CERATIZIT GROUP

The KOMET-Programme

Tool holders and tooling solutions
for drilling, reaming, countersinking,
threading and boring



TEAM CUTTING TOOLS

CUTTING SOLUTIONS BY CERATIZIT · KOMET · WNT · KLENK

CERATIZIT is a high-tech engineering group specialised in tooling and hard material technologies.

Tooling the Future

www.ceratizit.com

Index

DRILLING
Solid drilling \ Roughing \ Fine boring
Easy Special \ Kometric Insert Seatings
5 – 395

REAMING
396 – 533

THREADING
534 – 689

MILLING
690 – 709

TURNING
710 – 767

ADAPTORS
768 – 829

CUTTING ELEMENTS
830 – 927

INFORMATIONS
Accessories · Additional information
928 – 951

NUMERICAL INDEX
952 – 975

KOMET – Solid drilling





KOMET is one of the world's leading providers of high-precision drilling tools for efficient bore machining. Our potential for providing innovative solutions, a comprehensive performance spectrum and personal commitment form the basis for successful partnerships with our customers.

With the development of solid drill bits, KOMET entered completely new territory in the Seventies.

The KUB solid drill bit range has now become a leading concept in tool design.

Through the use of high-performance carbides and the latest generation of coatings, the cutting edges are always ideally matched with the solid bit drilling process.

KOMET also provides its service and after-sales spectrum internationally. You will find us in any location where you manufacture products which demand a high level of quality.



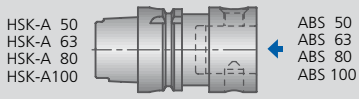
Index

	Page
Programme summary	6 – 7
Tool selection	8 – 9
Solid carbide drill	
KOMET Drillmax PCD | NCD	10 – 19
Replaceable head drill	
KOMET KUB K2	20 – 31
Indexable insert drill	
KOMET KUB Quatron	32 – 47
KOMET KUB Pentron	48 – 73
KOMET KUB Trigon	74 – 101
KOMET KUB drill	102 – 113
KOMET KUB Duon	114 – 135
KOMET KUB Centron Powerline	136 – 147
KOMET KUB Centron	148 – 157
KOMET KUB V464	158 – 161
KOMET KUB V50 drill head	162 – 165
KOMET V71 Flat-bottoming tool	166 – 167
KOMET Trepannning tool	168
KOMET Packet drill	169
KOMET Easy Special	268

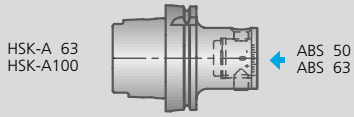
Programme summary – Solid drilling

6 Adaptors

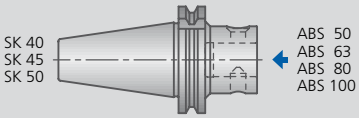
HSK-A Adaptors
with ABS connection



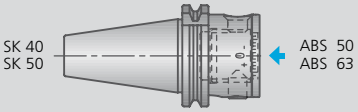
Eccentric adjusting device with ABS connection



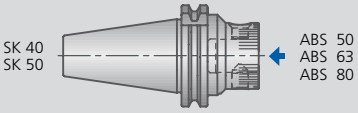
Taper shanks DIN 69871
with ABS connection



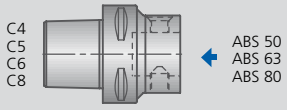
Eccentric adjusting device with ABS connection



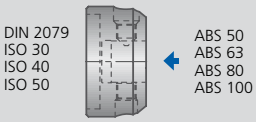
Torsional dampener with ABS connection



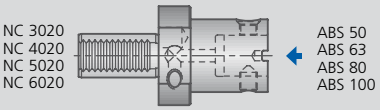
PSC Adaptor
with ABS connection



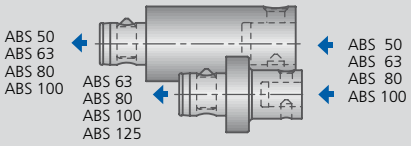
Spindle adaptor flange
with ABS connection



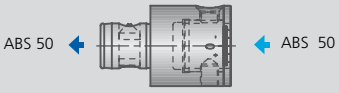
VDI Adaptor
with ABS connection



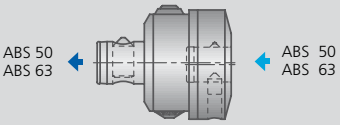
ABS Adaptors
Extension / Reducer



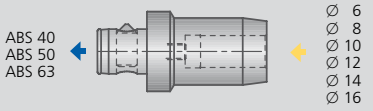
Eccentric adjusting device



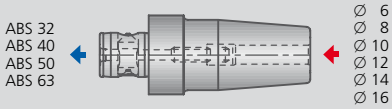
Adjustment device



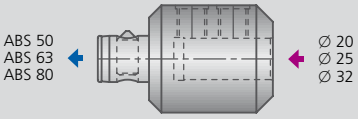
Expanding chuck



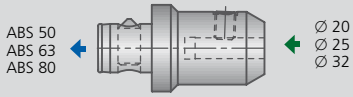
Thermal expansion chuck



Adaptor sleeve Weldon

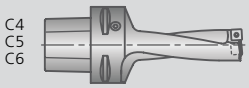


Adaptor sleeve Whistle Notch



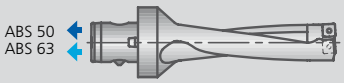
1 Tools for solid drilling, trepanning and flat bottoming

with PSC adaptor

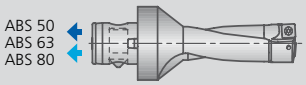


KUB Pentron
Ø 14 – 30 mm
▸ 58 – 59

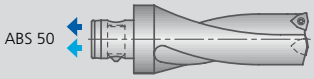
with ABS connection



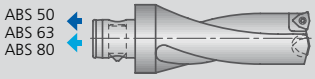
KUB Pentron
Ø 14 – 46 mm
▸ 50 – 53



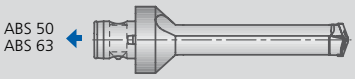
KUB Quatron
Ø 14 – 65 mm
▸ 34 – 37



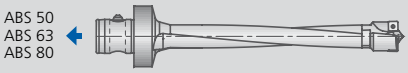
KUB Trigon
Ø 14 – 44 mm
▸ 76 | 94



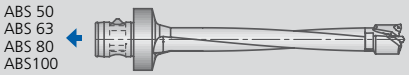
KUB drill
Ø 38,5 – 82 mm
▸ 102 – 107



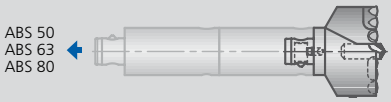
KUB Duon
Ø 17,3 – 44,2 mm
▸ 116 – 131



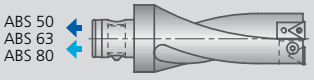
KUB Centron Powerline
Ø 20 – 65 mm
▸ 136 – 147



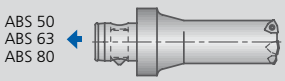
KUB Centron
Ø 20 – 81 mm
▸ 148 – 157



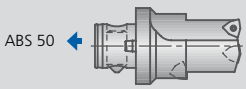
KUB V464
Ø 80 – 155 mm
▸ 158 – 161



Flat-bottoming tool V71
Ø 37 – 64 mm
▸ 166 – 167

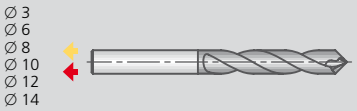


Packet drill
Ø 14 – 82 mm
▸ 169

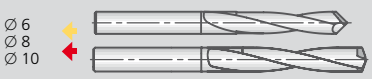


Easy Special
Ø 14 – 44 mm
▸ 268

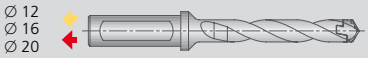
with cylindrical shank



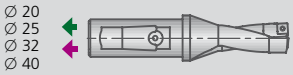
NCD Drillmax
Ø 0,8 – 13 mm
▸ 12 – 15



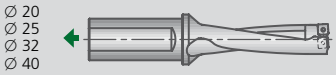
PKD Drillmax
Ø 6 – 10 mm
▸ 16 – 17



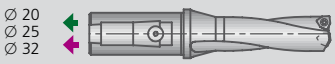
KUB K2
Ø 10 – 20,5 mm
▸ 22 – 27



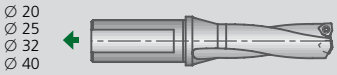
KUB Quatron
Ø 14 – 44 mm
▸ 38 – 41



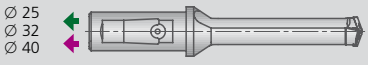
KUB Pentron
Ø 14 – 46 mm
▸ 54 – 57



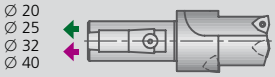
KUB Trigon
Ø 12 – 44 mm
▸ 80 – 83



KUB Trigon
Ø 14 – 54 mm
▸ 86 | 98



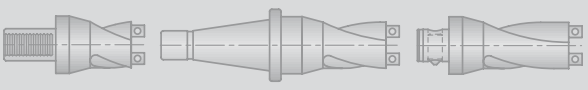
KUB Duon
Ø 17,3 – 36,2 mm
▸ 116 – 127



Easy Special
Ø 14 – 44 mm
▸ 268

Key

- ABS connection
- ABS connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection
- Shrink connection







KUB V50 drill head
larger sizes on request
Ø 83 – 128 mm
▸ 162 – 165



Trepannning tool
on request
Ø 83 – 198 mm
▸ 168

KOMET Tool selection

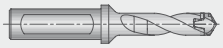
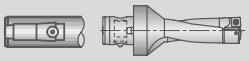
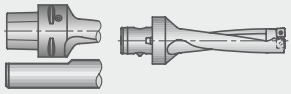
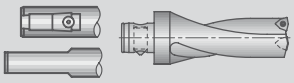
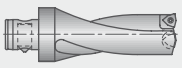
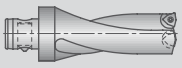
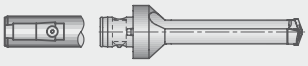
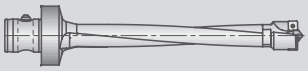
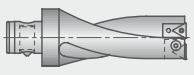
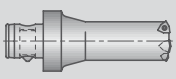
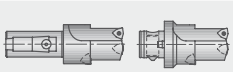
Help table for solid drilling

Ø (mm)	L / D	Machining										
	Length/ diameter ratio	solid drilling	blind hole	forge/ casting skin, interface	angled start and drilling out, interrupted cut	convex	cross bore	centering bore, seam	chamber	stack plate drilling	rough boring	adjusta-ble
Ø 0,8 – 13,0	5×D 7×D	●	●		●	●	◐	◐			●	
Ø 6,0 – 10,0	5×D	●	●		●	●	◐	◐			●	
Ø 10,0 – 20,5 +0,05	3×D 5×D 7×D	●	●	○	○			●		○		
Ø 14,0 – 65,0 ±0,2	2×D	●	●	●	●	●	●	●	●	●	◐	◐
	3×D	●	●	●	●	●	●	●	●	●	◐	◐
Ø 14,0 – 46,0 +0,2 –0,1	2×D 3×D	●	●	●	●	●	●	●	●	●	◐	◐
Ø 14,0 – 46,0 +0,3 –0,1	4×D	●	●	◐	◐	◐	◐	◐	○	◐		◐
Ø 14,0 – 46,0 +0,35 –0,1	5×D	●	●	◐	◐	◐	◐	◐		◐		◐
Ø 12,0 – 44,0 ±0,1	2×D	●	●	●	●	●	●	◐	●		◐	●
Ø 12,0 – 54,0 ±0,1	3×D	●	●	◐	◐	◐	◐	◐	◐		○	●
Ø 14,0 – 44,0 ±0,1	4×D	●	●	○	○	○	○	○	○			◐
Ø 38,5 – 82,0 +0,1 –0,5	3×D	●	●	○	○	○	○	○	○			◐
Ø 45,0 – 82,0 ±0,2	2×D	●	●	●	●	●	◐	◐	●		◐	◐
	3×D	●	●	●	◐	◐	◐	◐	◐			◐
Ø 17,3 – 44,2 ±0,!	5×D	●	●	◐	○	◐	◐	○		●	○	
Ø 20,0 – 65,0 +0,3 –0,1	4 – 9×D	●	●	◐	○	○	○	○				
Ø 20,0 – 81,0 ±0,!	4 – 9×D	●	●	◐	○	○	○	○	○			
Ø 80,0 – 155,0	6×D	●	●	◐	○	○	○	○				●
Ø 83,0 – 128,0 ±0,4	4×D	●	●	◐	○	○	○	○	○			
Ø 83,0 – 198,0 ±0,5	3×D	●		◐	◐	◐	◐	●	●			
Ø 37,0 – 64,0 ±0,5	3×D		◐								●	●
Ø 14,0 – 82,0	2×D	◐	◐	◐	○	◐	◐	◐	◐	●	○	○
	3×D	◐	◐	◐	○	◐	◐	◐	◐	●	○	○
Ø 14,0 – 44,0	1,5 - 4×D	●	●	●	◐	◐	◐	◐	◐			●

● very good | ◐ good | ○ possible: see technical notes

KOMET Tool selection

Help table for solid drilling

Coolant				Material						Tool	Page
Emulsion		MQL									
internal	external, drilling depth max. 3xD	internal	external, drilling depth max. 0,5xD	Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloys and titanium	Hardened materials		
●	●	●*	●*				N			 **KOMET Drillmax | NCD** cylindrical shank DIN 6535 HA	▸ 10 – 15
●	●	●*	●*				N			 **KOMET Drillmax | PCD** cylindrical shank DIN 6535 HA | HE	▸ 16 – 19
●	●			P	M	K				 **KOMET KUB K2** cylindrical shank ISO 9766	▸ 20 – 31
●	◐	●		P	M	K	N	S	H	 **KOMET KUB Quatron** ABS connection cylindrical shank (combination shank)	▸ 32 – 47
●	◐	●ABS ◐cyl.		P	M	K	N	S	H	 **KOMET KUB Pentron** ABS connection cylindrical shank ISO 9766 PSC ISO 26623	▸ 48 – 73
●	◐	◐									
●	◐	●		P	M	K	N	S		 **KOMET KUB Trigon** ABS connection cylindrical shank (combination shank) VDI kompatibel	▸ 74 – 101 ⌖ ▸ 94 / 98
●	○	◐	○	P	M	K	N	S		 **KOMET KUB drill adjustable** ABS connection	▸ 102 – 105
●	◐	◐		P	M	K	N	S	H	 **KOMET KUB drill** ABS connection	▸ 106 – 113
●	○	◐	○								
●	○	●	○	P		K	N			 **KOMET KUB Duon** ABS connection cylindrical shank (combination shank)	▸ 114 – 135
●		○		P	M	K	N	S	H	 **KOMET KUB Centron Powerline** ABS connection	▸ 136 – 147
●		○		P	M	K	N	S		 **KOMET KUB Centron** ABS connection	▸ 148 – 157
●		○		P	M	K	N			 **KOMET KUB V464** ABS T connection	▸ 158 – 161
●	○	◐	○	P	M	K	N	S		 **KOMET KUB V50 drill head**	▸ 162 – 165
●	○	◐	○	P	M	K	N	S		 **KOMET trepannning tool**	▸ 168
●	◐	◐	○	P	M	K	N			 **KOMET V71 flat-bottoming tool** ABS connection	▸ 166 – 167
●	◐	◐	○	P	M	K	N			 **KOMET packet drill**	▸ 169
●	○	◐	○								
●	◐		○	P	M	K	N	S		 **KOMET Easy Special**	▸ 268

* For optimum MQL suitability, the delivery taper should be ground on the rear of the shank

⌖ L.H. cutting

Lightweight construction – Focus COMPOSITE MATERIALS

In an era of increasing awareness of the issues surrounding energy, energy conservation and energy efficiency, the lightweight construction segment is becoming more and more important. At a rapid pace, composite materials are carving out ever larger market shares.
Outstanding material properties, however, also present challenges for the manufacturers of precision tools. The extremely high strength and complex make-up of these materials are placing new demands on the tools that work them: the high degree of abrasiveness means that conventional tools in drilling and milling setups last only a few metres.

In light of this requirement, KOMET has developed a brand new class of tools distinguished by their innovative geometry, suitability for new machining strategies involving very high cutting parameters and also by the use of intelligent cutting materials. These new solutions range from single-edge to multi-tooth milling cutters and from drills with a new chamfer geometry to indexable tools having a special insert arrangement.

Cutting materials have also followed the trend: diamond coatings and PCD solutions are demonstrating that they are fully equipped for the task.

The non-homogeneous nature of these new lightweight materials imposes exacting and individual requirements on the machining process. Not only does KOMET offer a standard product range, it is an expert partner for its customers – with absolute focus on problem-solving.
Thanks to full process control in-house – from carbide/cutting material selection, consolidated expertise and many years of experience in grinding – KOMET is your single source of smart and viable machining solutions.













KOMET Drillmax Page

NCD High-performance drill

5×D | ∅ 0,8 – 13 mm | DIN 6535 HA 12 – 13
7×D | ∅ 5 – 13 mm | DIN 6535 HA 14 – 15

PCD High-performance drill

5×D | ∅ 6 – 10 mm | DIN 6535 HA / HE 16 – 17

Recommended cutting data 18

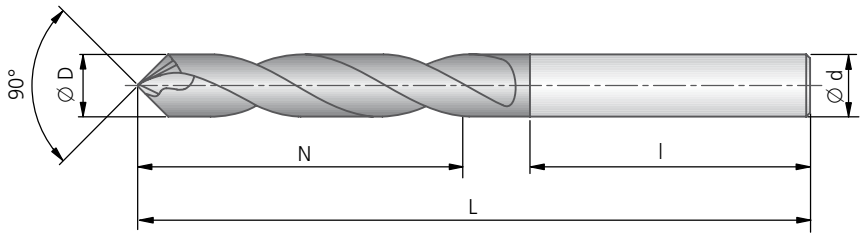
KOMET Drillmax 90 Ø 0,80 – 13,0 mm

NCD High-performance drill

for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

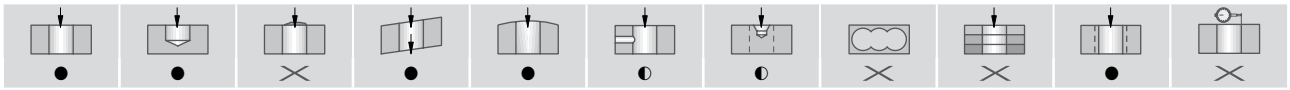
5×D

DIN 6535 HA



5×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
0,80	V11 00800.135210	3 × 28	38	6
1,00	V11 01000.135210	3 × 28	38	6
1,50	V11 01500.135210	3 × 28	48	12
1,60	V11 01600.135210	3 × 28	48	12
1,70	V11 01700.135210	3 × 28	48	12
1,80	V11 01800.135210	3 × 28	48	12
1,90	V11 01900.135210	3 × 28	48	12
2,00	V11 02000.135210	3 × 28	48	12
2,10	V11 02100.135210	3 × 28	48	15
2,20	V11 02200.135210	3 × 28	48	15
2,30	V11 02300.135210	3 × 28	48	15
2,40	V11 02400.135210	3 × 28	48	15
2,50	V11 02500.135210	6 × 36	66	19
2,60	V11 02600.135210	6 × 36	66	19
2,70	V11 02700.135210	6 × 36	66	19
2,80	V11 02800.135210	6 × 36	66	19
2,90	V11 02900.135210	6 × 36	66	19
3,00	V11 03000.135210	6 × 36	66	23
3,10	V11 03100.135210	6 × 36	66	23
3,20	V11 03200.135210	6 × 36	66	23
3,30	V11 03300.135210	6 × 36	66	23
3,40	V11 03400.135210	6 × 36	66	23
3,50	V11 03500.135210	6 × 36	66	23
3,60	V11 03600.135210	6 × 36	66	23
3,70	V11 03700.135210	6 × 36	66	23
3,80	V11 03800.135210	6 × 36	74	29
3,90	V11 03900.135210	6 × 36	74	29
4,00	V11 04000.135210	6 × 36	74	29
4,10	V11 04100.135210	6 × 36	74	29
4,20	V11 04200.135210	6 × 36	74	29
4,30	V11 04300.135210	6 × 36	74	29

5×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
4,40	V11 04400.135210	6 × 36	74	29
4,50	V11 04500.135210	6 × 36	74	29
4,60	V11 04600.135210	6 × 36	74	29
4,70	V11 04700.135210	6 × 36	74	29
4,80	V11 04800.135210	6 × 36	82	35
4,83	V11 04830.135210	6 × 36	82	35
4,90	V11 04900.135210	6 × 36	82	35
4,93	V11 04930.135210	6 × 36	82	35
5,00	V11 05000.135210	6 × 36	82	35
5,10	V11 05100.135210	6 × 36	82	35
5,20	V11 05200.135210	6 × 36	82	35
5,30	V11 05300.135210	6 × 36	82	35
5,40	V11 05400.135210	6 × 36	82	35
5,50	V11 05500.135210	6 × 36	82	35
5,60	V11 05600.135210	6 × 36	82	35
5,70	V11 05700.135210	6 × 36	82	35
5,80	V11 05800.135210	6 × 36	82	35
5,90	V11 05900.135210	6 × 36	82	35
6,00	V11 06000.135210	6 × 36	82	35
6,10	V11 06100.135210	8 × 36	91	42
6,20	V11 06200.135210	8 × 36	91	42
6,30	V11 06300.135210	8 × 36	91	42
6,35	V11 06350.135210	8 × 36	91	42
6,40	V11 06400.135210	8 × 36	91	42
6,50	V11 06500.135210	8 × 36	91	42
6,60	V11 06600.135210	8 × 36	91	42
6,70	V11 06700.135210	8 × 36	91	42
6,80	V11 06800.135210	8 × 36	91	42
6,90	V11 06900.135210	8 × 36	91	42
7,00	V11 07000.135210	8 × 36	91	42
7,10	V11 07100.135210	8 × 36	91	42



● very good | ◐ good | ○ possible | ✕ not possible

5×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
7,20	V11 07200.135210	8 × 36	91	42
7,30	V11 07300.135210	8 × 36	91	42
7,40	V11 07400.135210	8 × 36	91	42
7,50	V11 07500.135210	8 × 36	91	42
7,60	V11 07600.135210	8 × 36	91	42
7,70	V11 07700.135210	8 × 36	91	42
7,80	V11 07800.135210	8 × 36	91	42
7,90	V11 07900.135210	8 × 36	91	42
7,93	V11 07930.135210	8 × 36	91	42
8,00	V11 08000.135210	8 × 36	91	42
8,10	V11 08100.135210	10 × 40	103	48
8,20	V11 08200.135210	10 × 40	103	48
8,30	V11 08300.135210	10 × 40	103	48
8,40	V11 08400.135210	10 × 40	103	48
8,50	V11 08500.135210	10 × 40	103	48
8,60	V11 08600.135210	10 × 40	103	48
8,70	V11 08700.135210	10 × 40	103	48
8,80	V11 08800.135210	10 × 40	103	48
8,90	V11 08900.135210	10 × 40	103	48
9,00	V11 09000.135210	10 × 40	103	48
9,10	V11 09100.135210	10 × 40	103	48
9,20	V11 09200.135210	10 × 40	103	48
9,30	V11 09300.135210	10 × 40	103	48
9,40	V11 09400.135210	10 × 40	103	48
9,50	V11 09500.135210	10 × 40	103	48
9,52	V11 09520.135210	10 × 40	103	48
9,60	V11 09600.135210	10 × 40	103	48
9,70	V11 09700.135210	10 × 40	103	48
9,80	V11 09800.135210	10 × 40	103	48
9,90	V11 09900.135210	10 × 40	103	48
10,00	V11 10000.135210	10 × 40	103	48

5×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
10,10	V11 10100.135210	12 × 45	118	56
10,20	V11 10200.135210	12 × 45	118	56
10,30	V11 10300.135210	12 × 45	118	56
10,40	V11 10400.135210	12 × 45	118	56
10,50	V11 10500.135210	12 × 45	118	56
10,60	V11 10600.135210	12 × 45	118	56
10,70	V11 10700.135210	12 × 45	118	56
10,80	V11 10800.135210	12 × 45	118	56
10,90	V11 10900.135210	12 × 45	118	56
11,00	V11 11000.135210	12 × 45	118	56
11,10	V11 11100.135210	12 × 45	118	56
11,20	V11 11200.135210	12 × 45	118	56
11,30	V11 11300.135210	12 × 45	118	56
11,40	V11 11400.135210	12 × 45	118	56
11,50	V11 11500.135210	12 × 45	118	56
11,60	V11 11600.135210	12 × 45	118	56
11,70	V11 11700.135210	12 × 45	118	56
11,80	V11 11800.135210	12 × 45	118	56
11,90	V11 11900.135210	12 × 45	118	56
12,00	V11 12000.135210	12 × 45	118	56
12,10	V11 12100.135210	14 × 45	126	60
12,20	V11 12200.135210	14 × 45	126	60
12,30	V11 12300.135210	14 × 45	126	60
12,40	V11 12400.135210	14 × 45	126	60
12,50	V11 12500.135210	14 × 45	126	60
12,60	V11 12600.135210	14 × 45	126	60
12,70	V11 12700.135210	14 × 45	126	60
12,80	V11 12800.135210	14 × 45	126	60
12,90	V11 12900.135210	14 × 45	126	60
13,00	V11 13000.135210	14 × 45	126	60

Guideline values for solid drilling: page 18.

KOMET Drillmax 90

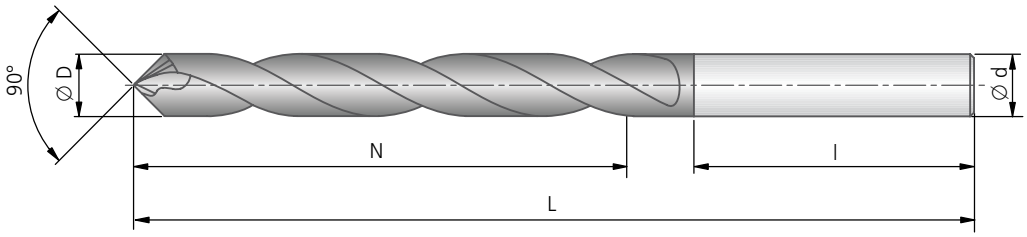
Ø 5,0 – 13,0 mm

NCD High-performance drill

for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

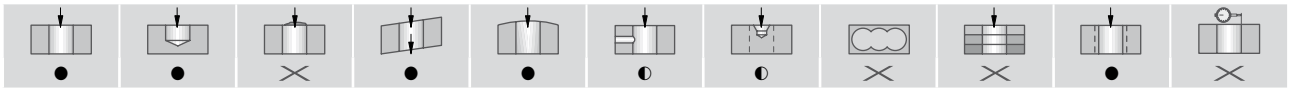
7×D

DIN 6535 HA



7×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
5,00	V21 05000.135210	6 × 36	88	43
5,10	V21 05100.135210	6 × 36	88	43
5,20	V21 05200.135210	6 × 36	88	43
5,30	V21 05300.135210	6 × 36	88	43
5,40	V21 05400.135210	6 × 36	88	43
5,50	V21 05500.135210	6 × 36	88	43
5,60	V21 05600.135210	6 × 36	88	43
5,70	V21 05700.135210	6 × 36	88	43
5,80	V21 05800.135210	6 × 36	88	43
5,90	V21 05900.135210	6 × 36	88	43
6,00	V21 06000.135210	6 × 36	88	43
6,10	V21 06100.135210	8 × 36	105	56
6,20	V21 06200.135210	8 × 36	105	56
6,30	V21 06300.135210	8 × 36	105	56
6,40	V21 06400.135210	8 × 36	105	56
6,50	V21 06500.135210	8 × 36	105	56
6,60	V21 06600.135210	8 × 36	105	56
6,70	V21 06700.135210	8 × 36	105	56
6,80	V21 06800.135210	8 × 36	105	56
6,90	V21 06900.135210	8 × 36	105	56

7×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
7,00	V21 07000.135210	8 × 36	105	56
7,10	V21 07100.135210	8 × 36	105	56
7,20	V21 07200.135210	8 × 36	105	56
7,30	V21 07300.135210	8 × 36	105	56
7,40	V21 07400.135210	8 × 36	105	56
7,50	V21 07500.135210	8 × 36	105	56
7,60	V21 07600.135210	8 × 36	105	56
7,70	V21 07700.135210	8 × 36	105	56
7,80	V21 07800.135210	8 × 36	105	56
7,90	V21 07900.135210	8 × 36	105	56
8,00	V21 08000.135210	8 × 36	105	56
8,10	V21 08100.135210	10 × 40	125	68
8,20	V21 08200.135210	10 × 40	125	68
8,30	V21 08300.135210	10 × 40	125	68
8,40	V21 08400.135210	10 × 40	125	68
8,50	V21 08500.135210	10 × 40	125	68
8,60	V21 08600.135210	10 × 40	125	68
8,70	V21 08700.135210	10 × 40	125	68
8,80	V21 08800.135210	10 × 40	125	68
8,90	V21 08900.135210	10 × 40	125	68



● very good | ◐ good | ○ possible | ✕ not possible

7×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
9,00	V21 09000.135210	10 × 40	125	68
9,10	V21 09100.135210	10 × 40	125	68
9,20	V21 09200.135210	10 × 40	125	68
9,30	V21 09300.135210	10 × 40	125	68
9,40	V21 09400.135210	10 × 40	125	68
9,50	V21 09500.135210	10 × 40	125	68
9,60	V21 09600.135210	10 × 40	125	68
9,70	V21 09700.135210	10 × 40	125	68
9,80	V21 09800.135210	10 × 40	125	68
9,90	V21 09900.135210	10 × 40	125	68
10,00	V21 10000.135210	10 × 40	125	68
10,10	V21 10100.135210	12 × 45	145	82
10,20	V21 10200.135210	12 × 45	145	82
10,30	V21 10300.135210	12 × 45	145	82
10,40	V21 10400.135210	12 × 45	145	82
10,50	V21 10500.135210	12 × 45	145	82
10,60	V21 10600.135210	12 × 45	145	82
10,70	V21 10700.135210	12 × 45	145	82
10,80	V21 10800.135210	12 × 45	145	82
10,90	V21 10900.135210	12 × 45	145	82

7×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
11,00	V21 11000.135210	12 × 45	145	82
11,10	V21 11100.135210	12 × 45	145	82
11,20	V21 11200.135210	12 × 45	145	82
11,30	V21 11300.135210	12 × 45	145	82
11,40	V21 11400.135210	12 × 45	145	82
11,50	V21 11500.135210	12 × 45	145	82
11,60	V21 11600.135210	12 × 45	145	82
11,70	V21 11700.135210	12 × 45	145	82
11,80	V21 11800.135210	12 × 45	145	82
11,90	V21 11900.135210	12 × 45	145	82
12,00	V21 12000.135210	12 × 45	145	82
12,10	V21 12100.135210	14 × 45	160	92
12,20	V21 12200.135210	14 × 45	160	92
12,30	V21 12300.135210	14 × 45	160	92
12,40	V21 12400.135210	14 × 45	160	92
12,50	V21 12500.135210	14 × 45	160	92
12,60	V21 12600.135210	14 × 45	160	92
12,70	V21 12700.135210	14 × 45	160	92
12,80	V21 12800.135210	14 × 45	160	92
12,90	V21 12900.135210	14 × 45	160	92
13,00	V21 13000.135210	14 × 45	160	92

Guideline values for solid drilling: page 18.

KOMET Drillmax 90 Ø 6 – 10 mm

PCD High-performance drill

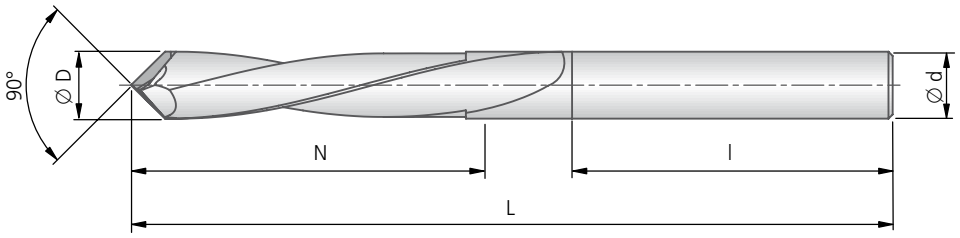
for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

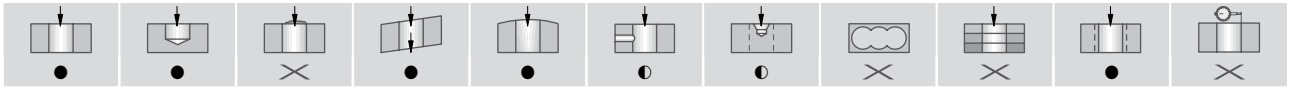
5×D

PCD

DIN 6535 HA

DIN 6535 HE





● very good | ◐ good | ○ possible | ✕ not possible

5×D					
	DIN 6535 HA	DIN 6535 HE			
Ø D_{m7}	Order No.	Order No.	Ø d_{h6} × l	L	N
6	V11 06000.135510	V11 06000.235510	6 × 36	82	30
8	V11 08000.135510	V11 08000.235510	8 × 36	91	42
10	V11 10000.135510	V11 10000.235510	10 × 40	103	50

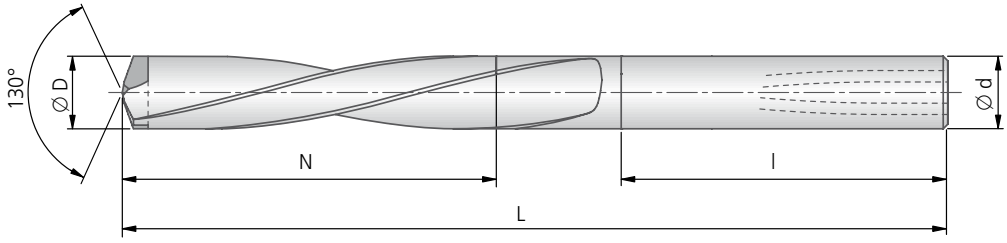
PCD High-performance drill

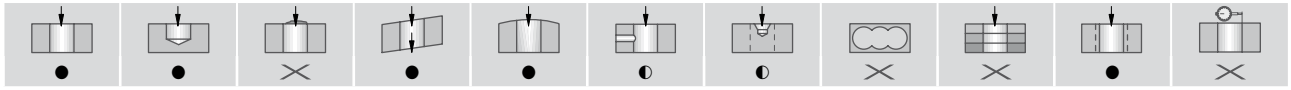
for workpiece material
N Al | CFRP | GFRP
CFRP/Al stacks
Honeycombs

5×D

PCD

DIN 6535 HA





● very good | ◐ good | ○ possible | ✕ not possible

5×D				
Ø D_{m7}	DIN 6535 HA Order No.	Ø d_{h6} × l	L	N
6	V03 06000.145510	6 × 36	82	30
8	V03 08000.145510	8 × 36	91	42
10	V03 10000.145510	10 × 40	103	50

Guideline values for solid drilling: page 18.

Recommended cutting data

NCD High-performance drill Drillmax 90 (V11.. / V21..)												
Machining: through hole, blind hole												
Cutting speed v_c (m/min) Feed f (mm/rev)	Ø 0,8 - 1,5 mm		Ø 1,6 - 3,9 mm		Ø 4 - 5,9 mm		Ø 6 - 7,9 mm		Ø 8 - 9,9 mm		Ø 10 - 13 mm	
	v_c	f	v_c	f	v_c	f	v_c	f	v_c	f	v_c	f
CFRP	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
GFRP	30 - 100	0,01 - 0,04	60 - 200	0,02 - 0,08	100 - 200	0,04 - 0,10	100 - 300	0,06 - 0,15	100 - 300	0,06 - 0,18	100 - 300	0,06 - 0,20
CFRP/Al stacks	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
Honeycombs	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12

PCD High-performance drill Drillmax and Drillmax 90 (V03..)						
Machining: through hole, blind hole						
Cutting speed v_c (m/min) Feed f (mm/rev)	Ø 6 mm		Ø 8 mm		Ø 10 mm	
	v_c	f	v_c	f	v_c	f
Al short chipping	150-500	0,10-0,18	200-600	0,12-0,22	250-800	0,15-0,28
Al long chipping	150-500	0,06-0,12	200-600	0,08-0,15	250-800	0,10-0,20
CFRP	100 - 300	0,05 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
GFRP	100 - 300	0,05 - 0,15	100 - 300	0,06 - 0,18	100 - 300	0,06 - 0,20
CFRP/Al stacks	100 - 300	0,05 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
Honeycombs	100 - 300	0,05 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12

Other materials and combinations on request.

We would be delighted to collaborate with you to develop new machining strategies. We offer a modern machining environment to conduct tests in-house or we can visit you to coordinate further.

Interested? Simply contact our experts in lightweight construction at www.kometgroup.com

Important: See chapter 8 for more application details and safety notes!



① Solid drilling with PCD High-performance drill Drillmax 90 (V11..)
② Solid drilling with NCD High-performance drill Drillmax 90 (V11..)
③ Slot milling with PCD Slot milling cutter straight fluted (38304..)
④ Interpolation milling with NCD Composite multi-tooth milling cutter, helical teeth, pull cut (78989..)
⑤ Circular and slot milling with NCD Composite milling cutter, HSC type FZ, straight teeth (78981..)
⑥ Slot milling with NCD Composite milling cutter, HSC type FZ, 2 front cutters, 135° drill centre (78986..)

Classification of composite materials and typical applications

FIBROUS COMPOSITE MATERIALS

Fibrous composites are inhomogeneous materials that are essentially an assembly of three components – fibres and matrices or binders.

Typical fibres include carbon fibre (CFRP), glass fibre (GFRP) or aramid fibre (AFRP). With respect to their tensile strength, they are categorised into HT (high tenacity), UT (ultra high tenacity) and IM (intermediate modulus). Depending on the properties desired, the fibres differ in length, thickness and relative orientation (unidirectional, bidirectional, multidirectional).

As matrices, there are currently more than 100 different resins/polymers available on the market, which is just a hint at how varied these materials are. "Cold" cutting is generally recommended for duroplastics (90%) and thermoplastics (PEEK, PEI, PPS, etc.), while elastomers (PUR) should be cut at "high speed".

Applications:
Aerospace, automotive, medical industry, sports industry, wind farms, transport, building/architecture

HYBRIDS

Hybrids are material combinations of at least three layers of metals, polymers and fibrous composites.

Application: Aircraft construction

HONEYCOMBS

These materials are usually three-layer composite constructions with a honeycomb-shaped core made, for example, of aluminium, polycarbonate or polypropylene and are therefore characterised by their extremely lightweight and highly stiff properties.

Applications:
Satellite engineering, packaging industry, exhibition stand, model and aircraft construction

METAL MATRIX COMPOSITE MATERIAL

Metal matrix composites (MMC) have at least two constituent materials, usually a ceramic or organic component bonded in a metal matrix.

Applications:
Engine building, cylinder liners, connecting rods

KOMET KUB K2 Replaceable head drill for tiny diameters



KOMET KUB K2 replaceable head drill

With this replaceable head system for the double-cutting KUB K2, KOMET has introduced an ingenious system of replaceable drill heads. These now also make the most of the cost efficiency and flexibility advantages of replaceable cutting heads in an extremely wide variety of different areas of application and materials.
A patented attachment point makes them self-clamping, self-centring, this results in higher repeating accuracy and the tool change times are reduced to a minimum.

BENEFITS for you:

- Easy replacement of the KUB K2 replaceable heads even in the machine, with secure, user-friendly quick-change connector
- Good performance and best possible feed with the latest coatings and high-end polished sections
- Outstanding tension release properties for many materials, due to optimum formed cutting channels
- Impressive performance and life of the main drill body due to a special surface treatment

Applications:

- For diameter range 10 to 20.5 mm
- Internal coolant supply
- Suitable for use with steel and cast metal
- Replaceable head system enables use with a wide variety of sections and coatings
- Universal 3×D, 5×D and 7×D basic holders
- Multi-stage tools with short delivery times

Replaceable head H76: Specially adapted insert edge chamfer in the transition from primary to secondary cutting edge for cast iron machining.



Step drill for continuous drilling with up to three counterboring steps

BENEFITS for you:

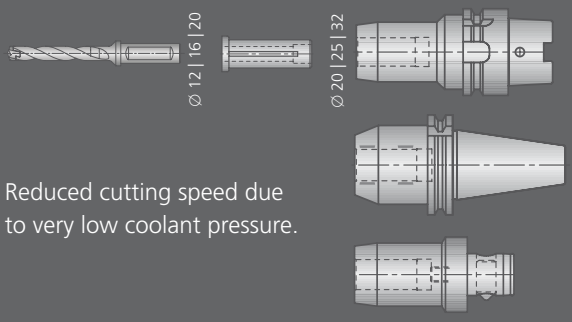
- Use of the standard replaceable heads
- Fewer tools and less changeover time required
- Increased process reliability
- Improved tool life
- Shorter machining times



KOMET KUB K2

	Page
Cylindrical shank ISO 9766	22 – 27
∅ 10 – 20.5 mm, R.H. cutting Drilling depth 3×D | 5×D | 7×D	
Recommended cutting data	28
Technical information	29 – 30
Step drill	31

Please note: When using the KUB K2 in a hydraulic expansion chuck, use a reducing sleeve.



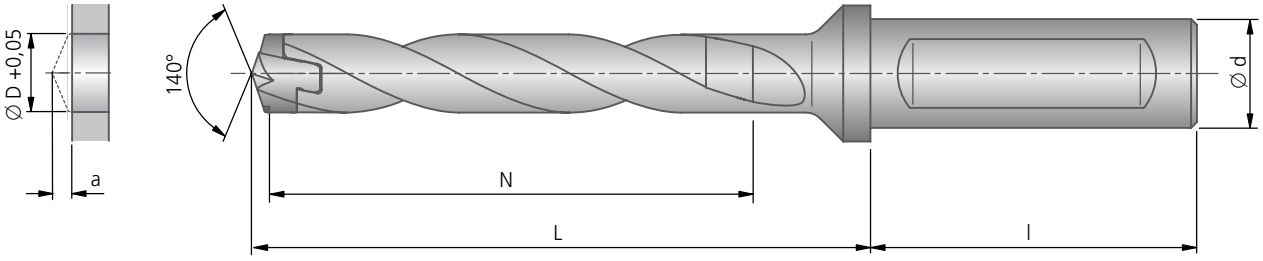
Reduced cutting speed due to very low coolant pressure.

KOMET KUB K2

Ø 10,0 – 13,9 mm

Replaceable head drill

for workpiece material P M K | 3×D 5×D 7×D | ISO 9766

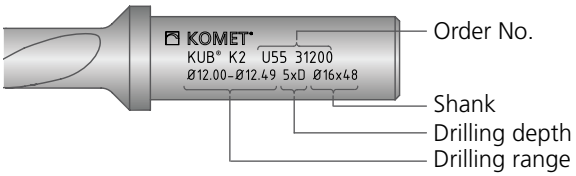


Replaceable head							
Ø D	H75 BK8425 Order No.	Chamfer H76 BK2725 Order No.	Starting / roughing size a	kg	Coating	for workpiece material	
10,00	H75 10000.018425	H76 10000.012725	2,0	0,0025	H75: BK8425 H76: BK2725	P M K	
10,10	H75 10100.018425	H76 10100.012725					
10,20	H75 10200.018425	H76 10200.012725					
10,30	H75 10300.018425	H76 10300.012725					
10,40	H75 10400.018425	H76 10400.012725					
10,50	H75 10500.018425	H76 10500.012725	2,0	0,0025	H75: BK8425 H76: BK2725	P M K	
10,60	H75 10600.018425	H76 10600.012725					
10,70	H75 10700.018425	H76 10700.012725					
10,80	H75 10800.018425	H76 10800.012725					
10,90	H75 10900.018425	H76 10900.012725					
11,00	H75 11000.018425	H76 11000.012725	2,4	0,003	H75: BK8425 H76: BK2725	P M K	
11,10	H75 11100.018425	H76 11100.012725					
11,20	H75 11200.018425	H76 11200.012725					
11,30	H75 11300.018425	H76 11300.012725					
11,40	H75 11400.018425	H76 11400.012725					
11,50	H75 11500.018425	H76 11500.012725	2,4	0,003	H75: BK8425 H76: BK2725	P M K	
11,60	H75 11600.018425	H76 11600.012725					
11,70	H75 11700.018425	H76 11700.012725					
11,80	H75 11800.018425	H76 11800.012725					
11,90	H75 11900.018425	H76 11900.012725					
12,00	H75 12000.018425	H76 12000.012725	2,6	0,0045	H75: BK8425 H76: BK2725	P M K	
12,10	H75 12100.018425	H76 12100.012725					
12,20	H75 12200.018425	H76 12200.012725					
12,30	H75 12300.018425	H76 12300.012725					
12,40	H75 12400.018425	H76 12400.012725					
12,50	H75 12500.018425	H76 12500.012725	2,6	0,0045	H75: BK8425 H76: BK2725	P M K	
12,60	H75 12600.018425	H76 12600.012725					
12,70	H75 12700.018425	H76 12700.012725					
12,80	H75 12800.018425	H76 12800.012725					
12,90	H75 12900.018425	H76 12900.012725					
13,00	H75 13000.018425	H76 13000.012725	2,75	0,0055	H75: BK8425 H76: BK2725	P M K	
13,10	H75 13100.018425	H76 13100.012725					
13,20	H75 13200.018425	H76 13200.012725					
13,30	H75 13300.018425	H76 13300.012725					
13,40	H75 13400.018425	H76 13400.012725					
13,50	H75 13500.018425	H76 13500.012725					
13,60	H75 13600.018425	H76 13600.012725					
13,70	H75 13700.018425	H76 13700.012725					
13,80	H75 13800.018425	H76 13800.012725					
13,90	H75 13900.018425	H76 13900.012725					

3×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
5×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
7×D*	●	●	○	○	✕	✕	●	✕	○	✕	✕

● very good | ◐ good | ○ possible: see technical notes, page 29 | ✕ not possible

* **Please note:** Drilling strategy required (page 30).



Supply includes: Basic body with mounting key. Order the mounting key separately if required.

Basic body													
	3×D				5×D				7×D				Mounting key
Cylindrical shank Ø d × l	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No.
12 × 45	U53 21000	55,7	33	0,05	U55 21000	77,7	55	0,055	U57 21000	99,7	77	0,06	L05 10170
12 × 45	U53 21050	55,7	33	0,05	U55 21050	77,7	55	0,057	U57 21050	99,7	77	0,065	
12 × 45	U53 21100	59,8	36	0,054	U55 21100	83,8	60	0,062	U57 21100	107,8	84	0,07	
12 × 45	U53 21150	59,8	36	0,055	U55 21150	83,8	60	0,064	U57 21150	107,8	84	0,075	
16 × 48	U53 31200	65,8	39	0,09	U55 31200	91,8	65	0,10	U57 31200	117,8	91	0,111	
16 × 48	U53 31250	65,8	39	0,09	U55 31250	91,8	65	0,10	U57 31250	117,8	91	0,115	
16 × 48	U53 31300	69,7	42	0,10	U55 31300	97,7	70	0,11	U57 31300	125,7	98	0,123	

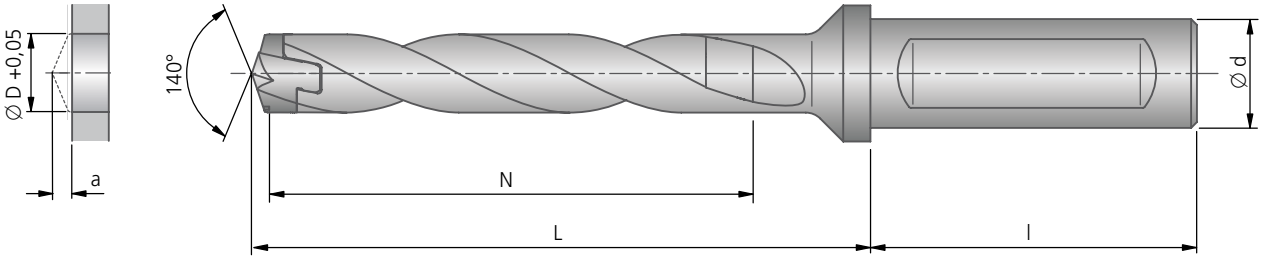
Guideline values for solid drilling: page 28.

KOMET KUB K2

Ø 14,0 – 16,9 mm

Replaceable head drill

for workpiece material P M K | 3×D 5×D 7×D |  | ISO 9766

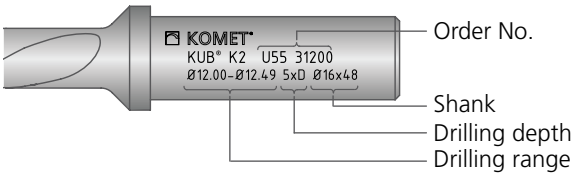


Replaceable head							
Ø D	 H75 BK8425 Order No.	Chamfer  H76 BK2725 Order No.	Starting / roughing size a	 kg	Coating	for workpiece material	
14,00	H75 14000.018425	H76 14000.012725	3	0,007	H75: BK8425 H76: BK2725	P M K	
14,10	H75 14100.018425	H76 14100.012725					
14,20	H75 14200.018425	H76 14200.012725					
14,30	H75 14300.018425	H76 14300.012725					
14,40	H75 14400.018425	H76 14400.012725					
14,50	H75 14500.018425	H76 14500.012725					
14,60	H75 14600.018425	H76 14600.012725					
14,70	H75 14700.018425	H76 14700.012725					
14,80	H75 14800.018425	H76 14800.012725					
14,90	H75 14900.018425	H76 14900.012725					
15,00	H75 15000.018425	H76 15000.012725	3,2	0,008	H75: BK8425 H76: BK2725	P M K	
15,10	H75 15100.018425	H76 15100.012725					
15,20	H75 15200.018425	H76 15200.012725					
15,30	H75 15300.018425	H76 15300.012725					
15,40	H75 15400.018425	H76 15400.012725					
15,50	H75 15500.018425	H76 15500.012725					
15,60	H75 15600.018425	H76 15600.012725					
15,70	H75 15700.018425	H76 15700.012725					
15,80	H75 15800.018425	H76 15800.012725					
15,90	H75 15900.018425	H76 15900.012725					
16,00	H75 16000.018425	H76 16000.012725	3,5	0,01	H75: BK8425 H76: BK2725	P M K	
16,10	H75 16100.018425	H76 16100.012725					
16,20	H75 16200.018425	H76 16200.012725					
16,30	H75 16300.018425	H76 16300.012725					
16,40	H75 16400.018425	H76 16400.012725					
16,50	H75 16500.018425	H76 16500.012725					
16,60	H75 16600.018425	H76 16600.012725					
16,70	H75 16700.018425	H76 16700.012725					
16,80	H75 16800.018425	H76 16800.012725					
16,90	H75 16900.018425	H76 16900.012725					

3×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
5×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
7×D*	●	●	○	○	✕	✕	●	✕	○	✕	✕

● very good | ◐ good | ○ possible: see technical notes, page 29 | ✕ not possible

* **Please note:** Drilling strategy required (page 30).



Supply includes: Basic body with mounting key.
Order the mounting key separately if required.

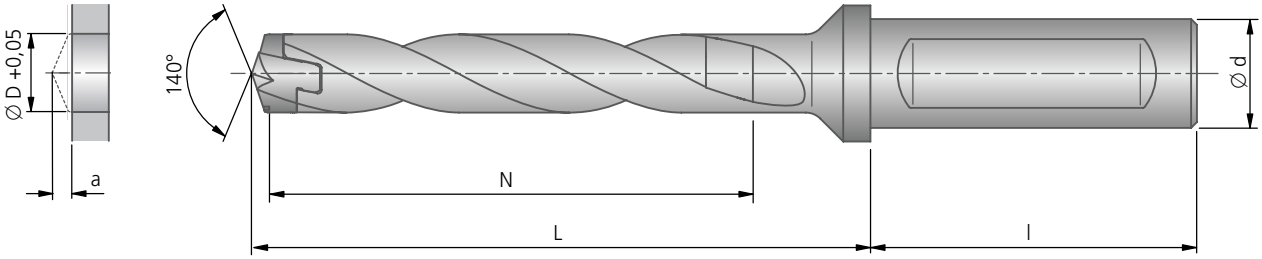
	Basic body												Mounting key
		3×D				5×D				7×D			
Cylindrical shank Ø d × l	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No.
16 × 48	**U53 31400**	73,7	45	0,10	**U55 31400**	103,7	75	0,12	**U57 31400**	133,6	105	0,137	
16 × 48	**U53 31500**	77,6	48	0,11	**U55 31500**	109,6	80	0,13	**U57 31500**	141,6	112	0,154	**L05 10170**
20 × 50	**U53 41600**	84,0	51	0,17	**U55 41600**	118,0	85	0,19	**U57 41600**	152,0	119	0,22	

Guideline values for solid drilling: page 28.

KOMET KUB K2 Ø 17,0 – 20,5 mm

Replaceable head drill

for workpiece material P M K | 3×D 5×D 7×D | ISO 9766

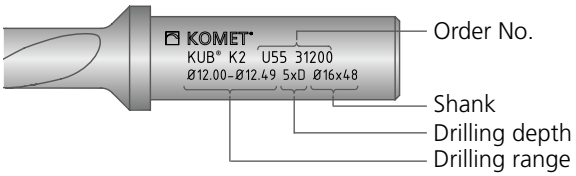


Replaceable head							
Ø D	H75 BK8425 Order No.	Chamfer H76 BK2725 Order No.	Starting / roughing size a	kg	Coating	for workpiece material	
17,00	H75 17000.018425	H76 17000.012725	3,5	0,0125	H75: BK8425 H76: BK2725	P M K	
17,10	H75 17100.018425	H76 17100.012725					
17,20	H75 17200.018425	H76 17200.012725					
17,30	H75 17300.018425	H76 17300.012725					
17,40	H75 17400.018425	H76 17400.012725					
17,50	H75 17500.018425	H76 17500.012725					
17,60	H75 17600.018425	H76 17600.012725					
17,70	H75 17700.018425	H76 17700.012725					
17,80	H75 17800.018425	H76 17800.012725					
17,90	H75 17900.018425	H76 17900.012725					
18,00	H75 18000.018425	H76 18000.012725	3,5	0,015	H75: BK8425 H76: BK2725	P M K	
18,10	H75 18100.018425	H76 18100.012725					
18,20	H75 18200.018425	H76 18200.012725					
18,30	H75 18300.018425	H76 18300.012725					
18,40	H75 18400.018425	H76 18400.012725					
18,50	H75 18500.018425	H76 18500.012725					
18,60	H75 18600.018425	H76 18600.012725					
18,70	H75 18700.018425	H76 18700.012725					
18,80	H75 18800.018425	H76 18800.012725					
18,90	H75 18900.018425	H76 18900.012725					
19,00	H75 19000.018425	H76 19000.012725	3,75	0,018	H75: BK8425 H76: BK2725	P M K	
19,10	H75 19100.018425	H76 19100.012725					
19,20	H75 19200.018425	H76 19200.012725					
19,30	H75 19300.018425	H76 19300.012725					
19,40	H75 19400.018425	H76 19400.012725					
19,50	H75 19500.018425	H76 19500.012725					
19,60	H75 19600.018425	H76 19600.012725					
19,70	H75 19700.018425	H76 19700.012725					
19,80	H75 19800.018425	H76 19800.012725					
19,90	H75 19900.018425	H76 19900.012725					
20,00	H75 20000.018425	H76 20000.012725					
20,10	H75 20100.018425	H76 20100.012725					
20,20	H75 20200.018425	H76 20200.012725					
20,30	H75 20300.018425	H76 20300.012725					
20,40	H75 20400.018425	H76 20400.012725					
20,50	H75 20500.018425	H76 20500.012725					

3×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
5×D	●	●	○	○	✕	✕	●	✕	○	✕	✕
7×D*	●	●	○	○	✕	✕	●	✕	○	✕	✕

● very good | ◐ good | ○ possible: see technical notes, page 29 | ✕ not possible

* **Please note:** Drilling strategy required (page 30).



Supply includes: Basic body with mounting key.
Order the mounting key separately if required.

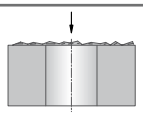
Basic body													
	3×D				5×D				7×D				Mounting key
Cylindrical shank Ø d × l	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No.
20 × 50	**U53 41700**	88,0	54	0,18	**U55 41700**	124,0	90	0,21	**U57 41700**	160,0	126	0,24	**L05 10170**
20 × 50	**U53 41800**	92,2	57	0,19	**U55 41800**	130,2	95	0,23	**U57 41800**	168,2	133	0,26	
20 × 50	**U53 41900**	96,1	61,5	0,21	**U55 41900**	136,1	102,5	0,25	**U57 41900**	176,1	143,5	0,29	

Guideline values for solid drilling: page 28.

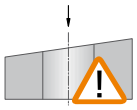
Recommended cutting data

Guideline values for solid drilling							v_c (m/min)						f (mm/rev)			
							Cutting speed						Feed			
													3×D / 5×D		7×D	
							H75 BK8425			H76 BK2725			Ø10-13,9	Ø14-20,5	Ø10-13,9	Ø14-20,5
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		min	opt.	max	min	opt	max	min-max	min-max	min-max	min-max
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		100	**120**	140	100	**120**	140	0,15-0,18	0,18-0,22	0,16-0,18	0,18-0,20
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		100	**120**	140	100	**120**	140	0,15-0,20	0,20-0,25	0,15-0,18	0,18-0,22
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)		80	**100**	120	80	**100**	120	0,20-0,25	0,25-0,30	0,18-0,22	0,22-0,28
P	3.0	>900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		70	**90**	110	70	**90**	110	0,20-0,25	0,25-0,30	0,18-0,22	0,22-0,28
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)		50	**70**	90	50	**70**	90	0,15-0,20	0,20-0,25	0,14-0,18	0,18-0,22
P	4.1			HSS												
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb-5Mo3) 2.4631 (Nimonic 80A)											
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)											
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)					40	**60**	80	0,15-0,20	0,20-0,25	0,12-0,15	0,15-0,18
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)											
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)											
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		70	**90**	110	70	**90**	110	0,20-0,30	0,30-0,40	0,20-0,28	0,28-0,38
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		60	**80**	100	60	**80**	100	0,20-0,30	0,30-0,40	0,20-0,28	0,28-0,38
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		60	**80**	100	60	**80**	100	0,25-0,35	0,35-0,45	0,20-0,30	0,30-0,40
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)		50	**70**	90	50	**70**	90	0,25-0,35	0,35-0,45	0,20-0,30	0,30-0,40
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		50	**70**	90	50	**70**	90	0,25-0,35	0,35-0,45	0,20-0,30	0,30-0,40
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		30	**50**	70	30	**50**	70	0,20-0,25	0,25-0,35	0,18-0,22	0,22-0,30
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		40	**60**	80	40	**60**	80	0,20-0,25	0,25-0,35	0,18-0,22	0,22-0,30
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)											
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)											
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)											
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)											
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)											
H	15.0	1400		hardened steels < 45 HRC												
H	16.0	1800		hardened steels > 45 HRC												

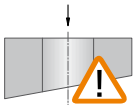
Cutting values shown are relating to the basic recommendations for cutting materials given.

1. 

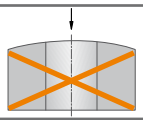
Starting on uneven surfaces (cast surfaces)
- depending on the quality of the surface or when spot drilling, reduce the feed

2. 

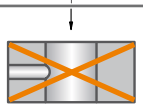
Starting on angled surfaces
- spot face surface before starting bore

3. 

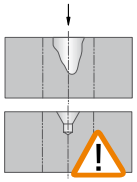
Angled bore exit
- reduce feed by 50 % in the exit area

4. 

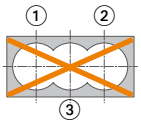
Starting on cambered surfaces
- not possible

5. 

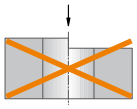
Drilling through a cross bore
- not possible

6. 

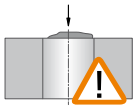
Starting on a groove or large centering bore
- end-face the seam or centre beforehand where applicable (diameter min. 0.1 mm greater than drill diameter)
- possible under certain conditions. Reduce feed where necessary

7. 

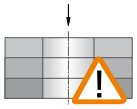
Drilling a chamfer
- not possible

8. 

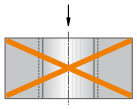
Starting on an edge
- not possible (start point must be flat)

9. 

Starting on a welded seam
- spot face surface before starting bore

10. 

Drilling through stacked plates
- possible in principle
- good workpiece clamping required
- avoid large spaces between elements

11. 

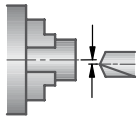
Roughing
- not possible

12. 

Coolant
- internal coolant supply min. 5 bar

13. 

Rotating application
- max. concentricity in rotating application 0,05 mm

14. 

Stationary application
- max. offset in stationary application 0,025 mm

15. 

Retraction from the hole
- Maintain the speed and direction of rotation from the drilling process during retraction to avoid catching the cutting edge

KOMET KUB K2

Drilling strategy

Solid carbide spot drill

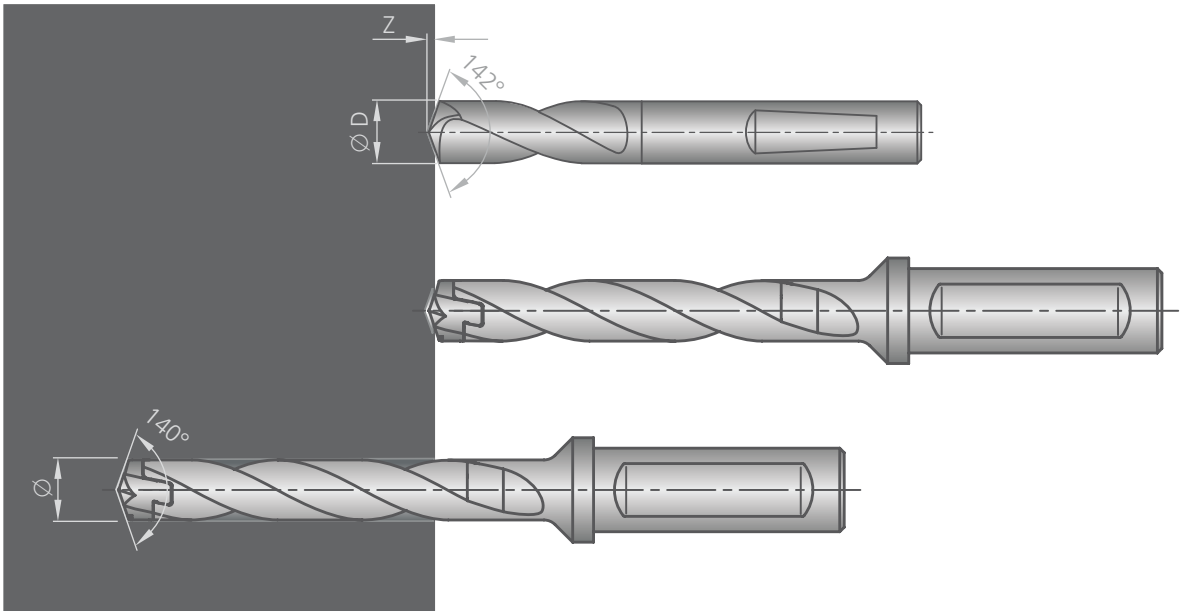
Drill a pilot hole with dimension Z.

KUB K2

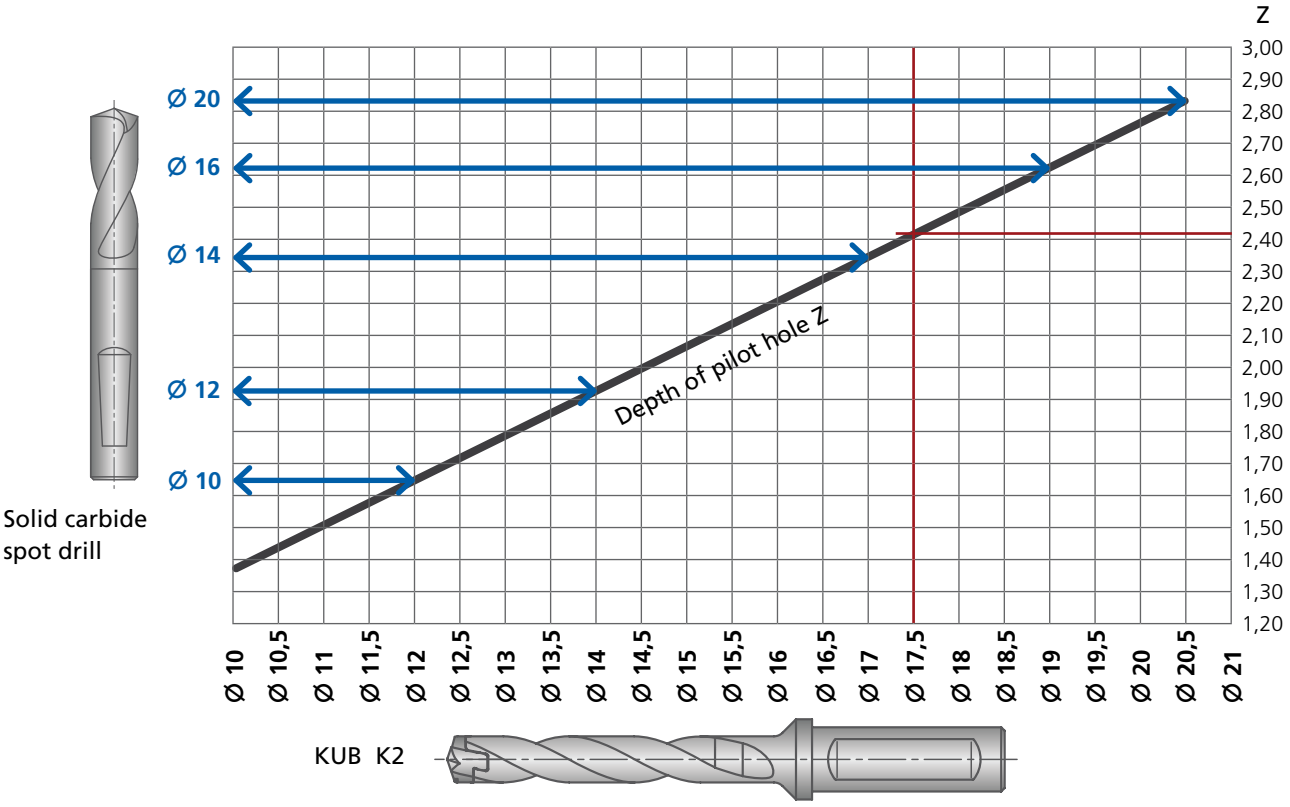
Move the spot drill into the pilot hole up to 2 mm above the bottom of the hole with reduced cutting values (50%).

Build up coolant pressure, increase the speed and hold for 2-3 seconds. Then set the recommended feed rate.

After the required drilling depth has been reached, move the spot drill out of the hole with reduced cutting values (50%).



Example: Select solid carbide spot drill for KUB K2 drilling diameter 17,5 mm:
Use solid carbide spot drill ∅ 16 mm for KUB K2 drilling diameter 10 to 19 mm or
use solid carbide spot drill ∅ 20 mm for KUB K2 drilling diameter 10 to 20,5 mm
= Depth of pilot hole Z = 2,41 mm

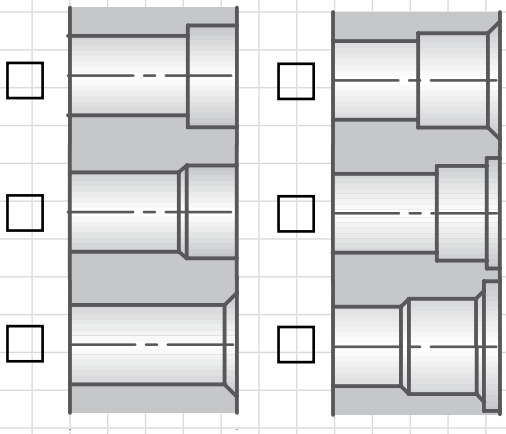


Enquiry Special Tool: KUB K2 Step Drill

Company:
Customer No.:
Address:

Contact:
Department:
Phone:
Fax:
E-Mail:

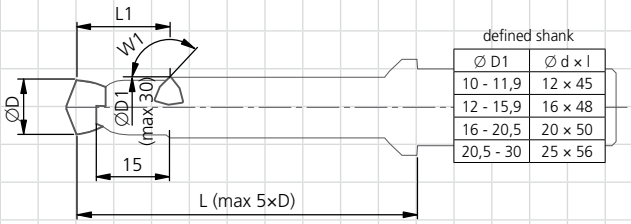
Bore variants:



ØD	L1 min
10 - 10,99	18,4
11 - 11,99	18,8
12 - 12,99	19,1
13 - 13,99	19,5

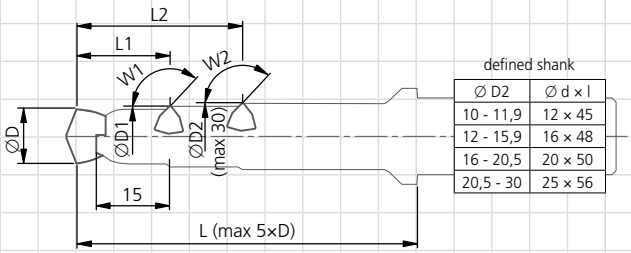
ØD	L1 min
14 - 14,99	19,8
15 - 15,99	20,2
16 - 16,99	20,5
17 - 17,99	20,9

ØD	L1 min
18 - 18,99	19,8
19 - 19,99	20,2
20 - 20,5	20,5



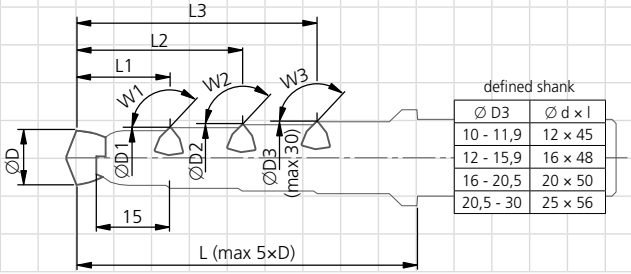
defined shank

Ø D1	Ø d x l
10 - 11,9	12 x 45
12 - 15,9	16 x 48
16 - 20,5	20 x 50
20,5 - 30	25 x 56



defined shank

Ø D2	Ø d x l
10 - 11,9	12 x 45
12 - 15,9	16 x 48
16 - 20,5	20 x 50
20,5 - 30	25 x 56



defined shank

Ø D3	Ø d x l
10 - 11,9	12 x 45
12 - 15,9	16 x 48
16 - 20,5	20 x 50
20,5 - 30	25 x 56

KUB K2 Step drill	Dimension	Tolerance
∅ D drill		
∅ D1		
∅ D2		
∅ D3		
L1		
L2		
L3		
L drill (max. 5×D)		
W1		
W2		
W3		

Cylindrical shank HA standard
optional ☐ HE ☐ HB

Internal cooling on ∅D standard changeable head

☐ optional coolant channels to stepped cutting edge

Workpiece

Tools required units

Workpiece units / year

Material to be machined

For a selection, see "Recommended cutting data"

Optional material (with surcharge and test):

KOMET KUB Quatron

Continuous drilling to 3×D

The KOMET KUB Quatron is supplied as standard in drilling depths up to 3×D with combination shank DIN 6536 HE and DIN 6595 and also with ABS 50 connection.

High overall rigidity and square indexable inserts are features of the KOMET KUB Quatron that guarantee drilling that is dimensionally and directionally accurate at high feed speeds.

The four cutting edges on each insert make the KOMET KUB Quatron totally economic. The latest coatings combined with tough, strong substrates reduce friction and also ensure maximum tool life.

The KUB Quatron from KOMET, which has already been successfully established in extreme technical situations such as for interrupted cuts, angled castings and rolling skins, is now available with the new insert technology -21 and -03 system.

BENEFITS for you:

- High stability and economy by using square inserts
- Free flow of chips and no wear on the tool body because of the special surface treatment
- Can be used for difficult drilling conditions such as cast angles, rolling skin or interrupted cut
- Excellent bore quality with no withdrawal grooves
- Maximum tool life with four cutting edges made up of specific substrates and coatings
- Intermediate sizes can be supplied within 4 weeks e.g. U10 71940 (Ø 19,4 mm 2×D)

Insert geometry 21:

Consisting of ultra fine grain carbide with highly positive top rake, clearly reduced cutting edge rounding and a new type of coating, it has been possible to halve cutting forces compared to previous versions.

This reduces the stress on machine and on workpiece, which allows significantly higher cutting parameters and, as a result, increases in productivity.

Geometry 21 was developed specifically for materials that produce long chips and for stainless steels. However, this is also very well suited to universal use in steel and for aluminium alloys.



Insert geometry 03:

Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.

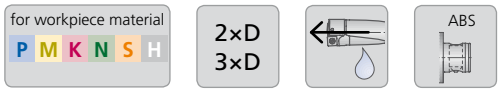


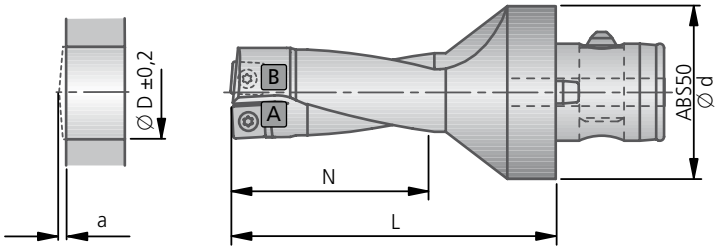
KOMET KUB Quatron

	Page
ABS connection	34 – 37
∅ 14 – 65 mm, R.H. cutting Drilling depth 2×D | 3×D	
Cylindrical shank (combination shank)	38 – 41
∅ 14 – 44 mm, R.H. cutting Drilling depth 2×D | 3×D	
Recommended cutting data	42 – 43
Technical informations	44 – 45
Alternative inserts	46
Problems → Causes → Solutions	47

KOMET KUB Quatron Ø 14 – 33 mm

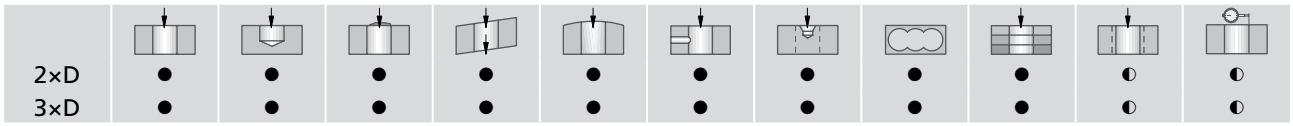
Indexable insert drill





				2×D				3×D					
Ø D	*max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	N	L	kg	Clamping screw Order No. Article	
14,0	14,5	1,5	50	**U10 71402**	28	63	0,45	**U11 51402**	42	77	0,47		
15,0	15,5	1,5	50	**U10 71502**	30	65	0,46	**U11 51502**	45	80	0,47		
15,5	16,0	1,5	50	**U10 71550**	32	67	0,46	**U11 51550**	48	83	0,47	**N00 56041** S/M2×4,3-6IP 0,62 Nm	
16,0	16,5	1,5	50	**U10 71600**	32	67	0,46	**U11 51600**	48	83	0,48		
16,5	17,0	1,5	50	–				**U11 51650**	51	86	0,48		
17,0	17,5	1,5	50	**U10 71700**	34	69	0,47	**U11 51700**	51	86	0,48		
17,5	18,0	1,5	50	**U10 71750**	36	71	0,47	**U11 51750**	54	89	0,49		
18,0	18,5	1,9	50	**U10 71800**	36	71	0,47	**U11 51800**	54	89	0,49		
18,5	19,0	1,9	50	**U10 71850**	38	73	0,48	**U11 51850**	57	92	0,50		
19,0	19,5	1,9	50	**U10 71900**	38	73	0,48	**U11 51900**	57	92	0,48	**N00 57553** S/M2,2×5,5-6IP 1,01 Nm	
19,5	20,0	1,9	50	**U10 71950**	40	75	0,49	**U11 51950**	60	95	0,51		
20,0	20,5	1,9	50	**U10 72000**	40	75	0,49	**U11 52000**	60	95	0,52		
20,5	21,0	1,9	50	**U10 72050**	42	77	0,5	**U11 52050**	63	98	0,52		
21,0	21,5	1,9	50	**U10 72100**	42	77	0,5	**U11 52100**	63	98	0,53		
22,0	22,5	2,4	50	**U10 72200**	44	79	0,51	**U11 52200**	66	101	0,52		
22,5	23,0	2,4	50	**U10 72250**	46	81	0,52	**U11 52250**	69	104	0,56		
23,0	23,5	2,4	50	**U10 72300**	46	81	0,52	**U11 52300**	69	104	0,59		
24,0	24,5	2,4	50	**U10 72400**	48	83	0,54	**U11 52400**	72	107	0,60		
24,5	25,0	2,4	50	**U10 72450**	50	85	0,54	**U11 52450**	75	110	0,60	**N00 57571** S/M2,5×6,3-8IP 1,28 Nm	
25,0	25,5	2,4	50	**U10 72500**	50	85	0,55	**U11 52500**	75	110	0,60		
26,0	26,5	2,4	50	**U10 72600**	52	87	0,56	**U11 52600**	78	113	0,61		
26,5	27,0	2,4	50	**U10 72650**	54	89	0,58	**U11 52650**	81	116	0,63		
27,0	27,5	2,8	50	**U10 72700**	54	89	0,58	**U11 52700**	81	116	0,63		
28,0	28,5	2,8	50	**U10 72800**	56	91	0,60	**U11 52800**	84	119	0,65		
28,5	29,0	2,8	50	**U10 72850**	58	93	0,61	**U11 52850**	87	122	0,67		
29,0	29,5	2,8	50	**U10 72900**	58	93	0,61	**U11 52900**	87	122	0,67		
29,5	30,0	2,8	50	**U10 72950**	59	95	0,63	**U11 52950**	88,5	125	0,69		
30,0	30,5	2,8	50	**U10 73000**	60	100	0,66	**U11 53000**	90	130	0,79	**N00 57261** S3575-15IP 2,8 Nm	
31,0	31,5	2,8	50	**U10 73100**	62	102	0,68	**U11 53100**	93	133	0,79		
31,5	32,0	2,8	50	**U10 73150**	64	104	0,70	**U11 53150**	96	136	0,78		
32,0	32,5	2,8	50	**U10 73200**	64	104	0,70	**U11 53200**	96	136	0,80		
33,0	33,5	2,8	50	**U10 73300**	66	106	0,73	**U11 53300**	99	139	0,84		

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 44-45 | ✕ not possible

Supply includes: KUB Quatron drill with clamping screw.
Please order insert separately.

Any **intermediate dimensions** from ∅ 14 – 33 mm and **inch dimensions** are available on request.

* Adjustment device see chapter 6

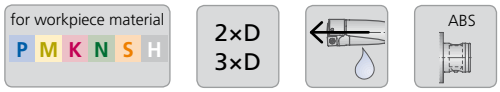
Basic recommendation							
Indexable insert A -01 -21			Indexable insert B -01 -21			for workpiece material
Order No. ▽▽ Size	ISO code	Piece	Order No. ▽▽ Size	ISO code	Piece	
W83 13010.048425	SOEX 050204-01 BK8425	1	W83 13010.048425	SOEX 050204-01 BK8425	1	P
W83 13210.047935	SOEX 050204-21 BK7935		W83 13010.048425	SOEX 050204-01 BK8425		M
W83 13000.016115	SOEX 050204-01 BK6115		W83 13010.048425	SOEX 050204-01 BK8425		K
W83 13210.047710	SOEX 050204-21 BK7710		W83 13210.047710	SOEX 050204-21 BK7710		N
W83 13010.047935	SOEX 050204-01 BK7935		W83 13010.047935	SOEX 050204-01 BK7935		S
W83 13000.016115	SOEX 050204-01 BK6115		W83 13010.048425	SOEX 050204-01 BK8425		H
W83 18010.068425	SOEX 060306-01 BK8425	1	W83 18010.068425	SOEX 060306-01 BK8425	1	P
W83 18210.067935	SOEX 060306-21 BK7935		W83 18010.068425	SOEX 060306-01 BK8425		M
W83 18000.096115	SOEX 060306-01 BK6115		W83 18010.068425	SOEX 060306-01 BK8425		K
W83 18210.067710	SOEX 060306-21 BK7710		W83 18210.067710	SOEX 060306-21 BK7710		N
W83 18010.067935	SOEX 060306-01 BK7935		W83 18010.067935	SOEX 060306-01 BK7935		S
W83 18000.096115	SOEX 060306-01 BK6115		W83 18010.068425	SOEX 060306-01 BK8425		H
W83 23010.088425	SOEX 07T308-01 BK8425	1	W83 23010.088425	SOEX 07T308-01 BK8425	1	P
W83 23210.087935	SOEX 07T308-21 BK7935		W83 23010.088425	SOEX 07T308-01 BK8425		M
W83 23000.016115	SOEX 07T308-01 BK6115		W83 23010.088425	SOEX 07T308-01 BK8425		K
W83 23210.087710	SOEX 07T308-21 BK7710		W83 23210.087710	SOEX 07T308-21 BK7710		N
W83 23010.087935	SOEX 07T308-01 BK7935		W83 23010.087935	SOEX 07T308-01 BK7935		S
W83 23000.016115	SOEX 07T308-01 BK6115		W83 23010.088425	SOEX 07T308-01 BK8425		H
W83 32010.088425	SOEX 090408-01 BK8425	1	W83 32010.088425	SOEX 090408-01 BK8425	1	P
W83 32210.087935	SOEX 090408-21 BK7935		W83 32010.088425	SOEX 090408-01 BK8425		M
W83 32000.156115	SOEX 090408-01 BK6115		W83 32010.088425	SOEX 090408-01 BK8425		K
W83 32210.087710	SOEX 090408-21 BK7710		W83 32210.087710	SOEX 090408-21 BK7710		N
W83 32010.087935	SOEX 090408-01 BK7935		W83 32010.087935	SOEX 090408-01 BK7935		S
W83 32000.156115	SOEX 090408-01 BK6115		W83 32010.088425	SOEX 090408-01 BK8425		H

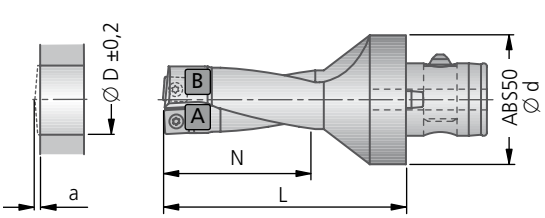
Guideline values for solid drilling: pages 42-43 / alternative inserts: page 46.

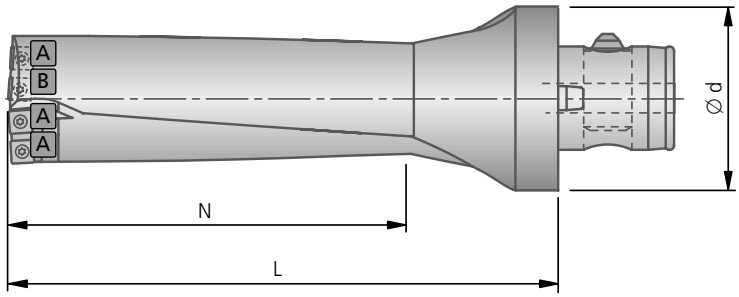
KOMET KUB Quatron

Ø 34 – 65 mm

Indexable insert drill







				2×D				3×D					
Ø D	*max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	N	L	kg	Clamping screw Order No. Article	
34,0	34,5	3,0	50	U10 73400	68	108	0,75	U11 53400	102	142	0,85	N00 57301 S45100-20IP 6,25 Nm	
35,0	35,5	3,0	50	U10 73500	70	110	0,77	U11 53500	105	145	0,89		
36,0	36,5	3,0	50	U10 73600	72	112	0,8	U11 53600	108	148	0,93		
37,0	37,5	3,0	50	U10 73700	74	124	0,88	U11 53700	111	161	1,04		
37,5	38,0	3,0	50	U10 73750	76	126	0,9	U11 53750	114	164	1,02		
38,0	38,5	3,0	50	U10 73800	76	126	0,92	U11 53800	114	164	1,08		
39,0	39,5	3,0	50	U10 73900	78	128	0,95	U11 53900	117	167	1,13		
39,5	40,0	3,0	50	U10 73950	80	130	0,97	U11 53950	120	170	1,14		
40,0	40,5	3,0	50	U10 74000	80	130	0,98	U11 54000	120	170	1,17		
41,0	41,5	3,0	50	U10 74100	82	132	1,02	U11 54100	123	173	1,22		
42,0	42,5	3,0	50	U10 74200	84	134	1,06	U11 54200	126	176	1,27		
43,0	43,5	3,0	50	U10 74300	86	136	1,1	U11 54300	129	179	1,33		
44,0	44,5	3,0	50	U10 74400	88	138	1,14	U11 54400	132	182	1,41		
45,0	45,5	3,3	63	U10 84500	90	145	1,47	U12 34500	135	190	1,73	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	
46,0	46,5	3,3	63	U10 84600	92	147	1,51	U12 34600	138	193	1,8		
47,0	47,5	3,3	63	U10 84700	94	149	1,55	U12 34700	141	196	1,86		
48,0	48,5	3,3	63	U10 84800	96	151	1,6	U12 34800	144	199	1,93		
49,0	49,5	3,3	63	U10 84900	98	153	1,65	U12 34900	147	202	2,0		
50,0	50,5	3,3	63	U10 85000	100	155	1,7	U12 35000	150	205	2,08		
51,0	51,5	3,3	63	U10 85100	102	157	1,75	U12 35100	153	208	2,15		
52,0	52,5	3,3	63	U10 85200	104	159	1,81	U12 35200	156	211	2,24		
53,0	53,5	3,7	63	U10 85300	106	161	1,82	U12 35300	159	214	2,27	N00 57261 S3575-15IP 2,8 Nm	
54,0	54,5	3,7	63	U10 85400	108	163	1,88	U12 35400	162	217	2,35		
55,0	55,5	3,7	80	U10 95500	110	165	2,57	U12 45500	165	220	3,07		
56,0	56,5	3,7	80	U10 95600	112	167	2,64	U12 45600	168	223	3,16		
57,0	57,5	3,7	80	U10 95700	114	169	2,7	U12 45700	171	226	3,26		
58,0	58,5	3,7	80	U10 95800	116	171	2,76	U12 45800	174	229	3,35		
59,0	59,5	3,7	80	U10 95900	118	173	2,83	U12 45900	177	232	3,45		
60,0	60,5	3,7	80	U10 96000	120	175	2,93	U12 46000	180	235	3,59		
61,0	61,5	3,7	80	U10 96100	122	177	3,01	U12 46100	183	238	3,6		
62,0	62,5	3,7	80	U10 96200	124	179	3,08	U12 46200	186	241	3,81		
63,0	63,5	3,7	80	U10 96300	126	181	3,18	U12 46300	189	244	3,95		
64,0	64,5	3,7	80	U10 96400	128	183	3,26	U12 46400	192	247	4,07		
65,0	65,5	3,7	80	U10 96500	130	185	3,35	U12 46500	195	250	4,2		

2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐

● very good | ◐ good | ○ possible: see technical notes, page 44-45 | ✕ not possible

Supply includes: KUB Quatron drill with clamping screw.
Please order insert separately.

Any **intermediate dimensions** from ∅ 34 – 65 mm and **inch dimensions** are available on request.

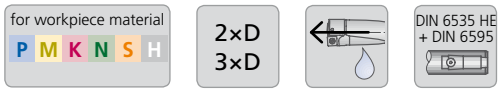
* Adjustment device see chapter 6

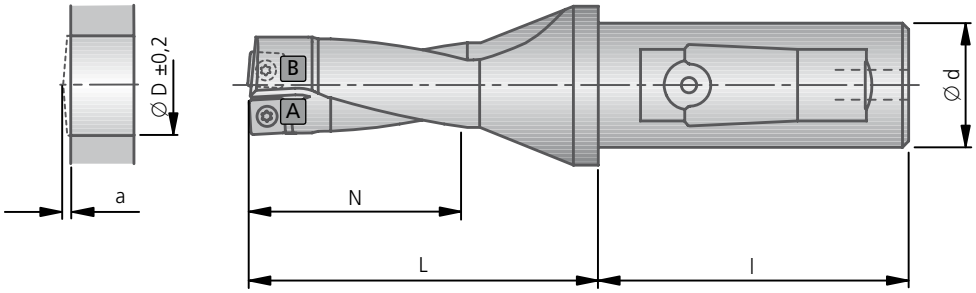
Basic recommendation							
Indexable insert A -01 -21			Indexable insert B -01 -21			for workpiece material
Order No. ▽▽ Size	ISO code	Piece	Order No. ▽▽ Size	ISO code	Piece	
W83 44010.088425	SOEX 120508-01 BK8425	1	**W83 44010.088425**	SOEX 120508-01 BK8425	1	P
W83 44210.087635	SOEX 120508-21 BK7935		**W83 44010.088425**	SOEX 120508-01 BK8425		M
W83 44000.186115	SOEX 120508-01 BK6115		**W83 44010.088425**	SOEX 120508-01 BK8425		K
W83 44210.087710	SOEX 120508-21 BK7710		**W83 44210.087710**	SOEX 120508-21 BK7710		N
W83 44010.087935	SOEX 120508-01 BK7935		**W83 44010.087935**	SOEX 120508-01 BK7935		S
W83 44000.186115	SOEX 120508-01 BK6115		**W83 44010.088425**	SOEX 120508-01 BK8425		H
W83 23010.088425	SOEX 07T308-01 BK8425	3	**W83 23010.088425**	SOEX 07T308-01 BK8425	1	P
W83 23210.087935	SOEX 07T308-21 BK7935		**W83 23010.088425**	SOEX 07T308-01 BK8425		M
W83 23000.016115	SOEX 07T308-01 BK6115		**W83 23010.088425**	SOEX 07T308-01 BK8425		K
W83 23210.087710	SOEX 07T308-21 BK7710		**W83 23210.087710**	SOEX 07T308-21 BK7710		N
W83 23010.087935	SOEX 07T308-01 BK7935		**W83 23010.087935**	SOEX 07T308-01 BK7935		S
W83 23000.016115	SOEX 07T308-01 BK6115		**W83 23010.088425**	SOEX 07T308-01 BK8425		H
W83 32010.088425	SOEX 090408-01 BK8425	3	**W83 32010.088425**	SOEX 090408-01 BK8425	1	P
W83 32210.087935	SOEX 090408-21 BK7935		**W83 32010.088425**	SOEX 090408-01 BK8425		M
W83 32000.156115	SOEX 090408-01 BK6115		**W83 32010.088425**	SOEX 090408-01 BK8425		K
W83 32210.087710	SOEX 090408-21 BK7710		**W83 32210.087710**	SOEX 090408-21 BK7710		N
W83 32010.087935	SOEX 090408-01 BK7935		**W83 32010.087935**	SOEX 090408-01 BK7935		S
W83 32000.156115	SOEX 090408-01 BK6115		**W83 32010.088425**	SOEX 090408-01 BK8425		H

Guideline values for solid drilling: pages 42-43 / alternative inserts: page 46.

KOMET KUB Quatron Ø 14 – 33 mm

Indexable insert drill





				2×D				3×D					
Ø D	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	Clamping screw Order No. Article	
14,0	14,5	1,5	20 × 50	**U10 01402**	28	52	0,17	**U11 61402**	42	66	0,18		
15,0	15,5	1,5	20 × 50	**U10 01502**	30	54	0,18	**U11 61502**	45	69	0,19		
15,5	16,0	1,5	20 × 50	**U10 01550**	32	56	0,18	**U11 61550**	48	72	0,19	**N00 56041** S/M2×4,3-6IP 0,62 Nm	
16,0	16,5	1,5	20 × 50	**U10 01600**	32	56	0,19	**U11 61600**	48	72	0,20		
16,5	17,0	1,5	20 × 50	–				**U11 61650**	51	75	0,20		
17,0	17,5	1,5	20 × 50	**U10 01700**	34	58	0,19	**U11 61700**	51	75	0,20		
17,5	18,0	1,5	25 × 56	**U10 11750**	36	60	0,27	**U11 71750**	54	78	0,28		
18,0	18,5	1,9	25 × 56	**U10 11800**	36	60	0,27	**U11 71800**	54	78	0,28		
18,5	19,0	1,9	25 × 56	**U10 11850**	38	62	0,27	**U11 71850**	57	81	0,29		
19,0	19,5	1,9	25 × 56	**U10 11900**	38	62	0,28	**U11 71900**	57	81	0,29	**N00 57553** S/M2,2×5,5-6IP 1,01 Nm	
19,5	20,0	1,9	25 × 56	**U10 11950**	40	64	0,29	**U11 71950**	60	84	0,30		
20,0	20,5	1,9	25 × 56	**U10 12000**	40	64	0,29	**U11 72000**	60	84	0,31		
20,5	21,0	1,9	25 × 56	**U10 12050**	42	66	0,30	**U11 72050**	63	87	0,31		
21,0	21,5	1,9	25 × 56	**U10 12100**	42	66	0,30	**U11 72100**	63	87	0,32		
22,0	22,5	2,4	25 × 56	**U10 12200**	44	68	0,31	**U11 72200**	66	90	0,33		
22,5	23,0	2,4	25 × 56	**U10 12250**	46	70	0,31	**U11 72250**	69	93	0,34		
23,0	23,5	2,4	25 × 56	**U10 12300**	46	70	0,32	**U11 72300**	69	93	0,35		
24,0	24,5	2,4	32 × 60	**U10 22400**	48	72	0,51	**U11 82400**	72	96	0,55	**N00 57571** S/M2,5×6,3-8IP 1,28 Nm	
24,5	25,0	2,4	32 × 60	**U10 22450**	50	74	0,52	**U11 82450**	75	99	0,56		
25,0	25,5	2,4	32 × 60	**U10 22500**	50	74	0,52	**U11 82500**	75	99	0,56		
26,0	26,5	2,4	32 × 60	**U10 22600**	52	76	0,54	**U11 82600**	78	102	0,58		
26,5	27,0	2,4	32 × 60	**U10 22650**	54	78	0,55	**U11 82650**	81	105	0,60		
27,0	27,5	2,8	32 × 60	**U10 22700**	54	78	0,56	**U11 82700**	81	105	0,61		
28,0	28,5	2,8	32 × 60	**U10 22800**	56	80	0,57	**U11 82800**	84	108	0,63		
28,5	29,0	2,8	32 × 60	**U10 22850**	58	82	0,58	**U11 82850**	87	111	0,65		
29,0	29,5	2,8	32 × 60	**U10 22900**	58	82	0,59	**U11 82900**	87	111	0,66		
29,5	30,0	2,8	32 × 60	**U10 22950**	59	84	0,60	**U11 82950**	88,5	114	0,67		
30,0	30,5	2,8	32 × 60	**U10 23000**	60	89	0,63	**U11 83000**	90	119	0,70	**N00 57261** S3575-15IP 2,8 Nm	
31,0	31,5	2,8	32 × 60	**U10 23100**	62	91	0,65	**U11 83100**	93	122	0,73		
31,5	32,0	2,8	32 × 60	**U10 23150**	64	93	0,66	**U11 83150**	96	125	0,75		
32,0	32,5	2,8	32 × 60	**U10 23200**	64	93	0,67	**U11 83200**	96	125	0,76		
33,0	33,5	2,8	32 × 60	**U10 23300**	66	95	0,73	**U11 83300**	99	128	0,83		
			40 × 68	**U10 33300**	66	95	1,02	**U11 93300**	99	128	1,12		

For other diameters see following page.

2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐

● very good | ◐ good | ○ possible: see technical notes, page 44-45 | ✕ not possible

Supply includes: KUB Quatron drill with clamping screw.
Please order insert separately.

Any **intermediate dimensions** from ∅ 14 – 33 mm and **inch dimensions** are available on request.

Basic recommendation							
Indexable insert A -01 -21			Indexable insert B -01 -21			for workpiece material
Order No. ▽▽ Size	ISO code	Piece	Order No. ▽▽ Size	ISO code	Piece	
W83 13010.048425	SOEX 050204-01 BK8425	1	W83 13010.048425	SOEX 050204-01 BK8425	1	P
W83 13210.047935	SOEX 050204-21 BK7935		W83 13010.048425	SOEX 050204-01 BK8425		M
W83 13000.016115	SOEX 050204-01 BK6115		W83 13010.048425	SOEX 050204-01 BK8425		K
W83 13210.047710	SOEX 050204-21 BK7710		W83 13210.047710	SOEX 050204-21 BK7710		N
W83 13010.047935	SOEX 050204-01 BK7935		W83 13010.047935	SOEX 050204-01 BK7935		S
W83 13000.016115	SOEX 050204-01 BK6115		W83 13010.048425	SOEX 050204-01 BK8425		H
W83 18010.068425	SOEX 060306-01 BK8425	1	W83 18010.068425	SOEX 060306-01 BK8425	1	P
W83 18210.067935	SOEX 060306-21 BK7935		W83 18010.068425	SOEX 060306-01 BK8425		M
W83 18000.096115	SOEX 060306-01 BK6115		W83 18010.068425	SOEX 060306-01 BK8425		K
W83 18210.067710	SOEX 060306-21 BK7710		W83 18210.067710	SOEX 060306-21 BK7710		N
W83 18010.067935	SOEX 060306-01 BK7935		W83 18010.067935	SOEX 060306-01 BK7935		S
W83 18000.096115	SOEX 060306-01 BK6115		W83 18010.068425	SOEX 060306-01 BK8425		H
W83 23010.088425	SOEX 07T308-01 BK8425	1	W83 23010.088425	SOEX 07T308-01 BK8425	1	P
W83 23210.087935	SOEX 07T308-21 BK7935		W83 23010.088425	SOEX 07T308-01 BK8425		M
W83 23000.016115	SOEX 07T308-01 BK6115		W83 23010.088425	SOEX 07T308-01 BK8425		K
W83 23210.087710	SOEX 07T308-21 BK7710		W83 23210.087710	SOEX 07T308-21 BK7710		N
W83 23010.087935	SOEX 07T308-01 BK7935		W83 23010.087935	SOEX 07T308-01 BK7935		S
W83 23000.016115	SOEX 07T308-01 BK6115		W83 23010.088425	SOEX 07T308-01 BK8425		H
W83 32010.088425	SOEX 090408-01 BK8425	1	W83 32010.088425	SOEX 090408-01 BK8425	1	P
W83 32210.087935	SOEX 090408-21 BK7935		W83 32010.088425	SOEX 090408-01 BK8425		M
W83 32000.156115	SOEX 090408-01 BK6115		W83 32010.088425	SOEX 090408-01 BK8425		K
W83 32210.087710	SOEX 090408-21 BK7710		W83 32210.087710	SOEX 090408-21 BK7710		N
W83 32010.087935	SOEX 090408-01 BK7935		W83 32010.087935	SOEX 090408-01 BK7935		S
W83 32000.156115	SOEX 090408-01 BK6115		W83 32010.088425	SOEX 090408-01 BK8425		H

Guideline values for solid drilling: pages 42-43 / alternative inserts: page 46.

KOMET KUB Quatron

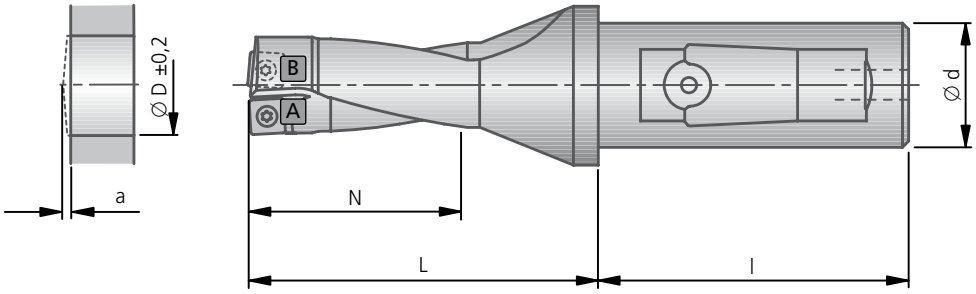
Ø 34 – 44 mm

Indexable insert drill

for workpiece material P M K N S H

2×D 3×D

DIN 6535 HE + DIN 6595



				2×D				3×D					
Ø D	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	Clamping screw Order No. Article	
34,0	34,5	3,0	32 × 60	**U10 23400**	68	97	0,75	**U11 83400**	102	131	0,86	**N00 57301** S45100-20IP 6,25 Nm	
			40 × 68	**U10 33400**	68	97	1,04	**U11 93400**	102	131	1,15		
35,0	35,5	3,0	32 × 60	**U10 23500**	70	99	0,78	**U11 83500**	105	134	0,89		
			40 × 68	**U10 33500**	70	99	1,07	**U11 93500**	105	134	1,18		
36,0	36,5	3,0	32 × 60	**U10 23600**	72	101	0,8	**U11 83600**	108	137	0,93		
			40 × 68	**U10 33600**	72	101	1,09	**U11 93600**	108	137	1,22		
37,0	37,5	3,0	32 × 60	**U10 23700**	74	113	0,89	**U11 83700**	111	150	1,03		
			40 × 68	**U10 33700**	74	113	1,18	**U11 93700**	111	150	1,32		
37,5	38,0	3,0	32 × 60	**U10 23750**	76	115	0,91	**U11 83750**	114	153	1,06		
			40 × 68	**U10 33750**	76	115	1,2	**U11 93750**	114	153	1,35		
38,0	38,5	3,0	32 × 60	**U10 23800**	76	115	0,92	**U11 83800**	114	153	1,07		
			40 × 68	**U10 33800**	76	115	1,21	**U11 93800**	114	153	1,36		
39,0	39,5	3,0	32 × 60	**U10 23900**	78	117	0,95	**U11 83900**	117	156	1,12		
			40 × 68	**U10 33900**	78	117	1,24	**U11 93900**	117	156	1,41		
39,5	40,0	3,0	32 × 60	**U10 23950**	80	119	0,97	**U11 83950**	120	159	1,15		
			40 × 68	**U10 33950**	80	119	1,26	**U11 93950**	120	159	1,44		
40,0	40,5	3,0	32 × 60	**U10 24000**	80	119	0,99	**U11 84000**	120	159	1,17		
			40 × 68	**U10 34000**	80	119	1,28	**U11 94000**	120	159	1,46		
41,0	41,5	3,0	32 × 60	**U10 24100**	82	121	1,02	**U11 84100**	123	162	1,22		
			40 × 68	**U10 34100**	82	121	1,31	**U11 94100**	123	162	1,51		
42,0	42,5	3,0	32 × 60	**U10 24200**	84	123	1,06	**U11 84200**	126	165	1,27		
			40 × 68	**U10 34200**	84	123	1,35	**U11 94200**	126	165	1,56		
43,0	43,5	3,0	32 × 60	**U10 24300**	86	125	1,1	**U11 84300**	129	168	1,33		
			40 × 68	**U10 34300**	86	125	1,39	**U11 94300**	129	168	1,62		
44,0	44,5	3,0	32 × 60	**U10 24400**	88	127	1,14	**U11 84400**	132	171	1,34		
			40 × 68	**U10 34400**	88	127	1,43	**U11 94400**	132	171	1,63		

2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐

● very good | ◐ good | ○ possible: see technical notes, page 44-45 | ✕ not possible

Supply includes: KUB Quatron drill with clamping screw.
Please order insert separately.

Any **intermediate dimensions** from ∅ 34 – 44 mm and **inch dimensions** are available on request.

Basic recommendation							
Indexable insert A -01 -21			Indexable insert B -01 -21			for workpiece material
Order No. ▽▽ Size	ISO code	Piece	**Order No.** ▽▽ Size	ISO code	Piece	
W83 44010.088425	SOEX 120508-01 BK8425	1	**W83 44010.088425**	SOEX 120508-01 BK8425	1	P
W83 44210.087635	SOEX 120508-21 BK7935		**W83 44010.088425**	SOEX 120508-01 BK8425		M
W83 44000.186115	SOEX 120508-01 BK6115		**W83 44010.088425**	SOEX 120508-01 BK8425		K
W83 44210.087710	SOEX 120508-21 BK7710		**W83 44210.087710**	SOEX 120508-21 BK7710		N
W83 44010.087935	SOEX 120508-01 BK7935		**W83 44010.087935**	SOEX 120508-01 BK7935		S
W83 44000.186115	SOEX 120508-01 BK6115		**W83 44010.088425**	SOEX 120508-01 BK8425		H

Guideline values for solid drilling: pages 42-43 / alternative inserts: page 46.

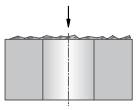
Recommended cutting data

Guideline values for solid drilling						v_c	Max. feed f (mm/rev)							
							2×D							
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Ø 14 – 15,9	Ø 16 – 17,5	Ø 17,6 – 21,5	Ø 21,6 – 27	Ø 28 – 33	Ø 34 – 44	Ø 45 – 52	Ø 53 – 65
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,10	0,12	0,12	0,14	0,14	0,14	0,14	0,14
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,12	0,14	0,16	0,20	0,20	0,25	0,20	0,20
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,14	0,16	0,18	0,25	0,25	0,30	0,25	0,25
P	3.0	>900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	180	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	180	0,10	0,12	0,12	0,18	0,18	0,20	0,18	0,18
P	4.1			HSS		80	0,08	0,10	0,12	0,14	0,16	0,18	0,14	0,16
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	60	0,06	0,08	0,10	0,12	0,12	0,12	0,12	0,12
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	80	0,06	0,08	0,10	0,12	0,12	0,12	0,12	0,12
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	180	0,08	0,10	0,12	0,14	0,14	0,16	0,14	0,14
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	160	0,08	0,08	0,12	0,16	0,16	0,20	0,16	0,16
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	160	0,06	0,08	0,10	0,12	0,12	0,14	0,12	0,12
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	200	0,16	0,16	0,25	0,30	0,30	0,30	0,30	0,30
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	160	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	160	0,14	0,16	0,18	0,22	0,22	0,25	0,22	0,22
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	140	0,14	0,16	0,18	0,22	0,22	0,25	0,22	0,22
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,14	0,16	0,18	0,22	0,25	0,25	0,22	0,25
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,10	0,12	0,16	0,20	0,20	0,25	0,20	0,20
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	300	0,12	0,14	0,16	0,25	0,20	0,25	0,25	0,20
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	400	0,08	0,08	0,10	0,12	0,12	0,15	0,12	0,12
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	600	0,08	0,08	0,10	0,12	0,12	0,12	0,12	0,12
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,10	0,12	0,14	0,16	0,16	0,20	0,16	0,16
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,10	0,12	0,14	0,20	0,20	0,30	0,20	0,20
H	15.0	1400		hardened steels < 45 HRC	BK6115 BK8425	120	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04
H	16.0	1800		hardened steels > 45 HRC		100	0,02	0,02	0,02	0,015	0,015	0,015	0,015	0,015

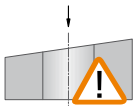
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Max. feed f (mm/rev)								
	3×D							
	Ø 14 – 15,9	Ø 16 – 17,5	Ø 17,6 – 21,5	Ø 21,6 – 27	Ø 28– 33	Ø 34 – 44	Ø 45 – 52	Ø 53 – 65
	0,10	0,12	0,12	0,14	0,14	0,14	0,14	0,14
	0,12	0,14	0,16	0,20	0,20	0,25	0,20	0,20
	0,14	0,16	0,18	0,25	0,25	0,30	0,25	0,25
	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
	0,10	0,12	0,12	0,18	0,18	0,20	0,18	0,18
	0,08	0,10	0,12	0,14	–	–	0,14	–
	0,06	0,08	0,10	0,12	0,12	0,12	0,12	0,12
	0,06	0,08	0,10	0,12	0,12	0,12	0,12	0,12
	0,08	0,10	0,12	0,14	0,14	0,16	0,14	0,14
	0,08	0,08	0,12	0,16	0,16	0,20	0,16	0,16
	0,06	0,08	0,10	0,12	0,12	0,14	0,12	0,12
	0,16	0,16	0,25	0,30	0,30	0,30	0,30	0,30
	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
	0,14	0,16	0,18	0,20	0,20	0,25	0,20	0,20
	0,14	0,16	0,18	0,22	0,22	0,25	0,22	0,22
	0,14	0,16	0,18	0,22	0,22	0,25	0,22	0,22
	0,14	0,16	0,18	0,22	0,25	0,25	0,22	0,25
	0,10	0,12	0,16	0,20	0,20	0,25	0,20	0,20
	0,12	0,14	0,16	0,25	0,20	0,25	0,25	0,20
	0,08	0,08	0,10	0,12	0,12	0,15	0,12	0,12
	0,08	0,08	0,10	0,12	0,12	0,12	0,12	0,12
	0,10	0,12	0,14	0,16	0,16	0,20	0,16	0,16
	0,10	0,12	0,14	0,20	0,20	0,30	0,20	0,20
	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04
	0,02	0,02	0,02	0,015	0,015	0,015	0,015	0,015

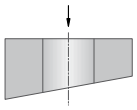
Technical informations

1. 

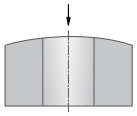
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

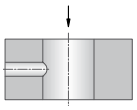
Starting on angled surfaces
- subject to the starting angle, the feed must be reduced when starting the bore.
  Rule of thumb: 3° ≙ 30%; 10° ≙ 40%; 25° ≙ 60% use tools max. 2×D
- use tough insert and stable corner radius

3. 

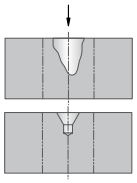
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

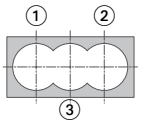
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

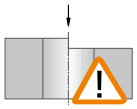
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insert and stable corner radius

6. 

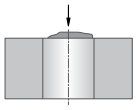
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed rate
- use tough insert for internal cutting edge

7. 

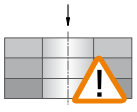
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insert and stable corner radius

8. 

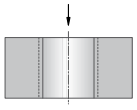
Starting on an edge
- reduce feed rate by 50%
- use tough insert and stable corner radius

9. 

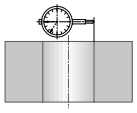
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- good workpiece clamping required
- max. gap = 1 mm

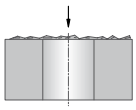
11. 

Roughing
- possible

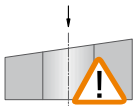
12. 

Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

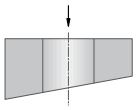
Note: please note max. offset ∅ in tables

1. 

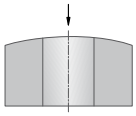
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

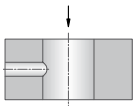
Starting on angled surfaces
- max. 3° angled position possible (cast angles)
- reduce feed rate when starting bore
- use stable corner radius

3. 

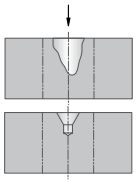
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

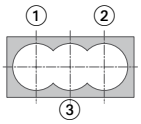
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

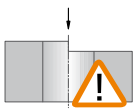
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

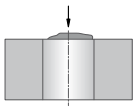
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed rate
- use tough insert for internal cutting edge

7. 

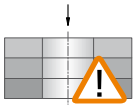
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

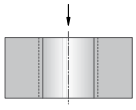
Starting on an edge
- not possible for 3×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

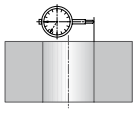
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- good workpiece clamping required

11. 

Roughing
- possible

12. 

Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

Alternative inserts

for better chip control

ØD	Order No.	ISO code	for work-piece material
	Indexable insert  -01 -13 -21		
14 – 17,5	**W83 13130.048425**	SOEX 050204-13 BK8425	P
	W83 13210.047935	SOEX 050204-21 BK7935 ⚠	P
	W83 13030.048430	SOEX 050204-03 BK8430	P M
	W83 13130.047935	SOEX 050204-13 BK7935	M
	W83 13210.047710	SOEX 050204-21 BK7710 ⚠	N S
18 – 21,5	**W83 18130.068425**	SOEX 060306-13 BK8425	P
	W83 18210.067935	SOEX 060306-21 BK7935 ⚠	P
	W83 18030.068430	SOEX 060306-03 BK8430	P M
	W83 18130.067935	SOEX 060306-13 BK7935	M
	W83 18210.067710	SOEX 060306-21 BK7710 ⚠	N S
22 – 27 | 45 – 52	**W83 23130.088425**	SOEX 07T308-13 BK8425	P
	W83 23210.087935	SOEX 07T308-21 BK7935 ⚠	P
	W83 23030.088430	SOEX 07T308-03 BK8430	P M
	W83 23130.087935	SOEX 07T308-13 BK7935	M
	W83 23210.087710	SOEX 07T308-21 BK7710 ⚠	N S
28 – 33 | 53 – 65	**W83 32130.088425**	SOEX 090408-13 BK8425	P
	W83 32210.087935	SOEX 090408-21 BK7935 ⚠	P
	W83 32030.088430	SOEX 090408-03 BK8430	P M
	W83 32130.087935	SOEX 090408-13 BK7935	M
	W83 32210.087710	SOEX 090408-21 BK7710 ⚠	N S
34 – 44	**W83 44130.088425**	SOEX 120508-13 BK8425	P
	W83 44210.087935	SOEX 120508-21 BK7935 ⚠	P
	W83 44030.088430	SOEX 120508-03 BK8430	P M
	W83 44130.087935	SOEX 120508-13 BK7935	M
	W83 44210.087710	SOEX 120508-21 BK7710 ⚠	N S

⚠
Only use this insert with KUB Quatron as an external cutting edge:
SOEX ... -01 (Geometry 01) in BK6115 and BK7615,
SOEX ... -21 (Geometry 21) in BK2730 and BK7710
(BK7710 is suitable for machining aluminium as internal cutting edge).

for higher cutting speed

ØD	Order No.	ISO code	for work-piece material
	Indexable insert  -01 -13 -21		
14 – 17,5	**W83 13010.046420**	SOEX 050204-01 BK6420	P
	W83 13210.046130	SOEX 050204-21 BK6130	P M
	W83 13000.0174	SOEX 050204-01 BK74	M
	W83 13010.047615	SOEX 050204-01 BK7615 ⚠	K
18 – 21,5	**W83 18010.066420**	SOEX 060306-01 BK6420	P
	W83 18210.066130	SOEX 060306-21 BK6130	P M
	W83 18000.0974	SOEX 060306-01 BK74	M
	W83 18010.067615	SOEX 060306-01 BK7615 ⚠	K
22 – 27 | 45 – 52	**W83 23010.086420**	SOEX 07T308-01 BK6420	P
	W83 23210.086130	SOEX 07T308-21 BK6130	P M
	W83 23000.0174	SOEX 07T308-01 BK74	M
	W83 23010.087615	SOEX 07T308-01 BK7615 ⚠	K
28 – 33 | 53 – 65	**W83 32010.086420**	SOEX 090408-01 BK6420	P
	W83 32210.086130	SOEX 090408-21 BK6130	P M
	W83 32000.1574	SOEX 090408-01 BK74	M
	W83 32010.087615	SOEX 090408-01 BK7615 ⚠	K
34 – 44	**W83 44010.086420**	SOEX 120508-01 BK6420	P
	W83 44210.086130	SOEX 120508-21 BK6130	P M
	W83 44000.1874	SOEX 120508-01 BK74	M
	W83 44010.087615	SOEX 120508-01 BK7615 ⚠	K

for greater strength

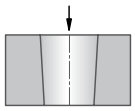
ØD	Order No.	ISO code	for work-piece material
14 – 17,5	**W83 13010.047935**	SOEX 050204-01 BK7935	P
	W83 13010.046420	SOEX 050204-01 BK6420	K
18 – 21,5	**W83 18010.067935**	SOEX 060306-01 BK7935	P
	W83 18010.066420	SOEX 060306-01 BK6420	K
22 – 27 | 45 – 52	**W83 23010.087935**	SOEX 07T308-01 BK7935	P
	W83 23010.086420	SOEX 07T308-01 BK6420	K
28 – 33 | 53 – 65	**W83 32010.087935**	SOEX 090408-01 BK7935	P
	W83 32010.086420	SOEX 090408-01 BK6420	K
34 – 44	**W83 44010.087935**	SOEX 120508-01 BK7935	P
	W83 44010.086420	SOEX 120508-01 BK6420	K

Important: See chapter 8 for more application details and safety notes!

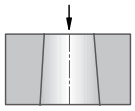
rotating and stationary use



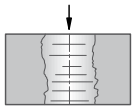
Short tool life types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



Bore narrows at bottom
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry



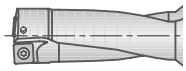
Bore widens at bottom
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



Bad surface finish
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

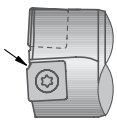


Bild up on cutting edge
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

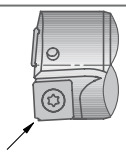


Friction marks on tool shank
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius

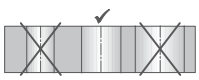
stationary use



Fracture on internal cutting edge
- drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge

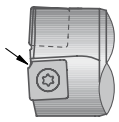


Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius

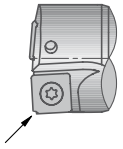


Bore too small/ too large
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

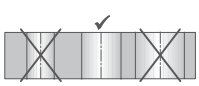
rotating use



Fracture on internal cutting edge
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge



Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



Bore too small/ too large with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting









KOMET KUB Pentron continuous drill

In developing the KUB Pentron, KOMET has blazed a completely new trail.

It has combined key features such as real accuracy, top performance parameters and deep drilling depths in a single tool.

The KOMET KUB Pentron enables up to 20% higher cutting and feed rates, all the way through to a 5×D length/diameter ratio.

It can handle extreme working conditions that were previously only feasible with 3×D.

BENEFITS for you:

- Maximum performance and life with excellent drilling performance due to optimum main body stability and a special surface treatment
- Optimum dimensional accuracy in the most difficult drilling conditions to 5×D
- Cost reductions in stocking and ease of handling due to identical internal and external indexable inserts
- Maximum tool life due to four fully useable cutting edges of modern substrates with appropriate coatings

Applications:

- Perfect for great drilling depths and high feed performance
- Ideal for extreme working situations
- Ideal for machining steel, cast metal, aluminium and stainless materials
- Geometry -03 for reliable machining of long-chipping steel materials and corrosion-resistant steels

Extreme applications in the 5×D region:

1 Drilling on an edge
2 Drilling in an acute corner
3 Multiple drilling
4 Drilling on a welded seam or undulating surfaces



KOMET KUB Pentron

	Page
ABS connection	50 – 53
∅ 14 – 46 mm, R.H. cutting Drilling depth 2×D – 5×D	
Cylindrical shank ISO 9766	54 – 57
∅ 14 – 46 mm, R.H. cutting Drilling depth 2×D – 5×D	
PSC ISO 26623	58 – 59
∅ 14 – 30 mm, R.H. cutting Drilling depth 3×D	
Recommended cutting data	60 – 65
Technical informations	67 – 69
Alternative inserts	66

The new high-performance drill bit
KOMET KUB Pentron
6×D *Productivity PLUS*

▸ 70 – 71

▸ 72 – 73

Step drill for continuous drilling with up to three counterboring steps
Ø 14 – 46 mm
4×D

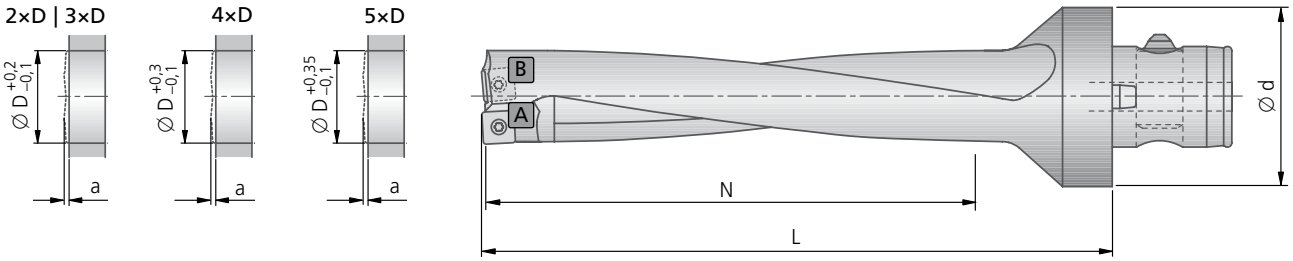


KOMET KUB Pentron

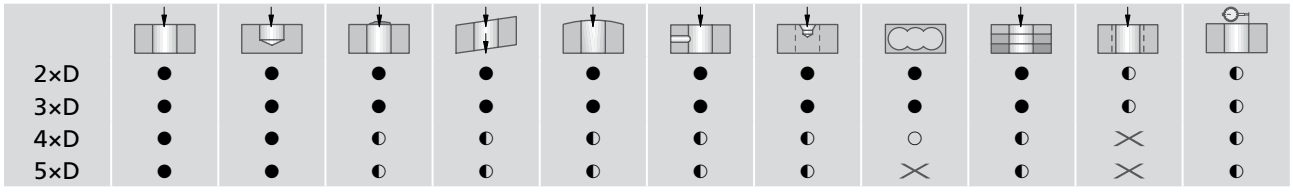
Ø 14,0 – 30,0 mm

Indexable insert drill

for workpiece material P M K N S | 2×D – 5×D | MQL 2×D | 3×D | | ABS



				2×D				3×D			
Ø D mm (inch)	**max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	MQL 1-channel system kg	Order No.	N	L	MQL 1-channel system kg
14,0	14,5	1,5	50	U42 51400	28	55	0,38	U43 51400	42	69	0,39
14,5	15,0	1,5	50	U42 51450	30	58	0,39	U43 51450	45	73	0,40
15,0	15,5	1,5	50	U42 51500	30	58	0,39	U43 51500	45	73	0,40
15,5	16,0	1,5	50	U42 51550	32	62	0,40	U43 51550	48	78	0,41
16,0	16,5	1,5	50	U42 51600	32	62	0,40	U43 51600	48	78	0,41
16,5	17,0	1,5	50	U42 51650	34	65	0,41	U43 51650	51	82	0,42
17,0	17,5	1,5	50	U42 51700	34	65	0,41	U43 51700	51	82	0,43
17,5 (0.687)	18,0	1,5	50	U42 51750	36	67	0,42	U43 51750	54	85	0,43
18,0	18,5	1,9	50	U42 51800	36	67	0,42	U43 51800	54	85	0,44
18,5	19,0	1,9	50	U42 51850	38	70	0,42	U43 51850	57	89	0,44
19,0	19,5	1,9	50	U42 51900	38	70	0,42	U43 51900	57	89	0,44
19,5	20,0	1,9	50	U42 51950	40	72	0,43	U43 51950	60	92	0,45
20,0	20,5	1,9	50	U42 52000	40	72	0,43	U43 52000	60	92	0,45
20,5	21,0	1,9	50	U42 52050	42	74	0,44	U43 52050	63	95	0,47
21,0 (0.828)	21,5	1,9	50	U42 52100	42	74	0,45	U43 52100	63	95	0,47
21,5	22,0	2,4	50	U42 52150	44	76	0,45	U43 52150	66	98	0,48
22,0	22,5	2,4	50	U42 52200	44	76	0,46	U43 52200	66	98	0,49
22,5	23,0	2,4	50	U42 52250	46	78	0,47	U43 52250	69	101	0,50
23,0 (0.906)	23,5	2,4	50	U42 52300	46	78	0,47	U43 52300	69	101	0,51
23,5	24,0	2,4	50	U42 52350	48	80	0,47	U43 52350	72	104	0,51
24,0	24,5	2,4	50	U42 52400	48	80	0,47	U43 52400	72	104	0,51
24,5	25,0	2,4	50	U42 52450	50	83	0,49	U43 52450	75	108	0,53
25,0 (0.985)	25,5	2,4	50	U42 52500	50	83	0,49	U43 52500	75	108	0,54
25,5	26,0	2,4	50	U42 52550	52	85	0,50	U43 52550	78	111	0,55
26,0	26,5	2,4	50	U42 52600	52	85	0,51	U43 52600	78	111	0,56
26,5	27,0	2,4	50	U42 52650	54	88	0,52	U43 52650	81	115	0,57
27,0 (1.062)	27,5	2,8	50	U42 52700	54	88	0,53	U43 52700	81	115	0,58
27,5	28,0	2,8	50	U42 52750	56	90	0,53	U43 52750	84	118	0,60
28,0	28,5	2,8	50	U42 52800	56	90	0,54	U43 52800	84	118	0,61
28,5	29,0	2,8	50	U42 52850	58	93	0,56	U43 52850	87	122	0,63
29,0	29,5	2,8	50	U42 52900	58	93	0,57	U43 52900	87	122	0,64
29,5	30,0	2,8	50	U42 52950	60	95	0,58	U43 52950	90	125	0,66
30,0	30,5	2,8	50	U42 53000	60	95	0,59	U43 53000	90	125	0,67



2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐
4×D	●	●	◐	◐	◐	◐	◐	○	◐	✕	◐
5×D	●	●	◐	◐	◐	◐	◐	✕	◐	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 67 | ✕ not possible

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

All intermediate dimensions can be supplied quickly on request.
** Adjustment device see chapter 6

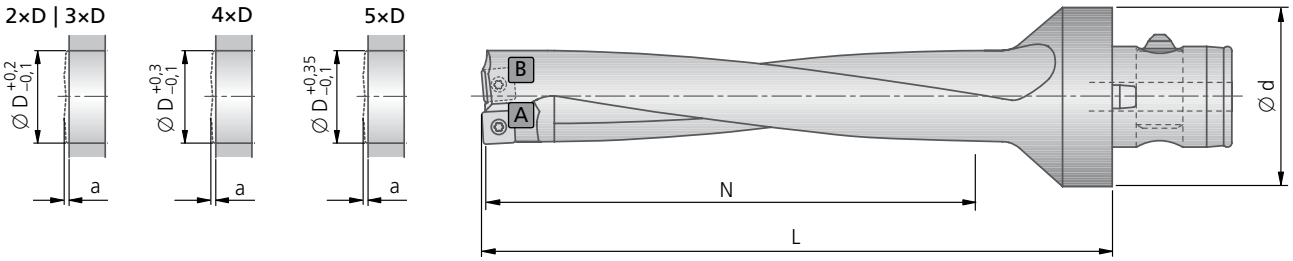
	4×D				5×D					Basic recommendation				
									Clamping screw	Indexable insert A -01		Indexable insert B -01		for workpiece material
∅	Order No.	N	L	kg	Order No.	N	L	kg	Order No. Article	Order No. ISO code ▽▽ Size	Piece	Order No. ISO code ▽▽ Size	Piece	
14,0	U44 51400	56	83	0,39	U45 51400	70	97	0,40	N00 56051 S/M1,8×3,85-5IP 0,38 Nm	W80 10010.048425 SOGX 040204-01 BK8425	1	W80 10010.048425 SOGX 040204-01 BK8425	1	P
14,5	U44 51450	60	88	0,40	U45 51450	75	103	0,41		W80 10010.047935 SOGX 040204-01 BK7935		W80 10010.047935 SOGX 040204-01 BK7935		M S
15,0	U44 51500	60	88	0,41	U45 51500	75	103	0,41		W80 10010.046115 SOGX 040204-01 BK6115		W80 10010.048425 SOGX 040204-01 BK8425		K H
15,5	U44 51550	64	94	0,41	U45 51550	80	110	0,42		W80 10010.047710 SOGX 040204-01 BK7710		W80 10010.047710 SOGX 040204-01 BK7710		N
16,0	U44 51600	64	94	0,42	U45 51600	80	110	0,43						
16,5	U44 51650	68	99	0,43	U45 51650	85	116	0,44	N00 56041 S/M2×4,3-6IP 0,62 Nm	W80 12010.048425 SOGX 050204-01 BK8425	1	W80 12010.048425 SOGX 050204-01 BK8425	1	P
17,0	U44 51700	68	99	0,43	U45 51700	85	116	0,44		W80 12010.047935 SOGX 050204-01 BK7935		W80 12010.047935 SOGX 050204-01 BK7935		M S
(0.687) 17,5	U44 51750	72	103	0,44	U45 51750	90	121	0,45		W80 12010.046115 SOGX 050204-01 BK6115		W80 12010.048425 SOGX 050204-01 BK8425		K H
18,0	U44 51800	72	103	0,44	U45 51800	90	121	0,46		W80 12010.047710 SOGX 050204-01 BK7710		W80 12010.047710 SOGX 050204-01 BK7710		N
18,5	U44 51850	76	108	0,47	U45 51850	95	127	0,51	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W80 18010.068425 SOGX 060206-01 BK8425	1	W80 18010.068425 SOGX 060206-01 BK8425	1	P
19,0	U44 51900	76	108	0,49	U45 51900	95	127	0,52		W80 18010.067935 SOGX 060206-01 BK7935		W80 18010.067935 SOGX 060206-01 BK7935		M S
19,5	U44 51950	80	112	0,50	U45 51950	100	132	0,53		W80 18010.066115 SOGX 060206-01 BK6115		W80 18010.068425 SOGX 060206-01 BK8425		K H
20,0	U44 52000	80	112	0,51	U45 52000	100	132	0,53		W80 18010.067710 SOGX 060206-01 BK7710		W80 18010.067710 SOGX 060206-01 BK7710		N
20,5	U44 52050	84	116	0,51	U45 52050	105	137	0,53	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W80 20010.088425 SOGX 07T208-01 BK8425	1	W80 20010.088425 SOGX 07T208-01 BK8425	1	P
(0.828) 21,0	U44 52100	84	116	0,51	U45 52100	105	137	0,54		W80 20010.087935 SOGX 07T208-01 BK7935		W80 20010.087935 SOGX 07T208-01 BK7935		M S
21,5	U44 52150	88	120	0,52	U45 52150	110	142	0,55		W80 20010.086115 SOGX 07T208-01 BK6115		W80 20010.088425 SOGX 07T208-01 BK8425		K H
22,0	U44 52200	88	120	0,53	U45 52200	110	142	0,56		W80 20010.087710 SOGX 07T208-01 BK7710		W80 20010.087710 SOGX 07T208-01 BK7710		N
22,5	U44 52250	92	124	0,55	U45 52250	115	147	0,59						
(0.906) 23,0	U44 52300	92	124	0,56	U45 52300	115	147	0,60						
23,5	U44 52350	96	128	0,56	U45 52350	120	152	0,60	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	W80 24010.088425 SOGX 080308-01 BK8425	1	W80 24010.088425 SOGX 080308-01 BK8425	1	P
24,0	U44 52400	96	128	0,57	U45 52400	120	152	0,61		W80 24010.087935 SOGX 080308-01 BK7935		W80 24010.087935 SOGX 080308-01 BK7935		M S
24,5	U44 52450	100	133	0,59	U45 52450	125	158	0,63		W80 24010.086115 SOGX 080308-01 BK6115		W80 24010.088425 SOGX 080308-01 BK8425		K H
(0.985) 25,0	U44 52500	100	133	0,60	U45 52500	125	158	0,64		W80 24010.087710 SOGX 080308-01 BK7710		W80 24010.087710 SOGX 080308-01 BK7710		N
25,5	U44 52550	104	137	0,61	U45 52550	130	163	0,66						
26,0	U44 52600	104	137	0,63	U45 52600	130	163	0,68						
26,5	U44 52650	108	142	0,61	U45 52650	135	169	0,66	N00 57251 S3076-8IP 2,25 Nm	W80 28010.088425 SOGX 09T308-01 BK8425	1	W80 28010.088425 SOGX 09T308-01 BK8425	1	P
(1.062) 27,0	U44 52700	108	142	0,62	U45 52700	135	169	0,67		W80 28010.087935 SOGX 09T308-01 BK7935		W80 28010.087935 SOGX 09T308-01 BK7935		M S
27,5	U44 52750	112	146	0,64	U45 52750	140	174	0,70		W80 28010.086115 SOGX 09T308-01 BK6115		W80 28010.088425 SOGX 09T308-01 BK8425		K H
28,0	U44 52800	112	146	0,65	U45 52800	140	174	0,71		W80 28010.087710 SOGX 09T308-01 BK7710		W80 28010.087710 SOGX 09T308-01 BK7710		N
28,5	U44 52850	116	151	0,68	U45 52850	145	180	0,74						
29,0	U44 52900	116	151	0,69	U45 52900	145	180	0,76						
29,5	U44 52950	120	155	0,70	U45 52950	150	185	0,77						
30,0	U44 53000	120	155	0,71	U45 53000	150	185	0,79						

KOMET KUB Pentron

Ø 30,5 – 46,0 mm

Indexable insert drill

for workpiece material P M K N S | 2×D – 5×D | MQL 2×D | 3×D | ABS



				2×D				3×D			
Ø D mm (inch)	**max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	MQL 1-channel system kg	Order No.	N	L	MQL 1-channel system kg
30,5	31,0	2,8	63	U42 63050	62	101	0,93	U43 63050	93	132	1,01
31,0	31,5	2,8	63	U42 63100	62	101	0,93	U43 63100	93	132	1,02
31,5	32,0	2,8	63	U42 63150	64	103	0,95	U43 63150	96	135	1,04
32,0	32,5	2,8	63	U42 63200	64	103	0,96	U43 63200	96	135	1,06
32,5 (1.281)	33,0	2,8	63	U42 63250	66	106	0,99	U43 63250	99	139	1,09
33,0	33,5	2,8	63	U42 63300	66	106	0,99	U43 63300	99	139	1,10
33,5	34,0	3,0	63	U42 63350	68	108	1,00	U43 63350	102	142	1,11
34,0	34,5	3,0	63	U42 63400	68	108	1,00	U43 63400	102	142	1,12
34,5	35,0	3,0	63	U42 63450	70	111	1,03	U43 63450	105	146	1,16
35,0	35,5	3,0	63	U42 63500	70	111	1,04	U43 63500	105	146	1,17
35,5	36,0	3,0	63	U42 63550	72	113	1,06	U43 63550	108	149	1,20
36,0	36,5	3,0	63	U42 63600	72	113	1,07	U43 63600	108	149	1,21
36,5 (1.437)	37,0	3,0	63	U42 63650	74	116	1,10	U43 63650	111	153	1,25
37,0	37,5	3,0	63	U42 63700	74	116	1,11	U43 63700	111	153	1,27
37,5	38,0	3,0	63	U42 63750	76	118	1,12	U43 63750	114	156	1,28
38,0	38,5	3,0	63	U42 63800	76	118	1,13	U43 63800	114	156	1,29
38,5	39,0	3,0	63	U42 63850	78	121	1,16	U43 63850	117	160	1,33
39,0	39,5	3,0	63	U42 63900	78	121	1,18	U43 63900	117	160	1,35
39,5	40,0	3,0	63	U42 63950	80	123	1,20	U43 63950	120	163	1,38
40,0	40,5	3,0	63	U42 64000	80	123	1,21	U43 64000	120	163	1,40
40,5	41,0	3,0	63	U42 64050	82	126	1,25	U43 64050	123	167	1,45
41,0	41,5	3,0	63	U42 64100	82	126	1,26	U43 64100	123	167	1,47
41,5	42,0	3,0	63	U42 64150	84	128	1,28	U43 64150	126	170	1,50
42,0	42,5	3,0	63	U42 64200	84	128	1,30	U43 64200	126	170	1,52
42,5	43,0	3,0	63	U42 64250	86	131	1,31	U43 64250	129	174	1,54
43,0	43,5	3,0	63	U42 64300	86	131	1,33	U43 64300	129	174	1,56
43,5	44,0	3,0	63	U42 64350	88	133	1,35	U43 64350	132	177	1,60
44,0	44,5	3,0	63	U42 64400	88	133	1,37	U43 64400	132	177	1,62
44,5 (1.750)	45,0	3,3	63	U42 64450	90	136	1,41	U43 64450	135	181	1,68
45,0	45,5	3,3	63	U42 64500	90	136	1,42	U43 64500	135	181	1,70
45,5	46,0	3,3	63	U42 64550	92	135	1,43	U43 64550	138	181	1,71
46,0	46,5	3,3	63	U42 64600	92	135	1,44	U43 64600	138	181	1,73

2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐
4×D	●	●	◐	◐	◐	◐	◐	○	◐	✕	◐
5×D	●	●	◐	◐	◐	◐	◐	✕	◐	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 67 | ✕ not possible

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

All intermediate dimensions can be supplied quickly on request.
** Adjustment device see chapter 6

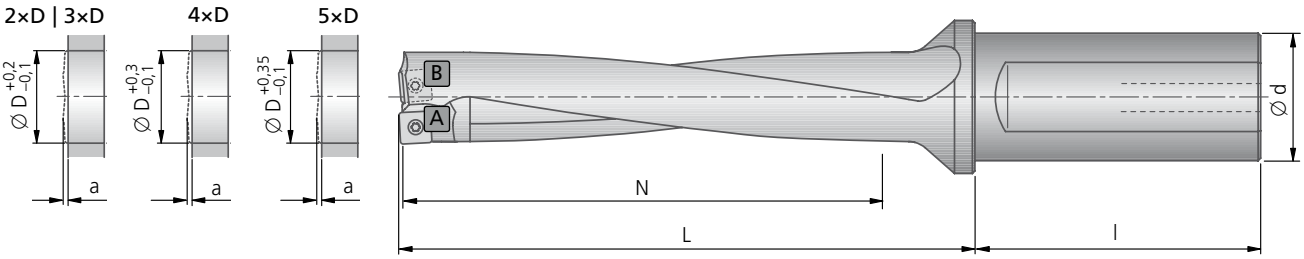
	4×D				5×D					Basic recommendation				
									Clamping screw	Indexable insert A -01		Indexable insert B -01		for workpiece material
Ø	Order No.	N	L	kg	Order No.	N	L	kg	Order No. Article	Order No. ISO code ▽▽ Size	Piece	Order No. ISO code ▽▽ Size	Piece	
30,5	U44 63050	124	163	1,05	U45 63050	155	194	1,13	N00 57261 S3575-15IP 2,8 Nm	W80 32010.088425 SOGX 100408-01 BK8425 W80 32010.087935 SOGX 100408-01 BK7935 W80 32010.086115 SOGX 100408-01 BK6115 W80 32010.087710 SOGX 100408-01 BK7710	1	W80 32010.088425 SOGX 100408-01 BK8425 W80 32010.087935 SOGX 100408-01 BK7935 W80 32010.088425 SOGX 100408-01 BK8425 W80 32010.087710 SOGX 100408-01 BK7710	1	P M S K H N
31,0	U44 63100	124	163	1,07	U45 63100	155	194	1,15						
31,5	U44 63150	128	167	1,10	U45 63150	160	199	1,18						
32,0	U44 63200	128	167	1,11	U45 63200	160	199	1,20						
(1.281) 32,5	U44 63250	132	172	1,15	U45 63250	165	205	1,25						
33,0	U44 63300	132	172	1,17	U45 63300	165	205	1,27						
33,5	U44 63350	136	176	1,18	U45 63350	170	210	1,29	N00 57261 S3575-15IP 2,8 Nm	W80 38010.088425 SOGX 110408-01 BK8425 W80 38010.087935 SOGX 110408-01 BK7935 W80 38010.086115 SOGX 110408-01 BK6115 W80 38010.087710 SOGX 110408-01 BK7710	1	W80 38010.088425 SOGX 110408-01 BK8425 W80 38010.087935 SOGX 110408-01 BK7935 W80 38010.088425 SOGX 110408-01 BK8425 W80 38010.087710 SOGX 110408-01 BK7710	1	P M S K H N
34,0	U44 63400	136	176	1,19	U45 63400	170	210	1,30						
34,5	U44 63450	140	181	1,23	U45 63450	175	216	1,34						
35,0	U44 63500	140	181	1,24	U45 63500	175	216	1,36						
35,5	U44 63550	144	185	1,27	U45 63550	180	221	1,40						
36,0	U44 63600	144	185	1,29	U45 63600	180	221	1,42						
(1.437) 36,5	U44 63650	148	190	1,34	U45 63650	185	227	1,48						
37,0	U44 63700	148	190	1,36	U45 63700	185	227	1,50						
37,5	U44 63750	152	194	1,39	U45 63750	190	232	1,53	N00 57301 S45100-20IP 6,25 Nm	W80 42010.088425 SOGX 120408-01 BK8425 W80 42010.087935 SOGX 120408-01 BK7935 W80 42010.086115 SOGX 120408-01 BK6115 W80 42010.087710 SOGX 120408-01 BK7710	1	W80 42010.088425 SOGX 120408-01 BK8425 W80 42010.087935 SOGX 120408-01 BK7935 W80 42010.088425 SOGX 120408-01 BK8425 W80 42010.087710 SOGX 120408-01 BK7710	1	P M S K H N
38,0	U44 63800	152	194	1,40	U45 63800	190	232	1,55						
38,5	U44 63850	156	199	1,43	U45 63850	195	238	1,58						
39,0	U44 63900	156	199	1,44	U45 63900	195	238	1,60						
39,5	U44 63950	160	203	1,49	U45 63950	200	243	1,65						
40,0	U44 64000	160	203	1,51	U45 64000	200	243	1,68						
40,5	U44 64050	164	208	1,56	U45 64050	205	249	1,74						
41,0	U44 64100	164	208	1,58	U45 64100	205	249	1,77						
41,5	U44 64150	168	212	1,63	U45 64150	210	254	1,83						
42,0	U44 64200	168	212	1,65	U45 64200	210	254	1,86						
42,5	U44 64250	172	217	1,68	U45 64250	215	260	1,90	N00 57301 S45100-20IP 6,25 Nm	W80 46010.088425 SOGX 130508-01 BK8425 W80 46010.087935 SOGX 130508-01 BK7935 W80 46010.086115 SOGX 130508-01 BK6115 W80 46010.087710 SOGX 130508-01 BK7710	1	W80 46010.088425 SOGX 130508-01 BK8425 W80 46010.087935 SOGX 130508-01 BK7935 W80 46010.088425 SOGX 130508-01 BK8425 W80 46010.087710 SOGX 130508-01 BK7710	1	P M S K H N
43,0	U44 64300	172	217	1,70	U45 64300	215	260	1,92						
43,5	U44 64350	176	221	1,75	U45 64350	220	265	1,99						
44,0	U44 64400	176	221	1,78	U45 64400	220	265	2,02						
(1.750) 44,5	U44 64450	180	226	1,84	U45 64450	225	271	2,09						
45,0	U44 64500	180	226	1,87	U45 64500	225	271	2,13						
45,5	U44 64550	184	230	1,93	U45 64550	230	276	2,20						
46,0	U44 64600	184	230	1,96	U45 64600	230	276	2,24						

KOMET KUB Pentron

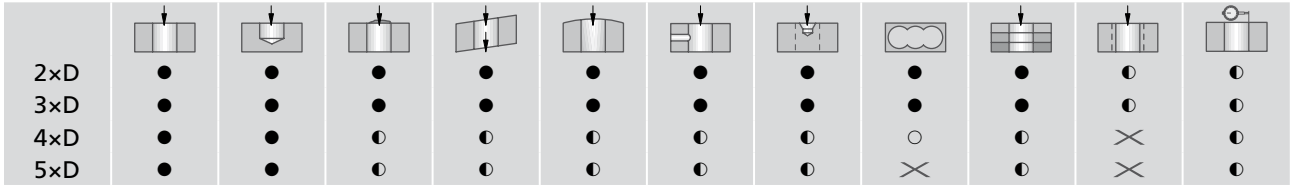
Ø 14,0 – 30,0 mm

Indexable insert drill

for workpiece material P M K N S | 2×D – 5×D | MQL 2×D | 3×D | ISO 9766



				2×D				3×D			
Ø D mm (inch)	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	MQL 1-channel system kg	Order No.	N	L	MQL 1-channel system kg
14,0	14,5	1,5	20×50	**U42 01400**	28	41	0,12	**U43 01400**	42	55	0,13
14,5	15,0	1,5	20×50	**U42 01450**	30	44	0,13	**U43 01450**	45	59	0,14
15,0	15,5	1,5	20×50	**U42 01500**	30	44	0,13	**U43 01500**	45	59	0,14
15,5	16,0	1,5	20×50	**U42 01550**	32	48	0,14	**U43 01550**	48	64	0,14
16,0	16,5	1,5	20×50	**U42 01600**	32	48	0,14	**U43 01600**	48	64	0,15
16,5	17,0	1,5	20×50	**U42 01650**	34	51	0,14	**U43 01650**	51	68	0,15
17,0	17,5	1,5	20×50	**U42 01700**	34	51	0,14	**U43 01700**	51	68	0,15
17,5 (0.687)	18,0	1,5	25×56	**U42 11750**	36	53	0,22	**U43 11750**	54	71	0,23
18,0	18,5	1,9	25×56	**U42 11800**	36	53	0,22	**U43 11800**	54	71	0,24
18,5	19,0	1,9	25×56	**U42 11850**	38	56	0,22	**U43 11850**	55,5	75	0,24
19,0	19,5	1,9	25×56	**U42 11900**	38	56	0,23	**U43 11900**	57	75	0,24
19,5	20,0	1,9	25×56	**U42 11950**	40	58	0,23	**U43 11950**	60	78	0,25
20,0	20,5	1,9	25×56	**U42 12000**	40	58	0,23	**U43 12000**	60	78	0,25
20,5	21,0	1,9	25×56	**U42 12050**	42	61	0,25	**U43 12050**	61,5	82	0,27
21,0 (0.828)	21,5	1,9	25×56	**U42 12100**	44	63	0,25	**U43 12100**	66	85	0,28
21,5	22,0	2,4	25×56	**U42 12150**	44	63	0,26	**U43 12150**	66	85	0,28
22,0	22,5	2,4	25×56	**U42 12200**	44	63	0,26	**U43 12200**	66	85	0,29
22,5	23,0	2,4	25×56	**U42 12250**	46	66	0,27	**U43 12250**	69	89	0,30
23,0 (0.906)	23,5	2,4	25×56	**U42 12300**	46	66	0,27	**U43 12300**	69	89	0,31
23,5	24,0	2,4	32×60	**U42 22350**	48	68	0,42	**U43 22350**	72	92	0,46
24,0	24,5	2,4	32×60	**U42 22400**	48	68	0,43	**U43 22400**	72	92	0,46
24,5	25,0	2,4	32×60	**U42 22450**	49	71	0,44	**U43 22450**	75	96	0,48
25,0 (0.985)	25,5	2,4	32×60	**U42 22500**	50	71	0,44	**U43 22500**	75	96	0,48
25,5	26,0	2,4	32×60	**U42 22550**	52	73	0,45	**U43 22550**	78	99	0,50
26,0	26,5	2,4	32×60	**U42 22600**	52	73	0,46	**U43 22600**	78	99	0,50
26,5	27,0	2,4	32×60	**U42 22650**	54	76	0,47	**U43 22650**	81	103	0,53
27,0 (1.062)	27,5	2,8	32×60	**U42 22700**	54	76	0,47	**U43 22700**	81	103	0,54
27,5	28,0	2,8	32×60	**U42 22750**	56	78	0,48	**U43 22750**	84	106	0,56
28,0	28,5	2,8	32×60	**U42 22800**	56	78	0,48	**U43 22800**	84	106	0,57
28,5	29,0	2,8	32×60	**U42 22850**	58	81	0,50	**U43 22850**	87	110	0,59
29,0	29,5	2,8	32×60	**U42 22900**	58	81	0,50	**U43 22900**	87	110	0,60
29,5	30,0	2,8	32×60	**U42 22950**	60	83	0,51	**U43 22950**	90	113	0,61
30,0	30,5	2,8	32×60	**U42 23000**	60	83	0,52	**U43 23000**	90	113	0,62



2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐
4×D	●	●	◐	◐	◐	◐	◐	○	◐	✕	◐
5×D	●	●	◐	◐	◐	◐	◐	✕	◐	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 67 | ✕ not possible

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

All intermediate dimensions can be supplied quickly on request.

	4×D				5×D					Basic recommendation				
									Clamping screw	Indexable insert A -01		Indexable insert B -01		for workpiece material
Ø	Order No.	N	L	kg	Order No.	N	L	kg	Order No. Article	Order No. ISO code ▽▽ Size	Piece	Order No. ISO code ▽▽ Size	Piece	
14,0	U44 01400	56	69	0,14	U45 01400	70	83	0,15	N00 56051 S/M1,8×3,85-5IP 0,38 Nm	W80 10010.048425 SOGX 040204-01 BK8425	1	W80 10010.048425 SOGX 040204-01 BK8425	1	P
14,5	U44 01450	60	74	0,15	U45 01450	75	89	0,16		W80 10010.047935 SOGX 040204-01 BK7935		W80 10010.047935 SOGX 040204-01 BK7935		M S
15,0	U44 01500	60	74	0,15	U45 01500	75	89	0,16		W80 10010.046115 SOGX 040204-01 BK6115		W80 10010.048425 SOGX 040204-01 BK8425		K H
15,5	U44 01550	64	80	0,16	U45 01550	80	96	0,17		W80 10010.047710 SOGX 040204-01 BK7710		W80 10010.047710 SOGX 040204-01 BK7710		N
16,0	U44 01600	64	80	0,16	U45 01600	80	96	0,17						
16,5	U44 01650	68	85	0,17	U45 01650	85	102	0,18	N00 56041 S/M2×4,3-6IP 0,62 Nm	W80 12010.048425 SOGX 050204-01 BK8425	1	W80 12010.048425 SOGX 050204-01 BK8425	1	P
17,0	U44 01700	68	85	0,17	U45 01700	85	102	0,19		W80 12010.047935 SOGX 050204-01 BK7935		W80 12010.047935 SOGX 050204-01 BK7935		M S
(0.687) 17,5	U44 11750	72	89	0,25	U45 11750	90	107	0,27		W80 12010.046115 SOGX 050204-01 BK6115		W80 12010.048425 SOGX 050204-01 BK8425		K H
18,0	U44 11800	72	89	0,26	U45 11800	90	107	0,28		W80 12010.047710 SOGX 050204-01 BK7710		W80 12010.047710 SOGX 050204-01 BK7710		N
18,5	U44 11850	76	94	0,26	U45 11850	95	113	0,28	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W80 18010.068425 SOGX 060206-01 BK8425	1	W80 18010.068425 SOGX 060206-01 BK8425	1	P
19,0	U44 11900	76	94	0,27	U45 11900	95	113	0,29		W80 18010.067935 SOGX 060206-01 BK7935		W80 18010.067935 SOGX 060206-01 BK7935		M S
19,5	U44 11950	80	98	0,28	U45 11950	100	118	0,30		W80 18010.066115 SOGX 060206-01 BK6115		W80 18010.068425 SOGX 060206-01 BK8425		K H
20,0	U44 12000	80	98	0,29	U45 12000	100	118	0,31		W80 18010.067710 SOGX 060206-01 BK7710		W80 18010.067710 SOGX 060206-01 BK7710		N
20,5	U44 12050	84	103	0,31	U45 12050	105	124	0,33	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W80 20010.088425 SOGX 07T208-01 BK8425	1	W80 20010.088425 SOGX 07T208-01 BK8425	1	P
(0.828) 21,0	U44 12100	84	103	0,31	U45 12100	105	124	0,34		W80 20010.087935 SOGX 07T208-01 BK7935		W80 20010.087935 SOGX 07T208-01 BK7935		M S
21,5	U44 12150	88	107	0,32	U45 12150	110	129	0,35		W80 20010.086115 SOGX 07T208-01 BK6115		W80 20010.088425 SOGX 07T208-01 BK8425		K H
22,0	U44 12200	88	107	0,33	U45 12200	110	129	0,36		W80 20010.087710 SOGX 07T208-01 BK7710		W80 20010.087710 SOGX 07T208-01 BK7710		N
22,5	U44 12250	92	112	0,35	U45 12250	115	135	0,38						
(0.906) 23,0	U44 12300	92	112	0,36	U45 12300	115	135	0,39						
23,5	U44 22350	96	116	0,51	U45 22350	120	140	0,54	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	W80 24010.088425 SOGX 080308-01 BK8425	1	W80 24010.088425 SOGX 080308-01 BK8425	1	P
24,0	U44 22400	96	116	0,51	U45 22400	120	140	0,55		W80 24010.087935 SOGX 080308-01 BK7935		W80 24010.087935 SOGX 080308-01 BK7935		M S
24,5	U44 22450	100	121	0,54	U45 22450	125	146	0,59		W80 24010.086115 SOGX 080308-01 BK6115		W80 24010.088425 SOGX 080308-01 BK8425		K H
(0.985) 25,0	U44 22500	100	121	0,55	U45 22500	125	146	0,60		W80 24010.087710 SOGX 080308-01 BK7710		W80 24010.087710 SOGX 080308-01 BK7710		N
25,5	U44 22550	104	125	0,56	U45 22550	130	151	0,61						
26,0	U44 22600	104	125	0,57	U45 22600	130	151	0,62						
26,5	U44 22650	108	130	0,57	U45 22650	135	157	0,63	N00 57251 S3076-8IP 2,25 Nm	W80 28010.088425 SOGX 09T308-01 BK8425	1	W80 28010.088425 SOGX 09T308-01 BK8425	1	P
(1.062) 27,0	U44 22700	108	130	0,58	U45 22700	135	157	0,64		W80 28010.087935 SOGX 09T308-01 BK7935		W80 28010.087935 SOGX 09T308-01 BK7935		M S
27,5	U44 22750	112	134	0,60	U45 22750	140	162	0,66		W80 28010.086115 SOGX 09T308-01 BK6115		W80 28010.088425 SOGX 09T308-01 BK8425		K H
28,0	U44 22800	112	134	0,62	U45 22800	140	162	0,68		W80 28010.087710 SOGX 09T308-01 BK7710		W80 28010.087710 SOGX 09T308-01 BK7710		N
28,5	U44 22850	116	139	0,64	U45 22850	145	168	0,71						
29,0	U44 22900	116	139	0,65	U45 22900	145	168	0,72						
29,5	U44 22950	120	143	0,66	U45 22950	150	173	0,73						
30,0	U44 23000	120	143	0,67	U45 23000	150	173	0,75						

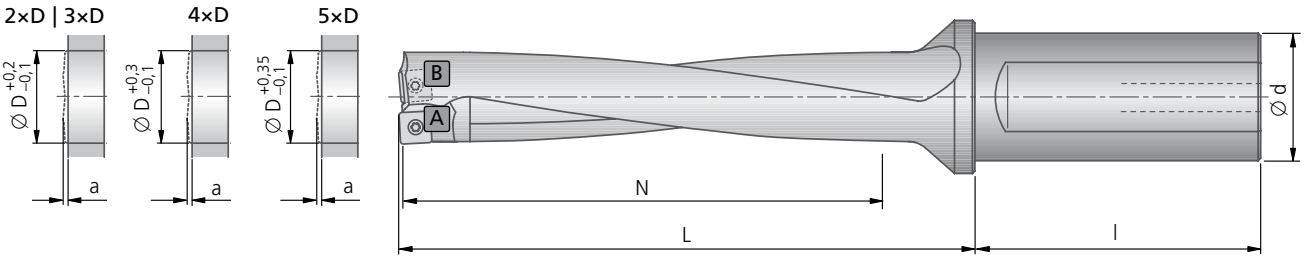
Guideline values for solid drilling: pages 60-65 / alternative inserts: page 66.

KOMET KUB Pentron

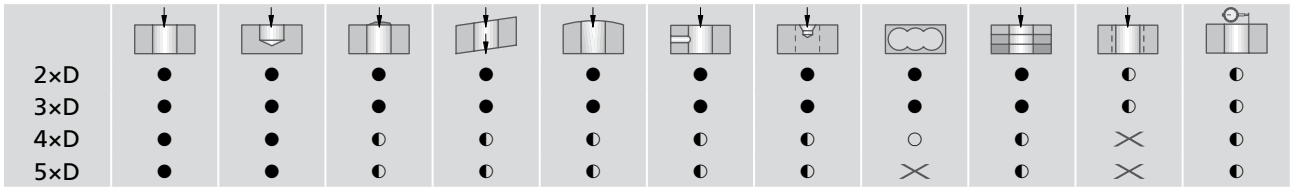
Ø 30,5 – 46,0 mm

Indexable insert drill

for workpiece material P M K N S | 2×D – 5×D | MQL 2×D | 3×D | ISO 9766



				2×D				3×D			
Ø D mm (inch)	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	MQL 1-channel system kg	Order No.	N	L	MQL 1-channel system kg
30,5	31,0	2,8	40x68	**U42 33050**	62	86	0,75	**U43 33050**	93	117	0,85
31,0	31,5	2,8	40x68	**U42 33100**	62	86	0,75	**U43 33100**	93	117	0,86
31,5	32,0	2,8	40x68	**U42 33150**	64	88	0,77	**U43 33150**	96	120	0,88
32,0	32,5	2,8	40x68	**U42 33200**	64	88	0,77	**U43 33200**	96	120	0,90
32,5 (1.281)	33,0	2,8	40x68	**U42 33250**	66	91	0,79	**U43 33250**	99	124	0,93
33,0	33,5	2,8	40x68	**U42 33300**	66	91	0,80	**U43 33300**	99	124	0,94
33,5	34,0	3,0	40x68	**U42 33350**	68	93	0,81	**U43 33350**	102	127	0,94
34,0	34,5	3,0	40x68	**U42 33400**	68	93	0,82	**U43 33400**	102	127	0,96
34,5	35,0	3,0	40x68	**U42 33450**	70	96	0,83	**U43 33450**	105	131	0,99
35,0	35,5	3,0	40x68	**U42 33500**	70	96	0,84	**U43 33500**	105	131	1,00
35,5	36,0	3,0	40x68	**U42 33550**	72	98	0,86	**U43 33550**	108	134	1,03
36,0	36,5	3,0	40x68	**U42 33600**	72	98	0,87	**U43 33600**	108	134	1,04
36,5 (1.437)	37,0	3,0	40x68	**U42 33650**	73	101	0,90	**U43 33650**	111	138	1,08
37,0	37,5	3,0	40x68	**U42 33700**	74	101	0,91	**U43 33700**	111	138	1,09
37,5	38,0	3,0	40x68	**U42 33750**	76	103	0,91	**U43 33750**	114	141	1,11
38,0	38,5	3,0	40x68	**U42 33800**	76	103	0,92	**U43 33800**	114	141	1,12
38,5	39,0	3,0	40x68	**U42 33850**	78	106	0,95	**U43 33850**	117	145	1,16
39,0	39,5	3,0	40x68	**U42 33900**	78	106	0,96	**U43 33900**	117	145	1,18
39,5	40,0	3,0	40x68	**U42 33950**	80	108	0,98	**U43 33950**	120	148	1,21
40,0	40,5	3,0	40x68	**U42 34000**	80	108	0,99	**U43 34000**	120	148	1,23
40,5	41,0	3,0	40x68	**U42 34050**	82	111	1,04	**U43 34050**	123	152	1,27
41,0	41,5	3,0	40x68	**U42 34100**	82	111	1,06	**U43 34100**	123	152	1,29
41,5	42,0	3,0	40x68	**U42 34150**	84	113	1,06	**U43 34150**	126	155	1,32
42,0	42,5	3,0	40x68	**U42 34200**	84	113	1,07	**U43 34200**	126	155	1,34
42,5	43,0	3,0	40x68	**U42 34250**	86	116	1,09	**U43 34250**	129	159	1,36
43,0	43,5	3,0	40x68	**U42 34300**	86	116	1,11	**U43 34300**	129	159	1,38
43,5	44,0	3,0	40x68	**U42 34350**	88	118	1,13	**U43 34350**	132	162	1,42
44,0	44,5	3,0	40x68	**U42 34400**	88	118	1,15	**U43 34400**	132	162	1,44
44,5 (1.750)	45,0	3,3	40x68	**U42 34450**	90	121	1,22	**U43 34450**	135	166	1,49
45,0	45,5	3,3	40x68	**U42 34500**	90	121	1,24	**U43 34500**	135	166	1,51
45,5	46,0	3,3	40x68	**U42 34550**	92	123	1,27	**U43 34550**	138	169	1,55
46,0	46,5	3,3	40x68	**U42 34600**	92	123	1,29	**U43 34600**	138	169	1,58



2×D	●	●	●	●	●	●	●	●	●	◐	◐
3×D	●	●	●	●	●	●	●	●	●	◐	◐
4×D	●	●	◐	◐	◐	◐	◐	○	◐	✕	◐
5×D	●	●	◐	◐	◐	◐	◐	✕	◐	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 67 | ✕ not possible

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

All intermediate dimensions can be supplied quickly on request.

	4×D				5×D					Basic recommendation				
									Clamping screw	Indexable insert A -01		Indexable insert B -01		for workpiece material
∅	Order No.	N	L	kg	Order No.	N	L	kg	Order No. Article	Order No. ISO code ▽▽ Size	Piece	Order No. ISO code ▽▽ Size	Piece	
30,5	U44 33050	124	148	0,90	U45 33050	155	179	1,00	N00 57261 S3575-15IP 2,8 Nm	W80 32010.088425 SOGX 100408-01 BK8425	1	W80 32010.088425 SOGX 100408-01 BK8425	1	P
31,0	U44 33100	124	148	0,92	U45 33100	155	179	1,01		W80 32010.087935 SOGX 100408-01 BK7935		W80 32010.087935 SOGX 100408-01 BK7935		M S
31,5	U44 33150	128	152	0,96	U45 33150	160	184	1,05		W80 32010.086115 SOGX 100408-01 BK6115		W80 32010.088425 SOGX 100408-01 BK8425		K H
32,0	U44 33200	128	152	0,97	U45 33200	160	184	1,06		W80 32010.087710 SOGX 100408-01 BK7710		W80 32010.087710 SOGX 100408-01 BK7710		N
(1.281) 32,5	U44 33250	132	157	1,01	U45 33250	165	190	1,10						
33,0	U44 33300	132	157	1,02	U45 33300	165	190	1,12						
33,5	U44 33350	136	161	1,03	U45 33350	170	195	1,14	N00 57261 S3575-15IP 2,8 Nm	W80 38010.088425 SOGX 110408-01 BK8425	1	W80 38010.088425 SOGX 110408-01 BK8425	1	P
34,0	U44 33400	136	161	1,04	U45 33400	170	195	1,15		W80 38010.087935 SOGX 110408-01 BK7935		W80 38010.087935 SOGX 110408-01 BK7935		M S
34,5	U44 33450	140	166	1,08	U45 33450	175	201	1,19		W80 38010.086115 SOGX 110408-01 BK6115		W80 38010.088425 SOGX 110408-01 BK8425		K H
35,0	U44 33500	140	166	1,09	U45 33500	175	201	1,21		W80 38010.087710 SOGX 110408-01 BK7710		W80 38010.087710 SOGX 110408-01 BK7710		N
35,5	U44 33550	144	170	1,13	U45 33550	180	206	1,25						
36,0	U44 33600	144	170	1,14	U45 33600	180	206	1,27						
(1.437) 36,5	U44 33650	148	175	1,18	U45 33650	185	212	1,32						
37,0	U44 33700	148	175	1,20	U45 33700	185	212	1,34						
37,5	U44 33750	152	179	1,23	U45 33750	190	217	1,37	N00 57301 S45100-20IP 6,25 Nm	W80 42010.088425 SOGX 120408-01 BK8425	1	W80 42010.088425 SOGX 120408-01 BK8425	1	P
38,0	U44 33800	152	179	1,24	U45 33800	190	217	1,39		W80 42010.087935 SOGX 120408-01 BK7935		W80 42010.087935 SOGX 120408-01 BK7935		M S
38,5	U44 33850	156	184	1,28	U45 33850	195	223	1,43		W80 42010.086115 SOGX 120408-01 BK6115		W80 42010.088425 SOGX 120408-01 BK8425		K H
39,0	U44 33900	156	184	1,29	U45 33900	195	223	1,45		W80 42010.087710 SOGX 120408-01 BK7710		W80 42010.087710 SOGX 120408-01 BK7710		N
39,5	U44 33950	160	188	1,34	U45 33950	200	228	1,50						
40,0	U44 34000	160	188	1,35	U45 34000	200	228	1,52						
40,5	U44 34050	164	193	1,40	U45 34050	205	234	1,58						
41,0	U44 34100	164	193	1,42	U45 34100	205	234	1,61						
41,5	U44 34150	168	197	1,47	U45 34150	210	239	1,67						
42,0	U44 34200	168	197	1,49	U45 34200	210	239	1,70						
42,5	U44 34250	172	202	1,53	U45 34250	215	245	1,74	N00 57301 S45100-20IP 6,25 Nm	W80 46010.088425 SOGX 130508-01 BK8425	1	W80 46010.088425 SOGX 130508-01 BK8425	1	P
43,0	U44 34300	172	202	1,54	U45 34300	215	245	1,76		W80 46010.087935 SOGX 130508-01 BK7935		W80 46010.087935 SOGX 130508-01 BK7935		M S
43,5	U44 34350	176	206	1,60	U45 34350	220	250	1,82		W80 46010.086115 SOGX 130508-01 BK6115		W80 46010.088425 SOGX 130508-01 BK8425		K H
44,0	U44 34400	176	206	1,62	U45 34400	220	250	1,85		W80 46010.087710 SOGX 130508-01 BK7710		W80 46010.087710 SOGX 130508-01 BK7710		N
(1.750) 44,5	U44 34450	180	211	1,68	U45 34450	225	256	1,92						
45,0	U44 34500	180	211	1,70	U45 34500	225	256	1,96						
45,5	U44 34550	184	215	1,76	U45 34550	230	261	2,03						
46,0	U44 34600	184	215	1,79	U45 34600	230	261	2,07						

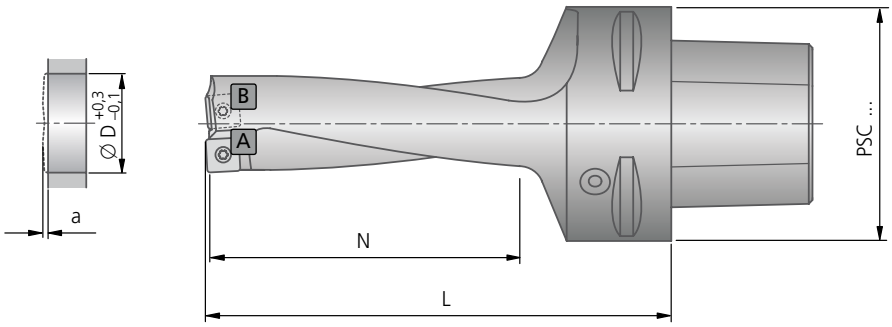
Guideline values for solid drilling: pages 60-65 / alternative inserts: page 66.

KOMET KUB Pentron

Ø 14,0 – 30,0 mm

Indexable insert drill

for workpiece material P M K N S | 3×D | PSC ISO 26623



				PSC 50			PSC 63			
Ø D mm (inch)	max. diameter with offset	Starting / roughing size a	N	Order No.	L	kg	Order No.	L	kg	
14,0	14,5	1,5	42	U40 61400	73	0,415	–			
14,5	15,0	1,5	45	U40 61450	77	0,411	–			
15,0	15,5	1,5	45	U40 61500	77	0,414	–			
15,5	16,0	1,5	48	U40 61550	82	0,419	–			
16,0	16,5	1,5	48	U40 61600	82	0,429	U40 71600	86	0,78	
16,5	17,0	1,5	51	U40 61650	86	0,431	U40 71650	90	0,75	
17,0	17,5	1,5	51	U40 61700	86	0,435	U40 71700	90	0,75	
17,5 (0.687)	18,0	1,5	54	U40 61750	89	0,441	U40 71750	93	0,76	
18,0	18,5	1,9	54	U40 61800	89	0,445	U40 71800	93	0,76	
18,5	19,0	1,9	57	U40 61850	93	0,447	U40 71850	97	0,77	
19,0	19,5	1,9	57	U40 61900	93	0,451	U40 71900	97	0,77	
19,5	20,0	1,9	60	U40 61950	96	0,458	U40 71950	100	0,78	
20,0	20,5	1,9	60	U40 62000	96	0,463	U40 72000	100	0,78	
20,5	21,0	1,9	63	U40 62050	100	0,483	U40 72050	104	0,81	
21,0 (0.828)	21,5	1,9	63	U40 62100	100	0,488	U40 72100	104	0,81	
21,5	22,0	2,4	66	U40 62150	103	0,498	U40 72150	107	0,82	
22,0	22,5	2,4	66	U40 62200	103	0,504	U40 72200	107	0,83	
22,5	23,0	2,4	69	U40 62250	107	0,523	U40 72250	111	0,85	
23,0 (0.906)	23,5	2,4	69	U40 62300	107	0,530	U40 72300	111	0,86	
23,5	24,0	2,4	72	U40 62350	110	0,529	U40 72350	114	0,86	
24,0	24,5	2,4	72	U40 62400	110	0,536	U40 72400	114	0,86	
24,5	25,0	2,4	75	U40 62450	114	0,556	U40 72450	118	0,89	
25,0 (0.985)	25,5	2,4	75	U40 62500	114	0,563	U40 72500	118	0,89	
25,5	26,0	2,4	78	U40 62550	117	0,577	U40 72550	121	0,91	
26,0	26,5	2,4	78	U40 62600	117	0,585	U40 72600	121	0,92	
26,5	27,0	2,4	81	U40 62650	121	0,598	U40 72650	125	0,93	
27,0 (1.062)	27,5	2,8	81	U40 62700	121	0,607	U40 72700	125	0,94	
27,5	28,0	2,8	84	U40 62750	124	0,622	U40 72750	128	0,96	
28,0	28,5	2,8	84	U40 62800	124	0,631	U40 72800	128	0,97	
28,5	29,0	2,8	87	U40 62850	128	0,655	U40 72850	132	0,99	
29,0	29,5	2,8	87	U40 62900	128	0,665	U40 72900	132	1,00	
29,5	30,0	2,8	90	U40 62950	131	0,683	U40 72950	135	1,02	
30,0	30,5	2,8	90	U40 63000	131	0,693	U40 73000	135	1,03	

3×D											◐	◐

● very good | ◐ good | ○ possible: see technical notes, page 67 | ✕ not possible

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

All intermediate dimensions can be supplied quickly on request.

	Clamping screw	Basic recommendation						for workpiece material
		Indexable insert A -01			Indexable insert B -01			
	Order No. Article	ISO code	**Order No.** ▽▽ Size	Piece	ISO code	**Order No.** ▽▽ Size	Piece	
	N00 56051 S/M1,8×3,85-5IP 0,38 Nm	SOGX 040204-01 BK8425 SOGX 040204-01 BK7935 SOGX 040204-01 BK6115 SOGX 040204-01 BK7710	**W80 10010.048425** **W80 10010.047935** **W80 10010.046115** **W80 10010.047710**	1	SOGX 040204-01 BK8425 SOGX 040204-01 BK7935 SOGX 040204-01 BK8425 SOGX 040204-01 BK7710	**W80 10010.048425** **W80 10010.047935** **W80 10010.048425** **W80 10010.047710**	1	P M S K H N
	N00 56041 S/M2×4,3-6IP 0,62 Nm	SOGX 050204-01 BK8425 SOGX 050204-01 BK7935 SOGX 050204-01 BK6115 SOGX 050204-01 BK7710	**W80 12010.048425** **W80 12010.047935** **W80 12010.046115** **W80 12010.047710**	1	SOGX 050204-01 BK8425 SOGX 050204-01 BK7935 SOGX 050204-01 BK8425 SOGX 050204-01 BK7710	**W80 12010.048425** **W80 12010.047935** **W80 12010.048425** **W80 12010.047710**	1	P M S K H N
	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	SOGX 060206-01 BK8425 SOGX 060206-01 BK7935 SOGX 060206-01 BK6115 SOGX 060206-01 BK7710	**W80 18010.068425** **W80 18010.067935** **W80 18010.066115** **W80 18010.067710**	1	SOGX 060206-01 BK8425 SOGX 060206-01 BK7935 SOGX 060206-01 BK8425 SOGX 060206-01 BK7710	**W80 18010.068425** **W80 18010.067935** **W80 18010.068425** **W80 18010.067710**	1	P M S K H N
	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK7935 SOGX 07T208-01 BK6115 SOGX 07T208-01 BK7710	**W80 20010.088425** **W80 20010.087935** **W80 20010.086115** **W80 20010.087710**	1	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK7935 SOGX 07T208-01 BK8425 SOGX 07T208-01 BK7710	**W80 20010.088425** **W80 20010.087935** **W80 20010.088425** **W80 20010.087710**	1	P M S K H N
	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	SOGX 080308-01 BK8425 SOGX 080308-01 BK7935 SOGX 080308-01 BK6115 SOGX 080308-01 BK7710	**W80 24010.088425** **W80 24010.087935** **W80 24010.086115** **W80 24010.087710**	1	SOGX 080308-01 BK8425 SOGX 080308-01 BK7935 SOGX 080308-01 BK8425 SOGX 080308-01 BK7710	**W80 24010.088425** **W80 24010.087935** **W80 24010.088425** **W80 24010.087710**	1	P M S K H N
	N00 57251 S3076-8IP 2,25 Nm	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK7935 SOGX 09T308-01 BK6115 SOGX 09T308-01 BK7710	**W80 28010.088425** **W80 28010.087935** **W80 28010.086115** **W80 28010.087710**	1	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK7935 SOGX 09T308-01 BK8425 SOGX 09T308-01 BK7710	**W80 28010.088425** **W80 28010.087935** **W80 28010.088425** **W80 28010.087710**	1	P M S K H N

Guideline values for solid drilling: pages 60-65 / alternative inserts: page 66.

Recommended cutting data

Guideline values for solid drilling						Cutting speed v_c (m/min) 2×D | 3×D																	
						BK8425			BK7935			BK6425			BK6115			BK7710		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	270	**320**	370	250	**300**	350			
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**280**	320	250	**270**	300			
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	**260**	320	160	**220**	280	270	**320**	370	250	**300**	350			
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	220	**260**	300	200	**240**	280			
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	120	**160**	200	100	**140**	180	190	**220**	250	170	**200**	230			
P	4.1			HSS		50	**70**	90	40	**60**	80	80	**100**	120	70	**90**	110			
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80									
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				40	**60**	80							40	**60**	80
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	**170**	210	140	**180**	220	190	**220**	250	210	**240**	270			
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	120	**150**	200	120	**160**	200	170	**200**	230	190	**220**	250			
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	**150**	190	120	**160**	200	170	**200**	230	190	**220**	250			
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	110	**150**	190	150	**200**	250	160	**240**	320			
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180	100	**140**	180			
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200	120	**160**	200			
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180	100	**140**	180			
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130	70	**100**	130			
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250							150	**250**	350
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400							250	**350**	450
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500							300	**500**	700
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320							210	**280**	350
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250							140	**220**	300
H	15.0	1400		hardened steels < 45 HRC	BK8425 BK6115	80	**120**	140							80	**120**	140			
H	16.0	1800		hardened steels > 45 HRC		60	**100**	140							60	**100**	140			

Cutting values shown are relating to the basic recommendations for cutting materials given.

| | Feed f (mm/rev) | | |

KOMET KUB Pentron

Ø 14,0 – 46,0 mm

Recommended cutting data

Guideline values for solid drilling						Cutting speed v_c (m/min)														
						4×D														
						 BK8425			 BK7935			 BK6425			 BK6115			 BK7710		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	270	**320**	370	250	**300**	350			
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**280**	320	250	**270**	300			
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	**260**	320	160	**220**	280	270	**320**	370	250	**300**	350			
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	220	**260**	300	200	**240**	280			
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	120	**160**	200	100	**140**	180	190	**220**	250	170	**200**	230			
P	4.1			HSS		50	**70**	90	40	**60**	80	80	**100**	120	70	**90**	110			
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80									
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				40	**60**	80							40	**60**	80
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	**170**	210	140	**180**	220	190	**220**	250	210	**240**	270			
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	120	**150**	200	120	**160**	200	170	**200**	230	190	**220**	250			
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	**150**	190	120	**160**	200	170	**200**	230	190	**220**	250			
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	110	**150**	190	150	**200**	250	160	**240**	320			
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180	100	**140**	180			
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200	120	**160**	200			
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180	100	**140**	180			
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130	70	**100**	130			
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250							150	**250**	350
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400							250	**350**	450
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500							300	**500**	700
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320							210	**280**	350
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250							140	**220**	300
H	15.0	1400		hardened steels < 45 HRC								on request								
H	16.0	1800		hardened steels > 45 HRC								on request								

Cutting values shown are relating to the basic recommendations for cutting materials given.

| | Feed f (mm/rev) | | |

Recommended cutting data

Guideline values for solid drilling						Cutting speed v_c (m/min)														
						5×D														
						 BK8425			 BK7935			 BK6425			 BK6115			 BK7710		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	270	**320**	370	250	**300**	350			
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**280**	320	250	**270**	300			
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	**260**	320	160	**220**	280	270	**320**	370	250	**300**	350			
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	220	**260**	300	200	**240**	280			
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	120	**160**	200	100	**140**	180	190	**220**	250	170	**200**	230			
P	4.1			HSS		50	**70**	90	40	**60**	80	80	**100**	120	70	**90**	110			
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80									
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				40	**60**	80							40	**60**	80
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	**170**	210	140	**180**	220	190	**220**	250	210	**240**	270			
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	120	**150**	200	120	**160**	200	170	**200**	230	190	**220**	250			
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	**150**	190	120	**160**	200	170	**200**	230	190	**220**	250			
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	110	**150**	190	150	**200**	250	160	**240**	320			
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180	100	**140**	180			
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200	120	**160**	200			
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180	100	**140**	180			
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150	90	**120**	150			
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130	70	**100**	130			
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250							150	**250**	350
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400							250	**350**	450
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500							300	**500**	700
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320							210	**280**	350
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250							140	**220**	300
H	15.0	1400		hardened steels < 45 HRC								on request								
H	16.0	1800		hardened steels > 45 HRC								on request								

Cutting values shown are relating to the basic recommendations for cutting materials given.

| | Feed f (mm/rev) | | |

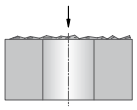
KOMET KUB Pentron

Alternative inserts

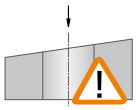
for better chip control			
Ø D	Indexable insert Order No.	ISO code	for work-piece material
14,0 – 16,0	W80 10030.048430	SOGX 040204-03 BK8430	P M
16,1 – 18,0	W80 12030.048430	SOGX 050204-03 BK8430	P M
18,1 – 20,0	W80 18030.068430	SOGX 060206-03 BK8430	P M
20,1 – 23,0	W80 20030.088430	SOGX 07T208-03 BK8430	P M
23,1 – 26,0	W80 24030.088430	SOGX 080308-03 BK8430	P M
26,1 – 30,0	W80 28030.088430	SOGX 09T308-03 BK8430	P M
30,1 – 33,0	W80 32030.088430	SOGX 100408-03 BK8430	P M
33,1 – 37,0	W80 38030.088430	SOGX 110408-03 BK8430	P M
37,1 – 42,0	W80 42030.088430	SOGX 120408-03 BK8430	P M
42,1 – 46,0	W80 46030.088430	SOGX 130508-03 BK8430	P M

for higher cutting speed			
Ø D	Indexable insert Order No.	ISO code	for work-piece material
14,0 – 16,0	W80 10010.046425 W80 10010.046115	SOGX 040204-01 BK6425 SOGX 040204-01 BK6115 ⚠	P M
16,1 – 18,0	W80 12010.046425 W80 12010.046115	SOGX 050204-01 BK6425 SOGX 050204-01 BK6115 ⚠	P M
18,1 – 20,0	W80 18010.066425 W80 18010.066115	SOGX 060206-01 BK6425 SOGX 060206-01 BK6115 ⚠	P M
20,1 – 23,0	W80 20010.086425 W80 20010.086115	SOGX 07T208-01 BK6425 SOGX 07T208-01 BK6115 ⚠	P M
23,1 – 26,0	W80 24010.086425 W80 24010.086115	SOGX 080308-01 BK6425 SOGX 080308-01 BK6115 ⚠	P M
26,1 – 30,0	W80 28010.086425 W80 28010.086115	SOGX 09T308-01 BK6425 SOGX 09T308-01 BK6115 ⚠	P M
30,1 – 33,0	W80 32010.086425 W80 32010.086115	SOGX 100408-01 BK6425 SOGX 100408-01 BK6115 ⚠	P M
33,1 – 37,0	W80 38010.086425 W80 38010.086115	SOGX 110408-01 BK6425 SOGX 110408-01 BK6115 ⚠	P M
37,1 – 42,0	W80 42010.086425 W80 42010.086115	SOGX 120408-01 BK6425 SOGX 120408-01 BK6115 ⚠	P M
42,1 – 46,0	W80 46010.086425 W80 46010.086115	SOGX 130508-01 BK6425 SOGX 130508-01 BK6115 ⚠	P M

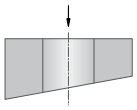
⚠ Note: Only use this insert with KUB Pentron as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

1. 

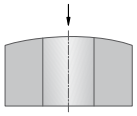
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

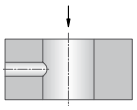
Starting on angled surfaces
- subject to the starting angle, the feed must be reduced when starting the bore.
  Rule of thumb: 3° ≙ 30%; 10° ≙ 40%; 25° ≙ 60% use tools max. 2×D
- use tough insert and stable corner radius

3. 

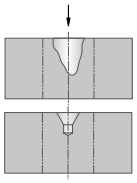
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

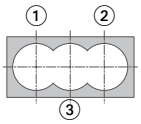
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

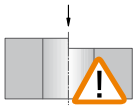
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insert and stable corner radius

6. 

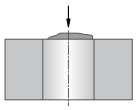
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed rate
- use tough insert for internal cutting edge

7. 

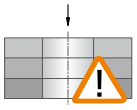
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insert and stable corner radius

8. 

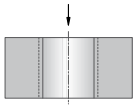
Starting on an edge
- reduce feed rate by 50%
- use tough insert and stable corner radius

9. 

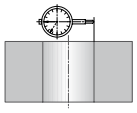
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- good workpiece clamping required
- max. gap = 1 mm

11. 

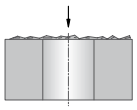
Roughing
- possible

12. 

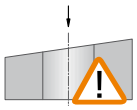
Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

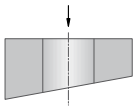
Technical informations

1. 

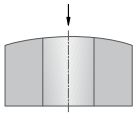
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

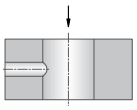
Starting on angled surfaces
- max. 3° angled position possible (cast angles)
- reduce feed rate when starting bore
- use stable corner radius

3. 

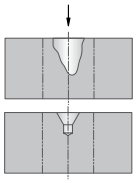
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

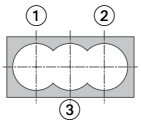
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

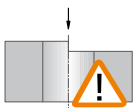
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

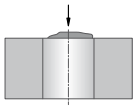
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed rate
- use tough insert for internal cutting edge

7. 

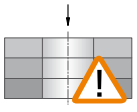
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

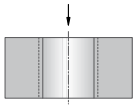
Starting on an edge
- not possible for 3×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

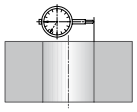
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- good workpiece clamping required

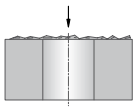
11. 

Roughing
- possible

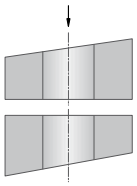
12. 

Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

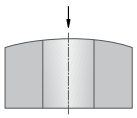
Note: please note max. offset ∅ in tables

1. 

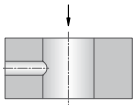
Starting on uneven surfaces (cast surfaces)
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)

2. 

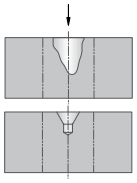
Starting on angled surfaces / angled bore exit
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60%
- use tough insert and stable corner radius

3. 

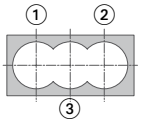
Starting on cambered surfaces
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

4. 

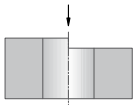
Drilling through a cross bore
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
- in the vicinity of the cross bore, reduce the feed rate by 50%
- watch for chip jamming around tool
- use tough insert and stable corner radius

5. 

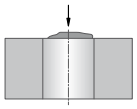
Starting on a groove or large centering bore
- when inserting the drill, reduce the feed rate by approx. 30-50% until centring depth is reached
- reduce feed rate
- use tough insert for internal cutting edge
- spot face if required

6. 

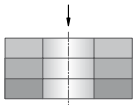
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- use tough insertand stable corner radius
- Continuous drilling: when inserting the drill, reduce the feed rate by approx. 30-60% (depending on component stability and clamping)
- Interruption to cut: when drilling the cut interruption, reduce the feed rate by approx. 50-60%

7. 

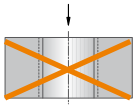
Starting on an edge
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
- use tough insert and stable corner radius

8. 

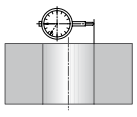
Starting on a welded seam
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

9. 

Drilling through stacked plates
- good workpiece clamping required
- max. gap = 1 mm

10. 

Roughing
- not possible

11. 

Adjustable
- when inserting and withdrawing the drill reduce the feed rate by approx. 30-50% until full bore diameter is reached (depending on component stability and clamping).
- use tough insert and stable corner radius

KOMET KUB Pentron 6×D *Productivity PLUS*

6×D indexable insert high-performance drill bit.

Retains its stability without a centring point or guide rails.



5×D is as good as it gets when it comes to the length/diameter ratio of drilling tools. Or at least, that's what was previously thought, since larger ratios have a considerable adverse effect on stiffness; until now, stable machining operations and adequate feed rates have been mutually exclusive.

But KOMET has been hard at work, pooling its many years of experience and sophisticated development methods to come up with the new KUB Pentron 6×D *Productivity PLUS* with performance data that will not fail to impress.

BENEFITS for you:

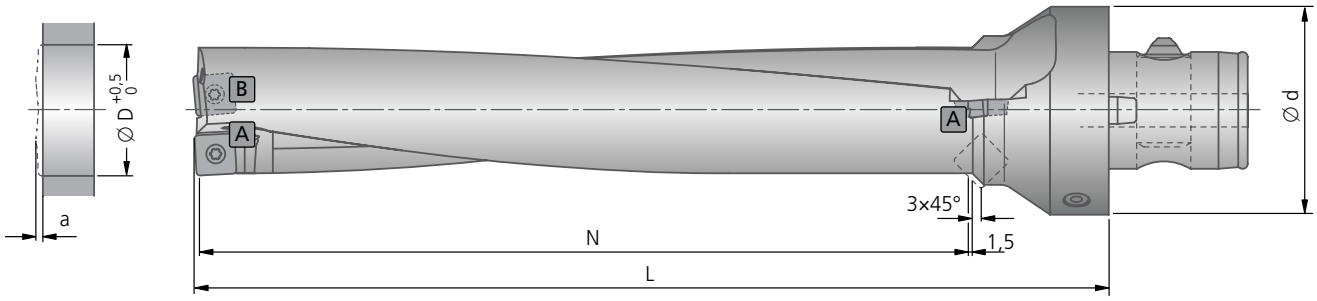
- Drilling and chamfering in a single operation
- Low-cost, high-performance alternative without guide elements
- Does not compromise on productivity or process reliability
- Superior stiffness thanks to the optimised basic-body geometry

Field test data:
Roughing in 42CrMo4 quenched and tempered steel
Feed rate of up to 0,12 mm/rev
Cutting speed of up to 176 m/min
Tool life travel of up to 9,9 m

In summary:
With this kind of cutting data and the results it has achieved in testing, the KUB Pentron 6×D *Productivity PLUS* without additional centring point is set to be a highly productive tool. Not only are these figures considerably higher than comparable drill bits without guide elements, but they also demonstrate that the new tool can hold its own against its guided counterparts.

Indexable insert drill

for workpiece material P K | 6×D | ABS



6×D								Basic recommendation				
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Clamping screw Order No. Article	Indexable insert A -01 Order No. ISO code ▽▽Size	Piece	Indexable insert B -01 Order No. ISO code ▽▽Size	Piece	for workpiece material
26,0	2,4	50	U49 02600	156	189	0,74	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	W80 24010.088425 SOGX 080308-01 BK8425 W80 24010.086115 SOGX 080308-01 BK6115	2	W80 24010.088425 SOGX 080308-01 BK8425 W80 24010.088425 SOGX 080308-01 BK8425	1	P K
33,0	2,8	63	U49 03300	198	238	1,53	N00 57261 S3575-15IP 2,8 Nm	W80 32010.088425 SOGX 100408-01 BK8425 W80 32010.086115 SOGX 100408-01 BK6115	2	W80 32010.088425 SOGX 100408-01 BK8425 W80 32010.088425 SOGX 100408-01 BK8425	1	P K
39,0	3,0	63	U49 03900	234	277	2,04	N00 57301 S45100-20IP 6,25 Nm	W80 42010.088425 SOGX 120408-01 BK8425 W80 42010.086115 SOGX 120408-01 BK6115	2	W80 42010.088425 SOGX 120408-01 BK8425 W80 42010.088425 SOGX 120408-01 BK8425	1	P K
45,0	3,3	63	U49 04500	270	316	2,80	N00 57301 S45100-20IP 6,25 Nm	W80 46010.088425 SOGX 130508-01 BK8425 W80 46010.086115 SOGX 130508-01 BK6115	2	W80 46010.088425 SOGX 130508-01 BK8425 W80 46010.088425 SOGX 130508-01 BK8425	1	P K

Supply includes: KUB Pentron drill with clamping screw.
Please order insert separately.

KOMET KUB Pentron

Design your own tool!
Step drill for continuous drilling with up to three counterboring steps
Diameters of 14 mm to 46 mm | 4×D

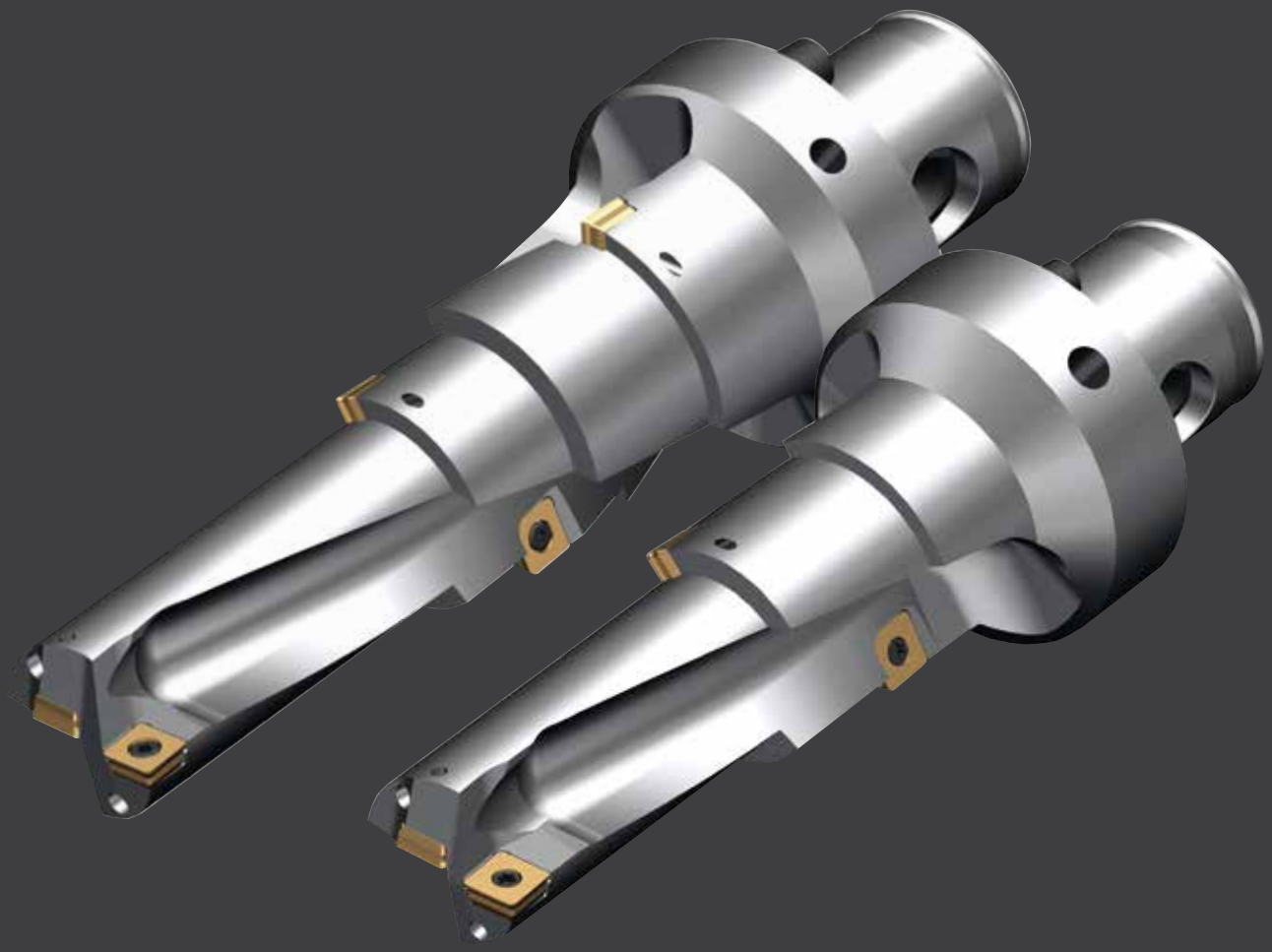
Can‘t find a suitable solution in our standard range? Can‘t find dimensions that suit your requirements?

Our KUB Pentron step drill enables you to create your own combinations in a wide range of dimensions. Select the basic type and define the useful length.

We check your requirements to ensure that they are technically feasible and create an individualised offer for you.

BENEFITS for you:

- Continuous drilling, counterboring and chamfering in a single operation
- Does not compromise on productivity or process reliability
- Superior stiffness thanks to the optimised basic-body geometry
- Maximum performance and life with excellent drilling performance due to optimum main body stability
- Cost reductions in stocking and ease of handling due to identical internal and external indexable inserts
- Maximum tool life due to four fully useable cutting edges of modern substrates with appropriate coatings

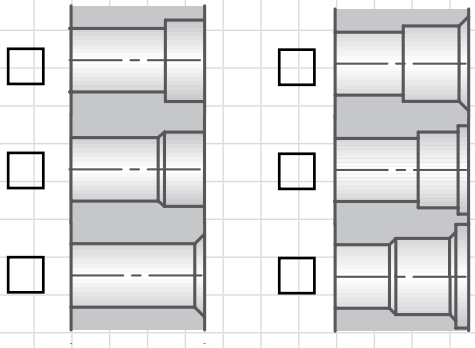


Enquiry KUB Pentron Step Drill

Company:
Customer No.:
Address:

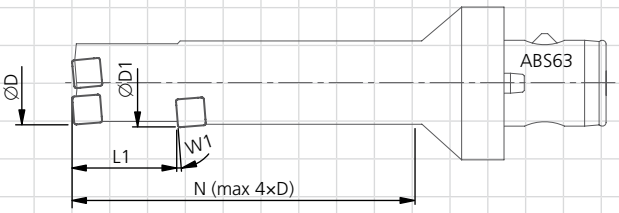
Contact:
Department:
Phone:
Fax:
E-Mail:

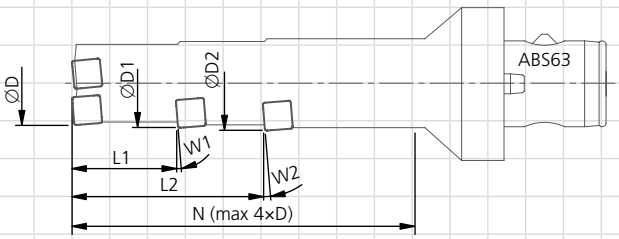
Bore variants:

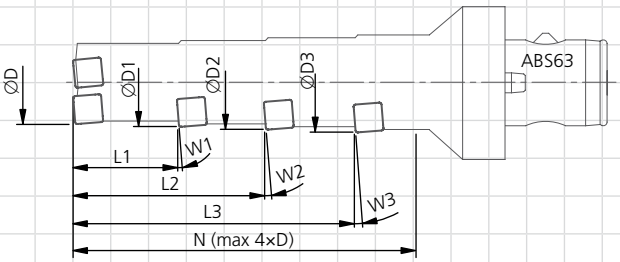


ØD	L1 min
14 - 16	9,5
16,1 - 18	11
18,1 - 20	12,5
20,1 - 23	14
23,1 - 26	16

ØD	L1 min
26,1 - 30	18
30,1 - 33	20
33,1 - 37	22
37,1 - 42	24
42,1 - 46	26,5







KUB Pentron Step Drill	Dimension	Tolerance
Ø D $^{+0,3}_{-0,1}$		
Ø D1		
Ø D2		
Ø D3		
L1		
L2		
L3		
N (max. 4×D)		
W1 (min. 2°)		
W2 (min. 2°)		
W3 (min. 2°)		

internal cooling on ØD standard

Workpiece

Tools required units

Workpiece units / year

Material to be machined

For a selection, see "Recommended cutting data"

Optional material (with surcharge and test):

As early as 1977, KOMET introduced the world's first indexable insert solid drill bit without an HSS centring tip, thereby laying the foundation for the triumphal procession of the KOMET KUB drills.

It was based on the familiar Unisix indexable insert with three cutting edges. Thanks to its 84° edge angle and variable fitting angle, the indexable insert enables ideal balancing of the thrust forces. This has significantly contributed to the resounding success of the new solid drill bit tools.

In just a few years, the KOMET KUB Trigon indexable insert drills have become the most commonly used solid drill bit tools in the diameter ranges from 12 millimetres to a maximum of 350 millimetres, with drilling depths of up to 4×D.





BENEFITS for you:

- Flexibility in application with various geometries and coatings
- Close bore tolerances up to IT 8
- Extremely good surface finish can be achieved
- Machining to production dimension without separate fine machining
- Universal use – suitable for rotating and stationary operations

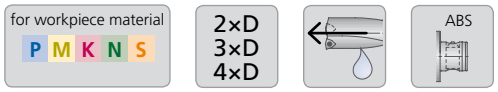
KOMET KUB Trigon	Page
ABS connection	
∅ 14 – 44 mm, R.H. cutting	
Drilling depth 2×D | 3×D | 4×D	76 – 77
Guideline values for solid drilling	78 – 79
Alternative inserts	93
Cylindrical shank (combination shank)	
∅ 12 – 44 mm, R.H. cutting	
Drilling depth 2×D | 3×D | 4×D	80 – 83
Guideline values for solid drilling	84 – 85
Alternative inserts	93
Cylindrical shank (parallel clamping surface)	
∅ 14 – 54 mm, R.H. cutting	
Drilling depth 3×D | 4×D	86 – 91
Guideline values for solid drilling	92
Alternative inserts	93
ABS connection	
∅ 14 – 44 mm, L.H. cutting	
Drilling depth 2×D | 3×D	94 – 95
Guideline values for solid drilling	96
Alternative inserts	97
Cylindrical shank (parallel clamping surface)	
∅ 14 – 54 mm, L.H. cutting	
Drilling depth 3×D	98 – 99
Guideline values for solid drilling	100
Alternative inserts	101

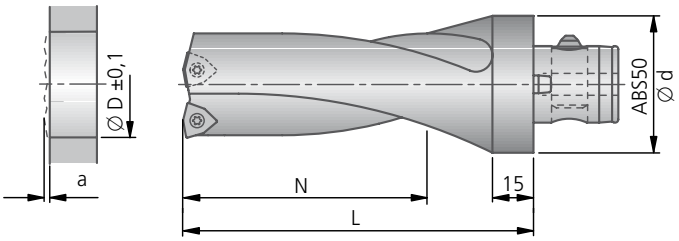
KOMET KUB	
ABS connection	
∅ 38,5 – 82 mm, R.H. cutting, adjustable	
Drilling depth 3×D	102 – 103
Guideline values for solid drilling	104
Alternative inserts	105
ABS connection	
∅ 45 – 82 mm, R.H. cutting	
Drilling depth 2×D | 3×D	106 – 107
Guideline values for solid drilling	108
Alternative inserts	109
Technical informations	110 – 112
Problems → Causes → Solutions	113

KOMET KUB Trigon

Ø 14 – 44 mm

Indexable insert drill





				2×D				3×D				
Ø D	*max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	N	L	kg	
14,0	15,0	1,3	50	**V30 31403**	28	63	0,46	**V30 71403**	42	77	0,47	
15,0	16,0	1,3	50	**V30 31503**	30	65	0,46	**V30 71503**	45	80	0,47	
15,5	16,5	1,3	50	**V30 31551**	32	67	0,46	**V30 71551**	48	83	0,47	
16,0	17,0	1,3	50	**V30 31601**	32	67	0,47	**V30 71601**	48	83	0,48	
17,0	18,0	1,3	50	**V30 31701**	34	69	0,47	**V30 71701**	51	86	0,48	
17,5	18,5	1,3	50	**V30 31751**	36	71	0,48	**V30 71751**	54	89	0,49	
18,0	19,0	1,3	50	**V30 31801**	36	71	0,48	**V30 71801**	54	89	0,49	
18,5	19,0	1,3	50	**V30 31851**	38	73	0,48	**V30 71851**	57	92	0,50	
19,0	20,0	1,3	50	**V30 31901**	38	73	0,48	**V30 71901**	57	92	0,48	
19,5	20,0	1,3	50	**V30 31951**	40	75	0,48	**V30 71951**	60	95	0,51	
20,0	21,0	1,5	50	**V30 32001**	40	75	0,50	**V30 72001**	60	95	0,52	
21,0	22,0	1,5	50	**V30 32101**	42	77	0,51	**V30 72101**	63	98	0,53	
22,0	23,0	1,5	50	**V30 32201**	44	79	0,52	**V30 72201**	66	101	0,52	
22,5	23,5	1,5	50	**V30 32251**	46	81	0,53	**V30 72251**	69	104	0,56	
23,0	24,0	1,5	50	**V30 32301**	46	81	0,53	**V30 72301**	69	104	0,59	
24,0	25,0	1,5	50	**V30 32401**	48	83	0,55	**V30 72401**	72	107	0,60	
24,5	25,5	1,5	50	**V30 32451**	50	85	0,55	**V30 72451**	75	110	0,60	
25,0	26,0	1,7	50	**V30 32501**	50	85	0,62	**V30 72501**	75	110	0,60	
26,0	28,0	1,7	50	**V30 32601**	52	87	0,64	**V30 72601**	78	113	0,61	
26,5	28,5	1,7	50	**V30 32651**	54	89	0,57	**V30 72651**	81	116	0,63	
27,0	30,0	1,7	50	**V30 32701**	54	89	0,58	**V30 72701**	81	116	0,63	
28,0	31,0	1,7	50	**V30 32801**	56	91	0,59	**V30 72801**	84	119	0,65	
28,5	31,5	1,7	50	**V30 32851**	58	93	0,60	**V30 72851**	87	122	0,67	
29,0	32,0	1,7	50	**V30 32901**	58	93	0,61	**V30 72901**	87	122	0,67	
29,5	32,5	1,7	50	**V30 32951**	60	95	0,62	**V30 72951**	90	125	0,69	
30,0	32,5	1,7	50	**V30 33001**	60	100	0,74	**V30 73001**	90	130	0,79	
31,0	33,5	1,7	50	**V30 33101**	62	102	0,69	**V30 73101**	93	133	0,79	
31,5	33,5	1,7	50	**V30 33151**	64	104	0,70	**V30 73151**	96	136	0,78	
32,0	34,0	1,7	50	**V30 33201**	64	104	0,71	**V30 73201**	96	136	0,8	
33,0	34,0	1,7	50	**V30 33301**	66	106	0,82	**V30 73301**	99	139	0,84	
34,0	35,0	1,7	50	**V30 33401**	68	108	0,78	**V30 73401**	102	142	0,85	
35,0	36,0	1,7	50	**V30 33501**	70	110	0,77	**V30 73501**	105	145	0,89	
36,0	37,0	1,7	50	**V30 33601**	72	112	0,79	**V30 73601**	108	148	0,93	
37,0	40,0	2,0	50	**V30 33701**	74	124	0,89	**V30 73701**	111	161	1,04	
37,5	40,5	2,0	50	**V30 33751**	76	126	0,9	**V30 73751**	114	164	1,02	
38,0	41,0	2,0	50	**V30 33801**	76	126	0,92	**V30 73801**	114	164	1,08	
39,0	42,0	2,0	50	**V30 33901**	78	128	0,95	**V30 73901**	117	167	1,13	
39,5	42,5	2,0	50	**V30 33951**	80	130	0,96	**V30 73951**	120	170	1,14	
40,0	43,0	2,0	50	**V30 34001**	80	130	0,98	**V30 74001**	120	170	1,17	
41,0	44,0	2,0	50	**V30 34101**	82	132	1,10	**V30 74101**	123	173	1,22	
42,0	45,0	2,0	50	**V30 34201**	84	134	1,10	**V30 74201**	126	176	1,27	
43,0	45,0	2,0	50	**V30 34301**	86	136	1,10	**V30 74301**	129	179	1,33	
44,0	45,0	2,0	50	**V30 34401**	88	138	1,13	**V30 74401**	132	182	1,41	

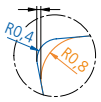
Any **intermediate dimensions** from ∅ 14 – 44 mm and **inch dimensions** are available on request.

* Adjustment device see chapter 6

2×D	●	●	●	●	●	●	◐	●	✕	◐	◐
3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



	4×D					Basic recommendation			
					Clamping screw	Indexable insert -01 -11			for workpiece material
∅ D	Order No.	N	L	kg	Order No. Article	Order No. ▽▽Size	ISO code	Piece	
14,0	V30 91403	56	91	0,47	N00 56041 S/M2×4,3-6IP 0,62 Nm	W29 10010.048425 W29 10010.047935 W29 10010.046115 W29 10110.047710	WOEX 030204-01 BK8425 WOEX 030204-01 BK7935 WOEX 030204-01 BK6115 WOEX 030204-11 BK7710	2	P M S K N
15,0	V30 91503	60	95	0,48					
15,5	V30 91551	64	99	0,48					
16,0	V30 91601	64	99	0,49					
17,0	V30 91701	68	103	0,50					
17,5	V30 91751	72	107	0,50					
18,0	V30 91801	72	107	0,51					
18,5	V30 91851	76	111	0,52					
19,0	V30 91901	76	111	0,52					
19,5	V30 91951	80	115	0,52					
20,0	V30 92001	80	115	0,54	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W29 18010.048425 W29 18010.047935 W29 18010.046115 W29 18110.047710	WOEX 040304-01 BK8425 WOEX 040304-01 BK7935 WOEX 040304-01 BK6115 WOEX 040304-11 BK7710	2	P M S K N
21,0	V30 92101	84	119	0,56					
22,0	V30 92201	88	123	0,58					
22,5	V30 92251	92	127	0,55					
23,0	V30 92301	92	127	0,60					
24,0	V30 92401	96	131	0,62					
24,5	V30 92451	100	135	0,64					
25,0	V30 92501	100	135	0,63	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W29 24010.048425 W29 24010.047935 W29 24010.046115 W29 24110.047710	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK6115 WOEX 05T304-11 BK7710	2	P M S K N
26,0	V30 92601	104	139	0,66					
26,5	V30 92651	108	143	0,67					
27,0	V30 92701	108	143	0,72					
28,0	V30 92801	112	147	0,70					
28,5	V30 92851	116	151	0,73					
29,0	V30 92901	116	151	0,75					
29,5	V30 92951	120	155	0,76					
30,0	V30 93001	120	160	0,82					
31,0	V30 93101	124	164	0,86					
31,5	V30 93151	128	168	0,88					
32,0	V30 93201	128	168	0,91					
33,0	V30 93301	132	172	0,94					
34,0	V30 93401	136	176	0,97					
35,0	V30 93501	140	180	1,01					
36,0	V30 93601	144	184	1,06					
37,0	V30 93701	148	198	1,18	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W29 34010.048425 W29 34010.047935 W29 34010.046115 W29 34110.047710	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK6115 WOEX 06T304-11 BK7710	2	P M S K N
37,5	V30 93751	152	202	1,19					
38,0	V30 93801	152	202	1,22					
39,0	V30 93901	156	206	1,29					
39,5	V30 93951	160	210	1,32					
40,0	V30 94001	160	210	1,36					
41,0	V30 94101	164	214	1,43					
42,0	V30 94201	168	218	1,50					
43,0	V30 94301	172	222	1,52					
44,0	V30 94401	176	226	1,66					

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

Guideline values for solid drilling: pages 78-79 / alternative inserts: page 93.

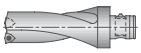
KOMET KUB Trigon

Ø 14 – 44 mm

Indexable insert drill with ABS connection, R.H. cutting

Guideline values for solid drilling						Cutting speed v_c (m/min) 2×D | 3×D | 4×D														
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	BK8425			BK7935			BK6115			BK7710			BK77		
						min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	260	320	200	250	300	250	300	350						
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	270	300	250	270	300	250	270	300						
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	260	320	160	220	280	250	300	350						
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	180	220	120	160	200	200	240	280						
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	120	160	200	100	140	180	170	200	230						
P	4.1			HSS		50	70	90	40	60	80	70	90	110						
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	50	80							20	50	80
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				40	60	80				40	60	80	40	60	80
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	170	210	140	180	220	210	240	270						
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	120	150	200	120	160	200	190	220	250						
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	150	190	120	160	200	190	220	250						
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	160	200	110	150	190	160	240	320						
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	120	150	80	110	140	100	140	180						
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	160	200	110	150	190	120	160	200						
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	140	170	110	130	160	100	140	180						
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	120	150	80	110	140	90	120	150						
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	120	150	80	110	140	90	120	150						
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	100	120	70	90	110	70	100	130						
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	200	250	150	200	250				150	250	350	150	250	350
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	300	400	200	300	400				250	350	450	250	350	450
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	400	500	300	400	500				300	500	700	300	500	700
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	250	320	180	250	320				210	280	350	210	280	350
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	200	250	150	200	250				140	220	300	140	220	300
H	15.0	1400		hardened steels < 45 HRC	BK8425 BK6115	80	120	140				80	120	140				40	80	100
H	16.0	1800		hardened steels > 45 HRC		60	100	140				60	100	140				30	40	60

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

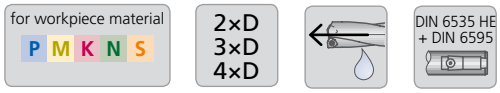


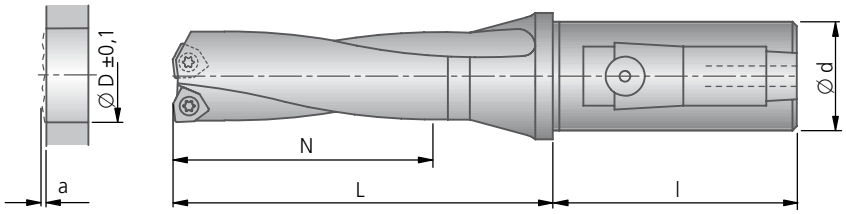
	Max. feed f (mm/rev)																				
	2×D							3×D							4×D						
	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0
	0,08	0,10	0,10	0,12	0,12	0,12	0,12	0,08	0,10	0,10	0,12	0,12	0,12	0,12	0,06	0,08	0,08	0,10	0,10	0,10	0,10
	0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,04	0,06	0,10	0,12	0,12	0,12	0,14
	0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,06	0,08	0,10	0,12	0,14	0,14	0,18
	0,06	0,08	0,10	0,14	0,16	0,16	0,16	0,06	0,08	0,10	0,14	0,16	0,16	0,16	0,04	0,06	0,08	0,12	0,14	0,14	0,14
	0,06	0,08	0,10	0,12	0,12	0,12	0,14	0,06	0,08	0,10	0,12	0,12	0,12	0,14	0,04	0,06	0,08	0,10	0,10	0,10	0,12
	0,04	0,06	0,08	0,10	0,10	0,12	0,12	0,04	0,06	0,08	0,10	0,10	0,12	0,12	0,02	0,04	0,06	0,08	0,10	0,12	0,12
	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,02	0,04	0,06	0,08	0,08	0,08	0,08
	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,04	0,06	0,08	0,10	0,08	0,10	0,10
	0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,04	0,06	0,08	0,12	0,12	0,12	0,12
	0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,04	0,04	0,06	0,10	0,10	0,10	0,12
	0,06	0,06	0,08	0,12	0,12	0,12	0,12	0,06	0,06	0,08	0,12	0,12	0,12	0,12	0,04	0,04	0,06	0,10	0,10	0,10	0,10
	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,12	0,18	0,18	0,18	0,23
	0,08	0,08	0,10	0,14	0,14	0,16	0,18	0,08	0,08	0,10	0,14	0,14	0,16	0,18	0,06	0,06	0,08	0,12	0,12	0,14	0,16
	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,18	0,18	0,23
	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,18	0,18	0,23
	0,10	0,12	0,16	0,25	0,16	0,18	0,18	0,10	0,12	0,16	0,25	0,25	0,25	0,25	0,08	0,10	0,14	0,23	0,23	0,23	0,23
	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,18	0,18	0,23
	0,08	0,10	0,14	0,16	0,16	0,16	0,20	0,08	0,10	0,14	0,16	0,16	0,16	0,20	0,06	0,08	0,12	0,14	0,14	0,14	0,18
	0,05	0,08	0,12	0,16	0,16	0,18	0,20	0,05	0,08	0,12	0,16	0,16	0,18	0,20	0,03	0,06	0,10	0,14	0,14	0,16	0,18
	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,03	0,06	0,06	0,08	0,08	0,08	0,10
	0,05	0,08	0,08	0,10	0,10	0,12	0,12	0,05	0,08	0,08	0,10	0,10	0,12	0,12	0,03	0,06	0,06	0,08	0,08	0,10	0,10
	0,10	0,12	0,14	0,18	0,18	0,20	0,20	0,10	0,12	0,14	0,18	0,18	0,20	0,20	0,08	0,10	0,12	0,16	0,16	0,18	0,18
	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,12	0,18	0,18	0,18	0,23
	0,05	0,05	0,08	0,10	0,10	0,12	0,12	0,05	0,05	0,08	0,10	0,10	0,12	0,12	0,03	0,03	0,06	0,08	0,08	0,10	0,10
	0,05	0,08	0,08	0,10	0,10	0,10	0,10	0,05	0,08	0,08	0,10	0,10	0,10	0,10	0,03	0,06	0,06	0,08	0,08	0,08	0,08

KOMET KUB Trigon

Ø 12 – 23 mm

Indexable insert drill





				2×D				3×D				
Ø D	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	
12,0	13,0	1,3	20 × 50	V43 31202	24	48	0,17	V43 71202	36	60	0,17	
12,7	13,7	1,3	20 × 50	V43 31272	26	50	0,17	V43 71272	39	63	0,17	
13,0	14,0	1,3	20 × 50	V43 31302	26	50	0,17	V43 71302	39	63	0,18	
13,7	14,7	1,3	20 × 50	V43 31372	28	52	0,17	V43 71372	42	66	0,18	
14,0	15,0	1,3	20 × 50	V43 31404	28	52	0,17	V43 71404	42	66	0,20	
			25 × 56	–				V44 71404	42	66	0,24	
15,0	16,0	1,3	20 × 50	V43 31504	30	54	0,18	V43 71504	45	69	0,20	
			25 × 56	–				V44 71504	45	69	0,28	
15,5	16,5	1,3	20 × 50	V43 31552	32	56	0,18	V43 71552	48	72	0,20	
			25 × 56	–				V44 71552	48	72	0,28	
16,0	17,0	1,3	20 × 50	V43 31602	32	56	0,19	V43 71602	48	72	0,20	
			25 × 56	–				V44 71602	48	72	0,28	
17,0	18,0	1,3	20 × 50	V43 31702	34	58	0,19	V43 71702	51	75	0,20	
			25 × 56	–				V44 71702	51	75	0,29	
17,5	18,5	1,3	20 × 50	V43 31752	36	60	0,20	V43 71752	54	78	0,21	
			25 × 56	–				V44 71752	54	78	0,29	
18,0	19,0	1,3	20 × 50	V43 31802	36	60	0,20	V43 71802	54	78	0,21	
			25 × 56	–				V44 71802	54	78	0,29	
18,5	19,0	1,3	20 × 50	V43 31852	38	62	0,20	V43 71852	57	81	0,22	
			25 × 56	–				V44 71852	57	81	0,31	
19,0	19,5	1,3	20 × 50	V43 31902	38	62	0,20	V43 71902	57	81	0,22	
			25 × 56	–				V44 71902	57	81	0,31	
19,5	20,0	1,3	20 × 50	V43 31952	40	64	0,21	V43 71952	60	84	0,23	
			25 × 56	–				V44 71952	60	84	0,34	
20,0	21,0	1,5	20 × 50	V43 32002	40	64	0,25	V43 72002	60	84	0,23	
			25 × 56	V44 32002	40	64	0,30	V44 72002	60	84	0,32	
			32 × 60	–				V45 72002	60	84	0,51	
21,0	22,0	1,5	20 × 50	V43 32102	42	66	0,22	V43 72102	63	87	0,2	
			25 × 56	V44 32102	42	66	0,31	V44 72102	63	87	0,33	
			32 × 60	–				V45 72102	63	87	0,55	
22,0	23,0	1,5	20 × 50	V43 32202	44	68	0,22	V43 72202	66	90	0,26	
			25 × 56	V44 32202	44	68	0,32	V44 72202	66	90	0,35	
			32 × 60	–				V45 72202	66	90	0,54	
22,5	23,5	1,5	20 × 50	V43 32252	46	70	0,24	V43 72252	69	93	0,23	
			25 × 56	V44 32252	46	70	0,32	V44 72252	69	93	0,36	
			32 × 60	–				V45 72252	69	93	0,56	
23,0	24,0	1,5	20 × 50	V43 32302	46	70	0,24	V43 72302	69	93	0,28	
			25 × 56	V44 32302	46	70	0,33	V44 72302	69	93	0,36	
			32 × 60	–				V45 72302	69	93	0,56	

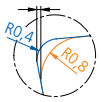
For other diameters see following page.

Any **intermediate dimensions** from Ø 12 – 44 mm and **inch dimensions** are available on request.

2×D	●	●	●	●	●	●	◐	●	✕	◐	◐
3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



	4×D					Basic recommendation			
					Clamping screw	Indexable insert -01 -11			for workpiece material
ØD	Order No.	N	L	kg	Order No. Article	Order No. ▽▽Size	ISO code	Piece	
12,0	–				N00 56051 S/M1,8×3,8-5IP 0,38 Nm	W29 04010.028425 W29 04010.027935	WOEX 020102-01 BK8425 WOEX 020102-01 BK7935	2	P K N S M
12,7	–								
13,0	–								
13,7	–								
14,0	V43 91404	56	80	0,22	N00 56041 S/M2×4,3-6IP 0,62 Nm	W29 10010.048425 W29 10010.047935 W29 10010.046115 W29 10110.047710	WOEX 030204-01 BK8425 WOEX 030204-01 BK7935 WOEX 030204-01 BK6115 WOEX 030204-11 BK7710	2	P M S K N
	–								
15,0	V43 91504	60	84	0,20					
	–								
15,5	–								
	–								
16,0	V43 91602	64	88	0,19					
	–								
17,0	V43 91702	68	92	0,21					
	–								
17,5	–								
	–								
18,0	V43 91802	72	96	0,27					
	–								
18,5	–								
	–								
19,0	V43 91902	76	100	0,28					
	–								
19,5	–								
	–								
	–								
20,0	V44 92002	80	104	0,34	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W29 18010.048425 W29 18010.047935 W29 18010.046115 W29 18110.047710	WOEX 040304-01 BK8425 WOEX 040304-01 BK7935 WOEX 040304-01 BK6115 WOEX 040304-11 BK7710	2	P M S K N
	–								
	–								
21,0	V44 92102	84	108	0,36					
	–								
	–								
22,0	V44 92202	88	112	0,38					
	–								
	–								
22,5	–								
	–								
	–								
23,0	V44 92302	92	116	0,40					
	–								

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

Guideline values for solid drilling: pages 84-85 / alternative inserts: page 93.

KOMET KUB Trigon

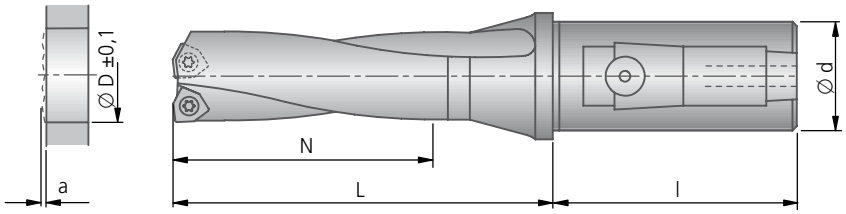
Ø 24 – 44 mm

Indexable insert drill

for workpiece material P M K N S

2×D 3×D 4×D

DIN 6535 HE + DIN 6595



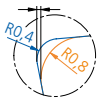
				2×D				3×D				
Ø D	max. diameter with offset	Starting / roughing size a	Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	
24,0	25,0	1,5	20 × 50	V43 32402	48	72	0,25	V43 72402	72	96	0,30	
			25 × 56	V44 32402	48	72	0,34	V44 72402	72	96	0,38	
			32 × 60	V45 32402	48	72	0,57	V45 72402	72	96	0,57	
24,5	25,5	1,7	20 × 50	V43 32452	50	74	0,26	V43 72452	75	99	0,31	
			25 × 56	V44 32452	50	74	0,35	V44 72452	75	99	0,40	
			32 × 60	V45 32452	50	74	0,54	V45 72452	75	99	0,58	
25,0	26,0	1,7	25 × 56	V44 32502	50	74	0,35	V44 72502	75	99	0,4	
			32 × 60	V45 32502	50	74	0,55	V45 72502	75	99	0,59	
26,0	28,0	1,7	25 × 56	V44 32602	52	76	0,37	V44 72602	78	102	0,44	
			32 × 60	V45 32602	52	76	0,56	V45 72602	78	102	0,61	
26,5	28,5	1,7	25 × 56	V44 32652	54	78	0,37	V44 72652	81	105	0,43	
			32 × 60	V45 32652	54	78	0,57	V45 72652	81	105	0,62	
27,0	30,0	1,7	25 × 56	V44 32702	54	78	0,40	V44 72702	81	105	0,44	
			32 × 60	V45 32702	54	78	0,57	V45 72702	81	105	0,62	
28,0	31,0	1,7	25 × 56	V44 32802	56	80	0,40	V44 72802	84	108	0,45	
			32 × 60	V45 32802	56	80	0,59	V45 72802	84	108	0,65	
28,5	31,5	1,7	25 × 56	V44 32852	58	82	0,40	V44 72852	87	111	0,47	
			32 × 60	V45 32852	58	82	0,59	V45 72852	87	111	0,66	
29,0	32,0	1,7	25 × 56	V44 32902	58	82	0,41	V44 72902	87	111	0,48	
			32 × 60	V45 32902	58	82	0,60	V45 72902	87	111	0,68	
29,5	32,5	1,7	25 × 56	V44 32952	60	84	0,42	V44 72952	90	114	0,49	
			32 × 60	V45 32952	60	84	0,61	V45 72952	90	114	0,69	
30,0	32,5	1,7	32 × 60	V45 33002	60	89	0,65	V45 73002	90	119	0,72	
31,0	33,5	1,7	32 × 60	V45 33102	62	91	0,67	V45 73102	93	122	0,76	
31,5	33,5	1,7	32 × 60	V45 33152	64	93	0,68	V45 73152	96	125	0,77	
32,0	34,0	1,7	32 × 60	V45 33202	64	93	0,69	V45 73202	96	125	0,78	
33,0	34,0	1,7	32 × 60	V45 33302	66	95	0,71	V45 73302	99	128	0,82	
34,0	35,0	1,7	32 × 60	V45 33402	68	97	0,73	V45 73402	102	131	0,84	
35,0	36,0	1,7	32 × 60	V45 33502	70	99	0,75	V45 73502	105	134	0,87	
36,0	37,0	1,7	32 × 60	V45 33602	72	101	0,78	V45 73602	108	137	0,91	
37,0	40,0	2,0	32 × 60	V45 33702	74	113	0,85	V45 73702	111	150	1,00	
37,5	40,5	2,0	32 × 60	V45 33752	76	115	0,86	V45 73752	114	153	1,01	
38,0	41,0	2,0	32 × 60	V45 33802	76	115	0,87	V45 73802	114	153	1,04	
39,0	42,0	2,0	32 × 60	V45 33902	78	117	0,90	V45 73902	117	156	1,09	
39,5	42,5	2,0	32 × 60	V45 33952	80	119	0,92	V45 73952	120	159	1,10	
40,0	43,0	2,0	32 × 60	V45 34002	80	119	0,94	V45 74002	120	159	1,12	
41,0	44,0	2,0	32 × 60	V45 34102	82	121	0,98	V45 74102	123	162	1,20	
42,0	45,0	2,0	32 × 60	V45 34202	84	123	1,04	V45 74202	126	165	1,25	
43,0	45,0	2,0	32 × 60	V45 34302	86	125	1,10	V45 74302	129	168	1,32	
44,0	45,0	2,0	32 × 60	V45 34402	88	127	1,13	V45 74402	132	171	1,39	

Any **intermediate dimensions** from ∅ 12 – 44 mm and **inch dimensions** are available on request.

2×D	●	●	●	●	●	●	◐	●	✕	◐	◐
3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



	4×D					Basic recommendation			
					Clamping screw	Indexable insert -01 -11			for workpiece material
∅ D	Order No.	N	L	kg	Order No. Article	Order No. ▽▽ Size	ISO code	Piece	
24,0	–				N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W29 18010.048425 W29 18010.047935 W29 18010.046115 W29 18110.047710	WOEX 040304-01 BK8425 WOEX 040304-01 BK7935 WOEX 040304-01 BK6115 WOEX 040304-11 BK7710	2	P M S K N
	V44 92402	96	120	0,45					
	–								
24,5	–								
	V44 92452	100	124	0,43					
	–								
25,0	–				N00 57511 S/M2,5×7,2-8IP 1,28	W29 24010.048425 W29 24010.047935 W29 24010.046115 W29 24110.047710	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK6115 WOEX 05T304-11 BK7710	2	P M S K N
	V45 92502	100	124	0,63					
26,0	–								
	V45 92602	104	128	0,65					
26,5	–								
	–								
27,0	–								
	V45 92702	108	132	0,68					
28,0	–								
	V45 92802	112	136	0,71					
28,5	–								
	–								
29,0	–								
	V45 92902	116	140	0,74					
29,5	–								
	–								
30,0	V45 93002	120	149	0,81					
31,0	V45 93102	124	153	0,84					
31,5	–								
32,0	V45 93202	128	157	0,87					
33,0	V45 93302	132	161	0,93					
34,0	V45 93402	136	165	0,95					
35,0	V45 93502	140	169	0,99					
36,0	V45 93602	144	173	1,05					
37,0	–				N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W29 34010.048425 W29 34010.047935 W29 34010.046115 W29 34110.047710	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK6115 WOEX 06T304-11 BK7710	2	P M S K N
37,5	–								
38,0	–								
39,0	–								
39,5	–								
40,0	–								
41,0	–								
42,0	–								
43,0	–								
44,0	–								

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

Guideline values for solid drilling: pages 84-85 / alternative inserts: page 93.

KOMET KUB Trigon Ø 12 – 44 mm

Indexable insert drill with cylindrical shank (combination shank), R.H. cutting

Guideline values for solid drilling						Cutting speed v_c (m/min) 2×D | 3×D | 4×D														
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	BK8425			BK7935			BK6115			BK7710			BK77		
						min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	260	320	200	250	300	250	300	350						
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	270	300	250	270	300	250	270	300						
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	260	320	160	220	280	250	300	350						
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	180	220	120	160	200	200	240	280						
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	120	160	200	100	140	180	170	200	230						
P	4.1			HSS		50	70	90	40	60	80	70	90	110						
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	50	80							20	50	80
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				40	60	80				40	60	80	40	60	80
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	170	210	140	180	220	210	240	270						
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	120	150	200	120	160	200	190	220	250						
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	150	190	120	160	200	190	220	250						
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	160	200	110	150	190	160	240	320						
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	120	150	80	110	140	100	140	180						
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	160	200	110	150	190	120	160	200						
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	140	170	110	130	160	100	140	180						
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	120	150	80	110	140	90	120	150						
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	120	150	80	110	140	90	120	150						
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	100	120	70	90	110	70	100	130						
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	200	250	150	200	250				150	250	350	150	250	350
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	300	400	200	300	400				250	350	450	250	350	450
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	400	500	300	400	500				300	500	700	300	500	700
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	250	320	180	250	320				210	280	350	210	280	350
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	200	250	150	200	250				140	220	300	140	220	300
H	15.0	1400		hardened steels < 45 HRC	BK8425 BK6115	80	120	140				80	120	140				40	80	100
H	16.0	1800		hardened steels > 45 HRC		60	100	140				60	100	140				30	40	60

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

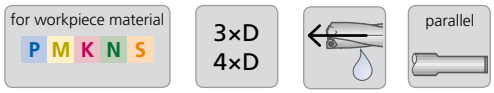


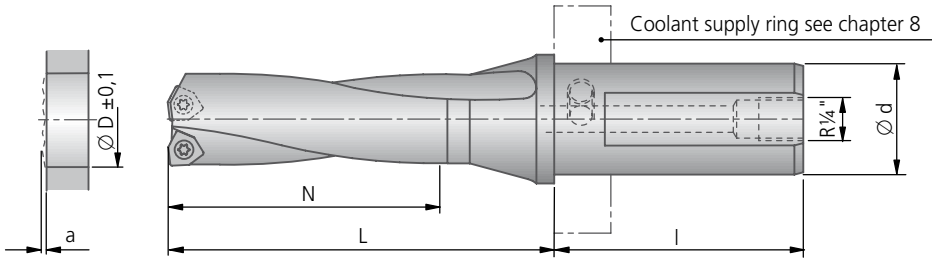
	Max. feed f (mm/rev)																			
	2×D								3×D								4×D				
	Ø 12 – 13,9	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 12 – 13,9	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9
	0,05	0,08	0,10	0,10	0,12	0,12	0,12	0,12	0,05	0,08	0,10	0,10	0,12	0,12	0,12	0,12	0,06	0,08	0,08	0,10	0,11
	0,05	0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,05	0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,04	0,06	0,10	0,12	0,12
	0,08	0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,08	0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,06	0,08	0,10	0,12	0,14
	0,05	0,06	0,08	0,10	0,14	0,16	0,16	0,16	0,05	0,06	0,08	0,10	0,14	0,16	0,16	0,16	0,04	0,06	0,08	0,12	0,14
	0,03	0,05	0,08	0,10	0,12	0,12	0,12	0,14	0,03	0,05	0,08	0,10	0,12	0,12	0,12	0,14	0,04	0,06	0,08	0,10	0,11
	0,02	0,04	0,06	0,08	0,10	0,10	0,12	0,12	0,02	0,04	0,06	0,08	0,10	0,10	0,12	0,12	0,03	0,05	0,07	0,08	0,09
	0,02	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,02	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,03	0,05	0,07	0,08	0,09
	0,02	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,02	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,04	0,06	0,08	0,10	0,10
	0,03	0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,03	0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,04	0,06	0,08	0,12	0,13
	0,05	0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,05	0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,04	0,04	0,06	0,10	0,11
	0,05	0,06	0,06	0,08	0,12	0,12	0,12	0,12	0,05	0,06	0,06	0,08	0,12	0,12	0,12	0,12	0,04	0,04	0,06	0,10	0,11
	0,10	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,10	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,12	0,18	0,19
	0,08	0,08	0,08	0,10	0,14	0,14	0,16	0,18	0,08	0,08	0,08	0,10	0,14	0,14	0,16	0,18	0,06	0,06	0,08	0,12	0,12
	0,06	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,19
	0,05	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,05	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,19
	0,05	0,10	0,12	0,16	0,25	0,25	0,25	0,25	0,05	0,10	0,12	0,16	0,25	0,25	0,25	0,25	0,08	0,10	0,14	0,23	0,24
	0,03	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,03	0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,06	0,08	0,12	0,18	0,19
	0,05	0,08	0,10	0,14	0,16	0,16	0,16	0,20	0,05	0,08	0,10	0,14	0,16	0,16	0,16	0,20	0,06	0,08	0,12	0,14	0,15
	0,05	0,05	0,08	0,12	0,16	0,16	0,18	0,20	0,05	0,05	0,08	0,12	0,16	0,16	0,18	0,20	0,04	0,06	0,10	0,14	0,15
	0,03	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,03	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,03	0,06	0,06	0,08	0,09
	0,03	0,05	0,08	0,08	0,10	0,10	0,12	0,12	0,03	0,05	0,08	0,08	0,10	0,10	0,12	0,12	0,03	0,06	0,06	0,08	0,09
	0,08	0,10	0,12	0,14	0,18	0,18	0,20	0,20	0,08	0,10	0,12	0,14	0,18	0,18	0,20	0,20	0,08	0,10	0,12	0,16	0,17
	0,05	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,05	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,08	0,10	0,12	0,18	0,19
	–	0,05	0,05	0,08	0,10	0,10	0,12	0,12	–	0,05	0,05	0,08	0,10	0,10	0,12	0,12	0,03	0,03	0,06	0,08	0,09
	–	0,05	0,08	0,08	0,10	0,10	0,10	0,10	–	0,05	0,08	0,08	0,10	0,10	0,10	0,10	0,03	0,06	0,06	0,08	0,08

KOMET KUB Trigon

Ø 14 – 19,5 mm

Indexable insert drill





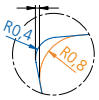
				3×D				4×D				
Ø D	max. diameter with offset	Starting / roughing size a	Cylindrical shank Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	
14,0	15,0	1,3	20 × 50	V36 71402	42	66	0,18	–				
			25 × 56	V37 71402	42	66	0,27	–				
			30 × 58	V38 71402	42	66	0,37	V38 91402	56	80	0,39	
			40 × 68	V39 71402	42	66	0,73	V39 91402	56	80	0,74	
15,0	16,0	1,3	20 × 50	V36 71502	45	69	0,19	–				
			25 × 56	V37 71502	45	69	0,25	–				
			30 × 58	V38 71502	45	69	0,38	V38 91502	60	84	0,40	
			40 × 68	V39 71502	45	69	0,74	V39 91502	60	84	0,97	
15,5	16,5	1,3	30 × 58	–				V38 91550	64	88	0,40	
			40 × 68	–				V39 91550	64	88	0,97	
16,0	17,0	1,3	20 × 50	V36 71600	48	72	0,20	–				
			25 × 56	V37 71600	48	72	0,28	–				
			30 × 58	V38 71600	48	72	0,39	V38 91600	64	88	0,40	
			40 × 68	V39 71600	48	72	0,75	V39 91600	64	88	0,76	
17,0	18,0	1,3	20 × 50	V36 71700	51	75	0,20	–				
			25 × 56	V37 71700	51	75	0,29	–				
			30 × 58	V38 71700	51	75	0,40	V38 91700	68	92	0,41	
			40 × 68	V39 71700	51	75	0,76	V39 91700	68	92	0,76	
17,5	18,5	1,3	30 × 58	–				V38 91750	72	96	0,42	
			40 × 68	–				V39 91750	72	96	0,77	
18,0	19,0	1,3	20 × 50	V36 71800	54	78	0,21	–				
			25 × 56	V37 71800	54	78	0,27	–				
			30 × 58	V38 71800	54	78	0,40	V38 91800	72	96	0,42	
			40 × 68	V39 71800	54	78	0,76	V39 91800	72	96	0,76	
18,5	19,0	1,3	30 × 58	–				V38 91850	76	100	0,43	
			40 × 68	–				V39 91850	76	100	0,79	
19,0	19,5	1,3	20 × 50	V36 71900	57	81	0,22	–				
			25 × 56	V37 71900	57	81	0,31	–				
			30 × 58	V38 71900	57	81	0,41	V38 91900	76	100	0,43	
			40 × 68	V39 71900	57	81	0,78	V39 91900	76	100	0,79	
19,5	20,0	1,3	30 × 58	–				V38 91950	80	104	0,44	
			40 × 68	–				V39 91950	80	104	0,79	

For other diameters see following page.
Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.

3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



Basic recommendation				
Clamping screw	Indexable insert -01 -11			for workpiece material
Order No. Article	**Order No.** ▽▽ Size	ISO code	Piece	
N00 56041 S/M2×4,3-6IP 0,62 Nm	**W29 10010.048425** WOEX 030204-01 BK8425 **W29 10010.047935** WOEX 030204-01 BK7935 **W29 10010.046115** WOEX 030204-01 BK6115 **W29 10110.047710** WOEX 030204-11 BK7710		2	P M S K N

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

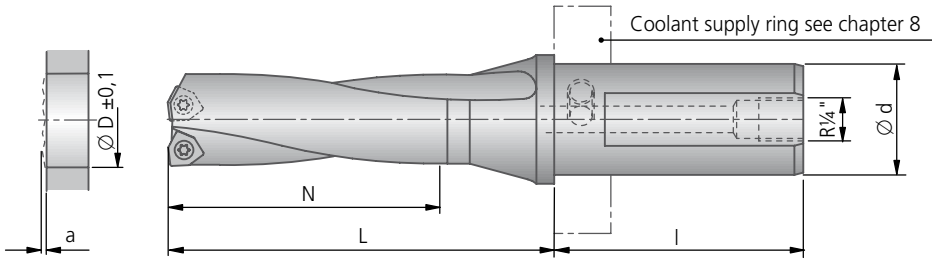
Guideline values for solid drilling: page 92 / alternative inserts: page 93.

KOMET KUB Trigon

Ø 20 – 29,5 mm

Indexable insert drill

for workpiece material P M K N S | 3×D 4×D | parallel



				3×D				4×D			
Ø D	max. diameter with offset	Starting / roughing size a	Cylindrical shank Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg
20,0	21,0	1,5	20 × 50	V36 72000	60	84	0,23	–			
			25 × 56	V37 72000	60	84	0,32	–			
			30 × 58	V38 72000	60	84	0,44	V38 92000	80	104	0,46
			40 × 68	V39 72000	60	84	0,79	V39 92000	80	104	0,81
21,0	22,0	1,5	20 × 50	V36 72100	63	87	0,23	–			
			25 × 56	V37 72100	63	87	0,33	–			
			30 × 58	V38 72100	63	87	0,45	V38 92100	84	108	0,47
			40 × 68	V39 72100	63	87	0,81	V39 92100	84	108	0,82
22,0	23,0	1,5	20 × 50	V36 72200	66	90	0,23	–			
			25 × 56	V37 72200	66	90	0,35	–			
			30 × 58	V38 72200	66	90	0,46	V38 92200	88	112	0,49
			40 × 68	V39 72200	66	90	0,82	V39 92200	88	112	0,84
22,5	23,5	1,5	30 × 58	–				V38 92250	92	116	0,51
			40 × 68	–				V39 92250	92	116	0,85
23,0	24,0	1,5	20 × 50	V36 72300	69	93	0,27	–			
			25 × 56	V37 72300	69	93	0,37	–			
			30 × 58	V38 72300	69	93	0,48	V38 92300	92	116	0,52
			40 × 68	V39 72300	69	93	0,84	V39 92300	92	116	0,87
24,0	25,0	1,5	20 × 50	V36 72400	72	96	0,29	–			
			25 × 56	V37 72400	72	96	0,38	–			
			30 × 58	V38 72400	72	96	0,49	V38 92400	96	120	0,51
			40 × 68	V39 72400	72	96	0,86	V39 92400	96	120	0,88
24,5	25,5	1,7	30 × 58	–				V38 92450	100	124	0,55
			40 × 68	–				V39 92450	100	124	0,90
25,0	26,0	1,7	30 × 58	V38 72500	75	99	0,48	V38 92500	100	124	0,54
			40 × 68	V39 72500	75	99	0,86	V39 92500	100	124	0,91
26,0	28,0	1,7	25 × 56	V37 72600	78	102	0,35	–			
			30 × 58	V38 72600	78	102	0,55	V38 92600	104	128	0,57
			40 × 68	V39 72600	78	102	0,88	V39 92600	104	128	0,93
26,5	28,5	1,7	30 × 58	–				V38 92650	108	132	0,59
			40 × 68	–				V39 92650	108	132	0,98
27,0	30,0	1,7	30 × 58	V38 72700	81	105	0,54	V38 92700	108	132	0,65
			40 × 68	V39 72700	81	105	0,90	V39 92700	108	132	0,95
28,0	31,0	1,7	25 × 56	V37 72800	84	108	0,38	–			
			30 × 58	V38 72800	84	108	0,57	V38 92800	112	136	0,63
			40 × 68	V39 72800	84	108	0,91	V39 92800	112	136	0,98
28,5	31,5	1,7	30 × 58	–				V38 92850	116	140	0,70
			40 × 68	–				V39 92850	116	140	1,00
29,0	32,0	1,7	25 × 56	V37 72900	87	111	0,40	–			
			30 × 58	V38 72900	87	111	0,59	V38 92900	116	140	0,68
			40 × 68	V39 72900	87	111	0,96	V39 92900	116	140	0,70
29,5	32,5	1,7	30 × 58	–				V38 92950	120	144	1,01
			40 × 68	–				V39 92950	120	144	1,04

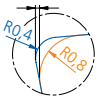
For other diameters see following page.

Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.

3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



Clamping screw	Basic recommendation			
	Indexable insert -01 -11			for workpiece material
Order No. Article	**Order No.** ▽▽ Size	ISO code	Piece	
N00 57553 S/M2,2×5,5-6IP 1,01 Nm	**W29 18010.048425** WOEX 040304-01 BK8425 **W29 18010.047935** WOEX 040304-01 BK7935 **W29 18010.046115** WOEX 040304-01 BK6115 **W29 18110.047710** WOEX 040304-11 BK7710		2	P M S K N
N00 57511 S/M2,5×7,2-8IP 1,28 Nm	**W29 24010.048425** WOEX 05T304-01 BK8425 **W29 24010.047935** WOEX 05T304-01 BK7935 **W29 24010.046115** WOEX 05T304-01 BK6115 **W29 24110.047710** WOEX 05T304-11 BK7710		2	P M S K N

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

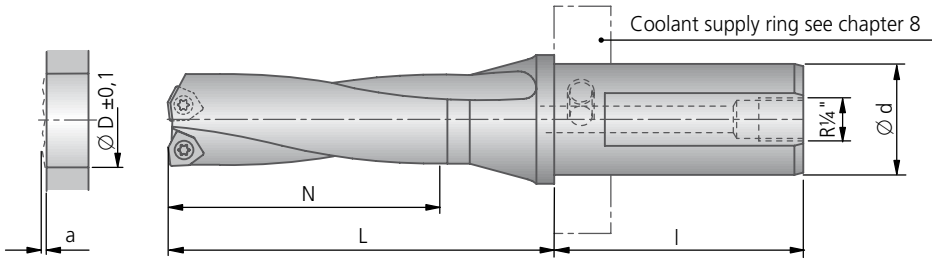
Guideline values for solid drilling: page 92 / alternative inserts: page 93.

KOMET KUB Trigon

Ø 30 – 54 mm

Indexable insert drill

for workpiece material P M K N S | 3×D 4×D | parallel



				3×D				4×D				
Ø D	max. diameter with offset	Starting / roughing size a	Cylindrical shank Ø d×l	Order No.	N	L	kg	Order No.	N	L	kg	
30,0	32,5	1,7	30 × 58	**V38 73000**	90	119	0,65	**V38 93000**	120	149	0,72	
			40 × 68	**V39 73000**	90	119	1,01	**V39 93000**	120	149	1,09	
31,0	33,5	1,7	30 × 58	**V38 73100**	93	122	0,68	**V38 93100**	124	153	0,76	
			40 × 68	**V39 73100**	93	122	0,99	**V39 93100**	124	153	1,13	
31,5	33,5	1,7	30 × 58	–				**V38 93150**	128	157	0,78	
			40 × 68	–				**V39 93150**	128	157	1,15	
32,0	34,0	1,7	30 × 58	**V38 73200**	96	125	0,71	**V38 93200**	128	157	0,80	
			40 × 68	**V39 73200**	96	125	1,08	**V39 93200**	128	157	1,17	
33,0	34,0	1,7	30 × 58	**V38 73300**	99	128	0,74	**V38 93300**	132	161	0,85	
			40 × 68	**V39 73300**	99	128	1,12	**V39 93300**	132	161	1,21	
34,0	35,0	1,7	30 × 58	**V38 73400**	102	131	0,75	**V38 93400**	136	165	0,86	
			40 × 68	**V39 73400**	102	131	1,13	**V39 93400**	136	165	1,23	
35,0	36,0	1,7	30 × 58	**V38 73500**	105	134	0,79	**V38 93500**	140	169	0,91	
			40 × 68	**V39 73500**	105	134	1,16	**V39 93500**	140	169	1,28	
36,0	37,0	1,7	30 × 58	**V38 73600**	108	137	0,82	**V38 93600**	144	173	0,96	
			40 × 68	**V39 73600**	108	137	1,19	**V39 93600**	144	173	1,33	
37,0	40,0	2,0	30 × 58	**V38 73700**	111	150	0,9	–				
			40 × 68	**V39 73700**	111	150	1,29	**V39 93700**	148	187	1,44	
37,5	40,5	2,0	40 × 68	–				**V39 93750**	152	191	1,57	
38,0	41,0	2,0	30 × 58	**V38 73800**	114	153	0,94	–				
			40 × 68	**V39 73800**	114	153	1,33	**V39 93800**	152	191	1,50	
39,0	42,0	2,0	30 × 58	**V38 73900**	117	156	0,99	–				
			40 × 68	**V39 73900**	117	156	1,38	**V39 93900**	156	195	1,55	
39,5	42,5	2,0	40 × 68	–				**V39 93950**	160	199	1,59	
40,0	43,0	2,0	30 × 58	**V38 74000**	120	159	1,03	–				
			40 × 68	**V39 74000**	120	159	1,43	**V39 94000**	160	199	1,62	
41,0	44,0	2,0	30 × 58	**V38 74100**	123	162	1,08	–				
			40 × 68	**V39 74100**	123	162	1,48	**V39 94100**	164	203	1,68	
42,0	45,0	2,0	30 × 58	**V38 74200**	126	165	1,15	–				
			40 × 68	**V39 74200**	126	165	1,54	**V39 94200**	168	207	1,76	
43,0	45,0	2,0	30 × 58	**V38 74300**	129	168	1,22	–				
			40 × 68	**V39 74300**	129	168	1,60	**V39 94300**	172	211	1,83	
44,0	45,0	2,0	30 × 58	**V38 74400**	132	171	1,23	–				
			40 × 68	**V39 74400**	132	171	1,66	**V39 94400**	176	215	1,91	
45,0	48,0	2,4	40 × 68	**V59 74500**	135	179	1,88	–				
46,0	49,0	2,4	40 × 68	**V59 74600**	138	182	1,87	–				
47,0	50,0	2,4	40 × 68	**V59 74700**	141	185	1,94	–				
48,0	51,0	2,4	40 × 68	**V59 74800**	144	188	2,09	–				
49,0	52,0	2,4	40 × 68	**V59 74900**	147	191	2,19	–				
50,0	53,0	2,4	40 × 68	**V59 75000**	150	194	2,28	–				
51,0	54,0	2,4	40 × 68	**V59 75100**	153	197	2,40	–				
52,0	55,0	2,4	40 × 68	**V59 75200**	156	200	2,42	–				
53,0	55,0	2,4	40 × 68	**V59 75300**	159	203	2,51	–				
54,0	55,0	2,4	40 × 68	**V59 75400**	162	206	2,64	–				

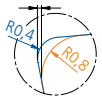
For other diameters see following page.

Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.

3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐
4×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



Clamping screw	Basic recommendation			
	Indexable insert -01 -11			for workpiece material
Order No. Article	**Order No.** ▽▽ Size	ISO code	Piece	
N00 57511 S/M2,5×7,2-8IP 1,28 Nm	**W29 24010.048425** **W29 24010.047935** **W29 24010.046115** **W29 24110.047710**	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK6115 WOEX 05T304-11 BK7710	2	P M S K N
N00 57521 S/M3,5×7,3-10IP 2,8 Nm	**W29 34010.048425** **W29 34010.047935** **W29 34010.046115** **W29 34110.047710**	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK6115 WOEX 06T304-11 BK7710	2	P M S K N
N00 57531 S/M4,5×9-15IP 6,25 Nm	**W29 42010.048425** **W29 42010.047935** **W29 42010.046115** **W29 42110.047710**	WOEX 080404-01 BK8425 WOEX 080404-01 BK7935 WOEX 080404-01 BK6115 WOEX 080404-11 BK7710	2	P M S K N

Supply includes: KUB Trigon drill with clamping screw.
Please order indexalbe insert separately.

Guideline values for solid drilling: page 92 / alternative inserts: page 93.

Indexable insert drill with cylindrical shank (parallel clamping surface), R.H. cutting



Guideline values for solid drilling						Cutting speed v_c (m/min) 3×D | 4×D															Max. feed f (mm/rev) 3×D							4×D						
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	BK8425			BK7935			BK6115			BK7710			BK77			Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 44,5 – 54,0	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0
						min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max															
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	250	**300**	350							0,08	0,10	0,10	0,12	0,12	0,12	0,14	0,06	0,08	0,08	0,12	0,12	0,12	0,12
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**270**	300							0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,04	0,06	0,10	0,14	0,14	0,14	0,16
	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	200	**260**	320	160	**220**	280	250	**300**	350							0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,06	0,08	0,10	0,14	0,16	0,16	0,20
	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	200	**240**	280							0,06	0,08	0,10	0,14	0,16	0,16	0,18	0,04	0,06	0,08	0,14	0,16	0,16	0,16
	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	120	**160**	200	100	**140**	180	170	**200**	230							0,06	0,08	0,10	0,10	0,12	0,12	0,14	0,04	0,06	0,08	0,10	0,12	0,12	0,14
	4.1			HSS		50	**70**	90	40	**60**	80	70	**90**	110							0,04	0,06	0,08	0,10	0,10	0,12	0,14	0,03	0,05	0,06	0,10	0,10	0,12	0,12
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80							20	**50**	80	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,03	0,05	0,06	0,10	0,10	0,10	0,10
	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)				40	**60**	80				40	**60**	80	40	**60**	80	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,04	0,06	0,08	0,12	0,10	0,12	0,12
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	150	**170**	210	140	**180**	220	210	**240**	270							0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,04	0,06	0,08	0,14	0,14	0,14	0,14
	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	120	**150**	200	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,12	0,12	0,15	0,04	0,04	0,06	0,12	0,12	0,12	0,14
	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	110	**150**	190	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,04	0,04	0,06	0,12	0,12	0,12	0,12
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	80	**110**	150	160	**240**	320							0,08	0,12	0,14	0,20	0,20	0,25	0,28	0,08	0,10	0,14	0,20	0,20	0,25	0,28
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180							0,08	0,10	0,14	0,14	0,20	0,20	0,20	0,06	0,08	0,12	0,14	0,20	0,20	0,20
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200							0,08	0,10	0,14	0,20	0,20	0,20	0,26	0,06	0,08	0,12	0,20	0,20	0,20	0,26
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180							0,08	0,10	0,14	0,20	0,20	0,25	0,26	0,06	0,08	0,12	0,20	0,20	0,25	0,26
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150							0,10	0,12	0,16	0,25	0,25	0,25	0,26	0,08	0,10	0,14	0,25	0,25	0,25	0,26
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150							0,08	0,10	0,14	0,20	0,20	0,25	0,26	0,06	0,08	0,12	0,20	0,20	0,25	0,26
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130							0,08	0,10	0,14	0,16	0,16	0,20	0,22	0,06	0,08	0,12	0,16	0,16	0,20	0,22
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250				150	**250**	350	150	**250**	350	0,05	0,08	0,12	0,16	0,16	0,16	0,20	0,04	0,06	0,10	0,16	0,16	0,18	0,20
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400				250	**350**	450	250	**350**	450	0,05	0,08	0,08	0,10	0,10	0,10	0,14	0,03	0,06	0,06	0,10	0,10	0,10	0,14
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500				300	**500**	700	300	**500**	700	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,03	0,06	0,06	0,10	0,10	0,10	0,12
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320				210	**280**	350	210	**280**	350	0,10	0,12	0,14	0,18	0,18	0,20	0,22	0,08	0,10	0,12	0,18	0,18	0,20	0,22
	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250				140	**220**	300	140	**220**	300	0,10	0,12	0,14	0,20	0,20	0,20	0,26	0,08	0,10	0,12	0,20	0,20	0,20	0,25
H	15.0	1400		hardened steels < 45 HRC		80	**120**	140				80	**120**	140				40	**80**	100	0,05	0,05	0,08	0,10	0,10	0,12	0,12	0,03	0,03	0,06	0,10	0,10	0,10	0,12
	16.0	1800		hardened steels > 45 HRC		60	**100**	140				60	**100**	140				30	**40**	60	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,03	0,06	0,06	0,10	0,10	0,10	0,10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Alternative inserts



for better chip control

ØD	Indexable insert -03 / -13 Order No.	ISO code	for work-piece material
12-13,7	–		
14 – 19,5	**W29 10130.048425** **W29 10130.0479**	WOEX 030204-13 BK8425 WOEX 030204-13 BK79	P M
20 – 24,5	**W29 18130.048425** **W29 18130.0479**	WOEX 040304-13 BK8425 WOEX 040304-13 BK79	P P P M M N S
25 – 36	**W29 24130.048425** **W29 24030.046425** **W29 24130.0479**	WOEX 05T304-13 BK8425 WOEX 05T304-03 BK6425 ⚠ WOEX 05T304-13 BK79	P P M M S
37 – 44	**W29 34130.048425** **W29 34030.046425** **W29 34130.0479**	WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 ⚠ WOEX 06T304-13 BK79	P P M M S
45 – 54	**W29 42030.046425** **W29 42000.048425**	WOEX 080404-03 BK6425 ⚠ WOEX 080404-00 BK8425	P M S

⚠
Only use this insert with KUB Trigon as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

for higher cutting speed

ØD	Indexable insert -00 / -01 / -11 Order No.	ISO code	for work-piece material
12-13,7	–		
14 – 19,5	W29 10010.0472 W29 10110.0450	WOEX 030204-01 BK72 WOEX 030204-11 BK50	P N
20 – 24,5	W29 18010.0472 W29 18110.0450	WOEX 040304-01 BK72 WOEX 040304-11 BK50	P N
25 – 36	W29 24010.0472 W29 24110.0450	WOEX 05T304-01 BK72 WOEX 05T304-11 BK50	P N
37 – 44	W29 34010.0472 W29 34110.0450	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	P N
45 – 54	W29 42010.0472 W01 42940.045510 W01 42600.047615	WOEX 080404-01 BK72 WOHX 080404 F PKD5510 WOHX 080404 EN BK7615	P M N H

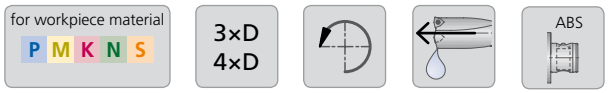
for greater strength

12-13,7	W29 04010.027935	WOEX 020102-01 BK7935	P
14 – 19,5	**W29 10010.047935** **W29 10010.0404** **W29 10010.0421** **W29 10110.0421**	WOEX 030204-01 BK7935 WOEX 030204-01 P40 WOEX 030204-01 K10 WOEX 030204-11 K10	P S P M S K N
20 – 24,5	**W29 18010.047935** **W29 18010.0404** **W29 18010.0421** **W29 18110.0421**	WOEX 040304-01 BK7935 WOEX 040304-01 P40 WOEX 040304-01 K10 WOEX 040304-11 K10	P S P M S K N
25 – 36	**W29 24010.047935** **W29 24010.0404** **W29 24010.0421** **W29 24110.0421**	WOEX 05T304-01 BK7935 WOEX 05T304-01 P40 WOEX 05T304-01 K10 WOEX 05T304-11 K10	P S P M S K N
37 – 44	**W29 34010.047935** **W29 34010.0404** **W29 34010.0421** **W29 34110.0421**	WOEX 06T304-01 BK7935 WOEX 06T304-01 P40 WOEX 06T304-01 K10 WOEX 06T304-11 K10	P S P M S K N
45 – 54	**W29 42010.047935** **W29 42010.0404** **W29 42010.0421** **W29 42000.0421**	WOEX 080404-01 BK7935 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-00 K10	P P M S K N H

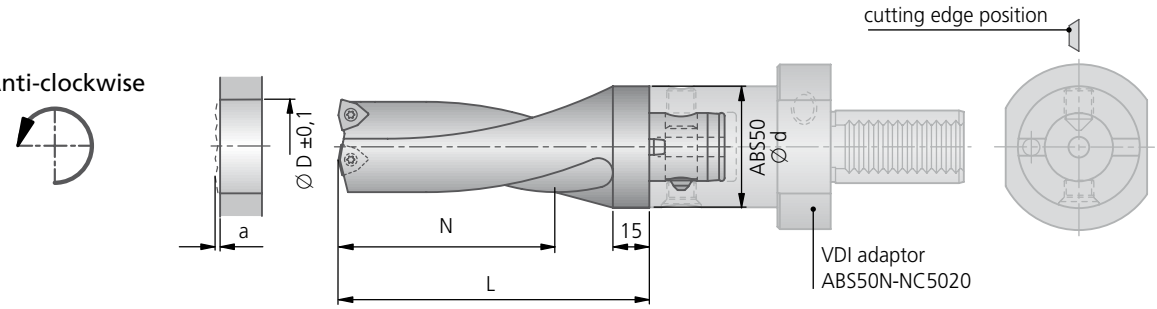
KOMET KUB Trigon

Ø 14 – 44 mm

Indexable insert drill



Anti-clockwise

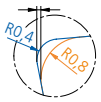


				2×D				3×D				
Ø D	max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	N	L	kg	
14,0	15,0	1,3	50	V30 21402	28	63	0,40	V30 61402	42	77	0,50	
15,0	16,0	1,3	50	V30 21502	30	65	0,40	V30 61502	45	80	0,50	
16,0	17,0	1,3	50	V30 21600	32	67	0,40	V30 61600	48	83	0,50	
17,0	18,0	1,3	50	V30 21700	34	69	0,40	V30 61700	51	86	0,50	
18,0	19,0	1,3	50	V30 21800	36	71	0,40	V30 61800	54	89	0,50	
19,0	20,0	1,3	50	V30 21900	38	73	0,50	V30 61900	57	92	0,55	
20,0	21,0	1,5	50	V30 22000	40	75	0,50	V30 62000	60	95	0,60	
21,0	22,0	1,5	50	V30 22100	42	77	0,55	V30 62100	63	98	0,60	
22,0	23,0	1,5	50	V30 22200	44	79	0,55	V30 62200	66	101	0,60	
23,0	24,0	1,5	50	V30 22300	46	81	0,55	V30 62300	69	104	0,60	
24,0	25,0	1,5	50	V30 22400	48	83	0,60	V30 62400	72	107	0,65	
25,0	26,0	1,7	50	V30 22500	50	85	0,60	V30 62500	75	110	0,65	
26,0	28,0	1,7	50	V30 22600	52	87	0,60	V30 62600	78	113	0,70	
27,0	30,0	1,7	50	V30 22700	54	89	0,60	V30 62700	81	116	0,70	
28,0	31,0	1,7	50	V30 22800	56	91	0,65	V30 62800	84	119	0,75	
29,0	32,0	1,7	50	V30 22900	58	93	0,70	V30 62900	87	122	0,75	
30,0	32,5	1,7	50	V30 23000	60	100	0,75	V30 63000	90	130	0,80	
31,0	33,5	1,7	50	V30 23100	62	102	0,75	V30 63100	93	133	0,85	
32,0	34,0	1,7	50	V30 23200	64	104	0,75	V30 63200	96	136	0,90	
33,0	34,0	1,7	50	V30 23300	66	106	0,80	V30 63300	99	139	0,95	
34,0	35,0	1,7	50	V30 23400	68	108	0,85	V30 63400	102	142	1,00	
35,0	36,0	1,7	50	V30 23500	70	110	0,90	V30 63500	105	145	1,00	
36,0	37,0	1,7	50	V30 23600	72	112	0,90	V30 63600	108	148	1,05	
37,0	40,0	2,0	50	V30 23700	74	124	1,05	V30 63700	111	161	1,20	
38,0	41,0	2,0	50	V30 23800	76	126	1,05	V30 63800	114	164	1,25	
39,0	42,0	2,0	50	V30 23900	78	128	1,10	V30 63900	117	167	1,30	
40,0	43,0	2,0	50	V30 24000	80	130	1,15	V30 64000	120	170	1,40	
41,0	44,0	2,0	50	V30 24100	82	132	1,20	V30 64100	123	173	1,45	
42,0	45,0	2,0	50	V30 24200	84	134	1,20	V30 64200	126	176	1,50	
43,0	45,0	2,0	50	V30 24300	86	136	1,25	V30 64300	129	179	1,55	
44,0	45,0	2,0	50	V30 24400	88	138	1,25	V30 64400	132	182	1,55	

2×D	●	●	●	●	●	●	◐	●	✕	◐	◐
3×D	●	●	◐	◐	◐	◐	◐	◐	✕	○	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



	Clamping screw	Basic recommendation			
		Indexable insert -01 -11			for workpiece material
	Order No. Article	**Order No.** ▽▽ Size	ISO code	Piece	
	N00 56041 S/M2×4,3-6IP 0,62 Nm	**W29 10010.048425** **W29 10010.047935** **W29 10010.046115** **W29 10110.047710**	WOEX 030204-01 BK8425 WOEX 030204-01 BK7935 WOEX 030204-01 BK6115 WOEX 030204-11 BK7710	2	P M S K N
	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	**W29 18010.048425** **W29 18010.047935** **W29 18010.046115** **W29 18110.047710**	WOEX 040304-01 BK8425 WOEX 040304-01 BK7935 WOEX 040304-01 BK6115 WOEX 040304-11 BK7710	2	P M S K N
	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	**W29 24010.048425** **W29 24010.047935** **W29 24010.046115** **W29 24110.047710**	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK6115 WOEX 05T304-11 BK7710	2	P M S K N
	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	**W29 34010.048425** **W29 34010.047935** **W29 34010.046115** **W29 34110.047710**	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK6115 WOEX 06T304-11 BK7710	2	P M S K N

Supply includes: KUB Trigon drill with clamping screw.

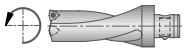
Please order indexalbe insert separately.

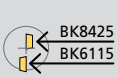
Guideline values for solid drilling: page 96 / alternative inserts: page 97.

KOMET KUB Trigon

Ø 14 – 44 mm

Insert drill with ABS connection, L.H. cutting



Guideline values for solid drilling						Cutting speed v_c (m/min)																Max. feed f (mm/rev)									
						2×D | 3×D																2×D					3×D				
	Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	BK8425			BK7935			BK6115			BK7710			BK77				Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 36,9	Ø 37 – 44,0	Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 36,9	Ø 37 – 44,0
							min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max										
P	1.0		≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	250	**300**	350							0,08	0,10	0,10	0,12	0,12	0,08	0,10	0,10	0,12	0,12
P	2.0		500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**270**	300							0,06	0,08	0,12	0,14	0,16	0,06	0,08	0,12	0,14	0,16
P	2.1		<500		lead alloys	1.0718 (11SMn-Pb30)	200	**260**	320	160	**220**	280	250	**300**	350							0,08	0,10	0,12	0,14	0,20	0,08	0,10	0,12	0,14	0,20
P	3.0		>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	200	**240**	280							0,06	0,08	0,10	0,14	0,16	0,06	0,08	0,10	0,14	0,16
P	4.0		>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	120	**160**	200	100	**140**	180	170	**200**	230							0,06	0,08	0,10	0,12	0,14	0,06	0,08	0,10	0,12	0,14
P	4.1				HSS		50	**70**	90	40	**60**	80	70	**90**	110							0,04	0,06	0,08	0,10	0,12	0,04	0,06	0,08	0,10	0,12
S	5.0			250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80							20	**50**	80	0,04	0,06	0,08	0,10	0,10	0,04	0,06	0,08	0,10	0,10
S	5.1		400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)				40	**60**	80				40	**60**	80	40	**60**	80	0,06	0,08	0,10	0,12	0,12	0,06	0,08	0,10	0,12	0,12
M	6.0		≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	**170**	210	140	**180**	220	210	**240**	270							0,06	0,08	0,10	0,14	0,14	0,06	0,08	0,10	0,14	0,14
M	6.1		<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	120	**150**	200	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,14	0,06	0,06	0,08	0,12	0,14
M	7.0		>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	**150**	190	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,12	0,06	0,06	0,08	0,12	0,12
K	8.0			180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	110	**150**	190	160	**240**	320							0,10	0,12	0,14	0,20	0,25	0,10	0,12	0,14	0,20	0,25
K	8.1			250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180							0,08	0,08	0,10	0,14	0,18	0,08	0,08	0,10	0,14	0,18
K	9.0		≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200							0,08	0,10	0,14	0,20	0,25	0,08	0,10	0,14	0,20	0,25
K	9.1			230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180							0,08	0,10	0,14	0,20	0,25	0,08	0,10	0,14	0,20	0,25
K	10.0		>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150							0,10	0,12	0,16	0,25	0,25	0,10	0,12	0,16	0,25	0,25
K	10.1			200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150							0,08	0,10	0,14	0,20	0,25	0,08	0,10	0,14	0,20	0,25
K	10.2			300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130							0,08	0,10	0,14	0,16	0,20	0,08	0,10	0,14	0,16	0,20
N	12.0			90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250				150	**250**	350	150	**250**	350	0,05	0,08	0,12	0,16	0,20	0,05	0,08	0,12	0,16	0,20
N	12.1			100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400				250	**350**	450	250	**350**	450	0,05	0,08	0,08	0,10	0,12	0,05	0,08	0,08	0,10	0,12
N	13.0			60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500				300	**500**	700	300	**500**	700	0,05	0,08	0,08	0,10	0,12	0,05	0,08	0,08	0,10	0,12
N	13.1			75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320				210	**280**	350	210	**280**	350	0,10	0,12	0,14	0,18	0,20	0,10	0,12	0,14	0,18	0,20
N	14.0			100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250				140	**220**	300	140	**220**	300	0,10	0,12	0,14	0,20	0,25	0,10	0,12	0,14	0,20	0,25
H	15.0	1400			hardened steels < 45 HRC		80	**120**	140				80	**120**	140				40	**80**	100	0,05	0,05	0,08	0,10	0,12	0,05	0,05	0,08	0,10	0,12
H	16.0	1800			hardened steels > 45 HRC		60	**100**	140				60	**100**	140				30	**40**	60	0,05	0,08	0,08	0,10	0,10	0,05	0,08	0,08	0,10	0,10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Alternative inserts

for better chip control

ØD	Indexable insert -03 -13 Order No.	ISO code	for work-piece material
14 – 19,5	**W29 10130.046425**	WOEX 030204-13 BK6425 ⚠	P M
20 – 24,5	**W29 18130.046425**	WOEX 040304-13 BK6425 ⚠	P M
25 – 36	**W29 24030.046425**	WOEX 05T304-03 BK6425 ⚠	P M
37 – 44	**W29 34030.046425**	WOEX 06T304-03 BK6425 ⚠	P M

⚠

Only use this insert with KUB Trigon as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

for higher cutting speed

ØD	Indexable insert -00 -01 -11 Order No.	ISO code	for work-piece material
14 – 19,5	W29 10010.0472 W29 10110.0450	WOEX 030204-01 BK72 WOEX 030204-11 BK50	P N
20 – 24,5	W29 18010.0472 W29 18110.0450	WOEX 040304-01 BK72 WOEX 040304-11 BK50	P N
25 – 36	W29 24010.0472 W29 24110.0450	WOEX 05T304-01 BK72 WOEX 05T304-11 BK50	P N
37 – 44	W29 34010.0472 W29 34110.0450	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	P N

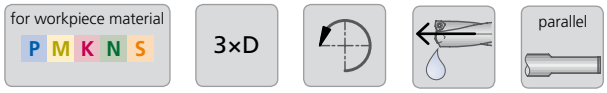
for greater strength

14 – 19,5	**W29 10010.047935**	WOEX 030204-01 BK7935	P S
	W29 10010.0404	WOEX 030204-01 P40	P M S
	W29 10010.0421	WOEX 030204-01 K10	K
	W29 10110.0421	WOEX 030204-11 K10	N
20 – 24,5	**W29 18010.047935**	WOEX 040304-01 BK7935	P S
	W29 18010.0404	WOEX 040304-01 P40	P M S
	W29 18010.0421	WOEX 040304-01 K10	K
	W29 18110.0421	WOEX 040304-11 K10	N
25 – 36	**W29 24010.047935**	WOEX 05T304-01 BK7935	P S
	W29 24010.0404	WOEX 05T304-01 P40	P M S
	W29 24010.0421	WOEX 05T304-01 K10	K
	W29 24110.0421	WOEX 05T304-11 K10	N
37 – 44	**W29 34010.047935**	WOEX 080404-01 BK7935	P S
	W29 34010.0404	WOEX 080404-01 P40	P M S
	W29 34010.0421	WOEX 080404-01 K10	K
	W29 34110.0421	WOEX 080404-11 K10	N

KOMET KUB Trigon

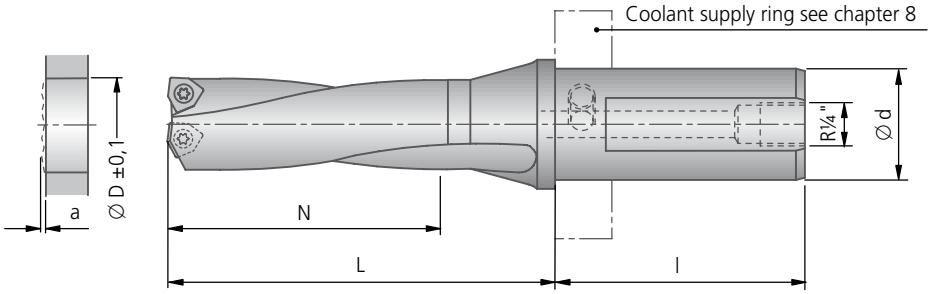
Ø 14 – 54 mm

Indexable insert drill



Anti-clockwise





					3×D					
					Cylindrical shank Ø d × l **Ø 25 × 56**		Cylindrical shank Ø d × l **Ø 30 × 58**		Cylindrical shank Ø d × l **Ø 40 × 68**	
Ø D	max. diameter with offset	Starting / roughing size a	N	L	Order No.	kg	Order No.	kg	Order No.	kg
14,0	15,0	1,3	42	66	V37 61402	0,27	V38 61402	0,37	V39 61402	0,73
15,0	16,0	1,3	45	69	V37 61502	0,25	V38 61502	0,38	V39 61502	0,74
16,0	17,0	1,3	48	72	V37 61600	0,28	V38 61600	0,39	V39 61600	0,75
17,0	18,0	1,3	51	75	V37 61700	0,29	V38 61700	0,40	V39 61700	0,76
18,0	19,0	1,3	54	78	V37 61800	0,27	V38 61800	0,40	V39 61800	0,76
19,0	19,5	1,3	57	81	V37 61900	0,31	V38 61900	0,41	V39 61900	0,78
20,0	21,0	1,5	60	84	V37 62000	0,32	V38 62000	0,44	V39 62000	0,79
21,0	22,0	1,5	63	87	V37 62100	0,33	V38 62100	0,45	V39 62100	0,81
22,0	23,0	1,5	66	90	V37 62200	0,35	V38 62200	0,46	V39 62200	0,82
23,0	24,0	1,5	69	93	V37 62300	0,37	V38 62300	0,48	V39 62300	0,84
24,0	25,0	1,5	72	96	V37 62400	0,38	V38 62400	0,49	V39 62400	0,86
25,0	26,0	1,7	75	99	–		V38 62500	0,48	V39 62500	0,86
26,0	28,0	1,7	78	102	–		V38 62600	0,55	V39 62600	0,88
27,0	30,0	1,7	81	105	–		V38 62700	0,54	V39 62700	0,90
28,0	31,0	1,7	84	108	–		V38 62800	0,57	V39 62800	0,91
29,0	32,0	1,7	87	111	–		V38 62900	0,59	V39 62900	0,96
30,0	32,5	1,7	90	119	–		V38 63000	0,65	V39 63000	1,01
31,0	33,5	1,7	93	122	–		V38 63100	0,68	V39 63100	0,99
32,0	34,0	1,7	96	125	–		V38 63200	0,71	V39 63200	1,08
33,0	35,0	1,7	99	128	–		V38 63300	0,74	V39 63300	1,12
34,0	35,0	1,7	102	131	–		V38 63400	0,75	V39 63400	1,13
35,0	36,0	1,7	105	134	–		V38 63500	0,79	V39 63500	1,16
36,0	37,0	1,7	108	137	–		V38 63600	0,82	V39 63600	1,19
37,0	40,0	2,0	111	150	–		V38 63700	0,90	V39 63700	1,29
38,0	41,0	2,0	114	153	–		V38 63800	0,94	V39 63800	1,33
39,0	42,0	2,0	117	156	–		V38 63900	0,99	V39 63900	1,38
40,0	43,0	2,0	120	159	–		V38 64000	1,03	V39 64000	1,43
41,0	44,0	2,0	123	162	–		V38 64100	1,08	V39 64100	1,48
42,0	45,0	2,0	126	165	–		V38 64200	1,15	V39 64200	1,54
43,0	45,0	2,0	129	168	–		V38 64300	1,22	V39 64300	1,60
44,0	45,0	2,0	132	171	–		V38 64400	1,23	V39 64400	1,66
45,0	48,0	2,4	135	179	–		–		V59 64500	1,88
46,0	49,0	2,4	138	182	–		–		V59 64600	1,87
47,0	50,0	2,4	141	185	–		–		V59 64700	1,94
48,0	51,0	2,4	144	188	–		–		V59 64800	2,09
49,0	52,0	2,4	147	191	–		–		V59 64900	2,19
50,0	53,0	2,4	150	194	–		–		V59 65000	2,28
51,0	54,0	2,4	153	197	–		–		V59 65100	2,40
54,0	55,0	2,4	162	206	–		–		V59 65400	2,64

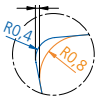
3×D												
	●	●	◐	◐	◐	◐	◐	◐	><	○	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | >< not possible

Supply includes: KUB Trigon drill with clamping screw.

Please order indexalbe insert separately.

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



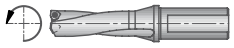
	Clamping screw	Basic recommendation			
		Indexable insert -01 -11			for workpiece material
	Order No. Article	**Order No.** ▽▽ Size	ISO code	Piece	
	N00 56041 S/M2×4,3-6IP 0,62 Nm	**W29 10010.048425** **W29 10010.047935** **W29 10010.046115** **W29 10110.047710**	WOEX 030204-01 BK8425 WOEX 030204-01 BK7935 WOEX 030204-01 BK6115 WOEX 030204-11 BK7710	2	P M S K N
	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	**W29 18010.048425** **W29 18010.047935** **W29 18010.046115** **W29 18110.047710**	WOEX 040304-01 BK8425 WOEX 040304-01 BK7935 WOEX 040304-01 BK6115 WOEX 040304-11 BK7710	2	P M S K N
	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	**W29 24010.048425** **W29 24010.047935** **W29 24010.046115** **W29 24110.047710**	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK6115 WOEX 05T304-11 BK7710	2	P M S K N
	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	**W29 34010.048425** **W29 34010.047935** **W29 34010.046115** **W29 34110.047710**	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK6115 WOEX 06T304-11 BK7710	2	P M S K N
	N00 57531 S/M4,5×9-15IP 6,25 Nm	**W29 42010.048425** **W29 42010.047935** **W29 42010.046115** **W29 42110.047710**	WOEX 080404-01 BK8425 WOEX 080404-01 BK7935 WOEX 080404-01 BK6115 WOEX 080404-11 BK7710	2	P M S K N

Guideline values for solid drilling: page 100 / alternative inserts: page 101.

KOMET KUB Trigon

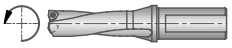
Ø 14 – 54 mm

Indexable insert drill with cylindrical shank (parallel clamping surface), L.H. cutting



Guideline values for solid drilling						Cutting speed v_c (m/min) 3×D												Max. feed f (mm/rev) 3×D							
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	BK8425			BK7935			BK6115			BK7710			BK77			Ø 14 – 16,9	Ø 17 – 19,9	Ø 20 – 24,9	Ø 25 – 29,9	Ø 30 – 36,9	Ø 37 – 40,9	Ø 41 – 44,0	Ø 44,5 – 54,0
						min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max								
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	**260**	320	200	**250**	300	250	**300**	350							0,08	0,10	0,10	0,12	0,12	0,12	0,12	0,14
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	**270**	300	250	**270**	300	250	**270**	300							0,06	0,08	0,12	0,14	0,14	0,14	0,16	0,18
	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	200	**260**	320	160	**220**	280	250	**300**	350							0,08	0,10	0,12	0,14	0,16	0,16	0,20	0,22
	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	140	**180**	220	120	**160**	200	200	**240**	280							0,06	0,08	0,10	0,14	0,16	0,16	0,16	0,18
	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	120	**160**	200	100	**140**	180	170	**200**	230							0,06	0,08	0,10	0,10	0,12	0,12	0,14	0,16
	4.1			HSS		50	**70**	90	40	**60**	80	70	**90**	110							0,04	0,06	0,08	0,10	0,10	0,12	0,12	0,14
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				20	**50**	80							20	**50**	80	0,04	0,06	0,08	0,10	0,10	0,10	0,10	0,10
	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)				40	**60**	80				40	**60**	80	40	**60**	80	0,06	0,08	0,10	0,12	0,10	0,12	0,12	0,12
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	150	**170**	210	140	**180**	220	210	**240**	270							0,06	0,08	0,10	0,14	0,14	0,14	0,14	0,14
	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	120	**150**	200	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,12	0,12	0,14	0,15
	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	110	**150**	190	120	**160**	200	190	**220**	250							0,06	0,06	0,08	0,12	0,12	0,12	0,12	0,14
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120	**160**	200	80	**110**	140	110	**150**	190	160	**240**	320				0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,28
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90	**120**	150	80	**110**	140	100	**140**	180							0,08	0,08	0,10	0,14	0,14	0,16	0,18	0,20
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	**160**	200	110	**150**	190	120	**160**	200							0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,26
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	110	**140**	170	110	**130**	160	100	**140**	180							0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,26
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	90	**120**	150	80	**110**	140	90	**120**	150							0,10	0,12	0,16	0,25	0,25	0,25	0,25	0,26
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90	**120**	150	80	**110**	140	90	**120**	150							0,08	0,10	0,14	0,20	0,20	0,20	0,25	0,26
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	**100**	120	70	**90**	110	70	**100**	130							0,08	0,10	0,14	0,16	0,16	0,16	0,20	0,22
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150	**200**	250	150	**200**	250				150	**250**	350	150	**250**	350	0,05	0,08	0,12	0,16	0,16	0,18	0,20	0,22
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	**300**	400	200	**300**	400				250	**350**	450	250	**350**	450	0,05	0,08	0,08	0,10	0,10	0,10	0,12	0,14
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	**400**	500	300	**400**	500				300	**500**	700	300	**500**	700	0,05	0,08	0,08	0,10	0,10	0,12	0,12	0,14
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	180	**250**	320	180	**250**	320				210	**280**	350	210	**280**	350	0,10	0,12	0,14	0,18	0,18	0,20	0,20	0,22
	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	150	**200**	250	150	**200**	250				140	**220**	300	140	**220**	300	0,10	0,12	0,14	0,20	0,20	0,20	0,25	0,26
H	15.0	1400		hardened steels < 45 HRC	BK8425 BK6115	80	**120**	140				80	**120**	140				40	**80**	100	0,05	0,05	0,08	0,10	0,10	0,12	0,12	0,12
	16.0	1800		hardened steels > 45 HRC		60	**100**	140				60	**100**	140				30	**40**	60	0,05	0,08	0,08	0,10	0,10	0,10	0,10	0,10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Alternative inserts

for better chip control

ØD	Indexable insert -03 -13 Order No.	ISO code	for work-piece material
14 – 19,5	**W29 10130.046425**	WOEX 030204-13 BK6425 ⚠	P M
20 – 24,5	**W29 18130.046425**	WOEX 040304-13 BK6425 ⚠	P M
25 – 36	**W29 24030.046425**	WOEX 05T304-03 BK6425 ⚠	P M
37 – 44	**W29 34130.048425** **W29 34030.046425** **W29 34130.0479**	WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 ⚠ WOEX 06T304-13 BK79	P P M S
45 – 54	**W29 42030.046425** **W29 42000.048425**	WOEX 080404-03 BK6425 ⚠ WOEX 080404-00 BK8425	P M S

⚠

Only use this insert with KUB Trigon
as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

for higher cutting speed

ØD	Indexable insert -00 -01 -11 Order No.	ISO code	for work-piece material
14 – 19,5	W29 10010.0472 W29 10110.0450	WOEX 030204-01 BK72 WOEX 030204-11 BK50	P N
20 – 24,5	W29 18010.0472 W29 18110.0450	WOEX 040304-01 BK72 WOEX 040304-11 BK50	P N
25 – 36	W29 24010.0472 W29 24110.0450	WOEX 05T304-01 BK72 WOEX 05T304-11 BK50	P N
37 – 44	W29 34010.0472 W29 34110.0450	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	P N
45 – 54	W29 42010.0472 W01 42940.045510 W01 42600.047615	WOEX 080404-01 BK72 WOHX 080404 F PKD5510 WOHX 080404 EN BK7615	P M N H

for greater strength

14 – 19,5	**W29 10010.047935** **W29 10010.0404** **W29 10010.0421** **W29 10110.0421**	WOEX 030204-01 BK7935 WOEX 030204-01 P40 WOEX 030204-01 K10 WOEX 030204-11 K10	P S P M S K N
20 – 24,5	**W29 18010.047935** **W29 18010.0404** **W29 18010.0421** **W29 18110.0421**	WOEX 040304-01 BK7935 WOEX 040304-01 P40 WOEX 040304-01 K10 WOEX 040304-11 K10	P S P M S K N
25 – 36	**W29 24010.047935** **W29 24010.0404** **W29 24010.0421** **W29 24110.0421**	WOEX 05T304-01 BK7935 WOEX 05T304-01 P40 WOEX 05T304-01 K10 WOEX 05T304-11 K10	P S P M S K N
37 – 44	**W29 34010.047935** **W29 34010.0404** **W29 34010.0421** **W29 34110.0421**	WOEX 080404-01 BK7935 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-11 K10	P S P M S K N
45 – 54	**W29 42010.047935** **W29 42010.0404** **W29 42010.0421** **W29 42000.0421**	WOEX 080404-01 BK7935 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-00 K10	P P M S K N H

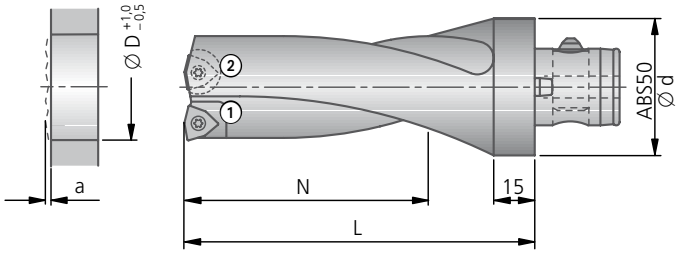
KOMET KUB

Ø 38,5 – 82 mm

Indexable insert drill

for workpiece material P M K N S | 3×D | ABS

2×D on request



			3×D				Insert seating ①				
Ø D adjustable	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	Location screw ③ Order No. Article	Adjusting screw ④ Order No. Article	Clamping screw ⑤ Order No. Article	
38,5 – 40	2,0	50	V82 73900	117	167	1,17	D53 56201	N10 11400 M3,5×9,4-Tx10	55051 03006 M3×6-O1,5	N00 57611 S/M3,5×6,6-10IP 2,8 Nm	
39,5 – 41	2,0	50	V82 74000	120	170	1,20					
40,5 – 42	2,0	50	V82 74100	123	173	1,32					
41,5 – 43	2,0	50	V82 74200	126	176	1,33					
42,5 – 44	2,0	50	V82 74300	129	179	1,44					
43,5 – 45	2,0	50	V82 74400	132	182	1,44					
44,5 – 46	2,4	63	V83 74500	135	190	1,91	D53 56211	N10 11500 M4,5×10,5-Tx15	55051 04010 M4×10-O2	N00 57531 S/M4,5×9-15IP 6,25 Nm	
45,5 – 47	2,4	63	V83 74600	138	193	1,79					
46,5 – 48	2,4	63	V83 74700	141	196	2,02					
47,5 – 49	2,4	63	V83 74800	144	199	2,01					
48,5 – 50	2,4	63	V83 74900	147	202	2,18					
49,5 – 51	2,4	63	V83 75000	150	205	2,23					
50,5 – 52	2,4	63	V83 75100	153	208	2,30					
51,5 – 53	2,4	63	V83 75200	156	211	2,40					
52,5 – 54	2,4	63	V83 75300	159	214	2,48					
53,5 – 55	2,4	63	V83 75400	162	217	2,55					
54,5 – 56	2,7	80	V84 75500	165	220	3,50	D53 56221	N10 11510 M4,5×11,5-Tx15	55051 04012 M4×12-O2	N00 57531 S/M4,5×9-15IP 6,25 Nm	
55,5 – 57	2,7	80	V84 75600	168	223	3,68					
56,5 – 58	2,7	80	V84 75700	171	226	3,70					
57,5 – 59	2,7	80	V84 75800	174	229	3,80					
58,5 – 60	2,7	80	V84 75900	177	232	3,92					
59,5 – 61	2,7	80	V84 76000	180	235	4,00					
60,5 – 62	2,7	80	V84 76100	183	238	4,00					
61,5 – 63	2,7	80	V84 76200	186	241	4,10					
62,5 – 64	2,7	80	V84 76300	189	244	4,43					
63,5 – 65	2,7	80	V84 76400	192	247	4,31					
64,5 – 66	2,7	80	V84 76500	195	250	4,61					
65,5 – 67	2,7	80	V84 76600	198	253	4,65					
66,5 – 68	2,7	80	V84 76700	201	256	4,70					
67,5 – 69	2,7	80	V84 76800	204	259	5,00					
68,5 – 70	3,5	80	V84 76900	207	272	5,44	D53 56231	N10 11010 M4×16,2-Tx20	55051 04010 M4×10-O2	N00 57541 S/M5,5×11-20IP 6,25 Nm	
69,5 – 71	3,5	80	V84 77000	210	275	5,51					
70,5 – 72	3,5	80	V84 77100	213	278	5,58					
71,5 – 73	3,5	80	V84 77200	216	281	5,91					
72,5 – 74	3,5	80	V84 77300	219	284	6,07					
73,5 – 75	3,5	80	V84 77400	222	287	6,15					
74,5 – 76	3,5	80	V84 77500	225	290	6,21					
75,5 – 77	3,5	80	V84 77600	228	293	6,35					
76,5 – 78	3,5	80	V84 77700	231	296	6,50					
77,5 – 79	3,5	80	V84 77800	234	299	6,80					
78,5 – 80	3,5	80	V84 77900	237	302	7,00					
79,5 – 81	3,5	80	V84 78000	240	305	7,39					
80,5 – 82	3,5	80	V84 78100	243	308	7,61					

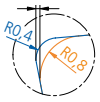
Any **intermediate dimensions** from ∅ 38,5 – 82 mm and **inch dimensions** are available on request.

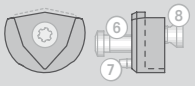
3×D	●	●	○	○	○	○	○	○	✕	✕	◐

● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Supply KUB drill includes: with insert seating ① and ②.
Supply insert seating ① includes: with location screw ③, adjusting screw ④ and clamping screw ⑤.
Supply insert seating ② includes: with location screw ⑥, cylindrical pin ⑦ and clamping screw ⑧.
Please order indexalbe insert separately.

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



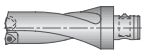
	Insert seating ②				Basic recommendation			
		Location screw ⑥	Cylindrical pin ⑦	Clamping screw ⑧	Indexable insert  -01 -11			for workpiece material
	Order No.	Order No. Article	Order No. Article	Order No. Article	Order No. ▽▽ Size	ISO code	Piece	
	D50 55100	N00 55701 M3,5×5-8IP 2,25 Nm	N00 52000 1,8/2×4,5	N00 57611 S/M3,5×6,6-10IP 2,8 Nm	W29 34010.048425 W29 34010.047935 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2	P M K N S
	D50 55110	N00 55821 M4,5×9-10IP 4,3 Nm	N00 52010 3/4×5,5	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 42010.048425 W29 42010.047935 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7935 WOEX 080404-01 BK62 WOEX 080404-11 BK77	2	P M K N S
	D50 55120	N00 55821 M4,5×9-10IP 4,3 Nm	N00 52010 3/4×5,5	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 50010.048425 W29 50010.047935 W29 50010.0462 W29 50110.0477	WOEX 100504-01 BK8425 WOEX 100504-01 BK7935 WOEX 100504-01 BK62 WOEX 100504-11 BK77	2	P M K N S
	D50 55130	N00 55891 M5,5×8,5-20IP 6,25 Nm	N00 52020 4/5×7,0	N00 57541 S/M5,5×11-20IP 6,25 Nm	W29 58010.088425 W29 58010.087935 W29 58010.0862 W29 58000.088425 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7935 WOEX 120608-01 BK62 WOEX 120608-00 BK8425 WOEX 120608-00 K10	2	P M K N S

Guideline values for solid drilling: page 104 / alternative inserts: page 105.

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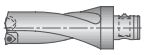
Ø 38,5 – 82 mm

Indexable insert drill with ABS connection, R.H. cutting



Guideline values for solid drilling						v_c	Max. feed f (mm/rev)			
							3×D			
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Cutting speed v_c (m/min)	Ø 38,5 – 44	Ø 44,5 – 54	Ø 54,5 – 68	Ø 68,5 – 82
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,10	0,12	0,12	0,14
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,10	0,12	0,12	0,14
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,12	0,14	0,14	0,16
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	200	0,10	0,12	0,12	0,14
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	180	0,08	0,10	0,10	0,12
P	4.1			HSS		80	0,06	0,08	0,08	0,10
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	60	0,06	0,08	0,08	0,10
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	80	0,06	0,08	0,08	0,10
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	180	0,08	0,10	0,10	0,12
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	160	0,08	0,10	0,10	0,12
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	160	0,06	0,08	0,08	0,10
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	200	0,16	0,18	0,18	0,23
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	160	0,16	0,18	0,18	0,23
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,14	0,16	0,16	0,18
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	160	0,14	0,16	0,16	0,18
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	140	0,12	0,14	0,14	0,16
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,10	0,12	0,12	0,14
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,12	0,14	0,14	0,16
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)	300	0,14	0,16	0,16	0,18
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)	400	0,14	0,16	0,16	0,18
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	600	0,14	0,16	0,16	0,18
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,16	0,18	0,18	0,23
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,16	0,18	0,18	0,23
H	15.0	1400		hardened steels < 45 HRC						
H	16.0	1800		hardened steels > 45 HRC						

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Alternative inserts

for better chip control

ØD	Indexable insert -02 -03 -13 Order No.	ISO code	for work-piece material
38,5 – 44	**W29 34130.048425**	WOEX 06T304-13 BK8425	P
	W29 34020.0464	WOEX 06T304-02 BK64	P
	W29 34030.046425	WOEX 06T304-03 BK6425 ⚠	P S
	W29 34130.0479	WOEX 06T304-13 BK79	M
44,5 – 54	**W29 42130.048425**	WOEX 080404-13 BK8425	P
	W29 42020.0464	WOEX 080404-02 BK64	P
	W29 42030.046425	WOEX 080404-03 BK6425 ⚠	P S
	W29 42130.0479	WOEX 080404-13 BK79	M
54,5 – 68	**W29 50130.048425**	WOEX 100504-13 BK8425	P
	W29 50020.0864	WOEX 100508-02 BK64	P
	W29 50030.086425	WOEX 100508-03 BK6425 ⚠	P S
	W29 50130.0479	WOEX 100504-13 BK79	M
68,5 – 82	**W29 58130.088425**	WOEX 120608-13 BK8425	P
	W29 58030.086425	WOEX 120608-03 BK6425 ⚠	P S
	W29 58130.0879	WOEX 120608-13 BK79	M

⚠ Only use this insert with KUB as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

for higher cutting speed

ØD	Indexable insert -00 -01 -11 Order No.	ISO code	for work-piece material
38,5 – 44	**W29 34010.0472**	WOEX 06T304-01 BK72	P
	W29 34110.0450	WOEX 06T304-11 BK50	N
44,5 – 54	**W29 42010.0472**	WOEX 080404-01 BK72	P
	W29 42110.0450	WOEX 080404-11 BK50	N
54,5 – 68	**W29 50010.0872**	WOEX 100508-01 BK72	P
	W29 50110.0450	WOEX 100504-11 BK50	N
68,5 – 82	**W29 58010.0872**	WOEX 120608-01 BK72	P M
	W29 58000.0862	WOEX 120608-00 BK62	S

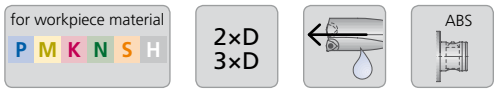
for greater strength

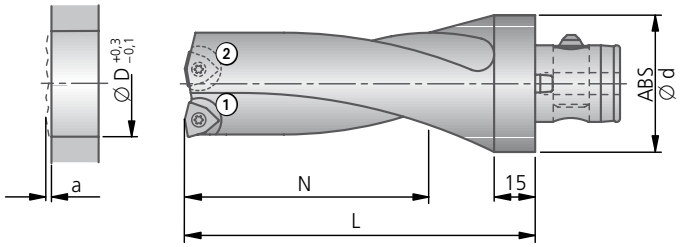
ØD	Order No.	ISO code	for work-piece material
38,5 – 44	**W29 34010.047935**	WOEX 06T304-01 BK7935	P S
	W29 34010.0404	WOEX 06T304-01 P40	P M S
	W29 34010.0421	WOEX 06T304-01 K10	K
	W29 34110.0421	WOEX 06T304-11 K10	N
44,5 – 54	**W29 42010.047935**	WOEX 080404-01 BK7935	P S
	W29 42010.0404	WOEX 080404-01 P40	P M S
	W29 42010.0421	WOEX 080404-01 K10	K
	W29 42110.0421	WOEX 080404-11 K10	N
54,5 – 68	**W29 50010.047935**	WOEX 100504-01 BK7935	P S
	W29 50010.0804	WOEX 100508-01 P40	P M S
	W29 50010.0821	WOEX 100508-01 K10	K
	W29 50110.0421	WOEX 100504-11 K10	N
68,5 – 82	**W29 58010.087935**	WOEX 120608-01 BK7935	P S
	W29 58010.0804	WOEX 120608-01 P40	P M S
	W29 58010.0821	WOEX 120608-01 K10	K
	W29 58000.0821	WOEX 120608-00 K10	N

KOMET KUB

Ø 45 – 82 mm

Indexable insert drill

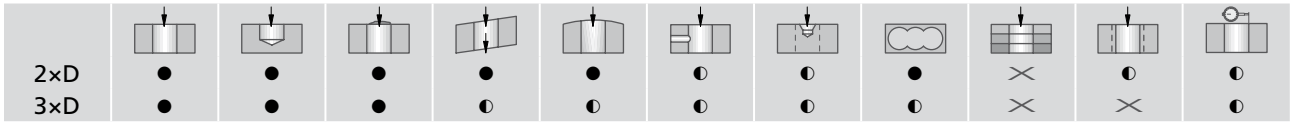




				2×D				3×D				
Ø D	*max. diameter with offset	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg	Order No.	N	L	kg	
45	48	2,4	63	V13 34500	90	145	1,61	V13 74500	135	190	1,61	
46	49	2,4	63	V13 34600	92	147	1,66	V13 74600	138	193	1,95	
47	50	2,4	63	V13 34700	94	149	1,70	V13 74700	141	196	2,02	
48	51	2,4	63	V13 34800	96	151	1,75	V13 74800	144	199	2,08	
49	52	2,4	63	V13 34900	98	153	1,80	V13 74900	147	202	2,16	
50	53	2,4	63	V13 35000	100	155	1,85	V13 75000	150	205	2,23	
51	54	2,4	63	V13 35100	102	157	1,89	V13 75100	153	208	2,27	
52	55	2,4	63	V13 35200	104	159	1,94	V13 75200	156	211	2,45	
53	55	2,4	63	V13 35300	106	161	2,00	V13 75300	159	214	2,45	
54	55	2,4	63	V13 35400	108	163	2,07	V13 75400	162	217	2,54	
55	58	2,7	80	V14 35500	110	165	2,91	V14 75500	165	220	3,41	
56	59	2,7	80	V14 35600	112	167	2,96	V14 75600	168	223	3,51	
57	60	2,7	80	V14 35700	114	169	3,06	V14 75700	171	226	3,62	
58	61	2,7	80	V14 35800	116	171	3,13	V14 75800	174	229	3,73	
59	62	2,7	80	V14 35900	118	173	3,21	V14 75900	177	232	3,82	
60	63	2,7	80	V14 36000	120	175	3,32	V14 76000	180	235	3,93	
61	64	2,7	80	V14 36100	122	177	3,32	V14 76100	183	238	4,05	
62	65	2,7	80	V14 36200	124	179	3,44	V14 76200	186	241	4,19	
63	66	2,7	80	V14 36300	126	181	3,54	V14 76300	189	244	4,31	
64	67	2,7	80	V14 36400	128	183	3,59	V14 76400	192	247	4,34	
65	68	2,7	80	V14 36500	130	185	3,65	V14 76500	195	250	4,60	
66	69	2,7	80	V14 36600	132	187	3,73	V14 76600	198	253	4,61	
67	69,5	2,7	80	V14 36700	134	189	3,82	V14 76700	201	256	4,80	
68	70	2,7	80	V14 36800	136	191	3,99	V14 76800	204	259	4,93	
69	72	3,5	80	V14 36900	138	203	4,30	V14 76900	207	272	5,25	
70	73	3,5	80	V14 37000	140	205	4,38	V14 77000	210	275	5,32	
71	74	3,5	80	V14 37100	142	207	4,57	V14 77100	213	278	5,55	
72	75	3,5	80	V14 37200	144	209	4,53	V14 77200	216	281	5,79	
73	76	3,5	80	V14 37300	146	211	4,65	V14 77300	219	284	5,96	
74	77	3,5	80	V14 37400	148	213	4,76	V14 77400	222	287	6,13	
75	78	3,5	80	V14 37500	150	215	4,90	V14 77500	225	290	6,32	
76	79	3,5	80	V14 37600	152	217	5,10	V14 77600	228	293	6,43	
77	80	3,5	80	V14 37700	154	219	5,18	V14 77700	231	296	6,60	
78	81	3,5	80	V14 37800	156	221	5,39	V14 77800	234	299	6,80	
79	82	3,5	80	V14 37900	158	223	5,42	V14 77900	237	302	7,10	
80	82	3,5	80	V14 38000	160	225	5,66	V14 78000	240	305	7,23	
81	82,5	3,5	80	V14 38100	162	227	5,75	V14 78100	243	308	7,57	
82	83	3,5	80	V14 38200	164	229	5,97	V14 78200	246	311	7,69	

Any **intermediate dimensions** from Ø 45 – 82 mm and **inch dimensions** are available on request.

* Adjustment device see chapter 6



2×D	●	●	●	●	●	◐	◐	●	✕	◐	◐
3×D	●	●	●	◐	◐	◐	◐	◐	✕	✕	◐

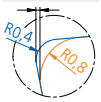
● very good | ◐ good | ○ possible: see technical notes, page 110-112 | ✕ not possible

Supply KUB drill includes: with insert seating ① and ②.
Supply insert seating ① includes: with location screw ③, cylindrical pin ④ and clamping screw ⑤.
Supply insert seating ② includes: with location screw ③, cylindrical pin ④ and clamping screw ⑤.

Please order indexalbe insert separately.

	Insert seating ① and ②					Basic recommendation			
	external ①	internal ②	Location screw ③	Cylindrical pin ④	Clamping screw ⑤	Indexable insert -01 -11			for workpiece material
	Order No.	Order No.	Order No. Article	Order No. Article	Order No. Article	Order No. ▽▽ Size	ISO code	Piece	
	D50 55310	D50 55110	N00 55821 M4,5×9-10IP 4,3 Nm	N00 52010 3/4×5,5	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 42010.048425 W29 42010.047935 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7935 WOEX 080404-01 BK62 WOEX 080404-11 BK77	2	P M K N S H
	D50 55320	D50 55120	N00 55821 M4,5×9-10IP 4,3 Nm	N00 52010 3/4×5,5	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 50010.048425 W29 50010.047935 W29 50010.0462 W29 50110.0477	WOEX 100504-01 BK8425 WOEX 100504-01 BK7935 WOEX 100504-01 BK62 WOEX 100504-11 BK77	2	P M K N S H
	D50 55330	D50 55130	N00 55901 M5,5×13,5-20IP 6,25 Nm	N00 52020 4/5×7,0	N00 57541 S/M5,5×11-20IP 6,25 Nm	W29 58010.088425 W29 58010.087935 W29 58010.0862 W29 58000.088425 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7935 WOEX 120608-01 BK62 WOEX 120608-00 BK8425 WOEX 120608-00 K10	2	P M K N S H

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

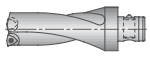


Guideline values for solid drilling: page 108 / alternative inserts: page 109.

KOMET KUB

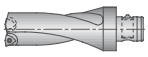
Ø 45 – 82 mm

Indexable insert drill with ABS connection, R.H. cutting



Guideline values for solid drilling						v_c	Max. feed f (mm/rev)					
							2×D			3×D		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Cutting speed v_c (m/min)	Ø 45 – 54	Ø 54,5 – 68	Ø 68,5 – 82	Ø 45 – 54	Ø 54,5 – 68	Ø 68,5 – 82
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,12	0,14	0,16	0,12	0,14	0,14
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,16	0,20	0,25	0,16	0,20	0,20
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,20	0,25	0,25	0,20	0,25	0,25
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	200	0,16	0,20	0,20	0,16	0,18	0,18
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	180	0,14	0,16	0,16	0,14	0,14	0,16
P	4.1			HSS		–	–	–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	60	0,10	0,12	0,14	0,10	0,12	0,14
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	80	0,12	0,14	0,16	0,12	0,14	0,14
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	180	0,14	0,16	0,16	0,14	0,14	0,16
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	160	0,14	0,16	0,16	0,14	0,16	0,16
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	160	0,12	0,16	0,18	0,12	0,16	0,16
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	200	0,25	0,30	0,30	0,25	0,25	0,30
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	160	0,18	0,30	0,30	0,18	0,20	0,25
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,25	0,30	0,30	0,25	0,25	0,30
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	160	0,25	0,30	0,30	0,25	0,25	0,30
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	140	0,25	0,30	0,30	0,25	0,25	0,30
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,25	0,30	0,30	0,25	0,25	0,30
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,20	0,25	0,30	0,20	0,20	0,20
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)	300	0,20	0,25	0,25	0,20	0,20	0,25
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)	400	0,12	0,16	0,16	0,12	0,12	0,14
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	600	0,12	0,12	0,14	0,12	0,12	0,14
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,20	0,25	0,25	0,20	0,25	0,25
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,25	0,30	0,30	0,25	0,30	0,30
H	15.0	1400		hardened steels < 45 HRC		80	0,12	0,14	0,14	0,12	0,14	0,14
H	16.0	1800		hardened steels > 45 HRC		40	0,10	0,10	0,10	0,10	0,10	0,10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Alternative inserts

for better chip control

ØD	Indexable insert -03 -13 Order No.	ISO code	for work-piece material
45 – 54	**W29 42130.048425**	WOEX 080404-13 BK8425	P
	W29 42030.046425	WOEX 080404-03 BK6425 ⚠	P
	W29 42130.0479	WOEX 080404-13 BK79	M S
55 – 68	**W29 50130.048425**	WOEX 100504-13 BK8425	P
	W29 50030.086425	WOEX 100508-03 BK6425 ⚠	P
	W29 50130.0479	WOEX 100504-13 BK79	M S
69 – 82	**W29 58130.088425**	WOEX 120608-13 BK8425	P
	W29 58030.086425	WOEX 120608-03 BK6425 ⚠	P
	W29 58130.0879	WOEX 120608-13 BK79	M

⚠ Only use this insert with KUB as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

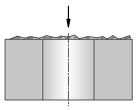
for higher cutting speed

ØD	Indexable insert -00 -01 -11 Order No.	ISO code	for work-piece material
45 – 54	**W29 42010.0472**	WOEX 080404-01 BK72	P
	W29 42110.0450	WOEX 080404-11 BK50	N
55 – 68	**W29 50010.0872**	WOEX 100508-01 BK72	P
	W29 50110.0450	WOEX 100504-11 BK50	N
69 – 82	**W29 58010.0872**	WOEX 120608-01 BK72	P
	W29 58000.0862	WOEX 120608-00 BK62	N

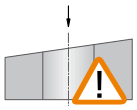
for greater strength

45 – 54	**W29 42010.047935**	WOEX 080404-01 BK7935	P S
	W29 42010.0404	WOEX 080404-01 P40	P M S
	W29 42010.0421	WOEX 080404-01 K10	K
	W29 42110.0421	WOEX 080404-11 K10	N
55 – 68	**W29 50010.047935**	WOEX 100504-01 BK7935	P S
	W29 50010.0804	WOEX 100508-01 P40	P M S
	W29 50010.0821	WOEX 100508-01 K10	K
	W29 50110.0421	WOEX 100504-11 K10	N
69 – 82	**W29 58010.087935**	WOEX 120608-01 BK7935	P S
	W29 58010.0804	WOEX 120608-01 P40	P M S
	W29 58010.0821	WOEX 120608-01 K10	K
	W29 58000.0821	WOEX 120608-00 K10	N

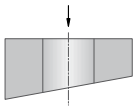
Technical informations

1. 

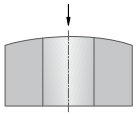
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

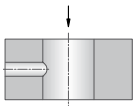
Starting on angled surfaces
- subject to the starting angle, the feed must be reduced when starting the bore.
  Rule of thumb: 3° ≙ 30%; 10° ≙ 40%; 25° ≙ 60% use tools max. 2×D
- use tough insertand stable corner radius

3. 

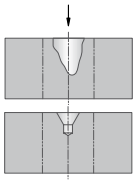
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

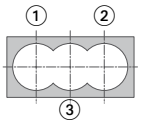
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

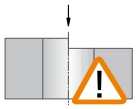
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

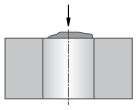
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

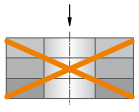
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

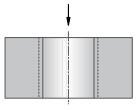
Starting on an edge
- reduce feed rate by 50%
- use tough insertand stable corner radius

9. 

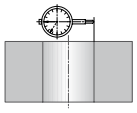
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- not possible

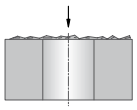
11. 

Roughing
- possible

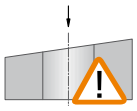
12. 

Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

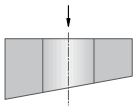
Note: please note max. offset ∅ in tables

1. 

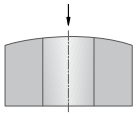
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

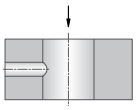
Starting on angled surfaces
- max. 3° angled position possible (cast angles)
- reduce feed rate when starting bore
- use stable corner radius

3. 

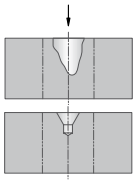
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

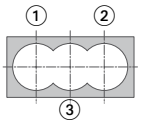
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

5. 

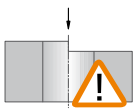
Drilling through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

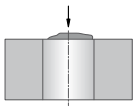
Starting on a groove or large centering bore
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

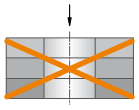
Drilling a chamber
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

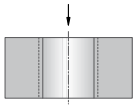
Starting on an edge
- not possible for 3×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

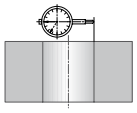
Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

10. 

Drilling through stacked plates
- not possible

11. 

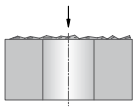
Roughing
- possible

12. 

Adjustable
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

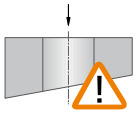
Technical informations

1. 

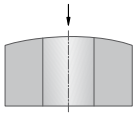
Starting on uneven surfaces (cast surfaces)
- subject to the surface, reduce feed as required when starting the bore

2. 

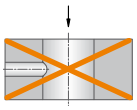
Starting on angled surfaces
- not possible for 4×D tools
- starting surface must be spot faced or spot milled

3. 

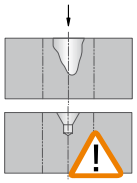
Angled bore exit
- reduce feed by up to 50% for 4×D tools

4. 

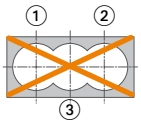
Starting on cambered surfaces
- starting surface must be milled evenly

5. 

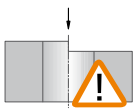
Drilling through a cross bore
- not possible with 4×D tools
- if necessary apply cross bore later

6. 

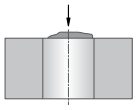
Starting on a groove or large centering bore
- points for starting bore must be rough machined first

7. 

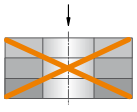
Drilling a chamber
- not possible

8. 

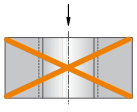
Starting on an edge
- not possible for 4×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

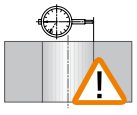
Starting on a welded seam
- reduce feed by up to 50% for 4×D tools
- if necessary pre-machine point for starting bore

10. 

Drilling through stacked plates
- not possible

11. 

Roughing
- not possible

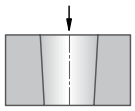
12. 

adjustable
- dimensional adjustment within 1/10 range possible

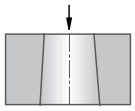
rotating and stationary use



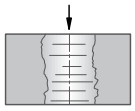
Short tool life types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



Bore narrows at bottom
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry



Bore widens at bottom
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



Bad surface finish
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

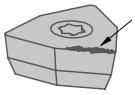
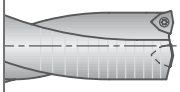
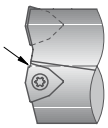


Bild up on cutting edge
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

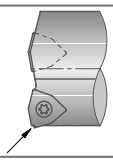


Friction marks on tool shank
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius

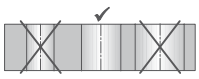
stationary use



Fracture on internal cutting edge
- drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine
- mix-up between renforced/non renforced insert → use correct insert
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge

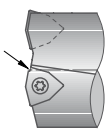


Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius

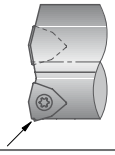


Bore too small/ too large
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

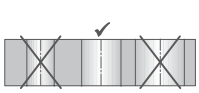
rotating use



Fracture on internal cutting edge
- mix-up between renforced/non renforced insert → use correct insert
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge



Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



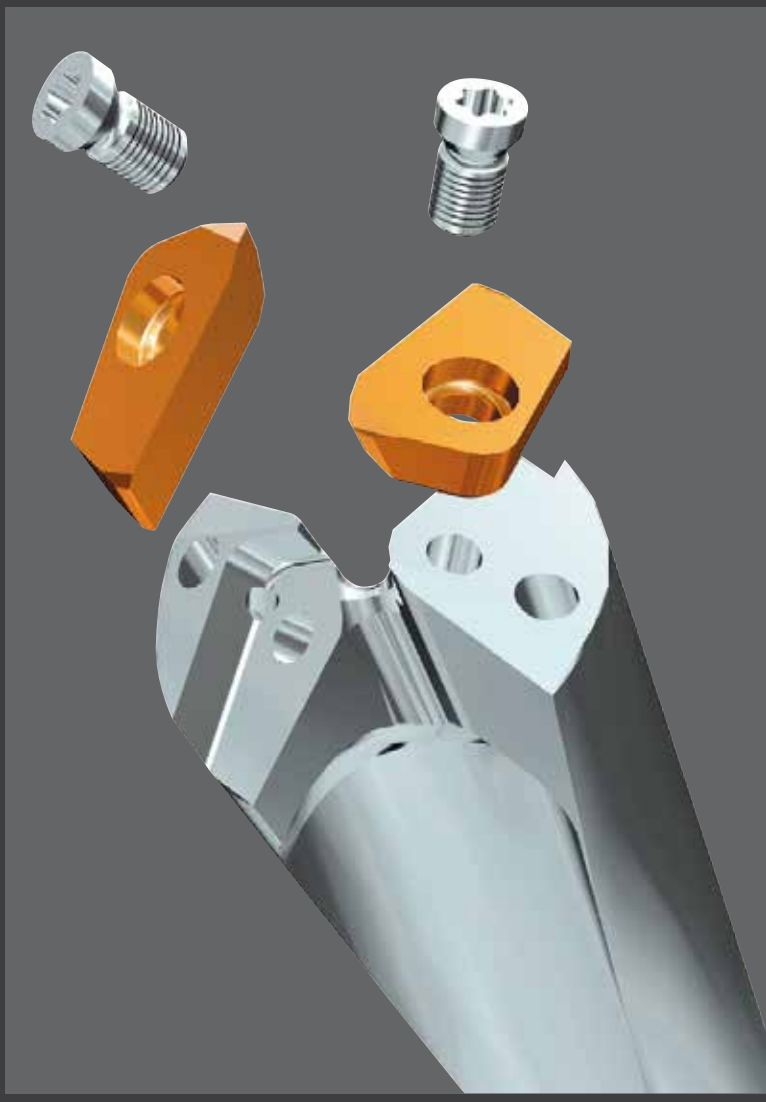
Bore too small/ too large with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting

KOMET KUB Duon

Continuous drilling to 5×D

With our KOMET KUB Duon drill concept, we have incorporated the principle of exchangeable cutting elements in double-edged tools.

The KOMET KUB Duon is supplied as standard in drilling depths up to 5×D with combination shank DIN 6536 HE and DIN 6595 and also with ABS connection.



BENEFITS for you:

- Twin cutting edges with high cutting speeds
- Drills with 2 replaceable screw-on cutter bodies; no regrinding necessary
- Face side, tangential mounting of inserts produces greater stability
- Precision ground inserts
- Intermediate dimensions can be changed very flexibly on standard tool bodies by means of the inserts
- Bore machining accurate and highly productive

Flexibility is the trump card:

1 Design to customer requirement e.g. with integral steps or chamfering insert

2 Suitable for retro-fitting a chamfering cartridge







KOMET KUB Duon

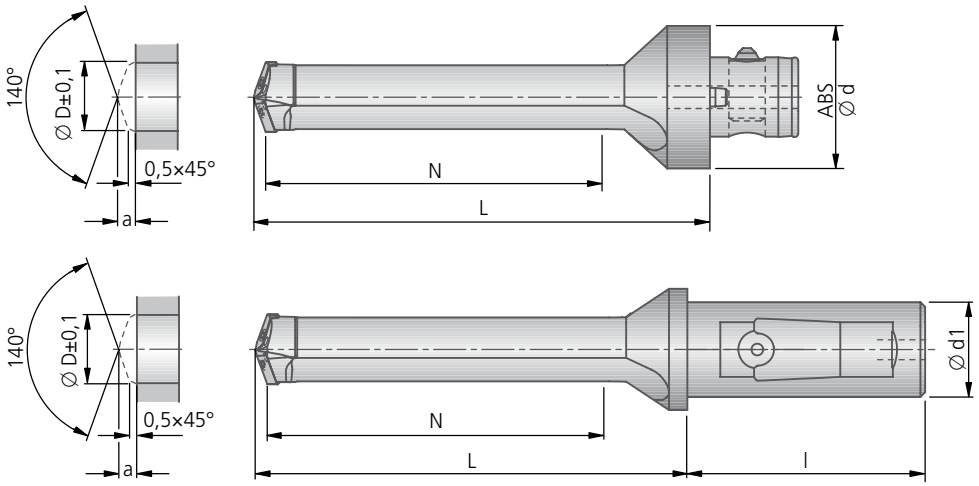
	Page
ABS connection	116 – 131
∅ 17,3 - 44,2 mm, R.H. cutting Drilling depth 5×D	
Cylindrical shank (combination shank)	116 – 127
∅ 17,3 - 36,2 mm, R.H. cutting Drilling depth 5×D	
Recommended cutting data	132
Pre-centering	133
ABS connection Cylindrical shank (combination shank)	
Technical informations	134
Problems → Causes → Solutions	135

KOMET KUB Duon

Ø 17,3 – 20,7 mm

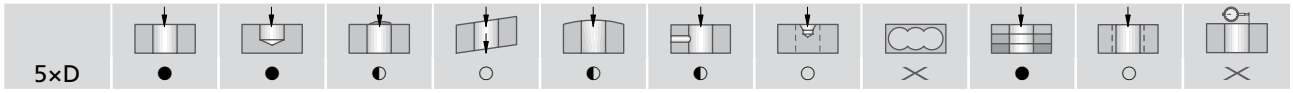
Twin cutting drill

for workpiece material P K N | 5×D | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
17,3	4,0												
17,4	4,1												
17,5	4,1	50	**U20 01750**	90	125	0,6	25×56	**U20 71750**	90	114	0,34	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
17,6	4,1												
17,7	4,1												
17,8													
17,9													
18,0	4,1	50	**U20 01800**	90	125	0,6	25×56	**U20 71800**	90	114	0,34	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
18,1													
18,2													
18,3													
18,4													
18,5	4,2	50	**U20 01850**	95	130	0,6	25×56	**U20 71850**	95	119	0,35	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
18,6													
18,7													
18,8													
18,9													
19,0	4,3	50	**U20 01900**	95	130	0,6	25×56	**U20 71900**	95	119	0,35	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
19,1													
19,2													
19,3													
19,4													
19,5	4,4	50	**U20 01950**	100	135	0,6	32×60	**U20 81950**	100	124	0,56	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
19,6													
19,7													
19,8													
19,9													
20,0	4,5	50	**U20 02000**	100	135	0,6	32×60	**U20 82000**	100	124	0,56	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
20,1													
20,2													
20,3													
20,4													
20,5	4,5	50	**U20 02050**	105	140	0,6	32×60	**U20 82050**	105	134	0,57	**N00 57660** S/M2,2×4,8-6IP 1,01 Nm	
20,6													
20,7													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 18.0 mm, coating BK84, Order No.: H60 18000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	for workpiece material K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide	Order No.	BK7710
XOHX 0802-17,3...	H60 17300. ..				XOHX 0802-17,3-62...	H62 17300. ..	
XOHX 0802-17,4...	H60 17400. ..				XOHX 0802-17,4-62...	H62 17400. ..	
XOHX 0802-17,5...	H60 17500. ..	8440	2715	84	XOHX 0802-17,5-62...	H62 17500. ..	7710
XOHX 0802-17,6...	H60 17600. ..				XOHX 0802-17,6-62...	H62 17600. ..	
XOHX 0802-17,7...	H60 17700. ..				XOHX 0802-17,7-62...	H62 17700. ..	
XOHX 0802-17,8...	H60 17800. ..				XOHX 0802-17,8-62...	H62 17800. ..	
XOHX 0802-17,9...	H60 17900. ..				XOHX 0802-17,9-62...	H62 17900. ..	
XOHX 0802-18,0...	H60 18000. ..	8440	2715	84	XOHX 0802-18,0-62...	H62 18000. ..	7710
XOHX 0802-18,1...	H60 18100. ..				XOHX 0802-18,1-62...	H62 18100. ..	
XOHX 0802-18,2...	H60 18200. ..				XOHX 0802-18,2-62...	H62 18200. ..	
XOHX 0802-18,3...	H60 18300. ..				XOHX 0802-18,3-62...	H62 18300. ..	
XOHX 0802-18,4...	H60 18400. ..				XOHX 0802-18,4-62...	H62 18400. ..	
XOHX 0802-18,5...	H60 18500. ..	8440	2715	84	XOHX 0802-18,5-62...	H62 18500. ..	7710
XOHX 0802-18,6...	H60 18600. ..				XOHX 0802-18,6-62...	H62 18600. ..	
XOHX 0802-18,7...	H60 18700. ..				XOHX 0802-18,7-62...	H62 18700. ..	
XOHX 0802-18,8...	H60 18800. ..				XOHX 0802-18,8-62...	H62 18800. ..	
XOHX 0802-18,9...	H60 18900. ..				XOHX 0802-18,9-62...	H62 18900. ..	
XOHX 0802-19,0...	H60 19000. ..	8440	2715	84	XOHX 0802-19,0-62...	H62 19000. ..	7710
XOHX 0802-19,1...	H60 19100. ..				XOHX 0802-19,1-62...	H62 19100. ..	
XOHX 0802-19,2...	H60 19200. ..				XOHX 0802-19,2-62...	H62 19200. ..	
XOHX 0802-19,3...	H60 19300. ..				XOHX 0802-19,3-62...	H62 19300. ..	
XOHX 0802-19,4...	H60 19400. ..				XOHX 0802-19,4-62...	H62 19400. ..	
XOHX 0802-19,5...	H60 19500. ..	8440	2715	84	XOHX 0802-19,5-62...	H62 19500. ..	7710
XOHX 0802-19,6...	H60 19600. ..				XOHX 0802-19,6-62...	H62 19600. ..	
XOHX 0802-19,7...	H60 19700. ..				XOHX 0802-19,7-62...	H62 19700. ..	
XOHX 0802-19,8...	H60 19800. ..				XOHX 0802-19,8-62...	H62 19800. ..	
XOHX 0802-19,9...	H60 19900. ..				XOHX 0802-19,9-62...	H62 19900. ..	
XOHX 0802-20,0...	H60 20000. ..	8440	2715	84	XOHX 0802-20,0-62...	H62 20000. ..	7710
XOHX 0802-20,1...	H60 20100. ..				XOHX 0802-20,1-62...	H62 20100. ..	
XOHX 0802-20,2...	H60 20200. ..				XOHX 0802-20,2-62...	H62 20200. ..	
XOHX 0802-20,3...	H60 20300. ..				XOHX 0802-20,3-62...	H62 20300. ..	
XOHX 0802-20,4...	H60 20400. ..				XOHX 0802-20,4-62...	H62 20400. ..	
XOHX 0802-20,5...	H60 20500. ..	8440	2715	84	XOHX 0802-20,5-62...	H62 20500. ..	7710
XOHX 0802-20,6...	H60 20600. ..				XOHX 0802-20,6-62...	H62 20600. ..	
XOHX 0802-20,7...	H60 20700. ..				XOHX 0802-20,7-62...	H62 20700. ..	

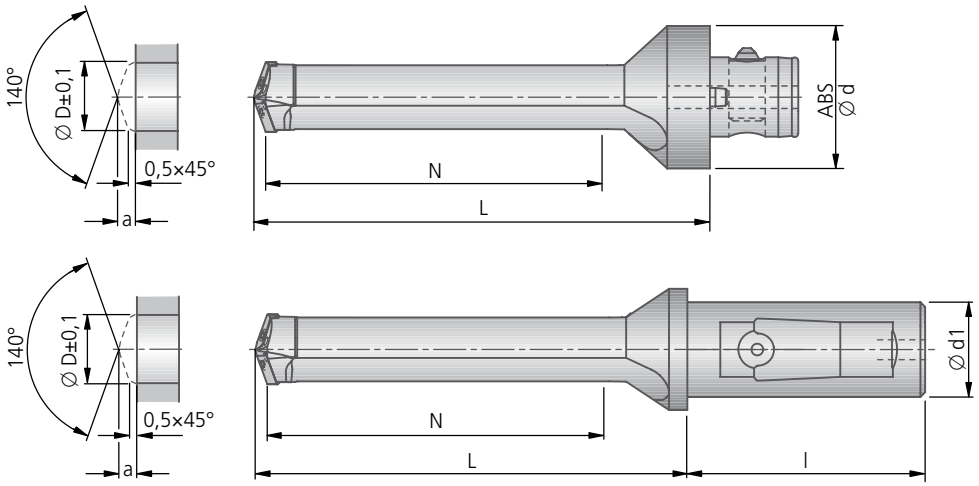
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 20,8 – 24,2 mm

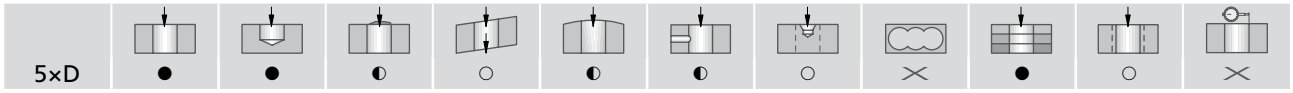
Twin cutting drill

for workpiece material P K N | 5×D | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
20,8													
20,9													
21,0	4,8	50	**U20 02100**	105	140	0,6	32×60	**U20 82100**	105	134	0,58	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
21,1													
21,2													
21,3													
21,4													
21,5	4,9	50	**U20 02150**	110	145	0,6	32×60	**U20 82150**	110	139	0,59	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
21,6													
21,7													
21,8													
21,9													
22,0	5,0	50	**U20 02200**	110	145	0,6	32×60	**U20 82200**	110	139	0,6	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
22,1													
22,2													
22,3													
22,4													
22,5	5,1	50	**U20 02250**	115	150	0,6	32×60	**U20 82250**	115	144	0,61	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
22,6													
22,7													
22,8													
22,9													
23,0	5,1	50	**U20 02300**	115	150	0,6	32×60	**U20 82300**	115	144	0,62	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
23,1													
23,2													
23,3													
23,4													
23,5	5,2	50	**U20 02350**	120	155	0,7	32×60	**U20 82350**	120	149	0,64	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
23,6													
23,7													
23,8													
23,9													
24,0	5,3	50	**U20 02400**	120	155	0,7	32×60	**U20 82400**	120	149	0,65	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
24,1													
24,2													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 21.0 mm, coating BK84, Order No.: H60 21000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX1003-20,8....	H60 20800. ..				XOHX1003-20,8-62...	H62 20800. ..	
XOHX1003-20,9....	H60 20900. ..				XOHX1003-20,9-62...	H62 20900. ..	
XOHX1003-21,0....	H60 21000. ..	8440	2715	84	XOHX1003-21,0-62...	H62 21000. ..	7710
XOHX1003-21,1....	H60 21100. ..				XOHX1003-21,1-62...	H62 21100. ..	
XOHX1003-21,2....	H60 21200. ..				XOHX1003-21,2-62...	H62 21200. ..	
XOHX1003-21,3....	H60 21300. ..				XOHX1003-21,3-62...	H62 21300. ..	
XOHX1003-21,4....	H60 21400. ..				XOHX1003-21,4-62...	H62 21400. ..	
XOHX1003-21,5....	H60 21500. ..	8440	2715	84	XOHX1003-21,5-62...	H62 21500. ..	7710
XOHX1003-21,6....	H60 21600. ..				XOHX1003-21,6-62...	H62 21600. ..	
XOHX1003-21,7....	H60 21700. ..				XOHX1003-21,7-62...	H62 21700. ..	
XOHX1003-21,8....	H60 21800. ..				XOHX1003-21,8-62...	H62 21800. ..	
XOHX1003-21,9....	H60 21900. ..				XOHX1003-21,9-62...	H62 21900. ..	
XOHX1003-22,0....	H60 22000. ..	8440	2715	84	XOHX1003-22,0-62...	H62 22000. ..	7710
XOHX1003-22,1....	H60 22100. ..				XOHX1003-22,1-62...	H62 22100. ..	
XOHX1003-22,2....	H60 22200. ..				XOHX1003-22,2-62...	H62 22200. ..	
XOHX1003-22,3....	H60 22300. ..				XOHX1003-22,3-62...	H62 22300. ..	
XOHX1003-22,4....	H60 22400. ..				XOHX1003-22,4-62...	H62 22400. ..	
XOHX1003-22,5....	H60 22500. ..	8440	2715	84	XOHX1003-22,5-62...	H62 22500. ..	7710
XOHX1003-22,6....	H60 22600. ..				XOHX1003-22,6-62...	H62 22600. ..	
XOHX1003-22,7....	H60 22700. ..				XOHX1003-22,7-62...	H62 22700. ..	
XOHX1003-22,8....	H60 22800. ..				XOHX1003-22,8-62...	H62 22800. ..	
XOHX1003-22,9....	H60 22900. ..				XOHX1003-22,9-62...	H62 22900. ..	
XOHX1003-23,0....	H60 23000. ..	8440	2715	84	XOHX1003-23,0-62...	H62 23000. ..	7710
XOHX1003-23,1....	H60 23100. ..				XOHX1003-23,1-62...	H62 23100. ..	
XOHX1003-23,2....	H60 23200. ..				XOHX1003-23,2-62...	H62 23200. ..	
XOHX1003-23,3....	H60 23300. ..				XOHX1003-23,3-62...	H62 23300. ..	
XOHX1003-23,4....	H60 23400. ..				XOHX1003-23,4-62...	H62 23400. ..	
XOHX1003-23,5....	H60 23500. ..	8440	2715	84	XOHX1003-23,5-62...	H62 23500. ..	7710
XOHX1003-23,6....	H60 23600. ..				XOHX1003-23,6-62...	H62 23600. ..	
XOHX1003-23,7....	H60 23700. ..				XOHX1003-23,7-62...	H62 23700. ..	
XOHX1003-23,8....	H60 23800. ..				XOHX1003-23,8-62...	H62 23800. ..	
XOHX1003-23,9....	H60 23900. ..				XOHX1003-23,9-62...	H62 23900. ..	
XOHX1003-24,0....	H60 24000. ..	8440	2715	84	XOHX1003-24,0-62...	H62 24000. ..	7710
XOHX1003-24,1....	H60 24100. ..				XOHX1003-24,1-62...	H62 24100. ..	
XOHX1003-24,2....	H60 24200. ..				XOHX1003-24,2-62...	H62 24200. ..	

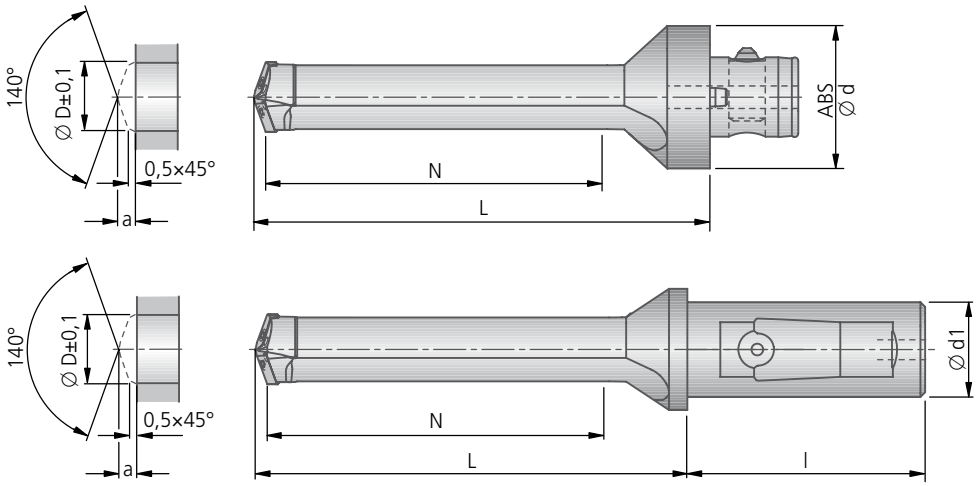
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 24,3 – 27,7 mm

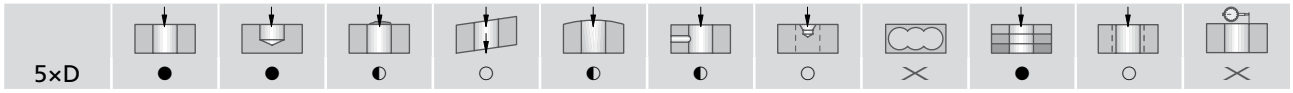
Twin cutting drill

for workpiece material P K N | 5×D | | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
24,3													
24,4													
24,5	5,4	50	**U20 02450**	125	160	0,7	32×60	**U20 82450**	125	154	0,67	**N00 57630** S/M3×5,8-8IP 2,25 Nm	
24,6													
24,7													
24,8													
24,9													
25,0	5,7	50	**U20 02500**	125	160	0,7	32×60	**U20 82500**	125	154	0,68	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
25,1													
25,2													
25,3													
25,4													
25,5	5,7	50	**U20 02550**	130	165	0,7	32×60	**U20 82550**	130	159	0,69	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
25,6													
25,7													
25,8													
25,9													
26,0	5,8	50	**U20 02600**	130	165	0,7	32×60	**U20 82600**	130	159	0,71	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
26,1													
26,2													
26,3													
26,4													
26,5	5,9	50	**U20 02650**	135	170	0,7	32×60	**U20 82650**	135	164	0,73	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
26,6													
26,7													
26,8													
26,9													
27,0	6,0	50	**U20 02700**	135	170	0,7	32×60	**U20 82700**	135	164	0,74	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
27,1													
27,2													
27,3													
27,4													
27,5	6,1	50	**U20 02750**	140	175	0,8	40×68	**U20 92750**	140	169	1,11	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
27,6													
27,7													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 25.0 mm, coating BK84, Order No.: H60 25000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX1003-24,3....	H60 24300. ..				XOHX1003-24,3-62...	H62 24300. ..	
XOHX1003-24,4....	H60 24400. ..				XOHX1003-24,4-62...	H62 24400. ..	
XOHX1003-24,5....	H60 24500. ..	8440	2715	84	XOHX1003-24,5-62...	H62 24500. ..	7710
XOHX1003-24,6....	H60 24600. ..				XOHX1003-24,6-62...	H62 24600. ..	
XOHX1003-24,7....	H60 24700. ..				XOHX1003-24,7-62...	H62 24700. ..	
XOHX12T3-24,8....	H60 24800. ..				XOHX12T3-24,8-62...	H62 24800. ..	
XOHX12T3-24,9....	H60 24900. ..				XOHX12T3-24,9-62...	H62 24900. ..	
XOHX12T3-25,0....	H60 25000. ..	8440	2715	84	XOHX12T3-25,0-62...	H62 25000. ..	7710
XOHX12T3-25,1....	H60 25100. ..				XOHX12T3-25,1-62...	H62 25100. ..	
XOHX12T3-25,2....	H60 25200. ..				XOHX12T3-25,2-62...	H62 25200. ..	
XOHX12T3-25,3....	H60 25300. ..				XOHX12T3-25,3-62...	H62 25300. ..	
XOHX12T3-25,4....	H60 25400. ..				XOHX12T3-25,4-62...	H62 25400. ..	
XOHX12T3-25,5....	H60 25500. ..	8440	2715	84	XOHX12T3-25,5-62...	H62 25500. ..	7710
XOHX12T3-25,6....	H60 25600. ..				XOHX12T3-25,6-62...	H62 25600. ..	
XOHX12T3-25,7....	H60 25700. ..				XOHX12T3-25,7-62...	H62 25700. ..	
XOHX12T3-25,8....	H60 25800. ..				XOHX12T3-25,8-62...	H62 25800. ..	
XOHX12T3-25,9....	H60 25900. ..				XOHX12T3-25,9-62...	H62 25900. ..	
XOHX12T3-26,0....	H60 26000. ..	8440	2715	84	XOHX12T3-26,0-62...	H62 26000. ..	7710
XOHX12T3-26,1....	H60 26100. ..				XOHX12T3-26,1-62...	H62 26100. ..	
XOHX12T3-26,2....	H60 26200. ..				XOHX12T3-26,2-62...	H62 26200. ..	
XOHX12T3-26,3....	H60 26300. ..				XOHX12T3-26,3-62...	H62 26300. ..	
XOHX12T3-26,4....	H60 26400. ..				XOHX12T3-26,4-62...	H62 26400. ..	
XOHX12T3-26,5....	H60 26500. ..	8440	2715	84	XOHX12T3-26,5-62...	H62 26500. ..	7710
XOHX12T3-26,6....	H60 26600. ..				XOHX12T3-26,6-62...	H62 26600. ..	
XOHX12T3-26,7....	H60 26700. ..				XOHX12T3-26,7-62...	H62 26700. ..	
XOHX12T3-26,8....	H60 26800. ..				XOHX12T3-26,8-62...	H62 26800. ..	
XOHX12T3-26,9....	H60 26900. ..				XOHX12T3-26,9-62...	H62 26900. ..	
XOHX12T3-27,0....	H60 27000. ..	8440	2715	84	XOHX12T3-27,0-62...	H62 27000. ..	7710
XOHX12T3-27,1....	H60 27100. ..				XOHX12T3-27,1-62...	H62 27100. ..	
XOHX12T3-27,2....	H60 27200. ..				XOHX12T3-27,2-62...	H62 27200. ..	
XOHX12T3-27,3....	H60 27300. ..				XOHX12T3-27,3-62...	H62 27300. ..	
XOHX12T3-27,4....	H60 27400. ..				XOHX12T3-27,4-62...	H62 27400. ..	
XOHX12T3-27,5....	H60 27500. ..	8440	2715	84	XOHX12T3-27,5-62...	H62 27500. ..	7710
XOHX12T3-27,6....	H60 27600. ..				XOHX12T3-27,6-62...	H62 27600. ..	
XOHX12T3-27,7....	H60 27700. ..				XOHX12T3-27,7-62...	H62 27700. ..	

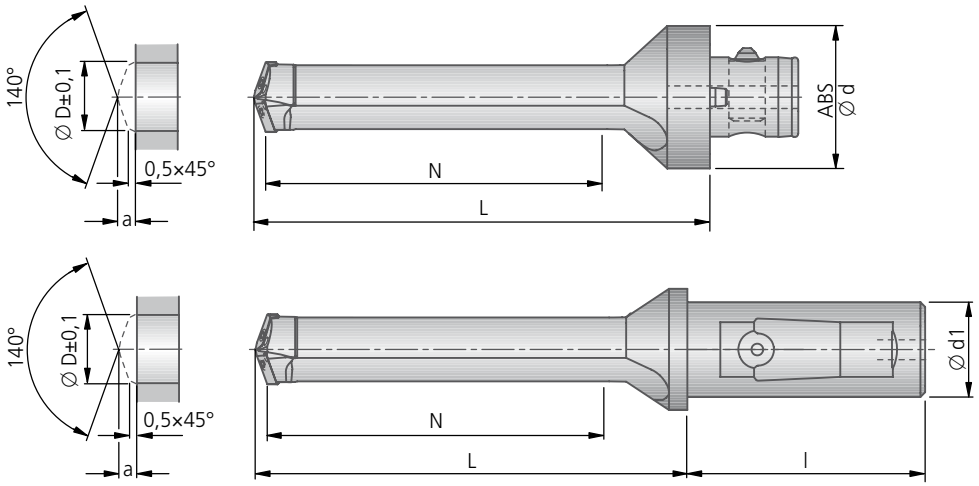
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 27,8 – 31,2 mm

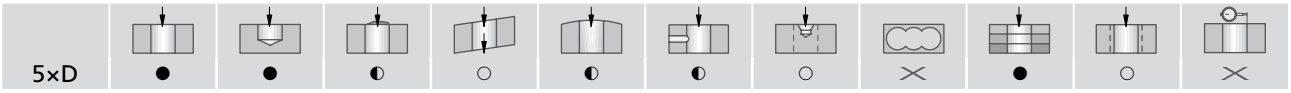
Twin cutting drill

for workpiece material P K N | 5×D | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
27,8													
27,9													
28,0	6,1	50	**U20 02800**	140	175	0,8	40×68	**U20 92800**	140	169	1,12	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
28,1													
28,2													
28,3													
28,4													
28,5	6,2	50	**U20 02850**	145	180	0,8	40×68	**U20 92850**	145	174	1,14	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
28,6													
28,7													
28,8													
28,9													
29,0	6,3	50	**U20 02900**	145	180	0,8	40×68	**U20 92900**	145	174	1,16	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
29,1													
29,2													
29,3													
29,4													
29,5	6,4	50	**U20 02950**	150	185	0,9	40×68	**U20 92950**	150	179	1,18	**N00 57640** S/M3,5×6,9-10IP 2,8 Nm	
29,6													
29,7													
29,8													
29,9													
30,0	6,7	50	**U20 03000**	150	185	0,9	40×68	**U20 93000**	150	179	1,20	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
30,1													
30,2													
30,3													
30,4													
30,5	6,7	50	**U20 03050**	155	190	0,9	40×68	**U20 93050**	155	184	1,22	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
30,6													
30,7													
30,8													
30,9													
31,0	6,8	50	**U20 03100**	155	190	0,9	40×68	**U20 93100**	155	184	1,24	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
31,1													
31,2													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 28.0 mm, coating BK84, Order No.: H60 28000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX12T3-27,8...	H60 27800. ..				XOHX12T3-27,8-62...	H62 27800. ..	
XOHX12T3-27,9....	H60 27900. ..				XOHX12T3-27,9-62...	H62 27900. ..	
XOHX12T3-28,0....	H60 28000. ..	8440	2715	84	XOHX12T3-28,0-62...	H62 28000. ..	7710
XOHX12T3-28,1....	H60 28100. ..				XOHX12T3-28,1-62...	H62 28100. ..	
XOHX12T3-28,2....	H60 28200. ..				XOHX12T3-28,2-62...	H62 28200. ..	
XOHX12T3-28,3....	H60 28300. ..				XOHX12T3-28,3-62...	H62 28300. ..	
XOHX12T3-28,4....	H60 28400. ..				XOHX12T3-28,4-62...	H62 28400. ..	
XOHX12T3-28,5....	H60 28500. ..	8440	2715	84	XOHX12T3-28,5-62...	H62 28500. ..	7710
XOHX12T3-28,6....	H60 28600. ..				XOHX12T3-28,6-62...	H62 28600. ..	
XOHX12T3-28,7....	H60 28700. ..				XOHX12T3-28,7-62...	H62 28700. ..	
XOHX12T3-28,8....	H60 28800. ..				XOHX12T3-28,8-62...	H62 28800. ..	
XOHX12T3-28,9....	H60 28900. ..				XOHX12T3-28,9-62...	H62 28900. ..	
XOHX12T3-29,0....	H60 29000. ..	8440	2715	84	XOHX12T3-29,0-62...	H62 29000. ..	7710
XOHX12T3-29,1....	H60 29100. ..				XOHX12T3-29,1-62...	H62 29100. ..	
XOHX12T3-29,2....	H60 29200. ..				XOHX12T3-29,2-62...	H62 29200. ..	
XOHX12T3-29,3....	H60 29300. ..				XOHX12T3-29,3-62...	H62 29300. ..	
XOHX12T3-29,4....	H60 29400. ..				XOHX12T3-29,4-62...	H62 29400. ..	
XOHX12T3-29,5....	H60 29500. ..	8440	2715	84	XOHX12T3-29,5-62...	H62 29500. ..	7710
XOHX12T3-29,6....	H60 29600. ..				XOHX12T3-29,6-62...	H62 29600. ..	
XOHX12T3-29,7....	H60 29700. ..				XOHX12T3-29,7-62...	H62 29700. ..	
XOHX1504-29,8....	H60 29800. ..				XOHX1504-29,8-62...	H62 29800. ..	
XOHX1504-29,9....	H60 29900. ..				XOHX1504-29,9-62...	H62 29900. ..	
XOHX1504-30,0....	H60 30000. ..	8440	2715	84	XOHX1504-30,0-62...	H62 30000. ..	7710
XOHX1504-30,1....	H60 30100. ..				XOHX1504-30,1-62...	H62 30100. ..	
XOHX1504-30,2....	H60 30200. ..				XOHX1504-30,2-62...	H62 30200. ..	
XOHX1504-30,3....	H60 30300. ..				XOHX1504-30,3-62...	H62 30300. ..	
XOHX1504-30,4....	H60 30400. ..				XOHX1504-30,4-62...	H62 30400. ..	
XOHX1504-30,5....	H60 30500. ..	8440	2715	84	XOHX1504-30,5-62...	H62 30500. ..	7710
XOHX1504-30,6....	H60 30600. ..				XOHX1504-30,6-62...	H62 30600. ..	
XOHX1504-30,7....	H60 30700. ..				XOHX1504-30,7-62...	H62 30700. ..	
XOHX1504-30,8....	H60 30800. ..				XOHX1504-30,8-62...	H62 30800. ..	
XOHX1504-30,9....	H60 30900. ..				XOHX1504-30,9-62...	H62 30900. ..	
XOHX1504-31,0....	H60 31000. ..	8440	2715	84	XOHX1504-31,0-62...	H62 31000. ..	7710
XOHX1504-31,1....	H60 31100. ..				XOHX1504-31,1-62...	H62 31100. ..	
XOHX1504-31,2....	H60 31200. ..				XOHX1504-31,2-62...	H62 31200. ..	

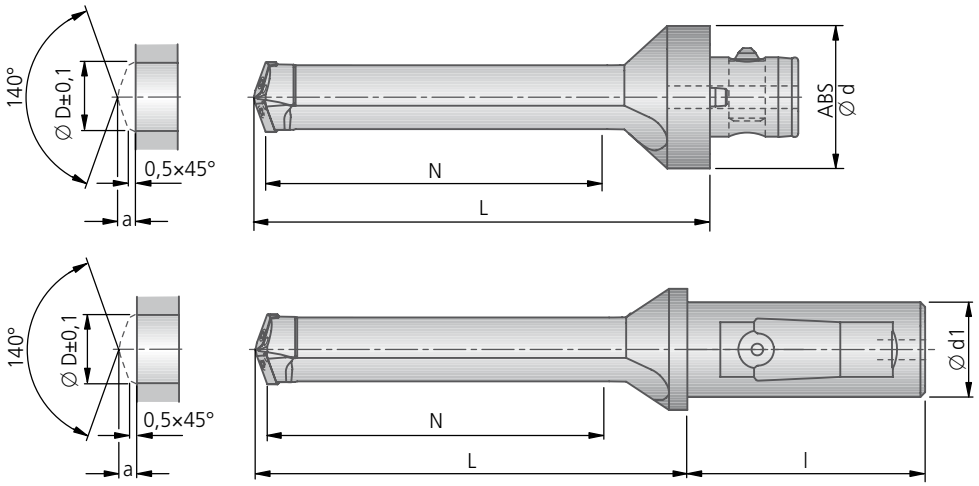
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 31,3 – 34,7 mm

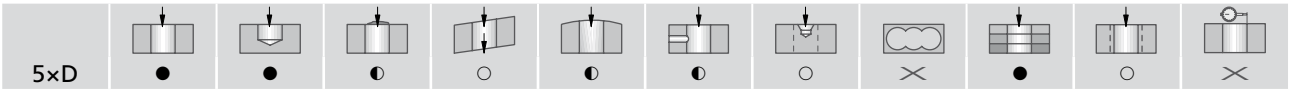
Twin cutting drill

for workpiece material P K N | 5×D | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
31,3													
31,4													
31,5	6,9	50	**U20 03150**	160	195	0,9	40×68	**U20 93150**	160	189	1,27	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
31,6													
31,7													
31,8													
31,9													
32,0	7,0	50	**U20 03200**	160	195	0,9	40×68	**U20 93200**	160	189	1,28	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
32,1													
32,2													
32,3													
32,4													
32,5	7,1	50	**U20 03250**	165	200	0,9	40×68	**U20 93250**	165	194	1,32	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
32,6													
32,7													
32,8													
32,9													
33,0	7,1	50	**U20 03300**	165	200	0,9	40×68	**U20 93300**	165	194	1,33	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
33,1													
33,2													
33,3													
33,4													
33,5	7,2	50	**U20 03350**	170	205	0,9	40×68	**U20 93350**	170	199	1,36	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
33,6													
33,7													
33,8													
33,9													
34,0	7,3	50	**U20 03400**	170	205	1,0	40×68	**U20 93400**	170	199	1,37	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
34,1													
34,2													
34,3													
34,4													
34,5	7,4	50	**U20 03450**	175	210	1,0	40×68	**U20 93450**	175	204	1,41	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
34,6													
34,7													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 32.0 mm, coating BK84, Order No.: H60 32000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX1504-31,3....	H60 31300. ..				XOHX1504-31,3-62...	H62 31300. ..	
XOHX1504-31,4....	H60 31400. ..				XOHX1504-31,4-62...	H62 31400. ..	
XOHX1504-31,5....	H60 31500. ..	8440	2715	84	XOHX1504-31,5-62...	H62 31500. ..	7710
XOHX1504-31,6....	H60 31600. ..				XOHX1504-31,6-62...	H62 31600. ..	
XOHX1504-31,7....	H60 31700. ..				XOHX1504-31,7-62...	H62 31700. ..	
XOHX1504-31,8....	H60 31800. ..				XOHX1504-31,8-62...	H62 31800. ..	
XOHX1504-31,9....	H60 31900. ..				XOHX1504-31,9-62...	H62 31900. ..	
XOHX1504-32,0....	H60 32000. ..	8440	2715	84	XOHX1504-32,0-62...	H62 32000. ..	7710
XOHX1504-32,1....	H60 32100. ..				XOHX1504-32,1-62...	H62 32100. ..	
XOHX1504-32,2....	H60 32200. ..				XOHX1504-32,2-62...	H62 32200. ..	
XOHX1504-32,3....	H60 32300. ..				XOHX1504-32,3-62...	H62 32300. ..	
XOHX1504-32,4....	H60 32400. ..				XOHX1504-32,4-62...	H62 32400. ..	
XOHX1504-32,5....	H60 32500. ..	8440	2715	84	XOHX1504-32,5-62...	H62 32500. ..	7710
XOHX1504-32,6....	H60 32600. ..				XOHX1504-32,6-62...	H62 32600. ..	
XOHX1504-32,7....	H60 32700. ..				XOHX1504-32,7-62...	H62 32700. ..	
XOHX1504-32,8....	H60 32800. ..				XOHX1504-32,8-62...	H62 32800. ..	
XOHX1504-32,9....	H60 32900. ..				XOHX1504-32,9-62...	H62 32900. ..	
XOHX1504-33,0....	H60 33000. ..	8440	2715	84	XOHX1504-33,0-62...	H62 33000. ..	7710
XOHX1504-33,1....	H60 33100. ..				XOHX1504-33,1-62...	H62 33100. ..	
XOHX1504-33,2....	H60 33200. ..				XOHX1504-33,2-62...	H62 33200. ..	
XOHX1504-33,3....	H60 33300. ..				XOHX1504-33,3-62...	H62 33300. ..	
XOHX1504-33,4....	H60 33400. ..				XOHX1504-33,4-62...	H62 33400. ..	
XOHX1504-33,5....	H60 33500. ..	8440	2715	84	XOHX1504-33,5-62...	H62 33500. ..	7710
XOHX1504-33,6....	H60 33600. ..				XOHX1504-33,6-62...	H62 33600. ..	
XOHX1504-33,7....	H60 33700. ..				XOHX1504-33,7-62...	H62 33700. ..	
XOHX1504-33,8....	H60 33800. ..				XOHX1504-33,8-62...	H62 33800. ..	
XOHX1504-33,9....	H60 33900. ..				XOHX1504-33,9-62...	H62 33900. ..	
XOHX1504-34,0....	H60 34000. ..	8440	2715	84	XOHX1504-34,0-62...	H62 34000. ..	7710
XOHX1504-34,1....	H60 34100. ..				XOHX1504-34,1-62...	H62 34100. ..	
XOHX1504-34,2....	H60 34200. ..				XOHX1504-34,2-62...	H62 34200. ..	
XOHX1504-34,3....	H60 34300. ..				XOHX1504-34,3-62...	H62 34300. ..	
XOHX1504-34,4....	H60 34400. ..				XOHX1504-34,4-62...	H62 34400. ..	
XOHX1504-34,5....	H60 34500. ..	8440	2715	84	XOHX1504-34,5-62...	H62 34500. ..	7710
XOHX1504-34,6....	H60 34600. ..				XOHX1504-34,6-62...	H62 34600. ..	
XOHX1504-34,7....	H60 34700. ..				XOHX1504-34,7-62...	H62 34700. ..	

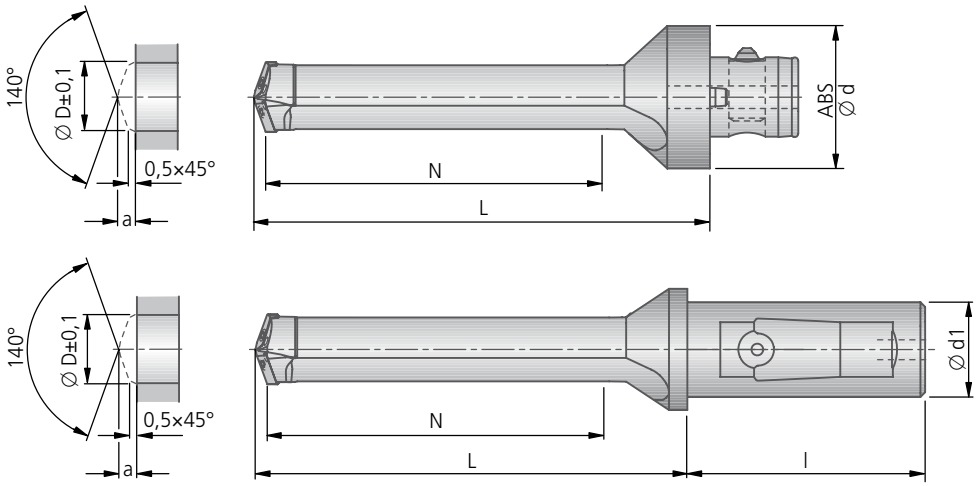
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 34,8 – 38,2 mm

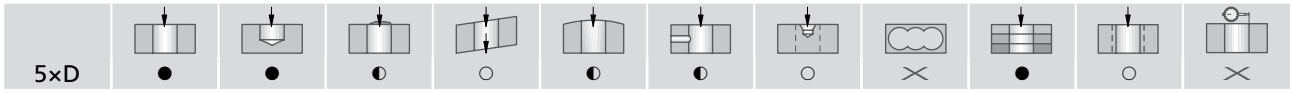
Twin cutting drill

for workpiece material P K N | 5×D | ABS | DIN 6535 HE + DIN 6595



		ABS					Cylindrical shank						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Cylindrical shank Ød1×l	Order No.	N	L	kg ~	Clamping screw Order No. Article	
34,8													
34,9													
35,0	7,5	50	**U20 03500**	175	210	1,0	40×68	**U20 93500**	175	204	1,43	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
35,1													
35,2													
35,3													
35,4													
35,5	7,5	50	**U20 03550**	180	215	1,0	40×68	**U20 93550**	180	209	1,47	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
35,6													
35,7													
35,8													
35,9													
36,0	7,6	50	**U20 03600**	180	215	1,0	40×68	**U20 93600**	180	209	1,49	**N00 57650** S/M4×8,7-15IP 4,3 Nm	
36,1													
36,2													
36,3													
36,4													
36,5	7,7	63	**U20 13650**	185	243	1,7		–				**N00 57670** S/M5×10,4-20IP 6,25 Nm	
36,6													
36,7													
36,8													
36,9													
37,0	8,0	63	**U20 13700**	185	243	1,7		–				**N00 57670** S/M5×10,4-20IP 6,25 Nm	
37,1													
37,2													
37,3													
37,4													
37,5	8,1	63	**U20 13750**	190	248	1,77		–				**N00 57670** S/M5×10,4-20IP 6,25 Nm	
37,6													
37,7													
37,8													
37,9													
38,0	8,1	63	**U20 13800**	190	248	1,77		–				**N00 57670** S/M5×10,4-20IP 6,25 Nm	
38,1													
38,2													

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 35.0 mm, coating BK84, Order No.: H60 35000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX1504-34,8...	H60 34800. ..				XOHX1504-34,8-62...	H62 34800. ..	
XOHX1504-34,9...	H60 34900. ..				XOHX1504-34,9-62...	H62 34900. ..	
XOHX1504-35,0...	H60 35000. ..	8440	2715	84	XOHX1504-35,0-62...	H62 35000. ..	7710
XOHX1504-35,1...	H60 35100. ..				XOHX1504-35,1-62...	H62 35100. ..	
XOHX1504-35,2...	H60 35200. ..				XOHX1504-35,2-62...	H62 35200. ..	
XOHX1504-35,3...	H60 35300. ..				XOHX1504-35,3-62...	H62 35300. ..	
XOHX1504-35,4...	H60 35400. ..				XOHX1504-35,4-62...	H62 35400. ..	
XOHX1504-35,5...	H60 35500. ..	8440	2715	84	XOHX1504-35,5-62...	H62 35500. ..	7710
XOHX1504-35,6...	H60 35600. ..				XOHX1504-35,6-62...	H62 35600. ..	
XOHX1504-35,7...	H60 35700. ..				XOHX1504-35,7-62...	H62 35700. ..	
XOHX1504-35,8...	H60 35800. ..				XOHX1504-35,8-62...	H62 35800. ..	
XOHX1504-35,9...	H60 35900. ..				XOHX1504-35,9-62...	H62 35900. ..	
XOHX1504-36,0...	H60 36000. ..	8440	2715	84	XOHX1504-36,0-62...	H62 36000. ..	7710
XOHX1504-36,1...	H60 36100. ..				XOHX1504-36,1-62...	H62 36100. ..	
XOHX1504-36,2...	H60 36200. ..				XOHX1504-36,2-62...	H62 36200. ..	
XOHX2205-36,3...	H60 36300. ..				XOHX2205-36,3-62...	H62 36300. ..	
XOHX2205-36,4...	H60 36400. ..				XOHX2205-36,4-62...	H62 36400. ..	
XOHX2205-36,5...	H60 36500. ..	8440	2715	84	XOHX2205-36,5-62...	H62 36500. ..	7710
XOHX2205-36,6...	H60 36600. ..				XOHX2205-36,6-62...	H62 36600. ..	
XOHX2205-36,7...	H60 36700. ..				XOHX2205-36,7-62...	H62 36700. ..	
XOHX2205-36,8...	H60 36800. ..				XOHX2205-36,8-62...	H62 36800. ..	
XOHX2205-36,9...	H60 36900. ..				XOHX2205-36,9-62...	H62 36900. ..	
XOHX2205-37,0...	H60 37000. ..	8440	2715	84	XOHX2205-37,0-62...	H62 37000. ..	7710
XOHX2205-37,1...	H60 37100. ..				XOHX2205-37,1-62...	H62 37100. ..	
XOHX2205-37,2...	H60 37200. ..				XOHX2205-37,2-62...	H62 37200. ..	
XOHX2205-37,3...	H60 37300. ..				XOHX2205-37,3-62...	H62 37300. ..	
XOHX2205-37,4...	H60 37400. ..				XOHX2205-37,4-62...	H62 37400. ..	
XOHX2205-37,5...	H60 37500. ..	8440	2715	84	XOHX2205-37,5-62...	H62 37500. ..	7710
XOHX2205-37,6...	H60 37600. ..				XOHX2205-37,6-62...	H62 37600. ..	
XOHX2205-37,7...	H60 37700. ..				XOHX2205-37,7-62...	H62 37700. ..	
XOHX2205-37,8...	H60 37800. ..				XOHX2205-37,8-62...	H62 37800. ..	
XOHX2205-37,9...	H60 37900. ..				XOHX2205-37,9-62...	H62 37900. ..	
XOHX2205-38,0...	H60 38000. ..	8440	2715	84	XOHX2205-38,0-62...	H62 38000. ..	7710
XOHX2205-38,1...	H60 38100. ..				XOHX2205-38,1-62...	H62 38100. ..	
XOHX2205-38,2...	H60 38200. ..				XOHX2205-38,2-62...	H62 38200. ..	

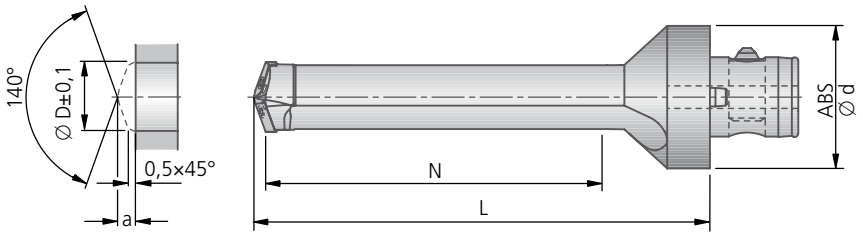
Guideline values for solid drilling: page 132.

KOMET KUB Duon

Ø 38,3 – 41,7 mm

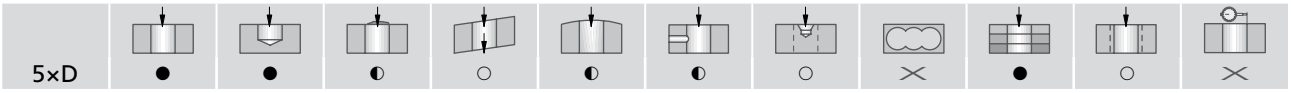
Twin cutting drill

for workpiece material P K N | 5×D | ABS



		ABS						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Clamping screw Order No. Article	
38,3	8,2	63	U20 13850	195	253	1,84	N00 57670 S/M5×10,4-20IP 6,25 Nm	
38,4								
38,5								
38,6								
38,7								
38,8	8,3	63	U20 13900	195	253	1,84	N00 57670 S/M5×10,4-20IP 6,25 Nm	
38,9								
39,0								
39,1								
39,2								
39,3	8,4	63	U20 13950	200	258	1,91	N00 57670 S/M5×10,4-20IP 6,25 Nm	
39,4								
39,5								
39,6								
39,7								
39,8	8,5	63	U20 14000	200	258	1,91	N00 57670 S/M5×10,4-20IP 6,25 Nm	
39,9								
40,0								
40,1								
40,2								
40,3	8,5	63	U20 14050	205	263	1,99	N00 57670 S/M5×10,4-20IP 6,25 Nm	
40,4								
40,5								
40,6								
40,7								
40,8	8,6	63	U20 14100	205	263	1,99	N00 57670 S/M5×10,4-20IP 6,25 Nm	
40,9								
41,0								
41,1								
41,2								
41,3	8,7	63	U20 14150	210	268	2,08	N00 57670 S/M5×10,4-20IP 6,25 Nm	
41,4								
41,5								
41,6								
41,7								

For other diameters see following page.



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 39.0 mm, coating BK84, Order No.: H60 39000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	for workpiece material K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX2205-38,3....	H60 38300. ..				XOHX2205-38,3-62...	H62 38300. ..	
XOHX2205-38,4....	H60 38400. ..				XOHX2205-38,4-62...	H62 38400. ..	
XOHX2205-38,5....	H60 38500. ..	8440	2715	84	XOHX2205-38,5-62...	H62 38500. ..	7710
XOHX2205-38,6....	H60 38600. ..				XOHX2205-38,6-62...	H62 38600. ..	
XOHX2205-38,7....	H60 38700. ..				XOHX2205-38,7-62...	H62 38700. ..	
XOHX2205-38,8....	H60 38800. ..				XOHX2205-38,8-62...	H62 38800. ..	
XOHX2205-38,9....	H60 38900. ..				XOHX2205-38,9-62...	H62 38900. ..	
XOHX2205-39,0....	H60 39000. ..	8440	2715	84	XOHX2205-39,0-62...	H62 39000. ..	7710
XOHX2205-39,1....	H60 39100. ..				XOHX2205-39,1-62...	H62 39100. ..	
XOHX2205-39,2....	H60 39200. ..				XOHX2205-39,2-62...	H62 39200. ..	
XOHX2205-39,3....	H60 39300. ..				XOHX2205-39,3-62...	H62 39300. ..	
XOHX2205-39,4....	H60 39400. ..				XOHX2205-39,4-62...	H62 39400. ..	
XOHX2205-39,5....	H60 39500. ..	8440	2715	84	XOHX2205-39,5-62...	H62 39500. ..	7710
XOHX2205-39,6....	H60 39600. ..				XOHX2205-39,6-62...	H62 39600. ..	
XOHX2205-39,7....	H60 39700. ..				XOHX2205-39,7-62...	H62 39700. ..	
XOHX2205-39,8....	H60 39800. ..				XOHX2205-39,8-62...	H62 39800. ..	
XOHX2205-39,9....	H60 39900. ..				XOHX2205-39,9-62...	H62 39900. ..	
XOHX2205-40,0....	H60 40000. ..	8440	2715	84	XOHX2205-40,0-62...	H62 40000. ..	7710
XOHX2205-40,1....	H60 40100. ..				XOHX2205-40,1-62...	H62 40100. ..	
XOHX2205-40,2....	H60 40200. ..				XOHX2205-40,2-62...	H62 40200. ..	
XOHX2205-40,3....	H60 40300. ..				XOHX2205-40,3-62...	H62 40300. ..	
XOHX2205-40,4....	H60 40400. ..				XOHX2205-40,4-62...	H62 40400. ..	
XOHX2205-40,5....	H60 40500. ..	8440	2715	84	XOHX2205-40,5-62...	H62 40500. ..	7710
XOHX2205-40,6....	H60 40600. ..				XOHX2205-40,6-62...	H62 40600. ..	
XOHX2205-40,7....	H60 40700. ..				XOHX2205-40,7-62...	H62 40700. ..	
XOHX2205-40,8....	H60 40800. ..				XOHX2205-40,8-62...	H62 40800. ..	
XOHX2205-40,9....	H60 40900. ..				XOHX2205-40,9-62...	H62 40900. ..	
XOHX2205-41,0....	H60 41000. ..	8440	2715	84	XOHX2205-41,0-62...	H62 41000. ..	7710
XOHX2205-41,1....	H60 41100. ..				XOHX2205-41,1-62...	H62 41100. ..	
XOHX2205-41,2....	H60 41200. ..				XOHX2205-41,2-62...	H62 41200. ..	
XOHX2205-41,3....	H60 41300. ..				XOHX2205-41,3-62...	H62 41300. ..	
XOHX2205-41,4....	H60 41400. ..				XOHX2205-41,4-62...	H62 41400. ..	
XOHX2205-41,5....	H60 41500. ..	8440	2715	84	XOHX2205-41,5-62...	H62 41500. ..	7710
XOHX2205-41,6....	H60 41600. ..				XOHX2205-41,6-62...	H62 41600. ..	
XOHX2205-41,7....	H60 41700. ..				XOHX2205-41,7-62...	H62 41700. ..	

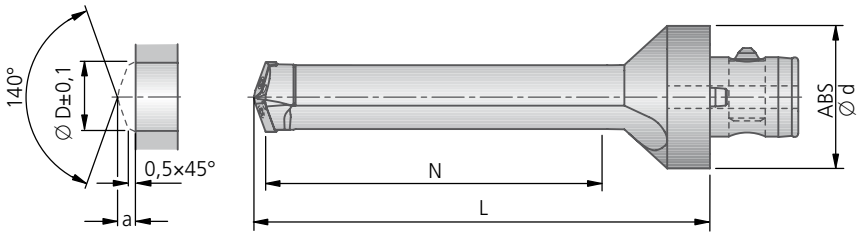
Guideline values for solid drilling: page 132.

KOMET KUB Duon

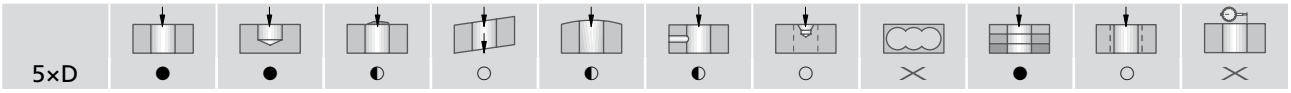
Ø 41,8 – 44,2 mm

Twin cutting drill

for workpiece material P K N | 5×D | ABS



		ABS						
Ø D	Starting / roughing size a	ABS Ø d	Order No.	N	L	kg ~	Clamping screw Order No. Article	
41,8	8,8	63	U20 14200	210	268	2,08	N00 57670 S/M5×10,4-20IP 6,25 Nm	
41,9								
42,0								
42,1								
42,2								
42,3	8,9	63	U20 14250	215	273	0,17	N00 57670 S/M5×10,4-20IP 6,25 Nm	
42,4								
42,5								
42,6								
42,7								
42,8	8,9	63	U20 14300	215	273	0,17	N00 57670 S/M5×10,4-20IP 6,25 Nm	
42,9								
43,0								
43,1								
43,2								
43,2	9,0	63	U20 14350	220	278	2,23	N00 57670 S/M5×10,4-20IP 6,25 Nm	
43,4								
43,5								
43,6								
43,7								
43,8	9,1	63	U20 14400	220	278	2,23	N00 57670 S/M5×10,4-20IP 6,25 Nm	
43,9	9,1							
44,0	9,1							
44,1	9,1							
44,2	9,2							



● very good | ◐ good | ○ possible: see technical notes, page 134 | ✕ not possible

Areas of use:

P high tensile strength steels, heat treated steels and tool steels
K grey cast iron, SG cast iron
N cast aluminium alloys, brass and bronze which produce short chips

Supply includes: KUB Duon drill with clamping screw.

Please order insert separately (pack of 2 inserts). Deliverability see current price list.

Order example insert: for ∅ 42.0 mm, coating BK84, Order No.: H60 42000.84

Basic recommendation				alternative ...	Basic recommendation		
Insert		for workpiece material P	K	for higher cutting speed P K N	Insert		N
ISO-Code enter carbide ▼	Order No.	BK8440	BK2715	BK84	ISO-Code enter carbide ▼	Order No.	BK7710
XOHX2205-41,8....	H60 41800. ..				XOHX2205-41,8-62...	H62 41800. ..	
XOHX2205-41,9....	H60 41900. ..				XOHX2205-41,9-62...	H62 41900. ..	
XOHX2205-42,0....	H60 42000. ..	8440	2715	84	XOHX2205-42,0-62...	H62 42000. ..	7710
XOHX2205-42,1....	H60 42100. ..				XOHX2205-42,1-62...	H62 42100. ..	
XOHX2205-42,2....	H60 42200. ..				XOHX2205-42,2-62...	H62 42200. ..	
XOHX2205-42,3....	H60 42300. ..				XOHX2205-42,3-62...	H62 42300. ..	
XOHX2205-42,4....	H60 42400. ..				XOHX2205-42,4-62...	H62 42400. ..	
XOHX2205-42,5....	H60 42500. ..	8440	2715	84	XOHX2205-42,5-62...	H62 42500. ..	7710
XOHX2205-42,6....	H60 42600. ..				XOHX2205-42,6-62...	H62 42600. ..	
XOHX2205-42,7....	H60 42700. ..				XOHX2205-42,7-62...	H62 42700. ..	
XOHX2205-42,8....	H60 42800. ..				XOHX2205-42,8-62...	H62 42800. ..	
XOHX2205-42,9....	H60 42900. ..				XOHX2205-42,9-62...	H62 42900. ..	
XOHX2205-43,0....	H60 43000. ..	8440	2715	84	XOHX2205-43,0-62...	H62 43000. ..	7710
XOHX2205-43,1....	H60 43100. ..				XOHX2205-43,1-62...	H62 43100. ..	
XOHX2205-43,2....	H60 43200. ..				XOHX2205-43,2-62...	H62 43200. ..	
XOHX2205-43,3....	H60 43300. ..				XOHX2205-43,3-62...	H62 43300. ..	
XOHX2205-43,4....	H60 43400. ..				XOHX2205-43,4-62...	H62 43400. ..	
XOHX2205-43,5....	H60 43500. ..	8440	2715	84	XOHX2205-43,5-62...	H62 43500. ..	7710
XOHX2205-43,6....	H60 43600. ..				XOHX2205-43,6-62...	H62 43600. ..	
XOHX2205-43,7....	H60 43700. ..				XOHX2205-43,7-62...	H62 43700. ..	
XOHX2205-43,8....	H60 43800. ..				XOHX2205-43,8-62...	H62 43800. ..	
XOHX2205-43,9....	H60 43900. ..				XOHX2205-43,9-62...	H62 43900. ..	
XOHX2205-44,0....	H60 44000. ..	8440	2715	84	XOHX2205-44,0-62...	H62 44000. ..	7710
XOHX2205-44,1....	H60 44100. ..				XOHX2205-44,1-62...	H62 44100. ..	
XOHX2205-44,2....	H60 44200. ..				XOHX2205-44,2-62...	H62 44200. ..	

Guideline values for solid drilling: page 132.

Recommended cutting data

Guideline values for solid drilling						v_c	Max. feed f (mm/rev)			
							5×D			
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Cutting speed v_c (m/min)	Ø 17,3 – 20,7	Ø 20,8 – 29,7	Ø 29,8 – 36,2	Ø 36,3 – 44,2
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	–	–	–	–	–
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	140	0,15	0,20	0,22	0,25
	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	160	0,15	0,20	0,22	0,25
	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	120	0,15	0,20	0,25	0,30
	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	100	0,15	0,18	0,20	0,25
	4.1			HSS		–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	–	–	–	–	–
	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	–	–	–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	–	–	–	–	–
	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	–	–	–	–	–
	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	–	–	–	–	–
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	140	0,30	0,40	0,50	0,55
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	100	0,20	0,30	0,40	0,50
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	0,25	0,35	0,45	0,50
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	100	0,20	0,30	0,40	0,45
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120	0,20	0,30	0,40	0,45
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	100	0,25	0,35	0,45	0,50
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	0,20	0,30	0,35	0,40
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)	180	0,30	0,40	0,45	0,50
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)	–	–	–	–	–
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	600	0,20	0,20	0,25	0,30
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	500	0,20	0,20	0,25	0,30
	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	350	0,20	0,20	0,25	0,30
H	15.0	1400		hardened steels < 45 HRC		–	–	–	–	–
	16.0	1800		hardened steels > 45 HRC		–	–	–	–	–

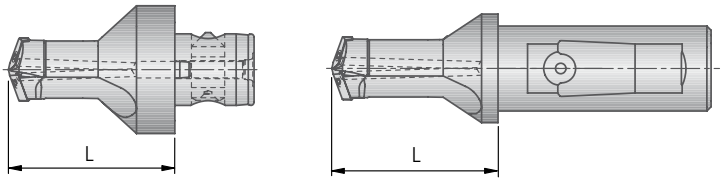
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

KOMET KUB Duon

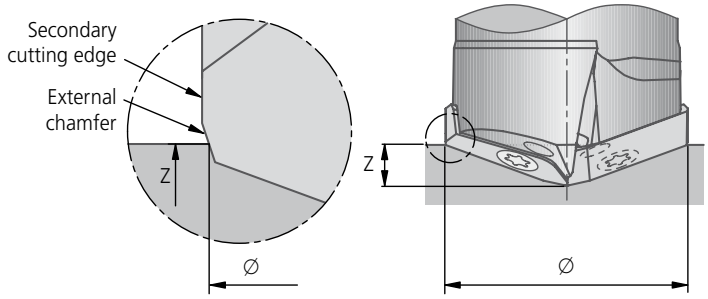
Twin cutting drill

for pre-centering from drilling depth > 5×D



Application notes for pre-centering

- from drilling depth > 5 × D (tools to customer requirement)
- where drilling starts on surfaces which are angled or have not been pre-machined
- where there are unstable conditions because of large tool overhang



Method 1:
Determining the centre depth Z

Size	Centre depth Z
1	2,7 mm
2	3,3 mm
3	4,0 mm
4	4,7 mm
5	6,5 mm

Method 2:
Determining the centre dia.

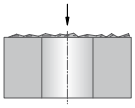
Size	Centre dia.
1	17,3 mm
2	20,8 mm
3	24,8 mm
4	29,8 mm
5	36,5 mm

Size	for bore-Ø	Nominal-Ø	L	Connection	Order No.	Insert
1	17,3 – 20,7	17,5	47,75	ABS50	**U22 21750**	H60 17500.. (XOHX0802..)
			36,75	25×56	**U22 71750**	
2	20,8 – 24,7	21	51,2	ABS50	**U22 22100**	H60 21000.. (XOHX1003..)
			40,2	32×60	**U22 82100**	
3	24,8 – 29,7	25	55,14	ABS50	**U22 22500**	H60 25000.. (XOHX12T3..)
			44,14	32×60	**U22 82500**	
4	29,8 – 36,2	30	60	ABS50	**U22 23000**	H60 30000.. (XOHX1504..)
			49	40×68	**U22 93000**	
5	36,3 – 44,2	36,5	94,5	ABS63	**U22 43650**	H60 36500.. (XOHX2205..)

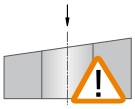
Short spot drills for KUB Duon are fitted with standard H60… inserts.

General note: Drill until the chamfer can be seen at the external bore diameter

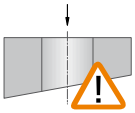
Technical informations

1. 

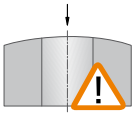
Starting on uneven surfaces (cast surfaces)
- possible in principle
- reduce feed rate when starting bore

2. 

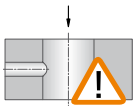
Starting on angled surfaces
- spot face surface before starting bore
- avoid chips jams

3. 

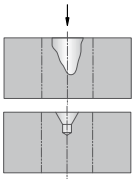
Angled bore exit
- possible under certain conditions
- reduce feed rate if necessary

4. 

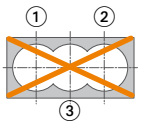
Starting on cambered surfaces
- centered boring can be started with reduced feed rate
- spot facing is required if the point for starting the bore is outside the radius centre

5. 

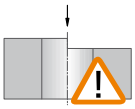
Drilling through a cross bore
- halve feed rate at interruption
- cross bore max. 1/3 of bore diameter
- off-centre cross bore not possible

6. 

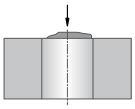
Starting on a groove or large centering bore
- possible under certain conditions
- reduce feed rate if necessary
- face beforehand where centre is particularly large

7. 

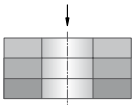
Drilling a chamber
- not possible

8. 

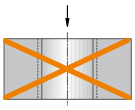
Starting on an edge
- start point must be flat

9. 

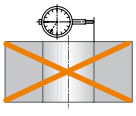
Starting on a welded seam
- reduce feed rate when starting bore
- face beforehand if necessary

10. 

Drilling through stacked plates
- possible in principle
- avoid large spaces between elements

11. 

Roughing
- not possible

12. 

adjustable
- not possible
- dimensional adjustment of diameter by means of inserts

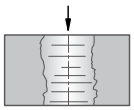
13. 

Retraction from the hole
- Maintain the speed and direction of rotation from the drilling process during retraction to avoid catching the cutting edge



Short tool life types of wear on inserts

- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability
- run-out error → check tool, adaptor and spindle



Bad surface finish

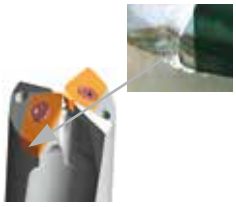
- chip jam on external cutting edge

→ improve cutting parameters: increase cutting speed reduce feed
→ check cutting parameters: reduce feed rate when starting bore



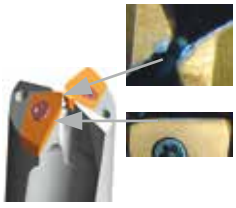
Friction marks on tool shank

- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts



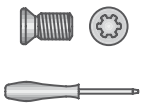
Wear

- cutting material not sufficiently wear resistant → better wear resistant material
- cutting speed too high → reduce cutting speed
- run-out error → check tool, adaptor and spindle



Wear, micro fractures

- cutting material too hard → use tougher cutting material with higher tensile strength
- feed rate not reduced when starting bore → reduce feed rate when starting bore and drilling out
- run-out error → check tool, adaptor and spindle



Securing the inserts

- wrong screwdriver used → only use Torx Plus screws and screwdriver
- starting torque too low → Check starting torques. Optimum starting torques only possible with Torx Plus

KOMET KUB Centron Powerline — Continuous drilling to 9×D

Together with the double-sided design of the cutter, this tool ensures extremely high performance in all standard materials.

The centring spade of the KOMET KUB Centron Powerline guides the tool exactly into the drill axis and thereby ensures straightness and maximum process reliability at drilling depths of up to 9×D. The extremely stabile SOEX indexable insert ensures maximum stability and optimum chip removal, even at maximum drilling depths.

Enables drilling up to 9×D is on flat even surfaces without a pilot hole.

BENEFITS for you:

- In contrast to the KUB Centron drill head, the guide rails are unnecessary and thus their adjustment, too
- High stability and economy by using square inserts
- Maximum tool life with four cutting edges made up of specific substrates and coatings
- Doubling of the feed values
- Stable drilling process thanks to proven cutting geometries
- Centring spade of carbide for better tool life and higher cutting values
- Compatibility with proven KUB Centron basic elements
- Intermediate sizes are available on request e.g. V46 22340 (Ø 23,4 mm)



① **Drill head:** Through the double-sided design of the KUB Centron Powerline, guide rails are not necessary, and no constrictions develop at the bore exit.

② **Centring spade/central drill bit:** The centring spade/central drill bit guides the solid drill precisely in the bore axis. This means dimensional stability even at bore depths of up to 9 × D. Optimised concentricity properties for the whole system mean the central drill bit and for the inserts have a noticeably longer life.

③ **Inserts:** New cutting materials and geometries guarantee maximum tool life and reliable machining.

④ **Connection point:** Central positioning is produced by means of an accurately fitting centering spigot. Two tapered screws which act in the direction of the torque pull the drill head onto large drive pins, producing a precise and stable connection between the drill head and the basic element.

⑤ **Basic element:** Compatible with all existing KUB Centron base elements. With the tried and tested ABS connection, the KUB Centron Powerline has no connection problems.

⑥ **Guide pads:** The carbide guide pads prevent the drill from deflecting at the bore exit and reduce narrowing to a minimum (see "Setting the guide pads..."). The screw connection allows easy changing and setting on site by the user over the whole diameter range. Optimal guide control and high wear resistance through top quality coatings.

KOMET KUB Centron

Extremely high performance data matched by a very high level of process reliability for drilling depths of up to 9 × D.The KOMET KUB Centron can be used to reliably machine virtually all materials.

BENEFITS for you:

- High production reliability for boring depths up to 9×D
- Short process times from high performance parameters
- Long tool life means low operating costs
- Modular design gives high flexibility
- Reliable machining in almost any materials
- Suitable for rotating and stationary applications and for vertical and horizontal applications
- Combination options reduce tool costs



KOMET KUB Centron Powerline

	Page
ABS connection	138 – 143
∅ 20 – 65 mm, R.H. cutting Drilling depth 4×D – 9×D	
Recommended cutting data	144 – 145
Alternative inserts	146
Technical informations	147

KOMET KUB Centron

ABS connection	148 – 153
∅ 20 – 81 mm, R.H. cutting Drilling depth 4×D – 9×D	
Recommended cutting data	154
Alternative inserts	155
Technical informations	156
Problems → Causes → Solutions	157

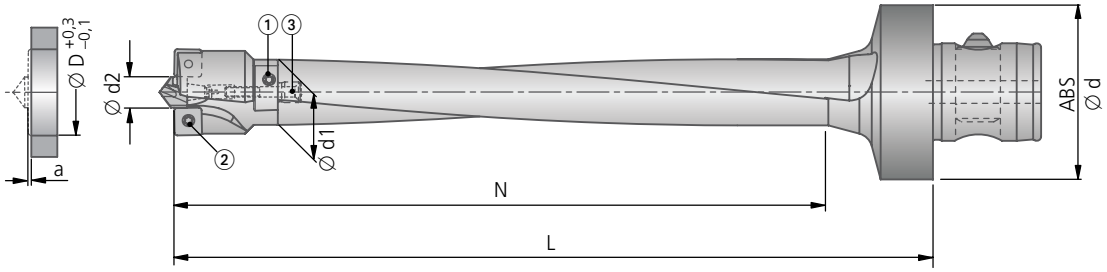
KOMET KUB V464

ABS T connection	158 – 159
∅ 80 – 155 mm, R.H. cutting Drilling depth 6×D	
Recommended cutting data	160
Alternative inserts	161

KOMET KUB Centron Powerline Ø 20 – 39,9 mm

Indexable insert drill

for workpiece material P M K N S H | 4×D 6×D 9×D | ABS



Drill head								
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ① for basic body Order No. Article	Clamping screw ② for insert Order No. Article	Clamping screw ③ for centring spade Order No. Article	depending on Ø d2
20,0	V46 22000	19	1,4	0,031	N00 57480 S2564-8IP 1,28 Nm	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	N10 12010 M3×22-8IP	1,28 Nm
21,0	V46 22100	19	1,4	0,034				1,28 Nm
22,0	V46 22200	19	1,4	0,038				1,28 Nm
23,0	V46 22300	19	1,4	0,040				1,8 Nm
24,0	V46 22400	19	1,4	0,044				1,8 Nm
25,0	V46 22500	19	1,4	0,047	N00 57480	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	N10 12010 M3×22-8IP	1,28 Nm
26,0	V46 22600	25	1,8	0,052	N00 57490 S3074-8IP 2,25 Nm			1,8 Nm
26,2	V46 22620	25	1,8	0,053				1,8 Nm
26,5	V46 22650	25	1,8	0,055				
27,0	V46 22700	25	1,8	0,056				1,8 Nm
28,0	V46 22800	25	1,8	0,059				1,8 Nm
29,0	V46 22900	25	1,8	0,061				1,8 Nm
30,0	V46 23000	25	1,8	0,066	N00 57490 S3074-8IP 2,25 Nm	N00 57261 S3575-15IP 2,8 Nm	N10 12010 M3×22-8IP	1,8 Nm
31,0	V46 23100	25	1,8	0,070				
32,0	V46 23200	25	1,8	0,072				
33,0	V46 23300	32	2	0,079	N00 57440 S4089-15IP 4,3 Nm	N00 57271 S3585-15IP 2,8 Nm	N10 12010 M3×22-8IP	1,8 Nm
33,2	V46 23320	32	2	0,080				
34,0	V46 23400	32	2	0,084				
35,0	V46 23500	32	2	0,087				
36,0	V46 23600	32	2	0,093				
37,0	V46 23700	32	2	0,096	N00 57440 S4089-15IP 4,3 Nm	N00 57301 S45100-20IP 6,25 Nm	N10 12010 M3×22-8IP	1,8 Nm
38,0	V46 23800	32	2	0,099				
39,0	V46 23900	32	2	0,105				
39,2	V46 23920	32	2	0,105				

Intermediate dimensions on request.

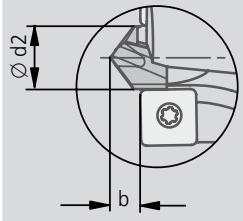
Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
50	19	V47 20201	113	145	0,52	V47 40201	150	185	0,55	V47 60201	200	235	0,63
50	25	V47 20261	130	160	0,66	V47 40261	175	210	0,77	V47 60261	230	260	0,90
50	32	V47 20331	160	195	0,93	V47 40331	215	255	1,13	V47 60331	290	330	1,4

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

4-9×D	●	●	◐	○	○	○	○	✕	✕	✕	✕

● very good | ◐ good | ○ possible: see technical notes, page 147 | ✕ not possible

Centring spade		Basic recommendation			
		Indexable insert -01 -21			for workpiece material
Ø d2	Order No.	Order No. ▽▽Size	ISO code	Piece	
10,3	V96 01100.8450	W83 18210.088430 W83 18210.087935 W83 18210.086130 W83 18210.087710	SOEX 060308-21 BK8430 SOEX 060308-21 BK7935 SOEX 060308-21 BK6130 SOEX 060308-21 BK7710	2	P M S K H N
10,3	V96 01100.8450				
11,3	V96 01110.8450				
12,3	V96 01120.8450				
13,3	V96 01130.8450				
11,3	V96 01110.8450	W83 23210.088430 W83 23210.087935 W83 23000.016115 W83 23210.087710	SOEX 07T308-21 BK8430 SOEX 07T308-21 BK7935 SOEX 07T308-01 BK6115 SOEX 07T308-21 BK7710	2	P M S K H N
12,3	V96 01120.8450				
13,3	V96 01130.8450				
13,3	V96 01130.8450				
13,3	V96 01130.8450				
14,3	V96 01140.8450				
15,3	V96 01150.8450				
13,3	V96 01130.8450	W83 32210.088430 W83 32210.087935 W83 32000.156115 W83 32210.087710	SOEX 090408-21 BK8430 SOEX 090408-21 BK7935 SOEX 090408-01 BK6115 SOEX 090408-21 BK7710	2	P M S K H N
14,3	V96 01140.8450				
15,3	V96 01150.8450				
13,3	V96 01130.8450	W83 39210.088430 W83 39210.087935 W83 39210.086130 W83 39210.087710	SOEX 110508-21 BK8430 SOEX 110508-21 BK7935 SOEX 110508-21 BK6130 SOEX 110508-21 BK7710	2	P M S K H N
14,3	V96 01140.8450				
14,3	V96 01140.8450				
15,3	V96 01150.8450				
16,3	V96 01160.8450				
14,3	V96 01140.8450	W83 44210.088430 W83 44210.087935 W83 44000.186115 W83 44210.087710	SOEX 120508-21 BK8430 SOEX 120508-21 BK7935 SOEX 120508-01 BK6115 SOEX 120508-21 BK7710	2	P M S K H N
15,3	V96 01150.8450				
16,3	V96 01160.8450				
16,3	V96 01160.8450				



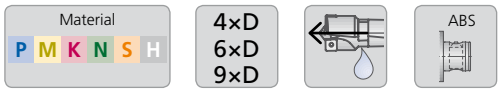
Ø d2	b
10,3	3,94
11,3	4,23
12,3	4,72
13,3	4,94
14,3	5,18
15,3	5,57
16,3	6,06

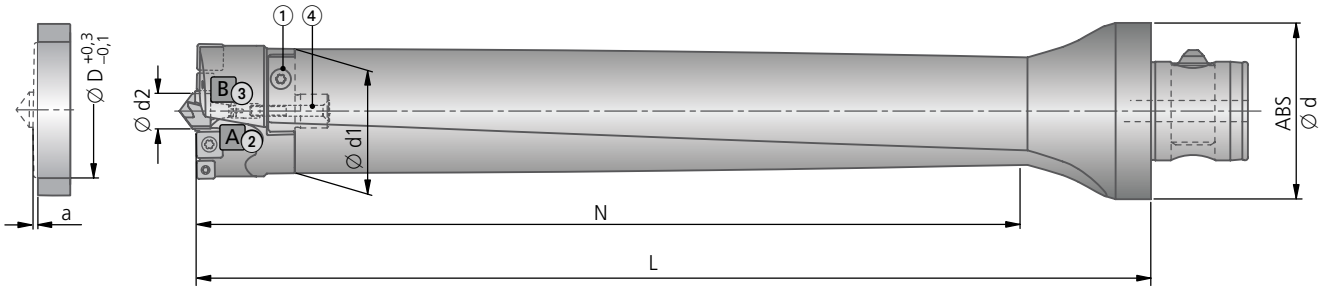
Supply drill head includes: with screws ①, ② and ③.
Please order insert and centring spade separately.

Guideline values for solid drilling: page 144 / alternative inserts: page 146.

KOMET KUB Centron Powerline Ø 40 – 59 mm

Indexable insert drill





Drill head									
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ① for basic body Order No. Article	Clamping screw ② for insert Order No. Article	Clamping screw ③ for insert Order No. Article	Clamping screw ④ for centring spade Order No. Article	depending on Ø d2
40,0	V46 24000	38,5	2,2	0,13	N00 57500 S45105-20IP 6,25Nm	N00 57261 S3575-15IP 2,8Nm	N00 57553 S/M2,2×5,5-6IP 1,01Nm	N10 12030 M3×30-8IP	1,28 Nm
41,0	V46 24100	38,5	2,2	0,14					
42,0	V46 24200	38,5	2,2	0,14					
43,0	V46 24300	38,5	2,2	0,15					
44,0	V46 24400	38,5	2,2	0,16	N00 57500 S45105-20IP 6,25Nm	N00 57261 S3575-15IP 2,8Nm	N00 57553 S/M2,2×5,5-6IP 1,01Nm	N10 12020 M3×26-8IP	1,8 Nm
45,0	V46 24500	38,5	2,2	0,17					
46,0	V46 24600	44,5	2,2	0,20	N00 57450 S/M5×11,5-20IP 6,25Nm	N00 57261 S3575-15IP 2,8Nm	N00 57553 S/M2,2×5,5-6IP 1,01Nm	N10 12030 M3×30-8IP	1,8 Nm
47,0	V46 24700	44,5	2,2	0,20					
48,0	V46 24800	44,5	2,2	0,21					
49,0	V46 24900	44,5	2,2	0,21	N00 57450 S/M5×11,5-20IP 6,25Nm	N00 57271 S3585-15IP 2,8Nm	N00 57571 S/M2,5×6,3-8IP 1,28Nm	N10 12040 M3×33-8IP	1,28 Nm
50,0	V46 25000	44,5	2,3	0,22	N00 57450 S/M5×11,5-20IP 6,25Nm	N00 57271 S3585-15IP 2,8Nm	N00 57571 S/M2,5×6,3-8IP 1,28Nm	N10 12030 M3×30-8IP	1,8 Nm
51,0	V46 25100	44,5	2,3	0,23					
52,0	V46 25200	44,5	2,3	0,23					
53,0	V46 25300	44,5	2,3	0,24					
54,0	V46 25400	44,5	2,3	0,25					
55,0	V46 25500	53,5	2,3	0,31	N00 57460 S/M5,5×14-20IP 6,25Nm	N00 57301 S45100-20IP 6,25Nm	N00 57571 S/M2,5×6,3-8IP 1,28Nm	N10 12050 M3×35-8IP	1,8 Nm
56,0	V46 25600	53,5	2,4	0,32					
57,0	V46 25700	53,5	2,4	0,33					
58,0	V46 25800	53,5	2,4	0,34					
59,0	V46 25900	53,5	2,4	0,35					

Intermediate dimensions on request.

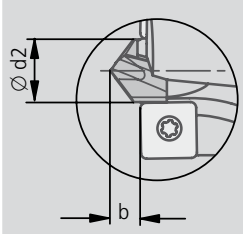
Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
63	38,5	V47 20401	185	235	1,68	V47 40401	260	310	2,08	V47 60401	340	390	2,50
80	44,5	V47 20461	215	280	3,31	V47 40461	310	375	3,97	V47 60461	415	480	4,82
80	53,5	V47 20551	260	325	4,30	V47 40551	370	435	5,42	V47 60551	495	560	6,68

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

4-9×D	●	●	◐	○	○	○	○	✕	✕	✕	✕

● very good | ◐ good | ○ possible: see technical notes, page 147 | ✕ not possible

Centring spade		Basic recommendation							
		Indexable insert A -01 -21			Indexable insert B -01 -21			for workpiece material
Ø d2	Order No.	Order No. ▽▽ Size	ISO code	Piece	Order No. ▽▽ Size	ISO code	Piece	
10,3	V96 01100.8450							
10,3	V96 01100.8450							
10,3	V96 01100.8450							
11,3	V96 01110.8450	W83 32210.088430	SOEX 090408-21 BK8430		W83 18210.088430	SOEX 060308-21 BK8430		P
12,3	V96 01120.8450	W83 32210.087935	SOEX 090408-21 BK7935	2	W83 18210.087935	SOEX 060308-21 BK7935	2	M S
13,3	V96 01130.8450	W83 32000.156115	SOEX 090408-01 BK6115		W83 18210.086130	SOEX 060308-21 BK6130		K H
14,3	V96 01140.8450	W83 32210.087710	SOEX 090408-21 BK7710		W83 18210.087710	SOEX 060308-21 BK7710		N
15,3	V96 01150.8450							
16,3	V96 01160.8450							
11,3	V96 01110.8450							
12,3	V96 01120.8450	W83 39210.088430	SOEX 110508-21 BK8430		W83 23210.088430	SOEX 07T308-21 BK8430		P
13,3	V96 01130.8450	W83 39210.087935	SOEX 110508-21 BK7935	2	W83 23210.087935	SOEX 07T308-21 BK7935	2	M S
14,3	V96 01140.8450	W83 39210.086130	SOEX 110508-21 BK6130		W83 23000.016115	SOEX 07T308-01 BK6115		K H
15,3	V96 01150.8450	W83 39210.087710	SOEX 110508-21 BK7710		W83 23210.087710	SOEX 07T308-21 BK7710		N
16,3	V96 01160.8450							
13,3	V96 01130.8450							
13,3	V96 01130.8450	W83 44210.088430	SOEX 120508-21 BK8430		W83 23210.088430	SOEX 07T308-21 BK8430		P
14,3	V96 01140.8450	W83 44210.087935	SOEX 120508-21 BK7935	2	W83 23210.087935	SOEX 07T308-21 BK7935	2	M S
15,3	V96 01150.8450	W83 44000.186115	SOEX 120508-01 BK6115		W83 23000.016115	SOEX 07T308-01 BK6115		K H
16,3	V96 01160.8450	W83 44210.087710	SOEX 120508-21 BK7710		W83 23210.087710	SOEX 07T308-21 BK7710		N



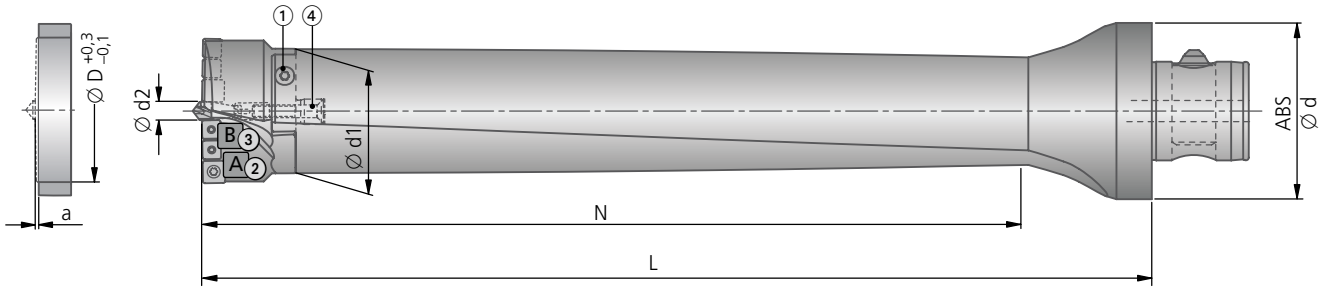
Ø d2	b
10,3	3,94
11,3	4,23
12,3	4,72
13,3	4,94
14,3	5,18
15,3	5,57
16,3	6,06

Supply drill head includes: with screws ①, ②, ③ and ④.
Please order insert and centring spade separately.

Guideline values for solid drilling: page 144 / alternative inserts: page 146.

Indexable insert drill

Material: P M K N S H | 4×D 6×D 9×D | ABS



Drill head									
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ① for basic body Order No. Article	Clamping screw ② for insert Order No. Article	Clamping screw ③ for insert Order No. Article	Clamping screw ④ for centring spade Order No. Article	depending on Ø d2
60,0	**V46 26000**	53,5	2,4	0,35	**N00 57460** S/M5,5×14-20IP 6,25Nm	**N00 57301** S45100-20IP 6,25Nm	**N00 57261** S3575-15IP 2,8Nm	**N10 12050** M3×35-8IP	1,8 Nm
61,0	**V46 26100**	53,5	2,4	0,37					
62,0	**V46 26200**	53,5	2,5	0,37	**N00 57460** S/M5,5×14-20IP 6,25Nm	**N00 57261** S3575-15IP 2,8Nm	**N00 57571** S/M2,5×6,3-8IP 1,28Nm	**N10 12060** M3×38-8IP	1,28 Nm
63,0	**V46 26300**	53,5	2,5	0,38					
64,0	**V46 26400**	53,5	2,5	0,40	**N00 57460** S/M5,5×14-20IP 6,25Nm	**N00 57261** S3575-15IP 2,8Nm	**N00 57571** S/M2,5×6,3-8IP 1,28Nm	**N10 12050** M3×35-8IP	1,8 Nm
65,0	**V46 26500**	63,5	2,5	0,50	**N00 57470** S60160-20IP 6,25Nm	**N00 57261** S3575-15IP 2,8Nm	**N00 57571** S/M2,5×6,3-8IP 1,28Nm	**N10 12070** M3×47,5-8IP	1,8 Nm

Intermediate dimensions on request.

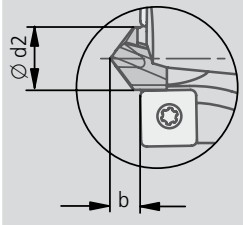
Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
80	53,5	**V47 20551**	260	325	4,30	**V47 40551**	370	435	5,42	**V47 60551**	495	560	6,68
80	63,5	**V47 20651**	295	375	5,80	**V47 40651**	420	500	7,52	**V47 60651**	560	640	9,46

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

● very good | ◐ good | ○ possible: see technical notes, page 147 | ✕ not possible

4-9×D	●	●	◐	○	○	○	○	×	×	×	×

	Centring spade		Basic recommendation							
			Indexable insert A -01 -21			Indexable insert B -01 -21				for workpiece material
	Ø d2	Order No.	Order No. ▽▽ Size	ISO code	Piece	Order No. ▽▽ Size	ISO code	Piece		
	16,3	V96 01160.8450	W83 44210.088430 W83 44210.087935	SOEX 120508-21 BK8430 SOEX 120508-21 BK7935	2	W83 32210.088430 W83 32210.087935	SOEX 090408-21 BK8430 SOEX 090408-21 BK7935	2		P M S K H N
	16,3	V96 01160.8450	W83 44000.186115 W83 44210.087710	SOEX 120508-01 BK6115 SOEX 120508-21 BK7710		W83 32000.156115 W83 32210.087710	SOEX 090408-01 BK6115 SOEX 090408-21 BK7710			
	10,3	V96 01100.8450								
	11,3	V96 01110.8450								
	12,3	V96 01120.8450	W83 32210.088430 W83 32210.087935	SOEX 090408-21 BK8430 SOEX 090408-21 BK7935	2	W83 23210.088430 W83 23210.087935	SOEX 07T308-21 BK8430 SOEX 07T308-21 BK7935	4		P M S K H N
	13,3	V96 01130.8450	W83 32000.156115 W83 32210.087710	SOEX 090408-01 BK6115 SOEX 090408-21 BK7710		W83 23000.016115 W83 23210.087710	SOEX 07T308-01 BK6115 SOEX 07T308-21 BK7710			



Ø d2	b
10,3	3,94
11,3	4,23
12,3	4,72
13,3	4,94
14,3	5,18
15,3	5,57
16,3	6,06

Supply drill head includes: with screws ①, ②, ③ and ④.
Please order insert and centring spade separately.

Guideline values for solid drilling: page 144 / alternative inserts: page 146.

Recommended cutting data

Guideline values for solid drilling						Cutting speed v_c · feed f (mm/rev)							
						⚠ Backing out of the bore with greatly reduced speed							
						Ø 20 - 24,9		Ø 25 - 29,9		Ø 30 - 32,9		Ø 33 - 36,9	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max
						⚠ ~ 6×D v_c = –10% · ~ 8×D v_c = –25%							
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	0,14 **0,16** 0,18	180	0,14 **0,17** 0,20	180	0,15 **0,18** 0,21	180	0,15 **0,18** 0,21
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	200	0,14 **0,16** 0,18	180	0,14 **0,17** 0,20	180	0,15 **0,18** 0,21	180	0,15 **0,18** 0,21
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	200	0,16 **0,18** 0,20	200	0,17 **0,20** 0,23	200	0,22 **0,25** 0,28	200	0,22 **0,25** 0,28
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	160	0,14 **0,16** 0,18	160	0,17 **0,20** 0,23	160	0,19 **0,22** 0,25	160	0,22 **0,25** 0,28
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	140	0,12 **0,14** 0,16	140	0,13 **0,16** 0,19	140	0,15 **0,18** 0,21	140	0,17 **0,20** 0,23
P	4.1			HSS					on request				
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				on request				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				on request				
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)				on request				
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				on request				
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)				on request				
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	180	0,23 **0,25** 0,27	180	0,27 **0,30** 0,33	180	0,32 **0,35** 0,38	180	0,32 **0,35** 0,38
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	170	0,23 **0,25** 0,27	170	0,27 **0,30** 0,33	170	0,32 **0,35** 0,38	170	0,32 **0,35** 0,38
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,23 **0,25** 0,27	180	0,27 **0,30** 0,33	180	0,32 **0,35** 0,38	180	0,32 **0,35** 0,38
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	170	0,20 **0,22** 0,24	170	0,22 **0,25** 0,28	170	0,27 **0,30** 0,33	170	0,27 **0,30** 0,33
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,18 **0,20** 0,22	160	0,19 **0,22** 0,25	160	0,25 **0,28** 0,31	160	0,25 **0,28** 0,31
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	120	0,12 **0,14** 0,16	120	0,15 **0,18** 0,21	120	0,19 **0,22** 0,25	120	0,19 **0,22** 0,25
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,20 **0,22** 0,24	120	0,22 **0,25** 0,28	120	0,32 **0,35** 0,38	120	0,32 **0,35** 0,38
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	250	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	250	0,25 **0,28** 0,31	250	0,27 **0,30** 0,33
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	250	0,16 **0,18** 0,20	250	0,19 **0,22** 0,25	250	0,25 **0,28** 0,31	250	0,25 **0,28** 0,31
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	0,12 **0,14** 0,16	300	0,15 **0,18** 0,21	300	0,17 **0,20** 0,23	300	0,17 **0,20** 0,23
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	250	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	250	0,27 **0,30** 0,33	250	0,27 **0,30** 0,33
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	250	0,27 **0,30** 0,33	250	0,27 **0,30** 0,33
H	15.0	1400		hardened steels < 45 HRC					on request				
H	16.0	1800		hardened steels > 45 HRC					on request				

Cutting values shown are relating to the basic recommendations for cutting materials given.

	Cutting speed v_c · feed f (mm/rev)													
	⚠ Backing out of the bore with greatly reduced speed													
	Ø 37 - 39,9		Ø 40 - 44,9		Ø 45 - 48,9		Ø 49 - 51,9		Ø 52 - 54,9		Ø 55 - 61,9		Ø 62 - 65,9	
	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max	v_c m/min ~ 4×D	f mm/rev min opt. max
	⚠ ~ 6×D v_c = –10% · ~ 8×D v_c = –25%													
	180	0,17 **0,20** 0,23	200	0,14 **0,16** 0,18	180	0,14 **0,16** 0,18	200	0,14 **0,17** 0,18	180	0,14 **0,17** 0,18	180	0,14 **0,17** 0,18	200	0,14 **0,17** 0,18
	180	0,17 **0,20** 0,23	200	0,14 **0,16** 0,18	180	0,14 **0,16** 0,18	200	0,14 **0,17** 0,18	180	0,14 **0,17** 0,18	180	0,14 **0,17** 0,18	200	0,14 **0,17** 0,18
	200	0,22 **0,25** 0,28	220	0,16 **0,18** 0,20	200	0,17 **0,20** 0,22	220	0,20 **0,23** 0,25	200	0,20 **0,25** 0,28	200	0,20 **0,25** 0,28	220	0,20 **0,23** 0,25
	160	0,22 **0,25** 0,28	180	0,16 **0,20** 0,22	160	0,16 **0,20** 0,22	180	0,18 **0,20** 0,24	160	0,18 **0,20** 0,24	160	0,18 **0,20** 0,24	180	0,18 **0,20** 0,24
	140	0,17 **0,20** 0,23	160	0,12 **0,16** 0,19	140	0,12 **0,16** 0,19	160	0,12 **0,16** 0,19	140	0,17 **0,20** 0,23	140	0,17 **0,20** 0,23	160	0,17 **0,20** 0,23
							on request							
							on request							
							on request							
							on request							
							on request							
							on request							
	180	0,32 **0,35** 0,38	180	0,23 **0,25** 0,27	170	0,23 **0,25** 0,27	180	0,27 **0,30** 0,33	170	0,27 **0,30** 0,33	170	0,27 **0,30** 0,33	180	0,23 **0,25** 0,27
	170	0,32 **0,35** 0,38	170	0,23 **0,25** 0,27	160	0,23 **0,25** 0,27	170	0,27 **0,30** 0,33	160	0,27 **0,30** 0,33	160	0,27 **0,30** 0,33	170	0,23 **0,25** 0,27
	180	0,32 **0,35** 0,38	180	0,23 **0,25** 0,27	170	0,23 **0,25** 0,27	180	0,27 **0,30** 0,33	170	0,27 **0,30** 0,33	170	0,27 **0,30** 0,33	180	0,23 **0,25** 0,27
	170	0,27 **0,30** 0,33	170	0,20 **0,22** 0,24	160	0,20 **0,22** 0,24	170	0,22 **0,25** 0,28	160	0,22 **0,25** 0,28	160	0,22 **0,25** 0,28	170	0,20 **0,22** 0,24
	160	0,25 **0,28** 0,31	160	0,18 **0,20** 0,22	150	0,18 **0,20** 0,22	160	0,19 **0,22** 0,25	150	0,19 **0,22** 0,25	150	0,19 **0,22** 0,25	160	0,18 **0,20** 0,22
	120	0,19 **0,22** 0,25	130	0,12 **0,14** 0,16	120	0,12 **0,14** 0,16	130	0,15 **0,18** 0,21	120	0,15 **0,18** 0,21	130	0,15 **0,18** 0,21	120	0,12 **0,14** 0,16
	120	0,32 **0,35** 0,38	130	0,20 **0,22** 0,24	120	0,20 **0,22** 0,24	130	0,22 **0,25** 0,28	120	0,22 **0,25** 0,28	130	0,22 **0,25** 0,28	120	0,20 **0,22** 0,24
	250	0,27 **0,30** 0,33	250	0,18 **0,20** 0,22	240	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	250	0,18 **0,20** 0,22
	250	0,25 **0,28** 0,31	250	0,16 **0,18** 0,20	240	0,16 **0,18** 0,20	250	0,19 **0,22** 0,25	240	0,19 **0,22** 0,25	240	0,19 **0,22** 0,25	250	0,16 **0,18** 0,20
	300	0,17 **0,20** 0,23	300	0,12 **0,14** 0,16	280	0,12 **0,14** 0,16	300	0,15 **0,18** 0,21	280	0,15 **0,18** 0,21	280	0,15 **0,18** 0,21	300	0,12 **0,14** 0,16
	250	0,27 **0,30** 0,33	250	0,18 **0,20** 0,22	240	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	250	0,18 **0,20** 0,22
	250	0,27 **0,30** 0,33	250	0,18 **0,20** 0,22	240	0,18 **0,20** 0,22	250	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	240	0,22 **0,25** 0,28	250	0,18 **0,20** 0,22
							on request							
							on request							

Alternative inserts

for better chip control

	Indexable insert Order No.	ISO code	for work-piece material
W83 18...	W83 18130.088425	SOEX 060308-13 BK8425	P
	W83 18130.087935	SOEX 060308-13 BK7935	M
	W83 18210.087710	SOEX 060308-21 BK7710	N
W83 23...	W83 23130.088425	SOEX 07T308-13 BK8425	P
	W83 23030.088430	SOEX 07T308-03 BK8430	P M
	W83 23130.087935	SOEX 07T308-13 BK7935	M
	W83 23210.087710	SOEX 07T308-21 BK7710	N
W83 32...	W83 32130.088425	SOEX 090408-13 BK8425	P
	W83 32030.088430	SOEX 090408-03 BK8430	P M
	W83 32130.087935	SOEX 090408-13 BK7935	M
	W83 32210.087710	SOEX 090408-21 BK7710	N
W83 39...	W83 39130.088425	SOEX 110508-13 BK8425	P
	W83 39130.087935	SOEX 110508-13 BK7935	P M
	W83 39210.087710	SOEX 110508-21 BK7710	M N
W83 44...	W83 44130.088425	SOEX 120508-13 BK8425	P
	W83 44030.088430	SOEX 120508-03 BK8430	P M
	W83 44130.087935	SOEX 120508-13 BK7935	M
	W83 44210.087710	SOEX 120508-21 BK7710	N

for higher cutting speed

	Indexable insert Order No.	ISO code	for work-piece material
W83 18...	W83 18130.086420	SOEX 060308-13 BK6420	P
	W83 18210.086130	SOEX 060308-21 BK6130	P M
	W83 18130.0874	SOEX 060308-13 BK74	M
W83 23...	W83 23010.086420	SOEX 07T308-01 BK6420	P
	W83 23210.086130	SOEX 07T308-21 BK6130	P M
	W83 23000.0174	SOEX 07T308-01 BK74	M
	W83 23000.016115	SOEX 07T308-01 BK6115	K
W83 32...	W83 32010.086420	SOEX 090408-01 BK6420	P
	W83 32210.086130	SOEX 090408-21 BK6130	P M
	W83 32000.1574	SOEX 090408-01 BK74	M
	W83 32000.156115	SOEX 090408-01 BK6115	K
W83 39...	W83 39130.086420	SOEX 110508-13 BK6420	P
	W83 39210.086130	SOEX 110508-21 BK6130	P M
W83 44...	W83 44010.086420	SOEX 120508-01 BK6420	P
	W83 44210.086130	SOEX 120508-21 BK6130	P M
	W83 44000.1874	SOEX 120508-01 BK74	M
	W83 44000.186115	SOEX 120508-01 BK6115	K

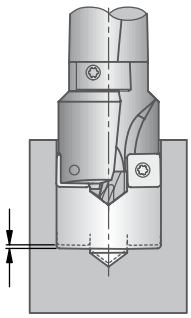
for greater strength

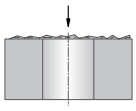
W83 18...	W83 18130.088425	SOEX 060308-13 BK8425	P
	W83 18130.087935	SOEX 060308-13 BK7935	M
	W83 18210.086130	SOEX 060308-21 BK6130	K
W83 23...	W83 23010.088425	SOEX 07T308-01 BK8425	P K
	W83 23010.087935	SOEX 07T308-01 BK7935	P M
W83 32...	W83 32010.088425	SOEX 090408-01 BK8425	P K
	W83 32010.087935	SOEX 090408-01 BK7935	P M
W83 39...	W83 39130.088425	SOEX 110508-13 BK8425	P
	W83 39130.087935	SOEX 110508-13 BK7935	M
	W83 39210.086130	SOEX 110508-21 BK6130	K
W83 44...	W83 44010.088425	SOEX 120508-01 BK8425	P K
	W83 44010.087935	SOEX 120508-01 BK7935	P M

From experience

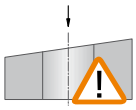
Entering an existing bore

- Before the tool is backed out of the bore, the exact position must be determined.
- Back out with stationary spindle or with approx. 50-150 rpm.
- Clean bore.
- Enter with stationary spindle up to 0.8 mm before the bottom of the bore. Drill bit must be in the existing bore.
- Turn on spindle and feed at 50% of the cutting values; when cutting edges fully engage again, increase to 100%.

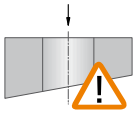


1. 

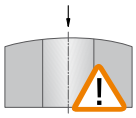
Starting on uneven surfaces (cast surfaces)
- possible in principle
- reduce feed rate when starting bore

2. 

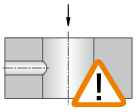
Starting on angled surfaces
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

3. 

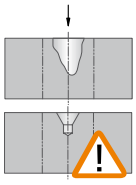
Angled bore exit
- possible under certain conditions
- reduce feed rate if necessary
- drilling angle max. 3°

4. 

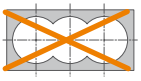
Starting on cambered surfaces
- centered boring can be started with reduced feed rate
- spot facing is required if the point for starting the bore is outside the radius centre

5. 

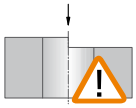
Drilling through a cross bore
- halve feed rate at interruption
- cross bore max. 1/3 of bore diameter
- off-centre cross bore not possible

6. 

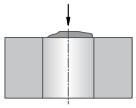
Starting on a groove or large centering bore
- surface for starting bore must be spot faced beforehand
- reduce feed rate if necessary

7. 

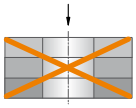
Drilling a chamber
- not possible

8. 

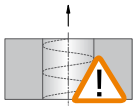
Starting on an edge
- not possible
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

9. 

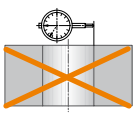
Starting on a welded seam
- reduce feed rate when starting bore
- face beforehand if necessary

10. 

Drilling through stacked plates
- not possible

11. 

Backing out of the bore
- tool 9×D swings up at bore exit
- back out of the bore with greatly reduced speed to avoid any development of chatter marks

12. 

adjustable
- not adjustable, fixed diameter
- intermediate dimensions on request

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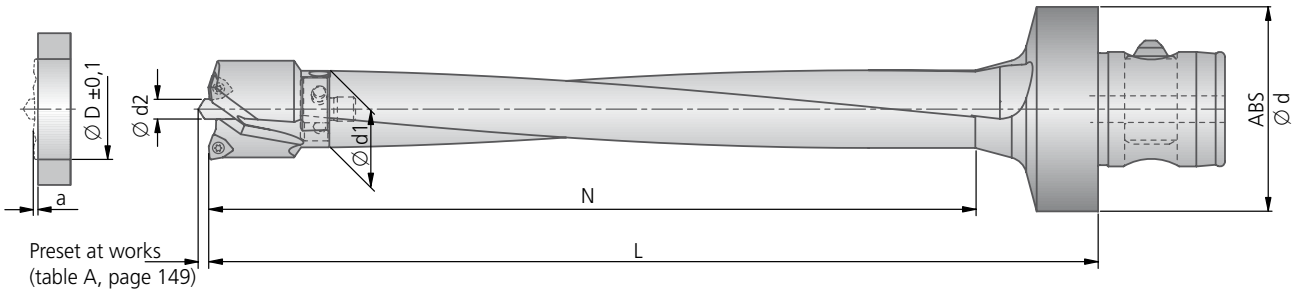
Ø 20 – 39 mm

Indexable insert drill

Material P M K N S

4×D 6×D 9×D

ABS



4-9×D	●	●	◐	○	○	○	○	○	✕	✕	✕

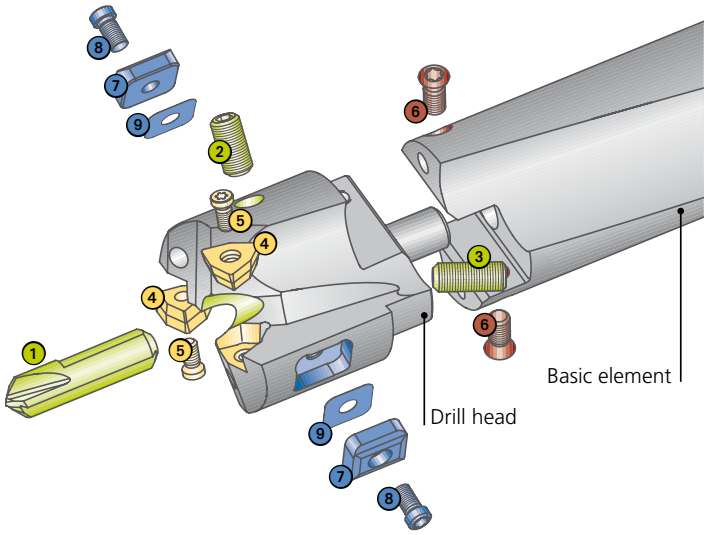
Drill head												
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ⑥ for basic element Order No. Article	Clamping screw ⑤ for indexable insert Order No. Article	Guide pad ⑦ Order No.	Clamping screw ⑧ for guide pad Order No. Article	Shim set ⑨ for adjusting guide pad Order No. includes	Clamping screw ② for central drill bit Order No. Article ⬡AF	Adjusting screw ③ for central drill bit Order No. Article
20,0	V46 50201	19	1,5	0,03	N00 57480 S2564-8IP 1,28 Nm	N00 56041 S/M2×4,3-6IP 0,62 Nm	L01 03990	N00 57211 S2542-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70910 M4×6-⬡2 1,5Nm	–
21,0	V46 50211	19	1,5	0,04						N00 70920 M4×8-⬡2 1,5 Nm	
22,0	V46 50221	19	1,5	0,04							
23,0	V46 50231	19	1,5	0,04	N00 57480 S2564-8IP 1,28 Nm	N00 56041 S/M2×4,3-6IP 0,62 Nm	L01 04000	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70920 M4×8-⬡2 1,5 Nm	–
24,0	V46 50241	19	1,5	0,05							
25,0	V46 50251	19	1,5	0,05							
26,0	V46 50260	25	2	0,05	N00 57490 S3074-8IP 2,25 Nm	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	L01 04000	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70930 M5×10-⬡2,5 2,5 Nm	55051 04010 M4×10-⬡2
27,0	V46 50270	25	2	0,06							
28,0	V46 50280	25	2	0,06							
29,0	V46 50290	25	2	0,06							
30,0	V46 50300	25	2	0,07	N00 57490 S3074-8IP 2,25 Nm	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	L01 04010	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70930 M5×10-⬡2,5 2,5 Nm	55051 04010 M4×10-⬡2
31,0	V46 50310	25	2	0,07							
32,0	V46 50320	25	2	0,07							
33,0	V46 50330	32	2,1	0,09	N00 57440 S4089-15IP 4,3 Nm	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	L01 04010	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70940 M5×12-⬡2,5 2,5 Nm	55051 04010 M4×10-⬡2
34,0	V46 50340	32	2,1	0,09							
35,0	V46 50350	32	2,1	0,09							
36,0	V46 50360	32	2,1	0,10							
37,0	V46 50370	32	2,1	0,10	N00 57440 S4089-15IP 4,3 Nm	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	L01 04020	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70940 M5×12-⬡2,5 2,5 Nm	55051 04010 M4×10-⬡2
38,0	V46 50380	32	2,4	0,11							
39,0	V46 50390	32	2,4	0,11							

Further diameters on request.

Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
50	19	V47 20201	113	145	0,52	V47 40201	150	185	0,55	V47 60201	200	235	0,63
50	25	V47 20261	130	160	0,66	V47 40261	175	210	0,77	V47 60261	230	260	0,90
50	32	V47 20331	160	195	0,93	V47 40331	215	255	1,13	V47 60331	290	330	1,4

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

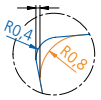
1. Central drill bit
2. Clamping screw for central drill bit
3. Adjusting screw for central drill bit
4. Indexable inserts
5. Clamping screw for indexable inserts
6. Clamping screw for basic element
7. Guide pad
8. Clamping screw for guide pad
9. Shim for adjusting guide pad



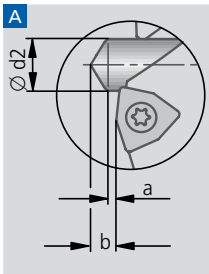
Central drill bit				Basic recommendation			
				Indexable insert -13 -01 -11			
Ø d2	Order No.	Article	for workpiece material	Order No. ▽▽ Size	ISO code	piece	for workpiece material
5	V95 10012.0089 V95 10012.0090 V95 10310.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	W29 10130.048425 W29 10130.0479 W29 10010.047615 W29 10110.0477	WOEX 030204-13 BK8425 WOEX 030204-13 BK79 WOEX 030204-01 BK7615 WOEX 030204-11 BK77	2	P M K N S
6	V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	W29 18130.048425 W29 18130.0479 W29 18010.047615 W29 18110.0477	WOEX 040304-13 BK8425 WOEX 040304-13 BK79 WOEX 040304-01 BK7615 WOEX 040304-11 BK77	2	P M K N S
6	V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	W29 24130.048425 W29 24130.0479 W29 24010.047615 W29 24110.0477	WOEX 05T304-13 BK8425 WOEX 05T304-13 BK79 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	2	P M K N S

● very good | ◐ good | ○ possible: see technical notes, page 156 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



A



Ø d2	a	b
5	1,0	2,25
6	1,1	2,65
8	1,25	3,38
10	1,25	3,86
12	1,45	4,67
16	1,8	5,78
20	2,5	7,91

Supply drill head includes:
with screws ②, ③, ⑤, ⑥ and ⑧, guide pads ⑦ and shim sets ⑨.
Please order insert and central drill bit separately.

Length adjustment central drill bit ①:
In principle there is no need to adjust the length of the central drill bit (preset at works). However, if an alternative length setting is required, this can be achieved by applying the adjusting screw ③ (→ table A).

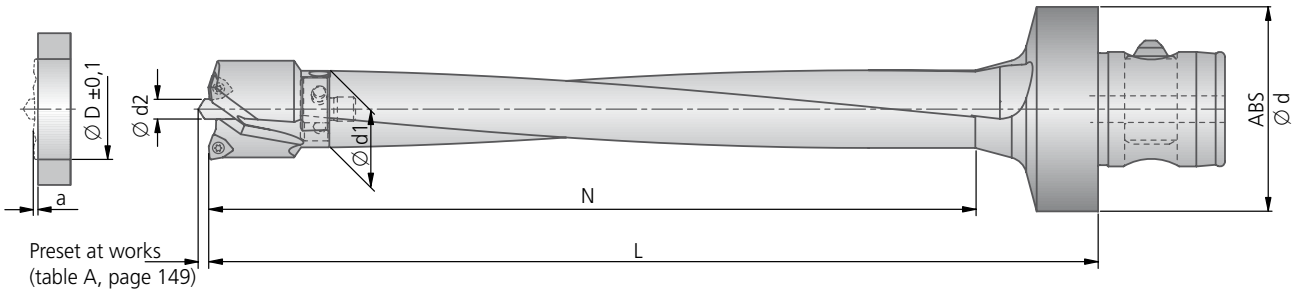
Guideline values for solid drilling: page 154 / alternative inserts: page 155.

KOMET KUB Centron

Ø 40 – 64 mm

Indexable insert drill

Material P M K N S | 4×D 6×D 9×D | ABS



4-9×D	●	●	◐	○	○	○	○	○	✕	✕	✕	

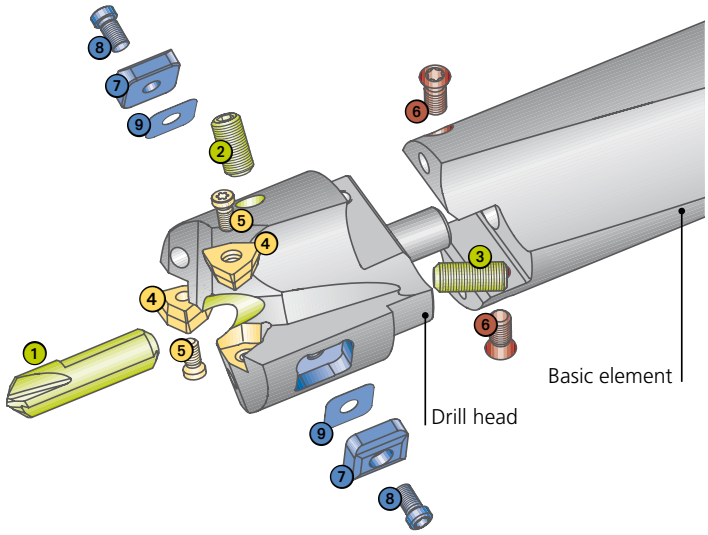
Drill head												
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ⑥ for basic element Order No. Article	Clamping screw ⑤ for indexable insert Order No. Article	Guide pad ⑦ Order No.	Clamping screw ⑧ for guide pad Order No. Article	Shim set ⑨ for adjusting guide pad Order No. includes	Clamping screw ② for central drill bit Order No. Article ⬡AF	Adjusting screw ③ for central drill bit Order No. Article	
40,0	V46 50400	38,5	2,4	0,13	N00 57500 S45105-20IP 6,25 Nm	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	L01 04020	N00 55581 M2,5×4,5-8IP 1,28 Nm	L01 04190 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70950 M6×12-⬡3 5 Nm	55051 05010 M5×10-⬡2,5	
41,0	V46 50410	38,5	2,4	0,16								
42,0	V46 50420	38,5	2,4	0,16								
43,0	V46 50430	38,5	2,4	0,16								
44,0	V46 50440	38,5	2,4	0,16								
45,0	V46 50450	38,5	2,4	0,16								
46,0	V46 50460	44,5	2,7	0,18	N00 57450 S50115-20IP 6,25 Nm	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	L01 04150	N00 55701 M3,5×5-8IP 2,25 Nm	L01 04240 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70960 M8×16-⬡4 8 Nm	55051 05010 M5×10-⬡2,5	
47,0	V46 50470	44,5	2,7	0,18								
48,0	V46 50480	44,5	2,7	0,19								
49,0	V46 50490	44,5	2,7	0,20								
50,0	V46 50500	44,5	2,7	0,21								
51,0	V46 50510	44,5	2,7	0,22								
52,0	V46 50520	44,5	2,7	0,22								
53,0	V46 50530	44,5	2,7	0,23								
54,0	V46 50540	44,5	2,7	0,24								
55,0	V46 50550	53,5	3,3	0,29	N00 57460 S55140-20IP 6,25 Nm	N00 57531 S/M4,5×9-15IP 6,25 Nm	L01 04160	N00 55701 M3,5×5-8IP 2,25 Nm	L01 04240 4× 0,025 2× 0,050 2× 0,075 2× 0,100	N00 70960 M8×16-⬡4 8 Nm	55051 05008 M5×8-⬡2,5	
56,0	V46 50560	53,5	3,3	0,30								
57,0	V46 50570	53,5	3,3	0,31								
58,0	V46 50580	53,5	3,3	0,31								
59,0	V46 50590	53,5	3,3	0,32								
60,0	V46 50600	53,5	3,3	0,33								
61,0	V46 50610	53,5	3,3	0,34								
62,0	V46 50620	53,5	3,3	0,35								
63,0	V46 50630	53,5	3,3	0,36								
64,0	V46 50640	53,5	3,3	0,37								

Further diameters on request.

Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
63	38,5	V47 20401	185	235	1,68	V47 40401	260	310	2,08	V47 60401	340	390	2,5
80	44,5	V47 20461	215	280	3,31	V47 40461	310	375	3,97	V47 60461	415	480	4,82
80	53,5	V47 20551	260	325	4,30	V47 40551	370	435	5,42	V47 60551	495	560	6,68

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

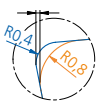
1. Central drill bit
2. Clamping screw for central drill bit
3. Adjusting screw for central drill bit
4. Indexable inserts
5. Clamping screw for indexable inserts
6. Clamping screw for basic element
7. Guide pad
8. Clamping screw for guide pad
9. Shim for adjusting guide pad



Central drill bit				Basic recommendation			
				Indexable insert -13 -01 -11			
Ø d2	Order No.	Article	for workpiece material	Order No. ▽▽ Size	ISO code	piece	for workpiece material
8	**V95 10032.0089** **V95 10032.0090** **V95 10330.8450**	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	**W29 24130.048425** **W29 24130.0479** **W29 24010.047615** **W29 24110.0477**	WOEX 05T304-13 BK8425 WOEX 05T304-13 BK79 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	2	P M K N S
10	**V95 10042.0089** **V95 10042.0090** **V95 10340.8450**	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	**W29 34130.048425** **W29 34130.0479** **W29 34010.047615** **W29 34110.0477**	WOEX 06T304-13 BK8425 WOEX 06T304-13 BK79 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	2	P M K N S
10	**V95 10042.0089** **V95 10042.0090** **V95 10340.8450**	HSS TiN HSS TiAlN VHM TiAlN/TiN	P N M K N P M K N	**W29 42130.048425** **W29 42130.0479** **W29 42010.047615** **W29 42110.0477**	WOEX 080404-13 BK8425 WOEX 080404-13 BK79 WOEX 080404-01 BK7615 WOEX 080404-11 BK77	2	P M K N S

● very good | ◐ good | ○ possible: see technical notes, page 156 | ✕ not possible

Note re. insert radius: The nominal dimension ∅ is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)



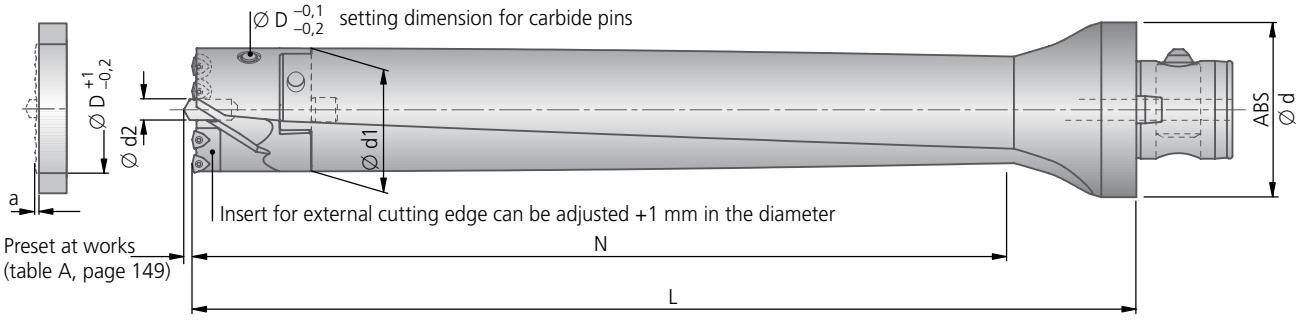
Supply drill head includes:
with screws ②, ③, ⑤, ⑥ and ⑧, guide pads ⑦ and shim sets ⑨.
Please order insert and central drill bit separately.

Guideline values for solid drilling: page 154 / alternative inserts: page 155.

KOMET KUB Centron Ø 65 – 81 mm

Indexable insert drill

Material: P M K N S | 4×D 6×D 9×D | ABS



Supply drill head includes:
with screws ②, ③ and ⑤, insert seating ⑥, ⑩ and ⑪, carbide pin ⑮ and key, threaded pin ⑯ and copper disc ⑰.
Supply insert seating ⑥ includes: with location screw ⑦, adjusting screw ⑧ and clamping screws ⑨.
Supply insert seating ⑩ ⑪ includes: with location screw ⑫, cylindrical pin ⑬ and clamping screw ⑭.
Please order insert and central drill bit separately.

4-9×D	●	●	◐	○	○	○	○	○	✕	✕	✕

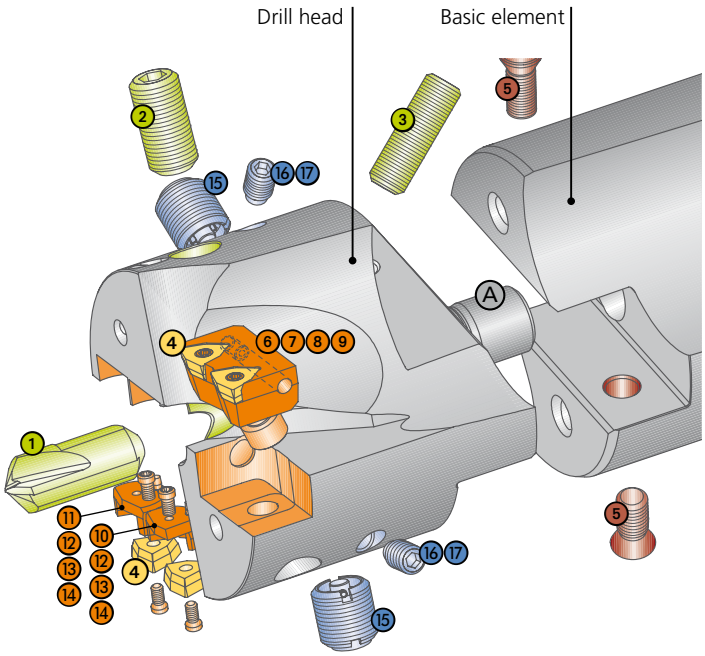
Drill head												
Ø D	Order No.	Connecting point Ø d1	Roughing size a	kg	Clamping screw ⑤ for basic element Order No. Article	Carbide pin ⑮ Order No.	Key for carbide pin Order No.	Threaded pin ⑯ Order No. Article	Copper disc ⑰ Order No. Article	Clamping screw ② for central drill bit Order No. Article	Adjusting screw ③ for central drill bit Order No. Article	
65,0	V46 50650	63,5	3	0,49	N00 57470 S60160-20IP 6,25 Nm	L01 04310 M12×1	L01 04370	55051 06008 M6×8	L01 04450 Ø4,5×1,5	N00 70970 M10×20-O5 16 Nm	55051 08010 M8×10-O4	
66,0	V46 50660	63,5	3	0,51								
67,0	V46 50670	63,5	3	0,43								
68,0	V46 50680	63,5	3	0,54								
69,0	V46 50690	63,5	3	0,55								
70,0	V46 50700	63,5	3	0,56								
71,0	V46 50710	63,5	3	0,57								
72,0	V46 50720	70,5	3	0,93	N00 57470 S60160-20IP 6,25 Nm	L01 04310 M12×1	L01 04370	55051 06008 M6×8	L01 04450 Ø4,5×1,5	N00 70970 M10×20-O5 16 Nm	55051 08025 M8×25-O4	
73,0	V46 50730	70,5	3,1	0,93								
74,0	V46 50740	70,5	3,1	0,93								
75,0	V46 50750	70,5	3,1	0,93								
76,0	V46 50760	70,5	3,1	0,93	N00 57470 S60160-20IP 6,25 Nm	L01 04310 M12×1	L01 04370	55051 06008 M6×8	L01 04450 Ø4,5×1,5	N00 70970 M10×20-O5 16 Nm	55051 08025 M8×25-O4	
77,0	V46 50770	70,5	3,1	0,93								
78,0	V46 50780	70,5	3,1	0,93								
79,0	V46 50790	70,5	3,1	0,93	N00 57470 S60160-20IP 6,25 Nm	L01 04310 M12×1	L01 04370	55051 06008 M6×8	L01 04450 Ø4,5×1,5	N00 70970 M10×20-O5 16 Nm	55051 08025 M8×25-O4	
80,0	V46 50800	70,5	3,1	0,93								
81,0	V46 50810	70,5	3,1	0,93								

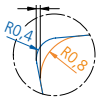
Basic element		~ 4×D				~ 6×D				~ 8×D			
ABS Ø d	Connecting point Ø d1	Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
80	63,5	V47 20651	295	375	5,80	V47 40651	420	500	7,52	V47 60651	560	640	9,46
100	70,5	V47 20721	325	405	8,59	V47 40721	460	540	10,8	V47 60721	610	690	13,5

The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

● very good | ◐ good | ○ possible: see technical notes, page 156 | ✕ not possible

1 Central drill bit
2 Clamping screw for central drill bit
3 Adjusting screw for central drill bit
4 Indexable inserts
5 Clamping screw for basic element
6 Insert seating
7 Location screw for insert seating
8 Adjusting screw for insert seating
9 Clamping screw for indexable insert
10 Insert seating
11 Insert seating
12 Location screw for insert seating
13 Cylindrical pin for insert seating
14 Clamping screw for indexable insert
15 Carbide pin
16 Threaded pin
17 Copper disc





Note re. insert radius:
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Insert seating			Central drill bit			Basic recommendation		
⑥ Order No.	⑩ Order No.	⑪ Order No.	Ød2	Order No.	for workpiece material	Indexable insert -13 -01 -11 Order No. · ISO code ▽▽ Size	piece	for workpiece material
D53 53200	–	–	12	V95 10050.0089 HSS TiN V95 10050.0090 HSS TiAlN	P N M K N	W29 24130.048425 WOEX 05T304-13 BK8425 W29 24130.0479 WOEX 05T304-13 BK79 W29 24010.047615 WOEX 05T304-01 BK7615 W29 24110.0477 WOEX 05T304-11 BK77	4	P M K N S
D53 53220 D53 53230 D53 53240	D50 50290	D50 55090	12	V95 10050.0089 HSS TiN V95 10050.0090 HSS TiAlN	P N M K N	W29 24130.048425 WOEX 05T304-13 BK8425 W29 24130.0479 WOEX 05T304-13 BK79 W29 24010.047615 WOEX 05T304-01 BK7615 W29 24110.0477 WOEX 05T304-11 BK77	4	P M K N S

Insert seating ⑥				Insert seating ⑩ and ⑪				
⑥ Order No.	Location screw ⑦ Order No. Article	Adjusting screw ⑧ Order No. Article	Clamping screw ⑨ Order No. Article	⑩ Order No.	⑪ Order No.	Location screw ⑫ Order No. Article	Cylindrical pin ⑬ Order No. Article	Clamping screw ⑭ Order No. Article
D53 53200	N10 11510 M4,5×11,5-Tx15	55051 04008 M4×8-O2	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	–	–	–	–	–
D53 53220 D53 53230 D53 53240	55011 05012 M5×12	55051 04010 M4×10-O2	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	D50 50290	D50 55090	N00 55571 M2,5×6-8IP	N00 52000	N00 57571 S/M2,5×6,3-8IP 1,28 Nm

Guideline values for solid drilling: page 154 / alternative inserts: page 155.

Recommended cutting data

Guideline values for solid drilling						KUB Centron																					
						Max. feed f (mm/rev) · Cutting speed v_c (m/min)																					
						Ø20–25			Ø26–32			Ø33–45			Ø46–54			Ø55–64			Ø65–71		Ø72–81			
							HSS*	VHM*		HSS*	VHM*		HSS*	VHM*		HSS*	VHM*		HSS*	VHM*		HSS*		HSS*		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	f	v_c	v_c	f	v_c	v_c	f	v_c	v_c	f	v_c	v_c	f	v_c	v_c	f	v_c	f	v_c	f	v_c
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	0,08	160	250	0,08	170	250	0,10	200	250	0,12	180	250	0,14	180	250	0,10	210	0,12	210
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	0,10	160	200	0,12	170	200	0,12	200	200	0,14	180	200	0,16	180	200	0,12	210	0,14	210
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	0,12	160	250	0,14	170	250	0,14	200	250	0,14	180	250	0,16	180	250	0,14	210	0,16	210
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	0,12	140	180	0,14	170	180	0,14	180	180	0,14	180	180	0,16	180	180	0,14	180	0,16	180
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	0,08	120	160	0,10	160	160	0,10	160	160	0,14	160	160	0,14	160	160	0,10	160	0,12	160
P	4.1			HSS		0,07	80	80	0,07	80	80	0,07	80	80	0,08	80	80	0,10	80	80	0,08	80	0,10	80
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	on request																			
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	on request																			
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	0,07	70	180	0,10	70	180	0,10	90	180	0,10	90	180	0,12	90	180	0,10	100	0,12	100
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	0,10	70	160	0,12	70	160	0,12	90	160	0,12	90	160	0,14	90	160	0,12	100	0,14	100
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	0,08	70	120	0,10	70	120	0,10	90	120	0,10	90	120	0,12	90	120	0,10	100	0,12	100
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	0,14	100	200	0,16	110	200	0,16	120	200	0,18	120	200	0,25	120	200	0,16	140	0,20	140
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	0,12	100	160	0,14	110	160	0,14	120	160	0,15	120	160	0,20	120	160	0,16	140	0,20	140
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	0,12	100	160	0,14	110	160	0,14	120	160	0,18	120	160	0,25	120	160	0,16	140	0,20	140
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	0,12	100	140	0,14	110	140	0,14	120	140	0,18	120	140	0,25	120	140	0,14	140	0,16	140
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	0,12	100	120	0,14	110	120	0,14	120	120	0,18	120	120	0,25	120	120	0,14	120	0,16	120
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	0,10	100	100	0,12	100	100	0,12	100	100	0,15	100	100	0,20	100	100	0,12	100	0,14	100
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	0,10	80	80	0,12	80	80	0,12	80	80	0,15	80	80	0,20	80	80	0,12	80	0,14	80
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	0,14	200	200	0,16	200	200	0,16	200	200	0,20	200	200	0,25	200	200	0,16	200	0,20	200
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	0,08	250	250	0,08	250	250	0,10	250	250	0,12	250	250	0,15	250	250	0,08	250	0,10	250
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	0,07	350	350	0,07	350	350	0,07	350	350	0,10	350	350	0,12	350	350	0,08	350	0,10	350
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	0,10	250	250	0,12	250	250	0,14	250	250	0,18	250	250	0,25	250	250	0,14	250	0,16	250
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	0,12	200	200	0,14	200	200	0,14	200	200	0,15	200	200	0,20	200	200	0,12	200	0,14	200
H	15.0	1400		hardened steels < 45 HRC		–			–			–			–			–			–		–			
H	16.0	1800		hardened steels > 45 HRC		–			–			–			–			–			–		–			

* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit.

for better chip control

ØD	Indexable insert -03 -13 Order No.	ISO code	for work-piece material
20 – 25	**W29 10030.048425**	WOEX 030204-03 BK8425	P M
	W29 10030.046425	WOEX 030204-03 BK6425	P
26 – 33	**W29 18030.048425**	WOEX 040304-03 BK8425	P M
	W29 18030.046425	WOEX 040304-03 BK6425	P
33 – 45	**W29 24130.048425**	WOEX 05T304-13 BK8425	P
	W29 24030.046425	WOEX 05T304-03 BK6425	P
	W29 24130.0479	WOEX 05T304-13 BK79	M
46 – 54	**W29 34130.048425**	WOEX 06T304-13 BK8425	P
	W29 34030.046425	WOEX 06T304-03 BK6425	P
	W29 34130.0479	WOEX 06T304-13 BK79	M
55 – 64	**W29 42130.048425**	WOEX 080404-13 BK8425	P
	W29 42030.046425	WOEX 080404-03 BK6425	P
	W29 42130.0479	WOEX 080404-13 BK79	M
65 – 81	**W29 24130.048425**	WOEX 05T304-13 BK8425	P
	W29 24030.046425	WOEX 05T304-03 BK6425	P M
	W29 24130.0479	WOEX 05T304-13 BK79	M

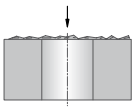
for higher cutting speed

ØD	Indexable insert -01 -11 -13 Order No.	ISO code	for work-piece material
20 – 25	W29 10010.0472	WOEX 030204-01 BK72	P
	W29 10130.047325	WOEX 030204-13 BK7325	M
	W29 10110.0450	WOEX 030404-11 BK50	N
26 – 33	W29 18010.0472	WOEX 040304-01 BK72	P
	W29 18130.047325	WOEX 040304-13 BK7325	M
	W29 18110.0450	WOEX 040304-11 BK50	N
33 – 45	W29 24010.0472	WOEX 05T304-01 BK72	P
	W29 24130.047325	WOEX 05T304-13 BK7325	M
	W29 24110.0450	WOEX 05T304-11 BK50	N
46 – 54	W29 34010.0472	WOEX 06T304-01 BK72	P
	W29 34130.047325	WOEX 06T304-13 BK7325	M
	W29 34110.0450	WOEX 06T304-11 BK50	N
55 – 64	W29 42010.0472	WOEX 080404-01 BK72	P
	W29 42130.047325	WOEX 080404-13 BK7325	M
	W29 42110.0450	WOEX 080404-11 BK50	N
65 – 81	W29 24010.0472	WOEX 05T304-01 BK72	P
	W29 24110.0450	WOEX 05T304-11 BK50	N

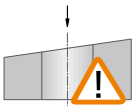
for greater strength

20 – 25	**W29 10010.047935**	WOEX 030204-01 BK7935	P
	W29 10010.0404	WOEX 030204-01 P40	P M
	W29 10010.0421	WOEX 030204-01 K10	K
	W29 10110.0421	WOEX 030204-11 K10	N
26 – 33	**W29 18010.047935**	WOEX 040304-01 BK7935	P
	W29 18010.0404	WOEX 040304-01 P40	P M
	W29 18010.0421	WOEX 040304-01 K10	K
	W29 18110.0421	WOEX 040304-11 K10	N
33 – 45	**W29 24010.047935**	WOEX 05T304-01 BK7935	P
	W29 24010.0404	WOEX 05T304-01 P40	P M
	W29 24010.0421	WOEX 05T304-01 K10	K
	W29 24110.0421	WOEX 05T304-11 K10	N
46 – 54	**W29 34010.047935**	WOEX 080404-01 BK7935	P
	W29 34010.0404	WOEX 080404-01 P40	P M
	W29 34010.0421	WOEX 080404-01 K10	K
	W29 34110.0421	WOEX 080404-11 K10	N
55 – 64	**W29 42010.047935**	WOEX 080404-01 BK7935	P
	W29 42010.0404	WOEX 080404-01 P40	P M
	W29 42010.0421	WOEX 080404-01 K10	K
	W29 42000.0421	WOEX 080404-00 K10	N
65 – 81	**W29 24010.047935**	WOEX 05T304-01 BK7935	P
	W29 24010.0404	WOEX 05T304-01 P40	M
	W29 24010.0421	WOEX 05T304-01 K10	K
	W29 24110.0421	WOEX 05T304-11 K10	N

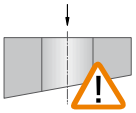
Technical informations

1. 

Starting on uneven surfaces (cast surfaces)
- possible in principle
- reduce feed rate when starting bore

2. 

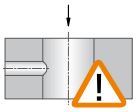
Starting on angled surfaces
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

3. 

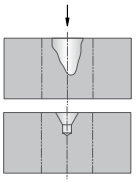
Angled bore exit
- possible under certain conditions
- reduce feed rate if necessary
- drilling angle max. 3°

4. 

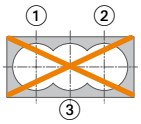
Starting on cambered surfaces
- centered boring can be started with reduced feed rate
- spot facing is required if the point for starting the bore is outside the radius centre

5. 

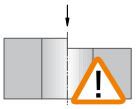
Drilling through a cross bore
- halve feed rate at interruption
- cross bore max. 1/3 of bore diameter
- off-centre cross bore not possible

6. 

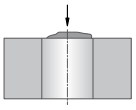
Starting on a groove or large centering bore
- possible under certain conditions
- reduce feed rate if necessary
- face beforehand where centre is particularly large
- central drill bit basic adjustment optimize if necessary

7. 

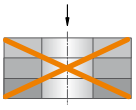
Drilling a chamber
- not possible

8. 

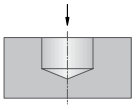
Starting on an edge
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

9. 

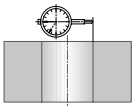
Starting on a welded seam
- reduce feed rate when starting bore
- face beforehand if necessary

10. 

Drilling through stacked plates
- not possible

11. 

Blind hole
- possible
- set guide pads 0.5 mm below actual ∅

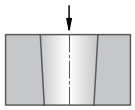
12. 

adjustable
- can be adjusted from 65 mm diameter

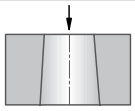
Rotating and stationary use



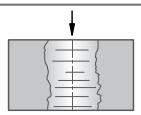
Short tool life types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



Bore narrows at bottom
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry
- axial adjustment of central drill bit not the best > adjust setting as shown on setting sheet in operating instructions



Bore widens at bottom
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



Bad surface finish
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

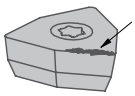
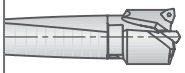
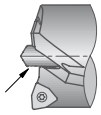


Bild up on cutting edge
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

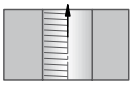


Friction marks on tool shank
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius
- chip jams on support element, fractured support element > where basic element < 6 × D use of support element can be dispensed with

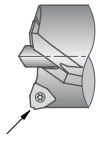
Stationary use



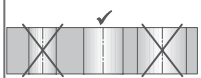
Heavy wear on one side on central drill bit
- tool not central → tool turret/holder may have shifted – readjust machine



Withdrawal groove on one side
- tool not central → tool turret/holder may have shifted – readjust machine

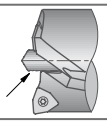


Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



Bore too small/ too large
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

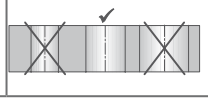
Rotating use



Heavy wear on one side on central drill bit
- insufficient guiding → check length setting on central drill bit



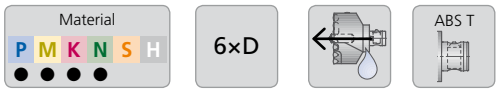
Fracture on external cutting edge
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



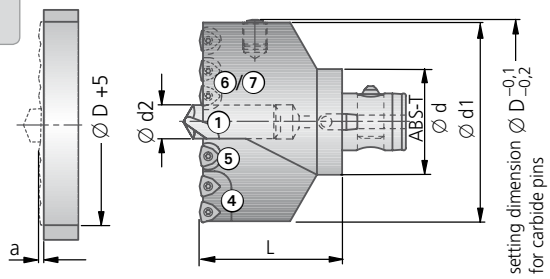
Bore too small/ too large with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting

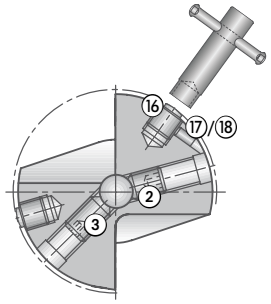
KOMET KUB V464 Ø 80 – 155 mm

Indexable insert drill (drill head)



Insert ④ for external cutting edge can be adjusted +5 mm in the diameter





Drill head												
Ø D +5 mm	ABS-T Ø d	Order No.	Ø d1	Roughing size a	L	kg	Carbide pin ⑯ Order No.	Key for carbide pin Order No.	Threaded pin ⑰ Order No. Article	Copper disc ⑱ Order No. Article	Clamping screw ② for central drill bit Order No. Article	Adjusting screw ③ for central drill bit Order No. Article
80	50	V46 40801	78,5	4,2	75	1,75	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70370 M12×16-O6 25 Nm	55052 12016 M12×16-O6
85	50	V46 40851	83,5	4,2	75	1,80	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70380 M12×20-O6 25 Nm	55052 12020 M12×20-O6
90	50	V46 40901	87,5	4,2	75	2,06						
95	50	V46 40951	92,5	4,2	75	2,16						
100	63	V46 41001	97,2	4,8	85	3,12	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70380 M12×20-O6 25 Nm	55052 12020 M12×20-O6
105	63	V46 41051	102,5	4,8	85	2,92						
110	63	V46 41101	107,5	4,8	85	3,20						
115	63	V46 41151	112,5	4,8	85	3,35	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70460 M16×20-O8 35 Nm	N00 70800 M16×22-O8
120	63	V46 41201	118,5	4,2	85	3,60	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70460 M16×20-O8 35 Nm	N00 70800 M16×22-O8
125	63	V46 41251	123,5	4,2	85	3,82						
130	80	V46 41301	127,5	4,2	90	5,62						
135	80	V46 41351	132,5	4,2	90	5,52						
140	80	V46 41401	137,5	4,2	90	5,79						
145	80	V46 41451	142,5	4,8	90	5,95	L01 04300 M16×1	L01 04350	55051 06008 M6×8-O3	L01 04450 Ø4,5×1,5	N00 70460 M16×20-O8 35 Nm	N00 70800 M16×22-O8
150	80	V46 41501	147,5	4,8	90	6,08						
155	80	V46 41551	152,5	4,8	90	6,50						

For torsional dampeners we recommend the use of appropriate reducers (available on request).

Supply drill head includes: with screws ② and ③, insert seating ④, ⑤ and ⑥/⑦, carbide pin ⑯ with key, threaded pin ⑰ and copper disc ⑱.

Supply insert seating ④ includes:
with location screw ⑧, adjusting screw ⑨ and clamping screws ⑩.

Supply insert seating ⑤ and ⑥ includes:
with location screw ⑪, Zylinderstift ⑫ and clamping screw ⑬.

Supply insert seating ⑦ includes:
with location screw ⑭ and clamping screws ⑮.

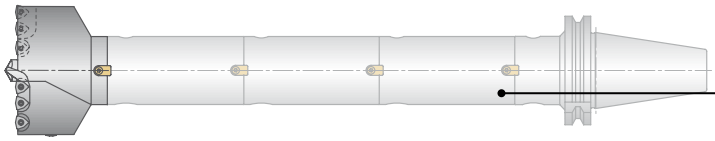
Please order insert and central drill bit separately.

Insert seating ④			
④ Order No.	Location screw ⑧ Order No. Article	Adjusting screw ⑨ Order No. Article	Clamping screw ⑩ Order No. Article
D53 53360 D53 53370 D53 53380 D53 53390	55011 05012 M5×12-O4	55051 05016 M5×16-O2,5	N00 57521 S/M3,5×7,3-10IP 2,8 Nm
D53 53400 D53 53410 D53 53420 D53 53430	55011 05012 M5×12-O4	55051 06020 M6×20-O3	N00 57531 S/M4,5×9-15IP 6,25 Nm

Indexable insert drill (drill head)

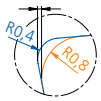
6×D											
	●	●	◐	○	○	○	○	✕	✕	✕	●

● very good | ◐ good | ○ possible: see technical notes, page 156 | ✕ not possible



Note: Use extensions in ABS T (see chapter 6)

Insert seating						Central drill bit ①			Basic recommendation		
④ Order No.	piece	⑤ Order No.	piece	⑥ D50 ⑦ D53 Order No.	piece	Ød2	Order No.	for workpiece material	Indexable insert -13 -01 -11 Order No. · ISO code ▽▽ Size	piece	for workpiece material
D53 53360	1	–		D53 53350	1	16	V95 10063.0089 HSS TiN	P N	W29 34130.048425 WOEX 06T304-13 BK8425	4	P
									W29 34130.0479 WOEX 06T304-13 BK79		M
D53 53370	1	D50 55100	1	D50 50300	1		V95 10063.0090 HSS TiAlN	M K N	W29 34010.047615 WOEX 06T304-01 BK7615		K
D53 53380	1								W29 34110.0477 WOEX 06T304-11 BK77		N
D53 53390	1										
D53 53400	1	D50 55110	1	D50 50310	1	16	V95 10063.0089 HSS TiN	P N	W29 42130.048425 WOEX 080404-13 BK8425	4	P
D53 53410	1								W29 42130.0479 WOEX 080404-13 BK79		M
D53 53420	1						V95 10063.0090 HSS TiAlN	M K N			
D53 53430	1	D50 55110	1	D50 50310	1	20	V95 10213.0089 HSS TiN	P N	W29 42010.047615 WOEX 080404-01 BK7615		K
							V95 10213.0090 HSS TiAlN	M K N	W29 42110.0477 WOEX 080404-11 BK77		N
D53 53360	1	D50 55100	2	D53 53350	1	20	V95 10213.0089 HSS TiN V95 10213.0090 HSS TiAlN	P N M K N	W29 34130.048425 WOEX 06T304-13 BK8425	6	P
D53 53360	1	D50 55100	3	D50 50300	1				W29 34130.0479 WOEX 06T304-13 BK79		M
D53 53380	1	D50 55100	3	D50 50300	1				W29 34010.047615 WOEX 06T304-01 BK7615		K
D53 53380	1								W29 34110.0477 WOEX 06T304-11 BK77		N
D53 53390	1										
D53 53400	1	D50 55110	3	D50 50310	1	20	V95 10213.0089 HSS TiN V95 10213.0090 HSS TiAlN	P N M K N	W29 42130.048425 WOEX 080404-13 BK8425	6	P
D53 53400	1								W29 42130.0479 WOEX 080404-13 BK79		M
									W29 42010.047615 WOEX 080404-01 BK7615		K
D53 53400	1								W29 42110.0477 WOEX 080404-11 BK77		N



Note re. insert radius:
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Insert seating ⑤ and ⑥				
⑤ Order No.	⑥ Order No.	Location screw ⑪ Order No. Article	Cylindrical pin ⑫ Order No. Article	Clamping screw ⑬ Order No. Article
D50 55100	D50 50300	N00 55701 M3,5×5-8IP	N00 52000 1,8/2x4,5	N00 57521 S/M3,5×7,3-10IP 2,8 Nm
D50 55110	D50 50310	N00 55821 M4,5×9-10IP	N00 52010 3/4×5,5	N00 57531 S/M4,5×9-15IP 6,25 Nm

Insert seating ⑦			
⑦ Order No.	Location screw ⑭ Order No. Article	Clamping screw ⑮ Order No. Article	
D53 53350	55011 05012 M5×12-O4	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	

Guideline values for solid drilling: page 160 / alternative inserts: page 161.

Recommended cutting data

Guideline values for solid drilling						KUB V464					
						Max. feed f (mm/rev) · Cutting speed v_c (m/min)					
						Ø 80 – 99		Ø 100 – 119		Ø 120 – 159	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	f mm/U	HSS * v_c m/min	f mm/rev	HSS * v_c m/min	f mm/rev	HSS * v_c m/min
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	0,10	200	0,12	200	0,12	200
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	0,12	180	0,14	180	0,16	180
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	0,12	200	0,14	200	0,16	200
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	0,12	160	0,14	160	0,16	160
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	0,12	140	0,14	140	0,16	140
P	4.1			HSS		0,10	60	0,12	60	0,14	60
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	–		–		–	
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	–		–		–	
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	0,10	100	0,12	100	0,14	160
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	0,12	100	0,14	100	0,14	140
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	0,12	100	0,14	100	0,14	100
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	0,16	180	0,16	180	0,25	180
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	0,14	140	0,16	140	0,20	140
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	0,14	140	0,16	140	0,20	140
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	0,14	120	0,16	120	0,20	120
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	0,12	100	0,14	100	0,18	100
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	0,12	80	0,14	80	0,16	80
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	0,12	80	0,14	80	0,16	80
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	0,16	180	0,20	180	0,25	180
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	0,08	200	0,10	200	0,12	200
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	0,08	300	0,10	300	0,12	300
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	0,14	200	0,16	200	0,16	200
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	0,12	160	0,14	160	0,14	160
H	15.0	1400		hardened steels < 45 HRC		–		–		–	
H	16.0	1800		hardened steels > 45 HRC		–		–		–	

* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit.

for better chip control

ØD	Indexable insert -03 Order No.	Indexable insert -13 ISO code	for work-piece material
80 – 99	**W29 34130.048425** **W29 34030.046425** **W29 34130.0479**	WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 WOEX 06T304-13 BK79	P P M M
100 – 119	**W29 42130.048425** **W29 42030.046425** **W29 42130.0479**	WOEX 080404-13 BK8425 WOEX 080404-03 BK6425 WOEX 080404-13 BK79	P P M M
120 – 144	**W29 34130.048425** **W29 34030.046425** **W29 34130.0479**	WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 WOEX 06T304-13 BK79	P P M M
145 – 159	**W29 42130.048425** **W29 42030.046425** **W29 42130.0479**	WOEX 080404-13 BK8425 WOEX 080404-03 BK6425 WOEX 080404-13 BK79	P P M M

for higher cutting speed

ØD	Indexable insert -01 -11 -13 Order No.	ISO code	for work-piece material
80 – 99	**W29 34010.0472** **W29 34110.0450**	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	P N
100 – 119	**W29 42010.0472** **W29 42110.0450**	WOEX 080404-01 BK72 WOEX 080404-11 BK50	P N
120 – 144	**W29 34010.0472** **W29 34110.0450**	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	P N
145 – 159	**W29 42010.0472** **W29 42110.0450**	WOEX 080404-01 BK72 WOEX 080404-11 BK50	P N

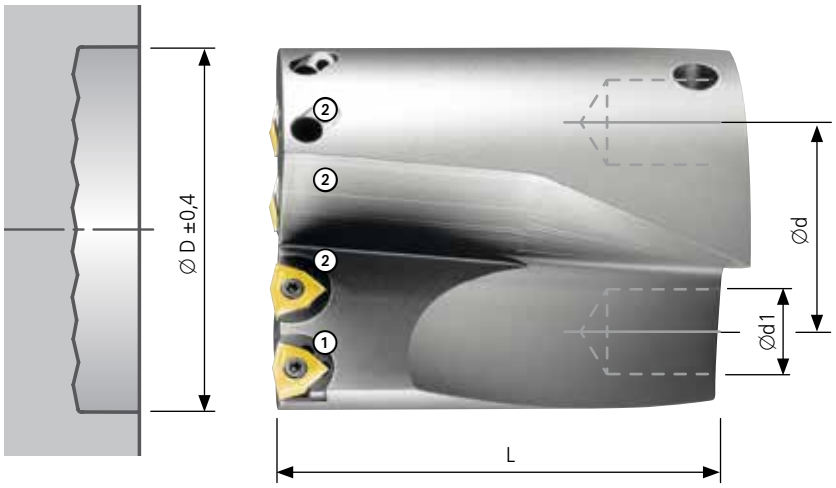
for greater strength

80 – 99	**W29 34010.047935** **W29 34010.0404** **W29 34010.0421** **W29 34110.0421**	WOEX 06T304-01 BK7935 WOEX 06T304-01 P40 WOEX 06T304-01 K10 WOEX 06T304-11 K10	P M K N
100 – 119	**W29 42010.047935** **W29 42010.0404** **W29 42010.0421** **W29 42110.0421**	WOEX 080404-01 BK7935 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-11 K10	P P M K N
120 – 144	**W29 34010.047935** **W29 34010.0404** **W29 34010.0421** **W29 34110.0421**	WOEX 06T304-01 BK7935 WOEX 06T304-01 P40 WOEX 06T304-01 K10 WOEX 06T304-11 K10	P P M K N
145 – 159	**W29 42010.047935** **W29 42010.0404** **W29 42010.0421** **W29 42110.0421**	WOEX 080404-01 BK7935 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-11 K10	P P M K N

KOMET KUB V50 — Ø 83 – 128 mm

Drill head

for workpiece material
P M K N S



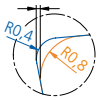
4×D											
	●	●	◐	○	○	○	○	○	✕	✕	✕

Drill head						Insert seating					Basic recommendation	
ØD	Order No.	Ød	Ød1	for R0,8 L	kg	① Order No.	② Order No.	Location screw ③ Order No. Article	Cylindrical pin ④ Order No. Article	Clamping screw ⑤ Order No. Article	Insert -01 -11 Order No. · ISO code ▽▽ Size	for workpiece material
83	**V50 30830**	48	20	120	2,43	**D50 55300**	**D50 55100**	**N00 55701** M3,5×5-8IP 2,25 Nm	**N00 52000** 1,8/2×4,5	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W29 34010.048425** WOEX 06T304-01 BK8425 **W29 34010.047935** WOEX 06T304-01 BK7935 **W29 34010.0462** WOEX 06T304-01 BK62 **W29 34110.0477** WOEX 06T304-11 BK77	P M K N S
88	**V50 30880**	48	20	120	2,56							
93	**V50 30930**	48	20	120	2,88	**D50 55310**	**D50 55110**	**N00 55821** M4,5×9-10IP 4,3 Nm	**N00 52010** 3/4×5,5	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W29 42010.048425** WOEX 080404-01 BK8425 **W29 42010.047935** WOEX 080404-01 BK7935 **W29 42010.0462** WOEX 080404-01 BK62 **W29 42110.0477** WOEX 080404-11 BK77	P M K N S
98	**V50 30980**	52	24	120	3,22							
103	**V50 31030**	52	24	120	3,56							
108	**V50 31080**	52	24	120	3,94							
113	**V50 31130**	52	24	120	4,17	**D50 55320**	**D50 55120**	**N00 55821** M4,5×9-10IP 4,3 Nm	**N00 52010** 3/4×5,5	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W29 50010.048425** WOEX 100504-01 BK8425 **W29 50010.047935** WOEX 100504-01 BK7935 **W29 50010.0462** WOEX 100504-01 BK62 **W29 50110.0477** WOEX 100504-11 BK77	P M K N S
118	**V50 31180**	64	28	120	4,71							
123	**V50 31230**	64	28	120	5,11							
128	**V50 31280**	64	28	120	5,66							

Supply drill head includes: with insert seating ① and ②.

Supply insert seating ① and ② includes: with location screw ③, cylindrical pin ④ and clamping screw ⑤.

Please order indexalbe insert separately.

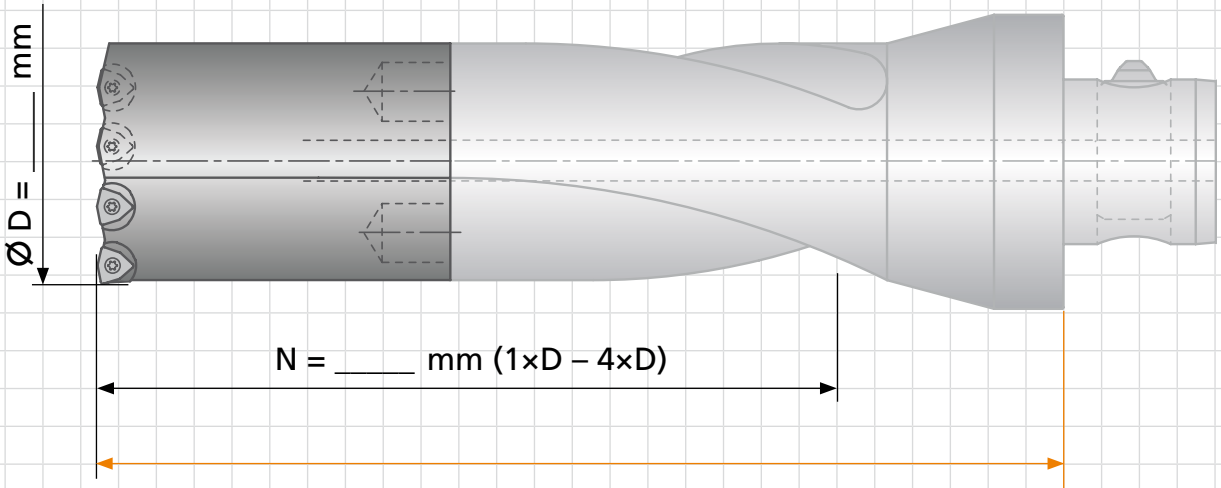


Note re. insert radius:
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

● very good | ◐ good | ○ possible | ✕ not possible

Design your own tool!

To process the enquiry, we require details of the type and size of connection and required boring depth.
We check you specifications for technical feasibility and you receive a prompt reply.



Company:

Customer No.:

Address:

Contact:

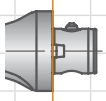
Department:

Phone:

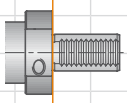
Fax:

E-Mail:

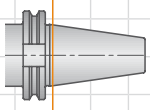
☐ ABS 100
☐ ABS 125



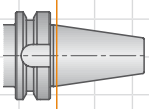
DIN 69880 (VDI 3425 B/2)
☐ NC 50
☐ NC 60



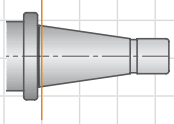
DIN 69871
☐ SK 50



JIS B 6339 AD/B (MAS 403 BT)
☐ BT 50



DIN 2080
☐ SK 50



other adaptors on request

Recommended cutting data

Guideline values for solid drilling						v_c	Max. feed f (mm/rev)		
							4×D		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Cutting speed v_c (m/min)	Ø 83 – 88	Ø 93 – 108	Ø 113 – 128
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	200	0,10	0,12	0,12
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	180	0,12	0,14	0,16
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	200	0,12	0,14	0,16
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	160	0,12	0,14	0,16
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	140	0,12	0,14	0,16
P	4.1			HSS		60	0,10	0,12	0,14
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)				
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	160	0,10	0,12	0,14
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	140	0,12	0,14	0,14
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	100	0,12	0,14	0,14
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	180	0,16	0,16	0,25
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	140	0,14	0,16	0,20
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	140	0,14	0,16	0,20
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	120	0,14	0,16	0,20
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	100	0,12	0,14	0,18
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	80	0,12	0,14	0,16
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	80	0,12	0,14	0,16
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	180	0,16	0,20	0,25
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	200	0,08	0,10	0,12
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300	0,08	0,10	0,12
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	200	0,14	0,16	0,16
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	160	0,12	0,14	0,14
H	15.0	1400		hardened steels < 45 HRC		–	–	–	–
H	16.0	1800		hardened steels > 45 HRC		–	–	–	–

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

for better chip control

ØD	Indexable insert -03 -13 Order No.	ISO code	for work-piece material
83 – 88	**W29 34130.048425**	WOEX 06T304-13 BK8425	P
	W29 34030.046425	WOEX 06T304-03 BK6425	P M
	W29 34130.0479	WOEX 06T304-13 BK79	M
93 – 108	**W29 42130.048425**	WOEX 080404-13 BK8425	P
	W29 42030.046425	WOEX 080404-03 BK6425	P M
	W29 42130.0479	WOEX 080404-13 BK79	M
113 – 128	**W29 50130.048425**	WOEX 100504-13 BK8425	P
	W29 50030.046425	WOEX 100504-03 BK6425	P M
	W29 50130.0479	WOEX 100504-13 BK79	M

for higher cutting speed

ØD	Indexable insert -00 -01 -11 Order No.	ISO code	for work-piece material
83 – 88	**W29 34010.0472**	WOEX 06T304-01 BK72	P
	W29 34110.0450	WOEX 06T304-11 BK50	N
93 – 108	**W29 42010.0472**	WOEX 080404-01 BK72	P
	W29 42110.0450	WOEX 080404-11 BK50	N
113 – 128	**W29 50010.0872**	WOEX 100508-01 BK72	P
	W29 50110.0450	WOEX 100504-11 BK50	N

for greater strength

83 – 88	**W29 34010.047935**	WOEX 06T304-01 BK7935	P
	W29 34010.0404	WOEX 06T304-01 P40	P M
	W29 34010.0421	WOEX 06T304-01 K10	K
	W29 34110.0421	WOEX 06T304-11 K10	N
93 – 108	**W29 42010.047935**	WOEX 080404-01 BK7935	P
	W29 42010.0404	WOEX 080404-01 P40	P M
	W29 42010.0421	WOEX 080404-01 K10	K
	W29 42110.0421	WOEX 080404-11 K10	N
113 – 128	**W29 50010.047935**	WOEX 100504-01 BK7935	P
	W29 50010.0804	WOEX 100508-01 P40	P M
	W29 50010.0821	WOEX 100508-01 K10	K
	W29 50110.0421	WOEX 100504-11 K10	N

KOMET V71

Ø 37 – 64 mm

Flat bottoming tool

for workpiece material P M K N | 3×D | ABS

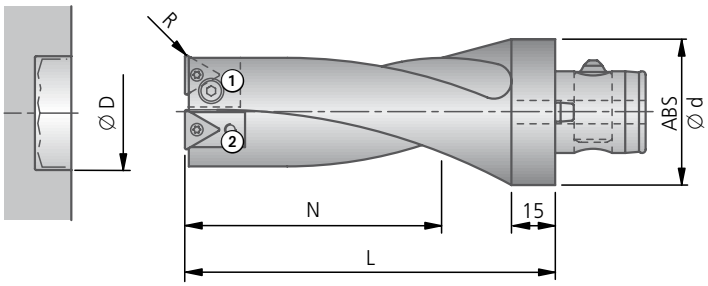
The adjustable flat bottoming tool is primarily used for flat bottoming the the bottom face in blind bores.

The external cutting edge is radially adjustable and the internal cutting edge axially adjustable for facing flat the bottom of the bore.

The flat bottoming tool will also remachine the bore diameter.

Rigid machine conditions are essential!

Please note! The flat bottoming tool must not be connected to the M01 (ABS-MV) adjustable device but only to adaptors, reducers or extensions.



3×D												
3×D	✕	◐	✕	✕	✕	✕	✕	✕	✕	●	●

3×D							Insert seating		Basic recommendation		
Adjustment range Ø D	ABS Ø d	Order No.	R	N	L	kg	① Order No.	② Order No.	Indexable insert Order No. ▽▽Size	ISO-Code	for workpiece material
37–43	50	V71 00200	0,5	111	161	1,18	D53 05310	D53 05110	W30 26660.058425	TOHX 140305EN-G06 BK8425	P
									W30 26660.0503	TOHX 140305EN-G06 P25M	M
43–48	50	V71 00210	0,5	129	179	1,49			W30 26660.0521	TOHX 140305EN-G06 K10	K
									W30 26720.0521	TOHX140305FN-G12 K10	N
48–52	63	V71 00250	0,8	144	199	2,27	D53 05320	D53 05120	W30 44660.0803	TOHX22T308EN-G06 P25M	P
52–58	63	V71 00260	0,8	156	211	2,51			W30 44660.0821	TOHX22T308EN-G06 K10	M
									W30 44720.0821	TOHX22T308FN-G12 K10	K
58–64	80	V71 00330	0,8	174	229	4,12					N

Insert seating ①				Insert seating ②			
① Order No.	Location screw ③ Order No. Article	Adjusting screw ④ Order No. Article	Clamping screw ⑤ Order No. Article	② Order No.	Location screw ⑥ Order No. Article	Adjusting screw ⑦ Order No. Article	Clamping screw ⑧ Order No. Article
D53 05310	55012 04008 M4×8-O2,5	55051 03008 M3×8-O1,5	N00 56201 S/M3,5×6,2-10IP 2,8 Nm	D53 05110	55012 04010 M4×10-O2,5	L02 30300 VPS-M2,6×6	N00 56201 S/M3,5×6,2-10IP 2,8 Nm
D53 05320	55012 06012 M6×12-O4	55051 04008 M4×8-O2	N00 56401 S/M5×9,4-20IP 6,25 Nm	D53 05120	55012 06012 M6×12-O4	55051 04008 M4×8-O2	N00 56401 S/M5×9,4-20IP 6,25 Nm

Supply flat bottoming tool includes: with insert seating ① and ②.

Supply insert seating ① and ② includes: with location screw, adjusting screw and clamping screw.

Please order indexalbe insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for flat bottoming							v_c	Max. f (mm/rev)	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	3×D	
								Ø 37 – 48	Ø 48 – 64
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		120	0,08	0,08
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		120	0,08	0,08
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		120	0,08	0,08
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		90	0,06	0,08
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		90	0,05	0,07
P	4.1			HSS			–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		60	0,07	0,09
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		60	0,07	0,09
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)		60	0,07	0,09
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		120	0,12	0,14
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		120	0,12	0,14
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		90	0,10	0,12
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)		90	0,10	0,12
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		90	0,10	0,12
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		90	0,10	0,12
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		90	0,10	0,12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		180	0,12	0,14
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		180	0,12	0,14
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		220	0,08	0,10
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		220	0,08	0,10
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		220	0,10	0,12
H	15.0	1400		hardened steels < 45 HRC			–	–	–
H	16.0	1800		hardened steels > 45 HRC			–	–	–

for better chip control			
Ø D	Alternative indexable insert		
	Order No.	ISO code	for workpiece material
37 – 48	W30 26720.0503	TOHX 140305EN-G12 P25M	P M
48 – 64	–		
for higher cutting speed			
37 – 48	W30 26660.056425	TOHX 140305EN-G06 BK6425	P M
48 – 64	W30 44660.086425	TOHX 22T308EN-G06 BK6425	P
for greater strength			
37 – 48	W30 26660.0503	TOHX 140605EN-G06 P25M	P
48 – 64	–		

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Core drill
for machining valuable materials



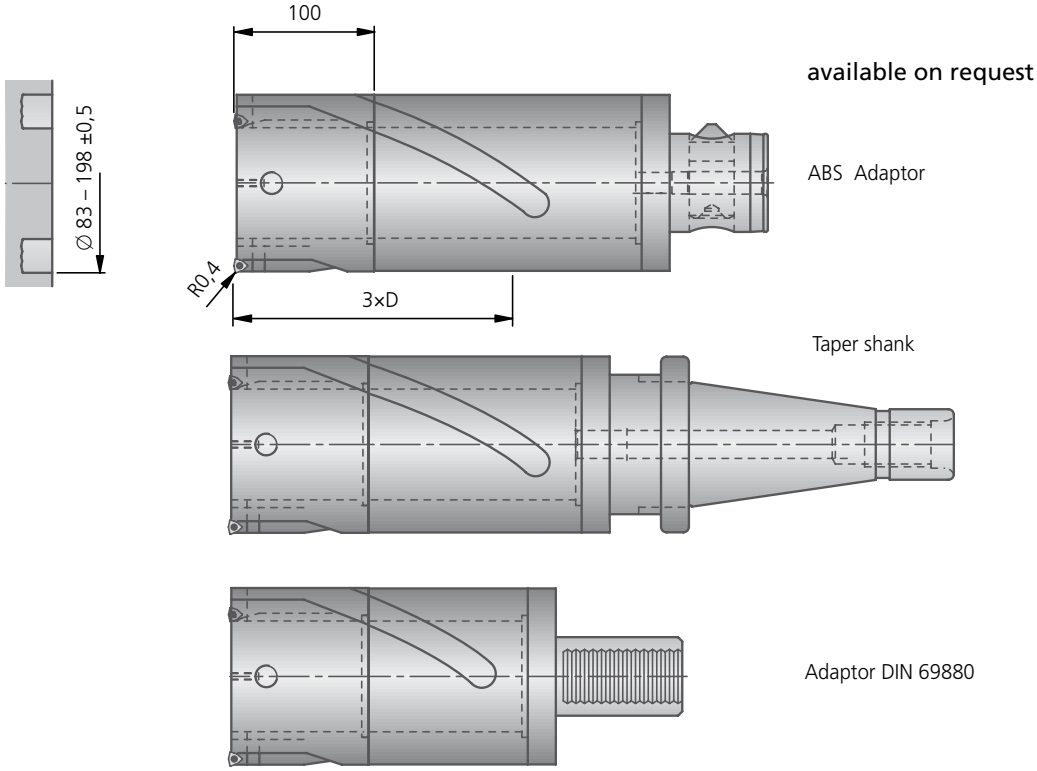
The KUB drill basic elements are available on request for drilling depths N 1×D to 3×D with ABS connection (ABS100, ABS125) and adaptors to SK 50 and cylindrical shank DIN 69880 from NC 50.

For administration purposes, please provide details of the type and size of connection and the required drilling depth with the enquiry.

The KOMET trepanning tool is used to enable recycling of residue when cutting particulary expensive materials or using this for verification. Because the tool only removes a ring of material, the amount of power required is very low, making it suitable for machining larger holes on less powerful machine tools.

With central coolant supply.

Please note:
Trepanning tool must be removed manually.
Cutting width 25 mm



available on request

ABS Adaptor

Taper shank

Adaptor DIN 69880

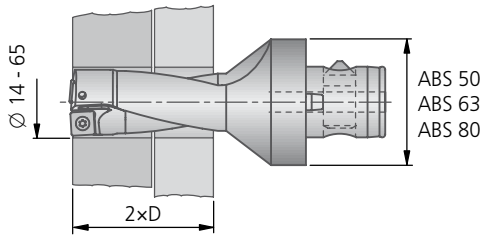
Stack drill
for complete machining at transitions to the next workpiece

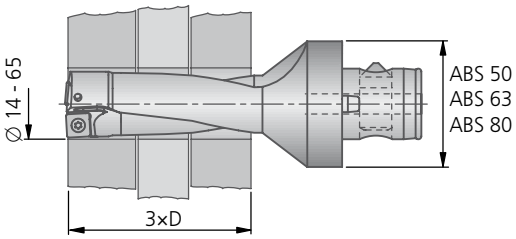


If workpieces are stacked close together, the disc produced would fall away during movement to the next workpiece and lie in front of the tool. This would destroy the inserts.

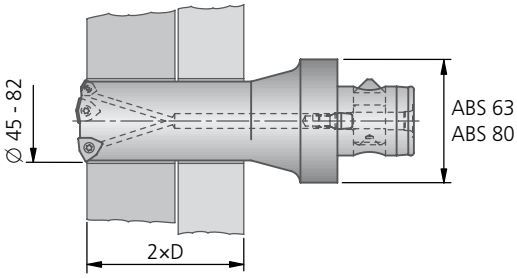
Because of the way their cutting edges are arranged, KUB drills cut the material right up to the changeover point to the next workpiece.

KUB Quatron

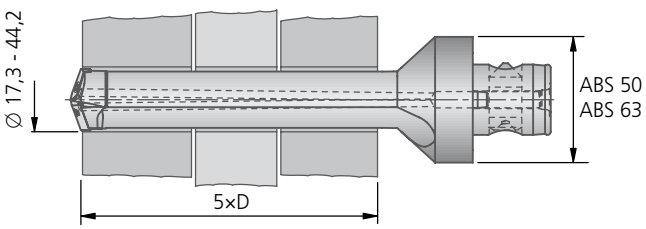


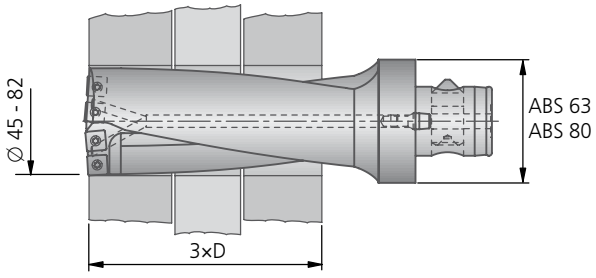


KUB Drill
available on request



KUB Duon





KOMET TwinKom G01

Modules are the key!
The particular features of the innovative KOMET twin cutter programme TwinKom are a high level of efficiency and flexibility.
A large selection of different holders and inserts will solve every kind of application – even difficult machining tasks – with the right insert geometry.



Lightweight dual cutter
Optimally designed for your machining requirement



BENEFITS for you:
- Axially adjustable insert holder for constant division of cut between the two cutting edges
- Radially adjustable insert holder for full twin cutter effect
- Radially adjustable insert holders allow conversion to stepped tool for larger depth
- Compact tool design
- For deep roughing operations chip removal is by means of the spiral flutes
- With ABS connection
- Application range from 24 to 401 mm diameter

KOMET PreciKom

Insert technology
for roughing and finishing in one step

BENEFITS for you:

- Two processes in one – roughing and finishing
- Uses economical inserts with four edges
- Interchangeability of the cutting heads reduces tool costs
- Precise adjustment with µm accuracy, thanks to the newly developed fine adjustment system for indexable inserts
- Maximum precision



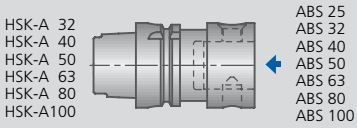
Index

	Page
Programme summary	172 – 173
Tool selection	174 – 175
KOMET TwinKom G01	
Area of application	176 – 177
Construction	178
Technical informations	179
WOEX inserts $\varkappa$ = 90° / 80°	
Ø 24 – 215 mm	180 – 181
Ø 196 – 401 mm	182
Guideline values for roughing	186
Alternative inserts	187
SOEX inserts $\varkappa$ = 80°	
Ø 24 – 215 mm	180 – 181
Guideline values for roughing	188
Alternative inserts	189
CCMT inserts $\varkappa$ = 90°	
Ø 24 – 215 mm	180 – 181
Ø 196 – 401 mm	182
Guideline values for roughing	192
TOHX / TOGX inserts $\varkappa$ = 90°	
Ø 24 – 215 mm	180 – 181
Ø 196 – 401 mm	182
Guideline values for roughing	190
Alternative inserts	191
Technical informations	194
Problems → Causes → Solutions	195
KOMET TwinKom G04	196
KOMET TwinKom Ø > 365 mm	198 – 199
KOMET PreciKom	200 – 201
Countersinking tool (KWZ)	202 – 203
Countersinking tool (KWS)	204 – 205

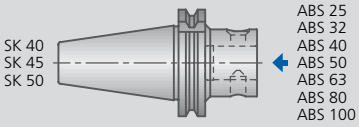
Programme summary – Roughing

6 Adaptors

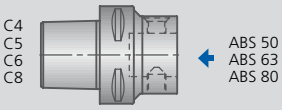
HSK-A Adaptors
with ABS connection



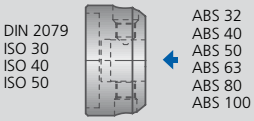
Taper shanks DIN 69871
with ABS connection



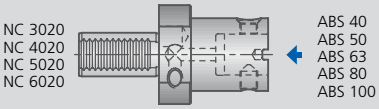
PSC Adaptor
with ABS connection



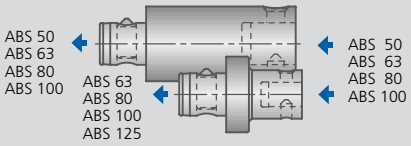
Spindle adaptor flange
with ABS connection



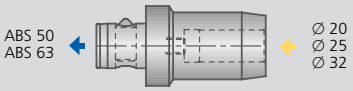
VDI Adaptor
with ABS connection



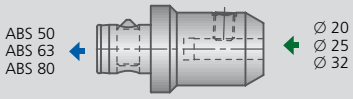
ABS Adaptors
Extension / Reducer



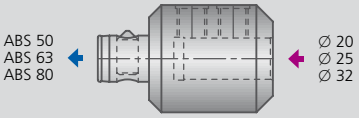
Expanding chuck



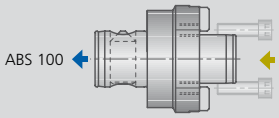
Adaptor sleeve Whistle Notch



Adaptor sleeve Weldon



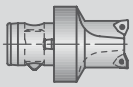
Milling cutter arbor FAM



1 Tools for Roughing

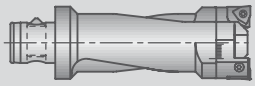
with ABS connection

ABS 50



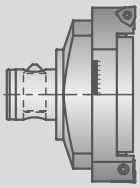
KOMET Easy Special
∅ 14 – 44 mm
▸ 294

ABS 25
ABS 32
ABS 40
ABS 50
ABS 63
ABS 80
ABS 100



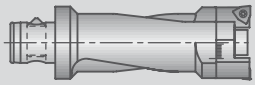
KOMET TwinKom G01
∅ 24 – 215 mm
▸ 180 – 181

ABS 100

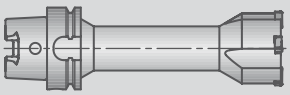


KOMET TwinKom G01
∅ 196 – 401 mm
▸ 182

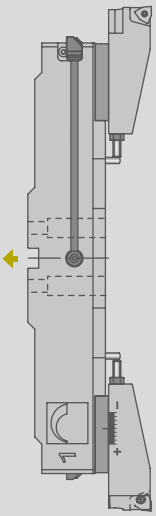
ABS 25
ABS 32
ABS 40
ABS 50
ABS 63
ABS 80
ABS 100



KOMET TwinKom G04
∅ 30 – 204 mm
▸ 196



KOMET PreciKom
∅ 32 – 101,99 mm
▸ 200 – 201



KOMET TwinKom
∅ 365 – 2000 mm
▸ 198 – 199

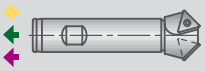
with cylindrical shank

∅ 16
∅ 25
∅ 32



Countersinking tool KWZ
∅ 10 – 48 mm
▸ 202 – 203

∅ 16
∅ 20



Countersinking tool KWS
∅ 16,5 – 37 mm
▸ 204 – 205

Key

- ABS connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection
- DIN 6357

KOMET Tool selection

Help table for roughing

Ø (mm)	through hole	blind hole	uneven	angled start and drilling out, interrupted cut	convex	cross bore	divided cut	large hole offset	stack plate drilling ϰ = approach angle	adjustable
Ø 14 – 44	●	●	●	●	●	●		●	ϰ = 80°	●
Ø 24 – 215	●	●	●	●	●	●	●	●	ϰ = 80°	●
Ø 30 – 204	●	●	●	●	●	●		●	ϰ = 80°	●
Ø 196 – 401	●	●	●	●	●	●		●	ϰ = 80°	●
Ø 365 – 2000	●	●	●	●	●	●	●	●	ϰ = 80°	●
Ø 32 – 101,99 larger dia. on request	●	●	●	◐	◐	●		●		●
Ø 10 – 48	●	●	●	●	●	●		●		
Ø 16,5 – 37										

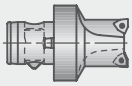
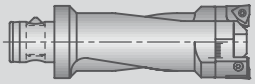
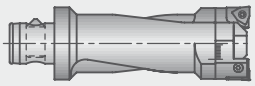
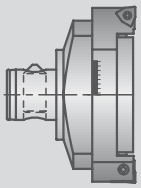
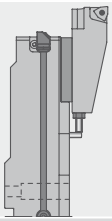
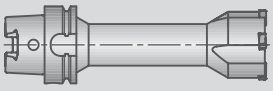
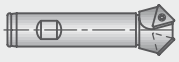
for producing the 90° and 60° countersinks

for milling of trapezoidal slots

for circular milling on machining centres

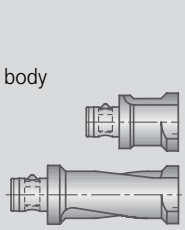
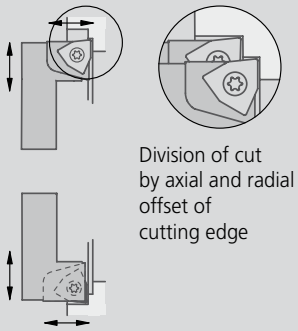
for chamfering on machining centres

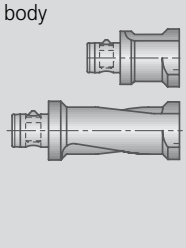
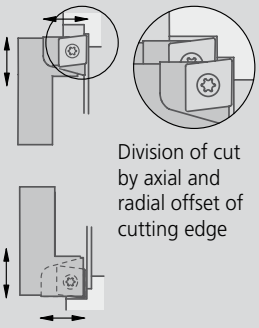
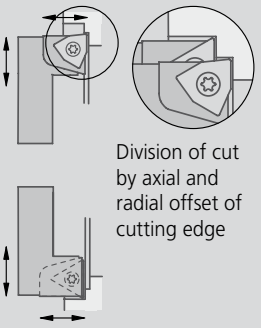
● very good ◐ good ○ possible: see technical notes

Coolant				Material						Tool	Page
Emulsion		MQL * for short boring depths		Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloys and titanium	Hardened materials		
internal	external	internal	external								
●	●		◐*							 KOMET Easy Special Ø 14 – 44	▸ 294
●	●	●	●	P	M	K	N			 KOMET TwinKom G01 Ø 24 – 215	▸ 180 – 181
●	●			P	M	K	N			 KOMET TwinKom G04 Ø 30 – 204	▸ 196
●	●	●	●	P	M	K	N			 KOMET TwinKom G01 Ø 196 – 401	▸ 182
●	●			P	M	K	N	S	H	 KOMET TwinKom Ø 365 – 2000 Lightweight twin cutter tool	▸ 198 – 199
				K						 KOMET PreciKom Ø 32 – 101,99 Roughing / finishing tool	▸ 200
●	●			P	M	K	N	S	H	 Countersinking tool KWZ Ø 10 – 48	▸ 202 – 203
				P	M	K	N	S	H	 Countersinking tool KWS Ø 16,5 – 37	▸ 204 – 205

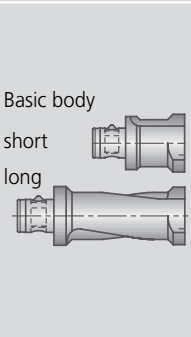
KOMET TwinKom G01 – High performance and flexibility

Adaptors with the same approach angle can be combined among each other

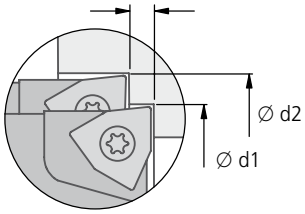
Machining	Roughing					Combination roughing
for machining allowance a_p Feed f	a_p = 1 - 9 mm 2 cutting edge f = 2×f_z					a_p = 2 - 18 mm 1+1 cutting edge f = f_z
ϰ = approach angle	90°	90°	80°	80°	90°	90°
Insert	WOEX	WOEX	WOEX	WOEX	SOEX	WOEX
adjustable	axially + radially	radially	axially + radially	radially	radially	axially + radially
Page	181	180	181	180	180	181
Basic body short long						 Division of cut by axial and radial offset of cutting edge
● 1st choice ◐ may be possible	Roughing with largemachining allowance and large axial offset					
	●	●	●	●	●	●
	Roughing with extremely large allowance and large axial offset					
	◐	◐	●	●	●	●
	Roughing with large allowance and long tool overhang					
	●	●	◐	◐	◐	●

Machining	Semi-finishing / Finishing				Combination Semi-Finishing	Combination Finishing
for machining allowance a_p Feed f	a_p = 0,7 - 3 mm 2 cutting edge f = 2×f_z		a_p = 0,1 - 2 mm 2 cutting edge f = 2×f_z		a_p = 1,4 - 6 mm 1+1 cutting edge f = f_z	a_p = 1,5 - 5 mm 1+1 cutting edge f = f_z
ϰ = approach angle	90°	90°	90°	90°	90°	90°
Insert	CCMT	CCMT	TOGX	TOGX	CCMT	WOEX + TOGX
adjustable	axially + radially	radially	axially + radially	radially	axially + radially	axially + radially
Page	181	180	181	180	181	181
Basic body short long					 Division of cut by axial and radial offset of cutting edge	 Division of cut by axial and radial offset of cutting edge
● 1st choice ◐ may be possible	Light roughing, Semi-finishing with large axial offset					
	◐	◐			●	
	Light roughing, Semi-finishing with slight axial offset					
	●	●			●	●
	Finishing with small to medium offset and slight axial offset					
	◐	◐	◐	◐		●
	Finishing with small allowance and no axial offset					
			●	●		●

Other possible combinations

$\varkappa$ = approach angle	90°	90°	90°	90°	80°	90°	90°
Insert	WOEX	WOEX	WOEX	WOEX	WOEX	CCMT	CCMT
adjustable	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially
Page	181	181	181	181	181	181	181
Basic body short / long							
$\varkappa$ = approach angle	90°	90°	90°	90°	80°	90°	90°
Insert	WOEX	CCMT	CCMT	TOGX	WOEX	CCMT	TOGX
adjustable	radially	axially + radially	radially	axially + radially	radially	radially	axially + radially
Page	180	180	180	180	180	180	180

Combination roughing / Combination finishing



With combination roughing and combination finishing, division of the whole cutting width is produced by offsetting the cutting edge axially and radially. This should allow the ensuing cutting forces to be better distributed and produce an even cutting result.

With the roughing operation, this allows double the cutting width
(using only a single feed rate $f=f_Z$)

With the finishing operation, the cutting width is divided so that some of the intermediate machining can be omitted.

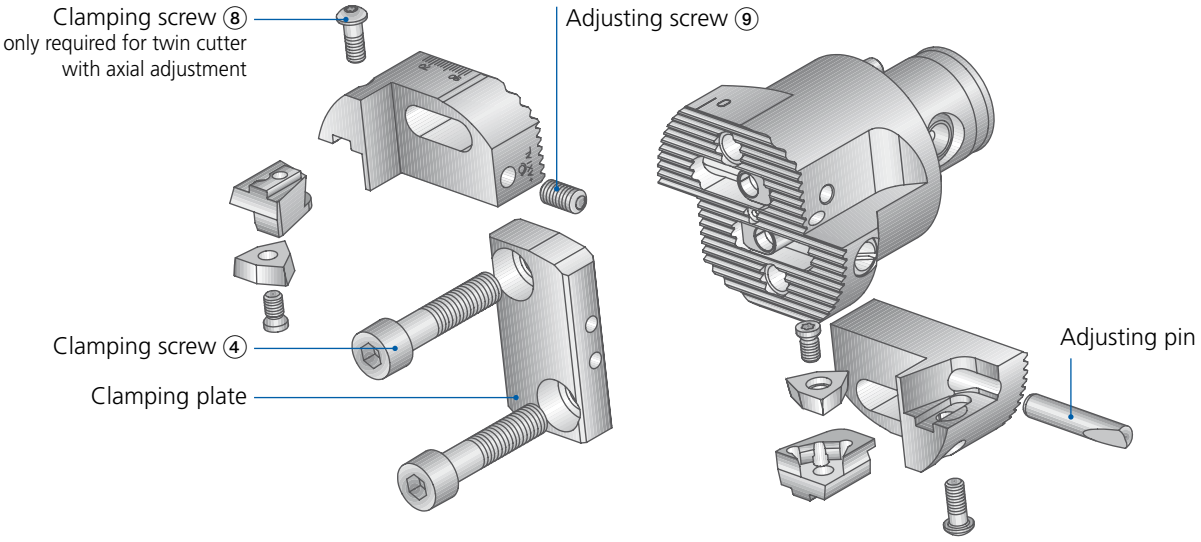
With long chipping materials, improved chip control is achieved by means of division between axial and radial cutting.

With long projection lengths, great operational smoothness is achieved.

- Axially adjustable insert holder for constant division of cut between the two cutting edges.
- Radially adjustable insert holder for full twin cutter effect.
- Radially adjustable insert holders allow conversion to stepped tool for larger depth.
- Compact tool design.
- For deep roughing operations chip removal is by means of the spiral flutes.
- With ABS connection.
- Application range from 24 to 215 mm diameter.

KOMET TwinKom G01

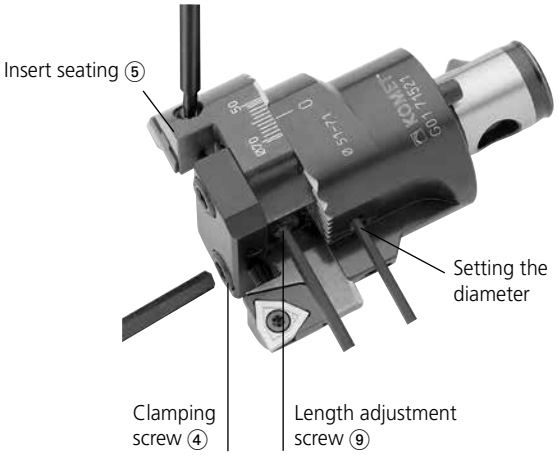
Assembly parts and construction



For further assembly parts see pages 180 - 181.

Boring range	Assembly parts						
	Clamping screw DIN 912 ④		Clamping screw ⑧			Adjusting screw DIN 913 ⑨	
Ø D min - max	Article	Order No.	Article	Order No.	Nm	Article	Order No.
24 - 32	M3×16	55011 03016	M2×3,5 / Tx6	N10 11210	0,62	M2,5×5 / SW1,3	55051 02505
30 - 41	M4×20	55011 04020	M2,5×4,3 /Tx8	N10 11320	1,25	M2,5×5 / SW1,3	55051 02505
39 - 53	M5×25	55011 05025	M2,5×7 / Tx8	N10 11310	1,25	M4×8 / SW2	55051 04008
51 - 71	M6×30	55011 06030	M3,5×9,4 / Tx10	N10 11400	2,1	M4×10 / SW2	55051 04010
64 - 91	M8×35	55011 08035	M4,5×10,5 / Tx15	N10 11500 for D54 60450	4	M6×12 / SW3	55051 06012
			M4,5×11,5 / Tx15	N10 11510	4		
83 - 124	M8×45	55011 08045	M5×12 / SW4	55011 05012	9	M6×20 / SW3	55051 06020
109 - 167	M10×50		M5×16 / SW4	55011 05016	9	M8×20 / SW4	55051 08020

Handling



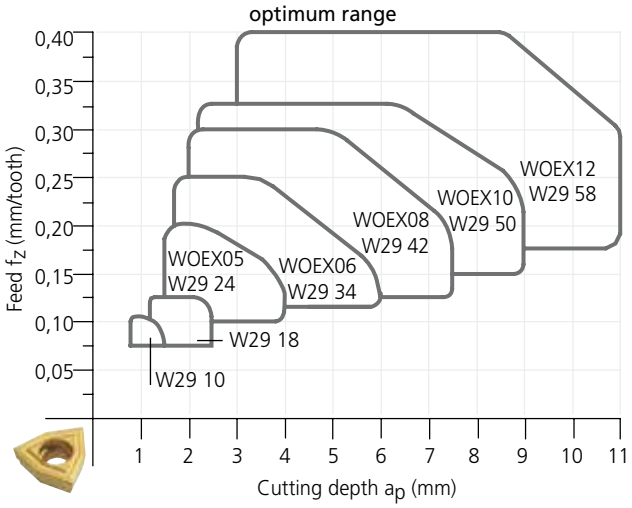
Setting the diameter
Loosen the clamping screw ④ on one side only.
Set the diameter and tighten clamping screw ④ again.
Repeat the same procedure on the second side.

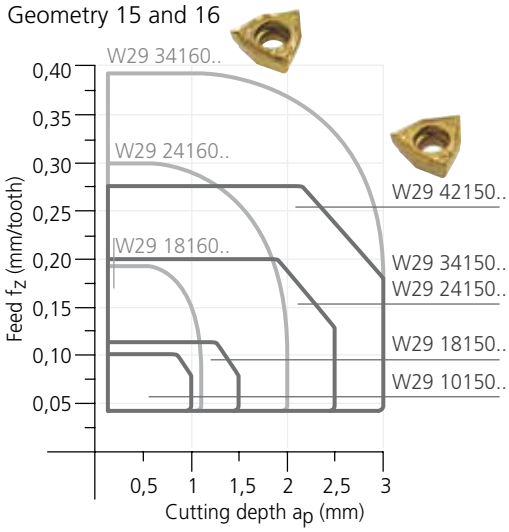
Length adjustment
Loosen insert seating ⑤ and then tighten again slightly.
Set length to 0.02 mm
in front of required dimension using length adjustment screw ⑨, tighten insert seating ⑤ and set to required height with length adjustment screw ⑨.
Repeat the same procedure on the second side.

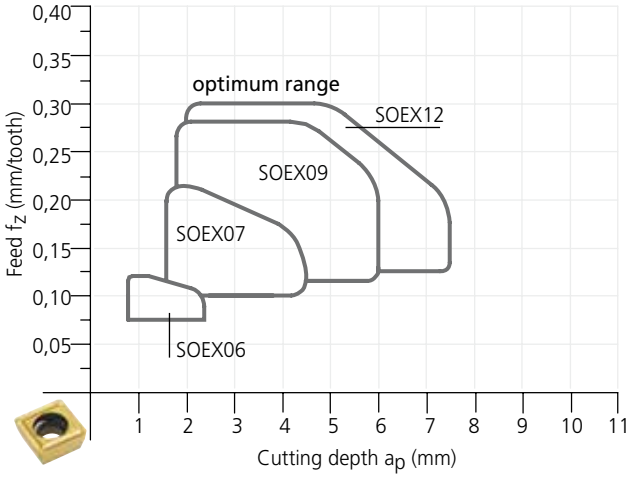
For performance calculation, see chapter 8

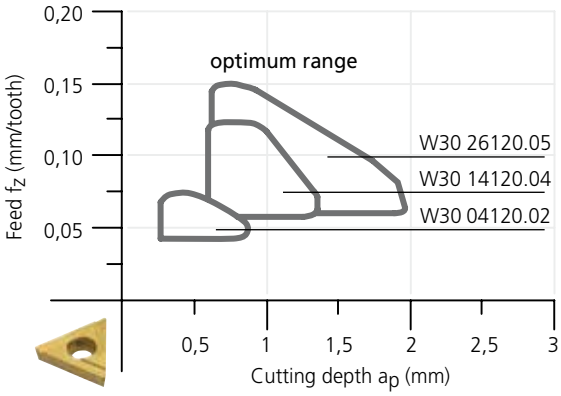
Optimum cutting depth range

Guideline values for medium strength steels







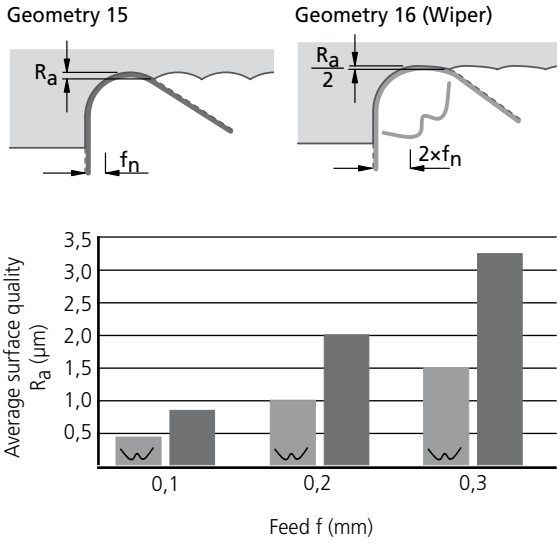


Chip formation from various insert geometries

Tool: TwinKom G01 twin cutter ∅ 40 mm
Material: 42CrMo4V 1100 N/mm²
Cutting data: v_c = 140 m/min f = 0,35 mm/rev



Comparison of surface quality results for "Wiper" R04 for ϰ = 90° (in X40Cr13 / 1.4034)

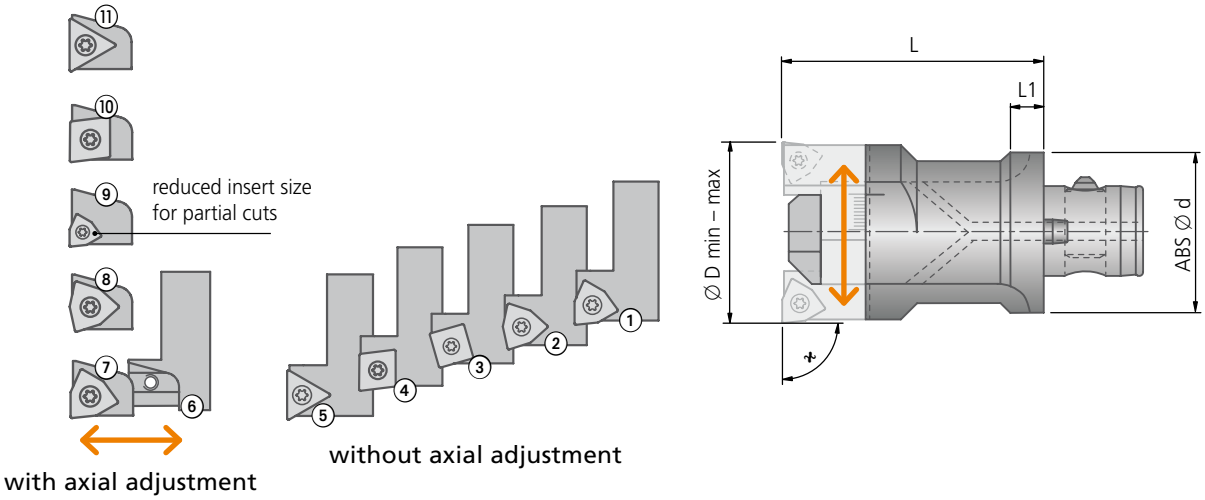


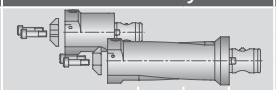
KOMET TwinKom G01

Ø 24 – 215 mm

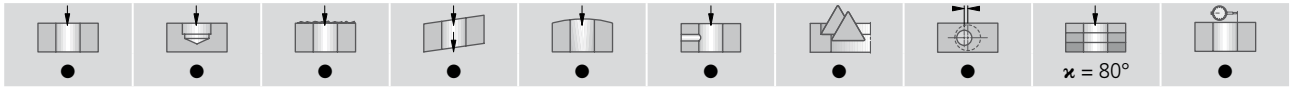
Twin cutter with ABS connection, $\varkappa$ = 90° / 80°

for workpiece material P M K N S H | 3,5×D | MQL | ABS



	Basic body				①	②	③	④	⑤	
					Holder $\varkappa$ = 90°	Holder $\varkappa$ = 80°	Holder $\varkappa$ = 80°	Holder $\varkappa$ = 90°	Holder $\varkappa$ = 90°	
Ø D min-max	Order No.	ABS Ø d	L	L1	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	
24 - 32	G01 70552 0,11	25	45	6	G03 70330 0,012 N00 57553 S/M2,2x5,5-6IP 1,01Nm W29 18...	G03 80310 0,012 N00 57553 S/M2,2x5,5-6IP 1,01Nm W29 18...	G03 80030 0,010 N00 57553 S/M2,2x5,5-6IP 1,01Nm W83 18...	G03 70150 0,011 N00 57221 S2553-7IP 0,9Nm CCMT/CCGT 060204	G03 70210 0,012 N00 56031 S/M2x4,9-6IP 0,62Nm W30 04 / W57 04	
	G01 71072 0,21	32	70	7						
30 - 41	G01 70562 0,114	25	50	–	G03 70141 0,017 N00 57511 S/M2,5x7,2-8IP 1,28Nm W29 24...	G03 80021 0,018 N00 57511 S/M2,5x7,2-8IP 1,28Nm W29 24...	G03 80040 0,017 N00 57571 S/M2,5x6,3-8IP 1,28Nm W83 23...	G03 70160 0,018 N00 57221 S2553-7IP 0,9Nm CCMT/CCGT 060204	G03 70220 0,018 N00 56111 S/M2,6x6,2-8IP 1,28Nm W30 14 / W57 14	
	G01 71132 0,293	32	85	7,5						
39 - 53	G01 71022 0,286	32	60	–	G03 70230 0,039 N00 57511 S/M2,5x7,2-8IP 1,28Nm W29 24...	G03 80090 0,038 N00 57511 S/M2,5x7,2-8IP 1,28Nm W29 24...	G03 80050 0,036 N00 57261 S3575-15IP 2,8Nm W83 32...	G03 70170 0,036 N00 57261 S3575-15IP 2,8Nm CCMT/CCGT 09T304		
	G01 71622 0,676	40	120	8						
51 - 71	G01 71522 0,44	40	60	–	G03 70240 0,077 N00 57521 S/M3,5x7,3-10IP 2,8Nm W29 34...	G03 80100 0,076 N00 57521 S/M3,5x7,3-10IP 2,8Nm W29 34...	G03 80060 0,072 N00 57261 S3575-15IP 2,8Nm W83 32...	G03 70180 0,073 N00 57261 S3575-15IP 2,8Nm CCMT/CCGT 09T304		
	G01 72122 1,238	50	135	10						
64 - 91	G01 72022 0,824	50	70	–	G03 70250 0,145 N00 57531 S/M4,5x9-15IP 6,25Nm W29 42...	G03 80110 0,143 N00 57531 S/M4,5x9-15IP 6,25Nm W29 42...	G03 80070 0,136 N00 57301 S45100-20IP 6,25Nm W83 44...	G03 70190 0,138 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404		
	G01 72622 2,25	63	155	13						
83 - 124	G01 72522 1,351	63	70	–	G03 70260 0,277 N00 57531 S/M4,5x9-15IP 6,25Nm W29 50...	G03 80120 0,272 N00 57531 S/M4,5x9-15IP 6,25Nm W29 50...	G03 80080 0,268 N00 57301 S45100-20IP 6,25Nm W83 44...	G03 70200 0,268 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404		
	G01 73122 3,805	80	155	16,5						
109 - 167	G01 73032 3,055	80	90	–						
	G01 73042 6,21	80	175	–						
139 - 215	G01 73562 6,47	100	125	–						
	G01 73572 13,25	100	240	–						

Twin cutter with ABS connection, ϰ = 90° / 80°



● very good | ◐ good | ○ possible: see technical notes, page 194 | ✕ not possible

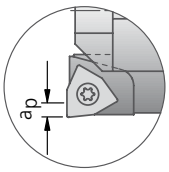
Supply includes basic body:
Clamping plate with adjusting screw and clamping screw.

Supply includes insert seating ⑦-⑩ / holder ①-⑤: with clamping screw.

Please order insert separately.

Order example:

1× Basic body short	G01 70552
2× Holder ⑥	G03 70011
2× Insert seating 90° ⑦	D54 60510
2× Insert	W29 10010.048425



Note!
For optimum cutting in the D_{min} area the cutting depth a_p should be reduced.a_p see page 184: Basic recommendation inserts.

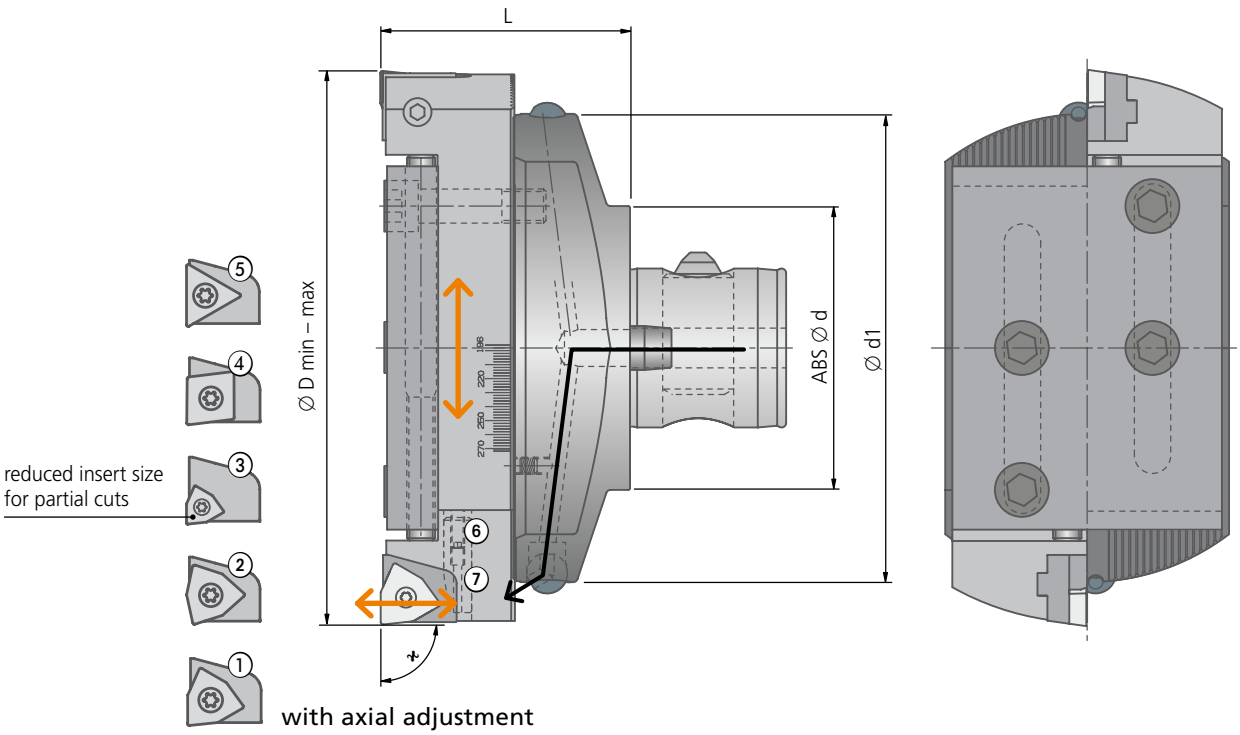
⑥	⑦	⑧	⑨	⑩	⑪	⑫
Holder	Insert seating ϰ = 90°	Insert seating ϰ = 80°	Insert seating ϰ = 90°	Insert seating ϰ = 80°	Insert seating ϰ = 90°	Insert seating ϰ = 90°
Order No.	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert	Order No. Clamping screw / insert
G03 70011 0,01	D54 60510 0,002 N00 56041 S/M2×4,3-6IP 0,62Nm W29 10...	D54 60610 0,002 N00 56041 S/M2×4,3-6IP 0,62Nm W29 10...				
G03 70021 0,016	D54 60520 0,002 N00 57553 S/M2,2×5,5-6IP 1,01Nm W29 18...	D54 60620 0,002 N00 57553 S/M2,2×5,5-6IP 1,01Nm W29 18...				
G03 70031 0,035	D54 60030 0,004 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...	D54 60130 0,004 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...				D54 60330 0,005 N00 56111 S/M2,6×6,2-8IP 1,28Nm W30 14 / W57 14
G03 70041 0,067	D54 60040 0,008 N00 57611 S/M3,5×6,6-10IP 2,8Nm W29 34...	D54 60140 0,008 N00 57611 S/M3,5×6,6-10IP 2,8Nm W29 34...				D54 60340 0,008 N00 56201 S/M3,5×6,2-10IP 2,8Nm W30 26 / W57 26
G03 70061 0,128	D54 60050 0,014 N00 57531 S/M4,5×9-15IP 6,25Nm W29 42...	D54 60150 0,014 N00 57531 S/M4,5×9-15IP 6,25Nm W29 42...				
G03 70071 0,247	D54 60060 0,026 N00 57531 S/M4,5×9-15IP 6,25Nm W29 50...	D54 60160 0,026 N00 57531 S/M4,5×9-15IP 6,25Nm W29 50...	D54 60560 0,033 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...	D54 60760 0,024 N00 57301 S45100-20IP 6,25Nm W83 44...	D54 60460 0,024 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404	D54 60360 0,032 N00 56201 S/M3,5×6,2-10IP 2,8Nm W30 26 / W57 26
G03 70081 0,486	D54 60060 0,026 N00 57531 S/M4,5×9-15IP 6,25Nm W29 50...	D54 60160 0,026 N00 57531 S/M4,5×9-15IP 6,25Nm W29 50...	D54 60560 0,033 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...	D54 60760 0,024 N00 57301 S45100-20IP 6,25Nm W83 44...	D54 60460 0,024 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404	D54 60360 0,032 N00 56201 S/M3,5×6,2-10IP 2,8Nm W30 26 / W57 26
G03 70091 1,082	D54 60070 0,049 N00 57541 S/M5,5×11-20IP 6,25Nm W29 58...	D54 60170 0,049 N00 57541 S/M5,5×11-20IP 6,25Nm W29 58...	D54 60570 0,062 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...	D54 60770 0,024 N00 57301 S45100-20IP 6,25Nm W83 44...	D54 60470 0,055 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404	

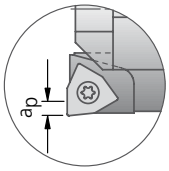
Guideline values for roughing: pages 186-192 / basic recommendation inserts: pages 184-185.

KOMET TwinKom G01 Ø 196 – 401 mm

Twin cutter with ABS connection, $\varkappa$ = 90° / 80°

for workpiece material P M K N S H | 3,5×D | MQL | ABS

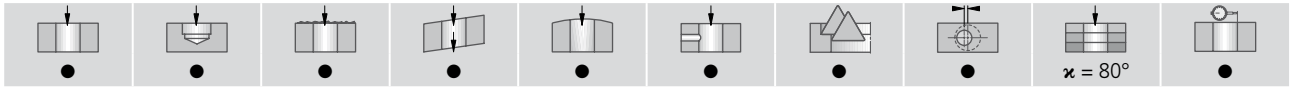




Note!
For optimum cutting in the D_{min} area the cutting depth a_p should be reduced.a_p see page 184: Basic recommendation inserts.

- The 90° design has radially arranged cutters and can therefore be operated with the same cutting edge overhang with double feed rate (feed distribution).
- The 80° design offers greater cutting widths through arrow-shaped cutter arrangement and particularly good tool guidance. Connection, excluding extensions, where possible only directly onto taper shank or spindle adaptor flange.
- The tool has internal coolant supply to each cutter.

Twin cutter with ABS connection, ϰ = 90° / 80°



● very good | ◐ good | ○ possible: see technical notes, page 194 | ✕ not possible

Twin cutter										Allen key
Ø D min-max	Basic body & pair of holders Order No.	ABS Ø d	Ø d1	L	kg	Holder Order No.	kg	Axial adjustment pin ⑥ Article	Threaded pin ⑦ DIN913 Order No. Article	Order No. Article
196 – 271	**G01 63532**	100	165	88	9,15	**G03 10281**	1,335	Ø10×34	**55051 05020** M5×20	**18050 35050** SW5
261 – 335	**G01 63542**	100	230	88	11,04	**G03 10291**	1,733	Ø10×34	**55051 05020** M5×20	**18050 35050** SW5
326 – 401	**G01 63552**	100	295	88	13,94	**G03 10301**	1,983	Ø10×34	**55051 05020** M5×20	**18050 35050** SW5

Insert seating				
① ϰ=90° Order No. Clamping screw / appropriate insert	② ϰ=80° Order No. Clamping screw / appropriate insert	③ ϰ=90° Order No. Clamping screw / appropriate insert	④ ϰ=90° Order No. Clamping screw / appropriate insert	⑤ ϰ=90° Order No. Clamping screw / appropriate insert
D54 60070 0,049 N00 57541 S/M5,5×11-20IP 6,25Nm W29 58...	**D54 60170** 0,049 N00 57541 S/M5,5×11-20IP 6,25Nm W29 58...	**D54 60570** 0,062 N00 57571 S/M2,5×6,3-8IP 1,28Nm W29 24...	**D54 60470** 0,055 N00 57301 S45100-20IP 6,25Nm CCMT/CCGT 120404	**D54 60370** 0,056 N00 56401 S/M5×9,4-20IP 6,25Nm W30 44...

Supply includes twin cutter tool:
Basic body & pair of holders, clamping plate, adjusting screw and clamping screw, axial adjustment pin and threaded pin.

Supply includes insert seating: with clamping screw.

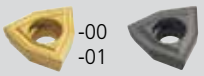
Please order insert separately.

Order example:

Twin cutter tool	G01 63532
Insert seating 90° 2×	D54 60070
Insert 2×	W29 58010.088425

KOMET TwinKom G01

Basic recommendation inserts

W29			
	Indexable insert  -00 -01 -11 Order No. ISO code	for work-piece material	max. cutting depth a_p
W29 10...	**W29 10010.048425** WOEX 030204-01 BK8425	P	1,5
	W29 10010.047935 WOEX 030204-01 BK7935	M	1,0
	W29 10010.047615 WOEX 030204-01 BK7615	K	1,5
	W29 10110.0477 WOEX 030204-11 BK77	N S	2,0
W29 18...	**W29 18010.048425** WOEX 040304-01 BK8425	P	2,5
	W29 18010.047935 WOEX 040304-01 BK7935	M	1,5
	W29 18010.047615 WOEX 040304-01 BK7615	K	3,0
	W29 18110.0477 WOEX 040304-11 BK77	N S	3,0
W29 24...	**W29 24010.048425** WOEX 05T304-01 BK8425	P	4,5
	W29 24010.047935 WOEX 05T304-01 BK7935	M	3,5
	W29 24010.047615 WOEX 05T304-01 BK7615	K	5,0
	W29 24110.0477 WOEX 05T304-11 BK77	N S	5,0
W29 34...	**W29 34010.048425** WOEX 06T304-01 BK8425	P	6,0
	W29 34010.047935 WOEX 06T304-01 BK7935	M	4,0
	W29 34010.047615 WOEX 06T304-01 BK7615	K	6,0
	W29 34110.0477 WOEX 06T304-11 BK77	N S	6,0
W29 42...	**W29 42010.048425** WOEX 080404-01 BK8425	P	7,5
	W29 42010.047935 WOEX 080404-01 BK7935	M	6,0
	W29 42010.047615 WOEX 080404-01 BK7615	K	7,5
	W29 42110.0477 WOEX 080404-11 BK77	N S	7,5
W29 50...	**W29 50010.088425** WOEX 100508-01 BK8425	P	9,0
	W29 50010.047935 WOEX 100504-01 BK7935	M	9,0
	W29 50010.087615 WOEX 100508-01 BK7615	K	9,0
	W29 50110.0477 WOEX 100504-11 BK77	N S	9,0
W29 58...	**W29 58010.088425** WOEX 120608-01 BK8425	P	9,0
	W29 58010.087935 WOEX 120608-01 BK7935	M	9,0
	W29 58010.087615 WOEX 120608-01 BK7615	K	9,0
	W29 58000.0821 WOEX 120608-00 K10	N S	9,0

Alternative inserts: page 187.

W83				
	Indexable insert  Order No. ISO code	for work-piece material	max. cutting depth a_p	
W83 13...	**W83 13010.048425** SOEX 050204-01 BK8425	P	2,5	
	W83 13010.047935 SOEX 050204-01 BK7935	M	1,5	
	W83 13010.047615 SOEX 050204-01 BK7615	K	3,0	
	W83 13010.048425 SOEX 050204-01 BK8425	N	3,0	
W83 18...	**W83 18010.068425** SOEX 060306-01 BK8425	P	2,5	
	W83 18010.067935 SOEX 060306-01 BK7935	M	1,5	
	W83 18010.067615 SOEX 060306-01 BK7615	K	3,0	
	W83 18010.068425 SOEX 060306-01 BK8425	N	3,0	
W83 23...	**W83 23010.088425** SOEX 07T308-01 BK8425	P	4,5	
	W83 23010.087935 SOEX 07T308-01 BK7935	M	3,5	
	W83 23010.087615 SOEX 07T308-01 BK7615	K	5,0	
	W83 23010.088425 SOEX 07T308-01 BK8425	N	5,0	
W83 32...	**W83 32010.088425** SOEX 090408-01 BK8425	P	Ø 39-53 4,5	Ø 51-71 6,0
	W83 32010.087935 SOEX 090408-01 BK7935	M	3,5	4,0
	W83 32010.087615 SOEX 090408-01 BK7615	K	5,0	6,0
	W83 32010.088425 SOEX 090408-01 BK8425	N	5,0	6,0
W83 44...	**W83 44010.088425** SOEX 120508-01 BK8425	P	Ø 64-91 7,5	Ø 83-124 9,0
	W83 44010.087935 SOEX 120508-01 BK7935	M	6,0	9,0
	W83 44010.087615 SOEX 120508-01 BK7615	K	7,5	9,0
	W83 44010.088425 SOEX 120508-01 BK8425	N	7,5	9,0

Alternative inserts: page 189.

CCMT/CCGT			
	Indexable insert  -01 -05 -12 ISO code	for work-piece material	max. cutting depth a_p
CCMT/CCGT 060204	CCMT 060204-01 BK7525	P	1,0
	CCMT 060204-01 BK7525	M	0,7
	CCMT 060204-05 BK7610	K	1,5
	CCGT 060204-12 K10	N	1,5
CCMT/CCGT 09T304	CCMT 09T304-01 BK7525	P	1,5
	CCMT 09T304-01 BK7525	M	1,0
	CCMT 09T304-05 BK7610	K	2,0
	CCGT 09T304-12 K10	N	2,0
CCMT/CCGT 120404	CCMT 120404-01 BK7525	P	2,5
	CCMT 120404-01 BK7525	M	2,0
	CCMT 120404-05 BK7610	K	3,0
	CCGT 120404-12 K10	N	3,0

W30 | W57			
	Indexable insert  W30 -12 -14 **Order No.** ISO code	for work-piece material	max. cutting depth a_p
W30 04 / W57 04...	**W57 04140.028430** TOGX 06T102EN-14 BK8430	P M	0,15
	W30 04060.037615 TOHX 06T103EL-G06 BK7615	K	0,1
	W57 04120.0223 TOGX 06T102FN-12 K10	N S	0,4
W30 14 / W57 14...	**W57 14140.048430** TOGX 090204EN-14 BK8430	P M	0,4
	W30 14060.047615 TOHX 090204EL-G06 BK7615	K	0,3
	W57 14120.0423 TOGX 090204FN-12 K10	N S	0,5
W30 26 / W57 26...	**W57 26140.048430** TOGX 140304EN-14 BK8430	P M	0,6
	W30 26060.047615 TOHX 140304EL-G06 BK7615	K	0,6
	W57 26120.0423 TOGX 140304FN-12 K10	N S	1,0
W30 44...	**W30 44060.088425** TOHX 22T308EL-G06 BK8425	P M	1,0
	W30 44600.087615 TOHX 22T308EN BK7615	K	0,8

Alternative inserts: page 191.

KOMET TwinKom G01 / G04

Recommended cutting data



Guideline values for roughing							v_c	Max. feed f_z (mm/tooth)								
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215	Ø 196 – 401
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		200	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,30	0,30
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		200	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,30	0,30
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		180	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,30	0,30
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		140	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,30	0,30
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		120	0,06	0,10	0,12	0,15	0,20	0,20	0,25	0,25	0,25
P	4.1			HSS			–	–	–	–	–	–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		50	0,05	0,08	0,10	0,12	0,12	0,15	0,15	0,20	0,20
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		50	0,06	0,08	0,10	0,12	0,12	0,15	0,15	0,20	0,20
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		120	0,07	0,09	0,12	0,12	0,15	0,20	0,20	0,20	0,20
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		120	0,07	0,09	0,12	0,12	0,15	0,20	0,20	0,20	0,20
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		90	0,05	0,07	0,10	0,10	0,12	0,15	0,15	0,15	0,15
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		180	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		140	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		140	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		120	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,35	0,35
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		100	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,35	0,35
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		100	0,10	0,12	0,15	0,20	0,25	0,30	0,30	0,35	0,35
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		90	0,12	0,15	0,25	0,30	0,30	0,35	0,35	0,35	0,35
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		250	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		250	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		250	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		250	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		200	0,12	0,15	0,25	0,25	0,30	0,35	0,35	0,35	0,35
H	15.0	1400		hardened steels < 45 HRC			–	–	–	–	–	–	–	–	–	–
H	16.0	1800		hardened steels > 45 HRC			–	–	–	–	–	–	–	–	–	–

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

for better chip control

	Indexable insert -02 -03 -13 -15 W01 a_p	Order No.	ISO code	for work-piece material
W29 10...	< 0,8	**W29 10150.048430**	WOGX030204-15 BK8430	P
	0,8-2,5	**W29 10030.048425**	WOEX030204-03 BK8425	P
	0,8-2,5	**W29 10130.048425**	WOEX030204-13 BK8425	P
	0,8-1,5	**W29 10130.0479**	WOEX030204-13 BK79	M
	...1,5	**W01 10120.0421**	WOHX030204FL-G12 K10	N S H
W29 18...	< 0,8	**W29 18150.048430**	WOGX040304-15 BK8430	P
	0,8-2,5	**W29 18030.048425**	WOEX040304-03 BK8425	P
	0,8-2,5	**W29 18130.048425**	WOEX040304-13 BK8425	P
	0,8-1,5	**W29 18130.0479**	WOEX040304-13 BK79	M
	...1,5	**W01 18120.0421**	WOHX040304FL-G12 K10	N S H
W29 24...	<1,5	**W29 24150.048430**	WOGX05T304-15 BK8430	P
	1,0-4,5	**W29 24030.048425**	WOEX05T304-03 BK8425	P
	1,0-4,5	**W29 24020.046440**	WOEX05T304-02 BK6440	P
	1,5-4,5	**W29 24130.048425**	WOEX05T304-13 BK8425	P
	1,0-3,5	**W29 24130.0479**	WOEX05T304-13 BK79	M
	...5,0	**W01 24120.0421**	WOHX05T304FL-G12 K10	N S H
W29 34...	<1,5	**W29 34150.048430**	WOGX06T304-15 BK8430	P
	1,0-6,0	**W29 34030.048425**	WOEX06T304-03 BK8425	P
	1,0-6,0	**W29 34020.046440**	WOEX06T304-02 BK6440	P
	2,5-6,0	**W29 34130.048425**	WOEX06T304-13 BK8425	P
	1,5-4,0	**W29 34130.0479**	WOEX06T304-13 BK79	M
	...6,0	**W01 34120.0421**	WOHX06T304FL-G12 K10	N S H
W29 42...	<1,5	**W29 42150.048430**	WOGX080404-15 BK8430	P
	1,0-6,0	**W29 42030.048425**	WOEX080404-03 BK8425	P
	1,0-6,0	**W29 42020.046440**	WOEX080404-02 BK6440	P
	2,5-6,0	**W29 42130.048425**	WOEX080404-13 BK8425	P
	1,5-4,0	**W29 42130.0479**	WOEX080404-13 BK79	M
	...6,0	**W01 42120.0421**	WOHX080404FL-G12 K10	N S H
W29 50...	2,5-9,0	**W29 50030.048425**	WOEX100504-03 BK8425	P
	2,5-9,0	**W29 50020.046440**	WOEX100504-02 BK6440	P
	2,5-9,0	**W29 50130.048425**	WOEX100504-13 BK8425	P
	2,5-9,0	**W29 50130.0479**	WOEX100504-13 BK79	M
	...7,5	**W01 50120.0421**	WOHX100504FL-G12 K10	N S H
W29 58...	3,0-9,0	**W29 58030.088425**	WOEX120608-03 BK8425	P
	3,0-9,0	**W29 58020.086440**	WOEX120608-02 BK6440	P
	3,0-9,0	**W29 58130.0879**	WOEX120608-13 BK79	M

⚠ For cutting depths ap < 3.0 mm use smaller cartridge D54 60170

for greater strength

	Order No.	ISO code	for work-piece material
W29 10...	**W29 10010.047935**	WOEX030204-01 BK7935	P M
	W29 10010.0404	WOEX030204-01 P40	P M
	W29 10010.0421	WOEX030204-01 K10	K
	W29 10110.0421	WOEX030204-11 K10	N S
	W01 10120.0421	WOHX030204FL-G12 K21	N S
W29 18...	**W29 18010.047935**	WOEX040304-01 BK7935	P M
	W29 18010.0404	WOEX040304-01 P40	P M
	W29 18010.0421	WOEX040304-01 K10	K
	W29 18110.0421	WOEX040304-11 K10	N S
	W01 18120.0421	WOHX040304FL-G12 K21	N S
W29 24...	**W29 24010.047935**	WOEX05T304-01 BK7935	P M
	W29 24010.0404	WOEX05T304-01 P40	P M
	W29 24010.0421	WOEX05T304-01 K10	K
	W29 24110.0421	WOEX05T304-11 K10	N S
	W01 24120.0421	WOHX05T304FL-G12 K21	N S
W29 34...	**W29 34010.047935**	WOEX06T304-01 BK7935	P M
	W29 34010.0404	WOEX06T304-01 P40	P M
	W29 34010.0421	WOEX06T304-01 K10	K
	W29 34110.0421	WOEX06T304-11 K10	N S
	W01 34120.0421	WOHX06T304FL-G12 K21	N S
W29 42...	**W29 42010.047935**	WOEX080404-01 BK7935	P M
	W29 42010.0404	WOEX080404-01 P40	P M
	W29 42010.0421	WOEX080404-01 K10	K
	W29 42110.0421	WOEX080404-11 K10	N S
	W01 42120.0421	WOHX080404FL-G12 K21	N S
W29 50...	**W29 50010.047935**	WOEX100504-01 BK7935	P M
	W29 50010.0404	WOEX100504-01 P40	P M
	W29 50010.0421	WOEX100504-01 K10	K
	W29 50110.0421	WOEX100504-11 K10	N S
	W01 50120.0421	WOHX100504FL-G12 K21	N S
W29 58	**W29 58010.087935**	WOEX120608-01 BK7935	P M
	W29 58010.0804	WOEX120608-01 P40	P M
	W29 58010.0821	WOEX120608-01 K10	K

for higher cutting speed

	Indexable insert -01 -02 -11 -13 -15 Order No.	ISO code	for work-piece material
W29 10...	**W29 10130.047325**	WOEX030204-13 BK7325	P M
	W29 10150.0473	WOGX030204-15 BK73	P M
	W29 10010.0472	WOEX030204-01 BK72	P M
	W29 10010.046115	WOEX030204-01 BK6115	K
	W29 10110.0450	WOEX030204-11 BK50	N
W29 18...	**W29 18130.047325**	WOEX040304-13 BK7325	P M
	W29 18150.0473	WOGX040304-15 BK73	P M
	W29 18010.0472	WOEX040304-01 BK72	P M
	W29 18010.046115	WOEX040304-01 BK6115	K
	W29 18110.0450	WOEX040304-11 BK50	N
W29 24...	**W29 24130.047325**	WOEX05T304-13 BK7325	P M
	W29 24150.0473	WOGX05T304-15 BK73	P M
	W29 24010.0472	WOEX05T304-01 BK72	P M
	W29 24010.046115	WOEX05T304-01 BK6115	P M K
	W29 24020.046425	WOEX05T304-02 BK6425	P
	W01 24940.0457	WOGX05T304F CBN57	K
	W29 24110.0450	WOEX05T304-11 BK50	N
W29 34...	**W29 34130.047325**	WOEX06T304-13 BK7325	P M
	W29 34150.0473	WOGX06T304-15 BK73	P M
	W29 34010.0472	WOEX06T304-01 BK72	P M
	W29 34010.046115	WOEX06T304-01 BK6115	P M K
	W29 34020.046425	WOEX06T304-02 BK6425	P
	W01 34940.0457	WOGX06T304F CBN57	K
	W29 34110.0450	WOEX06T304-11 BK50	N
W29 42...	**W29 42130.047325**	WOEX080404-13 BK7325	P M
	W29 42150.0473	WOGX080404-15 BK73	P M
	W29 42010.0472	WOEX080404-01 BK72	P M
	W29 42010.046115	WOEX080404-01 BK6115	P M K
	W01 42940.0457	WOGX080404F CBN57	K
	W29 42110.0450	WOEX080404-11 BK50	N
W29 50...	**W29 50130.047325**	WOEX100504-13 BK7325	P M
	W29 50010.0472	WOEX100504-01 BK72	P M
	W29 50010.046115	WOEX100504-01 BK6115	P M K
	W29 50110.0450	WOEX100504-11 BK50	N
W29 58...	**W29 58130.0879**	WOEX120608-13 BK79	P M
	W29 58010.0872	WOEX120608-01 BK72	P M

Wiper – for better surface

	Order No.	ISO code	for work-piece material
W29 18...	**W29 18160.048430**	WOGX040304-16 BK8430	P
	W29 18160.0473	WOGX040304-16 BK73	M
	W29 18160.0460	WOGX040304-16 BK60	K
W29 24...	**W29 24160.048430**	WOGX05T304-16 BK8430	P
	W29 24160.0473	WOGX05T304-16 BK73	M
	W29 24160.0460	WOGX05T304-16 BK60	K
W29 34...	**W29 34160.048430**	WOGX06T304-16 BK8430	P
	W29 34160.0473	WOGX06T304-16 BK73	M
	W29 34160.0460	WOGX06T304-16 BK60	K

KOMET TwinKom G01

Recommended cutting data



Guideline values for roughing							v_c	Max. feed f_z (mm/tooth)							
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		200	0,12	0,14	0,20	0,25	0,30	0,35	0,40	0,40
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		200	0,12	0,14	0,20	0,25	0,30	0,35	0,40	0,40
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		180	0,12	0,14	0,20	0,25	0,30	0,35	0,40	0,40
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		140	0,12	0,14	0,20	0,25	0,30	0,35	0,40	0,40
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		120	0,10	0,12	0,15	0,20	0,25	0,25	0,30	0,30
P	4.1			HSS			–	–	–	–	–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		–	–	–	–	–	–	–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		–	–	–	–	–	–	–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		120	0,10	0,12	0,15	0,20	0,25	0,25	0,30	0,30
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		120	0,10	0,12	0,15	0,20	0,25	0,25	0,30	0,30
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		90	0,10	0,12	0,15	0,20	0,25	0,25	0,30	0,30
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		180	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		140	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		140	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		120	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		100	0,12	0,15	0,20	0,20	0,25	0,30	0,40	0,40
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		100	0,12	0,15	0,20	0,20	0,25	0,30	0,40	0,40
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		90	0,15	0,20	0,20	0,25	0,30	0,35	0,40	0,40
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		250	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		250	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		250	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		250	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		200	0,15	0,20	0,25	0,30	0,35	0,40	0,50	0,50
H	15.0	1400		hardened steels < 45 HRC			–	–	–	–	–	–	–	–	–
H	16.0	1800		hardened steels > 45 HRC			–	–	–	–	–	–	–	–	–

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

for better chip control

	Indexable insert -01 -13 -21 Order No.	ISO code	for work-piece material
W83 13...	**W83 13130.048425**	SOEX 050204-13 BK8425	P
	W83 13210.047935	SOEX 050204-21 BK7935	P M
	W83 13130.047935	SOEX 050204-13 BK7935	M
	W83 13210.047710	SOEX 050204-21 BK7710	N S
W83 18...	**W83 18130.068425**	SOEX 060306-13 BK8425	P
	W83 18210.067935	SOEX 060306-21 BK7935	P M
	W83 18130.067935	SOEX 060306-13 BK7935	M
	W83 18210.067710	SOEX 060306-21 BK7710	N S
W83 23...	**W83 23130.088425**	SOEX 07T308-13 BK8425	P
	W83 23210.087935	SOEX 07T308-21 BK7935	P M
	W83 23130.087935	SOEX 07T308-13 BK7935	M
	W83 23210.087710	SOEX 07T308-21 BK7710	N S
W83 32...	**W83 32130.088425**	SOEX 090408-13 BK8425	P
	W83 32210.087935	SOEX 090408-21 BK7935	P M
	W83 32130.087935	SOEX 090408-13 BK7935	M
	W83 32210.087710	SOEX 090408-21 BK7710	N S
W83 44...	**W83 44130.088425**	SOEX 120508-13 BK8425	P
	W83 44210.087935	SOEX 120508-21 BK7935	P M
	W83 44130.087935	SOEX 120508-13 BK7935	M
	W83 44210.087710	SOEX 120508-21 BK7710	N S

for higher cutting speed

	Indexable insert -01 -13 -21 Order No.	ISO code	for work-piece material
W83 13...	**W83 13010.046420**	SOEX 050204-01 BK6420	P
	W83 13000.0174	SOEX 050204-01 BK74	M
	W83 13000.016115	SOEX 050204-01 BK6115	K
W83 18...	**W83 18010.066420**	SOEX 060306-01 BK6420	P
	W83 18000.0974	SOEX 060306-01 BK74	M
	W83 18000.096115	SOEX 060306-01 BK6115	K
W83 23...	**W83 23010.086420**	SOEX 07T308-01 BK6420	P
	W83 23000.0174	SOEX 07T308-01 BK74	M
	W83 23000.016115	SOEX 07T308-01 BK6115	K
W83 32...	**W83 32010.086420**	SOEX 090408-01 BK6420	P
	W83 32000.1574	SOEX 090408-01 BK74	M
	W83 32000.156115	SOEX 090408-01 BK6115	K
W83 44...	**W83 44010.086420**	SOEX 120508-01 BK6420	P
	W83 44000.1874	SOEX 120508-01 BK74	M
	W83 44000.186115	SOEX 120508-01 BK6115	K

for greater strength

W83 13...	**W83 13010.047935**	SOEX 050204-01 BK7935	P
	W83 13010.046420	SOEX 050204-01 BK6420	K
W83 18...	**W83 18010.067935**	SOEX 060306-01 BK7935	P
	W83 18010.066420	SOEX 060306-01 BK6420	K
W83 23...	**W83 23010.087935**	SOEX 07T308-01 BK7935	P
	W83 23010.086420	SOEX 07T308-01 BK6420	K
W83 32...	**W83 32010.087935**	SOEX 090408-01 BK7935	P
	W83 32010.086420	SOEX 090408-01 BK6420	K
W83 44...	**W83 44010.087935**	SOEX 120508-01 BK7935	P
	W83 44010.086420	SOEX 120508-01 BK6420	K

KOMET TwinKom G01

Recommended cutting data



Guideline values for roughing							v_c	Max. feed f_z (mm/tooth)								
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215	Ø 196 – 401
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		200	0,06	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		200	0,06	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		180	0,07	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		140	0,07	0,10	0,10	0,12	0,12	0,12	0,12	0,15	0,15
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		120	0,05	0,08	0,08	0,08	0,08	0,08	0,08	0,15	0,15
P	4.1			HSS			90	0,04	0,04	0,04	0,08	0,08	0,08	0,08	0,15	0,15
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		–	–	–	–	–	–	–	–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		–	–	–	–	–	–	–	–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		120	0,06	0,08	0,08	0,10	0,10	0,10	0,10	0,15	0,15
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		120	0,06	0,08	0,08	0,10	0,10	0,10	0,10	0,15	0,15
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		90	0,05	0,06	0,06	0,08	0,08	0,08	0,08	0,15	0,15
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		180	0,10	0,15	0,15	0,20	0,20	0,20	0,20	0,25	0,25
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		140	0,10	0,15	0,15	0,20	0,20	0,20	0,20	0,25	0,25
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		140	0,07	0,15	0,15	0,20	0,20	0,20	0,20	0,25	0,25
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		120	0,07	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		100	0,07	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		100	0,07	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		90	0,08	0,10	0,10	0,15	0,15	0,15	0,15	0,20	0,20
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		250	0,12	0,15	0,15	0,25	0,25	0,25	0,25	0,30	0,30
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		250	0,12	0,15	0,15	0,25	0,25	0,25	0,25	0,30	0,30
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		250	0,10	0,15	0,15	0,25	0,25	0,25	0,25	0,30	0,30
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		250	0,10	0,15	0,15	0,25	0,25	0,25	0,25	0,30	0,30
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		200	0,10	0,15	0,15	0,25	0,25	0,25	0,25	0,30	0,30
H	15.0	1400		hardened steels < 45 HRC			–	–	–	–	–	–	–	–	–	–
H	16.0	1800		hardened steels > 45 HRC			–	–	–	–	–	–	–	–	–	–

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

for better chip control

	Indexable insert  W30..12 W57..12 wiper W57..18 Order No.	ISO code	for work-piece material
W57 04 / W30 04	**W30 04120.3232** **W30 04120.306425** **W57 04120.0223**	TOHX 06T102EL-US12 CK32 TOHX 06T100EL-G12 BK6425 TOGX 06T102FN-12 K10	P M P M N S
W57 14 / W30 14	**W30 14120.3232** **W30 14120.306425** **W57 14120.0423**	TOHX 090202EL-US12 CK32 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10	P M P M N S
W57 26 / W30 26	**W30 26120.3232** **W57 26120.0423**	TOHX 140302EL-US12 CK32 TOGX 140304FN-12 K10	P M N S
W30 44...	–		

wiper – for better surface

W57 04 / W30 04	**W57 04180.048430** **W57 04180.0432**	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
W57 14 / W30 14	**W57 14180.048430** **W57 14180.0432**	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M
W57 26 / W30 26	**W57 26180.048430** **W57 26180.0432**	TOGX 140304 EN-18 BK8430 TOGX 140304 EN-18 CK32	P M K P M
W30 44...	–		

for higher cutting speed

	Indexable insert  W57..12 W57..14 W30..12 W30..99 Order No.	ISO code	for work-piece material
W57 04 / W30 04	**W57 04140.023210** **W57 04140.0260** **W30 04990.0357** **W30 04990.035510**	TOGX 06T102EN-14 CK3210 TOGX 06T102EN-14 BK60 TOEX 06T103TN CBN57 TOEX 06T103FN PKD5510	P M P M K N
W57 14 / W30 14	**W30 14120.3232** **W30 14120.306425** **W57 14120.0423**	TOHX 090202EL-US12 CK32 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10	P M P M N S
W57 26 / W30 26	**W30 26120.3232** **W57 26120.0423**	TOHX 140302EL-US12 CK32 TOGX 140304FN-12 K10	P M N S
W30 44...	**W30 44600.0821**	TOHX 22T308 EN K10	K

for greater strength

W57 04 / W30 04	**W30 04120.316425** **W30 04990.0357** **W30 04990.035510** **W30 04990.0240**	TOHX 06T102EL-UF12 BK6425 TOEX 06T103TN CBN57 TOEX 06T103FN PKD5510 TOEX 06T103TN CBN40	P M K N H
W57 14 / W30 14	**W30 14120.316425** **W30 14120.306425** **W57 14120.0423** **W30 14990.0440**	TOHX 090202EL-UF12 BK6425 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M P M N S H
W57 26 / W30 26	**W30 26120.316425** **W57 26120.0423** **W30 26990.0440**	TOHX140302EL-UF12 BK6425 TOGX140304FN-12 K10 TOEX140304TN CBN40	P M N S H
W30 44...	–		

KOMET TwinKom G01

Recommended cutting data

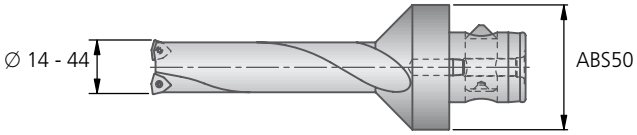


Guideline values for roughing							v_c	Max. feed f_z (mm/tooth)								
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215	Ø 196 – 401
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		200	0,08	0,08	0,08	0,10	0,10	0,15	0,15	0,15	0,15
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		200	0,08	0,08	0,08	0,10	0,10	0,15	0,15	0,15	0,15
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		180	0,08	0,08	0,08	0,10	0,10	0,15	0,15	0,15	0,15
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		140	0,07	0,07	0,07	0,08	0,08	0,12	0,12	0,12	0,12
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		120	0,07	0,07	0,07	0,08	0,08	0,10	0,10	0,10	0,10
P	4.1			HSS			90	0,05	0,05	0,05	0,06	0,06	0,10	0,10	0,10	0,10
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		–	–	–	–	–	–	–	–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		–	–	–	–	–	–	–	–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		120	0,07	0,07	0,07	0,08	0,08	0,12	0,12	0,12	0,12
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		120	0,06	0,06	0,06	0,07	0,07	0,12	0,12	0,12	0,12
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		90	0,05	0,05	0,05	0,06	0,06	0,10	0,10	0,10	0,10
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		180	0,10	0,10	0,10	0,15	0,15	0,25	0,25	0,25	0,25
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		140	0,10	0,10	0,10	0,15	0,15	0,25	0,25	0,25	0,25
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		140	0,10	0,10	0,10	0,15	0,15	0,25	0,25	0,25	0,25
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		120	0,10	0,10	0,10	0,15	0,15	0,25	0,25	0,25	0,25
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		100	0,07	0,07	0,07	0,10	0,10	0,20	0,20	0,20	0,20
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		100	0,08	0,08	0,08	0,10	0,10	0,20	0,20	0,20	0,20
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		90	0,10	0,10	0,10	0,10	0,10	0,20	0,20	0,20	0,20
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		250	0,15	0,15	0,15	0,20	0,20	0,30	0,30	0,30	0,30
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		250	0,15	0,15	0,15	0,20	0,20	0,30	0,30	0,30	0,30
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		250	0,15	0,15	0,15	0,20	0,20	0,30	0,30	0,30	0,30
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		250	0,15	0,15	0,15	0,20	0,20	0,30	0,30	0,30	0,30
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		200	0,15	0,15	0,15	0,20	0,20	0,30	0,30	0,30	0,30
H	15.0	1400		hardened steels < 45 HRC			–	–	–	–	–	–	–	–	–	–
H	16.0	1800		hardened steels > 45 HRC			–	–	–	–	–	–	–	–	–	–

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Easy Special tool

Diameter range from 14-44 mm
(also intermediate sizes)
for boring depths 2×D, 3×D and 4×D
in ABS 50



Special tools set standards

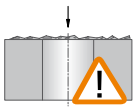
Special tools with KOMET's comprehensive knowledge and experience for economic cutting.

The advantages of our Easy Special tools are obvious:

- High tech tools from planning to productive use
- Shortest delivery times – available within 3 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level

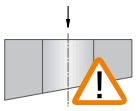
In short: time costs money.

1.



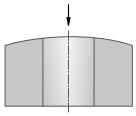
Starting on uneven surfaces (cast surfaces)
- subject to the starting angle, the feed must be reduced when starting the bore. Rule of thumb: 3° = 30%; 10° = 40%; 25° = 60%
- use tough insert
- use stable corner radius

2.



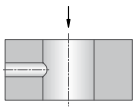
Angled bore exit
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insert
- use stable corner radius

3.



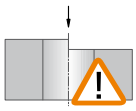
Starting on cambered surfaces
- no problems
- reduce feed rate if necessary

4.



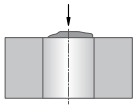
Roughing through a cross bore
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insert
- use stable corner radius

5.



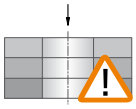
Starting on an edge
- reduce feed rate by 50%
- use tough insert
- use stable corner radius

6.



Starting on a welded seam
- reduce feed rate
- use max. 3×D tools

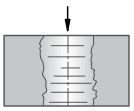
7.



Roughing through stacked plates
- use holder with 80° approach angle
- good workpiece clamping required
- max. gap = 1 mm

Long chips
- not optimum geometry

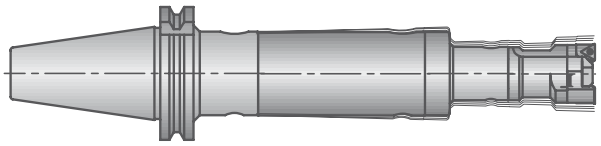
→ select correct cutting depth
→ select correct cutting values



Bad surface finish
- feed rate too high → improve cutting parameters: increase cutting speed, reduce feed
- long chips



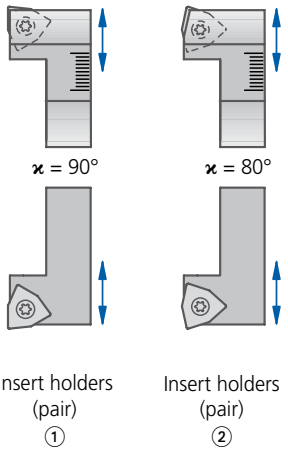
Vibrations
- feed rate too high
- cutting speed too high
- geometry too obtuse
- check axial / radial setting
- check tool assembly
- if required, use a damping element adaptor

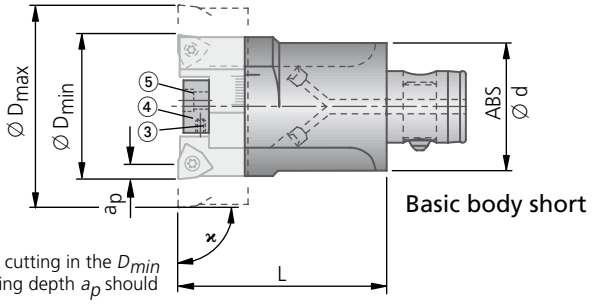


KOMET TwinKom G04 — Ø 30 – 204 mm

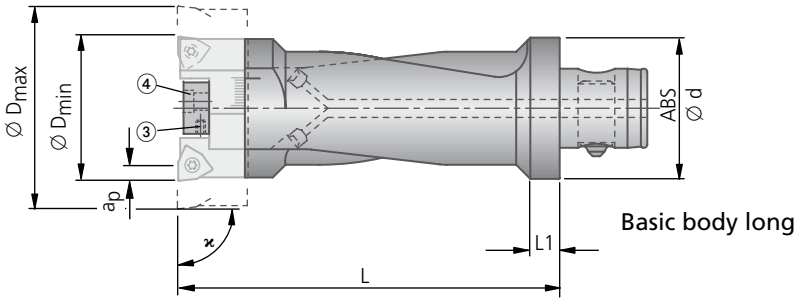
Twin cutter with ABS connection, $\varkappa$ = 90° / 80°

without axial adjustment





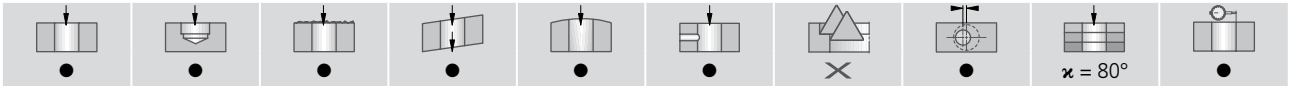
Note!
For optimum cutting in the D_{min} area the cutting depth a_p should be reduced.



	Basic body short					Basic body long						
Ø D min-max	Order No.	ABS Ø d	L	L1	kg	Order No.	ABS Ø d	L	L1	kg	Adjusting screw ③ DIN912 Order No. Article	Clamping screw ④ DIN912 Order No. Article
30 – 41	**G04 00500**	25	50	–	0,13	**G04 01000**	32	85	7,5	0,287	**55051 03010** M3×10	**55011 04020** M4×20
39 – 51	**G04 01010**	32	60	–	0,287	**G04 01500**	40	120	8,5	0,664	**55051 04010** M4×10	**55011 05025** M5×25
49 – 71	**G04 01510**	40	60	–	0,428	**G04 02000**	50	135	10,5	1,224	**55051 04016** M4×16	**55011 06025** M6×25
64 – 91	**G04 02010**	50	70	–	0,81	**G04 02020**	50	135	–	2,225	**55051 05025** M5×25	**55011 08030** M8×30
83 – 121	**G04 02500**	63	70	–	1,337	**G04 02510**	63	155	–	3,795	**55051 08035** M8×35	**55011 10035** M10×35
109 – 157	**G04 03000**	80	90	–	3,035	**G04 03010**	80	175	–	6,05	**55051 08050** M8×50	**55011 12045** M12×45
139 – 204	**G04 03500**	100	125	–	6,22						**55051 10080** M10×80	**55011 16055** M16×55

KOMET TwinKom G04

Twin cutter with ABS connection, $\varkappa$ = 90° / 80°



● very good | ◐ good | ○ possible | ✕ not possible

Supply includes basic body:
Clamping plate with adjusting screw and clamping screw.

Supply includes pair of insert holders: with clamping screw.

Please order insert separately.

Order example:

Basic body short	G04 00500
Pair of insert holders 90°	G03 60510
Insert 2×	W29 24010.048425

Pair of insert holders					Basic recommendation			
① $\varkappa$=90° Order No.	kg	② $\varkappa$=80° Order No.	kg	Clamping screw Order No. Article	Indexable insert -00 -01 -11 Order No. ▽▽ size	ISO-Code	max. cutting depth a_p	for work-piece material
G03 60510	0,035	G03 50510	0,035	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W29 24010.048425 W29 24010.047935 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7935 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	4,5 3,5 5,0 5,0	P M K N S
G03 60520	0,078	G03 50520	0,078	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W29 34010.048425 W29 34010.047935 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	6,0 4,0 6,0 6,0	P M K N S
G03 60530	0,154	G03 50530	0,154	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W29 34010.048425 W29 34010.047935 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7935 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	6,0 4,0 6,0 6,0	P M K N S
G03 60540	0,29	G03 50540	0,29	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 42010.048425 W29 42010.047935 W29 42010.047615 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7935 WOEX 080404-01 BK7615 WOEX 080404-11 BK77	7,5 6,0 7,5 7,5	P M K N S
G03 60550	0,554	G03 50550	0,554	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 50010.088425 W29 50010.047935 W29 50010.087615 W29 50110.0477	WOEX 100508-01 BK8425 WOEX 100504-01 BK7935 WOEX 100508-01 BK7615 WOEX 100504-11 BK77	9,0 9,0 9,0 9,0	P M K N S
G03 60560	1,024	G03 50560	1,01	N00 57531 S/M4,5×9-15IP 6,25 Nm	W29 50010.088425 W29 50010.047935 W29 50010.087615 W29 50110.0477	WOEX 100508-01 BK8425 WOEX 100504-01 BK7935 WOEX 100508-01 BK7615 WOEX 100504-11 BK77	9,0 9,0 9,0 9,0	P M K N S
G03 60570	2,262	G03 50570	2,252	N00 57541 S/M5,5×11-20IP 6,25 Nm	W29 58010.088425 W29 58010.087935 W29 58010.087615 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7935 WOEX 120608-01 BK7615 WOEX 120608-00 K10	9,0 9,0 9,0 9,0	P M K N S

Guideline values for roughing: pages 186 / Alternative inserts: page 187.

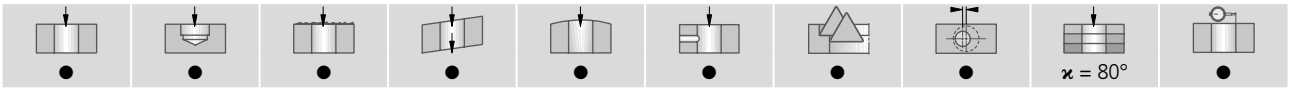
Lightweight dual cutter

Optimally designed for your machining requirement

A typical example of the ongoing further development of the KOMET cutting tool range can be seen in the improved concept of the KOMET TwinKom lightweight dual cutters – a concept which enables particularly cost-effective machining. The tools are extremely rigid, provide high transmissible torques and offer high cutting efficiency. KOMET TwinKom dual cutters can be used for a variety of operations – as a dual cutter for roughing, with a single cutting edge for finishing, as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. The tools are modular in design and are suitable for diameters from 365 to 2000 mm. The adjustment range is ± 40 mm (or 80 mm) in relation to the diameter.

The size of the replaceable bridge is application-oriented and adapted to suit the hole diameter to be cut, which is why the bridge is made according to customer requirement. Due to standardisation, delivery times are relatively short.

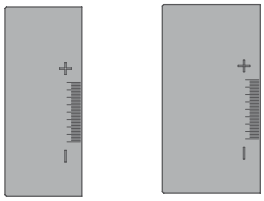
The indexable insert holders can be easily exchanged, which allows a variety of different approach angles and the use of indexable inserts of various different shapes, sizes and geometries.



Roughing tool as dual cutter



Single-edged finishing tool

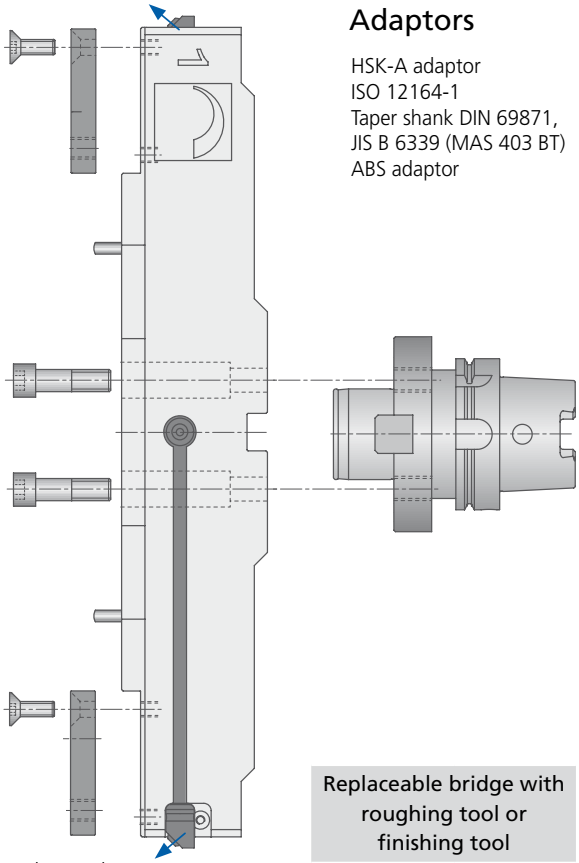


Balancing weight

G05 10110 XG05 00180

Replaceable bridge Ø 365 - 2000 mm

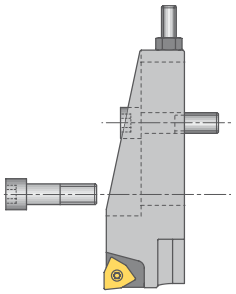
Produced to customer requirement,
FA40 / FAM40 connection up to Ø 399 mm



Adaptors

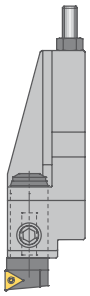
HSK-A adaptor
ISO 12164-1
Taper shank DIN 69871,
JIS B 6339 (MAS 403 BT)
ABS adaptor

Roughing cartridge
G05 20100



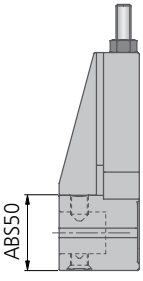
Insert seating
D54 60070
Indexable insert
W29 58

Finishing cartridge
G05 10100



Micro-adjustable cartridge
M30 20051
Indexable insert
W57 26 / W30 26

ABS Adapter
XG05 00170



Adapter plate
G05 00100

Replaceable bridge with roughing tool or finishing tool	
Diameter	Weight
Ø 400 mm	~ 13 kg
Ø 600 mm	~ 22 kg
Ø 800 mm	~ 29 kg
Ø 1000 mm	~ 35 kg

The tool blocks for roughing can be adjusted radially and axially, both for dual cutter use and for cut distribution. For finishing, the fine adjustment insert can be applied to the workpiece directly without clamping. Fine adjustment of 2 µm by vernier is possible. A stop guarantees a high level of positional accuracy for the tool blocks. The measurements set after the first cut are maintained even after repeatedly exchanging the tool blocks.

Once diameters have been established, they are maintained even when the tool blocks are repositioned, and need not be established again. One and the same tool block can be used for roughing and finishing throughout all diameter ranges. When designing the adaptor plates for the tool blocks, sufficient space was allowed for attaching the magnetic holder of a dial gauge.

An internal coolant supply can be used on all replaceable bridges. An adjustable jet guarantees positionally accurate cooling of the cutting edge. Because DIN mill adaptors are used on the machine side to connect the tools, they can be adapted for all commonly used spindles.

BENEFITS for you:

- High rigidity
- High cutting efficiency through double-sided roughing
- High transmissible torques
- Exchangeable tool blocks for roughing and finishing
- Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool
- External machining can also be performed with the standard components
- High level of flexibility thanks to modular design of system components
- Internal coolant supply
- Tool connection with standard mill adaptor according to DIN standard
- Cost-effective cutting thanks to the use of stock-type standard tool blocks and indexable inserts
- Wide selection of various indexable inserts, cutting tool materials and cutting geometries
- Easy-to-replace indexable insert holders
- Tool blocks can be exchanged without losing measurement settings
- Dial gauge can be fitted using a magnetic holder
- Optimised heat cycle, even when dry machining

Stepped tool

Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. External machining can also be performed with the standard components.



KOMET ABS Adapter

Thanks to the new ABS adapter, KOMET standard tools, for example the MicroKom BluFlex fine adjustment head, show more of what they can really do. The ABS adapter is available on request.



Insert technology for roughing and finishing in one step

The challenge which must be met by tools enabling roughing and finishing in a single process is to achieve the required roundness and concentricity, taking account of the high cutting performance and the associated forces. For this reason, such tools are normally fitted with guide pads; however, these can lead to problems during machining.

The newly developed roughing/finishing tools are based on an innovation in indexable insert technology, which makes it possible not only to bore, but to finish as well using economical, multi-bladed indexable inserts. Thanks to an innovative cutting head geometry with support land, previously commonplace guide rails are a thing of the past.

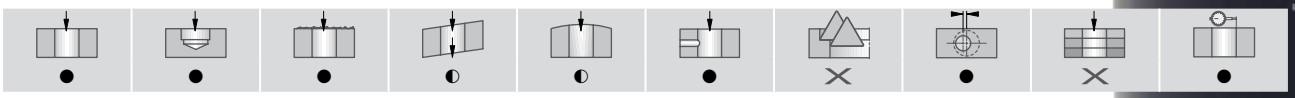
Due to the innovative fine adjustment of indexable inserts, it is possible to easily adjust every single indexable insert with µm accuracy.

The tools are specially manufactured for each application, with four to six cutting edges on a main body and for diameter ratios up to 3×D. With various cutting tool material/coating variants, they can also be ideally adapted to customer requirements for specific materials. For example, in GGG50 the new machine tools work to cutting depths from three to four millimetres (a_p) whereby, bore tolerances to IT8 are possible.



BENEFITS for you:

- Two processes in one – roughing and finishing
- Uses economical inserts with four edges
- Interchangeability of the cutting heads reduces tool costs
- Precise adjustment with µm accuracy, thanks to the newly developed fine adjustment system for indexable inserts
- Maximum precision



Basic recommendation						
Indexable insert			for workpiece material		Clamping screw	Wedge
Ø D	ISO Code	Order No. enter carbide code ▼	K BK 6110	K BK 2710	Order No. Article	Order No.
32 – 34,99	LNHX 09T310-01	H80 32000.01....	6110	2710	N00 57251 S3076-8IP 2,25 Nm	L02 31990
35 – 37,49	LNHX 09T310-01	H80 35000.01....				
37,5 – 39,99	LNHX 09T310-01	H80 37500.01....				
40 – 41,99	LNHX 09T310-01	H80 40000.01....				
42 – 43,99	LNHX 120510-01	H80 42000.01....	6110	2710	N00 57411 S40101-15IP 4,3 Nm	L02 32000
44 – 45,99	LNHX 120510-01	H80 44000.01....				
46 – 47,99	LNHX 120510-01	H80 46000.01....				
48 – 49,99	LNHX 120510-01	H80 48000.01....				
50 – 51,99	LNHX 120510-01	H80 50000.01....				
52 – 53,99	LNHX 120510-01	H80 52000.01....				
54 – 55,99	LNHX 120510-01	H80 54000.01....				
56 – 57,99	LNHX 120510-01	H80 56000.01....				
58 – 59,99	LNHX 120510-01	H80 58000.01....				
60 – 61,99	LNHX 120510-01	H80 60000.01....				
62 – 66,99	LNHX 120510-01	H80 62000.01....				
67 – 71,99	LNHX 120510-01	H80 67000.01....				
72 – 76,99	LNHX 120510-01	H80 72000.01....				
77 – 81,99	LNHX 120510-01	H80 77000.01....				
82 – 86,99	LNHX 120510-01	H80 82000.01....				
87 – 91,99	LNHX 120510-01	H80 87000.01....				
92 – 96,99	LNHX 120510-01	H80 92000.01....				
97 – 101,99	LNHX 120510-01	H80 97000.01....				

Supply includes: Basic body with clamping screw and wedge.
Please order insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

Inquiry Fax to +49 7143 373233

KOMET PreciKom

Design your own tool!

Unique: Indexable insert technology for roughing and finishing in one step!
The tools are specially manufactured for each application, with four to six cutting edges on a basic body and for length/ diameter ratios up to 3×D.
We check you specifications for technical feasibility and you receive a prompt reply.

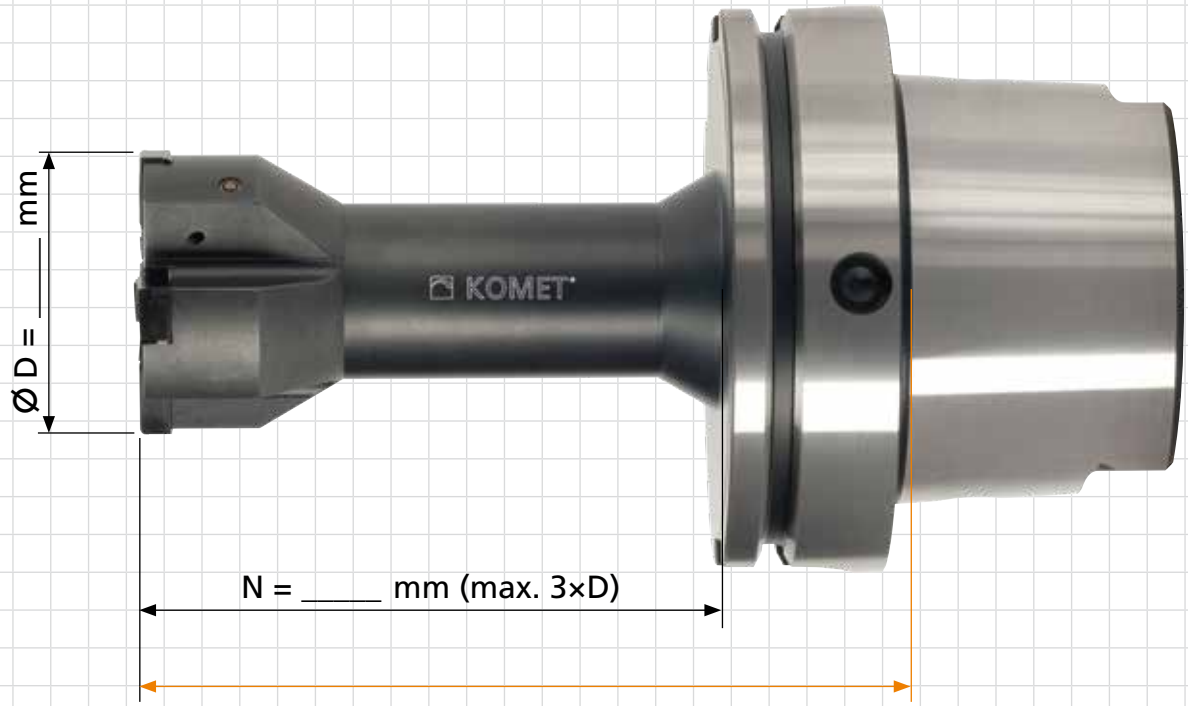
Company: Contact:

Department: E-Mail:

Telephone: Customer-No.:

Fax: Distributor:

Date:



Material to be machined:

Machining method ☐ through hole ☐ blind hole

Length of bore:

Interrupted cut ☐ yes ☐ no

Tolerance:

Required surface:

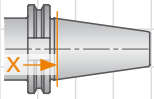
Allowance in Ø:

Required cutting material ☐ BK6110 ☐ BK2710

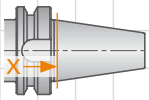
Holder / Adaptor (Type and size)



☐ HSK _____
DIN 69893 A



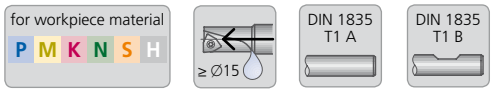
☐ SK _____
DIN 69871 AD/B



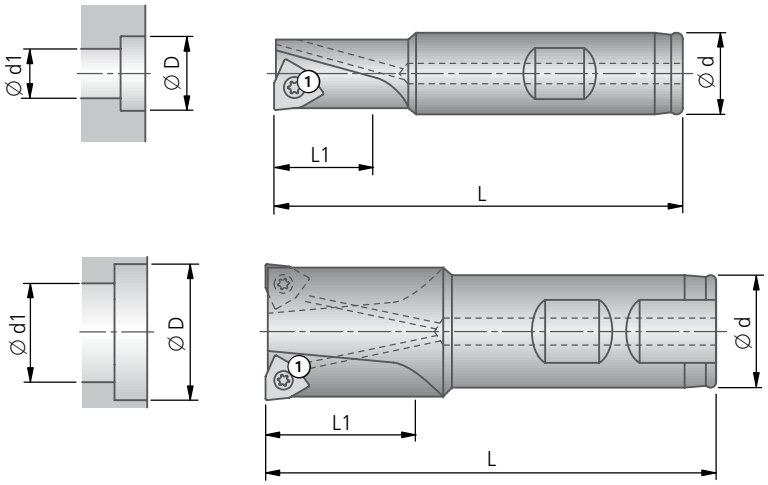
☐ SK _____
JIS B 6339 AD/B
(MAS 403 BT)

other adaptors on request

Countersinking tool KWZ



for producing 90° counterbores to DIN 974 T1 for cap head screws



Y = number of inserts
Z = effective number of teeth for calculating v_f

KWZ										Basic recommendation		
Ø D	Order No. Article	Rough bore Ø Ød1 min	Ød	L	Counter-sink depth L1 max	Y	Z	kg	Clamping screw ① Order No. Article	Indexable insert Order No. ▽▽size	ISO-Code	for work-piece material
10	**F10 10021** KWZ-M5K1	5,3	16	80	10	1	1	0,09	**N00 56041** S/M2×4,3-6IP 0,62 Nm	**W29 10010.048425** **W29 10010.0421**	WOEX 030204-01 BK8425 WOEX 030204-01 K10	P M S H K N
11	**F10 10031** KWZ-M6K1	6,4	16	80	11	1	1	0,10				
15	**F10 10040** KWZ-M8K1	8,4	16	80	15	1	1	0,10	**N00 55581** M2,5×4,5-8IP 1,28 Nm	**W29 24010.048425** **W29 24010.0421**	WOEX 05T304-01 BK8425 WOEX 05T304-01 K10	P M S H K N
18	**F10 10050** KWZ-M10K1	10,4	16	80	18	1	1	0,11				
20	**F10 10060** KWZ-M12K1	13	25	100	20	1	1	0,28	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**W29 24010.048425** **W29 24010.0421**	WOEX 05T304-01 BK8425 WOEX 05T304-01 K10	P M S H K N
24	**F10 11070** KWZ-M14K2	15	25	100	24	2	2	0,29				
26	**F10 11080** KWZ-M16K2	17	25	100	26	2	2	0,31				
30	**F10 11090** KWZ-M18K2	19	25	100	30	2	2	0,34	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W29 34010.048425** **W29 34010.0421**	WOEX 06T304-01 BK8425 WOEX 06T304-01 K10	P M S H K N
33	**F10 11100** KWZ-M20K2	21	25	100	33	2	2	0,36	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W29 42010.048425** **W29 42010.0421**	WOEX 080404-01 BK8425 WOEX 080404-01 K10	P M S H K N
36	**F10 11110** KWZ-M22K2	21	25	100	36	2	2	0,39				
40	**F10 11120** KWZ-M24K2	25	25	100	40	2	2	0,45				
48	**F10 11130** KWZ-M30K2	28	32	120	48	2	2	0,85	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W29 50010.048425** **W29 50010.0421**	WOEX 100504-01 BK8425 WOEX 100504-01 K10	P M S H K N

Supply includes: Countersinking tool with clamping screw ①.
Please order inserts separately.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended cutting data

Guideline values for countersinking							v_c	Max. f (mm/rev)			
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Feed			
								Ø 10 – 15	Ø 18 – 20	Ø 24 – 30	Ø 33 – 48
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		180-240	0,06-0,12	0,12-0,20	0,15-0,25	0,20-0,30
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		180-240	0,06-0,12	0,12-0,20	0,25-0,40	0,25-0,40
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		160	0,06-0,12	0,20	0,20-0,30	0,20-0,40
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		140	0,06-0,10	0,18	0,20-0,35	0,25-0,40
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		120	0,04-0,08	0,15	0,20-0,30	0,20-0,35
P	4.1			HSS			–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		30	0,05	0,10	0,12	0,15
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		30	0,05	0,10	0,12	0,15
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		120	0,08	0,15	0,16	0,18
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		120	0,08	0,15	0,16	0,18
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		100	0,05	0,10	0,10	0,12
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		160	0,15	0,30	0,40	0,60
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		140	0,15	0,25	0,30	0,40
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		140	0,15	0,25	0,30	0,35
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		120	0,12	0,20	0,25	0,35
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		120	0,10	0,18	0,25	0,30
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		120	0,10	0,18	0,20	0,30
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		100	0,10	0,15	0,20	0,25
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		300	0,05	0,10	0,12	0,15
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		300	0,05	0,10	0,12	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		300	0,05	0,12	0,15	0,20
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		250	0,06	0,16	0,20	0,25
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		200	0,10	0,20	0,25	0,30
H	15.0	1400		hardened steels < 45 HRC			50	0,05	0,10	0,15	0,20
H	16.0	1800		hardened steels > 45 HRC			50	0,05	0,10	0,15	0,20

for better chip control			
Ø D	Alternative indexable insert -01 -03 -11 Order No.	ISO code	for workpiece material
10 – 11	W29 10030.046425 W29 10110.0477	WOEX 030204-03 BK6425 WOEX 030204-11 BK77	P M H N S
15 – 26	W29 24030.046425 W29 24110.0477	WOEX 05T304-03 BK6425 WOEX 05T304-11 BK77	P M H N S
30	W29 34030.046425 W29 34110.0477	WOEX 06T304-03 BK6425 WOEX 06T304-11 BK77	P M H N S
33 – 40	W29 42030.046425 W29 42110.0477	WOEX 080404-03 BK6425 WOEX 080404-11 BK77	P M H N S
48	W29 50030.046425 W29 50110.0477	WOEX 100504-03 BK6425 WOEX 100504-11 BK77	P M H N S
for higher cutting speed			
10 – 11	–		
15 – 26	W29 24010.046425 W29 24010.047615	WOEX 05T304-01 BK6425 WOEX 05T304-01 BK7615	P K
30	W29 34010.0460 W29 34010.0461	WOEX 06T304-01 BK60 WOEX 06T304-01 BK61	P K
33 – 40	W29 42010.0460 W29 42010.0461	WOEX 080404-01 BK60 WOEX 080404-01 BK61	P K
48	W29 50010.0460 W29 50010.0461	WOEX 100504-01 BK60 WOEX 100504-01 BK61	P K
for greater strength			
10 – 11	W29 10010.047935	WOEX 05T304-01 BK7935	P M K S H
15 – 26	W29 24010.047935	WOEX 05T304-01 BK7935	P M K S H
30	W29 34010.047935	WOEX 06T304-01 BK7935	P M K S H
33 – 40	W29 42010.047935	WOEX 080404-01 BK7935	P M K S H
48	W29 50010.047935	WOEX 100504-01 BK7935	P M K S H

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

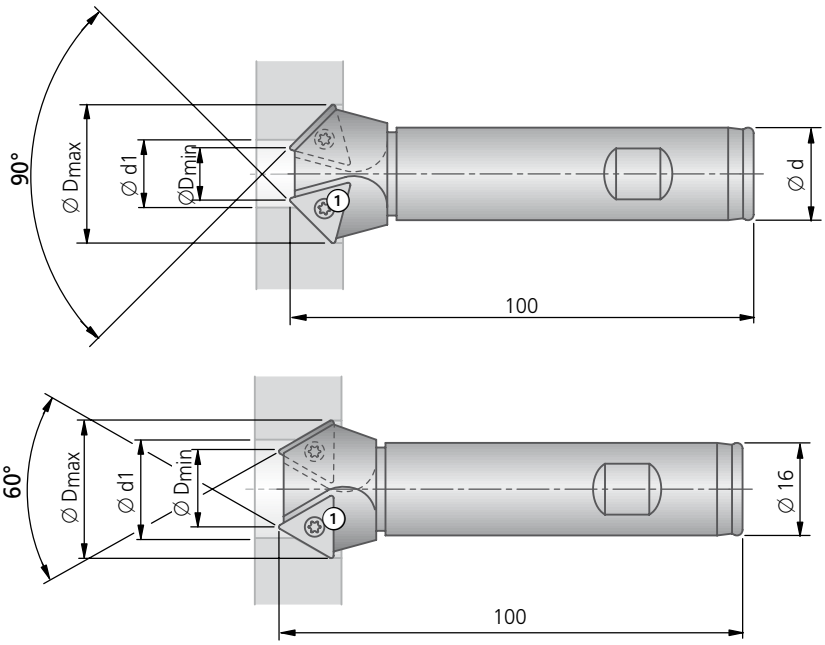
Important: See chapter 8 for more application details and safety notes!

KOMET Countersinking and chamfering tools

Countersinking tool KWS 90° | 60°

for workpiece material: P M K N S H

DIN 1835 T1 B



Y = number of inserts
Z = effective number of teeth for calculating v_f

for producing the 90° | 60° countersinks to DIN 74, page 1, Form A, fine

for milling of trapezoidal slots

for circular milling on machining centres

for chamfering on machining centres

KWS 90°									Basic recommendation		
Ø D max	Ø D min	Order No. Article	Rough bore Ø Ø d1 min	Ø d	Y	Z	kg	Clamping screw ① Order No. Article	Indexable insert Order No. ▽▽size	ISO-Code	for work-piece material
19	7	**F10 00051** KWS-M10	9,5	16	2	2		**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14660.338425** **W30 14660.3321**	TOHX 090204EN-U8.77 BK8425 TOHX 090204EN-U8.77 K10	P M K N S H
23	11	**F10 00061** KWS-M12	12	16	2	2					
26	11	**F10 00071** KWS-M14	12	16	2	1		**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14720.048425** **W30 14720.0421**	TOHX 090204EN-G12 BK8425 TOHX 090204FN-G12 K10	P M K N S H
30	12	**F10 00081** KWS-M16	13	20	2	2		**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**W30 26720.0560** **W30 26720.0521**	TOHX 140305EN-G12 BK60 TOHX 140305FN-G12 K10	P M K N S H
34	16	**F10 00091** KWS-M18	17	20	2	2					
37	19	**F10 00101** KWS-M20	20	20	2	2					

KWS 60°							Clamping screw ①	Basic recommendation		
Ø D max	Ø D min	Order No. Article	Rough bore Ø Ø d1 min	Y	Z	kg	Order No. Article	Indexable insert Order No. ▽▽ size	ISO-Code	for work-piece material
16,5	8,1	**F10 00350** KWS-M10/12-60	8,5	1	1	0,14	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W30 14660.338425** **W30 14660.3321**	TOHX 090204EN-U8.77 BK8425 TOHX 090204EN-U8.77 K10	P M K N S H
20	11,6	**F10 00370** KWS-M14-60	12	2	2	0,14				
22	13,6	**F10 00380** KWS-M16-60	14	2	2	0,15				
23,5	15,1	**F10 00390** KWS-M18-60	15,5	2	2	0,15	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14720.048425** **W30 14720.0421**	TOHX 090204EN-G12 BK8425 TOHX 090204FN-G12 K10	P M K N S H
25,5	17,1	**F10 00400** KWS-M20-60	17,5	2	2	0,16				

Supply includes: Countersinking tool with clamping screw ①.
Please order inserts separately.

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for countersinking							v_c	Max. f (mm/rev)
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Feed	
							∅ 16,5 – 37	
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	250	0,16	
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	200	0,20	
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	250	0,30	
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150	0,20	
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	120	0,15	
P	4.1			HSS		100	0,18	
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,12	
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	100	0,20	
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	160	0,15	
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	120	0,15	
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	100	0,15	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	150	0,40	
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	120	0,30	
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	120	0,30	
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	100	0,30	
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	100	0,20	
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	80	0,20	
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	50	0,20	
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	250	0,30	
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	250	0,20	
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	250	0,20	
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	150	0,30	
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	120	0,25	
H	15.0	1400		hardened steels < 45 HRC		50	0,15	
H	16.0	1800		hardened steels > 45 HRC		25	0,10	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

KOMET – Fine boring

Modern batch production is characterised by the shortest machining times and the highest quality requirements.

To meet these demands, highly developed tools need to be used with the latest cutting materials and efficient coatings.

KOMET offer excellent tools solutions for the fine boring area.



KOMET

Index

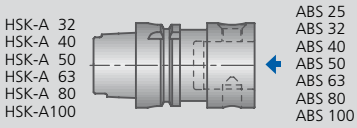
	Page
Programme summary	208 – 209
Tool selection	210 – 211
Insert geometry selection	212 – 213
MicroKom *hi.flex* Micro-adjustable head	214 – 233
MicroKom *BluFlex 2* Micro-adjustable head	214 – 233
UniTurn	Chapter 5
Copying tool ∅ 3 – 8 mm	
Boring tool ∅ 3 – 8 mm	
Boring tool with CBN ∅ 2,7 – 7,5 mm	
Boring bars with cylindrical shank	
Boring bar ∅ 3 – 9 mm	237
Boring bar B001 / B003 ∅ 5,6 – 24 mm	238
Low-vibration boring bar ∅ 5,6 – 26 mm	234
Boring bars with ABS connection	
Boring bar B002 ∅ 8 – 28 mm	240
Boring bar G10 ∅ 11,9 – 30 mm	242
MicroKom Boring bar M10	244
MicroKom Micro-adjustable head FZ / FF	246 – 251
MicroKom Micro-adjustable head M03Speed	252 – 263
KOMET TwinKom Ø > 365 mm	264 – 265
KomTronic U-Axis system	266 – 267



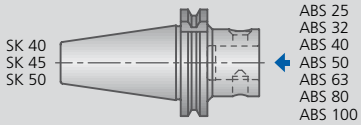
Programme summary – Fine boring

6 Adaptors

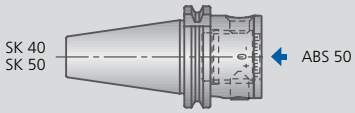
HSK-A Adaptors
with ABS connection



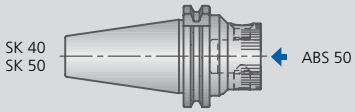
Taper shanks DIN 69871
with ABS connection



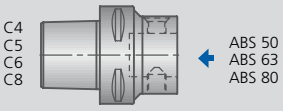
Eccentric adjusting device with ABS connection



Torsional dampener with ABS connection

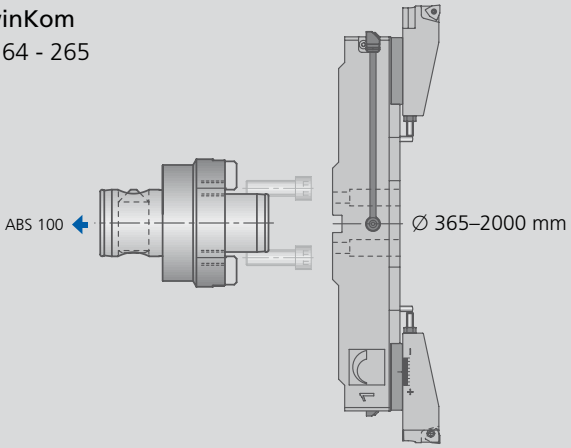


PSC Adaptor
with ABS connection



1 Fine boring tools

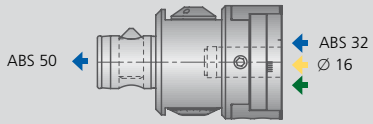
TwinKom
▸ 264 - 265



1 Fine boring tools

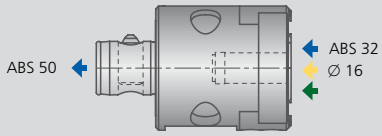
MicroKom *hi.flex*
Micro-adjustable head

▸ 218



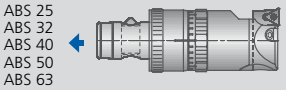
MicroKom *BluFlex 2*

▸ 219



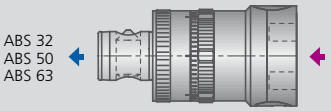
MicroKom M03Speed
Micro-adjustable head

▸ 254



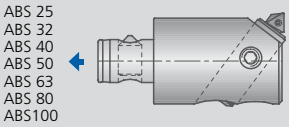
Ø 28,4 – 103 mm

▸ 256



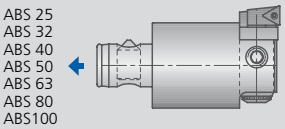
Micro-adjustable head

▸ 246



Ø 20 – 175 mm

▸ 250



Ø 29,5 – 199 mm

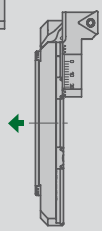
1 Fine boring tools

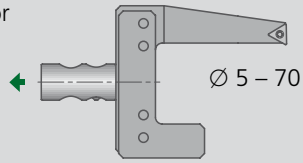
MicroKom *hi.flex* | MicroKom *BluFlex 2*

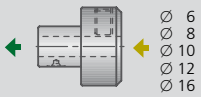
Boring bar
▸ 220  Ø 6 – 25 mm

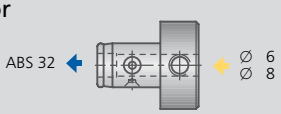
Serrated body + Insert holder
▸ 221  Ø 25 – 63 mm

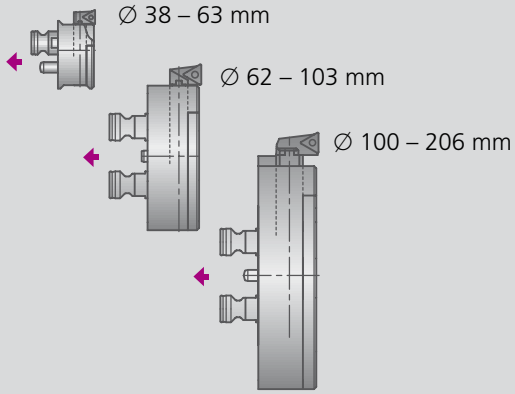
Insert holder
▸ 222  Ø 63 – 93 mm

Bridge + Insert holder
▸ 223  Ø 90 – 365 mm

Mounting bridge for external machining
▸ 232  Ø 5 – 70 mm

Adaptor
▸ 233 

ABS Adaptor
▸ 236 

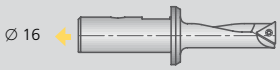
Replaceable bridge
▸ 258 

Boring bars

▸ 237  Ø 3 – 9 mm

▸ 234  Ø 5,6 mm Ø 6,9 mm

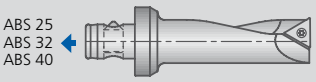
▸ 238  Ø 5,6 – 12 mm

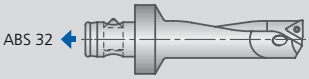
▸ 238  Ø 8 – 24 mm

▸ 234  Ø 9 mm Ø 11 mm

▸ 234  Ø 13 – 17 mm

▸ 234  Ø 17 – 26 mm

▸ 240  Ø 8 – 28 mm

▸ 242  Ø 11,9 – 30 mm

MicroKom Boring bar

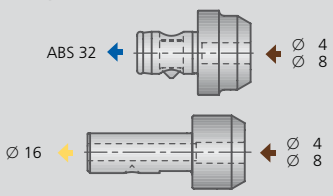
▸ 244  Ø 15,9 – 26 mm

Key

- ABS connection
- Cylindrical connection
- MicroKom *hi.flex* | MicroKom *BluFlex 2*
- MicroKom M03Speed connection
- UniTurn connection

5 UniTurn

UniTurn Adaptor



Copying tool  Ø 3 – 8 mm

Boring tool  Ø 3 – 8 mm

with CBN  Ø 2,7 – 7,5 mm

KOMET Tool selection

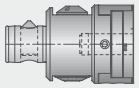
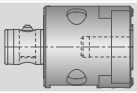
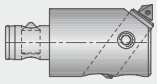
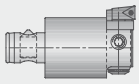
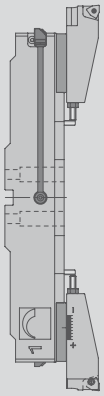
Help table for fine boring

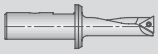
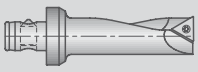
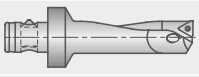
Fine adjustment systems (50 100 150 200 250 300 350 400 450 500 600 700 800 900 1000 2000)	through hole	blind hole	angled start and drilling out, interrupted cut	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
Ø 6,0 – 365,0	●	●	◐	◐	●	◐	◐	
Ø 6,0 – 365,0	●	●	◐	◐	●	◐	◐	
Ø 20,0 – 175,0	●	●	◐	◐		●	●	●
Ø 24,8 – 206,0	●	●	◐	◐	●	●	●	●
Ø 29,5 – 199,0	●	●	◐	◐		●	●	●
Ø 365 – 2000	●	●	●	●				

Fine boring tools (5 10 15 20 25 30 35 40 45 50)	through hole	blind hole	angled start and drilling out, interrupted cut	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
Ø 3,0 – 9,0	●	●	◐	◐				●
Ø 3,0 – 8,0	●	●	◐	◐				●
Ø 4,0 – 8,0	●	●	◐	◐		●	●	●
Ø 5,6 – 24,0	●	●	◐	◐		●	●	
Ø 5,6 – 26,0	●	●	◐	◐		○	○	●
Ø 7,9 – 44,0	●	●	◐	◐		●	●	
Ø 11,9 – 30,0	●	●	◐	◐		●	●	
Ø 15,9 – 26,0	●	●	◐	◐		●	●	

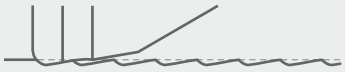
● very good ◐ good ○ possible: see technical notes

Help table for fine boring

Coolant				IT area	Tool		Page
Emulsion		MQL					
internal	external	internal	external				
●	●			> IT 7		Fine adjustment system **MicroKom *hi.flex* | Ø 6,0 – 365,0**	▸214 – 233
●	●			> IT 7		Fine adjustment system **MicroKom *BluFlex 2* | Ø 6,0 – 365,0**	▸214 – 233
●	●	●	●	> IT 7		Micro-adjustable head (FZ) **Ø 20,0 – 175,0**	▸246 – 249
●	●	●	●	< IT 7		Fine adjustment system **MicroKom M03Speed | Ø 24,8 – 206,0**	▸252 – 263
●	●	●	●	> IT 7		Micro-adjustable head (FF) **Ø 29,5 – 199,0**	▸250 – 251
●	●			< IT 7		Lightweight twin cutter tool **TwinKom | Ø 365 – 2000**	▸264 – 265

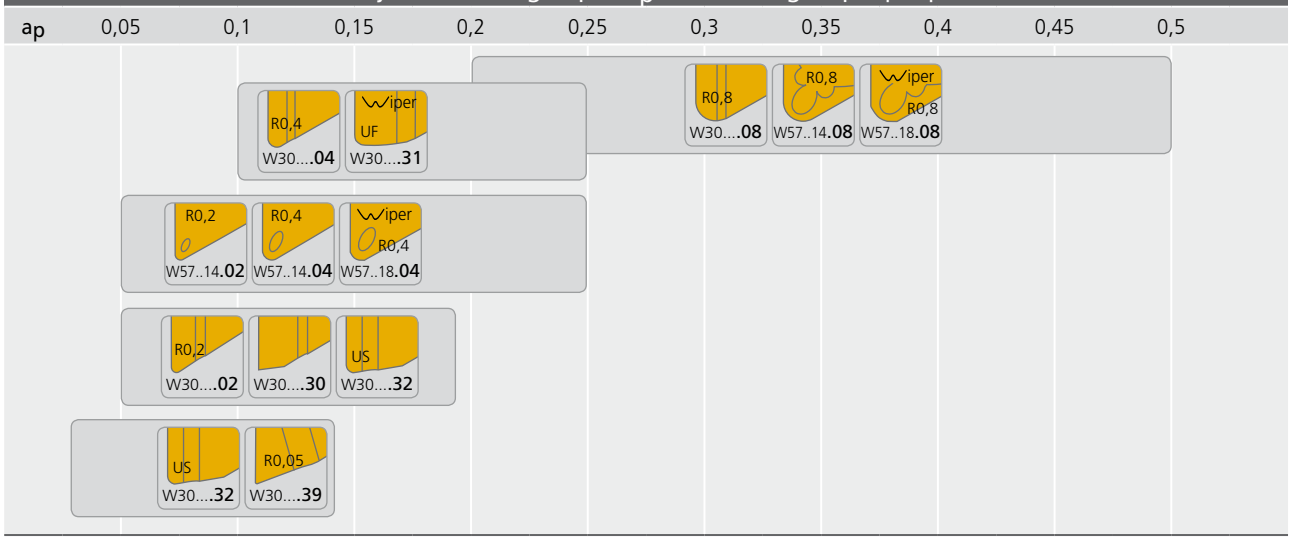
Coolant				IT area	Tool		Page
Emulsion		MQL					
internal	external	internal	external				
	◐			subject to mounting in micro-adjustable head		Boring bar **Ø 3,0 – 9,0**	▸237
●	●			subject to mounting in micro-adjustable head		Boring tool **UniTurn | Ø 3,0 – 8,0**	▸Chapter 5
	●	◐	○	subject to mounting in micro-adjustable head		Boring tool with CBN **UniTurn | Ø 4,0 – 8,0**	▸Chapter 5
●	●	◐	○	subject to mounting in micro-adjustable head		Boring bar **Ø 5,6 – 24,0**	▸238
●	●	◐	○	subject to mounting in micro-adjustable head		Low-vibration boring bar **Ø 5,6 – 26,0**	▸234
●	●	◐	○	subject to mounting in micro-adjustable head		Boring bar **Ø 7,9 – 44,0**	▸240
●	●	◐	○	subject to mounting in micro-adjustable head		Boring bar **Ø 11,9 – 30,0**	▸242
●	●	◐	○	IT 7		Boring bar **MicroKom M10 | Ø 15,9 – 26,0**	▸244

KOMET Insert selection

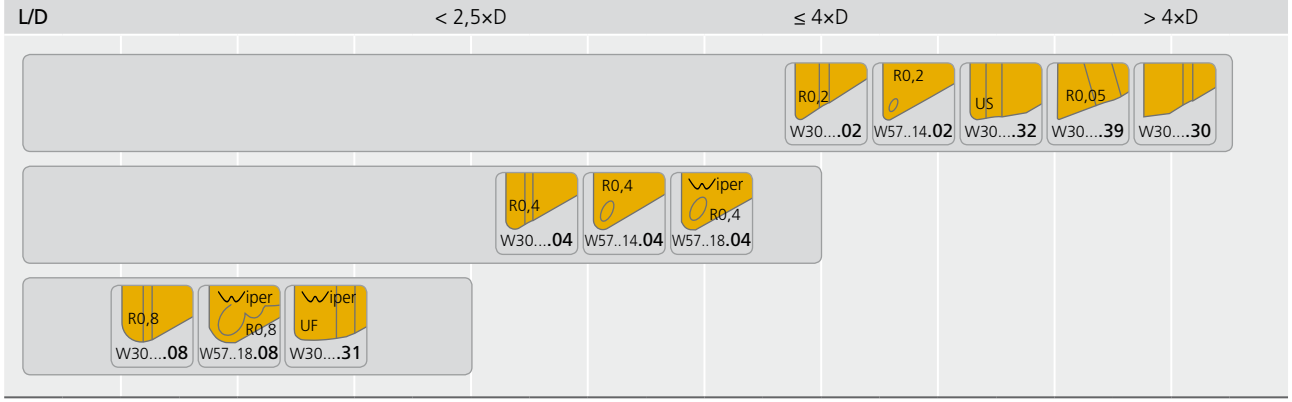
W30 | W57 – Material group P | M | K			
			
W30 .... .02			
W30 .... .04		**Universal insert** with different rake angles and corner radii	
W30 .... .08			
W30 .... .30			
W30 .... .31		**Wiper geometry | approach angle $\varkappa$ = 90°** - very good surface quality at high feed rates - subject to stable conditions (max. 2×D) - for interrupted cut	
W30 .... .32		- for large cut outs - for good chip control	
W30 .... .39			
W57..14 .02			
W57..14 .04		- for good chip control - for R.H. and L.H. cutting direction	
W57..14 .08			
W57..18 .04		**Wiper geometry | approach angle $\varkappa$ = 90°** - for good chip control - for R.H. and L.H. cutting direction - for better surface	
W57..18 .08			

For further information on indexable inserts, see chapter 7.

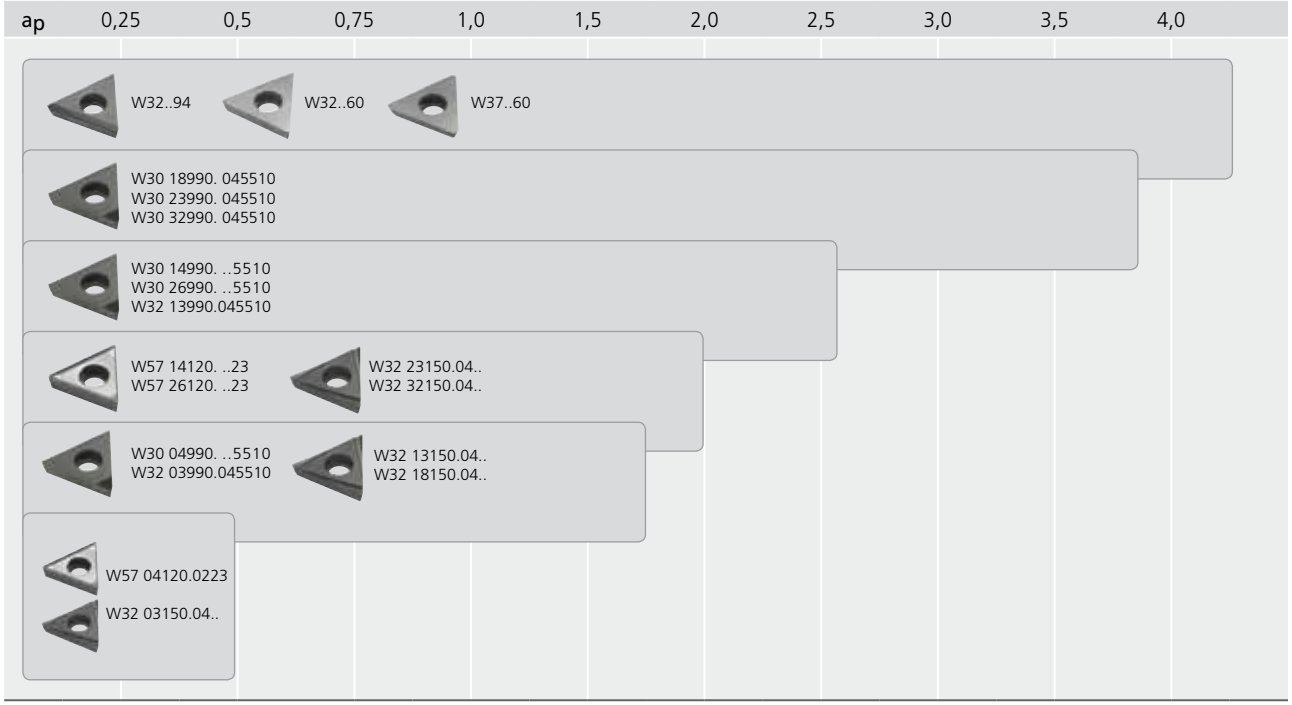
Subject to cutting depth a_p – Material group P | M | K



Subject to length:diameter ratio L/D – Material group P | M | K



Subject to cutting depth a_p – Machining aluminium



For further information on indexable inserts, see chapter 7.

KOMET MicroKom *hi.flex* | MicroKom *BluFlex 2*

Fine adjustment system for diameters 3 to 365 mm

The MicroKom *hi.flex* and MicroKom *BluFlex* 2 precision adjustment systems are highly versatile, making use of different boring bars and intelligent adapter solutions to cover the entire diameter range of 3 to 365 mm.

The standard sets come with four or five boring bars. A serrated body, a bridge and two different-sized holders for indexable inserts produce diameters of up to 125 mm depending on the combination.

The sets can be expanded using the tried-and-tested boring tools or UniTurn products, the internal turning diameter of which starts at 3 mm.



Precision boring head MicroKom *BluFlex* 2 with integrated high-contrast OLED display and Bluetooth low-energy wireless technology for connecting to all common Bluetooth-compatible smartphones from Android 4.4 and iOS 10

BENEFITS for you:

- Adjustment range: -0,4 to +4,25 mm on diameter
- Display resolution precise to the nearest micrometre: 0.001 mm in diameter
- Unit: mm / inch
- Sophisticated, high-contrast OLED display on the precision adjustment head itself
- Display can be rotated 180°
- Easy to operate on the touch display itself
- Additional Bluetooth low-energy interface that allows information to be displayed easily on a conventional smartphone
- Higher speeds due to integral part balancing
- Highly sensitive adjustment allows for a precise feed
- Absolute position measuring system – the absolute and relative positions of the slide are displayed at every switch-on
- Universal ABS interface
- Batteries are easy to replace
- Same construction as the previous version MicroKom *BluFlex*



Finger on the pulse of time – The clever alternative: „MicroKom BluFlex“ APP for use as display unit in Google Play for Android smartphones or the App Store for smartphones running iOS.

Bluetooth is a registered trademark of Bluetooth SIG, Inc.
iOS is a registered trademark of Cisco Systems, Inc.
Google Play and Android are registered trademarks of Google Inc.
App Store is a trademark of Apple Inc.



KOMET MicroKom

	Page
Variation options	216 – 217
Micro-adjustable head MicroKom *hi.flex*	218
Micro-adjustable head MicroKom *BluFlex 2*	219
Boring bar	220
Serrated body | Insert holder	221
Insert holder	222
Bridge | Insert holder	223
Forward and backward machining	
Serrated body | Adaptor | Insert holder	224
Adaptor | Insert holder	226
Bridge | Adaptor | Insert holder	228
Recommended cutting data	230
Alternative inserts	231
Mounting bridge for external machining	232
Tools, low-vibration	
Adaptor	233
Boring bar ∅ 5,6 - 26 mm	234
Tools with cylindrical shank	
Adaptor	236
Carbide boring bar ∅ 3,0 - 9,0 mm	237
Boring bar B001 / B003 ∅ 5,6 - 24 mm	238
Tools with ABS connection	
Boring bar B002 ∅ 8 - 28 mm	240
Boring bar G10 ∅ 11,9 - 30 mm	242
UniTurn	Chapter 5
Adaptor	
Copying tool ∅ 3 – 8 mm	
Boring tool ∅ 3 – 8 mm	
Boring tool with CBN ∅ 2,7 – 7,5 mm	

Micro-adjustable head MicroKom *hi.flex*

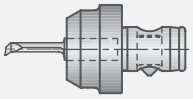
BENEFITS for you:

- Large adjustment range from -0.5 to +10 mm on diameter
- Adjustment per graduation = 0.01 mm Ø
- Adjustment accuracy 0.002 mm Ø with vernier
- Universal ABS interface



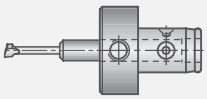
Variation options

Ø 3 – 8 mm



UniTurn
Adaptor | Boring tool

Ø 3 – 9 mm



Adaptor | carbide boring bar

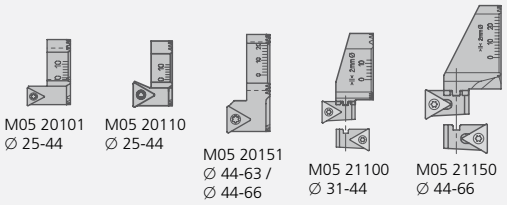
Ø 5,6 – 26 mm

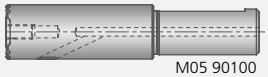


Adaptor | boring bar, low-vibration

Ø 25 – 66 mm

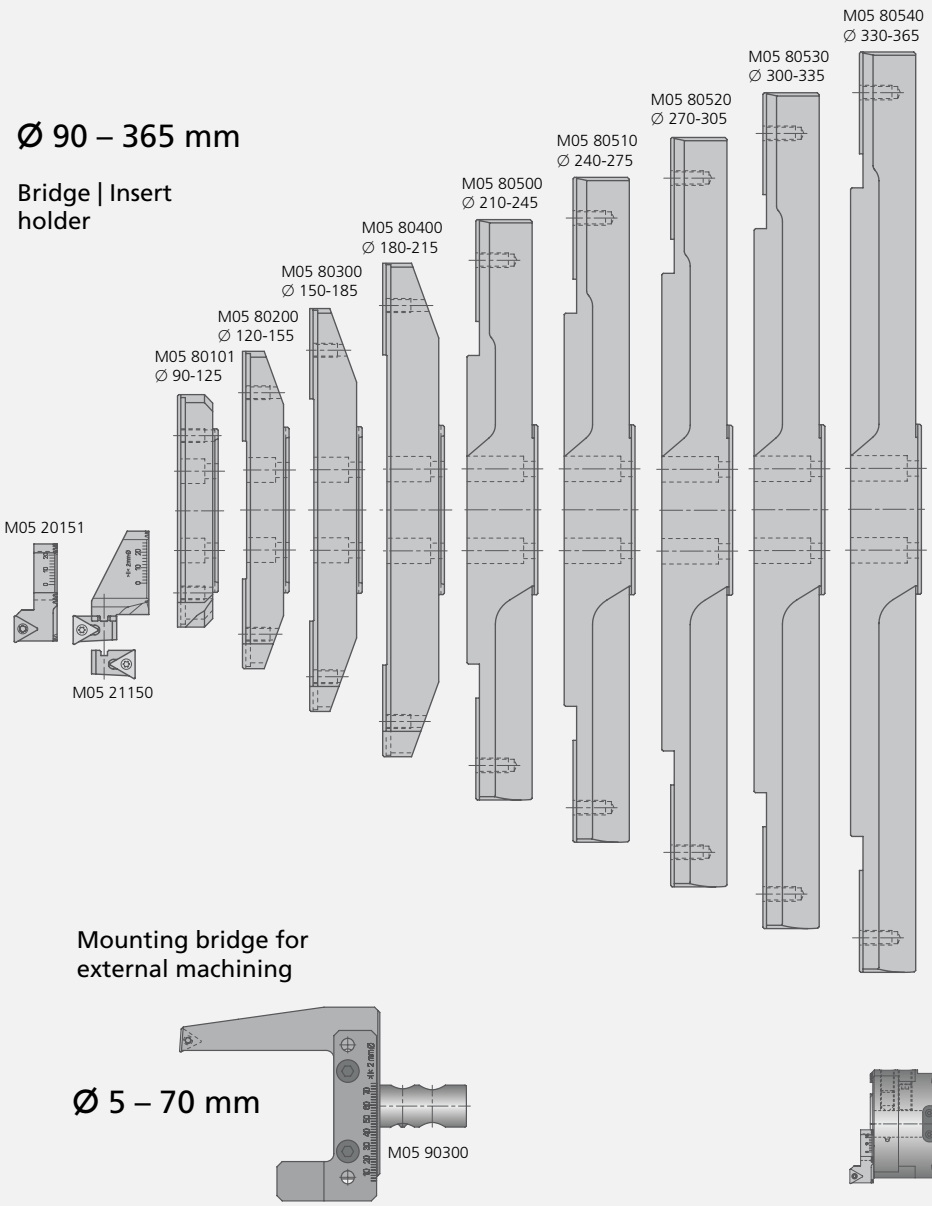
Serrated body | Insert holder





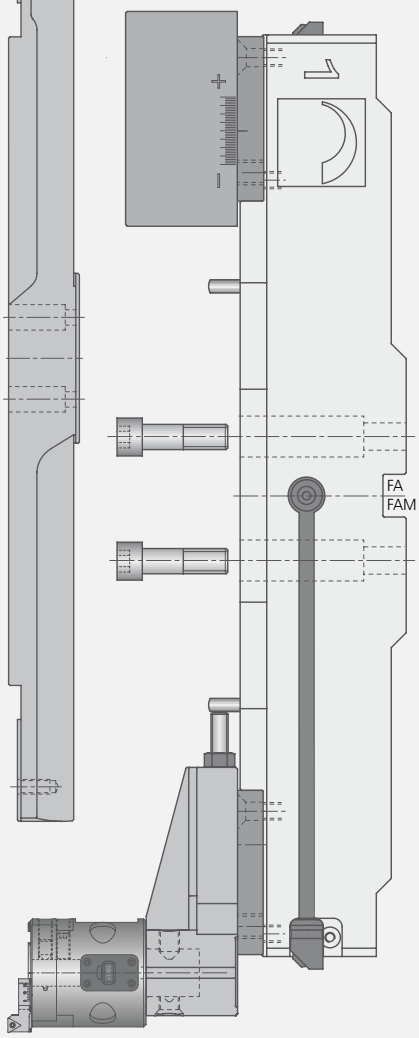
Ø 90 – 365 mm

Bridge | Insert holder



Ø 365 – 2000 mm

TwinKom Replaceable bridge | ABS Adapter

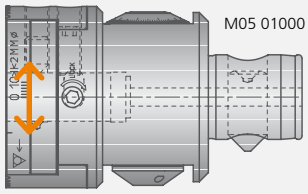


Mounting bridge for external machining

Ø 5 – 70 mm

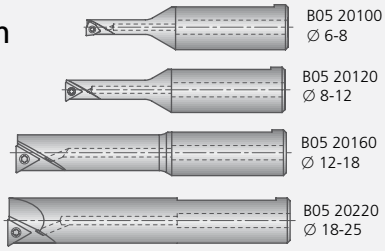
MicroKom *hi.flex*

Micro-adjustable head



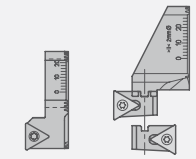
Ø 6 – 25 mm

Boring bars



Ø 63 – 94 mm

Insert holder

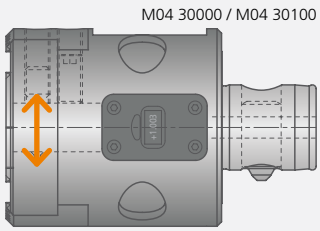


Technical data

- Large adjustment range from -0.5 to +10 mm in the diameter
- Max. coolant pressure: 50 bar
- Head diameter: 60 mm
- Height: 67 mm
- Weight of head without tool: 1,225 kg
- Max. speed: 17,500 rpm in central position
- Connection point: ABS 50
- Commercially available hex key WAF 4

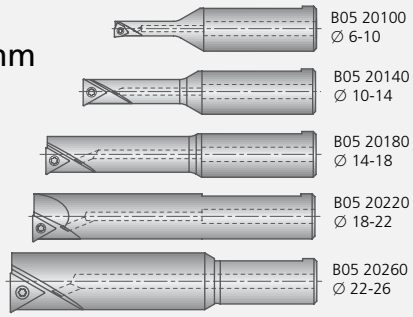
MicroKom *BluFlex 2*

Micro-adjustable head



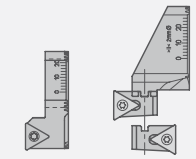
Ø 6 – 26 mm

Boring bars



Ø 66 – 94 mm

Insert holder

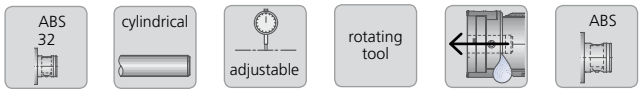


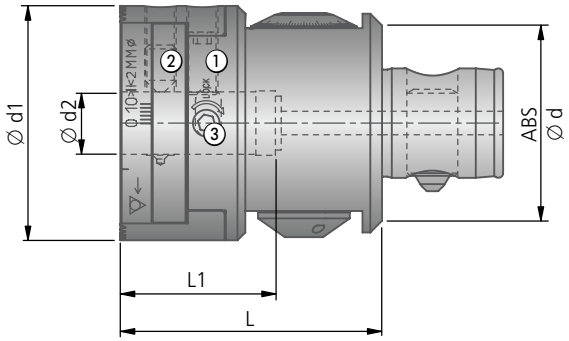
Technical data

- Linearity range: -0,4 to +4,25 mm (-0.0157 to 0.1673") in the diameter, do not operate the precision adjustable head outside of the adjustment range
- Linearity error ≤ ±5 µm in the diameter
- Max. coolant pressure: 50 bar
- Head diameter: 65 mm
- Height: 71 mm
- Weight of head without tool: 1,65 kg
- Max. speed: 20,000 rpm in central position
- Balance: Part balancing
- Working temperature: + 10 °C to + 40 °C
- Storage temperature: - 20 °C to + 60 °C
- Connection point: ABS 50
- Protection class: IP67
- Lithium-ion battery: 2/3 AA SL 761
- Commercially available hex key WAF3/ WAF4 / WAF5

KOMET MicroKom *hi.flex*

Micro-adjustable head





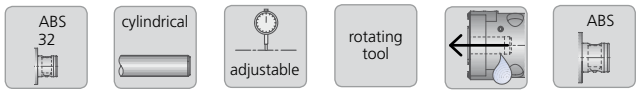
Micro-adjustable head										
Order No. Article	ABS Ø d	Ø d1	Ø d2	Adjust- ment S	L	L1	kg	Clamping screw ① Order No. Article	Clamping screw ② Order No. Article	Gripper screw ③ Order No. Article
M05 01000 ABS50/16	50	60	ABS32 Ø 16	5	67	39,7	1,225	**55051 08120** M8×1×20-O4	**N00 02062** ABS32-F1.1-O4	**55051 08008** M8×8-O4

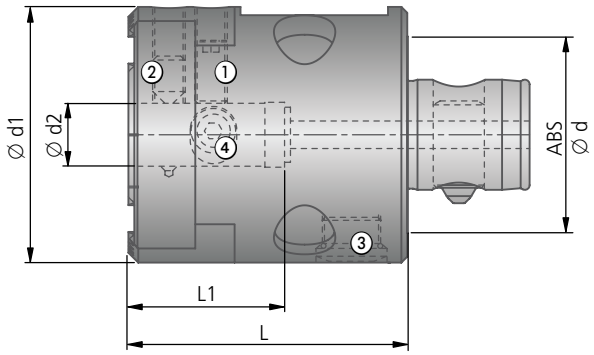
The micro-adjustable drilling head is balanced in the zero position.
Adjustment must be in line with cutting parameters and spindle speed.

Supply includes micro-adjustable head: with screws ①, ② and ③.

Fine boring set Ø 6 – 125 mm	Contents of case			
Order No.		Order No.	Qty.	Article
M05 00010	①	**M05 01000**	1	Micro-adjustable head
	②	**M05 20101**	1	Insert holder Ø 25-44 mm
	③	**M05 20151**	1	Insert holder Ø 44-125 mm
	④	**M05 80101**	1	Bridge Ø 90-125 mm
	⑤	**M05 90100**	1	Serrated body Ø 25-63 mm
	⑥	**M05 90501**	1	Packing piece
	⑦	**B05 20100**	1	Boring bar Ø 6 mm
	⑧	**B05 20120**	1	Boring bar Ø 8 mm
	⑨	**B05 20160**	1	Boring bar Ø 12 mm
	⑩	**B05 20220**	1	Boring bar Ø 18 mm
	⑪	**18050 10040**	1	Allen key SW4
	⑫	**L05 01110**	1	Flag key 5IP
		L05 01120	1	Flag key 6IP
		L05 01240	1	Flag key 8IP
		55011 05016	5	Cylindrical screw M5×16
	⑬	**W57 04140.0260**	4	Insert BK60
		W57 14140.0460	4	Insert BK60
		W00 04120.0164	2	Insert BK64

Micro-adjustable head





Micro-adjustable head												
Order No.	ABS Ø d	Ø d1	Ø d2	Adjust-ment S	L	L1	kg	Tool clamp: Clamping screw ① Order No. Article	Tool clamp: Clamping screw ② Order No. Article	Battery compartment: Cover/O-ring ③ Order No.	Slide clamp ④: Clamping screw Order No. Article	Slide clamp ④: Sleeve Order No.
M04 30100 M04 30000	50	65	ABS32 Ø 16	2,3	71	38	1,45	55051 08120 M8×1×20-O4	N00 02062 ABS32-F1.1-O4	M04 30000.20 (O5) 52914 011315	M04 30000.24 M5×14-O4 8 Nm	M04 30000.23

Adjustment must be in line with cutting parameters and spindle speed.
See chapter 8 for the information we are required to provide in accordance with German battery legislation.

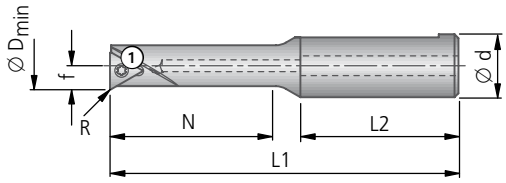
A radio certification is required for the distribution of radio-enabled devices (M04 30000). This certification for the MicroKom *BluFlex* 2 currently exists for all CE countries, USA and Canada (FCC). In other countries, only the distribution of the fine adjustment head without Bluetooth (M04 30100) is permitted.

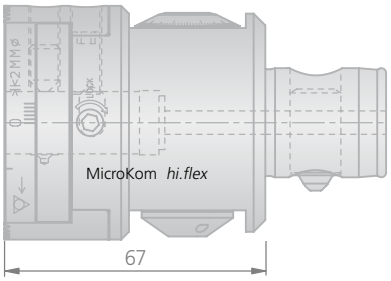
Fine boring set Ø 6 – 125 mm	Contents of case			
Order No.		Order No.	Qty.	Article
M04 30110	①	M04 30100	1	Micro-adjustable head
M04 30010	①	M04 30000	1	Micro-adjustable head | Bluetooth
	②	M05 20101	1	Insert holder Ø 25-44 mm / 0.98"-1.73"
	③	M05 20151	1	Insert holder Ø 44-125 mm / 1.73"-4,92"
	④	M05 80101	1	Bridge Ø 90-125 mm / 3,54"-4,92"
	⑤	M05 90100	1	Serrated body Ø 25-63 mm / 0.98"-2.48"
	⑥	M05 90501	1	Packing piece
	⑦	B05 20100	1	Boring bar Ø 6 mm / 0.236"
	⑧	B05 20140	1	Boring bar Ø 10 mm / 0.394"
	⑨	B05 20180	1	Boring bar Ø 14 mm / 0.551"
	⑩	B05 20220	1	Boring bar Ø 18 mm / 0.709"
	⑪	B05 20260	1	Boring bar Ø 22 mm / 0.866"
	⑫	18050 10030	1	Allen key SW3
	⑬	L05 01110	1	Flag key 5IP
		L05 01120	1	Flag key 6IP
		L05 01240	1	Flag key 8IP
		55011 05016	5	Cylindrical screw M5×16
	⑭	W57 04140.0260	4	Insert BK60
		W57 14140.0460	4	Insert BK60
		W00 04120.018440	2	Insert BK8440

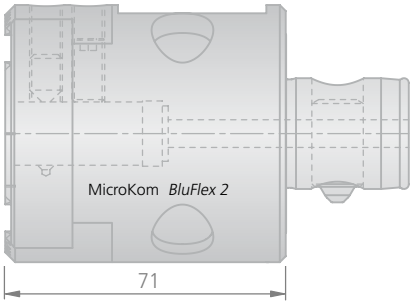


Boring bar

for workpiece material P M K N S H | 3,5×D | cylindrical







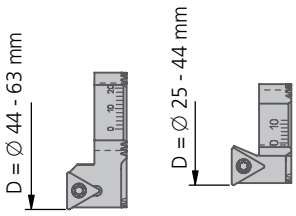
3,5×D	●	●	◐	◐	✕	◐ HRC > 54	◐ HRC > 54	✕

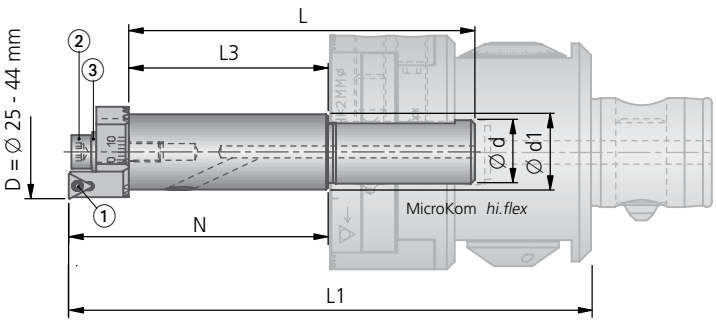
Boring bar										Basic recommendation		
Ø D	Order No.	Ød	L1	L2	N	f	R	kg	Clamping screw ① Order No. Article	Indexable insert W00 W57..14 W57..12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
6	**B05 20100**	16	71,7	40	21	3	0,1	0,06	**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04120.018440** **W00 04120.012710** **W00 04120.0121**	WOHX 02T001EL-G12 BK8440 WOHX 02T001EL-G12 BK2710 WOHX02T001FL-G12 K10	P M K H N S
8	**B05 20120**	16	77,4	40	28	4	0,2	0,07	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W57 04140.0260** **W30 04060.032710** **W30 04060.036110** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK2710 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H
10	**B05 20140**	16	81,8	40	34	5	0,2	0,08	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** **W30 14060.042710** **W30 14060.046110** **W57 14120.0423** **W30 14990.0440**	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H
12	**B05 20160**	16	88,2	40	42	6	0,2	0,08				
14	**B05 20180**	16	94,4	40	50	7	0,2	0,10				
18	**B05 20220**	16	100	40	60	9	0,2	0,14				
22	**B05 20260**	16	108	36	68,5	11	0,2	0,21	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**W57 26140.0460** **W30 26060.042710** **W30 26060.046110** **W57 26120.0423** **W30 26990.0440**	TOGX 140304EN-14 BK60 TOHX 140304EL-G06 BK2710 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOEX 140304TN CBN40	P M K H <52 HRC N S H

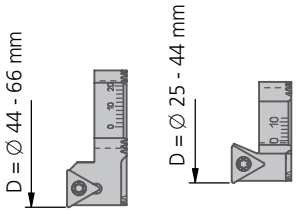
Supply includes boring bar: with clamping screw ①.
Please order insert separately.

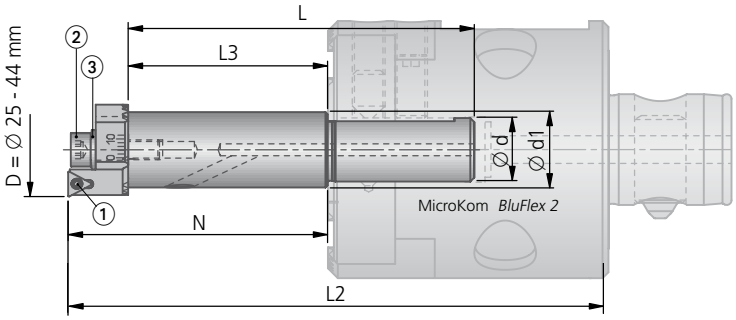
Serrated body | Insert holder

for workpiece material P M K N | 3,5×D | cylindrical









3,5×D	●	●	◐	◐	✕	◐ HRC > 54	◐ HRC > 54	✕

Serrated body

Order No.	d	d1	N	L	MicroKom *hi.flex* L1	MicroKom *BluFlex 2* L2	L3	kg	Location screw ② Order No. Article	Cup spring ③ Order No. Article
M05 90100	16	19	65	88,5	130,73	134,73	51,5	0,163	**55011 05016** M5×16-O4	**56771 10053** D10×5,2×0,3

Supply includes serrated body: with location screw ② and cup spring ③.

Insert holder				Basic recommendation		
Ø D	Order No.	kg	Clamping screw ① Order No. Article	Indexable insert -14 -12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
25 – 44	**M05 20101**	0,019	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** **W30 04060.032710** **W30 04060.037615** **W57 04120.0223**	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK2730 TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10	P M K N
25 – 44	**M05 20110**	0,019	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W57 14140.0460** **W30 14060.042710** **W30 14060.047615** **W57 14120.0423**	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10	P M K N
44 – 63 / 44 – 66	**M05 20151**	0,026				

Supply includes insert holder: with clamping screw ①.

Supply includes insert holder M05 20110:
with clamping screw ① and location screw L02 30180 (M5x16)

Please order insert separately.

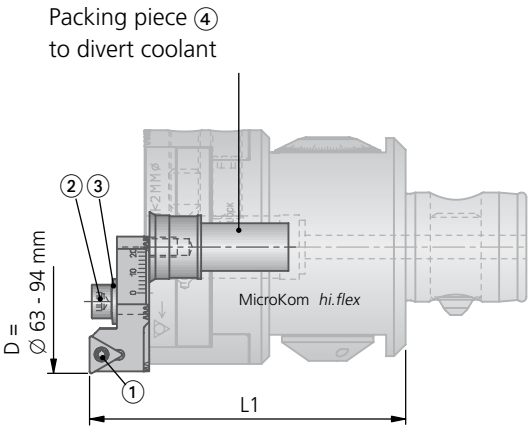
● very good | ◐ good | ○ possible | ✕ not possible

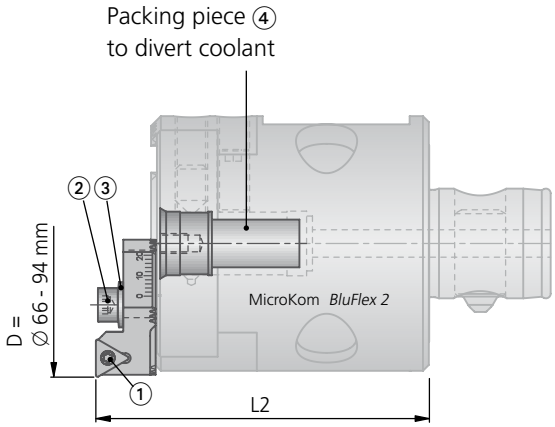
Guideline values for fine boring and alternative inserts: Pages 230-231.

Insert holder

for workpiece material P M K N

3,5×D





3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	✕	◐	◐	✕

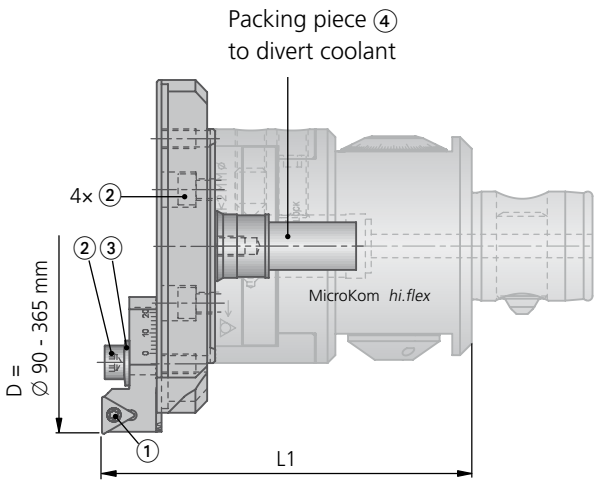
			Insert holder			Basic recommendation		
					Clamping screw ①	Indexable insert -14 -12 W30		for workpiece material
Ø D	MicroKom *hi.flex* L1	MicroKom *BluFlex 2* L2	Order No.	kg	Order No. Article	Order No. ▽▽ size	ISO Code	
63 - 94 66 - 94	80,5	84,71	**M05 20151**	0,026	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W57 14140.0460** **W30 14060.042710** **W30 14060.047615** **W57 14120.0423**	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10	P M K N

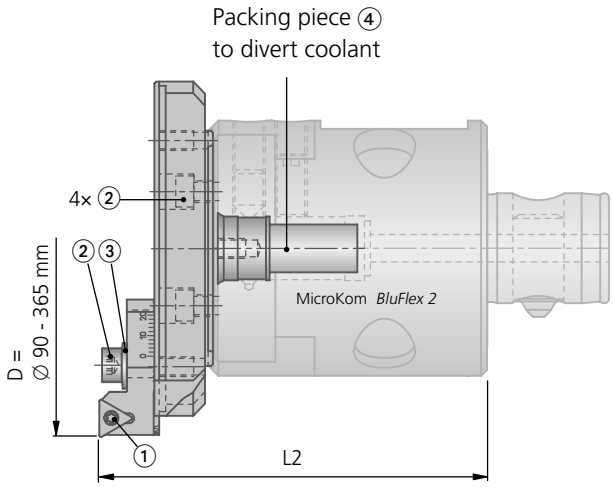
Supply includes insert holder: with clamping screw ①.
Please order insert, location screw ②, cup spring ③ and packing piece ④ separately.

Accessories		
Location screw ②	Cup spring ③	Packing piece ④
Order No. Article	**Order No.** Article	**Order No.**
55011 05016 M5×16-O4	**56771 10053** D10×5,2×0,3	**M05 90501**

Bridge | Insert holder

for workpiece material P M K N | 3,5×D





3,5×D	●	●	◐	◐	✕	◐ HRC > 54	◐ HRC > 54	✕

			Bridge		Insert holder			Basic recommendation	
Ø D	MicroKom *hi.flex* L1	MicroKom *BluFlex 2* L2	Order No.	kg	Order No.	kg	Clamping screw ① Order No. Article	Indexable insert -14 -12 W30 Order No. ISO Code ▽▽ size	for workpiece material
90 - 125	94,62	98,72	**M05 80101**	0,147	**M05 20151**	0,026	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60	P
120 - 155	96,62	100,72	**M05 80200**	0,107					
150 - 185	98,62	102,72	**M05 80300**	0,152				**W30 14060.042710** TOHX 090204EL-G06 BK2710	M
180 - 215	101,62	105,72	**M05 80400**	0,229					
210 - 245	101,62	105,72	**M05 80500**	0,306				**W30 14060.047615** TOHX 090204EL-G06 BK7615	K
240 - 275	101,62	105,72	**M05 80510**	0,349					
270 - 305	101,62	105,72	**M05 80520**	0,394				**W57 14120.0423** TOGX 090204FN-12 K10	N
300 - 335	101,62	105,72	**M05 80530**	0,435					
330 - 365	101,62	105,72	**M05 80540**	0,478					

Supply includes bridge: bridge without insert holder.

Supply includes insert holder: with clamping screw ①.

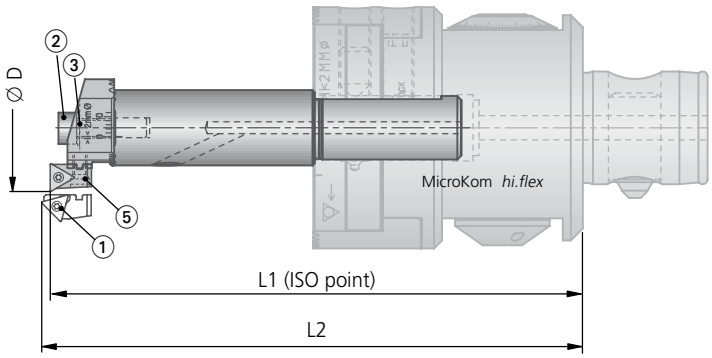
Please order insert, location screw ②, cup spring ③ and packing piece ④ separately.

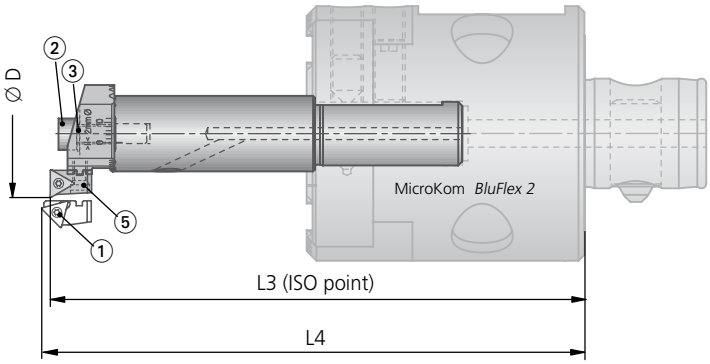
Accessories		
Location screw ② Order No. Article	Cup spring ③ Order No. Article	Packing piece ④ Order No.
55011 05016 M5×16-O4	**56771 10053** D10×5,2×0,3	**M05 90501**

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: Pages 230-231.

Serrated body | Adaptor | Insert holder

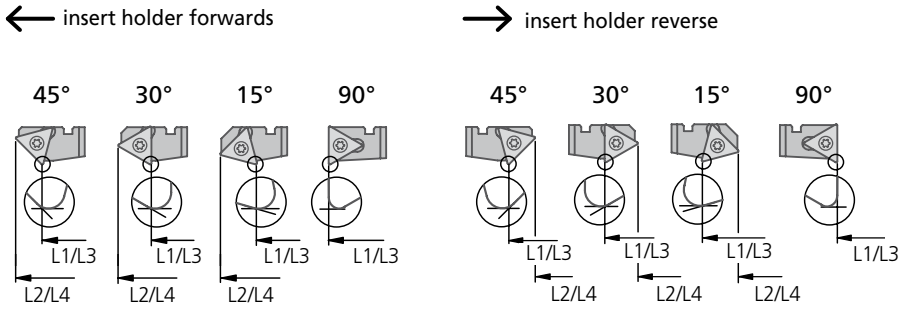


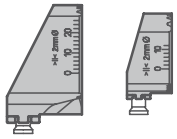


> 3,5×D	●	●	◐	◐	●	◐ HRC > 54	◐ HRC > 54	✕

	Serrated body		Adaptor	← Insert holder forwards									
				90°					15°				
					MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	kg	Order No.	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
31 - 44	M05 90100	0,163	M05 21100	M03 10033	131,8	–	135,85	–	M03 11120	127,3	138	131,35	142,05
44 - 66	M05 90100	0,163	M05 21150	M03 10043	140,7	–	144,75	–	M03 11130	134,2	142,6	138,25	146,65

	Serrated body		Adaptor	→ Insert holder reverse									
				90°					15°				
					MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	kg	Order No.	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
31 - 44	M05 90100	0,163	M05 21100	M03 12020	117,6	–	121,65	–	M03 12120	122,2	116	126,25	120,05
44 - 66	M05 90100	0,163	M05 21150	M03 12030	120,7	–	124,75	–	M03 12130	127,2	118,8	131,25	122,85





Supply includes serrated body: with location screw ② and cup spring ③.
Supply includes adaptor: with location screw ⑤.
Supply includes insert holder: with clamping screw ①.
Please order insert separately.

Accessories		
Location screw ②	Cup spring ③	Location screw ⑤
Order No. Article	**Order No.** Article	**Order No.** Article
55011 05016 M5×16-O4	**56771 10053** D10×5,2×0,3	**N00 56211** S/M3,5×7,3-10IP

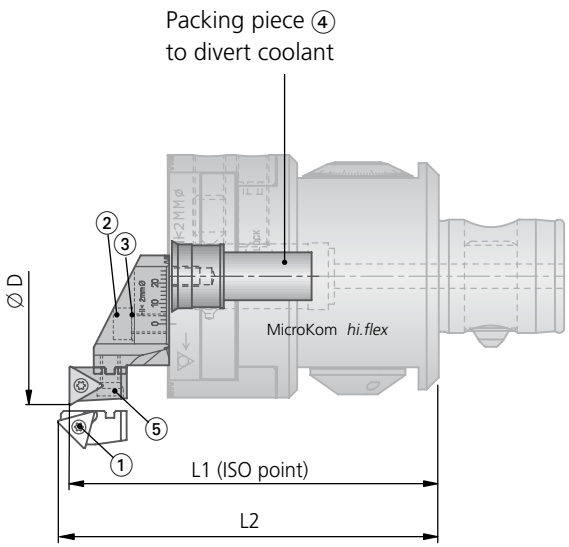
	30°					45°					Clamping screw ①	Basic recommendation: Indexable insert -14 -12 W30	for workpiece material
		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*				
	Order No.	L1	L2	L3	L4	**Order No.**	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
	–					**M03 11320**	129,3	138,3	133,35	142,35	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** TOGX 06T102EN-14 BK60 **W30 04060.032710** TOHX 06T103EL-G06 BK2710 **W30 04060.037615** TOHX 06T103EL-G06 BK7615 **W57 04120.0223** TOGX06T102FN-12 K10	P M K N
	M03 11230	135,2	142,7	139,25	146,75	**M03 11330**	137,5	143,6	141,55	147,65	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14060.042710** TOHX 090204EL-G06 BK2710 **W30 14060.047615** TOHX 090204EL-G06 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10	P M K N

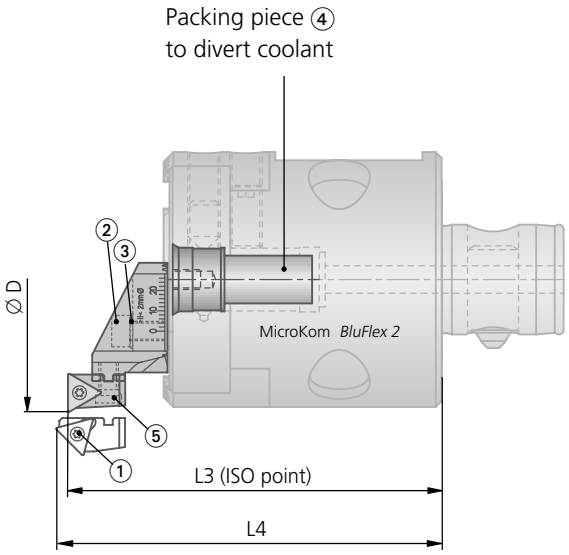
	30°					45°					Clamping screw ①	Basic recommendation: Indexable insert -14 -12 W30	for workpiece material
		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*				
	Order No.	L1	L2	L3	L4	**Order No.**	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
	M03 12220	121,2	115,7	125,25	119,75	**M03 12320**	120,2	115,7	124,25	119,75	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** TOGX 06T102EN-14 BK60 **W30 04420.038425** TOHX 06T103ER-G12 BK8425 **W57 04120.0223** TOGX 06T102FN-12 K10 **W30 04990.0240** TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
	M03 12230	126,2	118,7	130,25	122,75	**M03 12330**	123,7	117,6	127,75	121,65	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14420.047615** TOHX 090204ER-G12 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10 **W30 14990.0440** TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: Pages 230-231.

Adaptor | Insert holder

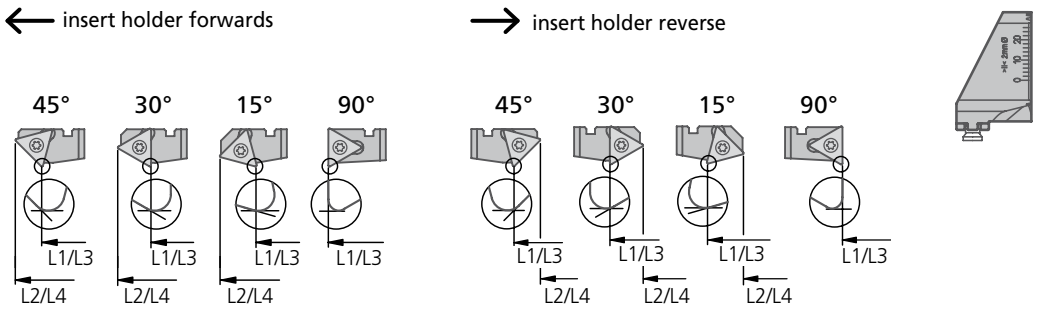




> 3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	●	◐	◐	✕

	Adaptor		← Insert holder forwards									
		Location screw ⑤	90°					15°				
				MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	Order No. Article	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
66 - 94	M05 21150	N00 56211 S/M3,5×7,3-10IP	M03 10043	90,7	–	94,73	–	M03 11130	84,2	92,6	88,23	96,63

	Adaptor		→ Insert holder reverse									
		Location screw ⑤	90°					15°				
				MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	Order No. Article	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
66 - 94	M05 21150	N00 56211 S/M3,5×7,3-10IP	M03 12030	70,7	–	74,73	–	M03 12130	77,2	68,8	81,23	72,83



Supply includes adaptor: with location screw ⑤.
Supply includes insert holder: with clamping screw ①.
Please order insert, location screw ②, cup spring ③ and packing piece ④ separately.

Accessories		
Location screw ②	Cup spring ③	Packing piece ④
Order No. Article	**Order No.** Article	**Order No.**
55011 05016 M5×16-O4	**56771 10053** D10×5,2×0,3	**M05 90501**

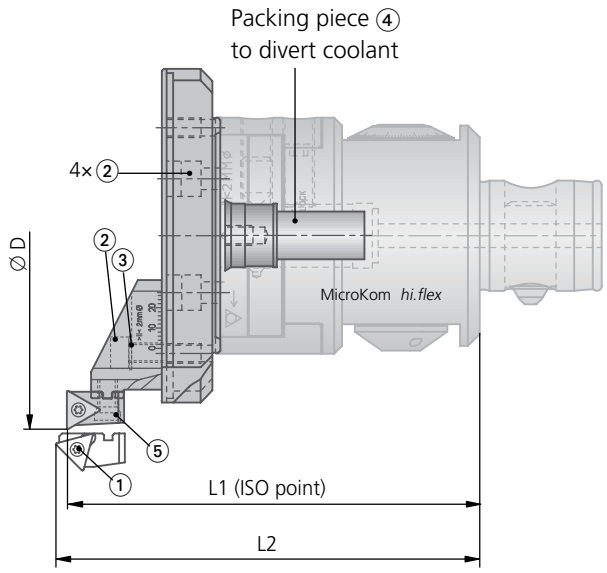
	30°				45°					Basic recommendation	
	MicroKom *hi.flex*		MicroKom *BluFlex 2*		MicroKom *hi.flex*		MicroKom *BluFlex 2*		Clamping screw ①	Indexable insert -14 -12 W30	for workpiece material
	Order No.	L1	L2	L3	L4	**Order No.**	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
	M03 11230	85,2	92,7	89,23	96,73	**M03 11330**	87,5	93,6	91,53	97,63	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14060.042710** TOHX 090204EL-G06 BK2710 **W30 14060.047615** TOHX 090204EL-G06 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10	P M K N

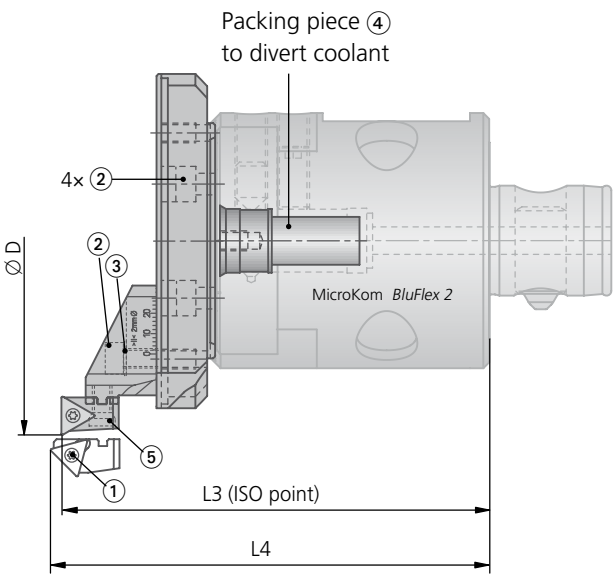
	30°				45°					Basic recommendation	
	MicroKom *hi.flex*		MicroKom *BluFlex 2*		MicroKom *hi.flex*		MicroKom *BluFlex 2*		Clamping screw ①	Indexable insert -14 -12 W30	for workpiece material
	Order No.	L1	L2	L3	L4	**Order No.**	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
	M03 12230	76,2	68,7	80,23	72,73	**M03 12330**	73,7	67,6	77,73	71,63	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14420.047615** TOHX 090204ER-G12 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10 **W30 14990.0440** TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: Pages 230-231.

Bridge | Adaptor | Insert holder





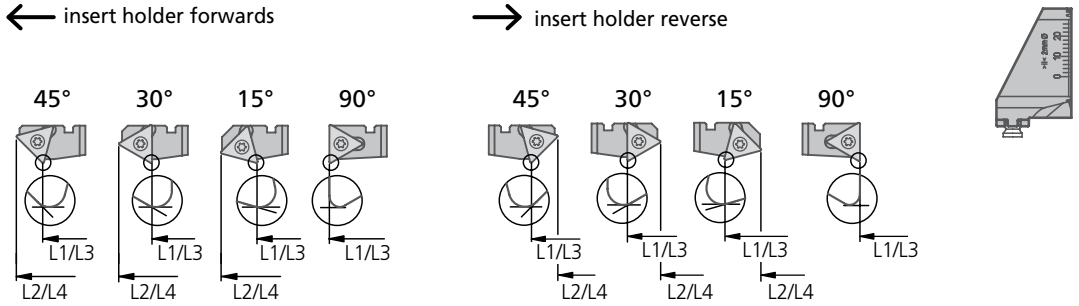
> 3,5×D	●	●	◐	◐	●	◐ HRC > 54	◐ HRC > 54	×	

← Insert holder forwards

	Bridge		Adaptor		90°					15°				
				Location screw ⑤		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	kg	Order No.	Order No. Article	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
90-125	**M05 80101**	0,147	**M05 21150**	**N00 56211** S/M3,5×7,3-10IP	**M03 10043**	104,7	–	108,74	–	**M03 11130**	98,2	106,6	102,24	110,64
120-155	**M05 80200**	0,107				106,7	–	110,74	–		100,2	108,6	104,24	112,64
150-185	**M05 80300**	0,152				108,7	–	112,74	–		102,2	110,6	106,24	114,64
180-215	**M05 80400**	0,229	**M05 21150**	**N00 56211** S/M3,5×7,3-10IP	**M03 10043**	111,7	–	115,74	–	**M03 11130**	105,2	113,6	109,24	117,64
210-245	**M05 80500**	0,306												
240-275	**M05 80510**	0,349												
270-305	**M05 80520**	0,394												
300-335	**M05 80530**	0,435												
330-365	**M05 80540**	0,478												

→ Insert holder reverse

	Bridge		Adaptor		90°					15°				
				Location screw ⑤		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*	
Ø D	Order No.	kg	Order No.	Order No. Article	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4
90-125	**M05 80101**	0,147	**M05 21150**	**N00 56211** S/M3,5×7,3-10IP	**M03 12030**	84,7	–	88,74	–	**M03 12130**	90,2	81,8	94,24	85,84
120-155	**M05 80200**	0,107				86,7	–	90,74	–		93,2	84,8	97,24	88,84
150-185	**M05 80300**	0,152				88,7	–	92,74	–		95,2	86,8	99,24	90,84
180-215	**M05 80400**	0,229	**M05 21150**	**N00 56211** S/M3,5×7,3-10IP	**M03 12030**	91,7	–	95,74	–	**M03 12130**	98,2	89,8	102,24	93,84
210-245	**M05 80500**	0,306												
240-275	**M05 80510**	0,349												
270-305	**M05 80520**	0,394												
300-335	**M05 80530**	0,435												
330-365	**M05 80540**	0,478												



Supply includes bridge: bridge without adaptor.

Supply includes adaptor: with location screw ⑤.

Supply includes insert holder: with clamping screw ①.

Please order insert, 5× location screw ②, cup spring ③ and packing piece ④ separately.

Accessories		
Location screw ②	Cup spring ③	Packing piece ④
Order No. Article	**Order No.** Article	**Order No.**
55011 05016 M5×16-O4	**56771 10053** D10×5,2×0,3	**M05 90501**

	30°					45°					Clamping screw ①	Basic recommendation: Indexable insert	Basic recommendation: for workpiece material
		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*			-14 -12 W30	
	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
		99,2	106,7	103,24	110,74		101,5	107,6	105,54	111,64			
	M03 11230	101,2	108,7	105,24	112,74	**M03 11330**	103,5	109,6	107,54	113,64			
		103,2	110,7	107,24	114,74		105,5	111,6	109,54	115,64			
	M03 11230	106,2	113,7	110,24	117,74	**M03 11330**	108,5	114,6	112,54	118,64	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14060.042710** TOHX 090204EL-G06 BK2710 **W30 14060.047615** TOHX 090204EL-G06 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10	P M K N

	30°					45°					Clamping screw ①	Basic recommendation: Indexable insert	Basic recommendation: for workpiece material
		MicroKom *hi.flex*		MicroKom *BluFlex 2*			MicroKom *hi.flex*		MicroKom *BluFlex 2*			-14 -12 W30	
	Order No.	L1	L2	L3	L4	Order No.	L1	L2	L3	L4	**Order No.** Article	**Order No.** ISO code ▽▽ size	
		91,2	81,7	93,24	85,74		86,7	80,6	90,74	84,64			
	M03 12230	92,2	84,7	96,24	88,74	**M03 12330**	89,7	83,6	93,74	87,64			
		94,2	86,7	98,24	90,74		91,7	85,6	95,74	89,64			
	M03 12230	97,2	89,7	101,24	93,74	**M03 12330**	94,7	88,6	98,74	92,64	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** TOGX 090204EN-14 BK60 **W30 14420.047615** TOHX 090204ER-G12 BK7615 **W57 14120.0423** TOGX 090204FN-12 K10 **W30 14990.0440** TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: Pages 230-231.

Recommended cutting data

Guideline values for fine boring						v_c	f (mm/rev)					
							max. feed 3,5×D					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code DIN	Cutting speed v_c (m/min)	Ø 6 – 7,9	Ø 8 – 11,9	Ø 12 – 25	Ø 25 – 44	Ø 44 – 94	Ø 90 – 365
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,04	0,07	0,10	0,08	0,10	0,10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,04	0,06	0,12	0,08	0,12	0,12
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	300	0,04	0,07	0,12	0,10	0,15	0,15
	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	240	0,03	0,06	0,10	0,08	0,10	0,10
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	200	0,03	0,05	0,10	0,06	0,10	0,10
	4.1			HSS		120	0,02	0,04	0,08	0,06	0,08	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,01	0,04	0,08	0,06	0,08	0,08
	5.1	400		titanium,titanium alloys	3.7115 (TiAl5Sn2.5)	30	0,01	0,04	0,08	0,06	0,08	0,08
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	200	0,01	0,05	0,10	0,08	0,10	0,10
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	180	0,01	0,05	0,10	0,06	0,10	0,10
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	120	0,01	0,04	0,08	0,06	0,10	0,10
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	240	0,05	0,10	0,15	0,15	0,20	0,20
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	200	0,05	0,10	0,15	0,15	0,20	0,20
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,04	0,08	0,15	0,10	0,15	0,15
	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	180	0,04	0,08	0,15	0,10	0,15	0,15
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,04	0,08	0,15	0,10	0,15	0,15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,03	0,07	0,12	0,10	0,15	0,15
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,03	0,10	0,15	0,10	0,15	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	400	0,02	0,04	0,08	0,10	0,15	0,15
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	300	0,05	0,08	0,15	0,10	0,15	0,15
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	500	0,02	0,06	0,10	0,08	0,12	0,12
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	350	0,05	0,08	0,12	0,10	0,15	0,15
	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	300	0,05	0,08	0,12	0,10	0,15	0,15
H	15.0	1400		hardened steels < 45 HRC		80	–	0,05	0,08	0,08	0,08	0,08
	16.0	1800		hardened steels > 45 HRC		60	–	0,05	0,08	0,06	0,08	0,08

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Alternative inserts

for better chip control

Insert size	Indexable insert .32.. .39.. W57..18 Order No.	ISO-Code	for workpiece material
W..04...	only for forward machining:		
	W30 04120.3232	TOHX 06T102EL-US12 CK32	P M
	W30 04120.3977	TOHX 06T1ZZEL-39G12 BK77	S
W..14...	only for forward machining:		
	W30 14120.3232	TOHX 090202EL-US12 CK32	P M
	W30 14120.3977	TOHX 0902ZZEL-39G12 BK77	S
W..26...	only for forward machining:		
	W30 26120.3232	TOHX 140304-US12 CK32	P M
	W30 26120.3977	TOHX 1403ZZEL-39G12 BK77	S

for higher cutting speed

Insert size	Indexable insert W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
W..04...	W57 04140.023210	TOGX 06T102EN-14 CK3210	P M
	W30 04990.0257	TOEX 06T102TN CBN57	K only 0.6025 (EN-GJL-250)
	W30 04990.025510	TOEX 06T102FN PKD5510	N
	W57 04120.027710	TOGX 06T102FN-12 BK7710	N
	only for forward machining:		
	W30 04120.0238	TOHX 06T102EL-G12 CK38	P M
W..14...	W57 14140.043210	TOGX 090204EN-14 CK3210	P M
	W30 14990.0457	TOEX 090204TN CBN57	K only 0.6025 (EN-GJL-250)
	W30 14990.045510	TOEX 090204FN PKD5510	N
	W57 14120.047710	TOGX 090204FN-12 BK7710	N
	only for forward machining:		
	W30 14120.0238	TOHX 090202EL-G12 CK38	P M
W..26...	W57 26140.043210	TOGX 140304EN-14 CK3210	P M
	W30 26990.0457	TOEX 140304TN CBN57	K only 0.6025 (EN-GJL-250)
	W30 26990.045510	TOEX 140304FN PKD5510	N
	W57 26120.047710	TOGX 140304FN-12 BK7710	N
	only for forward machining:		
	W30 26120.0438	TOHX 140304EL-G12 CK38	P M

Wiper – for better surface

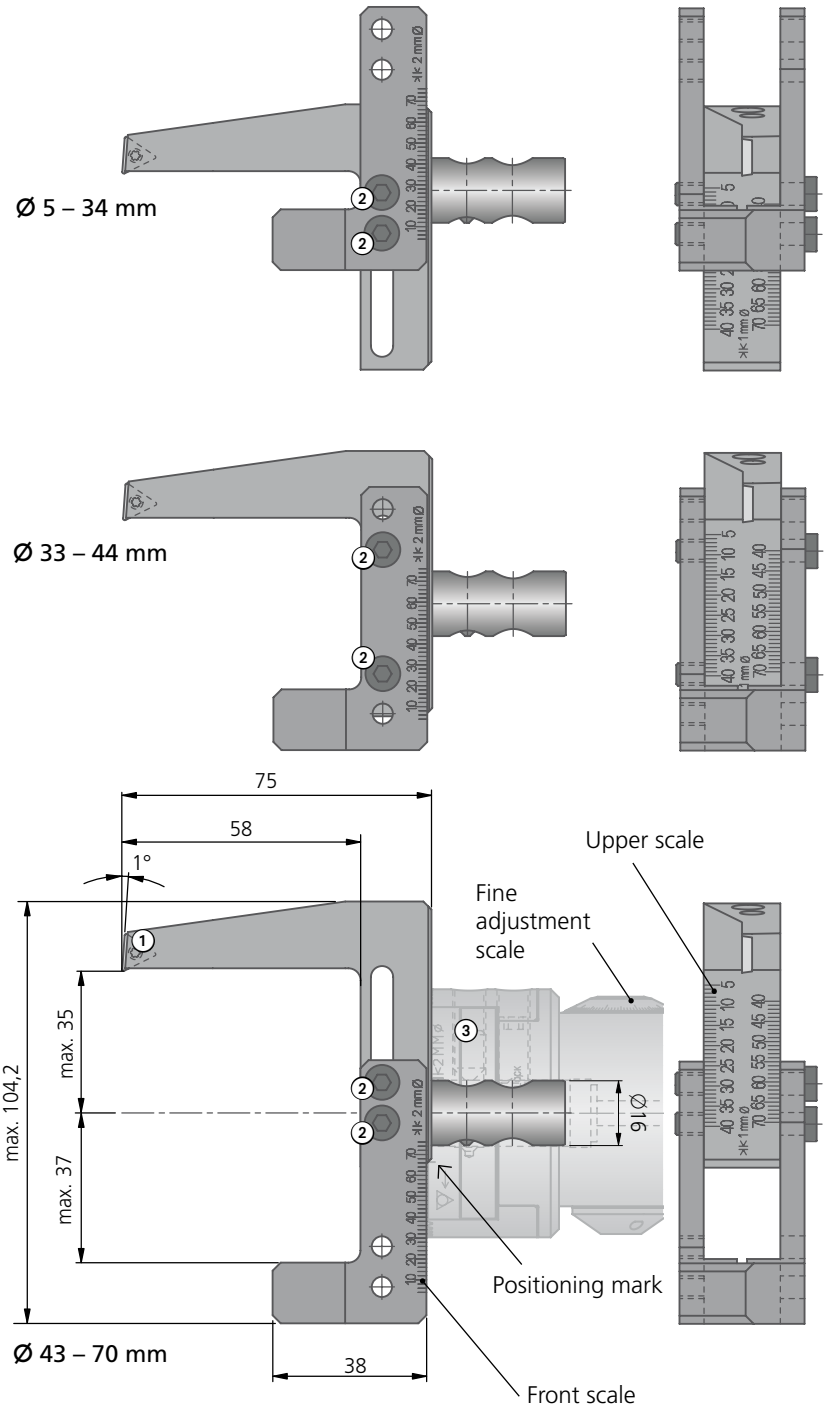
W..04...	W57 04180.048430	TOGX 060104 EN-18 BK8430	P M K
	W57 04180.0432	TOGX 060104 EN-18 CK32	P M
W..14...	W57 14180.048430	TOGX 090204 EN-18 BK8430	P M K
	W57 14180.0432	TOGX 090204 EN-18 CK32	P M
W..26...	W57 26180.048430	TOGX 140304 EN-18 BK8430	P M K
	W57 26180.0432	TOGX 140304 EN-18 CK32	P M

for greater strength

W..04...	W57 04140.023210	TOGX 06T102EN-14 CK3210	P M
	W30 04990.025510	TOEX 06T102FN PKD5510	N
	only for forward machining:		
	W30 04060.036110	TOHX 06T103EL-G06 BK6110	K
	W30 04200.0321	TOHX 06T103FL-G20 K10	N S
W..14...	W57 14140.043210	TOGX 090204EN-14 CK3210	P M
	W30 14990.025510	TOEX 090204FN PKD5510	N
	only for forward machining:		
	W30 14060.046110	TOHX 090204EL-G06 BK6110	K
	W30 14200.0421	TOHX 090204FL-G20 K10	N S
W..26...	W57 26140.043210	TOGX 140304EN-14 CK3210	P M
	W30 26990.045510	TOEX 140304FN PKD5510	N
	only for forward machining:		
	W30 26060.046110	TOHX 140304EL-G06 BK6110	K
	W30 26200.0521	TOHX 140305FL-G20 K10	N S

KOMET MicroKom *hi.flex* | MicroKom *BluFlex 2*

Mounting bridge for external machining Ø 5 – 70 mm



Setting the diameter

- Position the mounting bridge on the micro-adjustable head.
- Set the coarse position on the upper scale, tighten screw ②.

  Important note: check position of screw ② for required Ø range!
- Make a rough estimate of the diameter and preset this on the presetting device. Tighten screw ③.

KOMET MicroKom *hi.flex*:

Make precise adjustments to the presetting device using the adjustment key and display unit.

KOMET MicroKom *BluFlex 2*:

Fine adjustment on the presetting device using the hex key and the OLED display in the head, or alternatively using any mobile end device (the "MicroKom BluFlex" app must be installed for this).

Fine adjustment of the slide can also be performed in the machine using the hex key and the OLED display in the head, or can alternatively be carried out using any mobile end device.

Mounting bridge					Basic recommendation		
Ø D	Order No.	kg	Clamping screw ① Order No. Article	Cylindrical screw ② Order No. Article	Indexable insert -12 -14 W30 Order No. ▽▽ size	ISO Code	for workpiece material
5 – 70	**M05 90300**	0,377	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55011 05030** M5×30-⬡4	**W57 14140.0460** **W30 14360.047615** **W57 14120.0423**	TOGX 090204EN-14 BK60 TOHX 090204ER-G06 BK7615 TOGX 090204FN-12 K10	P M K N

Supply includes: Mounting bridge with clamping screw ① and cylindrical screw ②.
Please order insert separately.

Adaptor for clamping vibration dampened fine boring bars

Boring bar, low-vibration

Ø 5,6 / 6,9

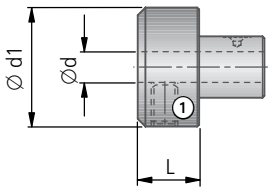


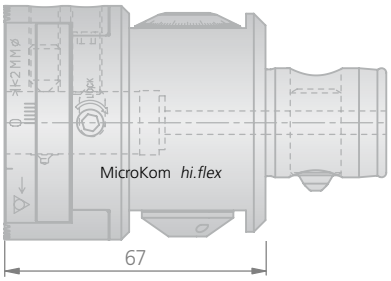
Ø 9 / 11

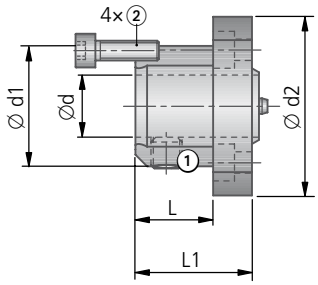


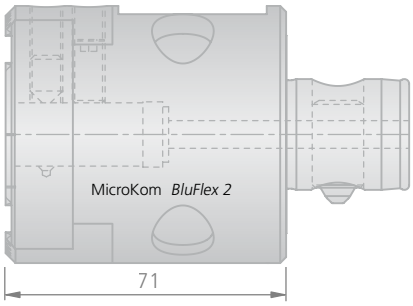
Ø 13 - 26











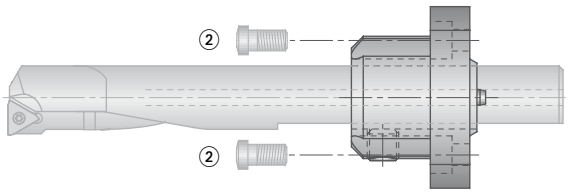
Adaptor								Accessories
							Clamping screw ①	Location screw
Order No.	Ø d	Ø d1	Ø d2	L	L1	kg	Article	Order No.	Order No.
M05 90200	6	31	–	16	–	0,112	M8×10-O4	55051 08010	–
M05 90210	8	31	–	16	–	0,107	M8×10-O4	55051 08010	–
M05 90220	10	31	46	15	25	0,155	M8×10-O4	55051 08010	–
M05 90230	12	31	46	15	25	0,147	M8×10-O4	55051 08010	–
M05 90240	16	31	46	20	30	0,146	M8×8-O4	55051 08008	55011 05016 M5×16-O4

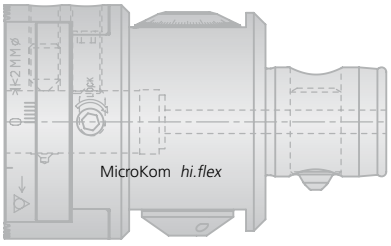
Supply includes: Adaptor with clamping screw ①. Please order location screw ② separately.

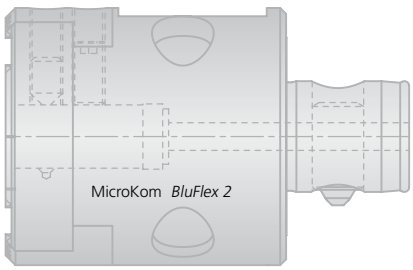
Instruction for adaptor M05 90240

Please note:

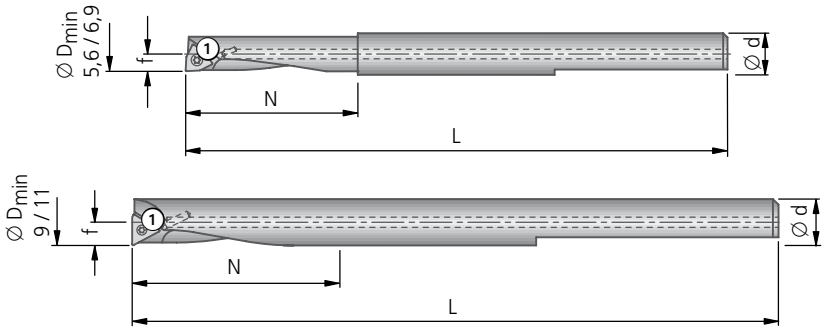
Before tightening the location screw ②, centre the adaptor with shank diameter for the boring bar on the micro-adjustable head.





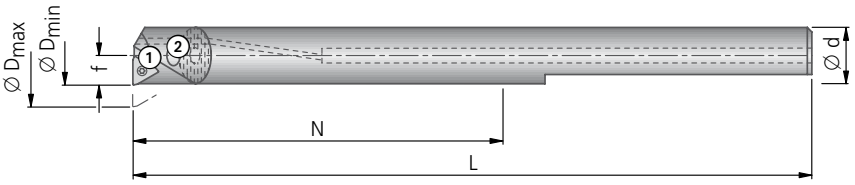


> 3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	✕	○	○	●



Boring bar								Basic recommendation		
Ø D min.	Order No. *carbide version	Ø d	L	N max	f	kg	Clamping screw ① Order No. Article	Indexable insert W00 W57..14 W57..12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
5,6	**B00 30280**	6	65	22	2,8		**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04120.016440** **W00 04120.0121**	WOHX 02T001EL-G12 BK6440 WOHX 02T001FL-G12 K10	P M K N S
6,9	**B00 30290***	6	80	36	3,45					
9	**B00 00680***	8	90	24	4,45		**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.028430** **W30 04060.036110** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H
11	**B00 00690***	10	95	50	5,45					

Supply includes boring bar: with clamping screw ①.
Please order insert separately.



					Adaptor	Turning head			Basic recommendation	
Ø D	Ø d	L	N max	f	Order No.	Turning head Order No.	Location screw ② Order No.	Clamping screw ① Order No. Article	Indexable insert W30 W57 -12 W57 -14 Order No. ISO Code ▽▽ size	for workpiece material
13-15	12	120	75	6,45	**G10 12060** 0,14	**G10 12621** 0,02	**G10 10111.15** Tx10	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.048430** TOGX 090204EN-14 BK8430 **W30 14060.046110** TOHX 090204EL-G06 BK6110 **W57 14120.0423** TOGX 090204FN-12 K10 **W30 14990.0440** TOEX 090204TN CBN40	P M K H <52 HRC N S H
15-17	12	120	75	8,45	**G10 12060** 0,14	**G10 12841** 0,02				
17-19	16	140	100	8,45	**G10 12070** 0,30	**G10 12711** 0,02	**G10 10131.15** Tx25	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm		
19-22	16	140	100	9,45	**G10 12070** 0,30	**G10 12861** 0,02				
22-26	16	140	100	10,95	**G10 12080** 0,30	**G10 12731** 0,02				

Supply turning head includes: with clamping screw ① and location screw ②.
Please order insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended cutting data | Alternative inserts

Guideline values for fine boring						v_c	Max. f (mm/rev)		
							Feed		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Ø 5,6 – 6,9	Ø 9 – 11	Ø 13 – 26
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)	120	0,04	0,07	0,10
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150	0,04	0,06	0,12
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	150	0,04	0,07	0,12
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	90	0,03	0,06	0,10
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	90	0,03	0,05	0,10
P	4.1			HSS		70	0,02	0,04	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	30	0,01	0,04	0,08
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	20	0,01	0,04	0,08
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	70	0,01	0,05	0,10
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	70	0,01	0,05	0,10
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	70	0,01	0,04	0,08
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	180	0,05	0,10	0,15
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	160	0,05	0,10	0,15
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	160	0,04	0,08	0,15
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	140	0,04	0,08	0,15
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120	0,04	0,08	0,15
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	120	0,03	0,07	0,12
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	100	0,03	0,10	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	250	0,02	0,04	0,08
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	250	0,05	0,08	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	400	0,02	0,06	0,10
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	270	0,05	0,08	0,12
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	200	0,05	0,08	0,12
H	15.0	1400		hardened steels < 45 HRC		120	–	0,05	0,08
H	16.0	1800		hardened steels > 45 HRC		90	–	0,05	0,08

for better chip control

Ø D	Indexable insert W30 / W57 / PKD CBN W30 / .32.. / .39.. Order No.	ISO-Code	for workpiece material
5,6 – 6,9	–		
9 – 11	**W30 04120.3232** **W30 04120.3977**	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	P M S
13 – 26	**W30 14120.3232** **W30 14120.3977**	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	P M S

for higher cutting speed

Ø D	Order No.	ISO-Code	for workpiece material
5,6 – 6,9	–		
9 – 11	**W57 04140.023210** **W30 04120.0238** **W30 04990.0257** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOEX 06T102TN CBN57 TOEX 06T102FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N
13 – 26	**W57 14140.043210** **W30 14120.0238** **W30 14990.0457** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOEX 090204TN CBN57 TOEX 090204FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N

for better surface finish

Ø D	Order No.	ISO-Code	for workpiece material
5,6 – 6,9	–		
9 – 11	**W57 04140.023210** **W30 04060.036110** **W30 04200.0321** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOEX 06T102FN PKD5510	P M K N S N
13 – 26	**W57 14140.043210** **W30 14060.046110** **W30 14200.0421** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOEX 090204FN PKD5510	P M K N S N

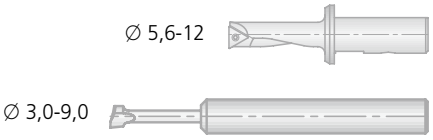
Wiper – for better surface finish

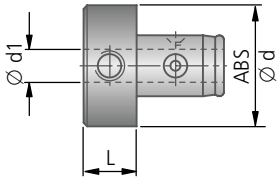
Ø D	Order No.	ISO-Code	for workpiece material
5,6 – 6,9	–		
9 – 11	**W57 04180.048430** **W57 04180.0432**	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
13 – 26	**W57 14180.048430** **W57 14180.0432**	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M

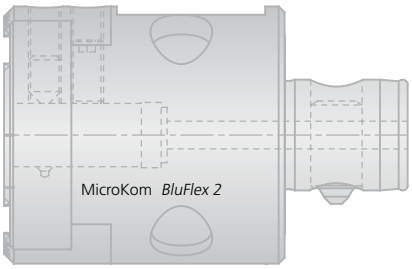
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

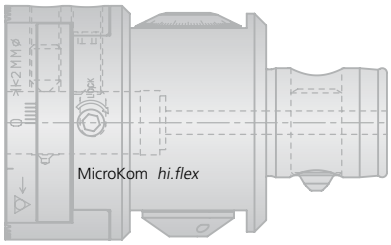
Important: See chapter 8 for more application details and safety notes!

KOMET Adaptor



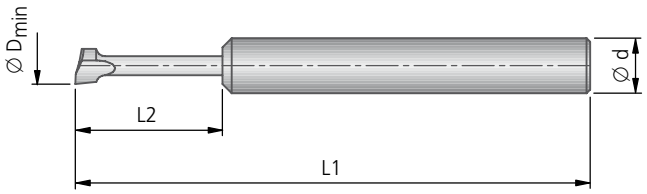






Adaptor with ABS connection				
Order No.	ABS Ø d	Ø d1	L	kg
L01 10431	32	6	14	0,12
L01 10441	32	8	14	0,12

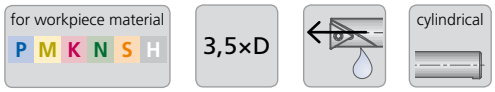
> 3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	✕	✕	✕	●

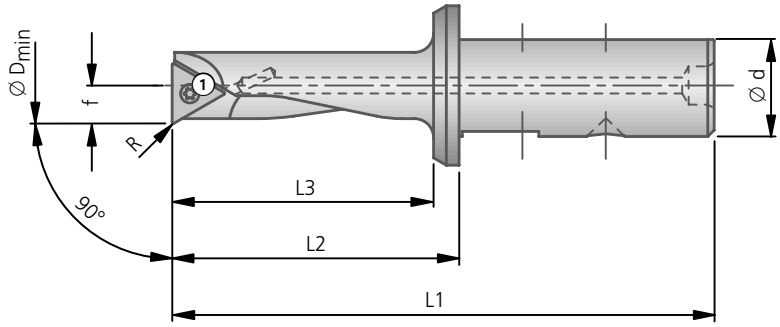


							Basic recommendation	
Ø D min	Article	Order No.	Ø d	L1	L2	kg	Quality	for workpiece material
3,0	B01F-P20	**H15 21110.02**	8	60	16	0,017	P20	P M
	B01F-K10	**H15 21110.21**	8	60	16	0,017	K10	P K N S
5,0	B02F-P20	**H15 21120.02**	8	60	19	0,018	P20	P M
	B02F-K10	**H15 21120.21**	8	60	19	0,018	K10	P K N S
7,0	B03F-K10	**H15 21130.21**	8	65	26	0,019	K10	P K N S
9,0	B04F-K10	**H15 21140.21**	8	70	45	0,026	K10	P K N S

● very good | ◐ good | ○ possible | ✕ not possible

KOMET Boring bar B001 / B003 Ø 5,6 – 24 mm





3,5×D	●	●	◐	◐	✕	◐ HRC > 54	◐ HRC > 54	✕

Boring bar										Basic recommendation		
Ø D min.	Order No.	Ød	L1	L2	L3	f	R	kg	Clamping screw ① Order No. Article	Indexable insert W00 W57..14 W57..12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
5,6	**B00 37010**	8	48	26	22	2,75	0,1	0,04	**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04120.016440**	WOHX 02T001EL-G12 BK6440	P M K N S
6,5	**B00 37020**	8	52	30	26	3,20	0,1	0,03		**W00 04120.0121**	WOHX 02T001FL-G12 K10	
8	**B00 15510**	8	57	35	28	3,95	0,2	0,02	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W57 04140.028430**	TOGX 06T102EN-14 BK8430	P M K H <52 HRC N S H
	B00 15610	16	75	35	30	3,95	0,2	0,08		**W30 04060.036110**	TOHX 06T103EL-G06 BK6110	
10	**B00 15620**	16	80	40	35	4,95	0,2	0,08		**W57 04120.0223**	TOGX 06T102FN-12 K10	
11	**B00 15710**	16	85	45	40	5,45	0,2	0,09	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W30 04990.0240**	TOEX 06T102TN CBN40	P M K H <52 HRC N S H
12	**B00 15530**	8	67	45	38	5,95	0,2	0,04		**W57 14140.048430**	TOGX 090204EN-14 BK8430	
	B00 15630	16	85	45	40	5,95	0,2	0,09		**W30 14060.046110**	TOHX 090204EL-G06 BK6110	
14	**B00 15640**	16	90	50	45	6,95	0,2	0,11		**W57 14120.0423**	TOGX 090204FN-12 K10	
16	**B00 15650**	16	95	55	50	7,95	0,2	0,17		**W30 14990.0440**	TOEX 090204TN CBN40	
18	**B00 15661**	16	100	60	55	8,95	0,2	0,14				
19	**B00 15751**	16	105	65	60	9,45	0,2	0,16				
20	**B00 15671**	16	105	65	60	9,90	0,2	0,22				
22	**B00 15681**	16	105	65	60	10,9	0,2	0,19				
24	**B00 15691**	16	105	65	60	11,9	0,2	0,21				

Further diameters on request.

Supply includes boring bar: with clamping screw ①.
Please order insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended cutting data | Alternative inserts

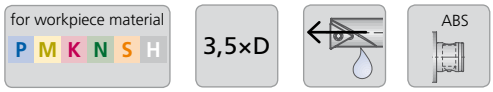
Guideline values for fine boring						v_c	Max. f (mm/rev)		
							Feed		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Ø 5,6 – 6,5	Ø 8 – 10	Ø 11 – 24
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)	300	0,04	0,07	0,10
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,04	0,06	0,12
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,04	0,07	0,12
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	240	0,03	0,06	0,10
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	200	0,03	0,05	0,10
P	4.1			HSS		120	0,02	0,04	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,01	0,04	0,08
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	30	0,01	0,04	0,08
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	200	0,01	0,05	0,10
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	180	0,01	0,05	0,10
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	120	0,01	0,04	0,08
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	240	0,05	0,10	0,15
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	200	0,05	0,10	0,15
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,04	0,08	0,15
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	180	0,04	0,08	0,15
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,04	0,08	0,15
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,03	0,07	0,12
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,03	0,10	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	400	0,02	0,04	0,08
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	300	0,05	0,08	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	500	0,02	0,06	0,10
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	350	0,05	0,08	0,12
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	300	0,05	0,08	0,12
H	15.0	1400		hardened steels < 45 HRC		80	–	0,05	0,08
H	16.0	1800		hardened steels > 45 HRC		60	–	0,05	0,08

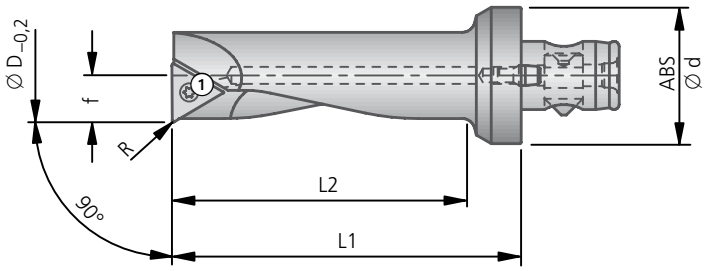
for better chip control			
Ø D	Indexable insert W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
5,6 – 6,5	–		
8 – 10	**W30 04120.3232** **W30 04120.3977**	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	P M S
11 – 24	**W30 14120.3232** **W30 14120.3977**	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	P M S
for higher cutting speed			
5,6 – 6,5	–		
8 – 10	**W57 04140.023210** **W30 04120.0238** **W30 04990.0257** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOEX 06T102TN CBN57 TOEX 06T102FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N
11 – 24	**W57 14140.043210** **W30 14120.0238** **W30 14990.0457** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOEX 090204TN CBN57 TOEX 090204FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N
for better surface finish			
5,6 – 6,5	–		
8 – 10	**W57 04140.023210** **W30 04060.036110** **W30 04200.0321** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOEX 06T102FN PKD5510	P M K N S N
11 – 24	**W57 14140.043210** **W30 14060.046110** **W30 14200.0421** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOEX 090204FN PKD5510	P M K N S N
Wiper – for better surface finish			
5,6 – 6,5	–		
8 – 10	**W57 04180.048430** **W57 04180.0432**	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
11 – 24	**W57 14180.048430** **W57 14180.0432**	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

KOMET Boring bar B002 — Ø 8 – 28 mm





3,5×D	●	●	◐	◐	✕	● HRC > 54	● HRC > 54	✕

Boring bar									Basic recommendation		
Ø D min.	Order No.	ABS Ød	L1	L2	f	R	kg	Clamping screw ① Order No. Article	Indexable insert W30 W57 -12 W57 -14 W30 CBN Order No. ▽▽ size	ISO Code	for workpiece material
7,9	B00 25510	25	38	28	3,95	0,2	0,05	N00 56021 S/M2×3,8-6IP 0,62 Nm	W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H
	B00 25610	32	42	28	3,95	0,2	0,10				
	B00 25810	40	45	28	3,95	0,2	0,18				
8,9	B00 25700	32	48	34	4,45	0,2	0,10				
9,9	B00 25620	32	48	34	4,95	0,2	0,11				
	B00 25820	40	51	34	4,95	0,2	0,19				
10,9	B00 25710	32	57	43	5,45	0,2	0,11	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H
11,9	B00 25530	25	53	43	5,95	0,2	0,07				
	B00 25630	32	57	43	5,95	0,2	0,12				
	B00 25830	40	60	43	5,95	0,2	0,20				
13,9	B00 25540	25	60	50	6,95	0,2	0,08				
	B00 25640	32	64	50	6,95	0,2	0,14				
	B00 25840	40	67	50	6,95	0,2	0,22				
15,9	B00 25650	32	72	58	7,95	0,2	0,15				
	B00 25850	40	75	58	7,95	0,2	0,24				
17,9	B00 25661	32	72	59	8,95	0,2	0,36				
	B00 25861	40	75	59	8,95	0,2	0,15				
19,9	B00 25671	32	82	70	9,9	0,2	0,21				
	B00 25871	40	85	70	9,9	0,2	0,30				
21,9	B00 25681	32	82	70	10,9	0,2	0,23				
23,9	B00 25691	32	82	70	11,9	0,2	0,26				
27,9	B00 25911	40	85	70	13,9	0,2	0,42				

Further diameters on request.

Supply includes boring bar: with clamping screw ①.
Please order insert separately.

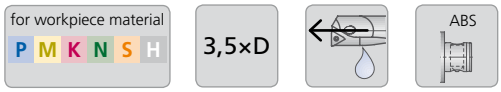
● very good | ◐ good | ○ possible | ✕ not possible

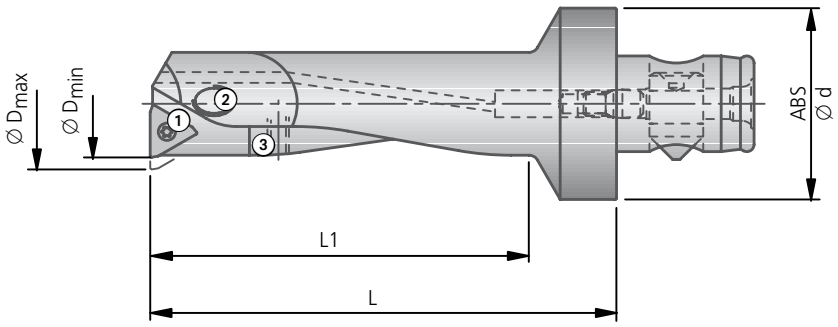
Guideline values for fine boring							v_c	Max. f (mm/rev)	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Feed Ø 7,9 – 9,9	Feed Ø10,9–27,9
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)		300	0,07	0,10
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		250	0,06	0,12
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		300	0,07	0,12
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		240	0,06	0,10
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		200	0,05	0,10
P	4.1			HSS			120	0,04	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		50	0,04	0,08
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		30	0,04	0,08
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		200	0,05	0,10
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		180	0,05	0,10
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		120	0,04	0,08
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		240	0,10	0,15
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		200	0,10	0,15
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		180	0,08	0,15
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		180	0,08	0,15
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		160	0,08	0,15
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		140	0,07	0,12
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		120	0,10	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		400	0,04	0,08
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		300	0,08	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		500	0,06	0,10
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		350	0,08	0,12
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		300	0,08	0,12
H	15.0	1400		hardened steels < 45 HRC			80	0,05	0,08
H	16.0	1800		hardened steels > 45 HRC			60	0,05	0,08

for better chip control			
Ø D	Indexable insert W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
7,9 – 9,9	**W30 04120.3232** **W30 04120.3977**	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	P M S
10,9 – 27,9	**W30 14120.3232** **W30 14120.3977**	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	P M S
for higher cutting speed			
7,9 – 9,9	**W57 04140.023210** **W30 04120.0238** **W30 04990.0257** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOEX 06T102TN CBN57 TOEX 06T102FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N
10,9 – 27,9	**W57 14140.043210** **W30 14120.0238** **W30 14990.0457** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOEX 090204TN CBN57 TOEX 090204FN PKD5510	P M P M K only 0.6025 (EN-GJL-250) N
for better surface finish			
7,9 – 9,9	**W57 04140.023210** **W30 04060.036110** **W30 04200.0321** **W30 04990.025510**	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOEX 06T102FN PKD5510	P M K N S N
10,9 – 27,9	**W57 14140.043210** **W30 14060.046110** **W30 14200.0421** **W30 14990.045510**	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOEX 090204FN PKD5510	P M K N S N
Wiper – for better surface finish			
7,9 – 9,9	**W57 04180.048430** **W57 04180.0432**	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
10,9 – 27,9	**W57 14180.048430** **W57 14180.0432**	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!





3,5×D	●	●	◐	◐	✕	● HRC > 54	● HRC > 54	✕

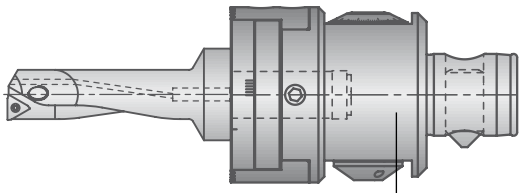
Boring bar										Basic recommendation	
Ø D	Order No.	ABS Ø d	L	L1	kg	Turning head Order No.	Adjusting screw ③ Order No.	Location screw ② Order No.	Clamping screw ① Order No. Article	Indexable insert W30 W57 -12 W57 -14 Order No. ISO Code ▽▽ size	for workpiece material
11,9-14	G10 10111 ABS32-VE12U	32	57	43,3	0,13	G10 10611	N00 70080 ○1,5	G10 10111.15 Tx10	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		
13,9-16	G10 10121 ABS32-VE14U	32	64	49	0,14	G10 10621	N00 70080 ○1,5	G10 10121.15 Tx20		W57 14140.048430 TOGX 090204EN-14 BK8430	P M
15,9-18	G10 10131 ABS32-VE16U	32	71	56	0,16	G10 10631	N00 70090 ○2	G10 10131.15 Tx25		W30 14060.046110 TOHX 090204EL-G06 BK6110	K H <52 HRC
17,9-20	G10 10141 ABS32-VE18U	32	78	63	0,19	G10 10641	N00 70140 ○2,5	G10 10141.15 Tx25		W57 14120.0423 TOGX 090204FN-12 K10	N S
19,9-24	G10 10151 ABS32-VE20U	32	85	70	0,23	G10 10651	N00 70140 ○2,5	G10 10151.15 Tx25		W30 14990.0440 TOEX 090204TN CBN40	H
23,8-30	G10 10161 ABS32-VE24U	32	99	84	0,32	G10 10661	N00 70190 ○3	G10 10161.15 Tx30			

Note: When inserts with different centre radii are fitted, the D_{min}/D_{max} ranges alter.

Supply includes boring bar: Basic body with turning head and screws ①, ② and ③. Please order insert separately.

The adjustable boring bar G10 (ABS-VE-U) allows coarse adjustment with minimum dimensional deflection by means of precision adjustment with the micro-adjustable head.

For finish machining, the boring bar G10 (ABS-VE-U) is provided with a triangular insert.



Micro-adjustable head
MicroKom *hi.flex*

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring						v_c	Max. f (mm/rev)
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Feed ∅ 11,9 – 30
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,10
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,12
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,12
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	240	0,10
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	200	0,10
P	4.1			HSS		120	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,08
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	30	0,08
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	200	0,10
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	180	0,10
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	120	0,08
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	240	0,15
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	200	0,15
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,15
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	180	0,15
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,15
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,12
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)	400	0,08
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)	300	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	500	0,10
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	350	0,12
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	300	0,12
H	15.0	1400		hardened steels < 45 HRC		80	0,08
H	16.0	1800		hardened steels > 45 HRC		60	0,08

for better chip control

Ø D	Indexable insert Order No. W30	W57	PKD CBN W30	.32..	.39.. ISO-Code	for workpiece material
11,9 – 30	**W30 14120.3232** **W30 14120.3977**				TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	P M S

for higher cutting speed

Ø D	Indexable insert Order No. W30	W57	PKD CBN W30	.32..	.39.. ISO-Code	for workpiece material
11,9 – 30	**W57 14140.043210**				TOGX 090204EN-14 CK3210	P M
	W30 14120.0238				TOHX 090202EL-G12 CK38	P M
	W30 14990.0457				TOEX 090204TN CBN57	K only 0.6025 (EN-GJL-250)
	W30 14990.045510				TOEX 090204FN PKD5510	N

for better surface finish

Ø D	Indexable insert Order No. W30	W57	PKD CBN W30	.32..	.39.. ISO-Code	for workpiece material
11,9 – 30	**W57 14140.043210**				TOGX 090204EN-14 CK3210	P M
	W30 14060.046110				TOHX 090204EL-G06 BK6110	K
	W30 14200.0421				TOHX 090204FL-G20 K10	N S
	W30 14990.045510				TOEX 090204FN PKD5510	N

Wiper – for better surface finish

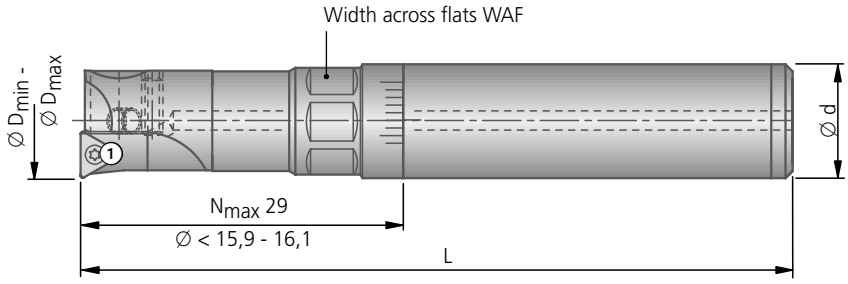
Ø D	Indexable insert Order No. W30	W57	PKD CBN W30	.32..	.39.. ISO-Code	for workpiece material
11,9 – 30	**W57 14180.048430**				TOGX 090204 EN-18 BK8430	P M K
	W57 14180.0432				TOGX 090204 EN-18 CK32	P M

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!



The smallest adjustment steps are 0.02 mm by: per graduation in the diameter.
For drilling diameter 15.9 – 16.1 mm the max. drilling depth is limited to 29 mm.



3×D	●	●	◐	◐	✕	HRC > 54 ●	HRC > 54 ●	✕

Boring bar								Basic recommendation	
Ø D min-max	Order No.	Ød	L	WAF	kg	Insert holder Order No.	Clamping screw ① Order No. Article	Indexable insert W30 W57 -12 W57 -14 Order No. ISO Code ▽▽ size	for workpiece material
15,9-20	**M10 50011**	16	100	14	0,13	**M10 50010.15**	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W57 04140.028430** TOGX 06T102EN-14 BK8430	P M
19-23	**M10 50021**	16	105	14	0,20	**M10 50021.15**		**W30 04060.036110** TOHX 06T103EL-G06 BK6110	K H <52 HRC
22-26	**M10 50031**	16	110	18	0,23	**M10 50030.15**		**W57 04120.0223** TOGX 06T102FN-12 K10	N S
								W30 04990.0240 TOEX 06T102TN CBN40	H

Supply includes boring bar: with insert holder clamping screw ①.
Please order insert separately.

BENEFITS for you:

- Three sizes for drilling diameters from 15.9 to 26 mm
- Internal coolant supply
- Suitable for high spindle speeds
- Fine adjustment range 0.3 mm in the diameter
- Extensive range of inserts with positive cutter geometry and wear-resistant coatings
- Inserts available with special cutter geometries to produce short, rolled chips for precision machining steel materials which produce long chips

● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring							v_C	Max. f (mm/rev)
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_C (m/min)	Feed ∅ 15,9 – 26
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		300	0,07
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		250	0,06
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		300	0,07
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		240	0,06
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		200	0,05
P	4.1			HSS			120	0,04
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		50	0,04
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		30	0,04
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		200	0,05
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		180	0,05
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		120	0,04
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		240	0,10
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		200	0,10
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		180	0,08
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		180	0,08
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		160	0,08
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		140	0,07
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		120	0,10
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)		400	0,04
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)		300	0,08
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		500	0,06
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		350	0,08
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		300	0,08
H	15.0	1400		hardened steels < 45 HRC			120	0,05
H	16.0	1800		hardened steels > 45 HRC			90	0,05

for better chip control

Ø D	Indexable insert Order No. W30	W57	PKD CBN W30	.32..	.39.. ISO-Code	for workpiece material
15,9 – 26	**W30 04120.3232** **W30 04120.3977**				TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	P M S

for higher cutting speed

Ø D	Indexable insert Order No.	ISO-Code	for workpiece material
15,9 – 26	**W57 04140.023210**	TOGX 06T102EN-14 CK3210	P M
	W30 04120.0238	TOHX 06T102EL-G12 CK38	P M
	W30 04990.0257	TOEX 06T102TN CBN57	K only 0.6025 (EN-GJL-250)
	W30 04990.025510	TOEX 06T102FN PKD5510	N

for better surface finish

Ø D	Indexable insert Order No.	ISO-Code	for workpiece material
15,9 – 26	**W57 04140.023210**	TOGX 06T102EN-14 CK3210	P M
	W30 04060.036110	TOHX 06T103EL-G06 BK6110	K
	W30 04200.0321	TOHX 06T103FL-G20 K10	N S
	W30 04990.025510	TOEX 06T102FN PKD5510	N

Wiper – for better surface finish

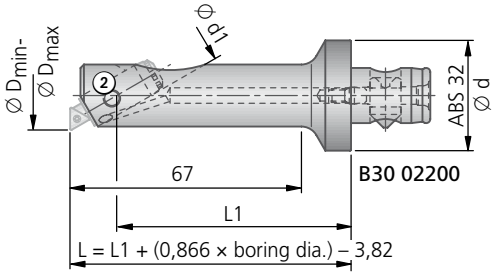
Ø D	Indexable insert Order No.	ISO-Code	for workpiece material
15,9 – 26	**W57 04180.048430**	TOGX 060104 EN-18 BK8430	P M K
	W57 04180.0432	TOGX 060104 EN-18 CK32	P M

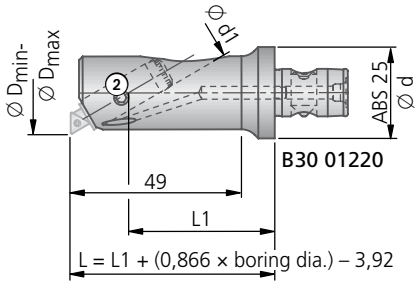
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

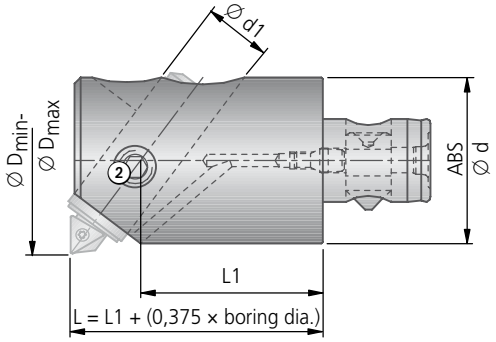
Important: See chapter 8 for more application details and safety notes!

BENEFITS for you:

- Fast, accurate setting of tool simply by using adjusting spindle
- Maximum setting accuracy by adjusting tool while clamped

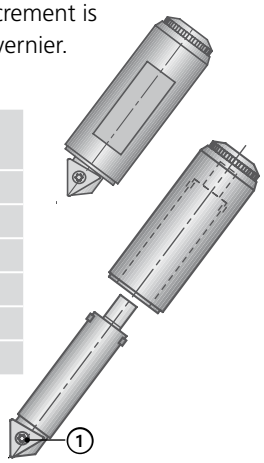






Fine boring cartridge with reduced reverse play < 0.03 mm and radial play < 0.04 mm.
The smallest adjustment increment is 0.002 mm in the Ø above vernier.

Housing Boring tool	Locking key
FZ10.. | U10..	**L05 01020**
FZ12.. | U12..	**L05 01030**
FZ16.. | U16..	**L05 01040**
FZ20.. | U20..	**L05 01050**
FZ25.. | U25..	**L05 01060**
FZ32.. | U32..	**L05 01070**



for workpiece material P M K N S H | >3,5×D | ABS

Boring bar								
Drilling range[1]							Clamping screw ②	
① Ø D min	② Ø D max	③ Ø D max	Order No. Article	ABS Ø d	Ø d1	L1	kg	Order No. Article
20	22	26	**B30 02200** ABS32/20-FZ10-5	32	10	68	0,19	**55051 05005** M5×5-O2,5 x Nm
26	30	33	**B30 01220** ABS25-FZ10-5	25	10	39,7	0,13	**55051 05005** M5×5-O2,5 x Nm
28	34,4	38	**B30 01010** ABS25-FZ10-3	25	10	40	0,20	**55051 06008** M6×8-O3 6 Nm
32	38,4	44						
36	44	48	**B30 02010** ABS32-FZ12-3	32	12	47	0,36	**55051 08010** M8×10-O4 16 Nm
40	48	55						
45	54,6	60	**B30 03010** ABS40-FZ16-3	40	16	44	0,55	**55051 10012** M10×12-O5 28 Nm
50	59,6	68						
56	68	78	**B30 04010** ABS50-FZ20-3	50	20	49,5	1,02	**55051 12016** M12×16-O6 40 Nm
64	76	90						
72	88	100	**B30 05010** ABS63-FZ25-3	63	25	63,5	2,06	**55051 16020** M16×20-O8 60 Nm
80	96	114						
90	114	126	**B30 06010** ABS80-FZ32-3	80	32	77	4,06	**55051 20020** M20×20-O10 80 Nm
100	124	140						
110	134	150	**B30 07010** ABS100-FZ32-3	100	32	84,5	7,65	**55051 20025** M20×25-O10 80 Nm
125	149	175						
for machining aluminium								
28	34,4	38	**B30 01010** ABS25-FZ10-3	25	10	40	0,20	**55051 06008** M6×8-O3 6 Nm
32	38,4	44						
36	44	48	**B30 02010** ABS32-FZ12-3	32	12	47	0,36	**55051 08010** M8×10-O4 16 Nm
40	48	55						
45	54,6	60	**B30 03010** ABS40-FZ16-3	40	16	44	0,55	**55051 10012** M10×12-O5 28 Nm
50	59,6	68						

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

● very good | ◐ good | ○ possible | ✕ not possible

> 3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	×	●	●	●

Fine boring cartridge		Housing	Boring tool		Basic recommendation		
complete (Housing + Boring tool)			Boring tool	Clamping screw ①	Indexable insert W30 W57 -12 W57 -14 W30 CBN		for workpiece material
Order No. Article		Order No. Article	Order No. Article	Order No. Article	Order No. ▽▽ size	ISO Code	
M30 04111 FZ10-20-5		M30 04011 FZ10-20-5	M30 54011 U10-Z5-803K	N00 56021 S/M2×3,8-6IP 0,62 Nm	W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 04121 FZ10-31-5		M30 00031 FZ10-31-1	M30 54021 U10-Z5-803				
M30 02231 FZ10-28-3		M30 02031 FZ10-28-3	M30 52021 U10-Z3-803	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02241 FZ10-32-3		M30 02041 FZ10-32-3					
M30 02251 FZ12-36-3		M30 02051 FZ12-36-3	M30 52031 U12-Z3-803	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02261 FZ12-40-3		M30 02061 FZ12-40-3					
M30 02271 FZ16-45-3		M30 02071 FZ16-45-3	M30 52041 U16-Z3-804	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02281 FZ16-50-3		M30 02081 FZ16-50-3					
M30 02291 FZ20-56-3		M30 02091 FZ20-56-3	M30 52051 U20-Z3-804	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02301 FZ20-64-3		M30 02101 FZ20-64-3					
M30 02311 FZ25-72-3		M30 02111 FZ25-72-3	M30 52061 U25-Z3-805	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOEX 140304TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02321 FZ25-80-3		M30 02121 FZ25-80-3					
M30 02331 FZ32-90-3		M30 02131 FZ32-90-3	M30 52071 U32-Z3-805	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOEX 140304TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02341 FZ32-100-3		M30 02141 FZ32-100-3					
M30 02351 FZ32-110-3		M30 02151 FZ32-110-3	M30 52071 U32-Z3-805	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOEX 140304TN CBN40	P M K H <52 HRC N S H >52 HRC
M30 02361 FZ32-125-3		M30 02161 FZ32-125-3					
Insert tilt of +5° over cutting edge							
–		M30 02031 FZ10-28-3	M30 52421 U10-Z3-T06	N00 56021 S/M2×3,8-6IP 0,62 Nm	W58 03120.0423	TPGX 060104FN-12 K10	N
		M30 02041 FZ10-32-3					
–		M30 02051 FZ12-36-3	M30 52431 U12-Z3-T06	N00 56021 S/M2×3,8-6IP 0,62 Nm	W58 03120.0423	TPGX 060104FN-12 K10	N
		M30 02061 FZ12-40-3					
–		M30 02071 FZ16-45-3	M30 52441 U16-Z3-T09	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W58 13120.0423	TPGX 090204FN-12 K10	N
		M30 02081 FZ16-50-3					

Supply boring bar includes: with clamping screw ②.
Supply fine boring cartridge complete includes: Housing and boring tool with clamping screw ①.
Supply boring tool includes: with clamping screw ①.
Please order locking key and insert separately.

Guideline values for fine boring and alternative inserts: pages 248.

Recommended cutting data | Alternative inserts

Guideline values for fine boring							v_c	Max. f (mm/rev)		
								Feed		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN		Cutting speed v_c (m/min)	Ø 20 – 48	Ø 45 – 76	Ø 72 – 149
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		300	0,08	0,10	0,15
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		250	0,08	0,12	0,20
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)		300	0,10	0,15	0,25
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		240	0,08	0,10	0,20
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)		200	0,06	0,10	0,15
P	4.1			HSS			120	0,06	0,08	0,12
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)		50	0,06	0,08	0,10
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)		30	0,06	0,08	0,10
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)		200	0,08	0,10	0,15
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)		180	0,06	0,10	0,15
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)		120	0,06	0,10	0,15
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		240	0,15	0,20	0,30
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		200	0,15	0,20	0,30
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		180	0,10	0,15	0,25
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		180	0,10	0,15	0,25
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		160	0,10	0,15	0,25
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		140	0,10	0,15	0,25
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		120	0,10	0,15	0,25
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)		300	0,10	0,15	0,20
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)		300	0,10	0,15	0,20
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		500	0,08	0,12	0,15
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		300	0,10	0,15	0,20
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)		250	0,10	0,15	0,20
H	15.0	1400		hardened steels < 45 HRC			120	0,08	0,08	0,10
H	16.0	1800		hardened steels > 45 HRC			90	0,06	0,08	0,10

for better chip control			
Ø D	Indexable insert W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
20 – 48	**W30 04120.3232** **W57 04140.023210**	TOHX 06T102EL-US12 CK32 TOGX 06T102EN-14 CK3210	P M P M
45 – 76	**W30 14120.3232** **W57 14140.023210**	TOHX 090202EL-US12 CK32 TOGX 090202EN-14 CK3210	P M P M
72 – 149	**W30 26120.3232** **W57 26140.023210**	TOHX 140302EL-US12 CK32 TOGX 140302EN-14 CK3210	P M P M
for higher cutting speed			
20 – 48	**W57 04140.023210** **W30 04120.0238** **W30 04990.0257**	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOEX 06T102TN CBN57	P P M K only 0.6025 (EN-GJL-250)
45 – 76	**W57 14140.043210** **W30 14120.0238** **W30 14990.0457**	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOEX 090204TN CBN57	P P M K only 0.6025 (EN-GJL-250)
72 – 149	**W57 26140.043210** **W30 26120.0238** **W30 26990.0457**	TOGX 140304EN-14 CK3210 TOHX 140302EL-G12 CK38 TOEX 140304TN CBN57	P P M K only 0.6025 (EN-GJL-250)
for better surface finish			
20 – 48	**W30 04120.3130** **W30 04990.035510**	TOHX 06T102EL-UF12 CK30 TOEX 06T103FN PKD5510	P M N
45 – 76	**W30 14120.3130** **W30 14990.045510**	TOHX 090202EL-UF12 CK30 TOEX 090204FN PKD5510	P M N
72 – 149	**W30 26120.3130** **W30 26990.045510**	TOHX 140302EL-UF12 CK30 TOEX 140304FN PKD5510	P M N
wiper – for better surface finish			
20 – 48	**W57 04180.048430** **W57 04180.0432**	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
45 – 76	**W57 14180.048430** **W57 14180.0432**	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M
72 – 149	**W57 26180.048430** **W57 26180.0432**	TOGX 140304 EN-18 BK8430 TOGX 140304 EN-18 CK32	P M K P M

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Recommended cutting data | Alternative inserts

Guideline values for fine boring						v_c	Max. f (mm/rev)	
							Feed	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Ø 28 – 48	Ø 45 – 59,6
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)	–	–	–
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	–	–	–
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	–	–	–
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	–	–	–
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	–	–	–
P	4.1			HSS		–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	–	–	–
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	–	–	–
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	–	–	–
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	–	–	–
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	–	–	–
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	–	–	–
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	–	–	–
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	–	–	–
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	–	–	–
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	–	–	–
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	–	–	–
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZ-n36Pb3) 2.1182.01 (G-CuPb15Sn)	270	0,1	0,15
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZ-n40Al2) 2.0060 (E-Cu57)	250	0,10	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	400	0,08	0,12
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,10	0,15
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,10	0,15
H	15.0	1400		hardened steels < 45 HRC		–	–	–
H	16.0	1800		hardened steels > 45 HRC		–	–	–

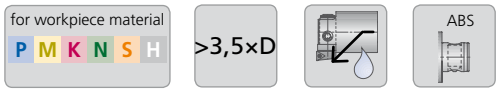
for better chip control			
Ø D	Indexable insert Order No.	 PKD -P15 ISO-Code	for workpiece material
20 – 48	**W32 03150.0421**	TPHX 060104FL-P15 K10	N N
45 – 59,6	**W32 13150.0421**	TPHX 090204FL-P15 K10	N
for higher cutting speed			
20 – 48	**W32 03990.045510** **W32 03150.0450**	TPHB 060104FN PKD5510 TPHX 060104FL-P15 BK50	N N
45 – 59,6	**W32 13990.045510**	TPHB 090204FN PKD5510	N
for better surface finish			
20 – 48	**W32 03990.045510** **W32 03150.0450**	TPHB 060104FN PKD5510 TPHX 060104FL-P15 BK50	N N
45 – 59,6	**W32 13990.045510**	TPHB 090204FN PKD5510	N

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

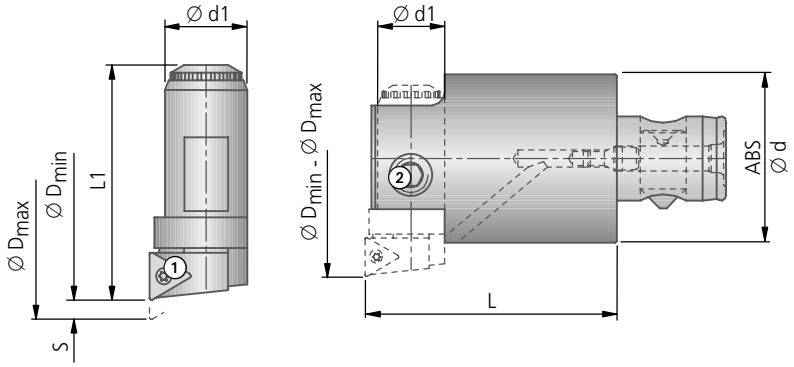
KOMET Micro-adjustable head FF

Ø 29,5 – 199 mm



BENEFITS for you:

- Radial mounting of micro-adjustable cartridge
- Adjustment of cartridge while clamped, providing optimum setting accuracy
- The smallest adjustment increment is 0.002 mm in the diameter above vernier



> 3,5×D	●	●	◐	◐	✕	● HRC > 54	● HRC > 54	●

Boring bar						Fine boring cartridge					Basic recommendation	
Ø D min-max	Ød1	Order No. Article	ABS Ød	L	kg	Clamping screw ② Order No. Article	Order No. Article	L1	S	kg	Clamping screw ① Order No. Article	Indexable insert W30 W57 -12 W57 -14 Order No. ISO Code ▽▽ size	for workpiece material
29,5-36	10	**B30 11010** ABS25-FF-29,5	25	50	0,17	**55051 06006** M6×6-O3 6 Nm	**M30 20011** FF10-30	28,5	3,5	0,06	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W57 04140.028430** TOGX 06T102EN-14 BK8430	P M
35,5-42	10	**B30 11020** ABS25-FF-35,5	25	50	0,18							**W30 04060.036110** TOHX 06T103EL-G06 BK6110	K H <52 HRC
39-45	12	**B30 12010** ABS32-FF-39	32	60	0,35	**55051 08008** M8×8-O4 16 Nm	**M30 20021** FF12-39	37,5	3,5	0,03	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W57 04120.0223** TOGX 06T102FN-12 K10	N S
44-50	12	**B30 12020** ABS32-FF-44	32	60	0,35	**55051 08010** M8×10-O4 16 Nm						**W30 04990.0240** TOEX 06T102TN CBN40	H >52 HRC
47-57	16	**B30 13010** ABS40-FF-47	40	60	0,52	**55051 10010** M10×10-O5 28 Nm	**M30 20031** FF16-47	45	5	0,06	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.048430** TOGX 090204EN-14 BK8430	P M
56-66	16	**B30 13020** ABS40-FF-56	40	60	0,53							**W30 14060.046110** TOHX 090204EL-G06 BK6110	K H <52 HRC
58-71	20	**B30 14010** ABS50-FF-58	50	70	0,97	**55051 12012** M12×12-O6 40 Nm	**M30 20041** FF20-58	56	7	0,12	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W57 14120.0423** TOGX 090204FN-12 K10	N S
70-83	20	**B30 14020** ABS50-FF-70	50	70	1,00							**W30 14990.0440** TOEX 090204TN CBN40	H >52 HRC
79-94	25	**B30 15010** ABS63-FF-79	63	70	1,58	**55051 16016** M16×16-O8 60 Nm	**M30 20051** FF25-79	77,5	8	0,27	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm		
93-108	25	**B30 15020** ABS63-FF-93	63	70	1,61								
100-121	32	**B30 16010** ABS80-FF-100	80	90	3,33	**55051 20020** M20×20-O10 80 Nm	**M30 20061** FF32-100	97	11	0,55	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**W57 26140.048430** TOGX 140304EN-14 BK8430	P M
120-141	32	**B30 16020** ABS80-FF-120	80	90	3,37							**W30 26060.046110** TOHX 140304EL-G06 BK6110	K H <52 HRC
138-159	32	**B30 17010** ABS100-FF-138	100	90	6,56	**55051 20030** M20×30-O10 80 Nm	**M30 20071** FF32-138	131	11	0,76	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**W57 26120.0423** TOGX 140304FN-12 K10	N S
158-179	32	**B30 17020** ABS100-FF-158	100	90	6,80	**55051 20020** M20×20-O10 80 Nm						**W30 26990.0440** TOEX 140304TN CBN40	H >52 HRC
178-199	32	**B30 17030** ABS100-FF-178	100	90	6,61								

Supply boring bar includes: with clamping screw ②.
Supply boring fine boring cartridge: with clamping screw ①.
Please order insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended cutting data | Alternative inserts

Guideline values for fine boring						v_c	Max. f (mm/rev)		
							Feed		
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)	Ø 29,5 – 50	Ø 47 – 83	Ø 79 – 199
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)	300	0,08	0,10	0,15
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,08	0,12	0,20
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,10	0,15	0,25
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	240	0,08	0,10	0,20
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	200	0,06	0,10	0,15
P	4.1			HSS		120	0,06	0,08	0,12
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,06	0,08	0,10
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	30	0,06	0,08	0,10
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	200	0,08	0,10	0,15
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	180	0,06	0,10	0,15
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	120	0,06	0,10	0,15
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	240	0,15	0,20	0,30
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	200	0,15	0,20	0,30
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,10	0,15	0,25
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	180	0,10	0,15	0,25
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,10	0,15	0,25
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,10	0,15	0,25
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,10	0,15	0,25
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	300	0,10	0,15	0,20
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	300	0,10	0,15	0,20
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	500	0,08	0,12	0,15
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,10	0,15	0,20
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,10	0,15	0,20
H	15.0	1400		hardened steels < 45 HRC		120	0,08	0,08	0,10
H	16.0	1800		hardened steels > 45 HRC		90	0,06	0,08	0,10

for better chip control			
Ø D	Indexable insert W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
29,5 – 50	W30 04120.3232 W57 04140.023210	TOHX 06T102EL-US12 CK32 TOGX 06T102EN-14 CK3210	P M P M
47 – 83	W30 14120.3232 W57 14140.023210	TOHX 090202EL-US12 CK32 TOGX 090202EN-14 CK3210	P M P M
79 – 199	W30 26120.3232 W57 26140.023210	TOHX 140302EL-US12 CK32 TOGX 140302EN-14 CK3210	P M P M
for higher cutting speed			
29,5 – 50	W57 04140.023210 W30 04120.0238 W30 04990.0257	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOEX 06T102TN CBN57	P P M K only 0.6025 (EN-GJL-250)
47 – 83	W57 14140.043210 W30 14120.0238 W30 14990.0457	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOEX 090204TN CBN57	P P M K only 0.6025 (EN-GJL-250)
79 – 199	W57 26140.043210 W30 26120.0238 W30 26990.0457	TOGX 140304EN-14 CK3210 TOHX 140302EL-G12 CK38 TOEX 140304TN CBN57	P P M K only 0.6025 (EN-GJL-250)
for better surface finish			
29,5 – 50	W30 04120.3130 W30 04990.035510	TOHX 06T102EL-UF12 CK30 TOEX 06T103FN PKD5510	P M N
47 – 83	W30 14120.3130 W30 14990.045510	TOHX 090202EL-UF12 CK30 TOEX 090204FN PKD5510	P M N
79 – 199	W30 26120.3130 W30 26990.045510	TOHX 140302EL-UF12 CK30 TOEX 140304FN PKD5510	P M N
Wiper – for better surface finish			
29,5 – 50	W57 04180.048430 W57 04180.0432	TOGX 060104 EN-18 BK8430 TOGX 060104 EN-18 CK32	P M K P M
47 – 83	W57 14180.048430 W57 14180.0432	TOGX 090204 EN-18 BK8430 TOGX 090204 EN-18 CK32	P M K P M
79 – 199	W57 26180.048430 W57 26180.0432	TOGX 140304 EN-18 BK8430 TOGX 140304 EN-18 CK32	P M K P M

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

KOMET MicroKom M03Speed

Micro-adjustable head for high-precision fine adjustment with balancing

The demands on fine boring tools are primarily increasing improvements to surface finishes and at the same time higher cutting speeds for short machining times.

Fine machining is a demanding bore machining operation. With MicroKom M03Speed micro-adjustable heads KOMET has provided a tried and tested tool system which, with its high precision adjustment mechanism, from the rough adjustment for the rotating clamping holder to the graduation collar on the external diameter, allows fine adjustment steps of up to 0.002 millimeters in the diameter.

The fine adjustment for wear compensation or after measurement is then carried out extremely accurately directly on the machine spindle. There is no need for clamping during and after this fine adjustment, which means that the dimension can be perfectly maintained.

Balancing: when the insert position is changed, there is an automatic balancing adjustment by means of a moveable balancing weight which lies diametrically opposite. This is a balancing operation on the adjustment plane for the insert.

This is based on six tool bodies to cover diameters from 24.8 to 206 millimeters. Maximum changeover accuracy is guaranteed with ABS 25 | 32 | 40 | 50 | 63 connections.

Diameters from 38 to 206 are provided for by means of three adaptable and replaceable bridges.

Just like the whole production range, the bridges – which are in a lightweight material with a hard surface coating – allow high machining speeds to be achieved.

Flexibility with replaceable insert holders: the replaceable insert holders are special feature of the new product range.

The user has the facility to carry out forward and reverse machining with one tool with different approach angles. Using a specially designed connection, the changeover is fast, uncomplicated and safe.



Construction

1 Insert holder with KOMET geometry
2 Holder
3 Connection insert holder – holder
4 Holding screw insert holder – holder
5 Holding screw holder – micro-adjustable head
6 Adjusting screw for coarse adjustment of insert holder
7 Slide with weight compensation
8 Internal coolant directed onto insert
9 All scales have matt chrome finish
10 High resolution gives easy read-off **without** vernier
11 ABS connection for maximum changeover accuracy

Coarse adjustment:

- Set adjustment scale 10 as far as stop in the minus direction to obtain as large a micro-adjustment range as possible.
- To compensate for reverse play, adjust the adjustment scale 10 by half a turn in the plus direction.
- Loosen the holding screw 5 .
- With the differential screw 6 preset to the nominal dimension within about 0.02 mm.

Fine adjustment:

- Set to dimension using the adjustment scale 10 .
- 1 graduation ≙ 0.002 mm.

BENEFITS for you:

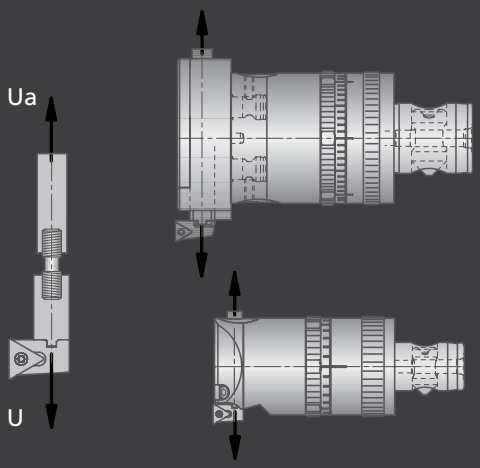
- Unique: our micro-adjustable head with automatic balancing in the slide
- The setting accuracy is per division 0.002 mm in diameter
- Geometrically the same as previous M03Speed design – and therefore compatible
- Micro-adjustment without the need for clamping

The modular tool range

- For diameters over 206 millimeters KOMET offers bridging tools.
- In a modular design, these consist of standard elements and elements adjusted to length to customer specification.



Dynamic weight balance on the slide
guarantees optimum balance in any position



KOMET MicroKom M03Speed Page

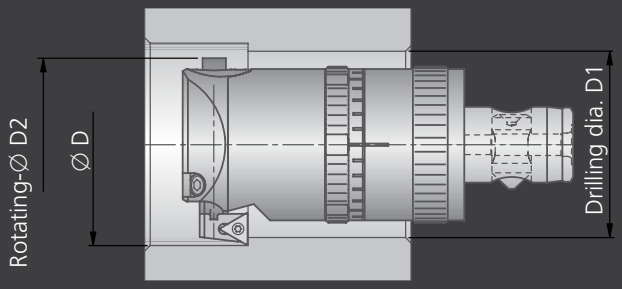
Micro-adjustable head with ABS connection	
Micro-adjustable head and insert holder for	
∅ 24,8 - 39 mm	254 – 255
∅ 38,0 - 103 mm	256 – 257
Micro-adjustable head / replaceable bridge and insert holder for	
∅ 38,0 - 103 mm	258 – 259
∅ 100 - 206 mm	260 – 261

Technical notes	
Guideline values for fine boring	262
Alternative inserts	263

Calculation for reverse machining

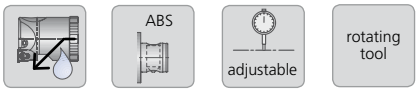
D1 = Drilling dia.
D2 = Rotating dia.
D = Machining dia. generally

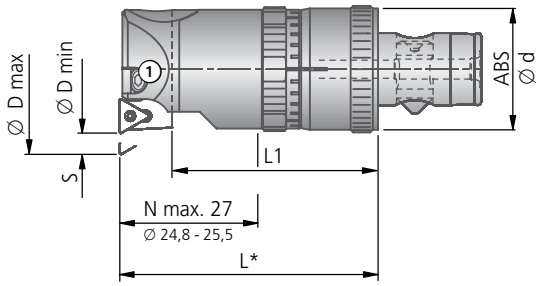
$$D1 = \frac{D2 + D}{2} + 0{,}5$$



KOMET MicroKom M03Speed Ø 24,8 – 39,0 mm

Micro-adjustable head





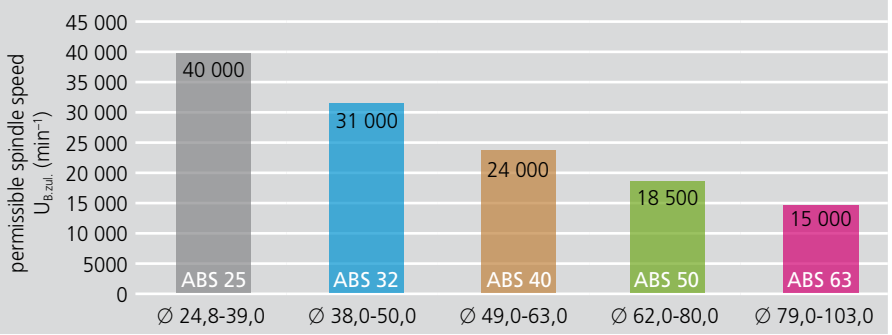
* dimension L see insert holder table on following page.

[1)] **Note:** from 25.5 mm diameters, the effective length N corresponds to tool length L.

Micro-adjustable head									
Ø D[1)] min - max	Rotating diameter Ø D2	Order No.	ABS Ø d	L1	Coarse adjustment path S	Fine adjustment in diameter	permissible spindle speed min^{-1}	kg	Clamping screw ① for holder Order No. Article
24,8 - 33,0	24,5	**M03 00115**	25	39,9	4,5	0,25	40 000	0,15	**55051 04504** M4×0,5×4-⬡2
29,0 - 39,0	26,0	**M03 00515**	25	39,9	5,0	0,40	40 000	0,17	**55051 04504** M4×0,5×4-⬡2

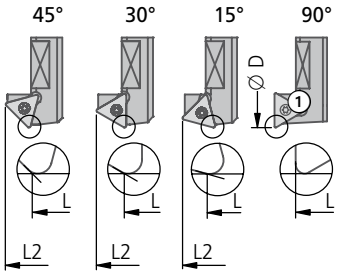
Supply includes:
Micro-adjustable drilling head with clamping screw ①. Please order insert holder and insert separately.

Maximum spindle speed
when using different ABS sizes
Ø 24.8 - 103.0 mm
(MicroKom M03Speed
without replaceable bridges)

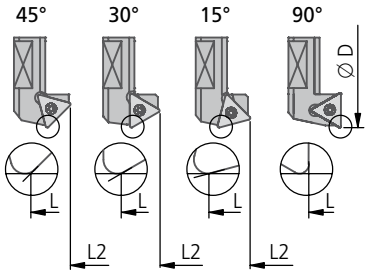


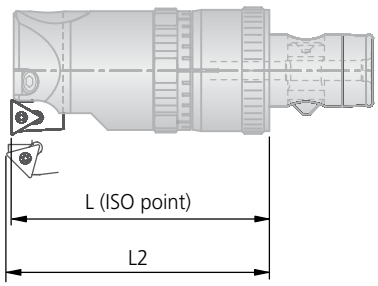
Material P M K N S H | 3,5×D

← insert holder forwards



→ insert holder reverse





> 3,5×D	●	●	◐	◐	●	● HRC > 54	● HRC > 54	●

		← Insert holder forwards						Basic recommendation		
Ø D	Micro-adjustable head	Order No.	ϰ	L	L2	kg	Clamping screw ① Order No. Article	Indexable insert Order No. ▽▽ size	ISO Code	for workpiece material
24,8 – 33	M03 00115	**M03 10011**	90°	50	–	0,004	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** **W30 04060.036110** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 11110	15°	44,4	50,3					
		M03 11210	30°	45,4	50,7					
		M03 11310	45°	46,4	50,7					
29 – 39	M03 00515	**M03 10021**	90°	50	–	0,005	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** **W30 04060.036110** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 11100	15°	44,4	50,3					
		M03 11200	30°	45,4	50,7					
		–	45°	46,4	50,7					
		→ Insert holder reverse								
30 – 33	M03 00115	–	90°	35,8	–	0,004	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** **W30 04420.0362** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK60 TOHX 06T103ER-G12 BK62 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		–	15°	41,4	35,45					
		M03 12210	30°	40,4	35,1					
		–	45°	39,4	35,1					
34 – 39	M03 00515	**M03 12000**	90°	35,8	–	0,005	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W57 04140.0260** **W30 04420.0362** **W57 04120.0223** **W30 04990.0240**	TOGX 06T102EN-14 BK60 TOHX 06T103ER-G12 BK62 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		–	15°	41,4	35,4					
		–	30°	40,4	35,1					
		M03 12300	45°	39,4	35,1					

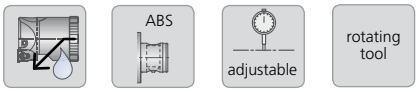
Supply includes: Insert holder with clamping screw ①.
Please order insert separately.

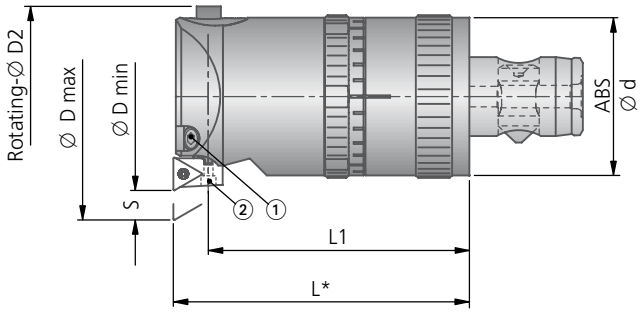
● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: page 262.

KOMET MicroKom M03Speed Ø 38,0 – 103,0 mm

Micro-adjustable head





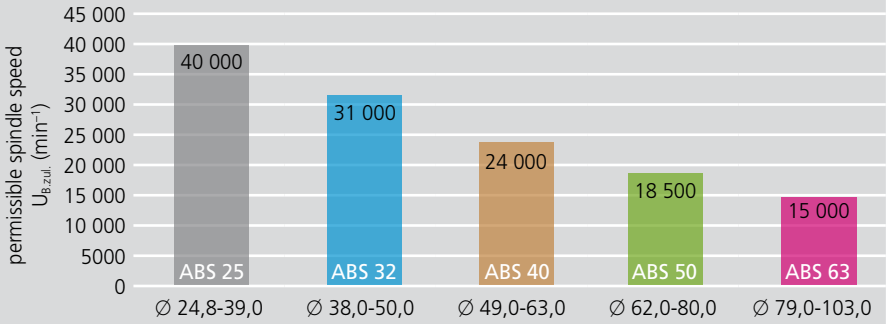
* dimension L see insert holder table on following page.

Micro-adjustable head

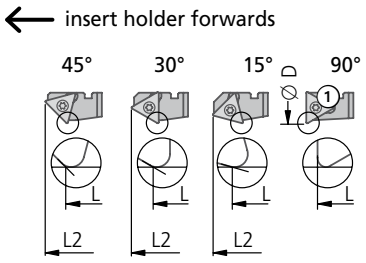
Ø D min - max	Rotating diameter Ø D2	Order No.	ABS Ø d	L1	Coarse adjustment path S	Fine adjustment in diameter	permissible spindle speed min⁻¹	kg	Clamping screw ① for holder Order No. Article	Holding screw ② Order No. Article
38,0 - 42,0	33,0	M03 01025	32	52,9	6,0	0,40	31 000	0,35	55051 04504 M4×0,5×4-O2	N00 56211 S/M3,5×7,3-10IP
42,0 - 50,0	Ø D – 8									
49,0 - 63,0	41,0	M03 01535	40	60	7,0	0,40	24 000	0,63	55051 05506 M5×0,5×6-O2,5	N00 56211 S/M3,5×7,3-10IP
62,0 - 80,0	51,0	M03 02045	50	65	9,0	0,60	18 500	1,12		
79,0 - 95,0	65,0	M03 02555	63	66	12,0	0,60	15 000	1,91	55051 06008 M6×8-O3	N00 56401 S/M5×9,4-20IP
95,0 - 103,0	Ø D – 30									

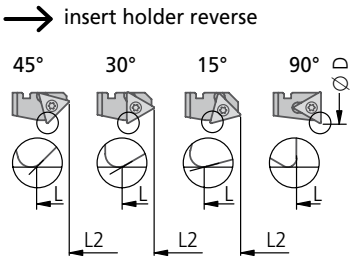
Supply includes:
Micro-adjustable drilling head with clamping screw ① and holder with holding screw ②.
Please order insert holder and insert separately.

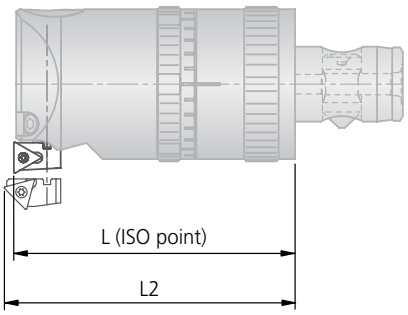
Maximum spindle speed
when using different ABS sizes
Ø 24.8 - 103.0 mm
(MicroKom M03Speed
without replaceable bridges)



Material P M K N S H | 3,5×D







> 3,5×D	●	●	◐	◐	●	● HRC > 54	● HRC > 54	●

		← Insert holder forwards						Basic recommendation		
Ø D	Micro-adjustable head	Order No.	ϰ	L	L2	kg	Clamping screw ① Order No. Article	Indexable insert -14 -12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
38 – 50	M03 01025 ABS 32	M03 10033	90°	60	–	0,002	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.0260 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 11120	15°	55,5	61,7					
		–	30°	56,5	62					
		M03 11320	45°	57,5	62					
49 – 63	M03 01535 ABS 40	M03 10043	90°	70	–	0,005	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W57 14140.0460 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		–	15°							
		M03 11230	30°	64,5	72					
		M03 11330	45°	66,8	72,9					
62 – 80	M03 02045 ABS 50	M03 10043	90°	75	–	0,005				
		M03 11130	15°	68,5	76,9					
		M03 11230	30°	69,5	77					
		M03 11330	45°	71,8	77,9					
79 – 103	M03 02555 ABS 63	M03 10063	90°	80	–	0,009				
		–	15°	71	79,7					
		M03 11250	30°	73	80,7					
		M03 11350	45°	75	81,3					
		→ Insert holder reverse								
42 – 50	M03 01025 ABS 32	M03 12020	90°	45,8	–	0,002	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.0260 W30 04420.0362 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK60 TOHX 06T103ER-G12 BK62 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 12120	15°	50,4	44,2					
		M03 12220	30°	49,4	43,9					
		M03 12320	45°	48,4	43,9					
49 – 63	M03 01535 ABS 40	M03 12030	90°	50	–	0,005	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W57 14140.0460 W30 14420.0462 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK60 TOHX 090204ER-G12 BK62 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 12130	15°	56,5	48,1					
		M03 12230	30°	55,5	48					
		M03 12330	45°	53	46,9					
62 – 80	M03 02045 ABS 50	M03 12030	90°	55	–	0,005				
		M03 12130	15°	61,5	53,1					
		M03 12230	30°	60,5	53					
		M03 12330	45°	58	51,9					
79 – 103	M03 02555 ABS 63	–	90°	52	–	0,009				
		–	15°	61	52,6					
		–	30°	59	51,5					
		M03 12350	45°	57	50,9					

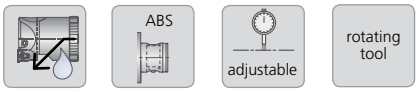
Supply includes: Insert holder with clamping screw ①.
Please order insert separately.

● very good | ◐ good | ○ possible | ✕ not possible

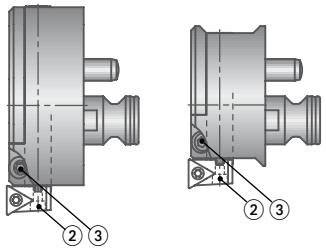
Guideline values for fine boring and alternative inserts: page 262.

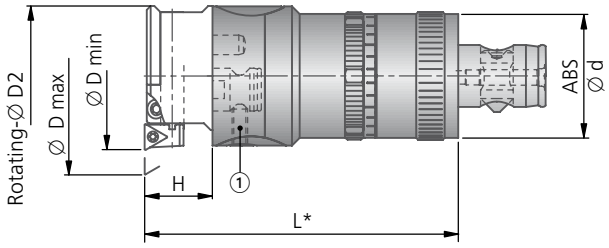
KOMET MicroKom M03Speed Ø 38,0 – 103,0 mm

Micro-adjustable head



Ø 38,0 – 63,0 mm

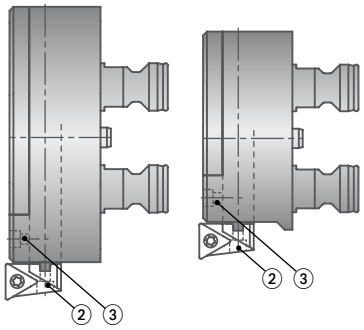


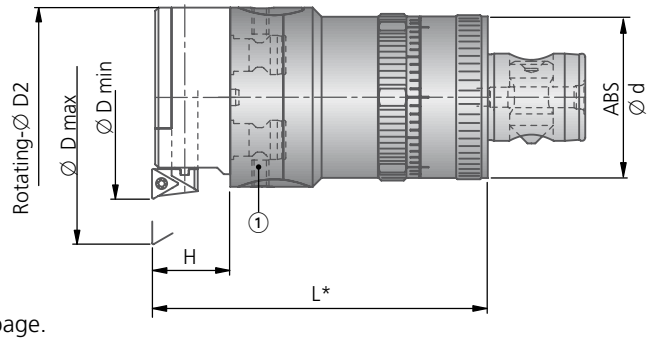


* dimension L see insert holder table on following page.

Micro-adjustable head				Replaceable bridge							
Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge Article	Drilling diameter Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min⁻¹	kg	Location screw ② for insert holder Order No. Article	Clamping screw ③ for holder Order No. Article
M03 20170	32	0,35	M8×10-O4	38,0 - 51,0	Ø D – 3,2	M03 20180	17,5	31 000	0,06	N00 56211 S/M3,5×7,3-10IP	55051 04008 M4×8-O2 1,5 Nm
				50,0 - 63,0	Ø D – 3,5	M03 20190	17,5	24 000	0,08		

Ø 62,0 – 103,0 mm



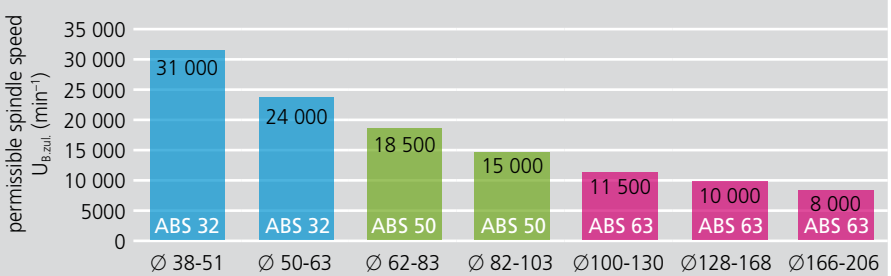


* dimension L see insert holder table on following page.

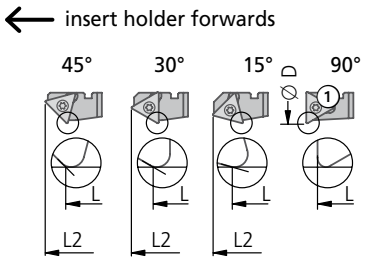
Micro-adjustable head				Replaceable bridge							
Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge Article	Drilling diameter Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min⁻¹	kg	Location screw ② for insert holder Order No. Article	Clamping screw ③ for holder Order No. Article
M03 20140	50	1,3	M8×10-O4	62,0 - 83,0	55	M03 20150	24	18 500	0,20	N00 56211 S/M3,5×7,3-10IP	55051 04008 M4×8-O2 1,5 Nm
				82,0 - 103,0	71	M03 20160	24	15 000	0,24		

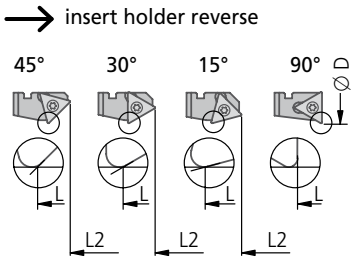
Supply includes micro-adjustable drilling head:
Micro-adjustable drilling head with clamping screw ①. Please order replaceable bridge separately.
Supply includes replaceable bridge:
Replaceable bridge with holding screw ② and clamping screw ③. Please order insert holder separately.

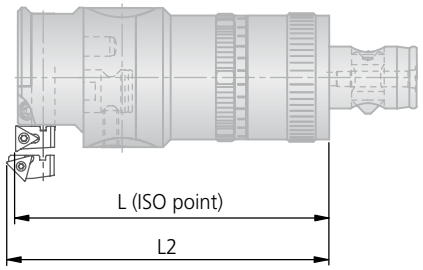
Maximum spindle speed
when using different ABS sizes
Ø 24.8 - 103.0 mm
(MicroKom M03Speed
with replaceable bridges)



Material P M K N S H | 3,5×D







> 3,5×D	●	●	◐	◐	●	● HRC > 54	● HRC > 54	●

		← Insert holder forwards						Basic recommendation		
Ø D	Micro-adjustable head	Order No.	ϰ	L	L2	kg	Clamping screw ① Order No. Article	Indexable insert -14 -12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
38 – 63	M03 20170 ABS 32	M03 10033	90°	81	–	0,002	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.0260 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK60 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 11120	15°	76,5	82,7					
		–	30°	77,5	83					
		M03 11320	45°	78,5	83					
62 – 103	M03 20140 ABS 50	M03 10043	90°	103	–	0,005	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W57 14140.0460 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		–	15°							
		M03 11230	30°	97,5	105					
		M03 11330	45°	99,8	105,9					
		→ Insert holder reverse								
38 – 63	M03 20170 ABS 32	M03 12020	90°	66,8	–	0,002	N00 56031 S/M2×4,9-6IP 0,62 Nm	W57 04140.0260 W30 04420.0362 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK60 TOHX 06T103ER-G12 BK62 TOGX 06T102FN-12 K10 TOEX 06T102TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 12120	15°	71,4	65,2					
		M03 12220	30°	70,4	64,9					
		M03 12320	45°	69,4	64,9					
62 – 103	M03 20140 ABS 50	M03 12030	90°	83	–	0,005	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W57 14140.0460 W30 14420.0462 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK60 TOHX 090204ER-G12 BK62 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 12130	15°	89,5	81,1					
		M03 12230	30°	88,5	81					
		M03 12330	45°	86	79,9					

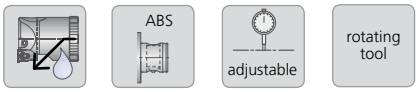
Supply includes: Insert holder with clamping screw ①.
Please order insert separately.

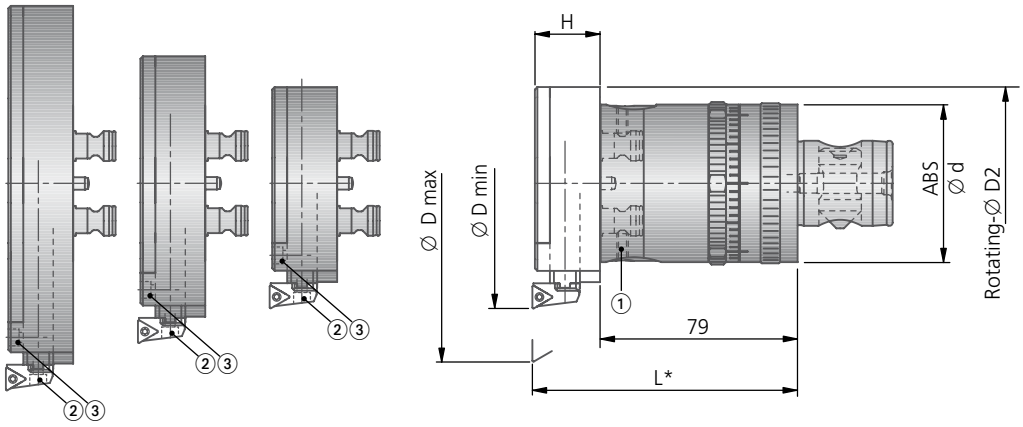
● very good | ◐ good | ○ possible | ✕ not possible

Guideline values for fine boring and alternative inserts: page 262.

KOMET MicroKom M03Speed Ø 100,0 – 206,0 mm

Micro-adjustable head



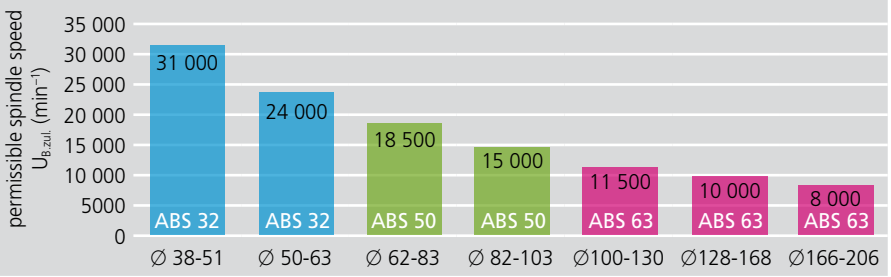


* dimension L see insert holder table on following page.

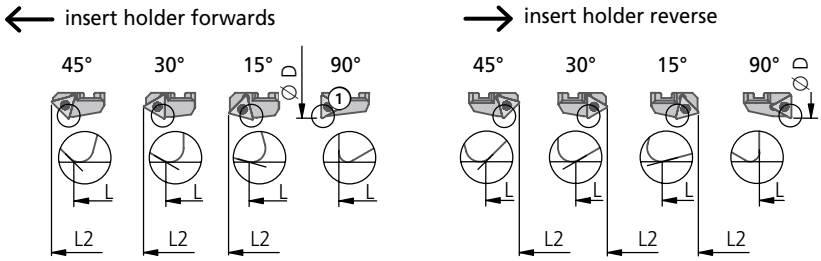
Micro-adjustable head				Replaceable bridge							
Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge Article	Drilling diameter Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min⁻¹	kg	Location screw ② for insert holder Order No. Article	Clamping screw ③ for holder Order No. Article
M03 20090	63	1,82	M8×10-O4	100 - 130	85	**M03 20100**	26	11 500	0,39	**N00 56401** S/M5×9,4-20IP	**55051 04008** M4×8-O2 1,5 Nm
				128 - 168	109	**M03 20110**	26	10 000	0,49		
				166 - 206	146	**M03 20120**	26	8 000	0,59		

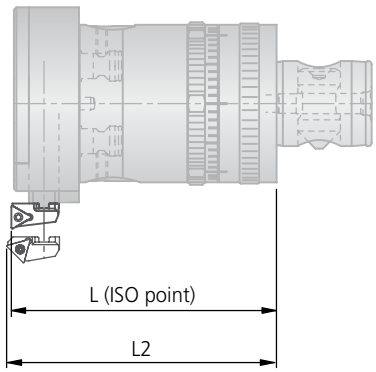
Supply includes micro-adjustable drilling head:
Micro-adjustable drilling head with clamping screw ①. Please order replaceable bridge separately.
Supply includes replaceable bridge:
Replaceable bridge with holding screw ② and clamping screw ③. Please order insert holder separately.

Maximum spindle speed
when using different ABS sizes
Ø 24.8 - 103.0 mm
(MicroKom M03Speed
with replaceable bridges)



Material P M K N S H | 3,5×D





> 3,5×D	●	●	◐	◐	●	● HRC > 54	● HRC > 54	●

		← Insert holder forwards						Basic recommendation		
Ø D	Micro-adjustable head	Order No.	ϰ	L	L2	kg	Clamping screw ① Order No. Article	Indexable insert -14 -12 W30 Order No. ▽▽ size	ISO Code	for workpiece material
100 – 206	M03 20090 ABS 63	**M03 10070**	90°	106	–	0,01	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** **W30 14060.046110** **W57 14120.0423** **W30 14990.0440**	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		–	15°	97	105,9					
		M03 11260	30°	99	107					
		–	45°	101	107,5					
		→ Insert holder reverse								
100 – 206	M03 20090 ABS 63	–	90°	80	–	0,01	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W57 14140.0460** **W30 14420.0462** **W57 14120.0423** **W30 14990.0440**	TOGX 090204EN-14 BK60 TOHX 090204ER-G12 BK62 TOGX 090204FN-12 K10 TOEX 090204TN CBN40	P M K H <52 HRC N S H >52 HRC
		M03 12160	15°	89	80,6					
		M03 12260	30°	87	79,5					
		M03 12360	45°	85	78,9					

Supply includes: Insert holder with clamping screw ①.
Please order insert separately.

Guideline values for fine boring and alternative inserts: page 262.

KOMET MicroKom M03Speed

Recommended cutting data ① without replaceable bridges | ② with replaceable bridges

Guideline values for fine boring							v_C	Max. f (mm/rev)	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_C (m/min)	Feed		
							① Ø 24,8–50 ② Ø 38–63	① Ø 49–103 ② Ø 62–206
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300	0,08	0,10
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	250	0,08	0,12
P	2.1	<500		lead alloys	1.0718 (11SMn-Pb30)	300	0,10	0,15
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	240	0,08	0,10
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	200	0,06	0,10
P	4.1			HSS		120	0,06	0,08
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	50	0,06	0,08
S	5.1	400		titanium, titanium alloys	3.7115 (Ti-Al5Sn2.5)	30	0,06	0,08
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	200	0,08	0,10
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNi-MoTi17-12-2)	180	0,06	0,10
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAl-Si7) 1.4862 (X8NiCr-Si38-18)	120	0,06	0,10
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	240	0,15	0,20
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	200	0,15	0,20
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	180	0,10	0,15
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	180	0,10	0,15
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	160	0,10	0,15
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	140	0,10	0,15
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	120	0,10	0,15
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	300	0,10	0,15
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	270	0,10	0,15
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	500	0,08	0,12
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300	0,10	0,15
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	250	0,10	0,15
H	15.0	1400		hardened steels < 45 HRC		120	0,08	0,08
H	16.0	1800		hardened steels > 45 HRC		90	0,06	0,08

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Ø D	Indexable insert  W30 W57 PKD CBN W30 .32.. .39.. Order No.	ISO-Code	for workpiece material
for better chip control			
① Ø24,8–50 | ② Ø38–63	**W57 04140.023210**	TOGX 06T102EN-14 CK3210	P M
	only for forward machining:		
	W30 04120.3232	TOHX 06T102EL-US12 CK32	P M
① Ø49–103 | ② Ø62–206	**W57 14140.023210**	TOGX 090202EN-14 CK3210	P M
	only for forward machining:		
	W30 14120.3232	TOHX 090202EL-US12 CK32	P M
for higher cutting speed			
① Ø24,8–50 | ② Ø38–63	**W57 04140.023210**	TOGX 06T102EN-14 CK3210	P
	W30 04990.0257	TOEX 06T102TN CBN57	K only 0.6025 (EN-GJL-250)
	only for forward machining:		
	W30 04120.0238	TOHX 06T102EL-G12 CK38	P M
① Ø49–103 | ② Ø62–206	**W57 14140.043210**	TOGX 090204EN-14 CK3210	P
	W30 14990.0457	TOEX 090204TN CBN57	K only 0.6025 (EN-GJL-250)
	only for forward machining:		
	W30 14120.0238	TOHX 090202EL-G12 CK38	P M
for better surface finish			
① Ø24,8–50 | ② Ø38–63	**W30 04990.035510**	TOEX 06T103FN PKD5510	N
	only for forward machining:		
	W30 04120.3130	TOHX 06T102EL-UF12 CK30	P M
① Ø49–103 | ② Ø62–206	**W30 14990.045510**	TOEX 090204FN PKD5510	N
	only for forward machining:		
	W30 14120.3130	TOHX 090202EL-UF12 CK30	P M
\/\/iper – for better surface finish			
① Ø24,8–50 | ② Ø38–63	**W57 04180.048430**	TOGX 060104 EN-18 BK8430	P M K
	W57 04180.0432	TOGX 060104 EN-18 CK32	P M
① Ø49–103 | ② Ø62–206	**W57 14180.048430**	TOGX 090204 EN-18 BK8430	P M K
	W57 14180.0432	TOGX 090204 EN-18 CK32	P M

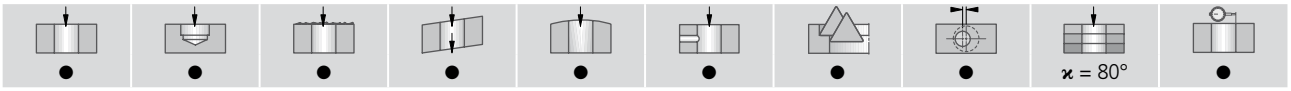
Lightweight dual cutter

Optimally designed for your machining requirement

A typical example of the ongoing further development of the KOMET cutting tool range can be seen in the improved concept of the KOMET TwinKom lightweight dual cutters – a concept which enables particularly cost-effective machining. The tools are extremely rigid, provide high transmissible torques and offer high cutting efficiency. KOMET TwinKom dual cutters can be used for a variety of operations – as a dual cutter for roughing, with a single cutting edge for finishing, as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. The tools are modular in design and are suitable for diameters from 365 to 2000 mm. The adjustment range is ± 40 mm (or 80 mm) in relation to the diameter.

The size of the replaceable bridge is application-oriented and adapted to suit the hole diameter to be cut, which is why the bridge is made according to customer requirement. Due to standardisation, delivery times are relatively short.

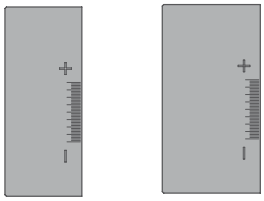
The indexable insert holders can be easily exchanged, which allows a variety of different approach angles and the use of indexable inserts of various different shapes, sizes and geometries.



Roughing tool as dual cutter



Single-edged finishing tool

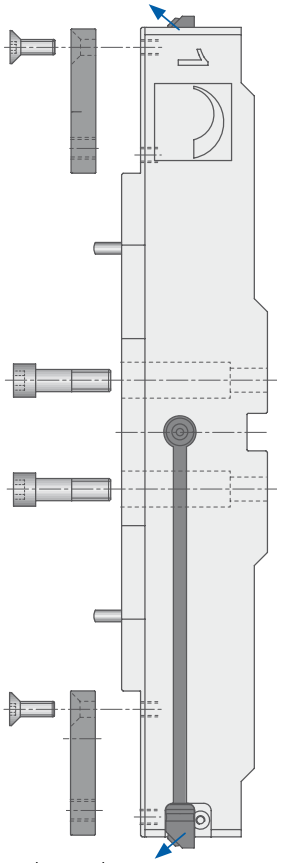


Balancing weight

G05 10110 XG05 00180

Replaceable bridge Ø 365 - 2000 mm

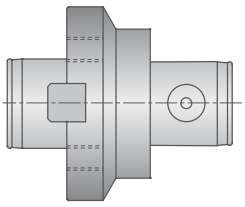
Produced to customer requirement,
FA40 / FAM40 connection up to Ø 399 mm



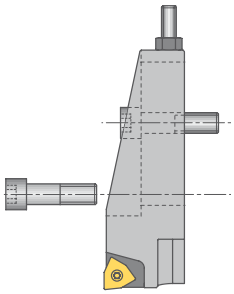
Adapter plate
G05 00100

Adaptors

HSK-A adaptor
ISO 12164-1
Taper shank DIN 69871,
JIS B 6339 (MAS 403 BT)
ABS adaptor

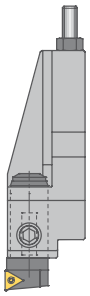


Roughing cartridge
G05 20100



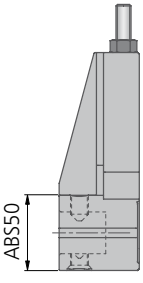
Insert seating
D54 60070
Indexable insert
W29 58

Finishing cartridge
G05 10100



Micro-adjustable cartridge
M30 20051
Indexable insert
W57 26 / W30 26

ABS Adapter
XG05 00170



Replaceable bridge with roughing tool or finishing tool	
Diameter	Weight
Ø 400 mm	~ 13 kg
Ø 600 mm	~ 22 kg
Ø 800 mm	~ 29 kg
Ø 1000 mm	~ 35 kg

● very good | ◐ good | ○ possible | ✕ not possible

The tool blocks for roughing can be adjusted radially and axially, both for dual cutter use and for cut distribution. For finishing, the fine adjustment insert can be applied to the workpiece directly without clamping. Fine adjustment of 2 µm by vernier is possible. A stop guarantees a high level of positional accuracy for the tool blocks. The measurements set after the first cut are maintained even after repeatedly exchanging the tool blocks.

Once diameters have been established, they are maintained even when the tool blocks are repositioned, and need not be established again. One and the same tool block can be used for roughing and finishing throughout all diameter ranges. When designing the adaptor plates for the tool blocks, sufficient space was allowed for attaching the magnetic holder of a dial gauge.

An internal coolant supply can be used on all replaceable bridges. An adjustable jet guarantees positionally accurate cooling of the cutting edge. Because DIN mill adaptors are used on the machine side to connect the tools, they can be adapted for all commonly used spindles.

BENEFITS for you:

- High rigidity
- High cutting efficiency through double-sided roughing
- High transmissible torques
- Exchangeable tool blocks for roughing and finishing
- Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool
- External machining can also be performed with the standard components
- High level of flexibility thanks to modular design of system components
- Internal coolant supply
- Tool connection with standard mill adaptor according to DIN standard
- Cost-effective cutting thanks to the use of stock-type standard tool blocks and indexable inserts
- Wide selection of various indexable inserts, cutting tool materials and cutting geometries
- Easy-to-replace indexable insert holders
- Tool blocks can be exchanged without losing measurement settings
- Dial gauge can be fitted using a magnetic holder
- Optimised heat cycle, even when dry machining

Stepped tool

Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. External machining can also be performed with the standard components.



KOMET ABS Adapter

Thanks to the new ABS adapter, KOMET standard tools, for example the MicroKom BluFlex fine adjustment head, show more of what they can really do. The ABS adapter is available on request.



KOMET KomTronic

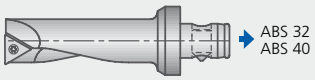
The functionality of the tool combinations depends on the L/D ratio, weight and cutting parameter.



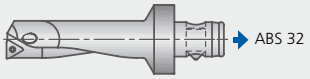
KOMET KomTronic
Drawbar tools
for machining centres

ABS Boring bars

Ø 8 – 28 mm



Ø 11,9 – 30 mm



UniTurn Copying tool | Boring tool | Adaptor

Ø 3 – 8 mm

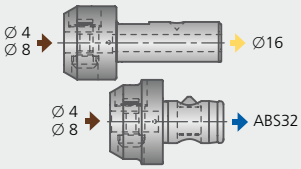


Ø 3 – 8 mm



Ø 2,7 – 7,5 mm





Boring bars | Adaptor

Ø 5,6 mm | Ø 6,9 mm



Ø 3,0 – 9,0 mm



Ø 5,6 – 12 mm



Ø 9 mm | Ø 11 mm



Ø 13 – 17 mm



Ø 6 – 25 mm



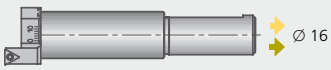
Ø 8 – 24 mm



Ø 17 – 26 mm



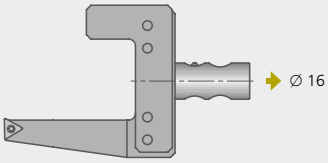
Serrated body + Insert holder
Ø 25 – 63 mm



Insert holder
Ø 63 – 93 mm

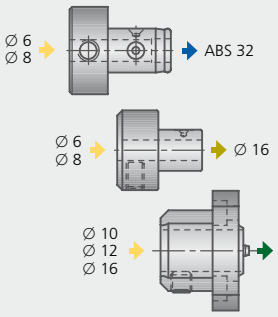


Mounting bridge for external machining
Ø 5 – 70 mm

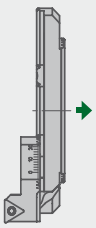


Key

- ABS | ABS N connection
- Cylindrical connection
- Toothing
- HSK connection
- UniTurn connection
- Front tool

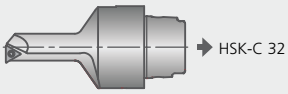


Bridge +
Insert holder
Ø 90 – 365 mm

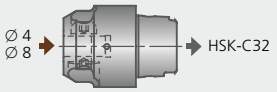


HSK Boring bars

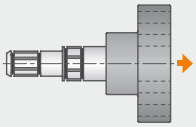
∅ 8 – 14 mm



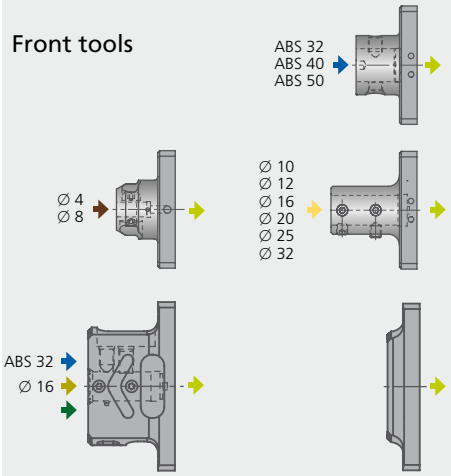
UniTurn Adaptor

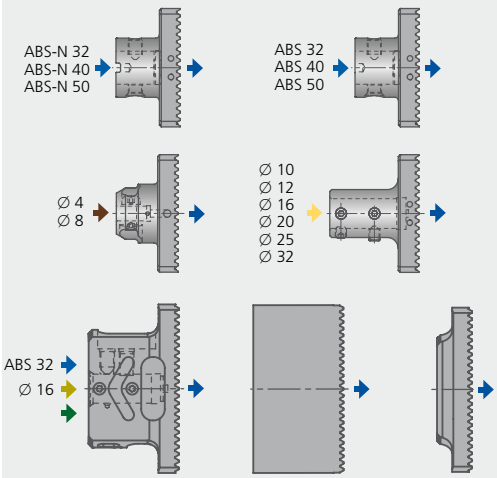


Honing tools

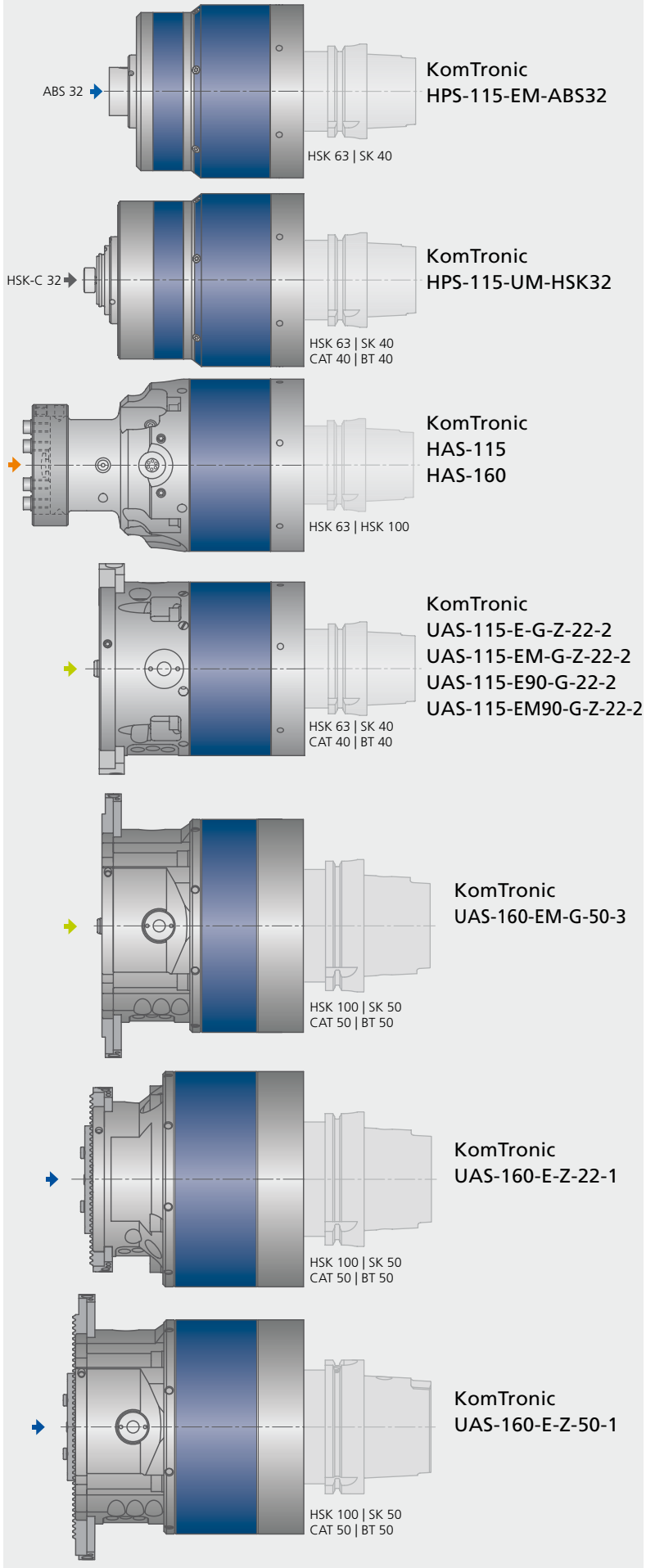


Front tools





Semi-finished product for customer-specific tool configuration



Design your own tool!

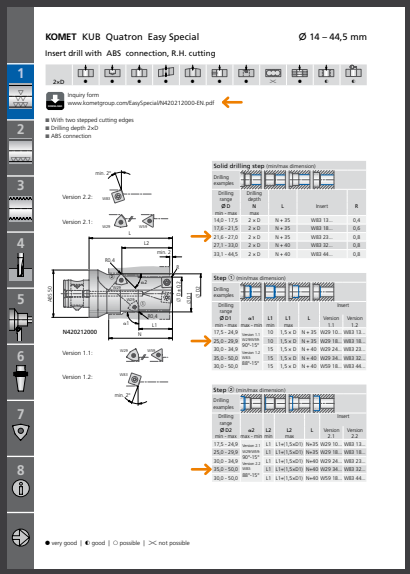
Is there no solution in the standard range? Are the dimensions not what you require? Easy Special makes it possible for you create your own combination of standard modules in the widest variety of dimensions. Select the basic type, define the effective length and choose the desired adapter for the tool. We check you specifications for technical feasibility and you receive a prompt reply.



BENEFITS for you:

- High tech tools from planning to productive use
- Shortest delivery times – available within 3 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level

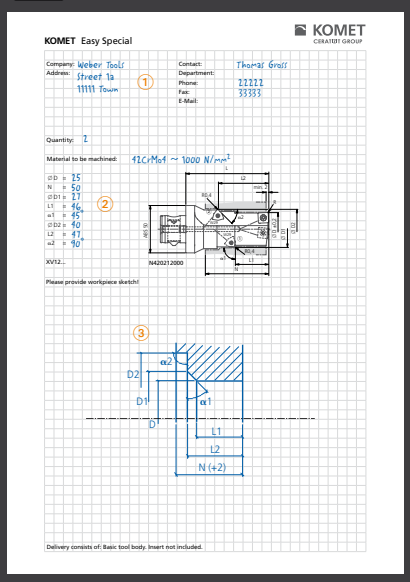
In short: time costs money


KOMET KUB Quatron Easy Special Ø 14 – 44,5 mm

Insert drill with ABS connection, R.H. cutting

DOWNLOAD

Inquiry form
www.kometgroup.com/EasySpecial/


KOMET Easy Special

KOMET CERATIZIT GROUP

Company: Weber Tools
Address: Street 1a
11111 Town

Contact: Thomas Groß
Department:
Phone: 22222
Fax: 33333
E-Mail:

Quantity: 1

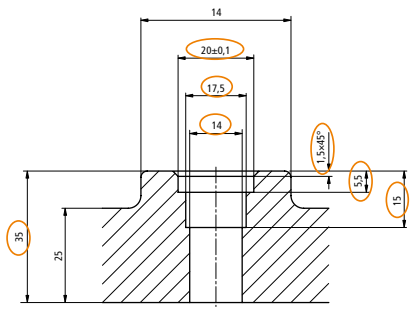
Material to be machined: 42CrMo4 ~ 1000 N/mm²

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

Example of a completed inquiry

① State sender/contact name
② Enter required dimensions
③ Component sketch or drawing section with dimensions marked

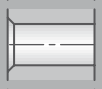


Possible applications

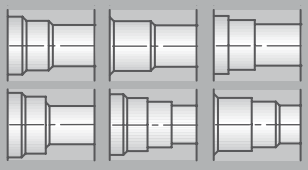
Solid drilling



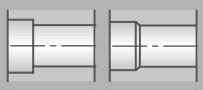
Solid drilling and chamfering



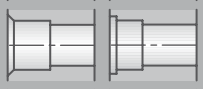
Multistage solid drilling



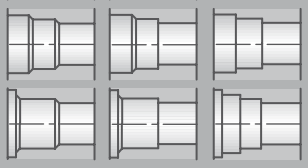
Roughing



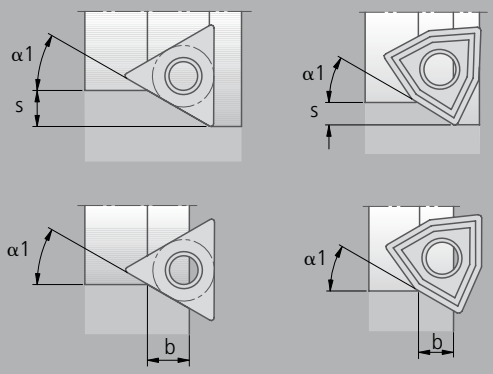
Roughing and chamfering



Multistage roughing



Maximum cutting and chamfering widths



s_{max} = max. cutting width | b_{max} = max. chamfering width

Insert	α1 90°	α1 75°		α1 60°		α1 45°		α1 30°		α1 15°	
		s max	b max	s max	b max	s max	b max	s max	b max	s max	b max
W29 10...	3,0	2,8	0,6	2,5	1,2	2,1	1,6	1,5	2,0	0,7	2,3
W29 18...	4,0	3,8	0,8	3,4	1,6	2,8	2,3	2,0	2,8	1,0	3,1
W29 24...	5,0	4,8	1,1	4,3	2,1	3,5	3,0	2,5	3,7	1,2	4,1
W29 34...	6,2	5,9	1,5	5,3	2,8	4,3	4,0	3,1	4,9	1,6	5,5
W59 18...	10,0	9,6	2,3	8,6	4,5	7,0	6,3	5,0	7,7	2,5	8,6

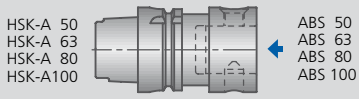
Index

	Page
Programme summary	270 – 271
Tool selection	272 – 273
Solid drilling Ø 12 – 44,5 mm	
KUB Quatron	274 – 275
KUB Trigon	280 – 281
KUB drill	284 – 285
KUB Trigon with chamfering insert	282 – 283
KUB Quatron with a stepped cutting edge	276 – 277
KUB drill with a stepped cutting edge	286 – 287
KUB Quatron with 2 stepped cutting edges	278 – 279
KUB drill with 2 stepped cutting edges	288 – 289
KUB drill with 3 stepped cutting edges	290 – 291
Roughing Ø 14 – 50 mm	
TwinKom Twin cutter	294 – 297
with chamfering insert	298 – 299
with a stepped cutting edge	300 – 301
with two stepped cutting edges	302 – 305
Fine boring Ø 8 – 40 mm	
with ABS connection	
Boring bar	306
Boring bar with chamfering insert	308
with cylindrical shank	
Boring bar	307
Boring bar with chamfering insert	309
Adaptors	
with HSK-A	310
with taper shank	310
with ABS	311

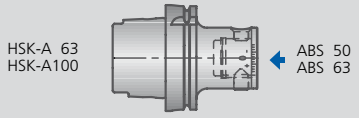
Programme summary – Easy Special

6 Adaptors

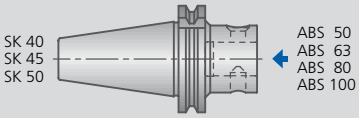
HSK-A Adaptors
with ABS connection



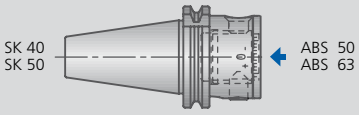
Eccentric adjusting device with ABS connection



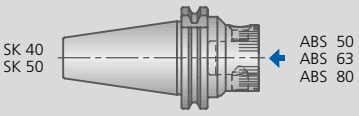
Taper shanks DIN 69871
with ABS connection



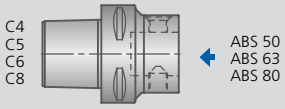
Eccentric Adjusting Device with ABS connection



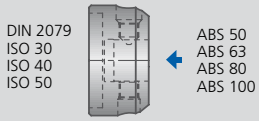
Torsional dampener with ABS connection



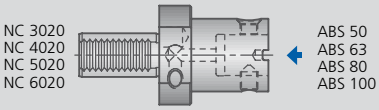
PSC Adaptor
with ABS connection



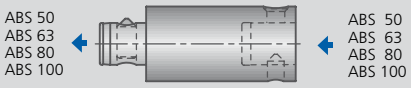
Spindle adaptor flange
with ABS connection

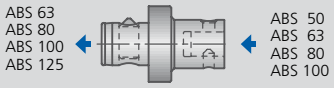


VDI Adaptor
with ABS connection

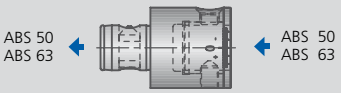


ABS Adaptors
Extension / Reducer

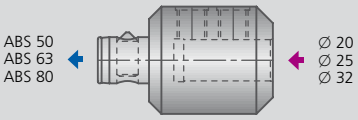




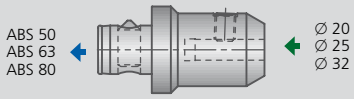
Eccentric adjusting device



Adaptor sleeve Weldon

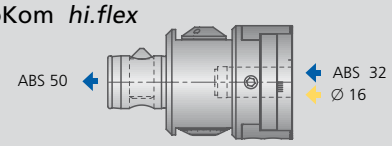


Adaptor sleeve Whistle Notch

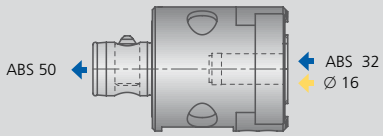


1 Adaptors

MicroKom *hi.flex*



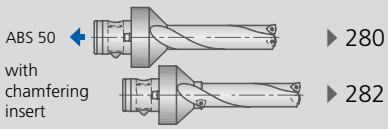
MicroKom *BluFlex* 2



1 Easy Special tools

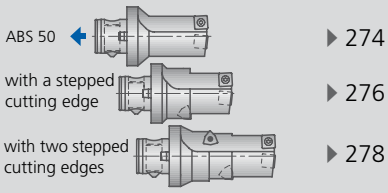
Solid drilling ∅ 12 - 44,5 mm

KUB Trigon



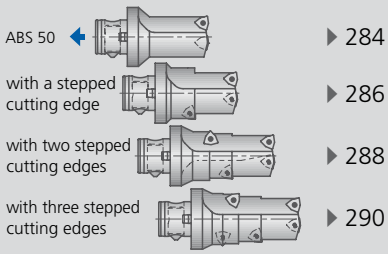
▸ 280
▸ 282

KUB Quatron



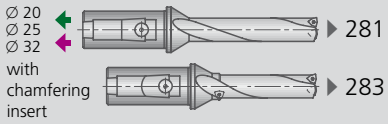
▸ 274
▸ 276
▸ 278

KUB Drill



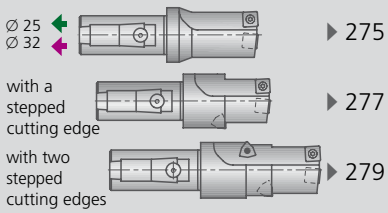
▸ 284
▸ 286
▸ 288
▸ 290

KUB Trigon



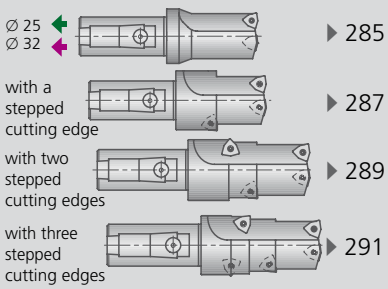
▸ 281
▸ 283

KUB Quatron



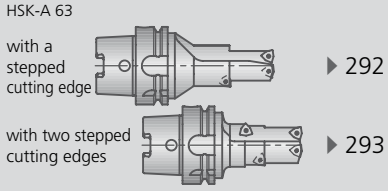
▸ 275
▸ 277
▸ 279

KUB Drill



▸ 285
▸ 287
▸ 289
▸ 291

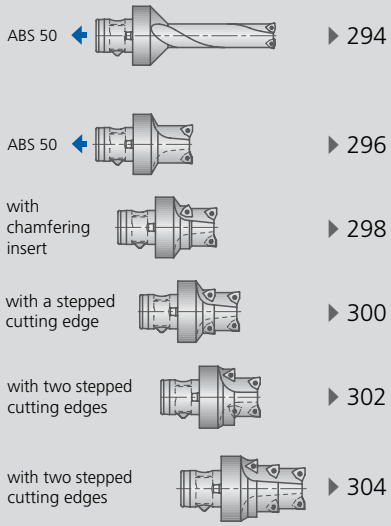
HSK-A 63



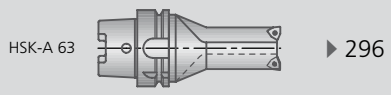
▸ 292
▸ 293

Roughing ∅ 14 - 50 mm

TwinKom



▸ 294
▸ 296
▸ 298
▸ 300
▸ 302
▸ 304
▸ 295
▸ 297
▸ 299
▸ 301
▸ 303
▸ 305



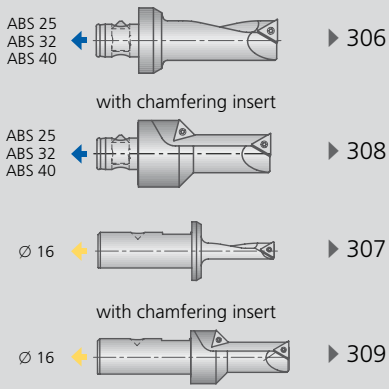
▸ 296

Key

- ABS connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection

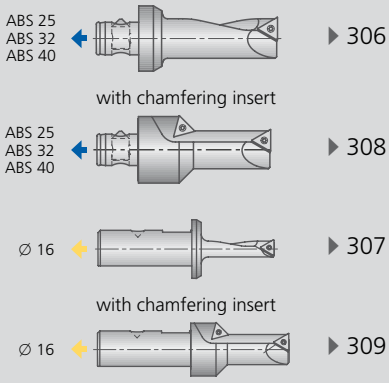
Fine boring ∅ 8 - 40 mm

Boring bars for machining steel



▸ 306
▸ 308
▸ 307
▸ 309

Boring bars for machining aluminium

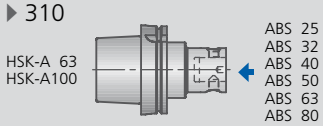


▸ 306
▸ 308
▸ 307
▸ 309

Adaptors

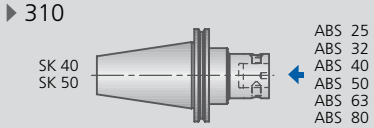
HSK-A Adaptors with ABS connection

▸ 310



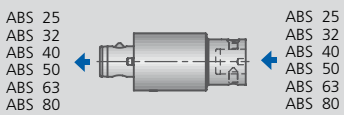
Taper shanks DIN 69871 with ABS connection

▸ 310



ABS Adaptors Extension / Reducer

▸ 311



KOMET Tool selection

Help table for solid drilling, roughing and fine boring with Easy Special

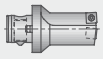
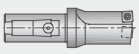
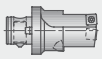
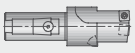
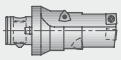
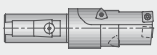
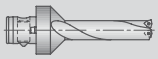
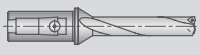
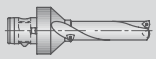
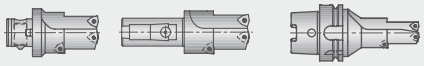
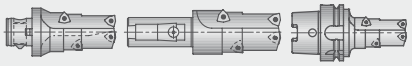
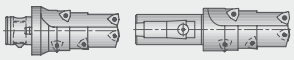
		Machining										
Solid drilling Ø (mm)	L / D Length/ diameter ratio	solid drilling	blind hole	forge/ casting skin, interface	angled start and drilling out, inter-rupted cut	convex	cross bore	centering bore, seam	chamber	stack plate drilling	rough boring	adjustable
14,0 – 44,5 ±0,2	2×D	●	●	●	●	●	●	●	●	●	◐	◐
14,0 – 44,5 ±0,2	2×D	●	●	●	●	●	●	●		●	◐	◐
14,0 – 44,5 ±0,2	2×D	●	●	●	●	●	●	●		●	◐	◐
12,0 – 44,0 ±0,1	2×D	●	●	●	●	●	◐	◐	●		◐	●
12,0 – 44,0 ±0,1	3×D	●	●	●	●	◐	◐	◐	◐		○	●
12,0 – 44,0 ±0,1	4×D	●	●	◐	○	○	○	○	○			◐
14,0 – 44,0 ±0,1	2×D	●	●	●	●	●	●	●	●		●	◐
14,0 – 44,0 ±0,1	2×D	●	●	●	●	●	●	●	●		◐	◐
14,0 – 44,0 ±0,1	2×D	●	●	●	●	●	●	●	●		◐	◐
14,0 – 44,0 ±0,1	2×D	●	●	●	●	●	●	●	●		◐	◐

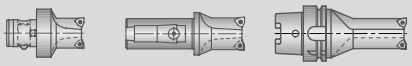
Roughing Ø (mm)	L / D	through hole	blind hole	uneven	angled start and drilling out, inter-rupted cut	convex	cross bore	divided cut	large hole offset	stack plate drilling α = approach angle	adjustable
14,0 – 50,0 ±0,1	2 – 4×D	●	●	●	●	●	●		●	α = 80°	
14,0 – 50,0 ±0,1	2×D	●	●	●	●	●	●		●	α = 80°	
14,0 – 50,0 ±0,1	2×D	●	●	●	●	●	●		●	α = 80°	
14,0 – 50,0 ±0,1	2×D	●	●	●	●	●	●		●	α = 80°	
14,0 – 50,0 ±0,1	2×D	●	●	●	●	●	●		●	α = 80°	
14,0 – 50,0 ±0,1	2×D	●	●	●	●	●	●		●	α = 80°	

Fine boring Ø (mm)	L / D	through hole	blind hole	angled start and drilling out, interrupted cut	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
8,0 – 40,0 -0,1	4×D	●	●	◐	◐				●
8,0 – 24,0 -0,1	4×D	●	●	◐	◐				●
8,0 – 40,0 -0,1	3×D	●	●	◐	◐		●	●	●
8,0 – 24,0 -0,1	3,5×D	●	●	◐	◐		●	●	

● very good ◐ good ○ possible

Help table for solid drilling, roughing and fine boring with Easy Special

Coolant: Emulsion internal	Coolant: Emulsion external	Coolant: MQL internal	Coolant: MQL external	Material: Steel	Material: Stainless steel	Material: Cast iron	Material: Non-ferrous metals	Material: Superalloys and titanium	Material: Hardened materials	Tool	Page
●	◐		◐	P	M	K	N	S	H	  **KUB Quatron** ABS connection Cylindrical shank (combination shank)	▸ 274 ▸ 275
●	◐		◐	P	M	K	N	S	H	  **KUB Quatron** with a stepped cutting edge ABS connection Cylindrical shank (combination shank)	▸ 276 ▸ 277
●	◐		◐	P	M	K	N	S	H	  **KUB Quatron** with two stepped cutting edges ABS connection Cylindrical shank (combination shank)	▸ 278 ▸ 279
●	◐		◐	P	M	K	N	S	H	  **KUB Trigon** ABS connection Cylindrical shank (combination shank)	▸ 280 ▸ 281
●	◐		○	P	M	K	N	S	H		
●	○		○	P	M	K	N	S	H	  **KUB Trigon** with chamfering insert ABS connection Cylindrical shank (combination shank)	▸ 282 ▸ 283
●	◐		◐	P	M	K	N	S	H	 **KUB drill** ABS connection Cylindrical shank (combination shank)	▸ 284 ▸ 285
●	◐		○	P	M	K	N	S	H	 **KUB drill** with a stepped cutting edge ABS connection Cylindrical shank (combination shank) HSK-A connection	▸ 286 ▸ 287 ▸ 292
●	◐		○	P	M	K	N	S	H	 **KUB drill** with two stepped cutting edges ABS connection Cylindrical shank (combination shank) HSK-A connection	▸ 288 ▸ 289 ▸ 293
●	◐		○	P	M	K	N	S	H	 **KUB drill** with three stepped cutting edges ABS connection Cylindrical shank (combination shank)	▸ 290 ▸ 291

Coolant: Emulsion internal	Coolant: Emulsion external	Coolant: MQL internal	Coolant: MQL external	Material	Tool	Page
●	◐		◐	P M K N S H	 **TwinKom** ABS connection Cylindrical shank (combination shank)	▸ 294 ▸ 295
●	◐		◐	P M K N S H	 **TwinKom** ABS connection Cylindrical shank (combination shank) HSK-A connection	▸ 296 ▸ 297 ▸ 296
●	◐		◐	P M K N S H	 **TwinKom with chamfering insert** ABS connection Cylindrical shank (combination shank)	▸ 298 ▸ 299
●	◐		◐	P M K N S H	 **TwinKom with a stepped cutting edge** ABS connection Cylindrical shank (combination shank)	▸ 300 ▸ 301
●	◐		◐	P M K N S H	 **TwinKom with two stepped cutting edges** ABS connection Cylindrical shank (combination shank)	▸ 302 ▸ 303
●	◐		○	P M K N S H	 **TwinKom with two stepped cutting edges** ABS connection Cylindrical shank (combination shank)	▸ 304 ▸ 305

Coolant: Emulsion internal	Coolant: Emulsion external	Coolant: MMS internal	Coolant: MMS external	Material	Tool	Page
●	◐		◐	P M K N S H	 **Boring bar** for machining steel	▸ 306
●	◐		◐	P M K N S H	 **Boring bar with chamfering insert** for machining steel	▸ 308
●	◐		◐	N	 **Boring bar** for machining aluminium	▸ 306
●	◐		◐	N	 **Boring bar with chamfering insert** for machining aluminium	▸ 308

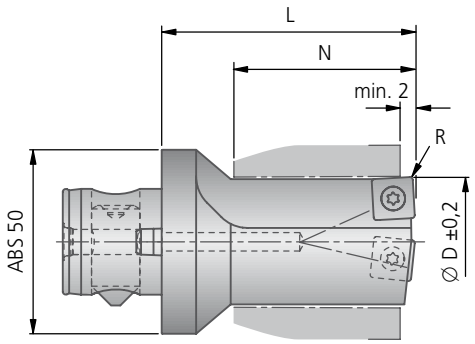
KOMET KUB Quatron Easy Special Ø 14 – 44,5 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	●	●	●	◐	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420270000-EN.pdf

- Drilling depth 2×D
- ABS connection



N420270000

Solid drilling step (min/max dimension)

Drilling examples

Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
14,0 - 17,5	2 × D	N + 35	W83 13...	0,4
17,6 - 21,5	2 × D	N + 35	W83 18...	0,6
21,6 - 27,0	2 × D	N + 35	W83 23...	0,8
27,1 - 33,0	2 × D	N + 35	W83 32...	0,8
33,1 - 44,5	2 × D	N + 35	W83 44...	0,8

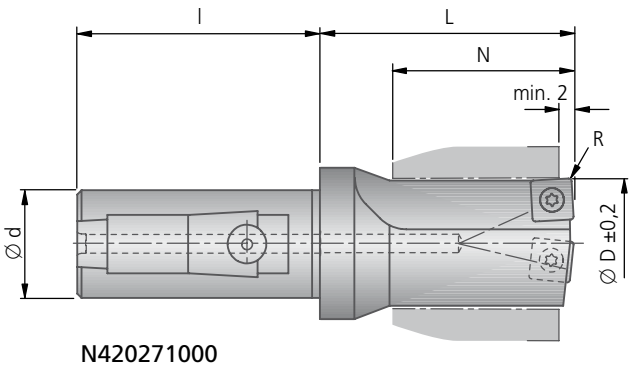
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	●	●	●	◐	◐	

Inquiry form
www.kometgroup.com/EasySpecial/N420271000-EN.pdf

Drilling depth 2×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420271000

Solid drilling step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N max	L	Insert	R	Cylindrical shank Ø d × l 25×56	32×60
14,0 - 17,5	2 × D	N + 24	W83 13...	0,4	•	•
17,6 - 21,5	2 × D	N + 24	W83 18...	0,6	•	•
21,6 - 27,0	2 × D	N + 29	W83 23...	0,8	•	•
27,1 - 33,0	2 × D	N + 29	W83 32...	0,8		•
33,1 - 44,5	2 × D	N + 29	W83 44...	0,8		•

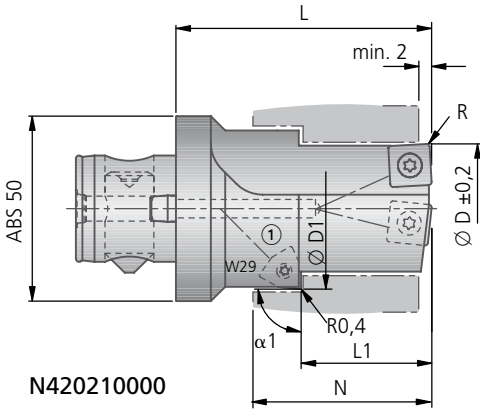
KOMET KUB Quatron Easy Special Ø 14 – 44,5 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	●	✕	●	◐	◐

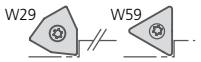
Inquiry form
www.kometgroup.com/EasySpecial/N420210000-EN.pdf

- With a stepped cutting edge
- Drilling depth 2×D
- ABS connection

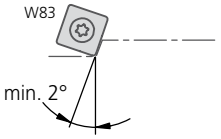


N420210000

Version 1:

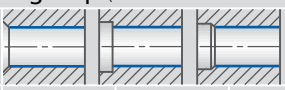


Version 2:



Solid drilling step (min/max dimension)

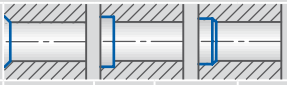
Drilling examples



Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
14,0 - 17,5	2 × D	N + 35	W83 13...	0,4
17,6 - 21,5	2 × D	N + 35	W83 18...	0,6
21,6 - 27,0	2 × D	N + 35	W83 23...	0,8
27,1 - 33,0	2 × D	N + 40	W83 32...	0,8
33,1 - 44,5	2 × D	N + 40	W83 44...	0,8

Step ① (min/max dimension)

Drilling examples



Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert Version 1	Insert Version 2
17,5 - 24,9	Version 1 W29/W59: 90°-15° Version 2 W83: 88°-15°	10	1,5 × D	N + 35	W29 10...	W83 13...
25,0 - 29,9		10	1,5 × D	N + 35	W29 18...	W83 18...
30,0 - 34,9		15	1,5 × D	N + 40	W29 24...	W83 23...
35,0 - 50,0		15	1,5 × D	N + 40	W29 34...	W83 32...
30,0 - 50,0		15	1,5 × D	N + 40	W59 18...	W83 44...

● very good | ◐ good | ○ possible | ✕ not possible

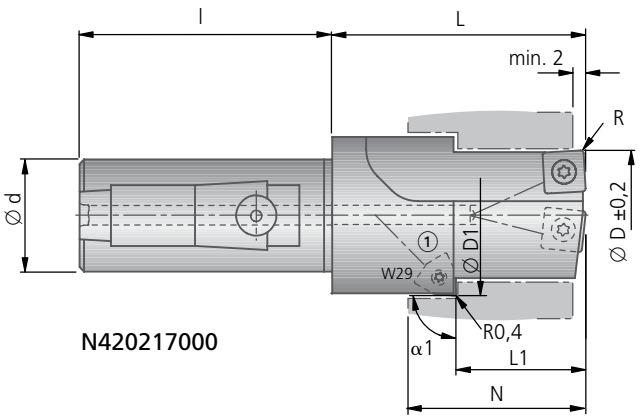
Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D											
	●	●	●	●	●	●	●	✕	●	◐	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420217000-EN.pdf

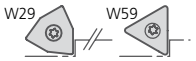
DOWNLOAD

With a stepped cutting edge ■
Drilling depth 2×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■

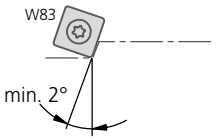


N420217000

Version 1:

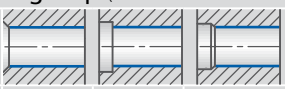


Version 2:



Solid drilling step (min/max dimension)

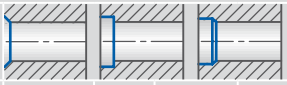
Drilling examples



Drilling range Ø D min - max	Drilling depth N max	L	Insert	R	Cylindrical shank Ø d × l 25×56	32×60
14,0 - 17,5	2 × D	N + 24	W83 13...	0,4	•	•
17,6 - 21,5	2 × D	N + 24	W83 18...	0,6	•	•
21,6 - 27,0	2 × D	N + 29	W83 23...	0,8	•	•
27,1 - 33,0	2 × D	N + 29	W83 32...	0,8		•
33,1 - 44,5	2 × D	N + 29	W83 44...	0,8		•

Step ① (min/max dimension)

Drilling examples



Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert Version 1	Version 2
17,5 - 24,9	Version 1 W29/W59: 90°-15° Version 2 W83: 88°-15°	10	1,5 × D	N + 35	W29 10...	W83 13...
25,0 - 29,9		10	1,5 × D	N + 35	W29 18...	W83 18...
30,0 - 34,9		15	1,5 × D	N + 40	W29 24...	W83 23...
35,0 - 50,0		15	1,5 × D	N + 40	W29 34...	W83 32...
30,0 - 50,0		15	1,5 × D	N + 40	W59 18...	W83 44...

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

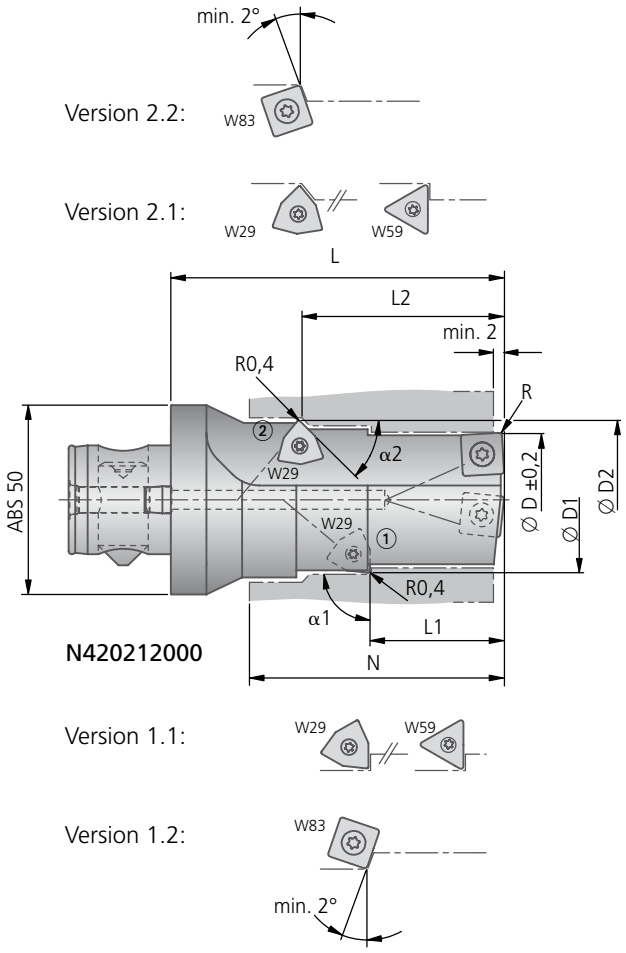
KOMET KUB Quatron Easy Special Ø 14 – 44,5 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	●	✕	●	◐	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420212000-EN.pdf

- With two stepped cutting edges
- Drilling depth 2×D
- ABS connection



Solid drilling step (min/max dimension)

Drilling examples				
Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
14,0 - 17,5	2 × D	N + 35	W83 13...	0,4
17,6 - 21,5	2 × D	N + 35	W83 18...	0,6
21,6 - 27,0	2 × D	N + 35	W83 23...	0,8
27,1 - 33,0	2 × D	N + 40	W83 32...	0,8
33,1 - 44,5	2 × D	N + 40	W83 44...	0,8

Step ① (min/max dimension)

Drilling examples						
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert Version 1.1	Insert Version 1.2
17,5 - 24,9	Version 1.1 W29/W59: 90°-15° Version 1.2 W83: 88°-15°	10	1,5 × D	N + 35	W29 10...	W83 13...
25,0 - 29,9		10	1,5 × D	N + 35	W29 18...	W83 18...
30,0 - 34,9		15	1,5 × D	N + 40	W29 24...	W83 23...
35,0 - 50,0		15	1,5 × D	N + 40	W29 34...	W83 32...
30,0 - 50,0		15	1,5 × D	N + 40	W59 18...	W83 44...

Step ② (min/max dimension)

Drilling examples						
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert Version 2.1	Insert Version 2.2
17,5 - 24,9	Version 2.1 W29/W59: 90°-15° Version 2.2 W83: 88°-15°	L1	L1+(1,5×D1)	N+35	W29 10...	W83 13...
25,0 - 29,9		L1	L1+(1,5×D1)	N+35	W29 18...	W83 18...
30,0 - 34,9		L1	L1+(1,5×D1)	N+40	W29 24...	W83 23...
35,0 - 50,0		L1	L1+(1,5×D1)	N+40	W29 34...	W83 32...
30,0 - 50,0		L1	L1+(1,5×D1)	N+40	W59 18...	W83 44...

● very good | ◐ good | ○ possible | ✕ not possible

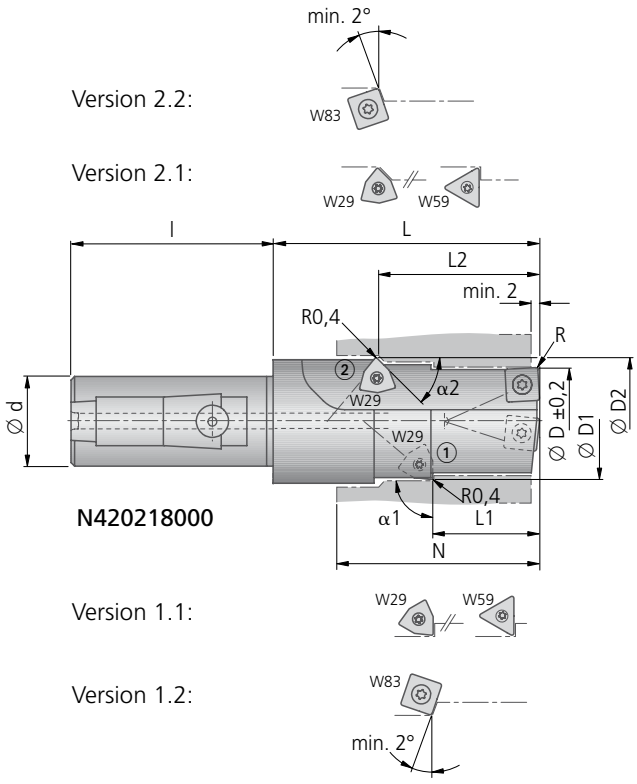
Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	●	✕	●	◐	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420218000-EN.pdf

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- With two stepped cutting edges ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



Solid drilling step (min/max dimension)

Drilling examples						
Drilling range Ø D min - max	Drilling depth N max	L	Insert	R	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 17,5	2 × D	N + 24	W83 13...	0,4	•	•
17,6 - 21,5	2 × D	N + 24	W83 18...	0,6	•	•
21,6 - 27,0	2 × D	N + 29	W83 23...	0,8	•	•
27,1 - 33,0	2 × D	N + 29	W83 32...	0,8		•
33,1 - 44,5	2 × D	N + 29	W83 44...	0,8		•

Step ① (min/max dimension)

Drilling examples						
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert Version 1.1	Insert Version 1.2
17,5 - 24,9	Version 1.1 W29/W59: 90°-15° Version 1.2 W83: 88°-15°	10	1,5 × D	N + 35	W29 10...	W83 13...
25,0 - 29,9		10	1,5 × D	N + 35	W29 18...	W83 18...
30,0 - 34,9		15	1,5 × D	N + 40	W29 24...	W83 23...
35,0 - 50,0		15	1,5 × D	N + 40	W29 34...	W83 32...
30,0 - 50,0		15	1,5 × D	N + 40	W59 18...	W83 44...

Step ② (min/max dimension)

Drilling examples						
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert Version 2.1	Insert Version 2.2
17,5 - 24,9	Version 2.1 W29/W59: 90°-15° Version 2.2 W83: 88°-15°	L1	L1+(1,5×D1)	N+35	W29 10...	W83 13...
25,0 - 29,9		L1	L1+(1,5×D1)	N+35	W29 18...	W83 18...
30,0 - 34,9		L1	L1+(1,5×D1)	N+40	W29 24...	W83 23...
35,0 - 50,0		L1	L1+(1,5×D1)	N+40	W29 34...	W83 32...
30,0 - 50,0		L1	L1+(1,5×D1)	N+40	W59 18...	W83 44...

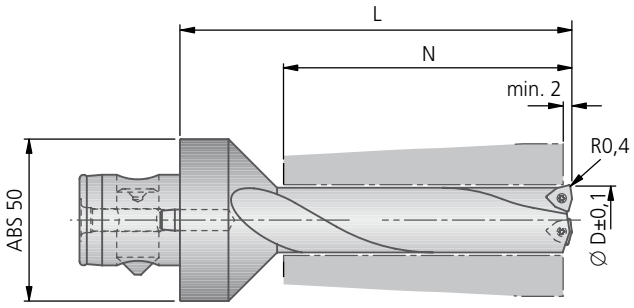
KOMET KUB Trigon Easy Special Ø 14 – 44 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	◐	◐	●	✕	◐	●
3×D	●	●	●	●	◐	◐	◐	◐	✕	○	●
4×D	●	●	◐	○	○	○	○	○	✕	✕	◐

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- Drilling depth 2×D, 3×D, 4×D
- ABS connection



N420001000

Solid drilling step (min/max dimension)					
Drilling examples					
Drilling range Ø D min - max	Drilling depth N 2×D	3×D	4×D	L	Insert
14,0 - 19,9	•	•		N + 35	W29 10...
20,0 - 24,9	•	•	•	N + 35	W29 18...
25,0 - 29,9	•	•	•	N + 35	W29 24...
30,0 - 36,9	•	•	•	N + 40	W29 24...
37,0 - 44,0	•	•	•	N + 50	W29 34...

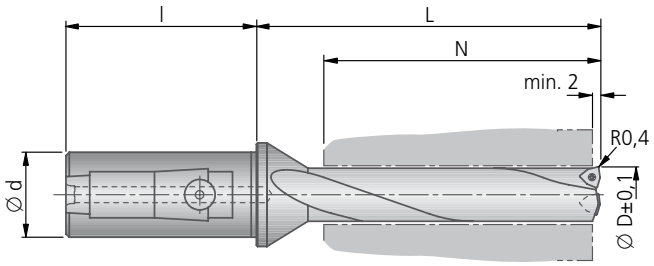
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	◐	◐	●	✕	◐	●
3×D	●	●	●	●	◐	◐	◐	◐	✕	○	●
4×D	●	●	◐	○	○	○	○	○	✕	✕	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420002000-EN.pdf

Drilling depth 2×D, 3×D, 4×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420002000

Solid drilling step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N 2×D	3×D	4×D	L	Insert	Cylindrical shank Ø d × l 20×50	25×56	32×60
12,0 - 13,9	•	•		N + 24	W29 04...	•		
14,0 - 19,9	•	•	•	N + 24	W29 10...	•	•	•
20,0 - 24,9	•	•	•	N + 24	W29 18...	•	•	•
25,0 - 29,9	•	•	•	N + 24	W29 24...		•	•
30,0 - 36,9	•	•	•	N + 29	W29 24...			•
37,0 - 44,0	•	•	•	N + 39	W29 34...			•

Note! On exit of the drill risk of accident by detached parts of workpiece . Please arrange suitable guarding.

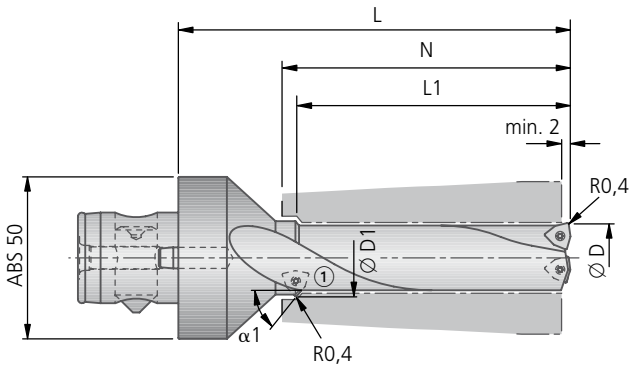
KOMET KUB Trigon Easy Special Ø 14 – 44 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	◐	◐	●	✕	◐	●
3×D	●	●	●	●	◐	◐	◐	◐	✕	○	●
4×D	●	●	◐	○	○	○	○	○	✕	✕	◐

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- With chamfering insert
- Drilling depth 2×D, 3×D, 4×D
- ABS connection



N420005000

Solid drilling step (min/max dimension)		
Drilling examples		
Drilling range Ø D min - max	L	Insert
14,0 - 19,9	N + 40	W29 10...
20,0 - 24,9	N + 40	W29 18...
25,0 - 29,9	N + 40	W29 24...
30,0 - 36,9	N + 45	W29 24...
37,0 - 44,0	N + 55	W29 34...

Chamfering step ① (min/max dimension)							
Drilling examples							
Drilling range Ø D1 min - max	α1 max - min	L1 2×D	L1 3×D	L1 4×D	Drilling range N min	Drilling range N max	Insert
20,0 - 24,9	90° - 15°	•	•	•	L1	L1+5	W29 10...
25,0 - 29,9	90° - 15°	•	•	•	L1	L1+5	W29 24...
30,0 - 36,9	90° - 15°	•	•	•	L1	L1+5	W29 24...
37,0 - 44,0	90° - 15°	•	•	•	L1	L1+5	W29 34...

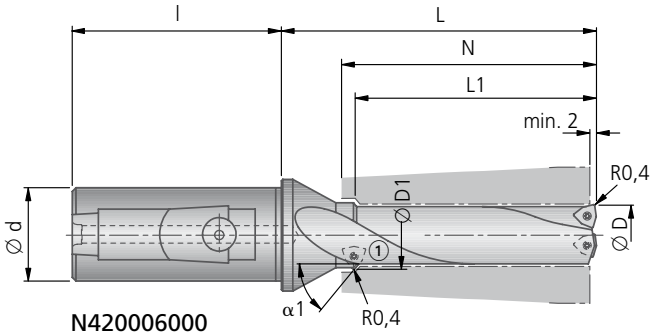
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	◐	◐	●	✕	◐	●
3×D	●	●	●	●	◐	◐	◐	◐	✕	○	●
4×D	●	●	◐	○	○	○	○	○	✕	✕	◐

Inquiry form
www.kometgroup.com/EasySpecial/N420006000-EN.pdf

- With chamfering insert ■
- Drilling depth 2×D, 3×D, 4×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420006000

Solid drilling step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	L	Insert	Cyl. shank Ø d × l 20×50	25×56	32×60
14,0 - 19,9	N + 29	W29 10...	•	•	•
20,0 - 24,9	N + 29	W29 18...	•	•	•
25,0 - 29,9	N + 29	W29 24...		•	•
30,0 - 36,9	N + 34	W29 24...			•
37,0 - 44,0	N + 44	W29 34...			•

Chamfering step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 2×D	3×D	4×D	Drilling range N min	N max	Insert
20,0 - 24,9	90° - 15°	•	•	•	L1	L1+5	W29 10...
25,0 - 29,9	90° - 15°	•	•	•	L1	L1+5	W29 24...
30,0 - 36,9	90° - 15°	•	•	•	L1	L1+5	W29 24...
37,0 - 44,0	90° - 15°	•	•	•	L1	L1+5	W29 34...

KOMET KUB Easy Special

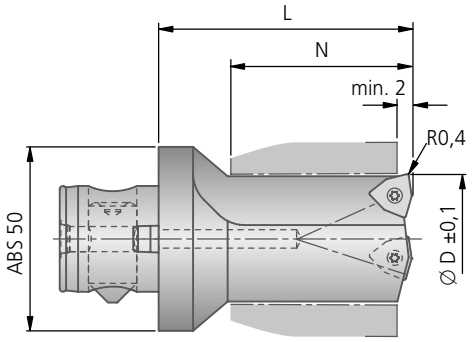
Ø 14 – 44 mm

Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	●	●	✕	◐	●

Inquiry form
www.kometgroup.com/EasySpecial/N420070000-EN.pdf

- Drilling depth 2×D
- ABS connection



N420070000

Solid drilling step (min/max dimension)				
Drilling examples				
Drilling range D min - max	Drilling depth N min	Drilling depth N max	L	Insert
14,0 - 19,9	15	2 × D	N + 35	W29 10...
20,0 - 24,9	15	2 × D	N + 35	W29 18...
25,0 - 29,9	15	2 × D	N + 35	W29 24...
30,0 - 36,9	20	2 × D	N + 40	W29 24...
37,0 - 44,0	20	2 × D	N + 40	W29 34...

● very good | ◐ good | ○ possible | ✕ not possible

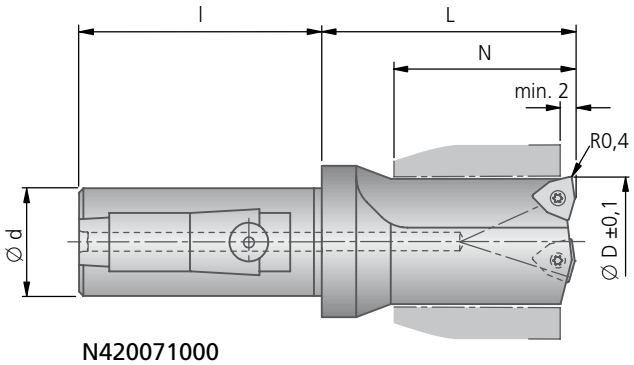
Insert drill with cylindrical shank (combination shank), R.H. cutting

2×D												
	●	●	●	●	●	●	●	●	✕	◐	●

Inquiry form
www.kometgroup.com/EasySpecial/N420071000-EN.pdf

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Drilling depth 2×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420071000

Solid drilling step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	L	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	10	2 × D	N + 24	W29 10...	•	•
20,0 - 24,9	10	2 × D	N + 24	W29 18...	•	•
25,0 - 29,9	10	2 × D	N + 29	W29 24...	•	•
30,0 - 36,9	15	2 × D	N + 29	W29 24...		•
37,0 - 44,0	15	2 × D	N + 29	W29 34...		•

Note! On exit of the drill risk of accident by detached parts of workpiece. Please arrange suitable guarding.

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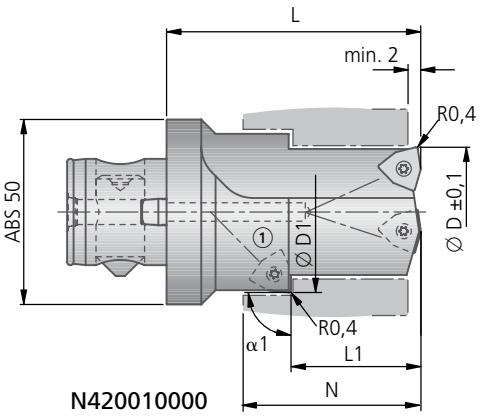
Ø 14 – 44 mm

Insert drill with ABS connection, R.H. cutting

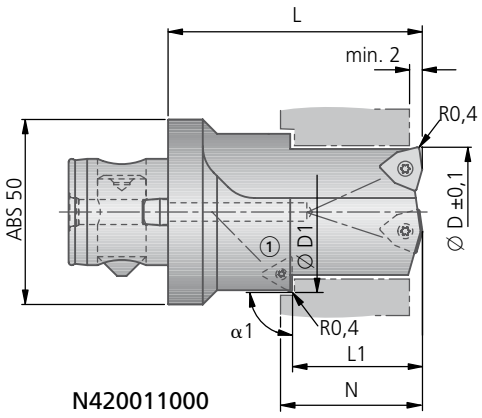
2×D	●	●	●	●	●	●	●	●	✕	◐	●	

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www.kometgroup.com/EasySpecial/N420010000-EN.pdf
www.kometgroup.com/EasySpecial/N420011000-EN.pdf

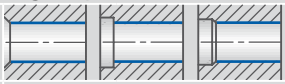
- With a stepped cutting edge
- Drilling depth 2×D
- ABS connection

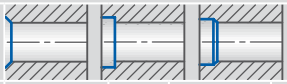


N420010000



N420011000

Solid drilling step (min/max dimension)			
Drilling examples			
Drilling range **Ø D** min - max	Drilling depth **N** min	**N** max	Insert
14,0 - 19,9	15	L1+(1,5×D1)	W29 10...
20,0 - 24,9	15	L1+(1,5×D1)	W29 18...
25,0 - 29,9	20	L1+(1,5×D1)	W29 24...
30,0 - 36,9	20	L1+(1,5×D1)	W29 24...
37,0 - 44,0	20	L1+(1,5×D1)	W29 34...

Step ① (min/max dimension)					
Drilling examples					
Drilling range **Ø D1** min - max	**α1** max - min	**L1** min	**L1** max	**L**	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 35	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 35	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 40	W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D	N + 40	W29 34...
30,0 - 50,0	90°-15°	15	1,5 × D	N + 40	W59 18...

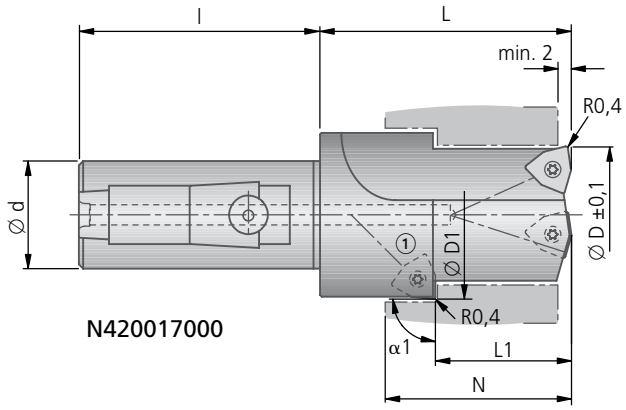
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

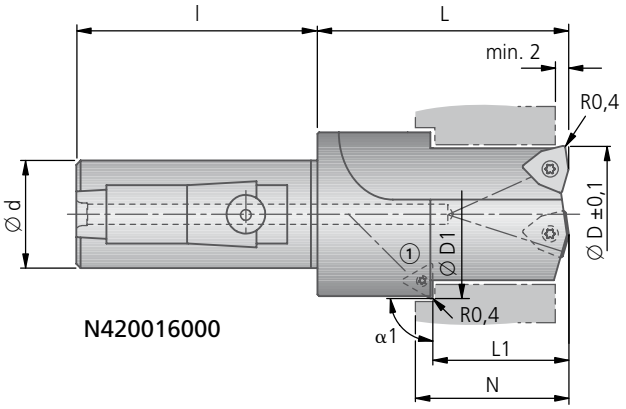
2×D												
	●	●	●	●	●	●	●	●	✕	◐	●	

Inquiry form
www.kometgroup.com/EasySpecial/N420017000-EN.pdf
www.kometgroup.com/EasySpecial/N420016000-EN.pdf

- With a stepped cutting edge ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■

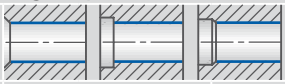


N420017000



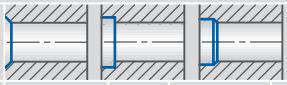
N420016000

Solid drilling step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	15	L1+(1,5×D1)	W29 10...	•	•
20,0 - 24,9	15	L1+(1,5×D1)	W29 18...	•	•
25,0 - 29,9	20	L1+(1,5×D1)	W29 24...	•	•
30,0 - 36,9	20	L1+(1,5×D1)	W29 24...		•
37,0 - 44,0	20	L1+(1,5×D1)	W29 34...		•

Step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 24	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 24	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 29	W29 24...
35,0 - 44,0	90°-15°	15	1,5 × D	N + 29	W29 34...
30,0 - 44,0	90°-15°	15	1,5 × D	N + 29	W59 18...

Note! On exit of the drill risk of accident by detached parts of workpiece . Please arrange suitable guarding.

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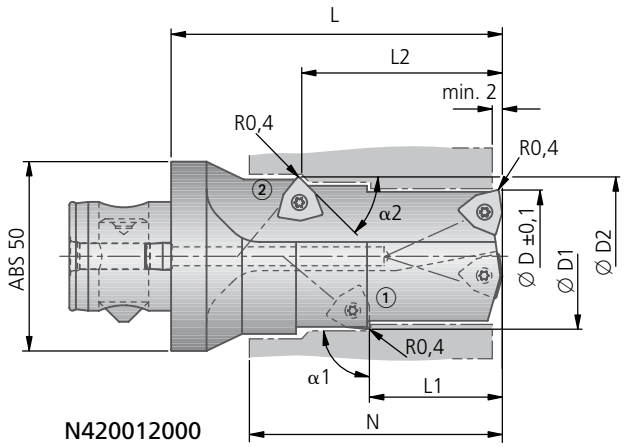
Ø 14 – 44 mm

Insert drill with ABS connection, R.H. cutting

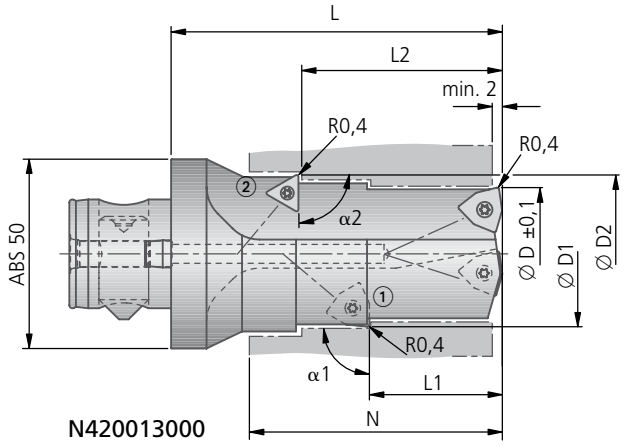
2×D	●	●	●	●	●	●	●	●	✕	◐	●	

Inquiry form
www.kometgroup.com/EasySpecial/N420012000-EN.pdf
www.kometgroup.com/EasySpecial/N420013000-EN.pdf

- With two stepped cutting edges
- Drilling depth 2×D
- ABS connection



N420012000



N420013000

Solid drilling step (min/max dimension)

Drilling examples			
Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert
14,0 - 19,9	15	L2 + (1,5×D2)	W29 10...
20,0 - 24,9	15	L2 + (1,5×D2)	W29 18...
25,0 - 29,9	20	L2 + (1,5×D2)	W29 24...
30,0 - 36,9	20	L2 + (1,5×D2)	W29 24...
37,0 - 44,0	20	L2 + (1,5×D2)	W29 34...

Step ① (min/max dimension)

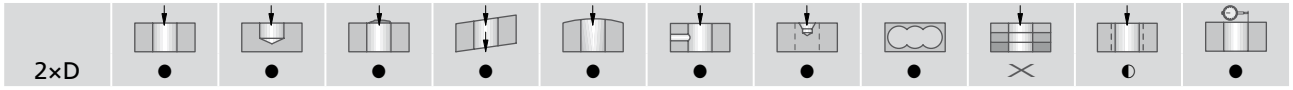
Drilling examples					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 54	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 54	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 59	W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D	N + 59	W29 34...

Step ② (min/max dimension)

Drilling examples					
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert
17,5 - 24,9	90°-15°	L1	L1+(1,5×D1)	N+35	W29 10...
25,0 - 29,9	90°-15°	L1	L1+(1,5×D1)	N+35	W29 18...
30,0 - 34,9	90°-15°	L1	L1+(1,5×D1)	N+40	W29 24...
35,0 - 50,0	90°-15°	L1	L1+(1,5×D1)	N+40	W29 34...
30,0 - 50,0	90°-15°	L1	L1+(1,5×D1)	N+40	W59 18...

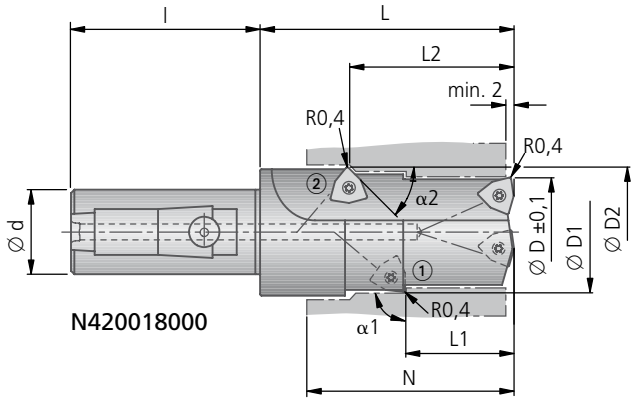
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

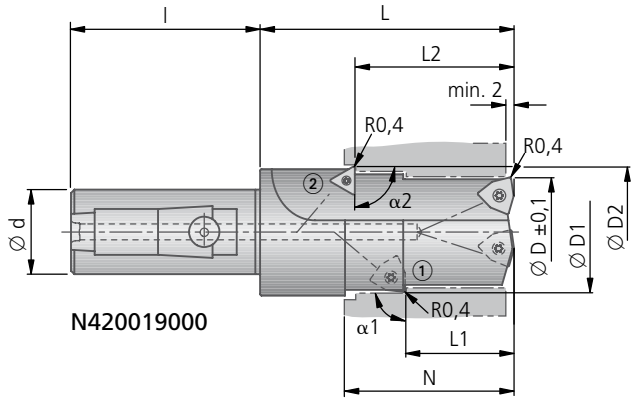


Inquiry form
www.kometgroup.com/EasySpecial/N420018000-EN.pdf
www.kometgroup.com/EasySpecial/N420019000-EN.pdf

- With two stepped cutting edges ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420018000



N420019000

Solid drilling step (min/max dimension)

Drilling examples					
Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	15	L2+(1,5×D2)	W29 10...	•	•
20,0 - 24,9	15	L2+(1,5×D2)	W29 18...	•	•
25,0 - 29,9	20	L2+(1,5×D2)	W29 24...	•	•
30,0 - 36,9	20	L2+(1,5×D2)	W29 24...		•
37,0 - 44,0	20	L2+(1,5×D2)	W29 34...		•

Step ① (min/max dimension)

Drilling examples					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 54	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 54	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 59	W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D	N + 59	W29 34...

Step ② (min/max dimension)

Drilling examples					
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert
17,5 - 24,9	90°-15°	L1	L1+(1,5×D1)	N+35	W29...
25,0 - 29,9	90°-15°	L1	L1+(1,5×D1)	N+35	W29...
30,0 - 34,9	90°-15°	L1	L1+(1,5×D1)	N+40	W29...
35,0 - 50,0	90°-15°	L1	L1+(1,5×D1)	N+40	W29...
30,0 - 50,0	90°-15°	L1	L1+(1,5×D1)	N+40	W59 18...

Note! On exit of the drill risk of accident by detached parts of workpiece . Please arrange suitable guarding.

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Ø 14 – 44 mm

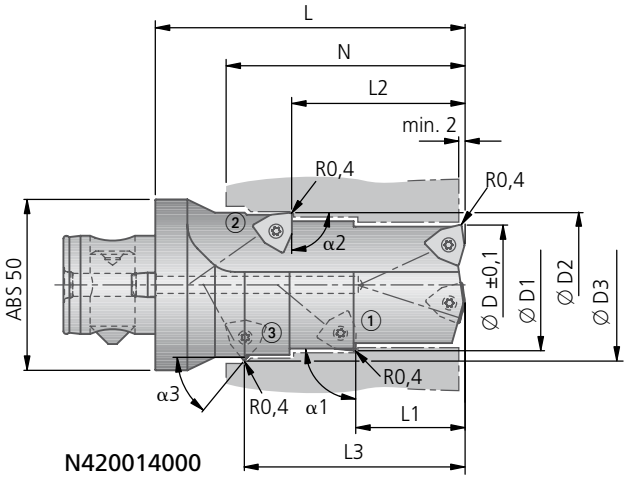
Insert drill with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	●	●	✕	◐	●

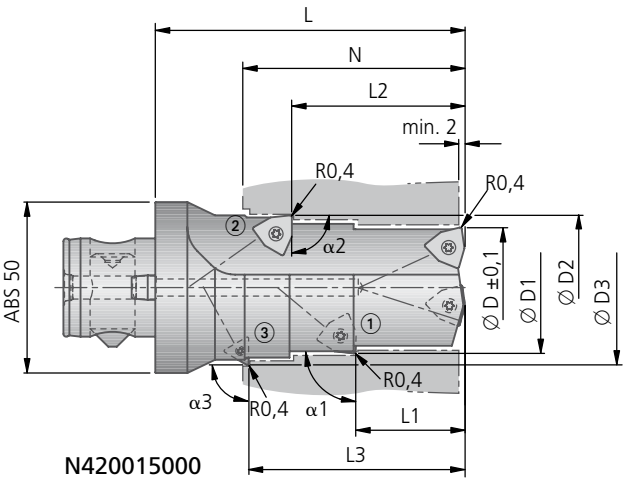
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www.kometgroup.com/EasySpecial/N420015000-EN.pdf

- With three stepped cutting edges
- Drilling depth 2×D
- ABS connection



N420014000



N420015000

Solid drilling step (min/max dimension)

Drilling examples					
Drilling range **Ø D** min - max	Drilling depth **N** min	**N** max			Insert
14,0 - 19,9	30	L3 + (1,5×D3)			W29 10...
20,0 - 24,9	30	L3 + (1,5×D3)			W29 18...
25,0 - 29,9	40	L3 + (1,5×D3)			W29 24...
30,0 - 36,9	40	L3 + (1,5×D3)			W29 24...
37,0 - 44,0	40	L3 + (1,5×D3)			W29 34...

Step ① (min/max dimension)

Drilling examples					
Drilling range **Ø D1** min - max	**α1** max - min	**L1** min	**L1** max		Insert
17,5 - 24,9	90°-15°	10	1,5 × D		W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D		W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D		W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D		W29 34...

Step ② (min/max dimension)

Drilling examples					
Drilling range **Ø D2** min - max	**α2** max - min	**L2** min	**L2** max		Insert
17,5 - 24,9	90°-15°	L1	L1 + (1,5×D1)		W29...
25,0 - 29,9	90°-15°	L1	L1 + (1,5×D1)		W29...
30,0 - 34,9	90°-15°	L1	L1 + (1,5×D1)		W29...
35,0 - 50,0	90°-15°	L1	L1 + (1,5×D1)		W29...

Step ③ (min/max dimension)

Drilling examples					
Drilling range **Ø D3** min - max	**α3** max - min	**L3** min	**L3** max	**L**	Insert
17,5 - 24,9	90°-15°	L2	L2+(1,5×D2)	N+35	W29...
25,0 - 29,9	90°-15°	L2	L2+(1,5×D2)	N+35	W29...
30,0 - 34,9	90°-15°	L2	L2+(1,5×D2)	N+40	W29...
35,0 - 50,0	90°-15°	L2	L2+(1,5×D2)	N+40	W29...
30,0 - 50,0	90°-15°	L2	L2+(1,5×D2)	N+40	W59 18...

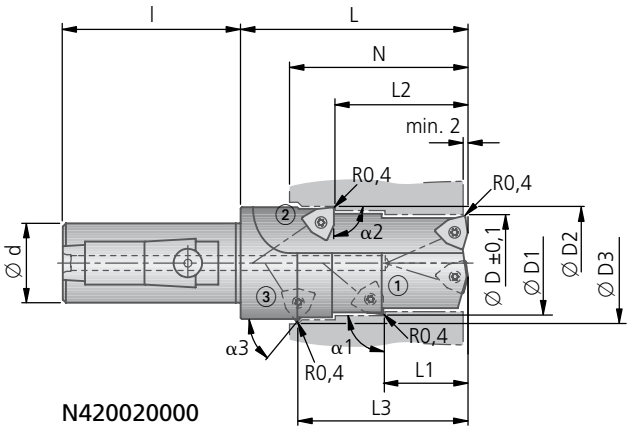
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with cylindrical shank (combination shank), R.H. cutting

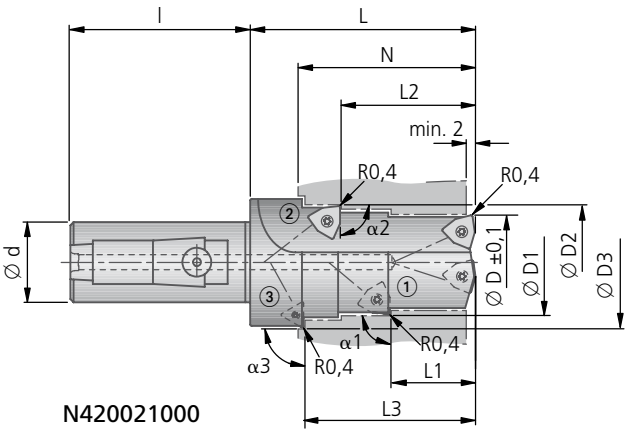
2×D											
	●	●	●	●	●	●	●	●	✕	◐	●

Inquiry form
www.kometgroup.com/EasySpecial/N420020000-EN.pdf
www.kometgroup.com/EasySpecial/N420021000-EN.pdf

- With three stepped cutting edges
- Drilling depth 2×D
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595



N420020000



N420021000

Solid drilling step (min/max dimension)

Drilling examples						
Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	15	L3+(1,5×D3)	W29 10...	•	•
20,0 - 24,9	15	L3+(1,5×D3)	W29 18...	•	•
25,0 - 29,9	20	L3+(1,5×D3)	W29 24...	•	•
30,0 - 36,9	20	L3+(1,5×D3)	W29 24...		•
37,0 - 44,0	20	L3+(1,5×D3)	W29 34...		•

Step ① (min/max dimension)

Drilling examples				
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	W29 24...
35,0 - 44,0	90°-15°	15	1,5 × D	W29 34...

Step ② (min/max dimension)

Drilling examples				
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	Insert
17,5 - 24,9	90°-15°	L1	L1 + (1,5×D1)	W29...
25,0 - 29,9	90°-15°	L1	L1 + (1,5×D1)	W29...
30,0 - 34,9	90°-15°	L1	L1 + (1,5×D1)	W29...
35,0 - 44,0	90°-15°	L1	L1 + (1,5×D1)	W29...

Step ③ (min/max dimension)

Drilling examples					
Drilling range Ø D3 min - max	α3 max - min	L3 min	L3 max	L	Insert
17,5 - 24,9	90°-15°	L2	L2+(1,5×D2)	N+24	W29...
25,0 - 29,9	90°-15°	L2	L2+(1,5×D2)	N+24	W29...
30,0 - 34,9	90°-15°	L2	L2+(1,5×D2)	N+29	W29...
35,0 - 44,0	90°-15°	L2	L2+(1,5×D2)	N+29	W29...
30,0 - 44,0	90°-15°	L2	L2+(1,5×D2)	N+29	W59 18...

Note! On exit of the drill risk of accident by detached parts of workpiece . Please arrange suitable guarding.

KOMET KUB Easy Special

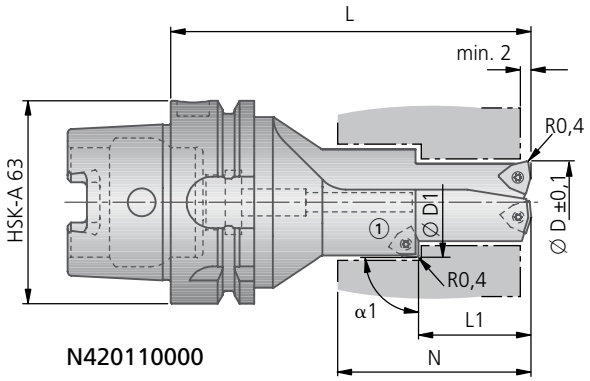
Ø 14 – 44 mm

Insert drill with HSK-A connection, R.H. cutting

2×D	●	●	●	●	●	●	●	●	✕	◐	●

Inquiry form
www.kometgroup.com/EasySpecial/N420110000-EN.pdf

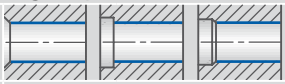
- With a stepped cutting edge
- Drilling depth 2×D
- HSK-A connection to ISO 12164-1



N420110000

Solid drilling step (min/max dimension)

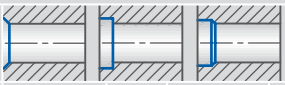
Drilling examples



Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert
14,0 - 19,9	15	L1+(1,5×D1)	W29 10...
20,0 - 24,9	15	L1+(1,5×D1)	W29 18...
25,0 - 29,9	20	L1+(1,5×D1)	W29 24...
30,0 - 36,9	20	L1+(1,5×D1)	W29 24...
37,0 - 44,0	20	L1+(1,5×D1)	W29 34...

Step ① (min/max dimension)

Drilling examples



Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 54	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 54	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 59	W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D	N + 59	W29 34...
30,0 - 50,0	90°-15°	15	1,5 × D	N + 59	W59 18...

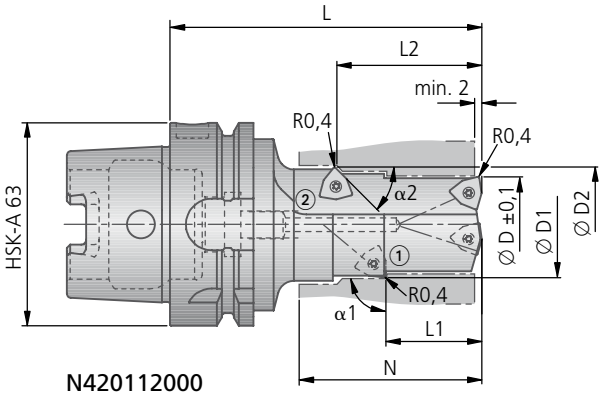
● very good | ◐ good | ○ possible | ✕ not possible

Insert drill with HSK-A connection, R.H. cutting

2×D	●	●	●	●	●	●	●	●	✕	◐	●	

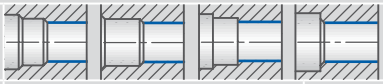
Inquiry form
www.kometgroup.com/EasySpecial/N420112000-EN.pdf

- With two stepped cutting edges
- Drilling depth 2×D
- HSK-A connection to ISO 12164-1



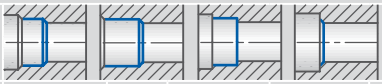
N420112000

Solid drilling step (min/max dimension)

Drilling examples 

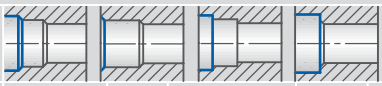
Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	Insert
14,0 - 19,9	15	L2 + (1,5×D2)	W29 10...
20,0 - 24,9	15	L2 + (1,5×D2)	W29 18...
25,0 - 29,9	20	L2 + (1,5×D2)	W29 24...
30,0 - 36,9	20	L2 + (1,5×D2)	W29 24...
37,0 - 44,0	20	L2 + (1,5×D2)	W29 34...

Step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
17,5 - 24,9	90°-15°	10	1,5 × D	N + 54	W29 10...
25,0 - 29,9	90°-15°	10	1,5 × D	N + 54	W29 18...
30,0 - 34,9	90°-15°	15	1,5 × D	N + 59	W29 24...
35,0 - 50,0	90°-15°	15	1,5 × D	N + 59	W29 34...

Step ② (min/max dimension)

Drilling examples 

Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert
17,5 - 24,9	90°-15°	L1	L1+(1,5×D1)	N+54	W29...
25,0 - 29,9	90°-15°	L1	L1+(1,5×D1)	N+54	W29...
30,0 - 34,9	90°-15°	L1	L1+(1,5×D1)	N+59	W29...
35,0 - 50,0	90°-15°	L1	L1+(1,5×D1)	N+59	W29...

Note! On exit of the drill risk of accident by detached parts of workpiece . Please arrange suitable guarding.

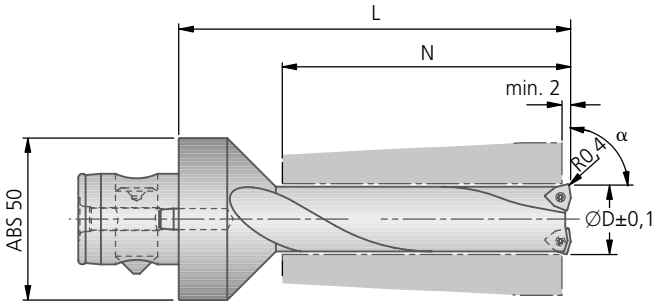
KOMET TwinKom Easy Special Ø 14 – 44 mm

Twin cutter with ABS connection, R.H. cutting

2×D	●	●	●	●	●	●	✕	●	α = 80°	✕
3×D	●	●	●	●	●	●	✕	●	α = 80°	✕
4×D	●	●	●	●	●	●	✕	●	α = 80°	✕

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- Drilling depth 2×D, 3×D, 4×D
- ABS connection



N420022000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N 2×D	3×D	4×D	L	α max - min	Insert
14,0 - 19,9	•	•	•	N + 35	90° - 15°	W29 10...
20,0 - 24,9	•	•	•	N + 35	90° - 15°	W29 18...
25,0 - 29,9	•	•	•	N + 35	90° - 15°	W29 24...
30,0 - 36,9	•	•	•	N + 40	90° - 15°	W29 24...
37,0 - 44,0	•	•	•	N + 50	90° - 15°	W29 34...

● very good | ◐ good | ○ possible | ✕ not possible

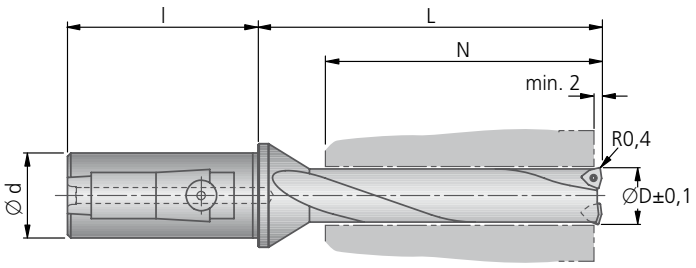
Twin cutter with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	×	●	α = 80°	×
3×D	●	●	●	●	●	●	×	●	α = 80°	×
4×D	●	●	●	●	●	●	×	●	α = 80°	×

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Drilling depth 2×D, 3×D, 4×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420023000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N 2×D	3×D	4×D	L	Insert	Cylindrical shank Ø d × l 20×50	25×56	32×60
14,0 - 19,9	•	•	•	N + 24	W29 10...	•	•	•
20,0 - 24,9	•	•	•	N + 24	W29 18...	•	•	•
25,0 - 29,9	•	•	•	N + 24	W29 24...		•	•
30,0 - 36,9	•	•	•	N + 29	W29 24...			•
37,0 - 44,0	•	•	•	N + 39	W29 34...			•

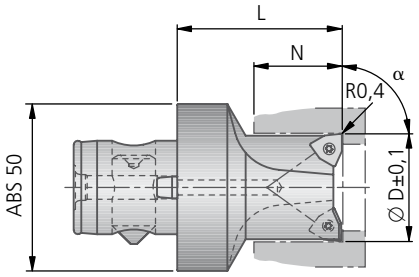
KOMET TwinKom Easy Special Ø 14 – 50 mm

Twin cutter with ABS or HSK-A connection, R.H. cutting

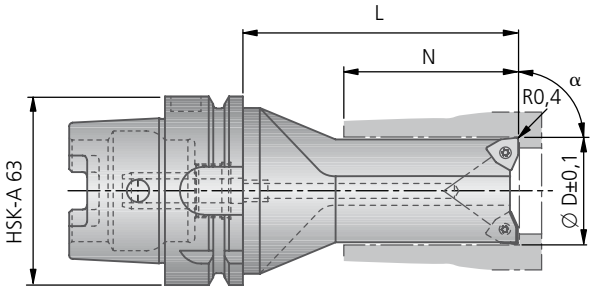
2×D										
	●	●	●	●	●	●	✕	●	α = 80°	✕

Inquiry form
www.kometgroup.com/EasySpecial/N420022000-EN.pdf
www.kometgroup.com/EasySpecial/N420122000-EN.pdf

- Drilling depth 2×D
- ABS connection or HSK-A connection to ISO 12164-1

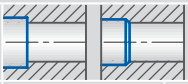


N420022000



N420122000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	ABS L	HSK L	Insert
14,0 - 19,9	5	2 × D	N + 35	N + 54	W29 10...
20,0 - 24,9	5	2 × D	N + 35	N + 54	W29 18...
25,0 - 29,9	5	2 × D	N + 35	N + 54	W29 24...
30,0 - 50,0	5	2 × D	N + 40	N + 59	W29 34...

● very good | ◐ good | ○ possible | ✕ not possible

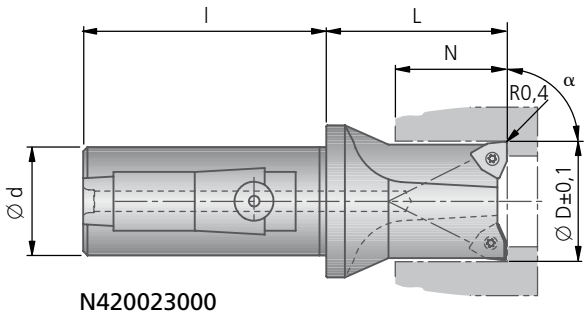
Twin cutter with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	×	●	α = 80°	×

Inquiry form
www.kometgroup.com/EasySpecial/N420023000-EN.pdf

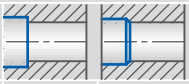
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Drilling depth 2×D ■
Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



N420023000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	α max - min	Drilling depth N min	Drilling depth N max	L	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	90°-15°	5	2 × D	N + 24	W29 10...	•	•
20,0 - 24,9	90°-15°	5	2 × D	N + 24	W29 18...	•	•
25,0 - 29,9	90°-15°	5	2 × D	N + 24	W29 24...	•	•
30,0 - 44,0	90°-15°	5	2 × D	N + 29	W29 34...		•

KOMET TwinKom Easy Special

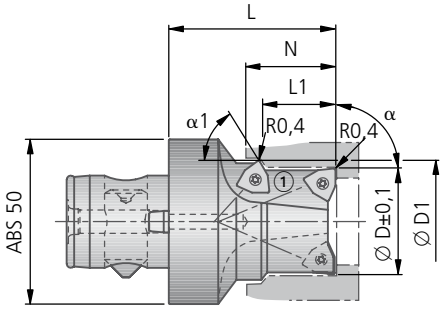
Ø 14 – 50 mm

Twin cutter with ABS connection, R.H. cutting

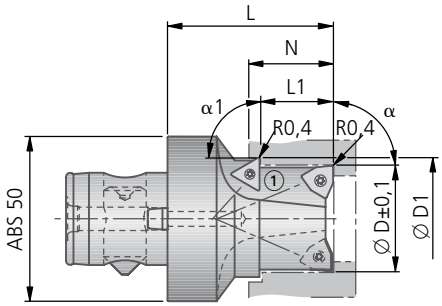
2×D									α = 80°	
	●	●	●	●	●	●	✕	●		✕

Inquiry form
www.kometgroup.com/EasySpecial/N420025000-EN.pdf
www.kometgroup.com/EasySpecial/N420027000-EN.pdf

- With chamfering insert
- Drilling depth 2×D
- ABS connection

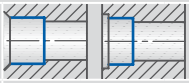


N420025000



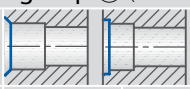
N420027000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	Drilling depth for N420025000 N min	N420027000 N min	N max	α max - min	Insert
14,0 - 19,9	10	L1	2 × D	90° - 15°	W29 10...
20,0 - 24,9	10	L1	2 × D	90° - 15°	W29 18...
25,0 - 29,9	10	L1	2 × D	90° - 15°	W29 24...
30,0 - 50,0	10	L1	2 × D	90° - 15°	W29 34...

Chamfering step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
17,0 - 22,9	75° - 15°	10	≦ N	N + 35	W29 10...
23,0 - 29,9	75° - 15°	10	≦ N	N + 35	W29 24...
30,0 - 34,9	75° - 15°	15	≦ N	N + 40	W29 24...
35,0 - 50,0	75° - 15°	15	≦ N	N + 40	W29 34...
30,0 - 50,0	90° - 15°	15	2×D	N + 40	W59 18...

● very good | ◐ good | ○ possible | ✕ not possible

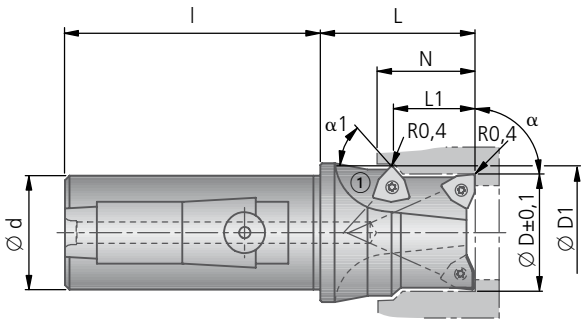
KOMET TwinKom Easy Special

Twin cutter with cylindrical shank (combination shank), R.H. cutting

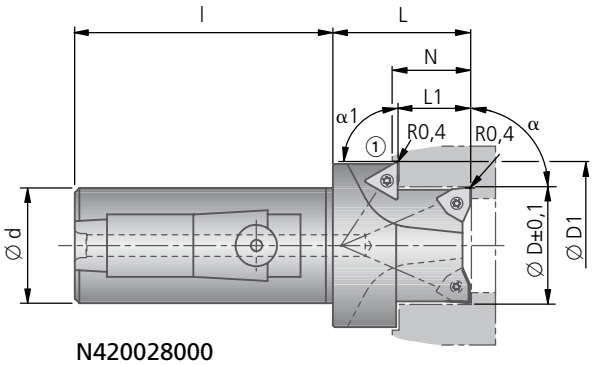
2×D	●	●	●	●	●	●	×	●	α = 80°	×

Inquiry form
www.kometgroup.com/EasySpecial/N420026000-EN.pdf
www.kometgroup.com/EasySpecial/N420028000-EN.pdf

- With chamfering insert ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■

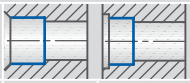


N420026000



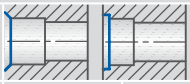
N420028000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	α max - min	Drilling depth N min	Drilling depth N max	L	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	90°-15°	10	2 × D	N + 24	W29 10...	•	•
20,0 - 24,9	90°-15°	10	2 × D	N + 24	W29 18...	•	•
25,0 - 29,9	90°-15°	10	2 × D	N + 24	W29 24...	•	•
30,0 - 44,0	90°-15°	10	2 × D	N + 29	W29 34...		•

Chamfering step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
17,0 - 22,9	75° - 15°	10	≦ N	N + 35	W29 10...
23,0 - 29,9	75° - 15°	10	≦ N	N + 35	W29 24...
30,0 - 34,9	75° - 15°	15	≦ N	N + 40	W29 24...
35,0 - 50,0	75° - 15°	15	≦ N	N + 40	W29 34...
30,0 - 50,0	90° - 15°	15	2×D	N + 40	W59 18...

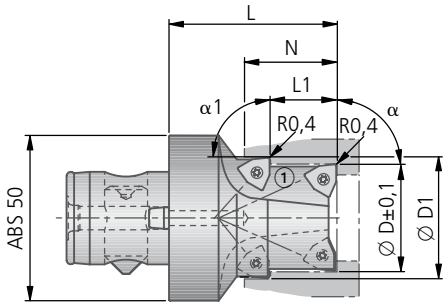
KOMET TwinKom Easy Special Ø 14 – 50 mm

Twin cutter with ABS connection, R.H. cutting

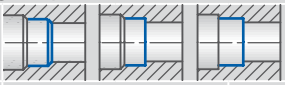
2×D									α = 80°	
	●	●	●	●	●	●	✕	●		✕

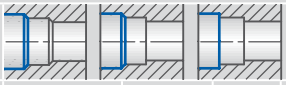
Inquiry form
www.kometgroup.com/EasySpecial/N420060000-EN.pdf

- With a stepped cutting edge
- Drilling depth 2×D
- ABS connection



N420060000

Roughing step (min/max dimension)				
Drilling examples				
Drilling range Ø D min - max	Drilling depth N min	N max	α max - min	Insert
14,0 - 19,9	> L1	2 × D	90° - 15°	W29 10...
20,0 - 24,9	> L1	2 × D	90° - 15°	W29 18...
25,0 - 29,9	> L1	2 × D	90° - 15°	W29 24...
30,0 - 50,0	> L1	2 × D	90° - 15°	W29 34...

Step ① (min/max dimension)					
Drilling examples					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
17,0 - 22,9	90° - 15°	10	≦ N	N + 35	W29 10...
23,0 - 29,9	90° - 15°	10	≦ N	N + 35	W29 24...
30,0 - 34,9	90° - 15°	15	≦ N	N + 40	W29 24...
35,0 - 50,0	90° - 15°	15	≦ N	N + 40	W29 34...

● very good | ◐ good | ○ possible | ✕ not possible

KOMET TwinKom Easy Special

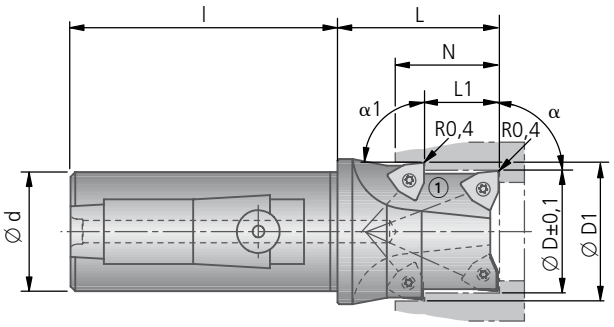
Twin cutter with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	×	●	α = 80°	×

Inquiry form
www.kometgroup.com/EasySpecial/N420061000-EN.pdf

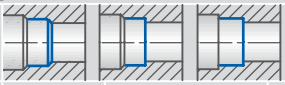
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- With a stepped cutting edge ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



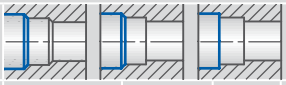
N420061000

Roughing step (min/max dimension)

Drilling examples 

Drilling range Ø D min - max	α max - min	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 25×56	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	90° - 15°	> L1	2 × D	W29 10...	•	•
20,0 - 24,9	90° - 15°	> L1	2 × D	W29 18...	•	•
25,0 - 29,9	90° - 15°	> L1	2 × D	W29 24...	•	•
30,0 - 44,0	90° - 15°	> L1	2 × D	W29 34...		•

Step ① (min/max dimension)

Drilling examples 

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
17,0 - 22,9	90° - 15°	10	< N	N + 24	W29 10...
23,0 - 29,9	90° - 15°	10	< N	N + 24	W29 24...
30,0 - 34,9	90° - 15°	15	< N	N + 29	W29 24...
35,0 - 44,0	90° - 15°	15	< N	N + 29	W29 34...

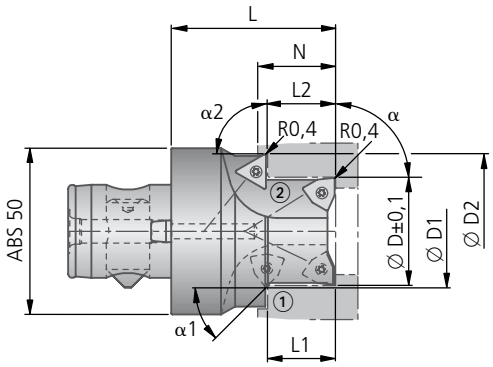
KOMET TwinKom Easy Special Ø 14 – 50 mm

Twin cutter with ABS connection, R.H. cutting

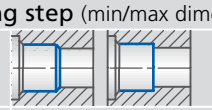
2×D										
	●	●	●	●	●	●	✕	●	α = 80°	✕

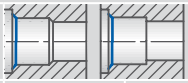
Inquiry form
www.kometgroup.com/EasySpecial/N420029000-EN.pdf

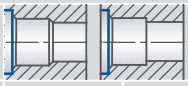
- With two stepped cutting edges
- Drilling depth 2×D
- ABS connection



N420029000

Roughing step (min/max dimension)				
Drilling examples				
Drilling range **Ø D** min - max	Drilling depth **N** min	**N** max	**α** max - min	Insert
14,0 - 19,9	L2	L2 + 2	90° - 15°	W29 10...
20,0 - 24,9	L2	L2 + 2	90° - 15°	W29 18...
25,0 - 29,9	L2	L2 + 2	90° - 15°	W29 24...
30,0 - 50,0	L2	L2 + 2	90° - 15°	W29 34...

Step ① (min/max dimension)				
Drilling examples				
Drilling range **Ø D1** min - max	**α1** max - min	**L1** min	**L1**	Insert
17,0 - 22,9	90° - 15°	10	≦ L2	W29 10...
23,0 - 29,9	90° - 15°	10	≦ L2	W29 24...
30,0 - 34,9	90° - 15°	15	≦ L2	W29 24...
35,0 - 50,0	90° - 15°	15	≦ L2	W29 34...

Step ② (min/max dimension)					
Drilling examples					
Drilling range **Ø D2** min - max	**α2** max - min	**L2** min	**L2**	**L**	Insert
30,0 - 50,0	90° - 15°	L1	2 × D	N + 40	W59 18...

● very good | ◐ good | ○ possible | ✕ not possible

KOMET TwinKom Easy Special

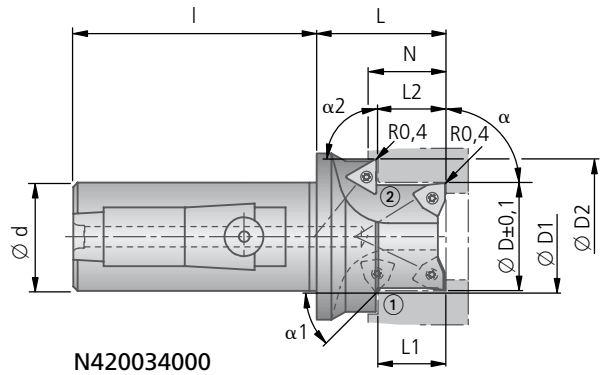
Twin cutter with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	×	●	α = 80°	×

Inquiry form
www.kometgroup.com/EasySpecial/N420034000-EN.pdf

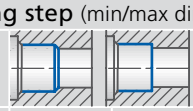
DOWNLOAD

- With two stepped cutting edges ■
- Drilling depth 2×D ■
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595 ■



Roughing step (min/max dimension)

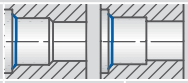
Drilling examples



Drilling range Ø D min - max	α max - max	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	90° - 15°	L2	L2 + 2	W29 10...	•
20,0 - 24,9	90° - 15°	L2	L2 + 2	W29 18...	•
25,0 - 29,9	90° - 15°	L2	L2 + 2	W29 24...	•
30,0 - 44,0	90° - 15°	L2	L2 + 2	W29 34...	•

Step ① (min/max dimension)

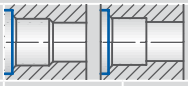
Drilling examples



Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
17,0 - 22,9	90° - 15°	10	≦ L2	W29 10...
23,0 - 29,9	90° - 15°	10	≦ L2	W29 24...
30,0 - 34,9	90° - 15°	15	≦ L2	W29 24...
35,0 - 44,0	90° - 15°	15	≦ L2	W29 34...

Step ② (min/max dimension)

Drilling examples



Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert
30,0 - 44,0	90° - 15°	L1	2 × D	N + 29	W59 18...

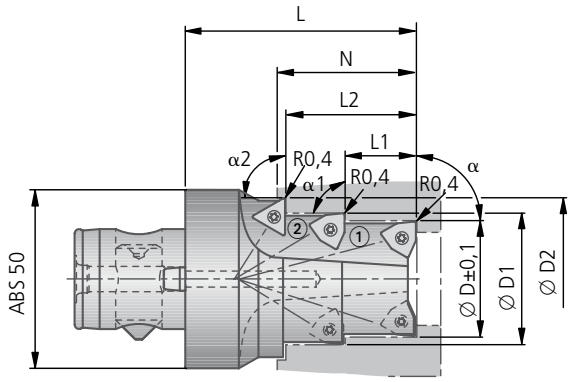
KOMET TwinKom Easy Special Ø 14 – 50 mm

Twin cutter with ABS connection, R.H. cutting

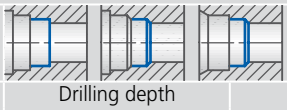
2×D	●	●	●	●	●	●	✕	●	α = 80°	✕

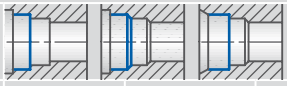
Inquiry form
www.kometgroup.com/EasySpecial/N420062000-EN.pdf

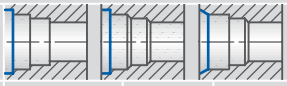
- With two stepped cutting edges
- Drilling depth 2×D
- ABS connection



N420062000

Roughing step (min/max dimension)				
Drilling examples				
Drilling range **Ø D** min - max	Drilling depth **N** min	**N** max	**α** max - min	Insert
14,0 - 19,9	> L2	L2 + 2	90° - 15°	W29 10...
20,0 - 24,9	> L2	L2 + 2	90° - 15°	W29 18...
25,0 - 29,9	> L2	L2 + 2	90° - 15°	W29 24...
30,0 - 50,0	> L2	L2 + 2	90° - 15°	W29 34...

Step ① (min/max dimension)				
Drilling examples				
Drilling range **Ø D1** min - max	**α1** max - min	**L1** min	**L1**	Insert
17,0 - 22,9	90° - 15°	10	L2 – 10	W29 10...
23,0 - 29,9	90° - 15°	10	L2 – 10	W29 24...
30,0 - 34,9	90° - 15°	15	L2 – 10	W29 24...
35,0 - 50,0	90° - 15°	15	L2 – 10	W29 34...

Step ② (min/max dimension)					
Drilling examples					
Drilling range **Ø D2** min - max	**α2** max - min	**L2** min	**L2**	**L**	Insert
30,0 - 50,0	90° - 15°	L1 + 15	2 × D	N + 40	W59 18...

● very good | ◐ good | ○ possible | ✕ not possible

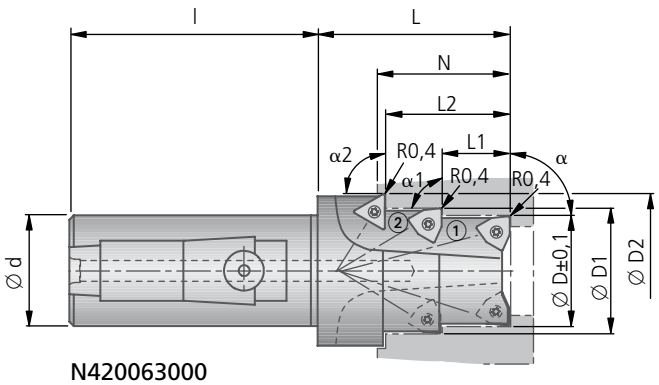
KOMET TwinKom Easy Special

Twin cutter with cylindrical shank (combination shank), R.H. cutting

2×D	●	●	●	●	●	●	×	●	α = 80°	×

Inquiry form
www.kometgroup.com/EasySpecial/N420063000-EN.pdf

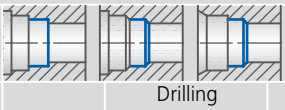
- With two stepped cutting edges
- Drilling depth 2×D
- Cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595



N420063000

Roughing step (min/max dimension)

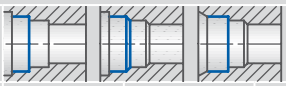
Drilling examples



Drilling range Ø D min - max	α max - min	Drilling depth N min	Drilling depth N max	Insert	Cylindrical shank Ø d × l 32×60
14,0 - 19,9	90° - 15°	> L2	L2 + 2	W29 10...	•
20,0 - 24,9	90° - 15°	> L2	L2 + 2	W29 18...	•
25,0 - 29,9	90° - 15°	> L2	L2 + 2	W29 24...	•
30,0 - 44,0	90° - 15°	> L2	L2 + 2	W29 34...	•

Step ① (min/max dimension)

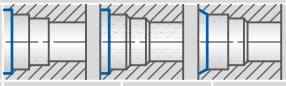
Drilling examples



Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
17,0 - 22,9	90° - 15°	10	L2 – 10	W29 10...
23,0 - 29,9	90° - 15°	10	L2 – 10	W29 24...
30,0 - 34,9	90° - 15°	15	L2 – 10	W29 24...
35,0 - 44,0	90° - 15°	15	L2 – 10	W29 34...

Step ② (min/max dimension)

Drilling examples



Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert
30,0 - 44,0	90° - 15°	L1 + 15	2 × D	N + 29	W59 18...

KOMET Easy Special Ø 8 – 40 mm

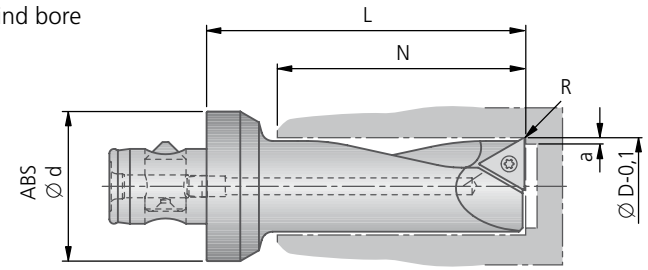
Boring bar with ABS connection, R.H. cutting

4×D						HRC > 54	HRC > 54	
	●	●	●	●	✕	● ≤ 2×D	● ≤ 2×D	✕

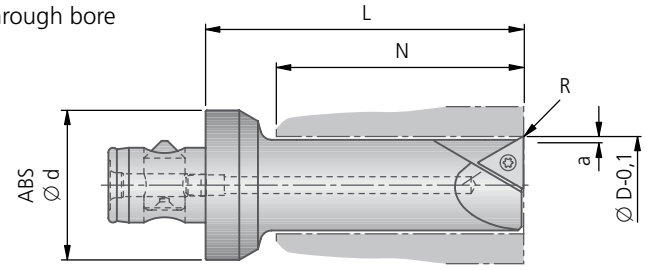
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- **For machining steel / machining aluminium**
- Drilling depth 4×D
- Use with micro-adjustable heads MicroKom *hi.flex,* MicroKom *BluFlex* 2

Blind bore



Through bore



N420030000

Fine boring step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	L	a max	ABS Ø d	Insert P	Insert N
8,0 - 11,9	15	4 × D	N + 17	0,3	25	W30 04...	W32 03...
12,0 - 14,0						W30 14...	W32 13...
8,0 - 11,9	15	4 × D	N + 17	0,3	32	W30 04...	W32 03...
12,0 - 32,0						W30 14...	W32 13...
8,0 - 11,9	15	4 × D	N + 20	0,3	40	W30 04...	W32 03...
12,0 - 40,0						W30 14...	W32 13...

● very good | ◐ good | ○ possible | ✕ not possible

Boring bar with cylindrical shank (KFK-UJ), R.H. cutting

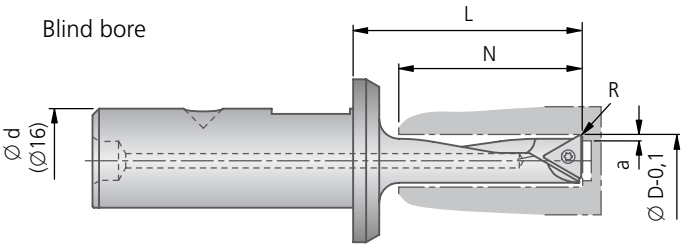
4×D						HRC > 54	HRC > 54	
	●	●	●	●	×	● ≤ 2×D	● ≤ 2×D	×

Inquiry form
www.kometgroup.com/EasySpecial/N420031000-EN.pdf

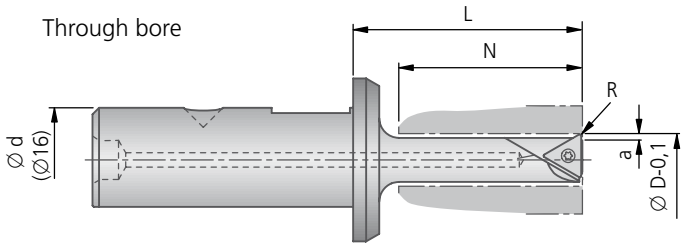
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For machining steel / machining aluminium ■
Drilling depth 4×D ■
Use with micro-adjustable heads MicroKom *hi.flex,* MicroKom *BluFlex* 2 (with adaptor M05 90240) ■

Blind bore



Through bore



N420031000

Fine boring step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	L	a max	Ø d	Insert P	Insert N
8,0 - 11,9	15	4 × D	N + 9	0,3	16	W30 04...	W32 03...
12,0 - 24,0						W30 14...	W32 13...

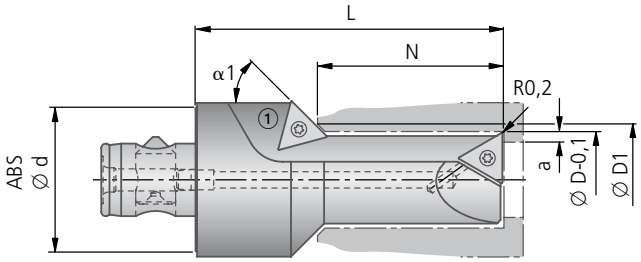
KOMET Easy Special — Ø 8 – 28 mm

Boring bar with ABS connection, R.H. cutting

4×D						HRC > 54	HRC > 54	
	●	●	●	●	✕	● ≤ 2×D	● ≤ 2×D	✕

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www.kometgroup.com/EasySpecial/N420032000-EN.pdf

- **For machining steel / machining aluminium**
- Drilling depth 4×D
- Use with micro-adjustable heads MicroKom *hi.flex,* MicroKom *BluFlex* 2



N420032000

Fine boring step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	L	a max	ABS Ø d	Insert P	Insert N
8,0 - 11,9	15	4 × D	N + 17	0,3	25	W30 04...	W32 03...
12,0 - 14,0						W30 14...	W32 13...
8,0 - 11,9	15	4 × D	N + 17	0,3	32	W30 04...	W32 03...
12,0 - 24,0						W30 14...	W32 13...
8,0 - 11,9	15	4 × D	N + 20	0,3	40	W30 04...	W32 03...
12,0 - 28,0						W30 14...	W32 13...

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)

Drilling range Ø D1 min - max	α1 max - min	Drilling depth N min	Drilling depth N max	L	Insert P	Insert N
8,0 - 9,9	75° - 50°	15	4×D	N + 27	W30 04...	W32 03...
10,0 - 14,9	75° - 45°					
15,0 - 18,9	75° - 30°					
19,0 - 28,0	75° - 15°					

Drilling range Ø 8 – 28 mm

α1	75°	60°	45°	30°	15°
s max	1,3	1,2	1,0	0,6	0,3
b max	0,3	0,6	1,0	1,2	1,3

s_{max} = max. cutting width b_{max} = max. chamfering width

● very good | ◐ good | ○ possible | ✕ not possible

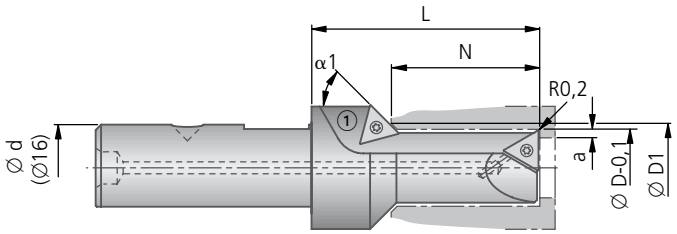
Boring bar with cylindrical shank (KFK-UJ), R.H. cutting

4×D						HRC > 54	HRC > 54	
	●	●	●	●	×	● ≤ 2×D	● ≤ 2×D	×

Inquiry form
www.kometgroup.com/EasySpecial/N420033000-EN.pdf

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For machining steel / machining aluminium ■
Drilling depth 4×D ■
Use with micro-adjustable heads MicroKom *hi.flex,* MicroKom *BluFlex* 2 (with adaptor M05 90240) ■



N420033000

Fine boring step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N min	Drilling depth N max	L	a max	Ø d	Insert P	Insert N
8,0 - 11,9	15	4 × D	N + 9	0,3	16	W30 04...	W32 03...
12,0 - 24,0						W30 14...	W32 13...

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)

Drilling range Ø D1 min - max	α1 max - min	Drilling depth N min	Drilling depth N max	L	Insert P	Insert N
8,0 - 9,9	75° - 50°	15	4×D	N + 27	W30 04...	W32 03...
10,0 - 14,9	75° - 45°					
15,0 - 18,9	75° - 30°					
19,0 - 28,0	75° - 15°					

Drilling range Ø 8 – 28 mm

α1	75°	60°	45°	30°	15°
s max	1,3	1,2	1,0	0,6	0,3
b max	0,3	0,6	1,0	1,2	1,3

s_{max} = max. cutting width b_{max} = max. chamfering width

KOMET Easy Special

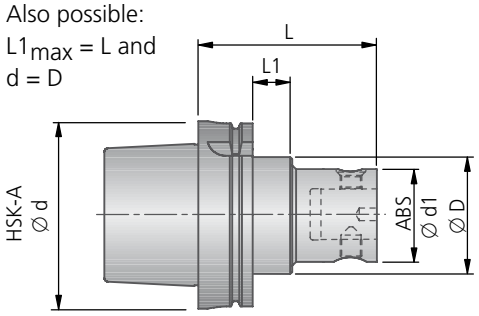
HSK-A Adaptor with ABS connection



Inquiry form
www.kometgroup.com/EasySpecial/N410004-EN.pdf
www.kometgroup.com/EasySpecial/N410001-EN.pdf

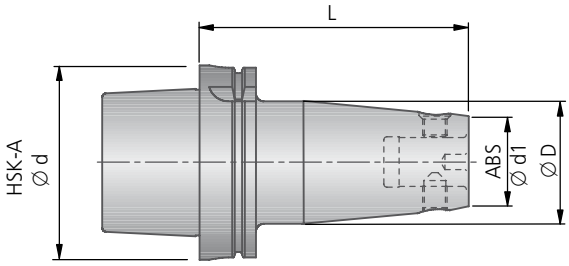
For facing for HSK gripper collar see standard sheet HSK DIN 69893 A.

Also possible:
$L1_{max}$ = L and
d = D



N410004...

conical version



N410001...

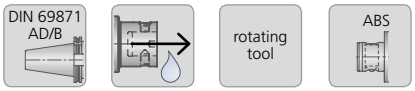
Adaptor (min/max dimension)

No.	HSK Ø d	ABS Ø d1	Ø D max	L min	L max
N41 0004000	63	25 · 32 · 40 · 50 · 63	84	1×D	185
N41 0004100	100	25 · 32 · 40 · 50 · 63 · 80	100	1×D	200

Adaptor (min/max dimension)

No.	HSK Ø d	ABS Ø d1	Ø D max	L min	L max
N41 0001000	63	25 · 32 · 40 · 50 · 63	84	1×D	190
N41 0001100	100	25 · 32 · 40 · 50 · 63 · 80	100	1×D	200

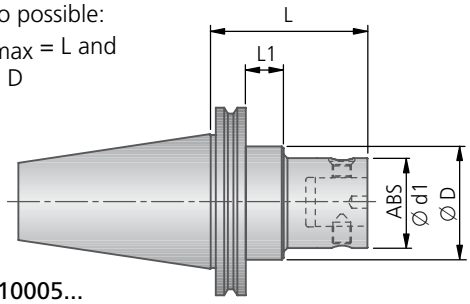
Taper shank with ABS connection



Inquiry form
www.kometgroup.com/EasySpecial/N410005-EN.pdf
www.kometgroup.com/EasySpecial/N410002-EN.pdf

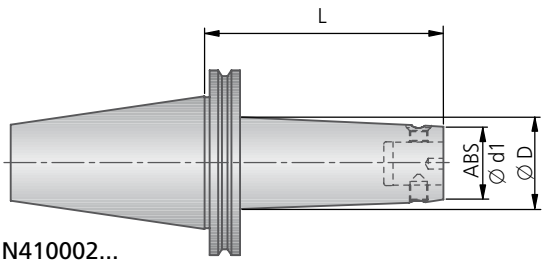
For facing for gripper groove see standard sheet DIN 69871 AD/B.

Also possible:
$L1_{max}$ = L and
d = D



N410005...

conical version



N410002...

Adaptor (min/max dimension)

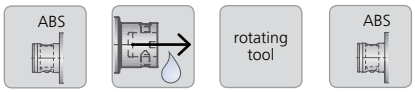
No.	ISO	ABS Ø d1	Ø D max	L min	L max
N41 0005000	40	25 · 32 · 40 · 50 · 63	63	1×D	180
N41 0005100	50	25 · 32 · 40 · 50 · 63 · 80	80	1×D	200

Adaptor (min/max dimension)

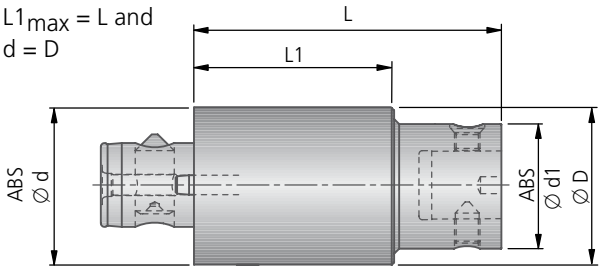
No.	ISO	ABS Ø d1	Ø D max	L min	L max
N41 0002000	40	25 · 32 · 40 · 50 · 63	63	1×D	180
N41 0002100	50	25 · 32 · 40 · 50 · 63 · 80	80	1×D	200

Extension / Reducer with ABS Connection

Inquiry form
www.kometgroup.com/EasySpecial/N410006-EN.pdf
www.kometgroup.com/EasySpecial/N410003-EN.pdf

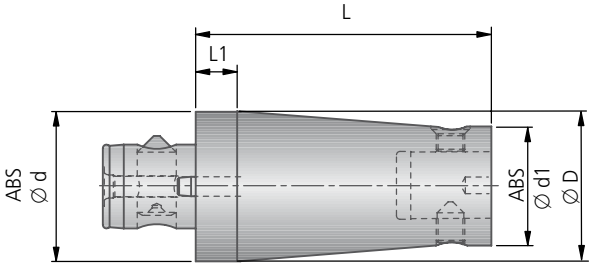


Also possible:
$L1_{max}$ = L and
d = D



N410006...

conical version



N410003...

Adaptor (min/max dimension)

No.	ABS Ø d	ABS Ø d1	Ø D max	L1 min	L max
N41 0006000	25	25	34	10	105
N41 0006100	32	25 · 32	49	12	115
N41 0006200	40	25 · 32 · 40	59	12	120
N41 0006300	50	25 · 32 · 40 · 50	74	15	175
N41 0006400	63	25 · 32 · 40 · 50 · 63	84	20	180
N41 0006500	80	25 · 32 · 40 · 50 · 63 · 80	84	25	200

Adaptor (min/max dimension)

No.	ABS Ø d	ABS Ø d1	Ø D max	L1 min	L max
N41 0003000	25	25	34	10	105
N41 0003100	32	25 · 32	49	12	115
N41 0003200	40	25 · 32 · 40	59	12	120
N41 0003300	50	25 · 32 · 40 · 50	74	15	175
N41 0003400	63	25 · 32 · 40 · 50 · 63	84	20	180
N41 0003500	80	25 · 32 · 40 · 50 · 63 · 80	84	25	200

Intermediate sizes for ABS tool adaptors and ABS extensions can be supplied with a larger external diameter than the ABS external diameter.



You can obtain KOMET Kometric seatings from us for fitting into tools.
The KOMET Kometric system offers a tried and tested range of efficient and economic insert seatings and fine boring cartridges.

This chapter contains the necessary information for fitting these elements. They have been designed so that they are easy to fit, versatile to use and require minimum space.

BENEFITS for you:

- Uncomplicated installation and versatile use, even in the smallest areas
- The use of special tools makes it possible to combine several machining tasks in one work step
- The same quality at reduced production costs



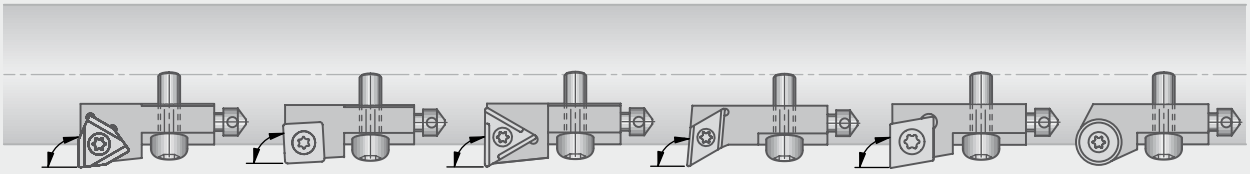
KOMET Kometric	Page
Programme summary	314 – 315
Semi-finished head	316 – 317
Short clamp holder UKS	
for machining steel	318 – 345
for machining aluminium	388 – 390
Adjustable insert seating WVU, WVP	
for machining steel	348 – 353
Insert flat bed seating FLWE	
for machining steel	346 – 347
Boring tool UZV, UZ, UV	
for machining steel	362 – 375
Micro-adjustable cartridge FZ, FF	
for machining steel	378 – 383
for machining aluminium	392 – 393
Micro-adjustable cartridge M31	
for machining steel	376 – 377
for machining aluminium	394 – 395
Insert seating UWU, UWE	356 – 361
Indexable insert adjustment with set screw	386
Chamfering cartridge	387

Programme summary – Insert seatings Kometric

for machining steel

Short clamp holder UKS

Page 320 – 329 | 330 | 331 – 336 | 337 – 339 | 341 | 340



$\varkappa$ = 93° · 90° · 75°
60° · 45° · 45°II
30° · 30° I
15° · 0°

$\varkappa$ = 87° · 75° · 45°

$\varkappa$ = 90° · 75° · 45°
30° · 15° · 0°

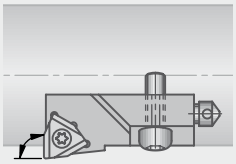
$\varkappa$ = 107,5°
95°
5°

$\varkappa$ = 90°

for round insert

Short clamp holder UKS to ISO standard

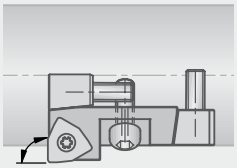
342 – 342



$\varkappa$ = 90° · 45°

with Power insert

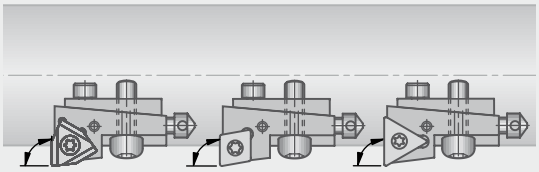
343



$\varkappa$ = 90°

with wedge adjustment

344 – 345



$\varkappa$ = 90°

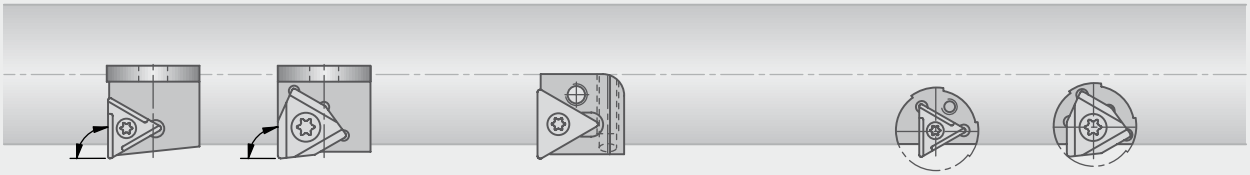
$\varkappa$ = 90°

$\varkappa$ = 90°

Adjustable insert seating

WVU | WVP

Page 349 – 353 | 354 – 355



$\varkappa$ = 90° · 75° · 60°
45° · 30°

$\varkappa$ = 45° · 30°

Insert flat bed seating

FLWE

346 – 347

$\varkappa$ = 90°

Insert seating

UWU, UWE

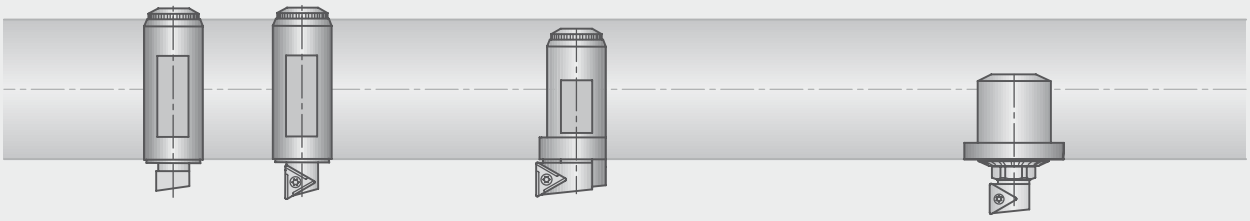
356 – 361



Micro-adjustable cartridge radial and angled mounting

FZ | FF | M31

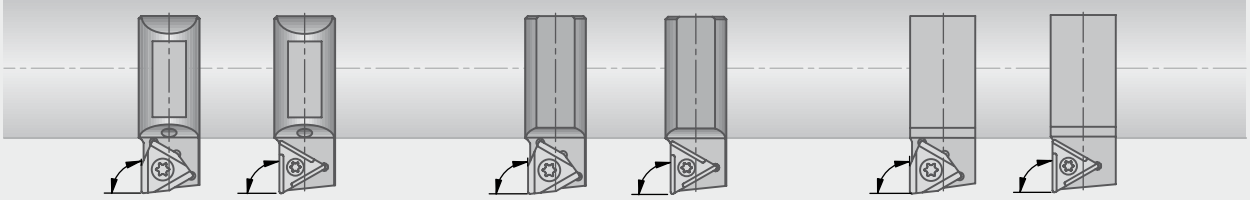
Page 378 – 382 | 383 | 376 – 377



Boring tool

UZV | UZ | UV

Page 363 – 369 | 371 – 373 | 374 – 375



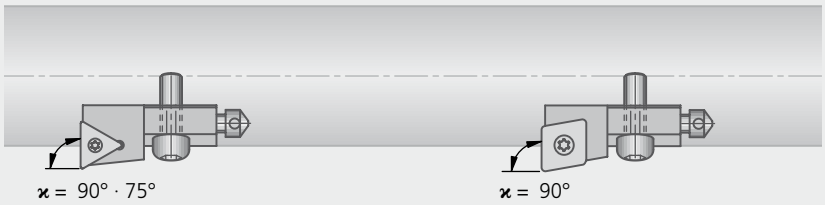
$\varkappa$ = 90° · 75° · 60°
45° · 30° · 15° · 0°

$\varkappa$ = 90° · 53° · 45°

$\varkappa$ = 90° · 53°

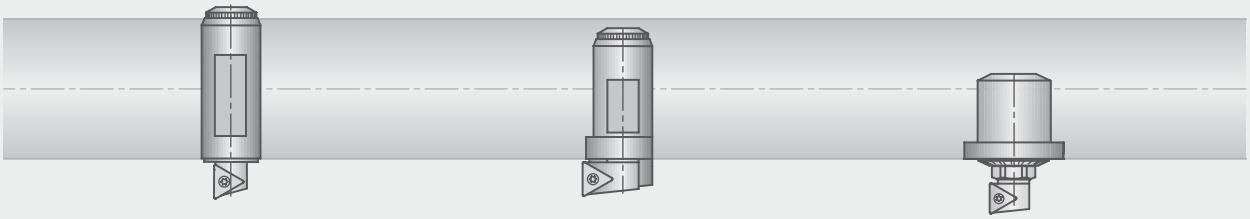
Short clamp holder UKS

Page 388 – 389 390



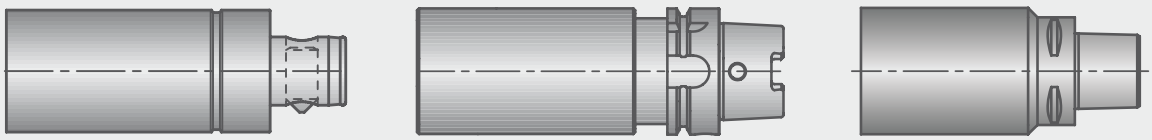
Micro-adjustable cartridge radial and angled mounting

	FZ	FF	M31
Page	392	393	394 – 395



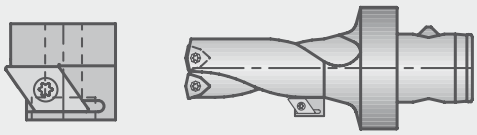
Semi-finished head

316 – 317



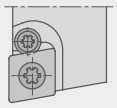
Chamfering cartridge

387



Indexable insert adjustment with set screw

386



Boring bars with adjustable KOMET Kometric insert seatings.

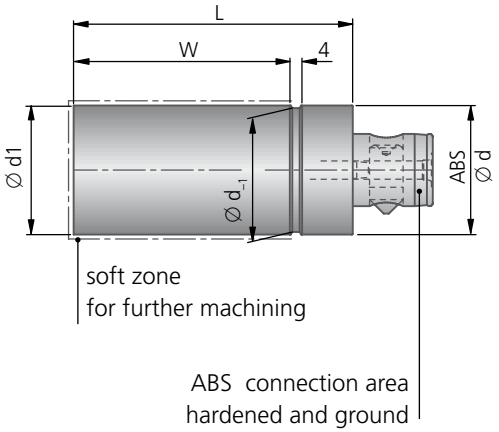


KOMET

As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

Note:
Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.

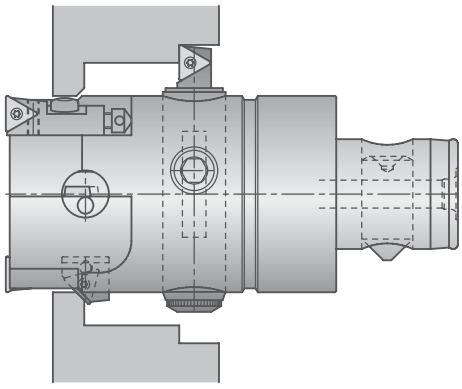
ABS Semi-finished heads

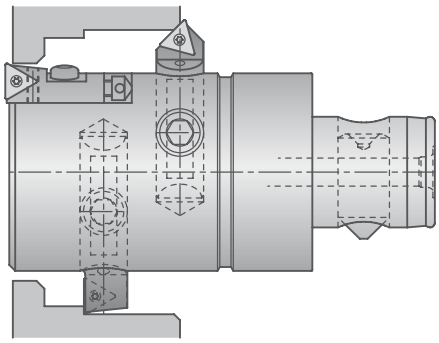


ABS						
Article	Order No.	ABS Ø d	Ø d1	L	W	kg
ABS 25-HK	**B10 01011**	25	26	70	51	0,30
ABS 32-HK	**B10 02011**	32	33	80	61	0,57
ABS 40-HK	**B10 03011**	40	41	100	78	1,10
ABS 50-HK	**B10 04011**	50	51	120	95	2,02
ABS 63-HK	**B10 05011**	63	64	150	120	4,08
ABS 80-HK	**B10 06011**	80	81	180	141	7,76
ABS 100-HK	**B10 07011**	100	101	200	154	13,48

Fitting KOMET Kometric insert seatings yourself

Example of semi-finished heads from ABS HK in conjunction with Kometric insert seatings

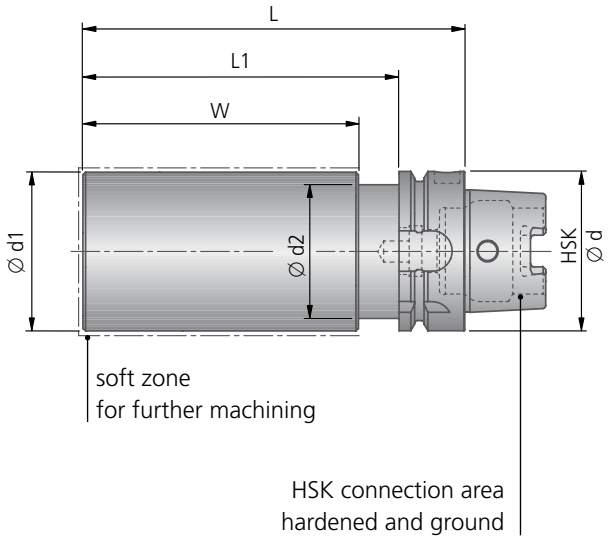




As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

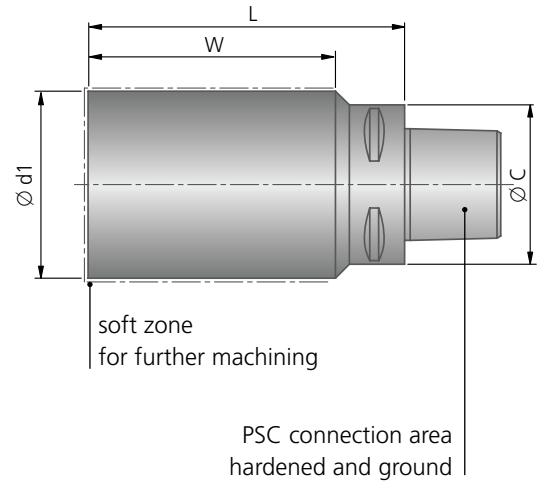
Note:
Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.

HSK-A Semi-finished heads



HSK-A DIN 69893 T1								
Article	Order No.	HSK Ød	Ød1	Ød2	L	L1	W	kg
HSK-A100-100x250	**A06 53650**	100	100	85	250	221	205	14,38

PSC Semi-finished heads

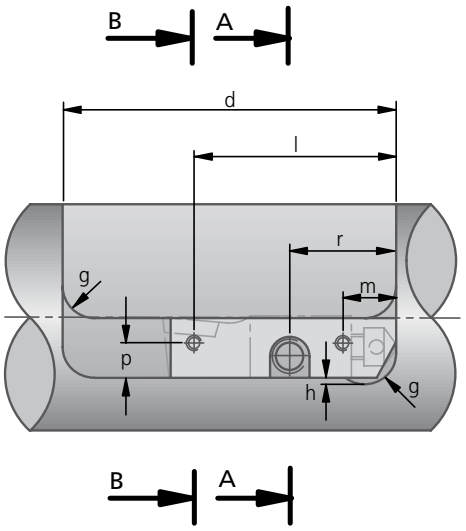


PSC ISO 26623						
Article	Order No.	PSC Ø C	Ø d1	L	W	kg
C4-D50	**A69 04200**	40	50	160	140	2,4
C4-D63	**A69 04210**	40	63	160	140	3,6
C4-D80	**A69 04220**	40	80	160	140	5,7
C5-D63	**A69 05210**	50	63	160	140	3,8
C5-D80	**A69 05220**	50	80	160	140	5,9
C5-D100	**A69 05230**	50	100	180	160	10,2
C6-D80	**A69 06220**	63	80	162	140	6,2
C6-D100	**A69 06230**	63	100	182	160	10,4
C6-D120	**A69 06240**	63	120	202	180	17,0
C8-D100	**A69 08230**	80	100	190	160	11,5
C8-D140	**A69 08250**	80	140	210	180	23,4

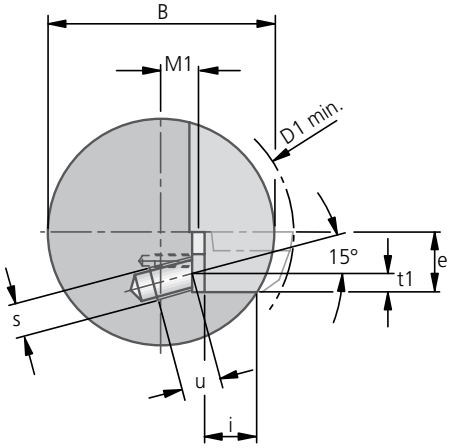
KOMET Kometric UKS Short clamp holder

Mounting dimensions

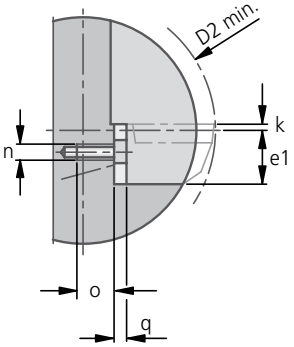
Axial mounting with shim plate



Section A-A

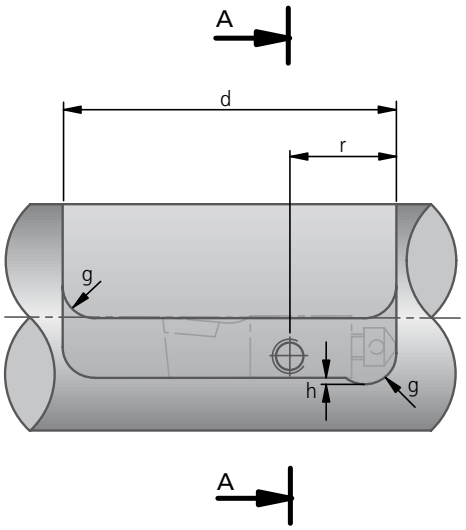


Part section B-B, cutting edge at "k" above centre

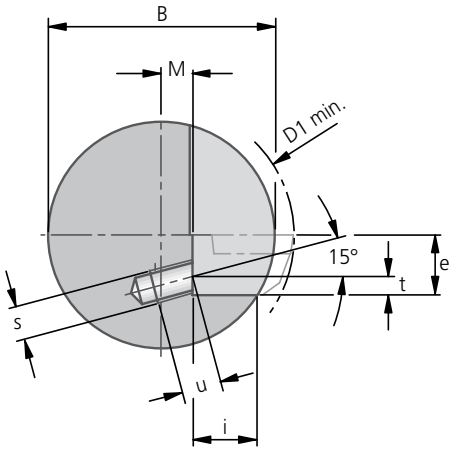


$B = 2\sqrt{e^2 + (M1 + q + i)^2}$ $M1 = \frac{D}{2} - f - q$ (Dimension f: see following pages)

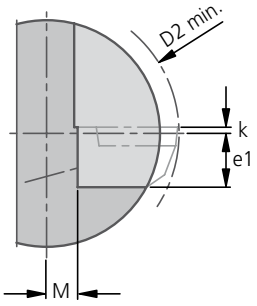
Axial mounting without shim plate



Section A-A



Part section A-A, cutting edge at "k" above centre

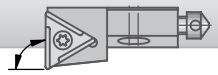


$B = 2\sqrt{e^2 + (M + i)^2}$ $M = \frac{D}{2} - f$ (Dimension f: see following pages)

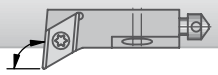
Mounting dimensions



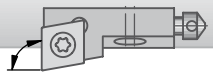
$\varkappa$ = 93° · 90° · 75°
60° · 45° · 45°II
30° · 30° I
15° · 0°



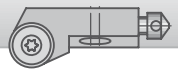
$\varkappa$ = 90° · 75°
60° · 45°
30° · 15° · 0°



$\varkappa$ = 107°
95°
5°



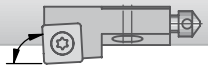
$\varkappa$ = 90°



for round insert

Short clamp holder size	Boring bar																												
	Ø D1 min. for													Ø D2 min. for															
	$\varkappa$ = 107°	$\varkappa$ = 95°	$\varkappa$ = 93°	$\varkappa$ = 90°	$\varkappa$ = 75°	$\varkappa$ = 60°	$\varkappa$ = 45°	$\varkappa$ = 45°II	$\varkappa$ = 30°	$\varkappa$ = 30°I	$\varkappa$ = 15°	$\varkappa$ = 5°	$\varkappa$ = 0°	round insert	$\varkappa$ = 107°	$\varkappa$ = 95°	$\varkappa$ = 93°	$\varkappa$ = 90°	$\varkappa$ = 75°	$\varkappa$ = 60°	$\varkappa$ = 45°	$\varkappa$ = 45°II	$\varkappa$ = 30°	$\varkappa$ = 30°I	$\varkappa$ = 15°	$\varkappa$ = 5°	$\varkappa$ = 0°	round insert
UKS6	24							20	20	24	20	24			16							16	16	16	16	16		
UKS8	33							22	24	33	26	33			25							18	20	25	22	25		
UKS10	36							26	26	36	36	36			28							22	22	28	32	28		
UKS16	56							56	64	56	60	56			40							46	52	40	40	40		
UKS20	68							74	78	68	80	68			52							52	58	52	52	52		

Short clamp holder size	Holder mounting							Location thread																					
								without shim plate					with shim plate																	
													93° 45°II 30° 0°	Dimension l for $\varkappa$ = ...°							107° 95° 5°	round insert						
	d	e	e1	g	h	i	k	r	s	t	t1	u		90°	75°	60°	45°	30°I	15°			m	n	o	p	q		
UKS6	33	5,8	4,8	3	0,5	4	1	12	M3	2,5	2	7	–	–	24	23,5	–	–	–	–	–	7	M2	6	3	2		
UKS8-804/706	43	7,6	6,6	4	1	6	1	17	M4	3,2	2,7	6,5	28	28	28	32	28	28	28	–	–	7	M2	6	4	2		
UKS8-802/708						7																						
UKS8-818																												
UKS8-8C1																												
UKS8-CC06																												
UKS10	53	9,6	8,6	5	1	8,4	1	17	M5	3,5	3	8,5	31,5	32	33,5	38	37,5	33,5	–	–	32,5	8,5	M2	6	5	2		
UKS16	70	15,6	13,6	8	1	10,5	2	25	M6	6,5	6	10	44,5	45	46	50	49	46	–	–	43,5	14	M3	8	8	2		
UKS20	82	19,6	17,1	10	1	13	2,5	27	M8	8,5	8	12	49	51,5	55	55	57	50	–	–	49	16	M3	8	10	2		



$\varkappa$ = 87° · 75° · 45°

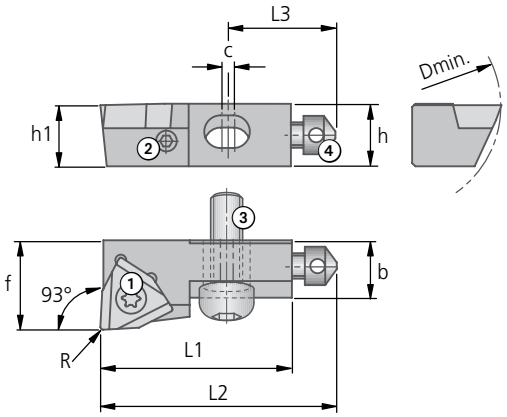
Short clamp holder size	Boring bar		Holder mounting							Location thread													
										without shim plate					with shim plate								
	D1 min.	D2 min.	d	e	e1	g	h	i	k	r	s	t	t1	u	Dimension l for $\varkappa$ 87°	75°	45°	m	n	o	p	q
UKS8	33	25	43	7,6	6,6	4	1	7	1	17	M4	3,2	2,7	6,5	28	28	28	7	M2	6	4	2	
UKS10	36	28	53	9,6	8,6	5	1	8,4	1	17	M5	3,5	3	8,5	32	33,5	37,5	8,5	M2	6	5	2	
UKS16	56	40	70	15,6	13,6	8	1	10,5	2	25	M6	6,5	6	10	45	46	49	14	M3	8	8	2	

KOMET Kometric UKS

Short clamp holder $\varkappa = 93°$

Material: P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa = 93°$																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-93 L 38	**D40 50011**	7,6	8	25	32	17	7,5	2	11	10,99	10,97	0,009	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-93 R 38	**D40 55020**	9,6	10	30	37	17	9	2	14	13,99	13,97	0,017	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-801-93 L 38	**D40 50020**															
UKS16-810-93 R 48	**D40 55040**	15,6	16	42	50	25	12	2	18	17,99	17,97	0,048	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert				Shim plate			
for short clamp holder	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-93 L 38		**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75L		**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-93 R 38	**W01 34..0.02..**		**W01 34600...**	**W29 34000.04..**	UKS10-5-0R	**L02 20920**	**55023 00206** M2×6 DIN965	–
UKS10-801-93 L 38		**W01.34..0.02..**			UKS10-5-0L			
UKS16-810-93 R 48	**W01 42..0.02..**		**W01 42600...**	**W29 42000.04..**	UKS16-5-0R		**55021 03008** M3×8 DIN7991	–

For further details on inserts see chapter 7.

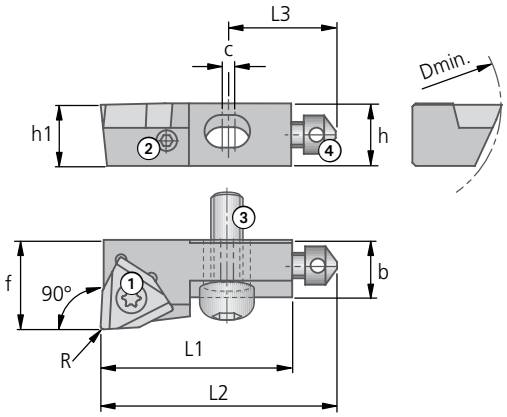
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa = 90°$

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 318 – 319 ■

Material: P M K N S H



UKS $\varkappa = 90°$																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-810-90 R 23	**D40 55160**	5,8	6	20	24,5	12	4,5	1	–	6,98	–	0,003	**N00 56041** S/M2×4,3-6IP 0,62 Nm	55054 03005 M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-818-90 R 32	**D40 55170**	7,6	8	25	32	17	7,5	2	–	10,98	–	0,003	**N00 57553** S/M2,2×5,5-6IP 1,01 Nm	55054 03005 M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-802-90 R 38	**D40 55111**	7,6	8	25	32	17	7,5	2	11	10,98	10,93	0,01	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-90 R 38	**D40 55120**	9,6	10	30	37	17	9	2	14	13,98	13,93	0,017	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	55054 04008 M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-801-90 L 38	**D40 50120**															
UKS16-810-90 R 48	**D40 55140**	15,6	16	42	50	25	12	2	18	17,98	17,93	0,05	**N00 57531** S/M4,5×9-15IP 6,25 Nm	55054 05012 M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS16-810-90 L 48	**D40 50140**															
UKS20-820-90 R 53	**D40 55150**	19,6	20	47	57	27	15	2	–	21,98	21,93	0,089	**N00 57531** S/M4,5×9-15IP 6,25 Nm	55054 05014 M5×14	**L02 30160** UKS20-3 35 Nm	**L02 30030** UKS12-4

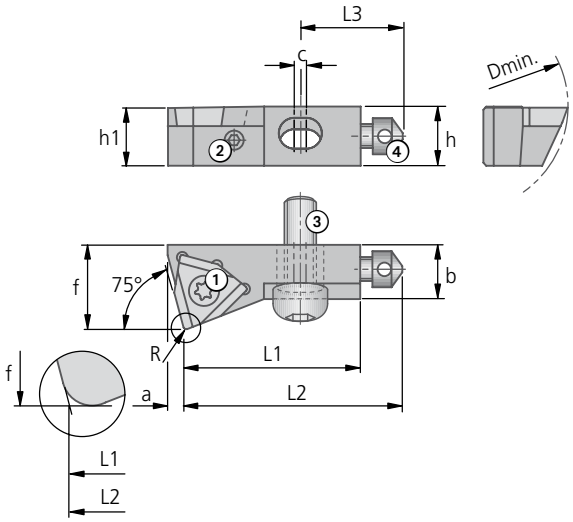
	Insert				Shim plate			
for short clamp holder	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-810-90 R 23				**W29 10000.04..**	UKS6-5-90R		55023 00206 M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS8-818-90 R 32				**W29 18000.04..**	UKS8-5-75R	**L02 20310**	55023 00206 M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-802-90 R 38	**W01 24..0.02..**		**W01 24600..**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	55023 00206 M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-90 R 38	**W01 34..0.02..**		**W01 34600...**	**W29 34000.04..**	UKS10-5-90R	**L02 20220**	55023 00206 M2×6 DIN965	–
UKS10-801-90 L 38		**W01 34..0.02..**			UKS10-5-90L	**L02 21220**		
UKS16-810-90 R 48	**W01 42..0.02..**		**W01 42600...**	**W29 42000.04..**	UKS16-5-90R		55021 03008 M3×8 DIN7991	–
UKS16-810-90 L 48		**W01 42..0.02..**			UKS16-5-90L			
UKS20-820-90 R 53	**W01 50..0.04..**		**W01 50600...**	**W29 50000.04..**	UKS20-5-90R	**L02 20250**	55021 03008 M3×8 DIN7991	–

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 75°

Material
P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 75°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-75 R 38	**D40 55211**	7,6	8	25	32	17	7,5	2	1	11	10,94	10,8	0,01	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-75 R 38	**D40 55220**	9,6	10	30	37	17	9	2	3	14	13,94	13,8	0,017	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-810-75 R 48	**D40 55240**	15,6	16	42	50	25	12	2	3,5	18	17,94	17,8	0,052	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate			
for short clamp holder	W01 L.H. radial 06 = 6° rake 12 = 12°	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-75 R 38	**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-75 R 38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-75R		**55023 00206** M2×6 DIN965	–
UKS16-810-75 R 48	**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-75R		**55021 03008** M3×8 DIN7991	–

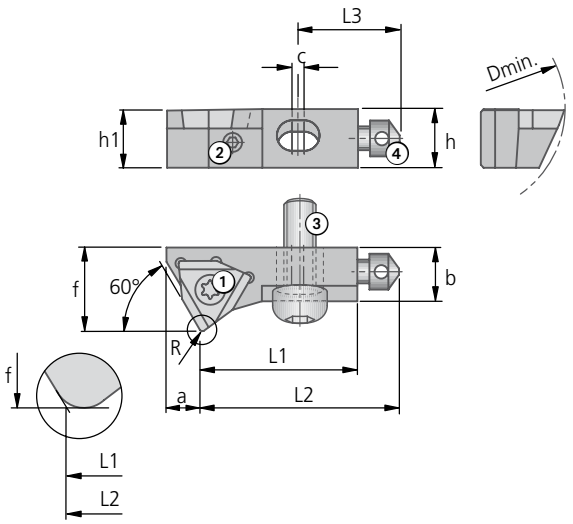
For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

Short clamp holder $\varkappa = 60°$

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 318 – 319 ■

Material
P M K N S H



UKS $\varkappa = 60°$																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-60 R 38	**D40 55311**	7,6	8	25	32	17	7,5	2	4,5	11	10,9	10,72	0,011	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-60 R 38	**D40 55320**	9,6	10	30	37	17	9	2	6	14	13,9	13,72	0,018	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4

	Insert			Shim plate			
for short clamp holder	W01 L.H. radial 06 = 6° rake 12 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-60 R 38	**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-60R	**L02 20410**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-60 R 38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-60R	**L02 20420**	**55023 00206** M2×6 DIN965	–

For further details on inserts see chapter 7.

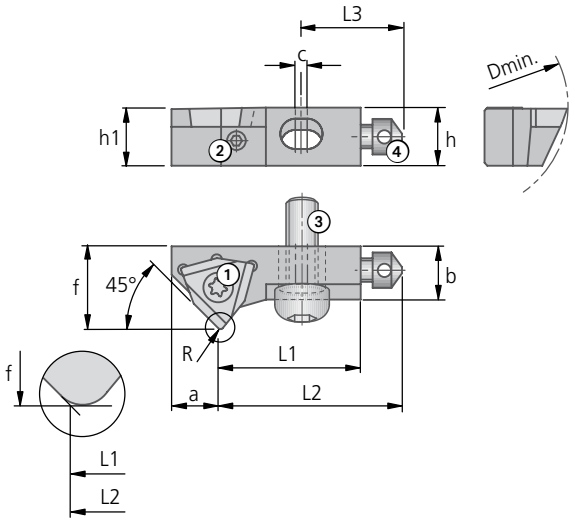
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa = 45°$

Material: P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa = 45°$																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-810-45 R 23	**D40 55460**	5,8	6	15	19,5	12	4,5	1	4	–	6,9	–	0,003	**N00 56041** S/M2×4,3-6IP 0,62 Nm	–	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-802-45 R 38	**D40 55411**	7,6	8	19,5	26,5	17	7,5	2	6,5	11	10,9	10,71	0,008	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-45 R 38	**D40 55420**	9,6	10	30	37	17	9	2	9	14	13,9	13,71	0,026	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-810-45 R 48	**D40 55440**	15,6	16	42	50	25	12	2	10	17	17,9	17,71	0,064	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate			
for short clamp holder	W01 L.H. radial rake 06 = 6° 12 = 12°	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-810-45 R 23			**W29 10000.04..**	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS8-802-45 R 38	**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-45 R 38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-45R	**L02 20520**	**55023 00206** M2×6 DIN965	–
UKS16-810-45 R 48	**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-45R	**L02 20540**	**55021 03008** M3×8 DIN7991	–

For further details on inserts see chapter 7.

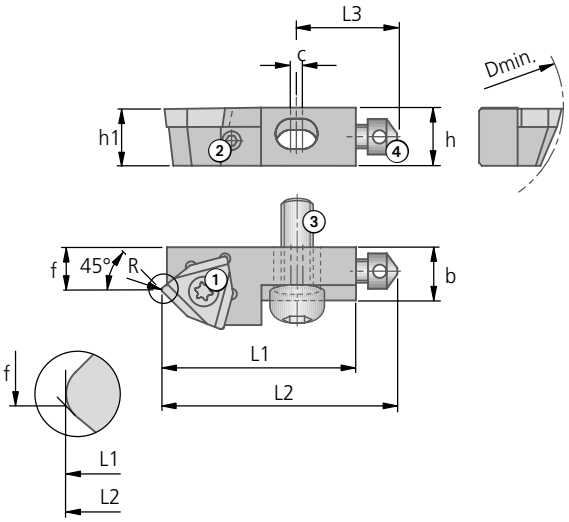
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa$ = 45° II

R.H. short clamp holder as shown with right or neutral insert ■
mounting instruction see page 318 – 319 ■

Material
P M K N S H



UKS $\varkappa$ = 45° II																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-II-45R38	**D40 55511**	7,6	8	26	33	17	7,5	2	5,6	5,7	5,89	0,009	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-II-45R38	**D40 55520**	9,6	10	30	37	17	9	2	7,1	7,2	7,39	0,018	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-810-II-45R38	**D40 55540**	15,6	16	42	50	25	12	2	9,6	9,7	9,89	0,05	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate			
for short clamp holder	W01 L.H. radial 36 = 6° rake 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-II-45R38	**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-II-45R38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-0R	**L02 20920**	**55023 00206** M2×6 DIN965	–
UKS16-810-II-45R38	**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-0R		**55021 03008** M3×8 DIN7991	–

For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

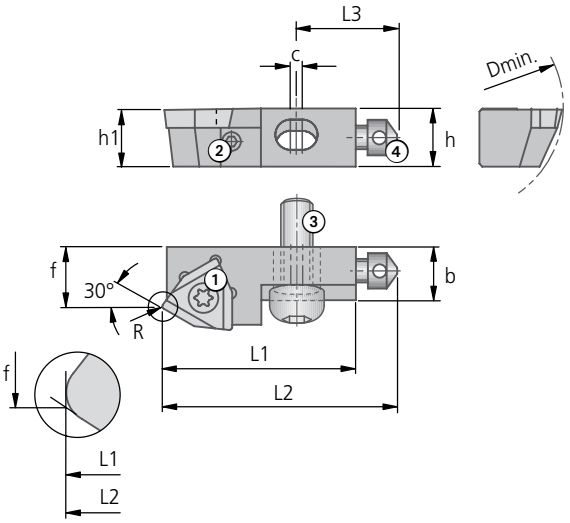
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 30°

Material
P M K N S H

- R.H. short clamp holder as shown with right or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 30°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-30 R 38	**D40 55611**	7,6	8	26	33	17	7,5	2	8,05	8,11	8,21	0,009	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-30 R 38	**D40 55620**	9,6	10	30	37	17	9	2	10,05	10,11	10,21	0,009	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-810-30 R 48	**D40 55640**	15,6	16	42	50	25	12	2	13,05	13,11	13,21	0,052	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate			
for short clamp holder	W01 L.H. radial 36 = 6° rake 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-30 R 38	**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-30 R 38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-0R	**L02 20920**	**55023 00206** M2×6 DIN965	–
UKS16-810-30 R 48	**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-0R		**55021 03008** M3×8 DIN7991	–

For further details on inserts see chapter 7.

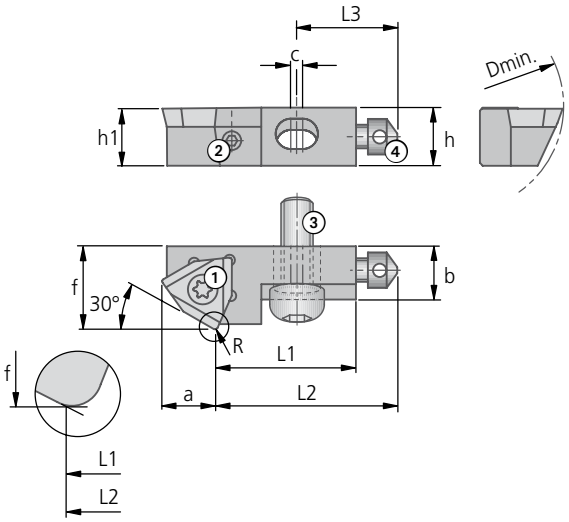
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa$ = 30° I

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 318 – 319 ■

Material
P M K N S H



UKS $\varkappa$ = 30° I																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS10-801-I-30R38	**D40 55720**	9,6	10	24	31	17	9	2	9,38	14	13,92	13,75	0,017	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-810-I-30R48	**D40 55740**	15,6	16	34	42	25	12	2	11	18	17,92	17,75	0,045	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate	
for short clamp holder	W01 L.H. radial 06 = 6° rake 12 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate 2,5 grinding allowance 0,5 Article	Countersunk screw for shim plate Order No. Article
UKS10-801-I-30R38	**W01 34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-75R	**55023 00206** M2×6 DIN965
UKS16-810-I-30R48	**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-75R	**55021 03008** M3×8 DIN7991

For further details on inserts see chapter 7.

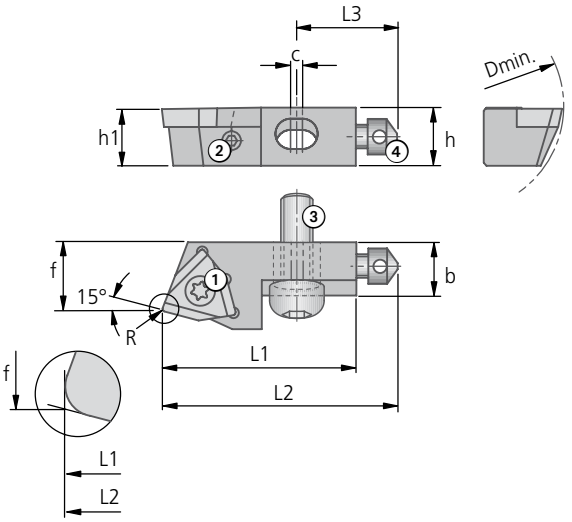
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 15°

Material: P M K N S H

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 15°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-15 R 38	**D40 55811**	7,6	8	26	33	17	7,5	2	9,52	9,54	9,57	0,01	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-15 R 38	**D40 55820**	9,6	10	30	37	17	9	2	12,02	12,04	12,07	0,017	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-801-15 L 38	**D40 50820**															

	Insert				Shim plate			
for short clamp holder	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-15 R 38		**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-15 R 38		**W01.34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-15R	**L02 20720**	**55023 00206** M2×6 DIN965	–
UKS10-801-15 L 38	**W01 34..0.02..**				UKS10-5-15L	**L02 21720**		

For further details on inserts see chapter 7.

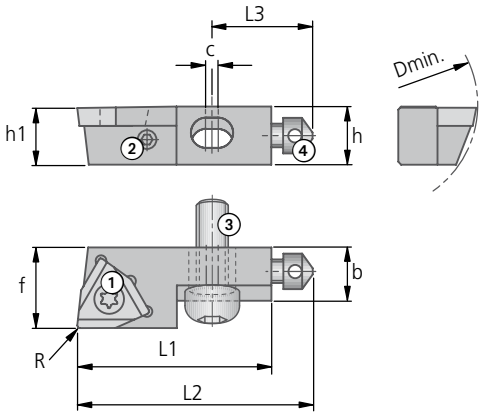
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa$ = 0°

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 318 – 319 ■

Material: P M K N S H



UKS $\varkappa$ = 0°															
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-802-0 R 38	**D40 55911**	7,6	8	26	33	17	7,5	2	11	11	11	0,008	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	–	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-801-0 R 38	**D40 55920**	9,6	10	30	37	17	9	2	14	14	14	0,016	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-801-0 L 38	**D40 50920**															
UKS16-810-0 R 48	**D40 55940**	15,6	16	42	50	25	12	2	18	18	18	0,048	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS16-810-0 L 48	**D40 50940**															

	Insert				Shim plate			
for short clamp holder	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-802-0 R 38		**W01 24..0.02..**	**W01 24600...**	**W29 24000.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-801-0 R 38		**W01.34..0.02..**	**W01 34600...**	**W29 34000.04..**	UKS10-5-0R	**L02 20920**	**55023 00206** M2×6 DIN965	–
UKS10-801-0 L 38	**W01 34..0.02..**				UKS10-5-0L			
UKS16-810-0 R 48		**W01 42..0.02..**	**W01 42600...**	**W29 42000.04..**	UKS16-5-0R		**55021 03008** M3×8 DIN7991	–
UKS16-810-0 L 48	**W01 42..0.02..**				UKS16-5-0L	**L02 21940**		

For further details on inserts see chapter 7.

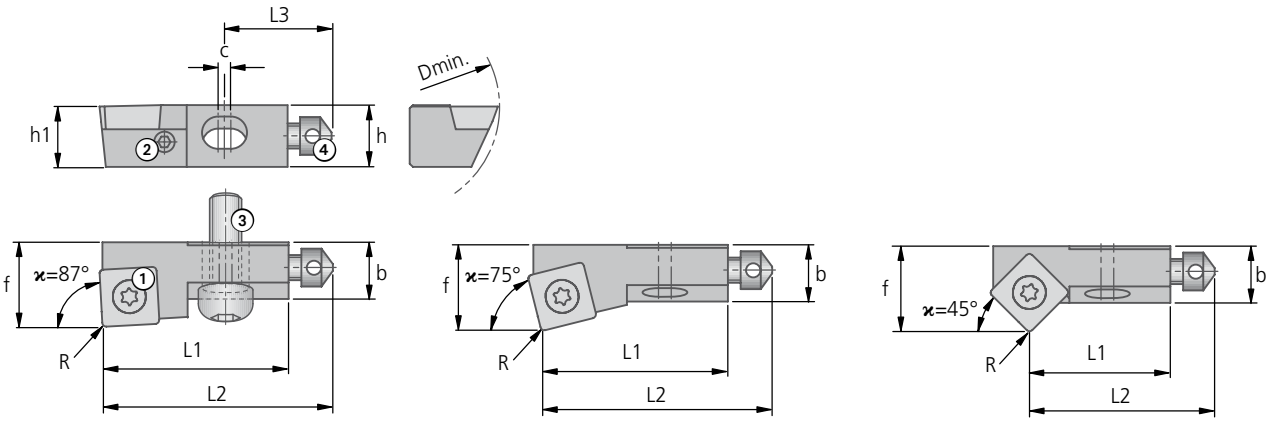
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 87° | 75° | 45°

Material: P M K N S H

- R.H. short clamp holder as shown with neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 87° | 75° | 45°																
Article cutting form	Order No.	$\varkappa$	h1	h	L1	L2	L3	b	c	R	ISO dim. f	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8 SOEX060306 87 R	D40 06700	87°	7,6	8	25	32	17	7,5	2	0,6	11	0,014	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	–	L02 30121 UKS8-3 4,1 Nm	L02 30020 UKS8-4
UKS8 SOEX060306 75 R	D40 06710	75°									10,94	0,013				
UKS10 SOEX090408 87 R	D40 06801	87°	9,6	10	30	37	17	9	2	0,8	14	0,025	N00 57261 S3575-15IP 2,8 Nm	–	L02 30130 UKS10-3 8,5 Nm	L02 30020 UKS8-4
UKS10 SOEX07T308 75 R	D40 06811	75°	9,6	10	30	37	17	9	2	0,8	13,94	0,024	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	–	L02 30130 UKS10-3 8,5 Nm	L02 30020 UKS8-4
UKS10 SOEX07T308 45 R	D40 06821	45°	9,6	10	25	32	17	9	2	0,8	13,9	0,023	N00 57571 S/M2,5×6,3-8IP 1,28 Nm	–	L02 30130 UKS10-3 8,5 Nm	L02 30020 UKS8-4
UKS16 SOEX120508 87 R	D40 06901	87°	15,6	15,7	42	50	25	12	2	0,8	18	0,066	N00 57301 S45100-20IP 6,25 Nm	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12
UKS16 SOEX120508 75 R	D40 06911	75°									17,94	0,066				
UKS16 SOEX120508 45 R	D40 06921	45°									17,9	0,076				

	Insert	Shim plate			
for short clamp holder	W83	Shim plate (2,5 – grinding allowance 0,5) Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8 SOEX060306 87 R	W83 18...	UKS8-5-75R	L02 20310	55023 00206 M2×6 DIN965	L02 30170 UKS8-3 4,1 Nm
UKS8 SOEX060306 75 R					
UKS10 SOEX090408 87 R	W83 32...	UKS10-5-90R	L02 20220	55023 00206 M2×6 DIN965	–
UKS10 SOEX07T308 75 R	W83 23...	UKS10-5-75R		55023 00206 M2×6 DIN965	–
UKS10 SOEX07T308 45 R	W83 23...	UKS10-5-45R	L02 20520	55023 00206 M2×6 DIN965	–
UKS16 SOEX120508 87 R	W83 44...	UKS16-5-90R		55021 03008 M3×8 DIN7991	–
UKS16 SOEX120508 75 R		UKS16-5-75R			
UKS16 SOEX120508 45 R		UKS16-5-45R	L02 20540		

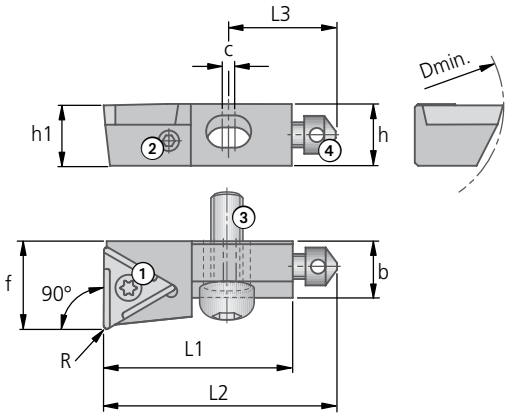
For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

Short clamp holder $\varkappa = 90°$

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 318 – 319 ■

Material: P M K N S H



UKS $\varkappa = 90°$

Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,3	R0,4	R0,5	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-803-90 R	**D40 05160**	5,8	6	20	24,5	12	4,5	1	7,08	7	6,93	–	–	0,003	**N00 56031** S/M2×4,9-6IP 0,62Nm	**55054 03005** M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS6-803-90 L	**D40 00160**																	
UKS8-804-90 R	**D40 05170**	7,6	8	25	32	17	6,5	2	10,14	–	10	–	9,7	0,008	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-804-90 L	**D40 00170**																	
UKS10-805-90 R	**D40 05180**	9,6	10	30	37	17	9	2	14,23	–	14,08	14	13,78	0,017	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-805-90 L	**D40 00180**																	
UKS20-806-90 R	**D40 05190**	19,6	20	47	57	27	15	2	–	–	22,3	–	22	0,092	**N00 56411** S/M5×13,4-20IP 6,25 Nm	**55054 05014** M5×14	**L02 30160** UKS20-3 35 Nm	**L02 30030** UKS12-4
UKS10-T4-90 R	**D40 07130**	9,6	10	30	37	17	9	2	–	–	14,08	–	13,78	0,05	**N00 56651** S2560-8IP 1,28 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-T5-90 R	**D40 07140**	15,6	16	42	50	25	12	2	–	–	–	18,22	18	0,06	**N00 56771** S35102-10IP 2,8 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert			Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 / W59 neutral W57..14 W57..18 viper W59..05	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-803-90 R	**W30 04..0.03..**		**W57 04140.04..** **W57 04180.04..**	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS6-803-90 L		**W30 04..0.03..**		UKS6-5-90L	**L02 21200**		
UKS8-804-90 R	**W30 14..0.04..**		**W57 14140.04..** **W57 14180.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-804-90 L		**W30 14..0.04..**		UKS8-5-75L			
UKS10-805-90 R	**W30 26..0.05..**		**W57 26140.04..** **W57 26180.04..**	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965	–
UKS10-805-90 L		**W30 26..0.05..**		UKS10-5-90L	**L02 21220**		
UKS20-806-90 R	**W30 44..0.08..**			UKS20-5-90R	**L02 20250**	**55021 03008** M3×8 DIN7991	–
UKS10-T4-90 R			**W59 18050.04..**	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965	–
UKS16-T5-90 R			**W59 32050.08..**	UKS16-5-90R		**55021 03008** M3×8 DIN7991	–

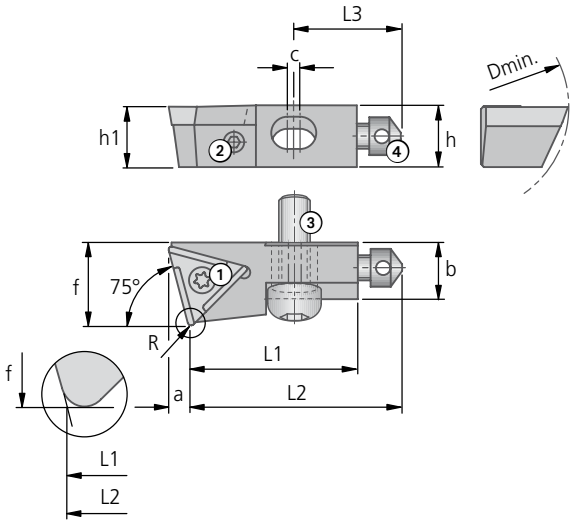
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 75°

Material
P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 75°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-803-75 R	**D40 05260**	5,8	6	20	24,5	12	4,5	1	1	7,1	7	6,91	0,003	**N00 56031** S/M2×4,9-6IP 0,62Nm	**55054 03005** M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-804-75 R	**D40 05270**	7,6	8	25	32	17	6,5	2	1,5	10,18	–	10	0,009	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4

	Insert		Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-803-75 R	**W30 04..0.03..**	**W57 04140.04..**	UKS6-5-75R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS8-804-75 R	**W30 14..0.04..**	**W57 14140.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm

For further details on inserts see chapter 7.

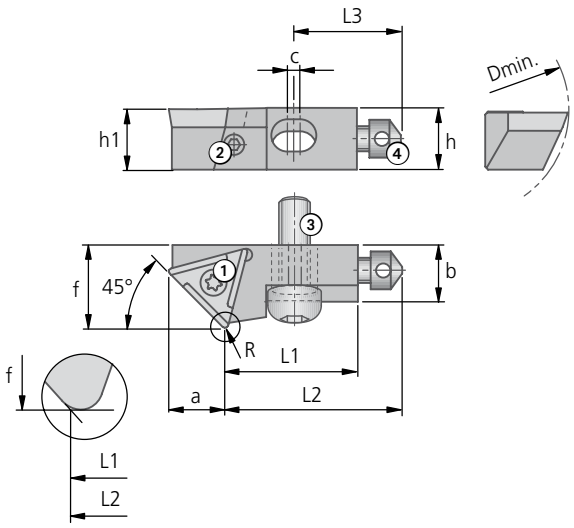
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa = 45°$

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 318 – 319 ■

Material
P M K N S H



UKS $\varkappa = 45°$															Clamping screw ①	Adjusting screw DIN 916 ②	Location screw ③	Stop screw ④
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,2	R0,3	R0,4	R0,8	kg	Order No. Article	Order No. Article	Order No. Article	Order No. Article
UKS6-803-45 R	**D40 05460**	5,8	6	15	19,5	12	4,5	1	5	7,1	7	6,91	–	0,003	**N00 56031** S/M2×4,9-6IP 0,62Nm	**55054 03004** M3×4	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS6-803-45 L	**D40 00460**																	
UKS8-804-45 R	**D40 05470**	7,6	8	19,5	26,5	17	6,5	2	6,5	10,18	–	10	9,62	0,007	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-804-45 L	**D40 00470**																	

	Insert			Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-803-45 R	**W30 04..0.03..**		**W57 04140.04..**	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS6-803-45 L		**W30 04..0.03..**		UKS6-5-90L	**L02 21200**		
UKS8-804-45 R	**W30 14..0.04..**		**W57 14140.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-804-45 L		**W30 14..0.04..**		UKS8-5-75L			

For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

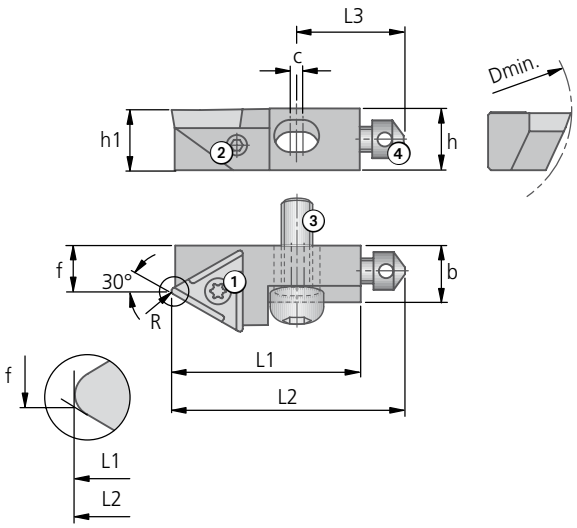
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 30°

Material: P M K N S H

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 30°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,3	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-803-30 R	**D40 05660**	5,8	6	20	24,5	12	4,5	1	3,62	3,67	3,73	–	0,003	**N00 56031** S/M2×4,9-6IP 0,62Nm	**55054 03005** M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-804-30 R	**D40 05670**	7,6	8	26	33	17	6,5	2	5,12	–	5,23	5,46	0,008	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-804-30 L	**D40 00670**																

	Insert			Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-803-30 R		**W30 04..0.03..**	**W57 04140.04..**	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS8-804-30 R		**W30 14..0.04..**	**W57 14140.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-804-30 L	**W30 14..0.04..**			UKS8-5-75L			

For further details on inserts see chapter 7.

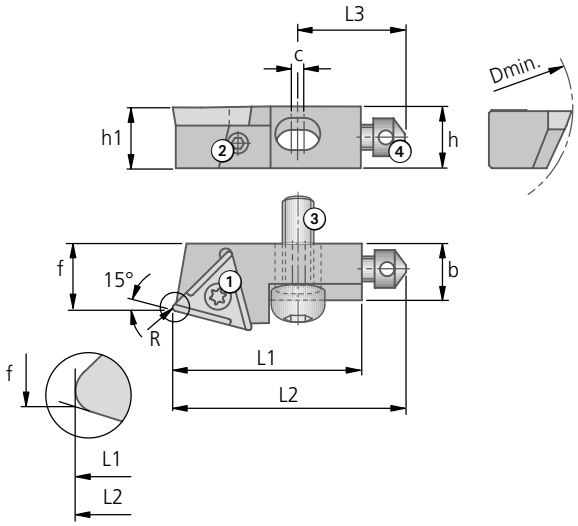
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa$ = 15°

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 318 – 319 ■

Material
P M K N S H



UKS $\varkappa$ = 15°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,3	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-803-15 R	**D40 05860**	5,8	6	20	24,5	12	4,5	1	5,05	5,07	5,1	–	0,003	**N00 56031** S/M2×4,9-6IP 0,62Nm	**55054 03005** M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS6-803-15 L	**D40 00860**																
UKS8-804-15 R	**D40 05870**	7,6	8	26	33	17	6,5	2	7,55	–	7,6	7,7	0,008	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-804-15 L	**D40 00870**																

	Insert			Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-803-15 R		**W30 04..0.03..**	**W57 04140.04..**	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS6-803-15 L	**W30 04..0.03..**			UKS6-5-90L	**L02 21200**		
UKS8-804-15 R		**W30 14..0.04..**	**W57 14140.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-804-15 L	**W30 14..0.04..**			UKS8-5-75L			

For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

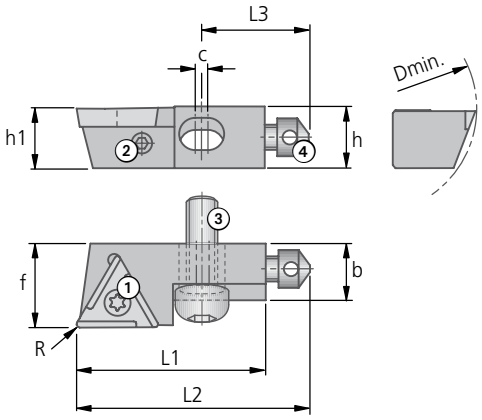
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa = 0°$

Material: P M K N S H

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa = 0°$														
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-804-0 R	**D40 05970**	7,6	8	25	32	17	6,5	2	10	0,008	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-804-0 L	**D40 00970**													
UKS10-805-0 R	**D40 05980**	9,6	10	30	37	17	9	2	14	0,015	**N00 56211** S/M3,5×7,3-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4

	Insert			Shim plate			
for short clamp holder	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-804-0 R		**W30 14..0.04..**	**W57 14140.04..**	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-804-0 L	**W30 14..0.04..**			UKS8-5-75L			
UKS10-805-0 R		**W30 26..0.05..**	**W57 26140.04..**	UKS10-5-0R	**L02 20920**	**55023 00206** M2×6 DIN965	–

For further details on inserts see chapter 7.

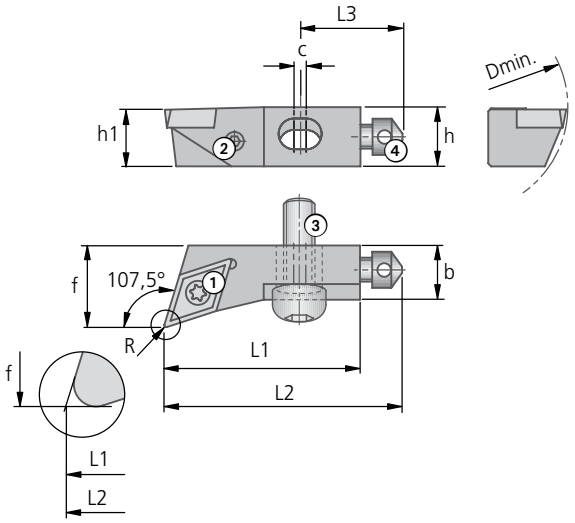
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

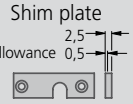
Short clamp holder $\varkappa$ = 107,5°

R.H. short clamp holder as shown, insert for this with peripheral chipbreaker ■
L.H. short clamp holder in mirror image ■
mounting instruction see page 318 – 319 ■

Material: P M K N S H



UKS $\varkappa$ = 107,5°															
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-8C1-107R	**D40 06010**	7,6	8	25	32	17	7,5	2	11,11	11	–	0,008	**N00 56651** S2560-8IP 1,28Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-8C1-107R	**D40 06020**	9,6	10	30	37	17	9	2	14,11	14	–	0,015	**N00 56651** S2560-8IP 1,28Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-8C1-107L	**D40 01020**															
UKS16-8C2-107R	**D40 06040**	15,6	16	42	50	25	12	2	–	18,21	18	0,044	**N00 56751** S3574-10IP 2,8Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS16-8C2-107L	**D40 01040**															

	Insert	Shim plate			
for short clamp holder	W79 	Shim plate 2,5 grinding allowance 0,5  Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-8C1-107R	**W79 18060.04..**	UKS8-5-107R	**L02 20010**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-8C1-107R	**W79 18060.04..**	UKS10-5-107R	**L02 20720**	**55023 00206** M2×6 DIN965	–
UKS10-8C1-107L		UKS10-5-107L	**L02 21720**		
UKS16-8C2-107R	**W79 32060.08..**	UKS16-5-107R	**L02 20040**	**55021 03008** M3×8 DIN7991	–
UKS16-8C2-107L		UKS16-5-107L	**L02 21040**		

For further details on inserts see chapter 7.

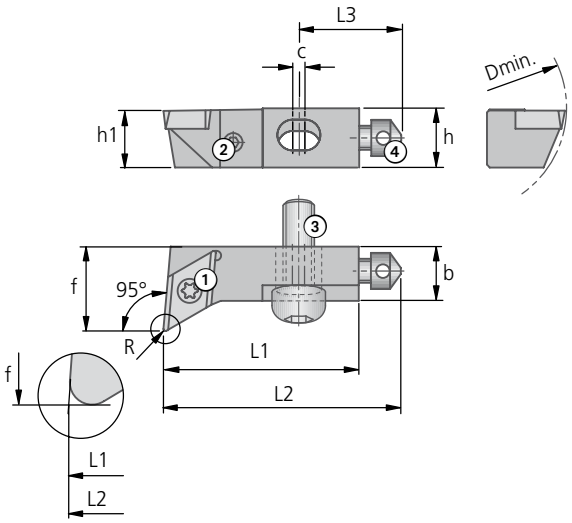
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.
Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 95°

Material: P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 318 – 319



UKS $\varkappa$ = 95°																
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-8C1-95R	**D40 06110**	7,6	8	25	32	17	7,5	2	12,17	12	–	0,009	**N00 56651** S2560-8IP 1,28Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-8C1-95L	**D40 01110**															
UKS10-8C1-95L	**D40 01120**	9,6	10	30	37	17	9	2	14,17	14	–	0,016	**N00 56651** S2560-8IP 1,28Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-8C2-95R	**D40 06140**	15,6	16	42	50	25	12	2	–	18,33	18	0,046	**N00 56751** S3574-10IP 2,8 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS16-8C2-95L	**D40 01140**															

	Insert			Shim plate			
for short clamp holder	W60 L.H. radial rake ▽▽ 06 = 6° 12 = 12° 20 = 20°	W60 R.H. radial rake ▽▽ 36 = 6° 42 = 12° 50 = 20°	W79 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-8C1-95R	**W60 18..0.04..**		**W79 18060.02..**	UKS8-5-95R	**L02 20110**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS8-8C1-95L		**W60 18..0.04..**		UKS8-5-95L	**L02 21110**		
UKS10-8C1-95L		**W60 18..0.04..**	**W79 18060.02..**	UKS10-5-95R	**L02 20120**	**55023 00206** M2×6 DIN965	–
UKS16-8C2-95R	**W60 32..0.08..**		**W79 32060.02..**	UKS16-5-95R	**L02 20140**	**55021 03008** M3×8 DIN7991	–
UKS16-8C2-95L		**W60 32..0.08..**		UKS16-5-95L	**L02 21140**		

For further details on inserts see chapter 7.

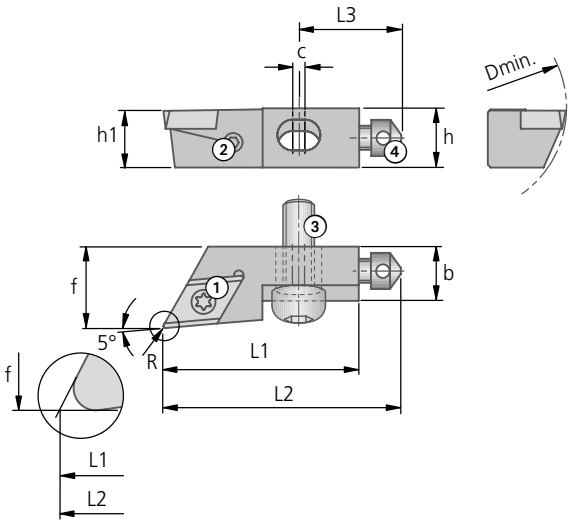
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa$ = 5°

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 318 – 319 ■

Material: P M K N S H



UKS $\varkappa$ = 5°													Clamping screw ①	Adjusting screw DIN 916 ②	Location screw ③	Stop screw ④
Article cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Order No. Article	Order No. Article	Order No. Article	Order No. Article
UKS8-8C1-5R	D40 06210	7,6	8	25	32	17	7,5	2	11,03	11	–	0,007	N00 56651 S2560-8IP 1,28Nm	55054 03005 M3×5	L02 30121 UKS8-3 4,1 Nm	L02 30020 UKS8-4
UKS8-8C1-5L	D40 01210															
UKS10-8C1-5R	D40 06220	9,6	10	30	37	17	9	2	14,03	14	–	0,014	N00 56651 S2560-8IP 1,28Nm	55054 04008 M4×8	L02 30130 UKS10-3 8,5 Nm	L02 30020 UKS8-4
UKS10-8C1-5L	D40 01220															
UKS16-8C2-5R	D40 06240	15,6	16	42	50	25	12	2	–	18,06	18	0,041	N00 56751 S3574-10IP 2,8 Nm	55054 05012 M5×12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-8C2-5L	D40 01240															

	Insert			Shim plate			
for short clamp holder	W60 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W60 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W79 neutral	Shim plate grinding allowance 2,5 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-8C1-5R		W60 18..0.04..	W79 18060.02..	UKS8-5-5R	L02 20810	55023 00206 M2×6 DIN965	L02 30170 UKS8-3 4,1 Nm
UKS8-8C1-5L	W60 18..0.04..			UKS8-5-5L	L02 21810		
UKS10-8C1-5R		W60 18..0.04..	W79 18060.02..	UKS10-5-5R	L02 20820	55023 00206 M2×6 DIN965	–
UKS10-8C1-5L	W60 18..0.04..			UKS10-5-5L	L02 21820		
UKS16-8C2-5R		W60 32..0.08..	W79 32060.02..	UKS16-5-5R	L02 20840	55021 03008 M3×8 DIN7991	–
UKS16-8C2-5L	W60 32..0.08..			UKS16-5-5L	L02 21840		

For further details on inserts see chapter 7.

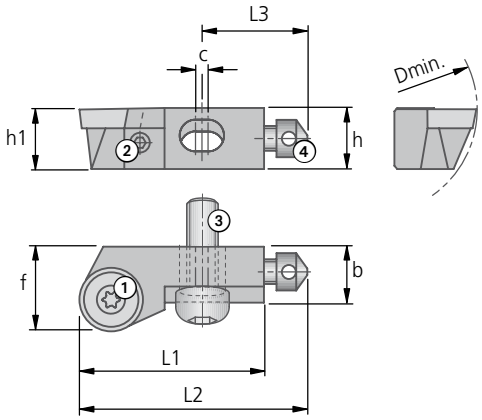
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

KOMET Kometric UKS

Short clamp holder

■ mounting instruction see page 318 – 319



UKS														
Article	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-705-Rd-R	**D40 06500**	5,8	6	20	24,5	12	4,5	1	7	0,003	**N00 56591** S2247-6IP 1,01Nm	**55054 03005** M3×5	**L02 30100** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-708-Rd-R	**D40 06520**	7,6	8	25	32	17	7,5	2	11	0,009	**N00 57341** S3066-9IP 2,5Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS16-712-Rd-R	**D40 06551**	15,6	16	42	50	25	12	2	18	0,046	**N00 57271** S3585-15IP 2,8Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

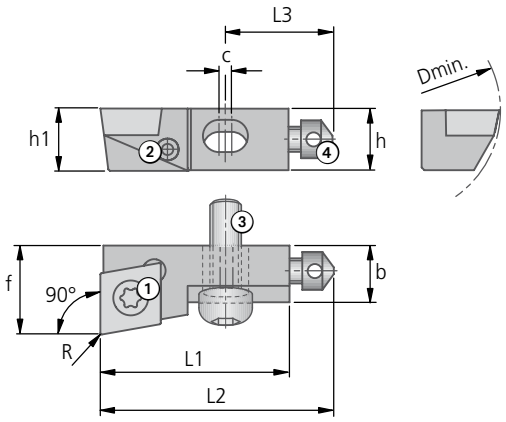
	Insert	Shim plate			
for short clamp holder		Shim plate 2,5 grinding allowance 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS6-705-Rd-R	RCMT 05 02 M0	UKS6-5-90R		**55023 00206** M2×6 DIN965	**L02 30111** UKS6-3 1,9 Nm
UKS8-708-Rd-R	RCMT 08 03 M0	UKS8-5-107R	**L02 20010**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS16-712-Rd-R	RCMT 12 04 M0	UKS16-5-0R		**55021 03008** M3×8 DIN7991	–

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Short clamp holder $\varkappa = 90°$

mounting instruction see page 318 – 319 ■



UKS $\varkappa = 90°$														
Article	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS8-CC06-90R	**D40 06600**	7,6	7,8	25	32	17	7,5	2	11	0,013	**N00 56651** S2560-8IP 1,28Nm	**55054 03005** M3×5	**L02 30121** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-CC09-90R	**D40 06610**	9,6	9,8	30	37	17	9	2	14	0,022	**N00 56751** S3574-10IP 2,8Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-CC09-90R	**D40 06630**	15,6	15,8	42	50	25	12	2	18	0,063	**N00 56751** S3574-10IP 2,8Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS20-CC12-90R	**D40 06640**	19,6	19,8	47	57	27	15	2	22	0,111	**N00 56851** S45111-20IP 6,25Nm	**55054 05014** M5×14	**L02 30160** UKS20-3 35 Nm	**L02 30030** UKS12-4

	Insert	Shim plate			
for short clamp holder		Shim plate 2,5 grinding allowance 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article	Location screw (extended) ③ Order No. Article
UKS8-CC06-90R	CCMT 06 02 04	UKS8-5-90R	**L02 20310**	**55023 00206** M2×6 DIN965	**L02 30170** UKS8-3 4,1 Nm
UKS10-CC09-90R	CCMT 09 T3 04	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965	–
UKS16-CC09-90R	CCMT 09 T3 04	UKS16-5-90R		**55021 03008** M3×8 DIN7991	–
UKS20-CC12-90R	CCMT 12 04 04	UKS20-5-90R	**L02 20250**	**55021 03008** M3×8 DIN7991	–

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

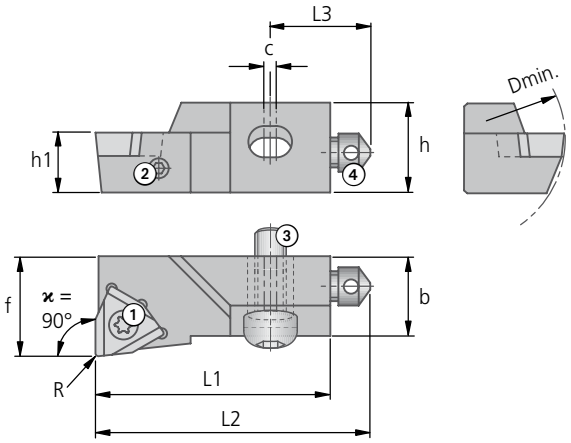
Please order insert and shim plate separately.

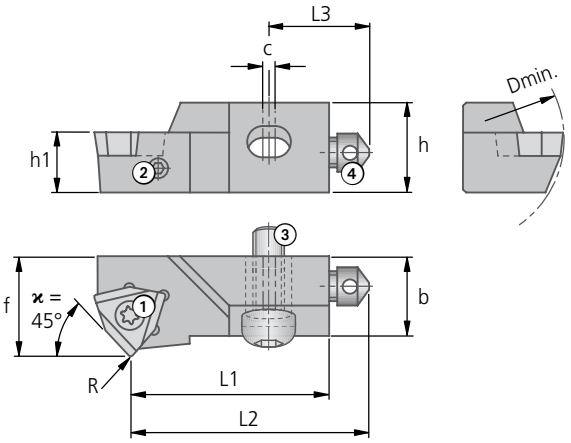
KOMET Kometric ISO

Short clamp holder $\varkappa$ = 90° | 45°

Material: P M K N S H

- R.H. short clamp holder as shown with left or neutral insert
- to ISO standard





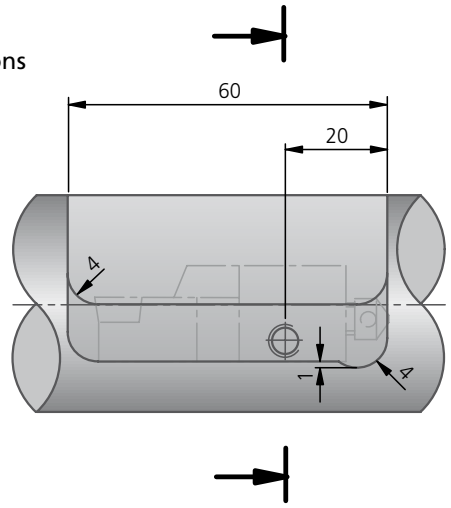
ISO $\varkappa$ = 90° | 45°														
Article	**Order No.**	$\varkappa$	**D**	**h1**	**h**	**L1**	**L2**	**L3**	**b**	**c**	ISO dimension **f** for radius R0,2	R0,4	R0,8	kg
SWFOR 10CA-06-38	**D40 58000**	90°	40	10	14	42	50	20	9	2	14	13,98	13,93	0,028
SWSOR 10CA-06-38	**D40 58400**	45°	40	10	14	36	44	20	9	2	14	13,9	13,71	0,028

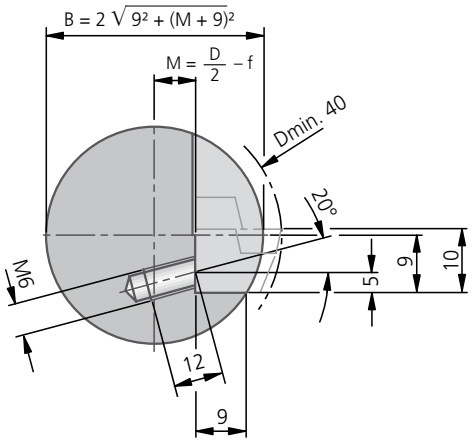
	Insert			Assembly parts			
for short clamp holder	W01 L.H.	W01 neutral	W29 neutral	Clamping screw ① **Order No.** Article	Adjusting screw DIN 916 ② **Order No.** Article	Location screw ③ **Order No.** Article	Stop screw ④ **Order No.** Article
SWSOR 10CA-06-38	**W01 34060.02..**	**W01 34600...**	**W29 34000.04..**	**N00 57521** S/M3,5x7,3-10IP 2,8 Nm	**55054 04008** M4x8	**L02 30140** UKS12-3 14 Nm	**L02 30020** UKS8-4
SWSOR 10CA-06-38	**W01 34060.02..**	**W01 34600...**	**W29 34000.04..**	**N00 57521** S/M3,5x7,3-10IP 2,8 Nm	**55054 04008** M4x8	**L02 30140** UKS12-3 14 Nm	**L02 30020** UKS8-4

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert separately.

Mounting Dimensions

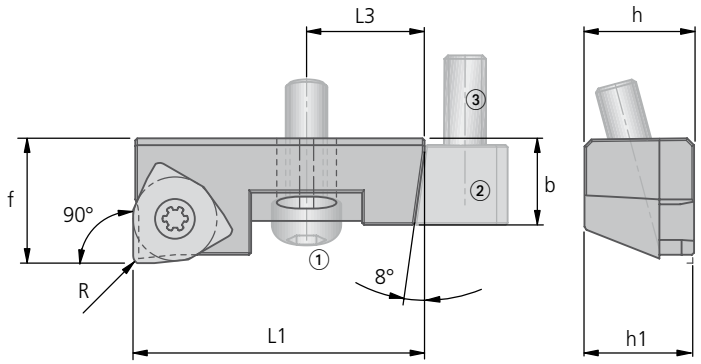




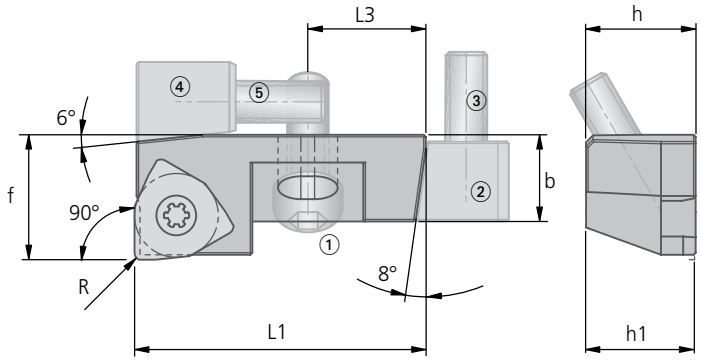
Short clamp holder $\varkappa$ = 90°

Material
K

axially adjustable



axially + radially adjustable



Short clamp holder										Inserts
Article cutting form ▾	Order No.	adjustable	h1	h	L1	L3	b	ISO dimension f for radius R0,8	kg	W01
UKS 10 WOHX 05T3 PN EL 90°	**D40 55190**	axially + radially	7,6	9,8	29,5	10,5	10	14,5	0,021	**W01 24600.906115**
UKS 16 WOHX 0804 PN EL 90°	**D40 65180**	axially	15,6	15,8	42	17	12,5	18	0,059	**W01 42600.906115**
UKS 16 WOHX 0804 PN EL 90°	**D40 65190**	axially + radially	15,6	15,8	42	17	12,5	18	0,057	**W01 42600.906115**

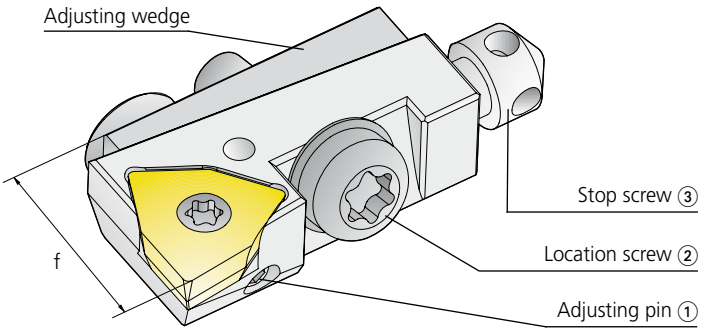
Assembly parts						
for short clamp holder	Clamping screw **Order No.** Article	Location screw ① **Order No.** Article	Axial wedge ② **Order No.**	Differential screw ③ **Order No.** Article	Radial wedge ④ **Order No.**	Differential screw ⑤ **Order No.** Article
UKS 10 WOHX 05T3 PN EL 90°	**N00 57511** S/M2,5x7,2-8IP 1,28 Nm	**L02 30130** UKS10-3 8,5 Nm	**L02 30880**	**L02 30851** M5×18-15IP	**L02 30860**	**L02 30851** M5×18-15IP
UKS 16 WOHX 0804 PN EL 90°	**N00 57531** S/M4,5x9-15IP 6,25 Nm	**L02 30140** UKS12-3 14 Nm	**L02 30890**	**N10 20220** M6x0,75-SW3	–	–
UKS 16 WOHX 0804 PN EL 90°	**N00 57531** S/M4,5x9-15IP 6,25 Nm	**L02 30140** UKS12-3 14 Nm	**L02 30890**	**N10 20220** M6x0,75-SW3	**L02 30860**	**L02 30851** M5×18-15IP

Supply includes:
Short clamp holder with assembly parts. Please order insert separately.

KOMET Kometric UKS

Short clamp holder with wedge adjustment and axial and radial adjustment

Adjusting the KOMET Kometric short clamp holder with wedge adjustment



1. Set the short clamping holder to the smallest possible diameter (turn adjusting pin ① clockwise as far as the stop) and place the location screw ② lightly in position
2. Set the axial dimension (length) with the stop screw ③
3. Set the short clamping holder to the required diameter by turning the adjusting pin ① anti-clockwise. (If necessary loosen the location screw ② slightly)
4. Tighten the location screw ②

Important note!
The short clamping holder must always be set from minus to plus!

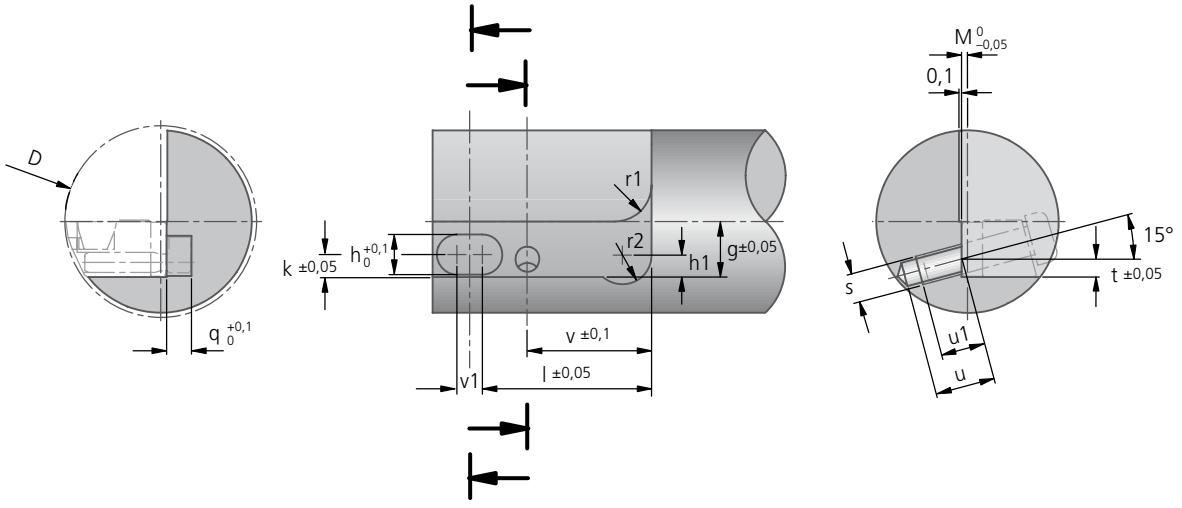
The following short clamping holder adjustments apply:

Holder size	axial	radial	f (for R0.4)
UKS 08	–1.0 to +1.0 mm	–0.07 to +0.16 mm	13.80
USK 10	–1.0 to +1.0 mm	–0.07 to +0.20 mm	17.58

Features
- Precise radial and axial adjustment
- Maximum support surface for short clamping holder on basic body provides maximum stability
- Parallel radial adjustment without changing the approach angle

Unlike the previous short clamping holder solutions, the user can carry out setting in the radial direction more accurately and more comfortably as no further movement occurs when the short clamping holder is locked with the central clamping screw.

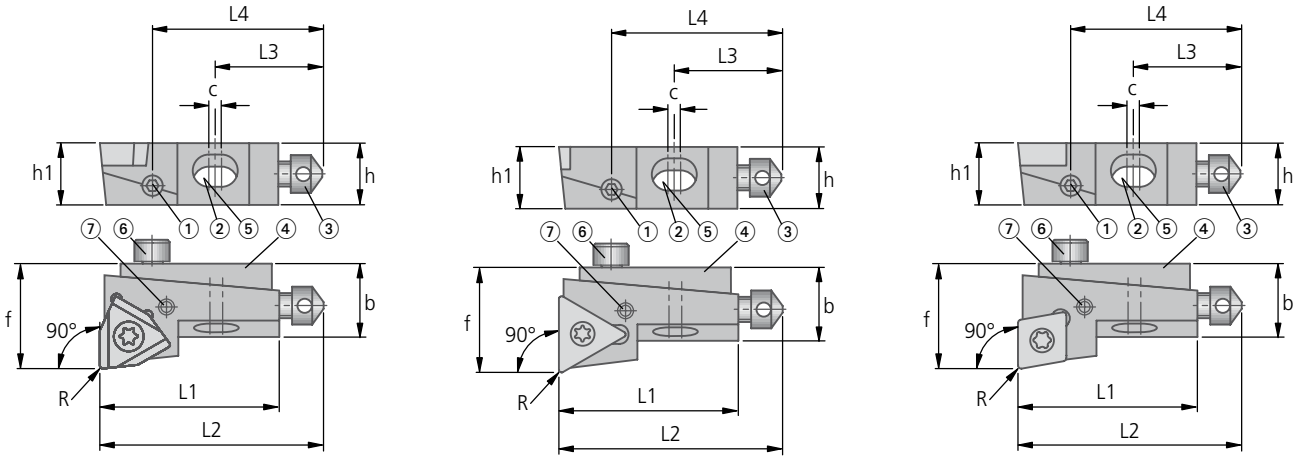
Mounting details



Short clamp holder size	D min.	for R0,4 f	g	h	h1	k	l	M	q	r1	r2	s	t	u	u1	v	v1
UKS 08	26	13,8	7,6	5,5	3	2,9	23,15	D/2 – f	3,4	5	4	M4	2,45	8	6,5	17	3,5
UKS 10	34	17,58	9,6	6,5	4	4	24,6	D/2 – f	4	5	5	M5	2,55	11	9	17	3,8

Short clamp holder $\varkappa = 90°$

R.H. short clamp holder as shown with left or neutral insert ■
with wedge adjustment and axial and radial adjustment ■



Short clamp holder												Inserts	
Order No. Article	h1	h	L1	L2	L3	L4	b	c	Adjustment path radial from	to	ISO dim. f in zero setting for radius R0,4	kg	L.H.	neutral
D40 65011 UKS08-W2924-90R	7,6	7,8	25	32	10	17,9	10,3	2	–0,07	+0,16	13,9	0,028	**W01 24060.04..** **W01 24120.04..**	**W01 24600..** **W29 24000.04..**
D40 65131 UKS08-W3014-90R	7,6	7,8	25	32	10	17,9	10,3	2	–0,07	+0,16	13,8	0,013	**W30 14060.04..** **W30 14120.04..** **W30 14200.04..**	**W57 14140.04..** **W57 14180.04..**
D40 65081 UKS10-CC09T3-90R	9,6	9,8	30	37	10	19,5	12,5	2	–0,10	+0,20	17,58	0,024		**CC..**

For further details on inserts see chapter 7

Assembly parts								
for short clamp holder	Clamping screw **Order No.** Article	Adjusting pin ① Article	Location screw ② **Order No.** Article	Stop screw ③ **Order No.** Article	Adjusting wedge ④ Article	Disc spring ⑤ **Order No.** Article	Cylindrical pin ⑥ **Order No.** Article	Cylindrical pin ⑦ **Order No.** Article
UKS08-W2924	**N00 57511** S/M2,5x7,2-8IP 1,28 Nm	UKS08 RAD/AX	**L02 31010** UKS8-3	**L02 30020** UKS8-4	UKS08 RAD/AX	8×4,2×0,3	**55311 02006** 2m6×6	1,5m6×4
UKS08-W3014	**N00 56111** S/M2,6x6,2-8IP 1,28 Nm	UKS08 RAD/AX	**L02 31010** UKS8-3	**L02 30020** UKS8-4	UKS08 RAD/AX	8×4,2×0,3	**55311 02006** 2m6×6	1,5m6×4
UKS10-CC09T3	**N00 56751** S3574-10IP 2,8 Nm	UKS10-R RAD/AX	**L02 31020** UKS10-3	**L02 30020** UKS8-4	UKS10-R RAD/AX	**56771 10054** 10×5,2×0,4	**55311 02008** 2m6×8	**55311 01505** 1,5m6×5

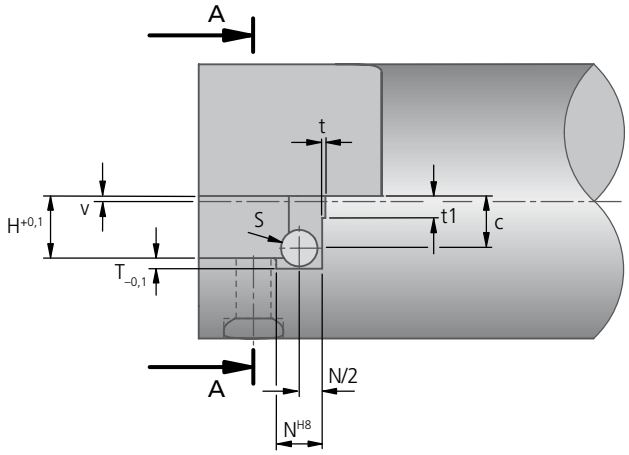
Supply includes:
Short clamp holder with assembly parts. Please order insert separately.

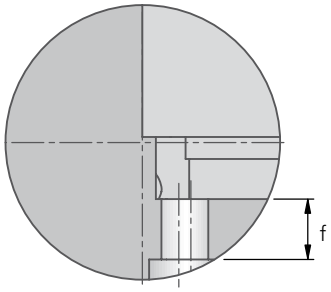
KOMET Kometric FLWE Insert flat bed seating

Mounting details

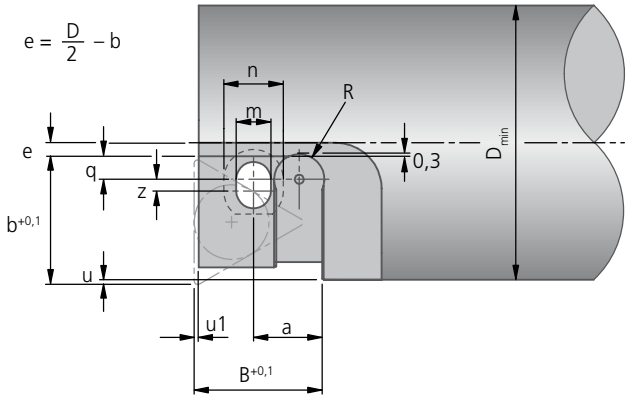
Mounting

for cutting form 1 as shown
for cutting form 2 in mirror image





Section A-A

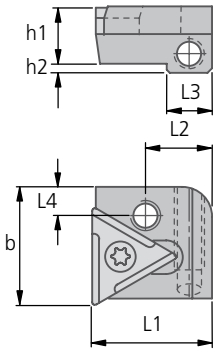


D = required turning diameter

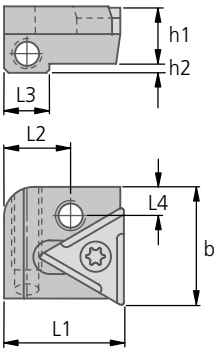
Insert flat bed seating size	a	B	c	D min.	f	b	H	m	N	n	q	R	S	T	t	t1	u	u1	v	z
FLWE-U3..	4,4	8	2,9	16	1,3	7,8	3,6	2,2	3	4	1,6	1,75	2,5	0,85	0,1	1,8	0,5	0,3	0,5	0,8
FLWE-U4..	7	12	4,1	22	3,6	11	5,7	2,8	5	4,5	2	2,75	4	1,15	0,15	2,4	0,5	0,5	0,6	1,3
FLWE-U5..	7,5	14	5,7	30	6,6	14	6,8	3,8	5	6,5	2,5	2,75	4	1,15	0,15	2,4	0,5	0,5	0,6	1,3

Adjustable insert flat bed seating $\varkappa = 90°$

Material
P M K N S H



Insert seating cutting form 1 as shown with left or neutral insert.



Insert seating cutting form 2 in mirror image with right or neutral insert.

Dimension 'b' relates to the appropriate insert radius

FLWE $\varkappa = 90°$									
Article cutting form ▼	Order No.	for radius b	L1	L2	L3	L4	h1	h2	kg
FLWE-U3-90°-1	**D53 56410**	7,8	8	4,4	3	1,9	3,6	0,6	0,004
FLWE-U4-90°-1	**D53 56430**	11	12	7	5	2,5	5,7	0,95	0,006
FLWE-U4-90°-2	**D53 51430**								
FLWE-U5-90°-1	**D53 56440**	14	14	7,5	5	3	6,8	0,95	0,008
FLWE-U5-90°-2	**D53 51440**								

	Insert			Assembly parts		
	W30 L.H.	W30 R.H.	W57 neutral	Clamping screw	Location screw	Threaded pin
for insert seating	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57..14 W57..18 Wiper	**Order No.** Article	**Order No.**	**Order No.** Article
FLWE-U3-90°-1	**W30 04..0.03..**		**W57 04140.04..** **W57 04180.04..**	**N00 56021** S/M2×3,8-6IP 0,62Nm	**N10 11200**	**55051 02005** M2×5
FLWE-U4-90°-1	**W30 14..0.04..**		**W57 14140.04..** **W57 14180.04..**	**N00 56101** S/M2,6×5,2-8IP 1,28Nm	**N10 11310**	**55051 03006** M3×6
FLWE-U4-90°-2		**W30 14..0.04..**				
FLWE-U5-90°-1	**W30 26..0.05..**		**W57 26140.04..** **W57 26180.04..**	**N00 56201** S/M3,5×6,2-10IP 2,8Nm	**N10 11400**	**55051 03006** M3×6
FLWE-U5-90°-2		**W30 26..0.05..**				

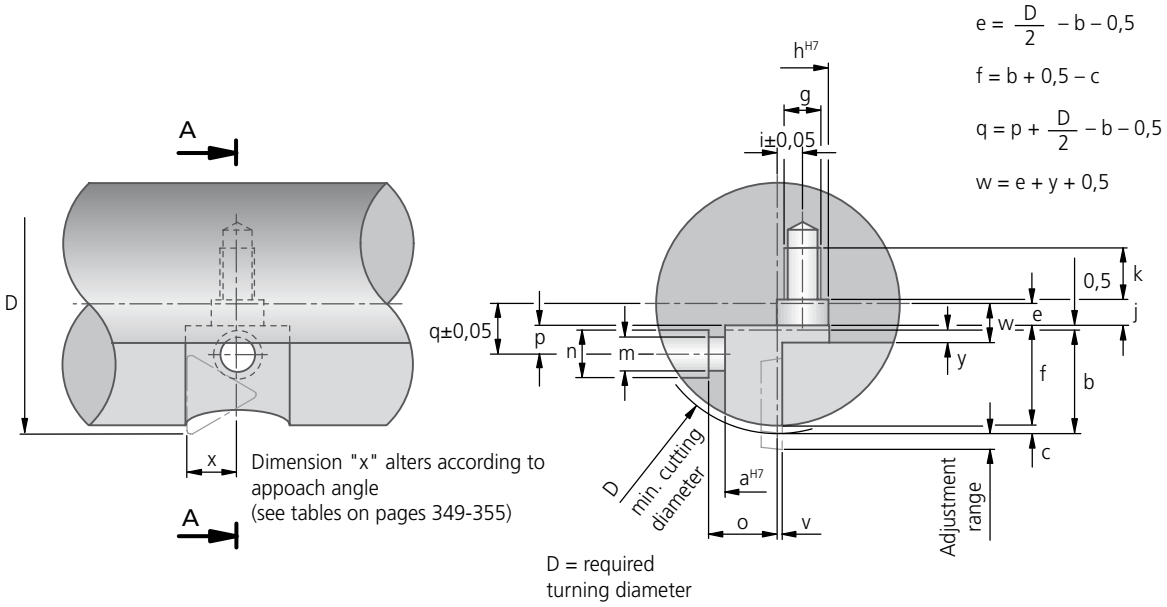
For further details on inserts see chapter 7

Note:
If using insert W30 ... .31.. (UF) the external contour have to be reworked.

Supply includes:
Insert seating with assembly parts. Please order insert separately.

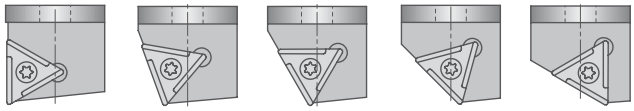
KOMET Kometric WVP, WVU Adjustable insert seating

Mounting details



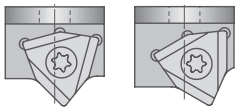
Features

- KOMET Kometric type WVP can be fitted with Unisix insert
- KOMET Kometric type WVU can be fitted with triangular insert
- KOMET Kometric types WVU4 and WVU5 can be interchanged with types WVP12 and WVP16
- can be used from 16 mm ∅
- optimum adjustment with easily accessible adjusting screw
- for own manufacture of fine boring tools using ABS , HSK or PSC semi-finished heads



90° 75° 60° 45° 30°

WVU Insert seating size	Insert seating			Adjusting screw					Location screw				Chip channel	
	a	b	c	g	h	i	j	k	m	n	o	p	v	y
WVU3..	8	8,5	0,75	M3	4	2,1	2,5	4	2,8	4	5,5	2,7	0,5	1,5
WVU4..	12	12	1	M4	6	2,9	3	6	3,9	5,5	7,9	3,3	0,6	1,5
WVU5..	16	16	1	M5	7	4,4	3,5	8	4,5	7,5	9,5	4,2	0,6	2



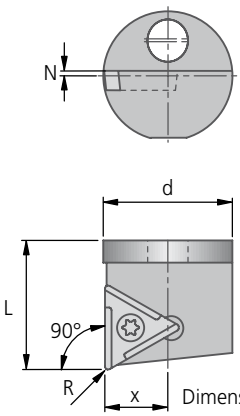
45° 30°

WVP Insert seating size	Insert seating			Adjusting screw					Location screw				Chip channel	
	a	b	c	g	h	i	j	k	m	n	o	p	v	y
WVP 12..	12	12	1	M4	6	2,9	3	6	3,9	5,5	7,9	3,3	0,6	1,5
WVP 16..	16	16	1	M5	7	4,4	3,5	8	4,5	7,5	9,5	4,2	0,6	2

Adjustable insert seatings $\varkappa = 90°$

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 348 ■

Material
P M K N S H



Dimension 'x' refers to the appropriate insert radius

WVU $\varkappa = 90°$										
Article cutting form ▼	Order No.	min. cutting diameter	Adjust-ment-range	d	L	N	ISO dimension x for radius R0,2	R0,4	R0,8	kg
WVU3-800-90L	**D20 40000**	16	0,3	8	8,5	0,5	3,9	3,9	3,9	0,004
WVU4-800-90L	**D20 40010**	22	0,4	12	12	0,6	5,8	5,8	5,8	0,004

	Insert		Assembly parts		
for insert seating	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral W57..14 W57..18 wiper	Clamping screw **Order No.** Article	Location screw **Order No.** Article	Adjusting screw **Order No.** Article
WVU3-800-90L	**W30 04..0.03..**	**W57 04140.04..** **W57 04180.04..**	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**N00 55561** M2,5×4-8IP 1,28 Nm	**N00 52500** E34
WVU4-800-90L	**W30 14..0.04..**	**W57 14140.04..** **W57 14180.04..**	**N00 56121** S/M2,6×4,7-8IP 1,28 Nm	**N00 55701** M3,5×5-8IP 2,25 Nm	**N00 52510** E46

For further details on inserts see chapter 7

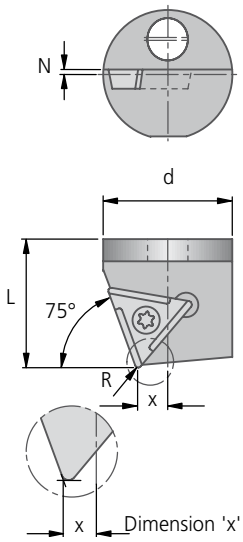
Supply includes:
Insert seating with assembly parts. Please order insert separately.

KOMET Kometric WVU

Adjustable insert seatings $\varkappa$ = 75°

Material
P M K N S H

- L.H. insert seating as shown with left or neutral insert
- mounting instruction see page 348



Dimension 'x' refers to the appropriate insert radius

WVU $\varkappa$ = 75°										
Article cutting form ▼	**Order No.**	min. cutting diameter	Adjust-ment-range	**d**	**L**	**N**	ISO dimension **x** for radius R0,2	R0,3	R0,4	kg
WVU3-800-75L	**D20 40100**	16	0,3	8	8,5	0,5	2,28	2,3	2,33	0,003

	Insert		Assembly parts		
for insert seating	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral	Clamping screw **Order No.** Article	Location screw **Order No.** Article	Adjusting screw **Order No.** Article
WVU3-800-75L	**W30 04..0.03..**	**W57 04140.04..**	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**N00 55561** M2,5×4-8IP 1,28 Nm	**N00 52500** E34
WVU4-800-75L	**W30 14..0.04..**	**W57 14140.04..**	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**N00 55701** M3,5×5-8IP 2,25 Nm	**N00 52510** E46

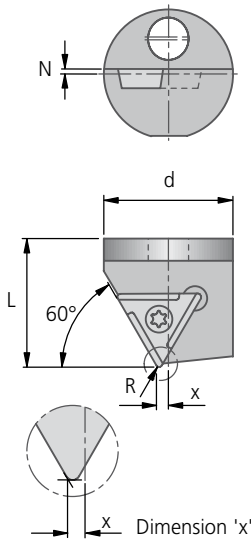
For further details on inserts see chapter 7

Supply includes:
Insert seating with assembly parts. Please order insert separately.

Adjustable insert seatings $\varkappa = 60°$

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 348 ■

Material
P M K N S H



Dimension 'x' refers to the appropriate insert radius

WVU $\varkappa = 60°$									
Article cutting form ▼	**Order No.**	min. cutting diameter	Adjust-ment-range	**d**	**L**	**N**	ISO dimension **x** for radius R0,2	R0,4	kg
WVU4-800-60L	**D20 40210**	22	0,4	12	12	0,6	1,39	1,5	0,006

	Insert		Assembly parts		
	W30 L.H.	W57 neutral	Clamping screw	Location screw	Adjusting screw
for insert seating	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°		**Order No.** Article	**Order No.** Article	**Order No.** Article
WVU4-800-60L	**W30 14..0.04..**	**W57 14140.04..**	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**N00 55701** M3,5×5-8IP 2,25 Nm	**N00 52510** E46

For further details on inserts see chapter 7

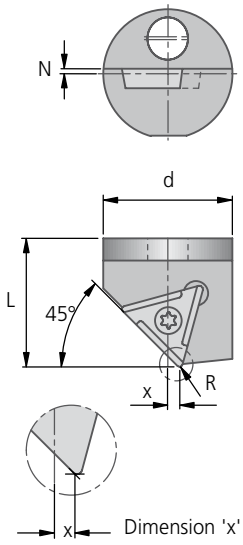
Supply includes:
Insert seating with assembly parts. Please order insert separately.

KOMET Kometric WVU

Adjustable insert seatings $\varkappa = 45°$

Material
P M K N S H

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting instruction see page 348



Dimension 'x' refers to the appropriate insert radius

WVU $\varkappa = 45°$										
Article cutting form ▼	Order No.	min. cutting diameter	Adjust-ment-range	d	L	N	ISO dimension x for radius R0,2	R0,4	R0,8	kg
WVU4-800-45L	**D20 40310**	22	0,4	12	12	0,6	0,88	0,7	–	0,005
WVU4-800-45R	**D20 45310**									
WVU5-800-45L	**D20 40320**	30	0,5	16	16	0,6	1,59	1,4	1,3	0,012

	Insert			Assembly parts		
for insert seating	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral	Clamping screw Order No. Article	Location screw Order No. Article	Adjusting screw Order No. Article
WVU4-800-45L	**W30 14..0.04..**		**W57 14140.04..**	**N00 56101** S/M2,6x5,2-8IP 1,28Nm	**N00 55701** M3,5x5-8IP 2,25Nm	**N00 52510** E46
WVU4-800-45R		**W30 14..0.04..**				
WVU5-800-45L	**W30 26..0.05..**		**W57 26140.04..**	**N00 56201** S/M3,5x6,2-10IP 2,8Nm	**55012 04006** M4x6 DIN7984	**N00 52520** E58

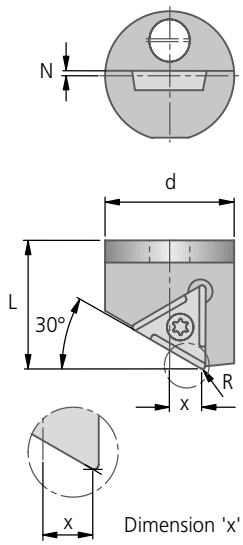
For further details on inserts see chapter 7

Supply includes:
Insert seating with assembly parts. Please order insert separately.

Adjustable insert seatings $\varkappa$ = 30°

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 348 ■

Material
P M K N S H



Dimension 'x' refers to the appropriate insert radius

WVU $\varkappa$ = 30°									
Article cutting form ▼	**Order No.**	min. cutting diameter	Adjust-ment-range	**d**	**L**	**N**	ISO dimension **x** for radius R0,2	 R0,4	kg
WVU4-800-30L	**D20 40410**	22	0,4	12	12	0,6	2,76	2,5	0,006

	Insert		Assembly parts		
	W30 L.H.	W57 neutral	Clamping screw	Location screw	Adjusting screw
for insert seating	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°		**Order No.** Article	**Order No.** Article	**Order No.** Article
WVU4-800-30L	**W30 14..0.04..**	**W57 14140.04..**	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**N00 55701** M3,5×5-8IP 2,25 Nm	**N00 52510** E46

For further details on inserts see chapter 7

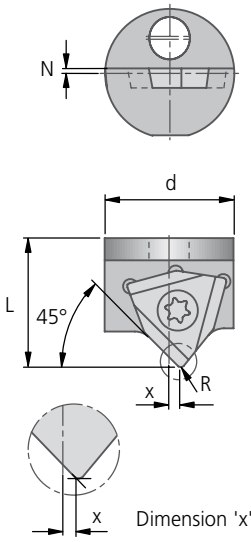
Supply includes:
Insert seating with assembly parts. Please order insert separately.

KOMET Kometric WVP

Adjustable insert seatings $\varkappa = 45°$

Material
P M K N S H

- L.H. insert seating as shown with left or neutral insert
- mounting instruction see page 348



Dimension 'x' refers to the appropriate insert radius

WVP $\varkappa = 45°$										
Article cutting form ▼	**Order No.**	min. cutting diameter	Adjust-ment-range	**d**	**L**	**N**	ISO dimension **x** for radius R0,2	R0,4	R0,8	kg
WVP16-824-45L38	**D20 80360**	30	0,5	16	16	0,6	1,3	1,2	1,01	0,02

	Insert			Assembly parts		
for insert seating	W01 L.H. 	W01 neutral 	W29 neutral 	Clamping screw **Order No.** Article	Location screw  **Order No.** Article	Adjusting screw  **Order No.** Article
WVP16-824-45L38	**W01 24060.02..**	**W01 24600...**	**W29 24010.04..**	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**55012 04006** M4×6 DIN7984	**N00 52520** E58

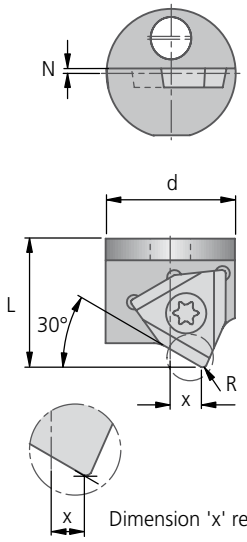
For further details on inserts see chapter 7

Supply includes:
Insert seating with assembly parts. Please order insert separately.

Adjustable insert seatings $\varkappa$ = 30°

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 348 ■

Material
P M K N S H



Dimension 'x' refers to the appropriate insert radius

WVP $\varkappa$ = 30°										
Article cutting form ▼	Order No.	min. cutting diameter	Adjust-ment-range	d	L	N	ISO dimension x for radius R0,2	R0,4	R0,8	kg
WVP16-824-30L38	**D20 80460**	30	0,5	16	16	0,6	4	3,86	3,57	0,02

	Insert			Assembly parts		
for insert seating	W01 L.H.	W01 neutral	W29 neutral	Clamping screw **Order No.** Article	Location screw **Order No.** Article	Adjusting screw **Order No.** Article
WVP16-824-30L38	**W01 24060.02..**	**W01 24600...**	**W29 24010.04..**	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**55012 04006** M4×6 DIN7984	**N00 52520** E58

For further details on inserts see chapter 7

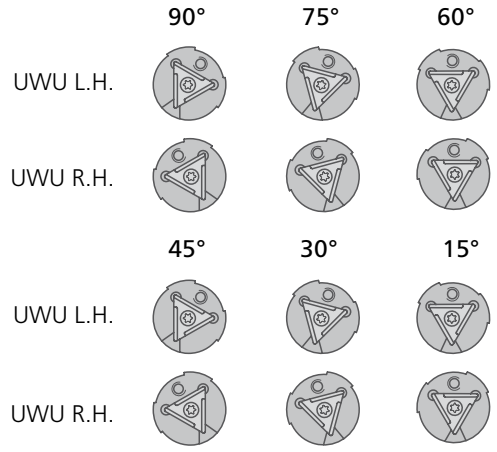
Supply includes:
Insert seating with assembly parts. Please order insert separately.

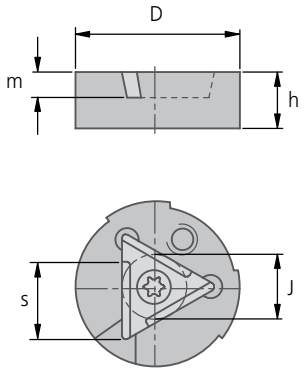
KOMET Kometric UWU

Insert seatings

Material
P M K N S H

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- Mounting instruction see page 358 – 359





UWU								Indexable insert		
Article cutting form ▼	Order No.	J	D	h	at standard radius s	insert thickness m	kg	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral
UWU 4 L	**D52 01100**	5,6	16	5,5	4,5	2,5	0,007	**W30 14..0.04..**		**W57 14140.04..**
UWU 5 L	**D52 01110**	8,2	20	6,5	6,7	3	0,012	**W30 26..0.04..**		**W57 26140.04..**
UWU 5 R	**D52 06110**								**W30 26..0.04..**	

For further details on inserts see chapter 7

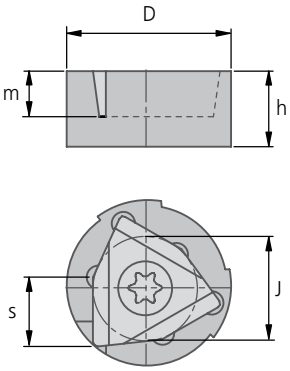
Assembly parts							
for insert seating	Clamping screw		Location screw		Cylindrical pin external machining		Cylindrical pin internal machining	
	Article	Order No.	Article	Order No.	Article	Order No.	Article	Order No.
UWU 4..	S/M2,6×6,2-8IP 1,28 Nm	**N00 56111**	Tx M2,6×6	**N00 55600**	1,8/2×4,5	**N00 52000**	1,8/2×4,5	**N00 52000**
UWU 5..	S/M3,5×7,3-10IP 2,8 Nm	**N00 56211**	M3,5×5-8IP 2,25 Nm	**N00 55701**	Ø3×10 DIN 6325	**55311 03010**	1,8/2×5,5	**55311 03010**

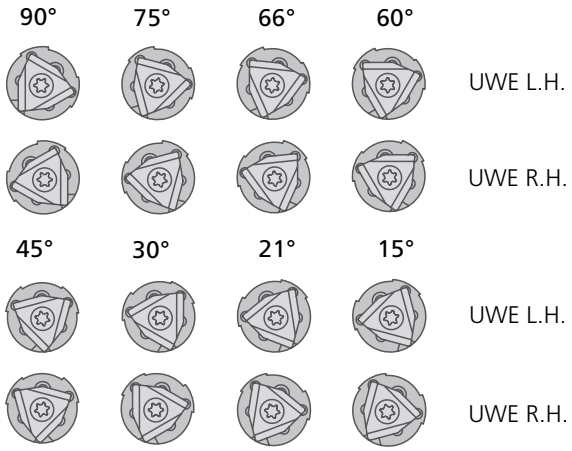
Supply includes:
Insert seating with assembly parts. Please order insert separately.

Insert seatings

L.H. insert seating as shown with left or neutral insert ■
R.H. insert seating in mirror image with right or neutral insert ■
Mounting instruction see page 360 – 361 ■

Material
P M K N S H





UWE								Indexable insert			
Article cutting form ▼	Order No.	J	D	h	s	insert thickness m	kg	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral 00 = PD 01 = K ▽▽
UWE02-38 L	**D52 50090**	8	14	6	5	3,8	0,005	**W01 24..0.04..**		**W01 24600...**	**W29 24..0.04..**
UWE02-38 R	**D52 55090**								**W01 24..0.04..**		
UWE01-38 L	**D52 50100**	10	16	6,5	6,5	3,8	0,007	**W01 34..0.04..**		**W01 34600...**	**W29 34..0.04..**
UWE01-38 R	**D52 55100**								**W01 34..0.04..**		
UWE1-48 L	**D52 50110**	12	20	8,3	7,5	4,8	0,013	**W01 42..0.04..**		**W01 42600...**	**W29 42..0.04..**
UWE2-53 L	**D52 50120**	15	25	8,8	9,5	5,3	0,023	**W01 50..0.04..**		**W01 50600...**	**W29 50..0.08..**
UWE3-60 L	**D52 50130**	17,6	30	10,5	11,5	6	0,041	**W01 58..0.04..**		**W01 58600...**	**W29 58..0.08..**
UWE3-60 R	**D52 55130**								**W01 58..0.04..**		

For further details on inserts see chapter 7

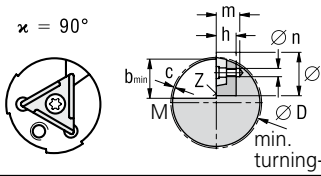
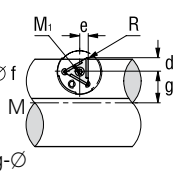
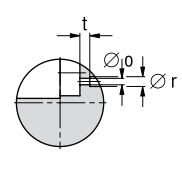
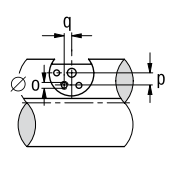
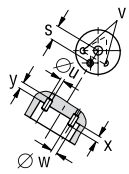
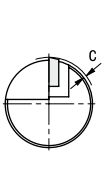
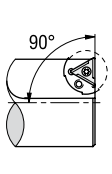
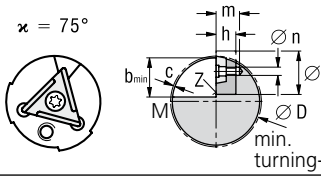
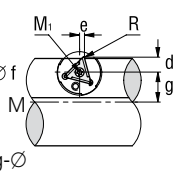
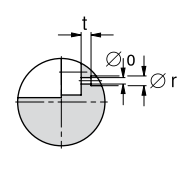
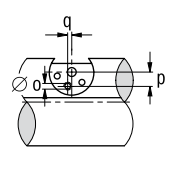
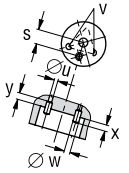
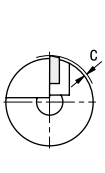
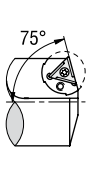
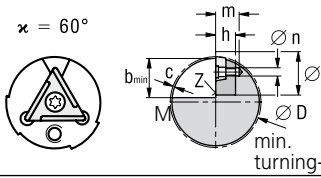
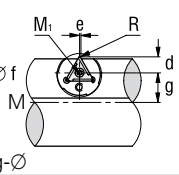
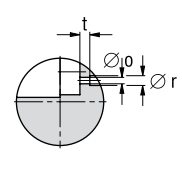
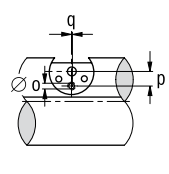
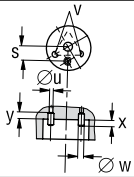
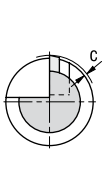
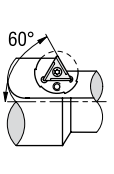
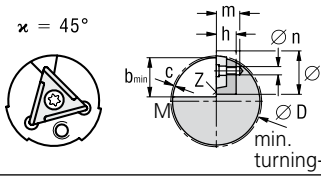
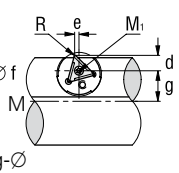
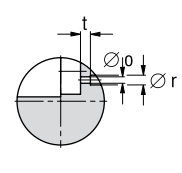
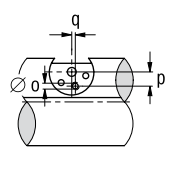
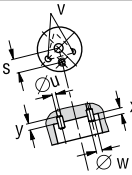
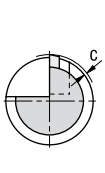
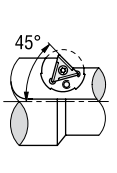
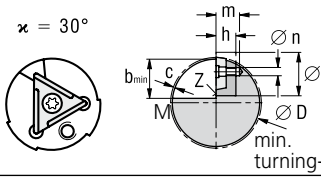
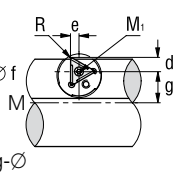
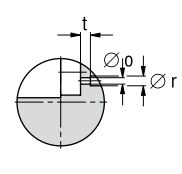
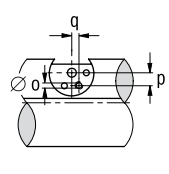
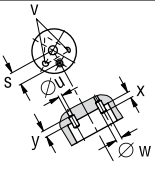
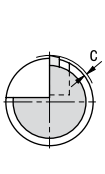
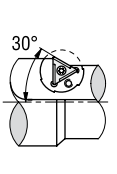
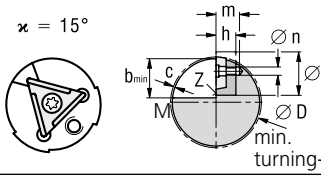
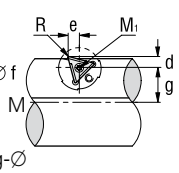
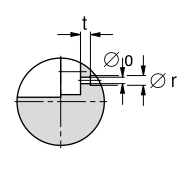
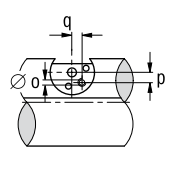
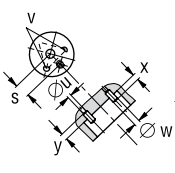
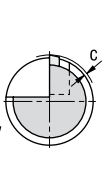
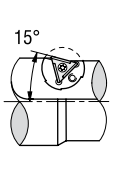
Assembly parts							
for insert seating	Clamping screw		Location screw		Cylindrical pin external machining		Cylindrical pin internal machining	
	Article	Order No.	Article	Order No.	Article	Order No.	Article	Order No.
UWE 02..	S/M2,5×6,3-8IP 1,28 Nm	**N00 57571**	M2,5×6-8IP 1,28 Nm	**N00 55571**	1,8/2×4,5	**N00 52000**	1,8/2×4,5	**N00 52000**
UWE 01..	S/M3,5×7,3-10IP 2,8 Nm	**N00 57521**	M3,5×5-8IP 2,25 Nm	**N00 55701**	1,8/2×4,5	**N00 52000**	1,8/2×4,5	**N00 52000**
UWE 1..	S/M4,5×9-15IP 6,25 Nm	**N00 57531**	M4,5×9-10IP 6,25 Nm	**N00 55821**	Ø4×10 DIN 6325	**55311 04010**	3/4×5,5	**N00 52010**
UWE 2..	S/M4,5×9-15IP 6,25 Nm	**N00 57531**	M4,5×9-10IP 6,25 Nm	**N00 55821**	Ø4×10 DIN 6325	**55311 04010**	3/4×5,5	**N00 52010**
UWE 3..	S/M5,5×11-20IP 6,25 Nm	**N00 57541**	M5,5×13,5-20IP 6,25 Nm	**N00 55901**	Ø5×12 DIN 6325	**55311 05012**	4/5×7	**N00 52020**

Supply includes:
Insert seating with assembly parts. Please order insert separately.

KOMET Kometric UWU insert seatings

Mounting instructions

L.H. cutting (R.H. cutting reflected image)

Approach angle	Fig. 1	Fig. 2	Fig. 3	Fig. 4	Fig. 5	Fig. 5a	Fig. 6
$\varkappa$ = 90°							
$\varkappa$ = 75°							
$\varkappa$ = 60°							
$\varkappa$ = 45°							
$\varkappa$ = 30°							
$\varkappa$ = 15°							

∅ D = required turning diameter

1. Mill cutting height ***Z*** to minimum width b, so that seating lies with diameter ***f*** as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis ***M-M***, take dimensions ***d*** and ***e*** from the table, based on insert radius ***R***, and calculate the distance ***g*** for centre point M1 ($g = \frac{D}{2} - d$). Move spindle by an amount ***g*** and allow for ***e***. The spindle is now at the centre point ***M1*** (Fig. 2).
3. Centre centrepoint ***M1*** and drill centre hole ***n*** to depth ***m*** (Fig. 3). Position machine spindle over ***n***.
4. Move to cutting height ***Z*** and countersink with ∅ ***f*** to depth ***h*** (Fig. 3).
5. Move with machine spindle (to coordinates ***p*** and ***q***) to clamping hole ***o***, centre and drill with ∅ ***o*** (Fig. 4).
6. Rotate workpiece 180°, locate bore ***o*** and counterbore ∅ ***r*** to dimension ***t*** (Fig. 4).
7. Move workpiece back 180°. Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes ***u*** to corner holes ***v*** and ream with ∅ ***w*** to depth ***y*** (Fig. 6 + 6a). Remove seating.
   Note: Attention should be paid with pin hole ***u*** and ***w*** as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of ***x*** (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool an if necessary harden or temper.

Note:

The seating is hardened to approx. 52 HRc and has a tensile strengh of approx. 1800 N/mm². It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed s ≈ 0.08 mm/rev.

Mounting dimensions

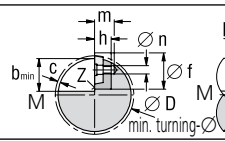
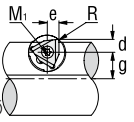
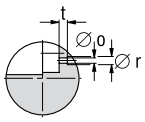
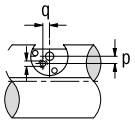
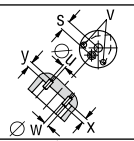
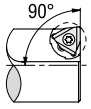
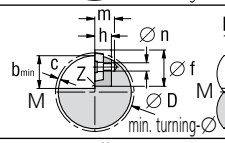
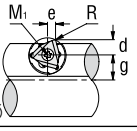
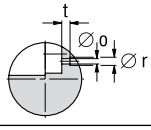
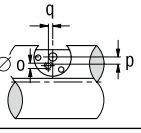
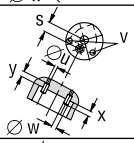
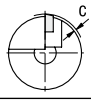
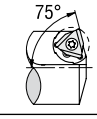
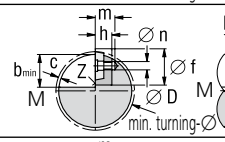
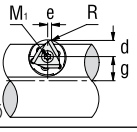
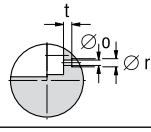
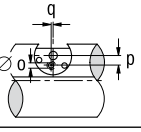
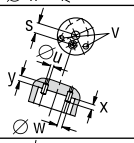
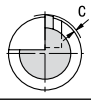
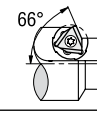
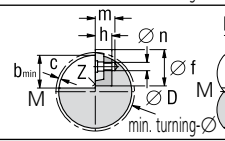
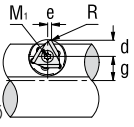
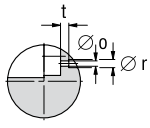
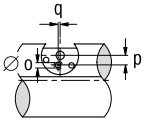
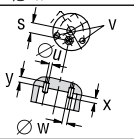
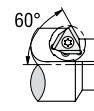
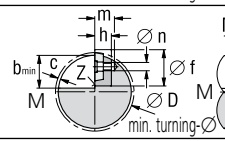
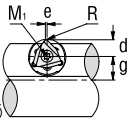
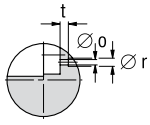
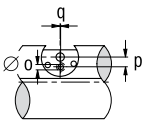
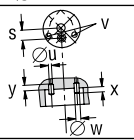
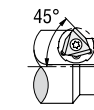
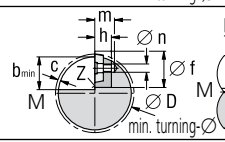
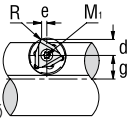
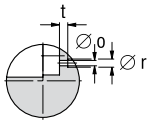
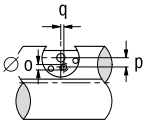
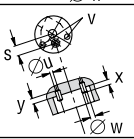
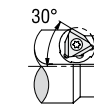
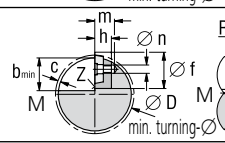
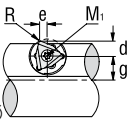
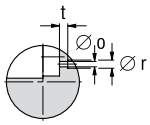
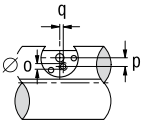
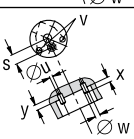
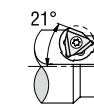
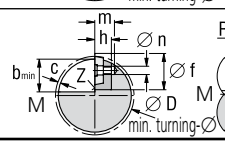
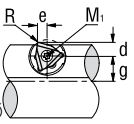
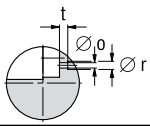
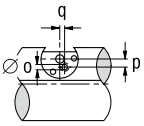
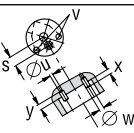
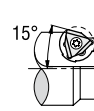
Approach angle		UWU 4 L/R		UWU 5 L/R			UWU 6 L/R		
		for R0,4	for R0,8	for R0,4	for R0,5	for R0,8	for R0,4	for R0,5	for R0,8
ϰ = 90°	d	4,56	4,26	6,81	6,73	6,51	10,71	10,41	10,12
	e	2,8	2,8	4,1	4,1	4,1	6,35	6,35	6,35
	p	3,9	3,9	5,5	5,5	5,5	8,23	8,23	8,23
	q	2,25	2,25	3,18	3,18	3,18	4,75	4,75	4,75
ϰ = 75°	d	5,04	4,66	7,55	7,45	7,17	11,94	11,56	11,19
	e	1,55	1,65	2,22	2,25	2,32	3,39	3,49	3,59
	p	4,35	4,35	6,13	6,13	6,13	9,18	9,18	9,18
	q	1,16	1,16	1,64	1,64	1,64	2,46	2,46	2,46
ϰ = 60°	d	5,2	4,8	7,8	7,7	7,4	12,3	11,9	11,5
	e	0,23	0,46	0,23	0,29	0,46	0,23	0,46	0,69
	p	4,5	4,5	6,35	6,35	6,35	9,5	9,5	9,5
	q	–	–	–	–	–	–	–	–
ϰ = 45°	d	5,04	4,66	7,55	7,45	7,17	11,89	11,52	11,15
	e	1,08	0,7	1,72	1,65	1,37	2,92	2,54	2,17
	p	4,35	4,35	6,13	6,13	6,13	9,18	9,18	9,18
	q	1,16	1,16	1,64	1,64	1,64	2,46	2,46	2,46
ϰ = 30°	d	4,56	4,26	6,81	6,73	6,51	10,71	10,41	10,12
	e	2,29	1,79	3,59	3,47	3,09	5,84	5,34	4,83
	p	3,9	3,9	5,5	5,5	5,5	8,23	8,23	8,23
	q	2,25	2,25	3,18	3,18	3,18	4,75	4,75	4,75
ϰ = 15°	d	3,79	3,63	5,63	5,59	5,47	8,81	8,65	8,48
	e	3,34	3,72	5,18	5,03	4,56	8,36	7,74	7,13
	p	3,18	3,18	4,49	4,49	4,49	6,72	6,72	6,72
	q	3,18	3,18	4,49	4,49	4,49	6,72	6,72	6,72

Mounting dimensions for		UWU 4 L/R	UWU 5 L/R		UWU 6 L/R	
Seating	min. cutting-Ø	24,0	40,0		50,0	
	b	14,0	19,0		28,0	
	c	0,5	0,5		0,7	
g = D/2 – d	f^{H7}	16,0	20,0		30,0	
	h	5,5	6,5		8,8	
	n	3,0	3,8		5,5	
	m	7,0	11,3		14,2	
Location screw	o	2,8	3,8		5,3	
	r	4,5	5,5		7,5	
	s	4,5	6,35		9,5	
	$t^{+0,1}$	2,5	3,9		8,5	
Pin			internal machining	external machining	internal machining	external machining
	u	1,6	1,6	2,8	2,8	3,8
	v^{H7}	2,0	3,0	3,0	4,0	4,0
	w^{H7}	1,8	1,8	3,0	3,0	4,0
	x	2,0	2,5	2,5	2,5	2,5
	y	3,0	6,0	7,5	6,0	7,5

KOMET Kometric UWE insert seatings

Mounting instructions

L.H. cutting (R.H. cutting reflected image)

Approach angle	Fig. 1	Fig. 2	Fig. 3	Fig. 4	Fig. 5	Fig. 5a	Fig. 6
$\varkappa$ = 90°							
$\varkappa$ = 75°							
$\varkappa$ = 66°							
$\varkappa$ = 60°							
$\varkappa$ = 45°							
$\varkappa$ = 30°							
$\varkappa$ = 21°							
$\varkappa$ = 15°							

∅ D = required turning diameter

1. Mill cutting height ***Z*** to minimum width b, so that seating lies with diameter ***f*** as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis ***M-M***, take dimensions ***d*** and ***e*** from the table, based on insert radius ***R***, and calculate the distance ***g*** for centre point M1 ($g = \frac{D}{2} - d$). Move spindle by an amount ***g*** and allow for ***e***. The spindle is now at the centre point ***M1*** (Fig. 2).
3. Centre centrepoint ***M1*** and drill centre hole ***n*** to depth ***m*** (Fig. 3). Position machine spindle over ***n***.
4. Move to cutting height ***Z*** and countersink with ∅ ***f*** to depth ***h*** (Fig. 3).
5. Move with machine spindle (to coordinates ***p*** and ***q***) to clamping hole ***o***, centre and drill with ∅ ***o*** (Fig. 4).
6. Rotate workpiece 180°, locate bore ***o*** and counterbore ∅ ***r*** to dimension ***t*** (Fig. 4).
7. Move workpiece back 180°. Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes ***u*** to corner holes ***v*** and ream with ∅ ***w*** to depth ***y*** (Fig. 6 + 6a). Remove seating.
   Note: Attention should be paid with pin hole ***u*** and ***w*** as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of ***x*** (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool an if necessary harden or temper.

Note:

The seating is hardened to approx. 52 HRc and has a tensile strengh of approx. 1800 N/mm². It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed s ≈ 0.08 mm/rev.

Mounting dimensions

Approach angle		UWE 02..L/R				UWE 01..L/R			UWE 1..L/R				UWE 2..L/R				UWE 3..L/R			
		for R0,2	for R0,4	for R0,8	for R1,2	for R0,2	for R0,4	for R0,8	for R0,2	for R0,4	for R0,8	for R1,2	for R0,4	for R0,8	for R1,2	for R1,6	for R0,6	for R0,8	for R1,2	for R1,6
ϰ = 90°	d	4,42	4,34	4,35	4,31	5,53	5,51	5,47	6,64	6,62	6,58		8,29	8,25	8,2		9,71	9,69	9,65	9,61
	e	4	4	4	4	5	5	5	6	6	6		7,5	7,5	7,5		8,8	8,8	8,8	8,8
	p	2,39	2,39	2,39	2,39	2,97	2,97	2,97	3,72	3,72	3,72		4,09	4,09	4,09		5,05	5,05	5,05	5,05
	q	2,14	2,14	2,14	2,14	2,68	2,68	2,68	3,35	3,35	3,35		3,68	3,68	3,68		4,55	4,55	4,55	4,55
ϰ = 75°	d	5,26	5,19	5,06	4,93	6,59	6,53	6,39	7,92	7,87	7,72	7,59	9,86	9,72	9,59	9,46	11,52	11,46	11,33	11,2
	e	2,73	2,75	2,79	2,82	3,41	3,43	3,46	4,09	4,11	4,14	4,18	5,13	5,16	5,2	5,23	6,02	6,04	6,08	6,11
	p	2,85	2,85	2,85	2,85	3,56	3,56	3,56	4,46	4,46	4,46	4,46	4,9	4,9	4,9	4,9	6,06	6,06	6,06	6,06
	q	1,45	1,45	1,45	1,45	1,82	1,82	1,82	2,27	2,27	2,27	2,27	2,49	2,49	2,49	2,49	3,09	3,09	3,09	3,09
ϰ = 66°	d	4,42	4,4	4,35	4,31	5,53	5,51	5,46	6,64	6,62	6,58		8,29	8,24	8,2		9,71	9,68	9,64	9,6
	e	4	4	4	4	5	5	5	6	6	6		7,5	7,5	7,5		8,8	8,8	8,8	8,8
	p	3,04	3,04	3,04	3,04	3,8	3,8	3,8	4,76	4,76	4,76		5,23	5,23	5,23		6,47	6,47	6,47	6,47
	q	0,99	0,99	0,99	0,99	1,24	1,24	1,24	1,55	1,55	1,55		1,7	1,7	1,7		2,1	2,1	2,1	2,1
ϰ = 60°	d	5,76	5,66	5,48	5,29	7,22	7,12	6,94	8,68	8,58	8,4	8,22	10,78	10,6	10,42	10,33	12,59	12,49	12,31	12,12
	e	1,3	1,35	1,46	1,56	1,6	1,66	1,76	1,92	1,98	2,08	2,19	2,44	2,55	2,65	2,77	2,89	2,95	3,05	3,17
	p	3,13	3,13	3,13	3,13	3,91	3,91	3,91	4,89	4,89	4,89	4,89	5,38	5,38	5,38	5,38	6,65	6,65	6,65	6,65
	q	0,66	0,66	0,66	0,66	0,83	0,83	0,83	1,04	1,04	1,04	1,04	1,14	1,14	1,14	1,14	1,41	1,41	1,41	1,41
ϰ = 45°	d	5,87	5,77	5,58	5,38	7,36	7,26	7,07	8,86	8,76	8,57	8,37	10,99	10,8	10,6	10,41	12,84	12,74	12,54	12,35
	e	0,21	0,12	0,08	–0,28	0,29	0,19	0	0,37	0,27	0,08	–0,12	0,39	0,2	0	–0,19	0,4	0,3	0,1	–0,09
	p	3,2	3,2	3,2	3,2	3,99	3,99	3,99	4,99	4,99	4,99	4,99	5,49	5,49	5,49	5,49	6,79	6,79	6,79	6,79
	q	0,17	0,17	0,17	0,17	0,21	0,21	0,21	0,26	0,26	0,26	0,26	0,29	0,29	0,29	0,29	0,36	0,36	0,36	0,36
ϰ = 30°	d	5,6	5,52	5,35	5,18	7,02	6,93	6,76	8,45	8,36	8,19	8,03	10,49	10,32	10,15	9,99	12,25	12,16	12	11,82
	e	1,7	1,56	1,26	0,97	2,16	2,02	1,73	2,62	2,48	2,19	1,9	3,17	2,88	2,59	2,3	3,63	3,48	3,19	2,9
	p	3,04	3,04	3,04	3,04	3,8	3,8	3,8	4,76	4,76	4,76	4,76	5,23	5,23	5,23	5,23	6,47	6,47	6,47	6,47
	q	0,99	0,99	0,99	0,99	1,24	1,24	1,24	1,55	1,55	1,55	1,55	1,7	1,7	1,7	1,7	2,1	2,1	2,1	2,1
ϰ = 21°	d	5,26	5,19	5,06	4,93	6,59	6,53	6,39	7,92	7,86	7,72		9,85	9,72	9,59		11,52	11,45	11,32	11,19
	e	2,54	2,37	2,02	1,68	3,22	3,05	2,7	3,9	3,73	3,38		4,74	4,4	4,05		5,45	5,28	4,93	4,59
	p	2,85	2,85	2,85	2,85	3,56	3,56	3,56	4,46	4,46	4,46		4,9	4,9	4,9		6,06	6,06	6,06	6,06
	q	1,45	1,45	1,45	1,45	1,82	1,82	1,82	2,27	2,27	2,27		2,5	2,5	2,5		3,09	3,09	3,09	3,09
ϰ = 15°	d	4,96	4,91	4,81	4,71	6,22	6,17	6,06	7,47	7,42	7,32		9,3	9,2	9,1		10,88	10,83	10,73	10,62
	e	3,07	2,88	2,5	2,12	3,88	3,69	3,31	4,69	4,51	4,13		5,73	5,35	4,97		6,6	6,41	6,03	5,65
	p	2,68	2,68	2,68	2,68	3,35	3,35	3,35	4,19	4,19	4,19		4,61	4,61	4,61		5,7	5,7	5,7	5,7
	q	1,74	1,74	1,74	1,74	2,18	2,18	2,18	2,72	2,72	2,72		3	3	3		3,7	3,7	3,7	3,7

Mounting dimensions for		UWE 02..L/R	UWE 01..L/R	UWE 1..L/R		UWE 2..L/R		UWE 3..L/R	
Seating	min. cutt.-Ø	32	34	40		50		54	
	b	13	16	19		24		28	
ϰ = 90°, 75°, 60°, 45°, 30°, 15°	c	0,5	0,5	0,6		0,7		0,8	
g = D/2 – d	f^{H7}	14	16	20		25		30	
ϰ = 66°, 21°	h	6	6,5	8,3		8,8		10,5	
g = D/2 + d	n	2,7	3,8	4,8		4,8		5,8	
	m	8,5	7	11,3		11,3		16	
Location screw	o	2,7	3,8	4,8		4,8		5,8	
	r	4	5,5	6,5		6,5		7,5	
	s	3,2	4	5		5,5		6,8	
	$t^{+0,1}$	3,9	2,5	5,7		5,7		9,2	
Pin				internal machining	external machining	internal machining	external machining	internal machining	external machining
	u	1,6	1,6	2,8	3,8	2,8	3,8	3,8	4,8
	v^{H7}	2	2	4	4	4	4	5	5
	w^{H7}	1,8	1,8	3	4	3	4	4	5
	x	2	2	2,5	2,5	2,5	2,5	5	5
	y	3	3	6	7,5	6	7,5	8	8

KOMET Kometric UZV Boring tool

Mounting instructions

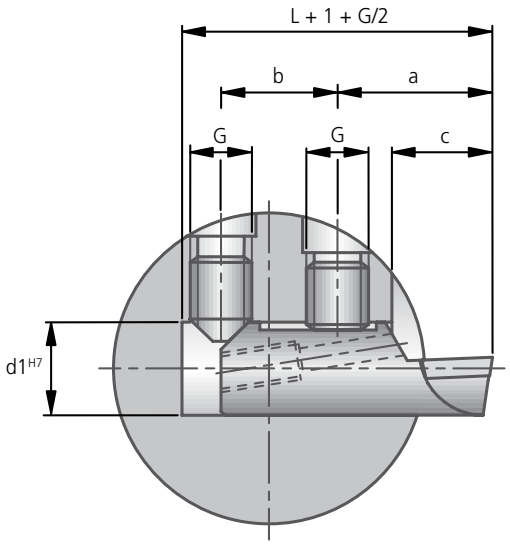
Mounting depends on the insert position required. The right dimensions for the mounting bore and holding thread for each boring bar Ø can be taken from the details on the drawings and tables.

Mounting dimensions

Boring tool size	d1	a	b	G	c
UZV 8	8	15	10	M6	9
UZV 10	10	18	12	M6	12
UZV 12	12	20	15	M8	13
UZV 16	16	27	18	M10	18
UZV 20	20	30	20	M12	20

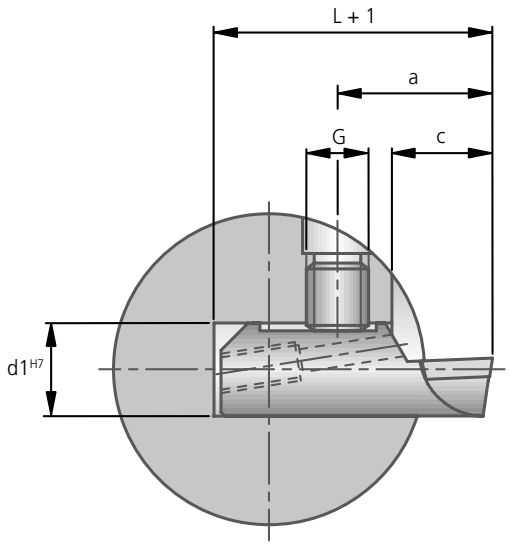
Mounting form A

Angled adjustment with threaded pin DIN 914



Mounting form B

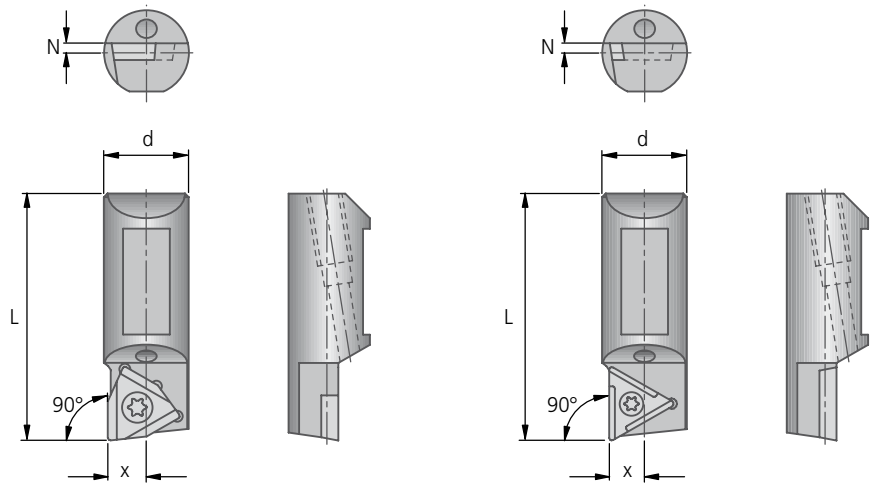
Adjustment with internal adjusting screw



Boring tool $\varkappa$ = 90°

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 362 ■

Material: P M K N S H



UZV $\varkappa$ = 90° | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral W57..14 W57..18 iper
UZV 8-803-25-90°-L	D20 00000	8	25	1,0	3	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04.. W57 04180.04..
UZV 8-803-25-90°-R	D20 05000								W30 04..0.03..	
UZV10-804-30-90°-L	D20 00020	10	30	1,5	4	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04.. W57 14180.04..
UZV10-804-30-90°-R	D20 05020								W30 14..0.04..	
UZV12-804-35-90°-L	D20 00040	12	35	1,5	5	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04.. W57 14180.04..
UZV16-805-45-90°-L	D20 00060	16	45	3,0	6	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26..0.05..		W57 26140.04.. W57 26180.04..
UZV16-805-45-90°-R	D20 05060								W30 26..0.05..	

UZV $\varkappa$ = 90° | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV12-802-35-90°-R38	D20 05071	12	35	1,5	5	0,022	N00 57511 S/M2,5×7,2-8IP 1,28 Nm		W01 24....	W29 24000.. W29 24010..
UZV16-802-45-90°-L38	D20 50090	16	45	3,0	6	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV16-802-45-90°-R38	D20 55090								W01 24....	
UZV16-801-45-90°-L38	D20 00091	16	45	3,0	6	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W01 34....		W29 34000.. W29 34010..
UZV16-801-45-90°-R38	D20 05091								W01 34....	

For further details on inserts see chapter 7

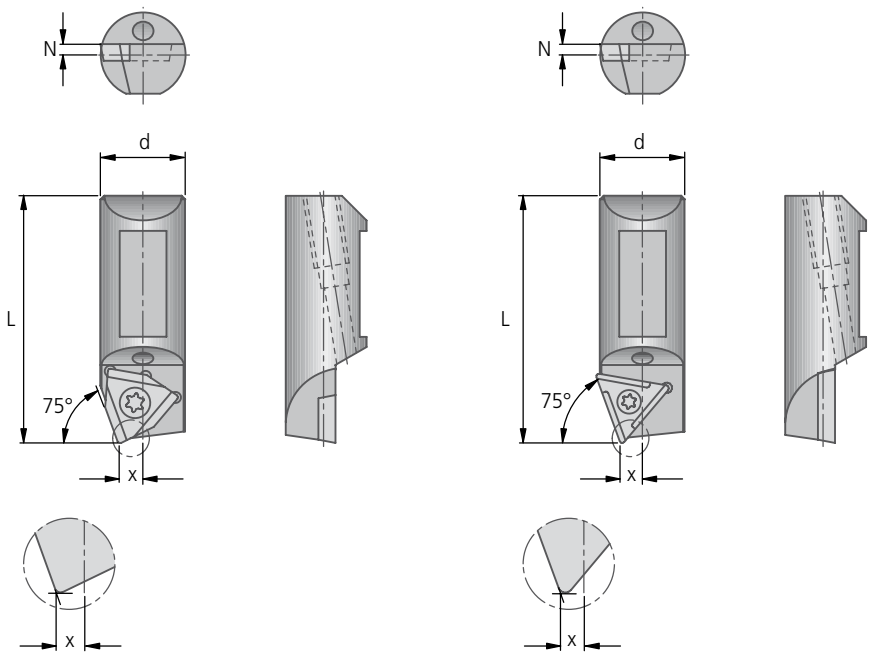
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UZV

Boring tool $\varkappa$ = 75°

Material: P M K N S H

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 362



UZV $\varkappa$ = 75° | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZV 8-803-25-75°-L	D20 00100	8	25	1,0	2	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04..
UZV 8-803-25-75°-R	D20 05100								W30 04..0.03..	
UZV10-804-30-75°-L	D20 00120	10	30	1,5	2,5	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV10-804-30-75°-R	D20 05120								W30 14..0.04..	
UZV12-804-35-75°-L	D20 00140	12	35	1,5	4	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV16-805-45-75°-L	D20 00160	16	45	3,0	4	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26..0.05..		W57 26140.04..

UZV $\varkappa$ = 75° | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV10-818-30-75°-L31	D20 50120	10	30	1,5	2,5	0,013	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W01 18....		W29 18000.. W29 18010..
UZV10-818-30-75°-R31	D20 55120								W01 18....	
UZV12-802-35-75°-L38	D20 00171	12	35	1,5	4	0,022	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV16-802-45-75°-L38	D20 50190	16	45	3,0	4	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV16-801-45-75°-L38	D20 00191	16	45	3,0	4	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W01 34....		W29 34000.. W29 34010..

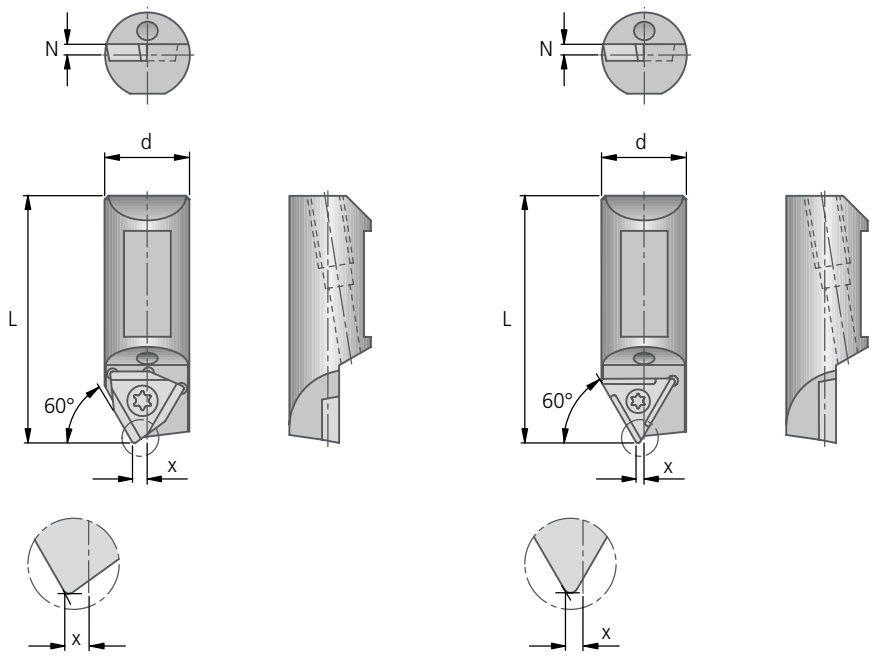
For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

Boring tool $\varkappa$ = 60°

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 362 ■

Material: P M K N S H



UZV $\varkappa$ = 60° | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZV 8-803-25-60°-L	D20 00200	8	25	1,0	0,6	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04..
UZV 8-803-25-60°-R	D20 05200								W30 04..0.03..	
UZV10-804-30-60°-L	D20 00220	10	30	1,5	0,6	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV10-804-30-60°-R	D20 05220								W30 14..0.04..	
UZV12-804-35-60°-L	D20 00240	12	35	1,5	1	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV12-804-35-60°-R	D20 05240								W30 14..0.04..	

UZV $\varkappa$ = 60° | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV12-802-35-60°-L38	D20 00271	12	35	1,5	1	0,022	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV12-802-35-60°-R38	D20 05271								W01 24....	
UZV16-801-45-60°-R38	D20 05291	16	45	3,0	1	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm		W01 34....	W29 34000.. W29 34010..

For further details on inserts see chapter 7

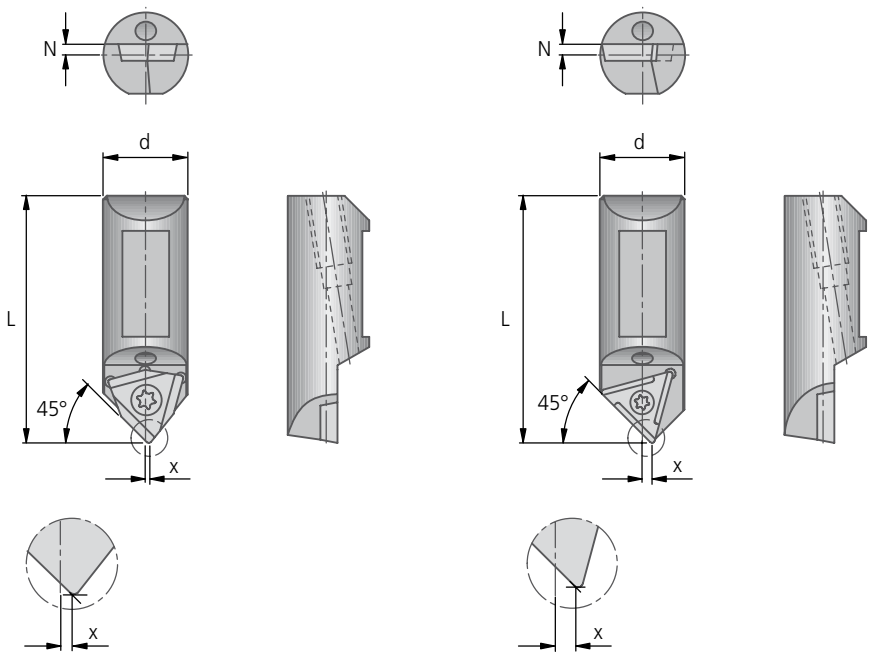
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UZV

Boring tool $\varkappa = 45°$

Material: P M K N S H

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 362



UZV $\varkappa = 45°$ | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZV 8-803-25-45°-L	D20 00400	8	25	1,0	1	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04..
UZV 8-803-25-45°-R	D20 05400								W30 04..0.03..	
UZV10-804-30-45°-L	D20 00420	10	30	1,5	1,3	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV10-804-30-45°-R	D20 05420								W30 14..0.04..	
UZV12-804-35-45°-L	D20 00440	12	35	1,5	1	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV12-804-35-45°-R	D20 05440								W30 14..0.04..	
UZV16-805-45-45°-L	D20 00460	16	45	3,0	1,5	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26..0.05..		W57 26140.04..

UZV $\varkappa = 45°$ | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV10-818-30-45°-L31	D20 50420	10	30	1,5	1,3	0,013	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W01 18....		W29 18000.. W29 18010..
UZV12-802-35-45°-L38	D20 00471	12	35	1,5	1	0,022	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV12-802-35-45°-R38	D20 05471								W01 24....	
UZV16-802-45-45°-L38	D20 50490	16	45	3,0	1,5	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV16-802-45-45°-R38	D20 55490								W01 24....	
UZV16-801-45-45°-R38	D20 05491	16	45	3,0	1,5	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm		W01 34....	W29 34000.. W29 34010..

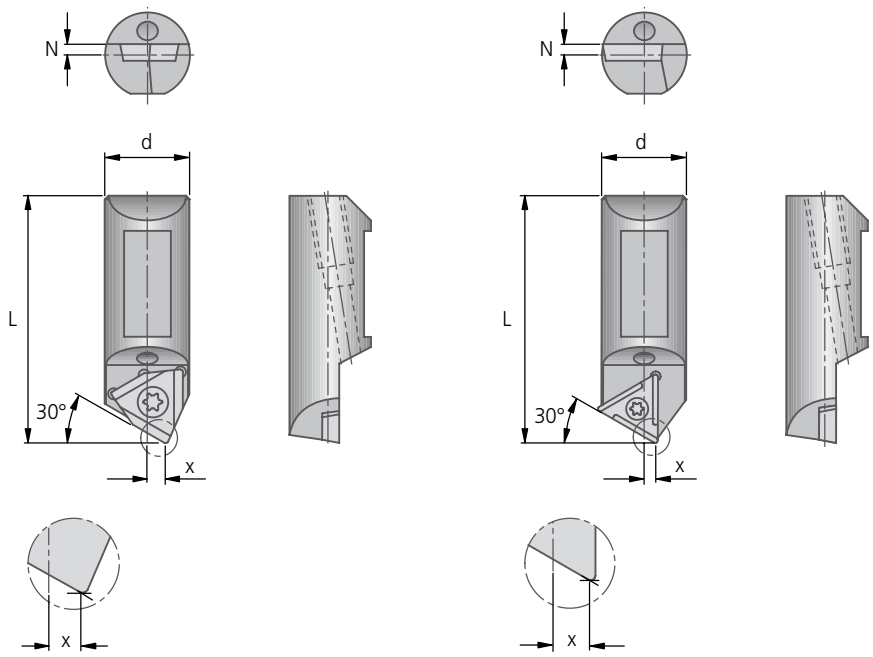
For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

Boring tool $\varkappa$ = 30°

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 362 ■

Material
P M K N S H



UZV $\varkappa$ = 30° | W30 / W57								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZV 8-803-25-30°-L	D20 00500	8	25	1,0	2,5	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04..
UZV 8-803-25-30°-R	D20 05500								W30 04..0.03..	
UZV10-804-30-30°-L	D20 00520	10	30	1,5	3	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV10-804-30-30°-R	D20 05520								W30 14..0.04..	
UZV12-804-35-30°-R	D20 05540	12	35	1,5	3	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm		W30 14..0.04..	W57 14140.04..
UZV16-805-45-30°-R	D20 05560	16	45	3,0	3,5	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm		W30 26..0.05..	W57 26140.04..

UZV $\varkappa$ = 30° | W01 / W29								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV12-802-35-30°-R38	D20 05571	12	35	1,5	3	0,022	N00 57511 S/M2,5×7,2-8IP 1,28 Nm		W01 24....	W29 24000.. W29 24010..
UZV16-802-45-30°-L38	D20 50590	16	45	3,0	3,5	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..

For further details on inserts see chapter 7

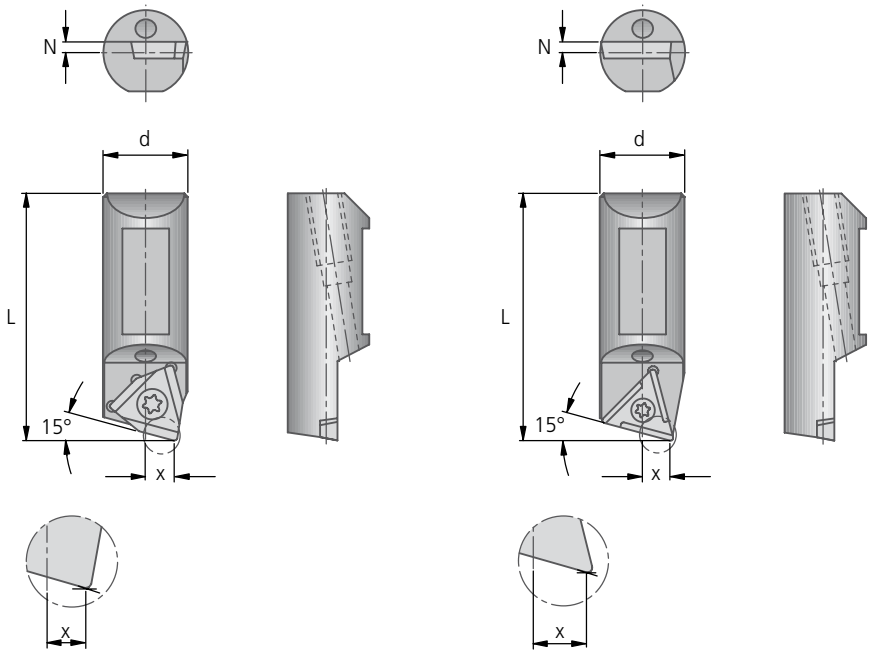
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UZV

Boring tool $\varkappa$ = 15°

Material
P M K N S H

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 362



UZV $\varkappa$ = 15° | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZV 8-803-25-15°-L	D20 00600	8	25	1,0	3	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..		W57 04140.04..
UZV 8-803-25-15°-R	D20 05600								W30 04..0.03..	
UZV10-804-30-15°-L	D20 00620	10	30	1,5	4	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV10-804-30-15°-R	D20 05620								W30 14..0.04..	
UZV12-804-35-15°-L	D20 00640	12	35	1,5	3,5	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04..
UZV12-804-35-15°-R	D20 05640								W30 14..0.04..	
UZV16-805-45-15°-L	D20 00660	16	45	3,0	5	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26..0.05..		W57 26140.04..

UZV $\varkappa$ = 15° | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV10-818-30-15°-L31	D20 50620	10	30	1,5	4	0,013	N00 57553 S/M2,2×5,5-6IP 1,01 Nm	W01 18....		W29 18000.. W29 18010..
UZV16-802-45-15°-L38	D20 50690	16	45	3,0	5	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZV16-801-45-15°-L38	D20 00691	16	45	3,0	5	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W01 34....		W29 34000.. W29 34010..
UZV16-801-45-15°-R38	D20 05691								W01 34....	

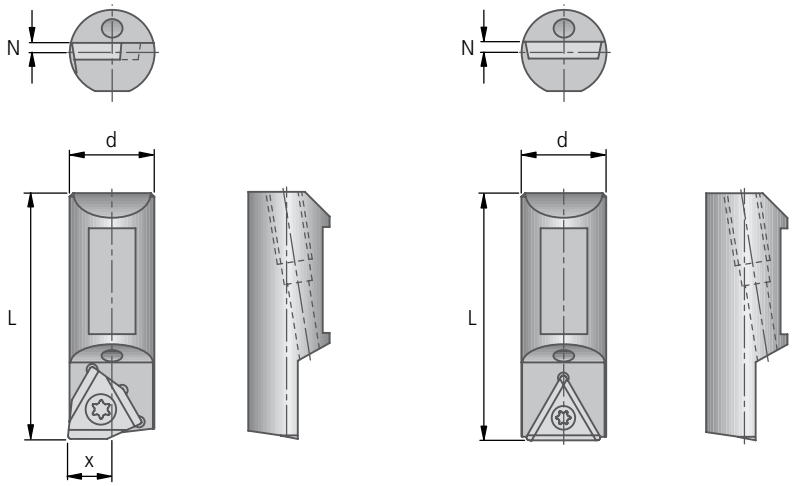
For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

Boring tool $\varkappa$ = 0°

L.H. boring tool as shown with right or neutral insert ■
R.H. boring tool in mirror image with left or neutral insert ■
mounting instruction see page 362 ■

Material
P M K N S H



UZV $\varkappa$ = 0° | W30 / W57							Insert		
Article	Order No.	d	L	N	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽50 = 20°	W57 neutral
UZV8-803-25-0°	D20 05700	8	25	1,0	0,007	N00 56031 S/M2×4,9-6IP 0,62 Nm	W30 04..0.03..	W30 04..0.03..	W57 04140.04..
UZV10-804-30-0°	D20 05720	10	30	1,5	0,013	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..	W30 14..0.04..	W57 14140.04..
UZV12-804-35-0°	D20 05740	12	35	1,5	0,022	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..	W30 14..0.04..	W57 14140.04..
UZV16-805-45-0°	D20 05760	16	45	3,0	0,052	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26..0.05..	W30 26..0.05..	W57 26140.04..
UZV20-806-50-0°	D20 05800	20	50	4,0	0,98	N00 56411 S/M5×13,4-20IP 6,25 Nm	W30 44..0.08..	W30 44..0.08..	

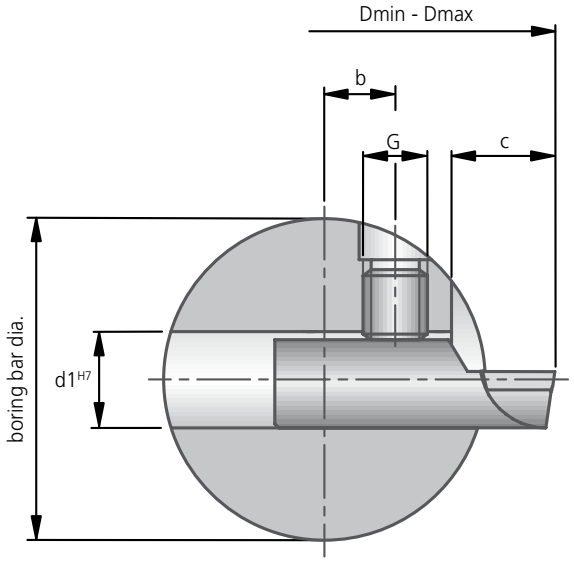
UZV $\varkappa$ = 0° | W01 / W29								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZV10-818-30-0°-L31	D20 50720	10	30	1,5	5,3	0,013	N00 57553 S/M2,2×5,5-6IP 1,01 Nm		W01 18....	W29 18000.. W29 18010..
UZV16-802-45-0°-L38	D20 50790	16	45	3,0	8,3	0,052	N00 57511 S/M2,5×7,2-8IP 1,28 Nm		W01 24....	W29 24000.. W29 24010..
UZV16-801-45-0°-L38	D20 00791	16	45	3,0	8,3	0,052	N00 57521 S/M3,5×7,3-10IP 2,8 Nm		W01 34....	W29 34000..
UZV16-801-45-0°-R38	D20 05791							W01 34....		W29 34010..

For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UZ Boring tool

Mounting instructions



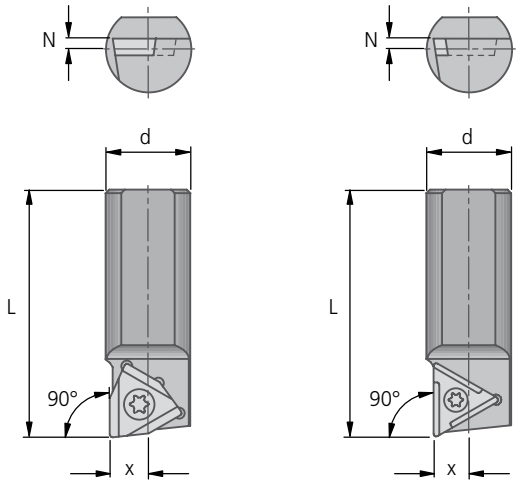
Mounting dimensions

Boring tool **size**	Drilling range Radial mounting D_{min} – D_{max}	for boring bar dia.	d1	b	G	c
UZ8	27 – 40	20	8	1,5	M6	9
UZ10	35 – 52	25	10	2,0	M6	12
UZ12	40 – 63	32	12	2,5	M8	13
UZ16	52 – 80	40	16	3,0	M10	18
UZ20	64 – 100	50	20	5,0	M12	20
UZ25	79 – 126	63	25	4,0	M16	23

Boring tool $\varkappa = 90°$

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 370 ■

Material
P M K N S H



UZ $\varkappa = 90°$ | W30 / W57								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral W57..14 W57..18 iper
UZ 8-803-45-90°-R	D20 15010	8	45	1,0	3	0,015	N00 56031 S/M2×4,9-6IP 0,62 Nm		W30 04..0.03..	W57 04140.04.. W57 04180.04..
UZ10-804-50-90°-L	D20 10030	10	50	1,5	4	0,026	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04.. W57 14180.04..
UZ10-804-50-90°-R	D20 15030								W30 14..0.04..	
UZ12-804-60-90°-L	D20 10050	12	60	1,5	5	0,045	N00 56111 S/M2,6×6,2-8IP 1,28 Nm	W30 14..0.04..		W57 14140.04.. W57 14180.04..
UZ12-804-60-90°-R	D20 15050								W30 14..0.04..	

UZ $\varkappa = 90°$ | W01 / W29								Insert		
Article cutting form ▼	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZ12-802-60-90°-L38	D20 10071	12	60	1,5	5	0,047	N00 57511 S/M2,5×7,2-8IP 1,28 Nm	W01 24....		W29 24000.. W29 24010..
UZ16-801-80-90°-L38	D20 10091	16	80	3,0	6	0,11	N00 57521 S/M3,5×7,3-10IP 2,8 Nm	W01 34....		W29 34000.. W29 34010..
UZ16-801-80-90°-R38	D20 15091								W01 34....	
UZ20-810-100-90°-L48	D20 10111	20	100	4,0	8	0,217	N00 57531 S/M4,5×9-15IP 6,25 Nm	W01 42....		W29 42000.. W29 42010..
UZ20-810-100-90°-R48	D20 15111								W01 42....	
UZ25-820-120-90°-L53	D20 10131	25	120	4,0	10	0,404	N00 57531 S/M4,5×9-15IP 6,25 Nm	W01 50....		W29 50000.. W29 50010..
UZ25-820-120-90°-R53	D20 15131								W01 50....	

For further details on inserts see chapter 7

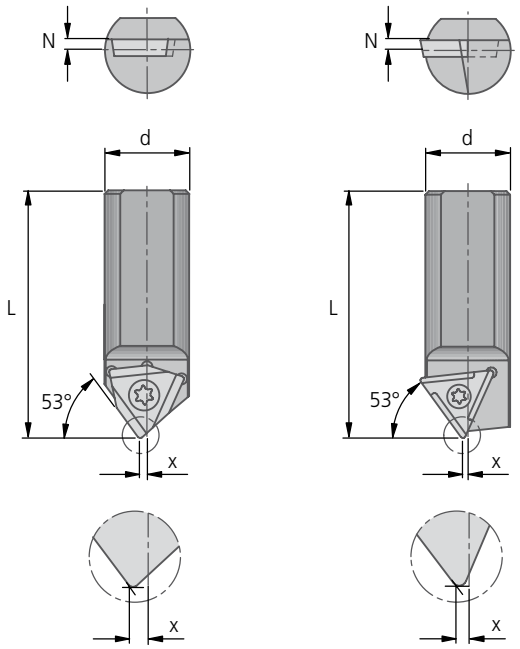
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UZ

Boring tool $\varkappa$ = 53°

Material
P M K N S H

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 370



UZ $\varkappa$ = 53° | W30 / W57								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZ10-804-50-53°-L	**D20 10630**	10	50	1,5	0,5	0,026	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**		**W57 14140.04..**
UZ12-804-60-53°-L	**D20 10650**	12	60	1,5	0,5	0,044	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**		**W57 14140.04..**

UZ $\varkappa$ = 53° | W01 / W29								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZ12-802-60-53°-R38	**D20 15671**	12	60	1,5	0,5	0,047	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24....**	**W29 24000..** **W29 24010..**
UZ16-801-80-53°-L38	**D20 10691**	16	80	3,0	0,6	0,108	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34....**		**W29 34000..** **W29 34010..**
UZ20-810-100-53°-L48	**D20 10711**	20	100	4,0	0,6	0,212	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42....**		**W29 42000..** **W29 42010..**
UZ25-820-120-53°-L53	**D20 10731**	25	120	4,0	0,6	0,395	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50....**		**W29 50000..** **W29 50010..**

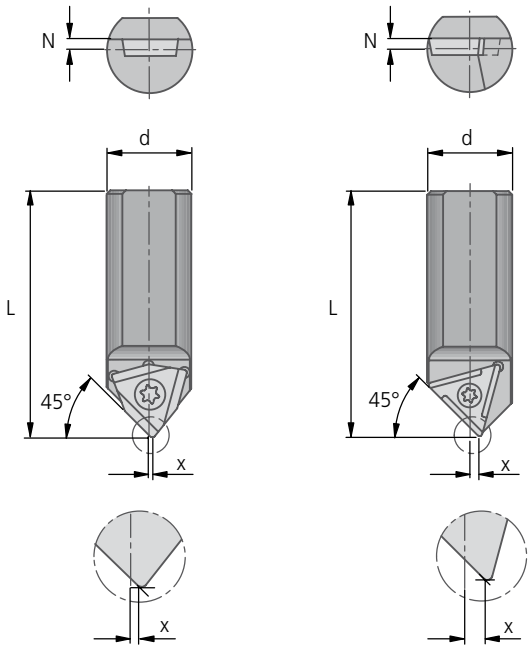
For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

Boring tool $\varkappa$ = 45°

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 370 ■

Material
P M K N S H



UZ $\varkappa$ = 45° | W30 / W57								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57 neutral
UZ 8-803-45-45°-L	**D20 10810**	8	45	1,0	1,0	0,015	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W30 04..0.03..**		**W57 04140.04..**
UZ 8-803-45-45°-R	**D20 15810**								**W30 04..0.03..**	
UZ10-804-50-45°-L	**D20 10830**	10	50	1,5	1,3	0,026	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**		**W57 14140.04..**
UZ10-804-50-45°-R	**D20 15830**								**W30 14..0.04..**	
UZ12-804-60-45°-L	**D20 10850**	12	60	1,5	1,0	0,044	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**		**W57 14140.04..**

UZ $\varkappa$ = 45° | W01 / W29								Insert		
Article cutting form ▾	Order No.	d	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W29 neutral
UZ16-801-80-45°-L38	**D20 10891**	16	80	3,0	1,5	0,107	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34....**		**W29 34000..** **W29 34010..**
UZ16-801-80-45°-R38	**D20 15891**								**W01 34....**	

For further details on inserts see chapter 7

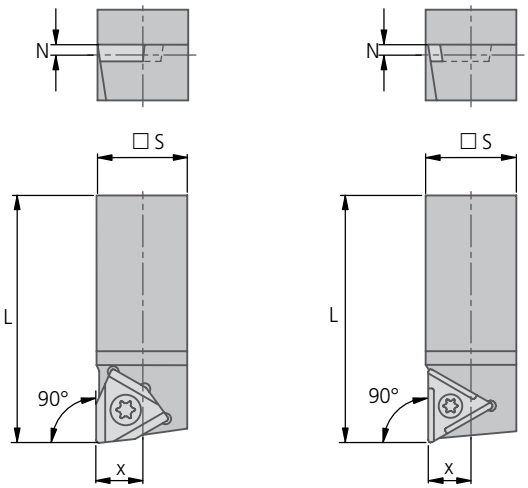
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric UV

Boring tool $\varkappa = 90°$

Material: P M K N S H

■ L.H. boring tool as shown with left or neutral insert



UV $\varkappa = 90°$ | W30 / W57									Insert	
Article cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral W57..14 W57..18 Wiper
UV10-804-50-90°-L	**D20 20040**	32	10	50	1,5	4,8	0,03	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**	**W57 14140.04.. W57 14180.04..**
UV12-804-60-90°-L	**D20 20060**	40	12	60	1,5	5,8	0,04	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**	**W57 14140.04.. W57 14180.04..**

UV $\varkappa = 90°$ | W01 / W29									Insert	
Article cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W29 neutral
UV16-801-80-90°-L38	**D20 20081**	50	16	80	3	7,8	0,01	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34....**	**W29 34000.. W29 34010..**
UV20-810-100-90°-L48	**D20 20101**	63	20	100	4	9,8	0,03	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42....**	**W29 42000.. W29 42010..**

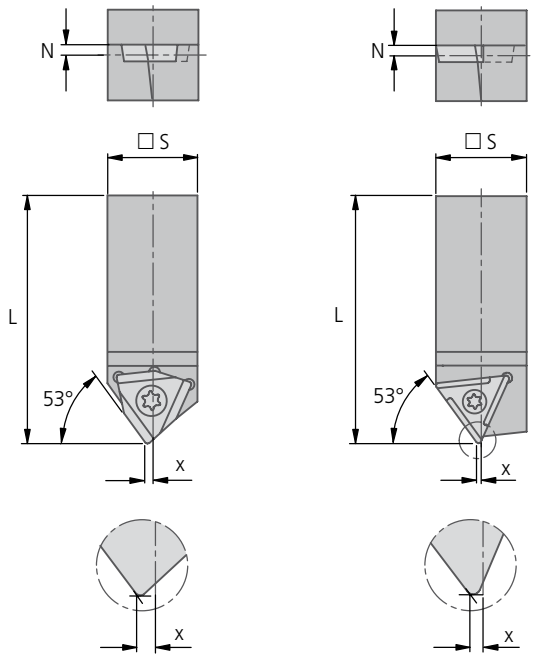
For further details on inserts see chapter 7

Supply includes:
Boring tool with clamping screw. Please order insert separately.

Boring tool $\varkappa$ = 53°

L.H. boring tool as shown with left or neutral insert ■

Material
P M K N S H



UV $\varkappa$ = 53° | W30 / W57									Insert	
Article cutting form ▼	Order No.	for boring bar dia.	☐S	L	N	x	kg	Clamping screw Order No. Article	W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral
UV 8-803-40-53°-L	**D20 20220**	25	8	40	1,5	0,4	0,02	**N00 56031** S/M2×4,9-6IP 0,62 Nm	**W30 04..0.03..**	**W57 04140.04..**
UV10-804-50-53°-L	**D20 20240**	32	10	50	1,5	0,5	0,03	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**	**W57 14140.04..**
UV12-804-60-53°-L	**D20 20260**	40	12	60	1,5	0,5	0,06	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**W30 14..0.04..**	**W57 14140.04..**

UV $\varkappa$ = 53° | W01 / W29									Insert	
Article cutting form ▼	Order No.	for boring bar dia.	☐S	L	N	x	kg	Clamping screw Order No. Article	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W29 neutral
UV16-801-80-53°-L38	**D20 20281**	50	16	80	3	0,6	0,01	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34....**	**W29 34000..** **W29 34010..**
UV20-810-100-53°-L48	**D20 20301**	63	20	100	4	0,6	0,03	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42....**	**W29 42000..** **W29 42010..**
UV25-820-120-53°-L53	**D20 20321**	80	25	120	4	0,6	0,05	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50....**	**W29 50000..** **W29 50010..**

For further details on inserts see chapter 7

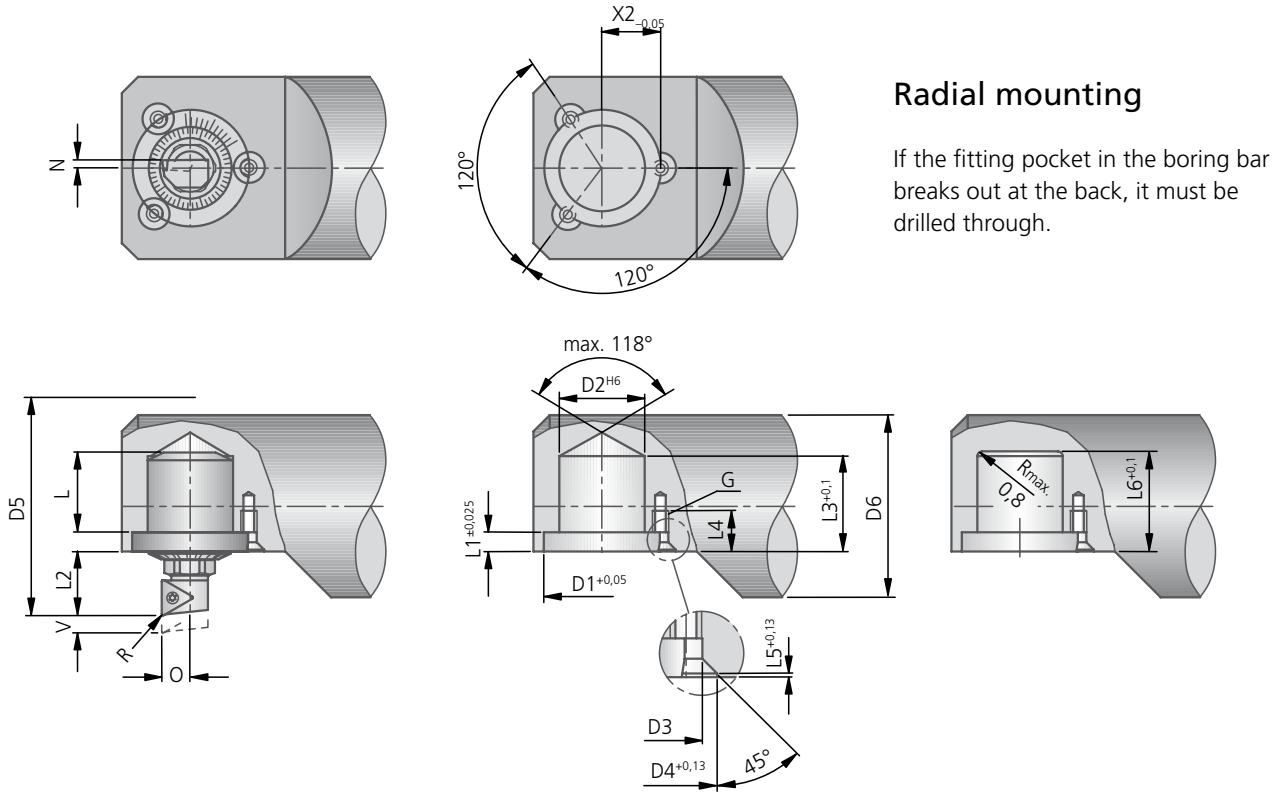
Supply includes:
Boring tool with clamping screw. Please order insert separately.

KOMET Kometric

Micro-adjustable cartridge up to Ø 27,6 mm

Material
P M K N S H

- the smallest adjustment increment is 0.002 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- significant saving in setting times



Radial mounting

If the fitting pocket in the boring bar breaks out at the back, it must be drilled through.

Micro-adjustable cartridge					Insert			Accessories
min. turning Ø D5	Order No.	kg	Clamping screw Order No. Article	Location screw 3× DIN7991 Order No. Article	W30 L.H.	W30 neutral	W57 neutral W57..14 W57..18 Wiper	Wrench Order No. Article
27,6	**M31 00022**	0,021	**N00 56041** S/M2×4,3-6IP 0,62 Nm	M3×6 sim. DIN7991	**W30 04060.04..**	**W30 04660.03..**	**W57 04140.04..** **W57 04180.04..**	**18589 10010** SW10
49,5	**M31 00032**	0,081	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55021 04010** M4×10	**W30 14060.04..**	**W30 14660.04..**	**W57 14140.04..** **W57 14180.04..**	**18589 10014** SW14
70	**M31 00042**	0,249	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55021 05012** M5×12	**W30 26060.05..**	**W30 26660.05..**	**W57 26140.04..** **W57 26180.04..**	SW22

Supply includes:
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

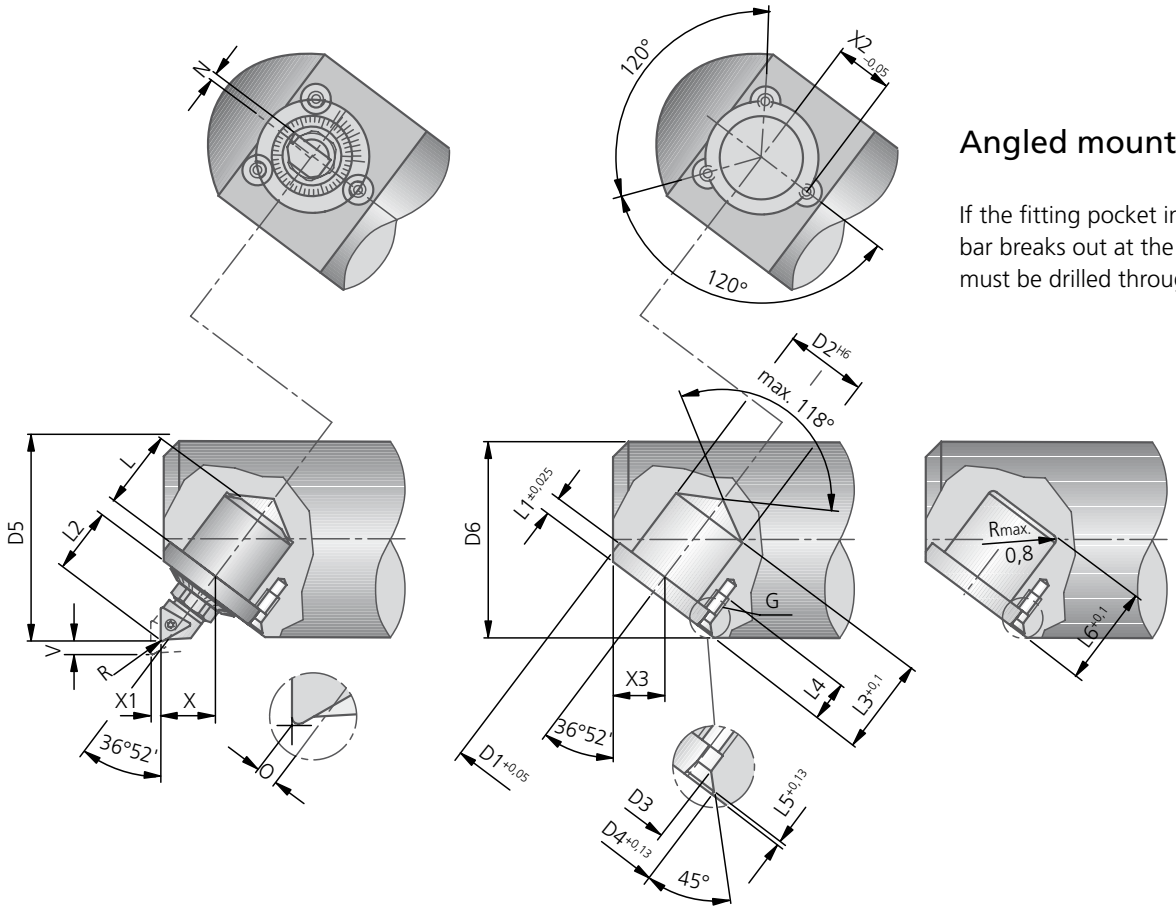
Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3	L4	L5	L6	G	N	R	V	O	X2
M31 00022	19	16	3,2	4,6	26	8,7	2,8	10	11,5	9	1,6	12,5	M3	1,5	0,4	1,0	5,1	9,65
M31 00032	30	22	4,3	8	46	21,2	5	16,9	25	10	0,9	27,2	M4	2	0,4	3,4	7,2	15,4
M31 00042	46	32	5,5	10	67	27,72	6,3	25,5	33	12	0,8	35	M5	2	0,5	5,22	10,3	23,0

Micro-adjustable cartridge up to Ø 25,4 mm

- the smallest adjustment increment is 0.0016 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- significant saving in setting times

Material: P M K N S H



Angled mounting

If the fitting pocket in the boring bar breaks out at the back, it must be drilled through.

Micro-adjustable cartridge					Insert			Accessories
min. turning Ø D5	Order No.	kg	Clamping screw Order No. Article	Location screw 3× DIN7991 Order No. Article	W30 L.H.	W30 neutral	W57 neutral	Wrench Order No. Article
25,4	**M31 01022**	0,021	**N00 56041** S/M2×4,3-6IP 0,62 Nm	M3×6 sim. DIN7991	**W30 04060.04..**	**W30 04660.03..**	**W57 04140.04..**	**18589 10010** SW10
43	**M31 01032**	0,082	**N00 56111** S/M2,6×6,2-8IP 1,28 Nm	**55021 04010** M4×10	**W30 14060.04..**	**W30 14660.04..**	**W57 14140.04..**	**18589 00012** SW12
61	**M31 01042**	0,25	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55021 05012** M5×12	**W30 26060.05..**	**W30 26660.05..**	**W57 26140.04..**	**18589 00017** SW17

Supply includes:
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

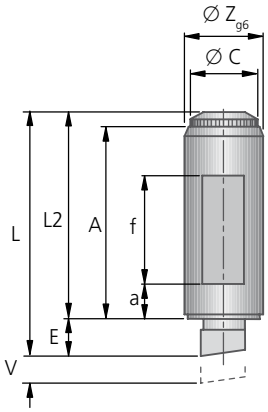
Mounting dimension

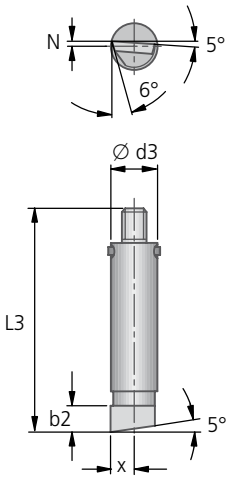
for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3	L4	L5	L6	G	N	ISO dimension for R	V	O	X	X1	X2	X3
M31 01022	19	16	3,2	4,6	24,5	9,1	2,8	11	11,9	9	1,6	12,9	M3	1,5	0,4	1,1	0,33	8,54	0,81	9,65	8,18
M31 01032	30	22	4,3	8	40	21,6	5	18,4	25	10	0,9	27,6	M4	2	0,4	3,1	1,3	15,08	2,0	15,4	14,0
M31 01042	46	32	5,5	10	55	27,6	6,3	27,2	33	12	0,8	34,9	M5	2	0,5	4,6	1,4	21,22	3,2	23	19,8

KOMET Kometric FZ

Micro-adjustable cartridge up to Ø 25 mm

Material
P M K N S H





Drilling range[1]			Housing		Soldering			Accessories
					cutting form 1	cutting form 2		Wrench
D_{min} ①	D_{max} ②	D_{max} ③	Article	Order No.	Order No. Article	Order No. Article	kg	Order No. Article
25	33	36	FZ8-25-1	M30 00011	M30 50111.21 8Z1-K10	M30 51111.21 8Z2-K10	0,007 0,008	L05 01010 R0/N0

Drilling range[1]					Cutter Ø			Ø							Ø			Ø				
D_{min} ①	D_{max} ②	D_{max} ③	d1	n[2]	D1[2]	b	d2	Z^{H7}_{g6}	L1	L2	E	V	A	C	a	f	d3	L3	x	N	b2
25	33	36	20	3,5	8	1,5	M6	8	23,7	21	2,7	4	19,2	6,9	5	10	4,7	19,2	1,9	0,9	2,5

Delivery note: Please order housing, soldering and wrench separately.

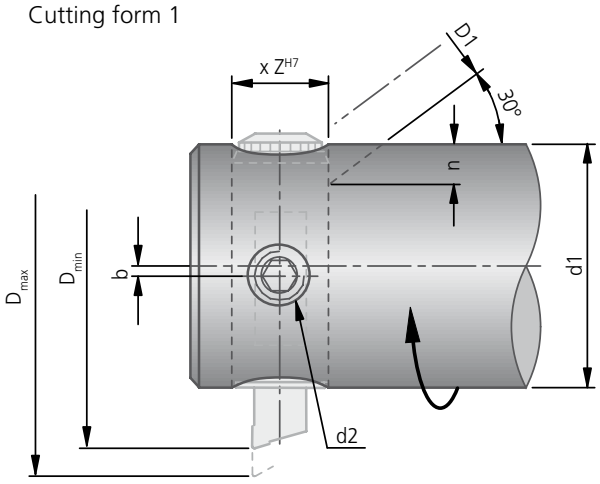
[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

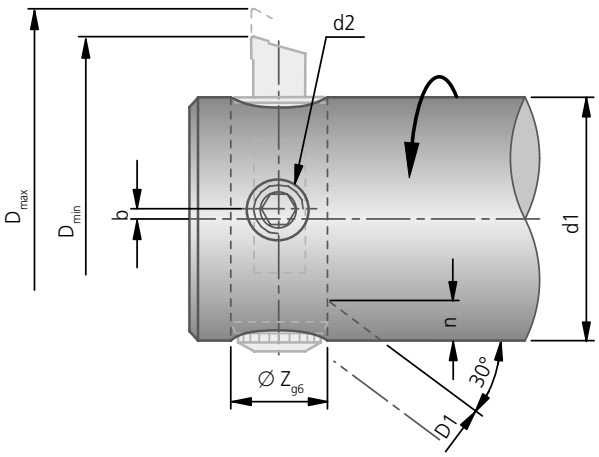
Radial mounting 90° (cutting form 1 and 2)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 2 µm Ø above vernier

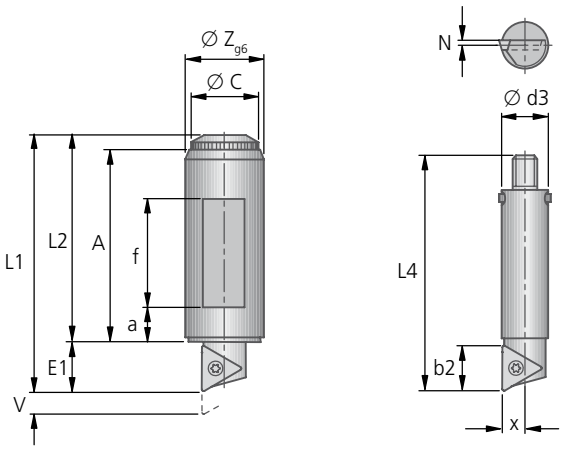
Cutting form 1



Cutting form 2



Micro-adjustable cartridge up to Ø 33 mm



Material: P M K N S H

Drilling range[1]			Housing		Turning tool				Insert			Accessories
					cutting form 1	cutting form 2		Clamping screw	W30 L.H.	W30 R.H.	W57 neutral	Wrench
D_{min} ①	D_{max} ②	D_{max} ③	Article	Order No.	Order No. Article	Order No. Article	kg	Order No. Article	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°	W57..14 / W57..18 iper	Order No. Article
33	41	48	FZ10-31-1	M30 00031	M30 50021 U10Z1-803	M30 51021 U10Z2-803	0,014	N00 56021 S/M2×3,8-6IP 0,62 Nm	W30 04 .. 0.03..	W30 04 .. 0.03..	W57 04140.04.. W57 04180.04..	L05 01020 R2/N1
37	45	52	FZ10-35-1	M30 00041			0,016					
41	51	58	FZ12-40-1	M30 00051	M30 50031 U12Z1-803	M30 51031 U12Z2-803	0,025	N00 56031 S/M2×4,9-6IP 0,62 Nm				L05 01030 R2a/N2
46	56	63	FZ12-45-1	M30 00061			0,030					
53	65	73	FZ16-50-1	M30 00071	M30 50041 U16Z1-804	M30 51041 U16Z2-804	0,058	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W30 14 .. 0.04..	W30 14 .. 0.04..	W57 14140.04.. W57 14180.04..	L05 01040 N3
59	71	79	FZ16-56-1	M30 00081			0,067					
63	78	88	FZ20-64-1	M30 00091	M30 50051 U20Z1-804	M30 51051 U20Z2-804	0,112	N00 56111 S/M2,6×6,2-8IP 1,28 Nm				L05 01050 R4/N4
72	87	100	FZ20-72-1	M30 00101			0,13					
80	100	115	FZ25-80-1	M30 00111	M30 50061 U25Z1-805	M30 51061 U25Z2-805	0,221	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26 .. 0.05..	W30 26 .. 0.05..	W57 26140.04.. W57 26180.04..	L05 01060 ZV25
90	110	126	FZ25-90-1	M30 00121			0,259					
104	134	154	FZ32-100-1	M30 00131	M30 50071 U32Z1-805	M30 51071 U32Z2-805	0,482					L05 01070 R5/N5
145	175	205	FZ32-140-1	M30 00161			0,728					

Supply includes: Turning tool with clamping screw.
Please order housing, inserts (for further details see chapter 7) and wrench separately.

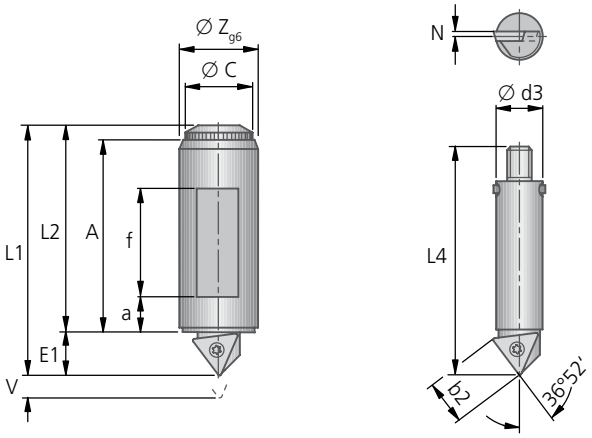
Drilling range[1]																				
D_{min} ①	D_{max} ②	D_{max} ③	d1	$n^{2)}$	Cutter Ø $D1^{2)}$	b	d2	Ø Z^{H7}_{g6}	L1	L2	E1	V	A	Ø C	a	f	Ø d3	L4	x	N	b2
33	41	48	25	4,5	8	2	M6	10	31,5	25,5	6	4	23,3	8,9	6	12	5,7	24,8	2,3	1,2	6,5
37	45	52							35,5	29,5			27,3			16					
41	51	58	32	5	10	2,5	M8	12	39,5	33,5	6	5	31	10,9	8	16	6,7	30,5	2,9	1,2	6,5
46	56	63							44,5	38,5			36			21					
53	65	73	40	8	12	3	M10	16	51	42	9	6	39	13,9	10	20	8,6	39,7	3,8	1,2	9
59	71	79							57	48			45			26					
63	78	88	50	9	16	5	M12	20	60	51	9	7,5	47	17,9	12	24	11,5	48,2	4,7	1,7	9
72	87	100							68	59			55			32					
80	100	115	63	10	20	4	M16	25	77,5	64,5	13	10	59,5	21,9	15	30	14	60,3	6	2	13,5
90	110	126							87,5	74,5			69,5			40					
104	134	154	80	13	25	6	M20	32	97	84	13	15	78	28,9	20	40	18	78,5	7,6	2,7	13,5
145	175	205	100	13	25	12	M20	32	137	124	13	15	118	28,9	25	65	18	78,5	7,6	2,7	13,5

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder
[2] when using rough adjustment, the distance „n“ must be used on the boring bar

KOMET Kometric FZ

Micro-adjustable cartridge up to Ø 28 mm

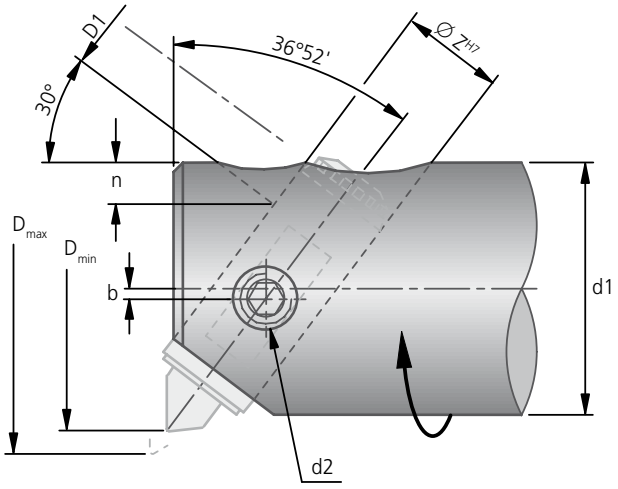
Material
P M K N S H



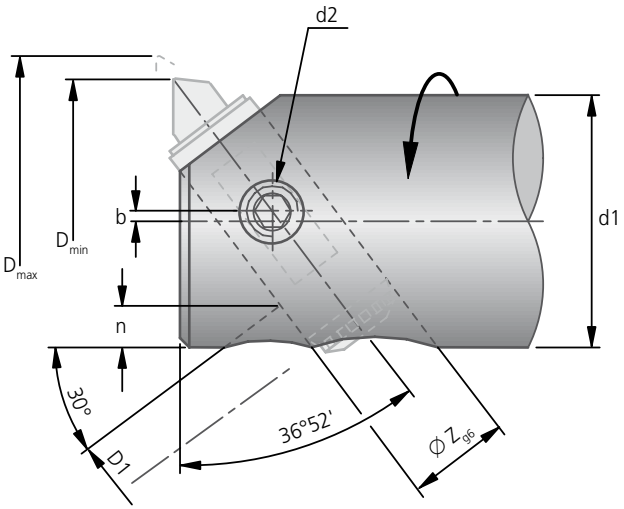
Angled mounting 36°52' (cutting form 3 and 4)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 1.6 µm Ø above vernier

Cutting form 3



Cutting form 4



Drilling range[1]			Housing		Turning tool						Insert			Accessories
					cutting form 3 	cutting form 4 		Clamping screw 	W30 L.H. 	W30 R.H. 	W57 neutral 			Wrench 
D_{min} ①	D_{max} ②	D_{max} ③	Article	Order No.	Order No. Article	Order No. Article		Order No. Article	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°				Order No. Article
28	34,4	38	FZ10-28-3	M30 02031	M30 52021 U10Z3-803	M30 53021 U10Z4-803	0,013	N00 56021 S/M2×3,8-6IP 0,62 Nm	W30 04 .. 0.03..	W30 04 .. 0.03..	W57 04140.04..			L05 01020 R2/N1
32	38,4	44	FZ10-32-3	M30 02041			0,015							
36	44	48	FZ12-36-3	M30 02051	M30 52031 U12Z3-803	M30 53031 U12Z4-803	0,026	N00 56031 S/M2×4,9-6IP 0,62 Nm						L05 01030 R2a/N2
40	48	55	FZ12-40-3	M30 02061			0,029							
45	54,6	60	FZ16-45-3	M30 02071	M30 52041 U16Z3-804	M30 53041 U16Z4-804	0,058	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W30 14 .. 0.04..	W30 14 .. 0.04..	W57 14140.04..			L05 01040 N3
50	59,6	68	FZ16-50-3	M30 02081			0,067							
56	68	78	FZ20-56-3	M30 02091	M30 52051 U20Z3-804	M30 53051 U20Z4-804	0,112	N00 56111 S/M2,6×6,2-8IP 1,28 Nm						L05 01050 R4/N4
64	76	90	FZ20-64-3	M30 02101			0,132							
72	88	100	FZ25-72-3	M30 02111	M30 52061 U25Z3-805	M30 53061 U25Z4-805	0,224	N00 56211 S/M3,5x7,3-10IP 2,8 Nm	W30 26 .. 0.05..	W30 26 .. 0.05..	W57 26140.04..			L05 01060 ZV25
80	96	114	FZ25-80-3	M30 02121			0,263							
90	114	126	FZ32-90-3	M30 02131	M30 52071 U32Z3-805	–	0,487							L05 01070 R5/N5
100	124	140	FZ32-100-3	M30 02141			0,548							
110	134	150	FZ32-110-3	M30 02151			0,639							
125	149	175	FZ32-125-3	M30 02161			0,732							

Supply includes: Turning tool with clamping screw.
Please order housing, inserts (for further details see chapter 7) and wrench separately.

Drilling range[1]			d1	n[2]	Cutter Ø D1[2]	b	d2	Ø Z^{H7}_{g6}	L1	L2	E1	V	A	Ø C	a	f	Ø d3	L4	N	b2
D_{min} ①	D_{max} ②	D_{max} ③																		
28	34,4	38	25	3,5	8	2	M6	10	31,5	25,5	6	4	23,3	8,9	6	12	5,7	24,8	1,2	6,5
32	38,4	44							35,5	29,5			27,3			16				
36	44	48	32	4	10	2,5	M8	12	40,3	33,5	6,8	5	31	10,9	8	16	6,7	31,3	1,2	6,5
40	48	55							45,3	38,5			36			21				
45	54,6	60	40	6,5	12	3	M10	16	51	42	9	6	39	13,9	10	20	8,6	39,7	1,2	9
50	59,6	68							57	48			45			26				
56	68	78	50	7	16	5	M12	20	63	51	12	7,5	47	17,9	12	24	11,5	51,2	1,7	9
64	76	90							71	59			55			32				
72	88	100	63	8	20	4	M16	25	81	64,5	16,5	10	59,5	21,9	15	30	14	63,8	2	13,5
80	96	114							91	74,5			69,5			40				
90	114	126	80	10	25	6	M20	32	102	84	18	15	78	28,9	20	40	18	83,5	2,7	13,5
100	124	140							112	94			88			50				
110	134	150	100	10	25	12	M20	32	127	109	18	15	103	28,9	25	50	18	83,5	2,7	13,5
125	149	175							142	124			118			65				

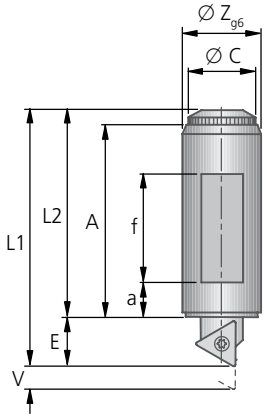
[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder
[2] when using rough adjustment, the distance „n“ must be used on the boring bar

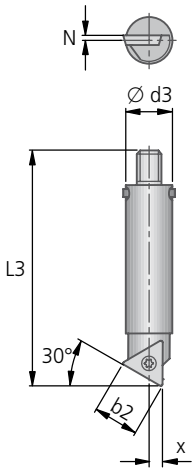
KOMET Kometric FZ

Micro-adjustable cartridge Ø 20 – 44 mm

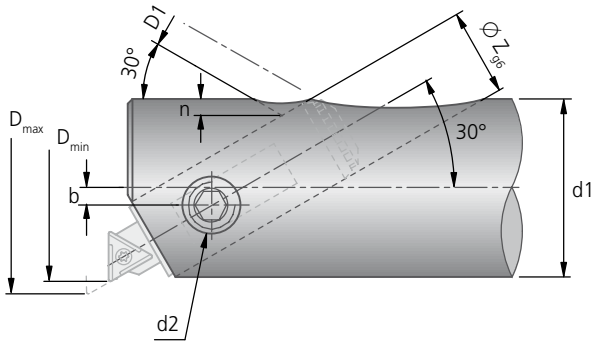
Material
P M K N S H

- Adjustment accuracy 1 µm ∅ above vernier
- For machining particularly small bores, the FZ fine boring cartridges can also be used for radial mounting on the boring bar are a 30° angle. Adjustment is then →||← 0.005 mm per graduation in the radial direction.





Angled mounting 30° (cutting form 5)



	Housing	Turning tool			Insert		Accessories
Drilling range[1]		cutting form 5		Clamping screw	W30 L.H.	W57 neutral	Wrench
D_{min} ① / D_{max} ② / D_{max} ③	Order No. Article	Order No. Article	kg	Order No. Article	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°		Order No. Article
20 / 22 / 26	**M30 04011** FZ10-20-5	**M30 54011** U10Z5-803K	0,012	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W30 04 .. 0.03..**	**W57 04140.04..**	**L05 01020** R2/N1
26 / 30 / 33	**M30 00031** FZ10-31-1	**M30 54021** U10Z5-803	0,014	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W30 04 .. 0.03..**	**W57 04140.04..**	**L05 01020** R2/N1
30 / 35 / 40	**M30 00051** FZ12-40-1	**M30 54030** U12Z5-803	0,026	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W30 04 .. 0.03..**	**W57 04140.04..**	**L05 01030** R2a/N2
38 / 44 / 50	**M30 00071** FZ16-50-1	**M30 54040** U16Z5-804	0,059	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W30 14 .. 0.04..**	**W57 14140.04..**	**L05 01040** N3

Supply includes: Turning tool with clamping screw.
Please order housing, inserts (for further details see chapter 7) and wrench separately.

Drilling range[1]																				
D_{min} ①	D_{max} ②	D_{max} ③	d1	n[2]	Cutter Ø D1[2]	b	d2	Ø Z^{H7}_{g6}	L1	L2	E	V	A	Ø C	a	f	Ø d3	L3	x	N	b2
20	22	26	18	–	–	0,8	M5	10	28,5	23,7	4,8	2	21,5	8,9	5	10	5,7	22,0	2,1	1,2	6,5
26	30	33	20	4,5	8	1,2	M6	10	33,9	25,5	8,4	4	23,3	8,9	6	12	5,7	27,3	2,1	1,2	6,5
30	35	40	25	5	10	1,5	M8	12	43,0	33,5	9,5	5	31,0	10,9	8	16	6,7	34,0	2,8	1,2	6,5
38	44	50	32	8	12	2,0	M10	16	54,5	42,0	12,5	6	39,0	13,9	10	20	8,6	43,2	3,3	1,2	9

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

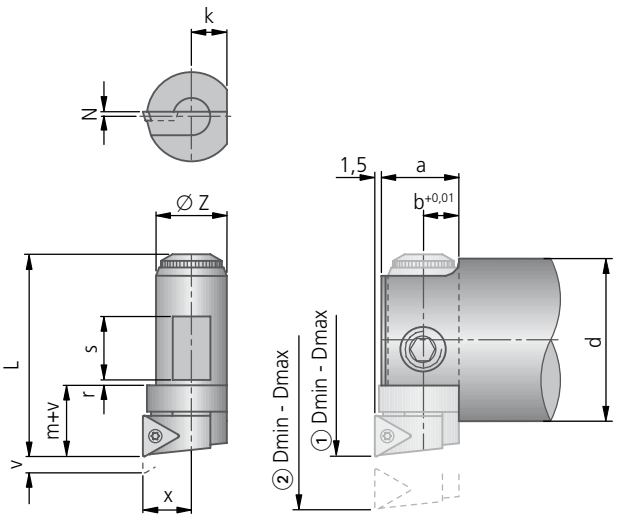
Micro-adjustable cartridge Ø 29,5 – 179 mm

Adjustment per graduation = 0.02 mm ∅ ■
Adjustment accuracy 2 µm ∅ above vernier ■

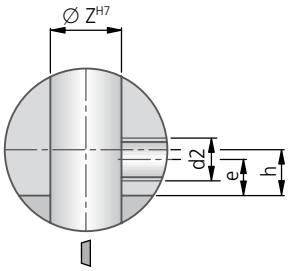
Material: P M K N S H

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The prodruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

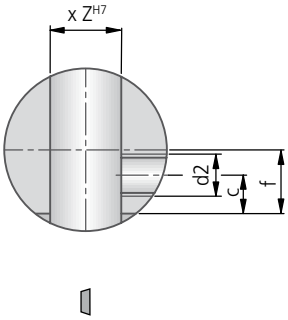
Setting: 1. Basic setting to be taken from drilling range ① and ②.
2. Machining diameter set by fine adjustment device.



Drilling range ①



Drilling range ②



Drilling range ① D_{min}–D_{max}	Drilling range ② D_{min}–D_{max}	Cartridges: Article	Order No.	kg	Clamping screw: Article	Order No.	Nm	Insert: W30 L.H. (radial rake: 06 = 6°, 12 = 12°, ▽▽ 20 = 20°)	Insert: W57 neutral (W57..14, W57..18 Wiper)
29,5 – 36	35,5 – 42	FF10-30	**M30 20011**	0,055	S/M2×3,8-6IP	**N00 56021**	0,62	**W30 04 .. 0.03..**	**W57 04140.04.. W57 04180.04..**
39 – 45	44 – 50	FF12-39	**M30 20021**	0,031					
47 – 57	56 – 66	FF16-47	**M30 20031**	0,062	S/M2,6×5,2-8IP	**N00 56101**	1,28	**W30 14 .. 0.04..**	**W57 14140.04.. W57 14180.04..**
58 – 71	70 – 83	FF20-58	**M30 20041**	0,123	S/M2,6×6,2-8IP	**N00 56111**	1,28		
79 – 94	93 – 108	FF25-79	**M30 20051**	0,268	S/M3,5×7,3-10IP	**N00 56211**	2,8	**W30 26 .. 0.05..**	**W57 26140.04.. W57 26180.04..**
100 – 121	120 – 141	FF32-100	**M30 20061**	0,548					
138 – 159	158 – 179	FF32-138	**M30 20071**	0,76					

Supply includes:
Micro-adjustable cartridge with clamping screw. Please order inserts (chapter 7) separately.

for cartridges	d	Ø Z	a	b	h	e	f	c	d2	L	x	N	k	v	m	r	s
M30 20011	25	10	11	5	3,7	3,9	6,7	3,9	M6	28,8	7,5	2,0	5	3,5	11	0,5	8
M30 20021	32	12	13,5	6	7	6	9,5	6	M8	37,75	9	1,2	6	3,5	12,5	1	11
M30 20031	40	16	17,5	8	7,5	7,5	12	8	M10	45,4	11	1,2	8	5	16	2	13
M30 20041	50	20	23	10	11	9	17	9	M12	56,35	14,5	1,7	10	7	18	2	14,5
M30 20051	63	25	27	12,5	17,9	12,4	24,9	15,4	M16	77,8	16	2,0	12,5	8	21,6	2	28
M30 20061	80	32	33,5	16	24,5	15	34,5	22	M20	97,4	19	2,7	16	11	25,5	2	35
M30 20071	115	32	33,5	16	43,5	20	53,5	20	M20	131,4	19	2,7	16	11	25,5	2	35

KOMET Kometric FZ Micro-adjustable cartridge

BENEFITS for you:

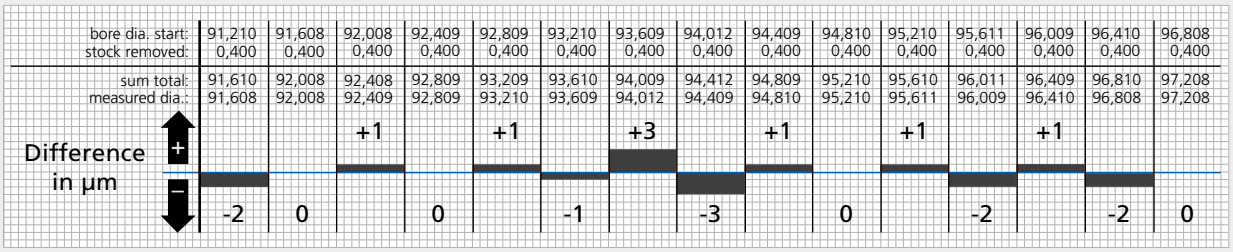
- Fast, accurate tool setting: simply using setting spindle
- Maximum accuracy: Tool is adjusted when clamped Anti-backlash design
- Large turning range: In addition to micro-adjustment, the whole cartridge can be moved
- Easy mounting: Only requirements: close tolerance bore or broached square hole and tapped hole for clamping
- Minimum weakening of boring bar: due to small dimensions of cartridges
- Suitable for standard boring bars
- Excellent for external turning: on automatics, turret lathes and special machines

Application example

A Material: Cast iron GG22

Boring bar: BZ 40×63×160 mm
Micro-adjustable cartridge:
Housing: **M30 02121** (FZ25-80-3)
Turning tool: **M30 52061** (U25Z3-805)
Insert: **W30 26600.0521** (TOHX 140305 EN K10)

Cutting speed: v ~ 80 m/min
Feed: f = 0.08 mm^{-1}
Cutting depth: a = 0.2 mm (≙ 0.4 mm in dia.)
Measuring tool: TESA internal precision measuring instrument

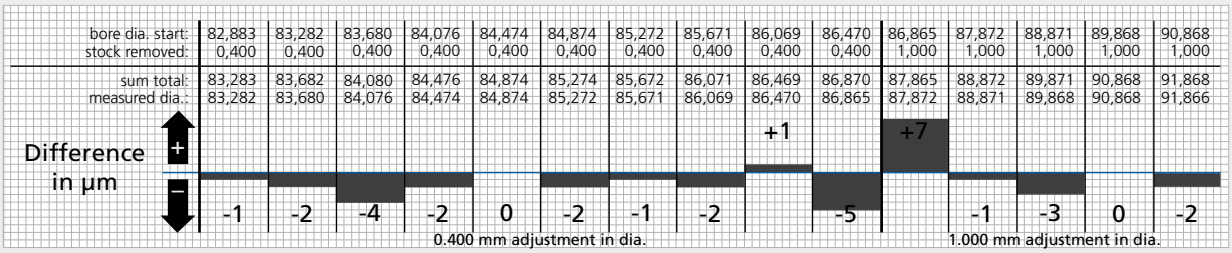


Result: Average deviation per pass 1.2 µm

B Material: Steel 1.7131 | 16MnCr5

Boring bar: BZ 40×63×160 mm
Micro-adjustable cartridge:
Housing: **M30 02121** (FZ25-80-3)
Turning tool: **M30 52061** (U25Z3-805)
Insert: **W30 26060.0521** (TOHX 140305 EL-G06 K10)

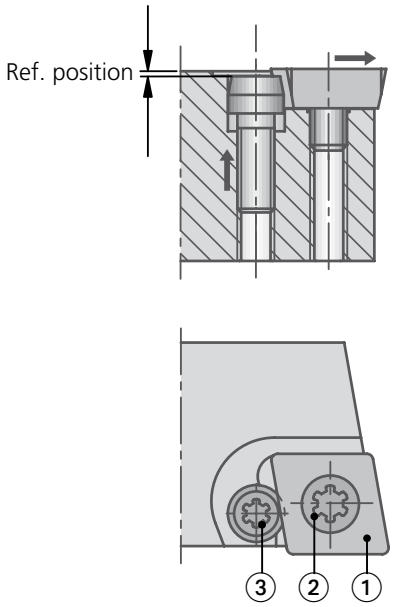
Cutting speed: v ~ 250 m/min
Feed: f = 0.1 mm^{-1}
Cutting depth: a = 0.2 mm (≙ 0.4 mm in dia.)
0.5 mm (≙ 1 mm in dia.) see diagram
Measuring tool: TESA internal precision measuring instrument



Result: Average deviation per pass 2.2 µm

Note: The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

Indexable insert adjustment with set screw



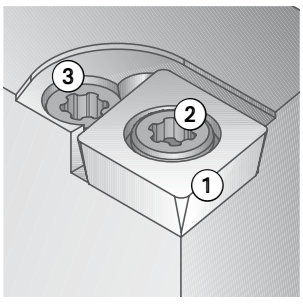
CC..		
Insert	Ref. position mm	Precision set screw ③ **Order No.**
CC..06	0,6	**N00 40010**
CC..09	1,2	**N00 40020**
CC..12	1,2	**N00 40030**

CP..		
Insert	Ref. position mm	Precision set screw ③ **Order No.**
CP..06	0,6	**N00 40040**
CP..08	0,6	**N00 40050**

SC..		
Insert	Ref. position mm	Precision set screw ③ **Order No.**
SC..09	1,2	**N00 40020**
SC..12	1,2	**N00 40030**

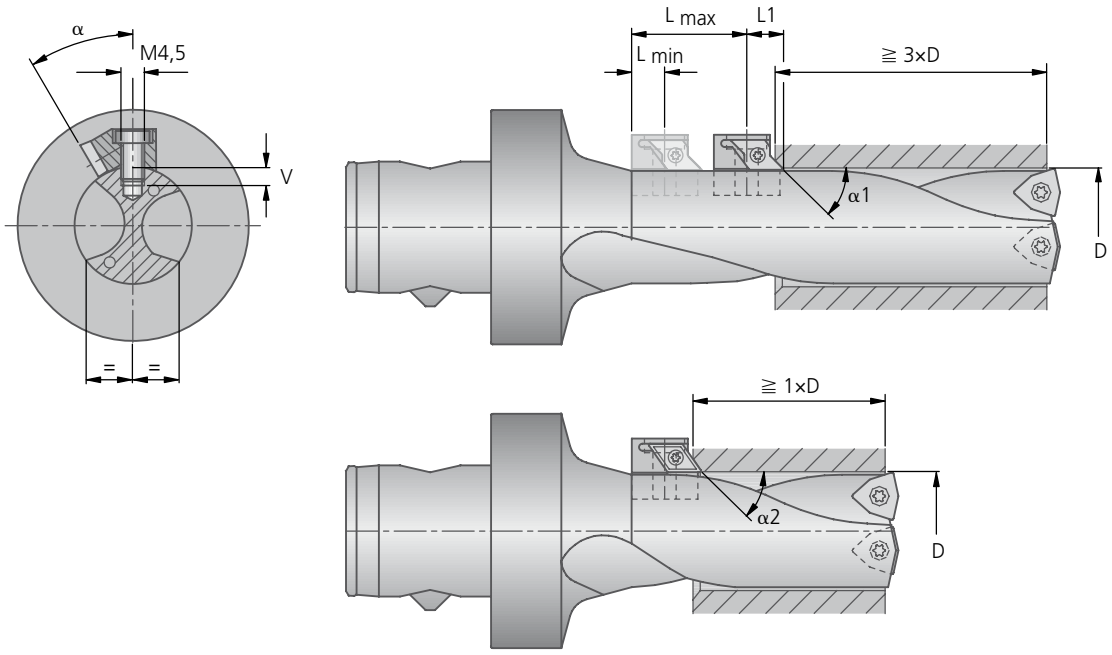
Fitting and adjusting an insert:

1. Before fitting, thoroughly clean the insert ① and the seating for the insert and secure the unit.
2. Grease clamping bolt ② and precision set screw ③ underneath the head and on the thread.
3. Insert precision set screw ③ and set it to its standard adjustment (ref. position).
4. Insert the insert ① and gently tighten the clamping bolt ②.
5. Set the precision set screw ③ to the required dimension.
6. Tighten the clamping bolt ②.



Addition of chamfering cartridge

Material
P M K N S



⚠ For production of thread M4,5 for location screw into the hardened body we recommend the use of carbide tools.

Chamfering cartridge									Insert	
Order No.	for ∅ range D	max. chamfer diameter	L min	L max	L1	α	Clamping screw Order No. Article	Location screw Order No. Article	W60 / W79	
D50 00800	20 – 24	D+5	7	30	10	26°	N00 57221 S2553-7IP 0,9 Nm	N10 11500 Tx M4,5×10,5	W60 18600.4021 W60 18420.0403 W79 18060.0403	α1=45° α2=55° α2=55°
D50 00810*	25 – 29		5	35	8	30°				

* on request

Supply includes:
Chamfering cartridge with assembly parts. Please order accessories and inserts separately.

Stepped tools are an important element for minimising production costs.
The D50 chamfering cartridge offers an economical solution to frequent solid drilling applications where chamfer machining is required.
The D50 chamfering cartridge can be fitted to any KUB insert drills, KUB Trigon, KUB Quatron, KUB Pentron and KUB Duon.

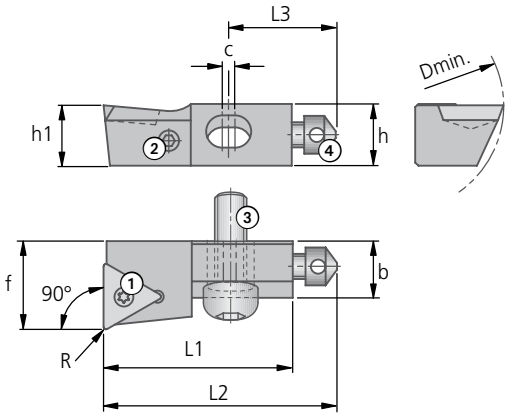


KOMET Kometric UKS

Short clamp holder $\varkappa = 90°$

Material
N

- **insert tilt of +5° over cutting edge**
- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 318-319



UKS $\varkappa = 90°$																
Article cutting form ▼	Order No.	D min	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,4	ISO dimension f for radius R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-T06-90 R	**D40 07000**	20	5,8	5,9	20	24,5	12	4,5	1	7	6,7	0,04	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**55054 02504** M2,5×4	**L02 30111** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-T09-90 R	**D40 07010**	25	7,6	7,8	25	32	17	6,5	2	10	9,7	0,03	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55054 03006** M3×6	**L02 30121*** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS8-T09-90 L	**D40 02010**															
UKS10-T11-90 R	**D40 07020**	33	9,6	9,8	30	37	17	9	2	14	13,7	0,04	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-T11-90 L	**D40 02020**															
UKS10-T13-90 R	**D40 07030**	33	9,6	9,8	30	37	17	9	2	14	13,7	0,02	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-T13-90 L	**D40 02030**															
UKS16-T16-90 L	**D40 02040**	56	15,6	15,8	42	50	25	12	2	18	17,7	0,10	**N00 56301** S/M4×8-10IP 4,3 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4

	Insert				Shim plate		
for short clamp holder	W32 L.H.	W32 R.H.	W32 neutral	W58 neutral	Shim plate 2,5 grinding allowance 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article
UKS6-T06-90 R	**W32 03150..**		**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..	UKS6-5-90R		**55023 00206** M2×6 DIN965
UKS8-T09-90 R	**W32 13150..**		**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965
UKS8-T09-90 L		**W32 13450..**			UKS8-7-75L		
UKS10-T11-90 R	**W32 18150..**		**W32 18.....** TPHB 1102..	**W58 18.....** TPGX 1102..	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965
UKS10-T11-90 L		**W32 18450..**			UKS10-5-90L	**L02 21220**	
UKS10-T13-90 R	**W32 23150..**		**W32 23.....** TPHB 1303..	**W58 23.....** TPGX 1303..	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965
UKS10-T13-90 L		**W32 23450..**			UKS10-5-90L	**L02 21220**	
UKS16-T16-90 L		**W32 32450..**	**W32 32.....** TPHB 1603..	**W58 32.....** TPGX 1603..	UKS16-5-90L		**55021 03008** M3×8 DIN7991

For further details on inserts see chapter 7.

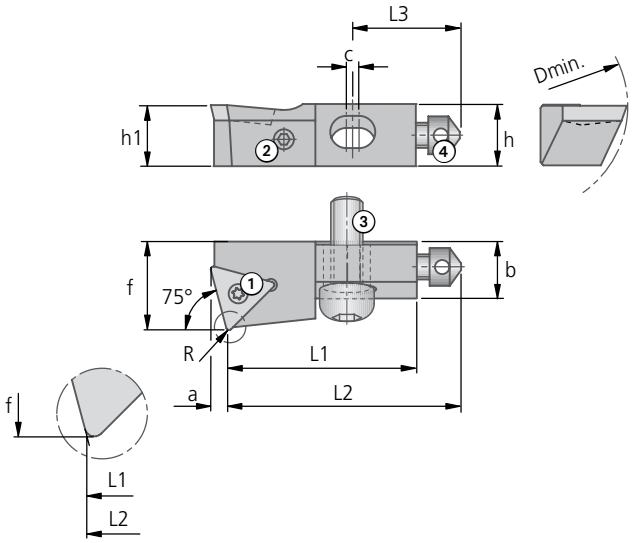
Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate* separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

KOMET Kometric UKS

Short clamp holder $\varkappa$ = 75°



Material
N

- **insert tilt of +5° over cutting edge**
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 318-319

UKS $\varkappa$ = 75°																	
Article cutting form ▼	Order No.	D min	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0,4	ISO dimension f for radius R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS6-T06-75 R	**D40 07200**	20	5,8	5,9	20	24,5	12	4,5	1	1,51	7	6,7	0,005	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**55054 02504** M2,5×4	**L02 30111** UKS6-3 1,9 Nm	**L02 30010** UKS6-4
UKS8-T09-75 R	**D40 07210**	25	7,6	7,8	25	32	17	6,5	2	2,23	10	9,7	0,015	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55054 03006** M3×6	**L02 30121*** UKS8-3 4,1 Nm	**L02 30020** UKS8-4
UKS10-T11-75 R	**D40 07220**	33	9,6	9,8	30	37	17	9	2	2,58	14	13,7	0,024	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS10-T13-75 R	**D40 07230**	33	9,6	9,8	30	37	17	9	2	3,29	14	13,7	0,045	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4
UKS16-T16-75 R	**D40 07240**	56	15,6	15,8	42	50	25	12	2	4	18	17,7	0,062	**N00 56301** S/M4×8-10IP 4,3 Nm	**55054 05012** M5×12	**L02 30140** UKS12-3 14 Nm	**L02 30030** UKS12-4
UKS20-T22-75 R	**D40 07250**	60	19,6	19,8	47	57	27	15	2	5,43	22	21,7	0,113	**N00 56411** S/M5×13,4-20IP 6,25 Nm	**55054 05012** M5×12	**L02 30160** UKS20-3 35 Nm	**L02 30030** UKS12-4

	Insert			Shim plate		
for short clamp holder	W32 L.H.	W32 neutral	W58 neutral	Shim plate (2,5 / grinding allowance 0,5) Article	Order No.	Countersunk screw for shim plate Order No. Article
UKS6-T06-75 R	**W32 03150..** TPHX 0601..	**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..	UKS6-5-75R		**55023 00206** M2×6 DIN965
UKS8-T09-75 R	**W32 13150..** TPHX 0902..	**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..	UKS8-5-75R	**L02 20310**	**55023 00206** M2×6 DIN965
UKS10-T11-75 R	**W32 18150..** TPHX 1102..	**W32 18.....** TPHB 1102..	**W58 18.....** TPGX 1102..	UKS10-5-75R		**55023 00206** M2×6 DIN965
UKS10-T13-75 R	**W32 23150..** TPHX 1303..	**W32 23.....** TPHB 1303..	**W58 23.....** TPGX 1303..	UKS10-5-75R		**55023 00206** M2×6 DIN965
UKS16-T16-75 R	**W32 32150..** TPHX 1603..	**W32 32.....** TPHB 1603..	**W58 32.....** TPGX 1603..	UKS16-5-75R		**55021 03008** M3×8 DIN7991
UKS20-T22-75 R	**W32 44150..** TPHX 2204..	**W32 44.....** TPHB 2204..		UKS20-5-75R		**55021 03008** M3×8 DIN7991

For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate* separately.

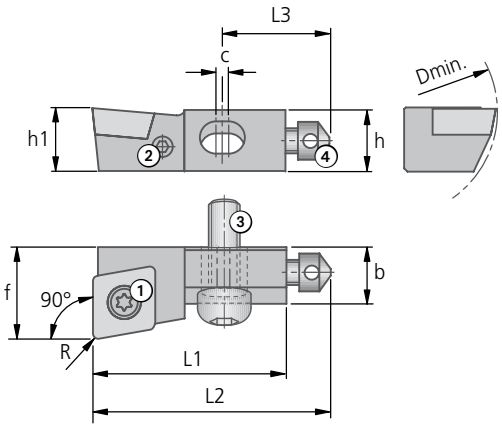
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

KOMET Kometric UKS

Short clamp holder $\varkappa = 90°$

Material
N

- **insert tilt of +5° over cutting edge**
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 318-319



UKS $\varkappa = 90°$																
Article cutting form ▾	Order No.	D min	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0,2	R0,4	R0,8	kg	Clamping screw ① Order No. Article	Adjusting screw DIN 916 ② Order No. Article	Location screw ③ Order No. Article	Stop screw ④ Order No. Article
UKS10-CP09T3-90R	**D40 06430**	33	9,6	9,8	30	37	17	9	2		14	13,92	0,018	**N00 57261** S3575-15IP 2,8 Nm	**55054 04008** M4×8	**L02 30130** UKS10-3 8,5 Nm	**L02 30020** UKS8-4

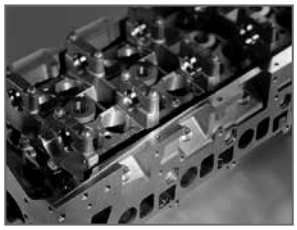
	Insert		Shim plate		
for short clamp holder	W85 L.H.	W85 neutral	Shim plate 2,5 grinding allowance 0,5 Article	Order No.	Countersunk screw for shim plate Order No. Article
UKS10-CP09T3-90R	**W85 32000..** CPG..09T3..L	**W85 32000..** CPGW 09T3..N	UKS10-5-90R	**L02 20220**	**55023 00206** M2×6 DIN965

For further details on inserts see chapter 7.

Supply includes: Short clamp holder with screws ①, ②, ③ and ④.

Please order insert and shim plate separately.

Application example:
cylinder head



The task

Cam shaft bores
- Machining aluminium
- Maximum tolerance requirements
- Allowance up to 1.5 mm
- Large scale production
- Solutions for machining centres and transfer lines

Customer use

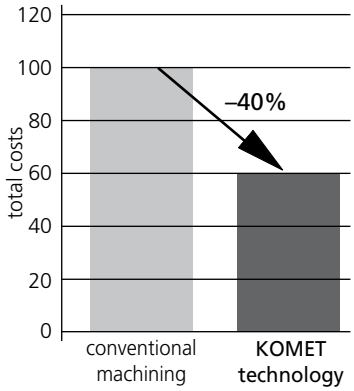
Complete result in just a few weeks
- 50% reduction of main time
- Increase in tool life to up to 80,000 parts per tool
- No setting
- Easy handling
- Approx. 40% reduction in production costs

Our solution

Ready-to-use solution from tool design to putting into operation
- Development of multiple insert PCD tools with up to eight cutting edges
- Pre-machining with multiple insert pilot PCD tool
- Finish machining with multiple insert PCD tool with carbide guide pad and internal coolant supply



Production costs: Cam shaft bores



The conventional filter will be replaced by a new generation of oil filters; these are already in use on new car models.This consists mainly of an aluminium housing fitted with the appropriate filter elements.

Cast aluminium filter housing:
Material: G - AlSi9Cu3

Machined with:
TOMILL thread milling tool GWF S80×3 with PCD inserts

Special solutions:
Special VABOS (variable boring and counterboring system) with PCD inserts for complete face machining on filter housing.



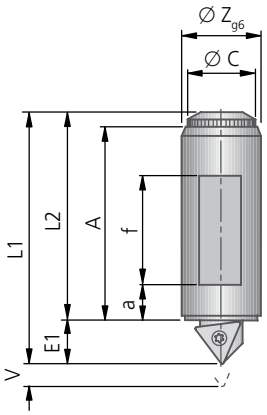


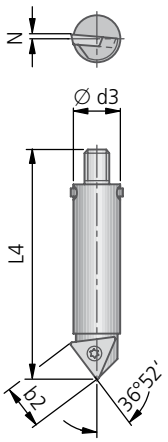
KOMET Kometric FZ

Micro-adjustable cartridges Ø 28 – 68 mm

Material
N

■ insert tilt of +5° over cutting edge





	Housing		Turning tool			Insert			Accessories
Drilling range[1]					Clamping screw	W32 L.H.	W32 neutral	W58 neutral	Wrench
D_{min} ① / D_{max} ② / D_{max} ③	Article	Order No.	Order No. Article	kg	Order No. Article				Order No. Article
28 / 34,4 / 38	FZ10-28-3	**M30 02031**	**M30 52421** U10Z3-T06	0,013	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W32 03150..** TPHX 0601..	**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..	**L05 01020** R2/N1
32 / 38,4 / 44	FZ10-32-3	**M30 02041**		0,015					
36 / 44 / 48	FZ12-36-3	**M30 02051**	**M30 52431** U12Z3-T06	0,026	**N00 56031** S/M2×4,9-6IP 0,62 Nm				**L05 01030** R2a/N2
40 / 48 / 55	FZ12-40-3	**M30 02061**		0,029					
45 / 54,6 / 60	FZ16-45-3	**M30 02071**	**M30 52441** U16Z3-T09	0,058	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W32 13150..** TPHX 0902..	**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..	**L05 01040** N3
50 / 59,6 / 68	FZ16-50-3	**M30 02081**		0,067					

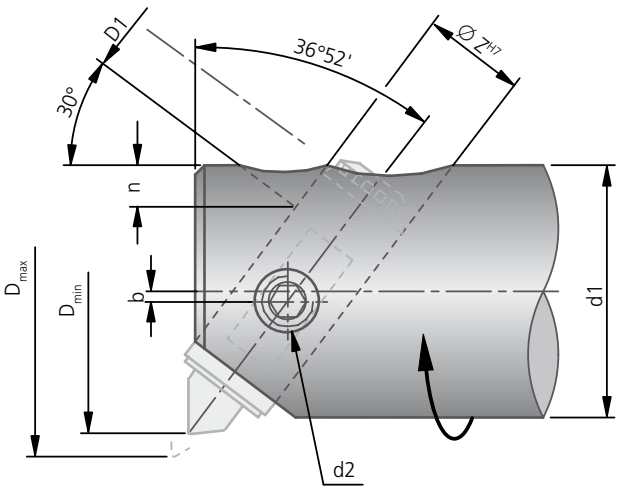
Supply includes: Turning tool with clamping screw.
Please order housing, inserts (for further details see chapter 7) and wrench separately.

Drilling range[1]					Cutter Ø			Ø						Ø					
D_{min} ①	D_{max} ②	D_{max} ③	d1	n[2]	D1[2]	b	d2	Z^{H7}_{g6}	L1	L2	E1	V	A	C	a	f	d3	L4	N	b2
28	34,4	38	25	3,5	8	2	M6	10	31,5	25,5	6	4	23,3	8,9	6	12	5,7	24,8	1,2	6,5
32	38,4	44							35,5	29,5			27,3			16				
36	44	48	32	4	10	2,5	M8	12	40,3	33,5	6,8	5	31	10,9	8	16	6,7	31,3	1,2	6,5
40	48	55							45,3	38,5			36			21				
45	54,6	60	40	6,5	12	3	M10	16	51	42	9	6	39	13,9	10	20	8,6	39,7	1,2	9
50	59,6	68							57	48			45			26				

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder
[2] when using rough adjustment, the distance „n" must be used on the boring bar

Angled mounting 36°52'

■ adjustment accuracy 1.6 µm Ø above vernier



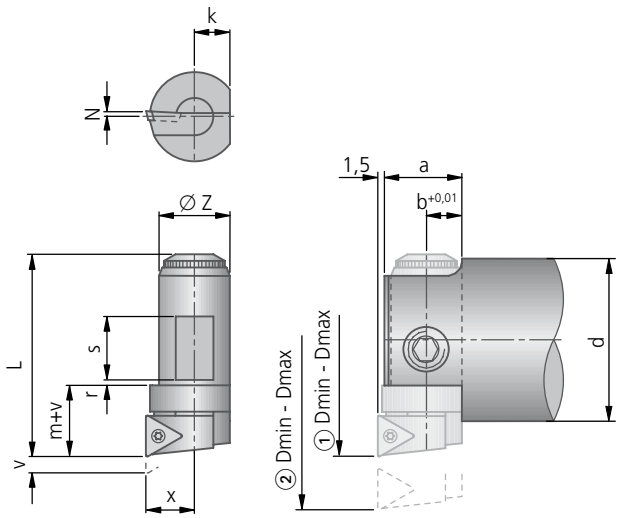
Micro-adjustable cartridge Ø 29,5 – 66 mm

insert tilt of +5° over cutting edge ■
Adjustment accuracy 2 µm ∅ above vernier ■

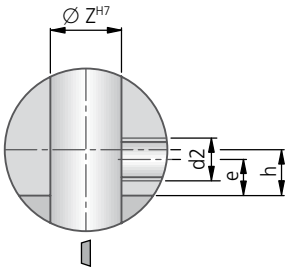
Material
N

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The prodruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

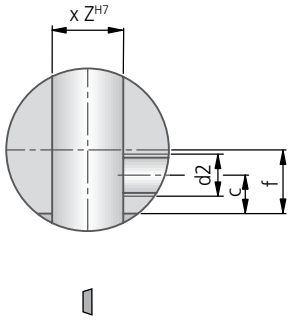
Setting: 1. Basic setting to be taken from drilling range ① and ②.
2. Machining diameter set by fine adjustment device.



Drilling range ①



Drilling range ②



		Cartridges				Insert		
Drilling range ① D_{min}–D_{max}	Drilling range ② D_{min}–D_{max}	Article	Order No.	kg	Clamping screw Order No. Article	W32 L.H.	W32 neutral	W58 neutral
29,5 – 36	35,5 – 42	FF10-T06-30	**M30 20201**	0,055	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W32 03150..**	**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..
39 – 45	44 – 50	FF12-T06-39	**M30 20211**	0,031				
47 – 57	56 – 66	FF16-T09-47	**M30 20221**	0,062	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W32 13150..**	**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..

Supply includes:
Micro-adjustable cartridge with clamping screw. Please order inserts (chapter 7) separately.

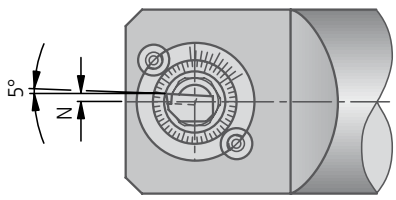
for cartridges	d	Ø Z	a	b	h	e	f	c	d2	L	x	N	k	v	m	r	s
M30 20201	25	10	11	5	3,7	3,9	6,7	3,9	M6	28,8	7,5	2,0	5	3,5	11	0,5	8
M30 20211	32	12	13,5	6	7	6	9,5	6	M8	37,75	9	1,2	6	3,5	12,5	1	11
M30 20221	40	16	17,5	8	7,5	7,5	12	8	M10	45,4	11	1,2	8	5	16	2	13

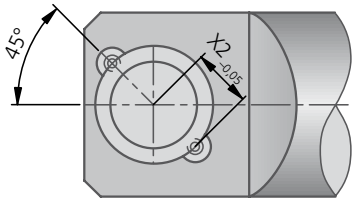
KOMET Kometric

Micro-adjustable cartridge up to Ø 25,4 mm

Material
N

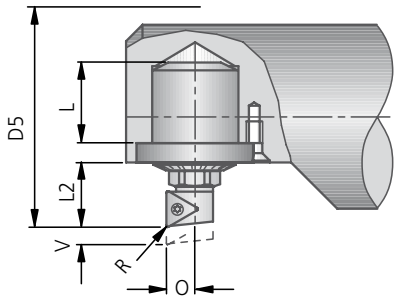
- **insert tilt of +5° over cutting edge**
- the smallest adjustment increment is 0.002 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- significant saving in setting times

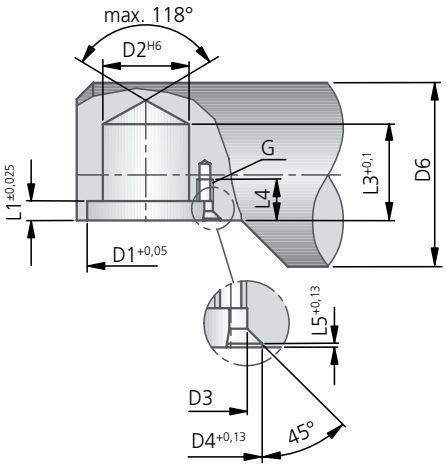


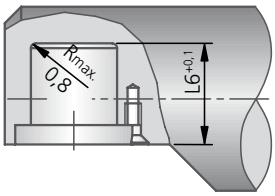


Radial mounting

If the fitting pocket in the boring bar breaks out at the back, it must be drilled through.







Micro-adjustable cartridge					Insert			Accessories
min. turning Ø D5	Order No.	kg	Clamping screw Order No. Article	Location screw 2× DIN7991 Order No. Article	W32 L.H.	W32 neutral	W58 neutral	Wrench Order No. Article
25,4	**M31 00122**	0,02	**N00 56021** S/M2×3,8-6IP 0,62 Nm	M3×6 sim. DIN7991	**W32 03150..** TPHX 0601..	**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..	**18589 10010** SW10
36,5	**M31 00153**	0,04	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55021 03008** M3×8	**W32 13150..** TPHX 0902..	**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..	**18589 10014** SW14
73	**M31 00162**	0,25	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55021 05012** M5×12	**W32 23150..** TPHX 1303..	**W32 23.....** TPHB 1303..	**W58 23.....** TPGX 1303..	SW22

Supply includes:
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3	L4	L5	L6	G	N	R	V	O	X2
M31 00122	21	15	3,2	4,5	25	9,54	3,16	10,3	12,7	13	1,6	13,7	M3	1,5	0,4	1,0	3,6	10,5
M31 00153	24,6	19,05	4,3	6	33	14,84	3,96	13,5	19	10	1,5	19,8	M3	2	0,4	1,1	3,94	12,3
M31 00162	46	31,75	5,5	10	65	31,35	6,35	24,4	37	12	1,5	38,7	M5	2	0,4	5,5	7,1	23

Micro-adjustable cartridge up to Ø 25,4 mm

- **insert tilt of +5° over cutting edge**
- the smallest adjustment increment is 0.0016 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- significant saving in setting times

Material
N

Angled mounting

If the fitting pocket in the boring bar breaks out at the back, it must be drilled through.

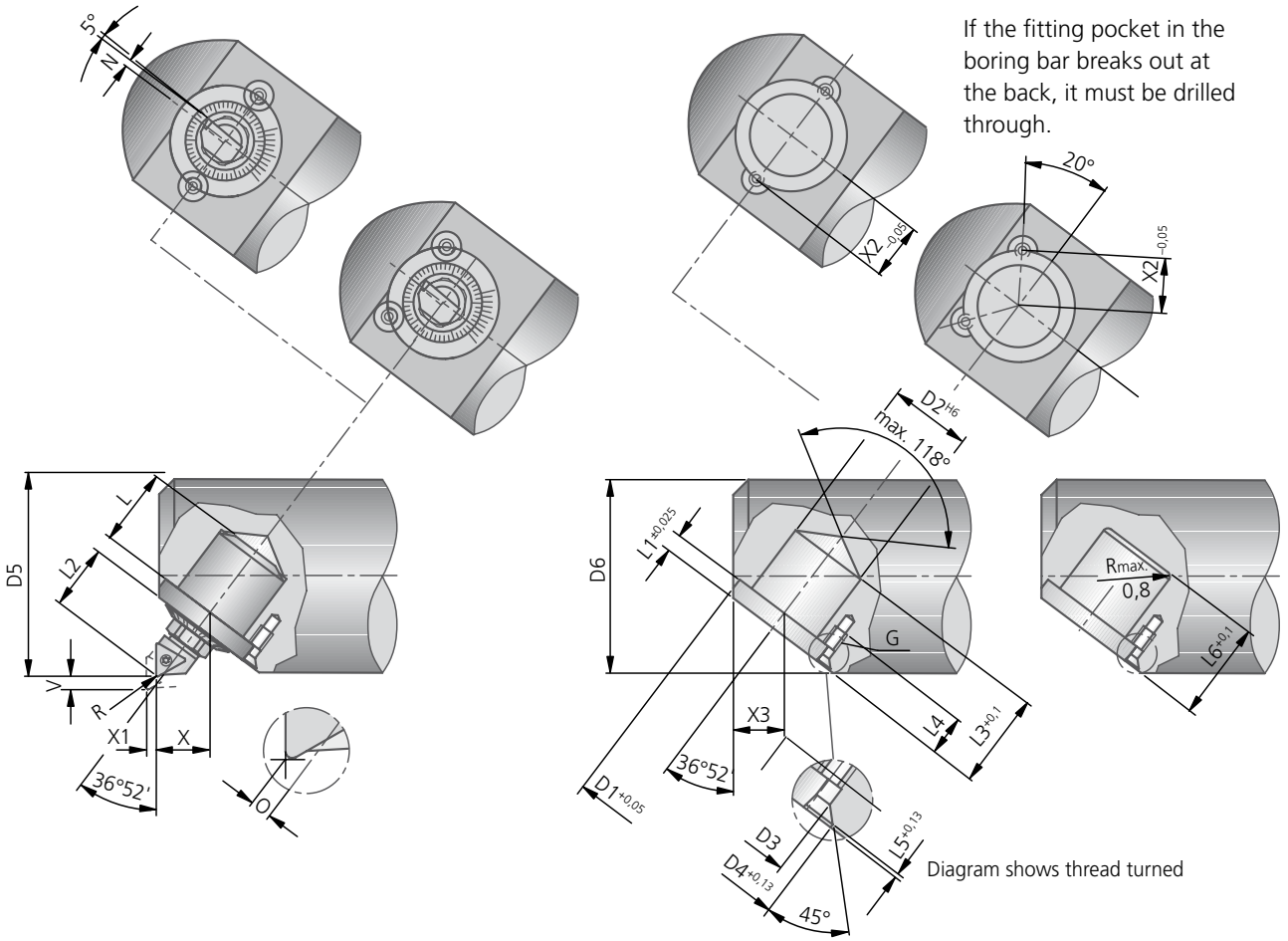


Diagram shows thread turned

Micro-adjustable cartridge					Insert			Accessories
min. turning Ø D5	Order No.	kg	Clamping screw Order No. Article	Location screw 2× DIN7991 Order No. Article	W32 L.H.	W32 neutral	W58 neutral	Wrench Order No. Article
25,4	**M31 01122**	0,02	**N00 56021** S/M2×3,8-6IP 0,62 Nm	M3×6 sim. DIN7991	**W32 03150..** TPHX 0601..	**W32 03.....** TPHB 0601..	**W58 03.....** TPGX 0601..	**18589 10010** SW10
36,5	**M31 01153**	0,04	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**55021 03008** M3×8	**W32 13150..** TPHX 0902..	**W32 13.....** TPHB 0902..	**W58 13.....** TPGX 0902..	**18589 10010** SW10
73	**M31 01162**	0,25	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**55021 05012** M5×12	**W32 23150..** TPHX 1303..	**W32 23.....** TPHB 1303..	**W58 23.....** TPGX 1303..	**18589 10017** SW17

Supply includes:
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	for R0,4 L2	L3	L4	L5	L6	G	N	ISO dimension for R	V	O	X	X1	X2	X3
M31 01122	19	15	3,2	4,5	23	9,2	3,2	11,1	13	13	1,6	13,4	M3	1,5	0,4	0,8	0,68	9,2	0,6	9,5	8,8
M31 01153	24,6	19,05	3,5	6	33	14,84	3,96	14,94	19	10	1,5	19,8	M3	2	0,4	1,3	0,9	12,06	0,95	12,3	11,3
M31 01162	46	31,75	5,5	10	65	30,51	6,35	27	37	12	1,5	37,9	M5	2	0,4	4,7	0,9	20,73	3,75	23	19,8

KOMET – Reaming

Innovative solutions for precision finishing of bores

KOMET has been synonymous for high-precision reaming. We are successfully meeting the increasing demand for customer-specific special solutions and flexible standard tools we have been continuously expanding our solution competency and our innovative edge. Our leading market position is the result of consistently higher quality and continuous development.

With new product and logistics concepts such as the modular high-speed reaming tools REAMAX TS, sets standards especially in the standard range. Our knowledge of customer-specific solutions offers unique perspectives.



KOMET

Index

	Page
Tool selection	398 – 399
Reaming tools	
KOMET Fullmax	400 – 411
KOMET Monomax	412 – 423
KOMET Rapid set head	424 – 431
KOMET hi.max	432 – 441
KOMET REAMAX	442 – 451
KOMET REAMAX TS fix	452 – 459
KOMET REAMAX TS	460 – 465
KOMET REAMAX TS Duo	466 – 475
KOMET Duomax	476 – 483
KOMET Cutting ring	484 – 495
KOMET Freemax	496 – 503
Special tools	516 – 525
Insert reaming	
KOMET MicroSet System	
Special tools	
DAH Compensating holder	504 – 515
Informations	526 – 533
Cutting geometry (ASG)	
Cutting materials and coatings	
Tolerances, Surfaces, Measuring	

1 **KOMET Fullmax**
KOMET Fullmax K | N | H
Solid carbide reaming programm Ø 2,96 - 20,05 mm

2 **KOMET hi.max**
EASY-TO-USE principle: No accessories, no adjusting, no fitting of individual parts

3 **KOMET REAMAX**
Minimum quantity lubrication (MQL) optimised for environmentally friendly use

4 **KOMET REAMAX TS fix**
High machining performance due to combination of cutting topography and cutting material

5 **KOMET REAMAX TS Duo**
Indexable insert reaming head

6 **KOMET Freemax**
Handling is straightforward and the need for adjustments is minimal

7 **KOMET Monomax**
The standardized monoblock tool program

8 **KOMET REAMAX TS**
Modular reaming system for Ø 18,00 - 65,00 mm

9 **KOMET REAMAX TS Duo**
Adjustable indexable insert reaming head

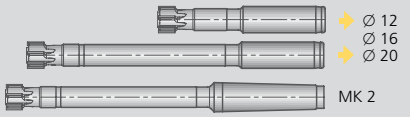
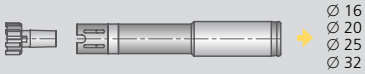
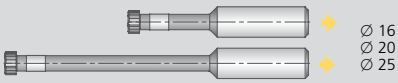
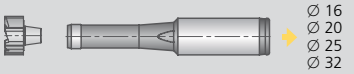
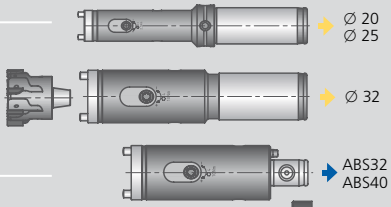
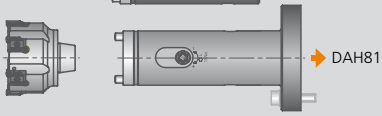
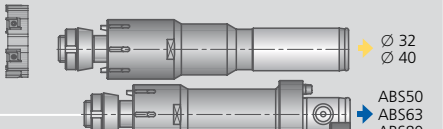
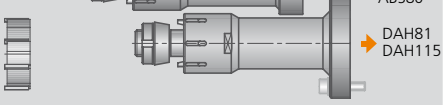
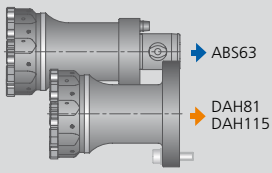
10 **KOMET Duomax**
Cutting ring with insert technology

11 **KOMET MicroSet System**
Reaming with adjustable inserts

KOMET Tool selection

Help table for reaming

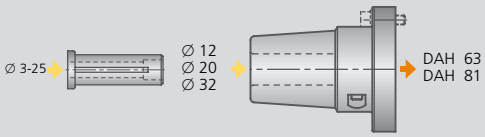
Diameter	Description			ISO Material group						
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115	Accuracy	Tool structure	Adjust-ability	Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloys and titanium	Hardened materials	
Ø 2,96 - 20,05 KOMET Fullmax	IT7	monolithic	fix	P	M	K	N	S	H	
Ø 5,60 - 25,89 KOMET Monomax	IT6	monolithic	adjustable	P	M	K	N	S		
Ø 9,60 - 60,00 KOMET Rapid set head	IT7	modular	fix	P	M	K	N	S		
Ø 12,00 - 30,00 KOMET hi.max	IT7	monolithic	fix	P	M	K	N	S		
Ø 12,00 - 40,00 KOMET REAMAX	IT7	modular	fix	P	M	K	N	S	H	
Ø 18,00 - 30,00 KOMET REAMAX TS fix	IT7	modular	fix	P	M	K	N	S		
Ø 18,00 - 65,00 KOMET REAMAX TS	IT6	modular	adjustable	P	M	K	N	S		
Ø 42,00 - 70,00 KOMET REAMAX TS Duo	IT6	modular	fix / adjustable	P	M	K	N	S		
Ø 60,60 - 110,59 KOMET Duomax	IT6	modular	adjustable	P	M	K	N	S		
Ø 60,60 - 110,59 KOMET Cutting ring	IT6	modular	adjustable	P	M	K	N	S		
Ø 70,00 - 100,00 KOMET Freemax	IT7	modular	fix	P		K	N			

	Tool
KOMET Fullmax ▸ 400 – 411	
KOMET Monomax ▸ 412 – 423	
KOMET Rapid set head ▸ 424 – 431	
KOMET hi.max ▸ 432 – 441	
KOMET REAMAX ▸ 442 – 451	
KOMET REAMAX TS fix ▸ 452 – 459	
KOMET REAMAX TS ▸ 460 – 465	
KOMET REAMAX TS Duo ▸ 466 – 475	
KOMET Duomax ▸ 476 – 483	
KOMET Cutting ring ▸ 484 – 495	
KOMET Freemax ▸ 496 – 503	

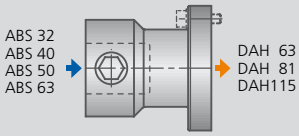
Adaptors

▸ 504 – 515

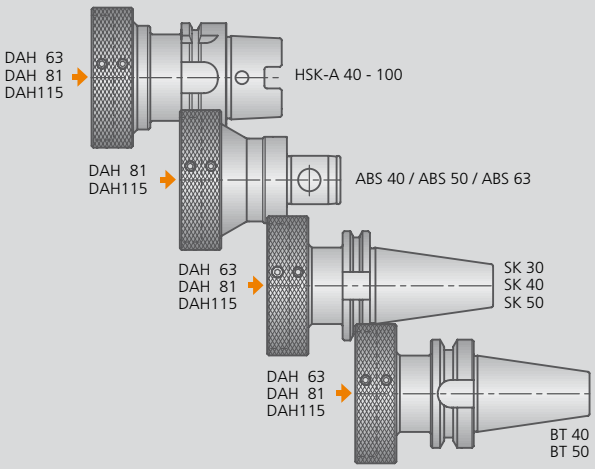
DAH Expanding chuck



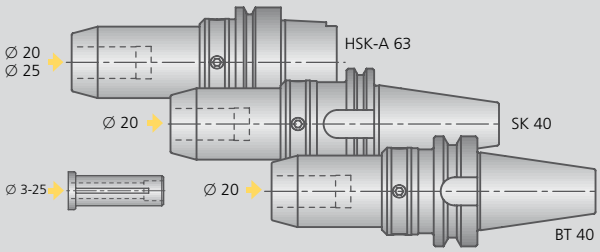
DAH Adaptor



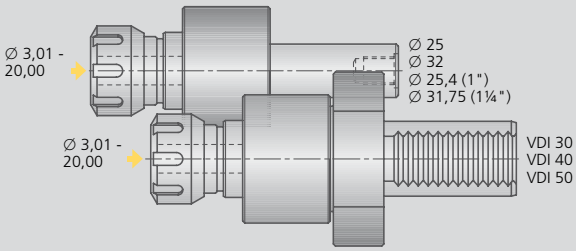
DAH Compensating holder



DAH 50 HS Compensating holder



DPS Floating holder



Key

- ABS connection
- cylindrical connection
- DAH connection

KOMET Fullmax

High performance for universal use
KOMET is expanding its solid carbide reaming range with a completely overhauled universal reaming tool, available from stock in the main dimensions both with H7 tolerance and in 1/100 dimensions.

The combination of knowledge and experience gained with the previous product line has enabled us to systematically develop the cutting geometry and achieve incredibly high cutting performance in various different materials – even those hardened up to HRC62. At the same time, the modified cutting edge pitch reduces chatter marks and improves chip formation.

In addition to optimal cutting edge cooling, the targeted coolant also aids smooth evacuation of chips that are formed. A high-performance coating completes the new design, and can be used for various different materials, thus also contributing to longer tool life, as a result of significant improved wear resistance.

These characteristics and properties combine to create the kind of precision for which KOMET is known on the market, as well as its high standards of dimensional accuracy and surface finish quality.

Individually configurable dimensions can be supplied in the diameter range from 2,96 to 20,05 mm. In addition, preferred ranges are available from stock for diameters 4 to 12 mm and 16 mm. There are separate variants matched to blind hole and through hole machining.

BENEFITS for you:
- Top performance for many different materials
- New high-performance for universal use
- Optimised geometry for top cutting performance
- Minimal costs per hole as a result of high cutting data and tool life
- Available from stock with dimensions H7 and 1/100 mm

KOMET Fullmax K: Outstanding surface quality and long tool life thanks to the optimal combination of geometry and coating.

KOMET Fullmax N: The extremely smooth coating affords outstanding surface quality, and the chip breaker geometry yields optimal chip formation.

KOMET Fullmax H: Excellent surface quality with minimal cutting edge preparation. Optimal combination of geometry and coating for use in materials with a hardness of up to 62 HRC.



KOMET Fullmax	Page
Universal reamer	
∅ 2,96 – 20,05 mm	402 – 403
Recommended cutting data	408 – 409
Special reamer K | N | H	
∅ 2,96 – 20,05 mm	402 – 403
Recommended cutting data	410 – 411
Diameter H7 – available from stock	404 – 405
1/100 Dimensions – available from stock	406 – 407

KOMET Fullmax

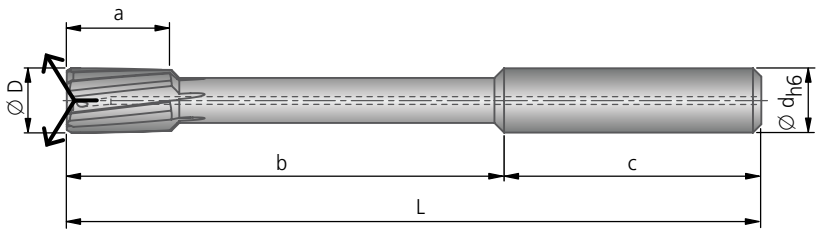
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining							
						Order No. ASG = cutting geometry							
						Universal	Special	Universal	Special	Universal	Special	Universal	Special
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
P	4.1			HSS									
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)					52M.57 ASG 2110		52M.57 ASG 2110	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	52P.57 ASG 2210		52P.57 ASG 2210		52M.57 ASG 2110		52M.57 ASG 2110	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	52P.57 ASG 2210	52J.65 ASG 2350	52P.57 ASG 2210	52J.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350	52M.57 ASG 2110	52K.65 ASG 2350
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	52P.57 ASG 2210	52N.17 ASG 2270	52P.57 ASG 2210	52N.17 ASG 2270	52M.57 ASG 2110	52Q.17 ASG 2170	52M.57 ASG 2110	52Q.17 ASG 2170
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	52P.57 ASG 2210	52N.17 ASG 2270	52P.57 ASG 2210	52N.17 ASG 2270	52M.57 ASG 2110	52Q.17 ASG 2170	52M.57 ASG 2110	52Q.17 ASG 2170
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		52N.17 ASG 2270		52N.17 ASG 2270		52Q.17 ASG 2170		52Q.17 ASG 2170
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		52N.17 ASG 2270		52N.17 ASG 2270		52Q.17 ASG 2170		52Q.17 ASG 2170
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)		52N.17 ASG 2270		52N.17 ASG 2270		52Q.17 ASG 2170		52Q.17 ASG 2170
H	15.0	1400		hardened steels < 55 HRC		52P.57 ASG 2210	52G.55 ASG 2360		52G.55 ASG 2360	52M.57 ASG 2110	52H.55 ASG 2360		52H.55 ASG 2360
H	16.0	1800		hardened steels > 55 HRC, ≤ 62 HRC		52P.57 ASG 2210	52G.55 ASG 2360		52G.55 ASG 2360	52M.57 ASG 2110	52H.55 ASG 2360		52H.55 ASG 2360

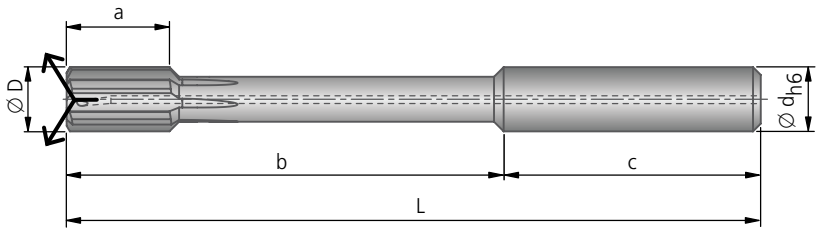
We are happy to take inquiries concerning tools for materials without a recommendation.



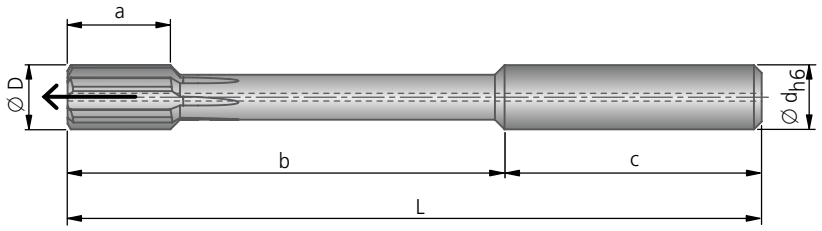
Universal reamer
radially cooled, left slant,
for through hole machining



Special reamer
radially cooled, straight,
for through hole machining



Universal / Special reamer
centrally cooled, straight,
for blind hole machining



Custom reaming tool – selection options!

	Order No.	Order No.	Cutting material, coating	Dimensions							
				Ø D	Cylindrical shank Ød×c	L	b	a ~	Universal Fullmax N Fullmax H Z	Fullmax K Z	kg ~
Universal	52P.57	52M.57	DBG-U	2,96 - 4,05	4×28	60	32	12	4	6	0,005-0,01
				4,06 - 6,05	6×36	76	40	12	4	6	0,01-0,03
Special Fullmax K	52J.65	52K.65	DBG-P	6,06 - 8,05	8×36	101	65	16	6	8	0,03-0,05
				8,06 - 10,05	10×40	108	68	16	6	8	0,05-0,09
Special Fullmax N	52N.17	52Q.17	DBC-N	10,06 - 12,05	12×45	130	85	20	6	8	0,09-0,15
				12,06 - 14,05	14×45	130	85	20	6	8	0,15-0,22
				14,06 - 16,05	16×48	150	102	20	6	8	0,22-0,31
Special Fullmax H	52G.55	52H.55	DBF-A	16,06 - 18,05	18×48	150	102	20	6	8	0,31-0,42
				18,06 - 20,05	20×50	160	110	20	6	8	0,42-0,51

Order example:
Order No. 52P.57 · Bore diameter 4,02 mm · Bore tolerance $^{+0,05}_{-0}$ · Material EN-GJS-400-15

Cutting speed and feed universal reamer see pages 408-409 / special reamer see pages 410-411.

For in-stock H7 series and 1/100 dimensions see pages 404-407.

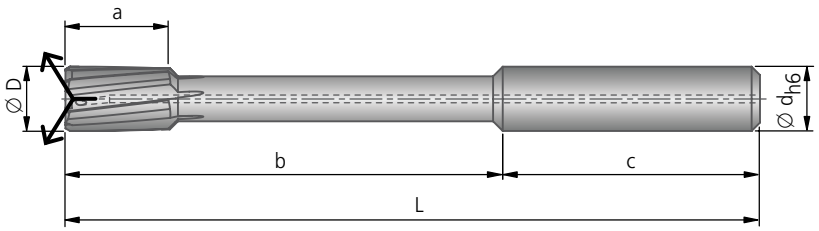
KOMET Fullmax

Universal reamer

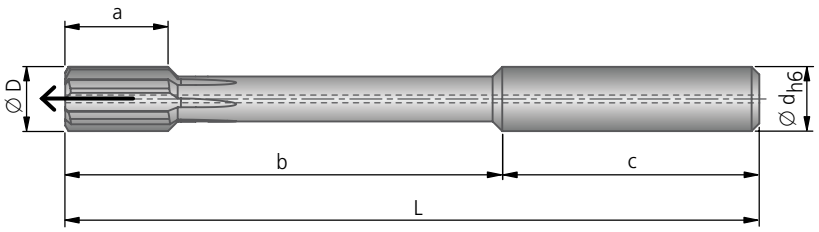
Ø 4^{H7} – 16^{H7} mm



radially cooled, left slant,
for through hole machining



centrally cooled, straight,
for blind hole machining

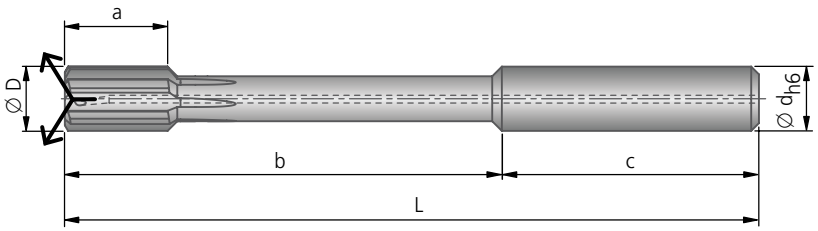


Diameter H7 – available from stock								
								
								
Ø D	Ødxc	L	b	a ~	Z	kg ~	Order No. DBG-U	Order No. DBG-U
4^{H7}	4 × 28	60	32	12	4	0,01	52P.57.04H7	52M.57.04H7
5^{H7}	6 × 36	76	40	12	4	0,02	52P.57.05H7	52M.57.05H7
6^{H7}	6 × 36	76	40	12	4	0,03	52P.57.06H7	52M.57.06H7
7^{H7}	8 × 36	101	65	16	6	0,05	52P.57.07H7	52M.57.07H7
8^{H7}	8 × 36	101	65	16	6	0,05	52P.57.08H7	52M.57.08H7
9^{H7}	10 × 40	108	68	16	6	0,08	52P.57.09H7	52M.57.09H7
10^{H7}	10 × 40	108	68	16	6	0,09	52P.57.10H7	52M.57.10H7
11^{H7}	12 × 45	130	85	20	6	0,15	52P.57.11H7	52M.57.11H7
12^{H7}	12 × 45	130	85	20	6	0,15	52P.57.12H7	52M.57.12H7
16^{H7}	16 × 48	150	102	20	6	0,31	52P.57.16H7	52M.57.16H7

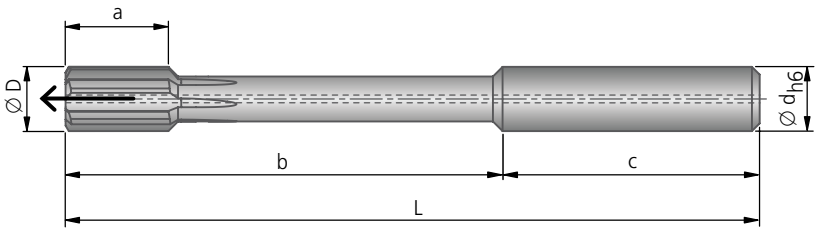
Cutting speed and feed see pages 408-409.



radially cooled, straight,
for through hole machining



centrally cooled, straight,
for blind hole machining



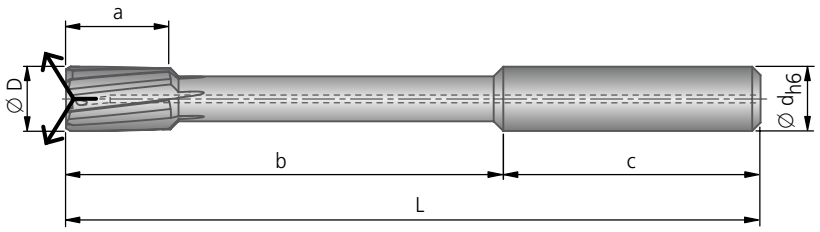
Diameter H7 – available from stock								
								
								
Ø D	Ød×c	L	b	a ~	Z	kg ~	Order No. DBC-N	Order No. DBC-N
4H7	4 × 28	60	32	12	4	0,01	52N.17.04H7	52Q.17.04H7
5H7	6 × 36	76	40	12	4	0,02	52N.17.05H7	52Q.17.05H7
6H7	6 × 36	76	40	12	6	0,03	52N.17.06H7	52Q.17.06H7
7H7	8 × 36	101	65	16	6	0,05	52N.17.07H7	52Q.17.07H7
8H7	8 × 36	101	65	16	6	0,05	52N.17.08H7	52Q.17.08H7
9H7	10 × 40	108	68	16	6	0,08	52N.17.09H7	52Q.17.09H7
10H7	10 × 40	108	68	16	6	0,09	52N.17.10H7	52Q.17.10H7
11H7	12 × 45	130	85	20	6	0,15	52N.17.11H7	52Q.17.11H7
12H7	12 × 45	130	85	20	6	0,15	52N.17.12H7	52Q.17.12H7
16H7	16 × 48	150	102	20	6	0,31	52N.17.16H7	52Q.17.16H7

Cutting speed and feed see pages 410-411.

KOMET Fullmax

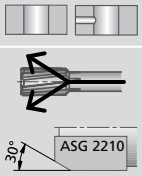
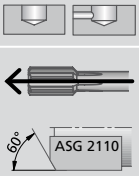
1/100 Dimensions – available from stock

radially cooled, left slant,
for through hole machining



centrally cooled, straight,
for blind hole machining



1/100 dimensions – available from stock								
Ø D	 Order No. DBG-U	 Order No. DBG-U	Ødx c	L	b	a ~	Z	kg ~
3,970	52P.57.0397	52M.57.0397	4×28	60	32	12	4	0,01
3,980	52P.57.0398	52M.57.0398						
3,990	52P.57.0399	52M.57.0399						
4,000	52P.57.0400	52M.57.0400						
4,010	52P.57.0401	52M.57.0401						
4,020	52P.57.0402	52M.57.0402						
4,030	52P.57.0403	52M.57.0403						
4,970	52P.57.0497	52M.57.0497	6×36	76	40	12	4	0,02
4,980	52P.57.0498	52M.57.0498						
4,990	52P.57.0499	52M.57.0499						
5,000	52P.57.0500	52M.57.0500						
5,010	52P.57.0501	52M.57.0501						
5,020	52P.57.0502	52M.57.0502						
5,030	52P.57.0503	52M.57.0503						
5,970	52P.57.0597	52M.57.0597	6×36	76	40	12	4	0,03
5,980	52P.57.0598	52M.57.0598						
5,990	52P.57.0599	52M.57.0599						
6,000	52P.57.0600	52M.57.0600						
6,010	52P.57.0601	52M.57.0601						
6,020	52P.57.0602	52M.57.0602						
6,030	52P.57.0603	52M.57.0603						
6,970	52P.57.0697	52M.57.0697	8×36	101	65	16	6	0,05
6,980	52P.57.0698	52M.57.0698						
6,990	52P.57.0699	52M.57.0699						
7,000	52P.57.0700	52M.57.0700						
7,010	52P.57.0701	52M.57.0701						
7,020	52P.57.0702	52M.57.0702						
7,030	52P.57.0703	52M.57.0703						
7,970	52P.57.0797	52M.57.0797	8×36	101	65	16	6	0,05
7,980	52P.57.0798	52M.57.0798						
7,990	52P.57.0799	52M.57.0799						
8,000	52P.57.0800	52M.57.0800						
8,010	52P.57.0801	52M.57.0801						
8,020	52P.57.0802	52M.57.0802						
8,030	52P.57.0803	52M.57.0803						

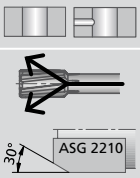
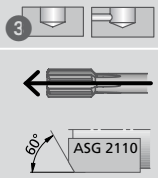
Tolerance: ∅3,970 – 5,030 mm = +4µ / ∅5,970 – 16,030 mm = +5µ

1/100 Dimensions – available from stock

1/100 Ø D	Fit sizes which can be used				
.. ,970	U7	X7			
.. ,980	N10	N11	R7		
② .. ,990	M8	N7	① N8	N9	
.. ,000	J7	J8	JS7	JS8	JS9
.. ,010	G7	H8			
.. ,020	F8	H9			
.. ,030	E8	F9	H10		

Example: Blind hole Ø 9 N8
① Tolerance N8 = ② .. ,990
③ Blind hole
④ Bore diameter 8,990 mm
Oder No. **52M.57.0899**

1/100 dimensions – available from stock

Ø D	 Order No. DBG-U	 Order No. DBG-U	Ød×c	L	b	a ~	Z	kg ~
8,970	52P.57.0897	52M.57.0897	10×40	108	68	16	6	0,08
8,980	52P.57.0898	52M.57.0898						
④ 8,990	52P.57.0899	52M.57.0899						
9,000	52P.57.0900	52M.57.0900						
9,010	52P.57.0901	52M.57.0901						
9,020	52P.57.0902	52M.57.0902						
9,030	52P.57.0903	52M.57.0903						
9,970	52P.57.0997	52M.57.0997	10×40	108	68	16	6	0,09
9,980	52P.57.0998	52M.57.0998						
9,990	52P.57.0999	52M.57.0999						
10,000	52P.57.1000	52M.57.1000						
10,010	52P.57.1001	52M.57.1001						
10,020	52P.57.1002	52M.57.1002						
10,030	52P.57.1003	52M.57.1003						
10,970	52P.57.1097	52M.57.1097	12×45	130	85	20	6	0,15
10,980	52P.57.1098	52M.57.1098						
10,990	52P.57.1099	52M.57.1099						
11,000	52P.57.1100	52M.57.1100						
11,010	52P.57.1101	52M.57.1101						
11,020	52P.57.1102	52M.57.1102						
11,030	52P.57.1103	52M.57.1103						
11,970	52P.57.1197	52M.57.1197	12×45	130	85	20	6	0,15
11,980	52P.57.1198	52M.57.1198						
11,990	52P.57.1199	52M.57.1199						
12,000	52P.57.1200	52M.57.1200						
12,010	52P.57.1201	52M.57.1201						
12,020	52P.57.1202	52M.57.1202						
12,030	52P.57.1203	52M.57.1203						
15,970	52P.57.1597	52M.57.1597	16×48	150	102	20	6	0,31
15,980	52P.57.1598	52M.57.1598						
15,990	52P.57.1599	52M.57.1599						
16,000	52P.57.1600	52M.57.1600						
16,010	52P.57.1601	52M.57.1601						
16,020	52P.57.1602	52M.57.1602						
16,030	52P.57.1603	52M.57.1603						

Tolerance: ∅3,970 – 5,030 mm = +4µ / ∅5,970 – 16,030 mm = +5µ

KOMET Fullmax

Recommended cutting data – universal reamer

Guideline values for reaming						Cutting speed v_c (m/min) optimum · maximum DBG-U	
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN		
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	180 250	
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	180 250	
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	180 250	
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	180 250	
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	180 250	
	4.1			HSS			
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	40 60	
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	30 60	
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	40 80	
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	40 60	
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	40 60	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	120 180	
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90 130	
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	200 250	
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	200 250	
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 150	
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90 130	
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)	90 130	
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 250	
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	100 150	
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)		
H	15.0	1400		hardened steels < 55 HRC		40 60	
	16.0	1800		hardened steels > 55 HRC, ≤ 62 HRC		30 50	

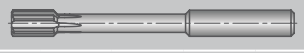
Reaming allowance in diameter (mm)			
	P M K N S		
	H	< 55 HRC	
		> 55 HRC	

Recommended cutting data – universal reamer

	Feed f (mm/rev)											
	optimum · maximum						optimum · maximum					
												
	Ø 2,97 - 4,05 ✲ 4	Ø 4,06 - 6,05 ✲ 4	Ø 6,06 - 7,55 ✲ 6	Ø 7,56 - 12,05 ✲ 6	Ø 12,06 - 16,05 ✲ 6	Ø 16,06 - 20,05 ✲ 6	Ø 2,97 - 4,05 ✲ 4	Ø 4,06 - 6,05 ✲ 4	Ø 6,06 - 7,55 ✲ 6	Ø 7,56 - 12,05 ✲ 6	Ø 12,06 - 16,05 ✲ 6	Ø 16,06 - 20,05 ✲ 6
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,40** 1,80	**1,50** 1,90	**1,80** 2,20
	0,40 0,50	**0,40** 0,60	**0,90** 1,10	**1,00** 1,20	**1,00** 1,30	**1,30** 1,50	**0,40** 0,50	**0,40** 0,60	**0,90** 1,10	**1,00** 1,20	**1,00** 1,30	**1,30** 1,50
	0,30 0,40	**0,40** 0,50	**0,70** 0,90	**0,80** 1,10	**0,90** 1,10	**1,10** 1,30	**0,30** 0,40	**0,40** 0,50	**0,70** 0,90	**0,80** 1,10	**0,90** 1,10	**1,10** 1,30
	0,30 0,40	**0,40** 0,50	**0,70** 0,90	**0,80** 1,10	**0,90** 1,10	**1,10** 1,30	**0,30** 0,40	**0,40** 0,50	**0,70** 0,90	**0,80** 1,10	**0,90** 1,10	**1,10** 1,30
	0,40 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70	**0,40** 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70
	0,40 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70	**0,40** 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70
	0,40 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70	**0,40** 0,60	**0,50** 0,70	**1,00** 1,30	**1,10** 1,40	**1,20** 1,50	**1,40** 1,70
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20
	0,50 0,60	**0,50** 0,70	**1,00** 1,30	**1,00** 1,30	**1,30** 1,60	**1,50** 1,80	**0,50** 0,60	**0,50** 0,70	**1,00** 1,30	**1,00** 1,30	**1,30** 1,60	**1,50** 1,80
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20
	0,60 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20	**0,60** 0,80	**0,70** 0,90	**1,30** 1,60	**1,30** 1,60	**1,60** 2,00	**1,90** 2,20
	0,50 0,60	**0,50** 0,70	**1,00** 1,30	**1,00** 1,30	**1,30** 1,60	**1,50** 1,80	**0,50** 0,60	**0,50** 0,70	**1,00** 1,30	**1,00** 1,30	**1,30** 1,60	**1,50** 1,80
	0,40 0,50	**0,40** 0,60	**0,80** 1,00	**0,80** 1,00	**1,00** 1,30	**1,20** 1,50	**0,40** 0,50	**0,40** 0,60	**0,80** 1,00	**0,80** 1,00	**1,00** 1,30	**1,20** 1,50
	0,40 0,50	**0,40** 0,60	**0,80** 1,00	**0,80** 1,00	**1,00** 1,30	**1,20** 1,50	**0,40** 0,50	**0,40** 0,60	**0,80** 1,00	**0,80** 1,00	**1,00** 1,30	**1,20** 1,50
	0,50 0,80	**0,70** 0,90	**1,30** 1,40	**1,40** 1,70	**1,60** 1,90	**1,90** 2,20	**0,50** 0,80	**0,70** 0,90	**1,30** 1,40	**1,40** 1,70	**1,60** 1,90	**1,90** 2,20
	0,40 0,60	**0,60** 0,80	**1,00** 1,20	**1,20** 1,40	**1,30** 1,60	**1,60** 1,80	**0,40** 0,60	**0,60** 0,80	**1,00** 1,20	**1,20** 1,40	**1,30** 1,60	**1,60** 1,80
	0,20 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80	**0,20** 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80
	0,20 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80	**0,20** 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80
	0,10-0,20	0,10-0,20	0,20	0,20	0,20-0,30	0,30	0,10-0,20	0,10-0,20	0,20	0,20	0,20-0,30	0,30
	0,10-0,20	0,10-0,20	0,20	0,20	0,20	0,20	0,10-0,20	0,10-0,20	0,20	0,20	0,20	0,20
	0,10	0,10	0,10	0,10	0,20	0,20	0,10	0,10	0,10	0,10	0,20	0,20

KOMET Fullmax K | N | H

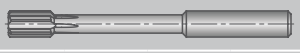
Recommended cutting data – special reamer

Guideline values for reaming						KOMET Fullmax K						
						DBG-P ASG2350 						
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	Cutting speed v_c (m/min) optimum / maximum	Feed f (mm/rev), optimum · maximum					
							Ø 2,97 - 4,05 ❄ 6	Ø 4,06 - 6,05 ❄ 6	Ø 6,06 - 7,55 ❄ 8	Ø 7,56 - 12,05 ❄ 8	Ø 12,06 - 16,05 ❄ 8	Ø 16,06 - 20,05 ❄ 8
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)							
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)							
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)							
P	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)							
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)							
P	4.1			HSS								
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)							
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)							
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)							
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)							
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)							
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	200 250	0,80 1,00	0,90 1,20	1,50 1,90	1,50 1,90	1,80 2,30	2,20 2,60
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	90 130	0,60 0,90	0,70 1,00	1,20 1,60	1,20 1,60	1,50 1,90	1,80 2,20
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	225 300	0,80 1,00	0,90 1,20	1,50 1,90	1,50 1,90	1,80 2,30	2,20 2,60
K	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	225 300	0,80 1,00	0,90 1,20	1,50 1,90	1,50 1,90	1,80 2,30	2,20 2,60
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 150	0,60 0,90	0,70 1,00	1,20 1,60	1,20 1,60	1,50 1,90	1,80 2,20
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	90 130	0,50 0,70	0,60 0,80	1,00 1,20	1,00 1,20	1,20 1,50	1,50 1,70
K	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)	90 130	0,50 0,70	0,60 0,80	1,00 1,20	1,00 1,20	1,20 1,50	1,50 1,70
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)							
N	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)							
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)							
N	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)							
N	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)							
H	15.0	< 2000		hardened steels < 55 HRC								
H	16.0			hardened steels > 55 HRC, ≤ 62 HRC								
Reaming allowance in diameter (mm)							0,10-0,20	0,10-0,20	0,20	0,20	0,20-0,30	0,30
							K					

Recommended cutting data – special reamer

KOMET Fullmax N

DBC-N
ASG2170 / ASG2270

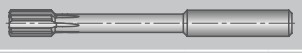


Cutting speed v_c (m/min) optimum / maximum	Feed f (mm/rev), optimum · maximum					
	Ø 2,97 - 4,05 ✻ 4	Ø 4,06 - 6,05 ✻ 4	Ø 6,06 - 7,55 ✻ 6	Ø 7,56 - 12,05 ✻ 6	Ø 12,06 - 16,05 ✻ 6	Ø 16,06 - 20,05 ✻ 6
150 250	**0,50** 0,60	**0,60** 0,90	**1,10** 1,60	**1,20** 1,60	**1,20** 1,80	**1,20** 1,80
100 150	**0,40** 0,50	**0,50** 0,70	**0,90** 1,30	**0,90** 1,30	**0,90** 1,40	**0,90** 1,40
200 300	**0,50** 0,60	**0,60** 0,90	**1,10** 1,60	**1,20** 1,60	**1,20** 1,80	**1,20** 1,80
200 300	**0,50** 0,70	**0,70** 1,00	**1,20** 1,70	**1,30** 1,70	**1,30** 2,00	**1,30** 2,00
200 250	**0,50** 0,70	**0,70** 1,00	**1,20** 1,70	**1,30** 1,70	**1,30** 2,00	**1,30** 2,00
	0,10-0,20	0,10-0,20	0,20	0,20	0,20-0,30	0,30

N

KOMET Fullmax H

DBF-A
ASG2360



Cutting speed v_c (m/min) optimum / maximum	Feed f (mm/rev), optimum · maximum					
	Ø 2,97 - 4,05 ✻ 4	Ø 4,06 - 6,05 ✻ 4	Ø 6,06 - 7,55 ✻ 6	Ø 7,56 - 12,05 ✻ 6	Ø 12,06 - 16,05 ✻ 6	Ø 16,06 - 20,05 ✻ 6
40 60	**0,20** 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80
30 50	**0,20** 0,30	**0,20** 0,30	**0,40** 0,60	**0,50** 0,60	**0,50** 0,70	**0,60** 0,80
< 55 HRC	0,10-0,20	0,10-0,20	0,20	0,20	0,20	0,20
> 55 HRC	0,10	0,10	0,10	0,10	0,20	0,20

H

Please observe further application and safety instructions (chapter 8).

KOMET Monomax

One-piece tools – known as monoblock tools – are one of KOMET's specialities. The demands which have been made over decades are reflected in an enormous number of types and variations. This successful tool programme has been completely revised and standardised by efficient manufacturing.

BENEFITS for you:

- Designed for small hole diameters
- Can be adjusted for extremely small hole tolerances
- Extremely high process reliability through mono construction
- Precision ground to size



Application:

- Non-alloy and low alloy steels
- Stainless, heat resistant and high alloy steels
- Grey cast iron and spheroidal graphite cast iron
- Copper alloys, brass and bronze
- Aluminium
- Titanium, titanium alloys, CGI and plastic on request

Versions:

- Short and long versions
- Lateral and central coolant outlet for best possible use
- Cutting materials, uncoated and coated carbide or DST
- Diameter 5,600 – 25,899 mm

KOMET

KOMET Monomax

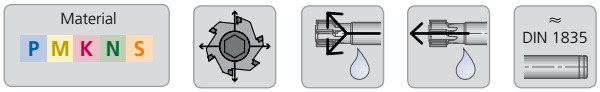
	Page
Reaming tool – short version	
∅ 5,600 – 25,899 mm	414 – 415
Reaming tool – long version	
∅ 5,600 – 25,899 mm	416 – 417
Reaming tool – Morse taper	
∅ 5,600 – 25,899 mm	418
Diameter H7 – available from stock	420 – 421
Recommended cutting data	422 – 423

KOMET Monomax

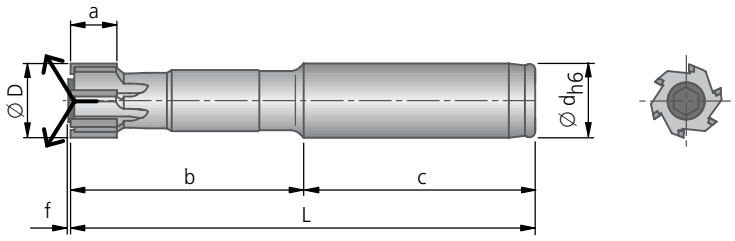
Tool recommendation – short version

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**56J.93** ASG 4000	**56J.71** ASG 4000	**56H.93** ASG 3000	**56H.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**56J.93** ASG 4000	**56J.71** ASG 4000	**56H.93** ASG 3000	**56H.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**56J.93** ASG 4000	**56J.71** ASG 4000	**56H.93** ASG 3000	**56H.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**56J.93** ASG 4000	**56J.71** ASG 3000	**56H.93** ASG 3000	**56H.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	**56J.71** ASG 0106	**56J.71** ASG 0106	**56H.71** ASG 0106	**56H.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**56J.21** ASG 03		**56H.21** ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**56J.65** ASG 0106	**56J.65** ASG 0106	**56H.65** ASG 0106	**56H.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**56J.65** ASG 0106	**56J.65** ASG 0106	**56H.65** ASG 0106	**56H.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**56J.65** ASG 0106	**56J.65** ASG 0106	**56H.65** ASG 0106	**56H.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**56J.65** ASG 3000	**56J.65** ASG 3000	**56H.65** ASG 3000	**56H.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**56J.65** ASG 3000	**56J.65** ASG 3000	**56H.65** ASG 3000	**56H.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**56J.93** ASG 3000	**56J.65** ASG 3000	**56H.93** ASG 3000	**56H.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**56J.93** ASG 3000	**56J.65** ASG 3000	**56H.93** ASG 3000	**56H.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**56J.93** ASG 3000	**56J.65** ASG 3000	**56H.93** ASG 3000	**56H.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**56J.65** ASG 3000	**56J.65** ASG 3000	**56H.65** ASG 3000	**56H.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**56J.65** ASG 3000	**56J.65** ASG 3000	**56H.65** ASG 3000	**56H.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**56J.93** ASG 3000	**56J.71** ASG 3000	**56H.93** ASG 3000	**56H.71** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**56J.71** ASG 3000	**56J.71** ASG 3000	**56H.71** ASG 3000	**56H.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**56J.17** ASG 0706	**56J.17** ASG 0706	**56H.17** ASG 0706	**56H.17** ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**56J.17** ASG 0706	**56J.17** ASG 0706	**56H.17** ASG 0706	**56H.17** ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**56J.17** ASG 0706	**56J.17** ASG 0706	**56H.17** ASG 0706	**56H.17** ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

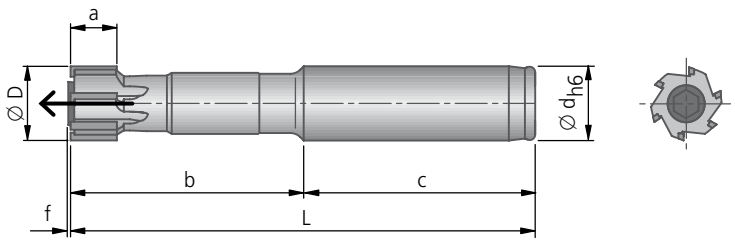
We are happy to take inquiries concerning tools for materials without a recommendation.



radially cooled,
for through hole machining



centrally cooled,
for blind hole machining



Custom reaming tool – selection options!

Order No.		Order No.		Cutting material, coating	Dimensions						
					Ø D	Cylindrical shank Ød×c	L	b	f ~	a ~	Z
56J.93	–	56H.93	–	DST	5,600 - 8,899	12×45	85	40	0,1	9,5	4
56J.67	–	56H.67	–	DJC							
56J.65		56H.65		DBG-P	8,900 - 15,899	12×45	95	50	0,1	9,5	6
56J.37		56H.37		DBG-N							
56J.17		56H.17		DBC	15,900 - 18,899	16×50	100	50	0,1	9,5	6
56J.71		56H.71		TiN							
56J.21		56H.21		HM	18,900 - 25,899	20×60	120	60	0,1	9,5	6

Order example:
Order No. 56J.93 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry)

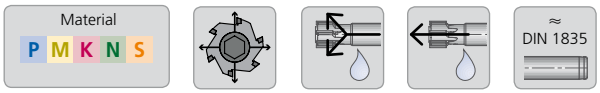
Cutting speed and feed see pages 422-423.

KOMET Monomax

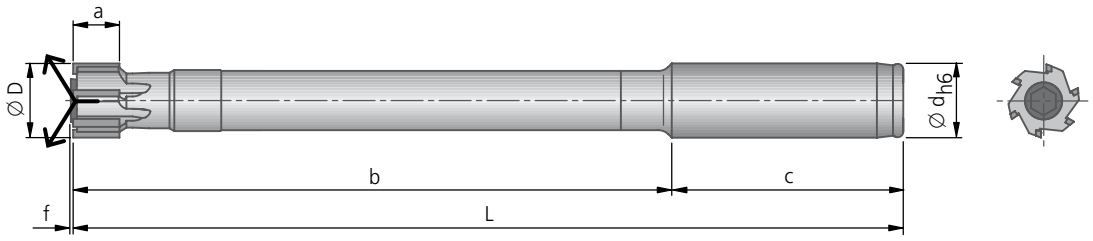
Tool recommendation – long version

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**56R.93** ASG 4000	**56R.71** ASG 4000	**56Q.93** ASG 3000	**56Q.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**56R.93** ASG 4000	**56R.71** ASG 4000	**56Q.93** ASG 3000	**56Q.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**56R.93** ASG 4000	**56R.71** ASG 4000	**56Q.93** ASG 3000	**56Q.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**56R.93** ASG 4000	**56R.71** ASG 3000	**56Q.93** ASG 3000	**56Q.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	**56R.71** ASG 0106	**56R.71** ASG 0106	**56Q.71** ASG 0106	**56Q.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**56R.21** ASG 03		**56Q.21** ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**56R.65** ASG 0106	**56R.65** ASG 0106	**56Q.65** ASG 0106	**56Q.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**56R.65** ASG 0106	**56R.65** ASG 0106	**56Q.65** ASG 0106	**56Q.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**56R.65** ASG 0106	**56R.65** ASG 0106	**56Q.65** ASG 0106	**56Q.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**56R.65** ASG 3000	**56R.65** ASG 3000	**56Q.65** ASG 3000	**56Q.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**56R.65** ASG 3000	**56R.65** ASG 3000	**56Q.65** ASG 3000	**56Q.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**56R.93** ASG 3000	**56R.65** ASG 3000	**56Q.93** ASG 3000	**56Q.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**56R.93** ASG 3000	**56R.65** ASG 3000	**56Q.93** ASG 3000	**56Q.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**56R.93** ASG 3000	**56R.65** ASG 3000	**56Q.93** ASG 3000	**56Q.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**56R.65** ASG 3000	**56R.65** ASG 3000	**56Q.65** ASG 3000	**56Q.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**56R.65** ASG 3000	**56R.65** ASG 3000	**56Q.65** ASG 3000	**56Q.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**56R.93** ASG 3000	**56R.71** ASG 3000	**56Q.93** ASG 3000	**56Q.71** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**56R.71** ASG 3000	**56R.71** ASG 3000	**56Q.71** ASG 3000	**56Q.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**56R.17** ASG 0706	**56R.17** ASG 0706	**56Q.17** ASG 0706	**56Q.17** ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**56R.17** ASG 0706	**56R.17** ASG 0706	**56Q.17** ASG 0706	**56Q.17** ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**56R.17** ASG 0706	**56R.17** ASG 0706	**56Q.17** ASG 0706	**56Q.17** ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

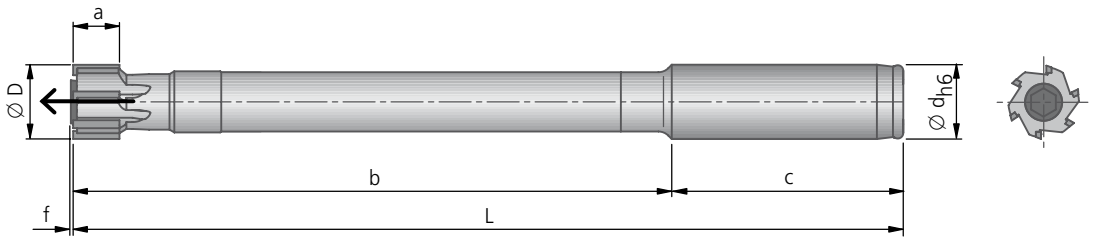
We are happy to take inquiries concerning tools for materials without a recommendation.



radially cooled,
for through hole machining



centrally cooled,
for blind hole machining



Custom reaming tool – selection options!

Order No.		Order No.		Cutting material, coating	Dimensions						
					Ø D	Cylindrical shank Ød×c	L	b	f ~	a ~	Z
56R.93	–	56Q.93	–	DST	5,600 - 8,899	12×45	130	85	0,1	9,5	4
56R.67	–	56Q.67	–	DJC	8,900 - 9,899	12×45	130	85	0,1	9,5	6
56R.65		56Q.65		DBG-P							
56R.37		56Q.37		DBG-N	9,900 - 15,899	12×45	160	115	0,1	9,5	6
56R.17		56Q.17		DBC	15,900 - 18,899	16×50	180	130	0,1	9,5	6
56R.71		56Q.71		TiN							
56R.21		56Q.21		HM	18,900 - 25,899	20×60	200	140	0,1	9,5	6

Order example:
Order No. 56R.93 · Bore diameter 21 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry)

Cutting speed and feed see pages 422-423.

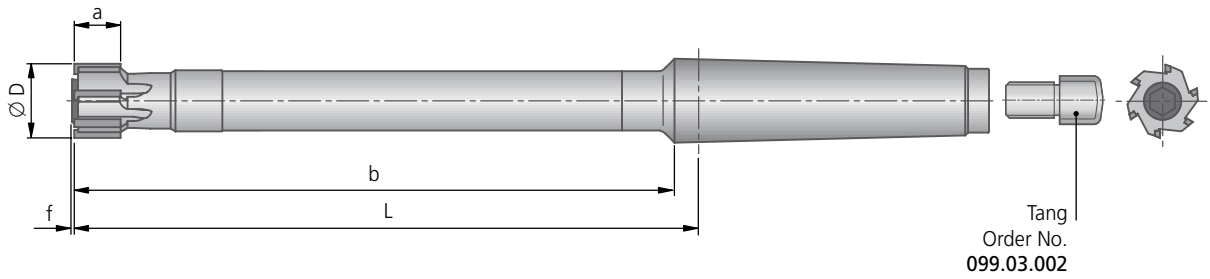
KOMET Monomax Ø 5,600 – 25,899 mm

Reaming tool

Material P M K N S

DIN 228 form A

conventional machining



Custom reaming tool – selection options!

Order No.	Cutting material, coating	Dimensions							
		Ø D	Morse taper MK	L	b	a ~	f ~	Z	kg ~
56X.21	HM	5,600-8,899	2	90	85	9,5	0,1	4	
		8,900-9,899	2	90	85	9,5	0,1	6	
		9,900-15,899	2	120	115	9,5	0,1	6	
		15,900-18,899	2	135	130	9,5	0,1	6	
		18,900-25,899	2	145	140	9,5	0,1	6	

Order example:
Order No. 56X.21 · Bore diameter 21 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry)

Design your own tool!

Is there no solution in the standard range? Are the dimensions not what you require?

Easy Special makes it possible for you create your own combination of standard modules in the widest variety of dimensions. Select the basic type, define the effective length and choose the desired adapter for the tool.

Examples:

Extra long Monomax reamer
with cylindrical shank

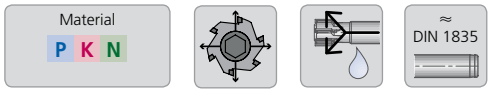
Monomax reamer
with DAH / HSK adaptor

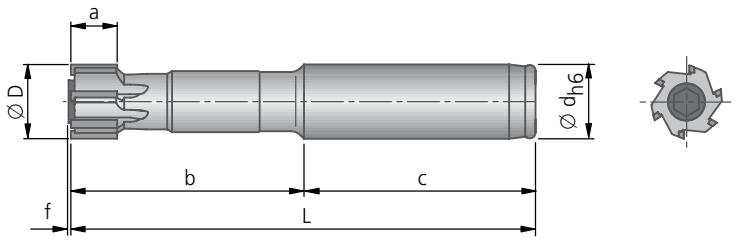


KOMET Monomax

Ø 6^{H7} – 20^{H7} mm

Reaming tool – short version





Diameter H7 – available from stock

Ø D	Ø d × c	L	b	f ~	a ~	Z	kg ~	P N [1] ASG 3000 Order No. DST	P N [1] ASG4000 Order No. DST	P K ASG 3000 Order No. DBG-P
6^{H7}	12 × 45	85	40	0,1	9,5	4		56J.93.06H7N	56J.93.06H7D	56J.65.06H7N
8^{H7}	12 × 45	85	40	0,1	9,5	4		56J.93.08H7N	56J.93.08H7D	56J.65.08H7N
10^{H7}	12 × 45	95	50	0,1	9,5	6		56J.93.10H7N	56J.93.10H7D	56J.65.10H7N
12^{H7}	12 × 45	95	50	0,1	9,5	6		56J.93.12H7N	56J.93.12H7D	56J.65.12H7N
14^{H7}	12 × 45	95	50	0,1	9,5	6		56J.93.14H7N	56J.93.14H7D	56J.65.14H7N
15^{H7}	12 × 45	95	50	0,1	9,5	6		56J.93.15H7N	56J.93.15H7D	56J.65.15H7N
16^{H7}	16 × 50	100	50	0,1	9,5	6		56J.93.16H7N	56J.93.16H7D	56J.65.16H7N
18^{H7}	16 × 50	100	50	0,1	9,5	6		56J.93.18H7N	56J.93.18H7D	56J.65.18H7N
20^{H7}	20 × 60	120	60	0,1	9,5	6		56J.93.20H7N	56J.93.20H7D	56J.65.20H7N

Diameter H7 – available from stock

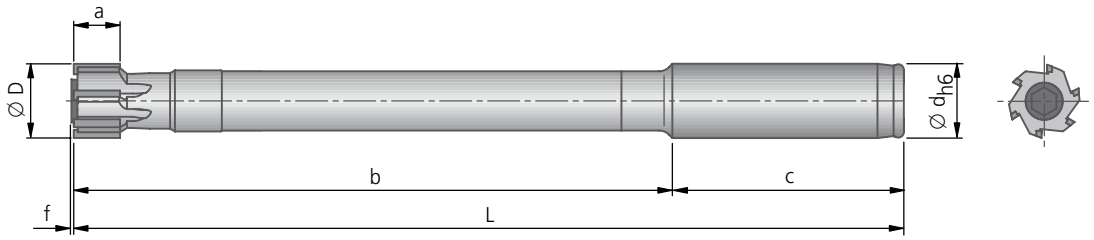
Ø D	Ø d × c	L	b	f ~	a ~	Z	kg ~	P N [2] P N [3] ASG 3000 Order No. TiN	P N [2] P N [3] ASG4000 Order No. TiN
6^{H7}	12 × 45	85	40	0,1	9,5	4		56J.71.06H7N	56J.71.06H7D
8^{H7}	12 × 45	85	40	0,1	9,5	4		56J.71.08H7N	56J.71.08H7D
10^{H7}	12 × 45	95	50	0,1	9,5	6		56J.71.10H7N	56J.71.10H7D
12^{H7}	12 × 45	95	50	0,1	9,5	6		56J.71.12H7N	56J.71.12H7D
14^{H7}	12 × 45	95	50	0,1	9,5	6		56J.71.14H7N	56J.71.14H7D
15^{H7}	12 × 45	95	50	0,1	9,5	6		56J.71.15H7N	56J.71.15H7D
16^{H7}	16 × 50	100	50	0,1	9,5	6		56J.71.16H7N	56J.71.16H7D
18^{H7}	16 × 50	100	50	0,1	9,5	6		56J.71.18H7N	56J.71.18H7D
20^{H7}	20 × 60	120	60	0,1	9,5	6		56J.71.20H7N	56J.71.20H7D

[1] material group 12.0 · [2] material group 12.1 · [3] material group 12.0 | 12.1

Cutting speed and feed see pages 422-423.

Material P K N

≈ DIN 1835



Diameter H7 – available from stock

Ø D	Ø d × c	L	b	f ~	a ~	Z	kg ~	P N 1) ASG 3000 Order No. DST	P N 1) ASG4000 Order No. DST	P K ASG 3000 Order No. DBG-P
6H7	12 × 45	130	85	0,1	9,5	4		56R.93.06H7N	56R.93.06H7D	56R.65.06H7N
8H7	12 × 45	130	85	0,1	9,5	4		56R.93.08H7N	56R.93.08H7D	56R.65.08H7N
10H7	12 × 45	160	115	0,1	9,5	6		56R.93.10H7N	56R.93.10H7D	56R.65.10H7N
12H7	12 × 45	160	115	0,1	9,5	6		56R.93.12H7N	56R.93.12H7D	56R.65.12H7N
14H7	12 × 45	160	115	0,1	9,5	6		56R.93.14H7N	56R.93.14H7D	56R.65.14H7N
15H7	12 × 45	160	115	0,1	9,5	6		56R.93.15H7N	56R.93.15H7D	56R.65.15H7N
16H7	16 × 50	180	130	0,1	9,5	6		56R.93.16H7N	56R.93.16H7D	56R.65.16H7N
18H7	16 × 50	180	130	0,1	9,5	6		56R.93.18H7N	56R.93.18H7D	56R.65.18H7N
20H7	20 × 60	200	140	0,1	9,5	6		56R.93.20H7N	56R.93.20H7D	56R.65.20H7N

Diameter H7 – available from stock

Ø D	Ø d × c	L	b	f ~	a ~	Z	kg ~	P N 2) P N 3) ASG 3000 Order No. TiN	P N 2) P N 3) ASG4000 Order No. TiN
6H7	12 × 45	130	85	0,1	9,5	4		56R.71.06H7N	56R.71.06H7D
8H7	12 × 45	130	85	0,1	9,5	4		56R.71.08H7N	56R.71.08H7D
10H7	12 × 45	160	115	0,1	9,5	6		56R.71.10H7N	56R.71.10H7D
12H7	12 × 45	160	115	0,1	9,5	6		56R.71.12H7N	56R.71.12H7D
14H7	12 × 45	160	115	0,1	9,5	6		56R.71.14H7N	56R.71.14H7D
15H7	12 × 45	160	115	0,1	9,5	6		56R.71.15H7N	56R.71.15H7D
16H7	16 × 50	180	130	0,1	9,5	6		56R.71.16H7N	56R.71.16H7D
18H7	16 × 50	180	130	0,1	9,5	6		56R.71.18H7N	56R.71.18H7D
20H7	20 × 60	200	140	0,1	9,5	6		56R.71.20H7N	56R.71.20H7D

1) material group 12.0 · 2) material group 12.1 · 3) material group 12.0 | 12.1

Cutting speed and feed see pages 422-423.

KOMET Monomax

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)												
						optimum · maximum							optimum · maximum					
						3×D Reamers short							5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200				100 140	30 45	120 160	120 160				80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200				100 140	7 9	120 160	120 160				80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)						30 45	5 7						30 45	5 7
	4.1			HSS															
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)														
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)							8 12							8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)			45 60			30 40	6 8			45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)			30 50			20 35	5 6			30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)			30 50			20 35	5 6			30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			150 220	150 220		80 130	15 25			120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			90 130	90 130		50 90	10 15			90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)			70 100	70 100		40 60	9 12			70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)			80 130	80 130		50 70	9 12			80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320					120 200	15 30	150 200					120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)						80 150	12 20						80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)					150 300		15 30					150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)					200 300		15 30					150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)					200 300		12 20					150 200		12 20
H	15.0	1400		hardened steels < 45 HRC															
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC															

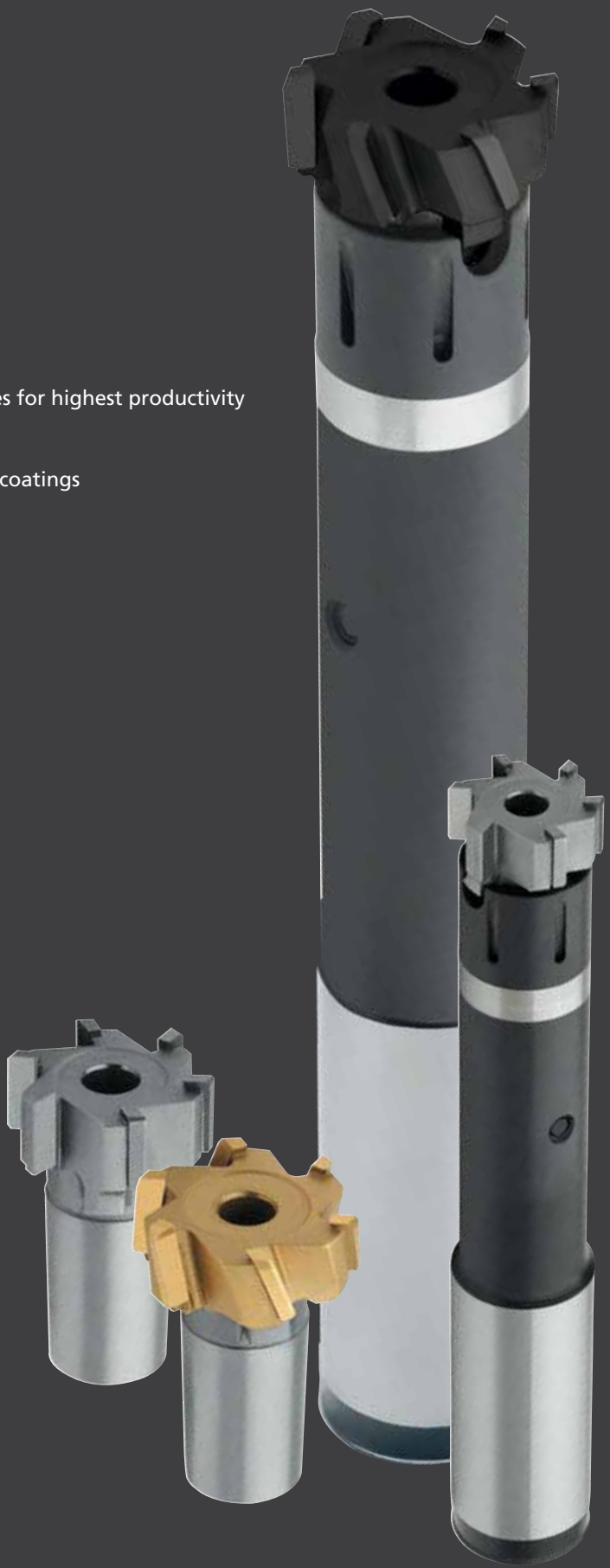
Reaming allowance in diameter (mm)

	Feed f (mm/rev)							
	optimum · maximum ASG3000, ASG0106, ASG03 ASG07, ASG02				optimum · maximum ASG4000, ASG09B ASG09, ASG1405, ASG1406			
	Ø 5,6 - 8,899 ✲ 4	Ø 8,9 - 12,00 ✲ 6	Ø 12,01 - 22,00 ✲ 6	Ø 22,01 - 25,899 ✲ 6	Ø 5,6 - 8,899 ✲ 4	Ø 8,9 - 12,00 ✲ 6	Ø 12,01 - 22,00 ✲ 6	Ø 22,01 - 25,899 ✲ 6
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30	**0,40** 0,60	**0,70** 0,90	**0,90** 1,20	**1,20** 1,50
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30	**0,40** 0,60	**0,70** 0,90	**0,90** 1,20	**1,20** 1,50
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30	**0,40** 0,60	**0,70** 0,90	**0,90** 1,20	**1,20** 1,50
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30	**0,40** 0,60	**0,70** 0,90	**0,90** 1,20	**1,20** 1,50
	0,20 0,30	**0,40** 0,50	**0,50** 0,70	**0,60** 0,90				
	0,20 0,30	**0,40** 0,50	**0,50** 0,70	**0,60** 0,90				
	0,20 0,30	**0,30** 0,40	**0,40** 0,60	**0,50** 0,70				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,80** 1,10				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,70** 1,00				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,70** 1,00				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,70** 1,00				
	0,40 0,60	**0,70** 0,90	**0,90** 1,20	**1,10** 1,50				
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30				
	0,40 0,60	**0,70** 0,90	**0,90** 1,20	**1,10** 1,50				
	0,40 0,60	**0,70** 0,90	**0,90** 1,20	**1,10** 1,50				
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,70** 1,00				
	0,30 0,40	**0,40** 0,60	**0,60** 0,80	**0,70** 1,00				
	0,40 0,60	**0,60** 0,90	**0,80** 1,20	**1,10** 1,50				
	0,30 0,50	**0,50** 0,70	**0,70** 1,00	**0,90** 1,30				
	0,40 0,60	**0,60** 0,90	**0,80** 1,20	**1,10** 1,50				
	0,40 0,60	**0,60** 0,90	**0,80** 1,20	**1,10** 1,50				
	0,40 0,60	**0,60** 0,90	**0,80** 1,20	**1,10** 1,50				
	0,10 - 0,20	0,10 - 0,30	0,20 - 0,30	0,20 - 0,40	0,10 - 0,20	0,10 - 0,30	0,20 - 0,30	0,20 - 0,40

KOMET Rapid set head

BENEFITS for you:

- Modular tooling system
- Simple and fastchangeability
- Left hand fluted cuttingblades for highest productivity
- Perfect accuracy
- Various cutting materialsand coatings



KOMET

KOMET Rapid set head

	Page
Replaceable insert	
∅ 9,60 – 60,00 mm	426 – 427
Holder	428
Assembly instructions	429
Recommended cutting data	430 – 431

KOMET Rapid set head

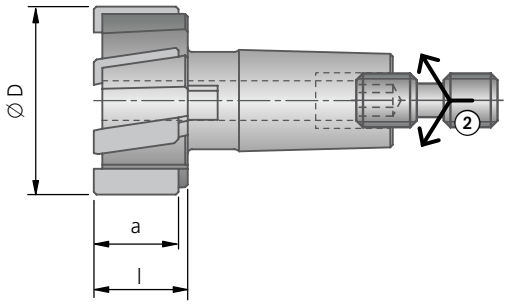
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining			
						Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**340.92** ASG 05	**340.70** ASG 05	**340.93** ASG 3000	**340.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**340.92** ASG 05	**340.70** ASG 05	**340.93** ASG 3000	**340.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**340.92** ASG 05	**340.70** ASG 05	**340.93** ASG 3000	**340.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**340.92** ASG 05	**340.71** ASG 3000	**340.93** ASG 3000	**340.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	**340.71** ASG 0106	**340.71** ASG 0106	**340.71** ASG 0106	**340.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**340.21** ASG 03	**340.21** ASG 03	**340.21** ASG 03	**340.21** ASG 03
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106	**340.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**340.93** ASG 3000	**340.65** ASG 3000	**340.93** ASG 3000	**340.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**340.93** ASG 3000	**340.65** ASG 3000	**340.93** ASG 3000	**340.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**340.93** ASG 3000	**340.65** ASG 3000	**340.93** ASG 3000	**340.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000	**340.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**340.71** ASG 3000	**340.71** ASG 3000	**340.71** ASG 3000	**340.71** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**340.71** ASG 3000	**340.71** ASG 3000	**340.71** ASG 3000	**340.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**340.21** ASG 02		**340.21** ASG 02	
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**340.21** ASG 3000		**340.21** ASG 3000	
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**340.21** ASG 3000		**340.21** ASG 3000	
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

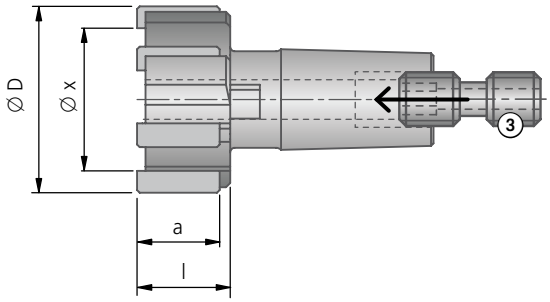
We are happy to take inquiries concerning tools for materials without a recommendation.

Material P M K N S

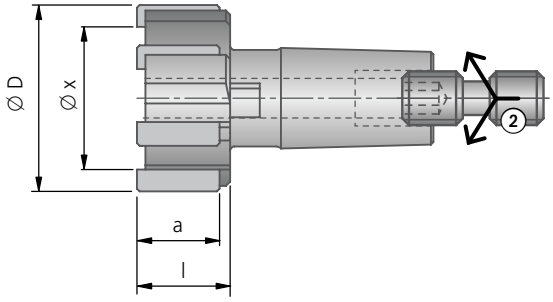
radially cooled, left slant,
for through hole machining



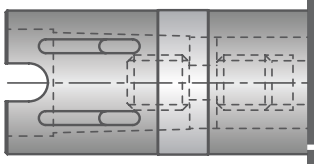
centrally cooled, straight,
for blind hole machining



radially cooled, straight,
for through hole machining



Holder
▸ 428



Custom reaming head – selection options!

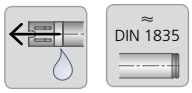
Order No.		Order No.		Cutting material, coating	Dimensions					
					Ø D	min. diameter for face machining Ø x ~	a ~	l ~	Z	Z
340.92	–	340.93	–	DST	9,60 – 12,59	ØD – 3,1	9,5	11	4	4
340.66	–	340.67	–	DJC	12,60 – 15,59	ØD – 3,6	10,5	11	4	4
340.62		340.65		DBG-P	15,60 – 18,59	ØD – 4,6	10,5	11	4	6
340.37		340.38		DBG-N	18,60 – 24,00	ØD – 5,1	10,5	11	6	6
340.70		340.71		TiN	24,01 – 30,10	ØD – 6,0	10,5	11	6	6
340.20		340.21		HM	30,11 – 40,00	ØD – 7,5	16	17	6	6
					40,01 – 60,00	ØD – 8,0	16	17	6	6

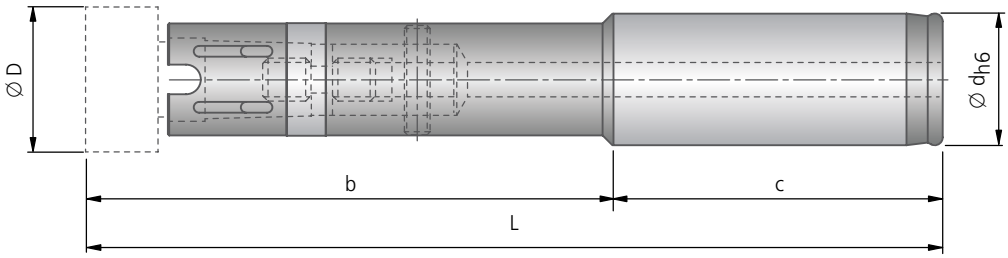
Order example:
Order No. 340.92 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG05 (Cutting geometry).

Cutting speed and feed see pages 430 - 431.

KOMET Rapid set head

Holder





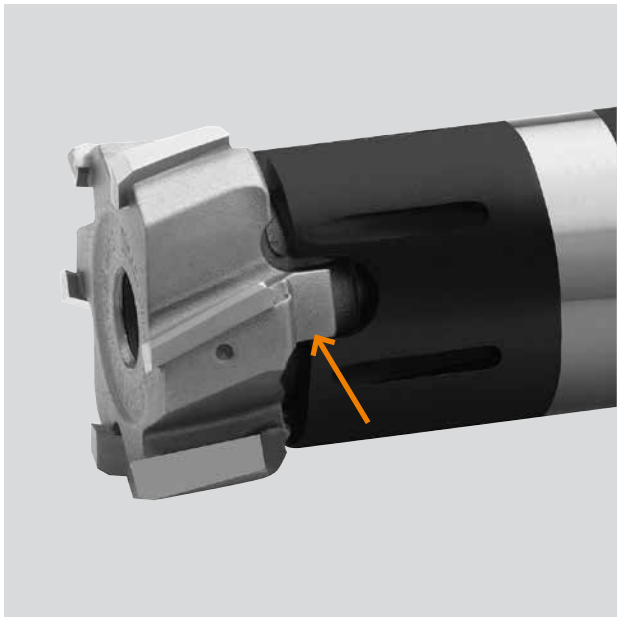
	short version						long version					
for Ø D	Order No.	L	b	c	d h6	kg	Order No.	L	b	c	d h6	kg
9,60 – 12,59	**540.66.000**	95	50	45	12		**540.36.000**	158	113	45	12	
12,60 – 15,59	**540.66.001**	108	60	48	16		**540.36.001**	159	111	48	16	
15,60 – 18,59	**540.66.002**	110	60	50	20		**540.36.002**	171	121	50	20	
18,60 – 24,00	**540.66.003**	130	80	50	20		**540.36.003**	191	141	50	20	
24,01 – 30,10	**540.66.004**	158	98	60	25		**540.36.004**	219	159	60	25	
30,11 – 40,00	**540.66.005**	164	104	60	25		**540.36.005**	225	165	60	25	
40,01 – 50,70	**540.66.006**	184	104	80	32		**540.36.006**	283	203	80	32	
50,71 – 60,00	**540.66.007**	188,5	108,5	80	32		**540.36.007**	288,5	208,5	80	32	



⚠ Each Rapid set head is delivered with slightly greased taper. Do not wipe off! Taper must be slightly greased with copper grease (Order-No.: 15K.10.10001)!

Clean taper in holder thoroughly → free of grease

Differential screw one rotation into the Head (counter-clockwise thread).



Before tightening turn the drive keys of the rapid set head against the direction of machining until it hits the holder.

Dia. range	Starting torque M (Nm)
12,60 – 15,59	0,7 – 0,9
15,60 – 18,59	1,1 – 1,4
18,60 – 24,00	1,8 – 2,3
24,01 – 40,00	3,0 – 3,8
40,01 – 60,00	5,2 – 6,6



Tightening the left-/right screw.
Observe the specified starting torque M in the index table.

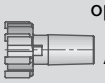
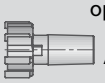
Rapid Set Heads up to Diameter 12,59 mm are assembled with a clamping screw at the back of the holder. The screw has a counter-clockwise thread.

KOMET Rapid set head

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)											
						optimum · maximum						optimum · maximum					
						3×D Reamers short						5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DBG-P	DBG-N	TiN	HM	DST	DJC	DBG-P	DBG-N	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200			100 140	8 10	120 160	120 160			80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200			100 140	8 10	120 160	120 160			80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200			100 140	30 45	120 160	120 160			80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200			100 140	7 9	120 160	120 160			80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)					30 45	5 7					30 45	5 7
	4.1			HSS													
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)												
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)						8 12						8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)			45 60		30 40	6 8			45 60		30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)			30 50		20 35	5 6			30 50		20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)			30 50		20 35	5 6			30 50		20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			150 220	150 220	80 130	15 25			120 150	120 150	80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			90 130	90 130	50 90	10 15			90 120	90 120	50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300		12 18	150 180	150 180	150 180	150 180		12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250		12 18	120 160	120 160	120 160	120 160		12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180		12 15	120 150	120 150	120 150	120 150		12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)			70 100	70 100	40 60	9 12			70 100	70 100	40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)			80 130	80 130	50 70	9 12			80 130	80 130	50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320				120 200	15 30	150 200				120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)					80 150	12 20					80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)						15 30						15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)						15 30						15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)						12 20						12 20
H	15.0	1400		hardened steels < 45 HRC													
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC													

Reaming allowance in diameter (mm)

	Feed f (mm/rev)									
	optimum · maximum  ASG3000, ASG0106, ASG03, ASG07, ASG02			optimum · maximum  ASG4000, ASG09B, ASG1402 ASG09, ASG1405, ASG1406			optimum · maximum  ASG05, ASG0502, ASG04			
	Ø 9,60 - 15,59 ✲ 4	Ø 15,60 - 30,10 ✲ 6	Ø 30,11 - 60 ✲ 6	Ø 9,60 - 15,59 ✲ 4	Ø 15,60 - 30,10 ✲ 6	Ø 30,11 - 60 ✲ 6	Ø 9,60 - 12,59 ✲ 4	Ø 12,60 - 18,59 ✲ 4	Ø 18,60 - 30,10 ✲ 6	Ø 30,11 - 60 ✲ 6
	0,30 0,50	0,90 1,30	1,10 1,50	0,40 0,60	1,20 1,50	1,40 1,90	0,60 0,80	0,80 1,00	1,20 1,50	1,40 1,90
	0,30 0,50	0,90 1,30	1,10 1,50	0,40 0,60	1,20 1,50	1,40 1,90	0,60 0,80	0,80 1,00	1,20 1,50	1,40 1,90
	0,30 0,50	0,90 1,30	1,10 1,50	0,40 0,60	1,20 1,50	1,40 1,90	0,60 0,80	0,80 1,00	1,20 1,50	1,40 1,90
	0,30 0,50	0,90 1,30	1,10 1,50	0,40 0,60	1,20 1,50	1,40 1,90	0,60 0,80	0,80 1,00	1,20 1,50	1,40 1,90
	0,20 0,30	0,60 0,90	0,70 1,10							
	0,20 0,30	0,60 0,90	0,70 1,10							
	0,20 0,30	0,50 0,70	0,60 0,90							
	0,30 0,40	0,80 1,10	0,90 1,30							
	0,30 0,40	0,70 1,00	0,90 1,20							
	0,30 0,40	0,70 1,00	0,90 1,20							
	0,30 0,40	0,70 1,00	0,90 1,20							
	0,40 0,60	1,10 1,50	1,30 1,90							
	0,30 0,50	0,90 1,30	1,10 1,50							
	0,40 0,60	1,10 1,50	1,30 1,90							
	0,40 0,60	1,10 1,50	1,30 1,90							
	0,30 0,50	0,90 1,30	1,10 1,50							
	0,30 0,40	0,70 1,00	0,90 1,20							
	0,30 0,40	0,70 1,00	0,90 1,20							
	0,40 0,60	1,10 1,50	1,20 1,70							
	0,30 0,50	0,90 1,30	1,00 1,40							
	0,30 0,50	0,90 1,30	1,10 1,50							
	0,40 0,60	1,10 1,50	1,20 1,90							
	0,40 0,60	1,10 1,50	1,20 1,90							
	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40	0,20 - 0,40

KOMET hi.max

With the completely redeveloped KOMET hi.max monoblock tool, we have succeeded in producing the perfect upgrade to our proven KOMET reaming tools. The new KOMET hi.max stands out thanks to its extremely high level of stability, which guarantees reliable use and excellent machining performance.

With the KOMET hi.max, it is no longer necessary to fit individual tool parts (thanks to the monoblock design). This makes the tool significantly easier to handle and use.

BENEFITS for you:

- High machining performance due to combination of cutting topography and cutting material
- Diameter is easy to measure thanks to the cutting edges arranged opposite one another in pairs
- Carbide and cermet versions (uncoated and coated) available for machining various material groups in accordance with the ISO standard
- EASY-TO-USE principle: No accessories, no adjusting, no fitting of individual parts
- Optimum stability and process capability thanks to monoblock design and solid carbide or solid cement cutter part
- Low-cost H7 preferred range with universal geometry for machining through holes and blind holes
- High-performance Cermet H7 preferred range with special geometry for machining steel
- Cylindrical shank similar to DIN 1835
- Comes in 3×D and 5×D versions
- Dimeter range 12 - 30 mm



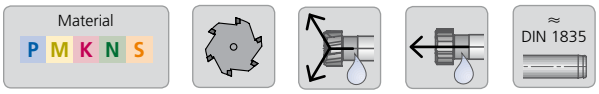
KOMET hi.max

	Page
Reaming tool – short version	
∅ 12,000 – 30,000 mm	434 – 435
Reaming tool – long version	
∅ 12,000 – 30,000 mm	436 – 437
Diameter H7 – available from stock	438 – 439
Recommended cutting data	440 – 441

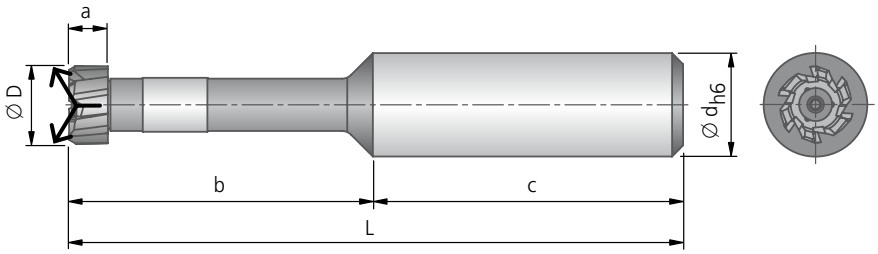
Tool recommendation: Reaming tool – short version

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining									
						Order No. ASG = cutting geometry									
						Universal	Special	Universal	Special	Universal	Special	Universal	Special	Universal	Special
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	58N.58 ASG 2210	58N.92 ASG 05	58N.58 ASG 2210		58M.57 ASG 2110	58M.93 ASG 3000	58M.57 ASG 2110		58N.57 ASG 2110	58N.93 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	58N.58 ASG 2210	58N.92 ASG 05	58N.58 ASG 2210		58M.57 ASG 2110	58M.93 ASG 3000	58M.57 ASG 2110		58N.57 ASG 2110	58N.93 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	58N.58 ASG 2210	58N.92 ASG 05	58N.58 ASG 2210		58M.57 ASG 2110	58M.93 ASG 3000	58M.57 ASG 2110		58N.57 ASG 2110	58N.93 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	58N.58 ASG 2210	58N.92 ASG 05	58N.58 ASG 2210		58M.57 ASG 2110	58M.93 ASG 3000	58M.57 ASG 2110		58N.57 ASG 2110	58N.93 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	58N.58 ASG 2210	58N.93 ASG 3000	58N.58 ASG 2210		58M.57 ASG 2110	58M.93 ASG 3000	58M.57 ASG 2110		58N.57 ASG 2110	58N.93 ASG 3000
P	4.1			HSS											
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)										
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	58N.21 ASG 03				58M.21 ASG 03					
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	58N.65 ASG 0106		58N.65 ASG 0106		58M.65 ASG 0106		58M.65 ASG 0106		58N.65 ASG 0106	
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	58N.65 ASG 0106		58N.65 ASG 0106		58M.65 ASG 0106		58M.65 ASG 0106		58N.65 ASG 0106	
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	58N.65 ASG 0106		58N.65 ASG 0106		58M.65 ASG 0106		58M.65 ASG 0106		58N.65 ASG 0106	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	58N.58 ASG 2210	58N.65 ASG 2350	58N.58 ASG 2210	58N.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58M.57 ASG 2110	58M.65 ASG 2350	58N.57 ASG 2110	58N.65 ASG 2350
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	58N.58 ASG 2210	58N.17 ASG 2270	58N.58 ASG 2210	58N.17 ASG 2270	58M.57 ASG 2110	58M.17 ASG 2170	58M.57 ASG 2110	58M.17 ASG 2170	58N.57 ASG 2110	58N.17 ASG 2170
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	58N.58 ASG 2210	58N.17 ASG 2270	58N.58 ASG 2210	58N.17 ASG 2270	58M.57 ASG 2110	58M.17 ASG 2170	58M.57 ASG 2110	58M.17 ASG 2170	58N.57 ASG 2110	58N.17 ASG 2170
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		58N.17 ASG 2270		58N.17 ASG 2270		58M.17 ASG 2170		58M.17 ASG 2170		58N.17 ASG 2170
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		58N.17 ASG 2270		58N.17 ASG 2270		58M.17 ASG 2170		58M.17 ASG 2170		58N.17 ASG 2170
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)		58N.17 ASG 2270		58N.17 ASG 2270		58M.17 ASG 2170		58M.17 ASG 2170		58N.17 ASG 2170
H	15.0	1400		hardened steels < 45 HRC											
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC											

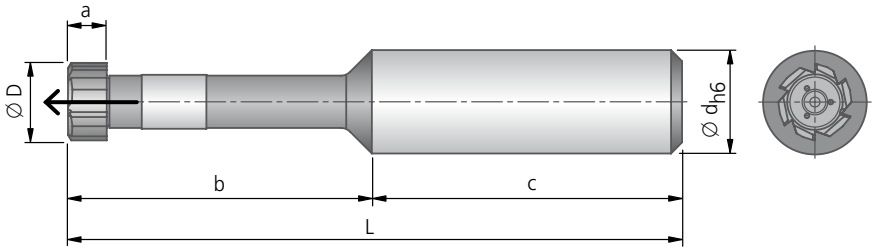
We are happy to take inquiries concerning tools for materials without a recommendation.



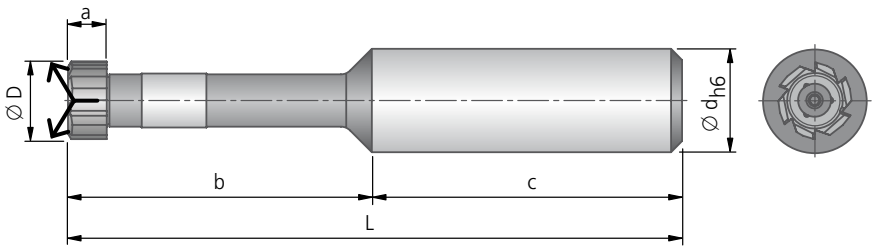
radially cooled, left slant,
for through hole machining



centrally cooled, straight,
for blind hole machining



radially cooled, straight,
for step hole



Custom reaming tool – selection options!

Order No.			Order No.		Cutting material, coating
58N.92	–	58N.93	58M.93	–	DST
58N.82	–	58N.85	58M.85	–	DJP
58N.62		58N.65	58M.65		DBG-P
58N.58		58N.57	58M.57		DBG-U
58N.17			58M.17		DBC
58N.21			58M.21		HM

Dimensions						
Ø D	Cylindrical shank Ød×c	L	b	a ~	Z	kg ~
12,000 - 14,099	16 × 48	95	47	6	6	0,09
14,100 - 16,099	16 × 48	95	47	6	6	0,09
16,100 - 18,099	16 × 48	100	52	6	6	0,09
18,100 - 20,099	20 × 50	120	70	6	8	0,11
20,100 - 22,099	20 × 50	120	70	6	8	0,18
22,100 - 24,099	25 × 56	120	64	6	8	0,18
24,100 - 26,099	25 × 56	120	64	6	8	0,32
26,100 - 28,099	25 × 56	135	79	7	8	0,32
28,100 - 30,000	25 × 56	135	79	7	8	0,45

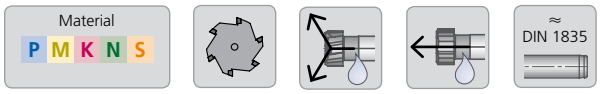
Order example:
Order No. 58N.58 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG2210 (Cutting geometry)

Cutting speed and feed see pages 440-441.

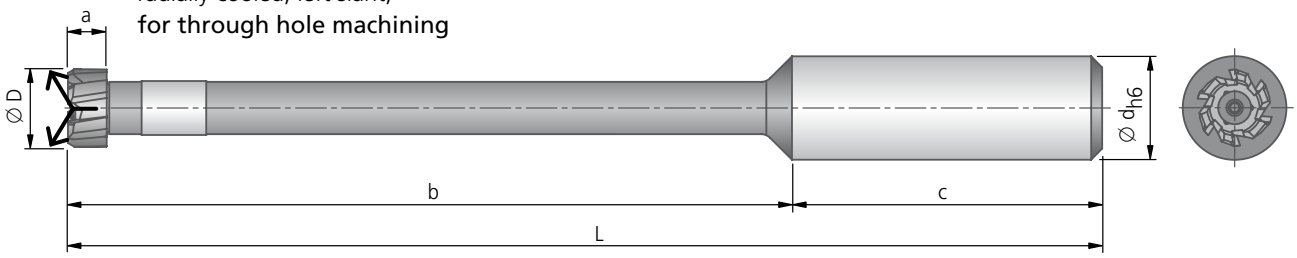
Tool recommendation: Reaming tool – long version

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining									
						Order No. ASG = cutting geometry									
						Universal	Special	Universal	Special	Universal	Special	Universal	Special	Universal	Special
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	58U.58 ASG 2210	58U.92 ASG 05	58U.58 ASG 2210		58T.57 ASG 2110	58T.93 ASG 3000	58T.57 ASG 2110		58U.57 ASG 2110	58U.93 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	58U.58 ASG 2210	58U.92 ASG 05	58U.58 ASG 2210		58T.57 ASG 2110	58T.93 ASG 3000	58T.57 ASG 2110		58U.57 ASG 2110	58U.93 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	58U.58 ASG 2210	58U.92 ASG 05	58U.58 ASG 2210		58T.57 ASG 2110	58T.93 ASG 3000	58T.57 ASG 2110		58U.57 ASG 2110	58U.93 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	58U.58 ASG 2210	58U.92 ASG 05	58U.58 ASG 2210		58T.57 ASG 2110	58T.93 ASG 3000	58T.57 ASG 2110		58U.57 ASG 2110	58U.93 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	58U.58 ASG 2210	58U.93 ASG 3000	58U.58 ASG 2210		58T.57 ASG 2110	58T.93 ASG 3000	58T.57 ASG 2110		58U.57 ASG 2110	58U.93 ASG 3000
P	4.1			HSS											
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)										
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	58U.21 ASG 03				58T.21 ASG 03					
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	58U.65 ASG 0106		58U.65 ASG 0106		58T.65 ASG 0106		58T.65 ASG 0106		58U.65 ASG 0106	
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	58U.65 ASG 0106		58U.65 ASG 0106		58T.65 ASG 0106		58T.65 ASG 0106		58U.65 ASG 0106	
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	58U.65 ASG 0106		58U.65 ASG 0106		58T.65 ASG 0106		58T.65 ASG 0106		58U.65 ASG 0106	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	58U.58 ASG 2210	58U.65 ASG 2350	58U.58 ASG 2210	58U.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58T.57 ASG 2110	58T.65 ASG 2350	58U.57 ASG 2110	58U.65 ASG 2350
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	58U.58 ASG 2210	58U.17 ASG 2270	58U.58 ASG 2210	58U.17 ASG 2270	58T.57 ASG 2110	58T.17 ASG 2170	58T.57 ASG 2110	58T.17 ASG 2170	58U.57 ASG 2110	58U.17 ASG 2170
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	58U.58 ASG 2210	58U.17 ASG 2270	58U.58 ASG 2210	58U.17 ASG 2270	58T.57 ASG 2110	58T.17 ASG 2170	58T.57 ASG 2110	58T.17 ASG 2170	58U.57 ASG 2110	58U.17 ASG 2170
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		58U.17 ASG 2270		58U.17 ASG 2270		58T.17 ASG 2170		58T.17 ASG 2170		58U.17 ASG 2170
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		58U.17 ASG 2270		58U.17 ASG 2270		58T.17 ASG 2170		58T.17 ASG 2170		58U.17 ASG 2170
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)		58U.17 ASG 2270		58U.17 ASG 2270		58T.17 ASG 2170		58T.17 ASG 2170		58U.17 ASG 2170
H	15.0	1400		hardened steels < 45 HRC											
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC											

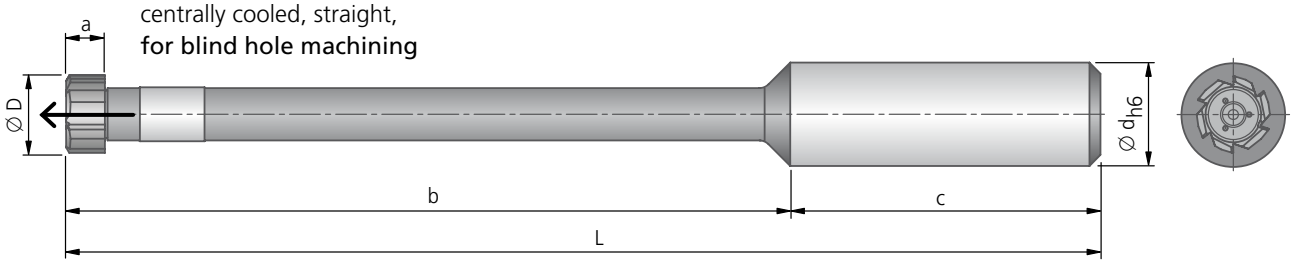
We are happy to take inquiries concerning tools for materials without a recommendation.



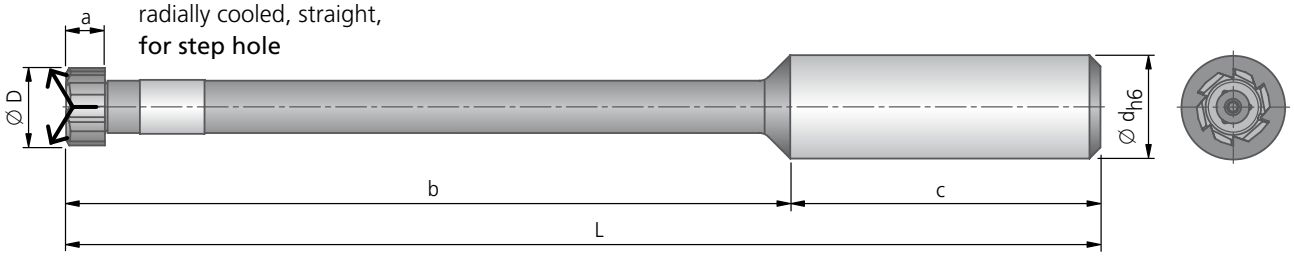
radially cooled, left slant,
for through hole machining



centrally cooled, straight,
for blind hole machining



radially cooled, straight,
for step hole



Custom reaming tool – selection options!

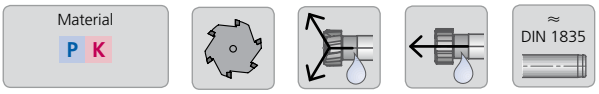
Order No.			Order No.		Cutting material, coating
58U.92	–	58U.93	58T.93	–	DST
58U.82	–	58U.85	58T.85	–	DJP
58U.62		58U.65	58T.65		DBG-P
58U.58		58U.57	58T.57		DBG-U
58U.17			58T.17		DBC
58U.21			58T.21		HM

Dimensions						
Ø D	Cylindrical shank Ød×c	L	b	a ~	Z	kg ~
12,000 - 14,099	16 × 48	160	112	6	6	0,13
14,100 - 16,099	16 × 48	160	112	6	6	0,15
16,100 - 18,099	16 × 48	180	132	6	6	0,17
18,100 - 20,099	20 × 50	200	150	6	8	0,20
20,100 - 22,099	20 × 50	200	150	6	8	0,25
22,100 - 24,099	25 × 56	200	144	6	8	0,35
24,100 - 26,099	25 × 56	200	144	6	8	0,45
26,100 - 28,099	25 × 56	210	154	7	8	0,55
28,100 - 30,000	25 × 56	210	154	7	8	0,60

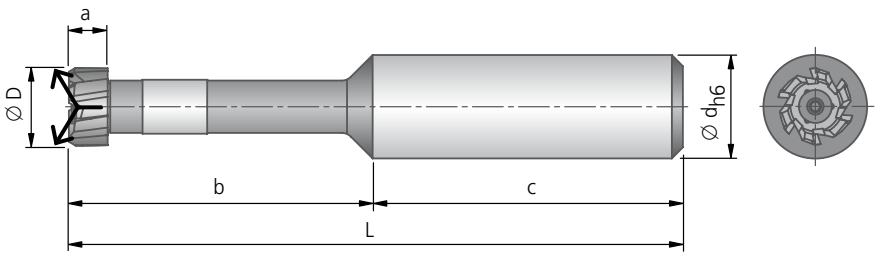
Order example:
Order No. 58U.58 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG2210 (Cutting geometry)

Cutting speed and feed see pages 440-441.

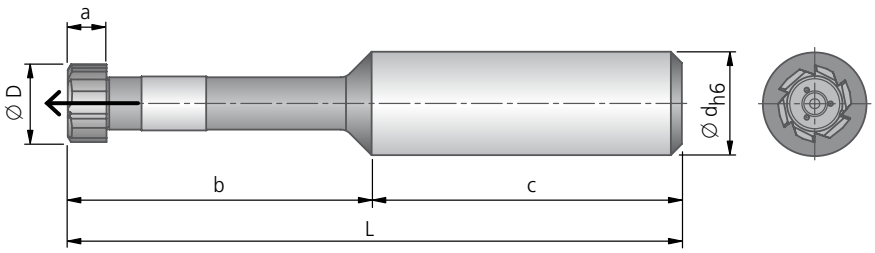
Universal reamer



radially cooled, left slant,
for through hole machining

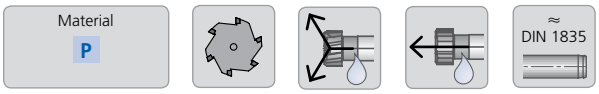


centrally cooled, straight,
for blind hole machining

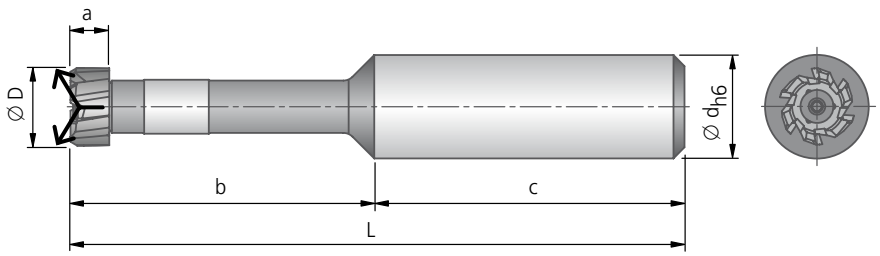


Diameter H7 – available from stock								
							P K	P K
							30° ASG 2210	60° ASG 2110
Ø D	Ød×c	L	b	a ~	Z	kg ~	Order No. DBG-U	Order No. DBG-U
12^{H7}	16 × 48	95	47	6	6	0,092	58N.58.12H7	58M.57.12H7
14^{H7}	16 × 48	95	47	6	6	0,093	58N.58.14H7	58M.57.14H7
15^{H7}	16 × 48	95	47	6	6	0,098	58N.58.15H7	58M.57.15H7
16^{H7}	16 × 48	95	47	6	6	0,099	58N.58.16H7	58M.57.16H7
18^{H7}	16 × 48	100	52	6	6	0,113	58N.58.18H7	58M.57.18H7
20^{H7}	20 × 50	120	70	6	8	0,184	58N.58.20H7	58M.57.20H7
22^{H7}	20 × 50	120	70	6	8	0,186	58N.58.22H7	58M.57.22H7
24^{H7}	25 × 56	120	64	6	8	0,319	58N.58.24H7	58M.57.24H7
25^{H7}	25 × 56	120	64	6	8	0,320	58N.58.25H7	58M.57.25H7
26^{H7}	25 × 56	120	64	6	8	0,321	58N.58.26H7	58M.57.26H7
28^{H7}	25 × 56	135	79	7	8	0,446	58N.58.28H7	58M.57.28H7
30^{H7}	25 × 56	135	79	7	8	0,452	58N.58.30H7	58M.57.30H7

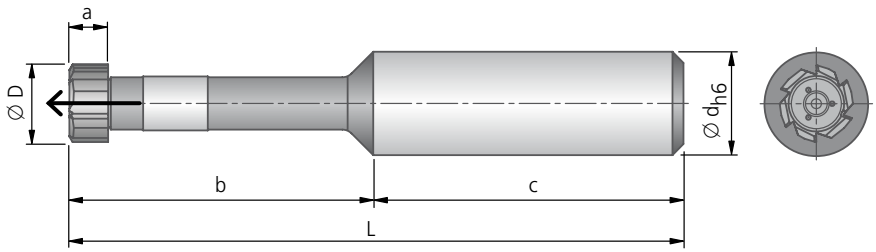
Cutting speed and feed see pages 440-441.



radially cooled, left slant,
for through hole machining



centrally cooled, straight,
for blind hole machining



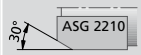
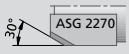
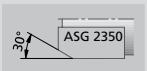
Diameter H7 – available from stock								
							P ASG 05 Order No. DST	P ASG 3000 Order No. DST
Ø D	Ød×c	L	b	a ~	Z	kg ~		
12H7	16 × 48	95	47	6	6	0,092	58N.92.12H7	58M.93.12H7
14H7	16 × 48	95	47	6	6	0,093	58N.92.14H7	58M.93.14H7
15H7	16 × 48	95	47	6	6	0,098	58N.92.15H7	58M.93.15H7
16H7	16 × 48	95	47	6	6	0,099	58N.92.16H7	58M.93.16H7
18H7	16 × 48	100	52	6	6	0,113	58N.92.18H7	58M.93.18H7
20H7	20 × 50	120	70	6	8	0,184	58N.92.20H7	58M.93.20H7
22H7	20 × 50	120	70	6	8	0,186	58N.92.22H7	58M.93.22H7
24H7	25 × 56	120	64	6	8	0,319	58N.92.24H7	58M.93.24H7
25H7	25 × 56	120	64	6	8	0,320	58N.92.25H7	58M.93.25H7
26H7	25 × 56	120	64	6	8	0,321	58N.92.26H7	58M.93.26H7
28H7	25 × 56	135	79	7	8	0,446	58N.92.28H7	58M.93.28H7
30H7	25 × 56	135	79	7	8	0,452	58N.92.30H7	58M.93.30H7

Cutting speed and feed see pages 440-441.

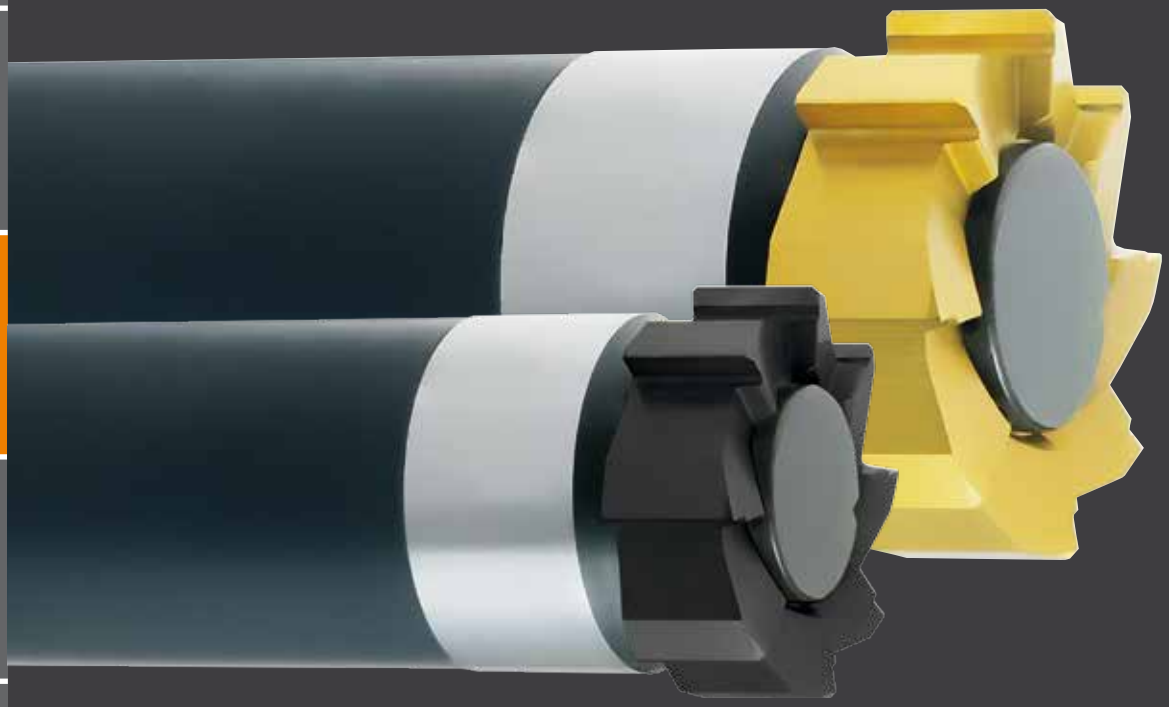
Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)											
						optimum · maximum						optimum · maximum					
						3×D Reamers short						5×D Reamers long					
Material group	Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN		DST	DJP	DBG-P	DBG-U	DBC	HM	DST	DJP	DBG-P	DBG-U	DBC	HM
P 1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)		150 200	150 200		150 200			120 160	120 160		120 160		
P 2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)		150 200	150 200		150 200			120 160	120 160		120 160		
P 2.1	< 500		lead alloys	1.0718 (11SMnPb30)		150 200	150 200		150 200			120 160	120 160		120 160		
P 3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)		150 200	150 200		150 200			120 160	120 160		120 160		
P 4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)		150 200	150 200		150 200			120 160	120 160		120 160		
P 4.1			HSS														
S 5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)													
S 5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)							8 12						8 12
M 6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)				40 60						40 60			
M 6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				30 50						30 50			
M 7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)				30 50						30 50			
K 8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)				180 210	120 180					120 180	120 180		
K 8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)				90 130	90 130					90 130	90 130		
K 9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)		175 300	175 300	200 250	200 250			150 180	150 180	150 180	150 180		
K 9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)		150 250	150 250	200 250	200 250			120 160	120 160	150 180	150 180		
K 10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)		120 180	120 180	120 150	120 150			120 150	120 150	120 150	120 150		
K 10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)				90 130	90 130					90 130	90 130		
K 10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)				90 130	90 130					90 130	90 130		
N 12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)					150 250	150 250					120 180	120 180	
N 12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)					100 150	100 150					100 150	100 150	
N 13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)						200 300						150 200	
N 13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)						200 300						150 200	
N 14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)						200 250						150 200	
H 15.0	1400		hardened steels < 45 HRC														
H 16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC														

Reaming allowance in diameter (mm)

	Feed f (mm/rev)																	
	optimum · maximum																	
																		
	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8	Ø 12-18,099 ✲6	Ø 18,1-30,0 ✲8
	1,20 1,50	**1,80** 2,20	**1,20** 1,50	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,20** 1,50	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,10** 1,40	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,10** 1,40	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	0,90 1,15	**1,20** 1,50			**0,90** 1,15	**1,20** 1,50											**0,60** 0,80	**1,00** 1,40
															0,70 1,00	**1,2** 1,60		
													0,70 0,90	**1,20** 1,60				
													0,70 0,90	**1,20** 1,60				
													0,70 0,90	**1,20** 1,60				
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,10 **1,70**	**1,50** 2,30			**1,10** 1,70	**1,50** 2,30					**1,10** 1,70	**1,50** 2,30						
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,10 1,70	**1,50** 2,30			**1,10** 1,70	**1,50** 2,30					**1,10** 1,70	**1,50** 2,30						
	0,90 1,30	**1,20** 1,80			**0,90** 1,30	**1,20** 1,80					**0,90** 1,30	**1,20** 1,80						
	0,90 1,30	**1,20** 1,80			**0,90** 1,30	**1,20** 1,80					**0,90** 1,30	**1,20** 1,80						
	1,20 1,90	**1,70** 2,50			**1,20** 1,90	**1,70** 2,50	**1,20** 1,80	**1,60** 2,40	**1,20** 1,80	**1,60** **2,40**								
	1,00 1,50	**1,40** 2,10			**1,00** 1,50	**1,40** 2,10	**0,90** 1,40	**1,20** 1,90	**0,90** 1,40	**1,20** 1,90								
							1,20 1,80	**1,60** 2,40	**1,20** 1,80	**1,60** 2,40								
							1,30 2,00	**1,70** 2,70	**1,30** 2,00	**1,70** 2,70								
							1,30 2,00	**1,70** 2,70	**1,30** 2,00	**1,70** 2,70								
	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,3	0,20 - 0,30	0,3	0,20 - 0,30	0,3	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40

KOMET REAMAX



The new dimension in high performance reaming

More performance. More flexibility.

The modular reaming tool consists of a tool holder with cylindrical shaft and the KOMET REAMAX-replaceable insert. A high precision short taper ensures the connection between the replaceable insert and the collet. Precise repeatability of the diameters and an immediate continuation of machining with a new insert are guaranteed.

The high-speed reaming tools KOMET REAMAX provide maximum cutting capacity through multiple cutting edges and offers all the advantages of replaceable cutting inserts in one system.

- Maximum efficiency and complete process reliability
- Low vibrations during maximum cutting speed
- No re-setting when blades are replaced
- Maximum flexibility for combining cutting materials and coatings along with diameters and geometry of the replaceable inserts are available and can be chosen for each specific application
- Made to measure, available within the shortest time
- Precise repeatability
- Maximum replacement accuracy
- Designed especially for inner coolant supply and minimal lubrication

Simple possible replacement

The KOMET REAMAX replaceable insert is fixed on to the tool holder with a tie-rod and a clamping nut. There is no need for time and cost intensive setting to the final size as the inserts are manufactured specifically for each application to the exact diameter and tolerance.

With KOMET REAMAX replacement time is no idle time.

Application:

- All current materials
- Through holes and blind bores
- 3 × D and 5 × D
- High speed – up to 300 m/min
- Feed – up to 2.4 mm/rev

BENEFITS for you:

- Precision ground for guaranteed qualityModular tool system
- Maximum stability through tensile stress for the most demanding machining tasks
- Extremely high repeatability through a tapered flat bearing face
- Extremely high machining performance for the greatest efficiency
- Minimum quantity lubrication (MQL) optimised for environmentally friendly use

KOMET REAMAX

	Page
Replaceable insert	
∅ 12,000 – 40,000 mm	444 – 445
Diameter H7 – available from stock	446
Recommended cutting data	448 – 449
Holder	447
Assembly instructions	450
Assembly parts / Accessories	451

KOMET REAMAX

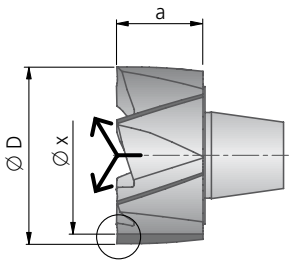
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	640.92 ASG 05	640.70 ASG 05	640.93 ASG 3000	640.71 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	640.92 ASG 05	640.70 ASG 05	640.93 ASG 3000	640.71 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	640.92 ASG 05	640.70 ASG 05	640.93 ASG 3000	640.71 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	640.92 ASG 05	640.71 ASG 3000	640.93 ASG 3000	640.71 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	640.71 ASG 0106	640.71 ASG 3000	640.71 ASG 0106	640.71 ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	640.21 ASG 03		640.21 ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106	640.65 ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	640.93 ASG 3000	640.65 ASG 3000	640.93 ASG 3000	640.65 ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	640.93 ASG 3000	640.65 ASG 3000	640.93 ASG 3000	640.65 ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	640.93 ASG 3000	640.65 ASG 3000	640.93 ASG 3000	640.65 ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000	640.65 ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	640.93 ASG 3000	640.71 ASG 3000	640.93 ASG 3000	640.71 ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	640.71 ASG 3000	640.71 ASG 3000	640.71 ASG 3000	640.71 ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706	640.27 ASG 0706
H	15.0	1400		hardened steels < 45 HRC		640.65 ASG 2360		640.65 ASG 2360	
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC		640.65 ASG 2360		640.65 ASG 2360	

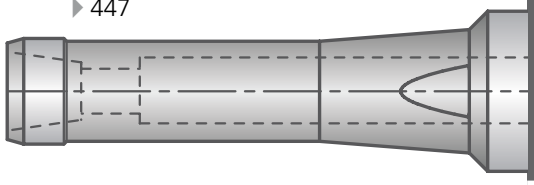
We are happy to take inquiries concerning tools for materials without a recommendation.

Material P M K N S H

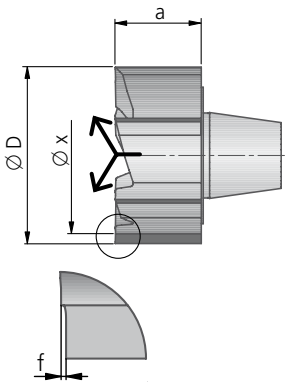
radially cooled, left slant,
for through hole machining



Holder
▸ 447



radially cooled, straight,
for blind hole machining



⚠ **Please note:** Don't use ∅ 12,000 - 12,500 for blind hole machining

Custom reaming head – selection options!

Order No.		Order No.		Cutting material, coating
640.92	–	640.93	–	DST
640.66	–	640.67	–	DJC
640.62		640.65		DBG-P
640.36		640.37		DBG-N
640.26		640.27		DBC
640.70		640.71		TiN
640.20		640.21		HM

Dimensions					
Ø D	min. diameter for face machining Ø x ~	a ~	f ~	Z	kg
12,000 - 15,999	ØD – 2,5	9,0	0,5	6	
16,000 - 21,999	ØD – 3,0	9,0	0,5	6	
22,000 - 25,999	ØD – 3,0	9,0	0,5	8	
26,000 - 32,000	ØD – 4,0	9,0	0,5	8	
32,001 - 40,000	ØD – 4,0	9,0	0,5	8	

Order example:
Order No. 640.92 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry).

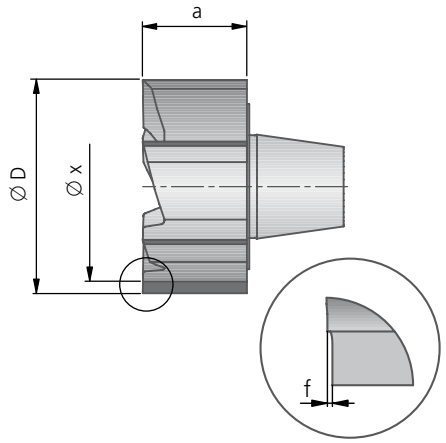
Cutting speed and feed see pages 448-449.

KOMET REAMAX

Ø 15^{H7} – 40^{H7} mm

Replaceable insert

Material P K N H



Diameter H7 – available from stock								
						P N [1]	P N [1]	P K
						45° ASG 3000	25° ASG4000	45° ASG 3000
Ø D	Ø x ~	a ~	f ~	Z	kg ~	Order No. DST	Order No. DST	Order No. DBG-P
15^{H7}	12,5	9	0,5	6		640.93.15H7N	640.93.15H7D	640.65.15H7N
16^{H7}	13	9	0,5	6		640.93.16H7N	640.93.16H7D	640.65.16H7N
18^{H7}	15	9	0,5	6		640.93.18H7N	640.93.18H7D	640.65.18H7N
20^{H7}	17	9	0,5	6		640.93.20H7N	640.93.20H7D	640.65.20H7N
22^{H7}	19	9	0,5	8		640.93.22H7N	640.93.22H7D	640.65.22H7N
24^{H7}	21	9	0,5	8		640.93.24H7N	640.93.24H7D	640.65.24H7N
25^{H7}	22	9	0,5	8		640.93.25H7N	640.93.25H7D	640.65.25H7N
28^{H7}	24	9	0,5	8		640.93.28H7N	640.93.28H7D	640.65.28H7N
30^{H7}	26	9	0,5	8		640.93.30H7N	640.93.30H7D	640.65.30H7N
40^{H7}	36	9	0,5	8		640.93.40H7N	640.93.40H7D	640.65.40H7N

[1] material group 12.0

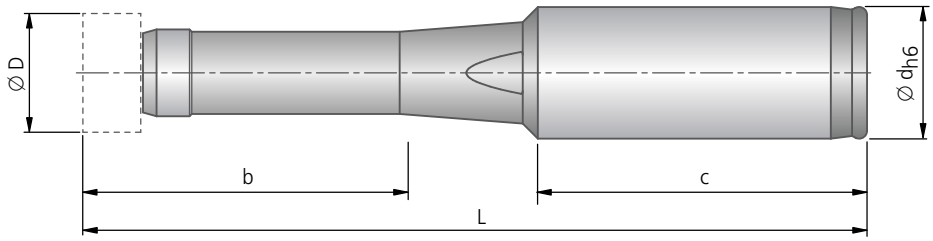
Cutting speed and feed see pages 448-449.

Holder

suitable for MQL

≈ DIN 1835

⚠ **Please note:**
Not suitable for shrinking



		short version						long version					
for Ø D^{H7}	for Ø D	Order No.	L	b	c	Ø d	kg	Order No.	L	b	c	Ø d	kg
15^{H7}	12,000 – 15,999	**640.01.001**	107	3×D	48	16	0,11	**640.81.001**	137	5×D	48	16	0,13
16^{H7}	16,000 – 21,999	**640.01.002**	119	3×D	50	20	0,18	**640.81.002**	169	5×D	50	20	0,23
18^{H7}													
20^{H7}													
22^{H7}	22,000 – 25,999	**640.01.003**	140	3×D	56	25	0,34	**640.81.003**	196	5×D	56	25	0,44
24^{H7}													
25^{H7}													
28^{H7}	26,000 – 32,000	**640.01.005**	160	3×D	56	25	0,46	**640.81.005**	226	5×D	56	25	0,65
30^{H7}													
40^{H7}	32,001 – 40,000	**640.01.006**	199	3×D	60	32	0,86	**640.81.006**	270	5×D	60	32	1,13

Supply includes: Holder with assembly parts (page 451). Please order replaceable insert separately.

KOMET REAMAX

Recommended cutting data

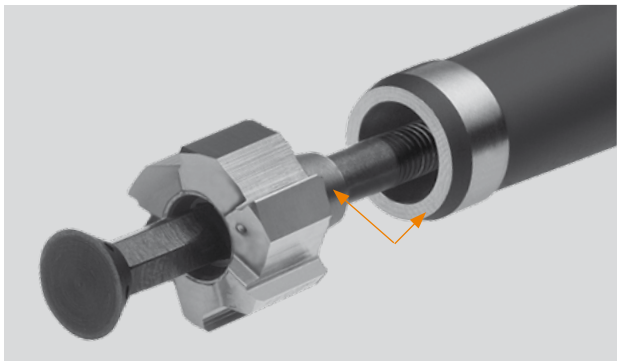
Guideline values for reaming						Cutting speed v_c (m/min)													
						optimum · maximum							optimum · maximum						
						3×D Reamers short							5×D Reamers long						
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200				100 140	30 45	120 160	120 160				80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200				100 140	7 9	120 160	120 160				80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)						30 45	5 7						30 45	5 7
	4.1			HSS															
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)														
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)							8 12							8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)			45 60			30 40	6 8			45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)			30 50			20 35	5 6			30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)			30 50			20 35	5 6			30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			150 220	150 220		80 130	15 25			120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			90 130	90 130		50 90	10 15			90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)			70 100	70 100		40 60	9 12			70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)			80 130	80 130		50 70	9 12			80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320					120 200	15 30	150 200					120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)						80 150	12 20						80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)					150 300		15 30					150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)					200 300		15 30					150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)					200 300		12 20					150 200		12 20
H	15.0	1400		hardened steels < 45 HRC					40 60							40 60			
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					30 50							30 50			

Reaming allowance in diameter (mm)

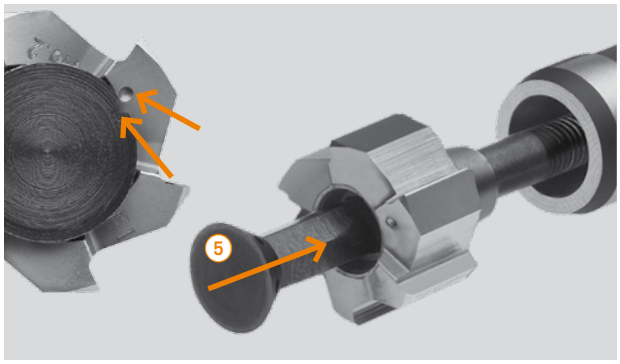
	Feed f (mm/rev)								
	optimum · maximum ASG3000, ASG0106, ASG03 ASG07, ASG02			optimum · maximum ASG4000, ASG09B, ASG1402 ASG09, ASG1405 ASG1406			optimum · maximum ASG05, ASG0502, ASG04		
	Ø 12 - 21,999 6	Ø 22 - 32,000 8	Ø 32,001 - 40 8	Ø 12 - 21,999 6	Ø 22 - 32,000 8	Ø 32,001 - 40 8	Ø 12 - 21,999 6	Ø 22 - 32,000 8	Ø 32,001 - 40 8
	0,90 1,20	**1,50** 2,00	**1,50** 2,00	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40
	0,90 1,20	**1,50** 2,00	**1,50** 2,00	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40
	0,90 1,20	**1,50** 2,00	**1,50** 2,00	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40
	0,90 1,20	**1,50** 2,00	**1,50** 2,00	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40	**1,10** 1,40	**1,80** 2,40	**1,80** 2,40
	0,60 0,80	**1,00** 1,40	**1,00** 1,40						
	0,60 0,80	**1,00** 1,40	**1,00** 1,40						
	0,50 0,70	**0,90** 1,20	**0,90** 1,20						
	0,70 1,00	**1,20** 1,60	**1,20** 1,60						
	0,70 0,90	**1,20** 1,60	**1,20** 1,60						
	0,70 0,90	**1,20** 1,60	**1,20** 1,60						
	0,70 0,90	**1,20** 1,60	**1,20** 1,60						
	1,00 1,40	**1,80** 2,40	**1,80** 2,40						
	0,90 1,20	**1,50** 2,00	**1,50** 2,00						
	1,00 1,40	**1,80** 2,40	**1,80** 2,40						
	1,00 1,40	**1,80** 2,40	**1,80** 2,40						
	0,90 1,20	**1,50** 2,00	**1,50** 2,00						
	0,70 0,90	**1,20** 1,60	**1,20** 1,60						
	0,70 0,90	**1,20** 1,60	**1,20** 1,60						
	1,00 1,40	**1,70** 2,40	**1,70** 2,40						
	0,80 1,20	**1,40** 2,00	**1,40** 2,00						
	1,00 1,40	**1,70** 2,40	**1,70** 2,40						
	1,00 1,40	**1,70** 2,40	**1,70** 2,40						
	1,00 1,40	**1,70** 2,40	**1,70** 2,40						
	0,40 0,80	**0,60** 1,00	**0,60** 1,00						
	0,40 0,80	**0,60** 1,00	**0,60** 1,00						
	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40	0,10 - 0,30	0,20 - 0,40	0,20 - 0,40

KOMET REAMAX

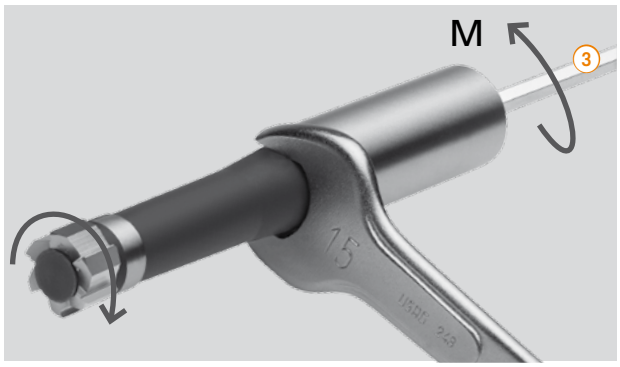
Assembly instructions



Clean taper/contactface thoroughly (grease free).
Apply light grease on tie bar thread ⑤.



Locate tie bar ⑤ on insert and holder.
Important note: for nominal size 3, 4 and 5, fit with marking on tie bar and insert aligned.

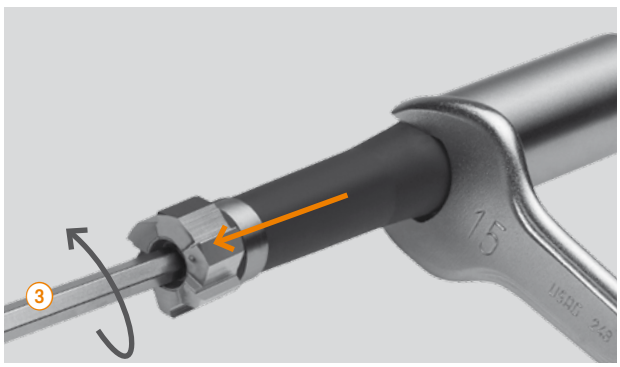


Draw in tie bar with the clamping nut. Before tightening, turn insert and tie bar clockwise until it stops.
Tighten the clamping nut as far as possible using the torque key to the specified starting torque M.

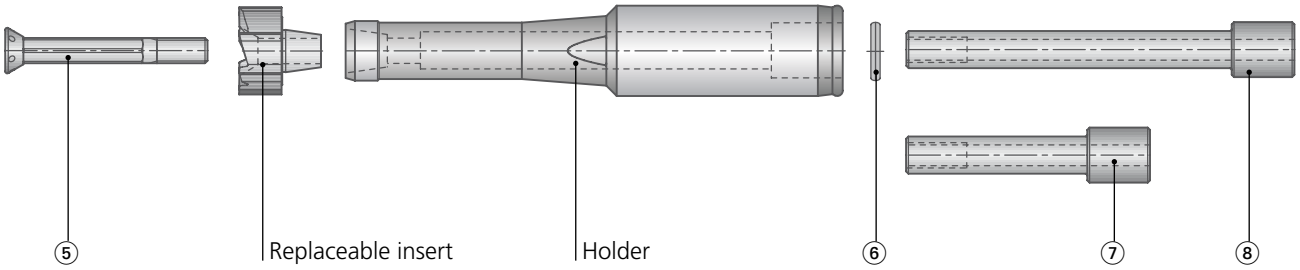
Dia. range	Starting torque M
12,000 – 15,999	4-5 Nm
16,000 – 21,999	6-7 Nm
22,000 – 25,999	10-12 Nm
26,000 – 32,000	18-20 Nm
32,001 – 40,000	26-28 Nm



Removing the replaceable insert:
Loosen the clamping screw.
Pull tie bar from holder and insert.



Locate operating key ③ in insert and loosen insert by turning.



		③				④
		Operating key				Open-end wrench
for Ø D	for Ø D^{H7}	Width across flats	Short version L	Long version L	**Starting torque M**	Width across flats
12,000 – 15,999	15^{H7}	SW 4	100	200	4-5 Nm	SW 12
16,000 – 21,999	16^{H7}	SW 5	100	350	6-7 Nm	SW 14
	18^{H7}					
	20^{H7}					
22,000 – 25,999	22^{H7}	SW 7	100	350	10-12 Nm	SW 19
	24^{H7}					
	25^{H7}					
26,000 – 32,000	28^{H7}	SW 8	100	350	18-20 Nm	SW 22
	30^{H7}					
32,001 – 40,000	40^{H7}	SW 10	200	350	26-28 Nm	SW 27

		⑤	⑥	⑦	⑧
		Tie bar	Seeger ring DIN 472	Clamping nut short version	Clamping nut long version
for Ø D	for Ø D^{H7}	**Order No.**	**Order No.**	**Order No.**	**Order No.**
12,000 – 15,999	15^{H7}	**640.03.001**	**55232 01010**	**640.04.001**	**640.84.001**
16,000 – 21,999	16^{H7}	**640.03.002**	**55232 01210**	**640.04.002**	**640.84.002**
	18^{H7}				
	20^{H7}				
22,000 – 25,999	22^{H7}	**640.03.003**	**55232 01610**	**640.04.003**	**640.84.003**
	24^{H7}				
	25^{H7}				
26,000 – 32,000	28^{H7}	**640.03.004**	**55232 01610**	**640.04.005**	**640.84.005**
	30^{H7}				
32,001 – 40,000	40^{H7}	**640.03.005**	**55232 02210**	**640.04.006**	**640.84.006**

Supply includes holder: tie-rod, Seeger ring and clamping nut.

KOMET REAMAX TS

Modular Reaming System

Unlimited flexibility and cost-effectiveness: KOMET REAMAX TS is a uniform clamping system with a standardised separation point for all reaming heads, offering flexibility and cost-effectiveness thanks to fast and high-precision tool changing.
KOMET REAMAX TS guarantees a maximum of system modularity thanks to a versatile and clearly structured range of reaming heads which can handle all commonly encountered diameter ranges and machining requirements. Tool costs and logistical expenditure are thereby reduced to a minimum.

Application:

- All current materials
- Through holes and blind bores
- Small bore tolerances
- Up to 5 × D
- High speed – up to 300 m/min
- Feed – up to 2.4 mm/rev

A connection for maximum production reliability

This high-precision connection guarantees safer transfer of the torque which occurs during reaming and the concentricity required for precision machining.
KOMET REAMAX TS is designed for high speed machining.

Adjustable for small tolerances

To compensate for wear and to meet tolerances as small as IT4, all KOMET REAMAX TS multi-flute tools are adjustable. Maximum repeatable accuracy is achieved without pre-setting, i.e.
- Longer tool life
- Maximum performance
- Extremely tight bore tolerances
- Less machine down time



BENEFITS for you:

- High-precision ground for the highest quality
- Modular tool system for the highest flexibility
- Compensation for wear through simple readjustment
- Integrated concentricity adjustment for short lengths
- Can be adjusted for extremely small hole

The use of inserts is revolutionizing reaming with multiple blade reamers and setting new levels in precision and function.

Each insert has two effective cutting edges.
Unlike boring tools, inserts for reaming tools are ground as a complete set directly on the basic element in their specific insert pocket.

The positions of the individual cutting edges on an insert are precisely defined during manufacturing and application. Cutting edges ground in a single operation ensure the degree of precision required for high precision bore machining.

Numerous cutting materials and coatings for machining an extremely wide variety of materials.



KOMET REAMAX TS	Page
Reaming head REAMAX TS fix	
∅ 18,000 – 30,000 mm	454 – 455
Diameter H7 – available from stock	456 – 457
Recommended cutting data	458 – 459
Reaming head REAMAX TS	
∅ 18,000 – 65,000 mm	460 – 461
Diameter H7 – available from stock	462 – 463
Recommended cutting data	464 – 465
Indexable insert reaming head REAMAX TS Duo	
∅ 42,000 – 70,000 mm	466 – 469
Recommended cutting data	470 – 471
Holder	472 – 473
Assembly instruction	474
Assembly parts / Accessories	475

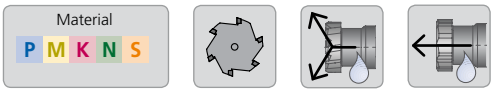
KOMET REAMAX TS fix

Tool recommendation

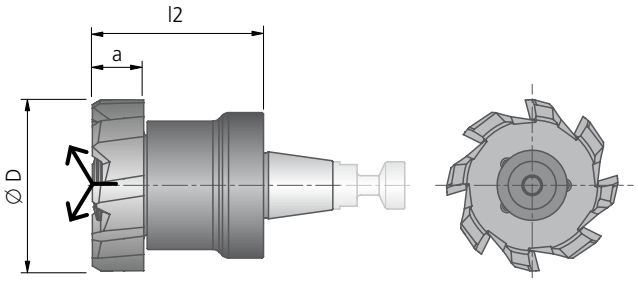
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining									
						Order No. ASG = cutting geometry									
						Universal	Special	Universal	Special	Universal	Special	Universal	Special	Universal	Special
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	78N.58 ASG 2210	78N.92 ASG 05	78N.58 ASG 2210		78M.57 ASG 2110	78M.93 ASG 3000	78M.57 ASG 2110		78N.57 ASG 2110	78N.93 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	78N.58 ASG 2210	78N.92 ASG 05	78N.58 ASG 2210		78M.57 ASG 2110	78M.93 ASG 3000	78M.57 ASG 2110		78N.57 ASG 2110	78N.93 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	78N.58 ASG 2210	78N.92 ASG 05	78N.58 ASG 2210		78M.57 ASG 2110	78M.93 ASG 3000	78M.57 ASG 2110		78N.57 ASG 2110	78N.93 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	78N.58 ASG 2210	78N.92 ASG 05	78N.58 ASG 2210		78M.57 ASG 2110	78M.93 ASG 3000	78M.57 ASG 2110		78N.57 ASG 2110	78N.93 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	78N.58 ASG 2210	78N.93 ASG 3000	78N.58 ASG 2210		78M.57 ASG 2110	78M.93 ASG 3000	78M.57 ASG 2110		78N.57 ASG 2110	78N.93 ASG 3000
P	4.1			HSS											
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)										
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	78N.21 ASG 03				78M.21 ASG 03					
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	78N.65 ASG 0106		78N.65 ASG 0106		78M.65 ASG 0106		78M.65 ASG 0106		78N.65 ASG 0106	
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	78N.65 ASG 0106		78N.65 ASG 0106		78M.65 ASG 0106		78M.65 ASG 0106		78N.65 ASG 0106	
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	78N.65 ASG 0106		78N.65 ASG 0106		78M.65 ASG 0106		78M.65 ASG 0106		78N.65 ASG 0106	
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	78N.58 ASG 2210	78N.65 ASG 2350	78N.58 ASG 2210	78N.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78M.57 ASG 2110	78M.65 ASG 2350	78N.57 ASG 2110	78N.65 ASG 2350
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	78N.58 ASG 2210	78N.17 ASG 2270	78N.58 ASG 2210	78N.17 ASG 2270	78M.57 ASG 2110	78M.17 ASG 2170	78M.57 ASG 2110	78M.17 ASG 2170	78N.57 ASG 2110	78N.17 ASG 2170
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	78N.58 ASG 2210	78N.17 ASG 2270	78N.58 ASG 2210	78N.17 ASG 2270	78M.57 ASG 2110	78M.17 ASG 2170	78M.57 ASG 2110	78M.17 ASG 2170	78N.57 ASG 2110	78N.17 ASG 2170
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)		78N.17 ASG 2270		78N.17 ASG 2270		78M.17 ASG 2170		78M.17 ASG 2170		78N.17 ASG 2170
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)		78N.17 ASG 2270		78N.17 ASG 2270		78M.17 ASG 2170		78M.17 ASG 2170		78N.17 ASG 2170
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)		78N.17 ASG 2270		78N.17 ASG 2270		78M.17 ASG 2170		78M.17 ASG 2170		78N.17 ASG 2170
H	15.0	1400		hardened steels < 45 HRC											
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC											

We are happy to take inquiries concerning tools for materials without a recommendation.

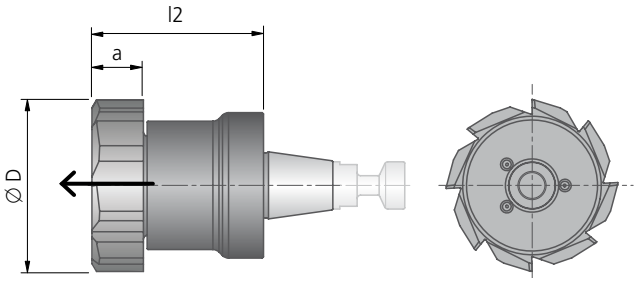
Reaming head



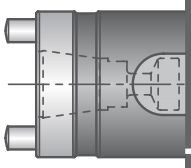
radially cooled, left slant,
for through hole machining



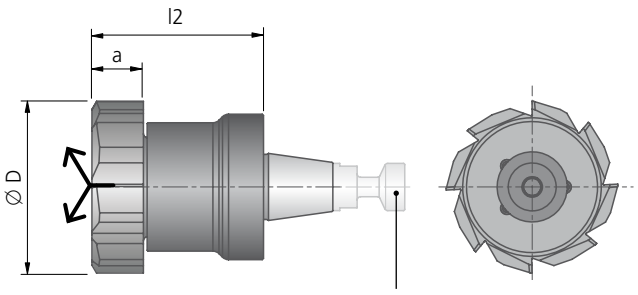
centrally cooled, straight,
for blind hole machining



Holder
▸ 472



radially cooled, straight,
for step hole



Pull stud included
with the holder

Custom reaming head – selection options!

Order No.			Order No.		Cutting material, coating
78N.92	–	78N.93	78M.93	–	DST
78N.82	–	78N.85	78M.85	–	DJP
78N.62		78N.65	78M.65		DBG-P
78N.58		78N.57	78M.57		DBG-U
78N.17			78M.17		DBC
78N.21			78M.21		HM

Dimensions				
Ø D	a ~	l2 ~	Z	kg ~
18,000 - 19,999	6	20	8	0,04
20,000 - 21,999	6	20	8	0,05
22,000 - 24,099	6	20	8	0,07
24,100 - 26,099	6	20	8	0,10
26,100 - 26,999	7	20	8	0,11
27,000 - 28,099	7	25	8	0,17
28,100 - 30,000	7	25	8	0,19

Order example:
Order No. 78N.58 · Bore diameter 21 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG2210 (Cutting geometry)

Cutting speed and feed see pages 458-459.

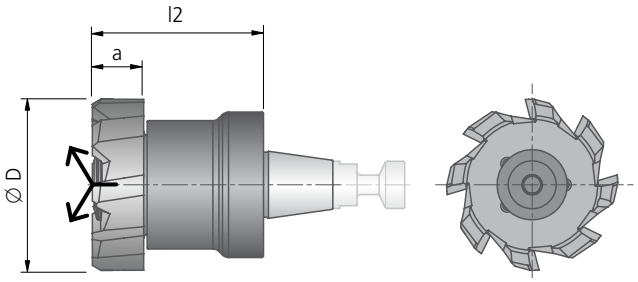
KOMET REAMAX TS fix

Ø 18^{H7} – 30^{H7} mm

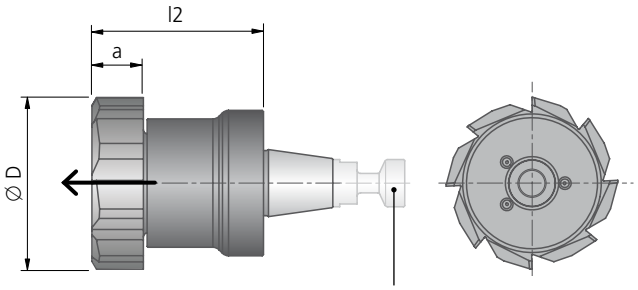
Universal reaming head

Material
P K

radially cooled, left slant,
for through hole machining

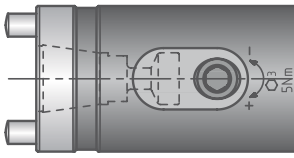


centrally cooled, straight,
for blind hole machining



Pull stud included
with the holder

Holder
▶ 472



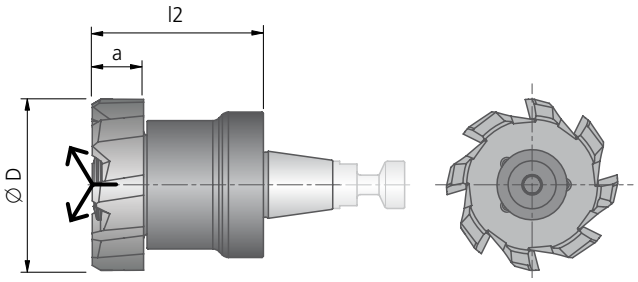
Diameter H7 – available from stock						
					P K ASG 2210	P K ASG 2110
Ø D	a ~	l2 ~	Z	kg ~	Order No. DBG-U	Order No. DBG-U
18^{H7}	6	20	8	0,041	78N.58.18H7	78M.57.18H7
20^{H7}	6	20	8	0,053	78N.58.20H7	78M.57.20H7
22^{H7}	6	20	8	0,067	78N.58.22H7	78M.57.22H7
24^{H7}	6	20	8	0,070	78N.58.24H7	78M.57.24H7
25^{H7}	6	20	8	0,092	78N.58.25H7	78M.57.25H7
26^{H7}	6	20	8	0,113	78N.58.26H7	78M.57.26H7
28^{H7}	7	25	8	0,176	78N.58.28H7	78M.57.28H7
30^{H7}	7	25	8	0,196	78N.58.30H7	78M.57.30H7

Cutting speed and feed see pages 458-459.

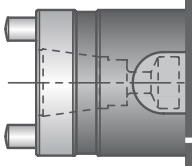
Special reaming head P

Material
P

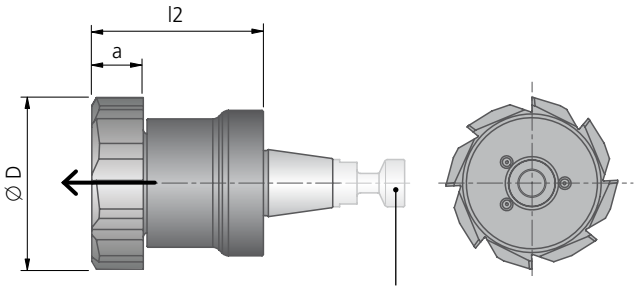
radially cooled, left slant,
for through hole machining



Holder
▸ 472



centrally cooled, straight,
for blind hole machining



Pull stud included
with the holder

Diameter H7 – available from stock						
					P 25° ASG 05	P 45° ASG 3000
Ø D	a ~	l2 ~	Z	kg ~	Order No. DST	Order No. DST
18^{H7}	6	20	8	0,041	78N.92.18H7	78M.93.18H7
20^{H7}	6	20	8	0,053	78N.92.20H7	78M.93.20H7
22^{H7}	6	20	8	0,067	78N.92.22H7	78M.93.22H7
24^{H7}	6	20	8	0,070	78N.92.24H7	78M.93.24H7
25^{H7}	6	20	8	0,092	78N.92.25H7	78M.93.25H7
26^{H7}	6	20	8	0,113	78N.92.26H7	78M.93.26H7
28^{H7}	7	25	8	0,176	78N.92.28H7	78M.93.28H7
30^{H7}	7	25	8	0,196	78N.92.30H7	78M.93.30H7

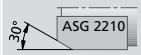
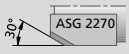
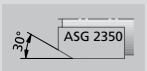
Cutting speed and feed see pages 458-459.

KOMET REAMAX TS fix

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)											
						optimum · maximum						optimum · maximum					
						3×D Reamers short						5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJP	DBG-P	DBG-U	DBC	HM	DST	DJP	DBG-P	DBG-U	DBC	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200		150 200			120 160	120 160		120 160		
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200		150 200			120 160	120 160		120 160		
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200		150 200			120 160	120 160		120 160		
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200		150 200			120 160	120 160		120 160		
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	150 200	150 200		150 200			120 160	120 160		120 160		
	4.1			HSS													
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)												
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)						8 12						8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)			40 60						40 60			
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)			30 50						30 50			
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)			30 50						30 50			
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			180 210	120 180					120 180	120 180		
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			90 130	90 130					90 130	90 130		
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	200 250	200 250			150 180	150 180	150 180	150 180		
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	200 250	200 250			120 160	120 160	150 180	150 180		
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 150	120 150			120 150	120 150	120 150	120 150		
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)			90 130	90 130					90 130	90 130		
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)			90 130	90 130					90 130	90 130		
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)				150 250	150 250					120 180	120 180	
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)				100 150	100 150					100 150	100 150	
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)					200 300						150 200	
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)					200 300						150 200	
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)					200 250						150 200	
H	15.0	1400		hardened steels < 45 HRC													
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC													

Reaming allowance in diameter (mm)

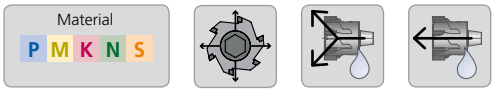
	Feed f (mm/rev)																	
	optimum · maximum																	
																		
	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8	Ø 18-18,099 ✲6	Ø 18,1-30,099 ✲8
	1,20 1,50	**1,80** 2,20	**1,20** 1,50	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,20** 1,50	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,10** 1,40	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	1,20 1,50	**1,80** 2,20	**1,10** 1,40	**1,80** 2,40	**1,20** 1,50	**1,80** 2,20											**0,90** 1,20	**1,50** 2,00
	0,90 1,15	**1,20** 1,50			**0,90** 1,15	**1,20** 1,50											**0,60** 0,80	**1,00** 1,40
															0,70 1,00	**1,2** 1,60		
													0,70 0,90	**1,20** 1,60				
													0,70 0,90	**1,20** 1,60				
													0,70 0,90	**1,20** 1,60				
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,10 **1,70**	**1,50** 2,30			**1,10** 1,70	**1,50** 2,30					**1,10** 1,70	**1,50** 2,30						
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,40 2,00	**1,90** 2,70			**1,40** 2,00	**1,90** 2,70					**1,40** 2,00	**1,90** 2,70						
	1,10 1,70	**1,50** 2,30			**1,10** 1,70	**1,50** 2,30					**1,10** 1,70	**1,50** 2,30						
	0,90 1,30	**1,20** 1,80			**0,90** 1,30	**1,20** 1,80					**0,90** 1,30	**1,20** 1,80						
	0,90 1,30	**1,20** 1,80			**0,90** 1,30	**1,20** 1,80					**0,90** 1,30	**1,20** 1,80						
	1,20 1,90	**1,70** 2,50			**1,20** 1,90	**1,70** 2,50	**1,20** 1,80	**1,60** 2,40	**1,20** 1,80	**1,60** **2,40**								
	1,00 1,50	**1,40** 2,10			**1,00** 1,50	**1,40** 2,10	**0,90** 1,40	**1,20** 1,90	**0,90** 1,40	**1,20** 1,90								
							1,20 1,80	**1,60** 2,40	**1,20** 1,80	**1,60** 2,40								
							1,30 2,00	**1,70** 2,70	**1,30** 2,00	**1,70** 2,70								
							1,30 2,00	**1,70** 2,70	**1,30** 2,00	**1,70** 2,70								
	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,3	0,20 - 0,30	0,3	0,20 - 0,30	0,3	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40	0,20 - 0,30	0,20 - 0,40

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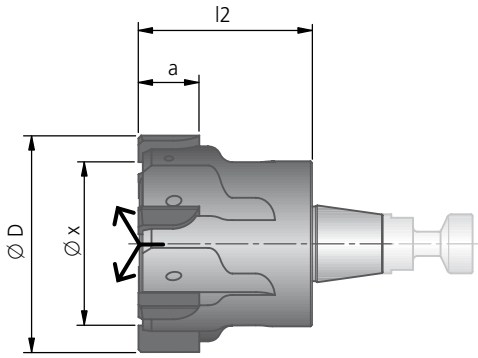
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	75J.93 ASG 4000	75J.71 ASG 4000	75H.93 ASG 3000	75H.71 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	75J.93 ASG 4000	75J.71 ASG 4000	75H.93 ASG 3000	75H.71 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	75J.93 ASG 4000	75J.71 ASG 4000	75H.93 ASG 3000	75H.71 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	75J.93 ASG 4000	75J.71 ASG 3000	75H.93 ASG 3000	75H.71 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	75J.71 ASG 0106	75J.71 ASG 0106	75H.71 ASG 0106	75H.71 ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	75J.21 ASG 03		75H.21 ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	75J.65 ASG 0106	75J.65 ASG 0106	75H.65 ASG 0106	75H.65 ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	75J.65 ASG 0106	75J.65 ASG 0106	75H.65 ASG 0106	75H.65 ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	75J.65 ASG 0106	75J.65 ASG 0106	75H.65 ASG 0106	75H.65 ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	75J.65 ASG 3000	75J.65 ASG 3000	75H.65 ASG 3000	75H.65 ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	75J.65 ASG 3000	75J.65 ASG 3000	75H.65 ASG 3000	75H.65 ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	75J.93 ASG 3000	75J.65 ASG 3000	75H.93 ASG 3000	75H.65 ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	75J.93 ASG 3000	75J.65 ASG 3000	75H.93 ASG 3000	75H.65 ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	75J.93 ASG 3000	75J.65 ASG 3000	75H.93 ASG 3000	75H.65 ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	75J.65 ASG 3000	75J.65 ASG 3000	75H.65 ASG 3000	75H.65 ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	75J.65 ASG 3000	75J.65 ASG 3000	75H.65 ASG 3000	75H.65 ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	75J.93 ASG 3000	75J.71 ASG 3000	75H.93 ASG 3000	75H.71 ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	75J.71 ASG 3000	75J.71 ASG 3000	75H.71 ASG 3000	75H.71 ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	75J.17 ASG 0706	75J.17 ASG 0706	75H.17 ASG 0706	75H.17 ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	75J.17 ASG 0706	75J.17 ASG 0706	75H.17 ASG 0706	75H.17 ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	75J.17 ASG 0706	75J.17 ASG 0706	75H.17 ASG 0706	75H.17 ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

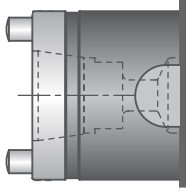
We are happy to take inquiries concerning tools for materials without a recommendation.



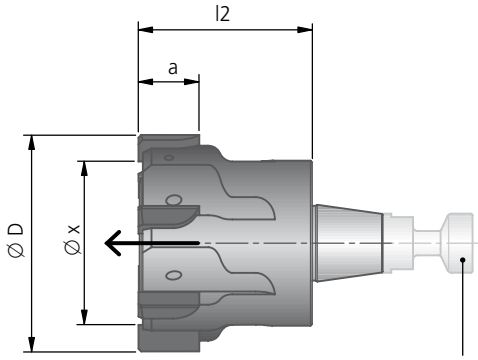
radially cooled,
for through hole machining



Holder
▶ 472



centrally cooled,
for blind hole machining



Pull stud included
with the holder

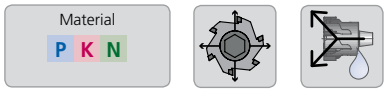
Custom reaming head – selection options!

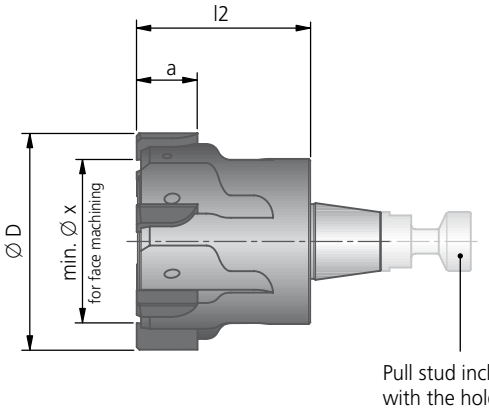
Order No.		Order No.		Cutting material, coating	Dimensions					
					Ø D	min. diameter for face machining Ø x ~	a ~	l2 ~	Z	kg
75J.93	–	75H.93	–	DST	18,000 - 21,999	ØD – 4,0	6,0	20	6	0,03
75J.67	–	75H.67	–	DJC	22,000 - 26,999	ØD – 4,2	6,0	20	6	0,04
75J.85		75H.85		DJP	27,000 - 31,799	ØD – 5,4	6,0	25	6	0,04
75J.65		75H.65		DBG-P	31,800 - 34,999	ØD – 6,0	6,0	25	8	0,05
75J.37		75H.37		DBG-N	35,000 - 41,999	ØD – 6,9	6,0	25	8	0,13 - 0,15
75J.17		75H.17		DBC	42,000 - 51,999	ØD – 7,5	6,0	30	8	0,20 - 0,25
75J.71		75H.71		TiN	52,000 - 65,000	ØD – 8,8	8,0	35	10	0,35 - 0,45
75J.21		75H.21		HM						

Order example:
Order No. 75J.93 · Bore diameter 21 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG4000 (Cutting geometry).

Cutting speed and feed see pages 464-465.

Reaming head





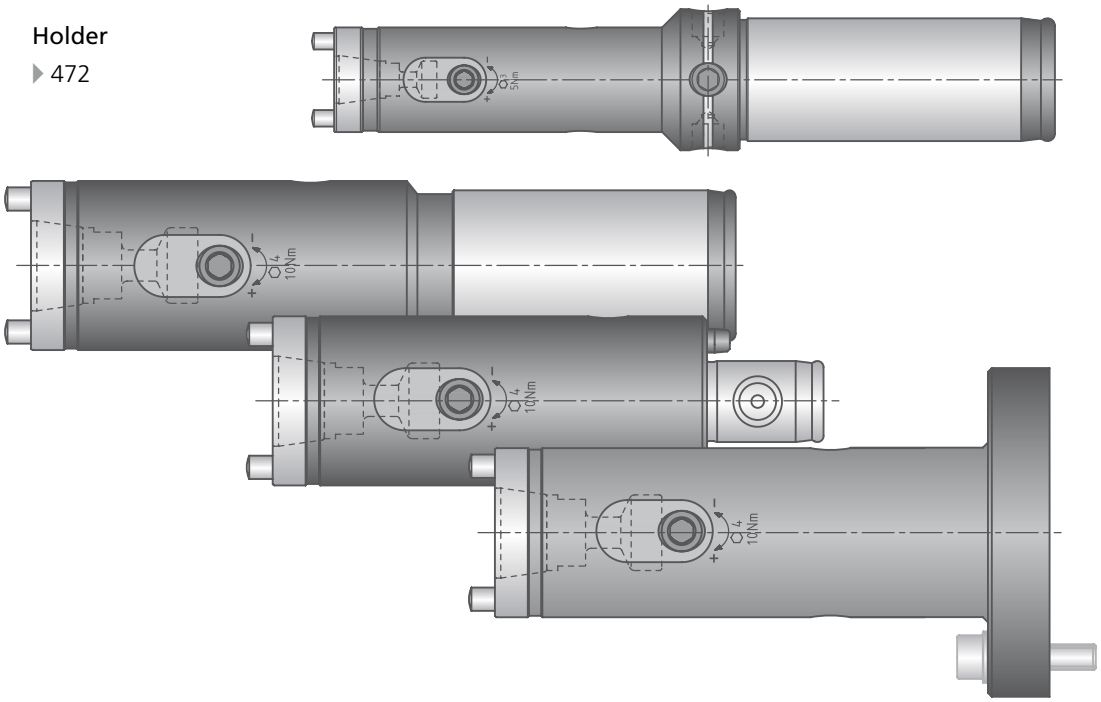
Diameter H7 – available from stock								
						P K[1] N[2]	P K[1] N[2]	
						ASG 3000	ASG4000	
Ø D	Ø x ~	a ~	l2 ~	Z	kg ~	Order No. DST	Order No. DST	
18^{H7}	14	6	20	6	0,026	75J.93.18H7N	75J.93.18H7D	
20^{H7}	16	6	20	6	0,033	75J.93.20H7N	75J.93.20H7D	
22^{H7}	17,8	6	20	6	0,039	75J.93.22H7N	75J.93.22H7D	
24^{H7}	19,8	6	20	6	0,043	75J.93.24H7N	75J.93.24H7D	
25^{H7}	20,8	6	20	6	0,044	75J.93.25H7N	75J.93.25H7D	
26^{H7}	21,8	6	20	6	0,047	75J.93.26H7N	75J.93.26H7D	
28^{H7}	22,6	6	25	6	0,078	75J.93.28H7N	75J.93.28H7D	
30^{H7}	24,6	6	25	6	0,080	75J.93.30H7N	75J.93.30H7D	
32^{H7}	26	6	25	8	0,090	75J.93.32H7N	75J.93.32H7D	
35^{H7}	28,1	6	25	8	0,130	75J.93.35H7N	75J.93.35H7D	
40^{H7}	33,1	6	25	8	0,144	75J.93.40H7N	75J.93.40H7D	
42^{H7}	34,5	6	30	8	0,206	75J.93.42H7N	75J.93.42H7D	
50^{H7}	42,5	6	30	8	0,226	75J.93.50H7N	75J.93.50H7D	
54^{H7}	45,2	8	35	10	0,371	75J.93.54H7N	75J.93.54H7D	

[1] GJS (spheroidal graphite cast iron) · [3] material group 12.0 · [4] material group 12.1 · [5] material group 12.0&12.1

Cutting speed and feed see pages 464-465.

Holder

▸ 472



	Diameter H7 – available from stock			
	P K	P N [3] P N [4]	P N [3] P N [4]	
	45° ASG 3000	45° ASG 3000	25° ASG4000	
	Order No. DBG-P	Order No. TiN	Order No. TiN	Ø D
	75J.65.18H7N	75J.71.18H7N	75J.71.18H7D	18^{H7}
	75J.65.20H7N	75J.71.20H7N	75J.71.20H7D	20^{H7}
	75J.65.22H7N	75J.71.22H7N	75J.71.22H7D	22^{H7}
	75J.65.24H7N	75J.71.24H7N	75J.71.24H7D	24^{H7}
	75J.65.25H7N	75J.71.25H7N	75J.71.25H7D	25^{H7}
		75J.71.26H7N	75J.71.26H7D	26^{H7}
	75J.65.28H7N	75J.71.28H7N	75J.71.28H7D	28^{H7}
	75J.65.30H7N	75J.71.30H7N	75J.71.30H7D	30^{H7}
	75J.65.32H7N	75J.71.32H7N	75J.71.32H7D	32^{H7}
	75J.65.35H7N	75J.71.35H7N	75J.71.35H7D	35^{H7}
	75J.65.40H7N	75J.71.40H7N	75J.71.40H7D	40^{H7}
		75J.71.42H7N	75J.71.42H7D	42^{H7}
	75J.65.50H7N	75J.71.50H7N	75J.71.50H7D	50^{H7}
		75J.71.54H7N	75J.71.54H7D	54^{H7}

KOMET REAMAX TS

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)													
						optimum · maximum								optimum · maximum					
						3×D Reamers short								5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200					100 140	30 45	120 160	120 160					80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200					100 140	7 9	120 160	120 160					80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)							30 45	5 7							30 45	5 7
	4.1			HSS																	
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)																
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)								8 12								8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)				45 60			30 40	6 8				45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				30 50			20 35	5 6				30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)				30 50			20 35	5 6				30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)				150 220	150 220		80 130	15 25				120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)				90 130	90 130		50 90	10 15				90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)				70 100	70 100		40 60	9 12				70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)				80 130	80 130		50 70	9 12				80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320						120 200	15 30	150 200						120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)							80 150	12 20							80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)						150 300		15 30						150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)						200 300		15 30						150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)						200 300		12 20						150 200		12 20
H	15.0	1400		hardened steels < 45 HRC																	
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC																	

Reaming allowance in diameter (mm)

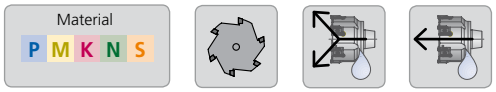
Feed f (mm/rev) – with face cut, feed reduced by 30%								
optimum · maximum ASG3000, ASG0106, ASG03, ASG0706 ASG07, ASG02				optimum · maximum ASG4000, ASG09B, ASG1402 ASG09, ASG1405, ASG1406			
Ø 18 - 21,999 6	Ø 22 - 31,799 6	Ø 31,8 - 51,999 8	Ø 52 - 65 10	Ø 18 - 21,999 6	Ø 22 - 31,799 6	Ø 31,8 - 51,999 8	Ø 52 - 65 10
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80	1,00 1,30	1,20 1,70	1,70 2,30	2,40 3,40
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80	1,00 1,30	1,20 1,70	1,70 2,30	2,40 3,40
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80	1,00 1,30	1,20 1,70	1,70 2,30	2,40 3,40
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80	1,00 1,30	1,20 1,70	1,70 2,30	2,40 3,40
0,50 0,80	0,70 1,00	0,90 1,30	1,30 2,00				
0,50 0,80	0,70 1,00	0,90 1,30	1,30 2,00				
0,40 0,60	0,60 0,80	0,80 1,10	1,10 1,70				
0,60 0,90	0,80 1,20	1,10 1,60	1,60 2,40				
0,60 0,90	0,80 1,10	1,10 1,50	1,50 2,30				
0,60 0,90	0,80 1,10	1,10 1,50	1,50 2,30				
0,60 0,90	0,80 1,10	1,10 1,50	1,50 2,30				
0,90 1,30	1,20 1,70	1,60 2,30	2,30 3,40				
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80				
0,90 1,30	1,20 1,70	1,60 2,30	2,30 3,40	1,20 1,60	1,50 2,00	2,00 2,70	2,90 4,10
0,90 1,30	1,20 1,70	1,60 2,30	2,30 3,40	1,20 1,60	1,50 2,00	2,00 2,70	2,90 4,10
0,80 1,10	1,00 1,40	1,30 1,90	1,90 2,80	1,00 1,30	1,20 1,70	1,70 2,30	2,40 3,40
0,60 0,90	0,80 1,10	1,10 1,50	1,50 2,30				
0,60 0,90	0,80 1,10	1,10 1,50	1,50 2,30				
0,90 1,30	1,10 1,70	1,50 2,30	2,10 3,10				
0,70 1,10	0,90 1,40	1,20 1,90	1,70 2,60				
0,90 1,30	1,10 1,70	1,50 2,30	2,20 3,40				
0,90 1,30	1,10 1,70	1,50 2,30	2,20 3,40				
0,90 1,30	1,10 1,70	1,50 2,30	2,20 3,40				
0,20 - 0,30	0,20 - 0,30	0,30 - 0,40	0,30 - 0,50	0,20 - 0,30	0,20 - 0,30	0,30 - 0,40	0,30 - 0,50

KOMET REAMAX TS Duo

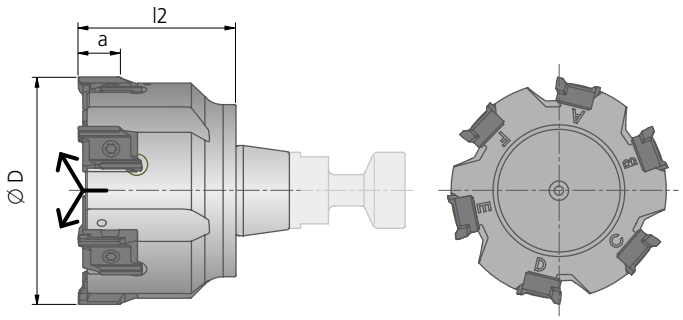
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**77J.93** ASG 4000	**77J.71** ASG 4000	**77H.93** ASG 3000	**77H.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**77J.93** ASG 4000	**77J.71** ASG 4000	**77H.93** ASG 3000	**77H.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**77J.93** ASG 4000	**77J.71** ASG 4000	**77H.93** ASG 3000	**77H.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**77J.93** ASG 4000	**77J.71** ASG 3000	**77H.93** ASG 3000	**77H.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	**77J.71** ASG 0106	**77J.71** ASG 0106	**77H.71** ASG 0106	**77H.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**77J.21** ASG 03		**77H.21** ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**77J.65** ASG 0106	**77J.65** ASG 0106	**77H.65** ASG 0106	**77H.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**77J.65** ASG 0106	**77J.65** ASG 0106	**77H.65** ASG 0106	**77H.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**77J.65** ASG 0106	**77J.65** ASG 0106	**77H.65** ASG 0106	**77H.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**77J.65** ASG 3000	**77J.65** ASG 3000	**77H.65** ASG 3000	**77H.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**77J.65** ASG 3000	**77J.65** ASG 3000	**77H.65** ASG 3000	**77H.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**77J.93** ASG 3000	**77J.65** ASG 3000	**77H.93** ASG 3000	**77H.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**77J.93** ASG 3000	**77J.65** ASG 3000	**77H.93** ASG 3000	**77H.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**77J.93** ASG 3000	**77J.65** ASG 3000	**77H.93** ASG 3000	**77H.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**77J.65** ASG 3000	**77J.65** ASG 3000	**77H.65** ASG 3000	**77H.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**77J.65** ASG 3000	**77J.65** ASG 3000	**77H.65** ASG 3000	**77H.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**77J.93** ASG 3000	**77J.93** ASG 3000	**77H.93** ASG 3000	**77H.93** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**77J.71** ASG 3000	**77J.71** ASG 3000	**77H.71** ASG 3000	**77H.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**77J.17** ASG 0706	**77J.17** ASG 0706	**77H.17** ASG 0706	**77H.17** ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**77J.17** ASG 0706	**77J.17** ASG 0706	**77H.17** ASG 0706	**77H.17** ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**77J.17** ASG 0706	**77J.17** ASG 0706	**77H.17** ASG 0706	**77H.17** ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

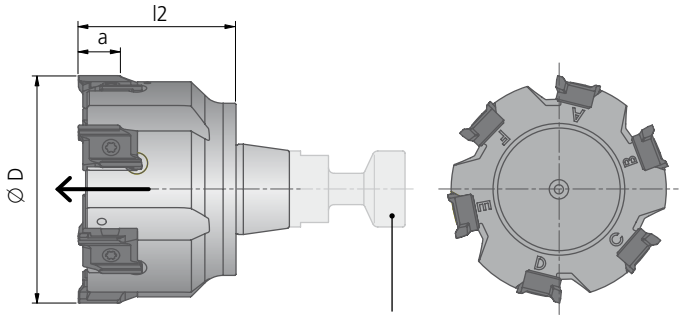
We are happy to take inquiries concerning tools for materials without a recommendation.



radially cooled,
for through hole machining

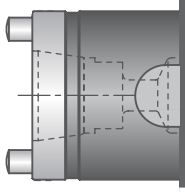


centrally cooled,
for blind hole machining



Pull stud included
with the holder

Holder
▸ 472



Custom reaming head – selection options!

Order No.		Order No.		Cutting material, coating	Dimensions					
					Ø D	Preferred diameter Ø D	a ~	l2 ~	Z	kg
77J.93	–	77H.93	–	DST	42,000 - 51,999	42	9,0	30	6	
77J.67	–	77H.67	–	DJC						
77J.85		77H.85		DJP						
77J.65		77H.65		DBG-P	52,000 - 55,999	54	9,0	35	6	
77J.37		77H.37		DBG-N						
77J.17		77H.17		DBC						
77J.71		77H.71		TiN	56,000 - 70,000	60	9,0	35	8	
77J.21		77H.21		HM						

New tool order example: Example Order No. **77J.93**
Bore diameter 65 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG4000 (Cutting geometry).
Supply includes: Reaming head mounted with inserts and clamping screws N00 57710 (S3090-9IP 2,25Nm).

Retipping order example: Example Order No. **77R.93**
A reaming head sent back to KOMET by the customer will be delivered fitted with indexable inserts and clamping screws. It is also possible to order one or two indexable insert sets for this reaming head (example Order No. **77S.93**).

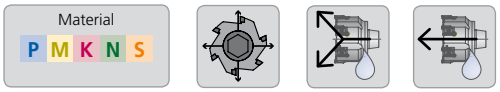
Cutting speed and feed see pages 470-471.

KOMET REAMAX TS Duo

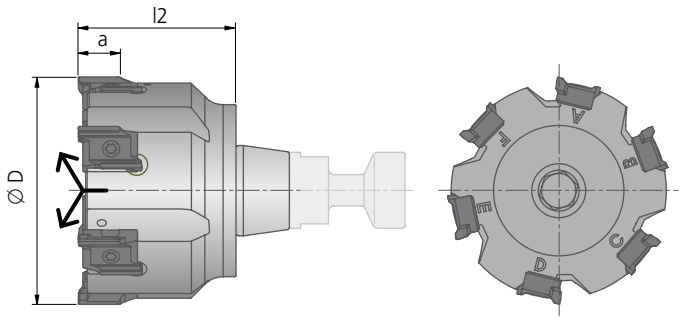
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**76J.93** ASG 4000	**76J.71** ASG 4000	**76H.93** ASG 3000	**76H.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**76J.93** ASG 4000	**76J.71** ASG 4000	**76H.93** ASG 3000	**76H.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**76J.93** ASG 4000	**76J.71** ASG 4000	**76H.93** ASG 3000	**76H.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**76J.93** ASG 4000	**76J.71** ASG 3000	**76H.93** ASG 3000	**76H.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	**76J.71** ASG 0106	**76J.71** ASG 0106	**76H.71** ASG 0106	**76H.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**76J.21** ASG 03		**76H.21** ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**76J.65** ASG 0106	**76J.65** ASG 0106	**76H.65** ASG 0106	**76H.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**76J.65** ASG 0106	**76J.65** ASG 0106	**76H.65** ASG 0106	**76H.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**76J.65** ASG 0106	**76J.65** ASG 0106	**76H.65** ASG 0106	**76H.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**76J.65** ASG 3000	**76J.65** ASG 3000	**76H.65** ASG 3000	**76H.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**76J.65** ASG 3000	**76J.65** ASG 3000	**76H.65** ASG 3000	**76H.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**76J.93** ASG 3000	**76J.65** ASG 3000	**76H.93** ASG 3000	**76H.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**76J.93** ASG 3000	**76J.65** ASG 3000	**76H.93** ASG 3000	**76H.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**76J.93** ASG 3000	**76J.65** ASG 3000	**76H.93** ASG 3000	**76H.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**76J.65** ASG 3000	**76J.65** ASG 3000	**76H.65** ASG 3000	**76H.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**76J.65** ASG 3000	**76J.65** ASG 3000	**76H.65** ASG 3000	**76H.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**76J.93** ASG 3000	**76J.93** ASG 3000	**76H.93** ASG 3000	**76H.93** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**76J.71** ASG 3000	**76J.71** ASG 3000	**76H.71** ASG 3000	**76H.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**76J.17** ASG 0706	**76J.17** ASG 0706	**76H.17** ASG 0706	**76H.17** ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**76J.17** ASG 0706	**76J.17** ASG 0706	**76H.17** ASG 0706	**76H.17** ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**76J.17** ASG 0706	**76J.17** ASG 0706	**76H.17** ASG 0706	**76H.17** ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

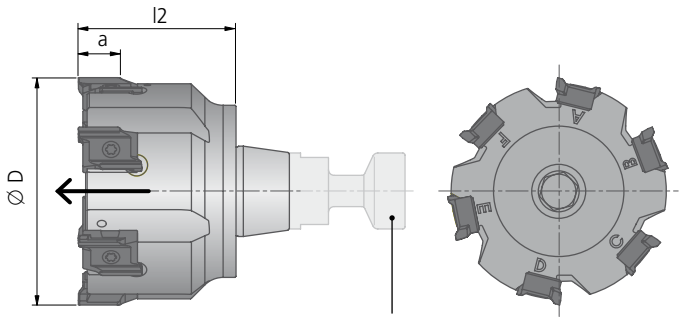
We are happy to take inquiries concerning tools for materials without a recommendation.



radially cooled,
for through hole machining

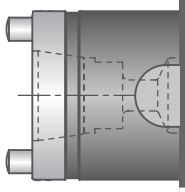


centrally cooled,
for blind hole machining



Pull stud included
with the holder

Holder
▸ 472



Custom reaming head – selection options!

Order No.		Order No.		Cutting material, coating	Dimensions					
					Ø D	Preferred diameter Ø D	a ~	l2 ~	Z	kg
76J.93	–	76H.93	–	DST	42,000 - 51,999	42	9,0	30	6	
76J.67	–	76H.67	–	DJC						
76J.85		76H.85		DJP						
76J.65		76H.65		DBG-P	52,000 - 55,999	54	9,0	35	6	
76J.37		76H.37		DBG-N						
76J.17		76H.17		DBC						
76J.71		76H.71		TiN	56,000 - 70,000	60	9,0	35	8	
76J.21		76H.21		HM						

New tool order example: Example Order No. **76J.93**
Bore diameter 65 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG4000 (Cutting geometry).
Supply includes: Reaming head mounted with inserts and clamping screws N00 57710 (S3090-9IP 2,25Nm).

Retipping order example: Example Order No. **76R.93**
A reaming head sent back to KOMET by the customer will be delivered fitted with indexable inserts and clamping screws. It is also possible to order one or two indexable insert sets for this reaming head (example Order No. **76S.93**).

Cutting speed and feed see pages 470-471.

KOMET REAMAX TS Duo

Recommended cutting data

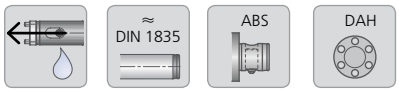
Guideline values for reaming						Cutting speed v_c (m/min)													
						optimum · maximum								optimum · maximum					
						3×D Reamers short								5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200					100 140	30 45	120 160	120 160					80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200					100 140	7 9	120 160	120 160					80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)							30 45	5 7							30 45	5 7
	4.1			HSS																	
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)																
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)								8 12								8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)				45 60			30 40	6 8				45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				30 50			20 35	5 6				30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)				30 50			20 35	5 6				30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)				150 220	150 220		80 130	15 25				120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)				90 130	90 130		50 90	10 15				90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)				70 100	70 100		40 60	9 12				70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)				80 130	80 130		50 70	9 12				80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320						120 200	15 30	150 200						120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)							80 150	12 20							80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)						150 300		15 30						150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)						200 300		15 30						150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)						200 300		12 20						150 200		12 20
H	15.0	1400		hardened steels < 45 HRC																	
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC																	

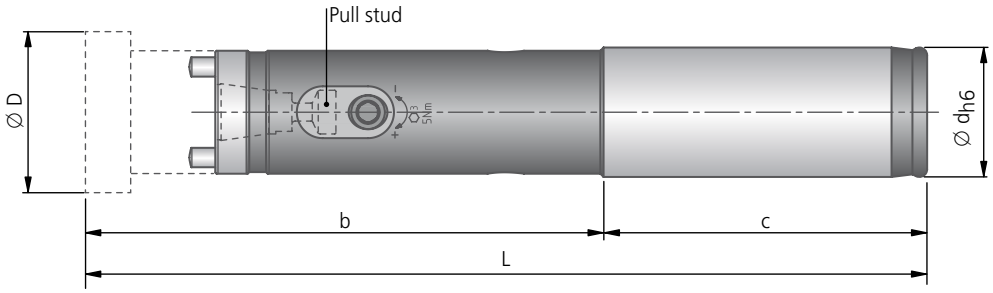
Reaming allowance in diameter (mm)

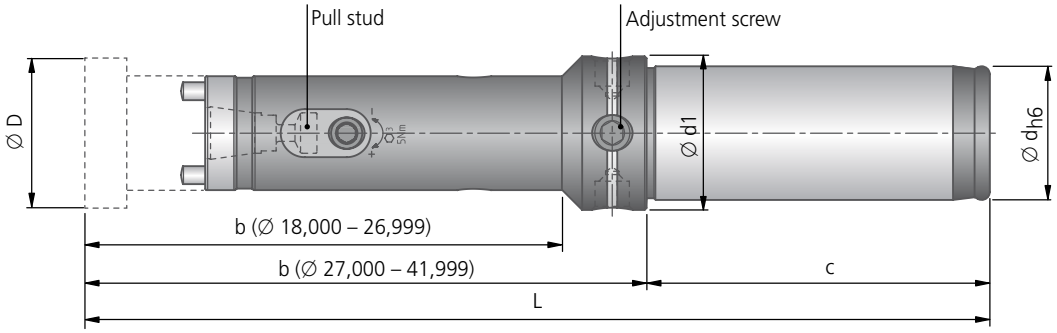
	Feed f (mm/rev) – with face cut, feed reduced by 30%			
	optimum · maximum ASG3000, ASG0106, ASG03, ASG0706 ASG07, ASG02		optimum · maximum ASG4000, ASG1402 ASG09, ASG1405, ASG1406	
	Ø 42 - 55,999 6	Ø 56 - 70 8	Ø 42 - 55,999 6	Ø 56 - 70 8
	1,00 1,40	1,50 2,30	1,20 1,70	1,90 2,70
	1,00 1,40	1,50 2,30	1,20 1,70	1,90 2,70
	1,00 1,40	1,50 2,30	1,20 1,70	1,90 2,70
	1,00 1,40	1,50 2,30	1,20 1,70	1,90 2,70
	0,70 1,00	1,10 1,60		
	0,70 1,00	1,10 1,60		
	0,60 0,80	0,90 1,30		
	0,80 1,20	1,30 1,90		
	0,80 1,10	1,20 1,80		
	0,80 1,10	1,20 1,80		
	0,80 1,10	1,20 1,80		
	1,20 1,70	1,90 2,70		
	1,00 1,40	1,50 2,30		
	1,20 1,70	1,90 2,70		
	1,20 1,70	1,90 2,70		
	1,00 1,40	1,50 2,30		
	0,80 1,10	1,20 1,80		
	0,80 1,10	1,20 1,80		
	1,10 1,70	1,70 2,50		
	0,90 1,40	1,40 2,10		
	1,10 1,70	1,70 2,70		
	1,10 1,70	1,70 2,70		
	1,10 1,70	1,70 2,70		
	0,30 - 0,40	0,30 - 0,50	0,30 - 0,40	0,30 - 0,50

KOMET REAMAX TS

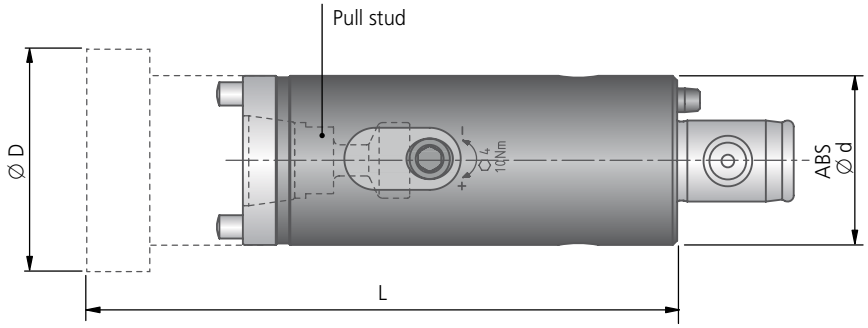
Holder

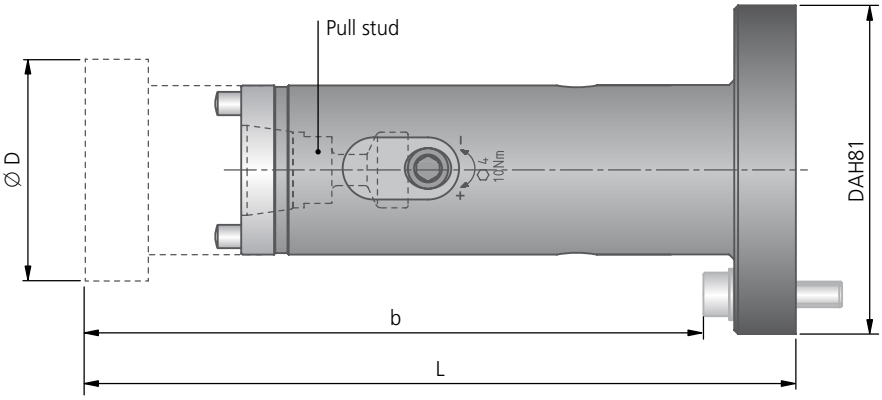






⚠ **Please note:**
Holder is pre-clamped and set to a concentricity of < 0.005 mm





For fitting instructions and accessories see pages 474-475.

≈ DIN 1835

for Ø D H7	for Ø D	short version Order No.	L	b	c	Ø d	kg	long version Order No.	L	b	c	Ø d	kg	Pull studs Order No.
18 H7	18,000 – 19,999	**75A.40.13010**	130	80	50	20	0,2	**75A.40.15010**	190	140	50	20	0,3	**15E.30.10010**
20 H7	20,000 – 21,999	**75A.40.13020**	130	80	50	20	0,2	**75A.40.15020**	190	140	50	20	0,3	**15E.30.10020**
22 H7	22,000 – 26,999	**75A.40.13030**	130	80	50	20	0,3	**75A.40.15030**	210	160	50	20	0,4	**15E.30.10030**
24 H7														
25 H7														
26 H7														
28 H7	27,000 – 34,999	**75A.40.13040**	176	120	56	25	0,5	**75A.40.15040**	236	180	56	25	0,7	**15E.30.10040**
30 H7														
32 H7														
35 H7	35,000 – 41,999	**75A.40.13050**	176	120	56	25	0,6	**75A.40.15050**	256	200	56	25	1,0	**15E.30.10050**
40 H7														
42 H7	42,000 – 51,999	**75A.40.13060**	180	120	60	32	0,9	**75A.40.15060**	280	220	60	32	1,5	**15E.30.10050**
50 H7														
54 H7	52,000 – 70,000	**75A.40.13070**	180	120	60	32	1,0	**75A.40.15070**	280	220	60	32	1,0	**15E.30.10070**

DAH Zero

for Ø D H7	for Ø D	short version Order No.	L	b	c	Ø d	Ø d1	kg	long version Order No.	L	b	c	Ø d	Ø d1	kg	Pull studs Order No.
18 H7	18,000 – 19,999	**75A.41.13010**	145	80	50	20	24	0,2	**75A.41.15010**	205	140	50	20	24	0,3	**15E.30.10010**
20 H7	20,000 – 21,999	**75A.41.13020**	145	80	50	20	25	0,3	**75A.41.15020**	205	140	50	20	25	0,4	**15E.30.10020**
22 H7	22,000 – 26,999	**75A.41.13030**	145	80	50	20	26,5	0,3	**75A.41.15030**	225	160	50	20	26,5	0,4	**15E.30.10030**
24 H7																
25 H7																
26 H7																
28 H7	27,000 – 34,999	**75A.41.13040**	176	120	56	25	26	0,5	**75A.41.15040**	236	180	56	25	26	0,7	**15E.30.10040**
30 H7																
32 H7																
35 H7	35,000 – 41,999	**75A.41.13050**	176	120	56	25	29	0,5	**75A.41.15050**	256	200	56	25	29	1,05	**15E.30.10050**
40 H7																

ABS

for Ø D H7	for Ø D	Order No.	L	ABS Ø d	kg	Pull studs Order No.
35 H7	35,000 – 41,999	**75A.60.13050**	110	32	0,42	**15E.30.10050**
40 H7						
42 H7	42,000 – 51,999	**75A.60.13060**	115	32	0,53	**15E.30.10050**
50 H7						
54 H7	52,000 – 70,000	**75A.60.13070**	125	40	0,83	**15E.30.10070**

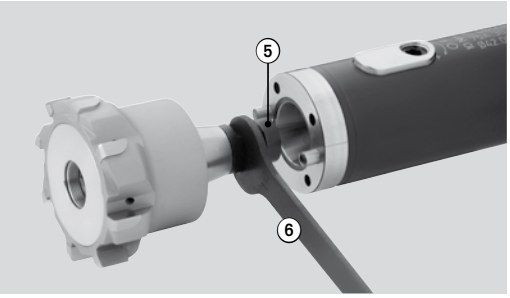
DAH

for Ø D H7	for Ø D	short version Order No.	L	b	DAH	kg	long version Order No.	L	b	DAH	kg	Pull studs Order No.
42 H7	42,000 – 51,999	**75A.30.13060**	138	120	81	0,9	**75A.30.15060**	238	220	81	1,5	**15E.30.10050**
50 H7												
54 H7	52,000 – 70,000	**75A.30.13070**	138	120	81	1,0	**75A.30.15070**	238	220	81	2,0	**15E.30.10070**

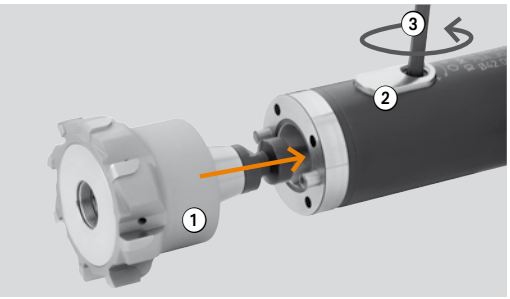
Supply includes: Holder with pull stud.
Please order reaming head separately.

KOMET REAMAX TS

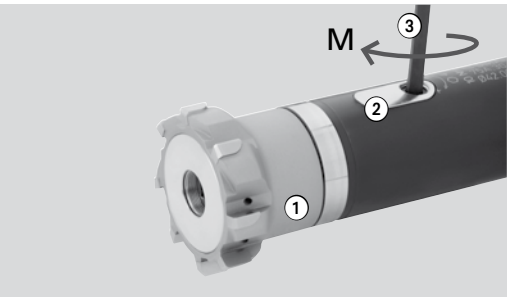
Assembly instructions



Clean taper/contact face thoroughly (grease free).
Screw pull stud ⑤ into reaming head and tighten with open-end wrench ⑥.

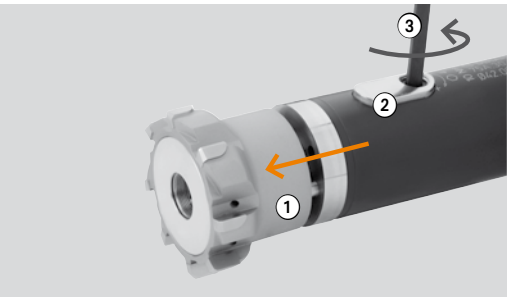


Without fully releasing them, open clamping jaws ② with key ③. Insert reaming head ①.

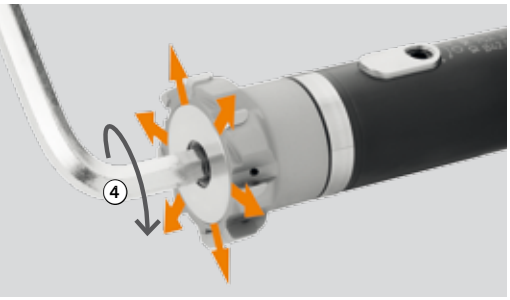


Close clamping jaws ② with key ③, using recommended torque. When inserting the reaming head ① it is drawn into its final position by closing the clamping jaws ②.

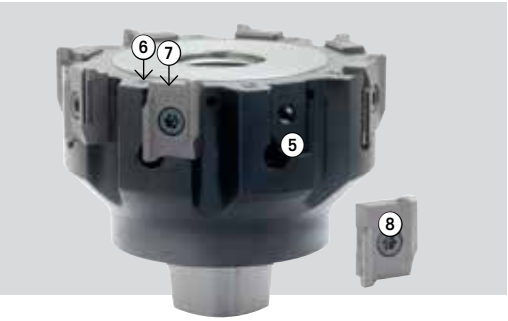
Dia. range	Starting torque M
18,000 – 19,999	1,5 Nm
20,000 – 21,999	2,5 Nm
22,000 – 26,999	4 Nm
27,000 – 34,999	5 Nm
35,000 – 41,999	6 Nm
42,000 – 51,999	10 Nm
52,000 – 70,000	13 Nm



When removing the reaming head ① it is pushed out of its position by the clamping jaws ② which allows for easy removal from the holder: Without fully releasing them, open clamping jaws ② with the key ③, remove the reaming head ①.



Adjusting to compensate for wear
Bore tolerances up to IT4 can be achieved by readjusting the reaming head using the hexagonal key ④.

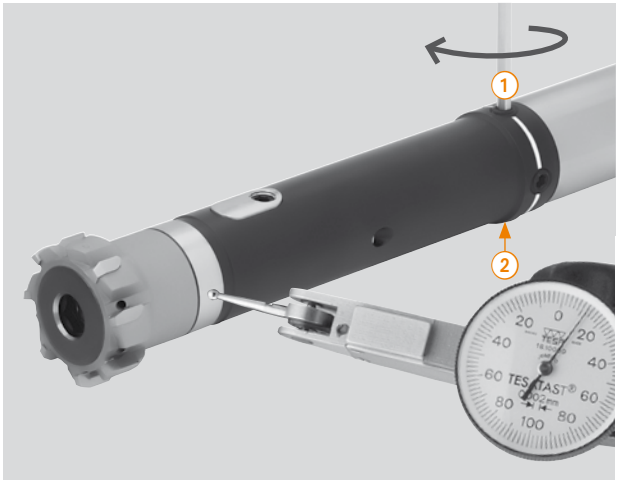


Make sure that the insert seats ⑤ and inserts are absolutely clean/ grease-free. If necessary, use compressed air to remove dust particles!

- All inserts and insert seats are marked with letters ⑥. This ensures correct assignment to the insert seat.
- The number markings ⑦ ensure that all inserts are positioned correctly.
- Tighten the screw ⑧ N00 57710 (S3090-9IP) to 2.25 Nm.

Aligning the DAH Zero holder:
The tool is recommended for a maximum radial alignment of 20 µm.

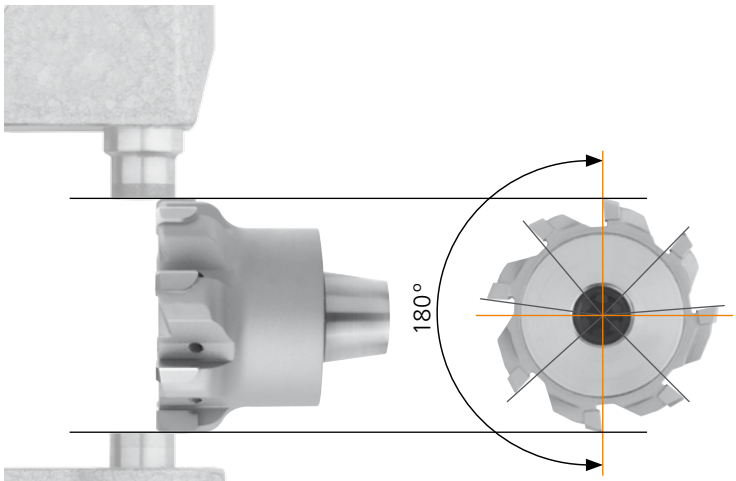
1. Loosen all adjustment screws and pretension to 1 Nm (new tools are delivered already adjusted).
2. Place µm dial against the steady rest bearing position.
3. Using the dial, determine the point of greatest runout error by turning the tool.
4. Using an Allen key, turn the appropriate adjustment screw clockwise ① until half of the runout error is corrected. Then over-tension by approx. 5 µm.
5. Loosen the opposite adjustment screw ② by the amount of over-tension.
6. Set all 4 adjustment screws until runout is less than 2 µ.



Please note:
- Based on adjustment steps 1 to 6, the runout must be checked and, if necessary, realigned when the adapter is exchanged, the application is changed, every time after wear compensation is adjusted and before every re-use.
- When in use, adjustment screws must always be tightened to 1 Nm.
- The max. readjustment torque is 4.5 Nm.

Assembly parts / Accessories (* not included in supply)

	③		④	⑤	⑥
for Ø D	Operating key* Size	L	Hexagonal key* Width across flats WAF	Pull studs Order No.	Open-end wrench* for pull studs Width across flats WAF
18,000 – 19,999	8IP/1,5 Nm		SW 4	**15E.30.10010**	SW 5
20,000 – 21,999	SW2,5/2,5 Nm	100	SW 5	**15E.30.10020**	SW 5
22,000 – 26,999	SW3/4 Nm	100	SW 5	**15E.30.10030**	SW 6
27,000 – 34,999	SW3/5 Nm	100	SW 8	**15E.30.10040**	SW 8
35,000 – 41,999	SW3/6 Nm	100	SW 6	**15E.30.10050**	SW 10
42,000 – 51,999	SW4/10 Nm	100	SW 8	**15E.30.10050**	SW 10
52,000 – 70,000	SW5/13 Nm		SW 10	**15E.30.10070**	SW 13



Caution!
- Uneven angle division !
- Two cutting edges are at 180° from each other = measuring teeth.
- Measure the diameter at the front of the reaming head (due to tapering, see illustration).
- Avoid damaging the cutting edges

REAMAX TS Duo:
The measuring tooth is located at letter A and is also marked on the holder with a spot. When indexing the insert, the diameter must be readjusted.

KOMET Cutting ring

We have put our entire wealth of experience into the generation of KOMET cutting ring, called Duomax.

The KOMET cutting ring for reaming basic and through holes is established and often copied due to its cost-effectiveness. This is one of the modular multi-blade tooling systems that features the easily replaceable KOMET cutting ring on the holder. The user gets a finish-ground tool which does not require any time-consuming setting and adjustment work to the individual cutters.

The indexable inserts for reaming have two fully utilisable cutting edges. Each set of indexable inserts saves you a retipping cycle and thereby reduces tool costs and time as well as effort spent on logistics. When retipping is required after delivering double the tool life, this is also much easier to do in comparison with the soldered KOMET cutting ring, because the number of machining steps in the process has been reduced. In connection with this, the tool life of the basic body is also longer, because it is no longer subjected to thermal stress. In addition, the precision and stability of the basic body has been further improved through optimisation of the basic shape.

A variety of cutting tool materials and coatings enable the individual adaptation of reamers to machining assignments and perfect processing of a wide variety of materials. In the future, a variety of coatings for this will be conceivable that cannot be used on soldered tools. Overall the flexibility with regard to selecting the cutting material and coating for reaming processes will significantly increase productivity. Moreover, tolerance and geometry changes can be accomplished quickly and with little effort.

Variant:
- Diameter from 60,600 – 110,599 mm
- Hole tolerances of ≥ IT5
- Use with cast metal, solutions for steel, stainless steels, aluminium and other materials to follow

BENEFITS for you:

- Retipping for extremely high cost efficiency
- For large hole diameters
- Modular multi-blade tooling system
- Compensation for wear through simple readjustment
- A variety of cutting materials and coatings
- Extremely high flexibility





The cutting ring system is one of the modular tool ranges from KOMET. The ring has support zones for non-deformational accommodation of the cutting forces. Expansion zones permit an elastic expansion of the ring for compensating for wear on the cutters.

Through repeated regrinding, the service life of the ring can be increased many times over. Cutting edge wear is compensated – all functional surfaces are fully reground. Reground tools have the same functionality as new ones.

BENEFITS for you:

- For large hole diameters
- Multiple blade
- Modular
- Compensation for wear through simple readjustment
- A variety of cutting materials and coatings
- Can be reground and refitted with cutters for extremely high cost efficiency

	Page
KOMET Duomax	
Indexable insert cutting ring ∅ 60,600 – 110,599 mm	478 – 479
Assembly instructions	480 – 481
Recommended cutting data	482 – 483
KOMET Cutting ring	
Cutting ring ∅ 60,600 – 110,599 mm	484 – 485
Assembly instructions	486 – 487
Recommended cutting data	488 – 489
Holder	490 – 495

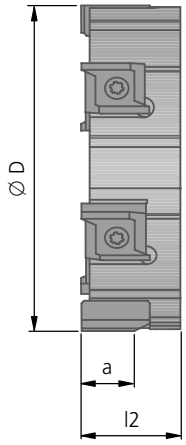
KOMET Duomax

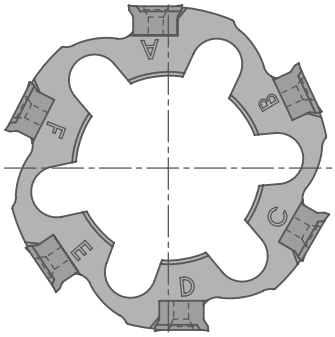
Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**33G.93** ASG 4000	**33G.71** ASG 4000	**33G.93** ASG 3000	**33G.71** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**33G.93** ASG 4000	**33G.71** ASG 4000	**33G.93** ASG 3000	**33G.71** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**33G.93** ASG 4000	**33G.71** ASG 4000	**33G.93** ASG 3000	**33G.71** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**33G.93** ASG 4000	**33G.71** ASG 3000	**33G.93** ASG 3000	**33G.71** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	**33G.71** ASG 0106	**33G.71** ASG 0106	**33G.71** ASG 0106	**33G.71** ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	**33G.21** ASG 03		**33G.21** ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106	**33G.65** ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**33G.93** ASG 3000	**33G.65** ASG 3000	**33G.93** ASG 3000	**33G.65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**33G.93** ASG 3000	**33G.65** ASG 3000	**33G.93** ASG 3000	**33G.65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**33G.93** ASG 3000	**33G.65** ASG 3000	**33G.93** ASG 3000	**33G.65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000	**33G.65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**33G.93** ASG 3000	**33G.71** ASG 3000	**33G.93** ASG 3000	**33G.71** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**33G.71** ASG 3000	**33G.71** ASG 3000	**33G.71** ASG 3000	**33G.71** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706	**33G.17** ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

We are happy to take inquiries concerning tools for materials without a recommendation.

Material P M K N S

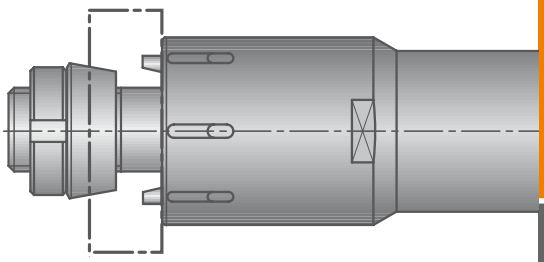




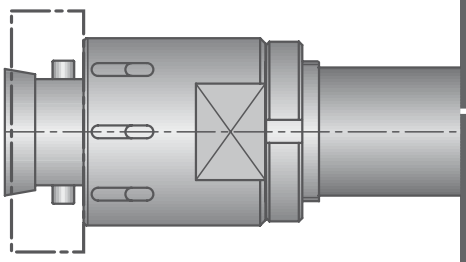
Face cut
Ø – 4,5 mm

Holder
▸ 490 - 495

for through hole machining



for blind hole machining



Custom cutting ring – selection options!

Order No.		Cutting material, coating	Dimensions				
			Diameter range Ø D	Preferred diameter Ø D	a ~	l2 ~	Z
33G.93	–	DST	60,600 - 79,599	62	10,3	19,6	6
33G.67	–	DJC		65	10,3	19,6	6
33G.85		DJP		70	10,3	19,6	6
33G.65		DBG-P		72	10,3	19,6	6
33G.37		DBG-N		75	10,3	19,6	6
33G.17		DBC	79,600 - 100,599	80	10,3	19,6	8
33G.71		TiN		90	10,3	19,6	8
33G.21		HM		92	10,3	19,6	8
				100	10,3	19,6	8
			100,600 - 110,599	110	10,3	19,6	10

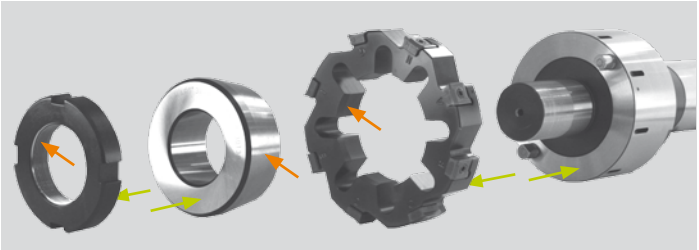
New tool order example: Example Order No. **33G.93**
Bore diameter 62 mm · Bore tolerance H7 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry).
Supply includes: Cutting ring mounted with inserts and clamping screws N00 57710 (S3090-9IP 2,25Nm).

Retipping order example: Example Order No. **33R.93**
A cutting ring sent back to KOMET by the customer will be delivered fitted with indexable inserts and clamping screws. It is also possible to order one or two indexable insert sets for this cutting ring (example Order No. **33S.93**).

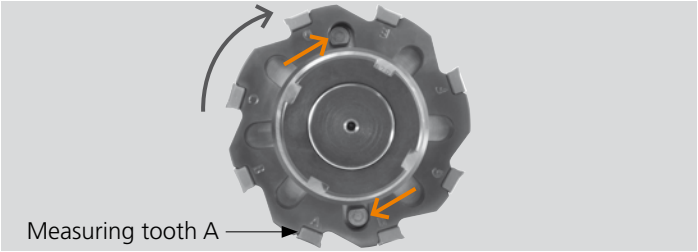
Cutting speed and feed see pages 482 - 483.

KOMET Duomax

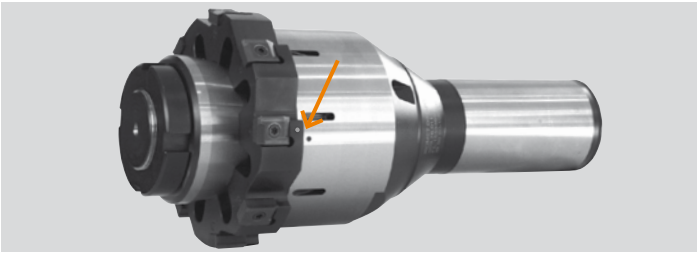
Assembly instructions on holder for through hole machining



Arrow markings:
- light grease
- Face surfaces on holder and Duomax are grease-free



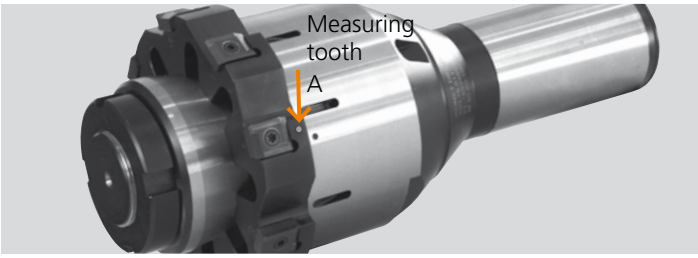
Positioning of the drive pins to the right of letter A (the measuring tooth is located at letter A and is also marked on the holder with a spot).
Before tightening and adjusting turn the Duomax against the direction of machining until hitting the drive pins.



Please observe the marking on holder and Duomax , check alignment of the coolant bores.



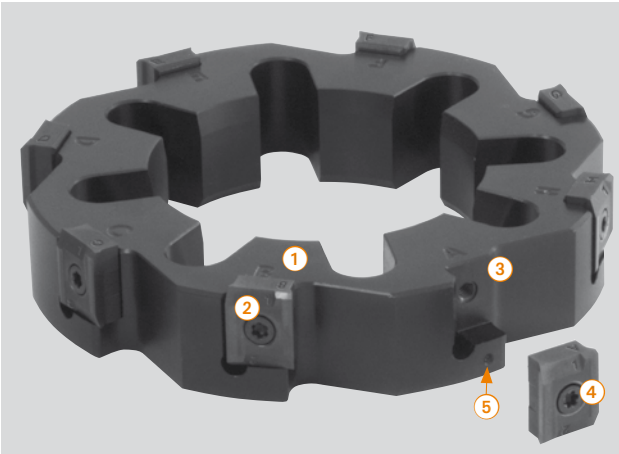
Adjust the diameter to the middle of the tolerance (counter-clockwise thread).



The diameter can only be measured at the marked cutting edges (measuring tooth A) due to unequal angular position!

If the diameter was set too large, the conical ring must be loosened and the Duomax readjusted.

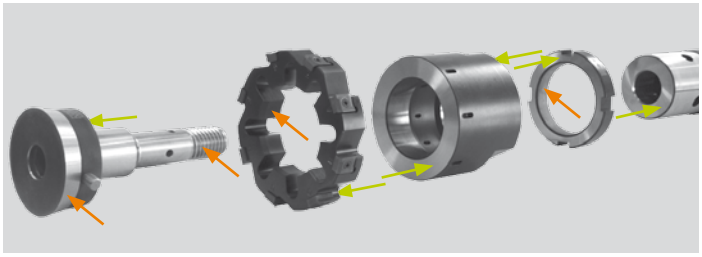
Assembly instructions inserts



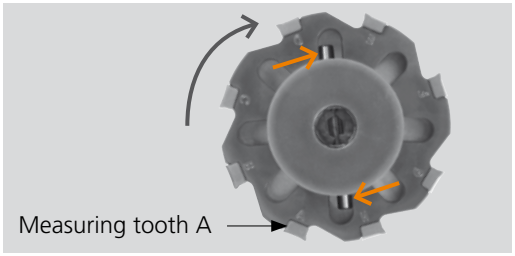
Cleaning:
Make sure that the insert seats ③ and inserts are absolutely clean/grease-free. If necessary, use compressed air to remove dust particles!

Montage:
- All inserts and insert seats are marked with letters ①. This ensures correct assignment to the insert seat.
- The number markings ② ensure that all inserts are positioned correctly.
- Tighten the screw ④ N00 57710 (S3090-9IP) to 2.25 Nm.

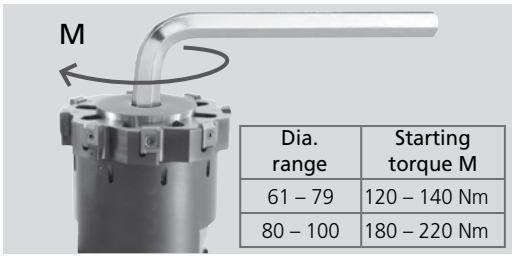
Assembly instructions on holder for blind hole machining



Arrow markings:
- light grease
- Face surfaces on holder and Duomax are grease-free

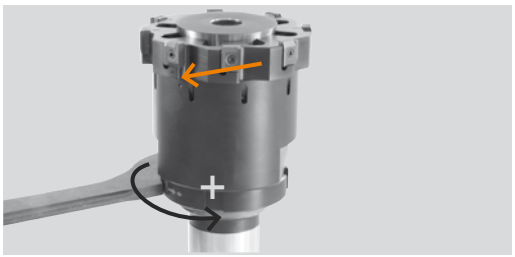


Positioning of the drive pins to the right of letter A (the measuring tooth is located at letter A and is also marked on the holder with a spot). Before tightening and adjusting turn the Duomax against the direction of machining until hitting the drive pins.

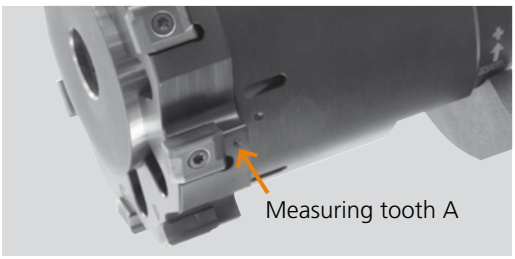


Dia. range	Starting torque M
61 – 79	120 – 140 Nm
80 – 100	180 – 220 Nm

Screw the nut onto the holder with the smooth face against the bush. Mount the Duomax with the conical screw. After fastening the conical screw check that there is space between bush and Duomax. Fasten conical screw according to index table.



Please observe the marking on holder and Duomax, check alignment of the coolant bores. Adjust the diameter to the middle of the tolerance.



The diameter can only be measured at the marked cutting edges (measuring tooth A) due to unequal angular position!

If the diameter was set too large, the nut must be loosened and the Duomax readjusted.

Measuring the diameter:
The measuring tooth is located at letter A and is also marked on the holder with a spot ⑤.

Caution!
- Uneven angle division !
- Two cutting edges are at 180° from each other = measuring tooth A.
- Measure the diameter at the front of the cutting ring (due to tapering, see illustration).
- Avoid damaging the cutting edges
- When indexing the insert, the diameter must be readjusted.
- Delivery includes: Duomax with mounted inserts.



KOMET Duomax

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)													
						optimum · maximum								optimum · maximum					
						3×D Reamers short								5×D Reamers long					
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DJP	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200					100 140	8 10	120 160	120 160					80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200					100 140	30 45	120 160	120 160					80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200					100 140	7 9	120 160	120 160					80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)							30 45	5 7							30 45	5 7
	4.1			HSS																	
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)																
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)								8 12								8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)				45 60			30 40	6 8				45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				30 50			20 35	5 6				30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)				30 50			20 35	5 6				30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)				150 220	150 220		80 130	15 25				120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)				90 130	90 130		50 90	10 15				90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)				70 100	70 100		40 60	9 12				70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)				80 130	80 130		50 70	9 12				80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320						120 200	15 30	150 200						120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)							80 150	12 20							80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)						150 300		15 30						150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)						200 300		15 30						150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)						200 300		12 20						150 200		12 20
H	15.0	1400		hardened steels < 45 HRC																	
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC																	

Reaming allowance in diameter (mm)

	Feed f (mm/rev)					
	optimum · maximum ASG3000, ASG0106, ASG03, ASG0706 ASG07, ASG02			optimum · maximum ASG4000, ASG1402 ASG09, ASG1405, ASG1406		
	Ø 60,600 - 79,599 6	Ø 79,6 - 100,599 8	Ø 100,6 - 110,599 10	Ø 60,600 - 79,599 6	Ø 79,6 - 100,599 8	Ø 100,6 - 110,599 10
	1,10 1,70	1,50 2,30	1,90 2,80	1,40 2,00	1,90 2,70	2,40 3,40
	1,10 1,70	1,50 2,30	1,90 2,80	1,40 2,00	1,90 2,70	2,40 3,40
	1,10 1,70	1,50 2,30	1,90 2,80	1,40 2,00	1,90 2,70	2,40 3,40
	1,10 1,70	1,50 2,30	1,90 2,80	1,40 2,00	1,90 2,70	2,40 3,40
	0,80 1,20	1,10 1,60	1,30 2,00			
	0,90 1,40	1,30 1,90	1,60 2,40			
	0,90 1,30	1,20 1,80	1,50 2,30			
	0,90 1,30	1,20 1,80	1,50 2,30			
	0,90 1,30	1,20 1,80	1,50 2,30			
	1,40 2,00	1,90 2,70	2,30 3,40			
	1,10 1,70	1,50 2,30	1,90 2,80			
	1,40 2,00	1,90 2,70	2,30 3,40			
	1,40 2,00	1,90 2,70	2,30 3,40			
	1,10 1,70	1,50 2,30	1,90 2,80			
	0,90 1,30	1,20 1,80	1,50 2,30			
	0,90 1,30	1,20 1,80	1,50 2,30			
	1,20 1,90	1,70 2,50	2,10 3,10			
	1,00 1,50	1,40 2,10	1,70 2,60			
	1,30 2,00	1,70 2,70	2,20 3,40			
	1,30 2,00	1,70 2,70	2,20 3,40			
	1,30 2,00	1,70 2,70	2,20 3,40			
	0,30 - 0,50	0,30 - 0,50	0,30 - 0,50	0,30 - 0,50	0,30 - 0,50	0,30 - 0,50

KOMET Cutting ring

Tool recommendation

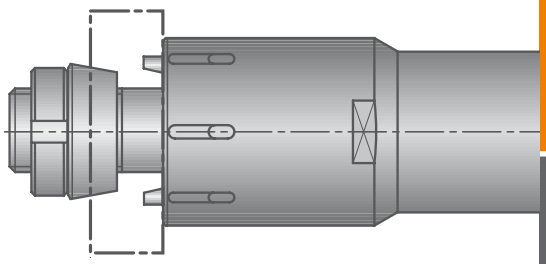
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	300.45 ASG 4000	300.05 ASG 4000	300.45 ASG 3000	300.05 ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	300.45 ASG 4000	300.05 ASG 4000	300.45 ASG 3000	300.05 ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	300.45 ASG 4000	300.05 ASG 4000	300.45 ASG 3000	300.05 ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	300.45 ASG 4000	300.05 ASG 3000	300.45 ASG 3000	300.05 ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	300.05 ASG 0106	300.05 ASG 0106	300.05 ASG 0106	300.05 ASG 0106
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	300.25 ASG 03		300.25 ASG 03	
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106	300.65 ASG 0106
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	300.45 ASG 3000	300.65 ASG 3000	300.45 ASG 3000	300.65 ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	300.45 ASG 3000	300.65 ASG 3000	300.45 ASG 3000	300.65 ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	300.45 ASG 3000	300.65 ASG 3000	300.45 ASG 3000	300.65 ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000	300.65 ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	300.45 ASG 3000	300.05 ASG 3000	300.45 ASG 3000	300.05 ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	300.05 ASG 3000	300.05 ASG 3000	300.05 ASG 3000	300.05 ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706	300.17 ASG 0706
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

We are happy to take inquiries concerning tools for materials without a recommendation.

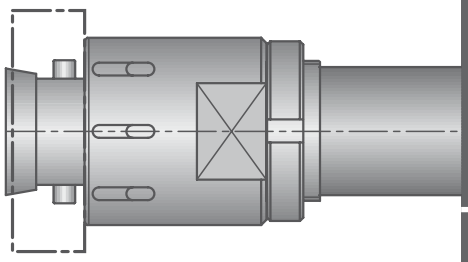
Material
P M K N S

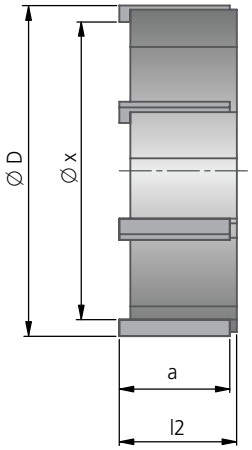
Holder
▸ 490 - 495

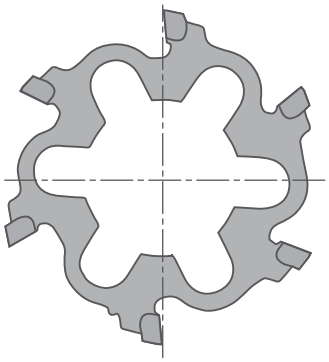
for through hole machining



for blind hole machining







Face cut
Ø – 8,4 mm

Custom cutting ring – selection options!

Order No.		Cutting material, coating	Dimensions					
			Ø D	min. diameter for face machining Ø x ~	a ~	HM, TiN DBG-N DBG-P DBC l2 ~	DST DJC l2 ~	Z
300.45	–	DST	60,600 - 79,599	ØD – 8,4	16,0	18,5	17,5	6
300.08	–	DJC						
300.65		DBG-P	79,600 - 100,599	ØD – 8,4	16,0	18,5	17,5	8
300.07		DBG-N						
300.17		DBC						
300.25		HM	100,600 - 110,599	ØD – 8,4	16,0	18,5	17,5	10
300.05		TiN						

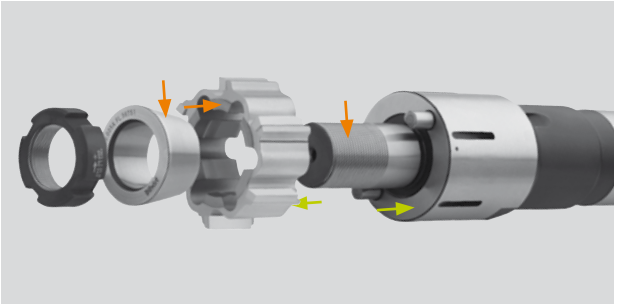
Order example:
Order No.300.45 · Bore diameter 71 mm · Bore tolerance H6 · Material 1.0037 (S235JR) or ASG4000 (Cutting geometry).

Cutting ring from dia. 17,60 to 60,59 mm and ∅ 110,60 to 300,59 mm on request.

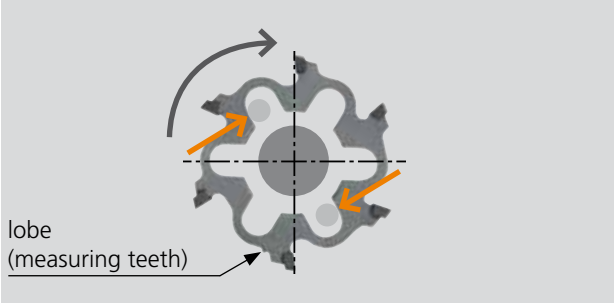
Cutting speed and feed see pages 488 - 489.

KOMET Cutting ring

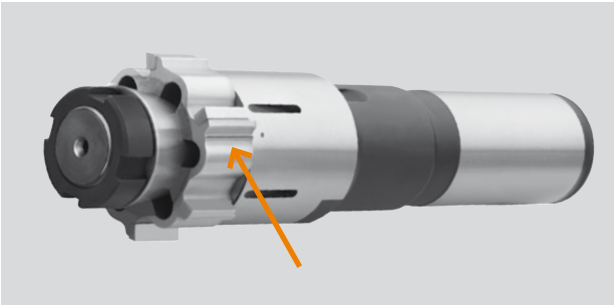
Assembly instructions on holder for through hole machining



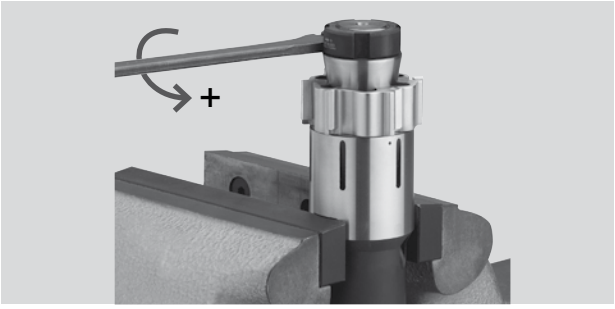
Arrow markings:
- light grease
- Face surfaces on holder and cutting ring are grease-free



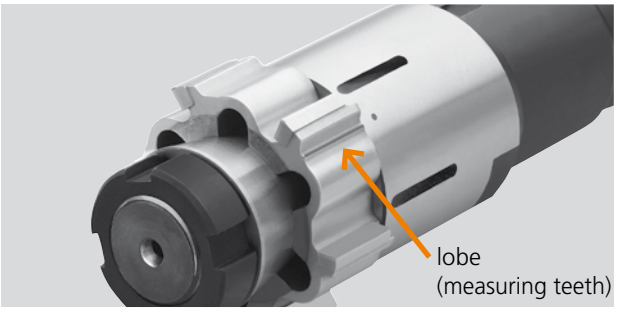
The position for the drive pins is marked with a lobe or in red.
Before tightening and adjusting turn the cutting ring against the direction of machining until hitting the drive pins.



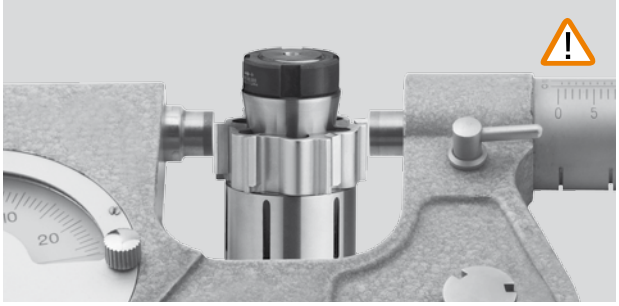
Please observe the marking on holder and cutting ring, check alignment of the coolant bores.



Adjust the diameter to the middle of the tolerance (counter-clockwise thread).



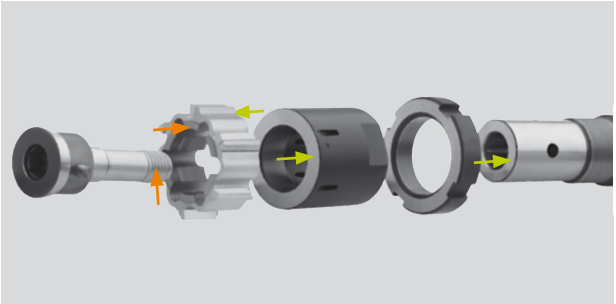
The diameter can only be measured at the marked cutting edges due to unequal angular position!



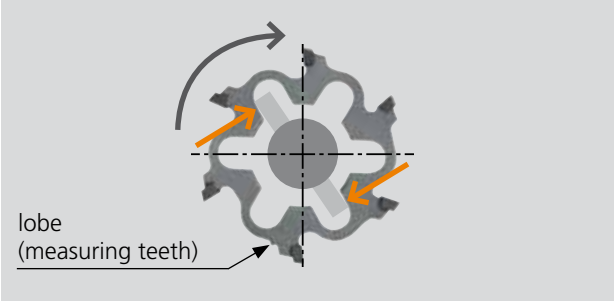
Measure the diameter

If the diameter was set too large, the conical ring must be loosened and the cutting ring readjusted.

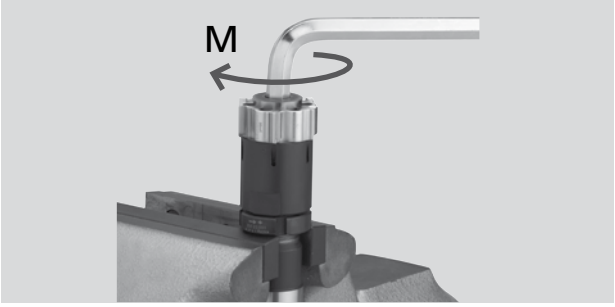
Assembly instructions on holder for blind hole machining



Arrow markings:
- light grease
- Face surfaces on holder and cutting ring are grease-free

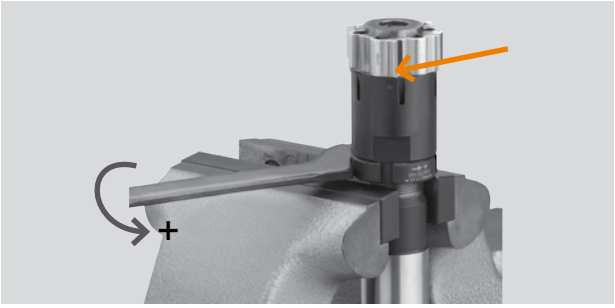


The position for the drive pins is marked with a lobe or in red.
Before tightening and adjusting turn the cutting ring against the direction of machining until hitting the drive pin.



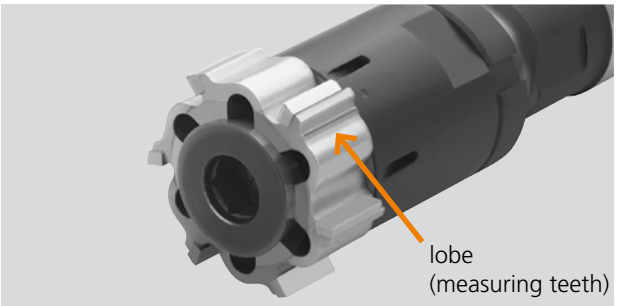
Screw the nut onto the holder with the smooth face against the bush. Mount the cutting ring with the conical screw.
After fastening the conical screw check that there is space between bush and ring.
Fasten conical screw according to index table.

Dia. range	Starting torque M
60	90 – 110 Nm
61 – 79	120 – 140 Nm
80 – 100	180 – 220 Nm

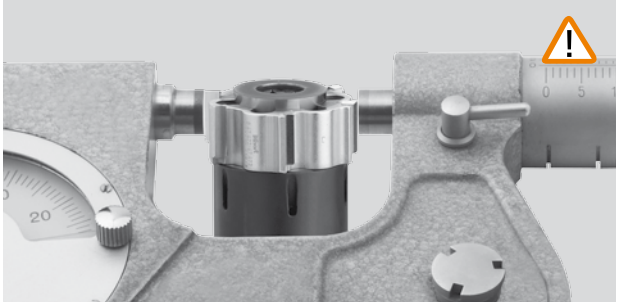


Please observe the marking on holder and cutting ring, check alignment of the coolant bores.

Adjust the diameter to the middle of the tolerance.



The diameter can only be measured at the marked cutting edges due to unequal angular position!



Measure the diameter

If the diameter was set too large, the nut must be loosened and the cutting ring readjusted.

KOMET Cutting ring

Recommended cutting data

Guideline values for reaming						Cutting speed v_c (m/min)													
						optimum · maximum							optimum · maximum						
						3×D Reamers short							5×D Reamers long						
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example material code/DIN	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM	DST	DJC	DBG-P	DBG-N	DBC	TiN	HM
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200				100 140	8 10	120 160	120 160				80 120	8 10
	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200				100 140	30 45	120 160	120 160				80 120	30 45
	3.0	> 900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200				100 140	7 9	120 160	120 160				80 120	7 9
	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)						30 45	5 7						30 45	5 7
	4.1			HSS															
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)														
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)							8 12							8 12
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)			45 60			30 40	6 8			45 60			30 40	6 8
	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)			30 50			20 35	5 6			30 50			20 35	5 6
	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)			30 50			20 35	5 6			30 50			20 35	5 6
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			150 220	150 220		80 130	15 25			120 150	120 150		80 120	15 25
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			90 130	90 130		50 90	10 15			90 120	90 120		50 90	10 15
	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	175 300	175 300			12 18	150 180	150 180	150 180	150 180			12 18
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	150 250	150 250	150 250	150 250			12 18	120 160	120 160	120 160	120 160			12 18
	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 180	120 180			12 15	120 150	120 150	120 150	120 150			12 15
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)			70 100	70 100		40 60	9 12			70 100	70 100		40 60	9 12
	10.2		300	vermicular cast iron	5.2200 (EN-GJV-350) 5.2300 (EN-GJV-450)			80 130	80 130		50 70	9 12			80 130	80 130		50 70	9 12
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 320					120 200	15 30	150 200					120 150	15 30
	12.1		100	copper alloy, brass, bronze:average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)						80 150	12 20						80 120	12 20
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)					150 300		15 30					150 200		15 30
	13.1		75	cast aluminium alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)					200 300		15 30					150 200		15 30
	14.0		100	cast aluminium alloy: Si-content > 10%	3.2381.01 (G-AlSi10Mg)					200 300		12 20					150 200		12 20
H	15.0	1400		hardened steels < 45 HRC															
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC															

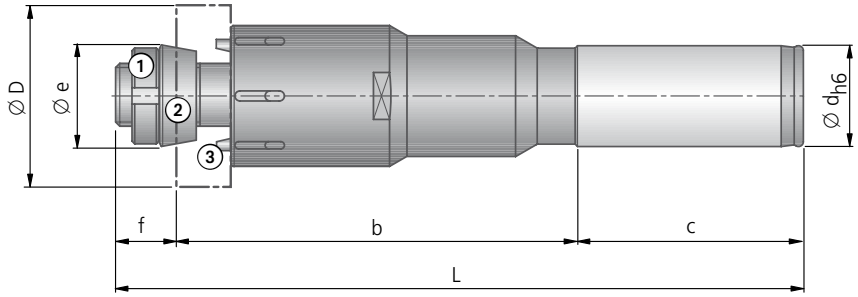
Reaming allowance in diameter (mm)

	Feed f (mm/rev)											
	optimum · maximum ASG3000, ASG0106, ASG03, ASG0706 ASG07, ASG02						optimum · maximum ASG4000, ASG09B, ASG1402 ASG09, ASG1405, ASG1406					
	Ø 17,6 - 22 6	Ø 22 - 32 6	Ø 32 - 50 6	Ø 50 - 79,59 6	Ø 79,6 - 100,59 8	Ø 100,6 - 300,59 10	Ø 17,6 - 22 6	Ø 22 - 32 6	Ø 32 - 50 6	Ø 50 - 79,59 6	Ø 79,6 - 100,59 8	Ø 100,6 - 300,59 10
	0,80 **1,10**	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80	**1,00** 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,40** 3,40
	0,80 **1,10**	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80	**1,00** 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,40** 3,40
	0,80 **1,10**	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80	**1,00** 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,40** 3,40
	0,80 **1,10**	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80	**1,00** 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,40** 3,40
	0,50 0,80	**0,70** 1,00	**0,70** 1,00	**0,80** 1,20	**1,10** 1,60	**1,30** 2,00						
	0,60 0,90	**0,80** 1,20	**0,80** 1,20	**0,90** 1,40	**1,30** 1,90	**1,60** 2,40						
	0,60 0,90	**0,80** 1,10	**0,80** 1,10	**0,90** 1,30	**1,20** 1,80	**1,50** 2,30						
	0,60 0,90	**0,80** 1,10	**0,80** 1,10	**0,90** 1,30	**1,20** 1,80	**1,50** 2,30						
	0,60 0,90	**0,80** 1,10	**0,80** 1,10	**0,90** 1,30	**1,20** 1,80	**1,50** 2,30						
	0,90 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,30** 3,40						
	0,80 1,10	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80						
	0,90 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,30** 3,40						
	0,90 1,30	**1,20** 1,70	**1,20** 1,70	**1,40** 2,00	**1,90** 2,70	**2,30** 3,40						
	0,80 1,10	**1,00** 1,40	**1,00** 1,40	**1,10** 1,70	**1,50** 2,30	**1,90** 2,80						
	0,60 0,90	**0,80** 1,10	**0,80** 1,10	**0,90** 1,30	**1,20** 1,80	**1,50** 2,30						
	0,60 0,90	**0,80** 1,10	**0,80** 1,10	**0,90** 1,30	**1,20** 1,80	**1,50** 2,30						
	0,90 1,30	**1,10** 1,70	**1,10** 1,70	**1,20** 1,90	**1,70** 2,50	**2,10** 3,10						
	0,70 1,10	**0,90** 1,40	**0,90** 1,40	**1,00** 1,50	**1,40** 2,10	**1,70** 2,60						
	0,90 1,30	**1,10** 1,70	**1,10** 1,70	**1,30** 2,00	**1,70** 2,70	**2,20** 3,40						
	0,90 1,30	**1,10** 1,70	**1,10** 1,70	**1,30** 2,00	**1,70** 2,70	**2,20** 3,40						
	0,90 1,30	**1,10** 1,70	**1,10** 1,70	**1,30** 2,00	**1,70** 2,70	**2,20** 3,40						
	0,20-0,30	0,20-0,30	0,20-0,40	0,30-0,50	0,30-0,50	0,30-0,50	0,20-0,30	0,20-0,30	0,20-0,40	0,30-0,50	0,30-0,50	0,30-0,50

KOMET Cutting ring

Holder for through hole machining



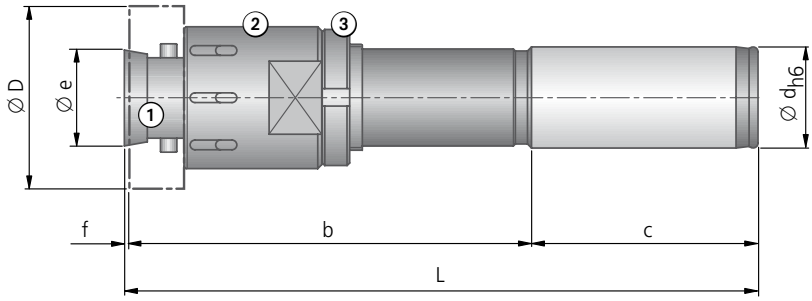


long version									①		②	③
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	Ø d×c	L	b	Ø e	f ~	kg	Nut Order No.	Hook spanner Size	Conical ring Order No.	Positioning pin Order No.
62 65 70	60,600 – 70,599	**504.76.009**	32×60	321,5	237	40,0	24,5	3,46	**099.00.090**	34-36	**301.80.006**	**300.30.007**
72 75	70,600 – 79,599	**504.76.010**	32×60	321,5	237	40,0	24,5	3,87	**099.00.090**	34-36	**301.80.006**	**300.30.007**
80 90	79,600 – 90,599	**504.76.011**	40×70	338,5	240	56,2	28,5	6,14	**099.00.092**	45-50	**301.80.007**	**300.30.008**
92 100	90,600 – 100,599	**504.76.012**	40×70	338,5	240	56,2	28,5		**099.00.092**	45-50	**301.80.007**	**300.30.008**

Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Cylindrical shank with flat available on request





short version										①		②	③	
										Conical screw		Bush	Nut	
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	Order No.	Ø d×c	L	b	Ø e	f ~	kg	Order No.	Order No.	Order No.	Order No.	DIN 1810 A
62 65 70	60,600 – 70,599	513.76.008	513.81.008	32×60	166,5	105	37,0	1,5	1,78	510.55.007	510.45.007	510.15.008	350.23.002	52-55
72 75	70,600 – 79,599	513.76.009	513.81.009	32×60	166,5	105	37,0	1,5	1,76	510.55.007	510.45.007	510.15.009	350.23.002	52-55
80 90	79,600 – 90,599	513.76.010	513.81.010	40×70	176,5	105	53,2	1,5	3,13	510.55.008	510.45.008	510.15.010	350.23.003	68-75
92 100	90,600 – 100,599	513.76.011	513.81.011	40×70	176,5	105	53,2	1,5		510.55.008	510.45.008	510.15.011	350.23.003	68-75

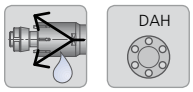
long version										①		②	③	
										Conical screw		Bush	Nut	
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	Order No.	Ø d×c	L	b	Ø e	f ~	kg	Order No.	Order No.	Order No.	Order No.	DIN 1810 A
62 65 70	60,600 – 70,599	514.76.008	514.81.008	32×60	298,5	237	37,0	1,5	2,90	510.55.007	510.45.007	510.15.008	350.23.002	52-55
72 75	70,600 – 79,599	514.76.009	514.81.009	32×60	298,5	237	37,0	1,5	3,01	510.55.007	510.45.007	510.15.009	350.23.002	52-55
80 90	79,600 – 90,599	514.76.010	514.81.010	40×70	311,5	240	53,2	1,5	4,90	510.55.008	510.45.008	510.15.010	350.23.003	68-75
92 100	90,600 – 100,599	514.76.011	514.81.011	40×70	311,5	240	53,2	1,5	5,55	510.55.008	510.45.008	510.15.011	350.23.003	68-75

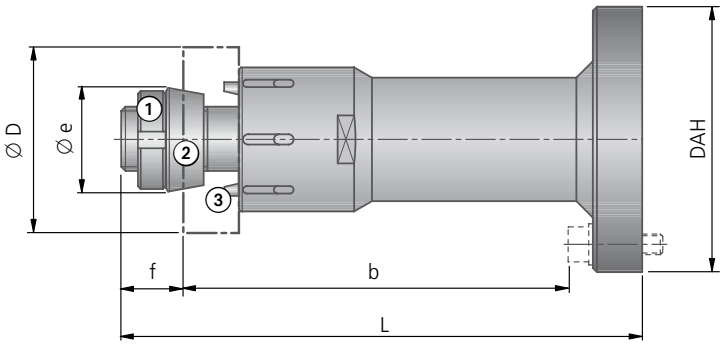
Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Cylindrical shank with flat available on request

KOMET Cutting ring

Holder for through hole machining



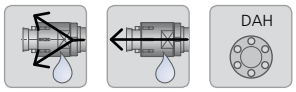


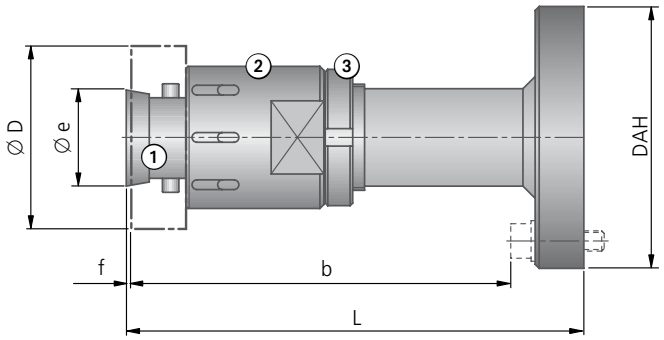
									①		②	③
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	DAH	L	b	Ø e	f ~	kg	Nut Order No.	Hook spanner DIN1810A Size	Conical ring Order No.	Positioning pin Order No.
62	60,600 – 70,599	**507.02.043**	81	141,5	99	40,0	24,5	1,70	**099.00.090**	34-36	**301.80.006**	**300.30.007**
65												
70												
72	70,600 – 79,599	**507.02.044**	81	141,5	99	40,0	24,5	1,90	**099.00.090**	34-36	**301.80.006**	**300.30.007**
75												
62	60,600 – 70,599	**507.02.008**	115	146	96	40,0	24,5	2,50	**099.00.090**	34-36	**301.80.006**	**300.30.007**
65												
70												
72	70,600 – 79,599	**507.02.009**	115	146	96	40,0	24,5	2,79	**099.00.090**	34-36	**301.80.006**	**300.30.007**
75												
80	79,600 – 90,599	**507.02.010**	115	150	96	56,2	28,5	3,80	**099.00.092**	45-50	**301.80.007**	**300.30.008**
90												
92	90,600 – 100,599	**507.02.011**	115	150	96	56,2	28,5	4,22	**099.00.092**	45-50	**301.80.007**	**300.30.008**
100												
110	100,600 – 110,599	**507.02.012**	115	158	97	73,4	35,5	5,50	**099.00.095**	58-62	**306.20.001**	**300.30.008**

Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Further holders on request

Holder for blind hole machining





										①		②	③	
										Conical screw		Bush	Nut	
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	Order No.	DAH	L	b	Ø e	f ~	kg	Order No.	Order No.	Order No.	Order No.	DIN 1810 A
62	60,600 – 70,599	517.76.008	517.81.008	115	147	120	37,0	1,5	2,52	510.55.007	510.45.007	510.15.008	350.23.002	52-55
65														
70														
72	70,600 – 79,599	517.76.009	517.81.009	115	147	120	37,0	1,5	2,52	510.55.007	510.45.007	510.15.009	350.23.002	52-55
75														
80	79,600 – 90,599	517.76.010	517.81.010	115	157	130	53,2	1,5	3,95	510.55.008	510.45.008	510.15.010	350.23.003	68-75
90														
92	90,600 – 100,599	517.76.011	517.81.011	115	157	130	53,2	1,5	4,33	510.55.008	510.45.008	510.15.011	350.23.003	68-75
100														

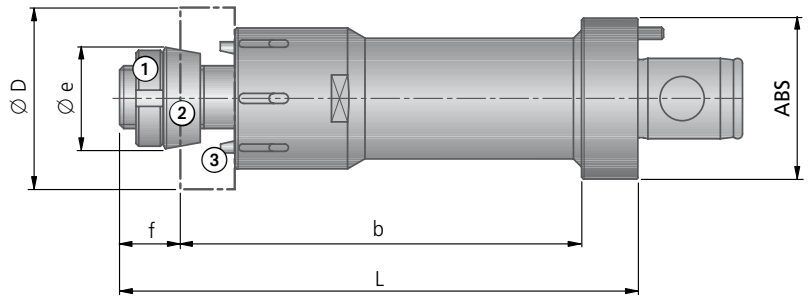
Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Further holders on request

KOMET Cutting ring

Holder for through hole machining



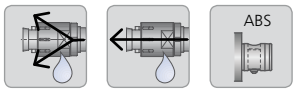


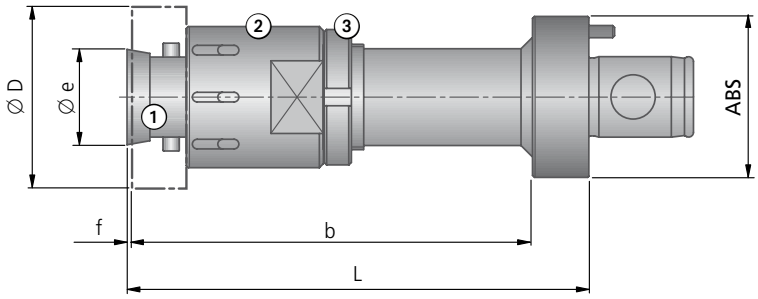
									①		②	③
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	ABS	L	b	Ø e	f ~	kg	Nut Order No.	Hook spanner DIN1810A Size	Conical ring Order No.	Positioning pin Order No.
62	60,600 – 65,599	**508.53.020**	50	143,5	105	40,0	24,5	1,95	**099.00.090**	34-36	**301.80.006**	**300.30.007**
65 70	65,600 – 70,599	**508.53.021**	63	149,5	105	40,0	24,5	2,33	**099.00.090**	34-36	**301.80.006**	**300.30.007**
72 75	70,600 – 79,599	**508.53.009**	63	149,5	105	40,0	24,5	2,50	**099.00.090**	34-36	**301.80.006**	**300.30.007**
80 90	79,600 – 90,599	**508.53.010**	63	153,5	105	56,2	28,5	3,55	**099.00.092**	45-50	**301.80.007**	**300.30.008**
92 100	90,600 – 100,599	**508.53.011**	63	153,5	105	56,2	28,5	3,93	**099.00.092**	45-50	**301.80.007**	**300.30.008**
110	100,600 – 110,599	**508.53.022**	80	167	106,5	73,4	35,5	6,21	**099.00.095**	58-62	**306.20.001**	**300.30.008**

Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Further holders on request

Holder for blind hole machining





										①		②	③	
										Conical screw		Bush	Nut	
Pre-ferred diameter Ø D	Diameter range Ø D	Order No.	Order No.	ABS	L	b	Ø e	f ~	kg	Order No.	Order No.	Order No.	Order No.	DIN 1810 A
62	60,600 – 65,599	**518.78.013**	**518.82.013**	50	120,5	105	37,0	1,5	1,75	**510.55.007**	**510.45.007**	**510.15.008**	**350.23.002**	52-55
65 70	65,600 – 70,599	**518.78.014**	**518.82.014**	63	126,5	105	37,0	1,5	2,15	**510.55.007**	**510.45.007**	**510.15.008**	**350.23.002**	52-55
72 75	70,600 – 79,599	**518.78.009**	**518.82.009**	63	126,5	105	37,0	1,5	2,23	**510.55.007**	**510.45.007**	**510.15.009**	**350.23.002**	52-55
80 90	79,600 – 90,599	**518.78.010**	**518.82.010**	63	126,5	105	53,2	1,5	3,29	**510.55.008**	**510.45.008**	**510.15.010**	**350.23.003**	68-75
92 100	90,600 – 100,599	**518.78.011**	**518.82.011**	63	126,5	105	53,2	1,5	3,60	**510.55.008**	**510.45.008**	**510.15.011**	**350.23.003**	68-75

Supply includes: Holder with ①, ② and ③. Please order cutting ring separately.

Further holders on request


KOMET
Freemax
KOMET
Freemax

Indexable insert technology has revolutionised reaming with multiple-cutting-edge reamers and has set new standards in terms of cost efficiency and functionality.

We have always focused on minimising tool wear and thus ensure maximum productivity at our customers. We have now applied this approach to our reaming tools and simplified handling at the same time. One new feature of our KOMET Freemax is that the user can choose the position of the inserts, similar to how other machining tools currently work. This means that they are easier to fit, quicker and more reliable.

The KOMET Freemax has three cutting edges per insert, making handling for the user extremely flexible. This makes our KOMET Freemax truly unique.

BENEFITS for you:

- Triple-edged indexable inserts that can be freely assigned
- Coated carbide and cermet inserts available for machining all material groups in accordance with the ISO standard
- The clear assignment of each cutting edge by marking on figures prevents incorrect positioning
- High level of stability thanks to the tangential fitting of the indexable inserts
- High-precision ground indexable inserts for maximum quality
- Can be fitted in KOMET DAH compensating holders or with ABS connection
- EASY-TO-USE principle: Handling is straightforward and the need for adjustments is minimal
- DBG-P coating for better performance

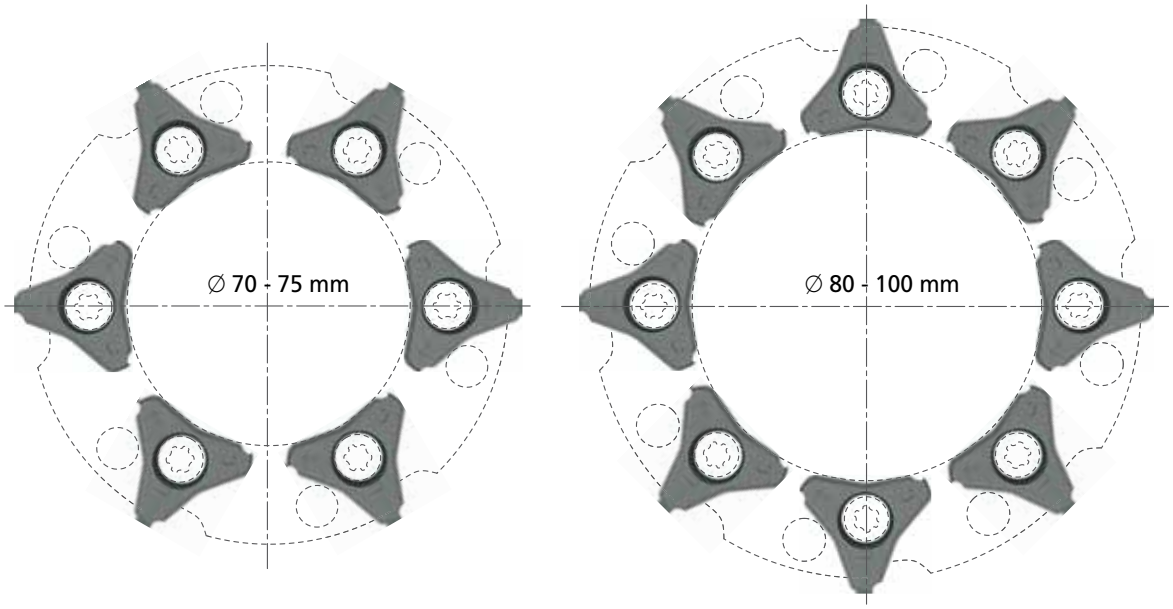
KOMET Freemax	Page
Diameter H7 – available from stock	498
Indexable insert set	
∅ 69,900 – 100,100 mm	500 – 501
Holder	499
Assembly instructions	502
Recommended cutting data	503

KOMET Freemax

Ø 70^{H7} – 100^{H7} mm

Indexable insert set

Material
P K N

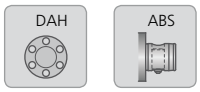


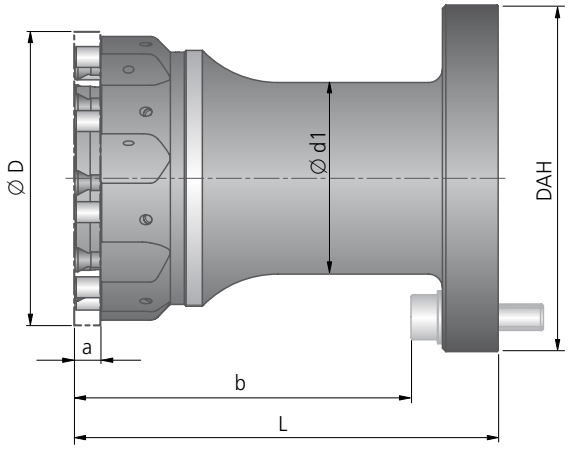
Diameter H7 – available from stock						
		P K [1] N [2]	P	P K N [3]	P	
		ASG 3000	ASG4000	ASG 3000	ASG4000	
Ø D	Z	Order No. DST	Order No. DST	Order No. DBG-P	Order No. DBG-P	
70^{H7}	6	71G.93.0700N	71G.93.0700D	71G.65.0700N	71G.65.0700D	
75^{H7}	6	71G.93.0750N	71G.93.0750D	71G.65.0750N	71G.65.0750D	
80^{H7}	8	71H.93.0800N	71H.93.0800D	71H.65.0800N	71H.65.0800D	
85^{H7}	8	71H.93.0850N	71H.93.0850D	71H.65.0850N	71H.65.0850D	
90^{H7}	8	71H.93.0900N	71H.93.0900D	71H.65.0900N	71H.65.0900D	
95^{H7}	8	71H.93.0950N	71H.93.0950D	71H.65.0950N	71H.65.0950D	
100^{H7}	8	71H.93.1000N	71H.93.1000D	71H.65.1000N	71H.65.1000D	

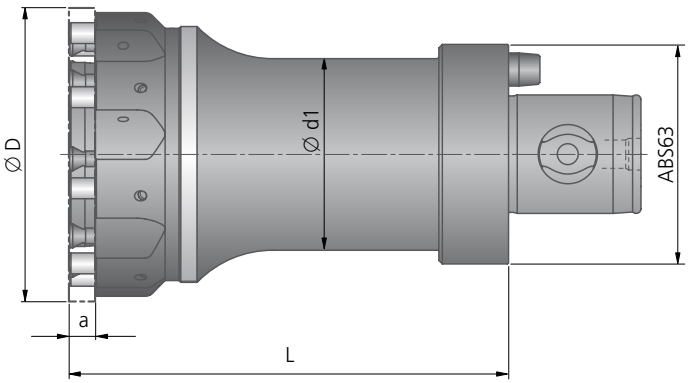
[1] material group 9.0 | 9.1 | 10.0 · [2] material group 12.0 · [3] material group 12.0 | 12.1

Cutting speed and feed see page 503.

Holder







	DAH							ABS						
	Order No.	**DAH**	Ø d1	L	b	a ~	kg	Order No.	**ABS**	Ø d1	L	a ~	kg	Clamping screw Order No. Article
	72A.30.07000	81	38	117	99	7	1,8	**72A.60.07000**	63	50	125	7	2,7	
	72A.30.07500	81	38	117	99	7	2,0	**72A.60.07500**	63	50	125	7	2,9	
	72A.30.08000	115	55	121,5	96	7	3,3	**72A.60.08000**	63	60	125	7	3,2	**N00 56861**
	72A.30.08500	115	55	121,5	96	7	3,5	**72A.60.08500**	63	60	125	7	3,4	S4514-20IP
	72A.30.09000	115	55	121,5	96	7	3,7	**72A.60.09000**	63	60	125	7	3,7	4,3 Nm
	72A.30.09500	115	55	121,5	96	7	3,9	**72A.60.09500**	63	60	125	7	4	
	72A.30.10000	115	55	121,5	96	7	4,2	**72A.60.10000**	63	60	125	7	4,3	

Supply includes: Holder with clamping screw.
Please order insert separately.

Further holders on request

KOMET Freemax

Tool recommendation

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Machining Order No. ASG = cutting geometry			
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	**71... .93** ASG 4000	**71... .65** ASG 4000	**71... .93** ASG 3000	**71... .65** ASG 3000
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	**71... .93** ASG 4000	**71... .65** ASG 4000	**71... .93** ASG 3000	**71... .65** ASG 3000
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	**71... .93** ASG 4000	**71... .65** ASG 4000	**71... .93** ASG 3000	**71... .65** ASG 3000
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	**71... .93** ASG 4000	**71... .65** ASG 4000	**71... .93** ASG 3000	**71... .65** ASG 3000
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	**71... .93** ASG 3000	**71... .65** ASG 3000	**71... .93** ASG 3000	**71... .65** ASG 3000
P	4.1			HSS					
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)				
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)				
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)				
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)				
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)				
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000	**71... .65** ASG 3000
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	**71... .93** ASG 4000	**71... .65** ASG 4000	**71... .93** ASG 3000	**71... .65** ASG 3000
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	**71... .65** ASG 4000	**71... .65** ASG 4000	**71... .65** ASG 3000	**71... .65** ASG 3000
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)				
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)				
N	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)				
H	15.0	1400		hardened steels < 45 HRC					
H	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC					

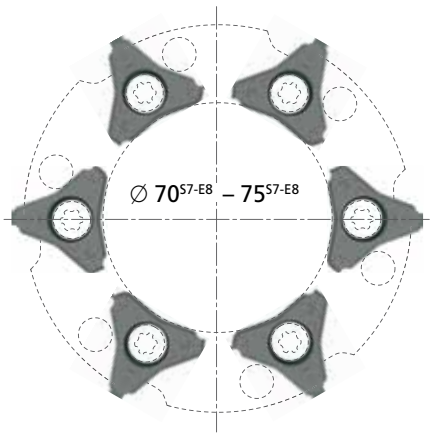
We are happy to take inquiries concerning tools for materials without a recommendation.

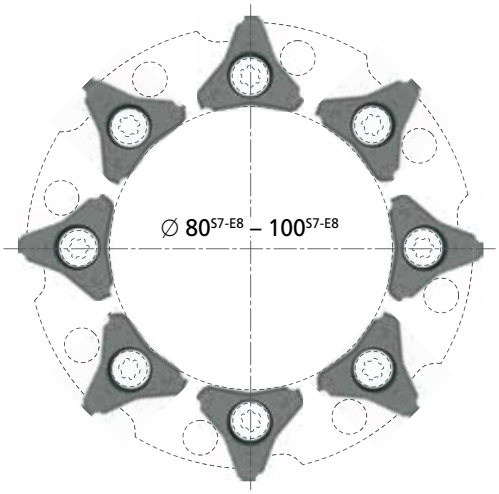
Ø 70^{S7-E8} – 100^{S7-E8} mm

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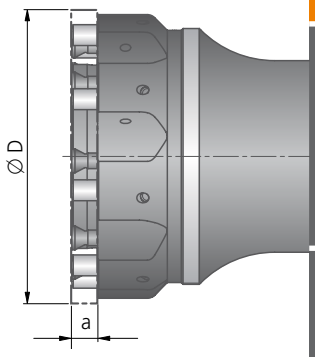
Indexable insert set

Material
P K N





Holder
▶ 499



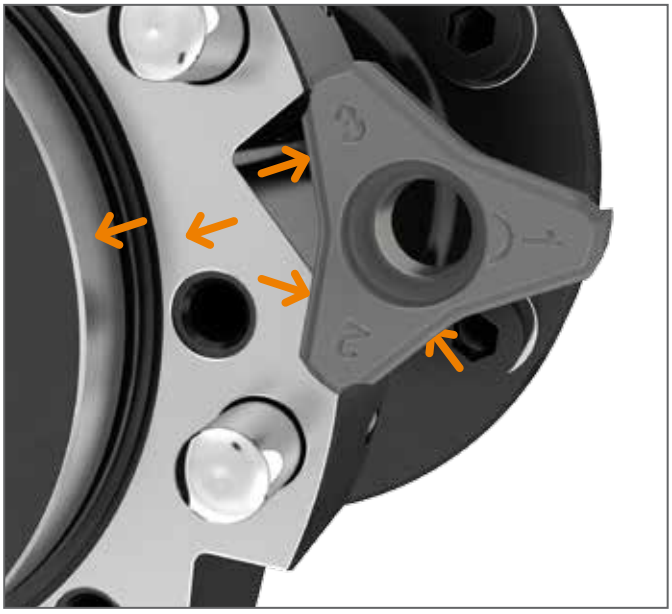
Custom indexable insert set – selection options!						
Ø 70 – 75 Order No. Z = 6	Ø 80 – 100 Order No. Z = 8	Cutting material, coating	Dimensions			
			Ø D	Achievable tolerance range	a ~	Z
71G.93	71H.93	DST	70	S7 – E8	7,0	6
			75	S7 – E8	7,0	6
			80	S7 – E8	7,0	8
71G.65	71H.65	DBG-P	85	S7 – E8	7,0	8
			90	S7 – E8	7,0	8
			95	S7 – E8	7,0	8
			100	S7 – E8	7,0	8

Order example:
Order No. 71G.93 · Bore diameter 70 mm · Bore tolerance S7 · Material 1.0037 (S235JR) or ASG3000 (Cutting geometry).

Cutting speed and feed see pages 503.

KOMET Freemax

Assembly instructions



Cleaning

→ Make sure that the end faces and contact surfaces on basic bodies and indexable inserts are absolutely clean/grease-free. If necessary, remove tiny dust particles with compressed air.



Assembly

All indexable inserts have number markings ①. During assembly, make sure that all indexable inserts are fitted with the same cutting edge (number markings 1, 2, 3). Place the indexable insert on the collar and on the positioning pin ②. Tighten the clamping screw ③ to a defined torque => use a torque wrench.

Perform exactly the same procedure when switching from cutting edge 1 to cutting edge 2 or 3.



Diameter range	70 - 100
Torque	4,30 Nm
Clamping screw	**N00 56861** S4514-20IP

Guideline values for reaming						Cutting speed v_c (m/min)				Feed f (mm/rev)							
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	optimum maximum Reamers short 3×D		optimum maximum Reamers long 5×D		optimum maximum ASG 3000				optimum maximum ASG 4000			
						DST	DBG-P	DST	DBG-P	Z6	Z8	Z10	Z12	Z6	Z8	Z10	Z12
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	150 200	150 200	120 160	120 160	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,0
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	150 200	150 200	120 160	120 160	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,0
	2.1	<500		lead alloys	1.0718 (11SMnPb30)	150 200	150 200	120 160	120 160	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,0
	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	150 200	150 200	120 160	120 160	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,0
	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	150 200	150 200	150 200	120 160	0,80 1,20	1,10 1,60	1,30 2,0	1,60 2,40				
	4.1			HSS													
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19N-b5Mo3) 2.4631 (Nimonic 80A)												
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)												
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi-Mo17-12-2)												
	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)												
	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)												
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)		150 220		120 150	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,00				
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)		90 130		90 130	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40				
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	175 300	175 300	150 180	150 180	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,00				
	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	150 250	150 250	120 160	120 160	1,40 2,00	1,90 2,70	2,30 3,30	2,80 4,00				
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	120 180	120 180	120 150	120 150	1,10 1,70	1,50 2,30	1,80 2,80	2,20 3,40				
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)		70 100		70 100	0,90 1,30	1,20 1,80	1,50 2,20	1,80 2,60				
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2		80 130		80 130	0,90 1,30	1,20 1,80	1,50 2,20	1,80 2,60				
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	150 300	150 300	120 180	120 180	1,20 1,90	1,70 2,50	2,00 3,20	2,40 3,80				
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)		100 150		100 150	1,00 1,50	1,40 2,10	1,70 2,50	2,00 3,00				
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)												
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)												
	14.0		100	cast alum. alloy: Si-content >10%	3.2381.01(G-AlSi10Mg)												
H	15.0	1400		hardened steels < 45 HRC													
	16.0	1800		hardened steels > 45 HRC, ≤ 55 HRC													



KOMET DAH compensating holders are static compensating systems, floating holder DPS are dynamic compensating systems. Axis and concentricity errors are compensated for extremely simply.

Using the patented KOMET DAH the concentricity of reaming tools and all rotating machining tools can be adjusted quickly, effortlessly and with utmost precision on the machine.

Precision bore machining can therefore be executed with extremely high cutting speeds and feed values.

The bore quality achieved, such as circularity, cylindricity and surface finishing, leaves nothing to be desired.

The use of the KOMET DAH enables you to machine precision bores up to tolerance class IT 4.

BENEFITS for you:

- Compensation systems for µ-precise concentricity
- Easy correction of concentricity and axis error
- Optimised for extremely high speeds
- Designed for internal coolant supply
- Tools rotating concentrically guarantee long tool life

Compensating holder

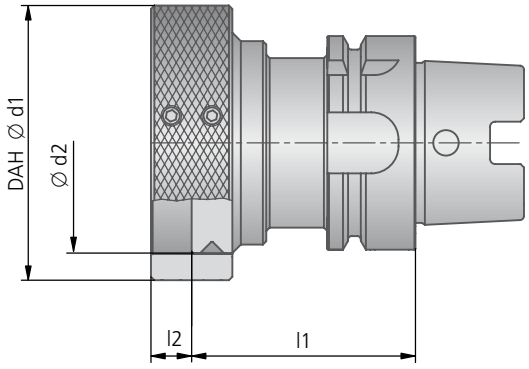
	Page
DAH Compensating holder	
with HSK-A adaptor	506
with ABS adaptor	506
with taper shank	507
Assembly instructions	508
Assembly parts / accessories	509
Adaptor for DAH	510 – 511
with expanding chuck	
with ABS adaptor	
DAH 50 HS Compensating holder	512 – 513
for high speed machining	
DPS Floating holder	514 – 515
with VDI connection	
with cylindrical shank	

KOMET DAH Compensating holder

with HSK adaptor DIN 69893 A

■ with internal coolant supply





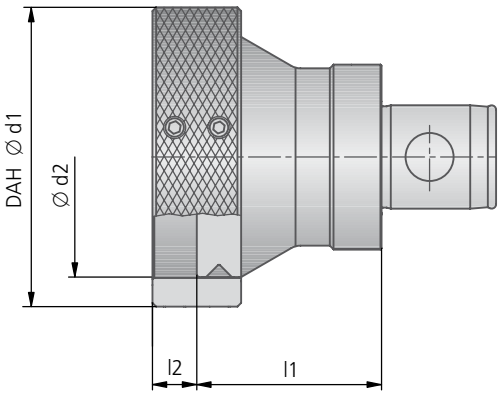
Supply includes: DAH compensating holder complete with assembling screws. DAH Assembly parts see page 509.

HSK-A						
Order No.	DAH Ø d1	HSK-A	Ø d2	l1	l2	kg
545.07.011	63	63	50	66	12	1,47
545.07.002	81	40	65	52	12	0,97
545.07.003	81	50	65	66	12	1,39
545.07.004	81	63	65	66	12	1,78
545.07.009	81	80	65	76	12	2,62
545.07.010	81	100	65	76	12	3,58
545.07.005	115	80	100	76	16	1,75
545.07.006	115	100	100	79	16	5,18

with ABS adaptor

■ with internal coolant supply





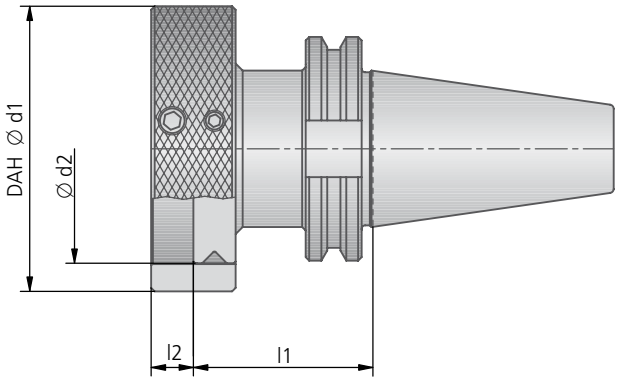
Supply includes: DAH compensating holder complete with assembling screws. DAH Assembly parts see page 509.

ABS						
Order No.	DAH Ø d1	ABS	Ø d2	l1	l2	kg
545.00.001	81	40	65	50	12	0,90
545.00.003	81	50	65	50	12	1,45
545.00.002	115	63	100	54	16	2,75

KOMET DAH Compensating holder

with taper shank DIN 69871 AD/B

with internal coolant supply ■
long version on request ■



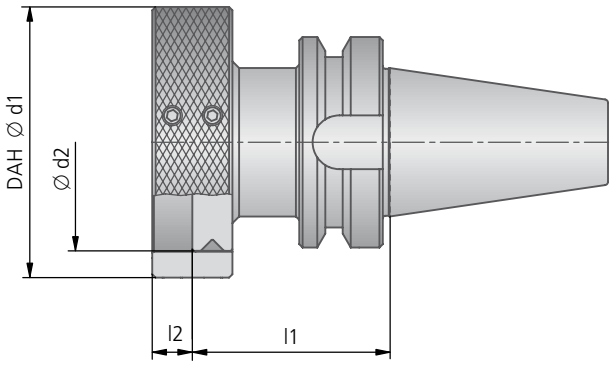


Supply includes: DAH compensating holder complete with assembling screws. DAH Assembly parts see page 509.

DIN 69871 AD/B						
Order No.	DAH Ø d1	SK	Ø d2	l1	l2	kg
545.10.011	63	40	50	51	12	1,45
545.10.001	81	40	65	51	12	1,62
545.10.003	81	50	65	51	12	3,69
545.10.004	115	50	100	69	16	5,61

with taper shank JIS B 6339 AD/B (MAS 403 BT)

with internal coolant supply ■
long version on request ■





Supply includes: DAH compensating holder complete with assembling screws. DAH Assembly parts see page 509.

JIS B 6339 AD/B						
Order No.	DAH Ø d1	BT	Ø d2	l1	l2	kg
545.77.011	63	40	50	59	12	1,55
545.77.001	81	40	65	59	12	1,79
545.77.003	81	50	65	70	12	4,68
545.77.004	115	50	100	88	16	6,60

KOMET DAH Compensating holder

Assembly instructions



Clean grinding surfaces thoroughly
→ dry and free of grease.



Pre-load evenly with the 6 assembling screws ②
(pressing the spring washer level)



Adjusting the DAH must be done in the machine on the spindle where the tool will be in use afterwards!

Determine the highest point by rotating (largest concentricity error).
Rotate the threaded pin ④ to the highest point.
Correct half of the measured runout error by inserting the thread pin ④.
Repeat this procedure until the runout error is < 5 µ.

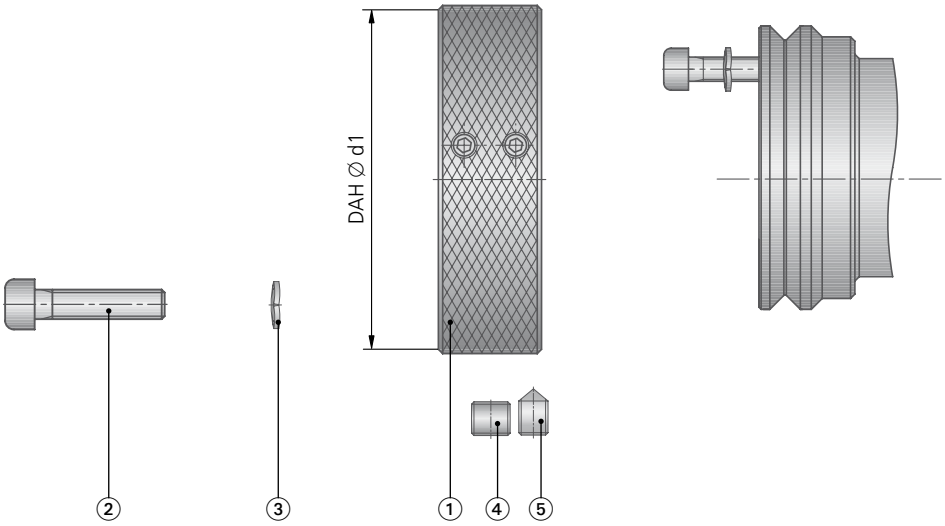
Center the indicator on the gauge line.



Tighten the assembling screw ② cross-wise. Please observe the specified starting torque M in the index-table. After fastening, fix the adjusting ring ① by locking the thread pin ④.

DAH Ø d1	Starting torque M
63	7 – 9 Nm
81	7 – 9 Nm
115	25 – 35 Nm

Finally check the runout once more.
«should be» < 5 µ



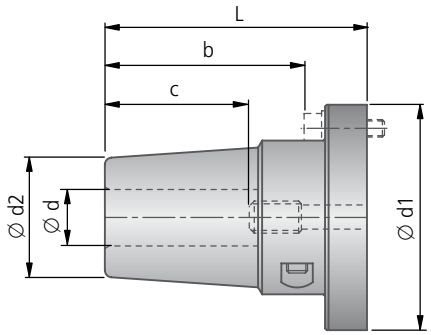
	①	②		③	④		⑤	
for DAH Ø d1	Adjusting ring Order No.	Assembling screw Article	Order No.	Spring washer Order No.	Thread pin Article	Order No.	Thread pin Article	Order No.
63	**545.25.010**	M5×22		**545.27.001**	M8×6	**55051 08006**	M6×8	**55052 06008**
81	**545.25.001**	M5×22		**545.27.001**	M8×6	**55051 08006**	M6×10	**55052 06010**
115	**545.25.002**	M8×30	**55011 08030**	**545.27.002**	M8×8	**55051 08008**	M8×10	

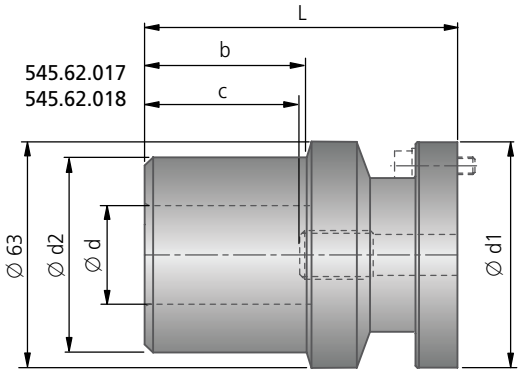
KOMET DAH Adaptor

Expanding chuck for tools with cylindrical shank

- with internal coolant supply
- length adjustment from outside







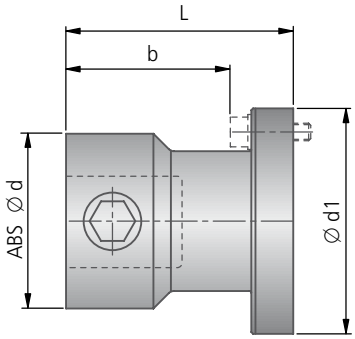
Supply includes: DAH adaptor complete. Adaptor sleeve see page 511.

Expanding chuck								
Order No.	Ø d	DAH	Ø d1	Ø d2	L	b	c	kg
545.62.004	12	63	49,5	24	70	52	35 - 45	0,43
545.62.014	12	81	64,5	24	70	52	35 - 45	
545.62.015	16	81	64,5	34	75	57	39 - 49	
545.62.016	20	81	64,5	37	75	57	41 - 51	0,78
545.62.017	25	81	64,5	50	110	52	46 - 56	1,43
545.62.018	32	81	64,5	60	115	59	51 - 61	1,72

for tools with ABS connection

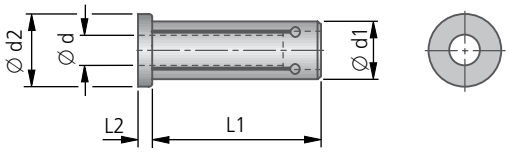
- with internal coolant supply





Supply includes: DAH adaptor complete.

ABS						
Order No.	ABS Ø d	DAH	Ø d1	L	b	kg
545.40.006	32	63	49,5	42	24	
545.40.007	32	81	64,5	35	17	
545.40.001	40	81	64,5	35	17	0,44
545.40.003	50	81	64,5	65	47	0,83
545.40.004	50	115	99,5	46	20,5	1,19
545.40.002	63	115	99,5	52	26,5	1,46



Adaptor sleeve						
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 14291	3	12	16,5	45	2	0,1
L01 14301	4					
L01 14311	5					
L01 14321	6					
L01 14331	8					
L01 14261	3	20	24	50,5	2	0,1
L01 14271	4					
L01 14281	5					
L01 14201	6					
L01 14211	8					
L01 14221	10					
L01 14231	12					
L01 14241	14					
L01 14251	16					
L01 14410	8	25	29	54,5	2	0,1
L01 14420	10					
L01 14430	12					
L01 14450	16					
L01 14460	18					
L01 14470	20					
L01 14521	10	32	35,5	60,5	2	0,3
L01 14531	12					
L01 14551	16					
L01 14561	18					
L01 14571	20					
L01 14581	25					

KOMET DAH 50 HS Compensating holder

High speed machining – with maximum quality

For maximum precision and concentricity

KOMET DAH 50 HS compensating holders ensure that the tool runs concentrically. They allow precision adjustment of the tool in the µm range at the cutter eliminating any machine spindle error.

Maximum concentricity guarantees reliable production within extremely close tolerances.

The quality of the bore, including surface quality, circularity, roundness and parallelism and above all the dimensional accuracy are improved considerably.

This significantly increases the process reliability with multiple blade reamers.

BENEFITS for you:

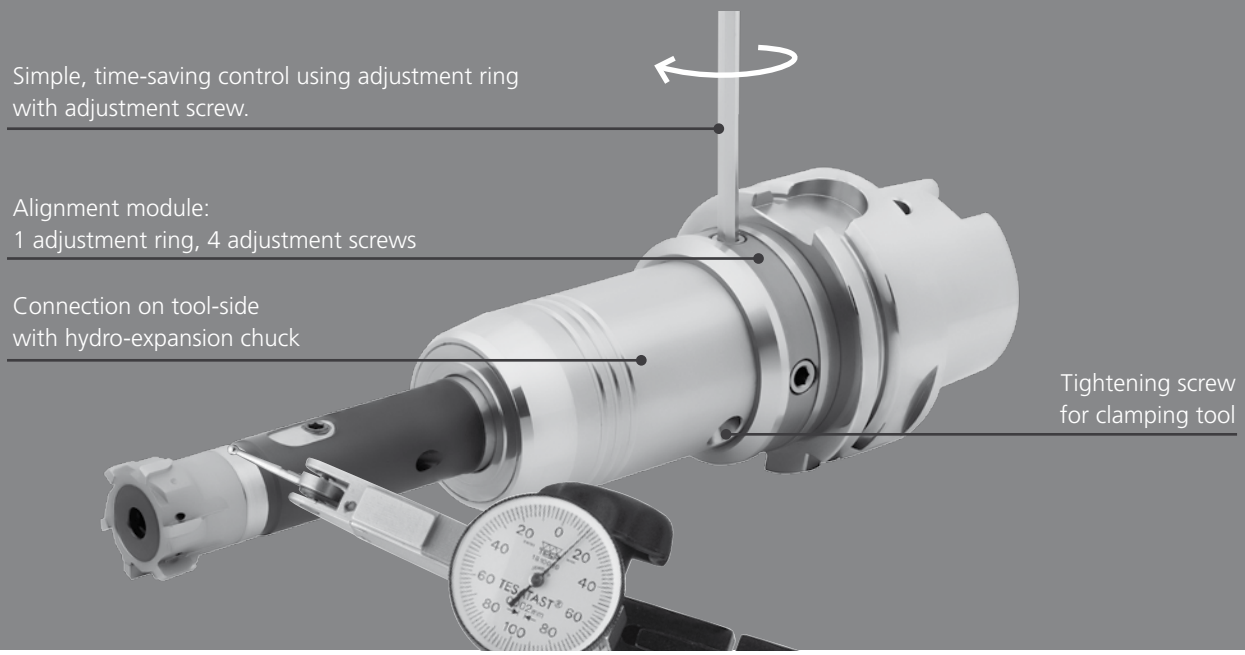
- Proven hydro-expansion clamping
- Maximum concentricity and repetition accuracy < 1 µ for uniform blade contact
- Extremely simple concentricity adjustment
- Compact design
- Optimum vibration damping for excellent surface quality
- Flexible clamping range with reduction sleeves
- Speeds up to 25.000 rpm
- For minimal lubrication (MLC)

Simple handling – reduced machine idle times

In comparison to previous solutions the hydro-expansion chuck is integrated into the new compensating holders. This means one less interface.

Four adjustable screws allow rapid and precise adjustment of the concentricity of the multiple blade reamer, reducing concentricity errors to virtually zero. The extremely slim design of these new compensating holders ensures that they fit easily into practically all tool magazines.

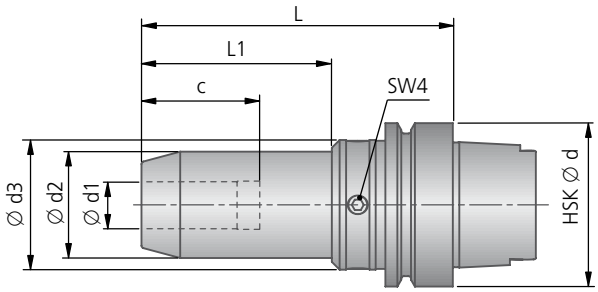
The KOMET DAH 50 HS compensating holders enable the concentricity of a tool to be adjusted with µ-precision at the bezel position, thereby eliminating any machine spindle error.



KOMET DAH 50 HS

with HSK adaptor

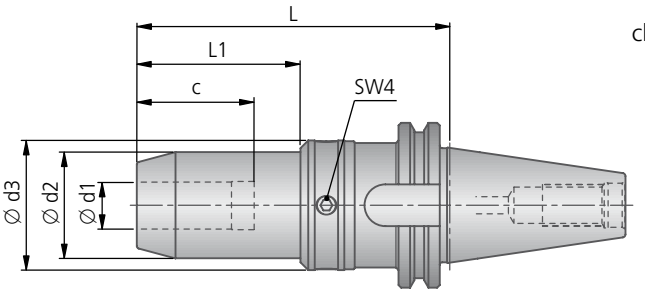
with internal coolant supply ■
clamping range ∅ 3 – 25 mm ■



HSK								
Order No.	HSK Ø d	Ø d1	Ø d2	Ø d3	L	L1	c	kg
54B.10.00030	63	20	41	50	110	63,1	52,5	1,30
54B.10.00040	63	25	50,5	60,5	135	72,1	57	2,16

with taper shank DIN 69871 AD

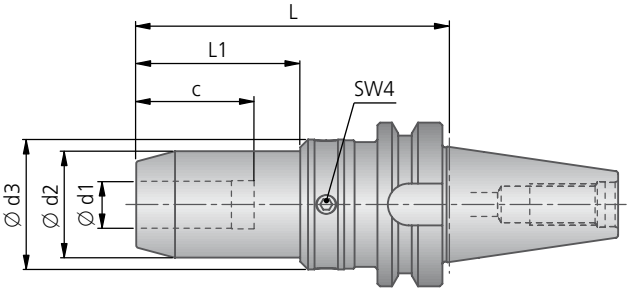
with internal coolant supply ■
clamping range ∅ 3 – 20 mm ■



DIN 69871 AD								
Order No.	SK	Ø d1	Ø d2	Ø d3	L	L1	c	kg
54B.90.00030	40	20	41	50	110	65	41	1,50

with taper shank JIS B 6339 AD (MAS 403 BT)

with internal coolant supply ■
clamping range ∅ 3 – 20 mm ■



JIS B 6339 AD (MAS 403 BT)								
Order No.	BT	Ø d1	Ø d2	Ø d3	L	L1	c	kg
54B.91.00030	40	20	41	50	115	69,1	41	1,70

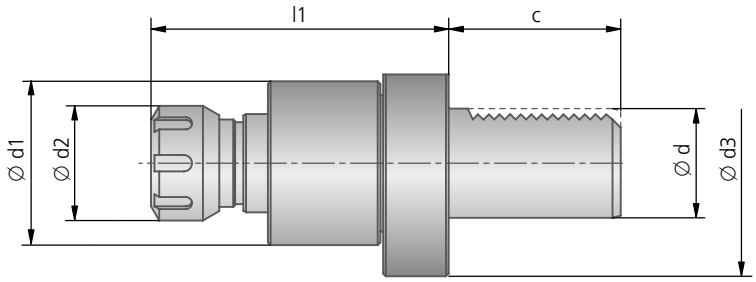
Supply includes:
Compensating holder complete. Adapter sleeve for clamping range ∅ 3 – 16 mm see page 511.

KOMET DPS Floating holder

with VDI connection DIN 69880

- for stationary tools
- with internal coolant supply
- angular compensation 30' (not adjustable)
- radial play 0,08 mm (not adjustable)





Supply includes: DPS floating holder with collet nut. Please order collets and washer separately.

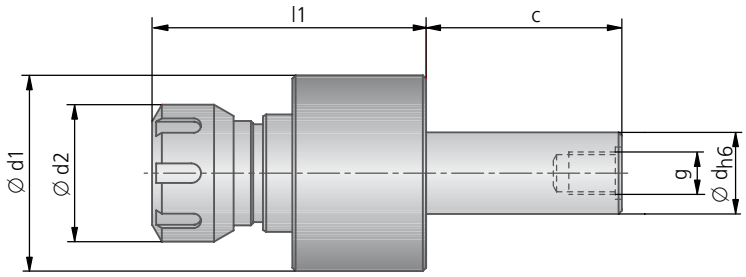
VDI								Accessories
Oder No.	VDI Ø d	Ø d1	Ø d2	Ø d3	l1	c	kg	Collet Size
57B.49.00010	30	59	42	68	109	55	1,85	ER 25
57B.49.00020	40	59	42	83	109	63	2,60	ER 25
57B.49.00030	40	64	50	83	116	63	2,74	ER 32
57B.49.00040	50	64	50	98	116	78	3,60	ER 32

KOMET DPS Floating holder

with cylindrical shank similar to DIN 1835

- for stationary tools
- with internal coolant supply
- angular compensation 30' (not adjustable)
- radial play 0,08 mm (not adjustable)





Supply includes: DPS floating holder with collet nut. Please order collets and washer separately.

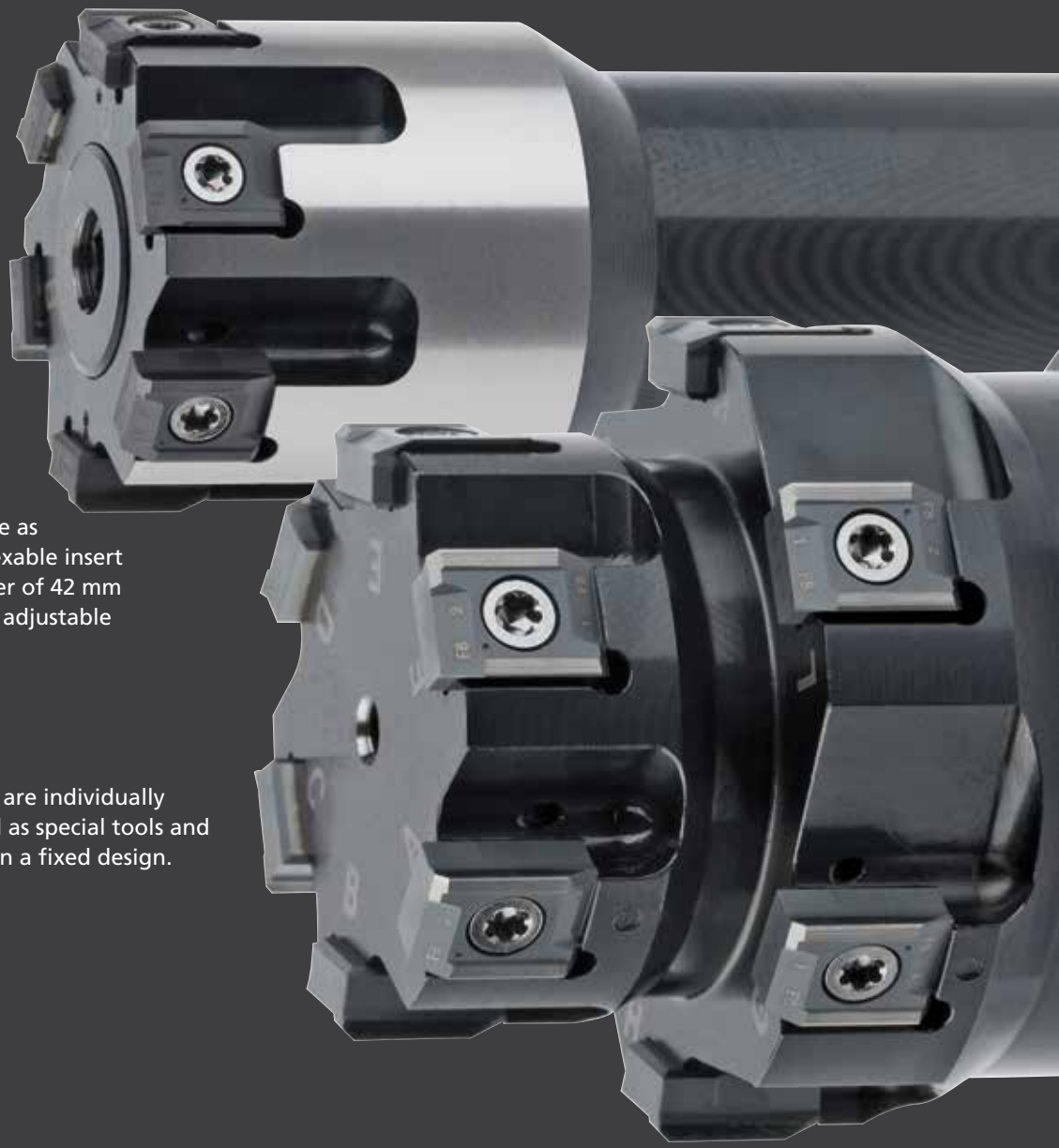
≈ DIN 1835								Accessories
Oder No.	Cylindrical shank Ø d_{h6}	Ø d1	Ø d2	l1	c	g	kg	Collet Size
57B.40.00010	25	59	42	84	60	G ¼	1,11	ER 25
57B.40.00020	32	64	50	91	80	G ⅜	1,70	ER 32
57B.50.00010	25,4 (1")	59	42	84	60	G ¼	1,03	ER 25
57B.50.00020	31,75 (1¼")	64	50	91	80	G ⅜	1,77	ER 32

KOMET Reaming with insert technology

In collaboration with the application specialists at KOMET, it is of course also possible for fixed versions and individual stepped tools as well as diameters to be designed and manufactured which can be combined with the various different tool connections.

Indexable insert reaming tools are available on request. They are designed as integral tools or as a modular tool system, depending on application. For extremely small tolerances, they can be produced in an adjustable version.

The tools can be supplied in single or multi-step versions from a diameter of 42 mm.



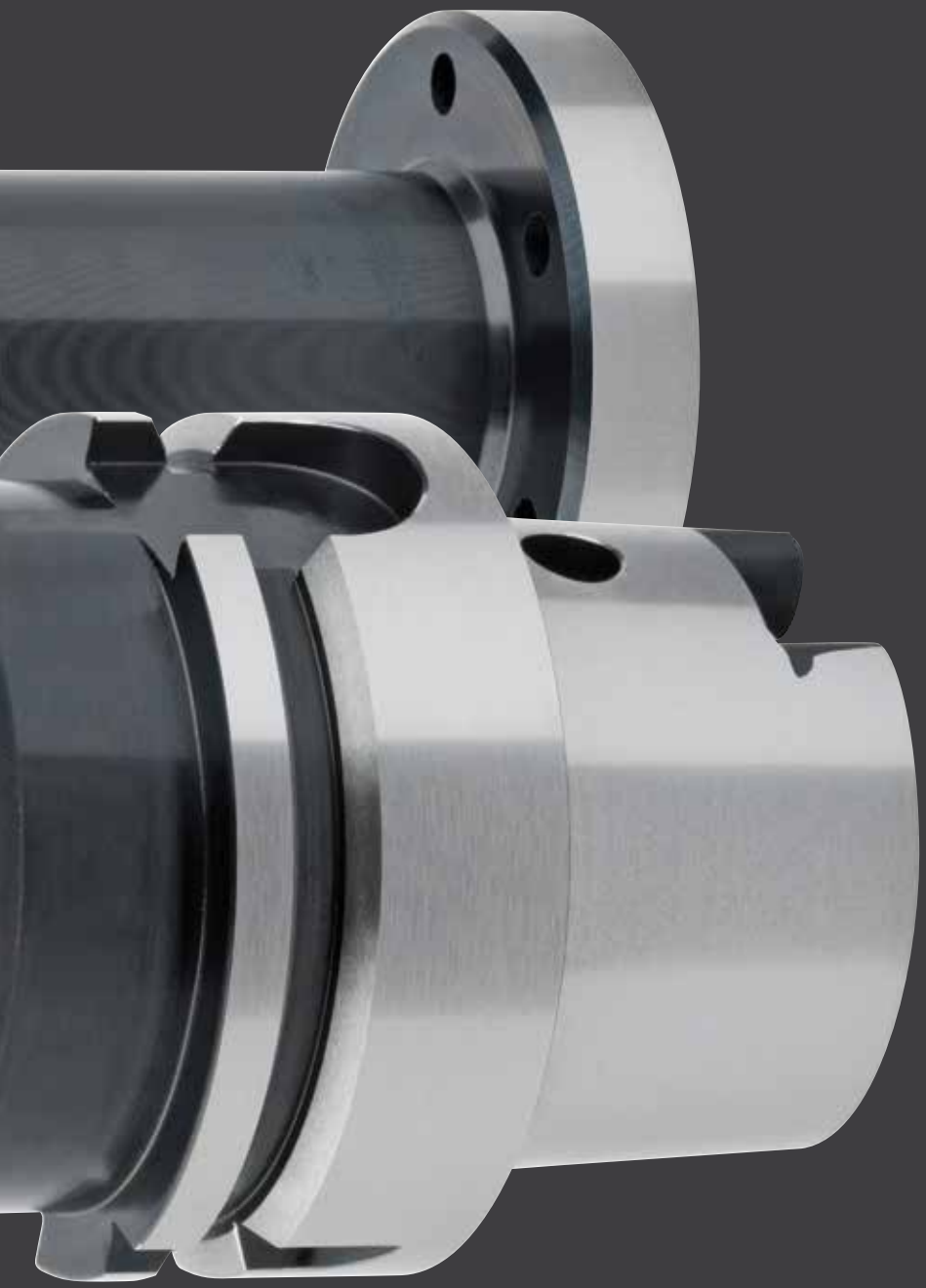
Monoblock tools
both fixed and adjustable
Reaming tools are available as monoblock tools with indexable insert technology from a diameter of 42 mm and are designed in either adjustable or fixed versions.

Stepped tools
Stepped tools are individually manufactured as special tools and are available in a fixed design.

KOMET

Insert technology

	Page
Insert reaming	518 – 519
Assembly instruction	
KOMET MicroSet System	520 – 523
Assembly instructions, Inquiry	
Special tools	524 – 525



Reaming with insert technology

The Technology

The use of inserts is revolutionising reaming with multiple blade reamers and setting new levels in precision and function.

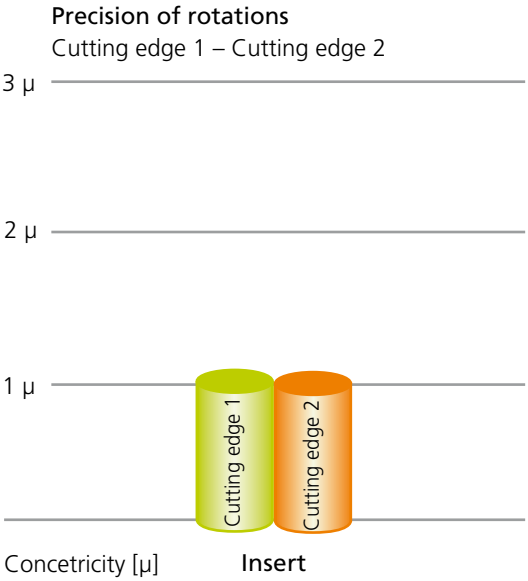
Each insert has two effective cutting edges.
Unlike boring tools, inserts for reaming tools are ground as a complete set directly on the basic element in their specific insert pocket.

The positions of the individual cutting edges on an insert are precisely defined during manufacturing and application. Cutting edges ground in a single operation ensure the degree of precision required for high precision bore machining.

Numerous cutting materials and coatings for machining an extremely wide variety of materials.

BENEFITS for you:

- Ground to size for maximum precision
- Low cost tool logistics
- Shortest preparation time
- Maximum flexibility
- Concept can be used for an extremely wide variety of tools
- Low cost changes to tool and geometry
- Can be adjusted for extremely small bore tolerances



Two cutting edge insert

Without affecting the tool's precision inserts can be rotated in the shortest possible time.

This minimises setting time and doubles the tool life by using two cutting edges.





Design your own tool!

We check your specifications for technical feasibility and you receive a prompt reply.

Assembly instructions

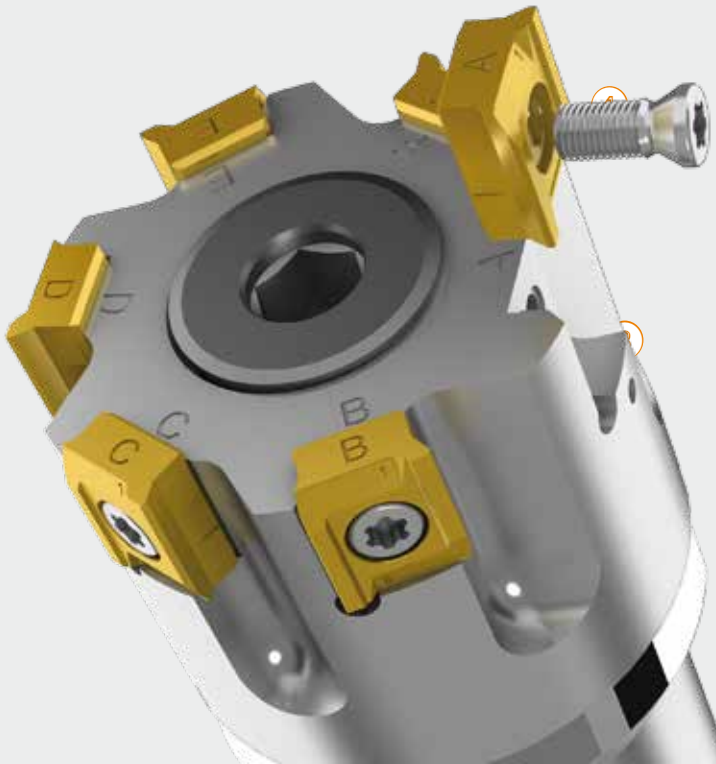
Cleaning:

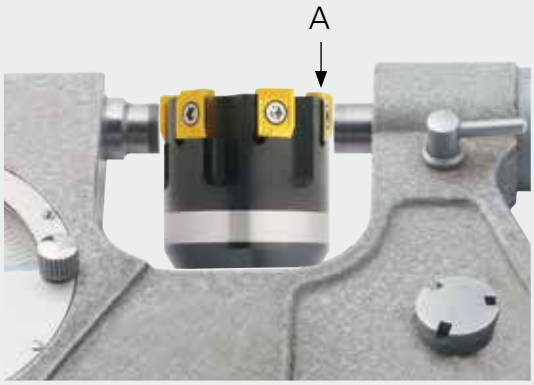
Make sure that the insert seats ③ and indexable inserts are absolutely clean/grease-free. If necessary, use compressed air to remove dust particles!

Assembly:

- All indexable inserts and insert seats are marked with letters ①. This ensures correct assignment to the insert seat.
- The number markings ② ensure that all indexable inserts are positioned correctly.

Tighten the screw ④ N00 57710 (S3090-9IP) to 2.25 Nm.





Measuring the diameter:

The measuring tooth is located at letter A and is also marked on the holder with a spot ⑥. If the diameter is too large, loosen the conical screw ⑤ and turn it to the right to set the correct diameter. The conical screw ⑤ does not have to be removed completely !

Caution!

- Uneven angle division !
- Two cutting edges are at 180° from each other = measuring tooth A.
- Measure the diameter at the front of the reaming head (due to tapering, see illustration).
- Avoid damaging the cutting edges
- When indexing the insert, the diameter must be readjusted.

KOMET MicroSet System

Reaming with Adjustable Inserts

The new reamers from KOMET which boast individually adjustable inserts are an alternative to the ready-to-use ground tool variants. These reamers also feature multiple blades and offer maximum flexibility, reduce logistics with regard to retipping and enable cost savings thanks to the favourably priced inserts which are available from stock.

The single-blade inserts are screwed in place and set to a diameter and tapering using a newly developed fine adjustment system for indexable inserts with µm accuracy. This makes hole tolerances of ≥ IT5 easily achievable. The reference dimension is provided by two measuring blocks.

Only 14 inserts for the diameter range of 40 to 140 mm. Maximum flexibility in terms of fields of application, availability and variety of cutting materials and coatings are features of this tool, because certain components, tolerances, volumes, etc., often determine which combinations are used.

BENEFITS for you:

- Maximum flexibility
- Reduces logistics with regard to retipping
- Inserts available from stock
- Individually adjustable inserts
- Simple handling when making adjustments and changing the inserts

Variant:
- Diameter range of 40 – 140 mm
- Hole tolerances of ≥ IT5
- Use with cast metal, solutions for steel, stainless steel, aluminium and other materials to follow
- The tool concept can be used in special and multiple dies

Precision and productivity

Even when the demands on a component are particularly high and the highest precision is required, the KOMET MicroSet System gives you a special advantage: The tools can be readjusted at any time. All that needs to be done is to readjust the indexable inserts in the precision adjustment system to the required diameter. Only when the cutting edges are worn do they need to be replaced.

The special strengths of the KOMET MicroSet System can truly be seen when used with special tools, especially with stepped tools that the user can arrange themselves. Thanks to the variety of possible combinations, the user quickly puts together a suitable reamer that is ideally matched to the component with regard to its materials, tolerances and volumes.

The MicroSet tool shown uses this advantage perfectly and solves the application requirements better than the previously used brazed PCD tools. An inability to correct the brazed PCD plates, particularly in the second stage, results in operating times of different lengths and irregular repair costs.

The standard indexable inserts available from stock (fitted with PCD in this case) make up for long repair cycles and not only increase the flexibility of the system but also the productivity and the profitability of an application.



Before: Good machining using PCD tool

New: Flexible machining using MicroSet system tool thanks to readjustment of the PCD-fitted indexable inserts



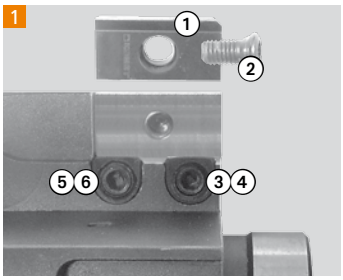
BENEFITS for you:

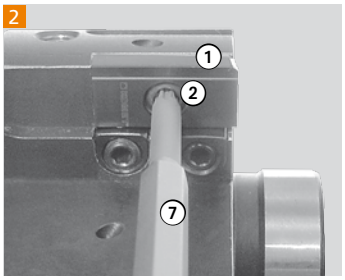
- Simplified logistics thanks to standard indexable inserts available from stock
- Can be fitted with CBN or PCD indexable inserts for a variety of machining requirements
- Uncomplicated readjustment using a precision-controlled adjustment system
- Can be used as a repeat operation tool e.g. integrated milling and reaming
- Easy and uncomplicated setting also on electronic presetting device

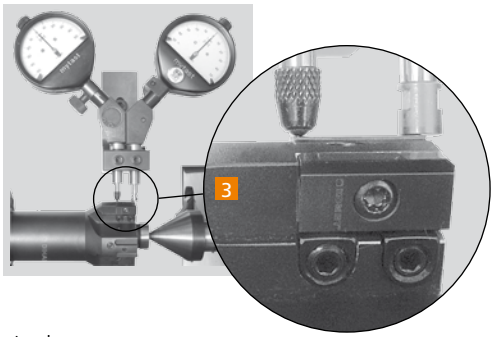


KOMET MicroSet System				
	Insert		Clamping screw	Wedge
	DST for material P	DBG-N for material K		
Ø D	Order No.	Order No.	Order No. Article	Order No.
40,000 – 44,999	70W.93.02040A	70W.37.01040A	N00 57241 S3070-8IP 2,25 Nm	15F.00.30001
45,000 – 49,999	70W.93.02045A	70W.37.01045A		
50,000 – 54,999	70W.93.02050A	70W.37.01050A		
55,000 – 59,999	70W.93.02055A	70W.37.01055A		
60,000 – 64,999	70W.93.02060A	70W.37.01060A		
65,000 – 69,999	70W.93.02065A	70W.37.01065A		
70,000 – 74,999	70W.93.02070A	70W.37.01070A		
75,000 – 79,999	70W.93.02075A	70W.37.01075A		
80,000 – 89,999	70W.93.02080A	70W.37.01080A		
90,000 – 99,999	70W.93.02090A	70W.37.01090A		
100,000 – 109,999	70W.93.02100A	70W.37.01100A		
110,000 – 119,999	70W.93.02110A	70W.37.01110A		
120,000 – 129,999	70W.93.02120A	70W.37.01120A		
130,000 – 140,000	70W.93.02130A	70W.37.01130A		

Assembly instructions



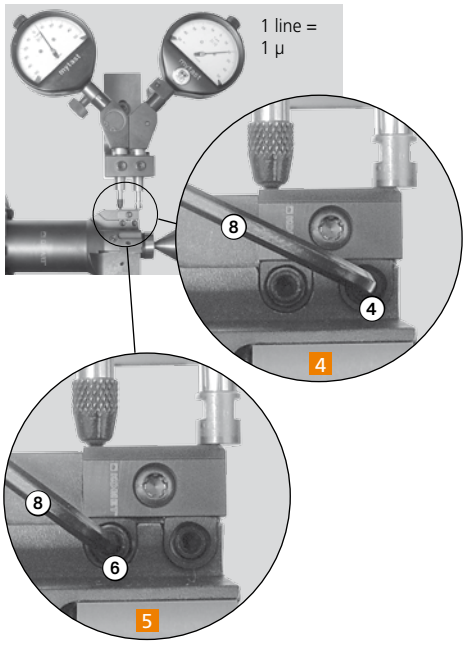




Assembly parts (Fig. 1)
① indexable insert
② clamping screw

Setting machining dia.
③ adjusting wedge, ④ differential screw

Setting conicity
⑤ adjusting wedge, ⑥ differential screw



Fit the indexable insert:
Make sure that the insert seat is clean.
Place the indexable insert ① into the insert seat and tighten the clamping screw ② only slightly.

Use torque wrench ⑦ (2,25 Nm) (Fig.2).

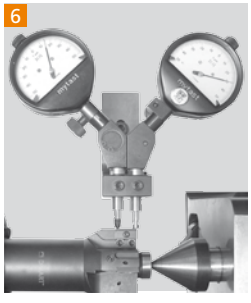
Reference dia. as reference dimension "0" for setting the machining dia. and conicity (Fig. 3), reference dia. is marked on tool.

Preset the machining dia. (Fig. 4) **and conicity** (Fig. 5)**:**
Use an Allen key ⑧ (width across flats SW2) to turn the differential screws ④ and ⑥ until the indexable insert ① is set to approx. 10 µm below the desired machining dia. and approx. 25 µm over the reference dia.

Secure the insert:
Use a torque wrench ⑦ (2,25 Nm) to secure the indexable insert ① at the preset tightening torque (Fig. 2).

Set the final machining dia. (Fig. 4) **and conicity** (Fig 5)**:**
When tightened, the indexable insert ① is set to the machining diameter and the specified conicity using the differential screws ④ and ⑥.

Tool after setting (Fig 6).



Inquiry Fax to +49 7143 373233

KOMET MicroSet System

Design your own tool!

Unique: Reaming with Adjustable Inserts!

The tools are specially manufactured for each application, with four to eight cutting edges on a basic body and for length/diameter ratios up to 2×D.

We check you specifications for technical feasibility and you receive a prompt reply.

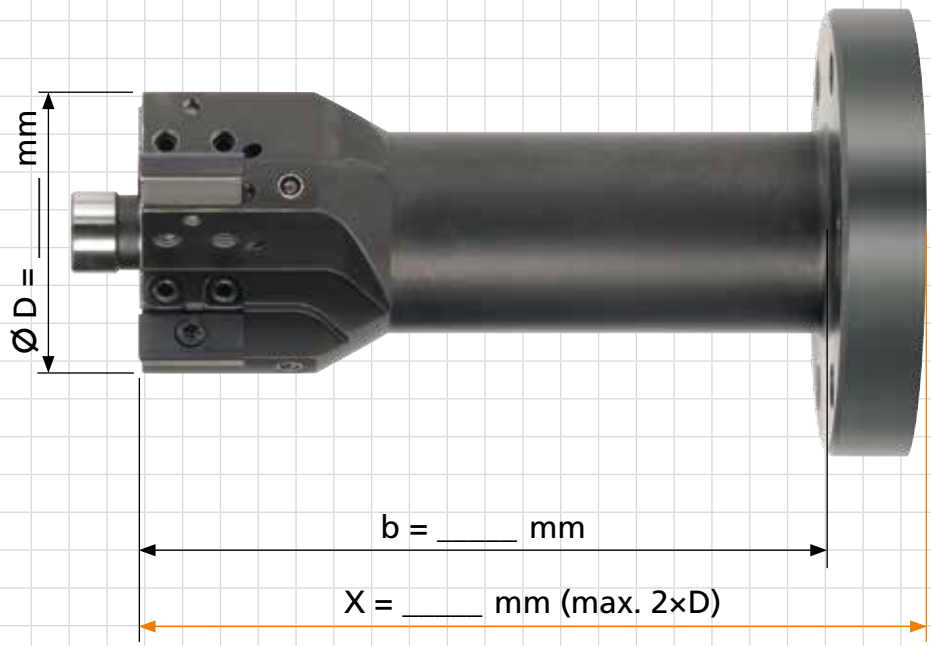
Company: Contact:

Department: E-Mail:

Telephone: Customer-No.:

Fax: Distributor:

Date:



Material to be machined:

Machining method ☐ through hole ☐ blind hole

Length of bore:

Interrupted cut ☐ yes ☐ no

Tolerance:

Required surface:

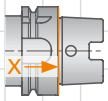
Allowance in Ø:

Required cutting material

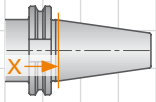
Holder / Adaptor (Type and size)



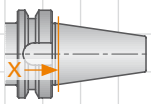
☐ DAH _____



☐ HSK _____
DIN 69893 A



☐ SK _____
DIN 69871 AD/B



☐ BT _____
JIS B 6339 AD/B
(MAS 403 BT)

other adaptors on request

KOMET Special tools

Special solutions and multi-step tools – Greater range of functions, lower machining costs

The development of specific solutions for customers represents a major area of competence for KOMET.

It is often impossible to carry out machining tasks with standard tools because of the demands for form, tolerance or quality which require special process analysis and tool development work.

Special tools can be requested and ordered at any time.

References to applications can be found in our application examples.

BENEFITS for you:

- Optimised application design
- Major reduction of non-productive time
- Technical advice by KOMET technicians
- Combining several machining operations
- Highest efficiency and productivity



Special systems: Machining bearing bores for cam shafts

Example:
Finish machining operation for camshaft bearing for cylinder heads in Ck AlSi9Cu3 for car engines.

The task:
To simplify the process on transfer lines or machining centres.

The solution:
Using the newly developed tool, machining the cylinder heads on transfer lines is reduced to one station. On machining centres a pilot tool short, stable fitted with PCD inserts is initially used to pre-machine the bores for the first journal. The finishing tool (also with PCD inserts), which matches the length of the engine, then reams all the bores to size: ∅ 26,045 H7.

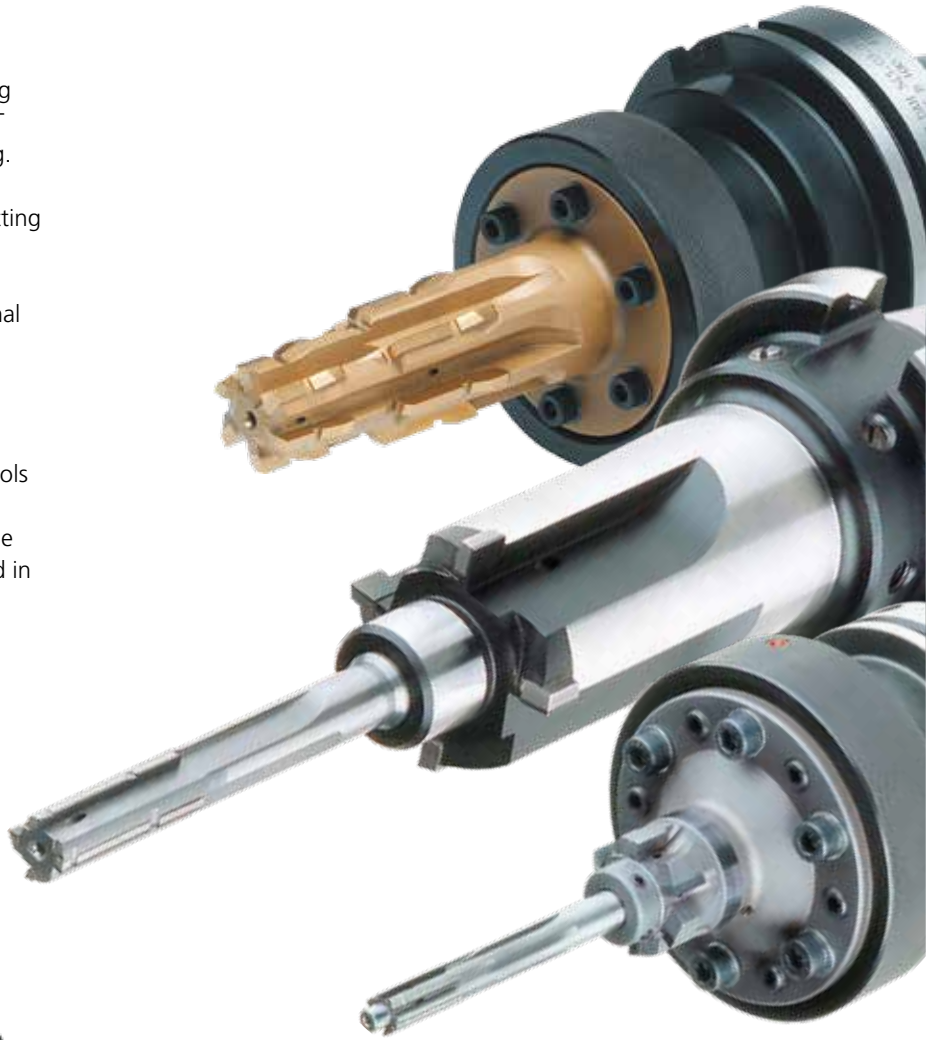
The concept has now become well established in engine and vehicle manufacturing.

The cutting values are:
v_c = 220 m/min; f = 1080 mm/min.

With its multi-flute stepped reaming tools and special solutions, KOMET improves the economics of reaming. The latest generation of tools is characterised by extremely high cutting speeds and high feed rates. Designed to suit workpiece and material, they guarantee dimensional stability and reliable production.

Multi-step tools

Multi-step and modular reaming tools from KOMET improve production performance. KOMET increases the range of functions for the tools and in doing so reduces machining costs.



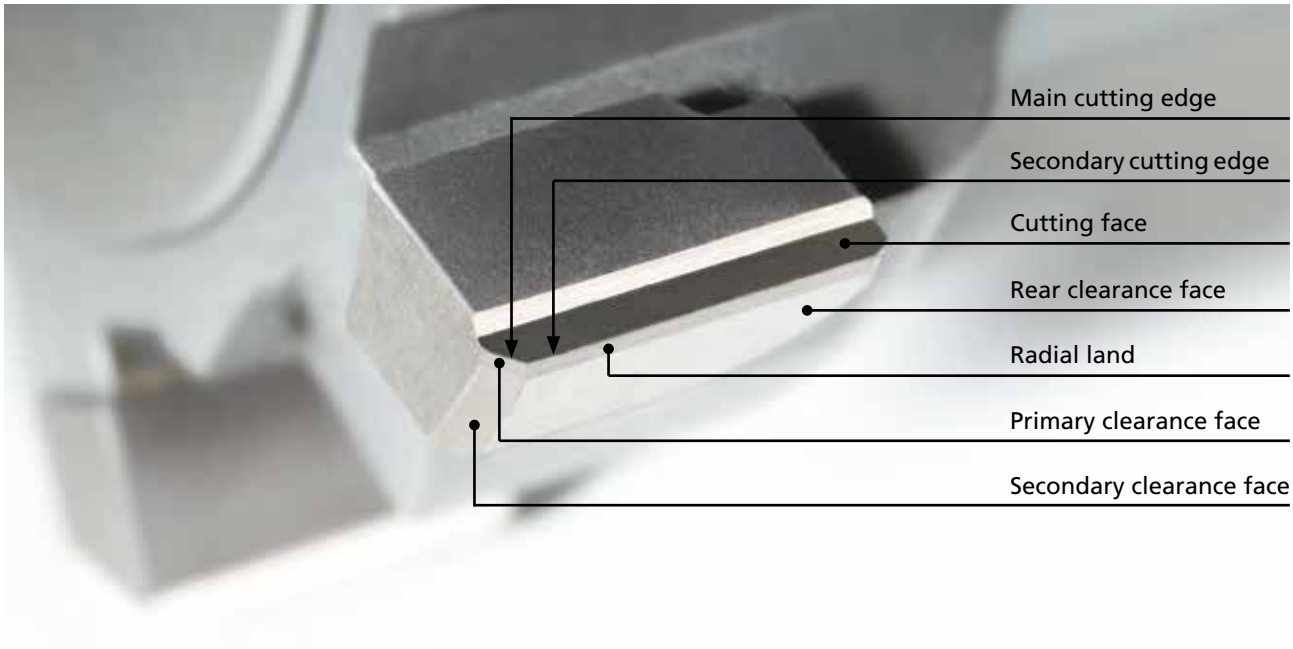


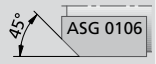
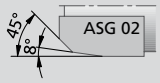
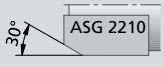
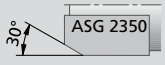
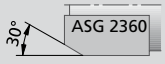
Special tools

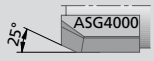
- Use of latest technology
- Tool design to suit application
- Advice from KOMET experts
- Stand the test in many references
- Multi-flute reaming tools for best performance
- Reduction in ancillary costs

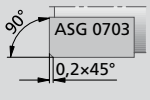
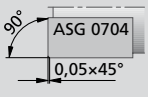
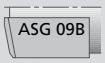
KOMET ASG – Cutting geometry

The cutting geometry (ASG) comprises:



Standard geometries			
Geometry	Flute form	Chip evacuation	Bevel angles
ASG0106	straight		
ASG02	straight		
ASG03	straight		
ASG05	left-hand fluted		
ASG2110	straight		
ASG2170	straight		
ASG2210	helical		
ASG2270	straight		
ASG2350	straight		
ASG2360	straight		

Standard geometries			
Geometry	Flute form	Chip evacuation	Bevel angles
ASG3000	straight		
ASG4000	straight		
ASG0706	straight		

Special geometries			
Geometry	Flute form	Chip evacuation comment	Bevel angles
ASG0703	straight	face cutting	
ASG0704	straight	face cutting, for increased positional accuracy	
ASG09B	straight	chip breaking < Ø 32 mm	
ASG1402	straight	chip breaking > Ø 32 mm	

Long and uncontrolled chips are a common problem.

Remedying this often requires the machine operator to manually intervene, and the resulting poor process-reliability in machining makes the operating times and the machining results difficult to estimate and calculate.

The KOMET reaming specialists set about making systematic improvements. The ASG3000 and ASG4000 were developed.

By adding an additional flute, chip deflection is defined and led along the cutting edge. In long-chipping materials, short and tight helical chips are formed that prevent the classic problems of ball or thread chips from forming. In addition, blockages of coolant holes and the erosion of base bodies no longer occur.

With this extra benefit and the performance remaining at least equally good in terms of drilling quality and tool life by comparison with the existing standard ASG07 and ASG09 geometry, the ASG3000 and the ASG4000 are setting new standards. The ASG3000 is now the first choice of geometry and has replaced the existing ASG07. The ASG4000 replaces the ASG09.

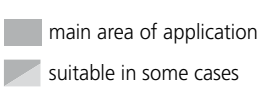
BENEFITS for you:

- Process reliability when working with long-chipping materials
- Improved chip control
- Shorter, tightly twisted chips
- No erosion due to chips on steel base bodies
- No penetration of chips into coolant holes



Cutting materials and coatings

Cutting tool material designation	Standard designation	Cutting speed range v_c (m/min) 5 | 10 | 25 | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500	Properties
HM	HF-K10	P M K N S H	**Fine-grained carbide, uncoated:** • Conventional reaming in all materials
TiN	HC-K10	P M K N S H	**PVD-TiN:** • TiN-coated K10 fine-grained carbide • Smooth surface • Minimal affinity to a large number of materials • For medium cutting speeds
DBG-N	HC-K10	P M K N S H	**PVD-AlTiN:** • AlTiN-coated K10 fine-grained carbide • For high cutting speeds • Suitable for MQL applications • For cast iron materials • For hard reaming < HRC 55
DBG-P	HC-K10	P M K N S H	**PVD-TiAlN-based:** • TiAlN-coated K10 fine-grained carbide • For high cutting speeds • Suitable for MQL applications • For universal use in a large number of materials
DBG-U	HC-K10	P M K N S H	**PVD-AlTiN:** • AlTiN-coated K10 fine-grained carbide • For high cutting speeds • Suitable for MQL applications • For universal use in a large number of materials • For hard reaming < HRC 62
DBF-A	HC-K10	P M K N S H	**PVD-AlCrN-based:** • AlCrN-coated K10 fine-grained carbide • For hard reaming < HRC 62
DBC	HC-K10	P M K N S H	**PACVD-a-C:H:** • DLC-coated K10 fine-grained carbide (DLC = diamond-like carbon) • The DLC coating has a very smooth surface • Suitable for aluminium alloys and copper alloys
DBC-N	HC-K10	P M K N S H	**PACVD-a-C:H:** • DLC-coated K10 fine-grained carbide (DLC = diamond-like carbon) • The DLC coating has an extremely high level of hardness • The DLC coating has a very smooth surface • Suitable for aluminium alloys and copper alloys
DST	HT-P15	P M K N S H	**Cermet, uncoated:** • Cermet with high wear resistance • For high cutting speeds • For structural steel and low-alloy steels up to 1200 N/mm² • Conditionally suitable for spheroidal graphite cast iron • Not suitable for interrupted cuts
DJC	HC-P15	P M K N S H	**PVD-AlTiN:** • AlTiN-coated cermet • For high cutting speeds • Suitable for spheroidal graphite cast iron • Suitable for MQL applications • Not suitable for interrupted cuts
DJP	HC-P15	P M K N S H	**PVD-TiAlN:** • TiAlN-coated cermet • For high cutting speeds • Suitable for MQL applications • For universal use in a large number of materials
PKD	DP	P M K N S H	**PCD:** • Polycrystalline diamond is an ultra-hard cutting tool material • For maximum cutting speeds • For Alu alloys and Cu alloys, CFRP, GFRP, MMC • Suitable for MQL applications
DSN	BL	P M K N S H	**CBN:** • Cubic boron nitride is an ultra-hard cutting tool material • For pearlitic cast iron materials • For hardened steels up to HRC 62
		5 | 10 | 25 | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500	1) Spheroidal graphite cast iron | 2) Pearlitic cast iron materials

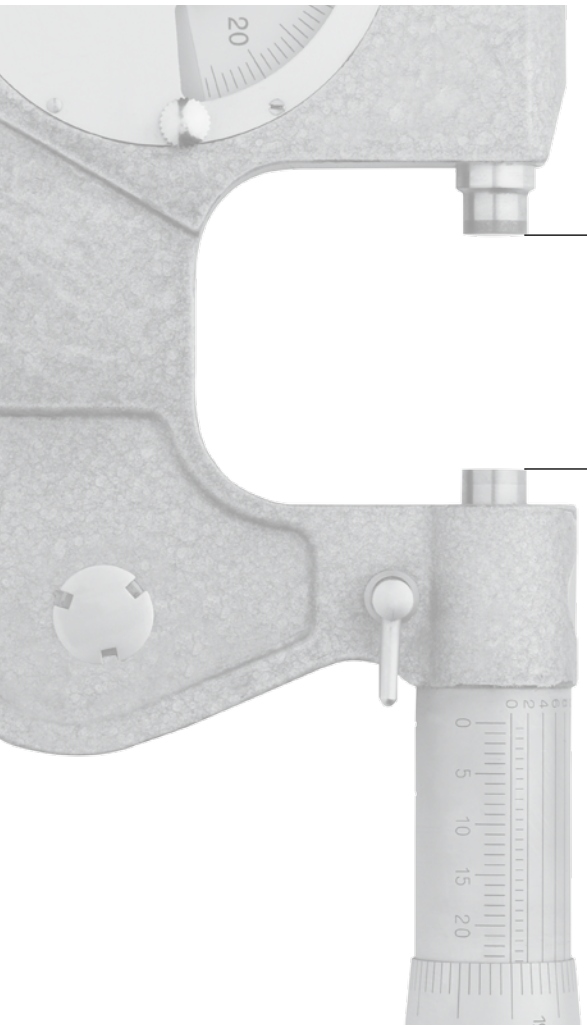


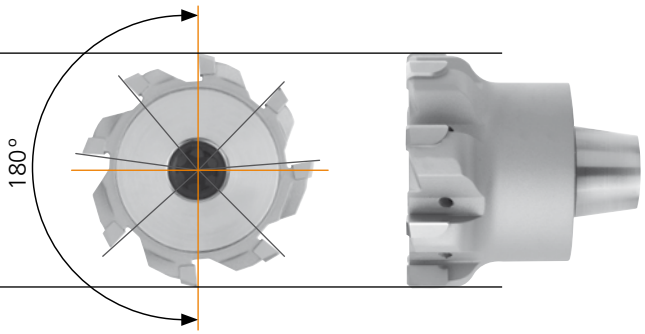
Attainable surface quality														
Material group		Surface finish class	N11	N10	N9	N8		N7	N6		N5	N4	N3	N2	N1
		Mean surface finish R_a	25	12,5	6,3	3,2		1,6	0,8		0,4	0,2	0,1	0,05	0,025
		Average surface uniformity R_z	100	63	40	25	16	10	6,3	4	2,5	1,6	1	0,63	0,25
P	1.0 – 4.0	structural steel, low alloy steels: case-hardened steels, heat-treated steel													
S	5.0	special alloys: Inconel													
S	5.1	titanium, titanium alloys													
M	6.0 – 7.0	stainless steels, fireproof steels													
K	8.0 – 10.2	gray cast iron, ferritic													
K		gray cast iron, perlitic													
K		spheroidal graphite cast iron, ferritic													
K		spheroidal graphite cast iron, perlitic													
N	12.0	copper alloy, brass													
N	13.0	wrought aluminium alloys													
N	13.1	cast aluminium alloy: Si-content < 10%													
N	14.0	cast aluminium alloy: Si-content > 10%													
H	15.0	hardened steels < 45 HRC													
H	16.0	hardened steels > 45 HRC, ≤ 55 HRC													

Achievable limited achievability (all other surface values on request)

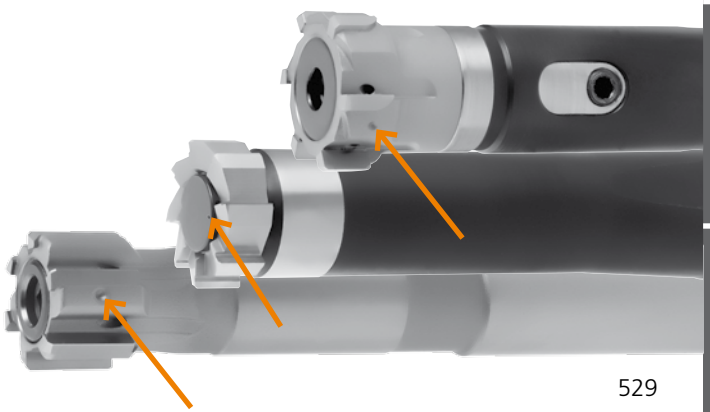
Measuring

Unequal angular position!
Only two cutting edges are 180° in opposite line → Measuring teeth
Because the tools are tapered measurement has to be done at the front of the cutting edge.
PCD tipped reamers require non-contact measuring device!

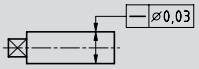
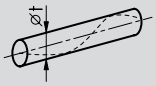
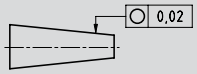
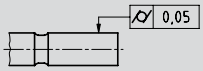
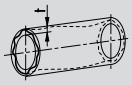
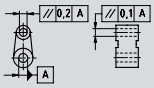
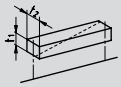
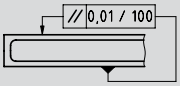
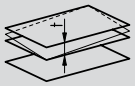
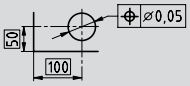
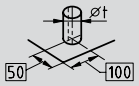
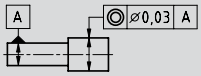
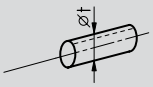




Mark of measuring teeth
- Drive pin, lobe
- Number
- Punch-mark



Form and positional tolerances DI EN ISO 1101

Form and positional tolerances						
Tolerance type		Symbols and characteristics to tolerance		Drawing details examples	Explanation	Tolerance zone
Form tolerances		—	**Straightness** of a line or axis		The axis of the cylindrical part of the pin must lie within the cylinder to t = 0.03 mm	
		○	**Circular form** of a disc, a cylinder, a cone, etc.		The circumference line of any cross section must be contained in a circular ring with a width to t = 0.02 mm	
		⌭	**Cylindrical form**		The surface to tolerance must lie within two coaxial cylinders which have a radial spacing to t = 0.05 mm	
Positional tolerances	Directional tolerances	//	**Parallelism** of a line (axis) with reference to a basic straight line		The top axis must lie in a square-shaped area, within 0.1 mm in the vertical and 0.2 mm in the horizontal direction. The area will lie parallel to the basic axis of bore A.	
		//	**Parallelism** of a surface with reference to a basic plane		Any 100 mm long section of the top surface must lie with a gap of 0.01 mm between two parallel planes. The planes will lie parallel to the lower surface (basic surface).	
	Location tolerances	⌖	**Position** of lines, axes or surfaces in relation to one another or to one or several basic elements		The axis of the hole must lie within a cylinder with a diameter to tolerance t = 0.05 mm, whose axis lies at the precise geometrical place (with dimensions as shown in boxes).	
		◎	**Concentricity** of an axis or a point in relation to a basic axis (basic point)		The axis of the part of the shaft to tolerance must lie within a cylinder with a diameter to tolerance t = 0.03 mm, whose axis aligns with the base axis.	

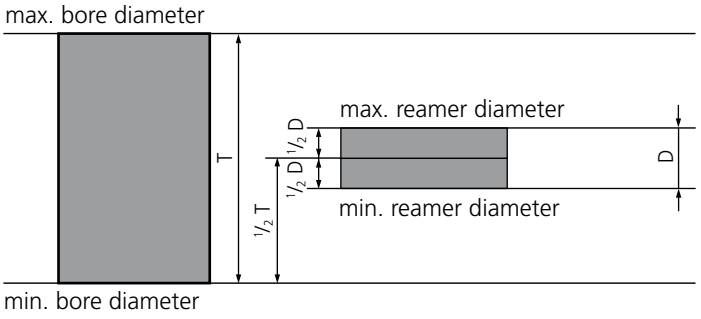
IT tolerance class DIN 7151

IT tolerance class (µm)												
Nominal dimension range	IT 1	IT 2	IT 3	IT 4	IT 5	IT 6	IT 7	IT 8	IT 9	IT 10	IT 11	IT 12
1 – 3 mm	0,8	1,2	2	3	4	6	10	14	25	40	60	100
> 3 – 6 mm	1	1,5	2,5	4	5	8	12	18	30	48	75	120
> 6 – 10 mm	1	1,5	2,5	4	6	9	15	22	36	58	90	150
> 10 – 18 mm	1,2	2	3	5	8	11	18	27	43	70	110	180
> 18 – 30 mm	1,5	2,5	4	6	9	13	21	33	52	84	130	210
> 30 – 50 mm	1,5	2,5	4	7	11	16	25	39	62	100	160	250
> 50 – 80 mm	2	3	5	8	13	19	30	46	74	120	190	300
> 80 – 120 mm	2,5	4	6	10	15	22	35	54	87	140	220	350
> 120 – 180 mm	3,5	5	8	12	18	25	40	63	100	160	250	400
> 180 – 250 mm	4,5	7	10	14	20	29	46	72	115	185	290	460
> 250 – 315 mm	6	8	12	16	23	32	52	81	130	210	320	520

Manufacturing tolerance of KOMET reamers

Manufacturing tolerance of expandable reamers

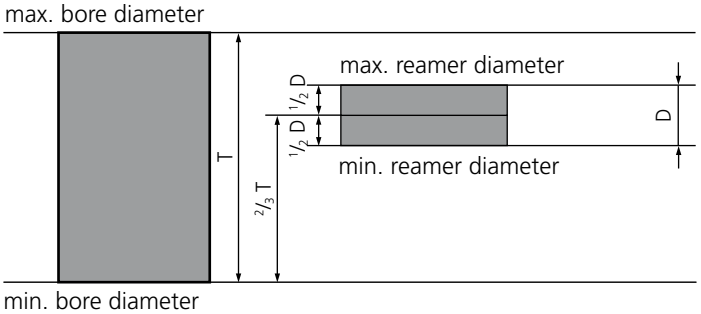
The diameter of an expandable reamer is ground to the middle of the bore tolerance T. The expansion feature of these tools allows for compensation of wear.



T = Tolerance field of bore
D = Manufacturing tolerance of reamer

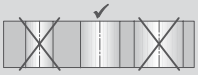
Manufacturing tolerance of solid reamers

The manufacturing tolerance field D of the solid reamers is in the upper third of the bore tolerance T.

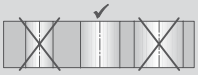


T = Tolerance field of bore
D = Manufacturing tolerance of reamer

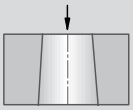
Problems • Possible Causes → Solutions



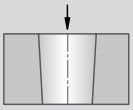
Bore too large
- Concentricity error of the reamer in the spindle → Use DAH compensating holder and correct concentricity
- Alignment not precise, reamer cuts at the back end → Correct alignment and use DPS floating holder
- Built-up edge → reduce cutting speed v_c for uncoated carbide cutting material, increase for DST and coated cutting material or increase the oil content of the coolant
- Reamer too big → have the reamer reworked



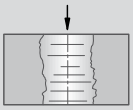
Bore too small
- Worn reamer → have the reamer readjusted, replaced or repaired
- Reaming allowance too small → Increase reaming allowance
- Cutting forces too big → reduce feed or choose a different cutting geometry (ASG)
- Reamer too small → have reamer readjusted, replaced or repaired



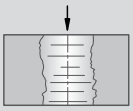
Conical bore, tapered
- Faulty alignment → Correct alignment and use DPS floating holder
- Misalignment of head-stock in relation to turret → correct turret and use DPS floating holder



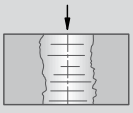
Conical bore, lipped
- Faulty alignment. Cutting edges press at start → Correct alignment and use DPS floating holder



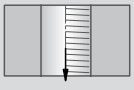
Bore not true
- Concentricity error of reamer too large → correct concentricity using DAH compensation system
- Faulty alignment → Correct alignment and use DPS floating holder
- Asymmetrical cutting through uneven entry surface → Countersink bore
- Deformation through clamping of the work piece → Correct clamping of the work piece
- Poor premachining → optimise premachining
- Feed too high → reduce feed



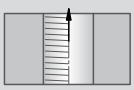
Bore shows chatter marks
- Cutting speed too high → reduce cutting speed
- L to D ratio too large → reduce the entry speed, pilot the bore or choose a different cutting geometry (ASG)



Surface quality unsatisfactory
- Cutting edge build-up → reduce cutting speed vc for uncoated carbide cutting material, increase for DST and coated cutting material or increase oil content of the coolant
- Cutters worn → have cutters repaired or replace tool
- Concentricity error of reamer → correct concentricity using DAH compensation system
- Failing or insufficient coolant, chips getting jammed → use internal coolant supply and increase coolant pressure
- Unsuitable coolant → increase the oil content of the coolant
- Wrong cutting data → use data according to catalogue recommendation

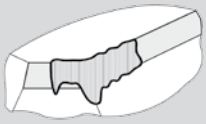


Scoring in bore «feed marks»
- Cutters defective (outbreaks) → replace reamer or have repaired
- Cutting edge build-ups → reduce cutting speed vc for uncoated carbide cutting material, and increase for DST and coated cutting material or increase oil content of the coolant

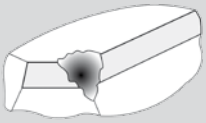


Scoring in bore «retraction marks»
- Reamer is allowed to travel too far out of the bore → Only allow the reamer to travel out of the bore 2 mm more than the cutting length at the most
- Material springs back → retraction not at a high speed, but with increased (2-3 times) feed speed

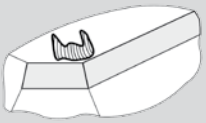
Types of tool wear



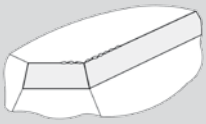
Flank wear
Reduce cutting speed or use a cutting material or coating with higher abrasion resistance.



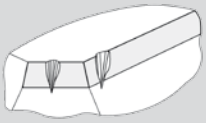
Major breakage
Reduce feed rate and stock allowance. Use carbide with coating instead of DST for interrupted bores.



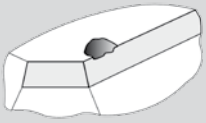
Pitting of chip surface
Reduce cutting speed or use a more positive rake angle.



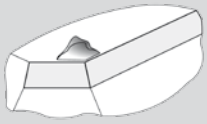
Edge wear
Increase cutting speed or use a more positive rake angle.



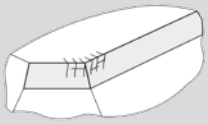
Notch wear
Reduce cutting speed or use a cutting material or coating with higher abrasion resistance.



Fatigue wear
Reduce feed rate, increase stability of the reamer.



Built-up on chip surface
Use positive cutting geometry, increase oil content of coolant, reduce cutting speed v_c for uncoated carbide cutting material, increase for DST and coated cutting material.



Hairline cracks
Use enough coolant and inner coolant supply, reduce cutting speed.

KOMET – Innovative Solutions for Thread Cutting







KOMET is one of the world's leading providers of high-precision threading tools for efficient production of threads. Our potential for providing innovative solutions, a comprehensive performance spectrum and personal commitment form the basis for successful partnerships with our customers.

Thread milling
- Chip producing method
- Thread making by helical interpolation within the pitch
- Same tool can be used for all threads with the same pitch starting from the nominal diameter
- Same tool can be used for different materials up to 45 HRC
- Lower torque than with tapping and roll form tapping
- Drill depth = thread depth if tool is not used for chamfering
- Machine spindle always running in the same direction – no reversing necessary
- High speed cutting (HSC) possible

Tapping
- Chip producing method
- Thread making by rotation – pitch is on the tool
- Can be used on almost all machines
- 1 tool per dimension required

Drill thread milling
- Chip producing method
- Complete thread is manufactured in a single pass – drilling, chamfering and thread milling
- One tool per dimension which can also be used for different materials
- Prerequisite: CNC machine or machining centre being capable to run helical interpolation

Roll form tapping
- Chip less method
- Thread making by forming – pitch is on the tool
- Suitable for materials with elongation of >5% and tensile strength of <1000 N/mm²
- Tap drill Ø larger than with tapping
- Higher torque than tapping
- Generates forming gap at minor diameter



KOMET TPT

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning: +49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

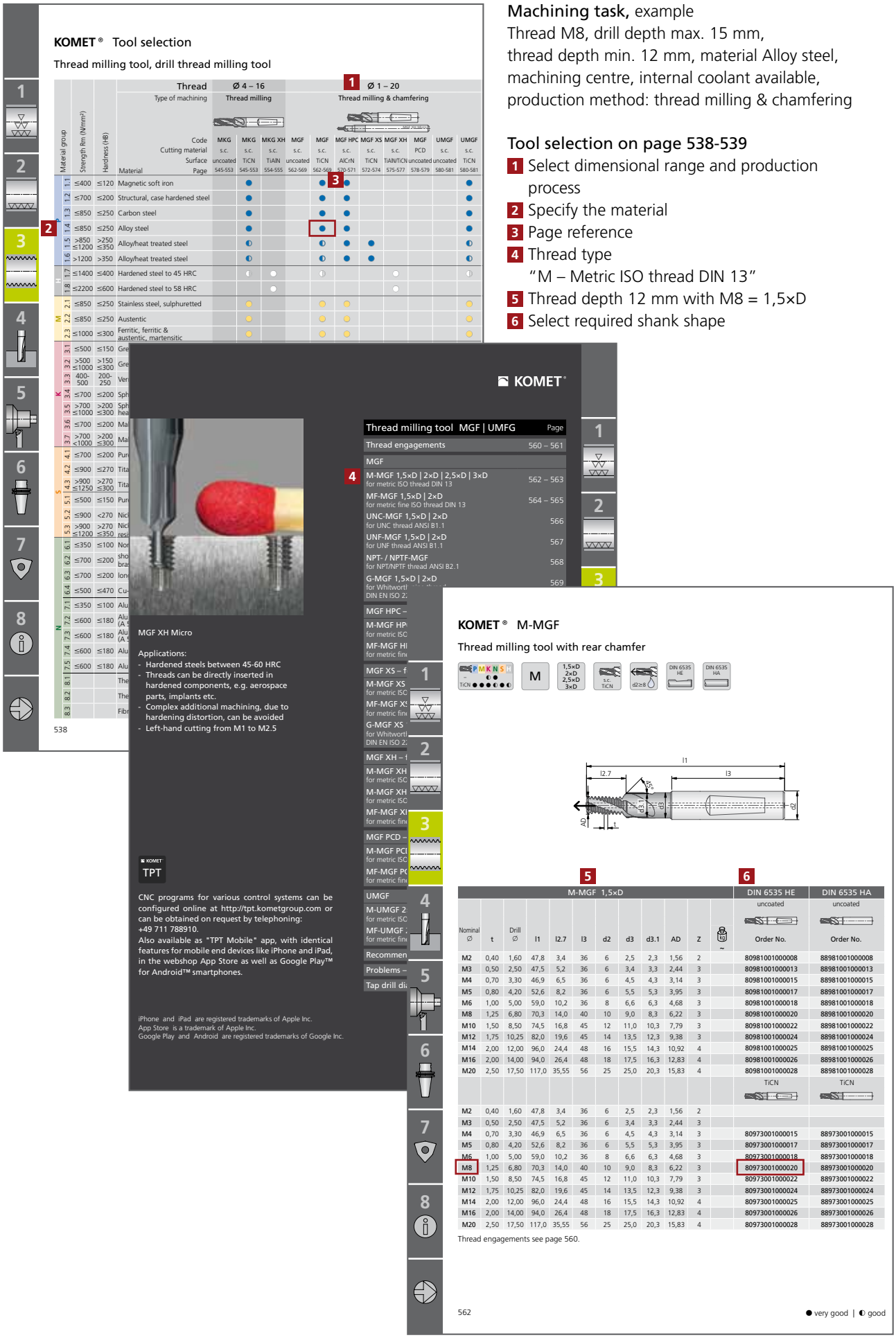
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Index

	Page
General information	
Tool selection guide	536
Producing internal threads	537
Tool selection	538 – 541
Threading tools	
Thread milling	542 – 557
Thread milling & chamfering	558 – 583
Drilling, thread milling & chamfering	584 – 607
Thread milling > ∅ 20 mm	608 – 631
Tapping	632 – 645
Roll form tapping	646 – 665
Adaptors	
Synchro tapping chuck	666 – 669
VABOS Easy	670 – 675
Technical Informations	
Special solutions	676
Tap drill diameters	678 – 681
Achievable thread lengths	682
Formulae	682
Explanation CNC program	683
Preparations on tool	684
Milling method for different materials	685
Torque calculations	686
Circular interpolation grooving	688 – 689

KOMET Tool selection guide

Thread milling tool, drill thread milling tool



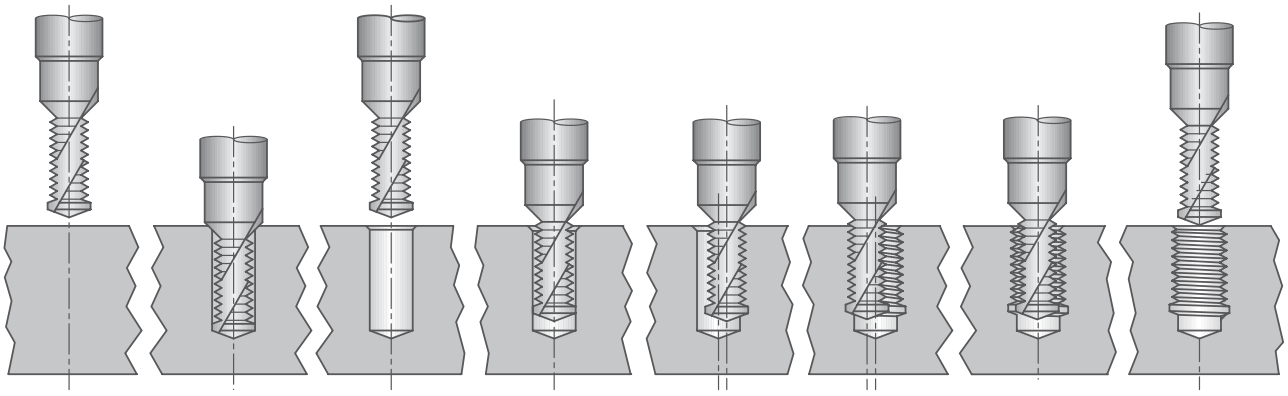
Machining task, example
Thread M8, drill depth max. 15 mm, thread depth min. 12 mm, material Alloy steel, machining centre, internal coolant available, production method: thread milling & chamfering

Tool selection on page 538-539

1. Select dimensional range and production process
2. Specify the material
3. Page reference
4. Thread type
   "M – Metric ISO thread DIN 13"
5. Thread depth 12 mm with M8 = 1,5×D
6. Select required shank shape

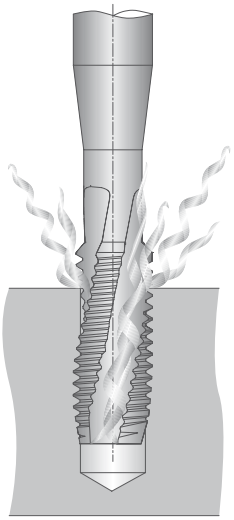
Process description

Drill thread milling

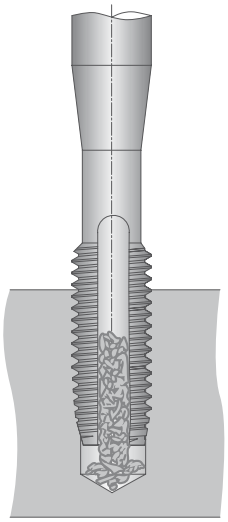


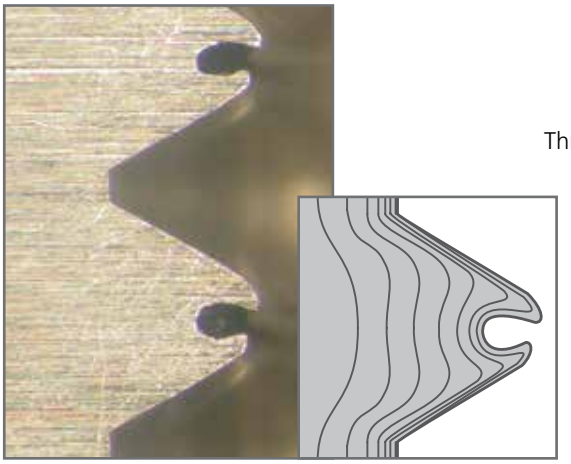
Tapping

Blind hole with
KOMET SIREX SR tap



Machining of short-chipping materials for through holes and blind holes using
KOMET GG





Roll form tapping

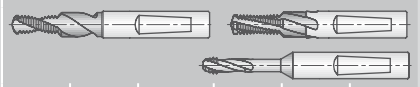
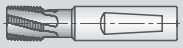
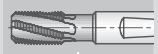
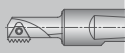
Thread forming – grain structure

KOMET Tool selection

Thread milling tool, drill thread milling tool

Material group		Strength Rm (N/mm²)	Hardness (HB)	Material	Page	Ø 4 – 16 Thread milling MKG s.c. uncoated 545-553	MKG s.c. TiCN 545-553	MKG XH s.c. TiAlN 554-555	Ø 1 – 20 Thread milling & chamfering MGF s.c. uncoated 562-569	MGF s.c. TiCN 562-569	MGF HPC s.c. AlCrN 570-571	MGF XS s.c. TiCN 572-574	MGF XH s.c. TiAlN/TiCN 575-577	MGF PCD uncoated 578-579	UMGF s.c. uncoated 580-581	UMGF s.c. TiCN 580-581
P	1.1	≤400	≤120	Magnetic soft iron			●			●	●					●
P	1.2	≤700	≤200	Structural, case hardened steel			●			●	●					●
P	1.3	≤850	≤250	Carbon steel			●			●	●					●
P	1.4	≤850	≤250	Alloy steel			●			●	●					●
P	1.5	>850 ≤1200	>250 ≤350	Alloy/heat treated steel			◐			◐	●	●				◐
P	1.6	>1200	>350	Alloy/heat treated steel			◐			◐	●	●				◐
H	1.7	≤1400	≤400	Hardened steel to 45 HRC			◑	○		◑			○			◑
H	1.8	≤2200	≤600	Hardened steel to 58 HRC				○					○			
M	2.1	≤850	≤250	Stainless steel, sulphuretted			●			●	●					●
M	2.2	≤850	≤250	Austentic			●			●	●					●
M	2.3	≤1000	≤300	Ferritic, ferritic & austentic, martensitic			●			●	●					●
K	3.1	≤500	≤150	Grey cast iron		◐	●		◐	●	●				◐	●
K	3.2	>500 ≤1000	>150 ≤300	Grey cast iron, heat treated		◐	●		◐	●	●				◐	●
K	3.3	400-500	200-250	Vermicular cast iron			●			●	●					●
K	3.4	≤700	≤200	Spher. graph. cast iron		◐	●		◐	●	●				◐	●
K	3.5	>700 ≤1000	>200 ≤300	Spher. graph. cast iron, heat treated			●			●	●					●
K	3.6	≤700	≤200	Malleable iron			●			●	●					●
K	3.7	>700 <1000	>200 ≤300	Malleable iron, heat treated			●			●	●					●
S	4.1	≤700	≤200	Pure titanium			●			●	●					●
S	4.2	≤900	≤270	Titanium alloys			●			●	●					●
S	4.3	>900 ≤1250	>270 ≤300	Titanium alloys			●			●	●	●				●
S	5.1	≤500	≤150	Pure nickel			●			●						●
S	5.2	≤900	<270	Nickel alloys, heat resistant			●			●						●
S	5.3	>900 ≤1200	>270 ≤350	Nickel alloys, high heat resistant			●			●		●				●
N	6.1	≤350	≤100	Non-alloy copper		●	◐		●	◐					●	◐
N	6.2	≤700	≤200	short chip, brass, bronze, red brass		●	◐		●	◐				●	●	◐
N	6.3	≤700	≤200	long chip brass		●	◐		●	◐					●	◐
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)		●	◐		●	◐					●	◐
N	7.1	≤350	≤100	Alu, Mg non-alloy		●	◐		●	◐				●	●	◐
N	7.2	≤600	≤180	Alu wrought all., break. strain (A 5) <14 %		●	◐		●	◐				●	●	◐
N	7.3	≤600	≤180	Alu wrought all., break. strain (A 5) ≥14 %		●	◐		●	◐				●	●	◐
N	7.4	≤600	≤180	Alu cast alloy, Si <10 %		●	◐		●	◐				●	●	◐
N	7.5	≤600	≤180	Alu cast alloy, Si ≥10 %		◐	●		◐	●				●	◐	●
N	8.1			Thermoplastics		●	◐		●	◐					●	◐
N	8.2			Thermosetting plastics		●	◐		●	◐					●	◐
N	8.3			Fibre reinforced plastics		◐	●		◐	●				●	◐	●

● very good | ◐ good

	Ø 3 – 20						Ø 16 – 20						> Ø 20	> Ø 20	> Ø 20	
	Drilling, thread milling & chamfering						Thread milling						Circular spotface, chamfering, thread milling	Thread milling	Thread milling	
																
	BGF	BGF	BGF NZ4	UBGF	UBGF	DBGF	GWF SR	GWF SR	GWF HPC	GWF XS	GWF SR	GWF HPC	GWF GP	GWF GP	TOMILL CUT	XAM
	s.c.	s.c.	s.c.	s.c.	s.c.	s.c.	s.c.	s.c.	s.c.	s.c.	PCD	PCD	s.c.	s.c.	s.c. head	carbide insert
	uncoated	TiAlN	AlCrN	uncoated	TiAlN	TiAlN	uncoated	TiCN	AlCrN	TiCN	uncoated	uncoated	uncoated	TiCN	TiAlN	uncoated	TiN
	588-598	588-598	599	600-604	600-604	605	615-620	615-620	622	621	626	627	623-624	623-624	610-611	612-613	612-613
	●					●		●	●					●	●		●
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	◐	●		◐	●	●	◐	●			●	●	◐	●	◐	◐	●
	●	◐		●	◐	●	●	◐					●	◐	●	●	◐
	●	◐		●	◐	●	●	◐					●	◐	●	●	◐
	◐	●		◐	●	●	◐	●			●	●	◐	●	●	◐	●

KOMET Tool selection

Taps

Material group		Strength Rm (N/mm²)	Hardness (HB)	Material	GG HML IK	SIREX HML IK	SIREX	SIREX SR	GG	DOREX	SIREX XH TiAlN
				Bilnd hole	✓	✓	✓	✓	✓		✓
				Through hole	✓	✓	✓		✓	✓	✓
				Cutting material	HML	HML	s.c.	s.c.	s.c.	s.c.	s.c.
				Surface	uncoated	AlCrN	uncoated	uncoated	uncoated	uncoated	TiAlN
				Coolant supply	IK	IK	IK	IK	IK	IKS	–
				Page	634	635	638 / 641	637 / 642	636	640	639
P	1.1	≤400	≤120	Magnetic soft iron							
P	1.2	≤700	≤200	Structural, case hardened steel							
P	1.3	≤850	≤250	Carbon steel							
P	1.4	≤850	≤250	Alloy steel							
P	1.5	>850 ≤1200	>250 ≤350	Alloy/heat treated steel							
P	1.6	>1200	>350	Alloy/heat treated steel							
H	1.7	≤1400	≤400	Hardened steel to 45 HRC							○
H	1.8	≤2200	≤600	Hardened steel to 58 HRC							○
M	2.1	≤850	≤250	Stainless steel, sulphuretted							
M	2.2	≤850	≤250	Austentic							
M	2.3	≤1000	≤300	Ferritic, ferritic & austentic, martensitic							
K	3.1	≤500	≤150	Grey cast iron	●		◐		●		
K	3.2	>500 ≤1000	>150 ≤300	Grey cast iron, heat treated	●		◐		●		
K	3.3	400-500	200-250	Vermicular cast iron	●		◐	◐	●	◐	
K	3.4	≤700	≤200	Spher. graph. cast iron		●		◐		◐	
K	3.5	>700 ≤1000	>200 ≤300	Spher. graph. cast iron, heat treated		●		◐		◐	
K	3.6	≤700	≤200	Malleable iron		◐		◐		◐	
K	3.7	>700 <1000	>200 ≤300	Malleable iron, heat treated		◐		◐		◐	
S	4.1	≤700	≤200	Pure titanium							
S	4.2	≤900	≤270	Titanium alloys							
S	4.3	>900 ≤1250	>270 ≤300	Titanium alloys							
S	5.1	≤500	≤150	Pure nickel							
S	5.2	≤900	<270	Nickel alloys, heat resistant							
S	5.3	>900 ≤1200	>270 ≤350	Nickel alloys, high heat resistant							
N	6.1	≤350	≤100	Non-alloy copper							
N	6.2	≤700	≤200	short chip, brass, bronze, red brass			●				
N	6.3	≤700	≤200	long chip brass							
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			●				
N	7.1	≤350	≤100	Alu, Mg non-alloy							
N	7.2	≤600	≤180	Alu wrought all., break. strain (A 5) <14 %							
N	7.3	≤600	≤180	Alu wrought all., break. strain (A 5) ≥14 %							
N	7.4	≤600	≤180	Alu cast alloy, Si <10 %			●	●		●	
N	7.5	≤600	≤180	Alu cast alloy, Si ≥10 %			●	◐		◐	
N	8.1			Thermoplastics				●		●	
N	8.2			Thermosetting plastics			●	●		●	
N	8.3			Fibre reinforced plastics			●	●		●	

● very good | ◐ good

Material group		Strength Rm (N/mm²)	Hardness (HB)	Code	MOREX	MOREX N				MOREX S	MOREX S N	MOREX HML		MOREX N HML		MOREX R	
				Bilnd hole	✓	✓				✓	✓	✓		✓		✓	✓
				Through hole		✓					✓			✓		✓	✓
				Cutting material	Solid carbide	Solid carbide				Solid carbide	Solid carbide	HSS-E with carbide strips		HSS-E with carbide strips		HSS-E with carbide strips	
				Surface	un-coated	TiN	uncoated		TiN	TiN	TiN	un-coated	TiN	un-coated	TiN	TiN	
				Coolant supply	IK	IK	IK	IKS	IK	IKS	IK	IKS	IK	IK	IK	IKS	IK	IKS
			Material	Page	648	648	649	650	649	650	651/653	652/654	655	655	656	657	659	660
P	1.1	≤400	≤120	Magnetic soft iron		●			●	●	●	●		●		●	●	●
	1.2	≤700	≤200	Structural, case hardened steel		●			●	●	●	●		●		●	●	●
	1.3	≤850	≤250	Carbon steel		●			●	●	●	●		●		●	●	●
	1.4	≤850	≤250	Alloy steel		●			●	●	●	●		●		●	●	●
	1.5	>850 ≤1200	>250 ≤350	Alloy/heat treated steel		●			●	●	●	●		●		●	●	●
	1.6	>1200	>350	Alloy/heat treated steel		◐			◐	◐	◐	◐		◐		◐	◐	◐
H	1.7	≤1400	≤400	Hardened steel to 45 HRC														
	1.8	≤2200	≤600	Hardened steel to 58 HRC														
M	2.1	≤850	≤250	Stainless steel, sulphuretted		○			○	○	○	○		○		○	○	○
	2.2	≤850	≤250	Austentic		○			○	○	○	○		○		○	○	○
	2.3	≤1000	≤300	Ferritic, ferritic & austentic, martensitic		○			○	○	○	○		○		○	○	○
K	3.1	≤500	≤150	Grey cast iron														
	3.2	>500 ≤1000	>150 ≤300	Grey cast iron, heat treated														
	3.3	400-500	200-250	Vermicular cast iron														
	3.4	≤700	≤200	Spher. graph. cast iron		●			●	●	●	●		●		●	●	●
	3.5	>700 ≤1000	>200 ≤300	Spher. graph. cast iron, heat treated		●			●	●	●	●		●		●	●	●
	3.6	≤700	≤200	Malleable iron														
	3.7	>700 <1000	>200 ≤300	Malleable iron, heat treated														
S	4.1	≤700	≤200	Pure titanium														
	4.2	≤900	≤270	Titanium alloys		●			●	●	●	●				●	●	●
	4.3	>900 ≤1250	>270 ≤300	Titanium alloys		◐			◐	◐	◐	◐				◐	◐	◐
	5.1	≤500	≤150	Pure nickel		●			●	●	●	●				●	●	●
	5.2	≤900	<270	Nickel alloys, heat resistant		●			●	●	●	●				●	●	●
	5.3	>900 ≤1200	>270 ≤350	Nickel alloys, high heat resistant														
N	6.1	≤350	≤100	Non-alloy copper	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.2	≤700	≤200	short chip, brass, bronze, red brass														
	6.3	≤700	≤200	long chip brass	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)														
	7.1	≤350	≤100	Alu, Mg non-alloy	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	7.2	≤600	≤180	Alu wrought all., break. strain (A 5) <14 %	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	7.3	≤600	≤180	Alu wrought all., break. strain (A 5) ≥14 %	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	7.4	≤600	≤180	Alu cast alloy, Si <10 %	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	7.5	≤600	≤180	Alu cast alloy, Si ≥10 %														
	8.1			Thermoplastics														
	8.2			Thermosetting plastics														
	8.3			Fibre reinforced plastics														

● very good | ◐ good

Thread milling small threads from M4 upwards
Spiral fluted solid carbide tools with profile correction for diameter range 4-14 mm.

BENEFITS for you:

- One and the same tool for different tolerances
- One and the same tool for different diameters >nominal Ø with same pitch
- One and the same tool for blind and through holes
- One and the same tool for different materials
- Exact and repeatable thread depth
- No chip root remaining in the thread
- High speed cutting (HSC) possible



KOMET
TPT

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning:
+49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

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Google Play and Android are registered trademarks of Google Inc.

KOMET MKG ES
Thread milling tool with deburring edge

During the thread-milling operation itself, the thread milling cutter with deburring cutting edge removes the otherwise uncompleted part at the start of the thread – without taking any extra time. This is particularly appreciated during work on hydraulic systems when, for reasons of maintenance, parts have to be fitted and removed relatively frequently.



Thread milling tool MKG

Page

Thread engagements 544

MKG

M-MKG 2×D 545
for metric ISO thread DIN 13

MF-MKG 2×D 546
for metric fine ISO thread DIN 13

UNC-MKG 2×D 547
for UNC thread ANSI B1.1

UNF-MKG 2×D 548
for UNF thread ANSI B1.1

G-MKG 2×D 549
for Whitworth pipe thread
DIN EN ISO 228 and DIN EN 10226

MKG ES – with deburring edge

M-MKG ES 552
for metric ISO thread DIN 13

MF-MKG ES 553
for metric fine ISO thread DIN 13

MKG XH – for hard machining ≥ 45 HRC

M-MKG XH 1,5×D 554
for metric ISO thread DIN 13
without internal coolant supply

MF-MKG XH 1,5×D 555
for metric fine ISO thread DIN 13
without internal coolant supply

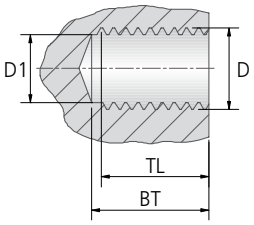
Recommended cutting data 556

Problems – Causes – Solutions 557

Tap drill diameters 678

KOMET MKG

Thread engagements



TL = full thread length
BT = drill depth (For safety reasons BT 0.2 deeper than TL)

M					
Nominal Ø		1,5×D		2×D	
D	D1	BT	TL	BT	TL
M4	3,30	6,70	6,50	8,10	7,90
M5	4,20	7,70	7,50	10,10	9,90
M6	5,00	9,50	9,30	12,50	12,30
M8	6,80	13,10	12,90	16,80	16,60
M10	8,50	15,70	15,50	20,20	20,00
M12	10,30	18,20	18,00	25,30	25,10
M14	12,00	20,80	20,60	28,80	28,60

M – metric ISO thread DIN 13

MF					
Nominal Ø		1,5×D		2×D	
D	D1	BT	TL	BT	TL
M10×1	9,00	–	–	20,50	20,30
M12×1,5	10,50	18,67	18,47	24,70	24,50
M14×1,5	12,50	21,67	21,47	–	–
M16×1,5	14,50	24,66	24,46	–	–

MF – metric fine ISO thread DIN 13

UNC			
Nominal Ø	2×D		
D	D1	BT	TL
Nr.10-24 UNC	3,77	10,10	9,90
Nr.12-24 UNC	4,43	11,13	10,93
1/4-20 UNC	5,08	14,60	14,40
5/16-18 UNC	6,53	16,20	16,00
3/8-16 UNC	7,94	19,80	19,60
7/16-14 UNC	9,30	22,60	22,40
1/2-13 UNC	10,75	26,20	26,00
9/16-12 UNC	12,17	30,50	30,30
5/8-11 UNC	13,57	33,27	33,07

UNC – american Unified coarse thread ANSI B1.1

UNF			
Nominal Ø	2×D		
D	D1	BT	TL
Nr.10-32 UNF	4,03	10,00	9,80
Nr.12-28 UNF	4,58	12,30	12,10
1/4-28 UNF	5,44	14,10	13,90
5/16-24 UNF	6,88	16,40	16,20
3/8-24 UNF	8,47	19,60	19,40
7/16-20 UNF	9,84	22,20	22,00
1/2-20 UNF	11,43	26,00	25,80
9/16-18 UNF	12,88	28,90	28,70
5/8-18 UNF	14,46	33,10	32,90

UNF – american Unified fine thread ANSI B1.1

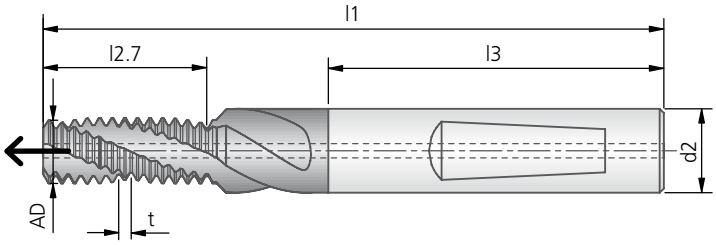
G			
Nominal Ø	2×D		
D	D1	BT	TL
G1/8-28	8,82	20,40	20,20
G1/4-19	11,82	27,30	27,10
G3/8-19	15,32	35,40	35,20

G – Whitworth pipe thread DIN EN ISO 228 and
DIN EN 10226 (previously DIN 2999)

KOMET M-MKG

Thread milling tool





Use for	
Thread	Thread milling tool
M16	MKG M14

M-MKG 2×D										DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
M4	0,70	3,30	49	8,00	36	6	3,14	3		80980001000015	88980001000015
M5	0,80	4,20	49	10,00	36	6	3,95	3		80980001000017	88980001000017
M6	1,00	5,00	55	12,00	36	6	4,68	3		80980001000018	88980001000018
M8	1,25	6,80	62	16,25	36	8	6,22	3		80980001000020	88980001000020
M10	1,50	8,50	74	19,50	40	10	7,79	3		80980001000022	88980001000022
M12	1,75	10,25	79	24,50	45	12	9,38	3		80980001000024	88980001000024
M14	2,00	12,00	89	28,00	45	14	10,92	4		80980001000025	88980001000025
										TiCN Order No.	TiCN Order No.
M4	0,70	3,30	49	8,00	36	6	3,14	3		80983001000015	88983001000015
M5	0,80	4,20	49	10,00	36	6	3,95	3		80983001000017	88983001000017
M6	1,00	5,00	55	12,00	36	6	4,68	3		80983001000018	88983001000018
M8	1,25	6,80	62	16,25	36	8	6,22	3		80983001000020	88983001000020
M10	1,50	8,50	74	19,50	40	10	7,79	3		80983001000022	88983001000022
M12	1,75	10,25	79	24,50	45	12	9,38	3		80983001000024	88983001000024
M14	2,00	12,00	89	28,00	45	14	10,92	4		80983001000025	88983001000025

Thread engagements see page 544.

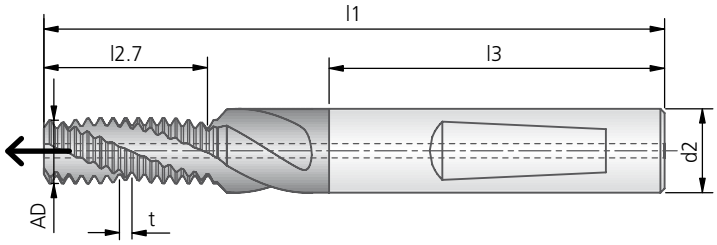
● very good | ◐ good

Guideline values for thread milling: page 556.

KOMET MF-MKG

Thread milling tool





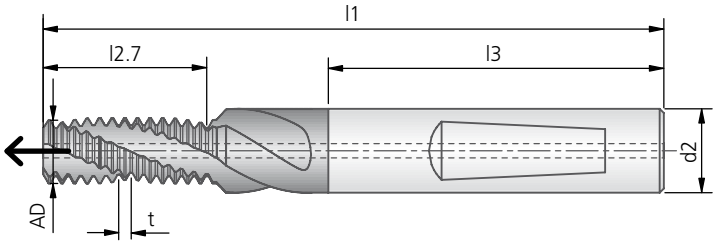
Use for	
Thread	Thread milling tool
M8×1	M-MKG M6
M12×1	MF-MKG M10×1
M14×1,5	MF-MKG M12×1,5
M16×1,5	MF-MKG M12×1,5

MF-MKG 2×D										DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	kg ~	uncoated  Order No.	uncoated  Order No.
M10×1	1,00	9,0	74,0	20,0	40	10	7,79	3		**80980002000094**	**88980002000094**
M12×1,5	1,50	10,5	79,0	24,0	45	12	9,38	3		**80980002000113**	**88980002000113**
										TiCN 	TiCN 
M10×1	1,00	9,0	74,0	20,0	40	10	7,79	3		**80983002000094**	**88983002000094**
M12×1,5	1,50	10,5	79,0	24,0	45	12	9,38	3		**80983002000113**	**88983002000113**

Thread engagements see page 544.

● very good | ◐ good





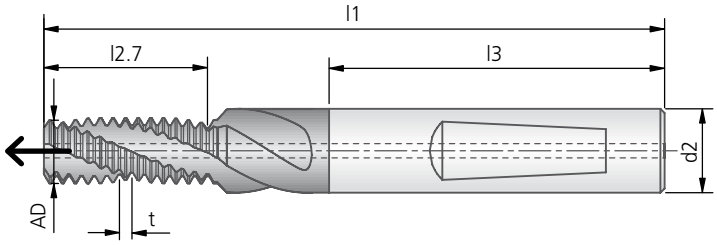
UNC-MKG 2×D										DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
Nr.10-24 UNC	1,058	3,77	55	9,5	36	6	3,68	3		80980010000009	88980010000009
Nr.12-24 UNC	1,058	4,43	55	10,6	36	6	4,26	3		80980010000010	88980010000010
1/4-20 UNC	1,270	5,08	55	13,9	36	6	4,70	3		80980010000011	88980010000011
5/16-18 UNC	1,411	6,53	62	15,5	36	8	6,22	3		80980010000012	88980010000012
3/8-16 UNC	1,588	7,94	74	19,1	40	10	7,34	3		80980010000013	88980010000013
7/16-14 UNC	1,814	9,30	79	21,8	45	12	8,57	3		80980010000014	88980010000014
1/2-13 UNC	1,954	10,75	79	25,4	45	12	9,38	3		80980010000015	88980010000015
9/16-12 UNC	2,117	12,17	89	29,6	45	14	10,92	4		80980010000016	88980010000016
5/8-11 UNC	2,309	13,57	102	32,3	48	16	12,50	4		80980010000017	88980010000017
										TiCN	TiCN
Nr.10-24 UNC	1,058	3,77	55	9,5	36	6	3,68	3		80983010000009	88983010000009
Nr.12-24 UNC	1,058	4,43	55	10,6	36	6	4,26	3		80983010000010	88983010000010
1/4-20 UNC	1,270	5,08	55	13,9	36	6	4,70	3		80983010000011	88983010000011
5/16-18 UNC	1,411	6,53	62	15,5	36	8	6,22	3		80983010000012	88983010000012
3/8-16 UNC	1,588	7,94	74	19,1	40	10	7,34	3		80983010000013	88983010000013
7/16-14 UNC	1,814	9,30	79	21,8	45	12	8,57	3		80983010000014	88983010000014
1/2-13 UNC	1,954	10,75	79	25,4	45	12	9,38	3		80983010000015	88983010000015
9/16-12 UNC	2,117	12,17	89	29,6	45	14	10,92	4		80983010000016	88983010000016
5/8-11 UNC	2,309	13,57	102	32,3	48	16	12,50	4		80983010000017	88983010000017

Thread engagements see page 544.

KOMET UNF-MKG

Thread milling tool



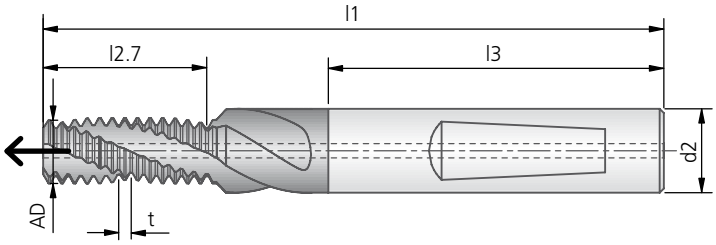


UNF-MKG 2×D										DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
Nr.10-32 UNF	0,794	4,03	49	9,5	36	6	3,95	3		80980011000009	88980011000009
Nr.12-28 UNF	0,907	4,58	55	11,8	36	6	4,45	3		80980011000010	88980011000010
1/4-28 UNF	0,907	5,44	55	13,6	36	6	4,70	3		80980011000011	88980011000011
5/16-24 UNF	1,058	6,88	62	15,9	36	8	6,22	3		80980011000012	88980011000012
3/8-24 UNF	1,058	8,47	74	19,0	40	10	7,79	3		80980011000013	88980011000013
7/16-20 UNF	1,270	9,84	79	21,6	45	12	9,32	3		80980011000014	88980011000014
1/2-20 UNF	1,270	11,43	79	25,4	45	12	9,38	3		80980011000015	88980011000015
9/16-18 UNF	1,411	12,88	89	28,2	45	14	10,92	4		80980011000016	88980011000016
5/8-18 UNF	1,411	14,46	102	32,4	48	16	12,82	4		80980011000017	88980011000017
										TiCN	TiCN
Nr.10-32 UNF	0,794	4,03	49	9,5	36	6	3,95	3		80983011000009	88983011000009
Nr.12-28 UNF	0,907	4,58	55	11,8	36	6	4,45	3		80983011000010	88983011000010
1/4-28 UNF	0,907	5,44	55	13,6	36	6	4,70	3		80983011000011	88983011000011
5/16-24 UNF	1,058	6,88	62	15,9	36	8	6,22	3		80983011000012	88983011000012
3/8-24 UNF	1,058	8,47	74	19,0	40	10	7,79	3		80983011000013	88983011000013
7/16-20 UNF	1,270	9,84	79	21,6	45	12	9,32	3		80983011000014	88983011000014
1/2-20 UNF	1,270	11,43	79	25,4	45	12	9,38	3		80983011000015	88983011000015
9/16-18 UNF	1,411	12,88	89	28,2	45	14	10,92	4		80983011000016	88983011000016
5/8-18 UNF	1,411	14,46	102	32,4	48	16	12,82	4		80983011000017	88983011000017

Thread engagements see page 544.

● very good | ◐ good





G-MKG 2×D										DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	kg ~	uncoated  Order No.	uncoated  Order No.
G1/8-28	0,907	8,82	74	20,0	40	10	7,79	3		**80980025000001**	**88980025000001**
G1/4-19	1,337	11,82	89	26,7	45	14	10,92	4		**80980025000002**	**88980025000002**
G3/8-19	1,337	15,32	102	34,84	48	18	13,92	4		**80980025000003**	**88980025000003**
										TiCN 	TiCN 
G1/8-28	0,907	8,82	74	20,0	40	10	7,79	3		**80983025000001**	**88983025000001**
G1/4-19	1,337	11,82	89	26,7	45	14	10,92	4		**80983025000002**	**88983025000002**
G3/8-19	1,337	15,32	102	34,84	48	18	13,92	4		**80983025000003**	**88983025000003**

Thread engagements see page 544.

KOMET MKG ES

Thread milling tool with deburring edge

During the thread-milling operation itself, the KOMET MKG thread milling cutter with deburring cutting edge removes the otherwise uncompleted part at the start of the thread – without taking any extra time. This is particularly appreciated during work on hydraulic systems when, for reasons of maintenance, parts have to be fitted and removed relatively frequently. This uncompleted part is thereby prevented from becoming detached, entering the system and causing damage.

Thread milling is the only method of creating an internal thread that offers the possibility of, starting from the tool nominal thread, cutting every larger-sized thread with the same pitch and the same tool. By using the deburring cutting edge, the effective length of the thread is completely defined and invariable.

Tools are therefore selected in relation to thread length TL and pitch t (page 552-553).

Our range offers a standard tool for all commonly used thread lengths in the thread pitches of 1.0 mm and 1.5 mm. Available with parallel shank DIN 6535 HA or with clamping surface DIN 6535 HE, in bare metal or TiCN-coated.



How the deburring edge works

Every thread, whether cut or formed, begins as a burr. The full thread profile is obtained as the pitch progesses when plunged into the solid material.In screwed connections that are frequently unscrewed and then reconnected, this burr can come away and cause damage - to hydraulic components, for example.

In order to prevent this, the burr can – as with a thread mating plug gauge – be removed at the start of the thread as the thread is milled, without requiring any additional time, so that the thread starts with a full profile thread.
This is done with what is known as a deburring edge (ES), which is positioned on the tool behind the thread profile. The amount of material removed depends on the position where the edge is applied.

Risk of burr becoming detached at the transition between the thread and the countersink – the risk is particularly high for lead-free aluminium alloys





Start position

With set depth deburring cutting edge 1×P





End position

M-MKG ES														DIN 6535 HE	DIN 6535 HA
														uncoated	uncoated
Nominal ∅ D	t	D1	l3	d2	AD	Z	KN	l1	BT min.	TL	t1		~	Order No.	Order No.
								55,0	12,8	12,5	1,0			80700001000018	88700001000018
								54,0	11,8	11,5	1,0			80700001010018	88700001010018
	❶							53,0	10,8	10,5	1,0			80700001020018	88700001020018
M6	1,00	5,0	36	6	4,68	3	3	52,0	9,8	9,5	1,0			80700001030018	88700001030018
								51,0	8,8	8,5	1,0			80700001040018	88700001040018
								50,0	7,8	7,5	1,0			80700001050018	88700001050018
								49,0	6,8	6,5	1,0			80700001060018	88700001060018
								74,0	20,65	20,2	1,5			80700001000022	88700001000022
								72,5	19,15	18,7	1,5			80700001010022	88700001010022
	❷ ❸							71,0	17,65	17,2	1,5			80700001020022	88700001020022
M10	1,50	8,5	40	10	7,79	3	3	69,5	16,15	15,7	1,5			80700001030022	88700001030022
								68,0	14,65	14,2	1,5			80700001040022	88700001040022
								66,5	13,15	12,7	1,5			80700001050022	88700001050022
								65,0	11,65	11,2	1,5			80700001060022	88700001060022
								63,5	10,15	9,7	1,5			80700001070022	88700001070022
														TiCN	TiCN
								55,0	12,8	12,5	1,0			80703001000018	88703001000018
								54,0	11,8	11,5	1,0			80703001010018	88703001010018

MF-MKG ES														DIN 6535 HE	DIN 6535 HA
														uncoated	uncoated
Nominal ∅ D	t	D1	l3	d2	AD	Z	KN	l1	BT min.	TL	t1		~	Order No.	Order No.
								74,0	20,8	20,5	1,0			80700002000094	88700002000094
								73,0	19,8	19,5	1,0			80700002010094	88700002010094
								72,0	18,8	18,5	1,0			80700002020094	88700002020094
	❹							71,0	17,8	17,5	1,0			80700002030094	88700002030094
								70,0	16,8	16,5	1,0			80700002040094	88700002040094
M10×1	1,00	9,0	40	10	7,79	3	3	69,0	15,8	15,5	1,0			80700002050094	88700002050094
								68,0	14,8	14,5	1,0			80700002060094	88700002060094
								67,0	13,85	13,5	1,0			80700002070094	88700002070094
								66,0	12,8	12,5	1,0			80700002080094	88700002080094
								65,0	11,8	11,5	1,0			80700002090094	88700002090094
								64,0	10,8	10,5	1,0			80700002091094	88700002091094
														TiCN	TiCN
								74,0	20,8	20,5	1,0			80703002000094	88703002000094
								73,0	19,8	19,5	1,0			80703002010094	88703002010094

How to select the right tool for YOUR machining operation? Here are some examples:

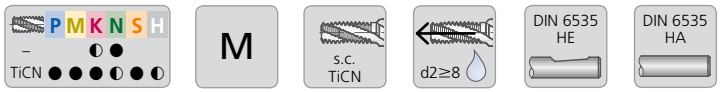
❶ M8×1 | Thread length 10 -1 mm
can be created with thread milling cutter MKG M6
achievable thread length 9,5 mm

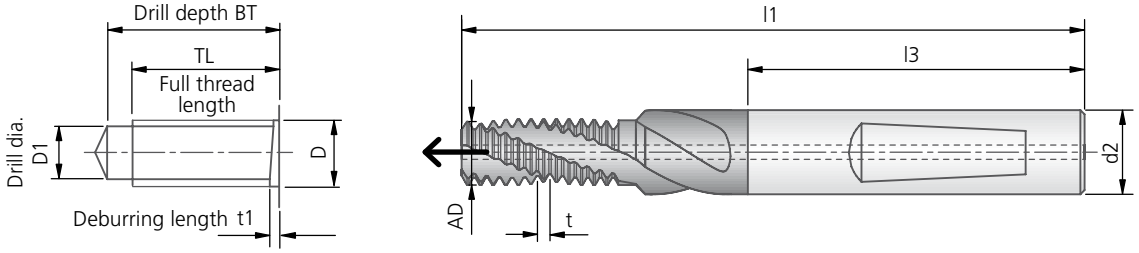
❷ M10 | Thread length 17 +1 mm and
❸ M20×1,5 | Thread length 18 -1 mm
can be created with thread milling cutter MKG M10
achievable thread length 17,2 mm

❹ M16×1 | Thread length 14 +1 mm
can be created with thread milling cutter MKG M10x1
achievable thread length 14,5 mm

KOMET M-MKG ES

Thread milling tool with deburring edge





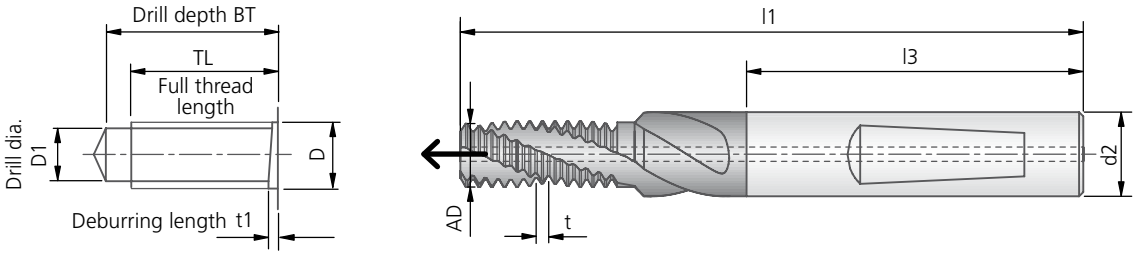
Use for:
M6 for M6, M7, M8×1,...
M10 for M10, M11, M12×1,5,...
Note max. thread length TL

M-MKG ES													DIN 6535 HE	DIN 6535 HA
Nominal ∅ D	t	D1	l3	d2	AD	Z	KN	l1	BT min.	TL	t1	~ kg	uncoated Order No.	uncoated Order No.
M6	1,00	5,0	36	6	4,68	3	3	55,0	12,8	12,5	1,0		80700001000018	88700001000018
								54,0	11,8	11,5	1,0		80700001010018	88700001010018
								53,0	10,8	10,5	1,0		80700001020018	88700001020018
								52,0	9,8	9,5	1,0		80700001030018	88700001030018
								51,0	8,8	8,5	1,0		80700001040018	88700001040018
								50,0	7,8	7,5	1,0		80700001050018	88700001050018
								49,0	6,8	6,5	1,0		80700001060018	88700001060018
M10	1,50	8,5	40	10	7,79	3	3	74,0	20,65	20,2	1,5		80700001000022	88700001000022
								72,5	19,15	18,7	1,5		80700001010022	88700001010022
								71,0	17,65	17,2	1,5		80700001020022	88700001020022
								69,5	16,15	15,7	1,5		80700001030022	88700001030022
								68,0	14,65	14,2	1,5		80700001040022	88700001040022
								66,5	13,15	12,7	1,5		80700001050022	88700001050022
								65,0	11,65	11,2	1,5		80700001060022	88700001060022
								63,5	10,15	9,7	1,5		80700001070022	88700001070022
													TiCN	TiCN
M6	1,00	5,0	36	6	4,68	3	3	55,0	12,8	12,5	1,0		80703001000018	88703001000018
								54,0	11,8	11,5	1,0		80703001010018	88703001010018
								53,0	10,8	10,5	1,0		80703001020018	88703001020018
								52,0	9,8	9,5	1,0		80703001030018	88703001030018
								51,0	8,8	8,5	1,0		80703001040018	88703001040018
								50,0	7,8	7,5	1,0		80703001050018	88703001050018
								49,0	6,8	6,5	1,0		80703001060018	88703001060018
M10	1,50	8,5	40	10	7,79	3	3	74,0	20,65	20,2	1,5		80703001000022	88703001000022
								72,5	19,15	18,7	1,5		80703001010022	88703001010022
								71,0	17,65	17,2	1,5		80703001020022	88703001020022
								69,5	16,15	15,7	1,5		80703001030022	88703001030022
								68,0	14,65	14,2	1,5		80703001040022	88703001040022
								66,5	13,15	12,7	1,5		80703001050022	88703001050022
								65,0	11,65	11,2	1,5		80703001060022	88703001060022
								63,5	10,15	9,7	1,5		80703001070022	88703001070022

● very good | ◐ good

Thread milling tool with deburring edge





Use for:
M10×1 for M10, M12×1,...
Note max. thread length TL

MF-MKG ES													DIN 6535 HE	DIN 6535 HA
Nominal ∅ D	t	D1	l3	d2	AD	Z	KN	l1	BT min.	TL	t1	kg ~	uncoated Order No.	uncoated Order No.
M10×1	1,00	9,0	40	10	7,79	3	3	74,0	20,8	20,5	1,0		80700002000094	88700002000094
								73,0	19,8	19,5	1,0		80700002010094	88700002010094
								72,0	18,8	18,5	1,0		80700002020094	88700002020094
								71,0	17,8	17,5	1,0		80700002030094	88700002030094
								70,0	16,8	16,5	1,0		80700002040094	88700002040094
								69,0	15,8	15,5	1,0		80700002050094	88700002050094
								68,0	14,8	14,5	1,0		80700002060094	88700002060094
								67,0	13,85	13,5	1,0		80700002070094	88700002070094
								66,0	12,8	12,5	1,0		80700002080094	88700002080094
								65,0	11,8	11,5	1,0		80700002090094	88700002090094
								64,0	10,8	10,5	1,0		80700002091094	88700002091094
													TiCN	TiCN
M10×1	1,00	9,0	40	10	7,79	3	3	74,0	20,8	20,5	1,0		80703002000094	88703002000094
								73,0	19,8	19,5	1,0		80703002010094	88703002010094
								72,0	18,8	18,5	1,0		80703002020094	88703002020094
								71,0	17,8	17,5	1,0		80703002030094	88703002030094
								70,0	16,8	16,5	1,0		80703002040094	88703002040094
								69,0	15,8	15,5	1,0		80703002050094	88703002050094
								68,0	14,8	14,5	1,0		80703002060094	88703002060094
								67,0	13,85	13,5	1,0		80703002070094	88703002070094
								66,0	12,8	12,5	1,0		80703002080094	88703002080094
								65,0	11,8	11,5	1,0		80703002090094	88703002090094
								64,0	10,8	10,5	1,0		80703002091094	88703002091094

Guideline values for thread milling: page 556.

KOMET M-MKG XH

Thread milling tool

Material P M K N S H ●

M

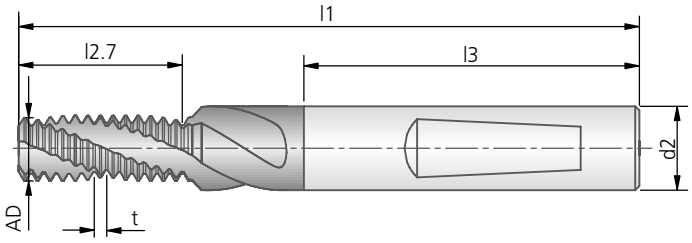
1,5×D

s.c. TiAlN

DIN 6535 HE

DIN 6535 HA

for hard machining of materials with hardness ≥ 45 HRC



M-MKG XH 1,5×D										DIN 6535 HE	DIN 6535 HA
										TiAlN	TiAlN
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	AD	Z	kg ~	Order No.	Order No.
M4	0,70	3,30	46	6,3	36	6	3,14	4		80987001000015	88987001000015
M5	0,80	4,20	47	7,2	36	6	3,95	4		80987001000017	88987001000017
M6	1,00	5,00	52	8,5	36	6	4,68	4		80987001000018	88987001000018
M8	1,25	6,80	57	12,5	36	8	6,22	4		80987001000020	88987001000020
M10	1,50	8,50	66	15,0	40	10	7,79	5		80987001000022	88987001000022
M12	1,75	10,25	76	17,5	45	12	9,38	5		80987001000024	88987001000024

Thread engagements see page 544.

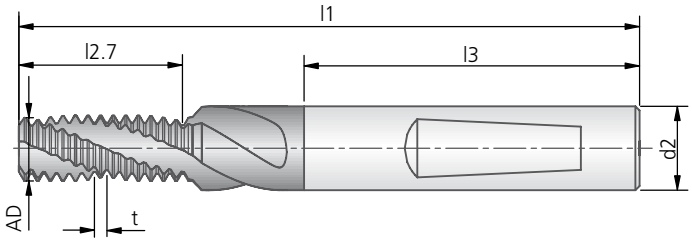
● very good | ◐ good

KOMET MF-MKG XH

Thread milling tool

Material P M K N S H | MF | 1,5×D | S.C. TiAlN | DIN 6535 HE | DIN 6535 HA

for hard machining of materials with hardness ≥ 45 HRC



MF-MKG XH 1,5×D										DIN 6535 HE	DIN 6535 HA
										TiAlN	TiAlN
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	AD	Z	kg ~	Order No.	Order No.
M12×1,5	1,50	10,5	76	17,9	45	12	9,38	5		**80987002000113**	**88987002000113**
M14×1,5	1,50	12,5	82	21,4	45	14	10,92	5		**80987002000131**	**88987002000131**
M16×1,5	1,50	14,5	94	23,9	48	16	12,82	5		**80987002000147**	**88987002000147**

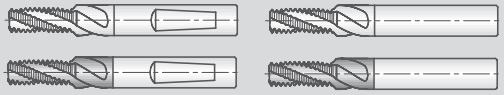
Thread engagements see page 544.

Guideline values for thread milling: page 556.

Recommended cutting data

Guideline values for thread milling

v_c (m/min) = Cutting speed
f_z (mm/tooth) = Milling feed



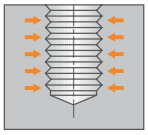
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Surface	uncoated v_c m/min	TiCN v_c m/min	≤ Ø 6 f_z mm/tooth	≤ Ø 12 f_z mm/tooth	≥ Ø 16 f_z mm/tooth
P	1.1	≤400	≤120	magnetic soft iron			80-150	0,015-0,04	0,04-0,06	0,08-0,15
P	1.2	≤700	≤200	structural, case hardened steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15
P	1.3	≤850	≤250	carbon steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15
P	1.4	≤850	≤250	alloy steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel			60-80	0,01-0,03	0,04-0,06	0,04-0,10
P	1.6	>1200	>350	alloy/heat treated steel			50-60	0,01-0,025	0,03-0,05	0,04-0,10
H	1.7	≤1400	≤400	hardened steel to 45 HRC			30-50	0,01-0,015	0,015-0,02	0,03-0,08
H	1.8	≤2200	≤600	hardened steel to 58 HRC			20-40	0,01-0,015	0,015-0,02	
M	2.1	≤850	≤250	stainless steel, sulphuretted			60-80	0,015-0,03	0,03-0,05	0,08-0,15
M	2.2	≤850	≤250	austentic			60-80	0,015-0,03	0,03-0,05	0,04-0,10
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic			60-80	0,01-0,025	0,02-0,04	0,04-0,10
K	3.1	≤500	≤150	grey cast iron		50-80	80-120	0,02-0,04	0,04-0,10	0,08-0,15
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated		50-80	80-120	0,02-0,03	0,04-0,08	0,08-0,12
K	3.3	400-500	200-250	vermicular cast iron			80-100	0,02-0,04	0,04-0,08	0,08-0,15
K	3.4	≤700	≤200	spheroidal graphite cast iron			80-120	0,02-0,04	0,04-0,10	0,08-0,15
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated			80-100	0,02-0,03	0,04-0,08	0,08-0,12
K	3.6	≤700	≤200	malleable iron			80-100	0,02-0,04	0,04-0,10	0,08-0,15
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated			80-100	0,02-0,03	0,04-0,08	0,08-0,12
S	4.1	≤700	≤200	pure titanium			40-100	0,015-0,03	0,03-0,08	0,08-0,15
S	4.2	≤900	≤270	titanium alloys			40-100	0,015-0,03	0,03-0,08	0,08-0,15
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys			40-80	0,015-0,02	0,03-0,06	0,08-0,12
S	5.1	≤500	≤150	pure nickel			50-60	0,02-0,04	0,04-0,06	0,04-0,10
S	5.2	≤900	<270	nickel alloys, heat resistant			30-40	0,02-0,04	0,04-0,06	0,04-0,10
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance			10-30	0,015-0,03	0,03-0,05	0,04-0,08
N	6.1	≤350	≤100	non-alloy copper		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20
N	6.2	≤700	≤200	short chip, brass, bronze, red brass		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20
N	6.3	≤700	≤200	long chip brass		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)		60-80	60-80	0,02-0,04	0,03-0,06	0,08-0,15
N	7.1	≤350	≤100	Al, Mg non-alloy		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %		100-300	100-400	0,03-0,07	0,07-0,12	0,10-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %		100-200	100-250	0,03-0,07	0,07-0,12	0,10-0,20
N	8.1			thermoplastics		80-100	100-120	0,04-0,06	0,06-0,12	0,08-0,20
N	8.2			thermosetting plastics		80-100	100-120	0,04-0,06	0,06-0,12	0,08-0,15
N	8.3			fibre reinforced plastics		50-60	60-80	0,04-0,06	0,06-0,12	0,08-0,15

Cutting values shown are relating to the basic recommendations for cutting materials given.

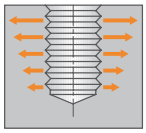
1. 

Chips packed or glued at the thread profile
- poor coolant

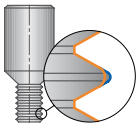
→ improve coolant (i.e. add flood coolant, lateral flute coolant supply for through holes)
→ add coolant flutes flutes on shank

2. 

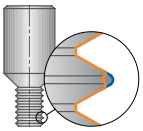
Thread go-gage doesn't fit
- thread too small → reduce tool radius in offset register
- chips in thread → improve coolant

3. 

Thread is getting tapered
- poor tool clamping → improve tool holding (i.e. shrink fit holders)
- thread milling feed too high → reduce thread milling feed

4. 

Erratic tool wear
- tool run out too high → use better tool holders (i.e. shrink fit holders), check material for homogeneity

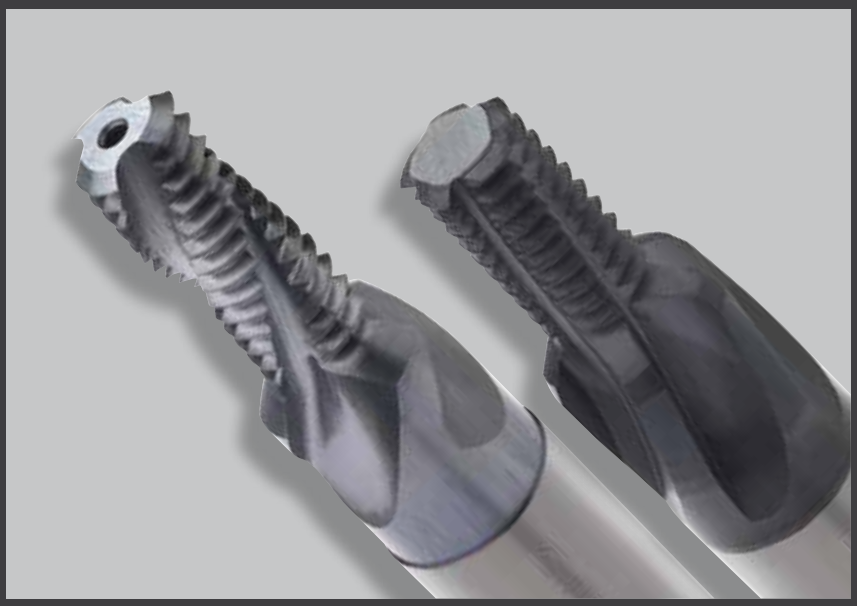
5. 

Chippage, tool breakage
- feed rate thread milling too high → reduce thread milling feed
- vibrations → check tool holder (don't use modular systems!!), change feeds and speeds

6. 

Poor thread surface
- tool overhang too long → check part clamping an and fixture. Use multiple cuts when part is clamped weak
- non-suitable tool for this application → reduce cutting speed, increase feed/tooth, prefer conventional milling





Chamfering and thread milling right from M1

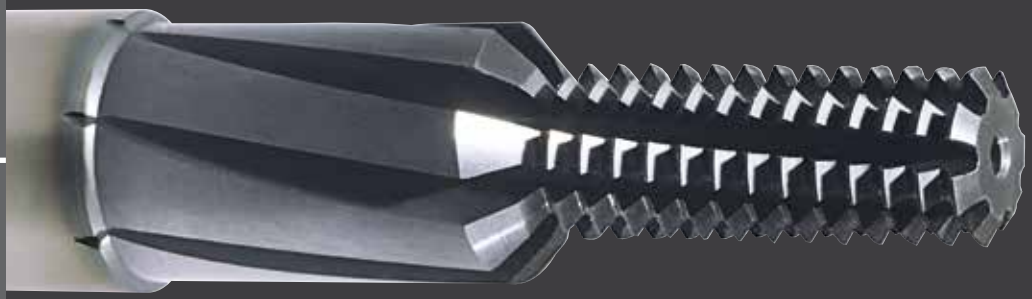
The MGF and UMGF thread milling tools feature a larger core cross section and narrow, geometrically optimised flutes. These characteristics produce good chip formation and low cutting pressure when thread milling.

The carbide grades used, as well as the coating, guarantee high tool life.

We have added our MKG thread milling tool to the range as a pure thread milling tool, without the chamfering option.

BENEFITS for you:

- Excellent surface finish on the part because of variation of the cutting parameters
- Exact pitch – no flattening at front of the thread
- Shorter milling chips (no chip problems in the same way as for tap drills)
- Various tolerances and thread sizes p.ex. 6H, 6G or M18×1.5, M20×1.5 and M24×1.5 can be produced
- One tool for blind bore and through hole thread
- One tool for L.H. and R.H. thread
- Fewer tool spaces
- No chip residue at the bottom of the bore
- Low cutting pressure when machining thin-walled parts
- Exact thread depth



KOMET MGF HPC thread milling cutters

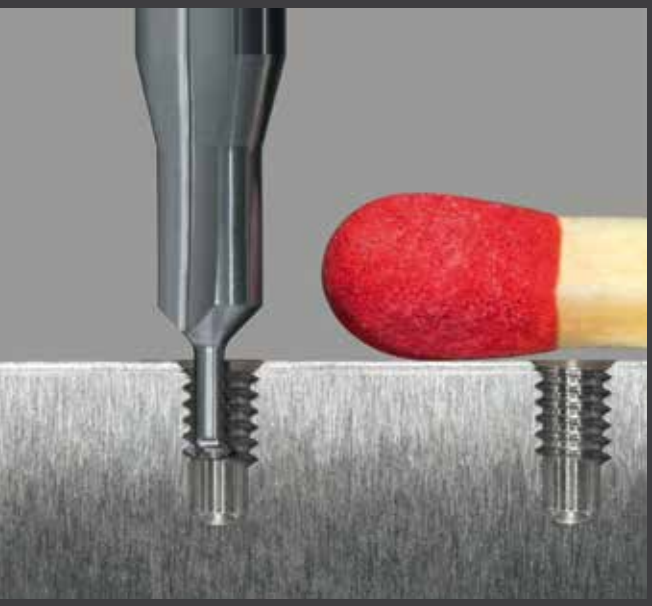
Threads in steel are milled for reasons relating to repeat accuracy and quality requirements. However, this procedure requires more time than conventional procedures such as tapping and forming, especially for small diameters of up to M16.

The process is determined by the cutting speed and feed rate. To achieve significantly faster machining times despite these parameters, the number of cutting edges must be increased. We have achieved this with the MGF HPC.

BENEFITS for you:

Advantages over tapping

- Machining time in steel the same or faster
- Threading possible right to the base
- Greater process reliability, particularly for expensive workpieces
- Same tool can be used for different materials
- Very short and wedged chips



MGF XH Micro

Applications:
- Hardened steels between 45-60 HRC
- Threads can be directly inserted in hardened components, e.g. aerospace parts, implants etc.
- Complex additional machining, due to hardening distortion, can be avoided
- Left-hand cutting from M1 to M2.5

KOMET TPT

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning: +49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

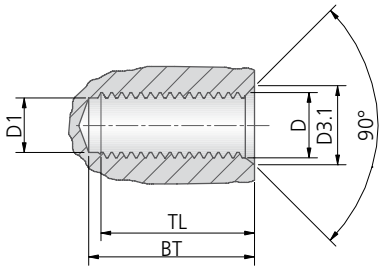
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Thread milling tool MGF | UMFG

	Page
Thread engagements	560 – 561
MGF	
M-MGF 1,5×D | 2×D | 2,5×D | 3×D for metric ISO thread DIN 13	562 – 563
MF-MGF 1,5×D | 2×D for metric fine ISO thread DIN 13	564 – 565
UNC-MGF 1,5×D | 2×D for UNC thread ANSI B1.1	566
UNF-MGF 1,5×D | 2×D for UNF thread ANSI B1.1	567
NPT- / NPTF-MGF for NPT/NPTF thread ANSI B2.1	568
G-MGF 1,5×D | 2×D for Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226	569
MGF HPC – for machining steel to 1200 N/mm²	
M-MGF HPC 1,5×D | 2×D for metric ISO thread DIN 13	570
MF-MGF HPC 1,5×D | 2×D for metric fine ISO thread DIN 13	571
MGF XS – for machining steel ≥ 900 N/mm²	
M-MGF XS 1,5×D | 2×D for metric ISO thread DIN 13	572
MF-MGF XS 1,5×D | 2×D for metric fine ISO thread DIN 13	573
G-MGF XS 1,5×D | 2×D for Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226	574
MGF XH – for hard machining ≥ 45 HRC	
M-MGF XH Micro 1,5×D for metric ISO thread DIN 13	575
M-MGF XH 1,5×D for metric ISO thread DIN 13	576
MF-MGF XH 1,5×D for metric fine ISO thread DIN 13	577
MGF PCD – for lightweight structural materials	
M-MGF PCD 2×D for metric ISO thread DIN 13	578
MF-MGF PCD 2×D for metric fine ISO thread DIN 13	579
UMGF	
M-UMGF 2×D | 2,5×D for metric ISO thread DIN 13	580
MF-UMGF 2×D for metric fine ISO thread DIN 13	581
Recommended cutting data	582
Problems – Causes – Solutions	583
Tap drill diameters	678

KOMET MGF

Thread engagements



TL = full thread length
BT = min. drill depth
D3.1 = possible chamfer ∅ with rear chamfer

M										
Nominal ∅			1,5×D		2×D		2,5×D		3×D	
D	D1	D3.1	BT	TL	BT	TL	BT	TL	BT	TL
M2	1,60	2,30	3,36	3,06	4,56	4,26	–	–	–	–
M3	2,50	3,30	5,16	4,77	6,66	6,27	–	–	–	–
M4	3,30	4,30	6,48	5,91	8,58	8,01	10,68	10,11	12,78	12,21
M5	4,20	5,30	8,22	7,52	10,60	9,92	13,00	12,32	16,20	15,52
M6	5,00	6,30	10,21	9,36	13,21	12,36	16,21	15,36	19,21	18,36
M8	6,80	8,30	14,01	12,89	17,76	16,64	21,51	20,39	25,26	24,14
M10	8,50	10,30	16,81	15,42	21,31	19,92	27,31	25,92	31,81	30,42
M12	10,30	12,30	19,65	17,95	26,60	24,96	31,85	30,21	–	–
M14	12,00	14,30	24,40	22,50	30,40	28,50	38,40	36,50	–	–
M16	14,00	16,30	26,42	24,47	34,42	32,47	42,42	40,47	–	–
M20	17,50	20,30	35,55	33,00	45,55	43,00	53,05	50,50	–	–

M – MGF XH Micro				
Nominal ∅			1,5×D	
D	D1	D3.1	BT	TL
M1	0,75	1,50	2,10	1,85
M1,4	1,10	1,70	2,60	2,36
M1,6	1,25	2,10	3,10	2,77
M2	1,60	2,60	3,70	3,44
M2,2	1,75	2,50	3,90	3,61
M2,5	2,05	2,90	4,50	4,11

M – metric ISO thread DIN 13

MF						
Nominal ∅			1,5×D		2×D	
D	D1	D3.1	BT	TL	BT	TL
M4×0,5	3,50	4,30	6,73	6,21	8,73	8,21
M5×0,5	4,50	5,30	8,30	7,70	10,80	10,20
M6×0,75	5,25	6,30	10,03	9,20	13,03	12,20
M8×1	7,00	8,30	13,34	12,26	17,34	16,26
M10×1	9,00	10,30	16,46	15,17	21,46	20,17
M12×1,5	10,50	12,30	19,92	18,33	25,92	24,33
M12×1	11,00	12,30	19,57	18,08	25,57	24,08
M14×1,5	12,50	14,30	23,05	21,23	30,55	28,73
M16×1,5	14,50	16,30	26,07	24,21	33,57	31,71

MF – metric fine ISO thread DIN 13

G						
Nominal ∅			1,5×D		2×D	
D	D1	D3.1	BT	TL	BT	TL
G1/8-28	8,82	10,03	15,81	14,67	21,25	20,11
G1/4-19	11,82	13,46	21,74	20,37	28,43	27,06
G3/8-19	15,32	16,96	27,22	25,60	35,24	33,62

G – Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226 (previously DIN 2999)

UNC						
Nominal ∅			1,5×D		2×D	
D	D1	D3.1	BT	TL	BT	TL
1/4-20 UNC	5,08	6,65	11,65	10,62	15,46	14,40
5/16-18 UNC	6,53	8,24	12,93	11,80	17,14	16,01
3/8-16 UNC	7,94	9,83	16,20	14,81	20,92	19,53
1/2-13 UNC	10,75	13,00	21,97	20,00	27,83	25,81

UNC – american Unified coarse thread ANSI B1.1

NPT				
Nominal ∅			Standard length	
D	D1	D3.1	BT	TL
1/16-27 NPT	6,15	8,70	11,36	9,00
1/8-27 NPT	8,43	11,10	11,36	9,00
1/4-18 NPT	11,13	14,50	16,77	13,50
3/8-18 NPT	14,27	17,90	16,77	13,50

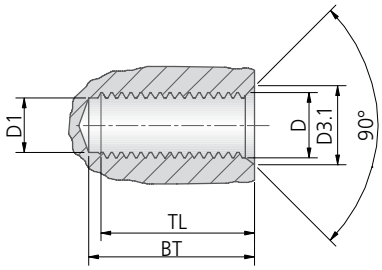
NPT thread ANSI B2.1

UNF						
Nominal ∅			1,5×D		2×D	
D	D1	D3.1	BT	TL	BT	TL
1/4-28 UNF	5,44	6,65	11,20	10,20	14,84	13,85
5/16-24 UNF	6,88	8,24	13,00	11,90	17,23	16,18
3/8-24 UNF	8,47	9,83	15,16	14,09	20,42	19,35
7/16-20 UNF	9,84	11,41	18,05	16,90	23,13	21,99
1/2-20 UNF	11,43	13,00	21,01	19,10	27,36	25,50

UNF – american Unified fine thread ANSI B1.1

NPTF				
Nominal ∅			Standard length	
D	D1	D3.1	BT	TL
1/16-27 NPTF	6,10	8,70	11,36	9,00
1/8-27 NPTF	8,40	11,10	11,36	9,00
1/4-18 NPTF	11,00	14,50	16,77	13,50
3/8-18 NPTF	14,50	17,90	16,77	13,50

NPTF thread ANSI B2.1



TL = full thread length
BT = min. drill depth
D3.1 = possible chamfer ∅ with rear chamfer

M						
Nominal ∅			2×D		2,5×D	
D	D1	D3.1	BT	TL	BT	TL
M4	3,30	4,30	8,58	7,31	–	–
M5	4,20	5,30	10,60	9,12	–	–
M6	5,00	6,30	13,21	11,36	16,21	14,36
M8	6,80	8,30	17,76	15,39	21,51	19,14
M10	8,50	10,30	21,31	18,42	27,31	24,42
M12	10,30	12,30	26,60	23,21	31,85	28,46
M14	12,00	14,30	30,40	26,50	–	–
M16	14,00	16,30	34,42	30,47	–	–

M – metric ISO thread DIN 13

MF				
Nominal ∅			2×D	
D	D1	D3.1	BT	TL
M8×1	7,00	8,30	17,37	15,29
M10×1	8,00	10,30	21,46	19,17
M12×1,5	10,50	12,30	25,98	22,88
M12×1	11,00	12,30	25,57	23,08
M14×1,5	12,50	14,30	30,55	27,23
M16×1,5	14,50	16,30	33,53	30,21

MF – metric fine ISO thread DIN 13

KOMET M-MGF

Thread milling tool with rear chamfer

P M K N S H
– ◐ ●
TiCN ● ● ● ◐ ● ◐

M

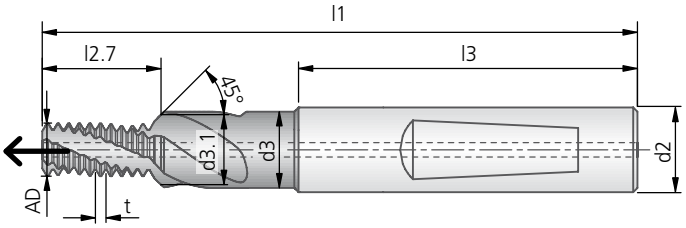
1,5×D
2×D
2,5×D
3×D

s.c.
TiCN

d2≥8

DIN 6535
HE

DIN 6535
HA



M-MGF 1,5×D												DIN 6535 HE	DIN 6535 HA
												uncoated	uncoated
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	kg ~	Order No.	Order No.
M2	0,40	1,60	47,8	3,4	36	6	2,5	2,3	1,56	2		80981001000008	88981001000008
M3	0,50	2,50	47,5	5,2	36	6	3,4	3,3	2,44	3		80981001000013	88981001000013
M4	0,70	3,30	46,9	6,5	36	6	4,5	4,3	3,14	3		80981001000015	88981001000015
M5	0,80	4,20	52,6	8,2	36	6	5,5	5,3	3,95	3		80981001000017	88981001000017
M6	1,00	5,00	59,0	10,2	36	8	6,6	6,3	4,68	3		80981001000018	88981001000018
M8	1,25	6,80	70,3	14,0	40	10	9,0	8,3	6,22	3		80981001000020	88981001000020
M10	1,50	8,50	74,5	16,8	45	12	11,0	10,3	7,79	3		80981001000022	88981001000022
M12	1,75	10,25	82,0	19,6	45	14	13,5	12,3	9,38	3		80981001000024	88981001000024
M14	2,00	12,00	96,0	24,4	48	16	15,5	14,3	10,92	4		80981001000025	88981001000025
M16	2,00	14,00	94,0	26,4	48	18	17,5	16,3	12,83	4		80981001000026	88981001000026
M20	2,50	17,50	117,0	35,55	56	25	25,0	20,3	15,83	4		80981001000028	88981001000028
												TiCN	TiCN
M2	0,40	1,60	47,8	3,4	36	6	2,5	2,3	1,56	2			
M3	0,50	2,50	47,5	5,2	36	6	3,4	3,3	2,44	3			
M4	0,70	3,30	46,9	6,5	36	6	4,5	4,3	3,14	3		80973001000015	88973001000015
M5	0,80	4,20	52,6	8,2	36	6	5,5	5,3	3,95	3		80973001000017	88973001000017
M6	1,00	5,00	59,0	10,2	36	8	6,6	6,3	4,68	3		80973001000018	88973001000018
M8	1,25	6,80	70,3	14,0	40	10	9,0	8,3	6,22	3		80973001000020	88973001000020
M10	1,50	8,50	74,5	16,8	45	12	11,0	10,3	7,79	3		80973001000022	88973001000022
M12	1,75	10,25	82,0	19,6	45	14	13,5	12,3	9,38	3		80973001000024	88973001000024
M14	2,00	12,00	96,0	24,4	48	16	15,5	14,3	10,92	4		80973001000025	88973001000025
M16	2,00	14,00	94,0	26,4	48	18	17,5	16,3	12,83	4		80973001000026	88973001000026
M20	2,50	17,50	117,0	35,55	56	25	25,0	20,3	15,83	4		80973001000028	88973001000028

Thread engagements see page 560.

● very good | ◐ good

M-MGF 2×D												DIN 6535 HE	DIN 6535 HA
												uncoated	uncoated
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	Order No.	Order No.
M2	0,40	1,60	49,0	4,6	36	6	2,5	2,3	1,56	2		80970001000008	88970001000008
M3	0,50	2,50	49,0	6,7	36	6	3,4	3,3	2,44	3		80970001000013	88970001000013
M4	0,70	3,30	49,0	8,6	36	6	4,5	4,3	3,14	3		80970001000015	88970001000015
M5	0,80	4,20	55,0	10,6	36	6	5,5	5,3	3,95	3		80970001000017	88970001000017
M6	1,00	5,00	62,0	13,2	36	8	6,6	6,3	4,68	3		80970001000018	88970001000018
M8	1,25	6,80	74,0	17,8	40	10	9,0	8,3	6,22	3		80970001000020	88970001000020
M10	1,50	8,50	79,0	21,3	45	12	11,0	10,3	7,79	3		80970001000022	88970001000022
M12	1,75	10,25	89,0	26,6	45	14	13,5	12,3	9,38	3		80970001000024	88970001000024
M14	2,00	12,00	102,0	30,4	48	16	15,5	14,3	10,92	4		80970001000025	88970001000025
M16	2,00	14,00	102,0	34,4	48	18	17,5	16,3	12,83	4		80970001000026	88970001000026
M20	2,50	17,50	127,0	45,55	56	25	25,0	20,3	15,83	4		80970001000028	88970001000028
												TiCN	TiCN
M2	0,40	1,60	49,0	4,6	36	6	2,5	2,3	1,56	2			
M3	0,50	2,50	49,0	6,7	36	6	3,4	3,3	2,44	3			
M4	0,70	3,30	49,0	8,6	36	6	4,5	4,3	3,14	3		80992001000015	88992001000015
M5	0,80	4,20	55,0	10,6	36	6	5,5	5,3	3,95	3		80992001000017	88992001000017
M6	1,00	5,00	62,0	13,2	36	8	6,6	6,3	4,68	3		80992001000018	88992001000018
M8	1,25	6,80	74,0	17,8	40	10	9,0	8,3	6,22	3		80992001000020	88992001000020
M10	1,50	8,50	79,0	21,3	45	12	11,0	10,3	7,79	3		80992001000022	88992001000022
M12	1,75	10,25	89,0	26,6	45	14	13,5	12,3	9,38	3		80992001000024	88992001000024
M14	2,00	12,00	102,0	30,4	48	16	15,5	14,3	10,92	4		80992001000025	88992001000025
M16	2,00	14,00	102,0	34,4	48	18	17,5	16,3	12,83	4		80992001000026	88992001000026
M20	2,50	17,50	127,0	45,55	56	25	25,0	20,3	15,83	4		80992001000028	88992001000028

M-MGF 2,5×D												DIN 6535 HE	DIN 6535 HA
												uncoated	uncoated
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	Order No.	Order No.
M4	0,70	3,30	49,0	10,7	36	6	4,5	4,3	3,14	3			
M5	0,80	4,20	55,0	13,0	36	6	5,5	5,3	3,95	3		80990001000017	88990001000017
M6	1,00	5,00	62,0	16,2	36	8	6,6	6,3	4,68	3		80990001000018	88990001000018
M8	1,25	6,80	74,0	21,5	40	10	9,0	8,3	6,22	3		80990001000020	88990001000020
M10	1,50	8,50	79,0	27,3	45	12	11,0	10,3	7,79	3		80990001000022	88990001000022
M12	1,75	10,25	89,0	31,9	45	14	13,5	12,3	9,38	3		80990001000024	88990001000024
M14	2,00	12,00	102,0	38,4	48	16	15,5	14,3	10,92	4			
M16	2,00	14,00	102,0	42,4	48	18	17,5	16,3	12,83	4			
												TiCN	TiCN
M4	0,70	3,30	49,0	10,7	36	6	4,5	4,3	3,14	3			
M5	0,80	4,20	55,0	13,0	36	6	5,5	5,3	3,95	3			
M6	1,00	5,00	62,0	16,2	36	8	6,6	6,3	4,68	3		80995001000018	88995001000018
M8	1,25	6,80	74,0	21,5	40	10	9,0	8,3	6,22	3		80995001000020	88995001000020
M10	1,50	8,50	79,0	27,3	45	12	11,0	10,3	7,79	3		80995001000022	88995001000022
M12	1,75	10,25	89,0	31,9	45	14	13,5	12,3	9,38	3		80995001000024	88995001000024
M14	2,00	12,00	102,0	38,4	48	16	15,5	14,3	10,92	4			
M16	2,00	14,00	102,0	42,4	48	18	17,5	16,3	12,83	4			

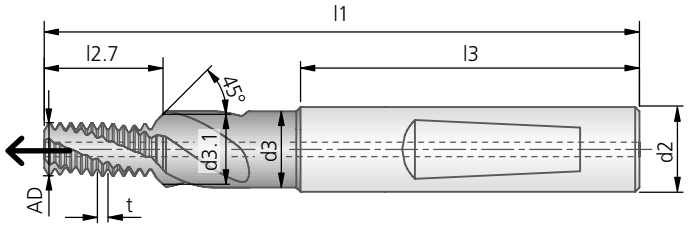
M-MGF 3×D – for aluminium												DIN 6535 HE	DIN 6535 HA
												uncoated	uncoated
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	Order No.	Order No.
M4	0,70	3,30	55	12,78	36	6	4,5	4,3	3,14	3		80270001000015	88270001000015
M5	0,80	4,20	58	16,2	36	6	5,5	5,3	3,95	3		80270001000017	88270001000017
M6	1,00	5,00	64	19,21	36	8	6,6	6,3	4,68	3		80270001000018	88270001000018
M8	1,25	6,80	76	25,26	40	10	9,0	8,3	6,22	3		80270001000020	88270001000020
M10	1,50	8,50	89	31,81	45	12	11,0	10,3	7,79	3		80270001000022	88270001000022

Guideline values for thread milling: page 582.

KOMET MF-MGF

Thread milling tool with rear chamfer





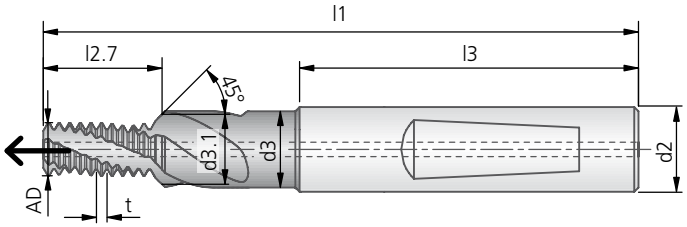
MF-MGF 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4×0,5	0,50	3,50	47,0	6,7	36	6	4,5	4,3	3,14	3			
M5×0,5	0,50	4,50	52,5	8,3	36	6	5,5	5,3	3,95	3			
M6×0,75	0,75	5,25	59,0	10,0	36	8	6,6	6,3	4,68	3			
M8×1	1,00	7,00	70,0	13,3	40	10	9,0	8,3	6,22	3		80981002000070	88981002000070
M10×1	1,00	9,00	74,0	16,5	45	12	11,0	10,3	7,79	3		80981002000094	88981002000094
M12×1	1,00	11,00	83,0	19,6	45	14	13,5	12,3	9,38	3		80981002000111	88981002000111
M12×1,5	1,50	10,50	83,0	19,9	45	14	13,5	12,3	9,38	3		80981002000113	88981002000113
M14×1,5	1,50	12,50	94,5	23,1	48	16	15,5	14,3	10,92	4		80981002000131	88981002000131
M16×1,5	1,50	14,50	94,5	26,1	48	18	17,5	16,3	12,82	4		80981002000147	88981002000147
												TiCN	TiCN
M4×0,5	0,50	3,50	47,0	6,7	36	6	4,5	4,3	3,14	3			
M5×0,5	0,50	4,50	52,5	8,3	36	6	5,5	5,3	3,95	3			
M6×0,75	0,75	5,25	59,0	10,0	36	8	6,6	6,3	4,68	3			
M8×1	1,00	7,00	70,0	13,3	40	10	9,0	8,3	6,22	3		80973002000070	88973002000070
M10×1	1,00	9,00	74,0	16,5	45	12	11,0	10,3	7,79	3		80973002000094	88973002000094
M12×1	1,00	11,00	83,0	19,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,50	10,50	83,0	19,9	45	14	13,5	12,3	9,38	3		80973002000113	88973002000113
M14×1,5	1,50	12,50	94,5	23,1	48	16	15,5	14,3	10,92	4		80973002000131	88973002000131
M16×1,5	1,50	14,50	94,5	26,1	48	18	17,5	16,3	12,82	4		80973002000147	88973002000147

Thread engagements see page 560.

● very good | ◐ good

Thread milling tool with rear chamfer





MF-MGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4×0,5	0,50	3,50	49,0	8,7	36	6	4,5	4,3	3,14	3			
M5×0,5	0,50	4,50	55,0	10,8	36	6	5,5	5,3	3,95	3		80970002000037	88970002000037
M6×0,75	0,75	5,25	62,0	13,0	36	8	6,6	6,3	4,68	3		80970002000048	88970002000048
M8×1	1,00	7,00	74,0	17,3	40	10	9,0	8,3	6,22	3		80970002000070	88970002000070
M10×1	1,00	9,00	79,0	21,5	45	12	11,0	10,3	7,79	3		80970002000094	88970002000094
M12×1	1,00	11,00	89,0	25,6	45	14	13,5	12,3	9,38	3		80970002000111	88970002000111
M12×1,5	1,50	10,50	89,0	25,9	45	14	13,5	12,3	9,38	3		80970002000113	88970002000113
M14×1,5	1,50	12,50	102,0	30,6	48	16	15,5	14,3	10,92	4		80970002000131	88970002000131
M16×1,5	1,50	14,50	102,0	33,6	48	18	17,5	16,3	12,82	4		80970002000147	88970002000147
												TiCN	TiCN
M4×0,5	0,50	3,50	49,0	8,7	36	6	4,5	4,3	3,14	3			
M5×0,5	0,50	4,50	55,0	10,8	36	6	5,5	5,3	3,95	3			
M6×0,75	0,75	5,25	62,0	13,0	36	8	6,6	6,3	4,68	3			
M8×1	1,00	7,00	74,0	17,3	40	10	9,0	8,3	6,22	3		80992002000070	88992002000070
M10×1	1,00	9,00	79,0	21,5	45	12	11,0	10,3	7,79	3		80992002000094	88992002000094
M12×1	1,00	11,00	89,0	25,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,50	10,50	89,0	25,9	45	14	13,5	12,3	9,38	3		80992002000113	88992002000113
M14×1,5	1,50	12,50	102,0	30,6	48	16	15,5	14,3	10,92	4		80992002000131	88992002000131
M16×1,5	1,50	14,50	102,0	33,6	48	18	17,5	16,3	12,82	4		80992002000147	88992002000147

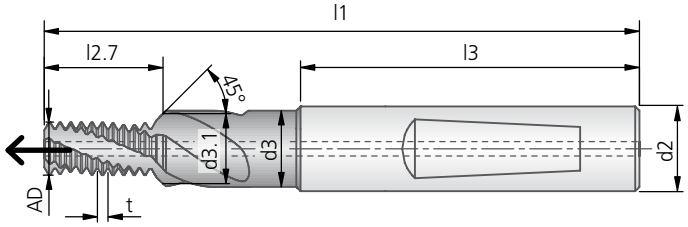
Thread engagements see page 560.

Guideline values for thread milling: page 582.

KOMET UNC-MGF

Thread milling tool with rear chamfer





UNC-MGF 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-20 UNC	1,270	5,08	58,2	11,65	36	8	7,8	6,7	4,70	3		80981010000011	88981010000011
5/16-18 UNC	1,411	6,53	69,8	12,90	40	10	9,0	8,2	6,22	3		80981010000012	88981010000012
3/8-16 UNC	1,588	7,94	74,2	16,20	45	12	11,0	9,8	7,34	3		80981010000013	88981010000013
1/2-13 UNC	1,954	10,75	83,1	22,00	45	14	13,5	13,0	9,38	3		80981010000015	88981010000015
												TiCN	TiCN
1/4-20 UNC	1,270	5,08	58,2	11,65	36	8	7,8	6,7	4,70	3		80973010000011	88973010000011
5/16-18 UNC	1,411	6,53	69,8	12,90	40	10	9,0	8,2	6,22	3		80973010000012	88973010000012
3/8-16 UNC	1,588	7,94	74,2	16,20	45	12	11,0	9,8	7,34	3		80973010000013	88973010000013
1/2-13 UNC	1,954	10,75	83,1	22,00	45	14	13,5	13,0	9,38	3		80973010000015	88973010000015

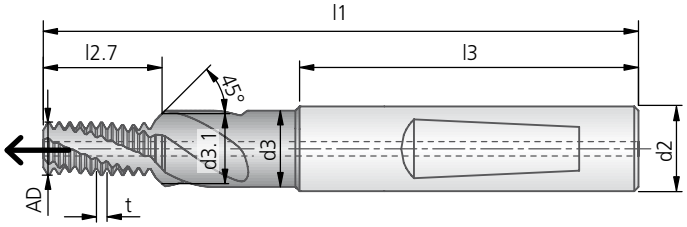
UNC-MGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-20 UNC	1,270	5,08	62,0	15,46	36	8	7,8	6,7	4,70	3		80970010000011	88970010000011
5/16-18 UNC	1,411	6,53	74,0	17,10	40	10	9,0	8,2	6,22	3		80970010000012	88970010000012
3/8-16 UNC	1,588	7,94	79,0	20,90	45	12	11,0	9,8	7,34	3		80970010000013	88970010000013
1/2-13 UNC	1,954	10,75	89,0	27,80	45	14	13,5	13,0	9,38	3		80970010000015	88970010000015
												TiCN	TiCN
1/4-20 UNC	1,270	5,08	62,0	15,46	36	8	7,8	6,7	4,70	3		80992010000011	88992010000011
5/16-18 UNC	1,411	6,53	74,0	17,10	40	10	9,0	8,2	6,22	3		80992010000012	88992010000012
3/8-16 UNC	1,588	7,94	79,0	20,90	45	12	11,0	9,8	7,34	3		80992010000013	88992010000013
1/2-13 UNC	1,954	10,75	89,0	27,80	45	14	13,5	13,0	9,38	3		80992010000015	88992010000015

Thread engagements see page 560.

● very good | ◐ good

Thread milling tool with rear chamfer





UNF-MGF 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-28 UNF	0,907	5,44	58,4	11,2	36	8	7,8	6,65	4,70	3		80981011000011	88981011000011
5/16-24 UNF	1,058	6,88	69,8	13,0	40	10	9,0	8,24	6,22	3		80981011000012	88981011000012
3/8-24 UNF	1,058	8,47	73,7	15,1	45	12	11,0	9,83	7,79	3		80981011000013	88981011000013
7/16-20 UNF	1,270	9,84	82,9	18,05	45	14	13,5	11,41	9,32	3		80981011000014	88981011000014
1/2-20 UNF	1,270	11,43	82,7	21,0	45	14	13,5	13,00	9,38	3		80981011000015	88981011000015
												TiCN	TiCN
1/4-28 UNF	0,907	5,44	58,4	11,2	36	8	7,8	6,65	4,70	3		80973011000011	88973011000011
5/16-24 UNF	1,058	6,88	69,8	13,0	40	10	9,0	8,24	6,22	3		80973011000012	88973011000012
3/8-24 UNF	1,058	8,47	73,7	15,1	45	12	11,0	9,83	7,79	3		80973011000013	88973011000013
7/16-20 UNF	1,270	9,84	82,9	18,05	45	14	13,5	11,41	9,32	3		80973011000014	88973011000014
1/2-20 UNF	1,270	11,43	82,7	21,0	45	14	13,5	13,00	9,38	3		80973011000015	88973011000015

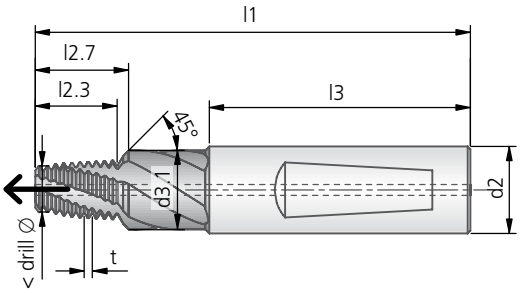
UNF-MGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-28 UNF	0,907	5,44	62,0	14,8	36	8	7,8	6,65	4,70	3		80970011000011	88970011000011
5/16-24 UNF	1,058	6,88	74,0	17,2	40	10	9,0	8,24	6,22	3		80970011000012	88970011000012
3/8-24 UNF	1,058	8,47	79,0	20,4	45	12	11,0	9,83	7,79	3		80970011000013	88970011000013
7/16-20 UNF	1,270	9,84	88,0	23,1	45	14	13,5	11,41	9,32	3		80970011000014	88970011000014
1/2-20 UNF	1,270	11,43	89,0	27,4	45	14	13,5	13,00	9,38	3		80970011000015	88970011000015
												TiCN	TiCN
1/4-28 UNF	0,907	5,44	62,0	14,8	36	8	7,8	6,65	4,70	3		80992011000011	88992011000011
5/16-24 UNF	1,058	6,88	74,0	17,2	40	10	9,0	8,24	6,22	3		80992011000012	88992011000012
3/8-24 UNF	1,058	8,47	79,0	20,4	45	12	11,0	9,83	7,79	3		80992011000013	88992011000013
7/16-20 UNF	1,270	9,84	88,0	23,1	45	14	13,5	11,41	9,32	3		80992011000014	88992011000014
1/2-20 UNF	1,270	11,43	89,0	27,4	45	14	13,5	13,00	9,38	3		80992011000015	88992011000015

Guideline values for thread milling: page 582.

KOMET NPT-MGF, NPTF-MGF

Thread milling tool with rear chamfer





NPT-MGF											DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.3	l2.7	l3	d2	d3.1	Z	~ kg	uncoated Order No.	uncoated Order No.
1/16-27 NPT	0,941	6,15	64,0	9,7	11,36	40	10	8,7	3		80970016000001	88970016000001
1/8-27 NPT	0,941	8,50	70,0	9,7	11,36	45	12	11,1	3		80970016000002	88970016000002
1/4-18 NPT	1,411	11,0	80,0	14,81	16,77	48	16	14,5	4		80970016000003	88970016000003
3/8-18 NPT	1,411	14,5	81,0	14,81	16,77	48	18	17,9	4		80970016000004	88970016000004
											TiCN	TiCN
1/16-27 NPT	0,941	6,15	64,0	9,7	11,36	40	10	8,7	3			
1/8-27 NPT	0,941	8,50	70,0	9,7	11,36	45	12	11,1	3		80973016000002	88973016000002
1/4-18 NPT	1,411	11,0	80,0	14,81	16,77	48	16	14,5	4		80973016000003	88973016000003
3/8-18 NPT	1,411	14,5	81,0	14,81	16,77	48	18	17,9	4		80973016000004	88973016000004

For threads ½" – 14 NPT and bigger, use KOMET TOMILL GS thread milling tool.

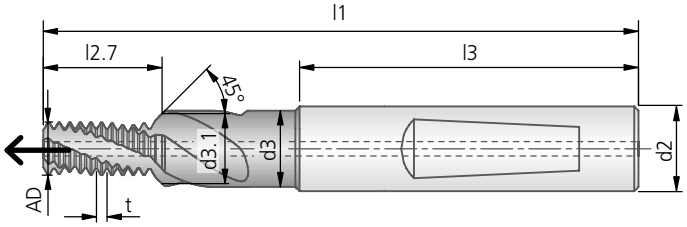
NPTF-MGF											DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.3	l2.7	l3	d2	d3.1	Z	~ kg	uncoated Order No.	uncoated Order No.
1/16-27 NPTF	0,941	6,10	64,0	9,7	11,36	40	10	8,7	3			
1/8-27 NPTF	0,941	8,45	70,0	9,7	11,36	45	12	11,1	3		80970017000002	88970017000002
1/4-18 NPTF	1,411	10,90	80,0	14,81	16,77	48	16	14,5	4		80970017000003	88970017000003
3/8-18 NPTF	1,411	14,30	81,0	14,81	16,77	48	18	17,9	4		80970017000004	88970017000004
											TiCN	TiCN
1/16-27 NPTF	0,941	6,10	64,0	9,7	11,36	40	10	8,7	3			
1/8-27 NPTF	0,941	8,45	70,0	9,7	11,36	45	12	11,1	3		80973017000002	88973017000002
1/4-18 NPTF	1,411	10,90	80,0	14,81	16,77	48	16	14,5	4		80973017000003	88973017000003
3/8-18 NPTF	1,411	14,30	81,0	14,81	16,77	48	18	17,9	4		80973017000004	88973017000004

For threads ½" – 14 NPTF and bigger, use KOMET TOMILL GS thread milling tool.

● very good | ◐ good

Thread milling tool with rear chamfer





G-MGF 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
G1/8-28	0,907	8,82	73,6	15,8	45	12	11,0	10,0	7,79	3		80981025000001	88981025000001
G1/4-19	1,337	11,82	94,0	21,7	48	16	15,5	13,5	10,92	4		80981025000002	88981025000002
G3/8-19	1,337	15,32	94,0	27,2	50	20	17,5	17,0	13,92	4		80981025000003	88981025000003
												TiCN Order No.	TiCN Order No.
G1/8-28	0,907	8,82	73,6	15,8	45	12	11,0	10,0	7,79	3		80973025000001	88973025000001
G1/4-19	1,337	11,82	94,0	21,7	48	16	15,5	13,5	10,92	4		80973025000002	88973025000002
G3/8-19	1,337	15,32	94,0	27,2	50	20	17,5	17,0	13,92	4			

G-MGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
G1/8-28	0,907	8,82	79,0	21,2	45	12	11,0	10,0	7,79	3		80970025000001	88970025000001
G1/4-19	1,337	11,82	100,5	28,4	48	16	15,5	13,5	10,92	4		80970025000002	88970025000002
G3/8-19	1,337	15,32	102,0	35,2	50	20	17,5	17,0	13,92	4		80970025000003	88970025000003
												TiCN Order No.	TiCN Order No.
G1/8-28	0,907	8,82	79,0	21,2	45	12	11,0	10,0	7,79	3		80992025000001	88992025000001
G1/4-19	1,337	11,82	100,5	28,4	48	16	15,5	13,5	10,92	4		80992025000002	88992025000002
G3/8-19	1,337	15,32	102,0	35,2	50	20	17,5	17,0	13,92	4			

Thread engagements see page 560.

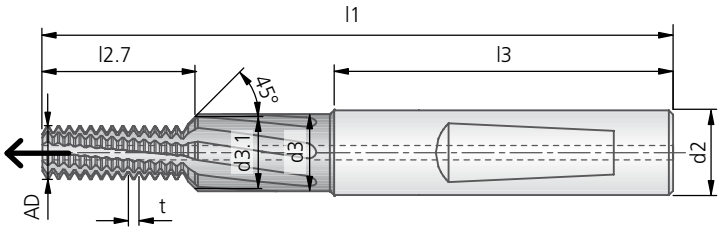
Guideline values for thread milling: page 582.

KOMET M-MGF HPC

Thread milling tool with rear chamfer

Material P M K N S H | M | 1,5×D 2×D | s.c. AlCrN | DIN 6535 HE | DIN 6535 HA

for machining steel to 1200 N/mm² tensile strength, stainless steel, cast materials and titanium alloys



M-MGF HPC 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	AlCrN Order No.	AlCrN Order No.
M4	0,70	3,3	46,9	6,5	36	6	4,5	4,3	3,14	5		80297001000015	88297001000015
M5	0,80	4,2	52,6	8,2	36	6	5,5	5,3	3,95	5		80297001000017	88297001000017
M6	1,00	5,0	59,0	10,2	36	8	6,6	6,3	4,68	6		80297001000018	88297001000018
M8	1,25	6,8	70,3	14,0	40	10	9,0	8,3	6,22	7		80297001000020	88297001000020
M10	1,50	8,5	74,5	16,8	45	12	11,0	10,3	7,79	7		80297001000022	88297001000022
M12	1,75	10,3	82,0	19,6	45	14	13,5	12,3	9,38	7		80297001000024	88297001000024
M14	2,00	12,0	96,0	24,4	48	16	15,5	14,3	10,92	7		80297001000025	88297001000025
M16	2,00	14,0	94,0	26,4	48	18	17,5	16,3	12,83	8		80297001000026	88297001000026
M20	2,50	17,5	117,0	35,6	56	25	25,0	20,3	15,83	8		80297001000028	88297001000028

M-MGF HPC 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	AlCrN Order No.	AlCrN Order No.
M4	0,70	3,3	49,0	8,6	36	6	4,5	4,3	3,14	5		80296001000015	88296001000015
M5	0,80	4,2	55,0	10,6	36	6	5,5	5,3	3,95	5		80296001000017	88296001000017
M6	1,00	5,0	62,0	13,2	36	8	6,6	6,3	4,68	6		80296001000018	88296001000018
M8	1,25	6,8	74,0	17,8	40	10	9,0	8,3	6,22	7		80296001000020	88296001000020
M10	1,50	8,5	79,0	21,3	45	12	11,0	10,3	7,79	7		80296001000022	88296001000022
M12	1,75	10,3	89,0	26,6	45	14	13,5	12,3	9,38	7		80296001000024	88296001000024
M14	2,00	12,0	102,0	30,4	48	16	15,5	14,3	10,92	7		80296001000025	88296001000025
M16	2,00	14,0	102,0	34,4	48	18	17,5	16,3	12,83	8		80296001000026	88296001000026
M20	2,50	17,5	127,0	45,6	56	25	25,0	20,3	15,83	8		80296001000028	88296001000028

Thread engagements see page 560.

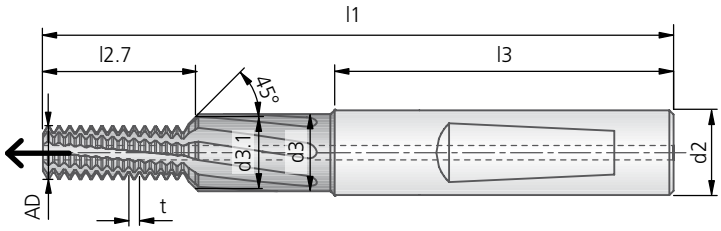
● very good | ◐ good

KOMET MF-MGF HPC

Thread milling tool with rear chamfer



for machining steel to 1200 N/mm² tensile strength, stainless steel, cast materials and titanium alloys



MF-MGF HPC 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	AlCrN Order No.	AlCrN Order No.
M4×0,5	0,50	3,5	47,0	6,7	36	6	4,5	4,3	3,14	5			
M5×0,5	0,50	4,5	52,5	8,3	36	6	5,5	5,3	3,95	5		80297002000037	88297002000037
M6×0,75	0,75	5,3	59,0	10,0	36	8	6,6	6,3	4,68	6		80297002000048	88297002000048
M8×1,0	1,00	7,0	70,0	13,3	40	10	9,0	8,3	6,22	7		80297002000070	88297002000070
M10×1,0	1,00	9,0	74,0	16,5	45	12	11,0	10,3	7,79	7		80297002000094	88297002000094
M12×1,0	1,00	11,0	83,0	19,6	45	14	13,5	12,3	9,38	7		80297002000111	88297002000111
M12×1,5	1,50	10,5	83,0	19,9	45	14	13,5	12,3	9,38	7		80297002000113	88297002000113
M14×1,0	1,00	13,0	95,0	22,7	48	16	15,5	14,3	10,92	7			
M14×1,5	1,50	12,5	94,5	23,1	48	16	15,5	14,3	10,92	7		80297002000131	88297002000131
M16×1,5	1,50	14,5	94,5	26,1	48	18	17,5	16,3	12,82	8		80297002000147	88297002000147

MF-MGF HPC 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	AlCrN Order No.	AlCrN Order No.
M4×0,5	0,50	3,5	49,0	8,7	36	6	4,5	4,3	3,14	5			
M5×0,5	0,50	4,5	55,0	10,8	36	6	5,5	5,3	3,95	5		80296002000037	88296002000037
M6×0,75	0,75	5,3	62,0	13,0	36	8	6,6	6,3	4,68	6		80296002000048	88296002000048
M8×1,0	1,00	7,0	74,0	17,3	40	10	9,0	8,3	6,22	7		80296002000070	88296002000070
M10×1,0	1,00	9,0	79,0	21,5	45	12	11,0	10,3	7,79	7		80296002000094	88296002000094
M12×1,0	1,00	11,0	89,0	25,6	45	14	13,5	12,3	9,38	7		80296002000111	88296002000111
M12×1,5	1,50	10,5	89,0	25,9	45	14	13,5	12,3	9,38	7		80296002000113	88296002000113
M14×1,0	1,00	13,0	102,0	29,7	48	16	15,5	14,3	10,92	7			
M14×1,5	1,50	12,5	102,0	30,6	48	16	15,5	14,3	10,92	7		80296002000131	88296002000131
M16×1,5	1,50	14,5	102,0	33,6	48	18	17,5	16,3	12,82	8		80296002000147	88296002000147

Thread engagements see page 560.

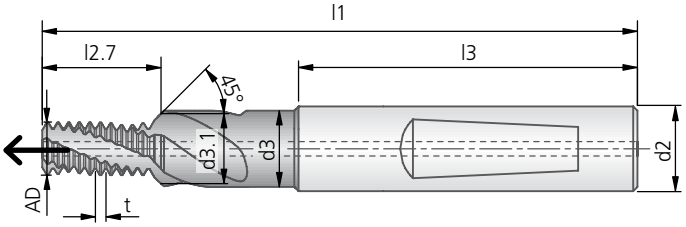
Guideline values for thread milling: page 582.

KOMET M-MGF XS

Thread milling tool with rear chamfer

Material P M K N S H | M | 1,5×D 2×D | s.c. TiCN | d2≥8 | DIN 6535 HE | DIN 6535 HA

for machining steel ≥ 900 N/mm² tensile strength



M-MGF XS 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	kg ~	TiCN Order No.	TiCN Order No.
M4	0,70	3,30	46,9	6,5	36	6	4,5	4,3	3,14	3		80273001000015	88273001000015
M5	0,80	4,20	52,6	8,2	36	6	5,5	5,3	3,95	3		80273001000017	88273001000017
M6	1,00	5,00	59,0	10,2	36	8	6,6	6,3	4,68	3		80273001000018	88273001000018
M8	1,25	6,80	70,3	14,0	40	10	9,0	8,3	6,22	3		80273001000020	88273001000020
M10	1,50	8,50	74,5	16,8	45	12	11,0	10,3	7,79	3		80273001000022	88273001000022
M12	1,75	10,25	82,0	19,6	45	14	13,5	12,3	9,38	3		80273001000024	88273001000024
M14	2,00	12,00	96,0	24,4	48	16	15,5	14,3	10,92	4		80273001000025	88273001000025
M16	2,00	14,00	94,0	26,4	48	18	17,5	16,3	12,83	4		80273001000026	88273001000026
M20	2,50	17,50	117,0	35,55	56	25	25,0	20,3	15,83	4		80273001000028	88273001000028

M-MGF XS 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	kg ~	TiCN Order No.	TiCN Order No.
M4	0,70	3,30	49,0	8,6	36	6	4,5	4,3	3,14	3		80292001000015	88292001000015
M5	0,80	4,20	55,0	10,6	36	6	5,5	5,3	3,95	3		80292001000017	88292001000017
M6	1,00	5,00	62,0	13,2	36	8	6,6	6,3	4,68	3		80292001000018	88292001000018
M8	1,25	6,80	74,0	17,8	40	10	9,0	8,3	6,22	3		80292001000020	88292001000020
M10	1,50	8,50	79,0	21,3	45	12	11,0	10,3	7,79	3		80292001000022	88292001000022
M12	1,75	10,25	89,0	26,6	45	14	13,5	12,3	9,38	3		80292001000024	88292001000024
M14	2,00	12,00	102,0	30,4	48	16	15,5	14,3	10,92	4		80292001000025	88292001000025
M16	2,00	14,00	102,0	34,4	48	18	17,5	16,3	12,83	4		80292001000026	88292001000026
M20	2,50	17,50	127,0	45,55	56	25	25,0	20,3	15,83	4		80292001000028	88292001000028

Thread engagements see page 560.

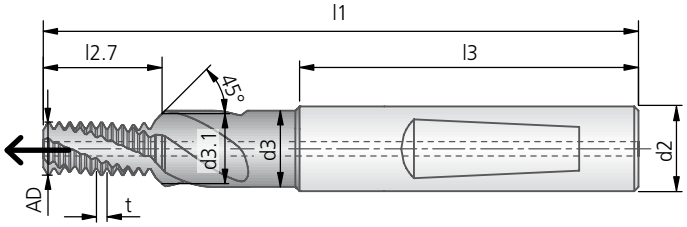
● very good | ◐ good

KOMET MF-MGF XS

Thread milling tool with rear chamfer

Material P M K N S H | MF | 1,5×D 2×D | s.c. TiCN | d2≥8 | DIN 6535 HE | DIN 6535 HA

for machining steel ≥ 900 N/mm² tensile strength



MF-MGF XS 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiCN Order No.	TiCN Order No.
M8×1	1,00	7,00	70,0	13,3	40	10	9,0	8,3	6,22	3		80273002000070	88273002000070
M10×1	1,00	9,00	74,0	16,5	45	12	11,0	10,3	7,79	3		80273002000094	88273002000094
M12×1	1,00	11,00	83,0	19,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,50	10,50	83,0	19,9	45	14	13,5	12,3	9,38	3		80273002000113	88273002000113
M14×1,5	1,50	12,50	94,5	23,1	48	16	15,5	14,3	10,92	4		80273002000131	88273002000131
M16×1,5	1,50	14,50	94,5	26,1	48	18	17,5	16,3	12,82	4		80273002000147	88273002000147

MF-MGF XS 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiCN Order No.	TiCN Order No.
M8×1	1,00	7,00	74,0	17,3	40	10	9,0	8,3	6,22	3		80292002000070	88292002000070
M10×1	1,00	9,00	79,0	21,5	45	12	11,0	10,3	7,79	3		80292002000094	88292002000094
M12×1	1,00	11,00	89,0	25,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,50	10,50	89,0	25,9	45	14	13,5	12,3	9,38	3		80292002000113	88292002000113
M14×1,5	1,50	12,50	102,0	30,6	48	16	15,5	14,3	10,92	4		80292002000131	88292002000131
M16×1,5	1,50	14,50	102,0	33,6	48	18	17,5	16,3	12,82	4		80292002000147	88292002000147

Thread engagements see page 560.

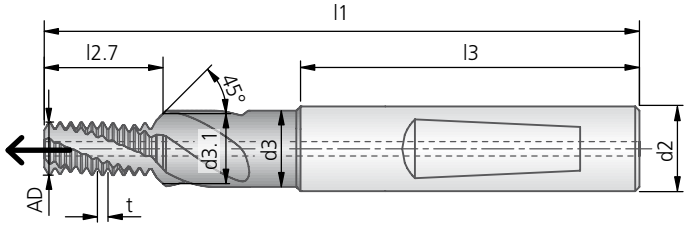
Guideline values for thread milling: page 582.

KOMET G-MGF XS

Thread milling tool with rear chamfer



for machining steel ≥ 900 N/mm² tensile strength



G-MGF XS 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiCN Order No.	TiCN Order No.
G1/8-28	0,907	8,82	73,6	15,8	45	12	11,0	10,0	7,79	3		**80273025000001**	**88273025000001**
G1/4-19	1,337	11,82	95,3	21,7	48	16	15,5	13,5	10,92	4		**80273025000002**	**88273025000002**

G-MGF XS 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiCN Order No.	TiCN Order No.
G1/8-28	0,907	8,82	79,0	21,2	45	12	11,0	10,0	7,79	3		**80292025000001**	**88292025000001**
G1/4-19	1,337	11,82	102,0	28,4	48	16	15,5	13,5	10,92	4		**80292025000002**	**88292025000002**

Thread engagements see page 560.

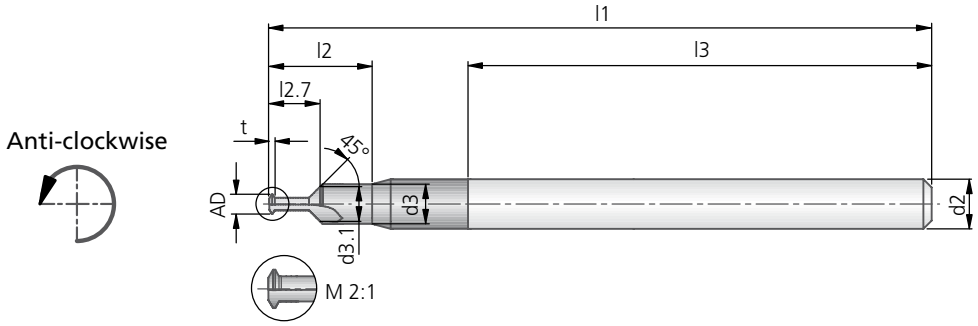
● very good | ◐ good

KOMET M-MGF XH Micro

Thread milling tool with rear chamfer

Material P M K N S H | M | 1,5×D | s.c. TiCN | DIN 6535 HA

for hard machining of materials with hardness ≥ 45 HRC



M-MGF XH Micro 1,5×D												DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l2	l3	d2	d3.1	d3	AD	Z	~ kg	TiCN Order No.
M1	0,25	0,75	40	2,1	5,2	28	3	1,5	1,8	< ∅ 0,75	2		**88977001000001**
M1,4	0,30	1,10	40	2,6	5,7	28	3	1,7	2,0	< ∅ 1,10	2		**88977001000004**
M1,6	0,35	1,25	40	3,1	6,0	28	3	2,1	2,4	< ∅ 1,25	2		**88977001000005**
M2	0,40	1,60	40	3,7	–	28	3	2,6	3,0	< ∅ 1,60	2		**88977001000008**
M2,2	0,45	1,75	40	3,9	–	28	3	2,5	3,0	< ∅ 1,75	2		**88977001000009**
M2,5	0,45	2,05	40	4,5	–	28	3	2,9	3,0	< ∅ 2,05	3		**88977001000011**

Thread engagements see page 560.

Guideline values for thread milling: page 582.

KOMET M-MGF XH

Thread milling tool with rear chamfer

Material: P M K N S H ●

M

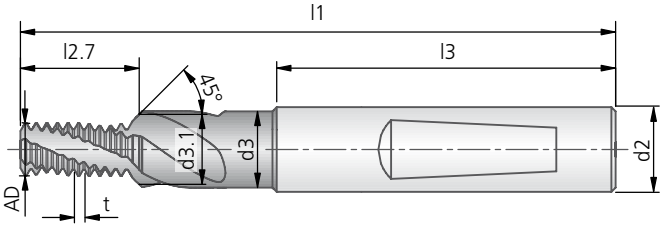
1,5×D

s.c. TiCN

DIN 6535 HE

DIN 6535 HA

for hard machining of materials with hardness ≥ 45 HRC



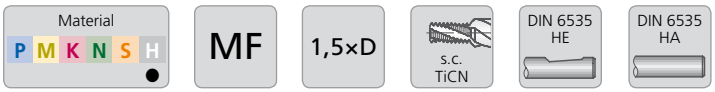
M-MGF XH 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiAlN  Order No.	TiAlN  Order No.
M3	0,50	2,50	49,0	5,31	36	6	4,9	3,3	2,55	3		80977001000013	88977001000013
M4	0,70	3,30	47,0	6,5	36	6	4,5	4,3	3,14	4		80977001000015	88977001000015
M5	0,80	4,20	52,0	8,2	36	6	5,5	5,3	3,95	4		80977001000017	88977001000017
M6	1,00	5,00	59,0	10,2	36	8	6,6	6,3	4,68	4		80977001000018	88977001000018
M8	1,25	6,80	70,0	14,0	40	10	9,0	8,3	6,22	4		80977001000020	88977001000020
M10	1,50	8,50	74,0	16,8	45	12	11,0	10,3	7,79	5		80977001000022	88977001000022
M12	1,75	10,25	82,0	19,6	45	14	13,5	12,3	9,38	5		80977001000024	88977001000024

Thread engagements see page 560.

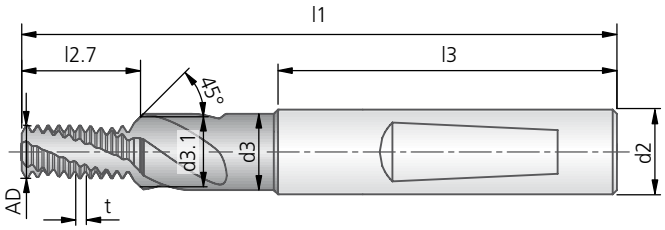
● very good | ◐ good

KOMET MF-MGF XH

Thread milling tool with rear chamfer



for hard machining of materials with hardness ≥ 45 HRC



MF-MGF XH 1,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	TiAlN Order No.	TiAlN Order No.
M12×1,5	1,50	10,50	82,0	19,9	45	14	13,5	12,3	9,38	5		**80977002000113**	**88977002000113**
M14×1,5	1,50	12,50	94,0	23,1	48	16	15,5	14,3	10,92	5		**80977002000131**	**88977002000131**
M16×1,5	1,50	14,50	94,0	26,1	48	18	17,5	16,3	12,82	5		**80977002000147**	**88977002000147**

Thread engagements see page 560.

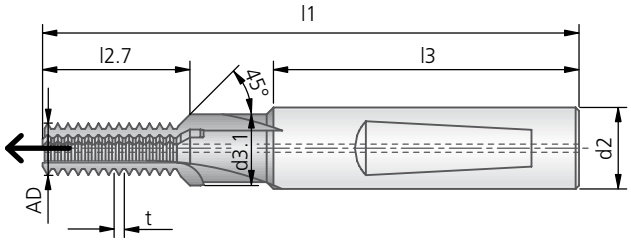
Guideline values for thread milling: page 582.

KOMET M-MGF PKD

Thread milling tool with rear chamfer

Material P M K N S H | M | 2×D | PCD | DIN 6535 HE | DIN 6535 HA

for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



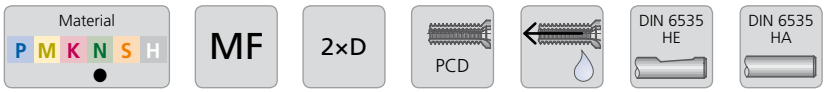
M-MGF PKD 2×D											DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3.1	AD	Z	~ kg	Order No.	Order No.
M8	1,25	6,80	74	17,8	40	10	8,3	6,22	2		30970001000020	38970001000020
M10	1,50	8,50	79	21,4	45	12	10,3	7,79	3		30970001000022	38970001000022
M12	1,75	10,25	89	26,7	45	14	12,3	9,38	3		30970001000024	38970001000024

Thread engagements see page 560.

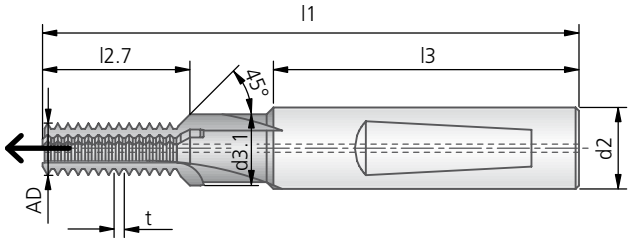
We can supply thread milling tools for other fixed thread lengths on request.

● very good | ◐ good

Thread milling tool with rear chamfer



for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



MF-MGF PKD 2×D											DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3.1	AD	Z	kg ~	Order No.	Order No.
M10×1	1,00	9,0	79	21,5	45	12	10,3	7,79	3		**30970002000094**	**38970002000094**
M12×1,5	1,50	10,5	88	26,0	45	14	12,3	9,38	3		**30970002000113**	**38970002000113**

Thread engagements see page 560.

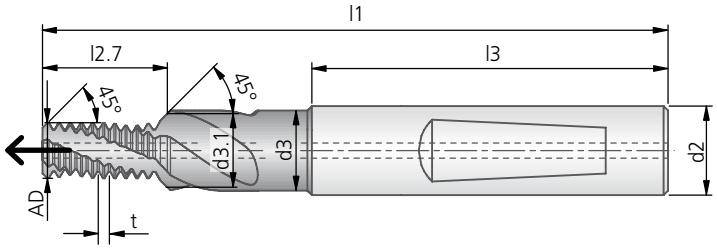
We can supply thread milling tools for other fixed thread lengths on request.

Guideline values for thread milling: page 582.

KOMET M-UMGF

Thread milling tool with front and rear chamfer





M-UMGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
M4	0,70	3,30	49,0	8,6	36	6	4,5	4,3	3,14	3			
M5	0,80	4,20	55,0	10,6	36	6	5,5	5,3	3,95	3			
M6	1,00	5,00	62,0	13,2	36	8	6,6	6,3	4,68	3		80670001000018	88670001000018
M8	1,25	6,80	74,0	17,8	40	10	9,0	8,3	6,22	3		80670001000020	88670001000020
M10	1,50	8,50	79,0	21,3	45	12	11,0	10,3	7,79	3		80670001000022	88670001000022
M12	1,75	10,25	89,0	26,6	45	14	13,5	12,3	9,38	3		80670001000024	88670001000024
M14	2,00	12,00	102,0	30,4	48	16	15,5	14,3	10,92	4			
M16	2,00	14,00	102,0	34,4	48	18	17,5	16,3	12,83	4			
												TiCN	TiCN
M4	0,70	3,30	49,0	8,6	36	6	4,5	4,3	3,14	3			
M5	0,80	4,20	55,0	10,6	36	6	5,5	5,3	3,95	3			
M6	1,00	5,00	62,0	13,2	36	8	6,6	6,3	4,68	3		80692001000018	88692001000018
M8	1,25	6,80	74,0	17,8	40	10	9,0	8,3	6,22	3		80692001000020	88692001000020
M10	1,50	8,50	79,0	21,3	45	12	11,0	10,3	7,79	3		80692001000022	88692001000022
M12	1,75	10,25	89,0	26,6	45	14	13,5	12,3	9,38	3		80692001000024	88692001000024
M14	2,00	12,00	102,0	30,4	48	16	15,5	14,3	10,92	4			
M16	2,00	14,00	102,0	34,4	48	18	17,5	16,3	12,83	4			

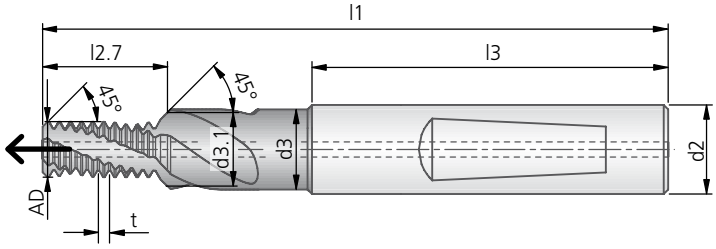
M-UMGF 2,5×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
M4	0,70	3,30	49,0	10,0	36	6	4,5	4,3	3,14	3			
M5	0,80	4,20	55,0	13,0	36	6	5,5	5,3	3,95	3			
M6	1,00	5,00	62,0	16,2	36	8	6,6	6,3	4,68	3		80690001000018	88690001000018
M8	1,25	6,80	74,0	21,5	40	10	9,0	8,3	6,22	3		80690001000020	88690001000020
M10	1,50	8,50	79,0	27,3	45	12	11,0	10,3	7,79	3		80690001000022	88690001000022
M12	1,75	10,25	89,0	31,8	45	14	13,5	12,3	9,38	3		80690001000024	88690001000024
M14	2,00	12,00	102,0	38,4	48	16	15,5	14,3	10,92	4			
M16	2,00	14,00	102,0	42,4	48	18	17,5	16,3	12,83	4			

Thread engagements see page 560.

● very good | ◐ good

Thread milling tool with front and rear chamfer





MF-UMGF 2×D												DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	Drill ∅	l1	l2.7	l3	d2	d3	d3.1	AD	Z	~ kg	uncoated  Order No.	uncoated  Order No.
M8×1	1,0	7,0	74,0	17,3	40	10	9,0	8,3	6,22	3		**80670002000070**	**88670002000070**
M10×1	1,0	9,0	79,0	21,5	45	12	11,0	10,3	7,79	3		**80670002000094**	**88670002000094**
M12×1	1,0	11,0	89,0	25,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,5	10,5	89,0	25,9	45	14	13,5	12,3	9,38	3		**80670002000113**	**88670002000113**
M14×1,5	1,5	12,5	102,0	30,6	48	16	15,5	14,3	10,92	4		**80670002000131**	**88670002000131**
M16×1,5	1,5	14,5	102,0	33,6	48	18	17,5	16,3	12,82	4		**80670002000147**	**88670002000147**
												TiCN 	TiCN 
M8×1	1,0	7,0	74,0	17,3	40	10	9,0	8,3	6,22	3		**80692002000070**	**88692002000070**
M10×1	1,0	9,0	79,0	21,5	45	12	11,0	10,3	7,79	3		**80692002000094**	**88692002000094**
M12×1	1,0	11,0	89,0	25,6	45	14	13,5	12,3	9,38	3			
M12×1,5	1,5	10,5	89,0	25,9	45	14	13,5	12,3	9,38	3		**80692002000113**	**88692002000113**
M14×1,5	1,5	12,5	102,0	30,6	48	16	15,5	14,3	10,92	4		**80692002000131**	**88692002000131**
M16×1,5	1,5	14,5	102,0	33,6	48	18	17,5	16,3	12,82	4		**80692002000147**	**88692002000147**

Thread engagements see page 560.

KOMET MGF | UMGF

Recommended cutting data

Guideline values for thread milling

v_c (m/min) = Cutting speed
f_z (mm/tooth) = Milling feed

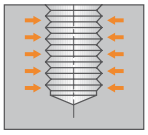
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Surface	MGF | UMGF					MGF HPC				MGF PKD		
						un-caoted	TiCN	≤ Ø6	≤ Ø12	≥ Ø16	AlCrN	M4 - M6	M8 - M12	M14 - M20	PCD	Ø8	Ø10 - 12
						v_c m/min	v_c m/min	f_z mm/t	f_z mm/t	f_z mm/t	v_c m/min	f_z mm/t	f_z mm/t	f_z mm/t	v_c m/min	f_z mm/t	f_z mm/t
P	1.1	≤400	≤120	magnetic soft iron			80-150	0,015-0,04	0,04-0,06	0,08-0,15	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
P	1.2	≤700	≤200	structural, case hardened steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
P	1.3	≤850	≤250	carbon steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
P	1.4	≤850	≤250	alloy steel			80-100	0,015-0,04	0,04-0,06	0,08-0,15	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel			60-80	0,01-0,03	0,04-0,06	0,04-0,10	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
P	1.6	>1200	>350	alloy/heat treated steel			50-60	0,01-0,025	0,03-0,05	0,04-0,10	80-100	0,015-0,02	0,02-0,03	0,03-0,04			
H	1.7	≤1400	≤400	hardened steel to 45 HRC			30-50	0,01-0,015	0,015-0,02	0,03-0,08							
H	1.8	≤2200	≤600	hardened steel to 58 HRC			20-40	0,01-0,015	0,015-0,02								
M	2.1	≤850	≤250	stainless steel, sulphuretted			60-80	0,015-0,03	0,03-0,05	0,08-0,15	60-80	0,015-0,03	0,04-0,06	0,06-0,10			
M	2.2	≤850	≤250	austentic			60-80	0,015-0,03	0,03-0,05	0,04-0,10	60-80	0,015-0,03	0,04-0,06	0,06-0,10			
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic			60-80	0,01-0,025	0,02-0,04	0,04-0,10	60-80	0,015-0,03	0,04-0,06	0,06-0,10			
K	3.1	≤500	≤150	grey cast iron		50-80	80-120	0,02-0,04	0,04-0,10	0,08-0,15	100-120	0,02-0,04	0,04-0,08	0,06-0,10			
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated		50-80	80-120	0,02-0,03	0,04-0,08	0,08-0,12	100-120	0,02-0,03	0,04-0,06	0,06-0,08			
K	3.3	400-500	200-250	vermicular cast iron			80-100	0,02-0,04	0,04-0,08	0,08-0,15	100-120	0,02-0,03	0,04-0,06	0,06-0,08			
K	3.4	≤700	≤200	spheroidal graphite cast iron			80-120	0,02-0,04	0,04-0,10	0,08-0,15	80-100	0,02-0,03	0,04-0,06	0,06-0,08			
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated			80-100	0,02-0,03	0,04-0,08	0,08-0,12	80-100	0,02-0,03	0,04-0,06	0,06-0,08			
K	3.6	≤700	≤200	malleable iron			80-100	0,02-0,04	0,04-0,10	0,08-0,15	80-100	0,02-0,03	0,04-0,06	0,06-0,08			
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated			80-100	0,02-0,03	0,04-0,08	0,08-0,12	80-100	0,02-0,03	0,04-0,06	0,06-0,08			
S	4.1	≤700	≤200	pure titanium			40-100	0,015-0,03	0,03-0,08	0,08-0,15	60-80	0,015-0,02	0,02-0,03	0,03-0,04			
S	4.2	≤900	≤270	titanium alloys			40-100	0,015-0,03	0,03-0,08	0,08-0,15	60-80	0,015-0,02	0,020-0,03	0,03-0,04			
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys			40-80	0,015-0,02	0,03-0,06	0,08-0,12	60-80	0,01-0,015	0,015-0,02	0,025-0,035			
S	5.1	≤500	≤150	pure nickel			50-60	0,02-0,04	0,04-0,06	0,04-0,10							
S	5.2	≤900	<270	nickel alloys, heat resistant			30-40	0,02-0,04	0,04-0,06	0,04-0,10							
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance			10-30	0,015-0,03	0,03-0,05	0,04-0,08							
N	6.1	≤350	≤100	non-alloy copper		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20							
N	6.2	≤700	≤200	short chip, brass, bronze, red brass		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20					300-1000	0,04-0,08	0,05-0,10
N	6.3	≤700	≤200	long chip brass		100-300	100-400	0,04-0,07	0,07-0,12	0,10-0,20							
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)		60-80	60-80	0,02-0,04	0,03-0,06	0,08-0,15							
N	7.1	≤350	≤100	Al, Mg non-alloy		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20					400-1500	0,04-0,08	0,04-0,10
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20					400-1500	0,04-0,08	0,04-0,10
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %		100-400	100-400	0,03-0,07	0,07-0,12	0,10-0,20					400-1500	0,04-0,08	0,04-0,10
N	7.4	≤600	≤180	Al cast alloy, Si <10 %		100-300	100-400	0,03-0,07	0,07-0,12	0,10-0,20					400-1500	0,04-0,08	0,04-0,10
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %		100-200	100-250	0,03-0,07	0,07-0,12	0,10-0,20					400-1500	0,04-0,08	0,04-0,10
N	8.1			thermoplastics		80-100	100-120	0,04-0,06	0,06-0,12	0,08-0,20							
N	8.2			thermosetting plastics		80-100	100-120	0,04-0,06	0,06-0,12	0,08-0,15							
N	8.3			fibre reinforced plastics		50-60	60-80	0,04-0,06	0,06-0,12	0,08-0,15					400-1500	0,04-0,10	0,05-0,20

Cutting values shown are relating to the basic recommendations for cutting materials given.

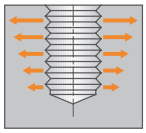
1. 

Chips packed or glued at the thread profile
- poor coolant

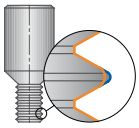
→ improve coolant (i.e. add flood coolant, lateral flute coolant supply for through holes)
→ add coolant flutes flutes on shank

2. 

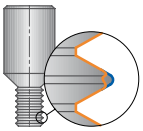
Thread go-gage doesn't fit
- thread too small → reduce tool radius in offset register
- chips in thread → improve coolant

3. 

Thread is getting tapered
- poor tool clamping → improve tool holding (i.e. shrink fit holders)
- thread milling feed too high → reduce thread milling feed

4. 

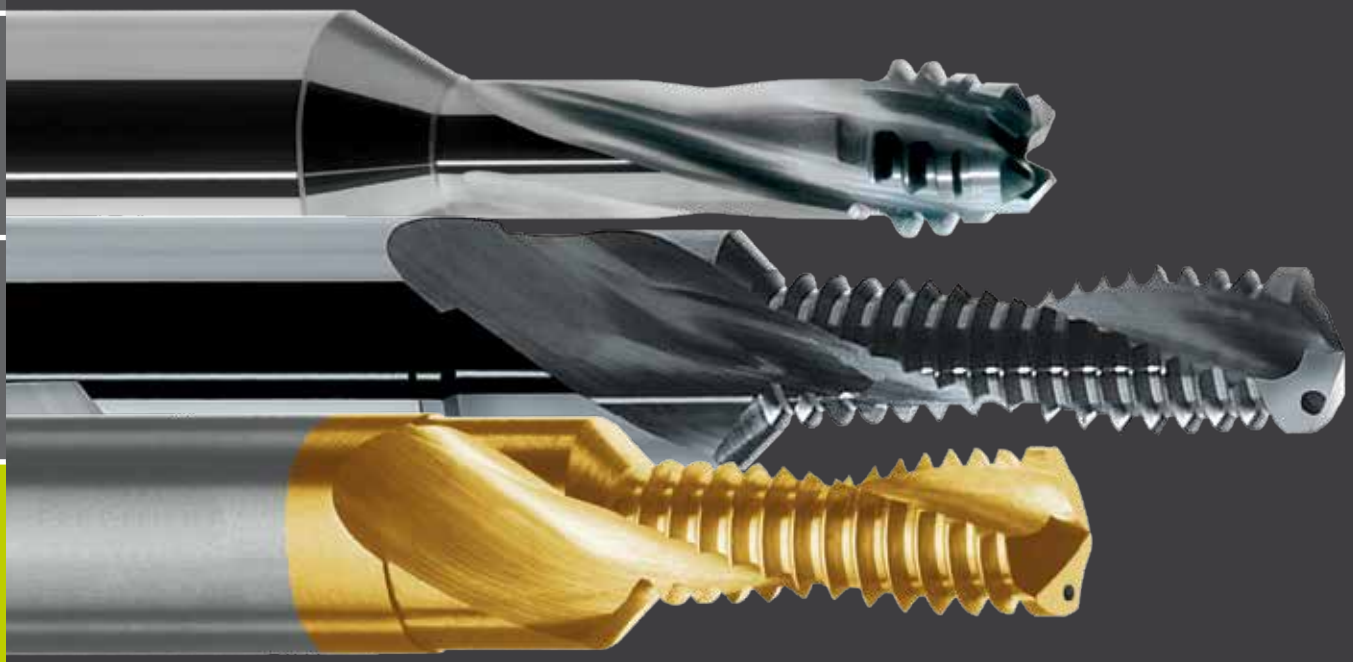
Erratic tool wear
- tool run out too high → use better tool holders (i.e. shrink fit holders), check material for homogeneity

5. 

Chippage, tool breakage
- feed rate thread milling too high → reduce thread milling feed
- vibrations → check tool holder (don't use modular systems!!), change feeds and speeds

6. 

Poor thread surface
- tool overhang too long → check part clamping an and fixture. Use multiple cuts when part is clamped weak
- non-suitable tool for this application → reduce cutting speed, increase feed/tooth, prefer conventional milling



Thread milling small threads from M3 upwards

Revolutionary thread manufacture in perfect form, made possible by CNC technology. With a combination bore thread milling tool, the bore, countersink and internal thread is produced in one pass!

As standard we offer two versions: our KOMET BGF drill thread milling tool with countersink on the shank side for defined thread lengths of 1.5×D | 2×D | 2.5×D and 3×D.

For different thread lengths our KOMET UBGF universal drill thread milling tool with countersink on the shank and face side should be used.

The fine grain carbide grades used and also the coatings guarantee a long tool life.

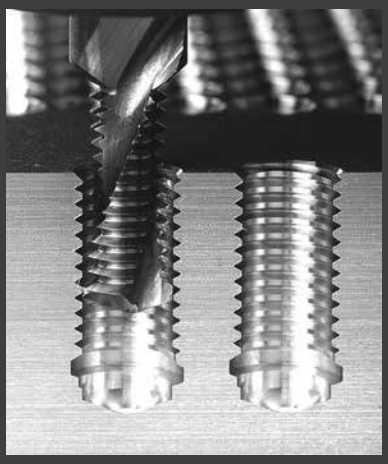
BENEFITS for you:

- More than 50% less machining time because of high cutting speeds and feed rate
- Saving in tool change time and tool change
- Excellent surface finish due to variation in cutting parameters
- No different tools required for blind bores and through holes
- Precise thread depth
- Exact and repeatable thread depth
- No chip residue left at the bottom of the bore
- High speed cutting (HSC) possible

KOMET Premium Tools
Process reliability when working on hydraulic components with drill thread milling cutters in multiple spindle operation at 15,000 rpm



Cross section of a thread produced by combined drilling and threading.



KOMET TPT

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning: +49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

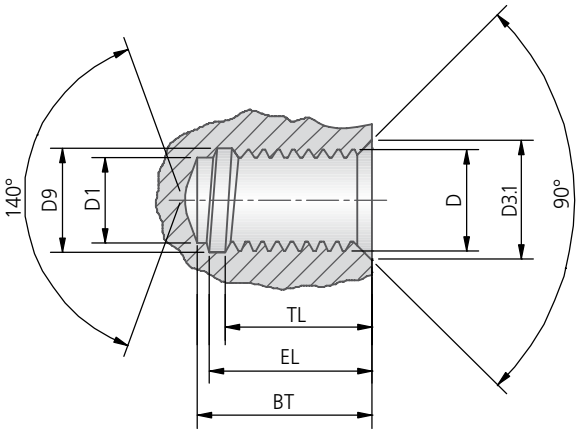
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Drill thread milling tool

	Page
Thread engagements	586 – 587
BGF – with 2 cutting edges with rear chamfer	
M-BGF 1,5×D | 2×D | 2,5×D | 3×D for metric ISO thread DIN 13	588 – 590
M-BGF 1,5×D | 2×D for GJS for metric ISO thread DIN 13	591
EG-BGF 2×D for metric ISO thread DIN 8140	592
MF-BGF 1,5×D | 2×D for metric fine ISO thread DIN 13	593
UNC-BGF 1,5×D | 2×D for UNC thread ANSI B1.1	594
UNF-BGF 1,5×D | 2×D for UNF thread ANSI B1.1	595
G-BGF 2×D for Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226	596
BGF – with 3 cutting edges with rear chamfer	
M-BGF 1,5×D | 2×D | 2,5×D for metric ISO thread DIN 13	597 – 598
BGF – with 4 cutting edges with rear chamfer	
M-BGF NZ4 1,5×D | 2×D | 2,5×D for metric ISO thread DIN 13	599
UBGF – with front and rear chamfer	
M-UBGF 2×D for metric ISO thread DIN 13	600
MF-UBGF 2×D for metric fine ISO thread DIN 13	601
UNC-UBGF 2×D for UNC thread ANSI B1.1	602
UNF-UBGF 2×D for UNF thread ANSI B1.1	603
G-UBGF 2×D for Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226	604
DBGF – Direct Circular Drill Thread Milling Tool	
M-DBGF 2×D | 3×D for metric ISO thread DIN 13	605
Recommended cutting data	606
Problems – Causes – Solutions	607
Tap drill diameters	678

KOMET BGF

Thread engagements



BT = drill depth
D3.1 = possible chamfer ∅ with rear chamfer
EL = thread engagement
TL = full thread length

M															
Nominal ∅				1,5×D			2×D			2,5×D			3×D		
D	D1	D3.1	D9	BT	EL	TL	BT	EL	TL	BT	EL	TL	BT	EL	TL
M3	2,50	3,30	3,10	4,90	4,40	3,80	6,90	6,40	5,80	–	–	–	–	–	–
M4	3,30	4,30	4,12	6,80	6,10	5,25	8,90	8,20	7,30	11,00	10,30	9,40	12,54	11,84	11,55
M5	4,20	5,30	5,19	8,58	7,80	6,80	11,00	10,20	9,20	13,38	12,58	11,57	15,94	15,14	14,77
M6	5,00	6,30	6,25	10,70	9,70	8,40	13,70	12,70	11,40	15,70	14,70	13,40	18,89	17,89	17,42
M8	6,80	8,30	8,41	13,35	12,15	10,45	17,10	15,90	14,20	22,10	20,90	19,20	24,89	23,64	22,97
M10	8,50	10,30	10,54	17,60	16,06	14,00	22,10	20,60	18,50	26,60	25,10	23,00	31,36	29,86	29,02
M12	10,30	12,30	12,65	20,25	18,45	16,35	25,50	23,70	21,60	32,50	30,70	28,60	–	–	–
M14	12,00	14,30	14,81	22,90	20,90	18,60	30,90	28,90	26,60	36,90	34,90	32,60	–	–	–
M16	14,00	16,30	16,88	27,00	25,00	22,60	35,00	33,00	30,60	43,00	41,00	38,60	–	–	–

M – BGF NZ4 / M – BGF GJS												
Nominal ∅				1,5×D			2×D			2,5×D		
D	D1	D3.1	D9	BT	EL	TL	BT	EL	TL	BT	EL	TL
M6	5,00	6,30	6,25	10,37	9,40	8,40	13,47	12,50	11,40	15,47	14,50	13,40
M8	6,80	8,30	8,41	13,02	11,80	10,50	16,77	15,50	14,30	21,77	20,50	19,30
M10	8,50	10,30	10,54	17,07	15,60	14,10	21,57	20,10	18,60	26,07	24,60	23,10
M12	10,30	12,30	12,65	19,65	17,90	16,40	24,90	23,10	21,60	31,90	30,10	28,60
M14	12,00	14,30	14,81	22,44	20,40	18,60	30,44	28,40	26,60	36,44	34,40	32,60
M16	14,00	16,30	16,88	26,45	24,50	22,60	34,45	32,50	30,60	42,45	40,50	38,60

M – metric ISO thread DIN 13

MF									
Nominal ∅				1,5×D			2×D		
D	D1	D3.1	D9	BT	EL	TL	BT	EL	TL
M6×0,75	5,25	6,30	6,18	10,30	9,60	8,60	14,05	13,30	12,30
M8×1	7,00	8,30	8,31	13,70	12,70	11,40	17,70	16,70	15,40
M10×1	9,00	10,30	10,35	16,80	15,80	14,40	21,80	20,80	19,40
M12×1,5	10,50	12,30	12,35	20,60	19,08	17,01	26,60	25,08	23,01
M12×1	11,00	12,30	12,35	19,75	18,80	17,40	24,75	23,80	22,40
M14×1,5	12,50	14,30	14,61	23,61	22,11	19,98	29,60	28,10	26,00
M16×1,5	14,50	16,30	16,64	26,62	25,12	22,97	34,10	32,60	30,50

MF – metric fine ISO thread DIN 13

EG						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
EG-M6	6,30	7,60	7,70	15,78	14,80	13,40
EG-M8	8,37	9,92	10,21	20,99	19,70	17,90
EG-M10	10,45	12,25	12,68	25,18	23,70	21,50
EG-M12	12,52	14,57	15,14	30,85	29,10	26,80

EG – metric ISO thread DIN 8140 for helical wire inserts

UNC									
Nominal ∅				1,5×D			2×D		
D	D1	D3.1	D9	BT	EL	TL	BT	EL	TL
1/4-20 UNC	5,08	6,65	6,83	11,09	9,82	8,06	14,90	13,60	11,90
5/16-18 UNC	6,53	8,24	8,56	13,77	12,36	10,34	18,00	16,60	14,60
3/8-16 UNC	7,94	9,83	10,23	16,99	15,40	13,20	21,80	20,20	18,00
1/2-13 UNC	10,75	13,00	13,72	22,56	20,60	18,10	28,40	26,50	24,00

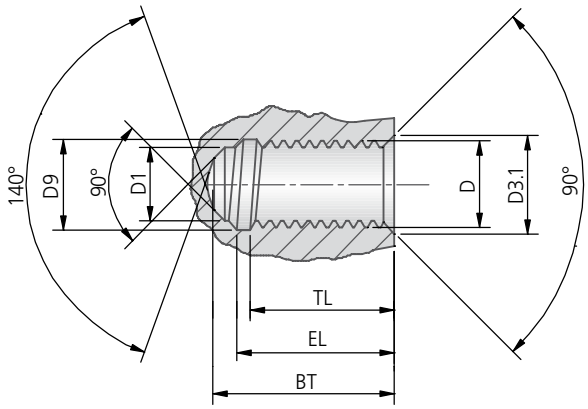
UNC – american Unified coarse thread ANSI B1.1

UNF									
Nominal ∅				1,5×D			2×D		
D	D1	D3.1	D9	BT	EL	TL	BT	EL	TL
1/4-28 UNF	5,44	6,65	6,70	10,68	9,78	8,52	14,30	13,40	12,10
5/16-24 UNF	6,88	8,24	8,40	13,54	12,50	11,00	17,80	16,70	15,20
3/8-24 UNF	8,47	9,83	10,01	15,67	14,61	13,07	19,90	18,80	17,30
1/2-20 UNF	11,43	13,00	13,35	20,08	18,80	16,90	26,40	25,20	23,30

UNF – american Unified fine thread ANSI B1.1

G						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
G1/8-28	8,82	10,03	10,12	20,70	19,80	18,50
G1/4-19	11,82	13,46	13,52	27,70	26,30	24,60

G – Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226 (previously DIN 2999)



BT = drill depth
D3.1 = max. possible chamfer ∅ with front chamfer
EL = thread engagement
TL = full thread length

M						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
M3	2,50	3,30	3,10	6,65	6,10	5,80
M4	3,30	4,30	4,12	8,58	7,90	7,30
M5	4,20	5,30	5,19	10,63	9,80	9,20
M6	5,00	6,30	6,25	13,28	12,30	11,40
M8	6,80	8,30	8,41	16,64	15,40	14,20
M10	8,50	10,30	10,54	21,49	20,00	18,50
M12	10,30	12,30	12,65	24,83	23,10	21,60
M14	12,00	14,30	14,81	30,19	28,20	26,60
M16	14,00	16,30	16,88	34,23	32,20	30,60

M – metric ISO thread DIN 13

MF						
Nominal ∅ D	2×D					
	D1	D3.1	D9	BT	EL	TL
M6×0,75	5,25	6,30	6,18	12,97	12,20	11,60
M8×1	7,00	8,30	8,31	17,70	16,70	15,40
M10×1	9,00	10,30	10,35	21,39	20,40	19,40
M12×1,5	10,50	12,30	12,35	24,34	23,30	22,40
M12×1	11,00	12,30	12,35	26,01	24,50	23,00
M14×1,5	12,50	14,30	14,61	29,03	27,50	26,00
M16×1,5	14,50	16,30	16,64	33,53	32,00	30,50

MF – metric fine ISO thread DIN 13

UNC						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
1/4-20 UNC	5,08	6,65	6,83	14,41	13,10	11,90
5/16-18 UNC	6,53	8,24	8,56	17,46	16,00	14,60
3/8-16 UNC	7,94	9,83	10,23	21,15	19,60	18,00
1/2-13 UNC	10,75	13,00	13,72	27,70	25,70	24,00

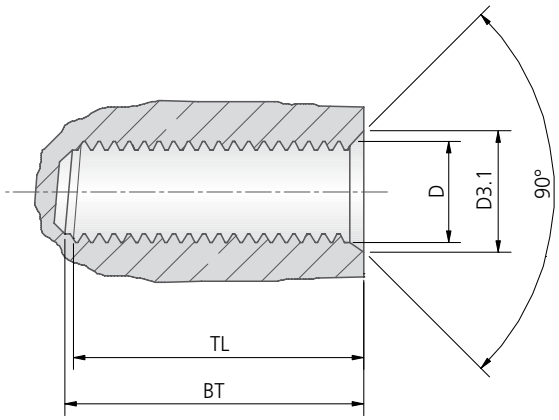
UNC – american Unified coarse thread ANSI B1.1

UNF						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
1/4-28 UNF	5,44	6,65	6,70	13,94	13,00	12,10
5/16-24 UNF	6,88	8,24	8,40	17,34	16,30	15,20
3/8-24 UNF	8,47	9,83	10,01	19,47	18,40	17,30
1/2-20 UNF	11,43	13,00	13,35	25,94	24,70	23,30

UNF – american Unified fine thread ANSI B1.1

G						
Nominal ∅	2×D					
D	D1	D3.1	D9	BT	EL	TL
G1/8-28	8,82	10,03	10,12	20,30	19,40	18,50
G1/4-19	11,82	13,46	13,52	27,10	25,70	24,50

G – Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226 (previously DIN 2999)



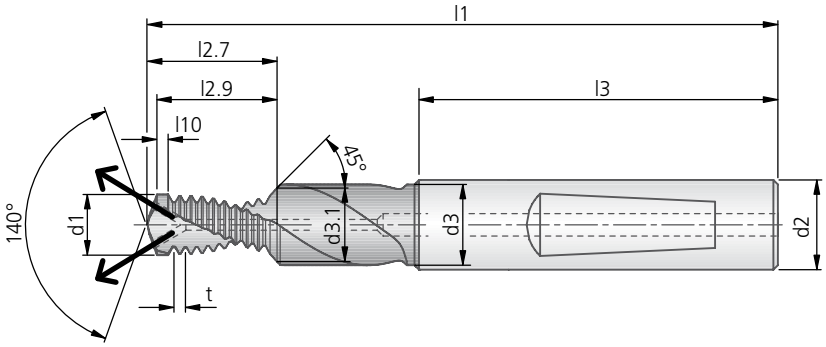
M					
Nominal ∅		2×D		3×D	
D	D3.1	BT	TL	BT	TL
M6 / M7	6,3	17,8	14,0	23,8	20,0
M8	8,3	23,2	18,5	31,2	26,5
M10	10,3	28,5	23,0	38,5	33,0
M12	12,3	34,0	27,5	46,0	39,5

M – metric ISO thread DIN 13

KOMET M-BGF

Drill thread milling tool with 2 cutting edges with rear chamfer





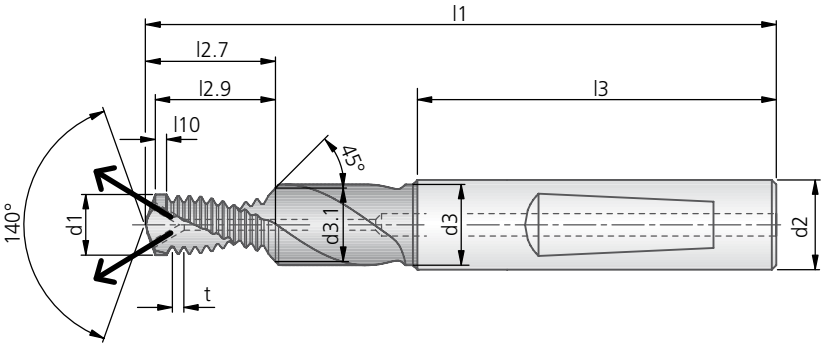
M-BGF 1,5×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4	0,70	47,0	7,3	6,8	36	0,7	3,3	6	4,5	4,3	3,24	2		80945001000015	88945001000015
M5	0,80	52,6	9,3	8,6	36	0,8	4,2	6	5,5	5,3	4,10	2		80945001000017	88945001000017
M6	1,00	59,0	11,5	10,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80945001000018	88945001000018
M8	1,25	70,3	14,4	13,4	40	1,3	6,8	10	9,0	8,3	6,45	2		80945001000020	88945001000020
M10	1,50	74,5	18,9	17,6	45	1,5	8,5	12	11,0	10,3	8,08	2		80945001000022	88945001000022
M12	1,75	83,8	21,8	20,2	45	1,5	10,3	14	13,5	12,3	9,74	2		80945001000024	88945001000024
														TiAlN Order No.	TiAlN Order No.
M4	0,70	47,0	7,3	6,8	36	0,7	3,3	6	4,5	4,3	3,24	2		80934001000015	88934001000015
M5	0,80	52,6	9,3	8,6	36	0,8	4,2	6	5,5	5,3	4,10	2		80934001000017	88934001000017
M6	1,00	59,0	11,5	10,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80934001000018	88934001000018
M8	1,25	70,3	14,4	13,4	40	1,3	6,8	10	9,0	8,3	6,45	2		80934001000020	88934001000020
M10	1,50	74,5	18,9	17,6	45	1,5	8,5	12	11,0	10,3	8,08	2		80934001000022	88934001000022
M12	1,75	83,8	21,8	20,2	45	1,5	10,3	14	13,5	12,3	9,74	2		80934001000024	88934001000024

Thread engagements see page 586.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with rear chamfer





M-BGF 2×D													DIN 6535 HE	DIN 6535 HA
													uncoated	uncoated
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	Order No.	Order No.
M3*	0,50	49,0	7,3	6,9	36	0,5	2,5	6	4,5	3,3	2,45	2		80901001000013	88901001000013
M4	0,70	49,0	9,4	8,9	36	0,7	3,3	6	4,5	4,3	3,24	2		80941001000015	88941001000015
M5	0,80	55,0	11,7	11,0	36	0,8	4,2	6	5,5	5,3	4,10	2		80941001000017	88941001000017
M6	1,00	62,0	14,5	13,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80941001000018	88941001000018
M8	1,25	74,0	18,2	17,1	40	1,3	6,8	10	9,0	8,3	6,45	2		80941001000020	88941001000020
M10	1,50	79,0	23,4	22,1	45	1,5	8,5	12	11,0	10,3	8,08	2		80941001000022	88941001000022
M12	1,75	89,0	27,1	25,5	45	1,5	10,3	14	13,5	12,3	9,74	2		80941001000024	88941001000024
M14	2,00	102,0	32,8	30,9	48	1,5	12,0	16	15,5	14,3	11,35	2		80941001000025	88941001000025
M16	2,00	102,0	37,1	35,0	48	1,5	14,0	18	17,5	16,3	13,28	2		80941001000026	88941001000026
														TiAlN	TiAlN
M3*	0,50	49,0	6,8	7,3	36	0,5	2,5	6	4,5	3,3	2,45	2		80906001000013	88906001000013
M4	0,70	49,0	9,4	8,9	36	0,7	3,3	6	4,5	4,3	3,24	2		80935001000015	88935001000015
M5	0,80	55,0	11,7	11,0	36	0,8	4,2	6	5,5	5,3	4,10	2		80935001000017	88935001000017
M6	1,00	62,0	14,5	13,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80935001000018	88935001000018
M8	1,25	74,0	18,2	17,1	40	1,3	6,8	10	9,0	8,3	6,45	2		80935001000020	88935001000020
M10	1,50	79,0	23,4	22,1	45	1,5	8,5	12	11,0	10,3	8,08	2		80935001000022	88935001000022
M12	1,75	89,0	27,1	25,5	45	1,5	10,3	14	13,5	12,3	9,74	2		80935001000024	88935001000024
M14	2,00	102,0	32,8	30,9	48	1,5	12,0	16	15,5	14,3	11,35	2		80935001000025	88935001000025
M16	2,00	102,0	37,1	35,0	48	1,5	14,0	18	17,5	16,3	13,28	2		80935001000026	88935001000026

* Tools without internal coolant supply

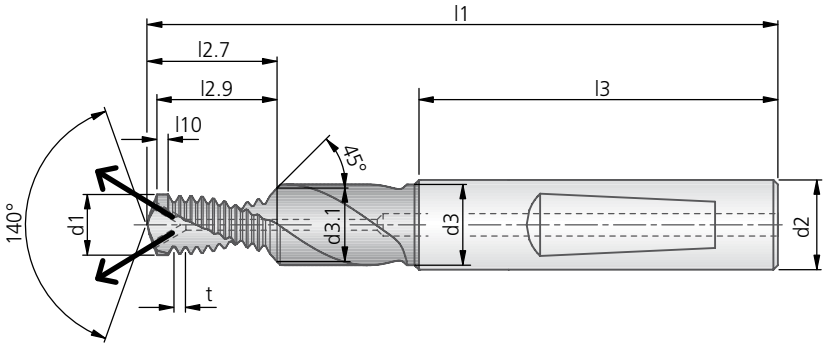
Thread engagements see page 586.

Guideline values for drill thread milling: page 606.

KOMET M-BGF

Drill thread milling tool with 2 cutting edges with rear chamfer





M-BGF 2,5×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4	0,70	49,0	11,5	11,0	36	0,7	3,3	6	4,5	4,3	3,24	2			
M5	0,80	55,0	14,1	13,4	36	0,8	4,2	6	5,5	5,3	4,10	2		80961001000017	88961001000017
M6	1,00	62,0	16,5	15,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80961001000018	88961001000018
M8	1,25	74,0	23,2	22,1	40	1,3	6,8	10	9,0	8,3	6,45	2		80961001000020	88961001000020
M10	1,50	79,0	27,9	26,6	45	1,5	8,5	12	11,0	10,3	8,08	2		80961001000022	88961001000022
M12	1,75	89,0	34,1	32,5	45	1,5	10,3	14	13,5	12,3	9,74	2		80961001000024	88961001000024
M14	2,00	102,0	38,8	36,9	48	1,5	12,0	16	15,5	14,3	11,35	2			
M16	2,00	102,0	45,1	43,0	48	1,5	14,0	18	17,5	16,3	13,28	2		80961001000026	88961001000026
														TiAlN	TiAlN
M4	0,70	49,0	11,5	11,0	36	0,7	3,3	6	4,5	4,3	3,24	2			
M5	0,80	55,0	14,1	13,4	36	0,8	4,2	6	5,5	5,3	4,10	2			
M6	1,00	62,0	16,5	15,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80956001000018	88956001000018
M8	1,25	74,0	23,2	22,1	40	1,3	6,8	10	9,0	8,3	6,45	2		80956001000020	88956001000020
M10	1,50	79,0	27,9	26,6	45	1,5	8,5	12	11,0	10,3	8,08	2		80956001000022	88956001000022
M12	1,75	89,0	34,1	32,5	45	1,5	10,3	14	13,5	12,3	9,74	2		80956001000024	88956001000024
M14	2,00	102,0	38,8	36,9	48	1,5	12,0	16	15,5	14,3	11,35	2			
M16	2,00	102,0	45,1	43,0	48	1,5	14,0	18	17,5	16,3	13,28	2			

M-BGF 3×D – for material group 7.4													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4	0,70	58	13,16	12,54	36	0,14	3,30	6	4,5	4,3	3,24	2		80904001000015	88904001000015
M5	0,90	63	16,73	15,94	36	0,16	4,20	6	5,5	5,3	4,10	2		80904001000017	88904001000017
M6	1,00	68	19,83	18,89	36	0,20	5,00	8	6,6	6,3	4,85	2		80904001000018	88904001000018
M8	1,25	82	26,11	24,89	40	0,25	6,80	10	9,0	8,3	6,45	2		80904001000020	88904001000020
M10	1,50	95	32,90	31,36	45	0,30	8,50	12	11,0	10,3	8,08	2		80904001000022	88904001000022

Thread engagements see page 586.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with rear chamfer

Material: P M K N S H

M

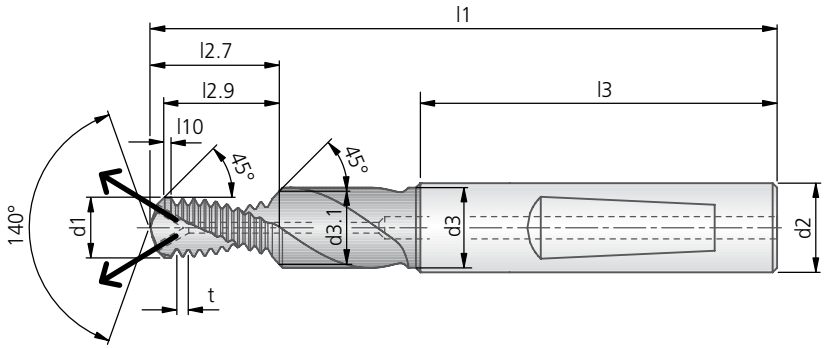
1,5×D
2×D

s.c. TiAlN

DIN 6535 HE

DIN 6535 HA

for cast materials (special GJS)



M-BGF GJS 1,5×D														DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	TiAlN Order No.	TiAlN Order No.
M4	0,70	47,0	7,3	6,8	36	0,7	3,3	6	4,5	4,3	3,24	2			
M5	0,80	52,6	9,3	8,6	36	0,8	4,2	6	5,5	5,3	4,10	2			
M6	1,00	59,0	11,5	10,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80949001000018	88949001000018
M8	1,25	70,3	14,4	13,4	40	1,3	6,8	10	9,0	8,3	6,45	2		80949001000020	88949001000020
M10	1,50	74,5	18,9	17,6	45	1,5	8,5	12	11,0	10,3	8,08	2		80949001000022	88949001000022
M12	1,75	83,8	21,8	20,2	45	1,5	10,3	14	13,5	12,3	9,74	2		80949001000024	88949001000024

M-BGF GJS 2×D														DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	TiAlN Order No.	TiAlN Order No.
M4	0,70	49,0	9,4	8,9	36	0,7	3,3	6	4,5	4,3	3,24	2			
M5	0,80	55,0	11,7	11,0	36	0,8	4,2	6	5,5	5,3	4,10	2			
M6	1,00	62,0	14,5	13,7	36	1,0	5,0	8	6,6	6,3	4,85	2		80943001000018	88943001000018
M8	1,25	74,0	18,2	17,1	40	1,3	6,8	10	9,0	8,3	6,45	2		80943001000020	88943001000020
M10	1,50	79,0	23,4	22,1	45	1,5	8,5	12	11,0	10,3	8,08	2		80943001000022	88943001000022
M12	1,75	89,0	27,1	25,5	45	1,5	10,3	14	13,5	12,3	9,74	2		80943001000024	88943001000024

Thread engagements see page 586.

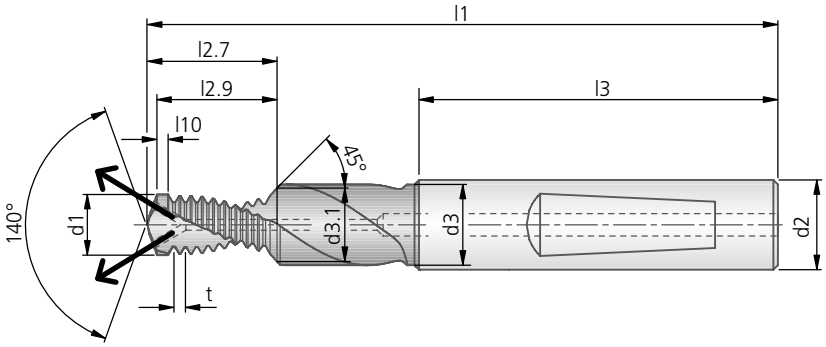
Uncoated tools are available on request.

Guideline values for drill thread milling: page 606.

KOMET EG-BGF

Drill thread milling tool with 2 cutting edges with rear chamfer





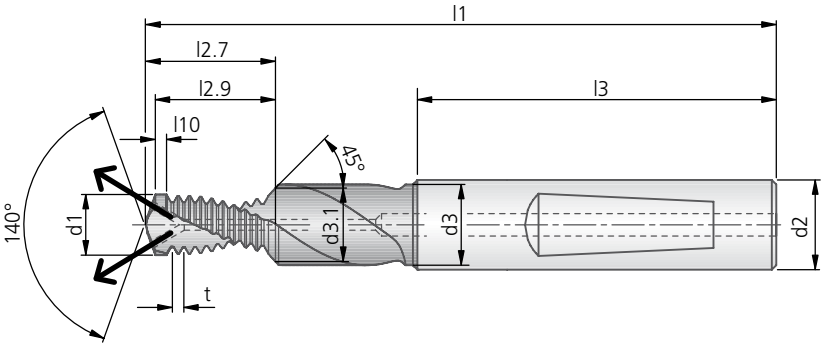
EG-BGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
EG-M6	1,00	74,0	16,8	15,8	40	1,0	6,3	10	9	7,6	5,98	2		80941051000018	88941051000018
EG-M8	1,25	78,0	22,3	21,0	45	1,3	8,4	12	11	9,9	7,89	2		80941051000020	88941051000020
EG-M10	1,50	87,5	26,8	25,2	45	1,5	10,5	14	14	12,3	9,83	2		80941051000022	88941051000022
EG-M12	1,75	102,0	32,8	30,9	48	1,5	12,5	16	16	14,6	11,80	2		80941051000024	88941051000024
														TiAlN	TiAlN
EG-M6	1,00	74,0	16,8	15,8	40	1,0	6,3	10	9	7,6	5,98	2		80935051000018	88935051000018
EG-M8	1,25	78,0	22,3	21,0	45	1,3	8,4	12	11	9,9	7,89	2		80935051000020	88935051000020
EG-M10	1,50	87,5	26,8	25,2	45	1,5	10,5	14	14	12,3	9,83	2		80935051000022	88935051000022
EG-M12	1,75	102,0	32,8	30,9	48	1,5	12,5	16	16	14,6	11,80	2		80935051000024	88935051000024

Thread engagements see page 586.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with rear chamfer





MF-BGF 1,5×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M8×1	1,0	70,0	14,8	13,7	40	1,0	7,0	10	9,0	8,3	6,79	2		80945002000070	88945002000070
M10×1	1,0	74,0	18,2	16,8	45	1,0	9,0	12	11,0	10,3	8,75	2		80945002000094	88945002000094
M12×1,5	1,5	83,0	22,2	20,6	45	1,5	10,5	14	13,5	12,3	10,06	2		80945002000113	88945002000113

TiAlN coated tools are available on request.

MF-BGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M6×0,75	0,75	62,0	14,9	13,3	36	0,8	5,25	8	6,6	6,3	5,14	2		80941002000048	88941002000048
M8×1	1,0	74,0	18,8	17,7	40	1,0	7,0	10	9,0	8,3	6,79	2		80941002000070	88941002000070
M10×1	1,0	79,0	23,2	21,8	45	1,0	9,0	12	11,0	10,3	8,75	2		80941002000094	88941002000094
M12×1	1,0	89,0	26,4	24,8	45	1,0	11,0	14	13,5	12,3	10,74	2		80941002000111	88941002000111
M12×1,5	1,5	89,0	28,2	26,6	45	1,5	10,5	14	13,5	12,3	10,06	2		80941002000113	88941002000113
M14×1,5	1,5	102,0	31,5	29,6	48	1,5	12,5	16	15,5	14,3	12,01	2		80941002000131	88941002000131
M16×1,5	1,5	102,0	36,3	34,1	48	1,5	14,5	18	17,5	16,3	13,95	2		80941002000147	88941002000147
														TiAlN	TiAlN
M6×0,75	0,75	62,0	14,9	13,3	36	0,8	5,25	8	6,6	6,3	5,14	2			
M8×1	1,0	74,0	18,8	17,7	40	1,0	7,0	10	9,0	8,3	6,79	2		80935002000070	88935002000070
M10×1	1,0	79,0	23,2	21,8	45	1,0	9,0	12	11,0	10,3	8,75	2		80935002000094	88935002000094
M12×1	1,0	89,0	26,4	24,8	45	1,0	11,0	14	13,5	12,3	10,74	2		80935002000111	88935002000111
M12×1,5	1,5	89,0	28,2	26,6	45	1,5	10,5	14	13,5	12,3	10,06	2		80935002000113	88935002000113
M14×1,5	1,5	102,0	31,5	29,6	48	1,5	12,5	16	15,5	14,3	12,01	2			
M16×1,5	1,5	102,0	36,3	34,1	48	1,5	14,5	18	17,5	16,3	13,95	2			

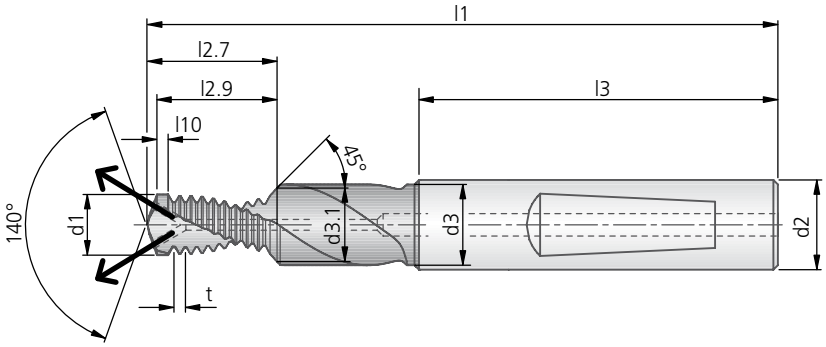
Thread engagements see page 586.

Guideline values for drill thread milling: page 606.

KOMET UNC-BGF

Drill thread milling tool with 2 cutting edges with rear chamfer





UNC-BGF 1,5×D													DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
1/4-20 UNC	1,270	58,2	11,9	11,1	36	1,3	5,1	8	7,8	6,7	4,70	2		80945010000011	88945010000011
5/16-18 UNC	1,411	69,8	14,8	13,8	40	1,4	6,5	10	9,0	8,2	6,01	2		80945010000012	88945010000012
3/8-16 UNC	1,588	74,2	18,2	17,0	45	1,5	7,9	12	11,0	9,8	7,36	2		80945010000013	88945010000013
1/2-13 UNC	1,954	83,0	24,2	22,6	45	1,5	10,8	14	13,5	13,0	9,87	2		80945010000015	88945010000015

UNC-BGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
1/4-20 UNC	1,270	62,0	15,7	14,9	36	1,3	5,1	8	7,8	6,7	4,70	2		80941010000011	88941010000011
5/16-18 UNC	1,411	74,0	19,0	18,0	40	1,4	6,5	10	9,0	8,2	6,01	2		80941010000012	88941010000012
3/8-16 UNC	1,588	79,0	23,0	21,8	45	1,5	7,9	12	11,0	9,8	7,36	2		80941010000013	88941010000013
1/2-13 UNC	1,954	89,0	30,1	28,4	45	1,5	10,8	14	13,5	13,0	9,87	2		80941010000015	88941010000015

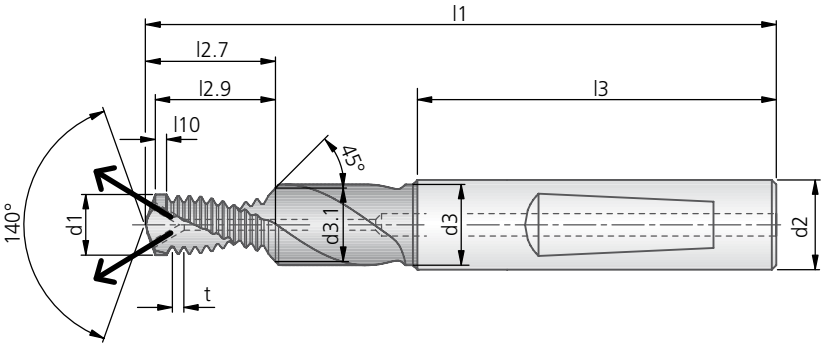
Thread engagements see page 586.

TiAlN coated tools are available on request.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with rear chamfer





UNF-BGF 1,5×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
1/4-28 UNF	0,907	58,4	11,5	10,7	36	0,9	5,4	8	7,8	6,7	5,17	2		**80945011000011**	**88945011000011**
5/16-24 UNF	1,058	70,0	14,6	13,5	40	1,1	6,9	10	9,0	8,2	6,51	2		**80945011000012**	**88945011000012**
3/8-24 UNF	1,058	74,8	17,0	15,7	45	1,1	8,5	12	11,0	9,8	8,07	2		**80945011000013**	**88945011000013**
1/2-20 UNF	1,270	82,7	21,8	20,1	45	1,3	11,4	14	13,5	13,0	10,88	2		**80945011000015**	**88945011000015**

UNF-BGF 2×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
1/4-28 UNF	0,907	62,0	15,2	14,3	36	0,9	5,4	8	7,8	6,7	5,17	2		**80941011000011**	**88941011000011**
5/16-24 UNF	1,058	74,0	18,8	17,8	40	1,1	6,9	10	9,0	8,2	6,51	2		**80941011000012**	**88941011000012**
3/8-24 UNF	1,058	79,0	21,2	19,9	45	1,1	8,5	12	11,0	9,8	8,07	2		**80941011000013**	**88941011000013**
1/2-20 UNF	1,270	89,0	28,2	26,4	45	1,3	11,4	14	13,5	13,0	10,88	2		**80941011000015**	**88941011000015**

Thread engagements see page 586.

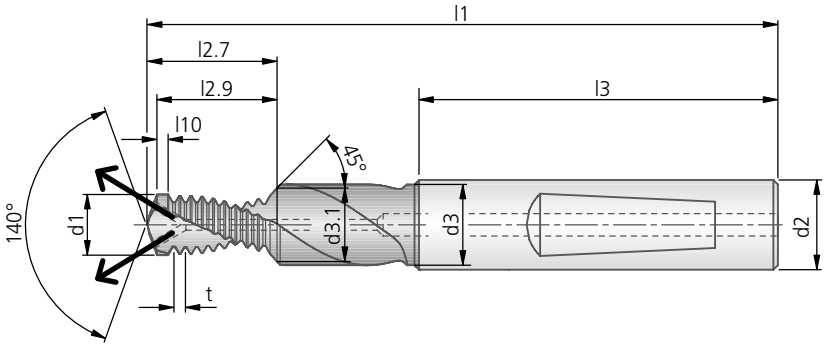
TiAlN coated tools are available on request.

Guideline values for drill thread milling: page 606.

KOMET G-BGF

Drill thread milling tool with 2 cutting edges with rear chamfer





G-BGF 2×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated  Order No.	uncoated  Order No.
G1/8-28	0,907	79,0	22,1	20,7	45	0,9	8,8	12	11,0	10,0	8,40	2		**80941025000001**	**88941025000001**
G1/4-19	1,337	102,0	29,5	27,7	48	1,3	11,8	16	13,5	13,5	11,44	2		**80941025000002**	**88941025000002**

Thread engagements see page 586.

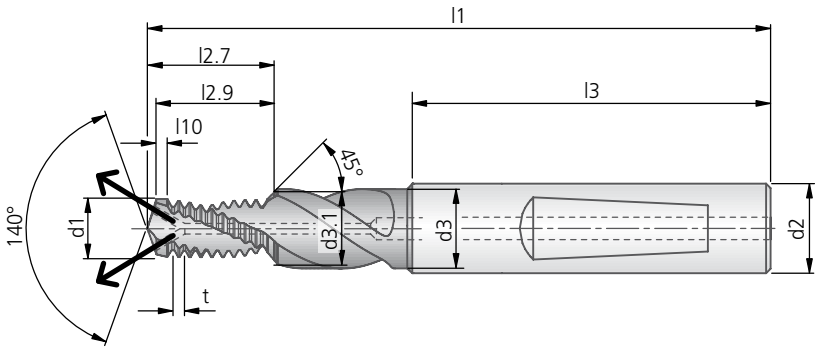
TiAlN coated tools are available on request.

● very good | ◐ good

Drill thread milling tool with 3 cutting edges with rear chamfer



for precasted holes



M-BGF 1,5×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M6	1,00	59,0	11,5	10,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80345001000018	88345001000018
M8	1,25	70,3	14,4	13,4	40	1,3	6,8	10	9,0	8,3	6,45	3		80345001000020	88345001000020
M10	1,50	74,5	18,9	17,6	45	1,5	8,5	12	11,0	10,3	8,08	3		80345001000022	88345001000022
M12	1,75	83,8	21,8	20,2	45	1,5	10,3	14	13,5	12,3	9,74	3		80345001000024	88345001000024
														TiAlN Order No.	TiAlN Order No.
M6	1,00	59,0	11,5	10,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80334001000018	88334001000018
M8	1,25	70,3	14,4	13,4	40	1,3	6,8	10	9,0	8,3	6,45	3		80334001000020	88334001000020
M10	1,50	74,5	18,9	17,6	45	1,5	8,5	12	11,0	10,3	8,08	3		80334001000022	88334001000022
M12	1,75	83,8	21,8	20,2	45	1,5	10,3	14	13,5	12,3	9,74	3		80334001000024	88334001000024

M-BGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M6	1,00	62,0	14,5	13,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80341001000018	88341001000018
M8	1,25	74,0	18,2	17,1	40	1,3	6,8	10	9,0	8,3	6,45	3		80341001000020	88341001000020
M10	1,50	79,0	23,4	22,1	45	1,5	8,5	12	11,0	10,3	8,08	3		80341001000022	88341001000022
M12	1,75	89,0	27,1	25,5	45	1,5	10,3	14	13,5	12,3	9,74	3		80341001000024	88341001000024
														TiAlN Order No.	TiAlN Order No.
M6	1,00	62,0	14,5	13,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80335001000018	88335001000018
M8	1,25	74,0	18,2	17,1	40	1,3	6,8	10	9,0	8,3	6,45	3		80335001000020	88335001000020
M10	1,50	79,0	23,4	22,1	45	1,5	8,5	12	11,0	10,3	8,08	3		80335001000022	88335001000022
M12	1,75	89,0	27,1	25,5	45	1,5	10,3	14	13,5	12,3	9,74	3		80335001000024	88335001000024

Thread engagements see page 586.

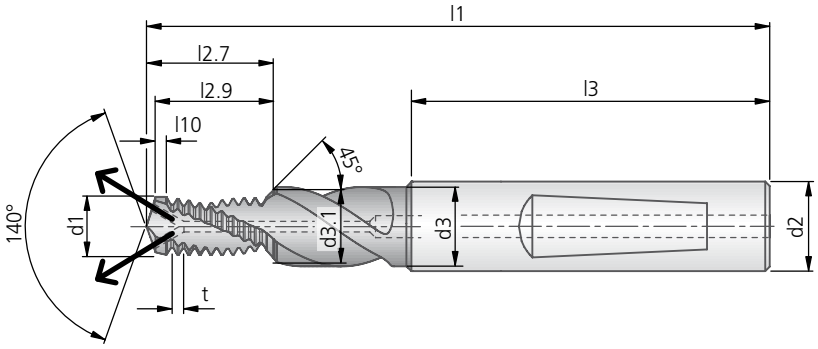
Guideline values for drill thread milling: page 606.

KOMET M-BGF

Drill thread milling tool with 3 cutting edges with rear chamfer

P M K N S H
– TiAlN
M
1,5×D 2×D
s.c. TiAlN
DIN 6535 HE
DIN 6535 HA

for precasted holes



M-BGF 2,5×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M6	1,00	62,0	16,5	15,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80361001000018	88361001000018
M8	1,25	74,0	23,2	22,1	40	1,3	6,8	10	9,0	8,3	6,45	3		80361001000020	88361001000020
M10	1,50	79,0	27,9	26,6	45	1,5	8,5	12	11,0	10,3	8,08	3		80361001000022	88361001000022
M12	1,75	89,0	34,1	32,5	45	1,5	10,3	14	13,5	12,3	9,74	3		80361001000024	88361001000024
														TiAlN Order No.	TiAlN Order No.
M6	1,00	62,0	16,5	15,7	36	1,0	5,0	8	6,6	6,3	4,85	3		80356001000018	88356001000018
M8	1,25	74,0	23,2	22,1	40	1,3	6,8	10	9,0	8,3	6,45	3		80356001000020	88356001000020
M10	1,50	79,0	27,9	26,6	45	1,5	8,5	12	11,0	10,3	8,08	3		80356001000022	88356001000022
M12	1,75	89,0	34,1	32,5	45	1,5	10,3	14	13,5	12,3	9,74	3		80356001000024	88356001000024

Thread engagements see page 586.

● very good | ◐ good

KOMET M-BGF NZ4

Drill thread milling tool with 4 cutting edges with rear chamfer

Material P M K N S H

M

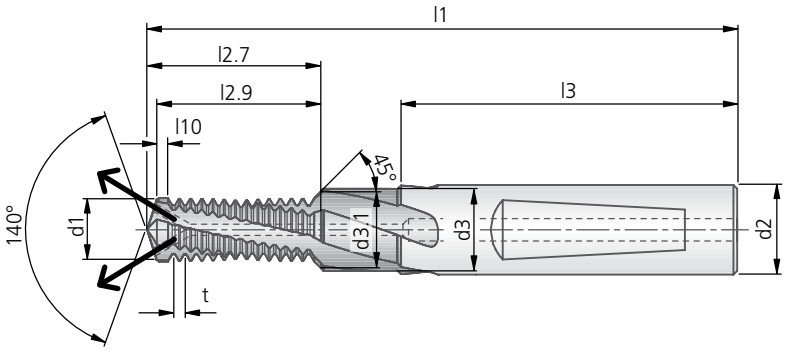
1,5×D 2×D 2,5×D

s.c. AlCrN

DIN 6535 HE

DIN 6535 HA

for grey cast iron (GJL)



M-BGF NZ4 GJL 1,5×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	AlCrN Order No.	AlCrN Order No.
M6	1,00	59,0	11,6	10,5	36	0,8	5,0	8	6,6	6,3	4,85	4		80369001000018	88369001000018
M8	1,25	70,3	14,5	13,0	40	1,0	6,8	10	9,0	8,3	6,61	4		80369001000020	88369001000020
M10	1,50	74,7	19,0	17,1	45	1,1	8,5	12	11,0	10,3	8,29	4		80369001000022	88369001000022
M12	1,75	83,8	22,0	19,7	45	1,1	10,3	14	13,5	12,3	10,00	4		80369001000024	88369001000024
M14	2,00	94,0	25,1	22,4	48	1,0	12,0	16	15,5	14,3	11,35	4			
M16	2,00	94,0	29,5	26,5	48	1,0	14,0	18	17,5	16,3	13,27	4			

M-BGF NZ4 GJL 2×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	AlCrN Order No.	AlCrN Order No.
M6	1,00	62,0	14,6	13,5	36	0,8	5,0	8	6,6	6,3	4,85	4		80373001000018	88373001000018
M8	1,25	74,0	18,3	16,8	40	1,0	6,8	10	9,0	8,3	6,61	4		80373001000020	88373001000020
M10	1,50	79,0	23,5	21,6	45	1,1	8,5	12	11,0	10,3	8,29	4		80373001000022	88373001000022
M12	1,75	89,0	27,2	24,9	45	1,1	10,3	14	13,5	12,3	10,00	4		80373001000024	88373001000024
M14	2,00	102,0	33,1	30,4	48	1,0	12,0	16	15,5	14,3	11,35	4			
M16	2,00	102,0	37,5	34,5	48	1,0	14,0	18	17,5	16,3	13,27	4			

M-BGF NZ4 GJL 2,5×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	AlCrN Order No.	AlCrN Order No.
M6	1,00	62,0	16,6	15,5	36	0,8	5,0	8	6,6	6,3	4,85	4		80380001000018	88380001000018
M8	1,25	74,0	23,3	21,8	40	1,0	6,8	10	9,0	8,3	6,61	4		80380001000020	88380001000020
M10	1,50	79,0	28,0	26,1	45	1,1	8,5	12	11,0	10,3	8,29	4		80380001000022	88380001000022
M12	1,75	89,0	34,2	31,9	45	1,1	10,3	14	13,5	12,3	10,00	4		80380001000024	88380001000024
M14	2,00	102,0	39,1	36,4	48	1,0	12,0	16	15,5	14,3	11,35	4			
M16	2,00	102,0	45,5	42,5	48	1,0	14,0	18	17,5	16,3	13,27	4			

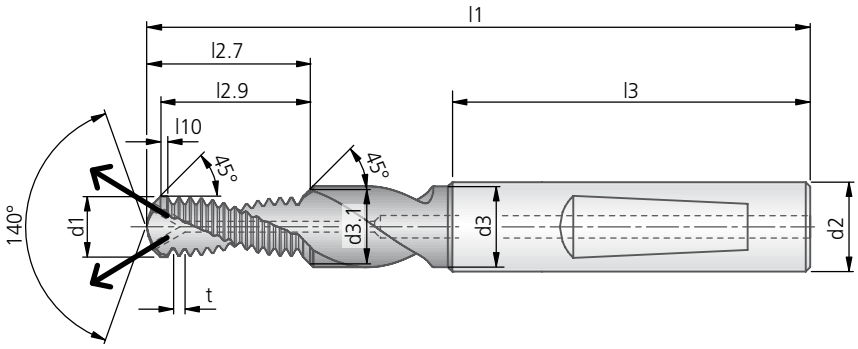
Thread engagements see page 586.

Guideline values for drill thread milling: page 606.

KOMET M-UBGF

Drill thread milling tool with 2 cutting edges with front and rear chamfer





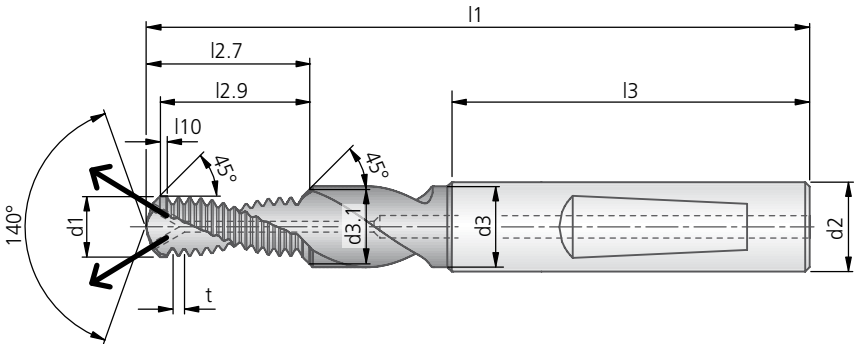
M-UBGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
M4	0,70	49,0	9,4	8,6	36	0,4	3,3	6	4,5	4,3	3,24	2			
M5	0,80	55,0	12,5	11,4	36	0,5	4,2	6	5,5	5,3	4,10	2			
M6	1,00	62,0	14,5	13,3	36	0,6	5,0	8	6,6	6,3	4,85	2		80641001000018	88641001000018
M8	1,25	74,0	18,2	16,6	40	0,8	6,8	10	9,0	8,3	6,45	2		80641001000020	88641001000020
M10	1,50	79,0	23,4	21,5	45	0,9	8,5	12	11,0	10,3	8,08	2		80641001000022	88641001000022
M12	1,75	89,0	28,8	26,6	45	0,9	10,3	14	13,5	12,3	9,74	2		80641001000024	88641001000024
M14	2,00	102,0	32,8	30,2	48	0,8	12,0	16	15,5	14,3	11,35	2			
M16	2,00	102,0	37,1	34,2	48	0,8	14,0	18	17,5	16,3	13,28	2			
														TiAlN	TiAlN
M4	0,70	49,0	9,4	8,6	36	0,4	3,3	6	4,5	4,3	3,24	2			
M5	0,80	55,0	12,5	11,4	36	0,5	4,2	6	5,5	5,3	4,10	2			
M6	1,00	62,0	14,5	13,3	36	0,6	5,0	8	6,6	6,3	4,85	2		80635001000018	88635001000018
M8	1,25	74,0	18,2	16,6	40	0,8	6,8	10	9,0	8,3	6,45	2		80635001000020	88635001000020
M10	1,50	79,0	23,4	21,5	45	0,9	8,5	12	11,0	10,3	8,08	2		80635001000022	88635001000022
M12	1,75	89,0	28,8	26,6	45	0,9	10,3	14	13,5	12,3	9,74	2		80635001000024	88635001000024
M14	2,00	102,0	32,8	30,2	48	0,8	12,0	16	15,5	14,3	11,35	2			
M16	2,00	102,0	37,1	34,2	48	0,8	14,0	18	17,5	16,3	13,28	2			

Thread engagements see page 587.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with front and rear chamfer





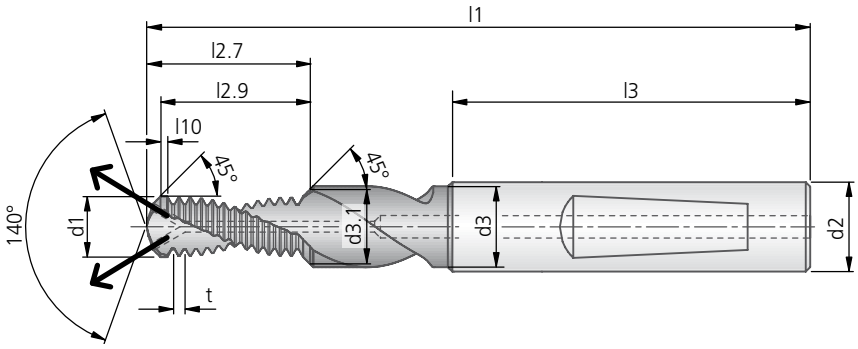
MF-UBGF 2×D														DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
M6×0,75	0,75	61,7	14,9	13,0	36	0,4	5,3	8	6,6	6,3	5,14	2		**80641002000048**	**88641002000048**
M8×1	1,00	74,0	18,8	17,3	40	0,6	7,0	10	9,0	8,3	6,79	2		**80641002000070**	**88641002000070**
M10×1	1,00	79,0	24,2	22,4	45	0,6	9,0	12	11,0	10,3	8,75	2		**80641002000094**	**88641002000094**
M12×1	1,00	88,4	26,4	24,3	45	0,6	11,0	14	13,5	12,3	10,74	2		**80641002000111**	**88641002000111**
M12×1,5	1,50	89,0	28,2	26,0	45	0,9	10,5	14	13,5	12,3	10,06	2		**80641002000113**	**88641002000113**
M14×1,5	1,50	102,0	33,0	30,5	48	0,9	12,5	16	15,5	14,3	12,01	2		**80641002000131**	**88641002000131**
M16×1,5	1,50	102,0	36,3	33,5	48	0,9	14,5	18	17,5	16,3	13,95	2			
														TiAlN	TiAlN
M6×0,75	0,75	61,7	14,9	13,0	36	0,4	5,3	8	6,6	6,3	5,14	2			
M8×1	1,00	74,0	18,8	17,3	40	0,6	7,0	10	9,0	8,3	6,79	2		**80635002000070**	**88635002000070**
M10×1	1,00	79,0	24,2	22,4	45	0,6	9,0	12	11,0	10,3	8,75	2		**80635002000094**	**88635002000094**
M12×1	1,00	88,4	26,4	24,3	45	0,6	11,0	14	13,5	12,3	10,74	2		**80635002000111**	**88635002000111**
M12×1,5	1,50	89,0	28,2	26,0	45	0,9	10,5	14	13,5	12,3	10,06	2		**80635002000113**	**88635002000113**
M14×1,5	1,50	102,0	33,0	30,5	48	0,9	12,5	16	15,5	14,3	12,01	2			
M16×1,5	1,50	102,0	36,3	33,5	48	0,9	14,5	18	17,5	16,3	13,95	2			

Thread engagements see page 587.

KOMET UNC-UBGF

Drill thread milling tool with 2 cutting edges with front and rear chamfer





UNC-UBGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-20 UNC	1,270	62,0	15,7	14,4	36	0,8	5,1	8	7,8	6,7	4,70	2		80641010000011	88641010000011
5/16-18 UNC	1,411	74,0	19,0	17,5	40	0,9	6,5	10	9,0	8,2	6,01	2		80641010000012	88641010000012
3/8-16 UNC	1,588	79,0	23,0	21,2	45	0,9	7,9	12	11,0	9,8	7,36	2		80641010000013	88641010000013
1/2-13 UNC	1,954	89,0	30,1	27,7	45	0,8	10,8	14	13,5	13,0	9,87	2		80641010000015	88641010000015

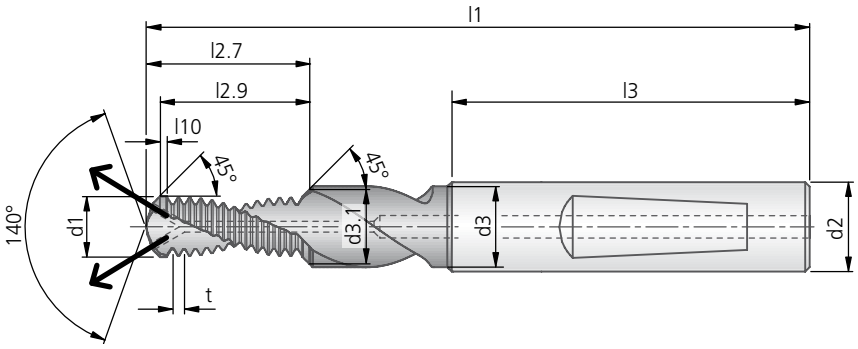
Thread engagements see page 587.

TiAlN coated tools are available on request.

● very good | ◐ good

Drill thread milling tool with 2 cutting edges with front and rear chamfer





UNF-UBGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	~ kg	uncoated Order No.	uncoated Order No.
1/4-28 UNF	0,907	62,0	15,2	13,9	36	0,5	5,4	8	7,8	6,7	5,17	2		**80641011000011**	**88641011000011**
5/16-24 UNF	1,058	74,0	18,8	17,3	40	0,6	6,9	10	9,0	8,2	6,51	2		**80641011000012**	**88641011000012**
3/8-24 UNF	1,058	79,0	22,3	20,5	45	0,6	8,5	12	11,0	9,8	8,07	2		**80641011000013**	**88641011000013**
1/2-20 UNF	1,270	89,0	29,5	27,2	45	0,8	11,4	14	13,5	13,0	10,88	2		**80641011000015**	**88641011000015**

Thread engagements see page 587.

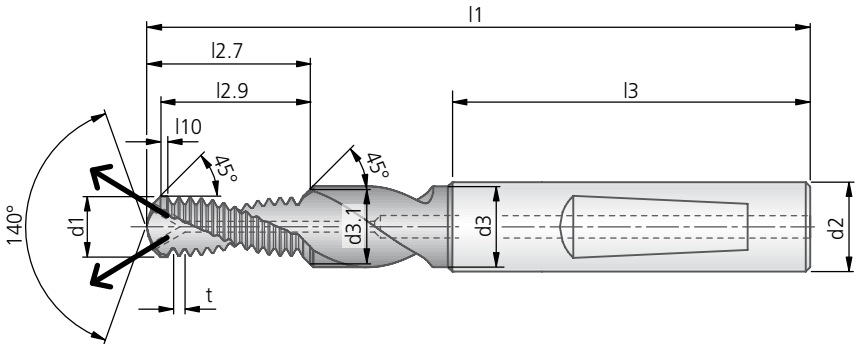
TiAlN coated tools are available on request.

Guideline values for drill thread milling: page 606.

KOMET G-UBGF

Drill thread milling tool with 2 cutting edges with front and rear chamfer





G-UBGF 2×D													DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2.7	l2.9	l3	l10	d1	d2	d3	d3.1	AD	Z	kg ~	uncoated Order No.	uncoated Order No.
G1/8-28	0,907	79,0	22,1	20,3	45	0,5	8,8	12	11,0	10,0	8,40	2		80641025000001	88641025000001
G1/4-19	1,337	102,0	30,8	28,5	48	0,8	11,8	16	15,5	13,5	11,44	2		80641025000002	88641025000002

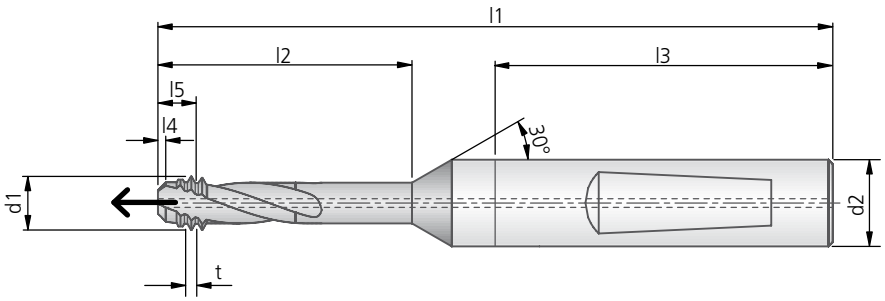
Thread engagements see page 587.

TiAlN coated tools are available on request.

● very good | ◐ good

Direct circular drill thread milling tool with 3 or 4 cutting edges with front chamfer





M-DBGF 2×D											DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2	l3	l4	l5	d1	d2	Z	~ kg	TiAlN Order No.	TiAlN Order No.
M6 / M7	1,00	60,0	17,8	36	0,4	3,8	4,7	8	3		80752001000018	88752001000018
M8	1,25	71,0	23,2	40	0,5	4,7	6,3	10	4		80752001000020	88752001000020
M10	1,50	76,0	28,5	40	0,6	5,5	7,8	10	4		80752001000022	88752001000022
M12	1,75	86,0	34,0	45	0,6	6,5	9,5	12	4		80752001000024	88752001000024

M-DBGF 3×D											DIN 6535 HE	DIN 6535 HA
Nominal ∅	t	l1	l2	l3	l4	l5	d1	d2	Z	~ kg	TiAlN Order No.	TiAlN Order No.
M6 / M7	1,00	65,0	23,8	36	0,4	3,8	4,7	8	3		80758001000018	88758001000018
M8	1,25	79,0	31,2	40	0,5	4,7	6,3	10	4		80758001000020	88758001000020
M10	1,50	85,0	38,5	40	0,6	5,5	7,8	10	4		80758001000022	88758001000022
M12	1,75	100,0	46,0	45	0,6	6,5	9,5	12	4		80758001000024	88758001000024

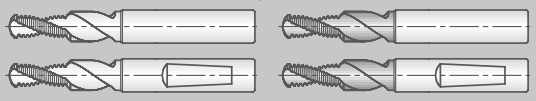
Thread engagements see page 587.

KOMET BGF | UBGF | DBGF

Recommended cutting data

Guideline values for drill thread milling

v_c (m/min) = Cutting speed
f_b (mm/rev.) = Drilling feed
f_z (mm/tooth) = Milling feed





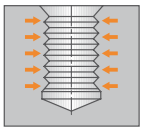
Material group		Strength Rm (N/mm²)	Hardness HB	Surface / Material	BGF | UBGF un-coated v_c m/min	BGF | UBGF TiAlN v_c m/min	BGF | UBGF AlCrN v_c m/min	BGF | UBGF ≤ Ø 6 f_b mm/rev.	BGF | UBGF ≤ Ø 12 f_b mm/rev.	BGF | UBGF ≤ Ø 6 f_z mm/tooth	BGF | UBGF ≤ Ø 12 f_z mm/tooth	DBGF TiAlN v_c m/min	DBGF f_z mm/tooth
P	1.1	≤400	≤120	magnetic soft iron								100-150	0,03-0,10
P	1.2	≤700	≤200	structural, case hardened steel								100-150	0,03-0,10
P	1.3	≤850	≤250	carbon steel								100-150	0,03-0,10
P	1.4	≤850	≤250	alloy steel								100-150	0,03-0,10
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel								100-150	0,03-0,10
P	1.6	>1200	>350	alloy/heat treated steel								100-150	0,03-0,10
H	1.7	≤1400	≤400	hardened steel to 45 HRC									
H	1.8	≤2200	≤600	hardened steel to 58 HRC									
M	2.1	≤850	≤250	stainless steel, sulphuretted									
M	2.2	≤850	≤250	austentic									
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic									
K	3.1	≤500	≤150	grey cast iron	50-80	80-120	80-120	0,10-0,15	0,15-0,22	0,02-0,05	0,05-0,10	100-200	0,05-0,15
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	50-80	80-120	80-120	0,10-0,15	0,15-0,22	0,02-0,05	0,05-0,10	100-200	0,05-0,15
K	3.3	400-500	200-250	vermicular cast iron		80-100		0,10-0,15	0,15-0,22	0,02-0,05	0,05-0,10	100-150	0,05-0,15
K	3.4	≤700	≤200	spheroidal graphite cast iron	50-80	80-120		0,10-0,15	0,15-0,22	0,02-0,05	0,05-0,10	100-200	0,05-0,15
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated								100-200	0,05-0,15
K	3.6	≤700	≤200	malleable iron								100-200	0,05-0,15
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated								100-200	0,05-0,15
S	4.1	≤700	≤200	pure titanium									
S	4.2	≤900	≤270	titanium alloys									
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys									
S	5.1	≤500	≤150	pure nickel									
S	5.2	≤900	<270	nickel alloys, heat resistant									
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance									
N	6.1	≤350	≤100	non-alloy copper									
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	100-300			0,10-0,30	0,06-0,10	0,03-0,06	0,06-0,10	100-200	0,05-0,15
N	6.3	≤700	≤200	long chip brass								100-200	0,05-0,15
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)									
N	7.1	≤350	≤100	Al, Mg non-alloy	100-400	100-400		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-400	0,05-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	100-400	100-400		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-400	0,05-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	100-400	100-400		0,03-0,06	0,06-0,12	0,03-0,06	0,06-0,10	100-400	0,05-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	100-300	100-400		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-400	0,05-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %		100-300		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-300	0,05-0,20
N	8.1			thermoplastics	60-120	60-120		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-200	0,05-0,20
N	8.2			thermosetting plastics	60-100	60-100		0,10-0,25	0,25-0,30	0,03-0,06	0,06-0,10	100-200	0,05-0,20
N	8.3			fibre reinforced plastics	40-60	60-80		0,10-0,15	0,15-0,22	0,02-0,05	0,05-0,10	100-150	0,05-0,20

Cutting values shown are relating to the basic recommendations for cutting materials given.

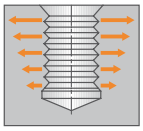
1. 

Chips packed or glued at the thread profile
- poor coolant

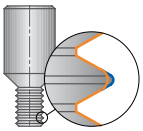
→ improve coolant (i.e. add flood coolant, lateral flute coolant supply for through holes)
→ add coolant flutes flutes on shank

2. 

Thread go-gage doesn't fit
- thread too small → reduce tool radius in offset register
- chips in thread → improve coolant

3. 

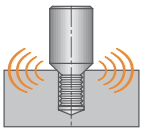
Thread is getting tapered
- poor tool clamping → improve tool holding (i.e. shrink fit holders)
- thread milling feed too high → reduce thread milling feed

4. 

Erratic tool wear
- tool run out too high → use better tool holders (i.e. shrink fit holders)

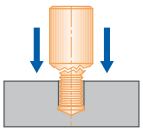
5. 

Counterbore chips are winding around the tool
- chamfer feed too low → increase chamfer feed

6. 

Loud drilling noise (especially towards the final drilling depth)
- chip problem

→ reduce drill feed rate
→ use tool with coolant through
→ add peck cycle

7. 

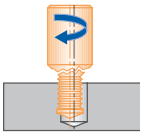
Tool breakage while drilling (especially in long chipping material)
- chip problem

→ reduce drill feed rate
→ use tool with coolant through
→ add peck cycle (multiple pecks)

8. 

Chips glued up in the flutes
- poor coolant

→ improve coolant situation
→ use tool with coolant through
→ use coated tool

9. 

Chippage,tool breakage while thread milling
- feed rate thread milling too high → check that the chip grooves are free of chips after the boring operation
- vibrations → reduce feed rate (check whether NC feeds relate to centre point or external track)

10. 

Poor thread surface (harmonics)
- vibrations

→ check tool holder (do not use modular systems !)
→ check workpiece clamping and fixture. Where the clamping set-up is unstable introduce a distribution of the cutting force.
→ reduce cutting speed
→ increase tooth feed rate
→ introduce distribution of cutting force

KOMET TOMILL GWF

Producing threads with the highest precision

The KOMET TOMILL GWF is suitable for producing large thread diameters according to the 2/3 concept. Our tools have a helix angle of approximately 15° to the right, with the effect that extremely quiet work can be achieved. The cubic capacity complies with the KOMET standard, and the shank is manufactured to DIN 6535.

KOMET TOMILL GWF SR
Thread milling right to the base of the hole.

KOMET TOMILL GWF GP
Using this tool greatly reduces machining time. Chamfering, face milling and thread milling using one tool.

KOMET TOMILL GWF GS
Counterboring and thread milling in a single clamping arrangement.

KOMET TOMILL GWF HPC PKD
Optimised for high cutting speeds due to a higher number of teeth.



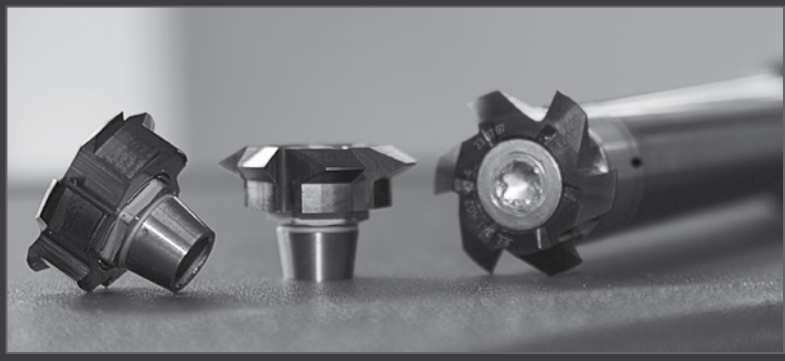
KOMET TOMILL CUT

Five holders with seven thread milling heads, three chamfering heads and, on request, grooving heads in various forms.

Thread milling
- For pitch 1,0 - 6,0 mm, as well as UN22 - UN4 T.P.I and G 14 - G 11 T.P.I
- For metric- and metric fine ISO threads from M20x1, as well as 13/16“ and G½
- Thread lengths up to 136 mm can be produced

90° chamfering and deburring
- Carbide chamfer head, TiAlN coated
- 90°-chamfering of the bore top as well as the bore exit
- Deburring of workpiece edges
- Chamfer heads with other angle (combinations) are available on request

Grooving
- Grooving heads in various designs are available on request
- Solid carbide or PCD tipped



BENEFITS for you:

- One and the same tool for different tolerances
- One and the same tool for different diameters > nominal Ø with same pitch
- One and the same tool for blind and through holes
- One and the same tool for different materials
- Exact and repeatable thread depth
- No chip root remaining in the thread
- High speed cutting (HSC) possible

KOMET TPT

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning: +49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

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Thread milling tool TOMILL CUT Page

for thread M, MF, UN, G > Ø 20 mm 610 – 611

Thread milling tool XAM

for thread M, UN, G > Ø 12 mm 612 – 613

Thread milling tool TOMILL GWF

Thread engagements 614

TOMILL GWF SR / GS

M-GWF SR | MF-GWF SR 615 – 616
UN-GWF SR 617
G-GWF SR 618
NPT-/NPTF-GWF GS 619

TOMILL GWF SR

for external thread
M-GWF SR | MF-GWF SR 620

TOMILL GWF XS

for machining steel ≥ 900 N/mm²
M-GWF XS | MF-GWF XS 621

TOMILL GWF HPC

for machining steel to 1200 N/mm² tensile strength, stainless steel, cast materials and titanium alloys
M-GWF HPC | MF-GWF HPC 622

TOMILL GWF SR PKD / HPC PKD

for lightweight structural materials
M-GWF SR PKD | MF-GWF SR PKD 626
M-GWF HPC PKD | MF-GWF HPC PKD 627

TOMILL GWF GP

spot facing, chamfering and thread milling
M-GWF GP | MF-GWF GP 623
G-GWF GP 624

Recommended cutting data 625 – 630

Problems – Causes – Solutions 631

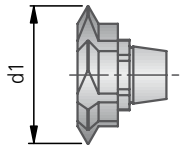
Tap drill diameters 678

KOMET TOMILL CUT

Thread milling, chamfering and deburring, grooving > Ø 20 mm

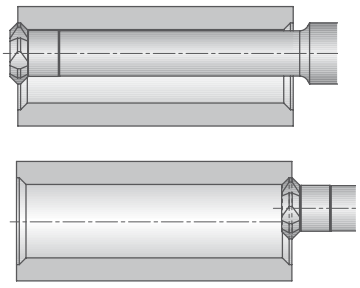
Material P M K N S H ● ● ● ● ● ◐ | M | MF | UN | G | S.C. TiAlN | | DIN 6535 HE | DIN 6535 HA

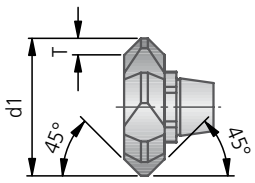
Thread milling head
TiAlN coated
Cylindrical connection with d1=34



			M | MF		UN				G			
Suitable for holder	d1	Z	Metric ISO thread DIN 13 Thread	Nut d min	american Unified thread ANSI B1.1 Thread	Nut d min	Order No.	kg	Whitworth pipe thread DIN EN ISO 228 Thread	Nut d min	Order No.	kg
❶	16	6	M1,0 - M2,0	20	UN24 - UN12	13/16-20 UNEF	50341001001020		G14	G1/2	50341001251400	
			M1,5 - M2,5		UN18 - UN10		50341001001525		G11		50341001251100	
❷	20	6	M1,0 - M2,0	24	UN24-UN12	1-8UNC	50341002001020				–	
			M3,0 - M4,0		UN8-UN6		50341002003040				–	
❸	34	6	M5,0 - M6,0	48	UN5-UN4	1-3/4-5UNC	50341004005060				–	

Chamfering head
TiAlN coated
Cylindrical connection with d1=34

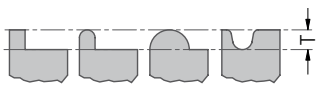




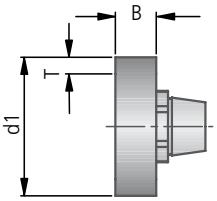
Chamfering and deburring						
Suitable for holder	d1	Z	T	Bore d min	Order No.	kg
❶	16	6	1,4	16,5	50391045011600	
❷	20	6	2,4	20,5	50391045022000	
❸	34	6	3,5	34,5	50391045043400	

Grooving head
in various designs available on request
solid carbide or PCD tipped
Cylindrical connection with d1=34





Examples of possible designs



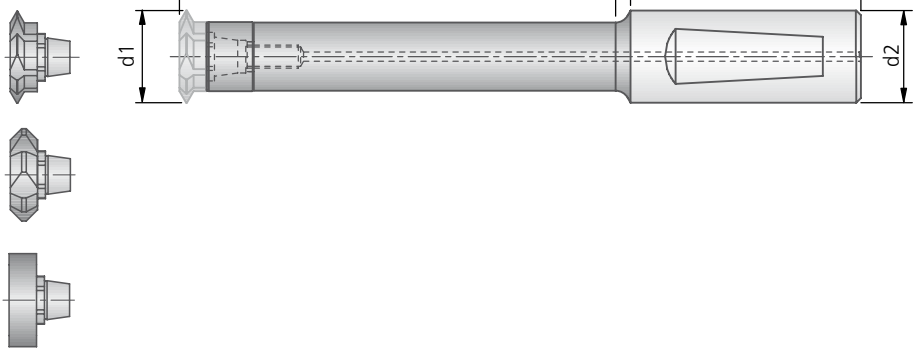
Grooving				
Suitable for holder	d1 max	B max	T max	Bore d min
❶	16	4,5	1,4	16,5
❷	20	5,5	2,4	20,5
❸	34	9,5	3,5	34,5

● very good | ◐ good

Thread milling

Chamfering and deburring

Grooving



Holder			DIN 6535 HE	DIN 6535 HA	Suitable for milling, chamfering and grooving heads
Cylindrical shank Ø d2×l3	l1	l2	Order No.	Order No.	
16 × 48	100	50	50310016001050	58310016001050	❶
16 × 48	130	80	50310016001080	58310016001080	
20 × 50	112	60	50310020002060	58310020002060	❷
20 × 50	148	96	50310020002096	58310020002096	
25 × 56	197	136	50310025004136	58310025004136	❸

Supply includes:
Holder with screw.

Example application
KOMET TOMILL CUT for M48, 70 mm deep, in a plate made of St50-3



Challenge
Material: construction steel St50-3
Workpiece: Plate
Production of an M48 thread, blind hole 70 mm deep

Solution
Thread milling head M5.0-6.0 TiAlN, fitted on holder shank 25×56, l2=136

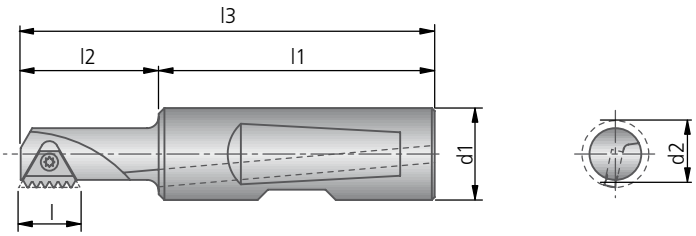
Cutting values
v_c = 80 m/min
f_z = 0.14 mm/tooth
t_h= 7.2 min

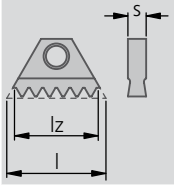
Guideline values for thread milling: page 630.

KOMET XAM

Thread milling tool with carbide inserts





XAM carbide inserts		10.03				16.T3			
	l × s (mm) ▶	10×3,18				16×3,97			
	Pitch	No. of milling teeth z	lz	uncoated Order No.	TiN Order No.	No. of milling teeth z	lz	uncoated Order No.	TiN Order No.
M metric ISO thread DIN 13	1,00	9	9,00	50111002000111	50115002000111	15	15,0	50161002000111	50165002000111
	1,25	7	8,75	50111002000112	50115002000112				
	1,50	5	7,50	50111002000113	50115002000113	10	15,0	50161002000113	50165002000113
	2,00					7	14,0	50161002000115	50165002000115
	2,50								
	3,00								
Lower milling limit for internal thread ▶		16 mm				22 mm			
UN american Unified thread ANSI B1.1	24								
	20								
	16								
	12					6	12,70	50161010000017	
	8								
Lower milling limit for internal thread ▶		5/8"				7/8"			
G Whitworth pipe thread* DIN EN ISO 228	19	6	8,02	50111025000002					
	14					8	14,51	50161025000003	
	11								
Lower milling limit for internal thread ▶		G 3/8"				G 1/2"			

* For Whitworth pipe thread the insert can be used both for internal and for external thread.



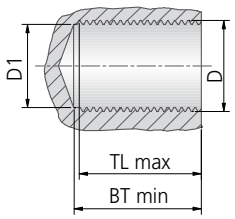
		22.04				27.06			
		22×4,76				27×6,35			
	Pitch	No. of milling teeth z	lz	uncoated Order No.	TiN Order No.	No. of milling teeth z	lz	uncoated Order No.	TiN Order No.
	1,00	21	21,0	50221002000111	50225002000111				
	1,25								
	1,50	13	19,5	50221002000113	50225002000113	17	25,5	50271002000113	50275002000113
	2,00	10	20,0	50221002000115	50225002000115	12	24,0	50271002000115	50275002000115
	2,50								
	3,00	6	18,0		50225002000117	8			
		28 mm				36 mm			
	24								
	20								
	16								
	12								
	8	5	18,88		50225010000021	7	22,23		50275010000021
	19								
	14								
	11	8	18,47	50221025000004	50225025000004	10	23,09	50271025000004	50275025000004
		G 1"				G 1.1/8"			

Guideline values for thread milling: page 630.

KOMET TOMILL GWF

Thread engagements

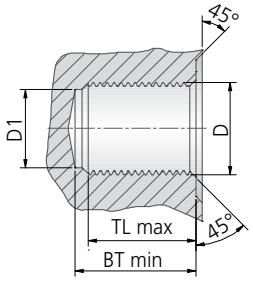
GWF SR



BT = drill depth
TL = full thread length
*with axial readjustment

GWF SR			
d1×l2	BT min	Thread length on tool	TL max
10×16	TL + min. 0,20 mm	16,00	16,00
12×20	TL + min. 0,20 mm	20,00	20,00
16×16	TL + min. 0,20 mm	16,00	*28,00
16×25	TL + min. 0,20 mm	25,00	*38,00
20×20	TL + min. 0,20 mm	20,00	*38,00
20×32	TL + min. 0,20 mm	32,00	*48,00

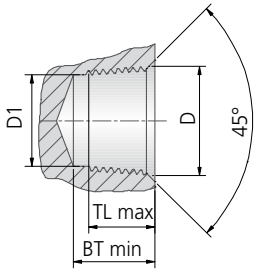
GWF GP



BT = drill depth
TL = full thread length
*with axial readjustment

GWF GP			
d1×l2	BT min	Thread length on tool	TL max
16×25	TL + 1 × t + 0,20 mm	25,00	*36,00
20×32	TL + 1 × t + 0,20 mm	32,00	*45,00

GWF GS



NPT-GWF GS			
d1×l2×t	Dimension	BT min	TL max
12,5×18,3×14	½ -14 – ¾-14 NPT	20,20	18,10
19×22,2×11½	1-11½ – 2-11½ NPT	24,60	22,10

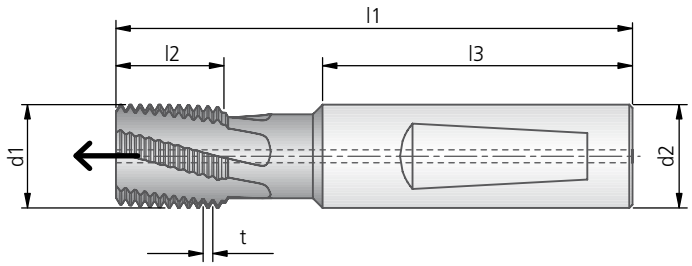
NPTF-GWF GS			
d1×l2×t	Dimension	BT min	TL max
12,5×18,3×14	½ -14 – ¾-14 NPTF	20,20	18,10
19×22,2×11½	1-11½ – 2-11½ NPTF	24,60	22,10

BT = drill depth
for safety reasons BT (boring depth) 0.2 deeper than deepest tool position
TL = full thread length

Thread milling tool M-GWF SR | MF-GWF SR



For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF or MKG thread milling tools.



* without neck recess

M-GWF SR | MF-GWF SR								DIN 6535 HE	DIN 6535 HA
								uncoated	uncoated
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	kg ~	Order No.	Order No.
10×16×M1*	15,0	70,0	16,0	40	10	4		80802002001100	88802002001100
10×16×M1,5*	15,0	70,0	16,5	40	10	4		80802002001150	88802002001150
12×20×M1*	18,0	80,0	20,0	45	12	4		80802004001100	88802004001100
12×20×M1,5*	18,0	80,0	19,5	45	12	4		80802004001150	88802004001150
16×16×M1	24,0	80,0	16,0	48	16	5		80802005001100	88802005001100
16×16×M1,5	24,0	80,0	16,5	48	16	5		80802005001150	88802005001150
16×16×M2	24,0	80,0	16,0	48	16	5		80802005001200	88802005001200
16×25×M1	24,0	90,0	25,0	48	16	5		80802006001100	88802006001100
16×25×M1,5	24,0	90,0	25,5	48	16	5		80802006001150	88802006001150
16×25×M2	24,0	90,0	24,0	48	16	5		80802006001200	88802006001200
16×25×M3*	24,0	90,0	27,0	48	16	4		80802006001300	88802006001300
20×20×M1	30,0	92,0	21,0	50	20	5		80802007001100	88802007001100
20×20×M1,5	30,0	92,0	21,0	50	20	5		80802007001150	88802007001150
20×20×M2	30,0	92,0	20,0	50	20	5		80802007001200	88802007001200
20×20×M3	30,0	92,0	21,0	50	20	5		80802007001300	88802007001300
20×32×M1	30,0	105,0	33,0	50	20	5		80802008001100	88802008001100
20×32×M1,5	30,0	105,0	33,0	50	20	5		80802008001150	88802008001150
20×32×M2	30,0	105,0	32,0	50	20	5		80802008001200	88802008001200
20×32×M3	30,0	105,0	33,0	50	20	5		80802008001300	88802008001300
								TiCN	TiCN
10×16×M1*	15,0	70,0	16,0	40	10	4		80842002001100	88842002001100
10×16×M1,5*	15,0	70,0	16,5	40	10	4		80842002001150	88842002001150
12×20×M1*	18,0	80,0	20,0	45	12	4		80842004001100	88842004001100
12×20×M1,5*	18,0	80,0	19,5	45	12	4		80842004001150	88842004001150
16×16×M1	24,0	80,0	16,0	48	16	5		80842005001100	88842005001100
16×16×M1,5	24,0	80,0	16,5	48	16	5		80842005001150	88842005001150
16×16×M2	24,0	80,0	16,0	48	16	5		80842005001200	88842005001200
16×25×M1	24,0	90,0	25,0	48	16	5		80842006001100	88842006001100
16×25×M1,5	24,0	90,0	25,5	48	16	5		80842006001150	88842006001150
16×25×M2	24,0	90,0	24,0	48	16	5		80842006001200	88842006001200
16×25×M3*	24,0	90,0	27,0	48	16	4		80842006001300	88842006001300
20×20×M1	30,0	92,0	21,0	50	20	5		80842007001100	88842007001100
20×20×M1,5	30,0	92,0	21,0	50	20	5		80842007001150	88842007001150
20×20×M2	30,0	92,0	20,0	50	20	5		80842007001200	88842007001200
20×20×M3	30,0	92,0	21,0	50	20	5		80842007001300	88842007001300
20×32×M1	30,0	105,0	33,0	50	20	5		80842008001100	88842008001100
20×32×M1,5	30,0	105,0	33,0	50	20	5		80842008001150	88842008001150
20×32×M2	30,0	105,0	32,0	50	20	5		80842008001200	88842008001200
20×32×M3	30,0	105,0	33,0	50	20	5		80842008001300	88842008001300

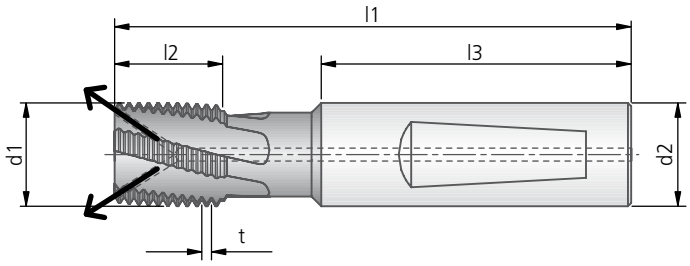
● very good | ◐ good

Guideline values for thread milling: page 625.

KOMET TOMILL GWF SR

Thread milling tool M-GWF SR | MF-GWF SR





* without neck recess

M-GWF SR | MF-GWF SR								DIN 6535 HE	DIN 6535 HA
								uncoated	uncoated
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	~ kg	Order No.	Order No.
12×20×M1*	18,0	80,0	20,0	45	12	4		80803004001100	88803004001100
12×20×M1,5*	18,0	80,0	19,5	45	12	4		80803004001150	88803004001150
16×25×M1	24,0	90,0	25,0	48	16	5		80803006001100	88803006001100
16×25×M1,5	24,0	90,0	25,5	48	16	5		80803006001150	88803006001150
20×32×M1,5	30,0	105,0	33,0	50	20	5		80803008001150	88803008001150
20×32×M2	30,0	105,0	32,0	50	20	5		80803008001200	88803008001200
								TiCN	TiCN
12×20×M1*	18,0	80,0	20,0	45	12	4		80843004001100	88843004001100
12×20×M1,5*	18,0	80,0	19,5	45	12	4		80843004001150	88843004001150
16×25×M1	24,0	90,0	25,0	48	16	5		80843006001100	88843006001100
16×25×M1,5	24,0	90,0	25,5	48	16	5		80843006001150	88843006001150
20×32×M1,5	30,0	105,0	33,0	50	20	5		80843008001150	88843008001150
20×32×M2	30,0	105,0	32,0	50	20	5		80843008001200	88843008001200

For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF or MKG thread milling tools.

Thread engagements see page 614.

● very good | ◐ good

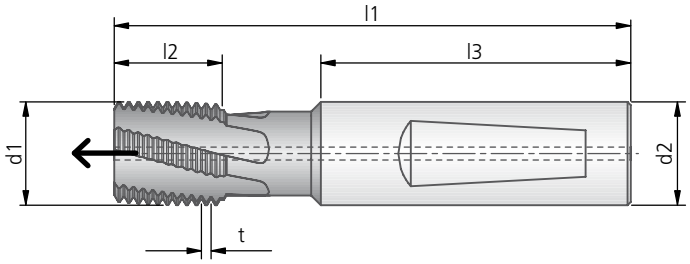
Material P M K N S H

UN

solid carbide

DIN 6535 HE

DIN 6535 HA



* without neck recess

UN-GWF SR								DIN 6535 HE	DIN 6535 HA
								uncoated	uncoated
d1 × l2 × t t = t.p.i.	Nut d min	l1	l2	l3	d2	z	kg ~	Order No.	Order No.
10×16×UN24*	15,0	70,0	15,8	40	10	4			
12×20×UN16*	18,0	80,0	20,6	45	12	4			
12×20×UN18*	18,0	80,0	19,8	45	12	4			
12×20×UN20*	18,0	80,0	20,3	45	12	4			
12×20×UN24*	18,0	80,0	20,1	45	12	4			
16×16×UN12	24,0	80,0	14,8	48	16	5		80802005001012	88802005001012
16×16×UN14	24,0	80,0	16,3	48	16	5			
16×16×UN16	24,0	80,0	15,9	48	16	5			
16×16×UN18	24,0	80,0	15,5	48	16	5			
16×16×UN20	24,0	80,0	16,5	48	16	5		80802005001020	88802005001020
16×16×UN24	24,0	80,0	15,8	48	16	5		80802005001024	88802005001024
16×25×UN12	24,0	90,0	25,4	48	16	5		80802006001012	88802006001012
16×25×UN14	24,0	90,0	25,4	48	16	5			
16×25×UN16	24,0	90,0	25,4	48	16	5			
16×25×UN18	24,0	90,0	25,4	48	16	5			
16×25×UN20	24,0	90,0	25,4	48	16	5		80802006001020	88802006001020
16×25×UN24	24,0	90,0	25,4	48	16	5		80802006001024	88802006001024
20×20×UN8	30,0	92,0	19,05	50	20	5		80802007001008	88802007001008
20×20×UN12	30,0	92,0	21,2	50	20	5		80802007001012	88802007001012
20×20×UN14	30,0	92,0	19,9	50	20	5			
20×20×UN16	30,0	92,0	20,6	50	20	5			
20×20×UN18	30,0	92,0	21,2	50	20	5			
20×20×UN20	30,0	92,0	20,3	50	20	5		80802007001020	88802007001020
20×20×UN24	30,0	92,0	21,2	50	20	5		80802007001024	88802007001024
20×32×UN8	30,0	105,0	31,8	50	20	5		80802008001008	88802008001008
20×32×UN12	30,0	105,0	31,8	50	20	5		80802008001012	88802008001012
20×32×UN20	30,0	105,0	31,8	50	20	5		80802008001020	88802008001020

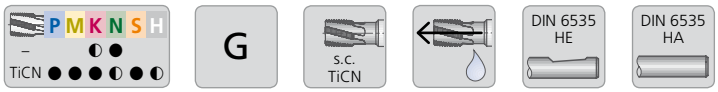
For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF or MKG thread milling tools.
Thread engagements see page 614.

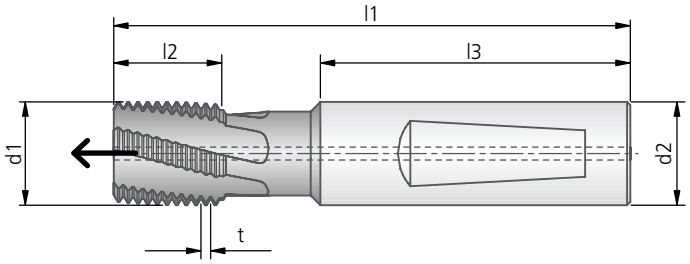
TiCN coated tools are available on request.

Guideline values for thread milling: page 625.

KOMET TOMILL GWF SR

Thread milling tool G-GWF SR





G-GWF SR								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = t.p.i.	Nut d min	l1	l2	l3	d2	Z	~ kg	uncoated Order No.	uncoated Order No.
16×16×G14	G ½"	80,0	16,3	48	16	5			
16×25×G14	G ½"	90,0	25,4	48	16	5		80802006002014	88802006002014
20×20×G14	G ⅞"	92,0	19,9	50	20	5		80802007002014	88802007002014
20×20×G11	G 1"	92,0	20,8	50	20	5		80802007002011	88802007002011
20×32×G14	G ⅞"	105,0	32,7	50	20	5		80802008002014	88802008002014
20×32×G11	G1"	105,0	32,3	50	20	5		80802008002011	88802008002011
								TiCN	TiCN
16×16×G14	G ½"	80,0	16,3	48	16	5			
16×25×G14	G ½"	90,0	25,4	48	16	5		80842006002014	88842006002014
20×20×G14	G ⅞"	92,0	19,9	50	20	5		80842007002014	88842007002014
20×20×G11	G 1"	92,0	20,8	50	20	5		80842007002011	88842007002011
20×32×G14	G ⅞"	105,0	32,7	50	20	5		80842008002014	88842008002014
20×32×G11	G1"	105,0	32,3	50	20	5		80842008002011	88842008002011

For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF or MKG thread milling tools.

Thread engagements see page 614.

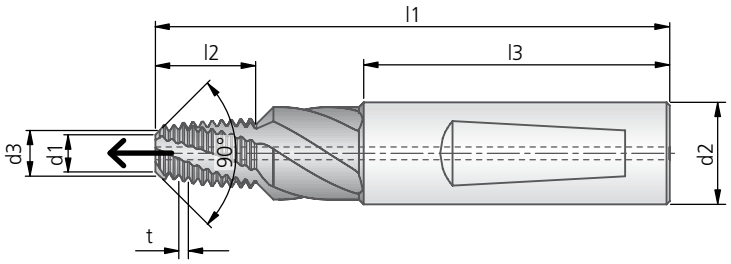
● very good | ◐ good

Thread milling tool NPT-GWF GS | NPTF-GWF GS

P M K N S H
– TiCN ● ● ● ◐ ● ◐

NPT | NPTF | s.c. TiCN | DIN 6535 HE | DIN 6535 HA

chamfering and thread milling with one tool



NPT-GWF GS									DIN 6535 HE	DIN 6535 HA
									uncoated	uncoated
d1 × l2 × t t = t.p.i.	Nut d min	l1	l2	l3	d2	d3	Z	kg ~	Order No.	Order No.
12,5×18,3×14	½" - 14	90,0	21,3	48	16	5,30	5		80872016000005	88872016000005
19,0×22,2×11½	1" - 11½	92,0	25,5	50	20	10,50	5		80872016000007	88872016000007
									TiCN	TiCN
12,5×18,3×14	½" - 14	90,0	21,3	48	16	5,30	5		80875016000005	88875016000005
19,0×22,2×11½	1" - 11½	92,0	25,5	50	20	10,50	5		80875016000007	88875016000007

NPTF-GWF GS									DIN 6535 HE	DIN 6535 HA
									uncoated	uncoated
d1 × l2 × t t = t.p.i.	Nut d min	l1	l2	l3	d2	d3	Z	kg ~	Order No.	Order No.
12,5×18,3×14	½" - 14	90,0	21,3	48	16	5,30	5		80872017000005	88872017000005
19,0×22,2×11½	1" - 11½	92,0	25,5	50	20	10,50	5		80872017000007	88872017000007
									TiCN	TiCN
12,5×18,3×14	½" - 14	90,0	21,3	48	16	5,30	5		80875017000005	88875017000005
19,0×22,2×11½	1" - 11½	92,0	25,5	50	20	10,50	5		80875017000007	88875017000007

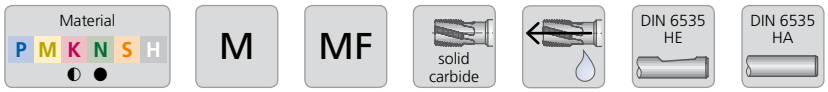
For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF thread milling tools.

Thread engagements see page 614.

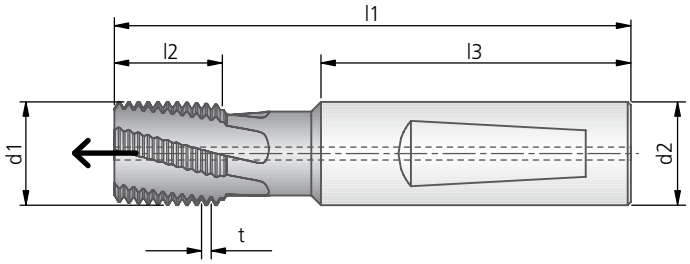
Guideline values for thread milling: page 625.

KOMET TOMILL GWF SR

Thread milling tool M-GWF SR | MF-GWF SR



for external thread



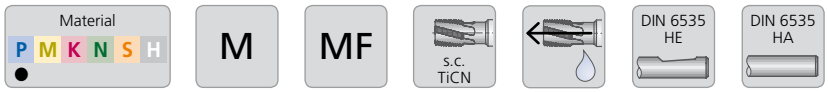
* without neck recess

M-GWF SR | MF-GWF SR								DIN 6535 HE	DIN 6535 HA
								uncoated	uncoated
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	kg ~	Order No.	Order No.
10×16×M1*	15,0	70,0	16,0	40	10	4			
10×16×M1,5*	15,0	70,0	16,5	40	10	4			
12×20×M1*	18,0	80,0	20,0	45	12	4			
12×20×M1,5*	18,0	80,0	19,5	45	12	4			
16×16×M1	24,0	80,0	16,0	48	16	5			
16×16×M1,5	24,0	80,0	16,5	48	16	5			
16×16×M2	24,0	80,0	16,0	48	16	5			
16×25×M1	24,0	90,0	25,0	48	16	5			
16×25×M1,5	24,0	90,0	25,5	48	16	5		80819006001150	88819006001150
16×25×M2	24,0	90,0	24,0	48	16	5			
20×20×M1	30,0	92,0	21,0	50	20	5			
20×20×M1,5	30,0	92,0	21,0	50	20	5			
20×20×M2	30,0	92,0	20,0	50	20	5			
20×20×M3	30,0	92,0	21,0	50	20	5			
20×32×M1	30,0	105,0	33,0	50	20	5			
20×32×M1,5	30,0	105,0	33,0	50	20	5		80819008001150	88819008001150
20×32×M2	30,0	105,0	32,0	50	20	5			
20×32×M3	30,0	105,0	33,0	50	20	5			

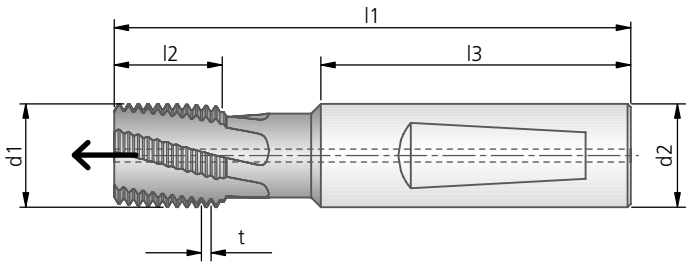
TiCN coated tools are available on request.

● very good | ◐ good

Thread milling tool M-GWF XS | MF-GWF XS



for machining steel ≥ 900 N/mm² tensile strength



M-GWF XS | MF-GWF XS								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	~ kg	TiCN Order No.	TiCN Order No.
16×25×M1	24,0	90,0	25,0	48	16	4		80806006001100	88806006001100
16×25×M1,5	24,0	90,0	25,5	48	16	4		80806006001150	88806006001150
20×32×M1,5	30,0	105,0	33,0	50	20	4		80806008001150	88806008001150
20×32×M2	30,0	105,0	32,0	50	20	4		80806008001200	88806008001200
20×32×M3	30,0	105,0	33,0	50	20	4		80806008001300	88806008001300

For thread ∅ (d_{min} nut) which is smaller than those shown on this page, please use our MGF XS thread milling tools.

Thread engagements see page 614.

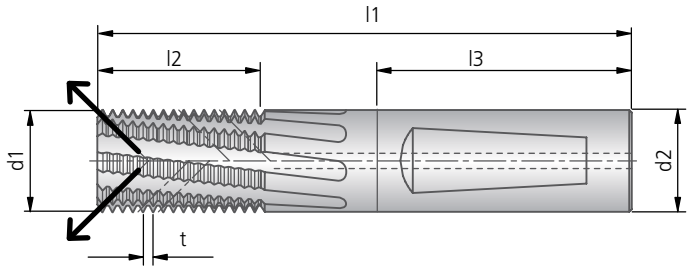
Guideline values for thread milling: page 625.

KOMET TOMILL GWF HPC

Thread milling tool M-GWF HPC | MF-GWF HPC

Material P M K S | M | MF | s.c. AlCrN | DIN 6535 HE | DIN 6535 HA

for machining steel to 1200 N/mm² tensile strength, stainless steel, cast materials and titanium alloys
Very stable tension of the tool necessary!



* without neck recess

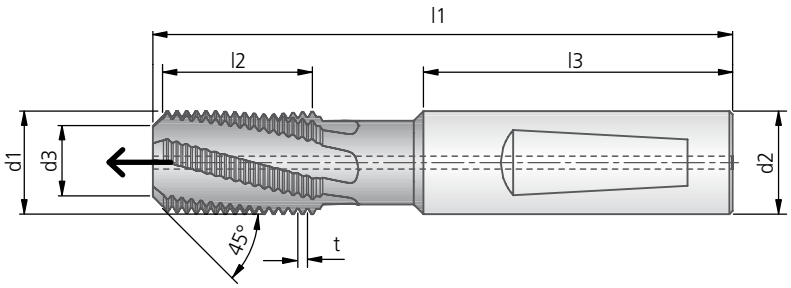
M-GWF HPC | MF-GWF HPC								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	z	kg ~	AlCrN Order No.	AlCrN Order No.
16x25xM1,0*	24	90	25	48	16	7	0,23	**80896006001100**	**88896006001100**
16x25xM1,5*	24	90	25,5	48	16	7	0,23	**80896006001150**	**88896006001150**
16x25xM2,0*	24	90	24	48	16	7	0,23	**80896006001200**	**88896006001200**
20x32xM1,0*	30	105	33	50	20	8	0,4	**80896008001100**	**88896008001100**
20x32xM1,5*	30	105	33	50	20	8	0,4	**80896008001150**	**88896008001150**
20x32xM2,0*	30	105	32	50	20	8	0,4	**80896008001200**	**88896008001200**

● very good | ◐ good

Thread milling tool M-GWF GP | MF-GWF GP



Spot facing, chamfering and thread milling with one tool



M-GWF GP | MF-GWF GP									DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	d3	z	kg ~	uncoated Order No.	uncoated Order No.
16×25×M1	24,0	90,0	24,0	48	16	12,90	5		**80882006001100**	**88882006001100**
16×25×M1,5	24,0	90,0	24,0	48	16	11,20	5		**80882006001150**	**88882006001150**
16×25×M2	24,0	90,0	22,0	48	16	9,60	5		**80882006001200**	**88882006001200**
20×32×M1	30,0	105,0	32,0	50	20	16,90	5		**80882008001100**	**88882008001100**
20×32×M1,5	30,0	105,0	31,5	50	20	15,20	5		**80882008001150**	**88882008001150**
20×32×M2	30,0	105,0	30,0	50	20	13,60	5		**80882008001200**	**88882008001200**
20×32×M3	30,0	105,0	30,0	50	20	10,50	5		**80882008001300**	**88882008001300**
									TiCN	TiCN
16×25×M1	24,0	90,0	24,0	48	16	12,90	5		**80885006001100**	**88885006001100**
16×25×M1,5	24,0	90,0	24,0	48	16	11,20	5		**80885006001150**	**88885006001150**
16×25×M2	24,0	90,0	22,0	48	16	9,60	5		**80885006001200**	**88885006001200**
20×32×M1	30,0	105,0	32,0	50	20	16,90	5		**80885008001100**	**88885008001100**
20×32×M1,5	30,0	105,0	31,5	50	20	15,20	5		**80885008001150**	**88885008001150**
20×32×M2	30,0	105,0	30,0	50	20	13,60	5		**80885008001200**	**88885008001200**
20×32×M3	30,0	105,0	30,0	50	20	10,50	5		**80885008001300**	**88885008001300**

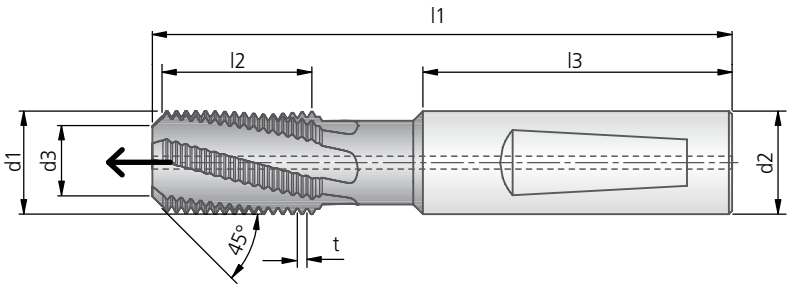
Guideline values for thread milling: page 625.

KOMET TOMILL GWF GP

Thread milling tool G-GWF GP



Spot facing, chamfering and thread milling with one tool



G-GWF GP									DIN 6535 HE	DIN 6535 HA
									uncoated	uncoated
d1 × l2 × t t = t.p.i.	Nut d min	l1	l2	l3	d2	d3	Z	kg ~	Order No.	Order No.
16×25×G14	G ½"	90,0	23,6	48	16	9,80	5		**80882006002014**	**88882006002014**
20×32×G14	G ⅞"	105,0	30,8	50	20	13,80	5		**80882008002014**	**88882008002014**
20×32×G11	G 1"	105,0	30,0	50	20	12,20	5		**80882008002011**	**88882008002011**
									TiCN	TiCN
16×25×G14	G ½"	90,0	23,6	48	16	9,80	5		**80885006002014**	**88885006002014**
20×32×G14	G ⅞"	105,0	30,8	50	20	13,80	5		**80885008002014**	**88885008002014**
20×32×G11	G 1"	105,0	30,0	50	20	12,20	5		**80885008002011**	**88885008002011**

Guideline values for thread milling: page 625.

Guideline values for thread milling

Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Surface Material	GWF				GWF HPC	
					uncoated v_c m/min	TiCN v_c m/min	≤ Ø 12 f_z mm/tooth	≥ Ø 16 f_z mm/tooth	AlCrN v_c m/min	≥ Ø 16 f_z mm/tooth
P	1.1	≤400	≤120	magnetic soft iron		80-150	0,04-0,06	0,08-0,15	100-150	0,08-0,15
P	1.2	≤700	≤200	structural, case hardened steel		80-100	0,04-0,06	0,08-0,15	100-150	0,08-0,15
P	1.3	≤850	≤250	carbon steel		80-100	0,04-0,06	0,08-0,15	100-150	0,08-0,15
P	1.4	≤850	≤250	alloy steel		80-100	0,04-0,06	0,08-0,15	100-150	0,08-0,15
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel		60-80	0,04-0,06	0,04-0,10	100-150	0,08-0,12
P	1.6	>1200	>350	alloy/heat treated steel		50-60	0,03-0,05	0,04-0,10	80-120	0,08-0,12
H	1.7	≤1400	≤400	hardened steel to 45 HRC		30-50	0,015-0,02	0,03-0,08		
H	1.8	≤2200	≤600	hardened steel to 58 HRC		20-40	0,015-0,02			
M	2.1	≤850	≤250	stainless steel, sulphuretted		60-80	0,03-0,05	0,08-0,15	60-80	0,08-0,15
M	2.2	≤850	≤250	austentic		60-80	0,03-0,05	0,04-0,10	60-80	0,05-0,10
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic		60-80	0,02-0,04	0,04-0,10	60-80	0,05-0,10
K	3.1	≤500	≤150	grey cast iron	50-80	80-120	0,04-0,10	0,08-0,15	120-160	0,08-0,16
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	50-80	80-120	0,04-0,08	0,08-0,12	120-150	0,08-0,15
K	3.3	400-500	200-250	vermicular cast iron		80-100	0,04-0,08	0,08-0,15	120-160	0,08-0,15
K	3.4	≤700	≤200	spheroidal graphite cast iron		80-120	0,04-0,10	0,08-0,15	100-150	0,08-0,15
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated		80-100	0,04-0,08	0,08-0,12	100-150	0,08-0,15
K	3.6	≤700	≤200	malleable iron		80-100	0,04-0,10	0,08-0,15	100-150	0,08-0,15
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated		80-100	0,04-0,08	0,08-0,12	100-150	0,08-0,15
S	4.1	≤700	≤200	pure titanium		40-100	0,03-0,08	0,08-0,15	60-100	0,05-0,15
S	4.2	≤900	≤270	titanium alloys		40-100	0,03-0,08	0,08-0,15	60-100	0,05-0,15
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys		40-80	0,03-0,06	0,08-0,12	60-80	0,05-0,12
S	5.1	≤500	≤150	pure nickel		50-60	0,04-0,06	0,04-0,10		
S	5.2	≤900	<270	nickel alloys, heat resistant		30-40	0,04-0,06	0,04-0,10		
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance		10-30	0,03-0,05	0,04-0,08		
N	6.1	≤350	≤100	non-alloy copper	100-300	100-400	0,07-0,12	0,10-0,20		
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	100-300	100-400	0,07-0,12	0,10-0,20		
N	6.3	≤700	≤200	long chip brass	100-300	100-400	0,07-0,12	0,10-0,20		
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)	60-80	60-80	0,03-0,06	0,08-0,15		
N	7.1	≤350	≤100	Al, Mg non-alloy	100-400	100-400	0,07-0,12	0,10-0,20		
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	100-400	100-400	0,07-0,12	0,10-0,20		
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	100-400	100-400	0,07-0,12	0,10-0,20		
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	100-300	100-400	0,07-0,12	0,10-0,20		
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	100-200	100-250	0,07-0,12	0,10-0,20		
N	8.1			thermoplastics	80-100	100-120	0,06-0,12	0,08-0,20		
N	8.2			thermosetting plastics	80-100	100-120	0,06-0,12	0,08-0,15		
N	8.3			fibre reinforced plastics	50-60	60-80	0,06-0,12	0,08-0,15		

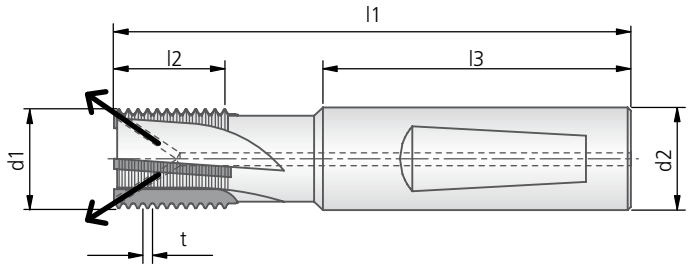
Cutting values shown are relating to the basic recommendations for cutting materials given.

KOMET TOMILL GWF SR PKD

Thread milling tool M-GWF SR PKD | MF-GWF SR PKD

Material P M K N S H | M | MF | PCD | DIN 6535 HE | DIN 6535 HA

for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



M-GWF SR PKD | MF-GWF SR PKD								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	~ kg	Order No.	Order No.
16×16×M1,5	24	80	16,5	48	16	4		30802005001150	38802005001150
20×20×M1,5	30	92	19,5	50	20	4		30802007001150	38802007001150

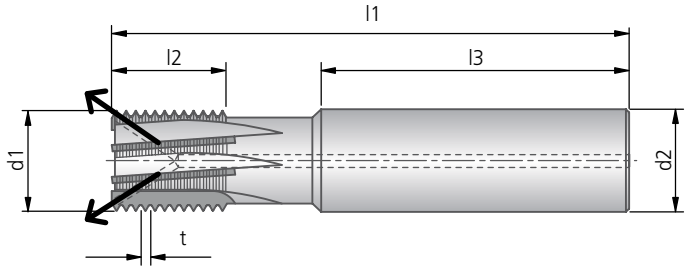
● very good | ◐ good

KOMET TOMILL GWF HPC PKD

Thread milling tool M-GWF HPC PKD | MF-GWF HPC PKD

Material P M K N S H | M | MF | PCD | DIN 6535 HA

for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



* without neck recess

M-GWF HPC PKD | MF-GWF HPC PKD								DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	kg ~	Order No.
12×12×M1*	16	70	12	45	12	5		38896003001100
12×12×M1,5*	18	70	12	45	12	5		38896003001150
16×16×M1	22	80	16	48	16	6		38896005001100
16×16×M1,5	24	80	16,5	48	16	6		38896005001150
20×20×M1	25	92	20	50	20	6		38896007001100
20×20×M1,5	27	92	21	50	20	6		38896007001150

Special variants:

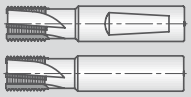
- Delivered within 2-3 weeks of order confirmation
- Additional thread profiles: Buttress, Whitworth, pipe thread, UN
- With deburring cutting edge
- With countersink step on front face or shank
- For tool diameter range between 12 and 32 mm, individual dimensioning of l1, l2, l3

Click here for inquiry
www.kometgroup.com/gwf

Guideline values for thread milling: page 628-629.

KOMET TOMILL GWF PKD

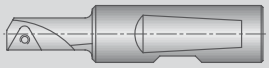
Recommended cutting data

Guideline values for thread milling							
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material	GWF SR PKD  v_c m/min	∅ 16 f_z mm/tooth	∅ 20 f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper			
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-1500	0,04-0,15	0,05-0,20
N	6.3	≤700	≤200	long chip brass			
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			
N	7.1	≤350	≤100	Al, Mg non-alloy	400-2000	0,05-0,15	0,06-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-2000	0,05-0,15	0,06-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-2000	0,05-0,15	0,06-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-2000	0,05-0,15	0,06-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-2000	0,05-0,15	0,06-0,20
N	8.1			thermoplastics			
N	8.2			thermosetting plastics			
N	8.3			fibre reinforced plastics	500-2000	0,05-0,20	0,06-0,25

Guideline values for thread milling								
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material	GWF HPC PKD v_c m/min	Ø 12 f_z mm/tooth	Ø 16 f_z mm/tooth	Ø 20 f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper				
	6.2	≤700	≤200	short chip, brass, bronze, red brass	500-1500	0,03-0,10	0,04-0,15	0,05-0,20
	6.3	≤700	≤200	long chip brass				
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)				
	7.1	≤350	≤100	Al, Mg non-alloy	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.4	≤600	≤180	Al cast alloy, Si <10 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	8.1			thermoplastics				
	8.2			thermosetting plastics				
	8.3			fibre reinforced plastics	500-2000	0,05-0,10	0,05-0,15	0,06-0,25

KOMET TOMILL CUT | XAM

Recommended cutting data

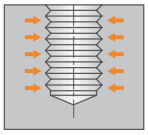
Guideline values for thread milling										
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Surface Material	TOMILL CUT  v_c m/min	f_z mm/tooth	 uncoated v_c m/min	XAM   TiN v_c m/min	f_z mm/tooth
P	1.1	≤400	≤120	magnetic soft iron	80-100	0,08-0,12		80-150	0,08-0,15
P	1.2	≤700	≤200	structural, case hardened steel	80-100	0,08-0,12		80-100	0,08-0,15
P	1.3	≤850	≤250	carbon steel	80-100	0,08-0,12		80-100	0,08-0,15
P	1.4	≤850	≤250	alloy steel	80-100	0,08-0,12		80-100	0,08-0,15
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel	60-80	0,04-0,08		60-80	0,04-0,10
P	1.6	>1200	>350	alloy/heat treated steel	50-60	0,04-0,08		50-60	0,04-0,10
H	1.7	≤1400	≤400	hardened steel to 45 HRC	30-50	0,03-0,08		30-50	0,03-0,08
H	1.8	≤2200	≤600	hardened steel to 58 HRC					
M	2.1	≤850	≤250	stainless steel, sulphuretted	60-80	0,04-0,08		60-80	0,08-0,15
M	2.2	≤850	≤250	austentic	60-80	0,04-0,08		60-80	0,04-0,10
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic	60-80	0,04-0,08		60-80	0,04-0,10
K	3.1	≤500	≤150	grey cast iron	80-120	0,08-0,15	50-80	80-120	0,08-0,15
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	80-120	0,08-0,15	50-80	80-120	0,08-0,12
K	3.3	400-500	200-250	vermicular cast iron	80-100	0,08-0,15		80-100	0,08-0,15
K	3.4	≤700	≤200	spheroidal graphite cast iron	80-120	0,08-0,15		80-120	0,08-0,15
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated	80-120	0,08-0,15		80-100	0,08-0,12
K	3.6	≤700	≤200	malleable iron	80-120	0,08-0,15		80-100	0,08-0,15
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated	80-120	0,08-0,15		80-100	0,08-0,12
S	4.1	≤700	≤200	pure titanium	40-80	0,04-0,08		40-100	0,08-0,15
S	4.2	≤900	≤270	titanium alloys	40-80	0,04-0,08		40-100	0,08-0,15
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys	40-80	0,04-0,08		40-80	0,08-0,12
S	5.1	≤500	≤150	pure nickel	20-40	0,04-0,06		50-60	0,04-0,10
S	5.2	≤900	<270	nickel alloys, heat resistant	20-40	0,04-0,06		30-40	0,04-0,10
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance	20-40	0,04-0,06		10-30	0,04-0,08
N	6.1	≤350	≤100	non-alloy copper	100-300	0,10-0,15	100-300	100-400	0,10-0,20
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	100-300	0,10-0,15	100-300	100-400	0,10-0,20
N	6.3	≤700	≤200	long chip brass	100-300	0,10-0,15	100-300	100-400	0,10-0,20
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			60-80	60-80	0,08-0,15
N	7.1	≤350	≤100	Al, Mg non-alloy	100-400	0,10-0,15	100-400	100-400	0,10-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	100-400	0,10-0,15	100-400	100-400	0,10-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	100-400	0,10-0,15	100-400	100-400	0,10-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	100-400	0,15-0,20	100-300	100-400	0,10-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	100-400	0,15-0,20	100-200	100-250	0,10-0,20
N	8.1			thermoplastics	100-120	0,10-0,20	80-100	100-120	0,08-0,20
N	8.2			thermosetting plastics	100-120	0,10-0,15	80-100	100-120	0,08-0,15
N	8.3			fibre reinforced plastics	60-80	0,10-0,15	50-60	60-80	0,08-0,15

Cutting values shown are relating to the basic recommendations for cutting materials given.

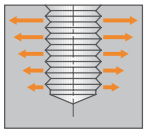
1. 

Chips packed or glued at the thread profile
- poor coolant

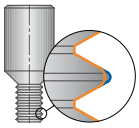
→ improve coolant (i.e. add flood coolant, lateral flute coolant supply for through holes)
→ add coolant flutes flutes on shank

2. 

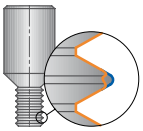
Thread go-gage doesn't fit
- thread too small → reduce tool radius in offset register
- chips in thread → improve coolant

3. 

Thread is getting tapered
- poor tool clamping → improve tool holding (i.e. shrink fit holders)
- thread milling feed too high → reduce thread milling feed

4. 

Erratic tool wear
- tool run out too high → use better tool holders (i.e. shrink fit holders), check material for homogeneity

5. 

Chippage, tool breakage
- feed rate thread milling too high → reduce thread milling feed
- vibrations → check tool holder (don't use modular systems!!), change feeds and speeds

6. 

Poor thread surface
- tool overhang too long → check part clamping an and fixture. Use multiple cuts when part is clamped weak
- non-suitable tool for this application → reduce cutting speed, increase feed/tooth, prefer conventional milling



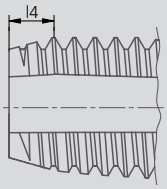
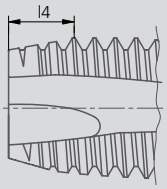
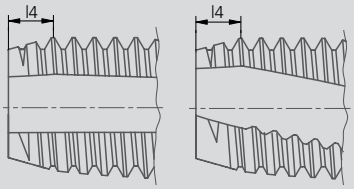
Taps with carbide strips

Taps with carbide strips combine the benefits of a flexible HSS shank and hard cutting edge. As a result, slight alignment faults can be compensated for and at the same time, long tool life achieved.

The KOMET SIREX HML tap has been specially developed for machining spheroidal graphite cast iron (GJS), and joins the existing KOMET GG HML tap, designed for machining vermicular graphite iron (GJV) and grey cast iron (GJL), in the HML range.

When used by our customers, it has proven exceptionally successful on machining centres and transfer lines: The KOMET SIREX HML achieves up to eight times the tool life of conventional HSS taps in spheroidal graphite cast iron (GJS), and is the perfect tool for reliable, efficient machining.

BENEFITS for you:
- Compensation of slight alignment faults
- Long tool life
- Fewer machine downtimes

Chamfer form					
Type of flute	straight flutes	straight flutes spiral point	straight or helical flutes		
					
	A	B	C	D	E
No. of threads l4	6 - 8	3,5 - 5,5	2 - 3	3,5 - 5	1,5 - 2
Application mainly for	short through hole threads	through hole threads	blind and through hole threads in short chipping materials	blind hole threads with long thread run-out (plug tap) and through hole threads	blind hole threads with short thread run-out (bottoming taps)

Taps

	Page
Taps HSS with carbide strips	
M – Metric ISO thread DIN 13	
GG HML	634
SIREX HML	635
Solid carbide taps	
M – Metric ISO thread DIN 13	
SIREX, SIREX SR, GG	636 – 638
DOREX	640
SIREX XH (hard machining ≥ 45 HRC)	639
MF – Metric fine ISO thread DIN 13	
SIREX	641
SIREX SR	642
Recommended cutting data	643
Problems – Causes – Solutions	645
Tap drill diameters	678

Compared to HSS-E taps carbide taps have substantial advantages:

- Up to 20x longer tool life than HSS-E taps
- Fewer tool change times due to longer tool life
- Higher cutting speeds – so shorter cycle times
- Significant reduction in production costs due to longer tool life, higher cutting speeds and fewer tool changes

KOMET GG HML

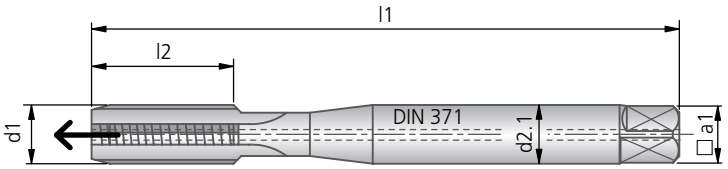
HSS-E Taps with carbide strips

Material P M K N S H | M | Tolerance range ISO 2X | Chamfer form C | HSS-E / HM | DIN 371 | DIN 376

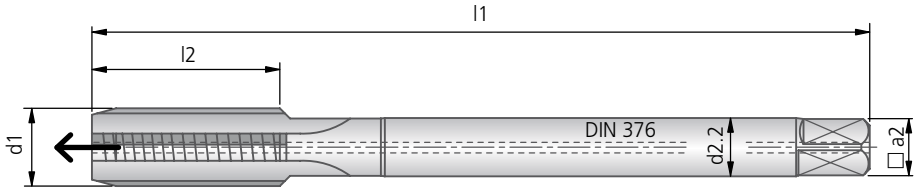
Benefits of a flexible HSS shank and hard cutting edge in one tool

especially for CGI and grey cast iron

M6 - M10



M12



							GG HML IK
						Cutting material ▸ Surface ▸	HSS-E, carbide tipped uncoated
Nominal ∅ d1	P	l1	l2	d2.1	a1	Shank ∅ DIN 371 ▸ kg	Order No.
M6	1,00	80	18,0	6,0	4,9	0,012	90456001000018
M8	1,25	90	18,0	8,0	6,2	0,027	90456001000020
M10	1,50	100	21,0	10,0	8,0	0,043	90456001000022
Nominal ∅ d1	P	l1	l2	d2.2	a2	Shank ∅ DIN 376 ▸ kg	Order No.
M12	1,75	110	24,0	9,0	7,0	0,048	90457001000024

● very good | ◐ good

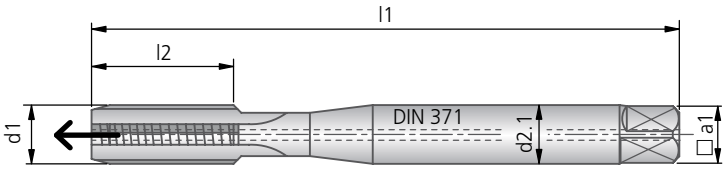
HSS-E Taps with carbide strips



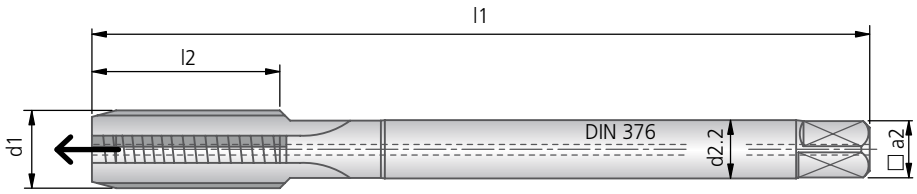
Benefits of a flexible HSS shank and hard cutting edge in one tool

especially for spheroidal graphite cast iron (GJS)

M6 - M10



M12 - M20



							SIREX HML IK
						Cutting material ▸ Surface ▸	HSS-E, carbide tipped AlCrN
Nominal ∅						Shank ∅ DIN 371 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M6	1,00	80	18,0	6,0	4,9	0,012	90520001000018
M8	1,25	90	18,0	8,0	5,5	0,027	90520001000020
M10	1,50	100	21,0	10,0	6,2	0,043	90520001000022
Nominal ∅						Shank ∅ DIN 376 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M12	1,75	110	24,0	9,0	6,2	0,048	90521001000024
M14	2,00	110	24,0	11,0	9,0	0,072	90521001000025
M16	2,00	110	27,0	12,0	9,0	0,087	90521001000026
M20	2,50	140	32,0	16,0	12,0	0,179	90521001000028

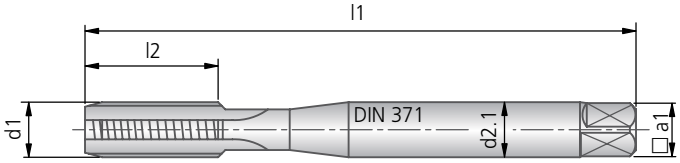
Guideline values for tapping: page 644.

KOMET GG

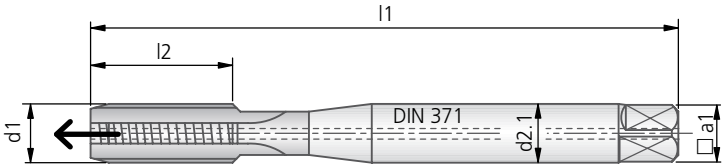
Solid carbide taps

Material P M K N S H | M | Tolerance range ISO 2X | Chamfer form C | solid carbide | ≥ M4 | DIN 371 | DIN 376

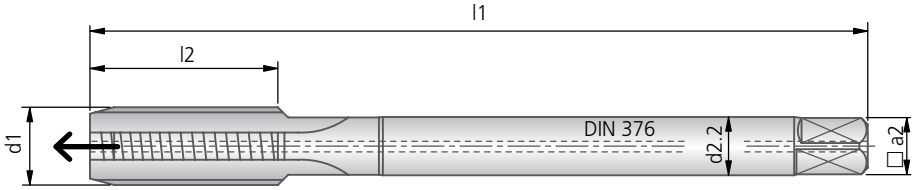
M3 - M3,5
without central coolant supply



M4 - M10



M11 - M16

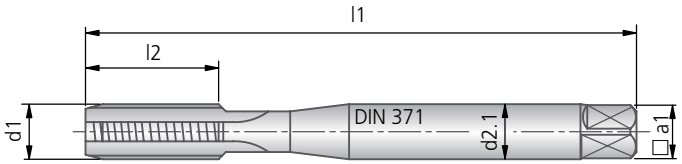


							GG
						Cutting material ▸ Surface ▸ Shank Ø DIN 371 ▸	solid carbide uncoated
Nominal Ø d1	P	l1	l2	d2.1	a1	kg	Order No.
M3	0,50	56	11,0	3,5	2,7		
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	13,0	4,5	3,4		80456001000015
M5	0,80	70	16,0	6,0	4,9		80456001000017
M6	1,00	80	18,0	6,0	4,9		80456001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2		80456001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0		80456001000022
Nominal Ø d1	P	l1	l2	d2.2	a2	Shank Ø DIN 376 ▸ kg	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	24,0	9,0	7,0		80457001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		

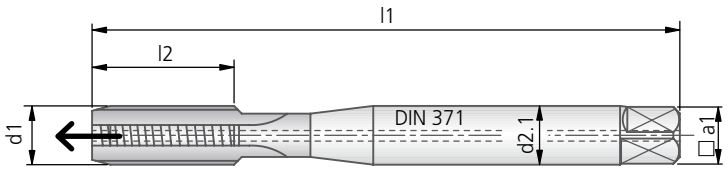
● very good | ◐ good

Material P M K N S H | M | Tolerance range ISO 2 | Chamfer form C | solid carbide | ≥ M4 | DIN 371 | DIN 376

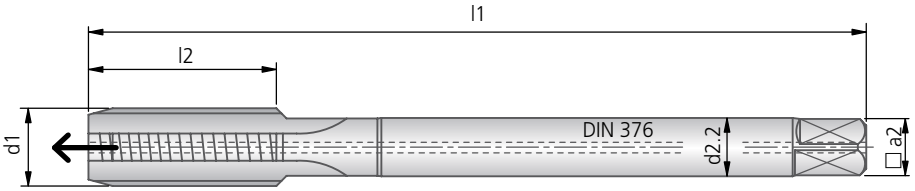
M3 - M3,5
without central coolant supply



M4 - M10



M11 - M16

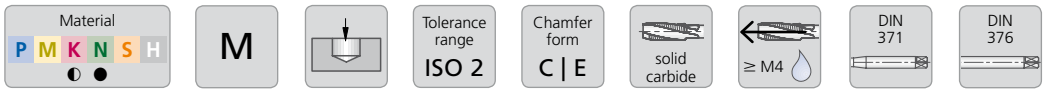


							SIREX
						Cutting material ▸ Surface ▸	solid carbide uncoated
Nominal ∅						Shank ∅ DIN 371 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M3	0,50	56	11,0	3,5	2,7		80420001000013
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	13,0	4,5	3,4		80420001000015
M5	0,80	70	16,0	6,0	4,9		80420001000017
M6	1,00	80	18,0	6,0	4,9		80420001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2		80420001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0		80420001000022
Nominal ∅						Shank ∅ DIN 376 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	24,0	9,0	7,0		80421001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		

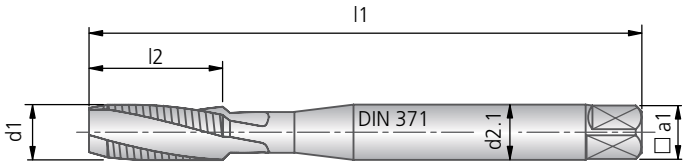
Guideline values for tapping: page 643.

KOMET SIREX SR

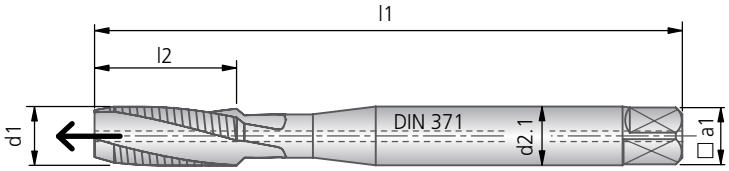
Solid carbide taps



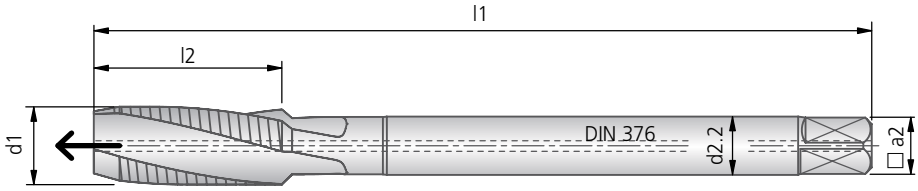
M3 - M3,5
without central coolant supply



M4 - M10



M11 - M16



							SIREX SR	SIREX SR
						Cutting material ▸ Surface ▸	solid carbide uncoated	solid carbide uncoated
						Shank ∅ DIN 371 ▸		
Nominal ∅ d1	P	l1	l2	d2.1	a1	kg	Order No. Chamfer form C	Order No. Chamfer form E
M3	0,50	56	11,0	3,5	2,7		80444001000013	
M3,5	0,60	56		4,0	3,0			
M4	0,70	63	13,0	4,5	3,4		80444001000015	
M5	0,80	70	16,0	6,0	4,9		80444001000017	
M6	1,00	80	18,0	6,0	4,9		80444001000018	80416001000018
M7	1,00	80		7,0	5,5			
M8	1,25	90	18,0	8,0	6,2		80444001000020	80416001000020
M9	1,25	90		9,0	7,0			
M10	1,50	100	21,0	10,0	8,0		80444001000022	80416001000022
						Shank ∅ DIN 376 ▸		
Nominal ∅ d1	P	l1	l2	d2.2	a2	kg	Order No.	Order No.
M11	1,50	100		8,0	6,2			
M12	1,75	110	24,0	9,0	7,0		80445001000024	
M14	2,00	110		11,0	9,0			
M16	2,00	110		12,0	9,0			

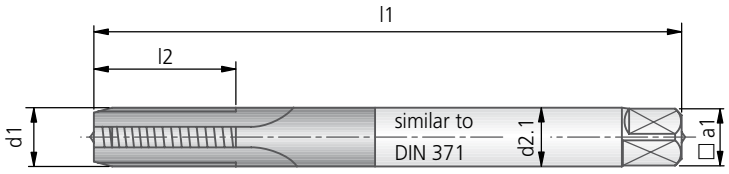
● very good | ◐ good

Solid carbide taps

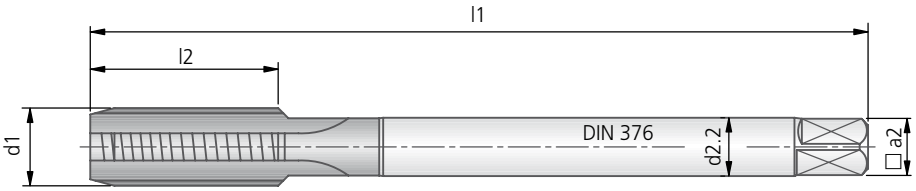
Material P M K N S H | M | Tolerance range ISO 2X | Chamfer form C | D | s.c. TiAlN | DIN 371 | DIN 376

for hard machining from 45 HRC hardness

M3 - M10



M11 - M16



							SIREX XH ≤ 58 HRC	SIREX XH ≤ 52 HRC
						Cutting material ▸	solid carbide	solid carbide
						Surface ▸	TiAlN	TiAlN
						Shank ∅ similar to DIN 371 ▸		
Nominal ∅ d1	P	l1	l2	d2.1	a1	kg	Order No. Chamfer form D	Order No. Chamfer form C
M3	0,50	56		3,5	2,7			
M3,5	0,60	56		4,0	3,0			
M4	0,70	63	18,0	4,5	3,4		80126001000015	80128001000015
M5	0,80	70	20,0	6,0	4,9		80126001000017	80128001000017
M6	1,00	80	24,0	6,0	4,9		80126001000018	80128001000018
M7	1,00	80		7,0	5,5			
M8	1,25	90	24,0	8,0	6,2		80126001000020	80128001000020
M9	1,25	90		9,0	7,0			
M10	1,50	100	26,0	10,0	8,0		80126001000022	80128001000022
Nominal ∅						Shank ∅ DIN 376 ▸		
d1	P	l1	l2	d2.2	a2	kg	Order No.	Order No.
M11	1,50	100		8,0	6,2			
M12	1,75	110	26,0	9,0	7,0		80127001000024	80129001000024
M14	2,00	110	26,0	11,0	9,0		80127001000025	80129001000025
M16	2,00	110	27,0	12,0	9,0		80127001000026	80129001000026

Guideline values for tapping: page 643.

KOMET DOREX

Solid carbide taps

Material P M K N S H

M

Tolerance range ISO 2

Chamfer form B

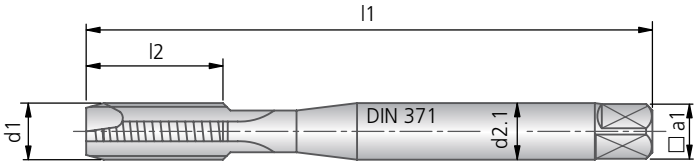
solid carbide

≥ M4

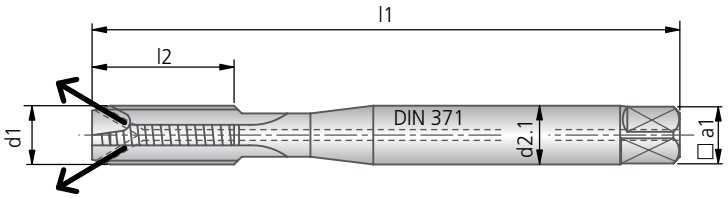
DIN 371

DIN 376

M3 - M3,5
without central coolant supply



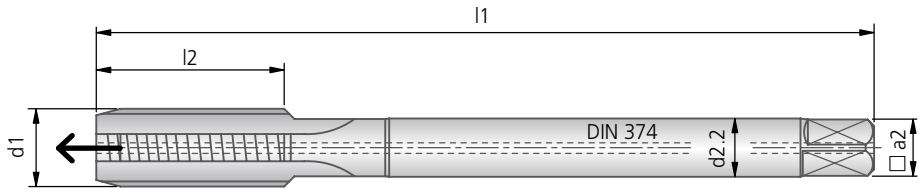
M4 - M10



							DOREX
						Cutting material ▸ Surface ▸ Shank ∅ DIN 371 ▸	solid carbide uncoated
Nominal ∅ d1	P	l1	l2	d2.1	a1	kg	Order No.
M3	0,50	56		3,5	2,7		
M3,5	0,60	56		4,0	3,0		
M4	0,70	63		4,5	3,4		
M5	0,80	70		6,0	4,9		
M6	1,00	80	18,0	6,0	4,9		80418001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2		80418001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0		80418001000022

● very good | ◐ good





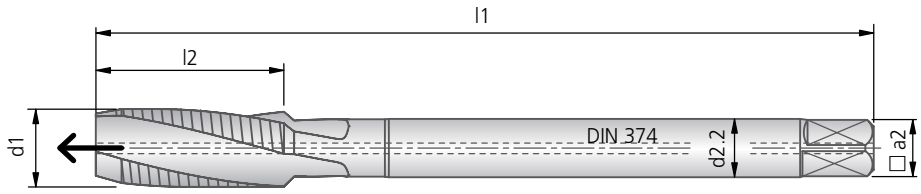
						SIREX
					Cutting material ▸ Surface ▸ Shank ∅ DIN 374 ▸	solid carbide uncoated
Nominal ∅ d1 × P	l1	l2	d2.1	a1	kg	Order No.
M4×0,5	63	10	4,5	3,4		80420002000029
M5×0,5	70		6,0	4,9		
M6×0,5	80		6,0	4,9		
M6×0,75	80	14	6,0	4,9		80420002000048
M8×0,5	80		8,0	4,9		
M8×0,75	80		8,0	4,9		
M8×1	90	18	8,0	4,9		80420002000070
Nominal ∅ d1 × P	l1	l2	d2.2	a2	Shank ∅ DIN 374 ▸ kg	Order No.
M10×0,75	90		7,0	5,5		
M10×1	90	18	7,0	5,5		80421002000094
M10×1,25	100		7,0	5,5		
M11×1	90		8,0	6,2		
M12×1	100		9,0	7,0		
M12×1,25	100		9,0	7,0		
M12×1,5	100	20	9,0	7,0		80421002000113
M14×1	100		11,0	9,0		
M14×1,25	100		11,0	9,0		
M14×1,5	100	20	11,0	9,0		80421002000131
M15×1	100		12,0	9,0		
M15×1,5	100		12,0	9,0		
M16×1	100		12,0	9,0		
M16×1,5	100	20	12,0	9,0		80421002000147
M18×1	110		14,0	11,0		
M18×1,5	110		14,0	11,0		
M20×1,5	125		16,0	12,0		

Guideline values for tapping: page 643.

KOMET SIREX SR

Solid carbide taps





						SIREX SR
					Cutting material ▸ Surface ▸ Shank ∅ DIN 374 ▸	solid carbide uncoated
Nominal ∅ d1 × P	l1	l2	d2.1	a1	kg	Order No.
M4×0,5	63	10	4,5	3,4		80444002000029
M5×0,5	70		6,0	4,9		
M6×0,5	80		6,0	4,9		
M6×0,75	80	14	6,0	4,9		80444002000048
M8×0,5	80		8,0	4,9		
M8×0,75	80		8,0	4,9		
M8×1	90	18	8,0	4,9		80444002000070
Nominal ∅ d1 × P	l1	l2	d2.2	a2	Shank ∅ DIN 374 ▸ kg	Order No.
M10×0,75	90		7,0	5,5		
M10×1	90	18	7,0	5,5		80445002000094
M10×1,25	100		7,0	5,5		
M11×1	90		8,0	6,2		
M12×1	100		9,0	7,0		
M12×1,25	100		9,0	7,0		
M12×1,5	100	20	9,0	7,0		80445002000113
M14×1	100		11,0	9,0		
M14×1,25	100		11,0	9,0		
M14×1,5	100	20	11,0	9,0		80445002000131
M15×1	100		12,0	9,0		
M15×1,5	100		12,0	9,0		
M16×1	100		12,0	9,0		
M16×1,5	100	20	12,0	9,0		80445002000147
M18×1	110		14,0	11,0		
M18×1,5	110		14,0	11,0		
M20×1,5	125		16,0	12,0		

Guideline values for tapping: page 643.

Recommended cutting data

Guideline values for tapping					Cutting speed		Coolant			
Material group		Strength Rm (N/mm²)	Hardness HB	Cutting material / Surface / Material	Solid carbide uncoated v_c m/min	Solid carbide coated v_c m/min	Emulsion	Oil	Dry	Air
P	1.1	≤400	≤120	magnetic soft iron						
P	1.2	≤700	≤200	structural, case hardened steel						
P	1.3	≤850	≤250	carbon steel						
P	1.4	≤850	≤250	alloy steel						
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel						
P	1.6	>1200	>350	alloy/heat treated steel						
H	1.7	≤1400	≤400	hardened steel to 45 HRC		2 - 8		✓		
H	1.8	≤2200	≤600	hardened steel to 58 HRC		2 - 5		✓		
M	2.1	≤850	≤250	stainless steel, sulphuretted						
M	2.2	≤850	≤250	austentic						
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic						
K	3.1	≤500	≤150	grey cast iron	20 - 50		✓		✓	
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	20 - 50		✓			
K	3.3	400-500	200-250	vermicular cast iron						
K	3.4	≤700	≤200	spheroidal graphite cast iron	20 - 50		✓			
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated	20 - 50		✓	✓		
K	3.6	≤700	≤200	malleable iron	20 - 50		✓	✓		
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated	20 - 50		✓	✓		
S	4.1	≤700	≤200	pure titanium						
S	4.2	≤900	≤270	titanium alloys						
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys						
S	5.1	≤500	≤150	pure nickel						
S	5.2	≤900	<270	nickel alloys, heat resistant						
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance						
N	6.1	≤350	≤100	non-alloy copper						
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	25 - 60		✓		✓	
N	6.3	≤700	≤200	long chip brass						
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)	5 - 9		✓	✓		
N	7.1	≤350	≤100	Al, Mg non-alloy						
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %						
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %						
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	25 - 80		✓			
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	20 - 60		✓			
N	8.1			thermoplastics						
N	8.2			thermosetting plastics	10 - 30		✓			✓
N	8.3			fibre reinforced plastics	8 - 25		✓			

Cutting values shown are relating to the basic recommendations for cutting materials given.

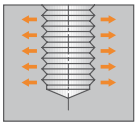
KOMET Taps

Recommended cutting data

Guideline values for tapping					Cutting speed		Coolant			
Material group		Strength Rm (N/mm²)	Hardness HB	Material	HSS-E with carbide strips GG HML v_c m/min	HSS-E with carbide strips SIREX HML v_c m/min	Emulsion	Oil	Dry	Air
P	1.1	≤400	≤120	magnetic soft iron						
P	1.2	≤700	≤200	structural, case hardened steel						
P	1.3	≤850	≤250	carbon steel						
P	1.4	≤850	≤250	alloy steel						
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel						
P	1.6	>1200	>350	alloy/heat treated steel						
H	1.7	≤1400	≤400	hardened steel to 45 HRC						
H	1.8	≤2200	≤600	hardened steel to 58 HRC						
M	2.1	≤850	≤250	stainless steel, sulphuretted						
M	2.2	≤850	≤250	austentic						
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic						
K	3.1	≤500	≤150	grey cast iron	20 - 50		✓		✓	
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	20 - 50		✓			
K	3.3	400-500	200-250	vermicular cast iron	20 - 50		✓			
K	3.4	≤700	≤200	spheroidal graphite cast iron		20 - 50	✓			
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated		20 - 50	✓	✓		
K	3.6	≤700	≤200	malleable iron		20 - 50	✓	✓		
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated		20 - 50	✓	✓		
S	4.1	≤700	≤200	pure titanium						
S	4.2	≤900	≤270	titanium alloys						
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys						
S	5.1	≤500	≤150	pure nickel						
S	5.2	≤900	<270	nickel alloys, heat resistant						
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance						
N	6.1	≤350	≤100	non-alloy copper						
N	6.2	≤700	≤200	short chip, brass, bronze, red brass						
N	6.3	≤700	≤200	long chip brass						
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)						
N	7.1	≤350	≤100	Al, Mg non-alloy						
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %						
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %						
N	7.4	≤600	≤180	Al cast alloy, Si <10 %						
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %						
N	8.1			thermoplastics						
N	8.2			thermosetting plastics						
N	8.3			fibre reinforced plastics						

Cutting values shown are relating to the basic recommendations for cutting materials given.

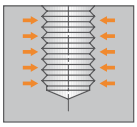
1.



Oversized thread

- wrong tools → select the right tools as shown in the catalogue
- cutting edge geometry not suitable for materials to be machined → select the right tools as shown in the catalogue
- material built-up at tap flanks
  → improve coolant system
  → use coated tap
- minor diameter too small, tool is cutting full profile → select correct core diameter
- chip jam
  → blind bore: increase spindle speed. Correct tool selection (spiral flute)
  → through hole: correct tool selection (spiral point)
- tolerance of tap drill to thread gauge does not agree → use tap drill with right tolerance
- angular or positional error in core bore → adjust workpiece clamping, use tapping chuck with axis parallel float

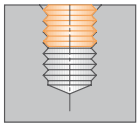
2.



Thread too tigh

- tolerance of tap drill to thread gauge does not agree → use tap drill with right tolerance
- wrong tool type → select the right tools as shown in the catalogue

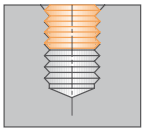
3.



Thread is cut wrongly axially

- cutting lead pressure on tapping chuck too great → select the right cutting lead pressure

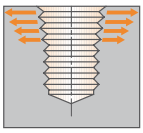
4.



Pitch distortion
(plug gauge cannot be screwed in over full thread length on the workpiece)

- tap is not cutting true to pitch
  → select right tool
  → select right cutting lead pressure
  → with length adjustment chucks reduce feed to 95%

5.



Thread oversize at the entry

- wrong cutting lead pressure
  → use compensation chuck(tension)
  → use lead srcrew
  → select right tool

6.



Thread surface not clean

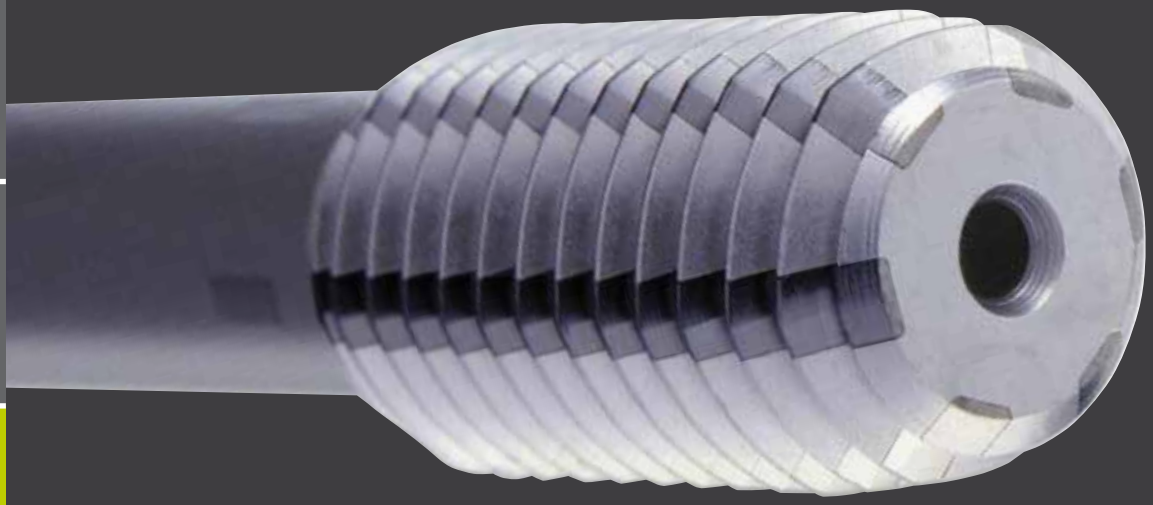
- wrong tool type → select right tool
- chip jam → see "thread too large – chip jam"
- core diameter too small → select right core diameter
- material built-up on thread flanks
  → use tools with surface treatment
  → improve coolant system
- cutting speed to low → increase cutting speed

7.



Tool life too short

- wrong tool type → select right tool type
- cutting speed too high or too low → adjust cutting speed
- composition and supply of coolant inadequate → provide suitable, sufficient coolant
- premature wear due to lack of or unsuitable surface treatment → use coated tools, if necessary solid carbide tools

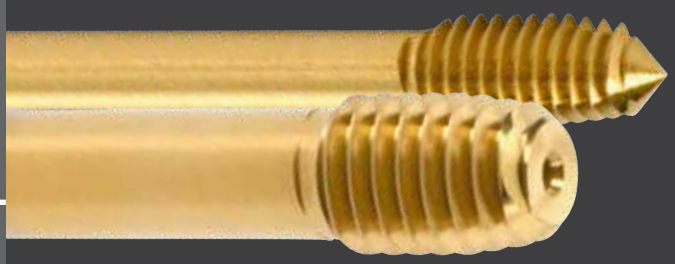


In contrast to thread cutting, no chips are produced when threads are made using thread formers. Materials with a breaking elongation >5% and a tensile strength <1000 N/mm² are suitable for when forming threads. Formed threads have a smoother surface and greater tensile strength under dynamic stress than cut threads.

Solid carbide thread formers have a tool life that is up to 20 times longer than those made of HSS-E.

The patented thread former made of HSS-E with brazed carbide inserts are particularly well suited for use on transfer lines. The flexible base body compensates for small alignment errors, whilst the carbide achieves the longest tool life at the cutting point.

Limitations: Thin-walled components with a wall thickness <2x lead cannot be formed.

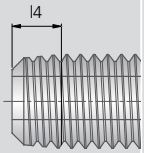
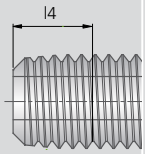
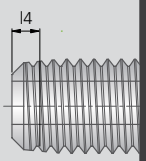


Roll form tap KOMET MOREX S

With the MOREX S solid carbide thread former, KOMET is expanding the fields of application for solid carbide thread formers. Above all, these tools are especially suitable for steel materials with small dimensions.

BENEFITS for you:

- Enhanced fields of application – especially in small dimensions, where it was not previously possible to use solid carbide thread formers
- Excellent performance and extremely long tool life for all easy-to-shape materials thanks to a combination of design and optimised geometry
- Short cycle times thanks to the high cutting speed

Chamfer form			
	 C	 D	 E
No. of threads l4	2 - 3,5	3,5 - 5,5	1,5 - 2
Application mainly for	blind and through hole	through hole threads	blind hole threads with short thread run-out (bottoming taps)

Roll form tap HSS-E with carbide strips

The successfull roll form tap MOREX HML has been refined by KOMET to the brandnew type MOREX R.
This new design allows highest tool life in all materials qualified for roll form tapping. Based on the combination of flexible shank and a hard thread profile, this unique tool outmatches conventional carbide roll form taps particularly in steel materials.
Furthermore the used tool can be refurbished 2-3 times.



BENEFITS for you:

- Highest tool life can be achieved in all materials which are suitable for roll form tapping
- Tools can be refurbished several times
- Keeps tool costs down

Roll form taps

Page

Solid carbide roll form taps

M – Metric ISO thread DIN 13
MOREX 648
MOREX N 649 – 650
MOREX S 651
MOREX S N 652

MF – Metric fine ISO thread DIN 13
MOREX S 653
MOREX S N 654

HSS-E roll form taps with carbide strips

M – Metric ISO thread DIN 13
MOREX HML 655
MOREX N HML 656 – 657

MF – Metric fine ISO thread DIN 13
MOREX HML 658

M – Metric ISO thread DIN 13
MOREX R 659 – 660

MF – Metric fine ISO thread DIN 13
MOREX R 661 – 662

Recommended cutting data 663

Problems – Causes – Solutions 665

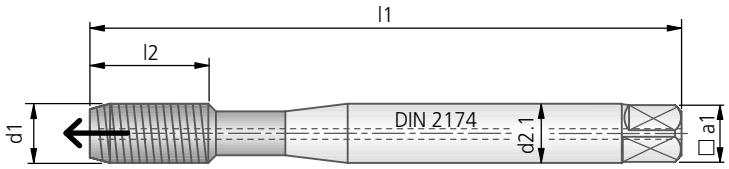
Tap drill diameters 681

KOMET MOREX

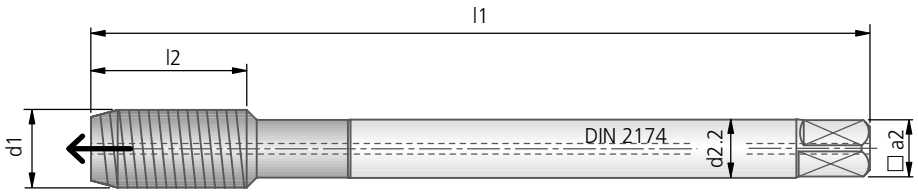
Solid carbide roll form taps



≤ M10



≥ M11

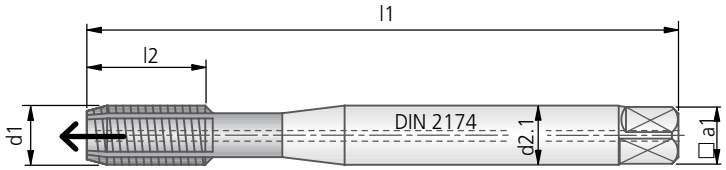


Nominal ∅ d1	P	l1	l2	d2.1	a1	kg	MOREX IK solid carbide uncoated Order No. chamfer form C	MOREX IK solid carbide uncoated Order No. chamfer form E	MOREX IK TiN solid carbide TiN Order No. chamfer form C
						Cutting material ▸ Surface ▸ Shank ∅ DIN 2174 ▸			
M1	0,25	40		2,5	2,1				
M1,1	0,25	40		2,5	2,1				
M1,2	0,25	40		2,5	2,1				
M1,4	0,30	40		2,5	2,1				
M1,6	0,35	40		2,5	2,1				
M1,7	0,35	40		2,5	2,1				
M1,8	0,35	40		2,5	2,1				
M2	0,40	45		2,8	2,1				
M2,2	0,45	45		2,8	2,1				
M2,3	0,40	45		2,8	2,1				
M2,5	0,45	50		2,8	2,1				
M2,6	0,45	50		2,8	2,1				
M3	0,50	56		3,5	2,7				
M3,5	0,60	56		4,0	3,0				
M4	0,70	63	13,0	4,5	3,4		80474001000015		80574001000015
M4,5	0,75	70		6,0	4,9				
M5	0,80	70	16,0	6,0	4,9		80474001000017		80574001000017
M6	1,00	80	18,0	6,0	4,9		80474001000018	80472001000018	80574001000018
M7	1,00	80		7,0	5,5				
M8	1,25	90	18,0	8,0	6,2		80474001000020	80472001000020	80574001000020
M9	1,25	90		9,0	7,0				
M10	1,50	100	21,0	10,0	8,0		80474001000022	80472001000022	80574001000022
Nominal ∅ d1	P	l1	l2	d2.2	a2	kg	Order No.	Order No.	Order No.
						Shank ∅ DIN 2174 ▸			
M11	1,50	100		8,0	6,2				
M12	1,75	110	24,0	9,0	7,0		80475001000024		80575001000024
M14	2,00	110		11,0	9,0				
M16	2,00	110		12,0	9,0				
M18	2,50	125		14,0	11,0				
M20	2,50	140		16,0	12,0				

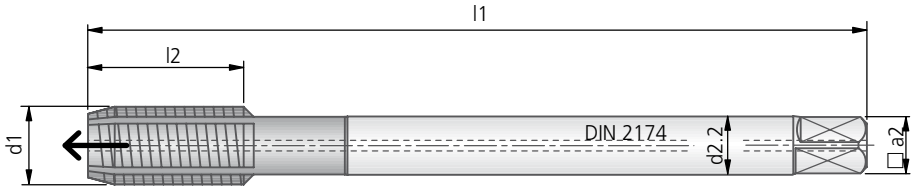
● very good | ◐ good



≤ M10



≥ M11



							MOREX N IK	MOREX N IK TiN
						Cutting material ▸	solid carbide	solid carbide
						Surface ▸	uncoated	TiN
Nominal ∅						Shank ∅ DIN 2174 ▸		
d1	P	l1	l2	d2.1	a1	kg	Order No.	Order No.
M1	0,25	40		2,5	2,1			
M1,1	0,25	40		2,5	2,1			
M1,2	0,25	40		2,5	2,1			
M1,4	0,30	40		2,5	2,1			
M1,6	0,35	40		2,5	2,1			
M1,7	0,35	40		2,5	2,1			
M1,8	0,35	40		2,5	2,1			
M2	0,40	45		2,8	2,1			
M2,2	0,45	45		2,8	2,1			
M2,3	0,40	45		2,8	2,1			
M2,5	0,45	50		2,8	2,1			
M2,6	0,45	50		2,8	2,1			
M3	0,50	56		3,5	2,7			
M3,5	0,60	56		4,0	3,0			
M4	0,70	63	13,0	4,5	3,4		80476001000015	80576001000015
M4,5	0,75	70		6,0	4,9			
M5	0,80	70	16,0	6,0	4,9		80476001000017	80576001000017
M6	1,00	80	18,0	6,0	4,9		80476001000018	80576001000018
M7	1,00	80		7,0	5,5			
M8	1,25	90	18,0	8,0	6,2		80476001000020	80576001000020
M9	1,25	90		9,0	7,0			
M10	1,50	100	21,0	10,0	8,0		80476001000022	80576001000022
Nominal ∅						Shank ∅ DIN 2174 ▸		
d1	P	l1	l2	d2.2	a2	kg	Order No.	Order No.
M11	1,50	100		8,0	6,2			
M12	1,75	110	24,0	9,0	7,0		80477001000024	80577001000024
M14	2,00	110		11,0	9,0			
M16	2,00	110		12,0	9,0			
M18	2,50	125		14,0	11,0			
M20	2,50	140		16,0	12,0			

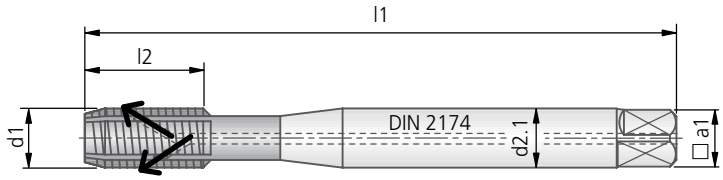
Guideline values for thread forming: page 664

KOMET MOREX N

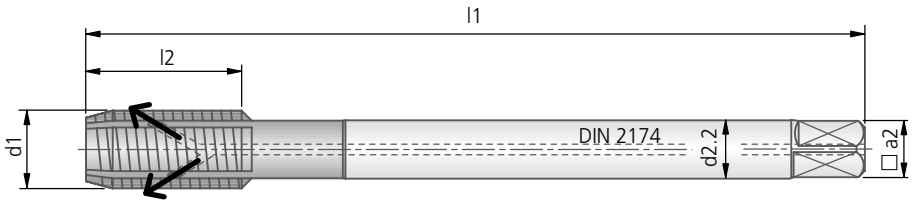
Solid carbide roll form taps



≤ M10



≥ M11



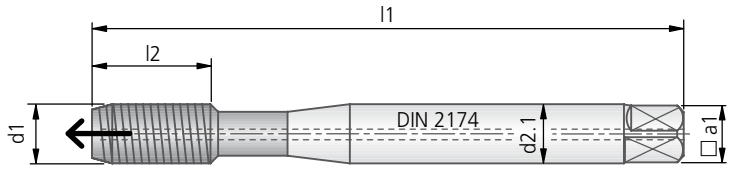
							MOREX N IKS	MOREX N IKS TiN
						Cutting material ▸ Surface ▸ Shank Ø DIN 2174 ▸	solid carbide uncoated	solid carbide TiN
Nominal Ø d1	P	l1	l2	d2.1	a1	kg	Order No.	Order No.
M1	0,25	40		2,5	2,1			
M1,1	0,25	40		2,5	2,1			
M1,2	0,25	40		2,5	2,1			
M1,4	0,30	40		2,5	2,1			
M1,6	0,35	40		2,5	2,1			
M1,7	0,35	40		2,5	2,1			
M1,8	0,35	40		2,5	2,1			
M2	0,40	45		2,8	2,1			
M2,2	0,45	45		2,8	2,1			
M2,3	0,40	45		2,8	2,1			
M2,5	0,45	50		2,8	2,1			
M2,6	0,45	50		2,8	2,1			
M3	0,50	56		3,5	2,7			
M3,5	0,60	56		4,0	3,0			
M4	0,70	63	13,0	4,5	3,4		80494001000015	80594001000015
M4,5	0,75	70		6,0	4,9			
M5	0,80	70	16,0	6,0	4,9		80494001000017	80594001000017
M6	1,00	80	18,0	6,0	4,9		80494001000018	80594001000018
M7	1,00	80		7,0	5,5			
M8	1,25	90	18,0	8,0	6,2		80494001000020	80594001000020
M9	1,25	90		9,0	7,0			
M10	1,50	100	21,0	10,0	8,0		80494001000022	80594001000022
Nominal Ø d1	P	l1	l2	d2.2	a2	Shank Ø DIN 2174 ▸ kg	Order No.	Order No.
M11	1,50	100		8,0	6,2			
M12	1,75	110	24,0	9,0	7,0		80495001000024	80595001000024
M14	2,00	110		11,0	9,0			
M16	2,00	110		12,0	9,0			
M18	2,50	125		14,0	11,0			
M20	2,50	140		16,0	12,0			

● very good | ◐ good

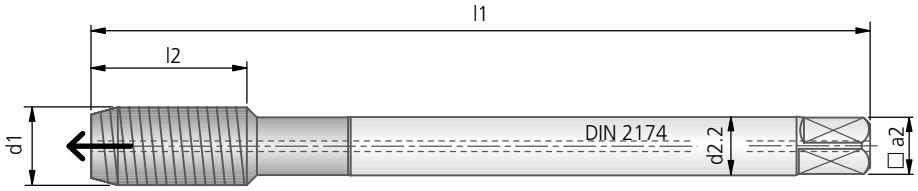
Solid carbide roll form taps



M3 without central coolant supply
M3,5 - M10



≥ M11



							MOREX S IK TiN
						Cutting material ▸ Surface ▸	solid carbide TiN
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M3	0,50	56	6,0	3,5	2,7		80584001000013
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	6,0	4,5	3,4		80584001000015
M4,5	0,75	70		6,0	4,9		
M5	0,80	70	6,0	6,0	4,9		80584001000017
M6	1,00	80	6,0	6,0	4,9		80584001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	8,0	8,0	6,2		80584001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100		10,0	8,0		
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110		9,0	7,0		
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		
M18	2,50	125		14,0	11,0		
M20	2,50	140		16,0	12,0		

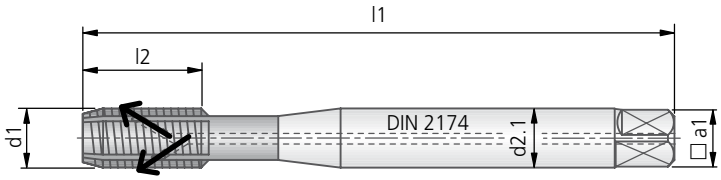
Guideline values for thread forming: page 664

KOMET MOREX S N

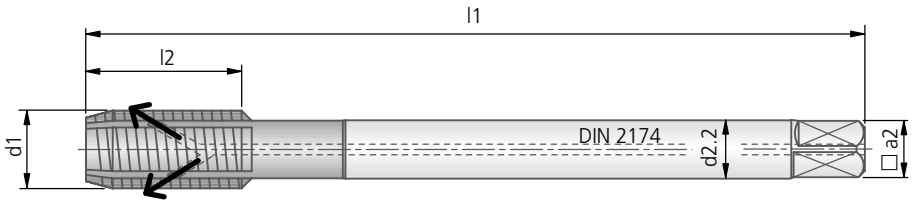
Solid carbide roll form taps



M3 without central coolant supply
M3,5 - M10



≥ M11

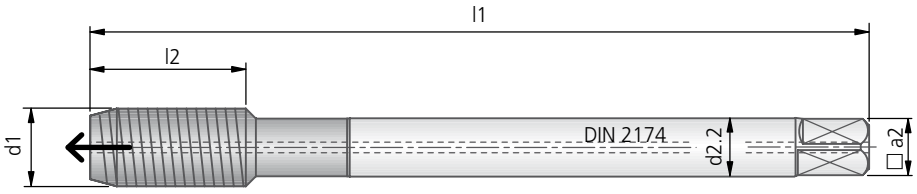


							MOREX S N IKS TiN
						Cutting material ▸ Surface ▸	solid carbide TiN
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M3	0,50	56		3,5	2,7		80586001000013
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	6,0	4,5	3,4		80586001000015
M4,5	0,75	70		6,0	4,9		
M5	0,80	70	6,0	6,0	4,9		80586001000017
M6	1,00	80	6,0	6,0	4,9		80586001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	8,0	8,0	6,2		80586001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100		10,0	8,0		
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110		9,0	7,0		
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		
M18	2,50	125		14,0	11,0		
M20	2,50	140		16,0	12,0		

● very good | ◐ good

Solid carbide roll form taps





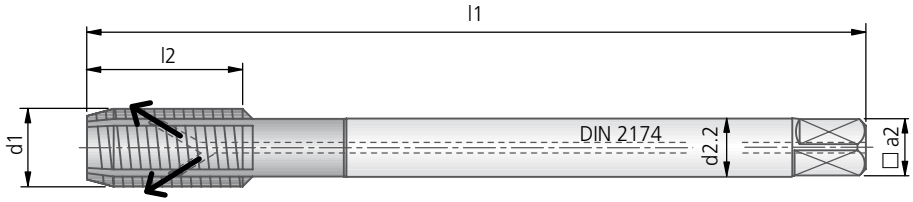
						MOREX S IK TiN
					Cutting material ▸	solid carbide
					Surface ▸	TiN
					Shank ∅ DIN 2174 ▸	
Nominal ∅ d1 × P	l1	l2	d2.2	a2	kg	Order No.
M8×0,5	80		6,0	4,9		
M8×0,75	80		6,0	4,9		
M8×1	90	8,0	6,0	4,9		80585002000070
M9×1	90		7,0	5,5		
M10×0,75	90		7,0	5,5		
M10×1	90	10,0	7,0	5,5		80585002000094
M10×1,25	100		7,0	5,5		
M11×1	90		8,0	6,2		
M12×1	100		9,0	7,0		
M12×1,25	100		9,0	7,0		
M12×1,5	100		9,0	7,0		
M14×1	100		11,0	9,0		
M14×1,25	100		11,0	9,0		

Guideline values for thread forming: page 664

KOMET MOREX S N

Solid carbide roll form taps





						MOREX S N IKS TiN
					Cutting material ▸	solid carbide
					Surface ▸	TiN
					Shank ∅ DIN 2174 ▸	
Nominal ∅ d1 × P	l1	l2	d2.2	a2	kg	Order No.
M8×0,5	80		6,0	4,9		
M8×0,75	80		6,0	4,9		
M8×1	90	8,0	6,0	4,9		80587002000070
M9×1	90		7,0	5,5		
M10×0,75	90		7,0	5,5		
M10×1	90	10,0	7,0	5,5		80587002000094
M10×1,25	100		7,0	5,5		
M11×1	90		8,0	6,2		
M12×1	100		9,0	7,0		
M12×1,25	100		9,0	7,0		
M12×1,5	100		9,0	7,0		
M14×1	100		11,0	9,0		
M14×1,25	100		11,0	9,0		

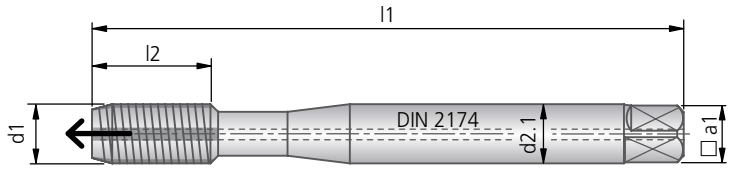
Guideline values for thread forming: page 664

● very good | ◐ good

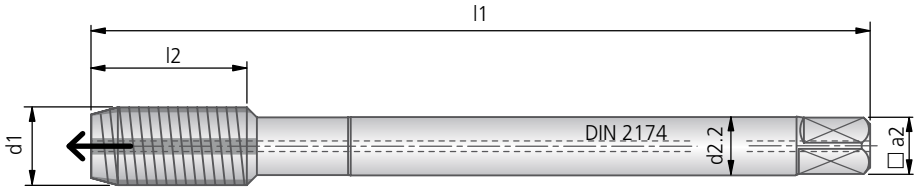
HSS-E Roll form taps with carbide strips



M5 without central coolant supply
M6 - M10



≥ M12



							MOREX HML IK	MOREX HML IK TiN
						Cutting material ▸	HSS-E, carbide tipped	HSS-E, carbide tipped
						Surface ▸	uncoated	TiN
Nominal ∅						Shank ∅ DIN 2174 ▸		
d1	P	l1	l2	d2.1	a1		Order No.	Order No.
M5	0,80	70		6,0	5,0			
M6	1,00	80	18,0	6,0	5,0		90174001000018	90374001000018
M8	1,25	90	18,0	8,0	6,0		90174001000020	90374001000020
M10	1,50	100	21,0	10,0	8,0		90174001000022	90374001000022
Nominal ∅						Shank ∅ DIN 2174 ▸		
d1	P	l1	l2	d2.2	a2		Order No.	Order No.
M12	1,75	110	24,0	9,0	7,0		90175001000024	90375001000024
M14	2,00	110		11,0	9,0			
M16	2,00	110		12,0	9,0			

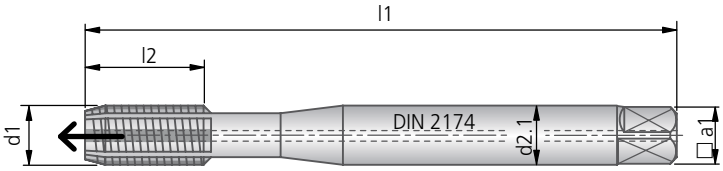
Guideline values for thread forming: page 663.

KOMET MOREX N HML

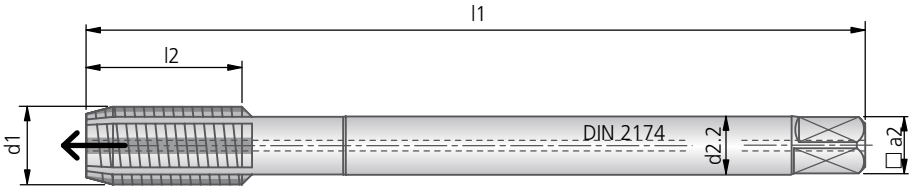
HSS-E Roll form taps with carbide strips



≤ M10



M12



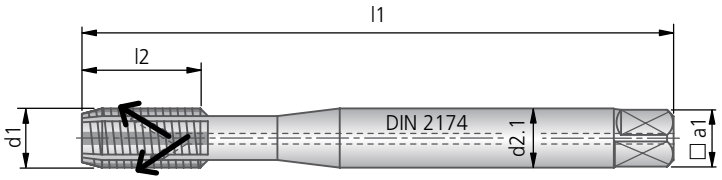
							MOREX N HML IK
						Cutting material ▸	HSS-E, carbide tipped
						Surface ▸	uncoated
Nominal ∅						Shank ∅ DIN 2174 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M6	1,00	80	18,0	6,0	4,9		90176001000018
M8	1,25	90	18,0	8,0	6,2		90176001000020
M10	1,50	100	21,0	10,0	8,0		90176001000022
Nominal ∅						Shank ∅ DIN 2174 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M12	1,75	110	24,0	9,0	7,0		90177001000024

● very good | ◐ good

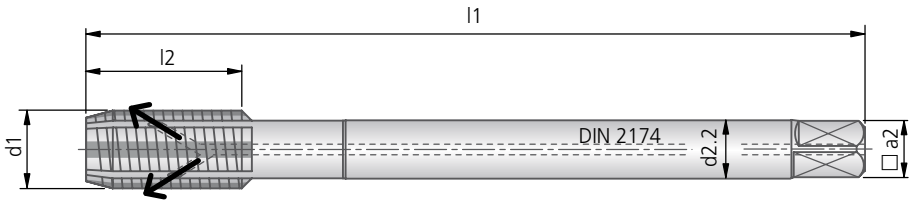
HSS-E Roll form taps with carbide strips



≤ M10



M12



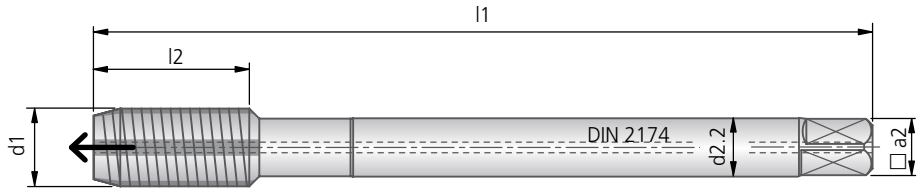
							MOREX N HML IKS TiN
						Cutting material ▸ Surface ▸	HSS-E, carbide tipped TiN
Nominal Ø **d1**	**P**	**l1**	**l2**	**d2.1**	**a1**	Shank Ø DIN 2174 ▸ kg	 **Order No.**
M6	1,00	80	18,0	6,0	4,9		**90496001000018**
M8	1,25	90	18,0	8,0	6,2		**90496001000020**
M10	1,50	100	21,0	10,0	8,0		**90496001000022**
Nominal Ø **d1**	**P**	**l1**	**l2**	**d2.2**	**a2**	Shank Ø DIN 2174 ▸ kg	 **Order No.**
M12	1,75	110	24,0	9,0	7,0		**90497001000024**

Guideline values for thread forming: page 663.

KOMET MOREX HML

HSS-E Roll form taps with carbide strips





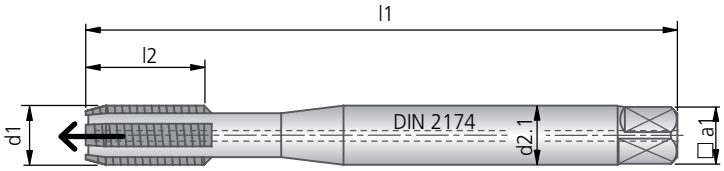
						MOREX HML IK
					Cutting material ▸ Surface ▸ Shank ∅ DIN 2174 ▸	HSS-E, carbide tipped uncoated
Nominal ∅ d1 × P	l1	l2	d2.2	a2	kg	Order No.
M10×1	90	18,0	7,0	5,5		90175002000094
M12×1	100		9,0	7,0		
M12×1,5	100	20,0	9,0	7,0		90175002000113
M14×1	100		11,0	9,0		
M14×1,5	100		11,0	9,0		
M16×1	100		12,0	9,0		
M16×1,5	100		12,0	9,0		
M18×1	110		14,0	11,0		
M18×1,5	110		14,0	11,0		
M20×1	125		16,0	12,0		
M20×1,5	125		16,0	12,0		

● very good | ◐ good

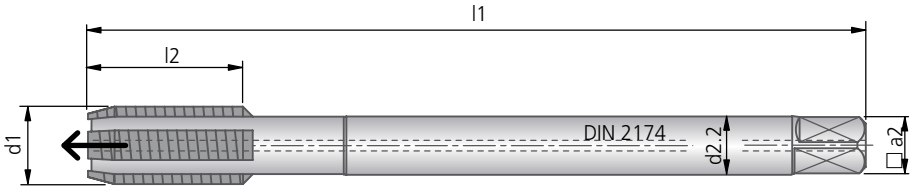
HSS-E Roll form taps with carbide strips



≤ M10



≥ M12



							MOREX R IK TiN
						Cutting material ▸	HSS-E, carbide tipped
						Surface ▸	TiN
Nominal ∅						Shank ∅ DIN 2174 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M10	1,50	100	11	10,0	8,0		90774001000022
Nominal ∅						Shank ∅ DIN 2174 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M12	1,75	110	13	9,0	7,0		90775001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110	18	12,0	9,0		90775001000026
M18	2,50	125		14,0	11,0		
M20	2,50	140	22	16,0	12,0		90775001000028
M24	3,00	160		18,0	14,5		
M27	3,00	160		20,0	16,0		
M30	3,50	180		22,0	18,0		
M33	3,50	180		25,0	20,0		
M36	4,00	200		28,0	22,0		

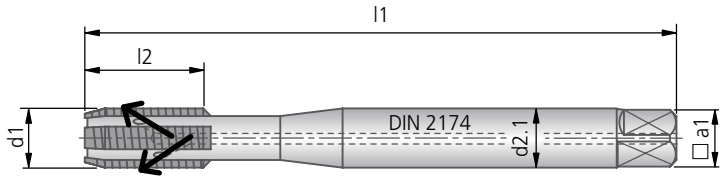
Guideline values for thread forming: page 663.

KOMET MOREX R

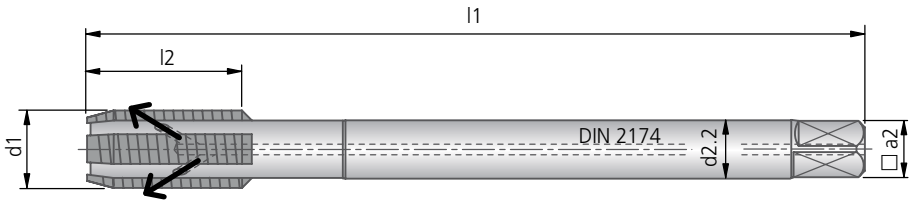
HSS-E Roll form taps with carbide strips



≤ M10



≥ M12

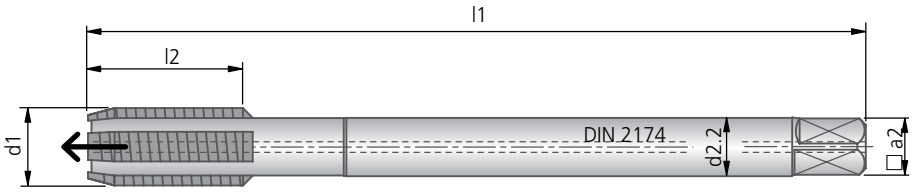


							MOREX R IKS TiN
						Cutting material ▸	HSS-E, carbide tipped
						Surface ▸	TiN
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.1	a1	kg	Order No.
M10	1,50	100	11	10,0	8,0		90776001000022
Nominal Ø						Shank Ø DIN 2174 ▸	
d1	P	l1	l2	d2.2	a2	kg	Order No.
M12	1,75	110	13	9,0	7,0		90777001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110	18	12,0	9,0		90777001000026
M18	2,50	125		14,0	11,0		
M20	2,50	140	22	16,0	12,0		90777001000028
M24	3,00	160		18,0	14,5		
M27	3,00	160		20,0	16,0		
M30	3,50	180		22,0	18,0		
M33	3,50	180		25,0	20,0		
M36	4,00	200		28,0	22,0		

● very good | ◐ good

HSS-E Roll form taps with carbide strips





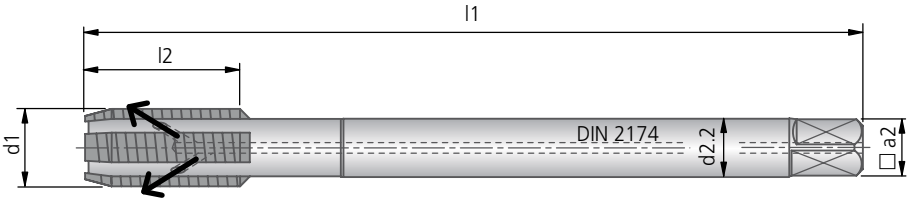
						MOREX R IK TiN
					Cutting material ▸ Surface ▸	HSS-E, carbide tipped TiN
Nominal ∅ d1 × P	l1	l2	d2.2	a2	Shank ∅ DIN 2174 ▸ kg	Order No.
M10×1	90	11,0	7,0	5,5		90775002000094
M12×1	100		9,0	7,0		
M12×1,5	100	13,0	9,0	7,0		90775002000113
M14×1	100		11,0	9,0		
M14×1,5	100		11,0	9,0		
M16×1	100		12,0	9,0		
M16×1,5	100	18,0	12,0	9,0		90775002000147
M18×1	110		14,0	11,0		
M18×1,5	110		14,0	11,0		
M20×1	125		16,0	12,0		
M20×1,5	125		16,0	12,0		

Guideline values for thread forming: page 663.

KOMET MOREX R

HSS-E Roll form taps with carbide strips





						MOREX R IKS TiN
					Cutting material ▸ Surface ▸	HSS-E, carbide tipped TiN
Nominal ∅ d1 × P	l1	l2	d2.2	a2	Shank ∅ DIN 2174 ▸ kg	Order No.
M10×1	90	11,0	7,0	5,5		90777002000094
M12×1	100		9,0	7,0		
M12×1,5	100	13,0	9,0	7,0		90777002000113
M14×1	100		11,0	9,0		
M14×1,5	100		11,0	9,0		
M16×1	100		12,0	9,0		
M16×1,5	100	18,0	12,0	9,0		90777002000147
M18×1	110		14,0	11,0		
M18×1,5	110		14,0	11,0		
M20×1	125		16,0	12,0		
M20×1,5	125		16,0	12,0		

● very good | ◐ good

Guideline values for thread forming					Cutting speed		Coolant			
Material group		Strength Rm (N/mm²)	Hardness HB	Cutting material / Surface / Material	HSS-E with carbide strips uncoated v_c m/min	HSS-E with carbide strips coated v_c m/min	Emulsion	Oil	Dry	Air
P	1.1	≤400	≤120	magnetic soft iron		30 - 80	✓	✓		
P	1.2	≤700	≤200	structural, case hardened steel		30 - 80	✓	✓		
P	1.3	≤850	≤250	carbon steel		30 - 80	✓	✓		
P	1.4	≤850	≤250	alloy steel		20 - 50		✓		
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel		20 - 50		✓		
P	1.6	>1200	>350	alloy/heat treated steel						
H	1.7	≤1400	≤400	hardened steel to 45 HRC						
H	1.8	≤2200	≤600	hardened steel to 58 HRC						
M	2.1	≤850	≤250	stainless steel, sulphuretted		20 - 50		✓		
M	2.2	≤850	≤250	austentic		20 - 40		✓		
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic		20 - 40		✓		
K	3.1	≤500	≤150	grey cast iron						
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated						
K	3.3	400-500	200-250	vermicular cast iron						
K	3.4	≤700	≤200	spheroidal graphite cast iron		20 - 60	✓	✓		
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated		20 - 40	✓	✓		
K	3.6	≤700	≤200	malleable iron						
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated						
S	4.1	≤700	≤200	pure titanium						
S	4.2	≤900	≤270	titanium alloys						
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys						
S	5.1	≤500	≤150	pure nickel		10 - 30		✓		
S	5.2	≤900	<270	nickel alloys, heat resistant		10 - 20		✓		
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance						
N	6.1	≤350	≤100	non-alloy copper	20 - 60	20 - 80	✓	✓		
N	6.2	≤700	≤200	short chip, brass, bronze, red brass						
N	6.3	≤700	≤200	long chip brass	20 - 60	20 - 80	✓	✓		
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)						
N	7.1	≤350	≤100	Al, Mg non-alloy	20 - 60	20 - 80	✓	✓		
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	20 - 60	20 - 80	✓	✓		
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	20 - 60	20 - 80	✓	✓		
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	20 - 60	20 - 80	✓	✓		
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	20 - 60	20 - 80	✓	✓		
N	8.1			thermoplastics						
N	8.2			thermosetting plastics						
N	8.3			fibre reinforced plastics						

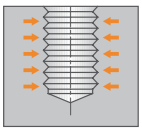
Cutting values shown are relating to the basic recommendations for cutting materials given.

KOMET Roll form taps

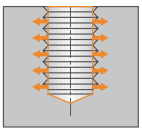
Recommended cutting data

Guideline values for thread forming					Cutting speed		Coolant			
Material group		Strength Rm (N/mm²)	Hardness HB	Cutting material / Surface / Material	Solid carbide uncoated v_c m/min	Solid carbide coated v_c m/min	Emulsion	Oil	Dry	Air
P	1.1	≤400	≤120	magnetic soft iron		30 - 80	✓	✓		
P	1.2	≤700	≤200	structural, case hardened steel		30 - 80	✓	✓		
P	1.3	≤850	≤250	carbon steel		30 - 80	✓	✓		
P	1.4	≤850	≤250	alloy steel		20 - 50		✓		
P	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel		20 - 50		✓		
P	1.6	>1200	>350	alloy/heat treated steel						
H	1.7	≤1400	≤400	hardened steel to 45 HRC						
H	1.8	≤2200	≤600	hardened steel to 58 HRC						
M	2.1	≤850	≤250	stainless steel, sulphuretted		20 - 50		✓		
M	2.2	≤850	≤250	austentic		20 - 40		✓		
M	2.3	≤1000	≤300	ferritic, ferritic & austentic, martensitic		20 - 40		✓		
K	3.1	≤500	≤150	grey cast iron						
K	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated						
K	3.3	400-500	200-250	vermicular cast iron						
K	3.4	≤700	≤200	spheroidal graphite cast iron		20 - 60	✓	✓		
K	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated		20 - 40	✓	✓		
K	3.6	≤700	≤200	malleable iron						
K	3.7	>700 <1000	>200 ≤300	malleable iron heat treated						
S	4.1	≤700	≤200	pure titanium						
S	4.2	≤900	≤270	titanium alloys						
S	4.3	>900 ≤1250	>270 ≤300	titanium alloys						
S	5.1	≤500	≤150	pure nickel		10 - 30		✓		
S	5.2	≤900	<270	nickel alloys, heat resistant		10 - 20		✓		
S	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance						
N	6.1	≤350	≤100	non-alloy copper	20 - 60	20 - 80	✓	✓		
N	6.2	≤700	≤200	short chip, brass, bronze, red brass						
N	6.3	≤700	≤200	long chip brass	20 - 60	20 - 80	✓	✓		
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)						
N	7.1	≤350	≤100	Al, Mg non-alloy	20 - 60	20 - 80	✓	✓		
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	20 - 60	20 - 80	✓	✓		
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	20 - 60	20 - 80	✓	✓		
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	20 - 60	20 - 80	✓	✓		
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	20 - 60	20 - 80	✓	✓		
N	8.1			thermoplastics						
N	8.2			thermosetting plastics						
N	8.3			fibre reinforced plastics						

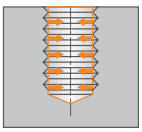
Cutting values shown are relating to the basic recommendations for cutting materials given.

1. 

Thread too tigh
- tolerance of thread forming tool does not align with thread gauge
  → use thread forming tool with right tolerance

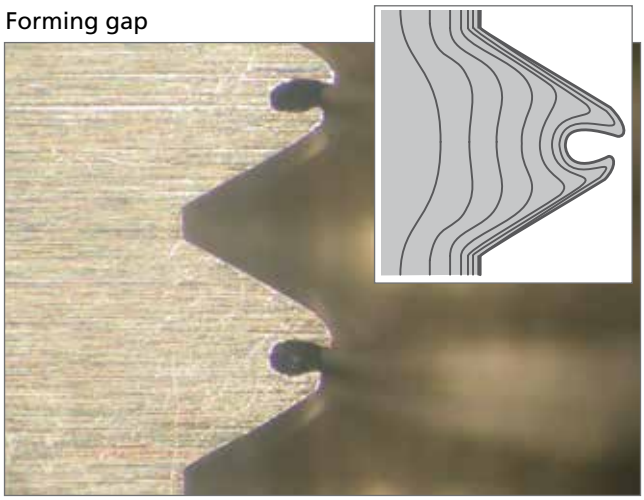
2. 

Core diameter too large on thread
- wrong drill diameter (too large)
  → use smaller drill

3. 

Core diameter too small or torque too high
- drill diameter too small
  → use larger core boring tool

Forming gap



KOMET JSF

Synchro tapping chuck



Modern CNC machines allow synchronous thread tapping without a compensating chuck, also called "rigid tapping".

The backlash of the spindle causes stress to one side of the cut tap or form tap, respectively. This may result in a reduced tool life and lack of quality in the surface of the thread.

KOMET synchro tapping chucks compensate for the length errors caused by the backlash and create the prerequisites for achieving optimum performance from your tapping tools.

BENEFITS for you:

- Optimum tool performance
- Lengths can be adjusted from both sides
- Maximum tool life
- Wet operation, MQL 1-channel system or MQL 2-channel system

Synchro tapping chuck

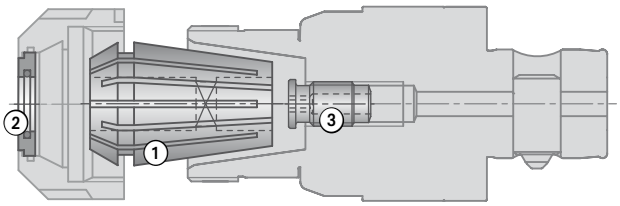
	Page
ABS adaptor	668
Accessories	669
Collet, coolant supply unit	

KOMET JSF

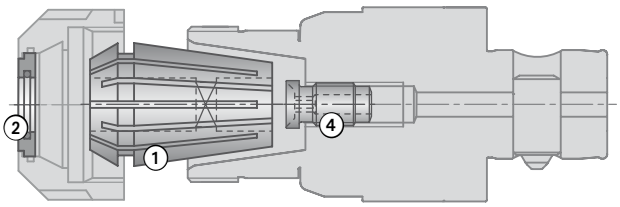
Synchro tapping chuck with ABS adaptor

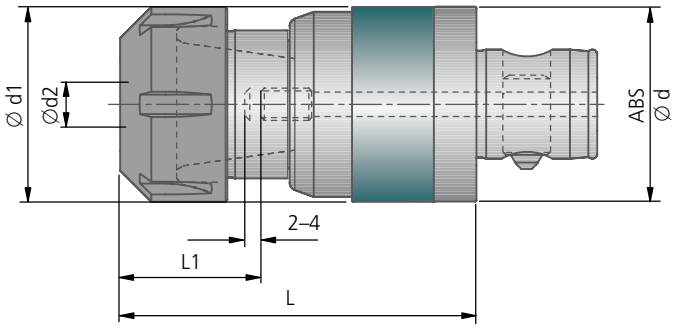
A synchro tapping chuck for two types of cooling lubricant supply: By choosing the appropriate adjustment screw, the synchro tapping chuck can be used in wet operation and in the MQL 1-channel system.

A Wet operation (max. 50 bar)



B MQL 1-channel system





JSF ABS							A | B		
for thread	ABS Ø d	Ø d1	Clamping range for collet Ø d2	L	Adjust-ment dimension L1	kg	Wet operation and MQL 1-channel system Article	Order No.	Collet Size
M4 – M12	32	34	4,5 - 11,2	78	29 - 42	0,41	JSF ABS32-20-78	**50795131002000**	ER20
M4 – M12	50	34	4,5 - 11,2	84,5	29 - 42	0,69	JSF ABS50-20-84,5	**50795135002000**	ER20
M4 – M20	50	50	4,5 - 18,0	90,5	31 - 45	1,01	JSF ABS50-32-90,5	**50795135003200**	ER32

Supply includes: Synchro tapping chuck with collet nut and Allen key for adjusting screw.
Please order separately: collet ①, seal disc ② and adjusting screw ③ or ④ (page 669).

ER20							
				Collet ① with square drive	Seal disc ② for collet nut	Adjusting screw ③ for wet operation	Adjusting screw ④ for MQL
Ø d	□ a	l	Norm	Order No.	Order No.	Order No.	Order No.
4,5	3,4	18	DIN	52805 20045	52806 20045	51391 20002	51391 30002
6,0	4,9	18	DIN	52805 20060	52806 20060	51391 20001	51391 30001
7,0	5,5	18	DIN	52805 20070	52806 20070	51391 20004	51391 30004
8,0	6,2	22	DIN	52805 20080	52806 20080	51391 20005	51391 30005
9,0	7,1	22	DIN	52805 20090	52806 20090	51391 20006	51391 30006
10,0	8,0	25	DIN	52805 20100	52806 20100	51391 20007	51391 30007
11,0	9,0	25	DIN	52805 20110	52806 20110	51391 20008	51391 30008

ER32							
				Collet ① with square drive	Seal disc ② for collet nut	Adjusting screw ③ for wet operation	Adjusting screw ④ for MQL
Ø d	□ a	l	Norm	Order No.	Order No.	Order No.	Order No.
6,0	4,9	18	DIN	52805 32060	52806 32060	51391 20014	51391 30014
7,0	5,5	18	DIN	52805 32070	52806 32070	51391 20015	51391 30015
8,0	6,2	22	DIN	52805 32080	52806 32080	51391 20016	51391 30016
9,0	7,1	22	DIN	52805 32090	52806 32090	51391 20009	51391 30009
10,0	8,0	25	DIN	52805 32100	52806 32100	51391 20010	51391 30010
11,0	9,0	25	DIN	52805 32110	52806 32110	51391 20011	51391 30011
12,0	9,0	25	DIN	52805 32120	52806 32120	51391 20011	51391 30011
14,0	11,0	25	DIN	52805 32140	52806 32140	51391 20012	51391 30012
16,0	12,0	25	DIN	52805 32160	52806 32160	51391 20013	51391 30013

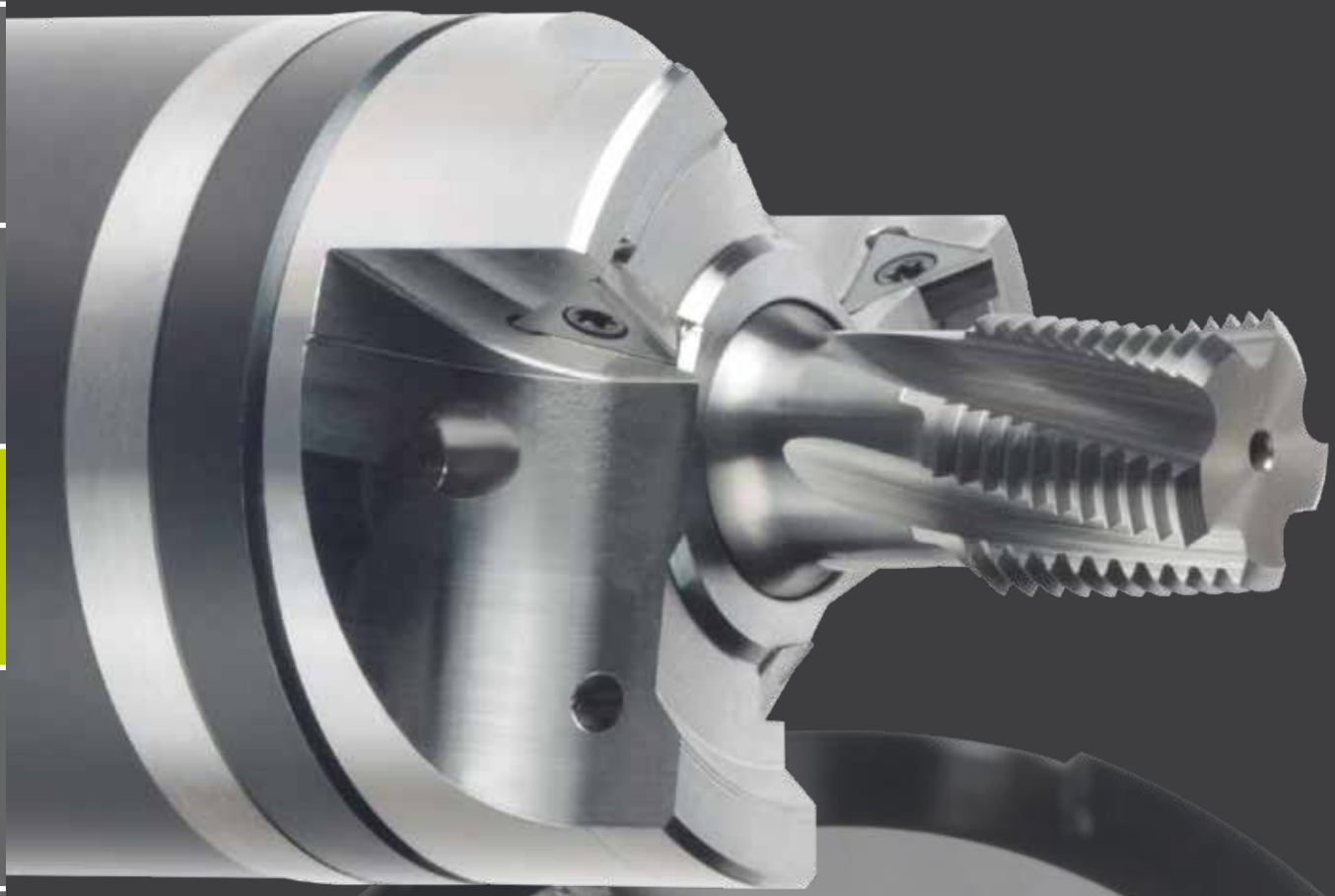
Coolant supply unit
for MQL 1-channel system
Order No.
61000 00388

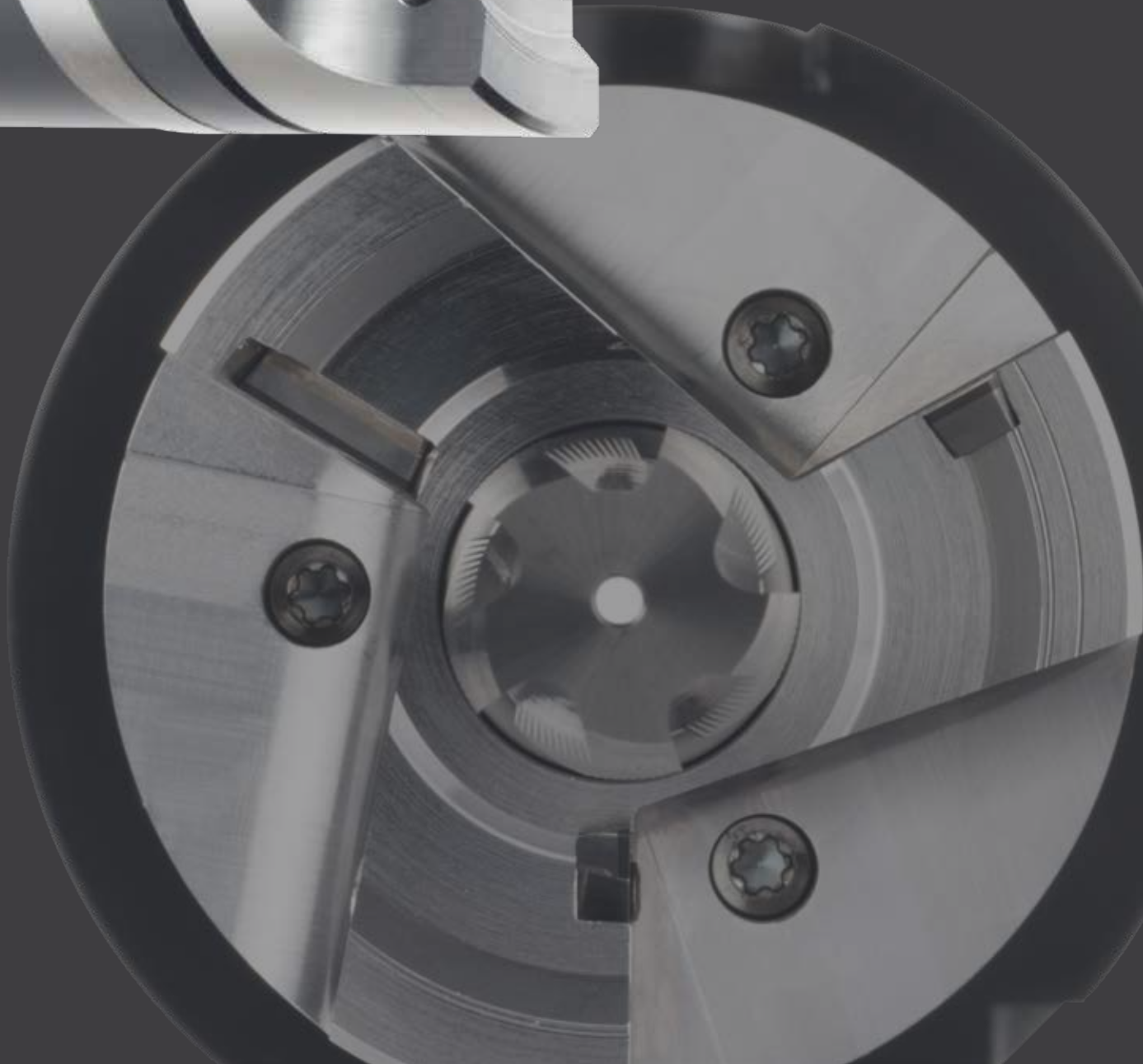
Supply coolant supply unit includes: Coolant tube, locking collar and two O rings.

Note re. supply: Only use the keys listed for assembly.
This will prevent coolant flowing back into the machine spindle/clamping system.
A specific coolant hose for the machine can also be fitted on all HSK adaptors.

Modular Tool System

especially for machining aluminium





Boring, counterboring and thread milling with the shortest possible delivery times

KOMET VABOS, the variable boring and countersinking system, is a modular tool system which is particularly notable for its extremely high flexibility.
A broad based range of machining tasks can be carried out with just a few components – a central tool combined with inserts for universal shaping. When manufacturing bores and threads on CNC machines significant time savings and improvements in quality can be achieved.

BENEFITS for you:

- Large number of possible combinations
- One tool holder sufficient
- Lower tool costs
- Exchangeable head
- Easy exchangeability at re-tipping
- Easy assembly of the central tool
- HSK-A63 basic holder kept in stock as standard in two lengths
- Can be supplied as insert tools or in PCD brazed version
- Shortest possible delivery times

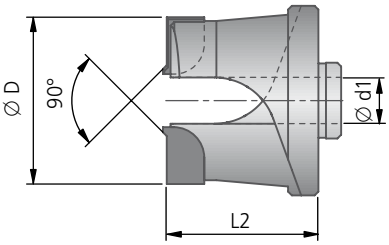
VABOS EASY

	Page
Head	672
HSK-A adaptor	673
Application example	674
Enquiry form	675

KOMET VABOS EASY

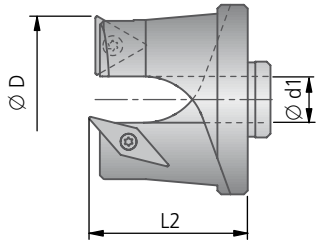
Head

with PCD brazed



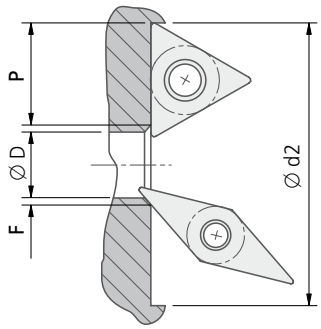
PCD head					
Ø D max.	Ø d1	L2 max.	kg	No. of flutes 2 Order No.	No. of flutes 3 Order No.
25,6	6	20		507350..	507360..
28,6	8	25		507350..	507360..
35,6	10	25		507350..	507360..
42,6	12	25		507350..	507360..
44,6	14	30		507350..	507360..
48,6	16	30		507350..	507360..

with inserts



Indexable insert head					
Ø D max.	Ø d1	L2 max.	kg	No. of flutes 2 Order No.	No. of flutes 3 Order No.
25,6	6	20		507150..	507160..
28,6	8	25		507150..	507160..
35,6	10	25		507150..	507160..
42,6	12	25		507150..	507160..
44,6	14	30		507150..	507160..
48,6	16	30		507150..	507160..

Calculating the achievable spotface diameter in conjunction with boring and 90° countersinking using inserts.



Bore diameter D		
shank Ø d1	Ø D min	Ø D max
6	4,0	6,0
8	6,0	8,0
10	8,0	10,0
12	10,0	12,0
14	12,0	14,0
16	14,0	16,0

Chamfer width F		
	F min	F max
W89 03..0.02..	0,1	1,5

Cutting length P		
	P min	P max
W30 04...02..	5,3	6,3
W30 04...03..	5,2	6,1
W30 04...04..	5,2	5,8
W30 14...02..	7,5	9,1
W30 14...04..	7,4	8,6

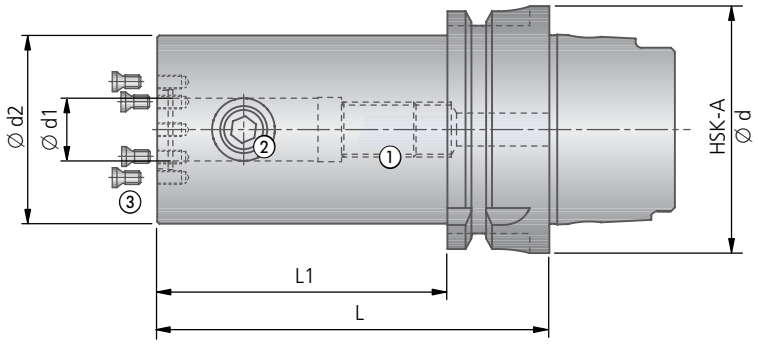
Spotface diameter d2 = bore diameter D + 2 × chamfer width F + 2 × cutting length P of inserts

Example: Bore diameter D = 5,0 mm, chamfer width F = 0,5 mm, cutting length P = 7,5 mm

Ø d2 = 5,0 + 2 × 0,5 + 2 × 7,5
Ø d2 = 21,0 mm

Holder with HSK-A Adaptor ISO 12164-1

internal coolant supply ■



Short version							Assembly parts		
HSK-A Ø d	Ø d1	Ø d2	L	L1	kg	Order No.	Adjusting screw ① Order No.	Clamping screw ② Order No.	Location screw ③ Order No. Article
63	6	25	80	54		50775026000600	N00 71020	N00 70160	N00 57521 S/M3,5×7,3-10IP 2,8 Nm
63	8	28	80	54		50775026000800	N00 71070	N00 70210	
63	10	35	80	54		50775026001000	N00 71130	M8×12	
63	12	42	90	64		50775026001200	N00 71220	M10×16	
63	14	44	90	64		50775026001400	N00 71220	M12×14	
63	16	48	100	74		50775026001600	N00 71400	N00 70400	

Long version							Assembly parts		
HSK-A Ø d	Ø d1	Ø d2	L	L1	kg	Order No.	Adjusting screw ① Order No.	Clamping screw ② Order No.	Location screw ③ Order No. Article
63	6	25	160	134		50776026000600	N00 71020	N00 70160	N00 57521 S/M3,5×7,3-10IP 2,8 Nm
63	8	28	160	134		50776026000800	N00 71070	N00 70210	
63	10	35	160	134		50776026001000	N00 71130	M8×12	
63	12	42	160	134		50776026001200	N00 71220	M10×16	
63	14	44	160	134		50776026001400	N00 71230	M12×14	
63	16	48	160	134		50776026001600	N00 71400	N00 70400	

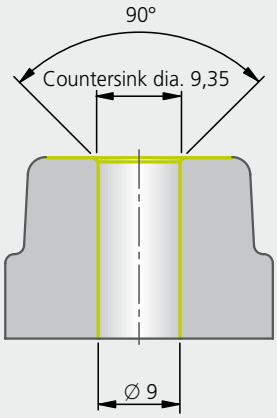
Supply includes:
HSK-A adaptor with assembly parts.

KOMET VABOS EASY

Modular Tool System

Application 1:

- Boring
- 90° countersinking
- Spotfacing

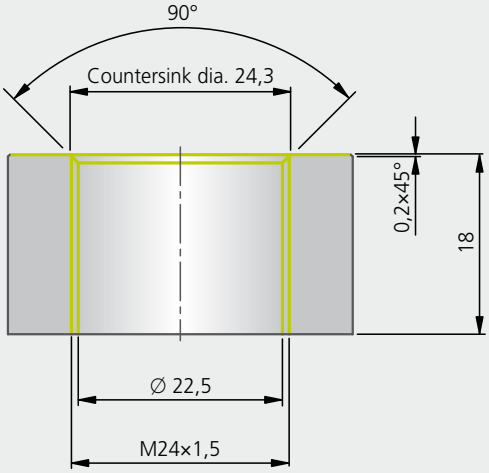


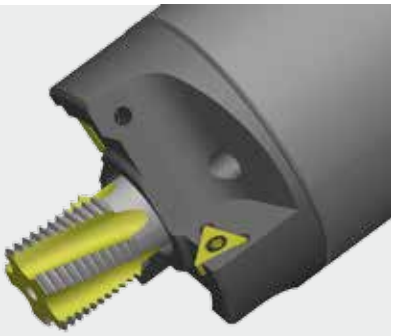


Application 2:

Existing bore
Shaped counterbore:

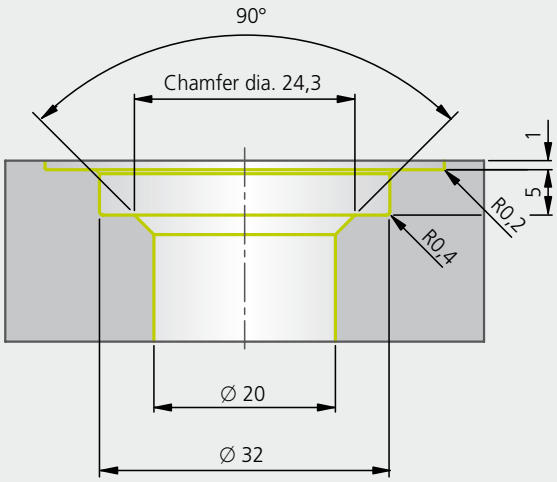
- Spotfacing and
- 90° chamfering
- External deburring
- Thread milling M24×1,5

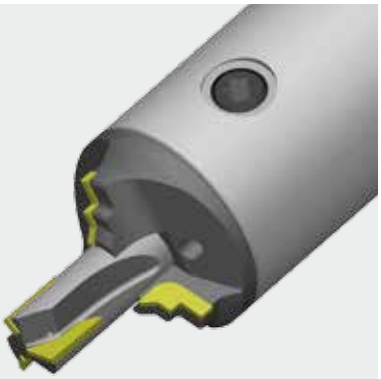




Application 3:

- Circular boring ∅ 20 mm
- Machining of complete counterbore





Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

Contact:
Department:
Phone:
Fax:
E-Mail:

Quantity:

Please provide workpiece sketch!

Special solutions

Combination tools
Take advantage of our know-how to reduce your production costs.

The development of innovative special tools in close cooperation with our customers is part of our everyday business.
Below you will see a few examples of special solutions:



PCD special boring tool

PCD special milling tool (buttress thread)
KOMET VABOS-M PKD

Drill thread milling tool
KOMET VABOS-M

Drill thread milling tool
KOMET PKD VABOS-K

Machining example:
Housing in G-AlSi10Mg
- drilling ∅ 5 mm
- chamfering 90°
- spot facing ∅ 50 mm with PCD
- thread milling M6

Cylcle time: 3.9 secs.

Find the suitable thread milling tool – App for iPhone and Android

Software for thread milling tools
Quick and easy tool selection, and generation of CNC programmes for standard thread milling cutters and thread mills:

24 hours a day, across the globe, at http://tpt.kometgroup.com

Benefits:
- Free service
- Simply register, and you will instantly be provided with a password
- Program is ready to use



BENEFITS for you:

- You can enter the machining task
- All possible tools will be proposed, with the machining time given for each
- Tool drawings will be displayed
- CNC programs for six different control systems in six different languages, in metric or imperial

CNC programs for various control systems can be configured online at http://tpt.kometgroup.com or can be obtained on request by telephoning: +49 711 788910.
Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play for Android smartphones.

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Tap drill diameters for milled and cut threads

M Metric thread			
	Milled and cut threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M 1	1,0	0,25	0,75
M 1,1	1,1	0,25	0,85
M 1,2	1,2	0,25	0,95
M 1,4	1,4	0,30	1,10
M 1,6	1,6	0,35	1,25
M 1,8	1,8	0,35	1,45
M 2	2,0	0,40	1,60
M 2,2	2,2	0,45	1,75
M 2,5	2,5	0,45	2,05
M 3	3,0	0,50	2,50
M 3,5	3,5	0,60	2,90
M 4	4,0	0,70	3,30
M 4,5	4,5	0,75	3,70
M 5	5,0	0,80	4,20
M 6	6,0	1,00	5,00
M 7	7,0	1,00	6,00
M 8	8,0	1,25	6,80
M 9	9,0	1,25	7,80
M10	10,0	1,50	8,50
M11	11,0	1,50	9,50
M12	12,0	1,75	10,20
M14	14,0	2,00	12,00
M16	16,0	2,00	14,00
M18	18,0	2,50	15,50
M20	20,0	2,50	17,50
M22	22,0	2,50	19,50
M24	24,0	3,00	21,00
M27	27,0	3,00	24,00
M30	30,0	3,50	26,50
M33	33,0	3,50	29,50
M36	36,0	4,00	32,00
M39	39,0	4,00	35,00
M42	42,0	4,50	37,50
M45	45,0	4,50	40,50
M48	48,0	5,00	43,00
M52	52,0	5,00	47,00
M56	56,0	5,50	50,50
M60	60,0	5,50	54,50
M64	64,0	6,00	58,00

MF Metric fine thread			
	Milled and cut threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M2,5×0,35	2,5	0,35	2,15
M3×0,35	3	0,35	2,65
M3,5×0,35	3,5	0,35	3,15
M4×0,5	4	0,50	3,50
M5×0,5	5	0,50	4,50
M6×0,5	6	0,50	5,50
M6×0,75	6	0,75	5,30
M8×0,5	8	0,50	7,50
M8×0,75	8	0,75	7,30
M8×1	8	1,00	7,00
M10×0,75	10	0,75	9,30
M10×1	10	1,00	9,00
M12×1	12	1,00	11,00
M12×1,5	12	1,50	10,50
M14×1	14	1,00	13,00
M14×1,5	14	1,50	12,50
M15×1,5	15	1,50	13,50
M16×1	16	1,00	15,00
M16×1,5	16	1,50	14,50
M17×1,5	17	1,50	15,50
M18×1	18	1,00	17,00
M18x1,5	18	1,50	16,50
M18×2	18	2,00	16,00
M20×1	20	1,00	19,00
M20×1,5	20	1,50	18,50
M20×2	20	2,00	18,00
M22×1	22	1,00	21,00
M22×1,5	22	1,50	20,50
M22×2	22	2,00	20,00
M24×1	24	1,00	23,00
M24×1,5	24	1,50	22,50
M24×2	24	2,00	22,00
M30×1,5	30	1,50	28,50
M30×2	30	2,00	28,00
M30×3	30	3,00	27,00
M33×1,5	33	1,50	31,50
M33×2	33	2,00	31,00
M33×3	33	3,00	30,00
M36×1,5	36	1,50	34,50
M36×2	36	2,00	34,00
M36×3	36	3,00	33,00
M40×1,5	40	1,50	38,50
M40×2	40	2,00	38,00
M40×3	40	3,00	37,00
M42×1,5	42	1,50	40,50
M42×2	42	2,00	40,00
M42×3	42	3,00	39,00
M48×1,5	48	1,50	46,50
M48×2	48	2,00	46,00
M48×3	48	3,00	45,00
M48×4	48	4,00	44,00

MF Metric fine thread			
	Milled and cut threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M50×1,5	50	1,50	48,50
M50×2	50	2,00	48,00
M50×3	50	3,00	47,00
M56×2	56	2,00	54,00
M56×4	56	4,00	52,00
M60×1,5	60	1,50	58,50
M60×2	60	2,00	58,00
M60×3	60	3,00	57,00
M60×4	60	4,00	56,00
M64×1,5	64	1,50	62,50
M64×2	64	2,00	62,00
M64×3	64	3,00	61,00
M64×4	64	4,00	60,00
M72×2	72	2,00	70,00
M72×3	72	3,00	69,00
M72×4	72	4,00	68,00
M72×6	72	6,00	66,00
M80×2	80	2,00	78,00
M80×4	80	4,00	76,00
M80×6	80	6,00	74,00
M90×2	90	2,00	88,00
M90×4	90	4,00	86,00
M90×6	90	6,00	84,00
M95×2	95	2,00	93,00
M95×6	95	6,00	89,00
M100×6	100	6,00	94,00

Tap drill diameters for milled and cut threads

UNC – American Unified coarse thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 4	2,845	40	2,35
Nr. 5	3,175	40	2,65
Nr. 6	3,505	32	2,85
Nr. 8	4,166	32	3,50
Nr. 10	4,820	24	3,90
Nr. 12	5,486	24	4,50
1/4	6,350	20	5,10
5/16	7,938	18	6,60
3/8	9,525	16	8,00
7/16	11,112	14	9,40
1/2	12,700	13	10,80
9/16	14,288	12	12,20
5/8	15,875	11	13,50
3/4	19,050	10	16,50
7/8	22,225	9	19,50
1"	25,400	8	22,50
1 1/8"	28,575	7	25,00
1 1/4"	31,750	7	38,00
1 3/8"	34,925	6	30,75
1 1/2"	38,100	6	34,00
1 3/4"	44,450	5	39,50
2"	50,800	4 1/2	45,00

UNF – American Unified fine thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 4	2,845	48	2,30
Nr. 5	3,175	44	2,60
Nr. 6	3,505	40	2,85
Nr.8	4,166	36	3,45
Nr. 10	4,826	32	4,05
Nr. 12	5,486	28	4,60
1/4	6,350	28	5,45
5/16	7,938	24	6,90
3/8	9,525	24	8,45
7/16	11,112	20	9,85
1/2	12,700	20	11,45
9/16	14,288	18	12,90
5/8	15,875	18	14,45
3/4	19,050	16	17,45
7/8	22,225	14	20,40
1"	25,400	12	23,30
1 1/8"	28,575	12	26,45
1 1/4"	31,750	12	29,65
1 3/8"	34,925	12	32,80
1 1/2"	38,100	12	36,00

UNEF – American Unified extra fine thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 12	5,486	32	4,75
1/4	6,350	32	5,55
5/16	7,938	32	7,15
3/8	9,525	32	8,70
7/16	11,112	28	10,20
1/2	12,700	28	11,80
9/16	14,288	24	13,20
5/8	15,875	24	14,80
11/16	17,462	24	16,40
3/4	19,050	20	17,80
13/16	20,637	20	19,40
7/8	22,225	20	20,95
15/16	23,812	20	22,50
1"	25,400	20	24,15
1 1/16"	26,987	18	25,60
1 1/8"	28,575	18	27,20
1 3/16"	30,162	18	28,75
1 1/4"	31,750	18	30,35
1 5/16"	33,337	18	31,95
1 3/8"	34,925	18	33,50
1 7/16"	36,512	18	35,10
1 1/2"	38,100	18	36,70

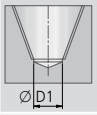
G Pipe thread DIN EN ISO 228

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
G 1/8"	9,728	28	8,82
G 1/4"	13,157	19	11,82
G 3/8"	16,662	19	15,32
G 1/2"	20,955	14	19,10
G 5/8"	22,911	14	21,10
G 3/4"	26,441	14	24,60
G 7/8"	30,201	14	28,40
G 1"	33,249	11	30,80
G 1 1/8"	37,897	11	35,50
G 1 1/4"	41,910	11	39,50
G 1 3/8"	44,323	11	41,90
G 1 1/2"	47,803	11	45,40
G 1 3/4"	53,746	11	51,40
G 2"	59,614	11	57,20
G 2 1/4"	65,710	11	63,20
G 2 1/2"	75,184	11	72,80
G 2 3/4"	81,834	11	79,10
G 3"	87,884	11	85,50

EG Helical wire insert thread

Size	Milled and cut threads		
	Nominal Ø	Pitch	Tap drill Ø
EG M3	3	0,50	3,15
EG M3,5	3,5	0,60	3,70
EG M4	4	0,70	4,20
EG M4,5	4,5	0,75	4,75
EG M5	5	0,80	5,25
EG M6	6	1,00	6,30
EG M7	7	1,00	7,30
EG M8	8	1,25	8,40
EG M10	10	1,50	10,50
EG M12	12	1,75	12,50
EG M14	14	2,00	14,50
EG M16	16	2,00	16,50
EG M18	18	2,50	18,75
EG M20	20	2,50	20,75
EG M22	22	2,50	22,75
EG M24	24	3,00	24,75
EG M27	27	3,00	27,75
EG M30	30	3,50	31,00

NPT, NPTF – without using a reamer

Size 	Milled and cut threads		
	Pitch t.p.i.	Tap drill Ø D1 **NPT**	Tap drill Ø D1 **NPTF**
1/16	27	6,15	6,10
1/8	27	8,50	8,45
1/4	18	11,00	10,90
3/8	18	14,50	14,30
1/2	14	17,85	17,60
3/4	14	23,20	23,00
1"	11 1/2	29,00	28,75
1 1/4"	11 1/2	37,80	37,50
1 1/2"	11 1/2	44,00	43,75
2"	11 1/2	56,00	55,75

Tap drill diameters for milled and cut threads

W Whitworth thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
1/8"	3,175	40	2,60
3/16"	4,762	24	3,60
1/4"	6,350	20	5,10
5/16"	7,938	18	6,50
3/8"	9,525	16	7,90
7/16"	11,113	14	9,25
1/2"	12,700	12	10,50
5/8"	15,876	11	13,50
3/4"	19,051	10	16,50
7/8"	22,226	9	19,25
1"	25,401	8	22,00
1 1/8"	28,576	7	24,75
1 1/4"	31,751	7	27,75
1 3/8"	34,926	6	30,50
1 1/2"	38,101	6	33,50
1 5/8"	41,277	5	35,50
1 3/4"	44,452	5	39,00
1 7/8"	47,627	41/2	41,50
2"	50,802	41/2	44,50

BSF Whitworth fine thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
1/4"	6,350	26	5,30
9/32"	7,142	26	6,10
5/16"	7,938	22	6,80
3/8"	9,525	20	8,30
7/16"	11,113	18	9,70
1/2"	12,700	16	11,10
9/16"	14,288	16	12,70
5/8"	15,875	14	14,00
11/16"	17,463	14	15,50
3/4"	19,050	12	16,75
13/16"	20,638	12	18,50
7/8"	22,225	11	19,75
1"	25,400	10	22,75
1 1/8"	28,575	9	25,50
1 1/4"	31,750	9	28,75
1 3/8"	34,925	8	31,50
1 1/2"	38,100	8	34,80
1 5/8"	41,275	8	38,00
1 3/4"	44,450	7	40,50
2"	50,800	7	47,00

NPSF – American cylindrical pipe thread

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
NPSF 1/16	7,582	27	6,35
NPSF 1/8	9,929	27	8,75
NPSF 1/4	13,236	18	11,3
NPSF 3/8	16,673	18	14,75
NPSF 1/2	20,819	14	18,20
NPSF 3/4	26,166	14	23,50
NPSF 1"	32,718	11/2	29,50

RC without using a reamer

Size	Milled and cut threads	
	Pitch t.p.i.	Tap drill Ø
RC 1/16	28	6,20
RC 1/8	28	8,20
RC 1/4	19	11,00
RC 3/8	19	14,50
RC 1/2	14	18,00
RC 3/4	14	23,50
RC 1"	11	29,50
RC 1 1/4"	11	38,25
RC 1 1/2"	11	44,25
RC 2"	11	55,75
RC 2 1/2"	11	71,25
RC 3"	11	83,75

RP – ISO 7/1, DIN 2999-1, DIN EN 10226,1

Size	Milled and cut threads		
	Nominal Ø	Pitch t.p.i.	Tap drill Ø
RP 1/16	7,723	28	6,55
RP 1/8	9,728	28	8,60
RP 1/4	13,157	19	11,50
RP 3/8	16,662	19	15,00
RP 1/2	20,955	14	18,50
RP 3/4	26,441	14	24,00
RP 1"	33,249	11	30,25
RP 1 1/4"	41,910	11	39,00
RP 1 1/2"	47,803	11	44,85
RP 2"	59,614	11	56,50

Tap drill diameters for formed threads

M Metric thread			
	Formed threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M 1,8	1,8	0,35	1,66
M 2	2,0	0,40	1,84
M 2,2	2,2	0,45	2,02
M 2,5	2,5	0,45	2,32
M 3	3,0	0,50	2,80
M 3,5	3,5	0,60	3,25
M 4	4,0	0,70	3,71
M 4,5	4,5	0,75	4,19
M 5	5,0	0,80	4,67
M 6	6,0	1,00	5,54
M 7	7,0	1,00	6,54
M 8	8,0	1,25	7,43
M 9	9,0	1,25	8,43
M10	10,0	1,50	9,31
M11	11,0	1,50	10,31
M12	12,0	1,75	11,20
M14	14,0	2,00	13,00
M16	16,0	2,00	15,00

MF Metric fine thread			
	Formed threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M2,5×0,35	2,5	0,35	2,36
M3×0,35	3	0,35	2,86
M3,5×0,35	3,5	0,35	3,36
M4×0,5	4	0,50	3,80
M5×0,5	5	0,50	4,80
M6×0,5	6	0,50	5,80
M6×0,75	6	0,75	5,69
M8×0,5	8	0,50	7,80
M8×0,75	8	0,75	7,69
M8×1	8	1,00	7,54
M10×0,75	10	0,75	9,69
M10×1	10	1,00	9,54
M12×1	12	1,00	11,54
M12×1,5	12	1,50	11,31
M14×1	14	1,00	13,54
M14×1,5	14	1,50	13,31
M15×1,5	15	1,50	14,31
M16×1	16	1,00	15,54
M16×1,5	16	1,50	15,31

MF Metric fine thread			
	Formed threads		
Size	Nominal Ø	Pitch	Tap drill Ø
M17×1,5	17	1,50	16,31
M18×1	18	1,00	17,54
M18x1,5	18	1,50	17,31
M18×2	18	2,00	17,00
M20×1	20	1,00	19,54
M20×1,5	20	1,50	19,31
M20×2	20	2,00	19,00
M22×1	22	1,00	21,54
M22×1,5	22	1,50	21,31
M22×2	22	2,00	21,00
M24×1	24	1,00	23,54
M24×1,5	24	1,50	23,31
M24×2	24	2,00	23,00
M30×1,5	30	1,50	29,31
M30×2	30	2,00	29,00
M33×1,5	33	1,50	32,31
M33×2	33	2,00	32,00
M36×1,5	36	1,50	35,31
M36×2	36	2,00	35,00

The tap drill diameters listed are guidelines. The actual tap drill diameters have to be investigated in use as these depend on the fluidity of the material and the forming speed.

UNC – American Unified coarse thread			
	Formed threads		
Size	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 4	2,845	40	2,58
Nr. 5	3,175	40	2,91
Nr. 6	3,505	32	3,18
Nr. 8	4,166	32	3,84
Nr. 10	4,820	24	4,33
Nr. 12	5,486	24	5,00
1/4	6,350	20	5,77
5/16	7,938	18	7,29
3/8	9,525	16	8,79
7/16	11,112	14	10,28
1/2	12,700	13	11,80
9/16	14,288	12	13,23

UNF – American Unified fine thread			
	Formed threads		
Size	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 4	2,845	48	2,63
Nr. 5	3,175	44	2,94
Nr. 6	3,505	40	3,24
Nr.8	4,166	36	3,88
Nr. 10	4,826	32	4,50
Nr. 12	5,486	28	5,11
1/4	6,350	28	5,98
5/16	7,938	24	7,45
3/8	9,525	24	9,04
7/16	11,112	20	10,53
1/2	12,700	20	12,12
9/16	14,288	18	13,64
5/8	15,875	18	15,23
3/4	19,050	16	18,32
7/8	22,225	14	21,39
1"	25,400	12	24,34
1 1/8"	28,575	12	27,52
1 1/4"	31,750	12	30,69
1 3/8"	34,925	12	33,87
1 1/2"	38,100	12	37,04

UNEF – American Unified extra fine thread			
	Formed threads		
Size	Nominal Ø	Pitch t.p.i.	Tap drill Ø
Nr. 12	5,486	32	5,16
1/4	6,350	32	6,02
5/16	7,938	32	7,61
3/8	9,525	32	9,20
7/16	11,112	28	10,74
1/2	12,700	28	12,33
9/16	14,288	24	13,80
5/8	15,875	24	15,39
11/16	17,462	24	16,98
3/4	19,050	20	18,47
13/16	20,637	20	20,05
7/8	22,225	20	21,64
15/16	23,812	20	23,23
1"	25,400	20	24,82
1 1/16"	26,987	18	26,34
1 1/8"	28,575	18	27,93
1 3/16"	30,162	18	29,51
1 1/4"	31,750	18	31,10
1 5/16"	33,337	18	32,69
1 3/8"	34,925	18	34,28
1 7/16"	36,512	18	35,86
1 1/2"	38,100	18	37,45

KOMET Thread milling, drill thread milling

Achievable thread lengths

Material	Drill thread milling	Thread milling	Thread milling
	BGF 	MKG 	MGF 
Steel		2,0 × D	2,0 × D
Stainless steel		2,0 × D	2,0 × D
Grey cast iron	2,5 × D	2,0 × D	2,5 × D
Nodular grey cast iron	2,0 × D	2,0 × D	2,0 × D
Titanium alloys		1,5 × D	1,5 × D
Nickel alloys		1,5 × D	1,5 × D
Copper alloys	2,5 × D	2,0 × D	2,5 × D
Aluminium	2,5 × D / 3 × D	2,0 × D	2,5 × D / 3 × D
Plastics	2,5 × D	2,0 × D	2,5 × D

Formulae

Formula symbols and abbreviations used		
n	r.p.m.	Spindle speed
z		No. of teeth
v_c	m/min	Cutting speed
f_z	mm/teeth	Milling feed
f	mm/rev	Boring feed
r_f	mm	Tool radius
e	mm	Eccentricity
g	mm	Amount of withdrawal for conventional milling
g	mm	Amount of withdrawal for climb milling
D	mm	Nominal thread diameter
R1	mm	Nominal thread radius
R2	mm	Radius entry loop, external path (J)
z	mm	z dimension entry and exit loop
R3	mm	Radius entry loop, centre path (J)
R4	mm	Radius full circle, centre path (=e)

Path feeds

Entry loop contour path

$$F_1 = n \times z \times f_z$$

Entry loop centre point path

$$F_1 = n \times z \times f_z \times \frac{e}{r_f + R_1}$$

Full circle contour path

$$F_2 = n \times z \times f_z$$

Full circle centre point path

$$F_2 = n \times z \times f_z \times \frac{2 \times e}{D}$$

Exit loop contour path

$$F_3 = n \times z \times f_z \times 2{,}5$$

Exit loop centre point path

$$F_3 = F_2 \times 2{,}5$$

Formulae

$v_c = \frac{D \times \pi \times n}{1000}$ Cutting speed in m/min

$n = \frac{v_c \times 1000}{D \times \pi}$ Spindle speed in r.p.m.

$r_f = R1 - e$ Tool radius in mm

$e = R1 - r_f$ Eccentricity in mm

$g = 1{,}3 \times \text{pitch} + \frac{e}{\tan(\frac{\alpha}{2})}$ Amount of withdrawal for conventional milling in mm

$g = \frac{e}{\tan(\frac{\alpha}{2})}$① Amount of withdrawal for climb milling in mm

① where α = 90° countersink angle = tan45° = 1 where countersink angle is 60° the amount of withdrawal is larger

$R_1 = \frac{D}{2}$ Nominal thread radius in mm

$R_2 = \frac{r_f + R_1}{2}$ Radius entry loop, external path (J) in mm

$z = p \times 0{,}15$ z dimension entry and exit loop in mm

$R_3 = \frac{e}{2}$ Radius entry loop, centre path (J) in mm

$R_4 = e$ Radius full circle, centre path (=e) in mm

Machining task:
Thread: M10, depth = 20.560 (EL)
Bore: blind bore, D = 8,500 mm,
cyl. depth = 22,060 mm
Chamfer steps:
1) tapered, D = 10,300 mm, W = 90,0°

Material:
7.2 aluminium alloy (A5 < 14%),
AlMn 1 Mg 0,5, 3.0525

Tool:
BGF-M10 2.0D, uncoated

Milling tool radius	= 3,980 mm
Eccentricity	= 1,020 mm
Order No.:	80.9410.01.000022
Drawing No.:	80.9410.01.000022.01
Main time:	**4,0 secs**

Cutting values (external track):

v_c	= 400 m/min	n	= 14980 min^{-1}
f_s	= 0,300 mm/rev	F	= 4494 mm/min (chamfering)
f_b	= 0,300 mm/rev	F	= 4494 mm/min (drilling)
f_{z1}	= 0,100 mm/tooth	F1	= 2996 mm/min (thread milling)

NC machine:

Drive:	standard NC machine
Max. spindle speed:	15000 min^{-1}
Control:	SINUMERIK
Ref.:	contour path, incremental

NC options:

Entry loop:	180°
Exit loop:	180°
Milling method:	conventional milling
Chip removal:	single, degressive

Note: Deepest tool position = –23,370 mm
For control systems where the feed relates to the central track, the figures given in brackets must be used

`N5 G00 G53 G40 G60 G90 D0 Z+0.0000`	Initialisation, absolute coordinates
`N10 G80`	Deselect any existing cycles
`N15 T1 M06`	Tool selection
`N20 G54 X+0.0000 Y+0.0000 M07`	Zero point shift
`N25 Z+1.0000 D1 S14980 M03`	Move to start pos. 1 mm above workpiece
`N30 G01 Z-1.3000 F1498`	Start bore with reduced boring feed
`N35 G01 Z-15.6580 F4494`	Bore to first boring depth
`N40 G00 Z+0.0000`	Clear chips (“chip clearance”, “blow through”)
`N45 G00 Z-14.6580`	Move to start position for second boring depth
`N50 G01 Z-23.3700`	Bore to end bore depth
`N55 G00 Z+0.0000`	Clear chips
`;(C O N V E N T I O N A L M I L L I N G)`	
`N60 G00 Z-20.4000`	Move to start position for thread milling
`N65 G01 G91 G42 G64 X+0.0000 Y+3.9800 F2996 ;(F340)`	Incremental coordinates, select milling radius adjustment, no movement
`N70 G02 X+0.0000 Y-8.9800 I+0.0000 J-4.4900 Z-0.2250`	Entry loop with pitch adjustment (Z = 0,15×P)
`N75 G02 X+0.0000 Y+0.0000 I+0.0000 J+5.0000 Z-1.5000 ;(F611)`	Thread finish milling to nominal dimension (Z = P)
`N80 G02 X+0.0000 Y+8.9800 I+0.0000 J+4.4900 Z-0.2250 F7490 ;(F851)`	Exit loop with pitch adjustment (Z = 0,15×P)
`N85 G00 G40 G60 X+0.0000 Y-3.9800`	Deselect milling radius adjustment
`N90 G00 G53 G40 G90 D0 Z+0.0000 M95`	Exit status
`N95 M30`	End of program

KOMET TPT
see page 677

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Setting

Preparations on tool

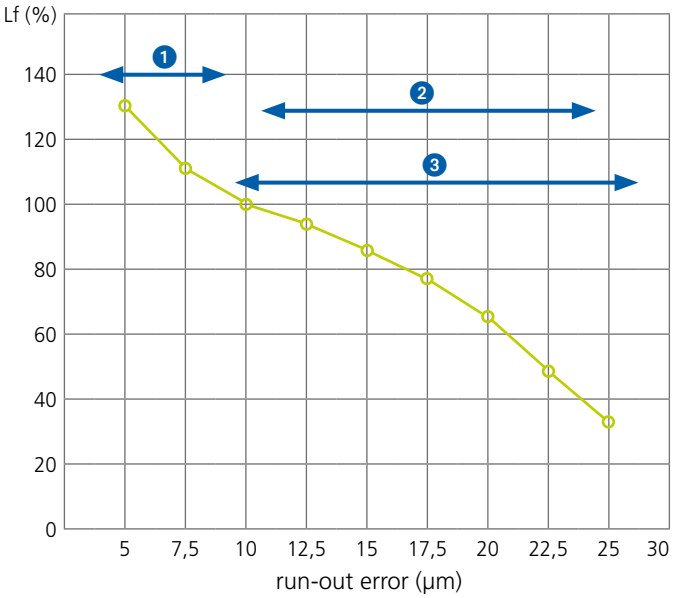
Tool clamping

- Correct alignment of clamping screw on clamping surface for Whistle-Notch adaptor
- Minimise overhang but the cutting sweep for the tool should be beyond the adaptor

Effect of concentricity on tool life using a solid carbide thread milling tool as an example

Material: heat treated steel, Rm = 1000 N/mm²
Size: M10
Cutting values: v_C = 100 m/min, f_Z = 0,06 mm/tooth

1. thermal expansion or hydr. expansion chuck
2. HE cyl. with side screw
3. collet



Tool measurement

- Only measure tool length on pre-setter.
- Check concentricity at drill tip resp. thread milling section <0.02 mm
- Use tool radius shown on the CNC program

Preparations on machine

- Inkey tool length and tool radius into offset register of the control

Program test

- Do a test run over the workpiece (increase tool length in tool record)
- Check machining time. If the time recorded is clearly different to that given in the program, there is an error in the feed rate calculation (contour path/centrer point path
- Optimise coolant supply. If flood coolant used, i.e. direct coolant flow onto the milling section of the tool. For through holes use flood coolant if there is no lateral flute coolant supply on the tool.

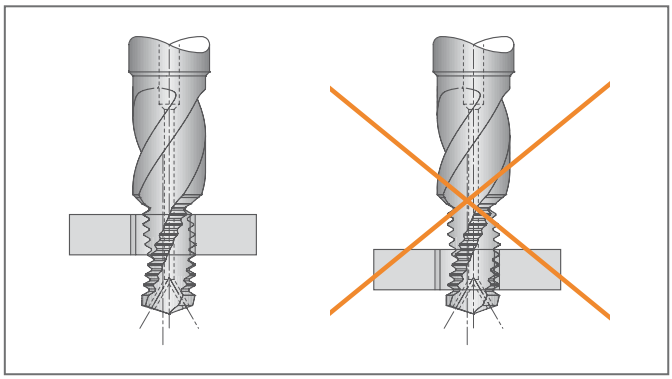
Milling method for different materials

Cast aluminium
- Can be carried out without peck cycle
- For tools with internal coolant there is no need for chip clearance after boring.

Long chipping aluminium
- At least once peck cycle
- Radial division of cut may be necessary if a thread with very low burring is required

Grey cast iron
- No chip clearance
- Conventional thread milling in one path. Over 2×D two pathes may be required.

Special cases
Through hole
- For tool with internal coolant, switch to external coolant for milling
- To reduce side load, preferably work with milling section on shank side



Angled bore exit / cutting through cross holes
- Reduce bore feed rate at bore exit by 60%

Cavities (inclusions) in cast materials
- Reduce bore feed rate by 40-60%

Torque calculations for tapping and thread forming

Formula symbols and abbreviations used		
M	Nm	Torque
k_c	N/mm²	Specific cutting force
h	mm	Thread pitch
D	mm	Nominal thread diameter

$$M = \frac{\text{Factor*}}{8000} \times k_c \times h^2 \times D$$

Factor*		
	Tapping	Thread forming
New tool	1,0	2,5
Used tool	2,5	3,5

Specific cutting force k_c	
Material	**k_c (N/mm²)**
Steel 1000-1300 N/mm²	3600
Steel 800-1000 N/mm²	2600
Steel 600- 850 N/mm²	2500
Steel <600 N/mm²	2300
Stainless steel	3200
Cast bronze	1900
GJL-20 (HB 170 (grey cast iron) – **for tapping only**	1600
Malleable Iron- hard	1250
Copper	1100
Malleable Iron - soft	900
Brass (CuZn)	720
Alu-Si alloy	680
Zinc alloy	440

Fax Order +49 7143 373233

KOMET

Enquiry: Solid carbide grooving head

Company:	Contact:
Customer No.:	Department:
Address:	Phone:
	Fax:
	E-Mail:

Grooving form:

Grooving head

Available in various forms on request

Solid carbide version

Cylindrical connection with d1=34

Workpiece:

Tools required _____units

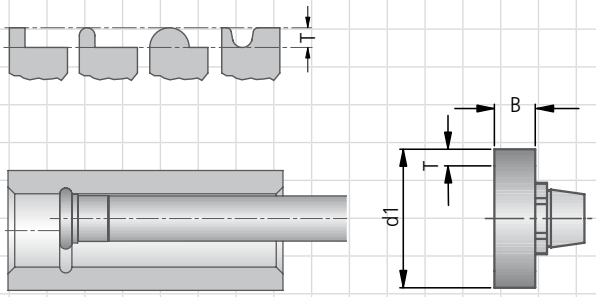
Workpiece _____units/year

Material to be machined:

- ☐ construction steel, good machinability
- ☐ tool steel
- ☐ stainless steels
- ☐ hardened steels
- ☐ malleable cast iron
- ☐ spheroidal graphite cast iron
- ☐ non-ferrous metal (refractory)
- ☐ non-ferrous metal (malleable)
- ☐

Material name
Tensile strength Rm (N/mm²)
Hardness (HRc, HB, HV)

Examples of possible grooving forms



Parameter			
d1	B	T	drill dia. d
max	max	max	min
16	4,5	1,4	16,5
20	5,5	2,4	20,5
34	9,5	3,5	34,5

KOMET Circular interpolation grooving

An exceptional tool concept

Method description:

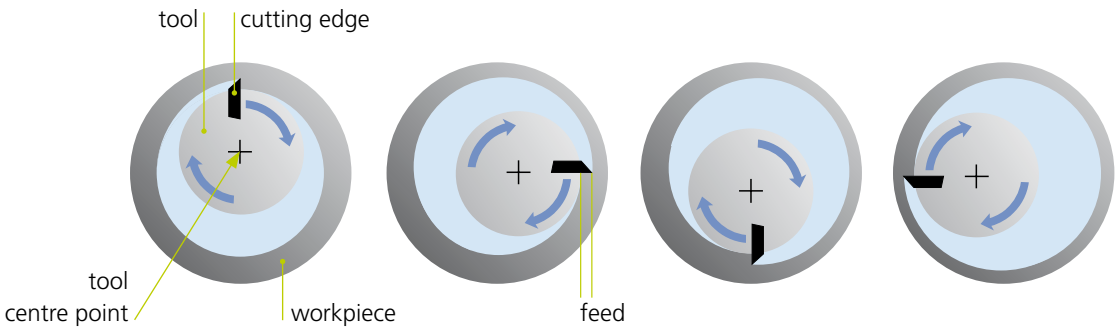
With circular interpolation grooving, the principle of external grooving is transferred from a machining centre to a lathe by programming the machining centre spindle as an axis. The tool is then moved outwards at grooving depth on a helical interpolation path programmed by the machine control. At every point on the circular path the cutting edge is vertical to the bore tangent.

Application areas:

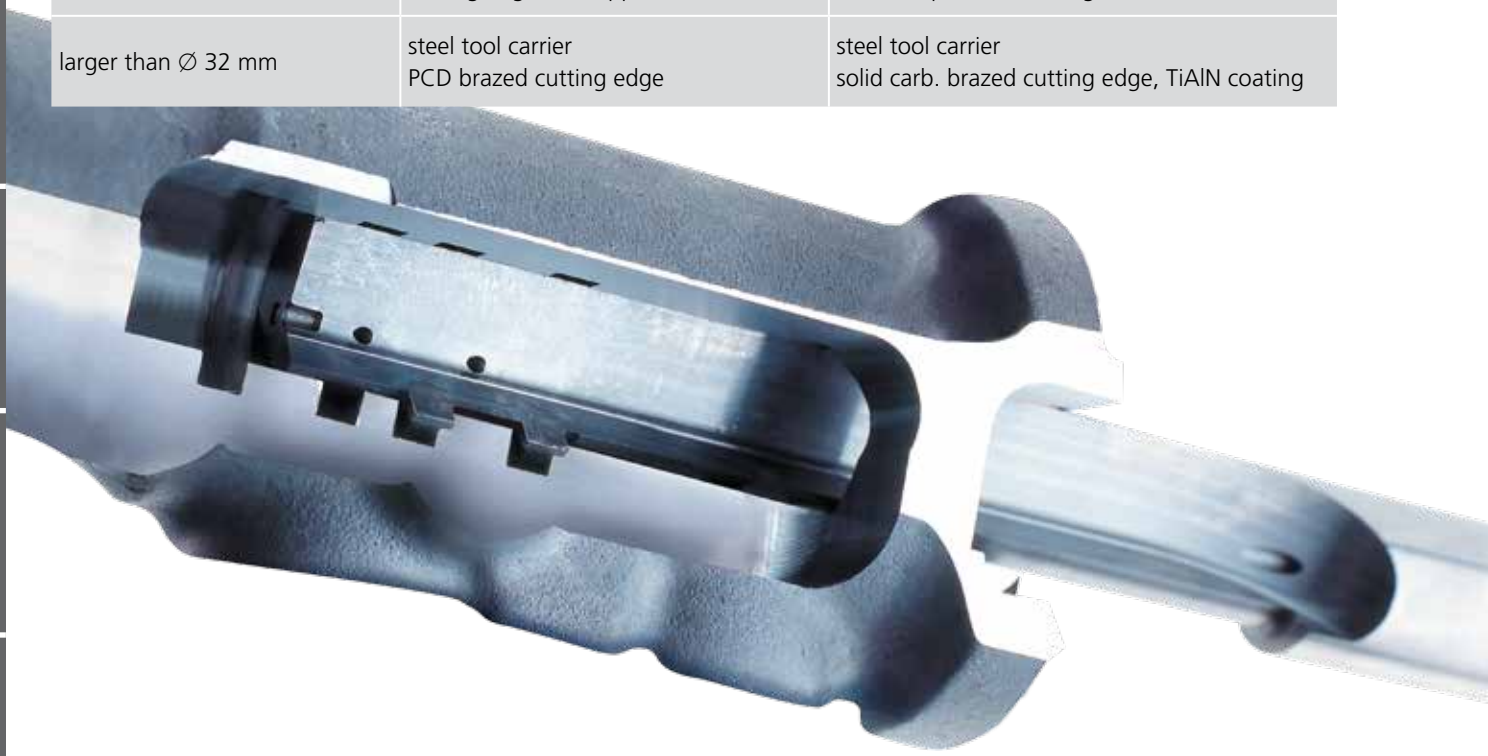
For all internal and external grooves, angled grooves and annular slots.

Tool design:

An extremely wide variety of tool designs specifically matched to the machining task in question.



Tool size	Aluminium / Alum. alloy	Grey cast iron / SG cast iron
very small tools	solid carbide mono, TiAlN coating	solid carbide mono TiAlN coating
up to ∅ 32 mm	solid carbide tool carrier cutting edge PCD tipped	solid carbide tool carrier, cutting edge with solid carbide tip, TiAlN coating
larger than ∅ 32 mm	steel tool carrier PCD brazed cutting edge	steel tool carrier solid carb. brazed cutting edge, TiAlN coating



KOMET Circular interpolation grooving

An exceptional tool concept

Machine requirements:

To carry out programming on a machining centre, the machine spindle has to be programmed and controlled as an axis. This is a basic requirement that must be clarified with the relevant machine manufacturer and/or control manufacturer.

Coolant system:

A sufficient high pressure internal coolant system is required for internal grooving subject to the bore depth and the cutting properties of the material.

Cutting data:

Rotation speed of tool centre point:
120 - 360 min^{-1} (depending on machine)

Cutting speed at cutting edge:
4 - 25 m/min (depending on machine)

Feed rates:
0.03 - 0.15 mm (depending on material)

BENEFITS for you:

- Short cycle times
- Better surface finish than with milling as cutting edge constantly engaged
- High cutting feed settings
- Economic production
- A single tool for roughing and finishing
- Less likelihood of vibrations
- Stable tools because of asymmetric construction, even with an unfavourable diameter to length ratio
- Turning process can be carried out on a machining centre
- Problem-free division of cut for grooves which are particularly deep
- Specially arranged coolant bores guarantee chip removal even from deep grooves
- Circular external grooving allows maximum rigidity in tool design
- Extremely good surface finish in grooves
- Extremely good repeatability of grooves in aluminium, e.g. Ø 25 mm: up to 5×D <0.001 mm, up to 8×D <0.015 mm

Application example:

Workpiece: Main brake cylinder
Material: Cast aluminium
Machine: BA 400-4 (4-spindle)

Task:
Internal production of several internal grooves in one machining operation

Tool:
Circular external grooving tool with multiple grooving profile for roughing and finishing operation



KOMET PCD Milling cutter

The use of PCD monotools in the production of aluminium components is widespread.

This system is distinguished by the minimum effort required to set an increased number of teeth, as well as its long life time and very low roughness depths.

Different requirements for surface roughness are met using special tools that have the appropriate cutting geometry.

Our portfolio includes PCD face milling and shoulder milling cutters, radius milling cutters, slot milling cutters and compression milling cutters.



3D-printed tools – welcome to the machining revolution

HPC PCD face milling cutters

The cutter holders in the completely redesigned KOMET PCD milling cutters are manufactured using the generative process of laser melting, which means that these new tools can offer feed rates that are up to 100% higher than before.

3D printing enables up to twice as many cutting edges to be created, depending on the diameter.

In these milling cutters, KOMET is utilising the advantages offered by additive manufacturing, a method which allows the coolant channels to be designed optimally and positioned exactly so that each cutting edge is supplied with coolant by a separate channel.

The angle between the axes of the cutting edges is larger than that on conventionally manufactured tools, which makes the cutting action smoother while also maintaining a high level of tool stability.

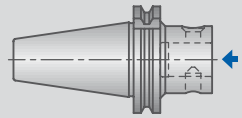


PCD Milling cutter

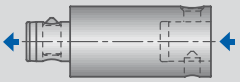
	Page
PCD Slot milling cutter	
∅ 6 – 20 mm (DIN 6535 HA) ∅ 10 – 25 mm (screw-in)	694
PCD Radius milling cutter	
∅ 10 – 16 mm (screw-in)	694
PCD Face milling cutter	
∅ 10 – 32 mm (screw-in) ∅ 40 – 160 mm (HSK-A) ∅ 40 – 125 mm (DIN 8030 A/B)	696
PCD Face and corner milling cutter	
∅ 16 – 25 mm (DIN 6535 HA) ∅ 32 – 63 mm (HSK-A)	698
PCD Face milling cutter HPC	
∅ 10 – 32 mm (DIN 6535 HA) ∅ 10 – 32 mm (screw-in)	700
PCD Slot milling cutter	
for machining composite materials ∅ 6 – 10 mm	704
PCD Compression milling cutter	
for machining composite materials ∅ 6 – 16 mm	705
PCD Finishing, facing and corner milling cutter	
HSC operations ∅ 80 – 100 mm (DIN 8030)	706 – 707

6 Adaptors

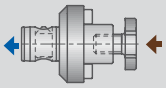
Adaptors with ABS connection

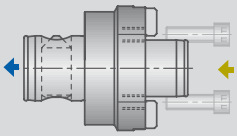




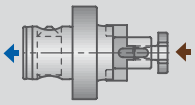


ABS Adaptors FA | FAM

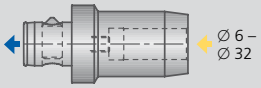




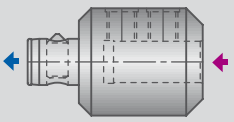
Combination milling cutter arbor FAK



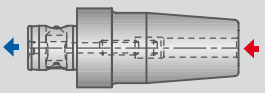
Expanding chuck



Adaptors with Weldon connection



Shrink fit technology ThermoGrip



Key

- ABS connection
- Cylindrical connection
- Weldon connection
- Shrink connection
- Screw connection
- DIN 6357 adaptor
- DIN 6358 adaptor

ThermoGrip is a registered trademark of Bilz Werkzeugfabrik GmbH & Co. KG

3 PCD Milling cutter



Compression milling cutter
Ø 6 – 16 mm ▸ 705



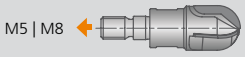
Slot milling cutter
Ø 6 – 10 mm ▸ 704



Slot milling cutter
Ø 6 – 20 mm ▸ 694



Ø 10 – 25 mm ▸ 694



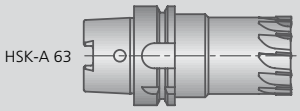
Radius milling cutter
Ø 10 – 16 mm ▸ 694



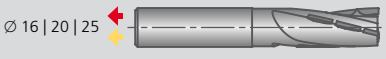
Face milling cutter
Ø 10 – 32 mm ▸ 696



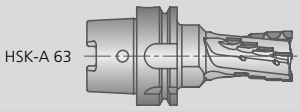
Ø 40 – 125 mm ▸ 696



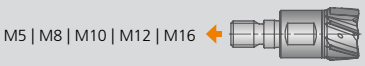
Ø 40 – 160 mm ▸ 696



Facing and corner milling cutter
Ø 16 – 25 mm ▸ 698



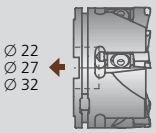
Ø 32 – 63 mm ▸ 698



Face milling cutter HPC
Ø 10 – 32 mm ▸ 700



Ø 10 – 32 mm ▸ 700



Finishing, facing and corner milling cutter HSC
Ø 80 – 100 mm ▸ 706

1 Countersinking tool



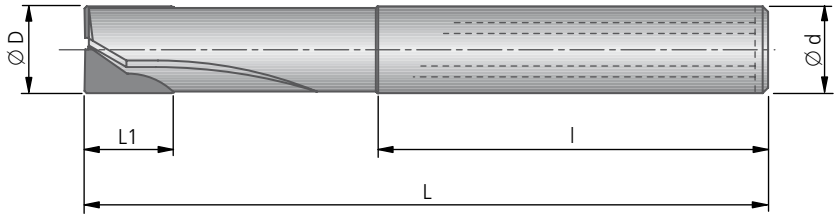
Countersink KWZ
Ø 10 – 48 mm

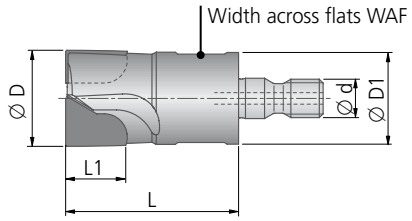


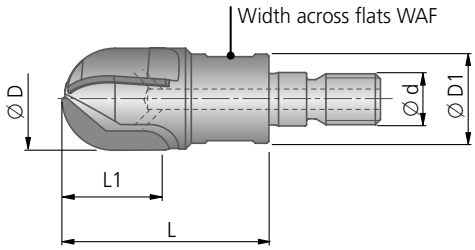
Countersink KWS
Ø 16,5 – 37 mm

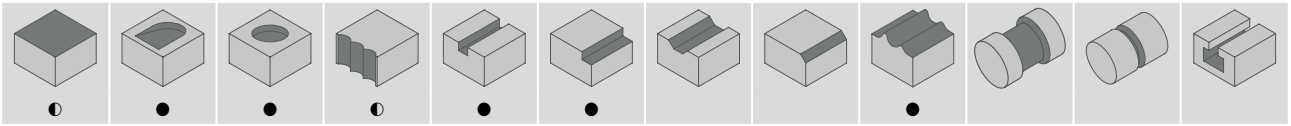
PCD Slot milling cutter | PCD Radius milling cutter











DIN 6535 HA 1×D					
Ø D	Cylindrical shank Ø d × l	L	L1	Z	Order No.
6	6 × 36	57	6	2	38390000000600
8	8 × 36	63	8	2	38390000000800
10	10 × 40	72	10	2	38390000001000
12	12 × 45	83	12	2	38390000001200
16	16 × 48	90	16	3	38391000001600
20	20 × 50	104	20	3	38391000002000
DIN 6535 HA 2×D					
6	6 × 36	57	12	2	38392057000600
8	8 × 36	63	16	2	38392063000800
10	10 × 40	72	20	2	38392072001000
12	12 × 45	83	24	2	38392083001200
16	16 × 48	90	32	3	38393090001600
20	20 × 50	104	40	3	38393004002000

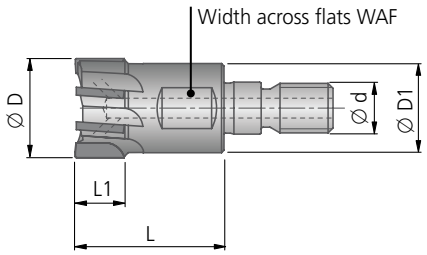
Screw-in cutter									
Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	Z	kg	Order No.
10	M5	8	7	9,6	28	10	2	0,018	37340099001000
12	M5	8	7	9,6	28	12	2	0,018	37340099001200
16	M8	13	18	13,8	32	16	3	0,036	37340099001600
20	M10	16	30	18,0	45	20	3	0,095	37340099002000
25	M12	18	40	21,0	45	20	3	0,165	37340099002500

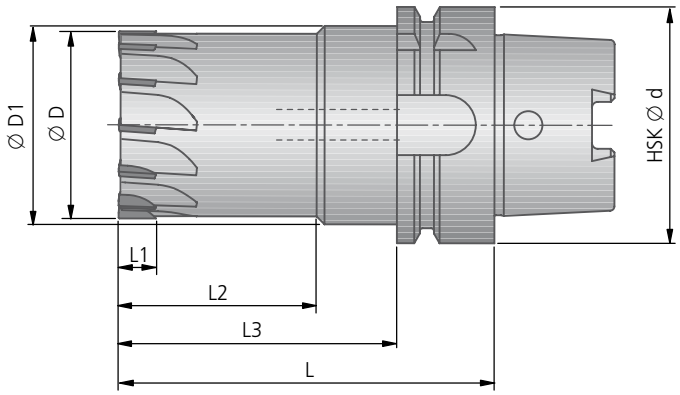
Radius screw-in cutter										
Ø D	R	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	Z	kg	Order No.
10	5	M5	8	7	9,6	28	10	2	0,018	37340098001000
12	6	M5	8	7	9,6	28	12	2	0,018	37340098001200
16	8	M8	13	18	13,8	32	16	3	0,036	37340098001600

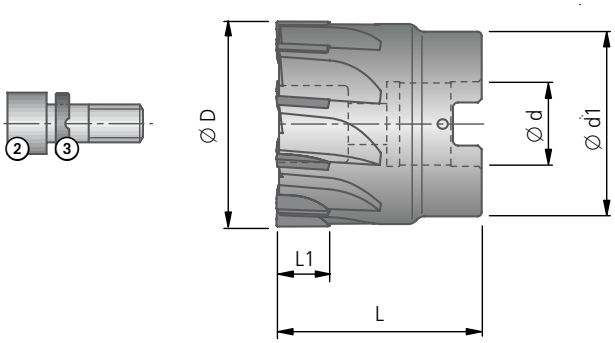
Cutting values for milling: Page 702.

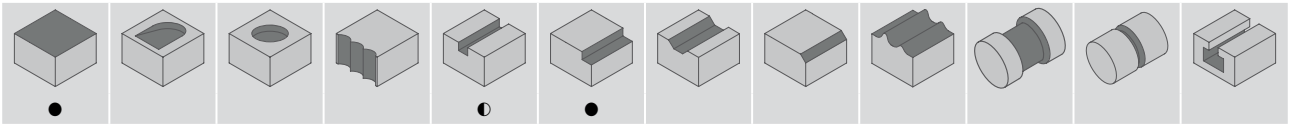
PCD Face milling cutter











Screw-in cutter									
Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	Z	kg	Order No.
10	M5	8	7	9,6	22	5	2	0,012	37341099001000
12	M5	8	7	9,6	28	5	2	0,018	37341099001200
16	M8	13	18	13,8	28	10	3	0,040	37341099001600
20	M10	16	30	18,0	30	10	4	0,070	37341099002000
25	M12	18	40	21,0	35	10	5	0,140	37341099002500
32	M16	27	80	29,0	35	10	6	0,250	37341099003200

HSK-A									Type 140 · R_z > 10 µm	Type 150 · R_z < 10 µm
Ø D	HSK Ø d	Ø D1	L ±0,02	L1	L2	L3	Z	kg	eroded cutting edge Order No.	specially design cutting edge Order No.
40	63	53	100	10	48	74	10	1,4	37140026004000	37150026004000
50	63	52	100	10	53	74	12	1,7	37140026005000	37150026005000
63	63	–	100	10	–	–	14	2,0	37140026006300	37150026006300
80	63	–	100	10	–	–	16	2,5		37150026008000
100	63	–	100	10	–	–	18	3,2	37140026010000	37150026010000
125	63	–	100	10	–	–	22	4,3	37140026012500	37150026012500
160	63	–	100	10	–	–	24	6,2	37140026016000	37150026016000

Other connections and cutting edge shapes available on request.

Supply includes: PCD milling cutter with coolant screw and coolant supply kit.

Arbor milling cutter								
ØD	DIN 8030 form	Ød^{H6}	Ød1	L	L1	Z	kg	Order No.
40	A	16	36	40	10	10		37155099004000
50	A	22	41	40	10	12		37155099005000
63	A	22	48	40	10	14		37155099006300
80	B	27	60	50	10	16		37155099008000
100	B	32	78	50	10	18		37155099010000
125	B	40	100	63	10	22		37155099012500

Supply includes milling cutter: with coolant sleeve ③ and cylindrical screw ②.

Cutting values for milling: Page 702.

KOMET Ø 16 – 63 mm

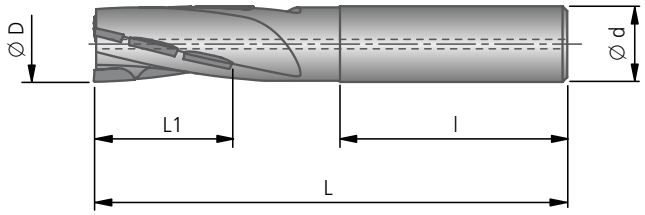
PCD Face and corner milling cutter

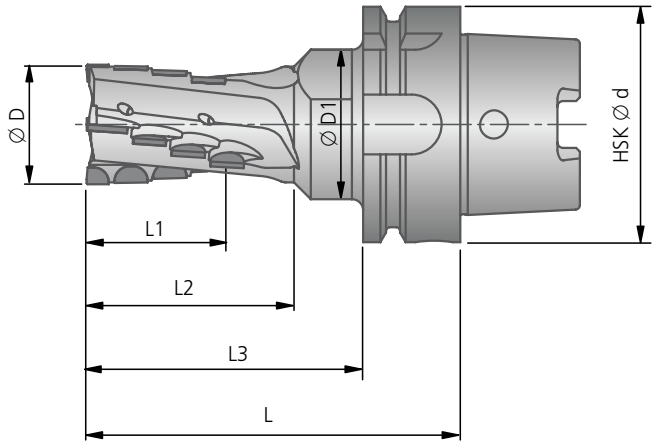
for workpiece material **N**

PCD

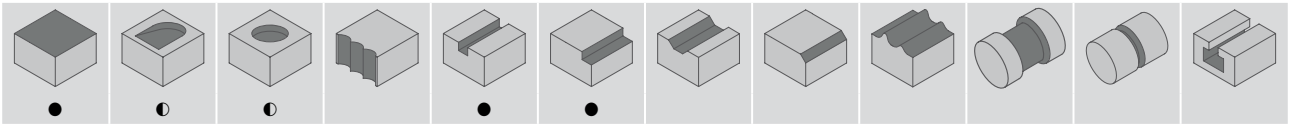
DIN 6535 HA

HSK-A ISO 12164-1





● very good | ◐ good



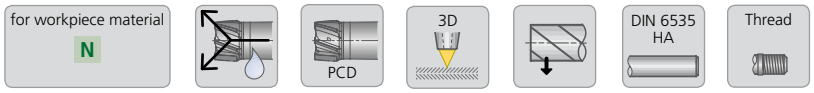
DIN 6535 HA					
Ø D	Cylindrical shank Ø d × l	L	L1	Z	Order No.
16	16 × 48	93	30	3	38170099001600
20	20 × 50	100	30	3	38170099002000
25	25 × 56	110	30	3	38170099002500

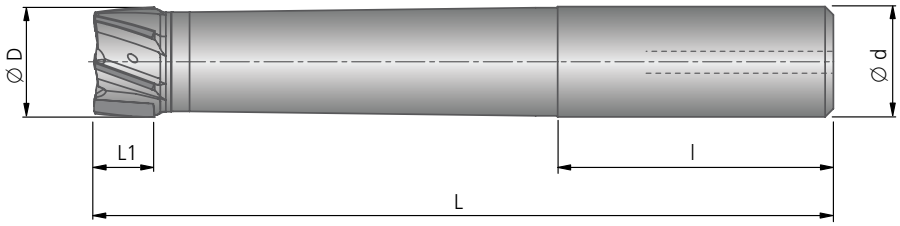
HSK-A									
Ø D	HSK Ø d	Ø D1	L ±0,02	L1	L2	L3	Z	kg	Order No.
32	63	40	100	40	55	74	4		37170026003200
40	63	-	100	40	-	-	4		37170026004000
50	63	-	100	40	-	-	4		37170026005000
63	63	-	100	40	-	-	4		37170026006300

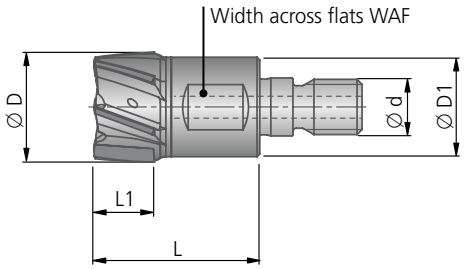
Supply includes: PCD milling cutter with coolant screw and coolant supply kit.

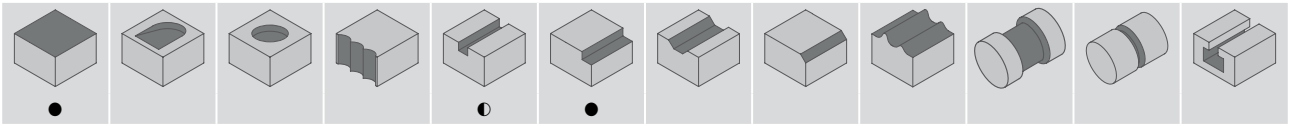
Cutting values for milling: Page 703.

PCD Face milling cutter HPC









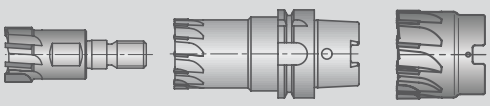
DIN 6535 HA 2,5×D						
Ø D	Cylindrical shank Ø d × l	L	L1	Z	kg	Order No.
10	10 × 40	67	5	4	0,074	38320001001000
12	12 × 45	78	5	4	0,084	38320001001200
16	16 × 48	91	10	5	0,132	38320001001600
20	20 × 50	104	10	6	0,229	38320001002000
25	25 × 56	124	10	8	0,401	38320001002500
32	32 × 60	147	10	10	0,871	38320001003200
DIN 6535 HA 4×D						
10	10 × 40	82	5	4	0,084	38321001001000
12	12 × 45	96	5	4	0,104	38321001001200
16	16 × 48	115	10	5	0,192	38321001001600
20	20 × 50	134	10	6	0,349	38321001002000
25	25 × 56	161	10	8	0,631	38321001002500
32	32 × 60	195	10	10	1,391	38321001003200

Screw-in cutter									
Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	Z	kg	Order No.
10	M5	8	7	9,6	22	5	4	0,012	37310001001000
12	M5	8	7	9,6	28	5	4	0,018	37310001001200
16	M8	13	15	13,8	28	10	5	0,040	37310001001600
20	M10	16	30	18,0	30	10	6	0,070	37310001002000
25	M12	18	50	21,0	35	10	8	0,140	37310001002500
32	M16	27	100	29,0	35	10	10	0,250	37310001003200

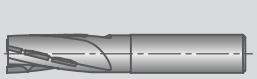
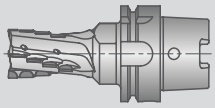
Cutting values for milling: Page 703.

Recommended cutting data

Guideline values for milling					PCD Slot milling cutter | PCD Radius milling cutter									
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material										
					∅ 6		∅ 8		∅ 10		∅ 12		∅ 16 | 20 | 25	
					v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper										
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	200-600	0,04-0,08	200-800	0,04-0,10	300-800	0,04-0,12	300-1000	0,04-0,15	300-1000	0,06-0,20
N	6.3	≤700	≤200	long chip brass										
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)										
N	7.1	≤350	≤100	Al, Mg non-alloy	200-800	0,04-0,08	200-800	0,04-0,10	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	200-800	0,04-0,08	200-800	0,04-0,10	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	200-800	0,04-0,08	200-800	0,04-0,10	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	200-800	0,04-0,08	200-800	0,04-0,10	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	200-800	0,04-0,08	200-800	0,04-0,10	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	8.1			thermoplastics										
N	8.2			thermosetting plastics										
N	8.3			fibre reinforced plastics	200-500	0,02-0,06	200-500	0,03-0,08	200-600	0,03-0,10	200-600	0,04-0,12	500-1200	0,05-0,15

Guideline values for milling					PCD Face milling cutter							
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material								
					∅ 10		∅ 12		∅ 16 | 20 | 25 | 32		∅ 40 – 160	
					v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper								
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-800	0,04-0,12	300-1000	0,04-0,15	300-1000	0,06-0,20	1000-1500	0,04-0,15
N	6.3	≤700	≤200	long chip brass								
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)								
N	7.1	≤350	≤100	Al, Mg non-alloy	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500	0,04-0,15
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500	0,04-0,15
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500	0,04-0,15
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-1500	0,04-0,15
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-1500	0,04-0,15
N	8.1			thermoplastics								
N	8.2			thermosetting plastics								
N	8.3			fibre reinforced plastics	200-600	0,03-0,10	200-600	0,04-0,12	500-1200	0,05-0,15	500-1200	0,05-0,15

Cutting values shown are relating to the basic recommendations for cutting materials given.

Guideline values for milling					PCD Face and corner milling cutter			
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material				
					∅ 16 | 20 | 25		∅ 32 | 40 | 50 | 63	
					v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper				
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-1000	0,06-0,20	300-1500	0,06-0,20
N	6.3	≤700	≤200	long chip brass				
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)				
N	7.1	≤350	≤100	Al, Mg non-alloy	400-1500	0,06-0,20	400-2500	0,06-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1500	0,06-0,20	400-2500	0,06-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1500	0,06-0,20	400-2500	0,06-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1500	0,06-0,20	400-2500	0,06-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1500	0,06-0,20	400-2500	0,06-0,20
N	8.1			thermoplastics				
N	8.2			thermosetting plastics				
N	8.3			fibre reinforced plastics	500-1200	0,05-0,15	500-1200	0,05-0,15

Guideline values for milling					PCD Face milling cutter HPC					
Material group		Strength Rm (N/mm²)	Hardness HB	v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed Material						
					∅ 10		∅ 12		∅ 16 | 20 | 25 | 32	
					v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper						
N	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-800	0,04-0,12	300-1000	0,04-0,15	300-1000	0,06-0,20
N	6.3	≤700	≤200	long chip brass						
N	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)						
N	7.1	≤350	≤100	Al, Mg non-alloy	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20
N	8.1			thermoplastics						
N	8.2			thermosetting plastics						
N	8.3			fibre reinforced plastics	200-600	0,03-0,10	200-600	0,04-0,12	500-1200	0,05-0,15

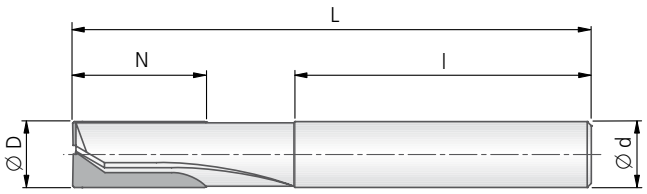
PCD Slot milling cutter

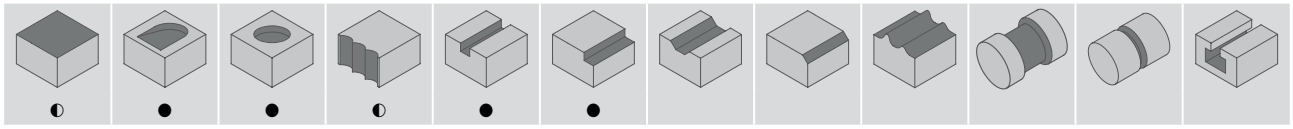
for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

PCD

DIN 6535
HA

straight fluted





◐	●	●	◐	●	●						

38304..					
Ø D_{h10}	Order No.	Ø d_{h6} × l	L	N	Z
6	**38304057000600**	6 × 36	57	12	2
8	**38304063000800**	8 × 36	63	16	3
10	**38304072001000**	10 × 40	72	20	4

Recommended cutting data

PCD Slot milling cutter (38304..)						
Machining: trimming, face milling, plunge milling						
Cutting speed v_c (m/min) Feed f_z (mm/tooth)	Ø 6 mm		Ø 8 mm		Ø 10 mm	
	v_c	f_z	v_c	f_z	v_c	f_z
CFRP	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10
GFRP	200 - 400	0,02 - 0,08	200 - 400	0,03 - 0,10	200 - 400	0,03 - 0,12
CFRP/Al stacks	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10
Honeycombs	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10

Important: See chapter 8 for more application details and safety notes!

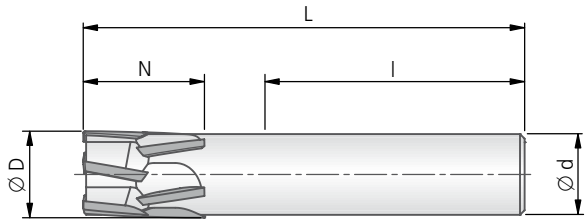
PCD Compression milling cutter

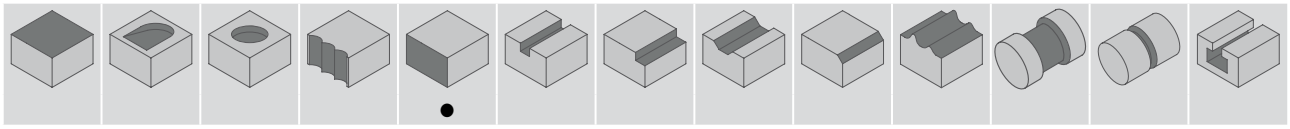
for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

PCD

DIN 6535
HA

staggered cut with dual right and left helix





38300..					
Ø D_{h10}	Order No.	Ø d_{h6} × l	L	N	Z
6	38300057000600	6 × 36	57	10	3
10	38300072001000	10 × 40	72	16	4
16	38300090001600	16 × 48	90	20	5

Recommended cutting data

PCD Compression milling cutter (38300..)								
Machining: trimming, pocket and slot milling								
Cutting speed v_c (m/min) Feed f_z (mm/tooth)	Ø 6 mm		Ø 8 mm		Ø 10 mm		Ø 16 mm	
	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z
CFRP	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10	200 - 400	0,03 - 0,12
GFRP	200 - 400	0,02 - 0,08	200 - 400	0,03 - 0,10	200 - 400	0,03 - 0,12	200 - 400	0,03 - 0,15
CFRP/Al stacks	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10	200 - 400	0,03 - 0,12
Honeycombs	200 - 400	0,02 - 0,06	200 - 400	0,03 - 0,08	200 - 400	0,03 - 0,10	200 - 400	0,03 - 0,12

PCD high-performance drill Drillmax

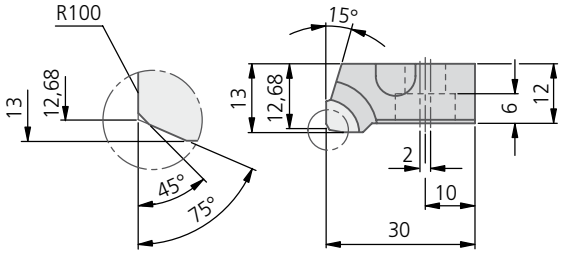
With a point angle of 90° and 130°, the Drillmax PCD high-performance drill is excellently suited for drilling composite materials.



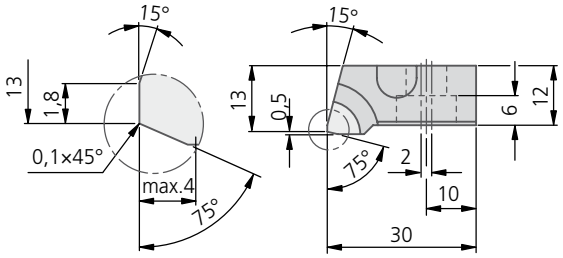
PCD Finishing, facing and corner milling cutter for HSC operations

Cartridges

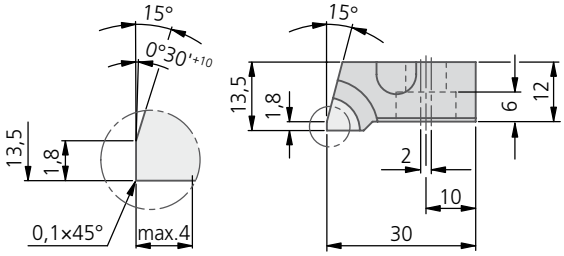
Finishing cartridge F51 34130



Facing cartridge F51 34120

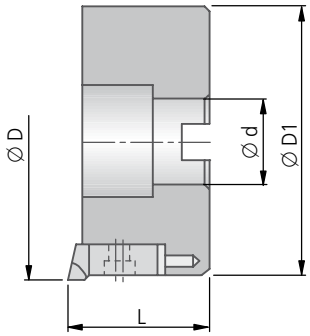


Corner cartridge F51 34110



Basic body

Dimensions to DIN 8030

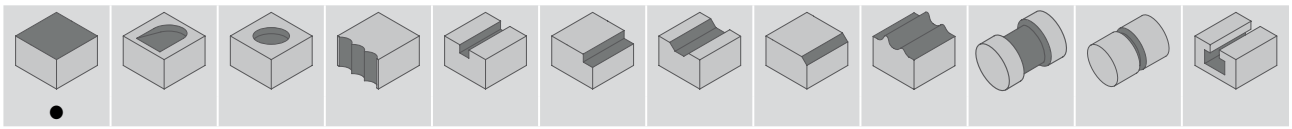


Supply of basic body includes:
Basic body incl. balancing screws and clamping screws already fitted. Cartridges not included.

Supply of cartridges includes:
Cartridges without clamping screws.

Clamping screw for cartridges: Order No.
55024 06012

Examples for ordering:
Face milling cutter complete tool ∅ 80 mm, Z = 5
1 × basic body F51 02350
4 × facing cartridge F51 34120
1 × finishing cartridge F51 34130



Basic body							Clamping screw		Cartridge with PCD insert		
Ø D	Order No.	Ø d^{H7}	L	Ø D1	Z	kg	Size	Torque setting Milling cutter arbor	Corner cartridge Order No.	Facing cartridge Order No.	Finishing cartridge Order No.
80	**F51 02350**	27	50	78	5	0,57	M12	70 Nm	**F51 34110**	**F51 34120**	**F51 34130**
100	**F51 02360**	32	50	98	6	0,95	M16				

Special milling cutter features:

Internal coolant supply
applied with clamping screw provided

Balance
Balanced to DIN 69888 and additional screws for precision balancing

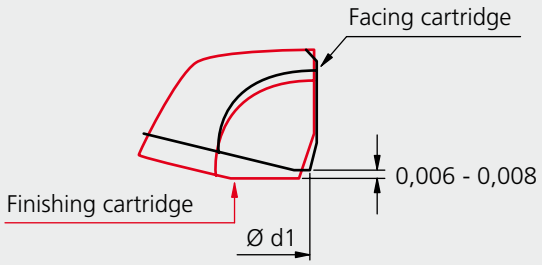
Setting
Secure adjusting screws for setting axial run-out on the milling head

Cartridges
PCD cartridges manufactured to high precision for maximum stability and perfect circular cutting movement

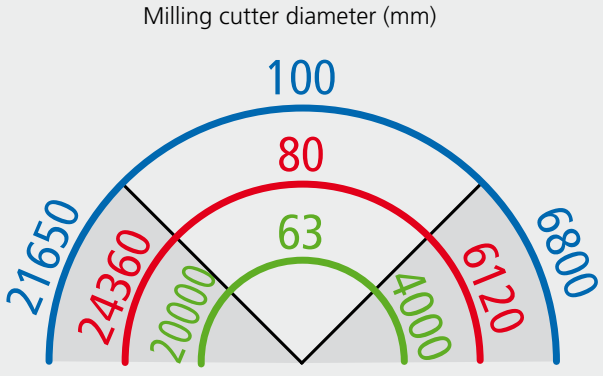
Milling cutter body
Manufactured from special aluminium alloy with high tensile strength, considerably reduced weight and excellent surface finish (Note 63 mm diameter body in steel)

Secure srews
Strong, high quality screws in hardened threaded inserts and with additional lateral screws

Setting notes for combination finishing and facing cartridge



Spindle speeds and cutting speeds



n (min⁻¹)
permissible maximum spindle speed

v_c (m/min)
Permissible maximum cutting speed

Problems → possible causes → solutions

Machine capacity

Pay attention to the machine's performance curve. Machine performance may be reduced at excessively low speeds.

Possible causes	Solutions
The power requirement when milling varies according to: · Workpiece material quantity · Average chip thickness · Milling cutter geometry · Cutting speed	· Switch from a narrow to wide pitch, e.g. fewer teeth · Milling cutters with positive cutting edge geometry are more power-efficient · Reduce the cutting speed before the table feed · Use a smaller milling cutter and work in several operations · Reduce the cutting depth ap

Chip jam

Frequent problem with full slot milling – particularly with long-chipping workpiece materials

Possible causes	Solutions
· Damage to corners · Edge chipping and breakage · Chips being cut again	· Improve chip removal through abundant, precisely guided cooling lubricant or compressed air · Reduce the feed rate fz · Divide deep cuts into several operations · Try conventional milling when milling deep grooves · Choose a milling cutter with a wide pitch

Unsatisfactory surface finish

Possible causes	Solutions
Feed per revolution too high	· Axially adjust milling cutter or classify indexable inserts. Check height on tool presetting device. · Check spindle concentricity and surfaces on the milling cutter adapter · Reduce the feed per revolution to max. 70% of the face chamfer width · Use wiper indexable inserts if possible (finishing operations)
Vibration	· See "Vibrations"
Build-up on the cutting edge	· Increase the cutting speed v_c in order to raise the machining temperature · Without cooling lubricant – dry · Use indexable inserts with a sharp cutting edge and soft-cutting geometry · Use positive cutting edge geometry
Recutting of the milling cutter	· Check the spindle pitch · Check the axial runout of the spindle · Minimise radial cutting forces (reduce the cutting depth a_p) · Choose a smaller milling cutter diameter · Check the lateral runout · Ensure that the milling cutter does not wobble – check and adapt surfaces on the milling cutter adapter
Chipping on workpiece edges	· Reduce the feed rate f_z · Choose a milling cutter with a narrow or extra-narrow pitch · Convert milling cutter to achieve a thinner chip when the milling cutter exits the hole · Choose a more suitable lead angle (45°) and easy-cutting geometry · Choose a sharp cutting edge geometry · Monitor flank face wear to prevent excessive wear

Vibration

Possible causes	Solutions
Weak clamping	· Determine the direction of the cutting forces and ensure sufficient clamping or increase clamping · Reduce the cutting forces by decreasing the cutting depth a_p · Choose a milling cutter with a wide pitch and positive cutting edge geometry · Choose a fine-grain, uncoated indexable insert or a thinner coating · Avoid machining operations in which the workpiece is insufficiently protected from the cutting forces which occur
Axially weak workpiece	· Choose a shoulder milling cutter (90° lead angle) with positive cutting edge geometry · Minimise axial cutting forces – reduce the cutting depth, and select a smaller corner radius and smaller face chamfer · Choose a milling cutter with a wide pitch · Check tool wear · Check concentricity faults in the tool holder · Improve tool clamping
Long tool projection	· Minimise the projection length · Choose a milling cutter with a wide pitch · Choose a high-feed milling cutter or a milling cutter with a large corner radius, round indexable inserts or a 45° lead angle · Increase the feed rate per tooth · Choose an easy-cutting insert geometry · Reduce the axial cutting depth a_e · Use conventional milling when finishing
Shoulder milling with weak spindle	· Choose the smallest possible milling cutter diameter · Choose a positive indexable insert and easy-cutting milling cutter · Use conventional milling · Check spiral deflection, suitability of the machine
Cutting data	· Vary the cutting speed (vc) · Increase the feed rate fz · Reduce the cutting depth ap
Poor stability	· Reduce the projection length · Improve stability
Vibrations in corners	· Program corner radius with reduced feed rate

KOMET

3D-printed HPC PCD milling cutters

3D-printed tools – welcome to the machining revolution
Maximum number of cutting edges – up to 100% increase in productivity

Face milling into flange using 20 mm dia. tool

The challenge:

Material:	3.2315 (AlSiMgMn)
Workpiece:	Connector
Tool:	Conventional 20 mm diameter tool with four teeth
Machining task:	Producing a 60 mm diameter collar with a flange facing, a_p = 3 mm, a_e = 20 mm
Objective:	Reduce machining time per unit

The solution:
20 mm dia. KOMET HPC PCD screw-in cutter with six teeth (37310001002000)



Cutting values:
v_c = 1068 m/min
= 17,000 rpm
f_t = 0.1 mm/tooth

Customer benefits:
The milling cutter runs very smoothly and quietly.
Machining time per unit is reduced from 1 min 45 s to 55 s.

Machining time per unit is reduced by 48%

Face milling into filter housing using 32 mm dia. tool

The challenge:

Material:	3.2371 (AlSi7Mg0.3)
Workpiece:	Filter housing
Tool:	Conventional 50 mm diameter tool with seven teeth v_c = 1600 m/min, f_t = 0.03 mm/tooth
Machining task:	Milling various webs, lands, surfaces, reliefs and shoulders a_p = 1-3 mm, a_e = 19-32 mm
Objective:	Reduce machining time per unit

The solution:
32 mm dia. KOMET HPC PCD screw-in cutter with 10 teeth (37310001003200), A = 129 mm



Cutting values:
v_c = 1206 m/min = 12,000 rpm (max. speed)
f_t = 0.04 mm/tooth

Customer benefits:
Machining time per unit is reduced from 1 min 23 s to 23 s.
100 min machining time saved per day.

Machining time per unit is reduced by 72%

Face milling into cylinder head using 40 mm dia. tool

The challenge:

Material:	3.2371 (G-AlSi7Mg)
Workpiece:	Cylinder head
Tool:	Conventional tool with six teeth for roughing, a_p = 2 mm
Machining task:	Milling the contact surface
Objective:	Increase productivity

The solution:
KOMET
40 mm dia. PCD arbour milling cutter with 12 teeth



Cutting values:
v_c = 1382 m/min
= 11,000 rpm
f_t = 0.1 mm/tooth = F 13,200 mm/min

Customer benefits:
This tool runs much more smoothly and quietly than conventional tools. No noticeable burr on the edge of the workpiece, unlike when conventional tools are used for machining.

Machining time per unit is reduced by 45%

Face milling into gearbox cover using 40 mm dia. tool

The challenge:

Material:	EN AC-48000 (Al Si12CuNiMg)
Workpiece:	Gearbox cover
Tool:	Conventional 40 mm diameter tool with seven teeth
Machining task:	Milling webs or lands, a_p = 1 mm, requisite max. surface roughness R_a = 1.6 µm
Objective:	Increase productivity

The solution:
KOMET
40 mm dia. PCD milling cutter with 12 teeth
HSK-A63, A = 200 mm

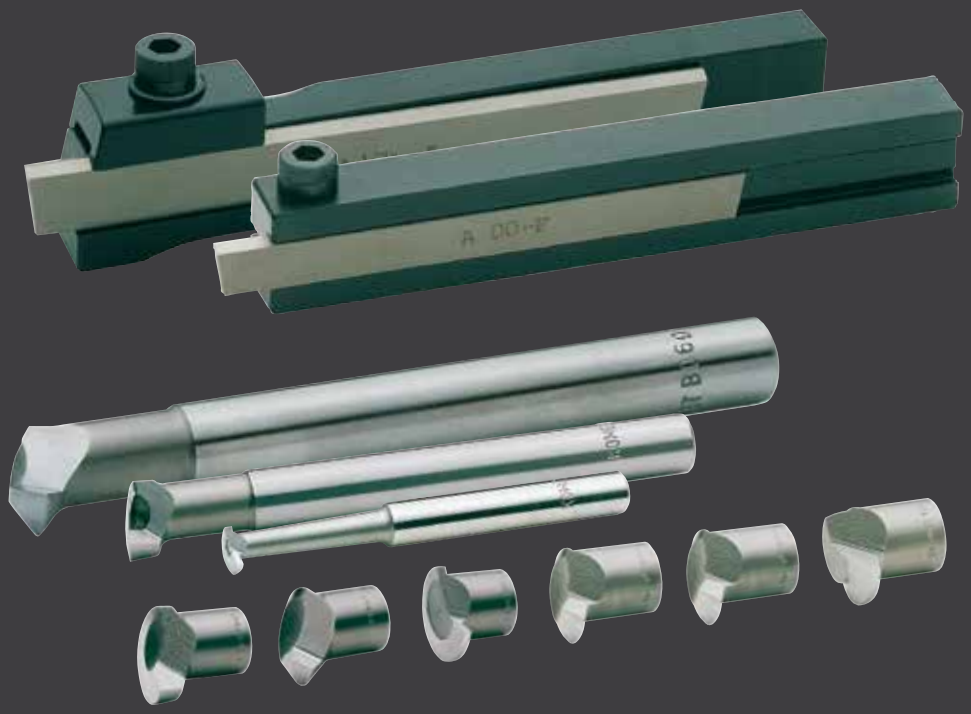


Cutting values:
v_c = 2000 m/min
= 15,924 rpm
f_t = 0.15 mm/tooth

Customer benefits:
This tool runs much more smoothly and quietly than conventional tools, surface roughness Ra = 1.15 µm
Tool life to date 107,000 parts, still in use.

Machining time per unit is reduced by 30%

KOMET Turning tools for external and internal machining



KOMET turning tools are extremely versatile.

Not only can our turning tools be used for conventional lathes, turret lathes, automatic lathes and custom machines, they can also be used for boring heads and milling machines.

They are equally at home with both external and internal machining.

Their simple design, combined with ultimate precision, falls into line with KOMET's noted tradition of excellence – qualities which have been much sought-after for decades across the globe.

Satisfaction across generations of customers.

KOMET UniTurn

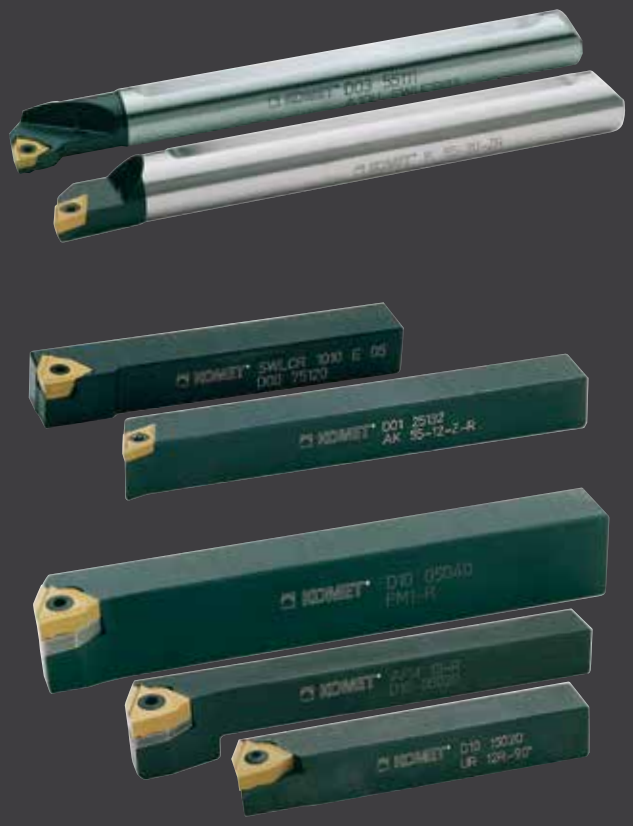
The main characteristic of the KOMET UniTurn turning programme is the extremely rigid connection between the turning tool and the clamping holder. An eccentric clamping device in the holder guarantees that tool change times are extremely short and the cutting edge is very accurately positioned.
The flat insertion surface on the shaft of the turning tool ensures a correctly insert in the right position.
Two coolant slots located axially in the holder provide the best possible supply of coolant onto the cutting edge both for right-hand and left-hand boring bars. This prevents any weakening of the boring bar caused by notching.



Indexable inserts tools

Internal machining	Page
Boring bar / turning tool	
with cylindrical connection	
W01/W29 92°, 93°	714 – 717
W60/W79 93°, 107°30'	718 – 721
W30/W57 90°, 92°, 100°	722 – 727
Turning tool	
with square connection	
W01/W29 91°	728

External machining	Page
Turning tool W01/W29 93°, 90°, 45°	739 – 741
Turning tool W60/W79 93°	742
Turning tool W04 90°, 60°, 45°	743 – 745



HSS and solid carbide tools

Internal machining	Page
Boring toolholder	729
Boring tool form F ∅ 2,5 - 14 mm	730
Boring tool form G ∅ 2,5 - 14 mm	731
Recessing tool form H ∅ 3 - 14 mm	732
Threading tool 60° ∅ 3 - 14 mm	733
Threading tool 55° ∅ 7 - 14 mm	734
Holder for detachable ...	735
Boring tool form F ∅ 16 - 30 mm	735
Boring tool form G ∅ 16 - 30 mm	735
Recessing tool form H ∅ 16 - 30 mm	735
Threading tool 60° ∅ 16 - 30 mm	736
Threading tool 55° ∅ 16 - 30 mm	736
Threading tool for acme thread	736

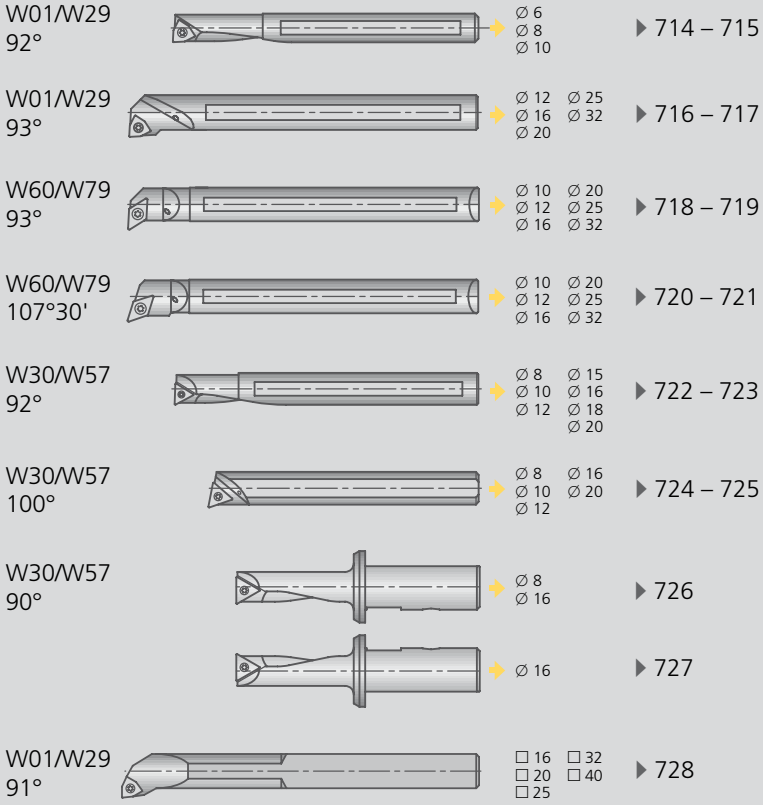
KOMET UniTurn	Page
Clamping holder	754
Adaptor with ABS connection	754
Adaptor with cylindrical connection	754
Copying tool ∅ 3 - 8 mm	756
Boring tool ∅ 3 - 8 mm	760
Boring tool with CBN ∅ 2,7 - 7,5 mm	762
Recessing tool ∅ 3 - 8 mm	758
Threading tool ∅ 5 - 8 mm	764
Operating instructions for the clamping mechanism	755

External machining	Page
Parting-off	746 – 747
Grooving	748

Programme summary indexable inserts tools

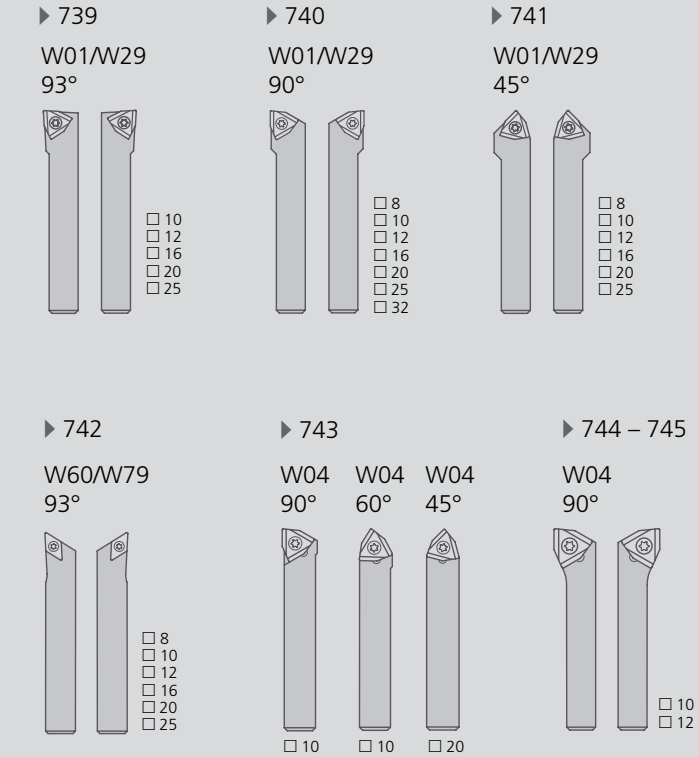
Internal machining

Boring bar / turning tool



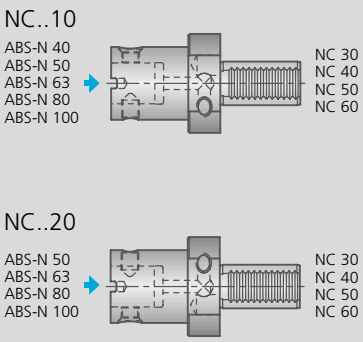
External machining

Turning tool

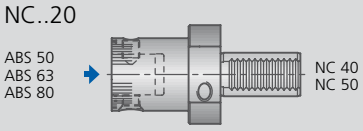


6 Adaptors

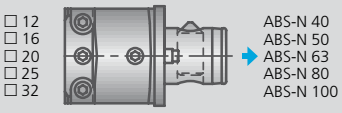
VDI Adaptor DIN 69880



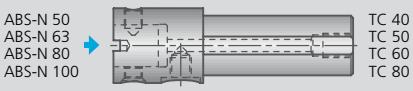
VDI Torsional dampener



Adaptor



TC Adaptor

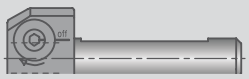
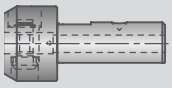
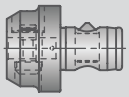


Key

- ABS connection
- ABS N connection
- cylindrical connection

Internal machining

UniTurn
Clamping holder and adaptor
▸ 754

Copying tool
∅ 3 – 8 mm
▸ 756



Recessing tool
∅ 3 – 8 mm
▸ 758



Threading tool
∅ 5 – 8 mm
▸ 764



Boring tool
∅ 3 – 8 mm
▸ 760



Boring tool with CBN
∅ 2,7 – 7,5 mm
▸ 762



Boring tool
Form F / G
∅ 2,5 – 14 mm
▸ 730 – 731



Recessing tool
Form H
∅ 3 – 14 mm
▸ 732



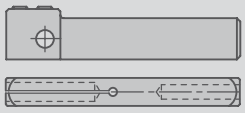
Threading tool
60°
∅ 3 – 14 mm
▸ 733



Threading tool
55°
∅ 7 – 14 mm
▸ 734



Boring toolholder
▸ 729



Boring tool
Form F / G
∅ 16 – 30 mm
▸ 735



Recessing tool
Form H
∅ 16 – 30 mm
▸ 735



Threading tool
60° / 55°
∅ 16 – 30 mm
▸ 736



Threading tool
acme thread
∅ 16 – 30 mm
▸ 736

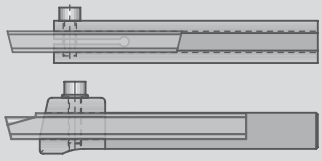


Boring toolholder
and boring bar
▸ 735

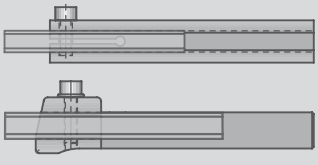


External machining

Parting-off
▸ 746 – 747



Grooving
▸ 748

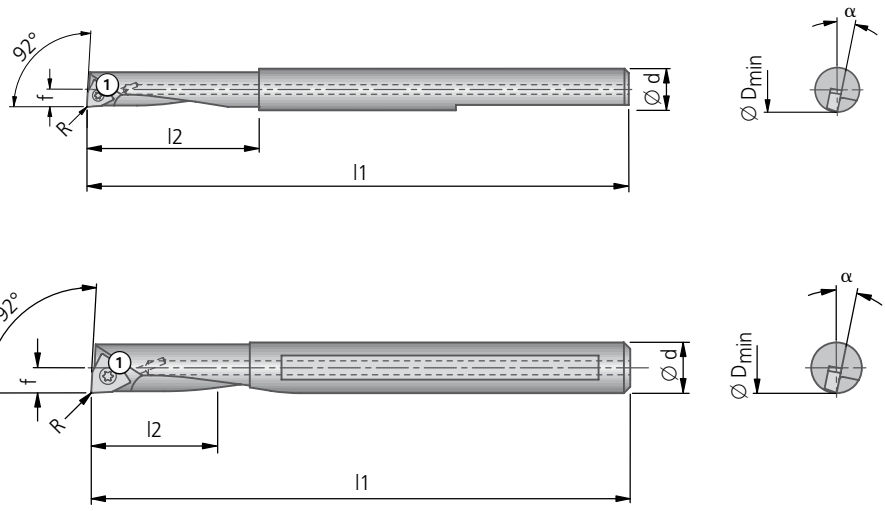


KOMET – Internal machining

Boring bar $\varkappa = 92°$

- for insert W00, W01 / W29
- R.H. boring bar as shown with left or neutral insert
- L.H. boring bar in mirror image with right or neutral insert

B00 30280
B00 30290



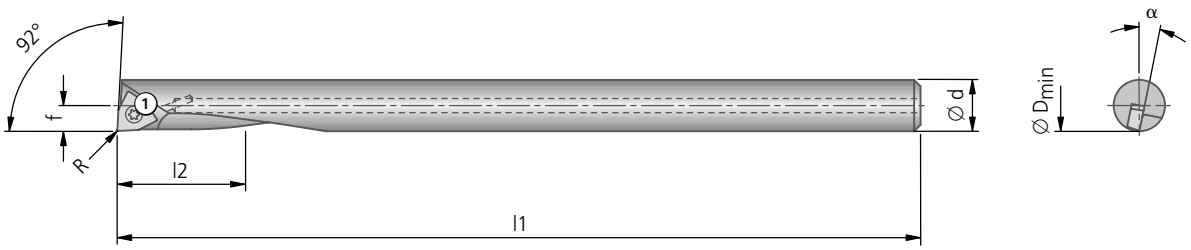
$\varkappa = 92°$											Insert		
D min	Order No.	Cutting form	d	l1	Working length l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W00 | W01 L.H. Size	W00 | W01 R.H. Size	W29 neutral Size
5,6	**B00 30280**	R.H.	6	65	22		0,1	10°17'		**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04...**		
6,9	**B00 30290**	R.H.	6	80	24		0,1	10°17'		**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04...**		
5,6	**B00 30300**	L.H.	6	60	15	2,80	0,1	10°15'	0,03	**N00 56011** S/M1,8×2,9-5IP 0,38 Nm		**W00 04...**	
	B00 35300	R.H.									**W00 04...**		
6,9	**B00 30311**	L.H.	8	70	20	3,45	0,2	15°	0,06	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35311	R.H.									**W01 10...**		
7,9	**B00 30321**	L.H.	8	85	25	3,95	0,2	11°30'	0,06	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35321	R.H.									**W01 10...**		
9,9	**B00 30331**	L.H.	10	95	30	4,95	0,2	8°	0,08	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35331	R.H.									**W01 10...**		

For further details on inserts see chapter 7.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

Boring bar $\varkappa$ = 92° for fine machining only

- carbide or heavy-duty metal (5,6 mm dia. and 6,9 mm dia.) ■
- for insert W00, W01 / W29 ■
- R.H. boring bar as shown with left or neutral insert ■
- L.H. boring bar in mirror image with right or neutral insert ■



$\varkappa$ = 92°											Insert		
Ø D min	Order No.	Cutting form	Ø d	l1	Working length l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W00 | W01 L.H. Size ▾▾	W00 | W01 R.H. Size ▾▾	W29 neutral Size ▾▾
5,6	**B00 35400**	R.H.	6	100	50	2,80	0,1	10°15'	0,06	**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04...**		
6,9	**B00 30411**	L.H.	8	125	60	3,45	0,2	15°	0,11	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35411	R.H.									**W01 10...**		
7,9	**B00 30421**	L.H.	8	125	–	4,30	0,2	11°30'	0,11	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35421	R.H.									**W01 10...**		
9,9	**B00 30431**	L.H.	10	150	–	5,30	0,2	8°	0,19	**N00 56041** S/M2×4,3-6IP 0,62 Nm		**W01 10...**	**W29 10...**
	B00 35431	R.H.									**W01 10...**		

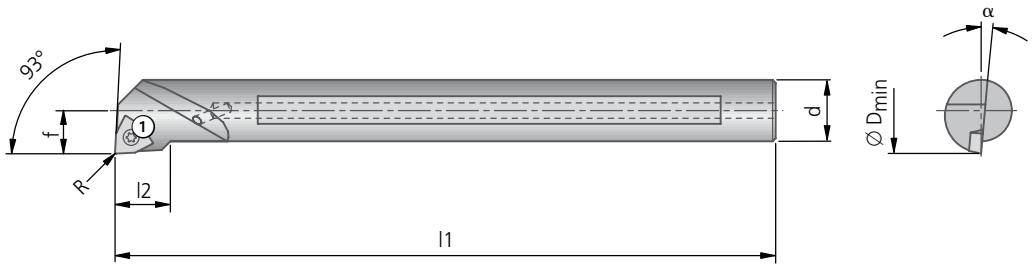
For further details on inserts see chapter 7.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Turning tool $\varkappa$ = 93°

- for insert W01 / W29
- R.H. turning tool as shown with left or neutral insert
- L.H. turning tool in mirror image with right or neutral insert



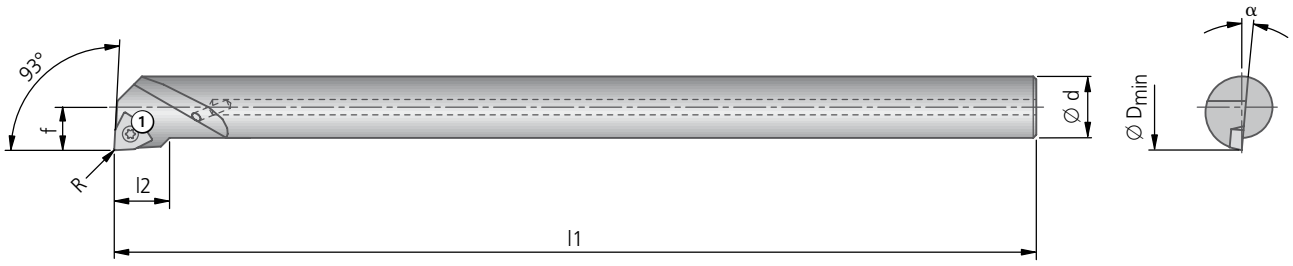
$\varkappa$ = 93°											Insert		
Ø D min	Order No. Article	Cutting form	Ø d	l1	l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W01 L.H. Size ▾▾	W01 R.H. Size ▾▾	W01 | W29 neutral Size ▾▾
16	**D03 50120** A12K-SWUCL-05	L.H.	12	125	14	9	0,4	7°	0,14	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
	D03 55120 A12K-SWUCR-05	R.H.									**W01 24...**		
20	**D03 50130** A16M-SWUCL-05	L.H.	16	150	14	11	0,4	5°30'	0,25	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
	D03 55130 A16M-SWUCR-05	R.H.									**W01 24...**		
25	**D03 50140** A20Q-SWUCL-06	L.H.	20	180	18	13	0,4	4°	0,46	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm		**W01 34...**	**W01 34...** **W29 34...**
	D03 55140 A20Q-SWUCR-06	R.H.									**W01 34...**		
32	**D03 50150** A25R-SWUCL-06	L.H.	25	200	18	17	0,4	2°	0,76	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm		**W01 34...**	**W01 34...** **W29 34...**
	D03 55150 A25R-SWUCR-06	R.H.									**W01 34...**		
40	**D03 50160** A32S-SWUCL-07	L.H.	32	250	25	22	0,4	1°30'	1,53	**N00 57531** S/M4,5×9-15IP 6,25 Nm		**W01 42...**	**W01 42...** **W29 42...**
	D03 55160 A32S-SWUCR-07	R.H.									**W01 42...**		

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa$ = 93° for fine machining only

carbide metal ■
for insert W01 / W29 ■
L.H. turning tool in mirror image with right or neutral insert ■



$\varkappa$ = 93°											Insert	
Ø D min	Order No. Article	Cutting form	Ø d	l1	l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W01 R.H. Size ▾▾	W01 | W29 neutral Size ▾▾
20	**D03 50030** E16R-SWUCL-05	L.H.	16	200	14	11	0,4	5°30'	0,56	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**W01 24...**	**W01 24... W29 24...**

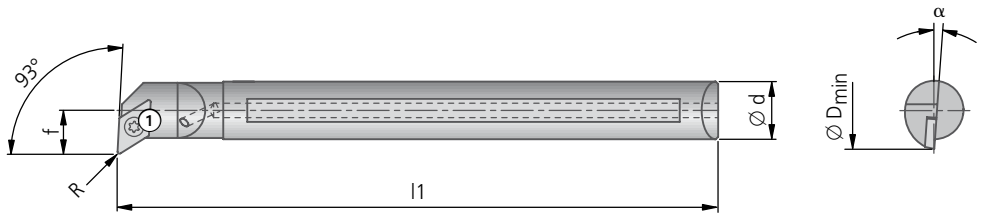
For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Turning tool $\varkappa = 93°$

- for insert W60 / W79
- R.H. turning tool as shown with left or neutral insert
- L.H. turning tool in mirror image with right or neutral insert



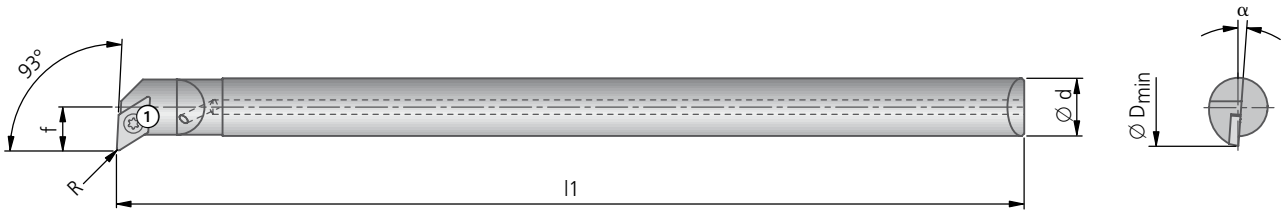
$\varkappa = 93°$										Insert		
Ø D min	Order No. Article	Cutting form	Ø d	l1	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W60 L.H. Size▾▾	W60 R.H. Size▾▾	W60 | W79 neutral Size▾▾
13	**D02 10122** IK55-10U L	L.H.	10	100	6,5	0,4	6°	0,09	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15122 IK55-10U R	R.H.								**W60 18...**		
16	**D02 10133** IK55-12U L	L.H.	12	125	9	0,4	5°	0,13	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15133 IK55-12U R	R.H.								**W60 18...**		
20	**D02 10143** IK55-16U L	L.H.	16	150	11	0,4	3°30'	0,25	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15143 IK55-16U R	R.H.								**W60 18...**		
25	**D02 10153** IK55-20U L	L.H.	20	180	13	0,8	4°	0,49	**N00 56751** S3574-10IP 2,8 Nm		**W60 32...**	**W60 32...** **W79 32...**
	D02 15153 IK55-20U R	R.H.								**W60 32...**		
32	**D02 10163** IK55-25U L	L.H.	25	200	17	0,8	2°	0,78	**N00 56751** S3574-10IP 2,8 Nm		**W60 32...**	**W60 32...** **W79 32...**
	D02 15163 IK55-25U R	R.H.								**W60 32...**		
40	**D02 10173** IK55-32U L	L.H.	32	250	22	0,8	0°	1,51	**N00 56751** S3574-10IP 2,8 Nm		**W60 32...**	**W60 32...** **W79 32...**
	D02 15173 IK55-32U R	R.H.								**W60 32...**		

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa$ = 93° for fine machining only

- carbide metal ■
- for insert W60 / W79 ■
- R.H. turning tool as shown with left or neutral insert ■
- L.H. turning tool in mirror image with right or neutral insert ■



$\varkappa$ = 93°										Insert		
Ø D min	Order No. Article	Cutting form	Ø d	l1	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W60 L.H. Size ▼▼	W60 R.H. Size ▼▼	W60 | W79 neutral Size ▼▼
13	**D02 10571** E10M-SDUCL-07	L.H.	10	150	6,5	0,4	6°	0,19	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15571 E10M-SDUCR-07	R.H.								**W60 18...**		
16	**D02 10581** E12Q-SDUCL-07	L.H.	12	180	9	0,4	5°	0,30	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
20	**D02 10591** E16R-SDUCL-07	L.H.	16	200	11	0,4	3°30'	0,55	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
25	**D02 10601** E20S-SDUCL-11	L.H.	20	250	13	0,8	4°	1,09	**N00 56751** S3574-10IP 2,8 Nm		**W60 32...**	**W60 32...** **W79 32...**

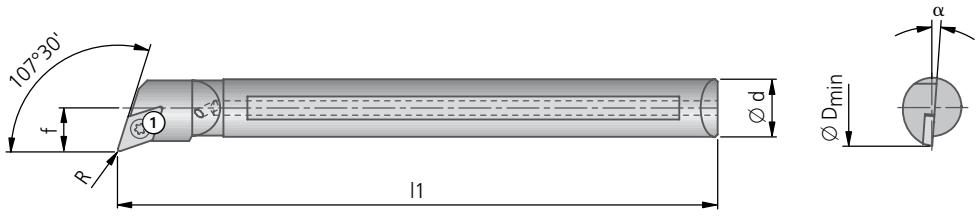
For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Turning tool $\varkappa$ = 107°30'

- for insert W60 / W79
- R.H. turning tool as shown with left or neutral insert
- L.H. turning tool in mirror image with right or neutral insert



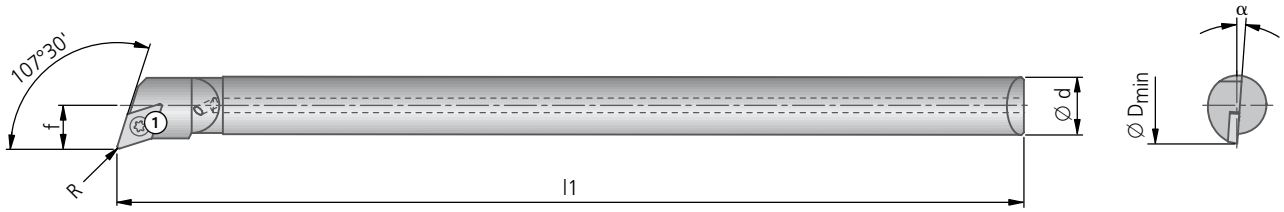
$\varkappa$ = 107°30'										Insert		
Ø D min	Order No. Article	Cutting form	Ø d	l1	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W60 L.H. Size▾▾	W60 R.H. Size▾▾	W60 | W79 neutral Size▾▾
13	D02 10023 IK55-10Z L	L.H.	10	100	6,5	0,4	6°	0,09	N00 56651 S2560-8IP 1,28 Nm		W60 18...	W60 18... W79 18...
	D02 15023 IK55-10Z R	R.H.								W60 18...		
16	D02 10033 IK55-12Z L	L.H.	12	125	9	0,4	5°	0,13	N00 56651 S2560-8IP 1,28 Nm		W60 18...	W60 18... W79 18...
	D02 15033 IK55-12Z R	R.H.								W60 18...		
20	D02 10043 IK55-16Z L	L.H.	16	150	11	0,4	3°30'	0,25	N00 56651 S2560-8IP 1,28 Nm		W60 18...	W60 18... W79 18...
	D02 15043 IK55-16Z R	R.H.								W60 18...		
25	D02 10053 IK55-20Z L	L.H.	20	180	13	0,8	4°	0,49	N00 56751 S3574-10IP 2,8 Nm		W60 32...	W60 32... W79 32...
	D02 15053 IK55-20Z R	R.H.								W60 32...		
32	D02 10063 IK55-25Z L	L.H.	25	200	17	0,8	2°	0,78	N00 56751 S3574-10IP 2,8 Nm		W60 32...	W60 32... W79 32...
	D02 15063 IK55-25Z R	R.H.								W60 32...		
40	D02 15073 IK55-32Z R	R.H.	32	250	22	0,8	0°	1,51	N00 56751 S3574-10IP 2,8 Nm	W60 32...		W60 32... W79 32...

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa$ = 107°30' for fine machining only

- carbide metal ■
- for insert W60 / W79 ■
- R.H. turning tool as shown with left or neutral insert ■
- L.H. turning tool in mirror image with right or neutral insert ■



$\varkappa$ = 107°30'										Insert		
Ø D min	Order No. Article	Cutting form	Ø d	l1	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W60 L.H. Size ▾▾	W60 R.H. Size ▾▾	W60 | W79 neutral Size ▾▾
13	**D02 10671** E10M-SDQCL-07	L.H.	10	150	6,5	0,4	4°	0,19	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15671 E10M-SDQCR-07	R.H.								**W60 18...**		
16	**D02 10681** E12Q-SDQCL-07	L.H.	12	180	9	0,4	5°	0,40	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
	D02 15681 E12Q-SDQCR-07	R.H.								**W60 18...**		
20	**D02 10691** E16R-SDQCL-07	L.H.	16	200	11	0,4	3°30'	0,80	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
25	**D02 10701** E20S-SDQCL-11	L.H.	20	250	13	0,8	4°	1,09	**N00 56751** S3574-10IP 2,8 Nm		**W60 32...**	**W60 32...** **W79 32...**

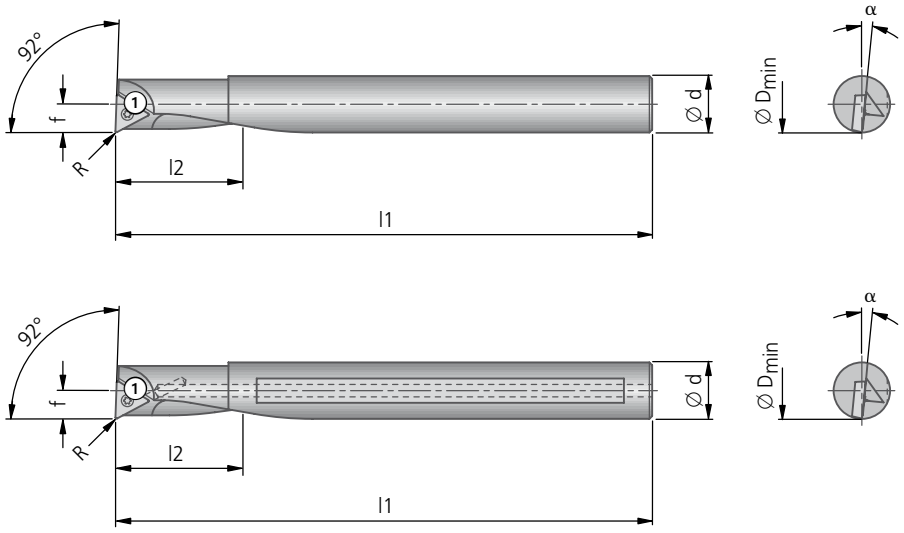
For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Boring bar $\varkappa = 92°$

- for insert W30 / W57
- R.H. boring bar as shown with left or neutral insert
- L.H. boring bar in mirror image with right or neutral insert



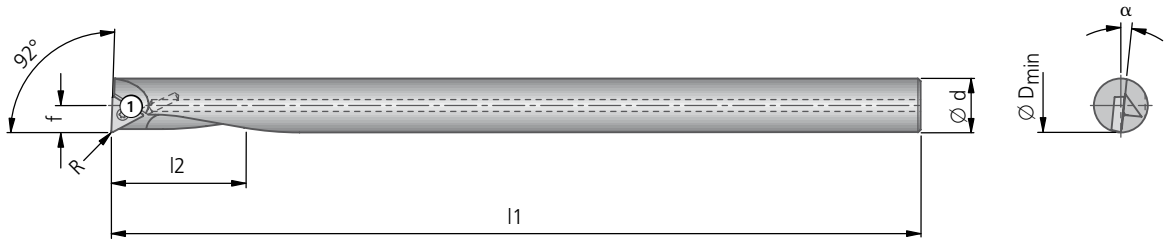
$\varkappa = 92°$												Insert		
Ø D min	Order No.	Order No.	Cutting form	Ød	l1	Working length l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W30 L.H. Size ▾▾	W30 R.H. Size ▾▾	W30 | W57 neutral Size ▾▾
7,9	B00 00010	B00 00410	L.H.	8	85	15	3,95	0,2	8°30'	0,07	N00 56021 S/M2×3,8-6IP 0,62 Nm		W30 04...	W30 04... W57 04...
	B00 05010	B00 05410	R.H.									W30 04...		
9,9	B00 00020	B00 00420	L.H.	10	95	20	4,95	0,2	5°30'	0,08	N00 56021 S/M2×3,8-6IP 0,62 Nm		W30 04...	W30 04... W57 04...
	B00 05020	B00 05420	R.H.									W30 04...		
11,9	B00 00030	B00 00430	L.H.	12	110	25	5,95	0,2	7°30'	0,12	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		W30 14...	W30 14... W57 14...
	B00 05030	B00 05430	R.H.									W30 14...		
14,9	–	B00 05440	R.H.	15	120	30	7,45	0,2	5°	0,18	N00 56101 S/M2,6×5,2-8IP 1,28 Nm	W30 14...		W30 14... W57 14...
15,9	B00 00050	B00 00450	L.H.	16	120	30	7,95	0,2	5°	0,21	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		W30 14...	W30 14... W57 14...
	B00 05050	B00 05450	R.H.									W30 14...		
17,9	B00 05060	B00 05460	R.H.	18	150	40	8,95	0,2	5°30'	0,33	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26...		W30 26... W57 26...
19,9	B00 00070	–	L.H.	20	150	40	9,95	0,2	4°30'	0,39	N00 56211 S/M3,5×7,3-10IP 2,8 Nm		W30 26...	W30 26... W57 26...
	B00 05070	B00 05470	R.H.									W30 26...		

For further details on inserts see chapter 7.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

Boring bar $\varkappa$ = 92° for fine machining only

- carbide or heavy-duty metal (7,9 mm dia.) ■
- for insert W30 / W57 ■
- R.H. boring bar as shown with left or neutral insert ■
- L.H. boring bar in mirror image with right or neutral insert ■



$\varkappa$ = 92°											Insert		
Ø D min	Order No.	Cutting form	Ød	l1	Working length l2	f	for R	Orientation angle α	kg	Clamping screw ① Order No. Article	W30 L.H. Size▾▾	W30 R.H. Size▾▾	W30 | W57 neutral Size▾▾
7,9	B00 00600	L.H.	8	125	65	3,95	0,2	8°30'	0,11	N00 56021 S/M2×3,8-6IP 0,62 Nm		W30 04...	W30 04... W57 04...
	B00 05600	R.H.									W30 04...		
9,2	B00 00610	L.H.	8	125	–	4,60	0,2	8°12'	0,11	N00 56021 S/M2×3,8-6IP 0,62 Nm		W30 04...	W30 04... W57 04...
	B00 05610	R.H.									W30 04...		
11,2	B00 00620	L.H.	10	150	–	5,60	0,2	5°	0,19	N00 56021 S/M2×3,8-6IP 0,62 Nm		W30 04...	W30 04... W57 04...
	B00 05620	R.H.									W30 04...		
13,5	B00 00630	L.H.	12	180	–	6,75	0,2	7°30'	0,30	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		W30 14...	W30 14... W57 14...
	B00 05630	R.H.									W30 14...		
16,5	B00 00640	L.H.	15	180	–	8,25	0,2	5°	0,43	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		W30 14...	W30 14... W57 14...
	B00 05640	R.H.									W30 14...		
17,5	B00 00650	L.H.	16	180	–	8,75	0,2	4°	0,48	N00 56101 S/M2,6×5,2-8IP 1,28 Nm		W30 14...	W30 14... W57 14...
	B00 05650	R.H.									W30 14...		
21,7	B00 05670	R.H.	20	200	–	10,95	0,2	4°15'	0,86	N00 56211 S/M3,5×7,3-10IP 2,8 Nm	W30 26...		W30 26... W57 26...

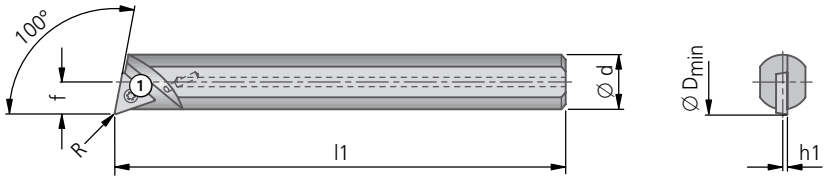
For further details on inserts see chapter 7.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Turning tool $\varkappa$ = 100°

- for insert W30 / W57
- R.H. turning tool as shown with left or neutral insert
- L.H. turning tool in mirror image with right or neutral insert



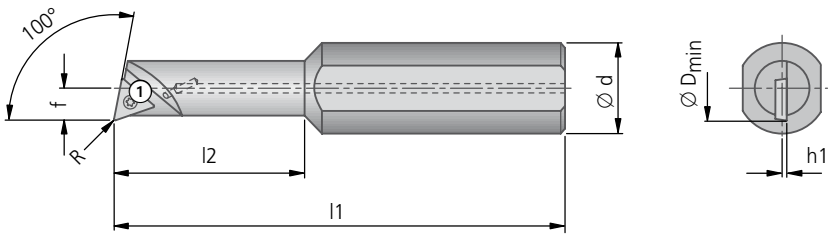
$\varkappa$ = 100°										Insert		
Ø D min	Order No. Article	Cutting form	Ø d	h1	l1	f	for R	kg	Clamping screw ① Order No. Article	W30 L.H. Size▾▾	W30 R.H. Size▾▾	W30 | W57 neutral Size ▾▾
9,5	**D02 20111** Z8L100U3-18	L.H.	8	0,8	100	4,70	0,3	0,06	**N00 56031** S/M2×4,9-6IP 0,62 Nm		**W30 04...**	**W30 04...** **W57 04...**
	D02 25111 Z8R100U3-18	R.H.								**W30 04...**		
11,5	**D02 20121** Z10L100U4-25	L.H.	10	0,8	125	5,70	0,4	0,10	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm		**W30 14...**	**W30 14...** **W57 14...**
	D02 25121 Z10R100U4-25	R.H.								**W30 14...**		
14,0	**D02 20131** Z12L100U4-25	L.H.	12	0,8	125	6,95	0,4	0,13	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm		**W30 14...**	**W30 14...** **W57 14...**
	D02 25131 Z12R100U4-25	R.H.								**W30 14...**		
19,0	**D02 20141** Z16L100U5-30	L.H.	16	0,8	150	9,45	0,5	0,27	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm		**W30 26...**	**W30 26...** **W57 26...**
	D02 25141 Z16R100U5-30	R.H.								**W30 26...**		

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa$ = 100°

for insert W30 / W57 ■
R.H. turning tool as shown with left or neutral insert ■
L.H. turning tool in mirror image with right or neutral insert ■



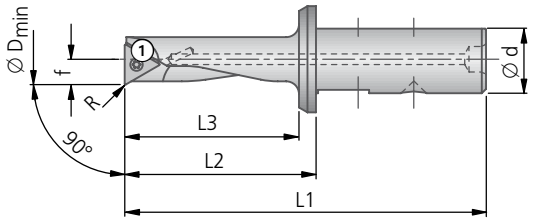
$\varkappa$ = 100°											Insert		
Ø D min	Order No. Article	Cutting form	Ø d	h1	l1	l2	f	for R	kg	Clamping screw ① Order No. Article	W30 L.H. Size▾▾	W30 R.H. Size▾▾	W30 | W57 neutral Size▾▾
8	**D02 20001** Z20/7,5L100U3-18	L.H.	20	0,6	100	30	3,95	0,3	0,20	**N00 56031** S/M2×4,9-6IP 0,62 Nm		**W30 04...**	**W30 04... W57 04...**
	D02 25001 Z20/7,5R100U3-18	R.H.									**W30 04...**		
10	**D02 20011** Z20/8,5L100U3-18	L.H.	20	0,8	100	35	4,95	0,3	0,20	**N00 56031** S/M2×4,9-6IP 0,62 Nm		**W30 04...**	**W30 04... W57 04...**
	D02 25011 Z20/8,5R100U3-18	R.H.									**W30 04...**		
12	**D02 20021** Z20/10,5L100U4-25	L.H.	20	0,8	100	40	5,95	0,4	0,20	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm		**W30 14...**	**W30 14... W57 14...**
	D02 25021 Z20/10,5R100U4-25	R.H.									**W30 14...**		
14	**D02 20031** Z20/12L100U4-25	L.H.	20	0,8	105	45	6,95	0,4	0,21	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm		**W30 14...**	**W30 14... W57 14...**
	D02 25031 Z20/12R100U4-25	R.H.									**W30 14...**		
19	**D02 25041** Z20/16R100U5-30	R.H.	20	0,8	105	45	9,45	0,5	0,26	**N00 56201** S/M3,5×6,2-10IP 2,8 Nm	**W30 26...**		**W30 26... W57 26...**

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Boring bar $\varkappa = 90°$

- for insert W00, W30 / W57
- with cylindrical shank
- R.H. cutting with left or neutral insert



$\varkappa = 90°$										Insert	
Ø D min	Order No.	Ø d	L1	L2	L3	f	R	kg	Clamping screw ① Order No. Article	W00 | W30 L.H. Size ▾▾	W30 | W57 neutral Size ▾▾
5,6	**B00 37010**	8	48	26	22	2,75	0,1	0,04	**N00 56011** S/M1,8×2,9-5IP 0,38 Nm	**W00 04...**	
6,5	**B00 37020**	8	52	30	26	3,20	0,1	0,03			
8	**B00 15510**	8	57	35	28	3,95	0,2	0,02	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W30 04...**	**W30 04...** **W57 04...** **W57 04180.04..**
	B00 15610	16	75	35	30	3,95	0,2	0,08			
10	**B00 15620**	16	80	40	35	4,95	0,2	0,08			
11	**B00 15710**	16	85	45	40	5,45	0,2	0,09	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W30 14...**	**W30 14...** **W57 14...** **W57 14180.04..**
12	**B00 15530**	8	67	45	38	5,95	0,2	0,04			
	B00 15630	16	85	45	40	5,95	0,2	0,09			
13	**B00 15720**	16	90	50	45	6,45	0,2	0,10			
14	**B00 15640**	16	90	50	45	6,95	0,2	0,11			
15	**B00 15730**	16	95	55	50	7,45	0,2	0,12			
16	**B00 15650**	16	95	55	50	7,95	0,2	0,17			
17	**B00 15741**	16	100	60	55	8,45	0,2	0,13			
18	**B00 15661**	16	100	60	55	8,95	0,2	0,14			
19	**B00 15751**	16	105	65	60	9,45	0,2	0,16			
20	**B00 15671**	16	105	65	60	9,90	0,2	0,22			
22	**B00 15681**	16	105	65	60	10,9	0,2	0,19			
24	**B00 15691**	16	105	65	60	11,9	0,2	0,21			

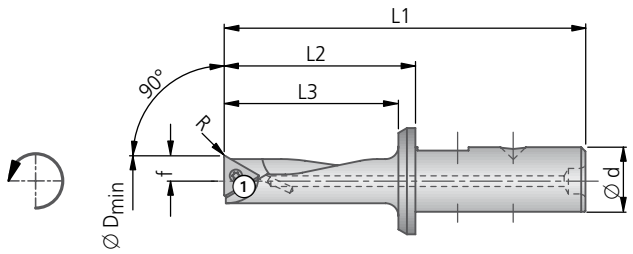
For further details on inserts see chapter 7.

Further diameters on request.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

Boring bar $\varkappa$ = 90°

for insert W30 / W57 ■
with cylindrical shank ■
L.H. cutting with right or neutral insert ■



$\varkappa$ = 90°										Insert	
Ø D min	Order No.	Ø d	L1	L2	L3	f	R	kg	Clamping screw ① Order No. Article	W30 R.H. Size ▾▾	W30 | W57 neutral Size ▾▾
8	**B00 10610**	16	75	35	30	3,95	0,2	0,08	**N00 56021** S/M2×3,8-6IP 0,62 Nm	**W30 04...**	**W30 04...** **W57 04...** **W57 04180.04..**
10	**B00 10620**	16	80	40	35	4,95	0,2	0,08			
12	**B00 10630**	16	85	45	40	5,95	0,2	0,09	**N00 56101** S/M2,6×5,2-8IP 1,28 Nm	**W30 14...**	**W30 14...** **W57 14...** **W57 14180.04..**
14	**B00 10640**	16	90	50	45	6,95	0,2	0,11			

For further details on inserts see chapter 7.

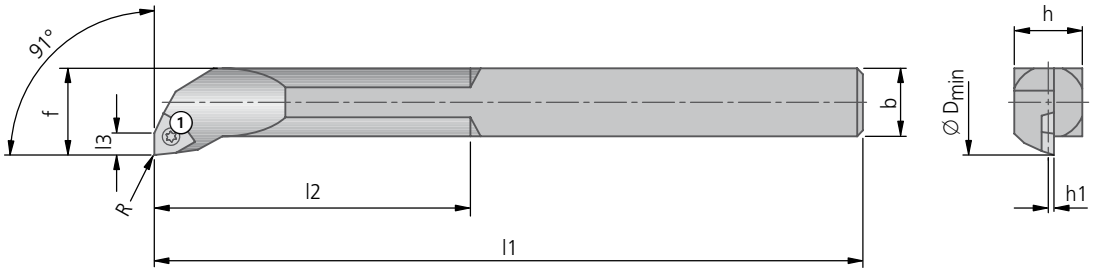
Further diameters on request.

Supply includes: Boring bar with clamping screw ①.
Please order insert separately.

KOMET – Internal machining

Turning tool $\varkappa = 91°$

- for insert W01 / W29
- R.H. turning tool as shown with left or neutral insert

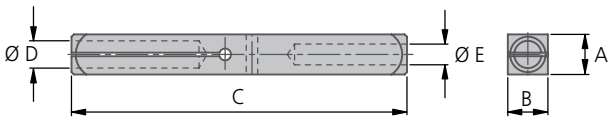


$\varkappa = 91°$													Insert	
Ø D min	Order No. Article	Cutting form	b	h	h1	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article	W01 L.H. Size ▾▾	W01 | W29 neutral Size ▾▾
25	**D03 15011** UBN1-801 FR	R.H.	16	16	0,5	150	70	6,5	21	0,2	0,33	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34...**	**W01 34...** **W29 34...**
30	**D03 15021** UBN2-810 FR	R.H.	20	20	0,5	200	100	7,5	26	0,2	0,64	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42...**	**W01 42...** **W29 42...**
40	**D03 15031** UBN3-820 FR	R.H.	25	25	1,0	245	120	9,5	33	0,4	1,19	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50...**	**W29 50...**
50	**D03 15041** UBN4-830 FR	R.H.	32	32	1,0	285	160	11,5	43	0,6	2,14	**N00 57541** S/M5,5×11-20IP 6,25 Nm	**W01 58...**	**W29 58...**
65	**D03 15051** UBN5-830 FR	R.H.	40	40	1,0	320	195	11,5	54	0,6	3,60	**N00 57541** S/M5,5×11-20IP 6,25 Nm	**W01 58...**	**W29 58...**

For further details on inserts see chapter 7.

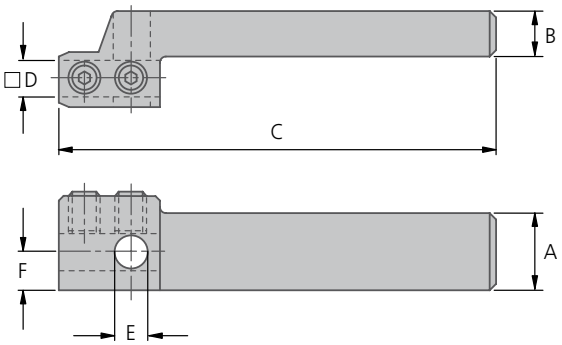
Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Boring toolholder
B8, B10



Boring toolholder								
Article	Order No.	A	B	C	D	E	Height of cutting edge	kg
B8-8	**H05 25110**	12	12	100	8	8	6,0	0,07
B10-8/10	**H05 25120**	15	15	125	8	10	7,5	0,16

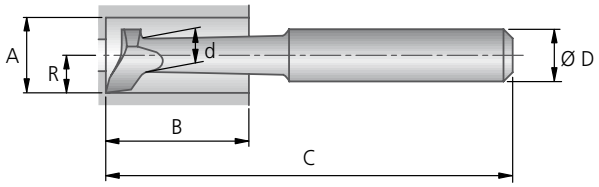
Boring toolholder
KD8, KD10
for round and square tools



Boring toolholder								
Article	Order No.	A	B	C	□ D	E	F	kg
KD8-8/8	**H05 65010**	21	12	120	8	8	10,5	0,30
KD10-10/10	**H05 65020**	21	12	120	10	10	10,5	0,39

Boring tool form F

HSS grade H
Carbide grade K10 and P20

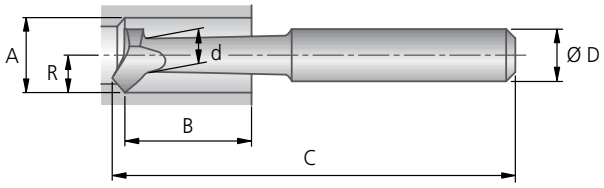


Boring tool										
for boring Ø A from	Article	Order No.	Grade	B	C	D	d	R	kg	for holder
2,5	B00F-H	**H15 21100.93**	H	10	50	8	1,5	1,2	0,02	B0 B8 B10 KD8
3,0	B01F-H	**H15 21110.93**	H	20	60	8	2,0	1,6	0,02	
	B01F-P20	**H15 21110.02**	P20	16						
	B01F-K10	**H15 21110.21**	K10	16						
5,0	B02F-H	**H15 21120.93**	H	24	60	8	3,0	2,8	0,02	
	B02F-P20	**H15 21120.02**	P20	19						
	B02F-K10	**H15 21120.21**	K10	19						
7,0	B03F-H	**H15 21130.93**	H	26	65	8	4,0	3,8	0,02	
	B03F-K10	**H15 21130.21**	K10							
9,0	B04F-H	**H15 21140.93**	H	30	75	8	5,8	5,0	0,03	
	B04F-K10	**H15 21140.21**	K10							
12,0	B05F-H	**H15 21150.93**	H	50	80	8	7,2	6,5	0,03	
	B05F-P20	**H15 21150.02**	P20							
14,0	B06F-H	**H15 21160.93**	H	60	95	10	9,2	7,6	0,06	B0 B10 KD10
	B06F-P20	**H15 21160.02**	P20							
	B06F-K10	**H15 21160.21**	K10							
strengthened design										
3,0	B01F-D10-H	**H15 22110.93**	H	20	60	10	2,0	1,6	0,03	B0 B10 KD8
5,0	B02F-D10-K10	**H15 22120.21**	K10	19	60	10	3,0	2,8	0,03	
7,0	B03F-D10-H	**H15 22130.93**	H	26	65	10	4,0	3,8	0,03	
9,0	B04F-D10-H	**H15 22140.93**	H	30	75	10	5,8	5,0	0,04	
12,0	B05F-D10-P20	**H15 22150.02**	P20	50	80	10	7,2	6,5	0,05	
extra long design										
3,0	B01FLG-H	**H15 23110.93**	H	20	125	8	2,0	1,6	0,05	B0 B8 B10 KD8
	B01FLG-P20	**H15 23110.02**	P20	16						
	B01FLG-K10	**H15 23110.21**	K10	16						
5,0	B02FLG-H	**H15 23120.93**	H	24	125	8	3,0	2,8	0,05	
	B02FLG-P20	**H15 23120.02**	P20	19						
	B02FLG-K10	**H15 23120.21**	K10	19						
7,0	B03FLG-H	**H15 23130.93**	H	26	125	8	4,0	3,8	0,05	
	B03FLG-K10	**H15 23130.21**	K10							
9,0	B04FLG-H	**H15 23140.93**	H	30	125	8	5,8	5,0	0,05	
	B04FLG-K10	**H15 23140.21**	K10							
12,0	B05FLG-H	**H15 23150.93**	H	50	125	8	7,2	6,5	0,05	
	B05FLG-P20	**H15 23150.02**	P20							
14,0	B06FLG-H	**H15 23160.93**	H	60	125	10	9,2	7,6	0,08	B0 B10 KD10
	B06FLG-K10	**H15 23160.21**	K10							

For grinding instructions, see page 737.
L.H. corner tool available on request.

Boring tool form G

For boring through holes from ∅ 2,5 mm
HSS grade H
Carbide grade K10 and P20

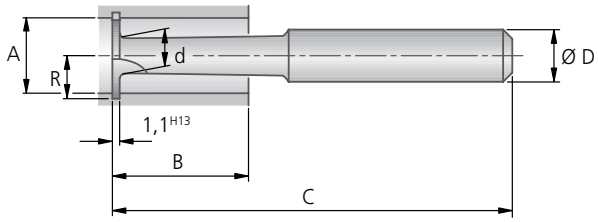


Boring tool										
for boring ∅ A from	Article	 Order No.	Grade	B	C	D	d	R	kg	for holder
2,5	B00G-H	**H15 21200.93**	H	10	50	8	1,5	1,2	0,02	B0 B8 B10 KD8
3,0	B01G-H	**H15 21210.93**	H	20	60	8	2,0	1,6	0,02	
	B01G-P20	**H15 21210.02**	P20	16						
5,0	B02G-H	**H15 21220.93**	H	24	60	8	3,0	2,8	0,02	
7,0	B03G-H	**H15 21230.93**	H	26	65	8	4,0	3,8	0,02	
	B03G-K10	**H15 21230.21**	K10							
9,0	B04G-H	**H15 21240.93**	H	30	75	8	5,8	5,0	0,03	
	B04G-K10	**H15 21240.21**	K10							
12,0	B05G-H	**H15 21250.93**	H	50	80	8	7,2	6,5	0,03	
14,0	B06G-H	**H15 21260.93**	H	60	95	10	9,2	7,6	0,06	B0 B10 KD10
	B06G-P20	**H15 21260.02**	P20							
	B06G-K10	**H15 21260.21**	K10							
extra long design										
5,0	B02GLG-H	**H15 23220.93**	H	24	125	8	3,0	2,8	0,05	B0 B8 B10 KD8
7,0	B03GLG-P20	**H15 23230.02**	P20	26	125	8	4,0	3,8	0,05	
9,0	B04GLG-H	**H15 23240.93**	H	30	125	8	5,8	5,0	0,05	
12,0	B05GLG-H	**H15 23250.93**	H	50	125	8	7,2	6,5	0,05	
	B05GLG-P20	**H15 23250.02**	P20							
14,0	B06GLG-H	**H15 23260.93**	H	60	125	10	9,2	7,6	0,08	B0 B10 KD10

For grinding instructions, see page 737.
L.H. corner tool available on request.

Recessing tool form H

HSS grade H
Carbide grade K10 and P20

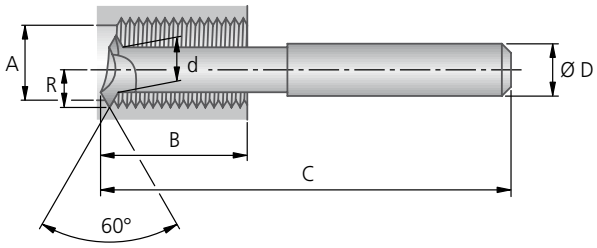


Recessing tool										
for boring Ø A from	Article	 Order No.	Grade	B	C	D	d	R	kg	for holder
3,0	B01H-H	**H15 21310.93**	H	20	60	8	2,0	1,6	0,02	B0 B8 B10 KD8
5,0	B02H-H	**H15 21320.93**	H	24	60	8	3,0	2,8	0,02	
7,0	B03H-H	**H15 21330.93**	H	26	65	8	4,0	3,8	0,02	
	B03H-P20	**H15 21330.02**	P20							
9,0	B04H-H	**H15 21340.93**	H	30	75	8	5,8	5,0	0,03	
	B04H-K10	**H15 21340.21**	K10							
12,0	B05H-H	**H15 21350.93**	H	50	80	8	7,2	6,5	0,03	
14,0	B06H-H	**H15 21360.93**	H	60	95	10	9,2	7,6	0,06	B0 B10 KD10
	B06H-P20	**H15 21360.02**	P20							
extra long design										
7,0	B03HLG-H	**H15 23330.93**	H	26	125	8	4,0	3,8	0,05	B0 B8 B10 KD8
9,0	B04HLG-H	**H15 23340.93**	H	30	125	8	5,8	5,0	0,05	
12,0	B05HLG-H	**H15 23350.93**	H	50	125	8	7,2	6,5	0,05	
14,0	B06HLG-H	**H15 23360.93**	H	60	125	10	9,2	7,6	0,08	B0 B10 KD10

For grinding instructions, see page 737.
Special recessing widths in HSS and L.H. cutting tools on request.

Threading tool 60°

HSS grade H
Carbide grade K10 and P20

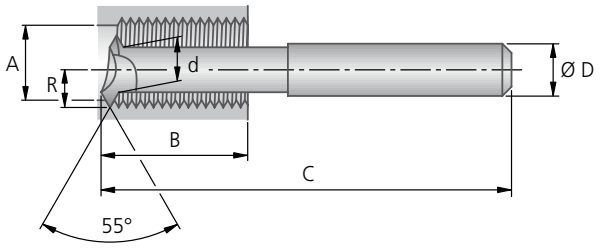


Threading tool										
for boring Ø A from	max. pitch mm	Article	Order No.	Grade	B	C	D	d	R	kg	for holder
3,0	0,18	B01 60-H	**H15 21410.93**	H	15	60	8	2,0	1,6	0,02	B0 B8 B10 KD8
5,0	0,8	B02 60-H	**H15 21420.93**	H	22	60	8	3,0	2,8	0,02	
		B02 60-P20	**H15 21420.02**	P20	19						
		B02 60-K10	**H15 21420.21**	K10	19						
7,0	1,1	B03 60-H	**H15 21430.93**	H	24	65	8	4,0	3,8	0,02	
		B03 60-P20	**H15 21430.02**	P20							
9,0	1,5	B04 60-H	**H15 21440.93**	H	28	75	8	5,8	5,0	0,03	
12,0	2,8	B05 60-H	**H15 21450.93**	H	50	80	8	7,2	6,5	0,03	
14,0	3,0	B06 60-H	**H15 21460.93**	H	60	95	10	9,2	7,6	0,06	B0 B10 KD10
		B06 60-K10	**H15 21460.21**	K10							
extra long design											
12,0	2,8	B05 60LG-H	**H15 23450.93**	H	50	125	8	7,2	6,5	0,05	B0 B8 B10 KD8

For grinding instructions, see page 737.
L.H. cutting internal threading tools on request.

Threading tool 55°

HSS grade H
Carbide grade P20



Threading tool										
for boring Ø A from	max. pitch T.P.I.	Article	Order No.	Grade	B	C	D	d	R	kg	for holder
7,0	25-50	B03 55-H	**H15 21530.93**	H	24	65	8	4,0	3,8	0,02	B0 B8 B10 KD8
		B03 55-P20	**H15 21530.02**	P20							
9,0	19-50	B04 55-H	**H15 21540.93**	H	28	75	8	5,8	5,0	0,03	
		B04 55-P20	**H15 21540.02**	P20							
12,0	11-40	B05 550-H	**H15 21550.93**	H	50	80	8	7,2	6,5	0,03	
14,0	10-30	B06 55-H	**H15 21560.93**	H	60	95	10	9,2	7,6	0,06	B0 B10 KD10
		B06 55-P20	**H15 21560.02**	P20							

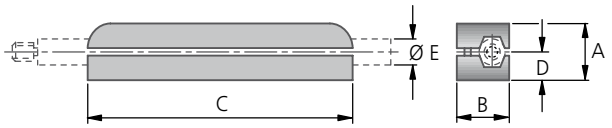
For grinding instructions, see page 737.
L.H. cutting internal threading tools on request.

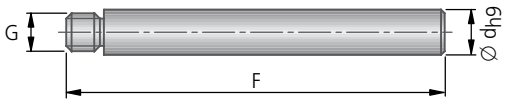
Guideline values for internal machining: page 738.

Boring head (detachable)

Holder

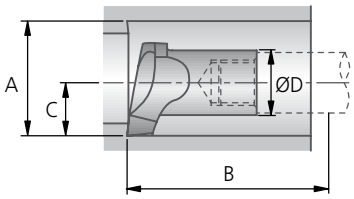
Boring bar
Boring bar with L.H. thread available on request.



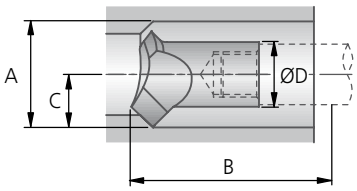


Holder								Boring bar						
Article	Order No.	A	B	C	D	E	kg	Article	Order No.	Ød$_{h9}$	F	G	kg	for boring head
B1	**H05 25210**	20	19	110	10,0	10	0,24	B1	**H05 35010**	10	180	M6	0,11	B1 ..
B2	**H05 25220**	27	23	150	14,0	13	0,56	B1A	**H05 35020**	13	220	M8×20 Gg/"	0,23	B1A ..
								B2	**H05 35030**	13	250	M10×20 Gg/"	0,27	B2 ..
B3	**H05 25230**	40	30	180	20,0	20	1,21	B2A	**H05 35040**	20	275	M12×20 Gg/"	0,67	B2A ..
								B2B	**H05 35050**	20	300	M14×20 Gg/"	0,74	B2B ..
								B3	**H05 35060**	20	325	M15×20 Gg/"	0,80	B3 ..

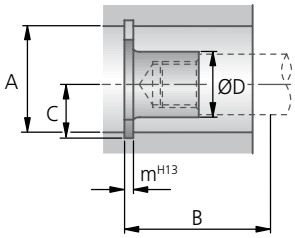
Boring tool (detachable)
Form F
HSS Grade F



Boring tool (detachable)
Form G
HSS Grade F



Recessing tool (detachable)
Form H
HSS Grade F
Carbide Grade P20



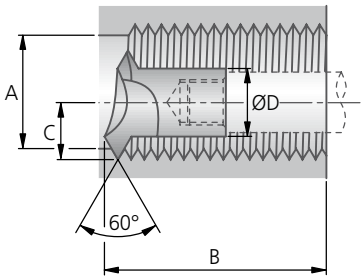
For grinding instructions, see page 737.

Special recessing widths in HSS on request.

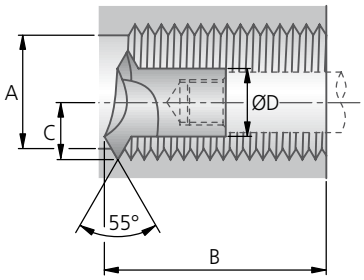
	Boring tool Form F		Boring tool Form G		Recessing tool Form H								
for boring-Ø A from	Article	Order No.	Article	Order No.	for slot width m	Article	Order No.	Grade	B	C	D	kg	for boring bar
16	B1 F-F	**H15 31010.91**	B1 G-F	**H15 31020.91**	1,10	B1 H-F	**H15 31030.91**	F	80	9,0	11,5	0,02	B1
18	B1A F-F	**H15 31110.91**	B1A G-F	**H15 31120.91**	1,30	B1A H-F	**H15 31130.91**	F	85	10,3	12,5	0,02	B1A
21	B2 F-F	**H15 31210.91**	B2 G-F	**H15 31220.91**	1,30	B2 H-F	**H15 31230.91**	F	115	12,0	16,0	0,03	B2
24	B2A F-F	**H15 31310.91**	B2A G-F	**H15 31320.91**	1,60	B2A H-F	**H15 31330.91**	F	120	13,5	18,0	0,04	B2A
28	B2B F-F	**H15 31410.91**	–		1,85	B2B H-F	**H15 31430.91**	F	140	15,5	20,2	0,05	B2B
30	B3 F-F	**H15 31510.91**	B3 G-F	**H15 31520.91**	2,15	B3 H-F	**H15 31530.91**	F	165	16,8	21,5	0,07	B3

Boring head (detachable)

Threading tool (detachable)
for 60° thread
HSS Grade F



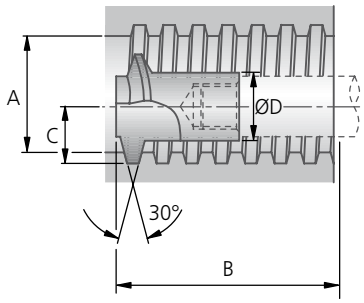
Threading tool (detachable)
for 55° thread
HSS Grade F



For grinding instructions, see page 737.

	Threading tool 60°			Threading tool 55°								
for boring-Ø A from	max. pitch mm	Article	Order No.	max. pitch T.P.I.	Article	Order No.	Grade	B	C	D	kg	for boring bar
16	2,9	B1 60-F	**H15 31040.91**	8	B1 55-F	**H15 31050.91**	F	80	9,0	11,5	0,02	B1
18	4,1	B1A 60-F	**H15 31140.91**	7	B1A 55-F	**H15 31150.91**	F	85	10,3	12,5	0,02	B1A
21	4,1	B2 60-F	**H15 31240.91**	6	B2 55-F	**H15 31250.91**	F	115	12,0	16,0	0,03	B2
24	4,7	B2A 60-F	**H15 31340.91**	5,5	B2A 55-F	**H15 31350.91**	F	120	13,5	18,0	0,04	B2A
28	5,9	B2B 60-F	**H15 31440.91**		–		F	140	15,5	20,2	0,05	B2B
30	6,4	B3 60-F	**H15 31540.91**	4,5	B3 55-F	**H15 31550.91**	F	165	16,8	21,5	0,07	B3

Threading tool (detachable)
Acme thread
HSS Grade F

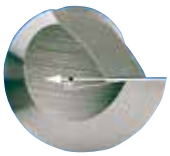


For grinding instructions, see page 737.

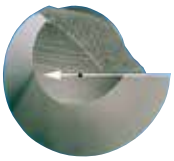
Acme thread, pitch in pitch/inch, carbide tipped acme - threading tools and other thread forms (HSS and L.H. cutting tools only) on request.

	Threading tool							
for boring-Ø A from	Article	Order No.	Grade	B	C	D	kg	for boring bar
16	B1 TR-3,0-F	**H15 32030.91**	F	80	9,0	11,5	0,02	B1
	B1 TR-4,0-F	**H15 32040.91**						
18	B1A TR-4,0-F	**H15 32120.91**	F	85	10,3	13,5	0,02	B1A
	B1A TR-5,0-F	**H15 32130.91**						
21	B2 TR-4,0-F	**H15 32220.91**	F	115	12,0	15,0	0,03	B2
	B2 TR-5,0-F	**H15 32230.91**						
	B2 TR-6,0-F	**H15 32240.91**						
24	B2A TR-6,0-F	**H15 32330.91**	F	120	13,5	18,0	0,04	B2A
30	B3 TR-7,0-F	**H15 32540.91**	F	165	16,8	21,5	0,08	B3
	B3 TR-8,0-F	**H15 32550.91**						

Guideline values for internal machining: page 738.



Boring tool
The cutting edge overhang shown above runs through the centre point of the boring head. However, the top rake which is to be measured at right angles to the direction of the cutting edge (dotted line), should be ground off obliquely between 10° and 20° acc. to material.

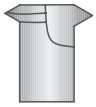


Internal threading tool 55° or 60°
The cutting edge must always run to the centrepoint (see illustration) or the angle will be distorted. When resharpening threading tools, use front edge of chamfered grinding wheel.

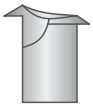
Threading tool
KOMET internal threading tools, HSS design in particular, are also supplied for L.H. thread cutting. Please note the details given below and state form required.



Threading tool form A
R.H. thread (standard), for forward running, cutting direction from tailstock to headstock.



Threading tool form D
R.H. thread, for reverse running, cutting direction from headstock to tailstock.
Please note: When ordering Form D, the required form must be stated.
For acme threads, round threads and buttress threads, the required pitch must also be stated, a special threading tool also being required for each pitch size.



Buttress threading tool form 1
R.H. thread, cutting direction for forward running from tailstock to headstock.
When ordering buttress threading tools, please state whether thread is stressed at compression or tension. Form 1 can also be produced as L.H. threading tools with cutting direction from headstock to tailstock for forwards operation.



Buttress threading tool form 2
R.H. thread, cutting direction for forward running from tailstock to headstock.
When ordering buttress threading tools, please state whether thread is stressed at compression or tension. Form 2 can also be produced as L.H. threading tools with cutting direction from headstock to tailstock for forwards operation.



Form threading tool form 5: Compression
Form threading tool form 6: Tension
A separate blade is required for each pitch for form threading tools. Round Edison threads are three different thread types. For buttress saw threading tools, please state whether the thread is stressed for compression or tension.

Recommended cutting data

Guideline values for internal machining

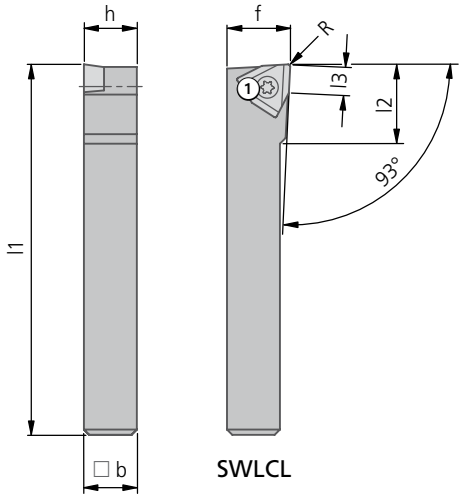
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min) Grade F min	Grade F opt.	Grade F max	Grade H min	Grade H opt.	Grade H max	Carbide Roughing min	Carbide Roughing opt.	Carbide Roughing max	Carbide Finishing min	Carbide Finishing opt.	Carbide Finishing max
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	10	**25**	40	15	**30**	45	40	**70**	100	50	**85**	120
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	8	**22**	35	8	**19**	30	30	**60**	90	40	**70**	100
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	10	**20**	30	10	**23**	35	30	**65**	100	40	**80**	120
P	3.0	>900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	8	**17**	25	8	**19**	30	25	**48**	70	30	**60**	90
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	15	**20**	25	16	**23**	30	20	**40**	60	20	**45**	65
P	4.1			HSS		5	**8**	10	6	**9**	12	15	**28**	40	15	**33**	50
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	5	**7**	8	4	**7**	9	10	**15**	20	10	**18**	25
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	3	**5**	6	4	**7**	9	10	**20**	30	10	**20**	30
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	10	**13**	15	10	**13**	15	20	**35**	50	20	**35**	50
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	8	**12**	15	8	**12**	15	20	**35**	50	20	**35**	50
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	6	**8**	10	6	**8**	10	15	**28**	40	15	**28**	40
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	15	**20**	25	15	**20**	25	25	**38**	50	25	**38**	50
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	15	**20**	25	15	**20**	25	30	**40**	50	30	**40**	50
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	20	**25**	30	20	**25**	30	35	**48**	60	35	**48**	60
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	20	**25**	30	20	**25**	30	35	**48**	60	35	**48**	60
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	15	**20**	25	15	**20**	25	25	**38**	50	25	**38**	50
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	12	**16**	20	12	**16**	20	25	**38**	50	25	**38**	50
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	10	**15**	20	10	**15**	20	25	**38**	50	25	**38**	50
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	60	**80**	100	60	**80**	100	120	**150**	180	120	**150**	180
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	30	**50**	70	30	**50**	70	120	**160**	200	120	**160**	200
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	40	**60**	80	40	**60**	80	140	**180**	220	140	**180**	220
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	30	**50**	70	30	**50**	70	140	**180**	220	140	**180**	220
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	20	**40**	60	20	**40**	60	120	**160**	200	120	**160**	200
H	15.0	1400		hardened steels < 45 HRC													
H	16.0	1800		hardened steels > 45 HRC													

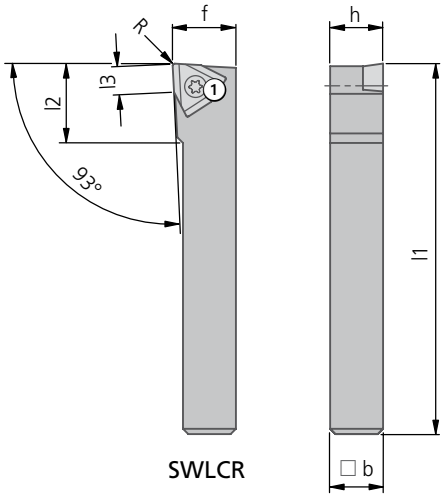
Cutting values shown are values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Turning tool $\varkappa$ = 93°

for insert W01 / W29 ■
L.H. turning tool SWLCL with left or neutral insert ■
R.H. turning tool SWLCR with right or neutral insert ■





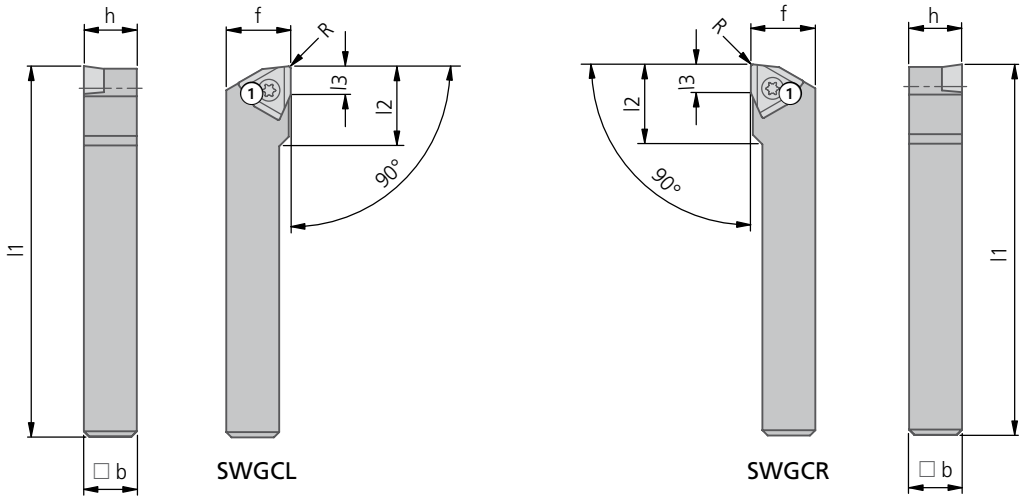
$\varkappa$ = 93°											Insert		
Order No. Article	Cutting form	h	□ b	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article	W01 L.H. Size ▾▾	W01 R.H. Size ▾▾	W01 | W29 neutral Size ▾▾
D00 75120 SWLCR-1010-E05	R.H.	10	10	70	15	5,3	12	0,2	0,09	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
D00 70130 SWLCL-1212-F05	L.H.	12	12	80	18	5,3	16	0,2	0,13	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**W01 24...**		**W01 24...** **W29 24...**
D00 75130 SWLCR-1212-F05	R.H.											**W01 24...**	
D00 70140 SWLCL-1616-H06	L.H.	16	16	100	20	6,6	20	0,2	0,27	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34...**		**W01 34...** **W29 34...**
D00 75140 SWLCR-1616-H06	R.H.											**W01 34...**	
D00 70150 SWLCL-2020-K07	L.H.	20	20	125	24	7,9	25	0,2	0,50	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42...**		**W01 42...** **W29 42...**
D00 75150 SWLCR-2020-K07	R.H.											**W01 42...**	
D00 70160 SWLCL-2525-M09	L.H.	25	25	150	30	9,9	32	0,4	0,84	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50...**		**W29 50...**
D00 75160 SWLCR-2525-M09	R.H.											**W01 50...**	

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa = 90°$

- for insert W01 / W29
- L.H. turning tool SWGCL with left or neutral insert
- R.H. turning tool SWGCR with right or neutral insert



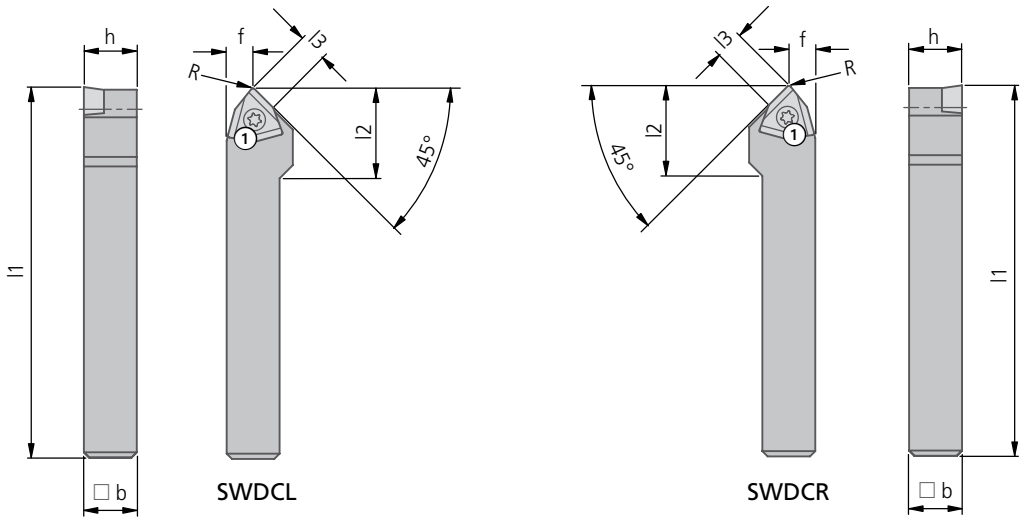
$\varkappa = 90°$											Insert		
Order No. Article	Cutting form	h	□ b	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article	W01 L.H. Size	W01 R.H. Size	W01 | W29 neutral Size
D00 75010 SWGCR-0808-D05	R.H.	8	8	60	16	5,3	11	0,2	0,06	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...** **W29 24160.04..**
D00 70020 SWGCL-1010-E05	L.H.	10	10	70	16	5,3	12	0,2	0,09	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**W01 24...**		**W01 24...** **W29 24...** **W29 24160.04..**
D00 75020 SWGCR-1010-E05	R.H.				15							**W01 24...**	
D00 70030 SWGCL-1212-F05	L.H.	12	12	80	20	5,3	16	0,2	0,13	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm	**W01 24...**		**W01 24...** **W29 24...** **W29 24160.04..**
D00 75030 SWGCR-1212-F05	R.H.				19							**W01 24...**	
D00 70040 SWGCL-1616-H06	L.H.	16	16	100	22	6,6	20	0,2	0,27	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34...**		**W01 34...** **W29 34...** **W29 34160.04..**
D00 75040 SWGCR-1616-H06	R.H.				20							**W01 34...**	
D00 70050 SWGCL-2020-K07	L.H.	20	20	125	26	7,9	25	0,2	0,50	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42...**		**W01 42...** **W29 42...** **W29 42160.04..**
D00 75050 SWGCR-2020-K07	R.H.											**W01 42...**	
D00 70060 SWGCL-2525-M09	L.H.	25	25	150	33	9,9	32	0,4	0,84	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50...**		**W29 50...**
D00 75060 SWGCR-2525-M09	R.H.											**W01 50...**	
D00 70070 SWGCL-3232-P09	L.H.	32	32	170	34	9,9	40	0,4	1,45	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50...**		**W29 50...**
D00 75070 SWGCR-3232-P09	R.H.				33							**W01 50...**	

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

Turning tool $\varkappa = 45°$

for insert W01 / W29 ■
L.H. turning tool SWDCL with left or neutral insert ■
R.H. turning tool SWDCR with right or neutral insert ■



$\varkappa = 45°$											Insert		
Order No. Article	Cutting form	h	□ b	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article	W01 L.H. Size ▾▾	W01 R.H. Size ▾▾	W01 | W29 neutral Size ▾▾
D00 75410 SWDCR-0808-D05	R.H.	8	8	60	18	5,3	5	0,2	0,06	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
D00 75420 SWDCR-1010-E05	R.H.	10	10	70	17	5,3	5	0,2	0,09	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
D00 75430 SWDCR-1212-F05	R.H.	12	12	80	18	5,3	6	0,2	0,13	**N00 57511** S/M2,5×7,2-8IP 1,28 Nm		**W01 24...**	**W01 24...** **W29 24...**
D00 70440 SWDCL-1616-H06	L.H.	16	16	100	23	6,6	8	0,2	0,27	**N00 57521** S/M3,5×7,3-10IP 2,8 Nm	**W01 34...**		**W01 34...** **W29 34...**
D00 75440 SWDCR-1616-H06	R.H.											**W01 34...**	
D00 70450 SWDCL-2020-K07	L.H.	20	20	125	10	7,9	10	0,2	0,50	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 42...**		**W01 42...** **W29 42...**
D00 75450 SWDCR-2020-K07	R.H.											**W01 42...**	
D00 70460 SWDCL-2525-M09	L.H.	25	25	150	12,5	9,9	12,5	0,4	0,84	**N00 57531** S/M4,5×9-15IP 6,25 Nm	**W01 50...**		**W29 50...**
D00 75460 SWDCR-2525-M09	R.H.											**W01 50...**	

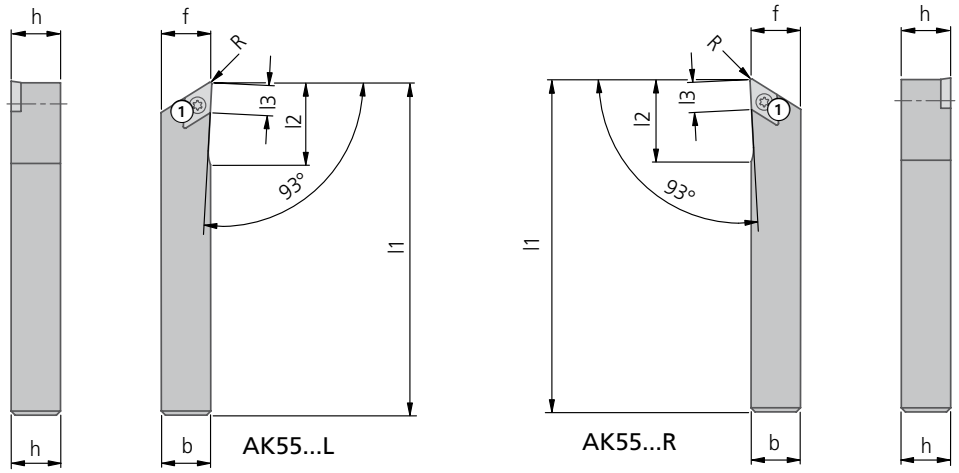
For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

KOMET – External machining

Turning tool $\varkappa$ = 93°

- for insert W60 / W79
- L.H. turning tool AK55...L with left or neutral insert
- R.H. turning tool AK55...R with right or neutral insert



$\varkappa$ = 93°											Insert		
Order No. Article	Cutting form	h	b	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article	W60 L.H. Size ▾▾	W60 R.H. Size ▾▾	W60 | W79 neutral Size ▾▾
D01 25012 AK55-8J R	R.H.	8	8	80	20	7	10,3	0,4	0,08	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
D01 25022 AK55-10J R	R.H.	10	10	90	20	7	10,3	0,4	0,10	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
D01 25032 AK55-12J R	R.H.	12	12	100	20	7	12,3	0,4	0,14	**N00 56651** S2560-8IP 1,28 Nm		**W60 18...**	**W60 18...** **W79 18...**
D01 20042 AK55-16J L	L.H.	16	16	110	20	7	20	0,4	0,25	**N00 56651** S2560-8IP 1,28 Nm	**W60 18...**		**W60 18...** **W79 18...**
D01 25042 AK55-16J R	R.H.				24							**W60 18...**	
D01 20052 AK55-20J L	L.H.	20	20	120	30	11	25	0,8	0,46	**N00 56751** S3574-10IP 2,8 Nm	**W60 32...**		**W60 32...** **W79 32...**
D01 25052 AK55-20J R	R.H.											**W60 32...**	
D01 20062 AK55-25J L	L.H.	25	25	150	30	11	32	0,8	0,82	**N00 56751** S3574-10IP 2,8 Nm	**W60 32...**		**W60 32...** **W79 32...**
D01 25062 AK55-25J R	R.H.											**W60 32...**	

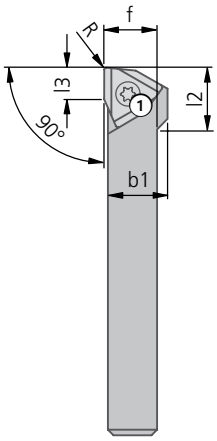
For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ①.
Please order insert separately.

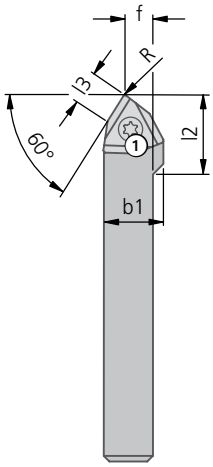
Turning tool $\varkappa$ = 90°, 60° and 45°

for insert W04 ■
R.H. turning tool as shown with right insert ■

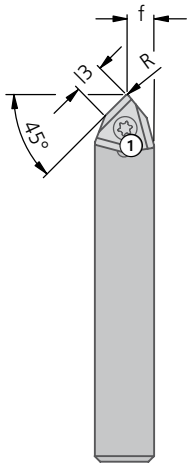
$\varkappa$ = 90°
UR

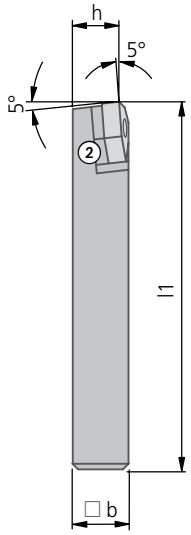


$\varkappa$ = 60°
UR



$\varkappa$ = 45°
UR





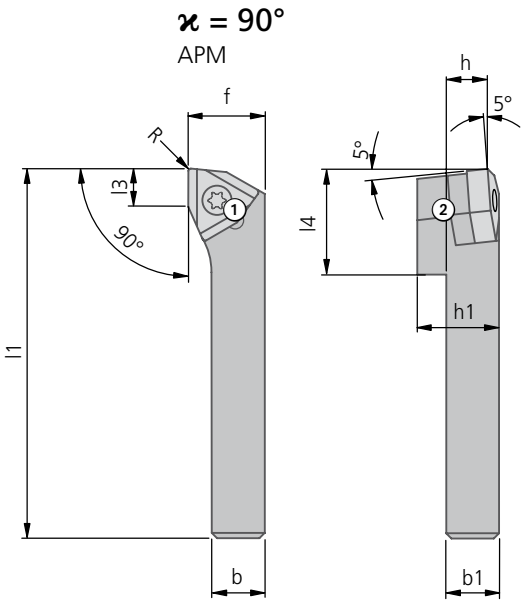
UR												Clamping screw ① Order No. Article ⌀WAF	Shim plate ② Order No. Size	Insert W04 R.H. Order No.
Order No. Article	Cutting form	□ b	b1	h	l1	l2	l3	f	for R	$\varkappa$	kg			
D10 15010 UR10 R 90°	R.H.	10	12,7	8,3	50	12	6,5	10,7	0,2	90°	0,04	**N00 55060** M3,5×9,4/60° ⌀1,5 2,8 Nm	–	**W04 34480.02..**
D10 15110 UR10 R 60°	R.H.	10	12,7	8,3	50	15	6,5	6,0	0,2	60°	0,04	**N00 55060** M3,5×9,4/60° ⌀1,5 2,8 Nm	–	**W04 34480.02..**
D10 15240 UR20 R 45°	R.H.	20	–	17,6	120	–	9,5	9,1	0,4	45°	0,35	**N00 55120** M4,5×16,4 ⌀2,5 4,5 Nm	**L02 11110** 2K	**W04 50480.04..**

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ① and shim plate ②.
Please order insert separately.

Turning tool $\varkappa = 90°$

- for insert W04
- R.H. turning tool as shown with right insert
- L.H. turning tool in mirror image with left insert



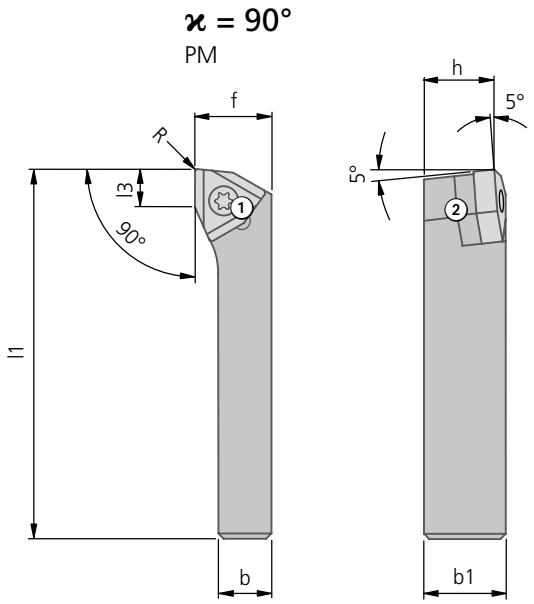
APM														Insert
Order No. Article	Cutting form	b	b1	h	h1	l1	l2	l3	f	for R	kg	Clamping screw ① Order No. Article ⬡WAF	Shim plate ② Order No. Size	W04 R.H.
D10 05010 APM10R	R.H.	10	10	8	17,7	115	22,5	7,5	16,8	0,2	0,12	**N00 55110** M4,5×14,5 ⬡2,5 4,5 Nm	**L02 11040** 16	**W04 42480.02..**
D10 05020 APM12R	R.H.	12	12	10	17,7	115	22,5	7,5	16,8	0,2	0,12	**N00 55110** M4,5×14,5 ⬡2,5 4,5 Nm	**L02 11040** 16	**W04 42480.02..**

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ① and shim plate ②.
Please order insert separately.

Turning tool $\varkappa = 90°$

for insert W04 ■
R.H. turning tool as shown with right insert ■
L.H. turning tool in mirror image with left insert ■



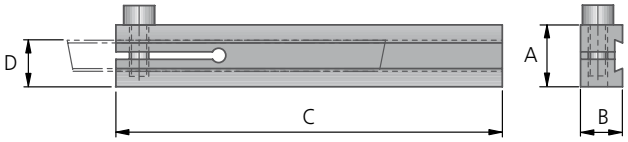
PM												Insert	
Order No. Article	Cutting form	b	b1	h	l1	l3	f	for R	kg	Clamping screw ① Order No. Article ○WAF	Shim plate ② Order No. Size	W04 L.H.	W04 R.H.
D10 00030 PM1/16L	L.H.	16	17,7	15,7	140	7,5	19,8	0,2	0,31	**N00 55110** M4,5×14,5 ○2,5 4,5 Nm	**L02 11040** 16	**W04 42180.02..**	
D10 05030 PM1/16R	R.H.												**W04 42480.02..**
D10 00040 PM1L	L.H.	16	21,7	19,7	140	7,5	19,8	0,2	0,39	**N00 55130** M4,5×18,7 ○2,5 4,5 Nm	**L02 11000** 1	**W04 42180.02..**	
D10 05040 PM1R	R.H.												**W04 42480.02..**
D10 00050 PM2L	L.H.	20	26,1	23,7	165	9,5	24,0	0,4	0,67	**N00 55140** M4,5×22,5 ○2,5 4,5 Nm	**L02 11010** 2	**W04 50180.04..**	
D10 05050 PM2R	R.H.												**W04 50480.04..**

For further details on inserts see chapter 7.

Supply includes: Turning tool with clamping screw ① and shim plate ②.
Please order insert separately.

Parting-off

Holder
A00, A0

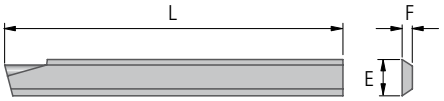


For this design, blades are clamped by pulling the slotted front section of the holder together.

Blade
A00, A0



- HSS grade F
- for L.H. and R.H. use

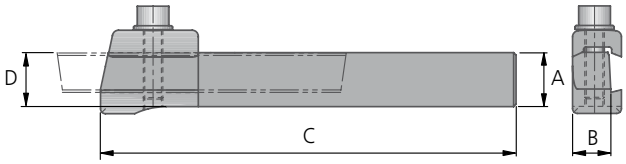


- carbide grade P20
- for R.H. use only
- blade with carbide insert

Holder							Blade						
Article	**Order No.**	**A**	**B**	**C**	**D**	kg	Article	**Order No.**	Grade	**E**	**F**	**L**	kg
A00	**H01 15010**	16	11	100	12	0,15	A00-F	**H10 15010.91**	F	8	2,2	75	0,010
A0	**H01 15020**	18	11	125	14	0,23	A0-F	**H10 15020.91**	F	10	2,7	100	0,019
							A0-R-P20	**H10 15020.02**	P20				

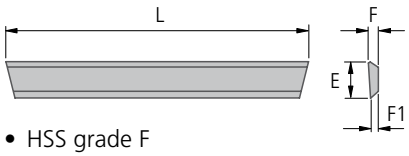
Guideline values for external machining: page 749.

Holder
A1/2A, A3A

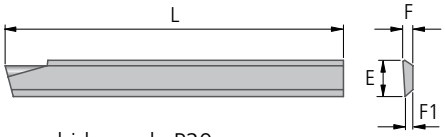


Also available for L.H. use.

Blade
A1/2A, A3A



- HSS grade F
- for L.H. and R.H. use

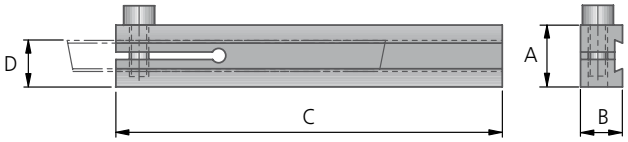


- carbide grade P20
- for R.H. use only
- blade with carbide insert

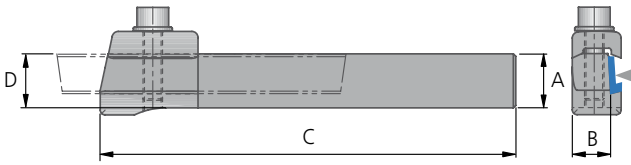
Holder							Blade							
Article	Order No.	A	B	C	D	kg	Article	Order No.	Grade	E	F	F1	L	kg
A1/2A	**H01 15110**	22	14,5	170	20	0,55	A1/2A-F	**H10 15110.91**	F	16	4	3	150	0,065
							A1/2A-R-P20	**H10 15110.02**	P20				100	0,044
A3A	**H01 15130**	27	18,0	210	25	1,00	A3A-F	**H10 15130.91**	F	18,5	5	4	150	0,095
							A3A-R-P20	**H10 15130.02**	P20				100	0,062

Grooving

Holder for grooving width 0,8 - 2,0 mm
AE

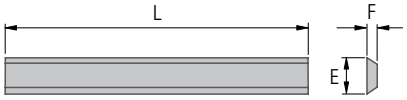


Holder for grooving width 0,8 - 2,0 mm
A1/2A



Spacer
H01 15120

Blade
A0,9 - A2,15

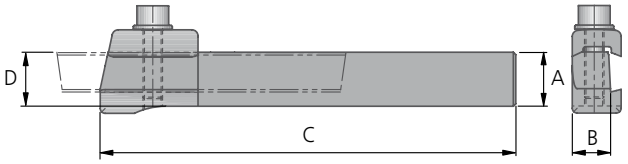


- HSS grade F
- for L.H. and R.H. use

Holder						
Article	Order No.	A	B	C	D	kg
AE	**H01 15030**	18	11	125	14	0,23
A1/2A	**H01 15110**	22	14,5	170	20	0,55

Blade							
Article	Order No.	Grade	for grooving width	E	F	L	kg
A0,9-R-F	**H10 15210.91**	F	0,8	11	0,9	80	0,006
A1,1-R-F	**H10 15220.91**	F	1,0	11	1,1	80	0,007
A1,3-R-F	**H10 15230.91**	F	1,2	11	1,3	80	0,009
A1,6-R-F	**H10 15240.91**	F	1,5	11	1,6	80	0,010
A1,85-R-F	**H10 15250.91**	F	1,75	11	1,85	80	0,012
A2,15-R-F	**H10 15260.91**	F	2,0	11	2,15	80	0,014

Holder for grooving width 2,5 - 5,0 mm
A1/2A



Blade
A2,65 - A5,15



- HSS grade F
- for L.H. and R.H. use

Holder						
Article	Order No.	A	B	C	D	kg
A1/2A	**H01 15110**	22	14,5	170	20	0,55

Blade							
Article	Order No.	Grade	for grooving width	E	F	L	kg
A2,65-R-F	**H10 15270.91**	F	2,5	16	2,65	150	0,038
A3,15-R-F	**H10 15280.91**	F	3,0	16	3,15	150	0,047
A4,15-R-F	**H10 15290.91**	F	4,0	16	4,15	150	0,066
A5,15-R-F	**H10 15300.91**	F	5,0	16	5,15	150	0,082

Guideline values for external machining: page 749.

Guideline values for external machining

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min) Grade F min	Grade F opt.	Grade F max	Grade H min	Grade H opt.	Grade H max	Carbide Roughing min	Carbide Roughing opt.	Carbide Roughing max	Carbide Finishing min	Carbide Finishing opt.	Carbide Finishing max
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	10	**25**	40	15	**30**	45	40	**70**	100	50	**85**	120
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	8	**22**	35	8	**19**	30	30	**60**	90	40	**70**	100
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	10	**20**	30	10	**23**	35	30	**65**	100	40	**80**	120
P	3.0	>900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	8	**17**	25	8	**19**	30	25	**48**	70	30	**60**	90
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	15	**20**	25	16	**23**	30	20	**40**	60	20	**45**	65
P	4.1			HSS		5	**8**	10	6	**9**	12	15	**28**	40	15	**33**	50
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	5	**7**	8	4	**7**	9	10	**15**	20	10	**18**	25
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	3	**5**	6	4	**7**	9	10	**20**	30	10	**20**	30
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	10	**13**	15	10	**13**	15	20	**35**	50	20	**35**	50
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	8	**12**	15	8	**12**	15	20	**35**	50	20	**35**	50
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	6	**8**	10	6	**8**	10	15	**28**	40	15	**28**	40
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	15	**20**	25	15	**20**	25	25	**38**	50	25	**38**	50
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	15	**20**	25	15	**20**	25	30	**40**	50	30	**40**	50
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	20	**25**	30	20	**25**	30	35	**48**	60	35	**48**	60
K	9.1		230	spheroidal graphite cast iron, ferritic/ perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	20	**25**	30	20	**25**	30	35	**48**	60	35	**48**	60
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	15	**20**	25	15	**20**	25	25	**38**	50	25	**38**	50
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	12	**16**	20	12	**16**	20	25	**38**	50	25	**38**	50
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	10	**15**	20	10	**15**	20	25	**38**	50	25	**38**	50
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	60	**80**	100	60	**80**	100	120	**150**	180	120	**150**	180
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	30	**50**	70	30	**50**	70	120	**160**	200	120	**160**	200
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	40	**60**	80	40	**60**	80	140	**180**	220	140	**180**	220
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	30	**50**	70	30	**50**	70	140	**180**	220	140	**180**	220
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	20	**40**	60	20	**40**	60	120	**160**	200	120	**160**	200
H	15.0	1400		hardened steels < 45 HRC													
H	16.0	1800		hardened steels > 45 HRC													

Cutting values shown are values relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

KOMET UniTurn

The KOMET UniTurn range boasts an extremely rigid union between the turning tool and the clamping holder.

An eccentric clamping device in the holder minimises tool change times and ensures that the cutting edge is positioned accurately in the optimum setting. The insertion surface on the shank of the turning tool is foolproof to ensure that, when changing inserts, the new insert is fitted in the correct position every time. At a shank diameter of 4 mm, two coolant slots positioned axially in the holder provide optimal cooling of the cutting edge for both the left and right boring bars.

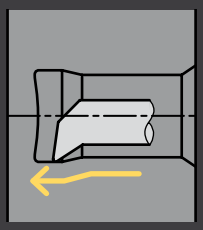
In all turning tools with a shank size of 8 mm, coolant is fed through the clamping shank.

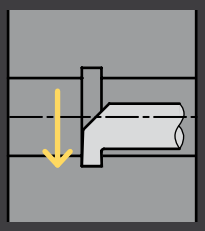
BENEFITS for you:

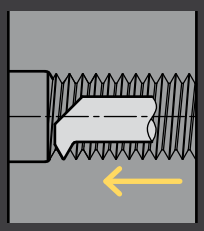
- Shorter tool changeover times
- Extremely rigid, accurately positioned union between the turning tool and holder
- UniTurn turning tool:
  Comprehensive standard product range
- UniTurn Easy Special:
  Short delivery time for a wide range of dimensions
- UniTurn custom turning tool:
  Produced in accordance with individual requirements



Machining examples







KOMET UniTurn Easy Special

Design your own tool!

Is there no solution in the standard range? Are the dimensions not what you require?

Easy Special makes it possible for you create your own combination of standard modules in the widest variety of dimensions.

We check you specifications for technical feasibility and you receive a prompt reply.

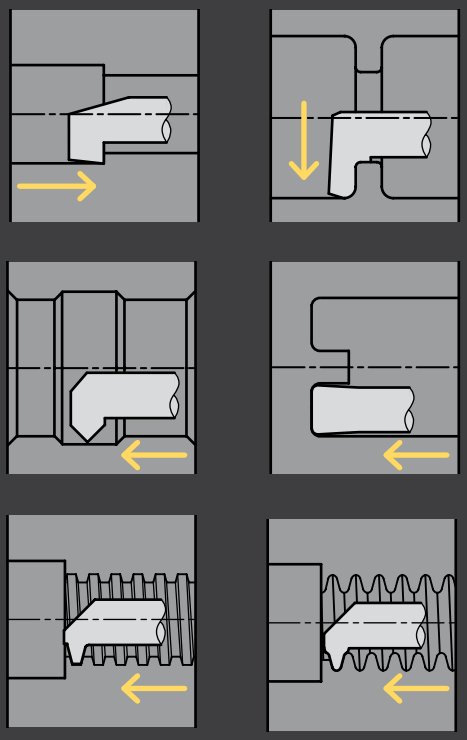
BENEFITS for you:

- Only 3-4 weeks delivery from order being placed (for quantities of up to 50 off/per item for coated tools
- Only 2 weeks delivery from order being placed (for quantities of up to 50 off/per item for uncoated tools
- Fixed price subject to quantity and working length
- Easy processing

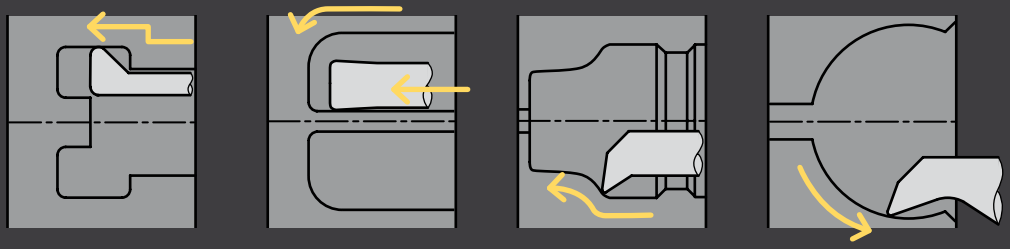
KOMET UniTurn

	Page
Programme summary	752 – 753
Adapters	754 – 755
Adaptor with ABS connection	
Adaptor with cylindrical connection	
Clamping holder for lathe	
Copying tool	
∅ 3 - 8 mm	756
UniTurn Easy Special	757
Grooving tool	
∅ 3 - 8 mm	758
UniTurn Easy Special	759
Boring tool	
∅ 3 - 8 mm	760
UniTurn Easy Special	761
Boring tool with CBN	
∅ 2,7 – 7,5 mm	762
Thread turning tool	
∅ 5 - 8 mm	764
UniTurn Easy Special	766– 767

Machining examples UniTurn custom turning tool



Machining examples for the UniTurn custom turning tool On a machining centre with the KomTronic U-axis tool

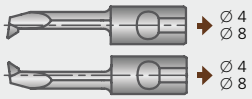


Programme summary – UniTurn

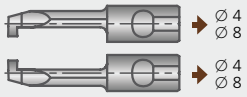
5 Fine boring tools

UniTurn

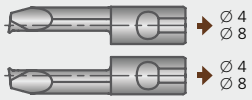
Copying tool
∅ 3 – 8 mm ▸ 756



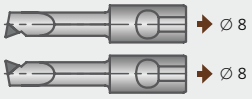
Grooving tool
∅ 3 – 8 mm ▸ 758



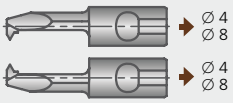
Boring tool
∅ 3 – 8 mm ▸ 760



Boring tool with CBN
∅ 2,7 – 7,5 mm ▸ 762



Thread turning tool
∅ 5 – 8 mm ▸ 764

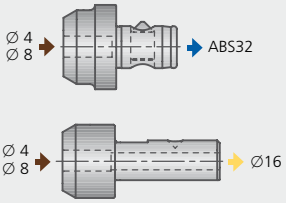


Key

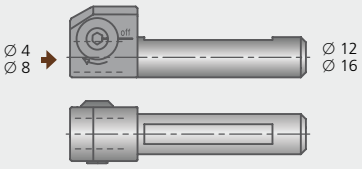
- ABS | ABS N connection
- Cylindrical connection
- UniTurn connection

UniTurn

Adapter
▸ 754



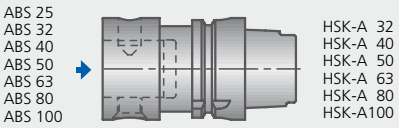
Clamping holder for lathe
▸ 754



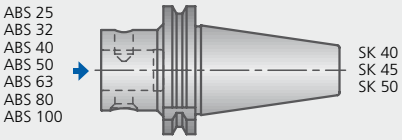


6 Adaptors

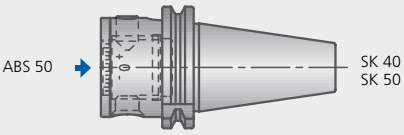
HSK-A Adaptors
with ABS connection



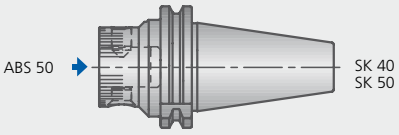
Taper shanks DIN 69871
with ABS connection



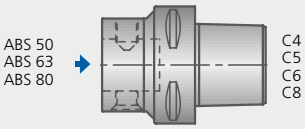
Eccentric adjusting device with ABS connection



Torsional dampener with ABS connection



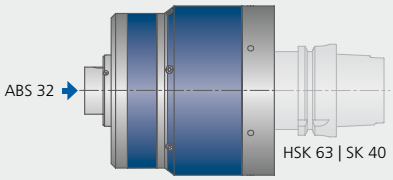
PSC Adaptor
with ABS connection

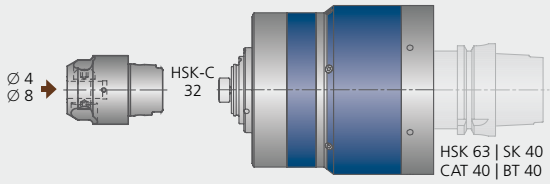


KOMET KomTronic

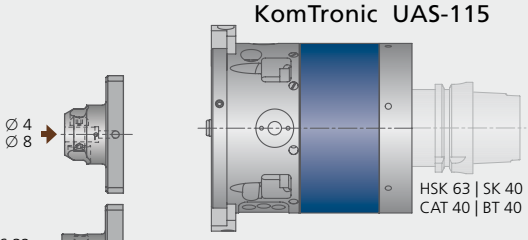
Attachment tool range for U-Axis system

KomTronic HPS-115

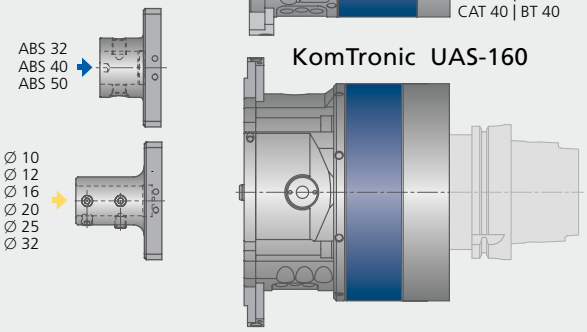


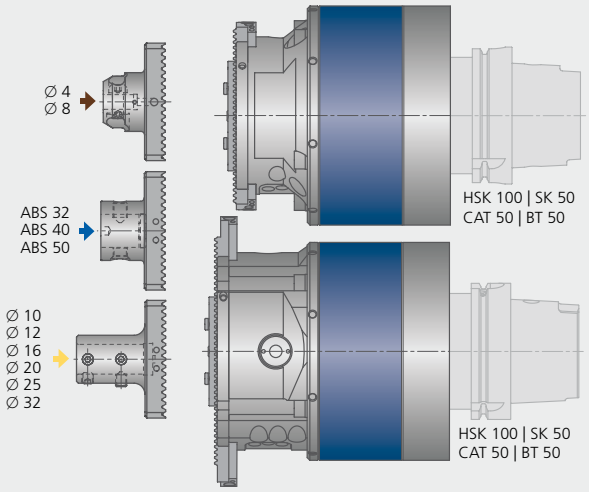


KomTronic UAS-115



KomTronic UAS-160

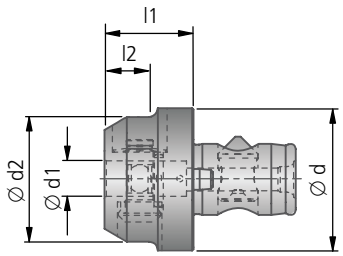




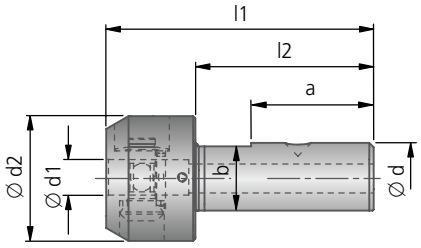


KOMET KomTronic
Feed-out tools
for machining centres

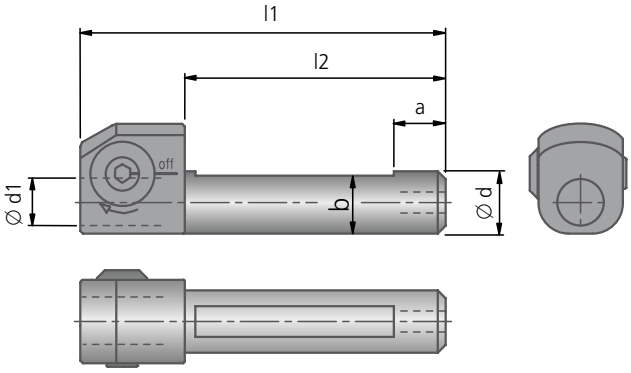
Adaptor



Adaptor with ABS connection						
Order No.	ABS Ø d	Ø d1	Ø d2	l1	l2	kg
H50 23240	32	4	28	20	12	0,15
H50 23280	32	8	28	20	12	0,12



Adaptor with cylindrical connection								
Order No.	Ø d_{g6}	Ø d1	Ø d2	l1	l2	a	b	kg
H50 21640	16	4	28	60	40	27,5	14,4	0,15
H50 21680	16	8	28	60	40	27,5	14,4	0,13



Clamping holder for lathe							
Order No.	Ø d_{g6}	Ø d1	l1	l2	a	b	kg
H50 01240	12	4	70	50	10	11	0,08
H50 01281	12	8					
H50 01640	16	4	70	50	10	15	0,11
H50 01681	16	8					

Operating instructions for the clamping mechanism

Set the eccentric clamping element to the "off" position with hexagonal key (as far as the stop). The clamping mechanism is then released and the boring bar can be changed (Fig. 1). Insert the new boring bar into the clamping holder as far as the stop with the flat surface upwards.

Tighten the eccentric clamping element with the key to a maximum of 3 Nm (Fig. 2).
By turning the eccentric clamping element, the boring bar is pushed out of the holder in the axial position (±0.01) and at the same time moved into the exact centre height (±0.01).

A click will indicate that the clamping mechanism has been released.

Fig. 1

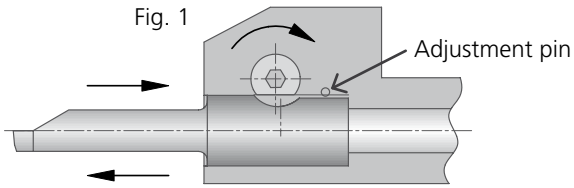
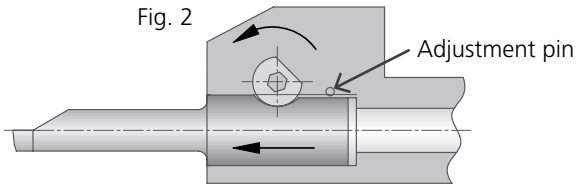
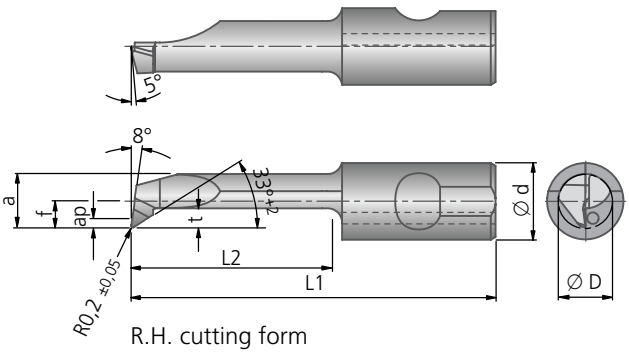


Fig. 2

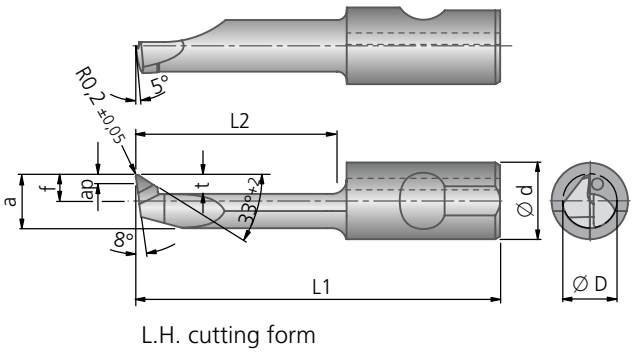


Copying tool

for workpiece material P K N S | > 3,5×D | $D_{min} \geq 5$ | UniTurn



R.H. cutting form



L.H. cutting form

> 3,5×D	●	●	◐	◐	✕	✕ HRC > 54	✕ HRC > 54	●

									Cutting form	
Ø D min	a_p max	t max	f	a	Ø d	L1	L2	kg	R.H. Order No.	L.H. Order No.
3	0,2	0,7	1,25	2,7	4	28	10	0,0032	H51 32100.0182	H51 31100.0182
						33	15	0,0035	H51 32150.0182	H51 31150.0182
						38	20	0,0037	H51 32200.0182	H51 31200.0182
4	0,3	0,8	1,75	3,7	4	28	10	0,0038	H51 42100.0182	H51 41100.0182
						33	15	0,0043	H51 42150.0182	H51 41150.0182
						38	20	0,0047	H51 42200.0182	H51 41200.0182
						43	25	0,0052	H51 42250.0182	H51 41250.0182
5	0,5	1,0	2,25	4,7	8	28	10	0,013	H51 52100.0282	H51 51100.0282
						33	15	0,013	H51 52150.0282	H51 51150.0282
						38	20	0,014	H51 52200.0282	H51 51200.0282
						43	25	0,015	H51 52250.0282	H51 51250.0282
						48	30	0,016	H51 52300.0282	H51 51300.0282
6	0,5	1,8	2,75	5,7	8	33	15	0,014	H51 62150.0282	H51 61150.0282
						38	20	0,015	H51 62200.0282	H51 61200.0282
						43	25	0,016	H51 62250.0282	H51 61250.0282
						48	30	0,017	H51 62300.0282	H51 61300.0282
						53	35	0,018	H51 62350.0282	H51 61350.0282
8	0,6	2,5	3,75	7,7	8	33	15	0,016	H51 82150.0282	H51 81150.0282
						38	20	0,018	H51 82200.0282	H51 81200.0282
						43	25	0,020	H51 82250.0282	H51 81250.0282
						48	30	0,022	H51 82300.0282	H51 81300.0282
						53	35	0,023	H51 82350.0282	H51 81350.0282
						58	40	0,025	H51 82400.0282	H51 81400.0282

Please note:
From $D_{min.}$ 5 mm, copying tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended guide values for copying: Page 763.

Order No./Order date | Please state Customer No. | Signature | KOMET internal

Enquiry

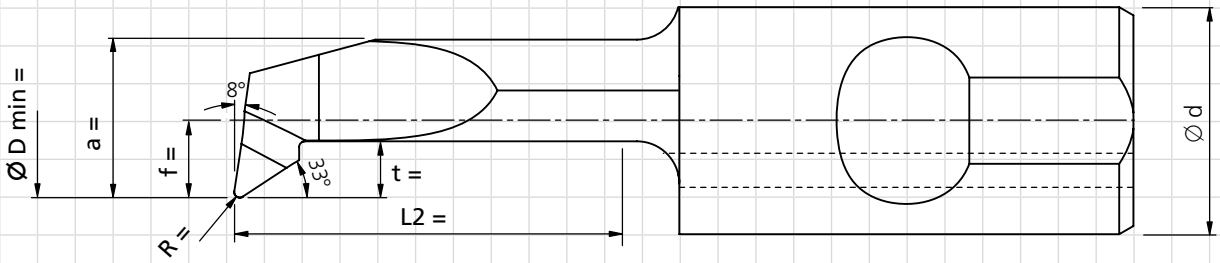
Company:
Address:

Quantity:
(minimum order 5 off)

Contact | Department:
Telephone | Fax:
E-Mail:

Coating ☐ yes ☐ no

Copying tool XH51 …



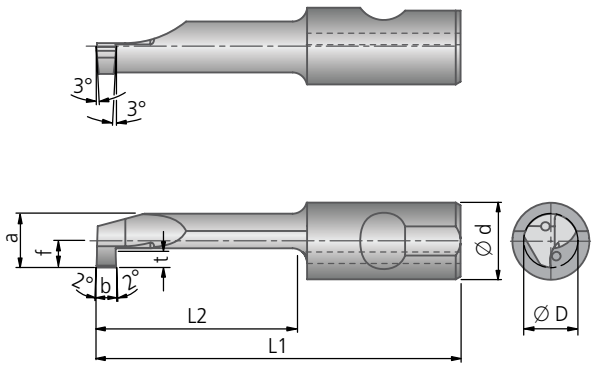
Parameter table

Ø D min	t max	a Dmin -0,3	f a/2 -0,1	R	L2	Ø d	
3,00 - 3,99	0,7	2,7…3,7	1,25…1,75	0,1 / 0,2	10 … 20	4	–
4,00 - 4,99	0,8	3,7…4,7	1,75…2,25	0,1 / 0,2	10 … 25	4	–
5,00 - 5,99	1,0	4,7…5,7	2,25…2,75	0,1 / 0,2	10 … 35	8	✓
6,00 - 6,99	1,8	5,7…6,7	2,75…3,25	0,1 / 0,2	10 … 40	8	✓
7,00 - 8,00	2,5	6,7…7,7	3,25…3,75	0,1 / 0,2	10 … 45	8	✓

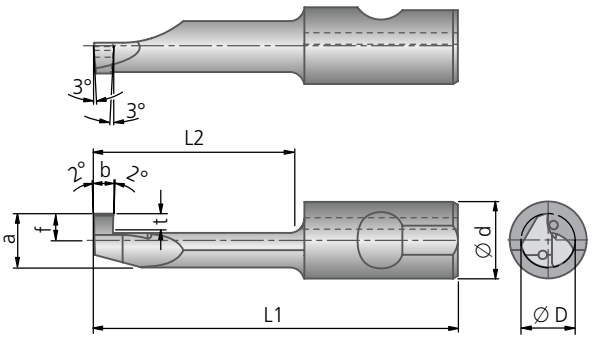
Please provide workpiece sketch!

Grooving tool

for workpiece material P K N S | > 3,5×D | $D_{min} \geq 5$ | UniTurn



R.H. cutting form



L.H. cutting form

Ø D min	b+0,05	t max	f	a	Ø d	L1	L2	kg	Cutting form R.H. Order No.	Cutting form L.H. Order No.
3	1,0	0,7	1,25	2,7	4	28	10	0,0032	H52 32100.1082	H52 31100.1082
						33	15	0,0035	H52 32150.1082	H52 31150.1082
4	1,0	0,8	1,75	3,7	4	28	10	0,0038	H52 42100.1082	H52 41100.1082
						33	15	0,0043	H52 42150.1082	H52 41150.1082
						38	20	0,0047	H52 42200.1082	H52 41200.1082
						43	25	0,0052	H52 42250.1082	–
5	1,0	1,0	2,25	4,7	8	28	10	0,013	H52 52100.1082	–
	1,5								H52 52100.1582	–
	2,0								H52 52100.2082	–
5	1,0	1,0	2,25	4,7	8	33	15	0,013	H52 52150.1082	H52 51150.1082
	2,0								H52 52150.2082	H52 51150.2082
5	1,0	1,0	2,25	4,7	8	38	20	0,014	H52 52200.1082	H52 51200.1082
	1,5								H52 52200.1582	H52 51200.1582
	2,0								H52 52200.2082	H52 51200.2082
5	1,0	1,0	2,25	4,7	8	43	25	0,015	H52 52250.1082	–
	1,5								H52 52250.1582	–
	2,0								H52 52250.2082	–
5	1,0	1,0	2,25	4,7	8	48	30	0,016	H52 52300.1082	H52 51300.1082
	2,0								H52 52300.2082	–
6	1,0	1,8	2,75	5,7	8	33	15	0,014	H52 62150.1082	H52 61150.1082
	1,5								H52 62150.1582	H52 61150.1582
	2,0								H52 62150.2082	H52 61150.2082
6	1,0	1,8	2,75	5,7	8	38	20	0,015	H52 62200.1082	H52 61200.1082
	1,5								H52 62200.1582	H52 61200.1582
	2,0								H52 62200.2082	H52 61200.2082
6	1,0	1,8	2,75	5,7	8	43	25	0,016	H52 62250.1082	–
	2,0								H52 62250.2082	H52 61250.2082
6	1,0	1,8	2,75	5,7	8	48	30	0,017	H52 62300.1082	H52 61300.1082
	1,5								H52 62300.1582	–
	2,0								H52 62300.2082	H52 61300.2082
6	1,0	1,8	2,75	5,7	8	53	35	0,018	H52 62350.1082	H52 61350.1082
	1,5								H52 62350.1582	–
	2,0								H52 62350.2082	–
8	1,0	2,5	3,75	7,7	8	33	15	0,016	H52 82150.1082	H52 81150.1082
	1,5								H52 82150.1582	H52 81150.1582
	2,0								H52 82150.2082	H52 81150.2082
8	1,0	2,5	3,75	7,7	8	38	20	0,018	H52 82200.1082	H52 81200.1082
	1,5								H52 82200.1582	H52 81200.1582
	2,0								H52 82200.2082	H52 81200.2082
8	1,0	2,5	3,75	7,7	8	43	25	0,020	H52 82250.1082	H52 81250.1082
	1,5								H52 82250.1582	H52 81250.1582
	2,0								H52 82250.2082	H52 81250.2082
8	1,0	2,5	3,75	7,7	8	48	30	0,022	H52 82300.1082	–
	1,5								H52 82300.1582	–
	2,0								H52 82300.2082	H52 81300.2082
8	1,0	2,5	3,75	7,7	8	53	35	0,023	H52 82350.1082	–
	1,5								H52 82350.1582	–
	2,0								H52 82350.2082	H52 81350.2082
8	1,0	2,5	3,75	7,7	8	58	40	0,025	H52 82400.1082	–
	1,5								H52 82400.1582	H52 81400.1582
	2,0								H52 82400.2082	H52 81400.2082

Please note: From $D_{min.}$ 5 mm, recessing tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended guide values for recessing: Page 763.

Order No./Order date | Please state Customer No. | Signature | KOMET internal

Enquiry

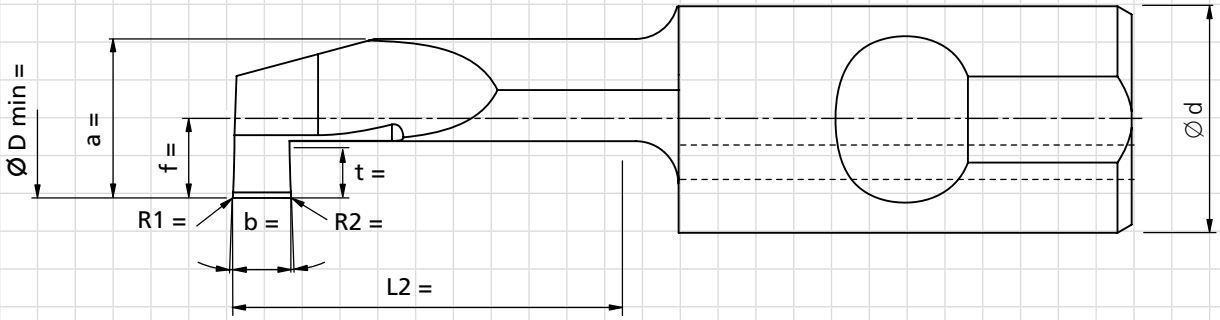
Company:
Address:

Quantity:
(minimum order 5 off)

Contact | Department:
Telephone | Fax:
E-Mail:

Coating ☐ yes ☐ no

Grooving tool XH52 …



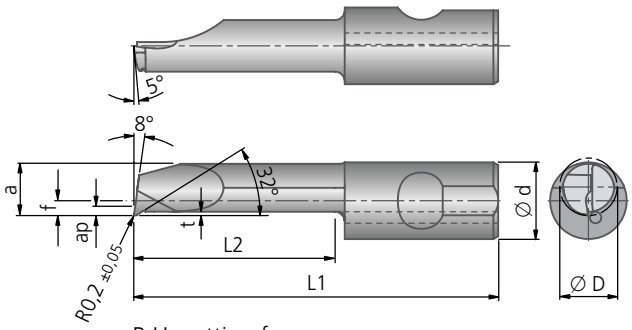
Parameter table

Ø D min	t max	b max	a Dmin -0,3	f a/2 -0,1	R1 / R2 b/2	L2	Ø d	
3,00 - 3,99	1,5	0,7	2,7…3,7	1,25…1,75	0 … 0,75	10… 20	4	–
4,00 - 4,99	2	0,8	3,7…4,7	1,75…2,25	0 … 1,00	10… 25	4	–
5,00 - 5,99	2,5	1,2	4,7…5,7	2,25…2,75	0 … 1,25	10… 30	8	✓
6,00 - 6,99	3	1,8	5,7…6,7	2,75…3,25	0 … 1,50	10… 35	8	✓
7,00 - 8,00	3,5	2,5	6,7…7,7	3,25…3,75	0 … 1,75	10… 40	8	✓

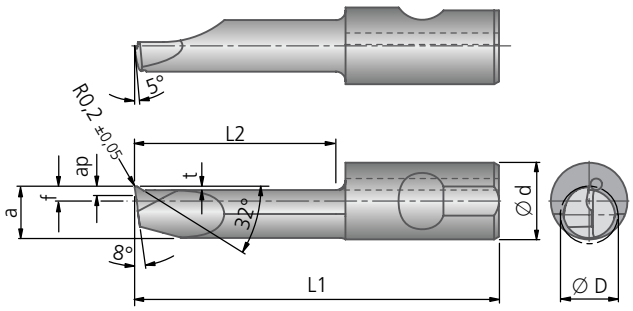
Please provide workpiece sketch!

Boring tool

for workpiece material P K N S | > 3,5×D | $D_{min} \geq 5$ | UniTurn



R.H. cutting form



L.H. cutting form

> 3,5×D						HRC > 54	HRC > 54	
	●	●	◐	◐	✕	✕	✕	●

									Cutting form	
Ø D min	a_p max	t max	f	a	Ø d	L1	L2	kg	R.H. Order No.	L.H. Order No.
3	0,6	0,3	1,25	2,6	4	28	10	0,004	H55 32100.0182	H55 31100.0182
						33	15		H55 32150.0182	–
4	0,8	0,3	1,75	3,6	4	33	15	0,005	H55 42150.0182	–
						38	20	0,006	H55 42200.0182	H55 41200.0182
5	1,0	0,4	1,55	4,6	8	33	15	0,016	H55 52150.0282	H55 51150.0282
						38	20	0,018	–	H55 51200.0282
						43	25	0,019	H55 52250.0282	–
6	1,1	0,4	1,55	5,4	8	38	20	0,020	H55 62200.0282	–
						48	30	0,023	H55 62300.0282	H55 61300.0282
8	1,2	0,4	1,5	5,5	8	38	20	0,020	–	H55 81200.0282
						58	40	0,027	H55 82400.0282	–

Please note:
From $D_{min.}$ 5 mm, boring tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

Guideline recommendation: feed f = 0.025-0.1 mm

● very good | ◐ good | ○ possible | ✕ not possible

Recommended guide values for boring: Page 763.

Order No./Order date | Please state Customer No. | Signature | KOMET internal

Enquiry

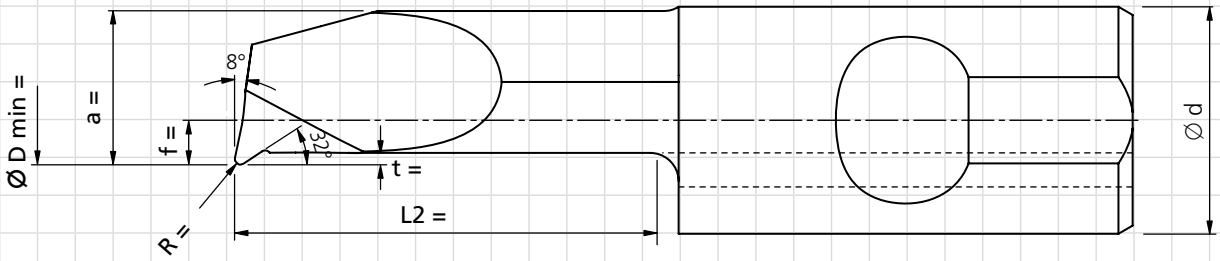
Company:
Address:

Quantity:
(minimum order 5 off)

Contact | Department:
Telephone | Fax:
E-Mail:

Coating ☐ yes ☐ no

Boring tool XH55 …



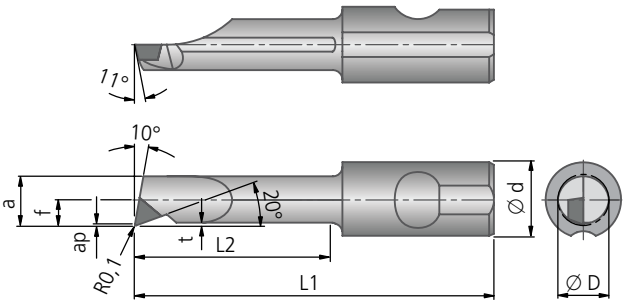
Parameter table

Ø D min	t max	a Dmin -0,3	f a/2 -0,1	R	L2	Ø d	
3,00 - 3,99	0,3	2,7…3,7	1,25…1,75	0,1 / 0,2	10 … 20	4	–
4,00 - 4,99	0,3	3,7…4,7	1,75…2,25	0,1 / 0,2	10 … 25	4	–
5,00 - 5,99	0,4	4,7…5,7	2,25…2,75	0,1 / 0,2 / 0,3	10 … 35	8	✓
6,00 - 6,99	0,4	5,7…6,7	2,75…3,25	0,1 / 0,2 / 0,3 / 0,4	10 … 40	8	✓
7,00 - 8,00	0,4	6,7…7,7	3,25…3,75	0,1 / 0,2 / 0,3 / 0,4	10 … 45	8	✓

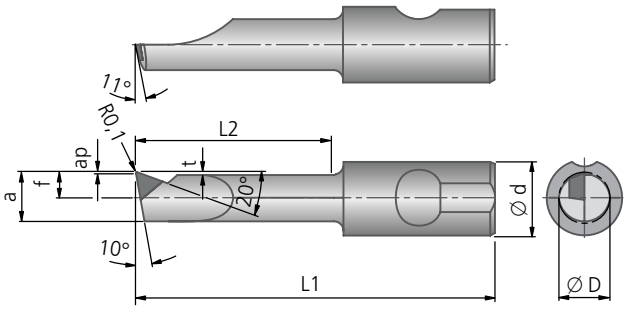
Please provide workpiece sketch!

Boring tool with CBN

for workpiece material S H | > 3,5×D | UniTurn



R.H. cutting form



L.H. cutting form

> 3,5×D	●	●	◐	◐	✕	● HRC > 54	● HRC > 54	●

								Cutting form	
Ø D min	t	f	a	Ø d	L1	L2	kg	R.H. Order No.	L.H. Order No.
2,7	0,2	1,35	2,5	4	27	9	0,004	H56 32100.0140	H56 31100.0140
3,8	0,2	1,9	3,6	8	30	12	0,015	H56 42121.0140	H56 41121.0140
4,8	0,25	2,4	4,55	8	33	15	0,016	H56 52151.0140	H56 51151.0140
5,6	0,3	2,7	5,2	8	38	20	0,019	H56 62201.0140	H56 61201.0140
7,5	0,5	3,8	7,3	8	43	25	0,024	H56 82251.0140	H56 81251.0140

Please note:
Boring tools have internal coolant supply.

Guideline recommendations: a_p = 0.05-0.07 mm; f = 0.01-0.03 mm; v_c = 70-90 m/min

● very good | ◐ good | ○ possible | ✕ not possible

Recommended guide values for boring: Page 763.

Recommended guide values for boring, chamfering, copying and recessing

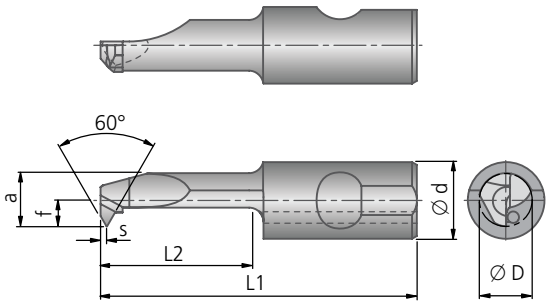
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min)			≤ 3×D Feed f (mm/rev)			≤ 3×D Cutting depth a_p (mm)			> 3×D Feed f (mm/rev)			> 3×D Cutting depth a_p (mm)		
						min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	30	**100**	180	0,010	**0,02**	0,030	0,02	**0,08**	0,15	0,010	**0,02**	0,025	0,02	**0,07**	0,10
	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	30	**90**	130	0,010	**0,02**	0,030	0,02	**0,08**	0,15	0,010	**0,02**	0,025	0,02	**0,07**	0,10
	2.1	<500		lead alloys	1.0718 (11SMnPb30)	20	**80**	120	0,010	**0,02**	0,030	0,02	**0,08**	0,15	0,010	**0,02**	0,025	0,02	**0,07**	0,10
	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	20	**80**	120	0,005	**0,01**	0,025	0,02	**0,07**	0,10	0,005	**0,01**	0,020	0,02	**0,07**	0,10
	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr-MoV12)	15	**50**	90	0,005	**0,01**	0,025	0,02	**0,08**	0,15	0,005	**0,01**	0,020	0,02	**0,07**	0,10
	4.1			HSS		10	**30**	60	0,005	**0,01**	0,025	0,02	**0,08**	0,15	0,005	**0,01**	0,020	0,02	**0,07**	0,10
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr-19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	5	**20**	30	0,005	**0,01**	0,025	0,02	**0,05**	0,08	0,005	**0,01**	0,020	0,02	**0,06**	0,10
	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	5	**30**	50	0,005	**0,01**	0,025	0,02	**0,05**	0,08	0,005	**0,01**	0,020	0,02	**0,06**	0,10
M	6.0	≤600		stainless steels	1.4306 (X2Cr-Ni19-11) 1.4401 (X5CrNi-Mo17-12-2)	10	**50**	80	0,005	**0,01**	0,025	0,02	**0,07**	0,10	0,005	**0,01**	0,020	0,02	**0,07**	0,10
	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo-Ti17-12-2)	10	**50**	80	0,005	**0,01**	0,025	0,02	**0,07**	0,10	0,005	**0,01**	0,020	0,02	**0,07**	0,10
	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCr-Si38-18)	8	**30**	60	0,005	**0,01**	0,025	0,02	**0,07**	0,10	0,005	**0,01**	0,020	0,02	**0,07**	0,10
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	15	**55**	90	0,010	**0,02**	0,035	0,05	**0,10**	0,25	0,010	**0,02**	0,030	0,03	**0,10**	0,20
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	30	**120**	200	0,010	**0,02**	0,040	0,02	**0,40**	0,50	0,010	**0,02**	0,040	0,03	**0,15**	0,30
	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	30	**150**	250	0,010	**0,02**	0,040	0,02	**0,40**	0,50	0,010	**0,02**	0,040	0,03	**0,15**	0,30
	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	30	**180**	300	0,010	**0,02**	0,040	0,02	**0,40**	0,50	0,010	**0,02**	0,040	0,03	**0,15**	0,30
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	30	**150**	250	0,010	**0,02**	0,040	0,02	**0,40**	0,50	0,010	**0,02**	0,040	0,03	**0,15**	0,30
	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	30	**120**	200	0,010	**0,02**	0,040	0,02	**0,40**	0,50	0,010	**0,02**	0,040	0,03	**0,15**	0,30
H	15.0	1400		hardened steels > 52 HRC		20	**50**	80	0,005	**0,01**	0,020	0,02	**0,07**	0,12		–			–	
	16.0	1800		hardened steels > 62 HRC		15	**40**	65	0,005	**0,01**	0,020	0,02	**0,07**	0,12		–			–	

Cutting values shown are relating to the basic recommendations for cutting materials given.

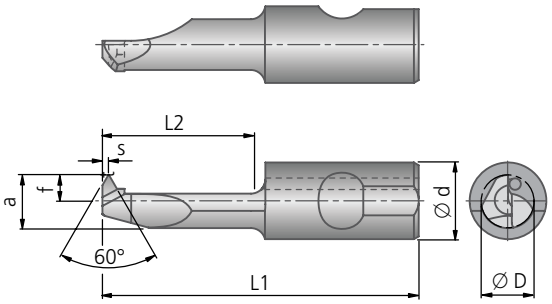
Important: See chapter 8 for more application details and safety notes!

Thread turning tool

for workpiece material P K N S | > 3,5×D | $D_{min} \geq 5$ | UniTurn



R.H. cutting form



L.H. cutting form

										Cutting form	
Ø D min	Control thread	Pitch P	s	f	a	Ø d	L1	L2	kg	R.H. Order No.	L.H. Order No.
5	M6	1	0,55	2,25	4,7	8	33	15	0,014	H54 52150.1082	H54 51150.1082
6	M8	1,25	0,65	2,75	5,7	8	33	15	0,014	H54 62150.1282	–
8	M10	1,5	0,75	3,75	7,7	8	33	15	0,017	H54 82150.1582	–
	M12	1,75	0,85							H54 82150.1782	–

Please note:
From $D_{min.}$ 5 mm, threading tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

● very good | ◐ good | ○ possible | ✕ not possible

Recommended guide values for internal thread cutting: Page 765.

Recommended guide values for internal thread cutting

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Cutting speed v_c (m/min) min	opt.	max	No. of cuts Pitch (mm) 0,50	0,75	1,00	1,25	1,50	1,75
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	30	**100**	180	4-6	4-7	4-8	5-9	6-10	7-12
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	30	**90**	130						
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	20	**80**	120						
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	20	**80**	120						
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	15	**50**	90						
P	4.1			HSS		10	**30**	60						
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	5	**20**	30	4-6	4-7	4-8	5-9	6-10	7-12
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	5	**30**	50						
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	10	**50**	80	4-6	4-7	4-8	5-9	6-10	7-12
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	10	**50**	80						
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	8	**30**	60						
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	15	**55**	90	4-6	4-7	4-8	5-9	6-10	7-12
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	15	**55**	90						
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	15	**55**	90						
K	9.1		230	spheroidal graphite cast iron, ferritic /perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	15	**55**	90						
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	15	**55**	90						
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	15	**55**	90						
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	15	**55**	90						
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	30	**120**	200	4-6	4-7	4-8	5-9	6-10	7-12
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	30	**150**	250						
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	30	**180**	300						
N	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	30	**150**	250						
N	14.0		100	cast alum.alloy:Si-content >10%	3.2381.01 (G-AlSi10Mg)	30	**120**	200						
H	15.0	1400		hardened steels > 52 HRC										
H	16.0	1800		hardened steels > 62 HRC										

Cutting values shown are relating to the basic recommendations for cutting materials given.

Important: See chapter 8 for more application details and safety notes!

Order No./Order date | Please state Customer No. | Signature | KOMET internal

Enquiry

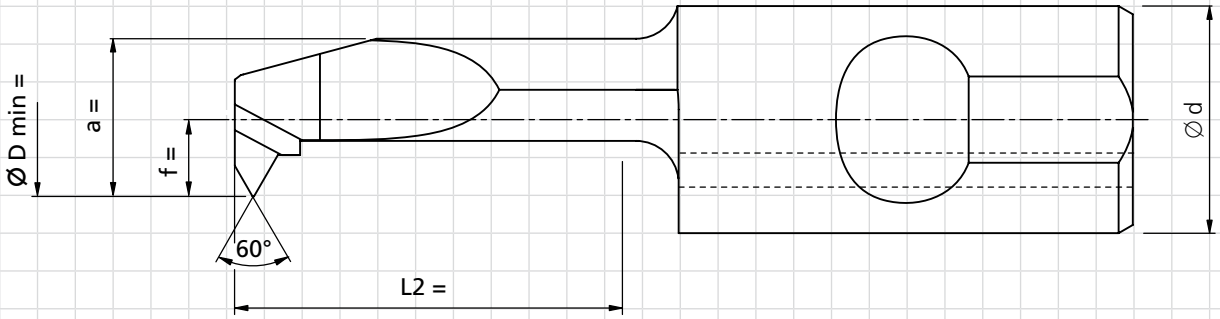
Company:
Address:

Quantity:
(minimum order 5 off)

Contact | Department:
Telephone | Fax:
E-Mail:

Coating ☐ yes ☐ no

Thread turning tool XH54 …



Parameter table
Metric ISO
standard thread

Ø D min	Thread	Pitch	Thread length	a	f	L2	Ø d	
3	M4 … M8	0,7 … 1,25	0,38 … 0,68	2,7	1,25	10 … 15	4	–
4	M5 … M10	0,8 … 1,5	0,43 … 0,81	3,7	1,75	10 … 20	4	–
5	M6 … M16	1 … 2	0,54 … 1,08	4,7	2,25	10 … 30	8	✓
6	M8 … M24	1,25 … 3,0	0,68 … 1,62	5,7	2,75	10 … 35	8	✓
8	M10 … M30	1,5 … 3,5	0,81 … 1,89	6,7	3,25	10 … 40	8	✓

Parameter table
Metric ISO
fine thread

Ø D min	Thread	Pitch	Thread length	a	f	L2	Ø d	
3	M4x0,20 … M8x1	0,2 … 1,0	0,11 … 0,54	2,7	1,25	10 … 15	4	–
4	M5x0,25 … M10x1	0,25 … 1,0	0,14 … 0,54	3,7	1,75	10 … 20	4	–
5	M6x0,25 … M16x1,5	0,25 … 1,5	0,14 … 0,81	4,7	2,25	10 … 30	8	✓
6	M8x0,25 … M24x1,5	0,25 … 1,5	0,14 … 0,81	5,7	2,75	10 … 35	8	✓
8	M10x0,25 … M30x2	0,25 … 2,0	0,14 … 1,08	6,7	3,25	10 … 40	8	✓

Please provide workpiece sketch!

Order No./Order date | Please state Customer No. | Signature | KOMET internal

Enquiry

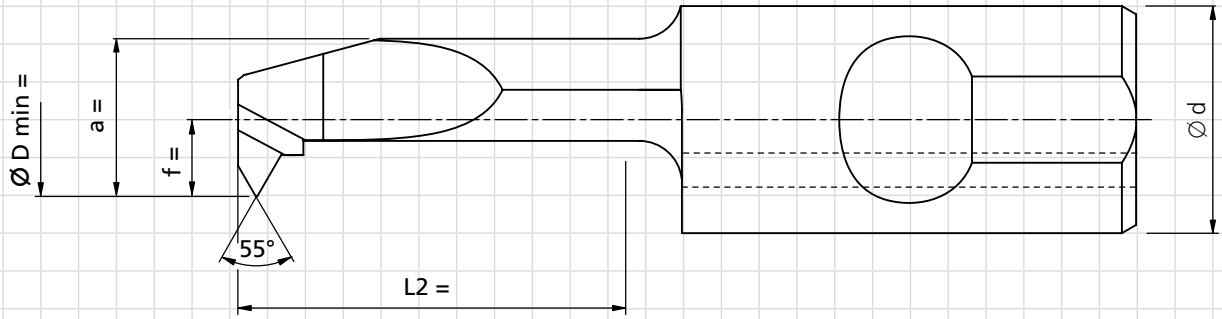
Company:
Address:

Quantity:
(minimum order 5 off)

Contact | Department:
Telephone | Fax:
E-Mail:

Coating ☐ yes ☐ no

Thread turning tool XH54 …



Parameter table
Witworth thread

Ø D min	Thread	Pitch	Thread length	a	f	L2	Ø d	
4	1/4"	1,27	0,81	3,7	1,75	10 … 20	4	–
5	5/16" … 3/8"	1,41 … 1,59	0,90 … 1,02	4,7	2,25	10 … 30	8	✓
6	5/16" … 7/8"	1,41 … 2,82	0,90 … 1,81	5,7	2,75	10 … 35	8	✓
8	1/2" … 1"	2,11 … 3,18	1,36 … 2,03	6,7	3,25	10 … 40	8	✓

Parameter table
Pipe thread
EN ISO 228-1

Ø D min	Thread	Pitch	Thread length	a	f	L2	Ø d	
6	G1/16 … G1 1/2	0,91 … 2,31	0,58 … 1,48	5,7	2,75	10 … 35	8	✓
8	G1/8 … G1 1/2	0,91 … 2,31	0,58 … 1,48	6,7	3,25	10 … 40	8	✓

Please provide workpiece sketch!

KOMET Adaptors

Easy-to-use device for adjusting the cutting edge of precision drilling and continuous drilling tools.
Optimised tolerance range thanks to the ability to compensate via an eccentric or MV adjusting device.

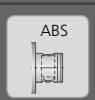
Eccentric adjusting device

BENEFITS for you:
- High degree of static and dynamic rigidity
- Very little imbalance
- High spindle speeds can be achieved
- Neutral weight for ABS extensions in similar version
- 1 graduation equals 0.02 mm in the diameter
- Adjustment path ± 0.25 mm in the diameter
- Scale on tool makes adjustment easy
- Correction of various cutting edge radii on tools with fixed insert seating



Adjustment device MV

BENEFITS for you:
- Accurate adjustment with micro-adjustable spindle
- Maximum adjustment range + 3 mm on diameter
- Scale divisions 1 division 0.02 mm on diameter
- Rigid clamping of head after adjustment achieved by means of 4 clamping screws on face
- Note: A seal cannot be used in the ABS hole with the adjustment device

Symbols	
 	**Machine adaptor** Connection on machine side
	**Balancing note (chapter 8)** Balance as despatched
	**Coolant supply**
	**Concentricity**
	**Lightweight**
 	**Vibration dampening** torsion damping | bending vibration
 	**adjustable** radially | axially
 	**Tool holder** Connection on tool side

KOMET HSK-A Adaptors

	Page
with ABS connection	772
with ABS N connection	773
Eccentric adjusting device	774
Torsional dampener	775
KomLoc HSK clamping system	
Adaptor flange	776 – 777
Built-in flange	778 – 779

KOMET Taper shanks

	Page
DIN 69871 AD/B	
with ABS connection	780
with ABS N connection	782
Eccentric adjusting device	784
Torsional dampener	785
DIN 68971 AD	
with ABS connection	781
with ABS connection (coolant ring)	783
Face Contact (FC) with ABS connection	786
JIS B 6339 (MAS 403 BT)	
with ABS / ABS N connection	787 – 788
with ABS connection (coolant ring)	789
Eccentric adjusting device	791
Torsional dampener	792
Face Contact (FC) with ABS connection	790
DIN 2080 A	
with ABS connection	793
DIN 2080 B	
with ABS connection (coolant ring)	794

KOMET ABS

	Page
ABS adaptor	
Reducer	796 – 797
Extension	798 – 799
Eccentric adjusting device	800
Adjustment device MV	801
Torsional dampener	802
Balanced adapter	803
Lightweight Extension / Reducer	804 – 805
Damping element HMD	806
Adaptor sleeve Whistle Notch	808 – 809
Adaptor sleeve Weldon	810 – 811
Adaptor HTR	812
Adaptor HMK	813
Tapping chuck	814
Collet holder	815
Expanding chuck	816
Milling cutter arbor FA | FAM	818 – 819
Combination milling cutter arbor FAK	820
Short drill chuck NCB	821
Shrink fit technology ThermoGrip	825
Spindle adaptor flange	822
PSC adaptor	823
Cylindrical adaptor	
TC adaptor	824
Damping element HMD	807
VDI adaptor	
NC..20 with ABS N connection	826
NC..20 Torsional dampener	827
NC..10 with ABS N connection	828
Adaptor for turning tools	
with ABS N connection	829

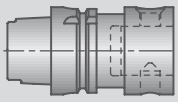
Easy Special Adaptors

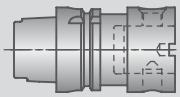
Chapter 1

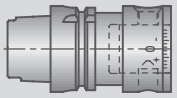
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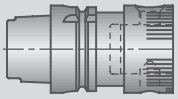
Programme summary – Adaptors

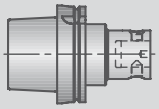
HSK-A Adaptors ISO 12164-1

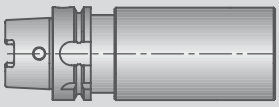
with ABS connection
▸ 772
HSK-A 32 HSK-A 63
HSK-A 40 HSK-A 80
HSK-A 50 HSK-A100

ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

with ABS N connection
▸ 773
HSK-A 63
HSK-A100

ABS 50
ABS 63
ABS 80

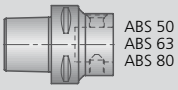
Eccentric adjusting device with ABS connection
▸ 774
HSK-A 63
HSK-A100

ABS 50
ABS 63

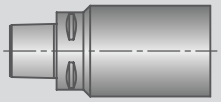
Torsional dampener with ABS connection
▸ 775
HSK-A 63
HSK-A100

ABS 50
ABS 63
ABS 80

Easy Special
▸ Chapter 1
HSK-A 63
HSK-A100

ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80

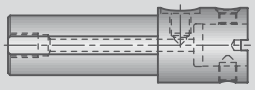
Semi-finished head
▸ Chapter 1
HSK-A 63
HSK-A100


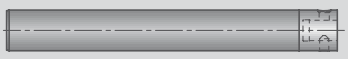
PSC Adaptors ISO 26623

with ABS connection
▸ 823
C4
C5
C6
C8

ABS 50
ABS 63
ABS 80

Semi-finished head
▸ Chapter 1
C4
C5
C6


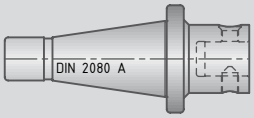
Cylindrical shank adapter

TC adaptor with ABS connection
▸ 824
Ø 40
Ø 50
Ø 60
Ø 80

ABS 50
ABS 63
ABS 80
ABS 100

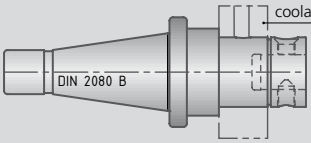
Damping element
▸ 807
Ø 25
Ø 32

ABS 25
ABS 32

Taper shanks

DIN 2080

ABS
▸ 793
SK 40
SK 50


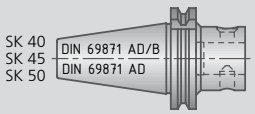
ABS 32 ABS 63
ABS 40 ABS 80
ABS 50 ABS 100

ABS
▸ 794
SK 50


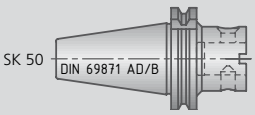
ABS 50
ABS 63
ABS 80
ABS 100

Taper shanks

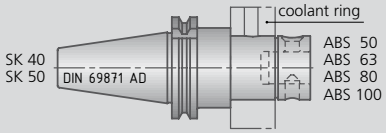
DIN 69871

ABS
▸ 780 / 781
SK 40
SK 45
SK 50


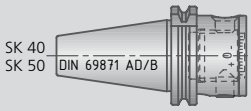
ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50 ABS 125

ABS N
▸ 782
SK 50


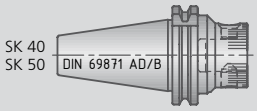
ABS-N 50
ABS-N 63
ABS-N 80
ABS-N 100

ABS
▸ 783
SK 40
SK 50


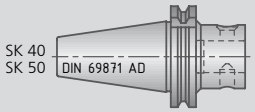
ABS 50
ABS 63
ABS 80
ABS 100

Eccentric adjusting device
▸ 784
SK 40
SK 50


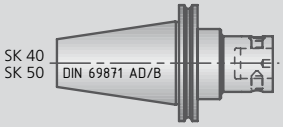
ABS 50
ABS 63

Torsional dampener
▸ 785
SK 40
SK 50


ABS 50
ABS 63
ABS 80

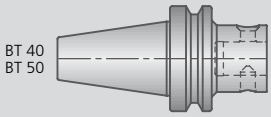
Face Contact (FC)
▸ 786
SK 40
SK 50


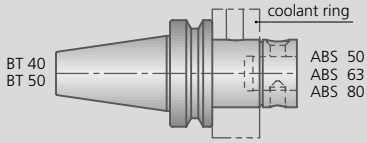
ABS 50
ABS 63
ABS 80
ABS 100

Easy Special
▸ Chapter 1
SK 40
SK 50


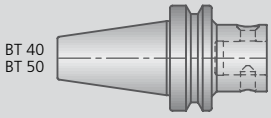
ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80

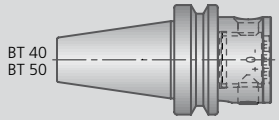
JIS B 6339 (MAS 403 BT)

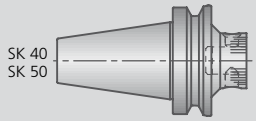
ABS / ABS N
▸ 787 – 788
BT 40
BT 50

ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

ABS
▸ 789
BT 40
BT 50


ABS 50
ABS 63
ABS 80

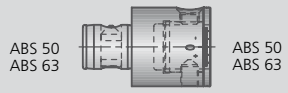
Face Contact (FC)
▸ 790
BT 40
BT 50

ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

Eccentric adjusting device
▸ 791
BT 40
BT 50

ABS 50
ABS 63

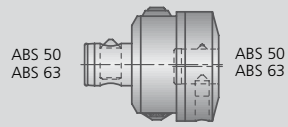
Torsional dampener
▸ 792
SK 40
SK 50

ABS 50
ABS 63

ABS Adaptors

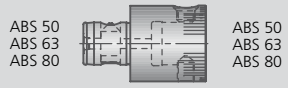
Eccentric adjusting device
▸ 800



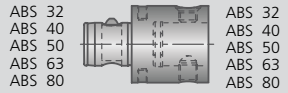
Adjustment device MV
▸ 801



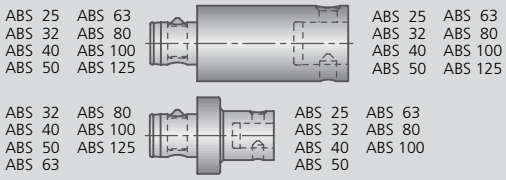
Torsional dampener
▸ 802



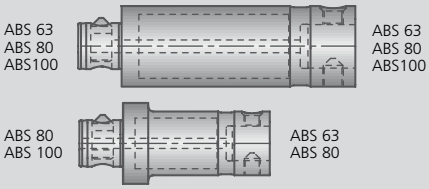
Balanced adapter
▸ 803



Extension / Reducer
▸ 796 – 799



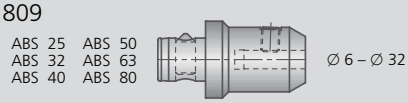
Lightweight Extension / Reducer
▸ 804 – 805



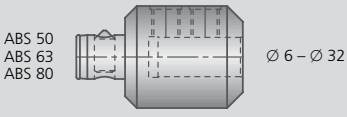
Damping element
▸ 806



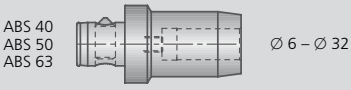
Adaptor sleeve Whistle Notch
▸ 808 – 809



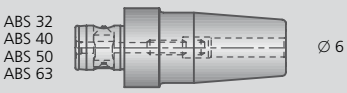
Adaptor sleeve Weldon
▸ 810 – 811



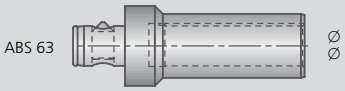
Expanding chuck
▸ 816



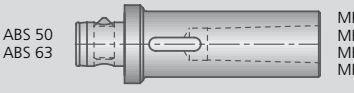
Thermal expansion chuck ThermoGrip
▸ 825



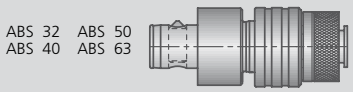
Adaptor HTR
▸ 812



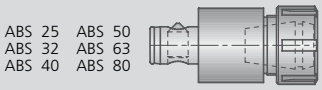
Adaptor HMK
▸ 813



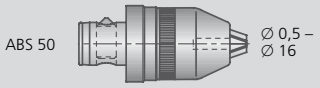
Tapping chuck GWF
▸ 814



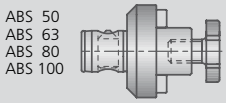
Collet holder SZV
▸ 815



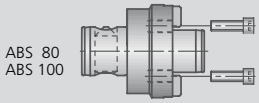
Short drill chuck NCB
▸ 821



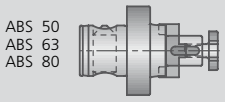
Milling cutter arbor FA
▸ 818



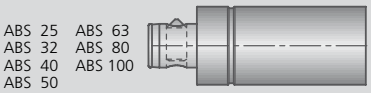
Milling cutter arbor FAM
▸ 819



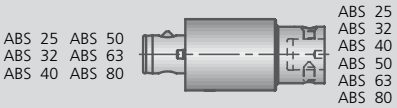
Combination milling cutter arbor FAK
▸ 820



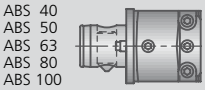
Semi-finished head
▸ Chapter 1



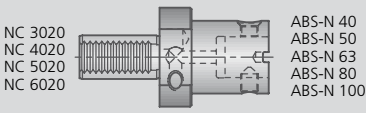
Easy Special
▸ Chapter 1



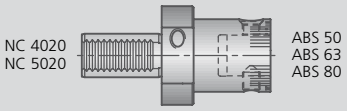
Adaptor for turning tool
▸ 829



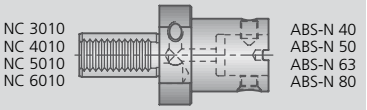
VDI adaptor with ABS N connection
▸ 828



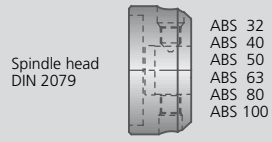
VDI torsional dampener with ABS connection
▸ 827



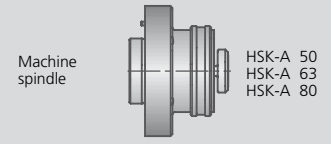
VDI adaptor with ABS N connection
▸ 826



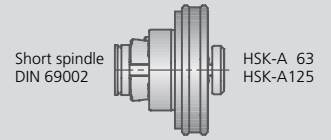
Spindle adaptor flange with ABS connection
▸ 822



Spindle adaptor flange with KomLoc HSK clamping system
▸ 776 – 777



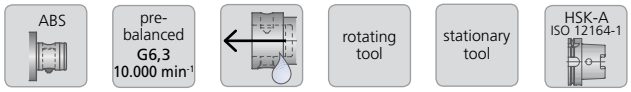
Built-in flange with KomLoc HSK clamping system
▸ 778 – 779

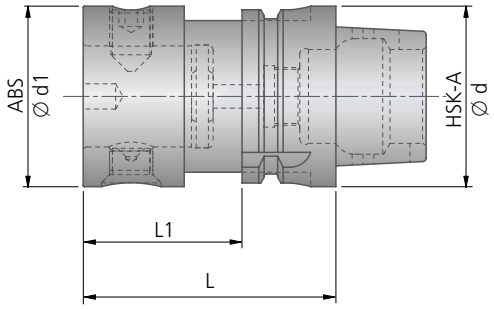


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KOMET ISO 12164-1

HSK-A Adaptor with ABS connection



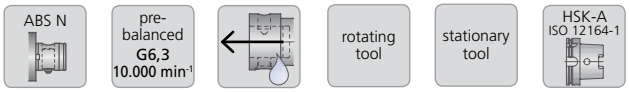


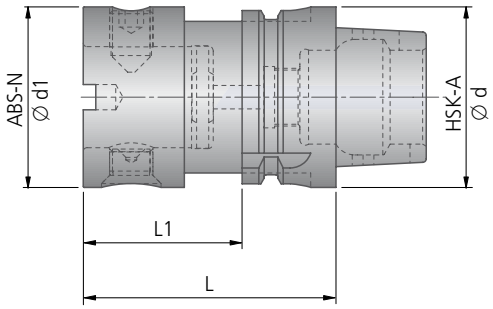
HSK-A DIN 69893 T1 ABS						
Article	Order No.	HSK-A Ø d	ABS Ø d1	L	L1	kg
HSK-A32-ABS25	**A06 00120**	32	25	40	20	0,16
HSK-A32-ABS32	**A06 00130**	32	32	55	35	0,25
HSK-A40-ABS40	**A06 10140**	40	40	55	–	0,40
HSK-A50-ABS25	**A06 20121**	50	25	50	24	0,45
HSK-A50-ABS32	**A06 20131**	50	32	50	24	0,50
HSK-A50-ABS40	**A06 20141**	50	40	60	34	0,64
HSK-A50-ABS50	**A06 20151**	50	50	70	–	0,79
HSK-A63-ABS25	**A06 30120**	63	25	50	24	0,70
HSK-A63-ABS32	**A06 30130**	63	32	50	24	0,75
HSK-A63-ABS40	**A06 30140**	63	40	60	34	1,00
HSK-A63-ABS50	**A06 30150**	63	50	70	44	1,22
HSK-A63-ABS50*	**A06 30220**	63	50	42	–	0,77
HSK-A63-ABS63	**A06 30160**	63	63	80	–	1,64
HSK-A63-ABS80	**A06 30170**	63	80	100	–	2,50
HSK-A80-ABS50	**A06 40150**	80	50	75	49	1,60
HSK-A100-ABS25	**A06 50120**	100	25	60	31	2,20
HSK-A100-ABS32	**A06 50130**	100	32	60	31	2,30
HSK-A100-ABS40	**A06 50140**	100	40	80	51	2,45
HSK-A100-ABS50	**A06 50150**	100	50	80	51	2,68
HSK-A100-ABS63	**A06 50160**	100	63	80	51	3,01
HSK-A100-ABS80	**A06 50170**	100	80	90	61	3,70
HSK-A100-ABS100	**A06 50180**	100	100	100	–	4,75

* for fineboring only

Supply includes:
Adaptor fitted complete.

HSK-A Adaptor with ABS N connection





HSK-A DIN 69893 T1 ABS N						
Article	Order No.	HSK-A Ø d	ABS-N Ø d1	L	L1	kg
HSK-A63-ABS50N	**A06 30050**	63	50	70	44	1,22
HSK-A63-ABS80N	**A06 30070**	63	80	100	–	2,50
HSK-A100-ABS50N	**A06 50050**	100	50	80	51	2,68
HSK-A100-ABS63N	**A06 50060**	100	63	80	51	3,01
HSK-A100-ABS80N	**A06 50070**	100	80	90	61	3,70

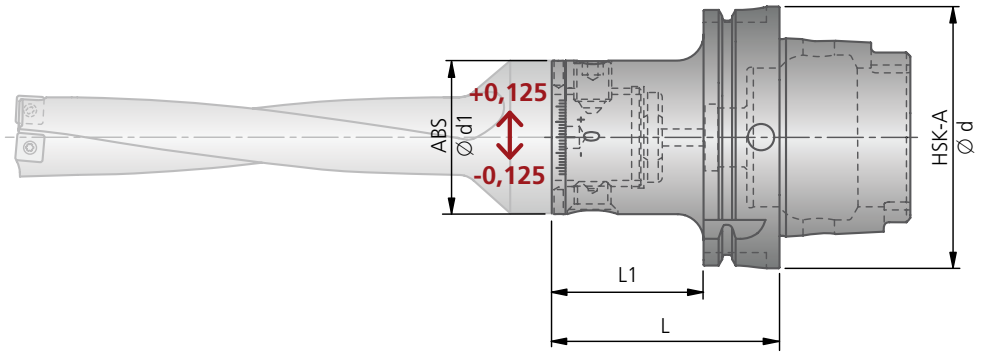
Supply includes:
Adaptor fitted complete.

KOMET ISO 12164-1

HSK-A Eccentric adjusting device with ABS connection



Extremely versatile – can be used for a multitude of standard applications
Narrow setting range: ± 0.25 mm in diameter
Compact yet ergonomic design
Up to 30 mm in diameter



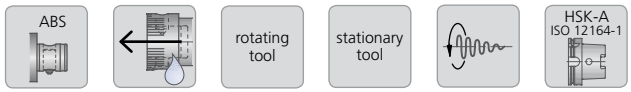
HSK-A DIN 69893 T1 ABS EXZ						
Article	Order No.	HSK-A Ø d	ABS Ø d1	L	L1	kg
HSK-A63 ABS50 EXZ	**A06 36730**	63	50	70	44	1,13
HSK-A100 ABS50 EXZ	**A06 56730**	100	50	80	51	2,60
HSK-A100 ABS63 EXZ	**A06 56740**	100	63	80	51	2,80

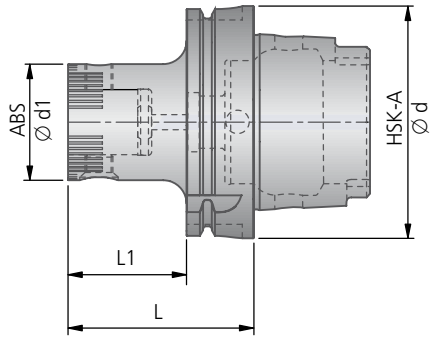
Supply includes:
Adaptor with adjusting key ∅2,8.

BENEFITS for you:
- High degree of static and dynamic rigidity
- Very little imbalance
- High spindle speeds can be achieved
- 1 graduation equals 0.02 mm in the diameter
- Adjustment path ± 0.25 mm in the diameter
- Scale on tool makes adjustment easy
- Correction of various cutting edge radii on tools with fixed insert seating

Setting diameter:
To achieve this, the ABS clamping screw is simply loosened and the eccentric sleeve adjusting to the correct dimension against the scale. Once the ABS clamping screw has been tightened again, the tool is ready for use.

HSK-A Torsional dampener with ABS connection





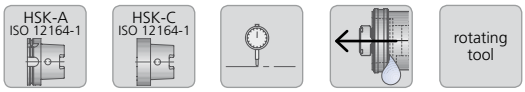
HSK-A DIN 69893 T1 ABS TSD							
Article	Order No.	HSK-A Ø d	ABS Ø d1	L	L1	kg	ABS Sealing plate Order No.
HSK-A63-ABS50-TSD	**A06 30251**	63	50	70	44	1,10	**L01 02041**
HSK-A63-ABS63-TSD	**A06 30261**	63	63	80	–	1,45	**L01 02051**
HSK-A63-ABS80-TSD	**A06 30270**	63	80	100	–	2,34	**L01 02061**
HSK-A100-ABS50-TSD	**A06 50251**	100	50	80	51	2,70	**L01 02041**
HSK-A100-ABS63-TSD	**A06 50261**	100	63	80	51	2,85	**L01 02051**
HSK-A100-ABS80-TSD	**A06 50270**	100	80	90	61	3,64	**L01 02061**

Supply includes:
Adaptor fitted complete.

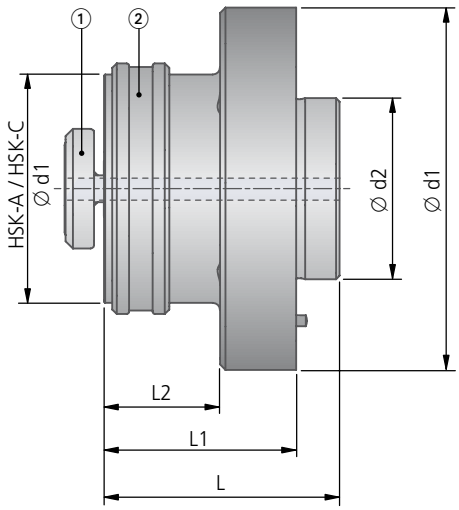
The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

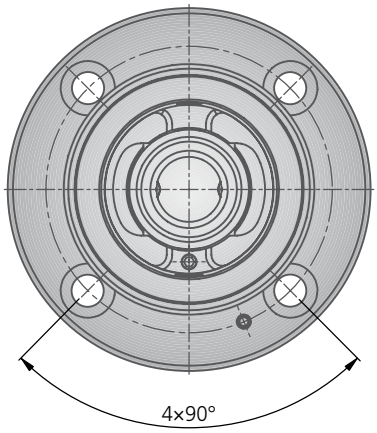
BENEFITS for you:
- Considerable prolongation of tool life
- Improved process reliability
- Optimum quality of machined surfaces
- Significant noise reduction
- Simplified device handling
- Can be used both in stationary and rotating tools
- Modular ABS design
- Run-in times no longer required as cutting parameters are unchanged

HSK-RVF Adaptor flange KomLoc HSK clamping system K



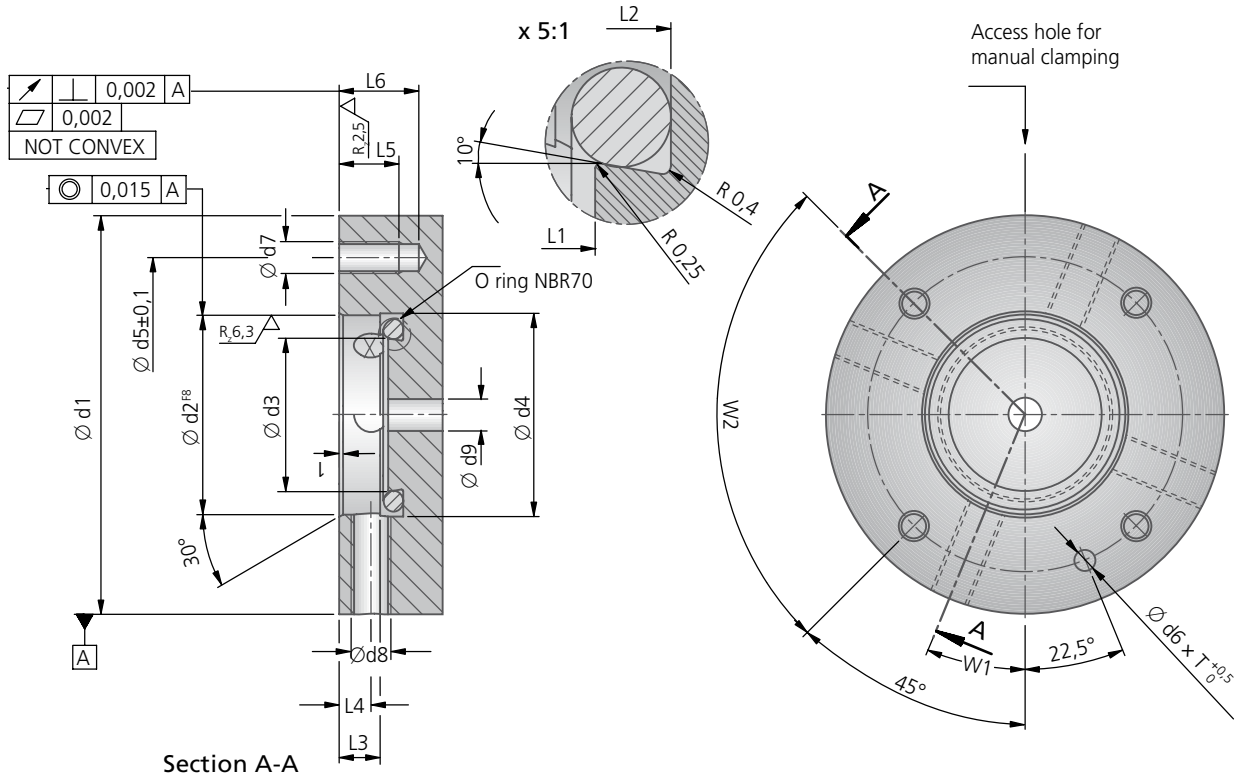
can be radially adjusted on the machine spindle with adjusting screws





HSK-RVF											
Article	Order No.	HSK-A HSK-C Ø d	Ø d1	Ø d2	L	L1	L2	kg	Clamping device KomLoc ① Order No.	Sealing ring, shifting ② Order No.	Clamping screw DIN 912 Article
HSK-50 RVF	**A08 61031**	50	80	40	53	43	26	0,97	**L07 01050**	**L07 01450**	M6×20-12,9
HSK-63 RVF	**A08 71031**	63	100	50	65	53	32	1,84	**L07 01060**	**L07 01460**	M8×25-12,9

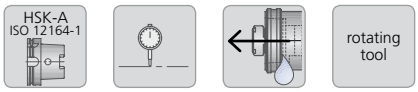
Supply includes:
Adaptor flange complete with KomLoc clamping device and sealing ring.



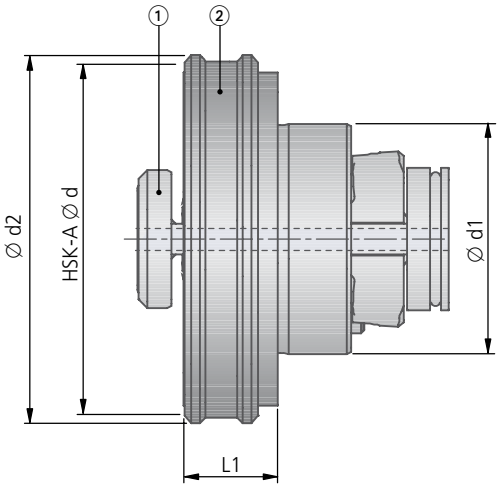
Connection dimensions																		
for adaptor flange	Ø d1	Ø d2	Ø d3	Ø d4	Ø d5 min	Ø d6	Ø d7	Ø d8	Ø d9	L1	L2	L3 min	L4	L5	L6	T	W1	W2	O ring
A08 61031	80	40	30,5	41	63	5	M6	M8×1	6,0	10,3	13,3	8,3	7,0	14	18	3,5	0°	4×90°	30×4
A08 71031	100	50	38,5	51	79	5	M8	M10×1	8,0	12,3	16,1	10,3	8,0	15	20	3,5	0°	4×90°	38×5

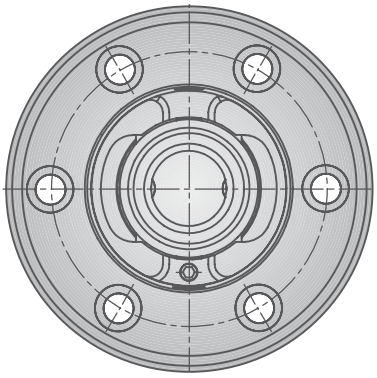
Please ask for current KOMET drawing No. N49 13470 for spindle production.

HSK-REF Built-in flange KomLoc HSK clamping system K



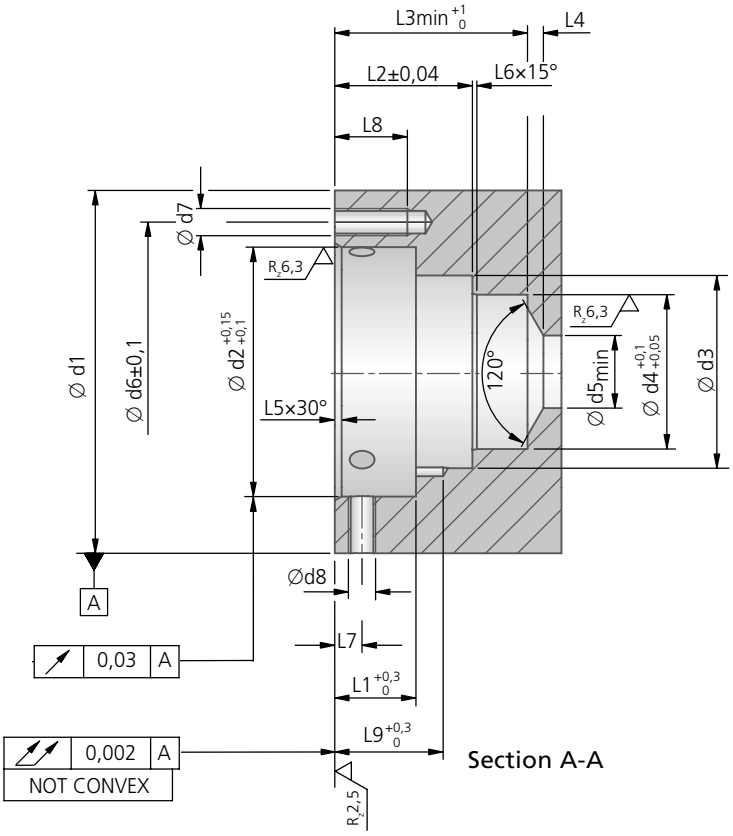
can be radially adjusted on the machine spindle with adjusting screw

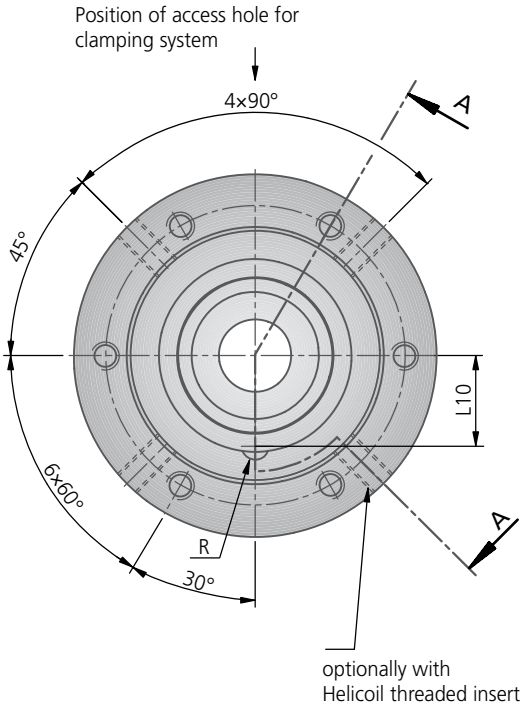




HSK-REF												
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	L1	kg	Clamping device KomLoc ① Order No.	Sealing ring, turning ② Order No.	Ball pressure screw Order No.	Clamping screw DIN 912 Article	Order No.
HSK-50 REF	**A08 61060**	63	42	69,2	17,5	0,54	**L07 01050**	**L07 01761**	**N10 30739**	M5×20 12.9	**55011 05020**
HSK-100 REF	**A08 91060**	125	88	137	30	4,10	**L07 01080**	**L07 01790**	**N10 30742**	M10×1×40 12.9	

Supply includes:
Built-in flange complete with KomLoc clamping device, sealing ring and ball pressure screw.





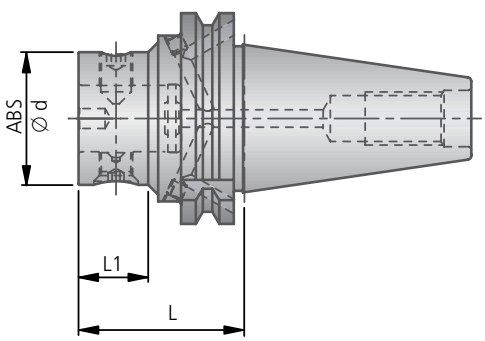
Connection dimensions																			
for built-in flange	Ø d1	Ø d2	Ø d3 +0,5	Ø d4	Ø d5 min	Ø d6	Ø d7	Ø d8	L1	L2	L3 min	L4	L5	L6	L7	L8	L9	L10	R
A08 81060	100	68	52,8	42	16	82	M8	M8	24,3	40,2	57,3	4	2	1,5	8	18	32,9	24,8	3,5
A08 91060	125	88	66	53	20	106	M10×1	M8	34,4	54,4	76	4,5	2	2	8	25	42,4	31,4	4,5

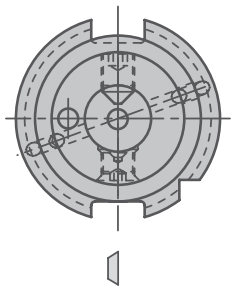
Please ask for current KOMET drawing No. N49 13460 for spindle production.

KOMET DIN 69871 AD/B

Taper shank with ABS connection







Position of tool cutting edge on single cutter tools

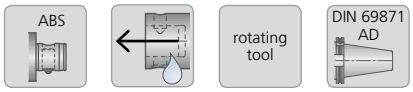
DIN 69871 AD/B (≙ ISO 7388/1) ABS							
SK	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ABS25SK-AD/B40	**A50 55120**	25	50	19	0,99	**L02 30920**
40	ABS32SK-AD/B40	**A50 55130**	32	50	19	1,05	**L02 30920**
40	ABS40SK-AD/B40	**A50 55140**	40	50	19	1,07	**L02 30920**
40	ABS50SK-AD/B40	**A50 55150**	50	50	30	1,10	**L02 30920**
40	ABS63SK-AD/B40	**A50 55160**	63	90	70	2,05	**L02 30920**
45	ABS50SK-AD/B45	**A50 55250**	50	60	25	2,10	**L02 30930**
45	ABS63SK-AD/B45	**A50 55260**	63	60	40	2,25	**L02 30930**
50	ABS25SK-AD/B50	**A50 55320**	25	60	20	3,17	**L02 30940**
50	ABS32SK-AD/B50	**A50 55330**	32	60	20	3,24	**L02 30940**
50	ABS40SK-AD/B50	**A50 55340**	40	60	20	3,30	**L02 30940**
50	ABS50SK-AD/B50	**A50 55350**	50	60	22	3,30	**L02 30940**
50	ABS63SK-AD/B50	**A50 55360**	63	60	29	3,37	**L02 30940**
50	ABS80SK-AD/B50	**A50 55370**	80	70	50	3,91	**L02 30940**
50	ABS100SK-AD/B50	**A50 55380**	100	115	95	6,72	**L02 30940**

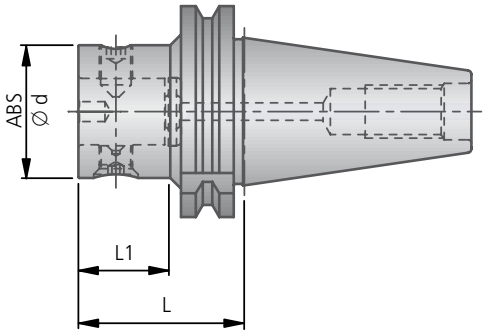
Supply includes:
Taper shank in form B complete with seal, conversion kit (for form AD).

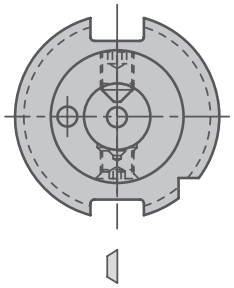
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET DIN 69871 AD

Taper shank with ABS connection







Position of tool cutting edge on single cutter tools

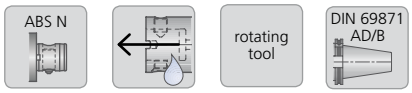
DIN 69871 AD (≙ ISO 7388/1) ABS						
SK	Article	Order No.	ABS Ø d	L	L1	kg
40	ABS 25 ISO400200	**A50 00120**	25	50	23	0,93
40	ABS 32 ISO400200	**A50 00130**	32	50	23	0,99
40	ABS 40 ISO400200	**A50 00140**	40	50	30	1,03
40	ABS 50 ISO400200	**A50 00150**	50	50	30	1,15
40	ABS 63 ISO400200	**A50 00160**	63	90	70	2,04
50	ABS 25 ISO500200	**A50 00320**	25	60	31	2,81
50	ABS 32 ISO500200	**A50 00330**	32	60	31	2,91
50	ABS 40 ISO500200	**A50 00340**	40	60	31	3,02
50	ABS 50 ISO500200	**A50 00350**	50	60	40	3,18
50	ABS 63 ISO500200	**A50 00360**	63	60	40	3,35
50	ABS 80 ISO500200	**A50 00370**	80	70	50	4,05
50	ABS100 ISO500200	**A50 00380**	100	115	95	7,05
50	ABS125 ISO500200	**A50 00390**	125	145	–	11,54

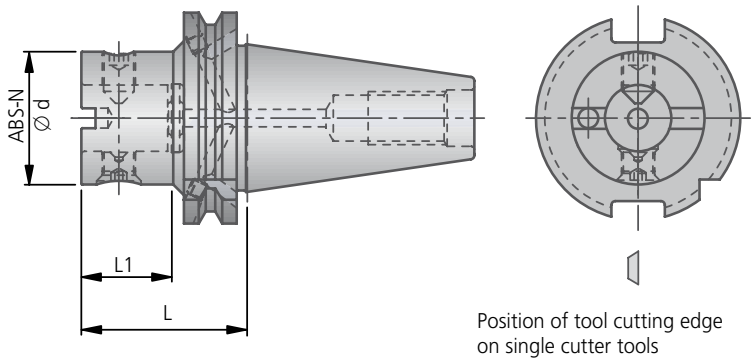
Supply includes:
Taper shank complete.

Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET DIN 69871 AD/B

Taper shank with ABS N connection





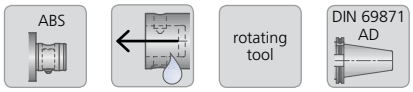
Position of tool cutting edge on single cutter tools

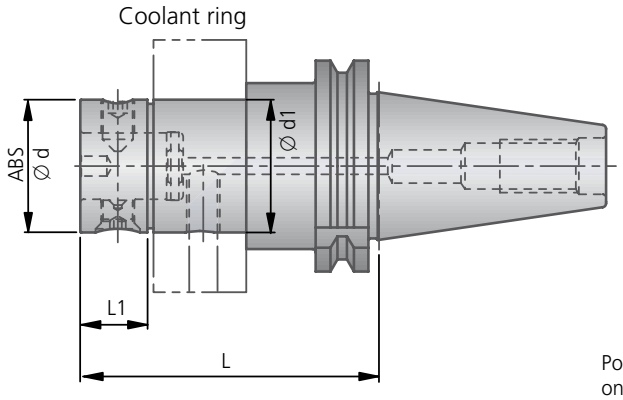
DIN 69871 AD/B ABS N						
SK	Article	Order No.	ABS-N Ø d	L	L1	kg
50	ABS 50N-AD/B 50	**A50 76350**	50	60	22	3,32
50	ABS 63N-AD/B 50	**A50 76360**	63	60	29	3,39
50	ABS 80N-AD/B 50	**A50 76370**	80	70	50	3,92
50	ABS 100N-AD/B 50	**A50 76380**	100	115	95	7,05

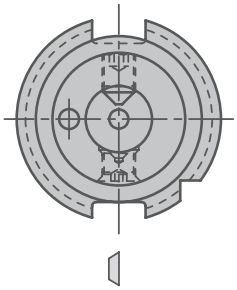
Supply includes:
Taper shank complete.

Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

Taper shank with ABS connection for coolant ring







Position of tool cutting edge on single cutter tools

DIN 69871 AD (≙ ISO 7388/1) ABS							
SK	Article	**Order No.**	**ABS Ø d**	Coolant ring **Ø d1**	**L**	**L1**	kg
40	ABS50 ISO400200KR	**A50 00650**	50	50	95	25	1,70
50	ABS50 ISO500200KR	**A50 00850**	50	50	100	28	3,84
50	ABS63 ISO500200KR	**A50 00860**	63	70	110	37	5,05
50	ABS80 ISO500200KR	**A50 00870**	80	80	110	37	5,60
50	ABS100 ISO500200KR	**A50 00880**	100	100	115	42	6,67

Supply includes:
Taper shank complete.
Coolant ring not included (chapter 8).

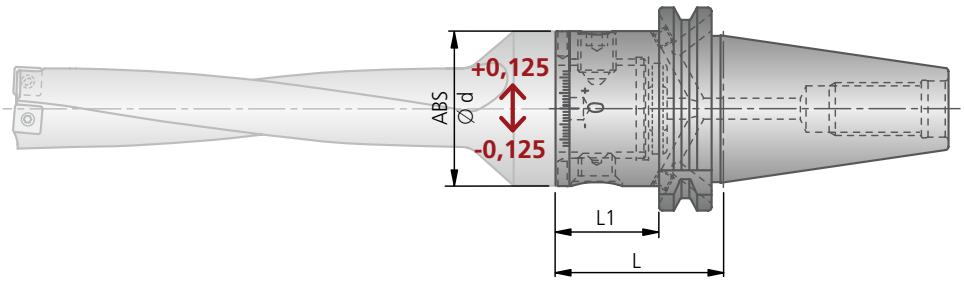
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET DIN 69871 AD/B

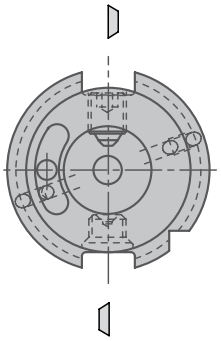
Eccentric adjusting device with ABS connection



Extremely versatile – can be used for a multitude of standard applications
Narrow setting range: ± 0.25 mm in diameter
Compact yet ergonomic design
Up to 30 mm in diameter



Cutter position
for R. H. cutting
KUB drills



Position of tool cutting edge
on single cutter tools

DIN 69871 AD/B ABS EXZ							
SK	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ABS50-SK AD/B40 EXZ.	**A50 56150**	50	50	30	1,10	**L02 30920**
40	ABS63-SK AD/B40 EXZ.	**A50 56160**	63	90	–	2,03	**L02 30920**
50	ABS50-SK AD/B50 EXZ.	**A50 56350**	50	60	22	3,33	**L02 30940**
50	ABS63-SK AD/B50 EXZ.	**A50 56360**	63	60	24,4	3,36	**L02 30940**

Supply includes:
Taper shank in form B complete with seal, conversion kit (for form AD).

BENEFITS for you:
- High degree of static and dynamic rigidity
- Very little imbalance
- High spindle speeds can be achieved
- 1 graduation equals 0.02 mm in the diameter
- Adjustment path ± 0.25 mm in the diameter
- Scale on tool makes adjustment easy
- Correction of various cutting edge radii on tools with fixed insert seating

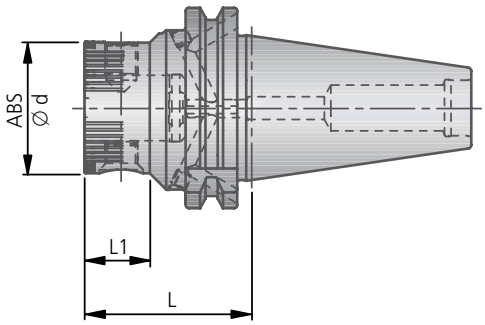
Setting diameter:
To achieve this, the ABS clamping screw is simply loosened and the eccentric sleeve adjusting to the correct dimension against the scale. Once the ABS clamping screw has been tightened again, the tool is ready for use.

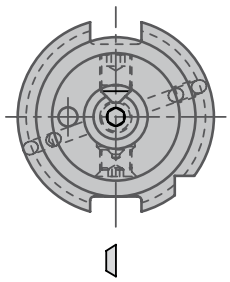
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET DIN 69871 AD/B

Torsional dampener with ABS connection







Position of tool cutting edge on single cutter tools

DIN 69871 AD/B ABS TSD							
SK	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ABS50-ISO40-TSD	**A50 01351**	50	50	30	1,07	**L02 30920**
40	ABS63-ISO40-TSD	**A50 01361**	63	90	–	2,00	**L02 30930**
50	ABS50-ISO50-TSD	**A50 01451**	50	60	22	3,30	**L02 30920**
50	ABS63-ISO50-TSD	**A50 01461**	63	60	30	3,40	**L02 30930**
50	ABS80-ISO50-TSD	**A50 01470**	80	70	50	3,84	**L02 30940**

Supply includes:
Taper shank in form B complete with seal, conversion kit (for form AD).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use: ...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

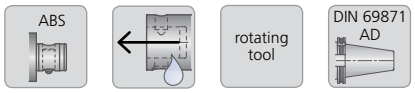
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

BENEFITS for you:
- Considerable prolongation of tool life
- Improved process reliability
- Optimum quality of machined surfaces
- Significant noise reduction
- Simplified device handling
- Can be used both in stationary and rotating tools
- Modular ABS design
- Run-in times no longer required as cutting parameters are unchanged

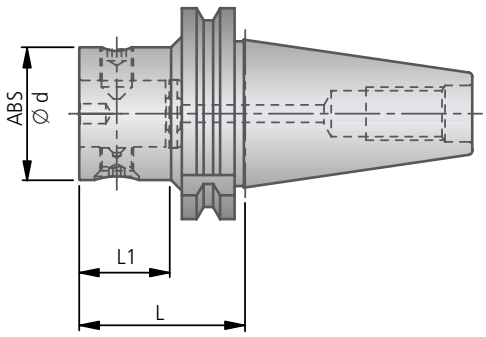
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

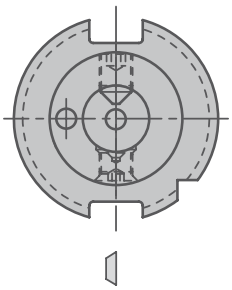
KOMET DIN 69871 AD

Face Contact (FC) Taper shank with ABS connection







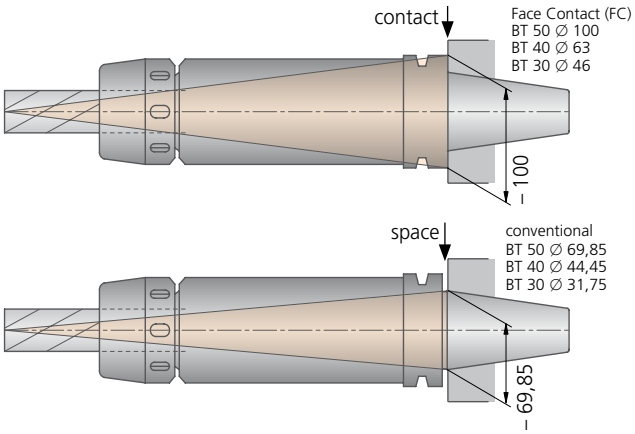


Position of tool cutting edge on single cutter tools

DIN 69871 AD ABS						
SK	Article	Order No.	ABS Ø d	L	L1	kg
40	ISO40 DIN69871AD-FC-ABS50	**A50 57151**	50	50	30	1,15
40	ISO40 DIN69871AD-FC-ABS63	**A50 57161**	63	90	70	2,04
50	ISO50 DIN69871AD-FC-ABS50	**A50 57351**	50	60	40	3,18
50	ISO50 DIN69871AD-FC-ABS63	**A50 57361**	63	60	40	3,35
50	ISO50 DIN69871AD-FC-ABS80	**A50 57371**	80	70	50	4,05
50	ISO50 DIN69871AD-FC-ABS100	**A50 57381**	100	115	95	7,05

Supply includes:
Taper shank complete.

Increased contact diameter



Face Contact (FC) Spindle System

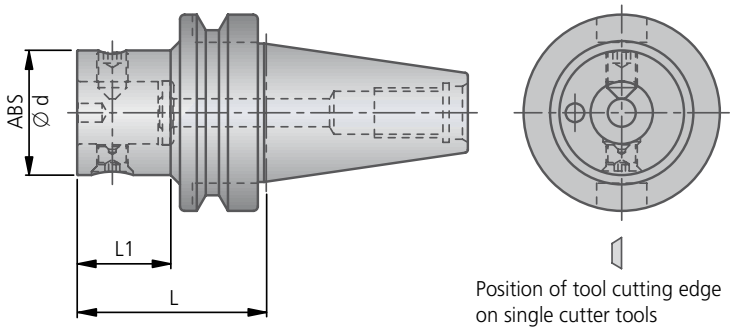
- The Face Contact (FC) Spindle System offers simultaneous dual contact between the machine spindle face and toolholder flange face, as well as the machine spindle taper and long toolholder taper shank. This system is based on the most currently available standards for JIS-BT, DIN 69871 and CAT-V flange tooling.
- By having all tolerances strictly controlled by high tolerance gauges and measuring equipment, simultaneous dual contact of the face and taper is thus assured.
- In this way, the Face Contact (FC) Spindle System skillfully utilizes the elastic deformation of the machine spindle to control the gauge line accuracy, which thus insures that dual contact of the face and taper is achieved.
- Existing accessories such as presetters, tooling fixtures and tooling storage systems can be used.
- The results in greatly extending the life of both the machine spindle and the toolholder.
- As a result of the dual contact which precisely positions the toolholder within 1 micron.

Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET JIS B 6339 (MAS 403 BT)

Taper shank with ABS connection





Position of tool cutting edge on single cutter tools

JIS B 6339 AD ABS						
BT	Article	Order No.	ABS Ø d	L	L1	kg
40	ABS 25 ISO401500	**A55 00120**	25	60	25	1,09
40	ABS 32 ISO401500	**A55 00130**	32	60	33	1,13
40	ABS 40 ISO401500	**A55 00140**	40	60	33	1,21
40	ABS 50 ISO401500	**A55 00150**	50	60	33	1,29
40	ABS 63 ISO401500	**A55 00160**	63	70	43	1,68
50	ABS 32 ISO501500	**A55 00330**	32	70	24	3,76
50	ABS 40 ISO501500	**A55 00340**	40	70	24	3,86
50	ABS 50 ISO501500	**A55 00350**	50	70	24	4,07
50	ABS 63 ISO501500	**A55 00360**	63	80	37	4,33
50	ABS 80 ISO501500	**A55 00370**	80	100	62	5,42
50	ABS100 ISO501500	**A55 00380**	100	110	72	6,85

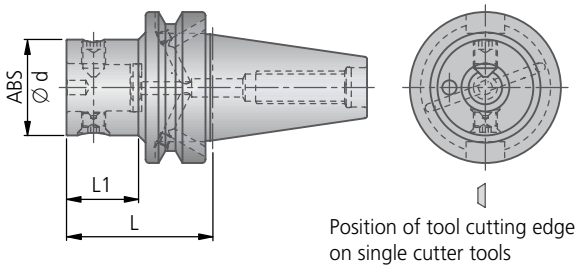
Supply includes:
Taper shank complete.

Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

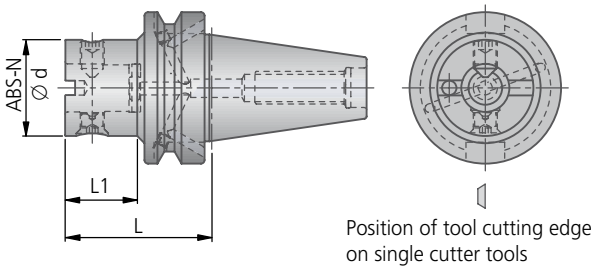
KOMET JIS B 6339 (MAS 403 BT)

Taper shank with ABS / ABS N connection





Position of tool cutting edge on single cutter tools



Position of tool cutting edge on single cutter tools

JIS B 6339 AD/B ABS							
BT	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ABS50 JIS B6339 BT40 AD/B	**A55 55150**	50	60	33	1,3	**L02 30920**
40	ABS63 JIS B6339 BT40 AD/B	**A55 55160**	63	70	–	1,7	**L02 30920**
50	ABS50 JIS B6339 BT50 AD/B	**A55 55350**	50	70	24	4,0	**L02 30940**
50	ABS63 JIS B6339 BT50 AD/B	**A55 55360**	63	80	37	4,3	**L02 30940**
50	ABS80 JIS B6339 BT50 AD/B	**A55 55370**	80	100	60	5,4	**L02 30940**
50	ABS100 JIS B6339 BT50 AD/B	**A55 55380**	100	110	–	6,8	**L02 30940**

JIS B 6339 AD/B ABS N							
BT	Article	Order No.	ABS-N Ø d	L	L1	kg	Conversion kit Order No.
50	ABS50N JIS B6339 BT50 AD/B	**A55 50350**	50	70	24	4,0	**L02 30940**
50	ABS63N JIS B6339 BT50 AD/B	**A55 50360**	63	80	37	4,3	**L02 30940**
50	ABS80N JIS B6339 BT50 AD/B	**A55 50370**	80	100	60	5,4	**L02 30940**

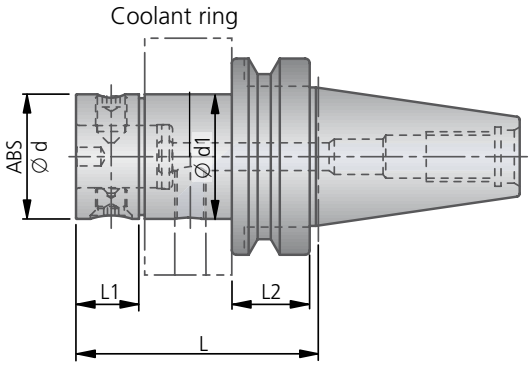
Supply includes:
Taper shank in form B complete with seal, conversion kit (for form AD).

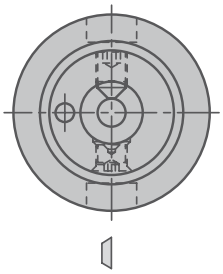
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET JIS B 6339 (MAS 403 BT)

Taper shank with ABS connection for coolant ring







Position of tool cutting edge on single cutter tools

JIS B 6339 AD ABS								
BT	Article	Order No.	ABS Ø d	Ø d1	L	L1	L2	kg
40	ABS50 ISO401510KR	**A55 10650**	50	50	105	33	40	3,84
50	ABS50 ISO501510KR	**A55 10850**	50	50	105	24	35	5,05
50	ABS63 ISO501510KR	**A55 10860**	63	70	115	29	35	5,60
50	ABS80 ISO501510KR	**A55 10870**	80	80	120	38	35	6,67

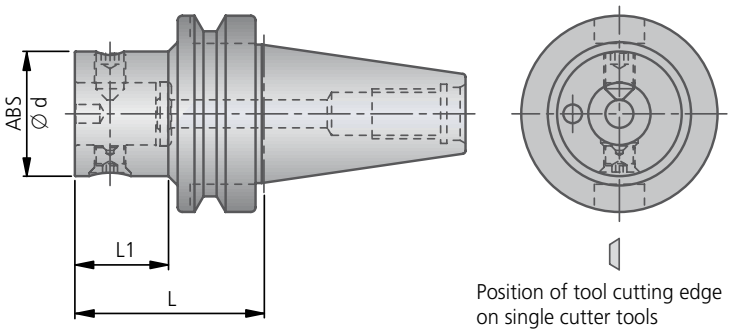
Supply includes:
Taper shank complete.
Coolant ring not included (chapter 8).

Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET JIS B 6339 (MAS 403 BT)

Face Contact (FC) Taper shank with ABS connection



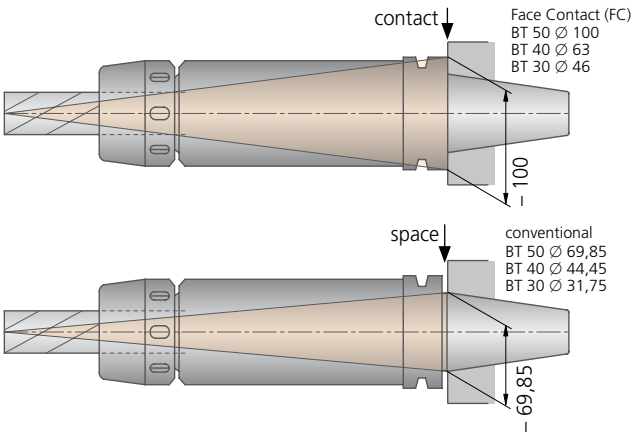


Position of tool cutting edge on single cutter tools

JIS B 6339 AD ABS						
BT	Article	Order No.	ABS Ø d	L	L1	kg
40	ISO40 JIS B6339-FC-ABS25	A55 57121	25	60	25	1,09
40	ISO40 JIS B6339-FC-ABS32	A55 57131	32	60	33	1,13
40	ISO40 JIS B6339-FC-ABS40	A55 57141	40	60	33	1,21
40	ISO40 JIS B6339-FC-ABS50	A55 57151	50	60	33	1,29
40	ISO40 JIS B6339-FC-ABS63	A55 57161	63	70	43	1,68
50	ISO50 JIS B6339-FC-ABS32	A55 57331	32	70	24	3,76
50	ISO50 JIS B6339-FC-ABS40	A55 57341	40	70	24	3,86
50	ISO50 JIS B6339-FC-ABS50	A55 57351	50	70	24	4,07
50	ISO50 JIS B6339-FC-ABS63	A55 57361	63	80	37	4,33
50	ISO50 JIS B6339-FC-ABS80	A55 57371	80	100	62	5,42
50	ISO50 JIS B6339-FC-ABS100	A55 57381	100	110	72	6,85

Supply includes:
Taper shank complete.

Increased contact diameter



Face Contact (FC) Spindle System

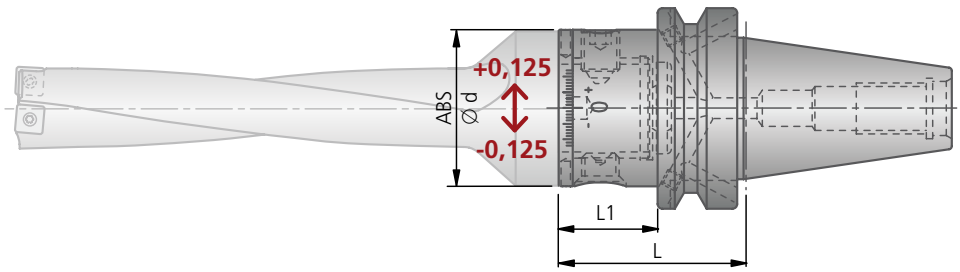
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- By having all tolerances strictly controlled by high tolerance gauges and measuring equipment, simultaneous dual contact of the face and taper is thus assured.
- In this way, the Face Contact (FC) Spindle System skillfully utilizes the elastic deformation of the machine spindle to control the gauge line accuracy, which thus insures that dual contact of the face and taper is achieved.
- Existing accessories such as presetters, tooling fixtures and tooling storage systems can be used.
- The results in greatly extending the life of both the machine spindle and the toolholder.
- As a result of the dual contact which precisely positions the toolholder within 1 micron.

KOMET JIS B 6339 (MAS 403 BT)

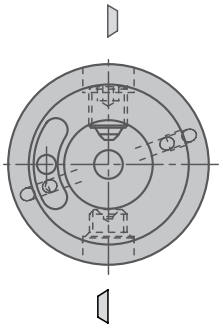
Eccentric adjusting device with ABS connection



Extremely versatile – can be used for a multitude of standard applications
Narrow setting range: ± 0.25 mm in diameter
Compact yet ergonomic design
Up to 30 mm in diameter



Cutter position
for R. H. cutting
KUB drills



Position of tool cutting edge
on single cutter tools

JIS B 6339 AD/B ABS EXZ							
BT	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ABS50 JIS B 6339 AD/B 40 EXZ.	A55 56150	50	60	33	1,28	L02 30920
50	ABS50 JIS B 6339 AD/B 50 EXZ.	A55 56350	50	70	24	3,94	L02 30940

JIS B 6339 AD ABS EXZ						
BT	Article	Order No.	ABS Ø d	L	L1	kg
40	ABS63 JIS B 6339 AD 40 EXZ.	A55 56160	63	70	–	1,67
50	ABS63 JIS B 6339 AD 50 EXZ.	A55 56360	63	80	31	4,30

Supply includes:
Taper shank ABS50 in form B complete with seal, conversion kit (for form AD).
Taper shank ABS63 in form AD.

BENEFITS for you:
- High degree of static and dynamic rigidity
- Very little imbalance
- High spindle speeds can be achieved
- 1 graduation equals 0.02 mm in the diameter
- Adjustment path ± 0.25 mm in the diameter
- Scale on tool makes adjustment easy
- Correction of various cutting edge radii on tools with fixed insert seating

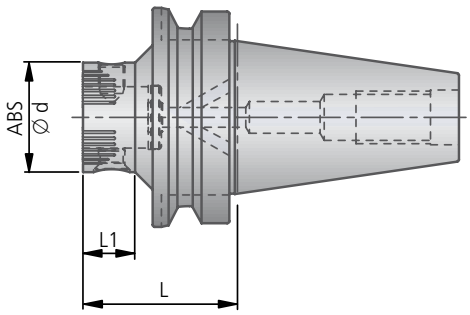
Setting diameter:
To achieve this, the ABS clamping screw is simply loosened and the eccentric sleeve adjusting to the correct dimension against the scale. Once the ABS clamping screw has been tightened again, the tool is ready for use.

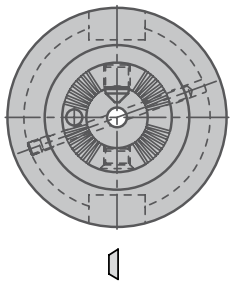
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET JIS B 6339 (MAS 403 BT)

Torsional dampener with ABS connection







Position of tool cutting edge on single cutter tools

JIS B 6339 AD/B ABS TSD							
BT	Article	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ISO40-ABS50-TSD	**A55 02150**	50	60	33	1,2	**L02 30920**
40	ISO40-ABS63-TSD	**A55 02160**	63	70	–	1,6	**L02 30920**
50	ISO50-ABS50-TSD	**A55 02350**	50	70	24	3,9	**L02 30940**
50	ISO50-ABS63-TSD	**A55 02360**	63	80	37	4,2	**L02 30940**

Supply includes:
Taper shank in form B complete with seal, conversion kit (for form AD).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use:
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

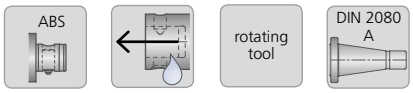
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

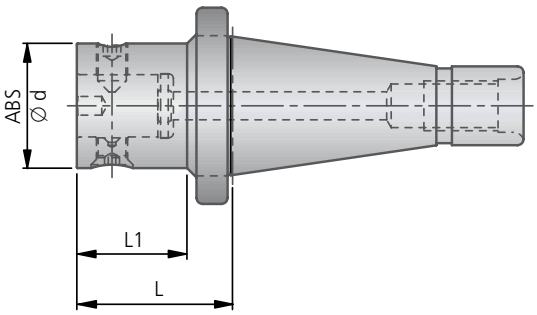
BENEFITS for you:
- **Considerable prolongation of tool life**
- **Improved process reliability**
- **Optimum quality of machined surfaces**
- **Significant noise reduction**
- **Simplified device handling**
- **Can be used both in stationary and rotating tools**
- **Modular ABS design**
- **Run-in times no longer required as cutting parameters are unchanged**

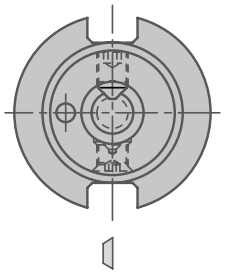
Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET DIN 2080 A

Taper shank with ABS connection







Position of tool cutting edge on single cutter tools

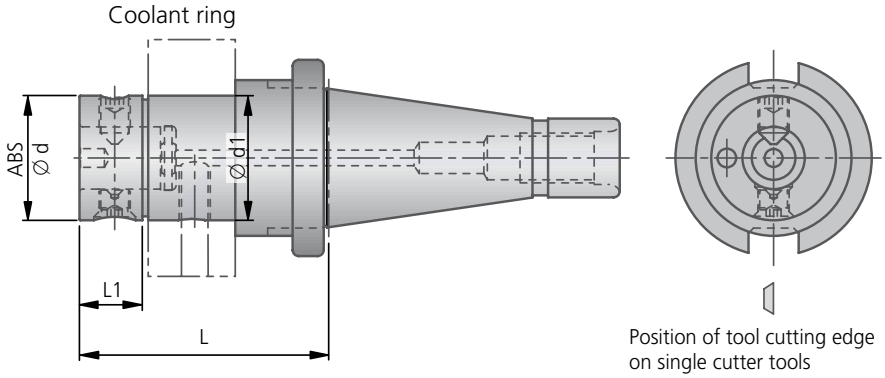
DIN 2080 A ABS						
ISO	Article	Order No.	ABS Ø d	L	L1	kg
40	ABS 40 ISO400000	**A54 00140**	40	50	36	1,04
40	ABS 50 ISO400000	**A54 00150**	50	50	37	1,15
40	ABS 63 ISO400000	**A54 00160**	63	70	–	1,81
50	ABS 32 ISO500000	**A54 00330**	32	60	36,8	2,92
50	ABS 40 ISO500000	**A54 00340**	40	60	37	3,03
50	ABS 50 ISO500000	**A54 00350**	50	60	37	3,19
50	ABS 63 ISO500000	**A54 00360**	63	60	43	3,46
50	ABS 80 ISO500000	**A54 00370**	80	80	64	4,64
50	ABS100 ISO500000	**A54 00380**	100	100	–	6,58

Supply includes:
Taper shank complete.

KOMET DIN 2080 B

Taper shank with ABS connection for coolant ring





DIN 2080 B ABS							
ISO	Article	Order No.	ABS Ø d	Ø d1	L	L1	kg
50	ABS 50 ISO500010KR	**A54 10850**	50	50	95	26	3,85
50	ABS 63 ISO500010KR	**A54 10860**	63	70	105	30	5,01
50	ABS 80 ISO500010KR	**A54 10870**	80	80	110	40,5	5,75
50	ABS100 ISO500010KR	**A54 10880**	100	100	125	55	7,73

Supply includes:
Taper shank complete.
Coolant ring not included (chapter 8).



KOMET

KOMET ABS

In tooling systems, the tool adapter is an important element between the tool and machine. It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process.

KOMET ABS connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

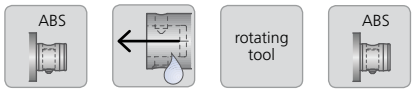
Since its launch by KOMET in 1981, the system has become established globally. It has fully developed components for each requirement.

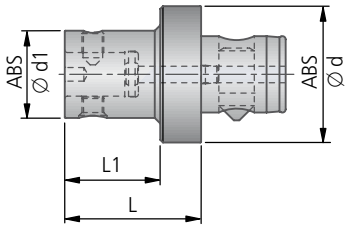
BENEFITS for you:

- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production

KOMET ABS

Reducer with ABS connection





ABS R						
Article	Order No.	ABS Ø d	ABS Ø d1	L	L1	kg
ABS 32-R 25	**A20 10120**	32	25	40	30	0,18
ABS 40-R 32	**A20 10230**	40	32	40	28	0,30
ABS 40-R 25	**A20 10220**	40	25	40	28	0,26
ABS 50-R 40	**A20 10340**	50	40	50	35	0,62
ABS 50-R 32	**A20 10330**	50	32	50	35	0,53
ABS 50-R 25	**A20 10320**	50	25	50	35	0,47
ABS 63-R 50	**A20 10450**	63	50	60	40	1,15
ABS 63-R 40	**A20 10440**	63	40	60	40	1,05
ABS 63-R 32	**A20 10430**	63	32	60	40	0,94
ABS 63-R 25	**A20 10420**	63	25	60	40	0,86
ABS 80-R 63	**A20 10560**	80	63	60	35	2,01
ABS 80-R 50	**A20 10550**	80	50	60	35	1,85
ABS 80-R 40	**A20 10540**	80	40	60	35	1,76
ABS 80-R 32	**A20 10530**	80	32	60	35	1,67
ABS100-R 80	**A20 10670**	100	80	80	50	4,11
ABS100-R 63	**A20 10660**	100	63	80	50	3,70
ABS100-R 50	**A20 10650**	100	50	80	50	3,35
ABS125-R100	**A20 10780**	125	100	100	50	8,56
ABS125-R 80	**A20 10770**	125	80	100	50	8,01

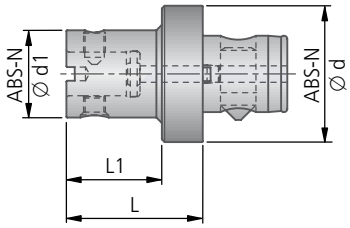
Supply includes:
Reducer mounted complete.

Other lengths available on request

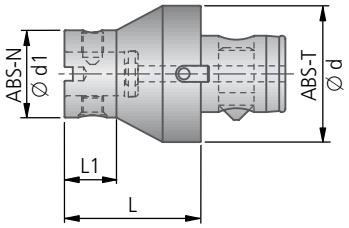
Reducer with ABS N / ABS T connection



ABS N



ABS T



ABS N R						
Article	Order No.	ABS-N Ø d	ABS-N Ø d1	L	L1	kg
ABS 50N-R 40	**A20 20340**	50	40	50	35	0,62
ABS 63N-R 50	**A20 20450**	63	50	60	40	1,15
ABS 80N-R 63	**A20 20560**	80	63	60	35	2,01
ABS 80N-R 50	**A20 20550**	80	50	60	35	1,85
ABS100N-R 80	**A20 20670**	100	80	80	50	4,11
ABS100N-R 50	**A20 20650**	100	50	80	50	3,35

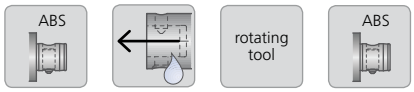
ABS T R						
Article	Order No.	ABS-T Ø d	ABS-N Ø d1	L	L1	kg
ABS 63T-R50	**A20 21450**	63	50	60	21	
ABS 80T-R63	**A20 21560**	80	63	60	22	

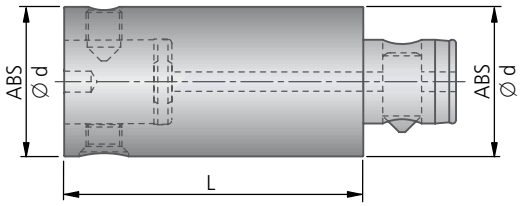
Supply includes:
Reducer mounted complete.

Other lengths available on request

KOMET ABS

Extension with ABS connection



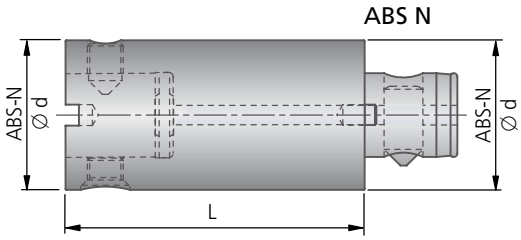


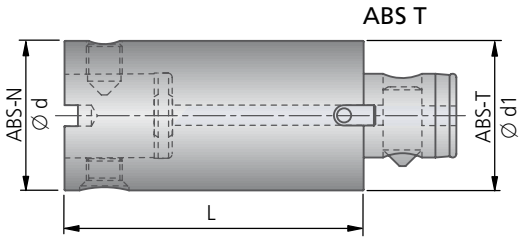
ABS V				
Article	Order No.	ABS Ø d	L	kg
ABS 25-V60	A20 00220	25	60	0,22
ABS 25-V45	A20 00020	25	45	0,16
ABS 32-V70	A20 00230	32	70	0,42
ABS 32-V50	A20 00030	32	50	0,29
ABS 32-V35	A20 00530	32	35	0,20
ABS 40-V90	A20 00240	40	90	0,84
ABS 40-V60	A20 00040	40	60	0,52
ABS 40-V40	A20 00540	40	40	0,36
ABS 50-V150	A20 00150	50	150	2,22
ABS 50-V100	A20 00250	50	100	1,46
ABS 50-V65	A20 00050	50	65	0,94
ABS 50-V50	A20 00550	50	50	0,71
ABS 63-V190	A20 00160	63	190	4,47
ABS 63-V125	A20 00260	63	125	2,94
ABS 63-V85	A20 00060	63	85	1,97
ABS 63-V60	A20 00560	63	60	1,37
ABS 80-V240	A20 00170	80	240	9,18
ABS 80-V125	A20 00270	80	125	4,71
ABS 80-V85	A20 00070	80	85	3,15
ABS 80-V70	A20 00570	80	70	2,58
ABS100-V160	A20 00280	100	160	9,47
ABS100-V125	A20 00080	100	125	7,36
ABS100-V85	A20 00580	100	85	4,95
ABS125-V200	A20 00290	125	200	18,96
ABS125-V160	A20 00090	125	160	15,13

Supply includes:
Extension mounted complete.

Extension with ABS N / ABS T connection







ABS N V				
Article	Order No.	ABS-N Ø d	L	kg
ABS 40N-V90	**A20 05640**	40	90	0,84
ABS 40N-V40	**A20 05840**	40	40	0,36
ABS 50N-V65	**A20 05450**	50	65	0,94
ABS 50N-V50	**A20 05910**	50	50	0,71
ABS 63N-V85	**A20 05460**	63	85	1,97
ABS 63N-V60	**A20 05920**	63	60	1,37
ABS 80N-V85	**A20 05470**	80	85	3,15
ABS 80N-V70	**A20 05930**	80	70	2,58
ABS100N-V160	**A20 05680**	100	160	9,47
ABS100N-V125	**A20 05480**	100	125	7,36
ABS100N-V85	**A20 05880**	100	85	4,95

Supply includes:
Extension mounted complete.

ABS T V					
Article	Order No.	ABS-T Ø d1	ABS-N Ø d	L	kg
ABS 50T-V150	**A20 05751**	50	50	150	2,22
ABS 50T-V100	**A20 05652**	50	50	100	1,46
ABS 50T-V65	**A20 05950**	50	50	65	0,94
ABS 50T-V50	**A20 05851**	50	50	50	0,71
ABS 63T-V190	**A20 05760**	63	63	190	4,47
ABS 63T-V125	**A20 05661**	63	63	125	2,94
ABS 63T-V85	**A20 05960**	63	63	85	1,97
ABS 63T-V60	**A20 05861**	63	63	60	1,37
ABS 80T-V240	**A20 05770**	80	80	240	9,18
ABS 80T-V125	**A20 05671**	80	80	125	4,71
ABS 80T-V85	**A20 05970**	80	80	85	3,15
ABS 80T-V70	**A20 05871**	80	80	70	2,58

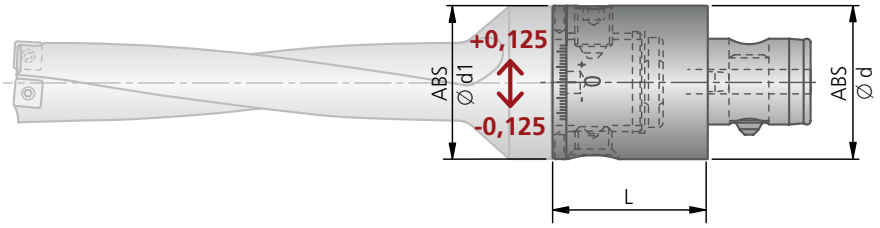
Note:
For optimum torque drive we recommend the use of ABS T extensions.

KOMET ABS

Eccentric adjusting device with ABS connection



Extremely versatile – can be used for a multitude of standard applications
Narrow setting range: ± 0.25 mm in diameter
Compact yet ergonomic design
Up to 30 mm in diameter



ABS EXZ					
Article	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS50-V50 EXZ.	A20 00620	50	50	50	0,71
ABS63-V60 EXZ.	A20 00630	63	63	60	1,33

Supply includes: Eccentric adjusting device with adjusting key Ø2,8.

BENEFITS for you:
- High degree of static and dynamic rigidity
- Very little imbalance
- High spindle speeds can be achieved
- Neutral weight for ABS extensions in similar version
- 1 graduation equals 0.02 mm in the diameter
- Adjustment path ± 0.25 mm in the diameter
- Scale on tool makes adjustment easy
- Correction of various cutting edge radii on tools with fixed insert seating

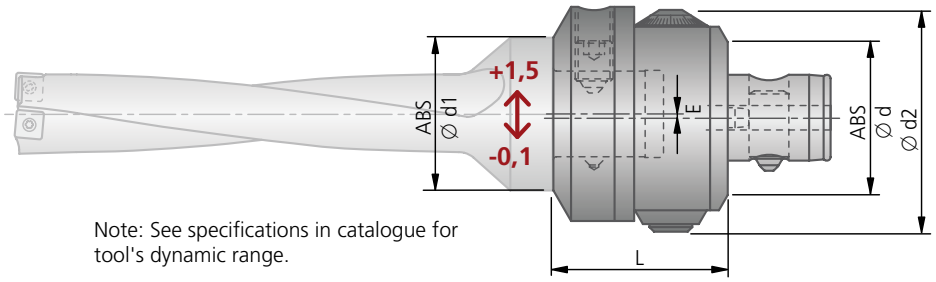
Setting diameter:
To achieve this, the ABS clamping screw is simply loosened and the eccentric sleeve adjusting to the correct dimension against the scale. Once the ABS clamping screw has been tightened again, the tool is ready for use.

KOMET ABS MV

Adjustment device with ABS connection



The stable solution for difficult machining
Wide setting range: + 3 mm in diameter
Also suitable for highly interrupted cuts



Note: See specifications in catalogue for tool's dynamic range.

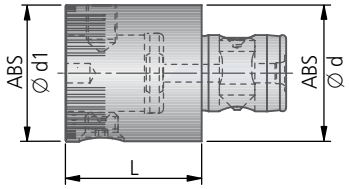
ABS MV							
Article	Order No.	ABS Ø d	ABS Ø d1	Ø d2	L	E	kg
ABS50 / 50-MV	M01 00001	50	50	70	57	1,5	1,49
ABS63 / 50-MV	M01 00011	63	50	88	70	1,5	3,01
ABS63 / 63-MV	M01 00021	63	63	88	70	1,5	2,89

BENEFITS for you:
- Accurate adjustment with micro-adjustable spindle
- Maximum adjustment range + 3 mm on diameter
- Scale divisions 1 division 0.02 mm on diameter
- Rigid clamping of head after adjustment achieved by means of 4 clamping screws on face
- Note: A seal cannot be used in the ABS hole with the adjustment device

KOMET ABS TSD

Torsional dampener with ABS connection





ABS TSD					
Article	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS50-V50-TSD	A20 00651	50	50	50	0,69
ABS63-V60-TSD	A20 00661	63	63	60	1,32
ABS80-V70-TSD	A20 00670	80	80	70	2,5

Supply includes:
Torsional dampener with sealing disc.

The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:

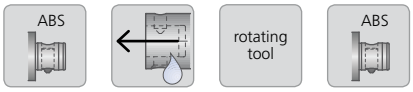
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

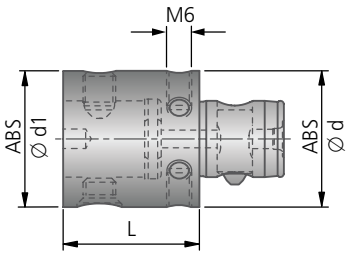
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

BENEFITS for you:

- Considerable prolongation of tool life
- Improved process reliability
- Optimum quality of machined surfaces
- Significant noise reduction
- Simplified device handling
- Can be used both in stationary and rotating tools
- Modular ABS design
- Run-in times no longer required as cutting parameters are unchanged

Balanced adapter with ABS connection





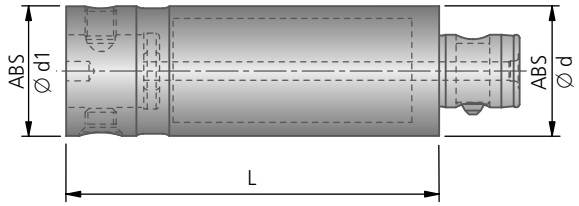
ABS W					
Article	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS32-W35	A20 60530	32	32	35	0,20
ABS40-W40	A20 60540	40	40	40	0,35
ABS50-W50	A20 60550	50	50	50	0,71
ABS63-W60	A20 60560	63	63	60	1,38
ABS80-W70	A20 60570	80	80	70	2,57

Supply includes:
Adaptor without balancing screws.

KOMET ABS V LB

Lightweight extension with ABS connection





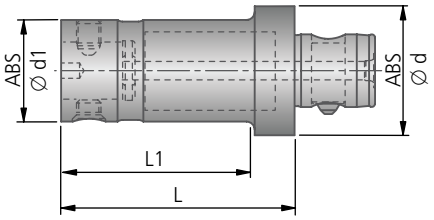
ABS V LB					
Article	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS63-V125-LB	**A20 01060**	63	63	125	1,90
ABS63-V190-LB	**A20 01160**	63	63	190	2,60
ABS80-V170-LB	**A20 01070**	80	80	170	4,00
ABS80-V240-LB	**A20 01170**	80	80	240	5,30
ABS100-V200-LB	**A20 01080**	100	100	200	7,30
ABS100-V300-LB	**A20 01180**	100	100	300	9,70

Supply includes:
Extension mounted complete.

KOMET ABS R LB

Lightweight reducer with ABS connection



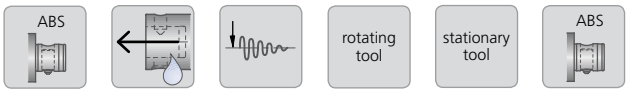


ABS R LB						
Article	Order No.	ABS Ø d	ABS Ø d1	L	L1	kg
ABS80-R63-LB	**A20 11560**	80	63	145	120	2,80
ABS100-R80-LB	**A20 11670**	100	80	160	130	5,00

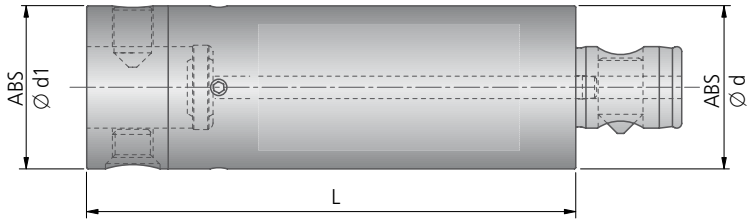
Supply includes:
Reducer mounted complete.

KOMET ABS V HMD

Damping element with ABS connection



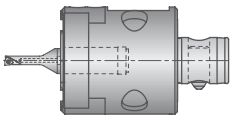
■ reduction in undesirable vibration in the tool



ABS V HMD					
Article	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS 40-V120-HMD	**A20 01240**	40	40	120	1,5
ABS 50-V150-HMD	**A20 01250**	50	50	150	2,8
ABS 63-V190-HMD	**A20 01260**	63	63	190	5,8
ABS 80-V240-HMD	**A20 01270**	80	80	240	11,6

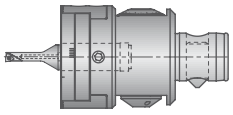
Supply includes:
Extension mounted complete.

MicroKom *BluFlex 2*



ABS50

MicroKom *hi.flex*



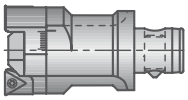
ABS50

MicroKom M03Speed



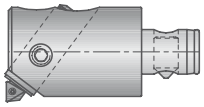
ABS40
ABS50
ABS63

TwinKom G01



ABS40
ABS50
ABS63
ABS80

Adjustable Head

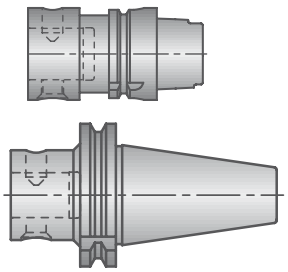


ABS40
ABS50
ABS63
ABS80



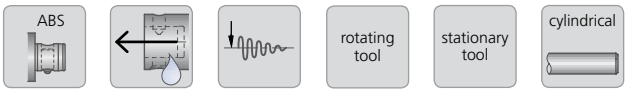
ABS40
ABS50
ABS63
ABS80

Please note:
HMD extension only suitable for counterboring and precision drilling.

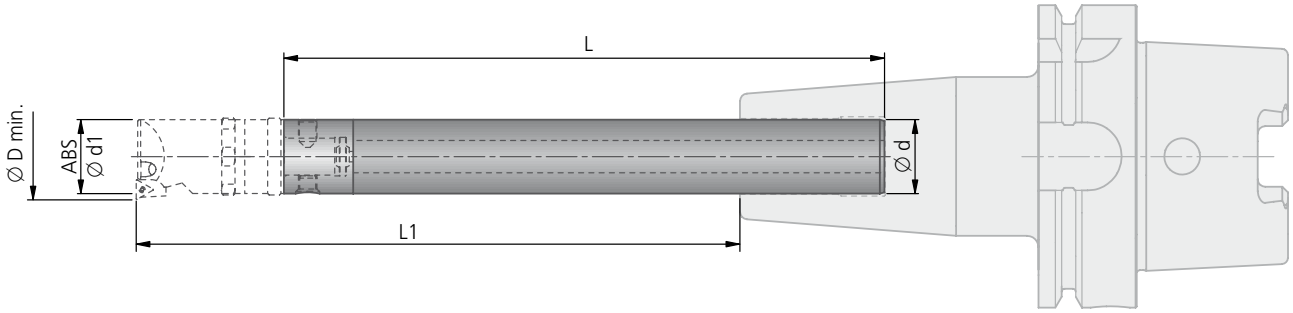


KOMET ABS V HMD

Damping element with ABS connection



reduction in undesirable vibration in the tool ■
suitable for shrink fits ■



ABS V HMD							
Article	Order No.	Cylindrical shank Ø d	ABS Ø d1	Ø $D_{min.}$	L	L1	kg
ABS 25-V150-HMD	**A20 01220**[*1]	25	25	26	160	150 *	0,84
ABS 25-V175-HMD	**A20 01320**[*2]	25	25	26	185	175 *	0,98
ABS 25-V200-HMD	**A20 01420**[*3]	25	25	26	210	200 *	1,13
ABS 32-V200-HMD	**A20 01230**[*1]	32	32	38	200	200 *	1,74
ABS 32-V230-HMD	**A20 01330**[*2]	32	32	38	230	230 *	2,03
ABS 32-V260-HMD	**A20 01430**[*3]	32	32	38	260	260 *	2,31

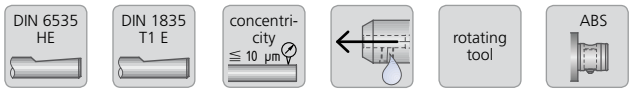
Supply includes:
Extension mounted complete.

* dimension inclusive of M03..... or B30.... Boring heads
*1 suitable for steel, cast and non ferrous metals
*2 suitable for cast and non ferrous metals
*3 only for non ferrous metals

Please note:
HMD extension only suitable for counterboring and precision drilling.

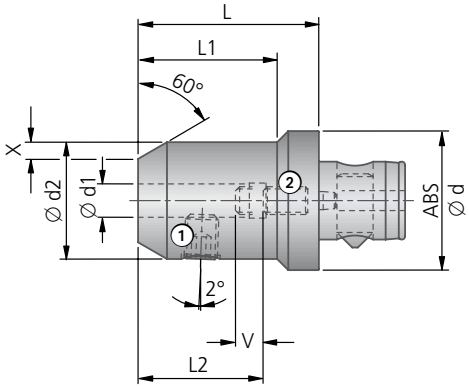
KOMET ABS FWD

Adaptor sleeve Whistle Notch



■ the 2° tilt of the clamping screws prevents the tool from pulling out

Tool restriction X for:
Ø 6 = 5 mm Ø 12 = 6 mm
Ø 8 = 4 mm Ø 16 = 6 mm
Ø 10 = 5 mm Ø 20 = 6 mm



ABS FWD												
										Clamping screw ①		Adjusting screw ②
Article	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	V	kg	Order No.	Qty.	Order No.
ABS25 FWD6	**A30 10601**	25	6	25	55	–	36	10	0,21	**51050 06010**	1	**N00 71000**
ABS25 FWD...*	**A30 10 ..1**	25	6,1–6,4	25	55	–	36	10	0,21	**51050 06010**	1	**N00 71000**
ABS25 FWD...*	**A30 10 ..1**	25	6,5–7,9	25	55	–	36	10	0,21	**51050 06010**	1	**N00 71050**
ABS25 FWD8	**A30 10801**	25	8	28	55	–	36	10	0,25	**51050 08010**	1	**N00 71050**
ABS25 FWD...*	**A30 10 ..1**	25	8,1–8,4	28	55	–	36	10	0,25	**51050 08010**	1	**N00 71050**
ABS25 FWD...*	**A30 10 ..1**	25	8,5–9,9	28	55	–	36	10	0,25	**51050 08010**	1	**N00 71100**
ABS25 FWD10	**A30 11001**	25	10	35	60	–	40	10	0,41	**51050 10012**	1	**N00 71100**
ABS25 FWD...*	**A30 1 ... 1**	25	10,1–10,4	35	60	–	40	8	0,41	**51050 10012**	1	**N00 71100**
ABS25 FWD...*	**A30 1 ... 1**	25	10,5–11,9	35	60	–	40	8	0,41	**51050 10012**	1	**N00 71200**
ABS32 FWD6	**A30 20601**	32	6	25	55	40	36	10	0,25	**51050 06010**	1	**N00 71000**
ABS32 FWD...*	**A30 20 ..1**	32	6,1–6,4	25	55	40	36	10	0,25	**51050 06010**	1	**N00 71000**
ABS32 FWD...*	**A30 20 ..1**	32	6,5–7,9	25	55	40	36	10	0,25	**51050 06010**	1	**N00 71050**
ABS32 FWD8	**A30 20801**	32	8	28	55	40	36	10	0,29	**51050 08010**	1	**N00 71050**
ABS32 FWD...*	**A30 20 ..1**	32	8,1–8,4	28	55	40	36	10	0,29	**51050 08010**	1	**N00 71050**
ABS32 FWD...*	**A30 20 ..1**	32	8,5–9,9	28	55	40	36	10	0,29	**51050 08010**	1	**N00 71110**
ABS32 FWD10	**A30 21001**	32	10	35	60	–	40	10	0,43	**51050 10012**	1	**N00 71110**
ABS32 FWD...*	**A30 2 ... 1**	32	10,1–10,4	35	60	–	40	10	0,43	**51050 10012**	1	**N00 71110**
ABS32 FWD...*	**A30 2 ... 1**	32	10,5–11,9	35	60	–	40	10	0,43	**51050 10012**	1	**N00 71210**
ABS32 FWD12	**A30 21201**	32	12	42	65	–	45	10	0,65	**51050 12016**	1	**N00 71210**
ABS32 FWD...*	**A30 2 ... 1**	32	12,1–12,4	42	65	–	45	10	0,65	**51050 12016**	1	**N00 71210**
ABS32 FWD...*	**A30 2 ... 1**	32	12,5–14	42	65	–	45	10	0,65	**51050 12016**	1	**N00 71300**

▲

Please enter drilling diameter:
Example Ø 7,2 mm = A30 10**72**1
Ø 10,6 mm = A30 1**106**1

Please note:
For all adaptor sleeves marked with * the clamping diameter d1 varies from DIN 1835 E.
All dimensions corredpond to the next standardised clamping diameter d1 downwards.

Supply includes: Adaptor sleeve complete with clamping screw and adjusting screw.

ABS FWD													
										Clamping screw ①		Adjusting screw ②	
Article	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	V	kg	Order No.	Qty.	Order No.	
ABS40 FWD6	A30 30601	40	6	25	55	35	36	10	0,34	51050 06010	1	N00 71000	
ABS40 FWD...*	A30 30 ..1	40	6,1–6,4	25	55	35	36	10	0,34	51050 06010	1	N00 71000	
ABS40 FWD...*	A30 30 ..1	40	6,5–7,9	25	55	35	36	10	0,34	51050 06010	1	N00 71050	
ABS40 FWD8	A30 30801	40	8	28	55	35	36	10	0,38	51050 08010	1	N00 71050	
ABS40 FWD...*	A30 30 ..1	40	8,1–8,4	28	55	35	36	10	0,38	51050 08010	1	N00 71050	
ABS40 FWD...*	A30 30 ..1	40	8,5–9,9	28	55	35	36	10	0,38	51050 08010	1	N00 71120	
ABS40 FWD10	A30 31001	40	10	35	60	45	40	10	0,48	51050 10012	1	N00 71120	
ABS40 FWD...*	A30 3 ... 1	40	10,1–10,4	35	60	45	40	10	0,48	51050 10012	1	N00 71120	
ABS40 FWD...*	A30 3 ... 1	40	10,5–11,9	35	60	45	40	10	0,48	51050 10012	1	N00 71220	
ABS40 FWD12	A30 31201	40	12	42	65	–	45	10	0,68	51050 12016	1	N00 71220	
ABS40 FWD...*	A30 3 ... 1	40	12,1–12,4	42	65	–	45	10	0,68	51050 12016	1	N00 71220	
ABS40 FWD...*	A30 3 ... 1	40	12,5–15,9	42	65	–	45	10	0,68	51050 12016	1	N00 71310	
ABS40 FWD16	A30 31601	40	16	48	70	–	48	10	0,91	51050 14016	1	N00 71400	
ABS40 FWD...*	A30 3 ... 1	40	16,1–19,9	48	70	–	48	10	0,91	51050 14016	1	N00 71400	
ABS50 FWD6	A30 40601	50	6	25	55	30	36	10	0,53	51050 06010	1	N00 71000	
ABS50 FWD...*	A30 40 ..1	50	6,1–6,4	25	55	30	36	10	0,53	51050 06010	1	N00 71000	
ABS50 FWD...*	A30 40 ..1	50	6,5–7,9	25	55	30	36	10	0,53	51050 06010	1	N00 71050	
ABS50 FWD8	A30 40801	50	8	28	55	30	36	10	0,57	51050 08010	1	N00 71050	
ABS50 FWD...*	A30 40 ..1	50	8,1–8,4	28	55	30	36	10	0,57	51050 08010	1	N00 71050	
ABS50 FWD...*	A30 40 ..1	50	8,5–9,9	28	55	30	36	10	0,57	51050 08010	1	N00 71120	
ABS50 FWD10	A30 41001	50	10	35	60	40	40	10	0,66	51050 10012	1	N00 71130	
ABS50 FWD...*	A30 4 ... 1	50	10,1–10,4	35	60	40	40	10	0,66	51050 10012	1	N00 71130	
ABS50 FWD...*	A30 4 ... 1	50	10,5–11,9	35	60	40	40	10	0,66	51050 10012	1	N00 71230	
ABS50 FWD12	A30 41201	50	12	42	65	50	45	10	0,81	51050 12016	1	N00 71230	
ABS50 FWD...*	A30 4 ... 1	50	12,1–12,4	42	65	50	45	10	0,81	51050 12016	1	N00 71230	
ABS50 FWD...*	A30 4 ... 1	50	12,5–15,9	42	65	50	45	10	0,81	51050 12016	1	N00 71320	
ABS50 FWD16	A30 41601	50	16	48	70	55	48	10	1,01	51050 14016	1	N00 71410	
ABS50 FWD...*	A30 4 ... 1	50	16,1–19,9	48	70	55	48	10	1,01	51050 14016	1	N00 71410	
ABS50 FWD20	A30 42002	50	20	52	75	–	50	10	1,20	51050 16016	1	N00 71500	
ABS50 FWD...*	A30 4 ... 2	50	20,1–24,9	52	75	–	50	10	1,20	51050 16016	1	N00 71500	
ABS50 FWD25*	A30 42502	50	25	52	75	–	50	10	1,13	51050 16016	1	N00 71500	
ABS63 FWD10	A30 51001	63	10	35	60	35	40	10	0,96	51050 10012	1	N00 71130	
ABS63 FWD...*	A30 5 ... 1	63	10,1–10,4	35	60	35	40	10	0,96	51050 10012	1	N00 71130	
ABS63 FWD...*	A30 5 ... 1	63	10,5–11,9	35	60	35	40	10	0,96	51050 10012	1	N00 71230	
ABS63 FWD12	A30 51201	63	12	42	65	45	45	10	1,08	51050 12016	1	N00 71230	
ABS63 FWD...*	A30 5 ... 1	63	12,1–12,4	42	65	45	45	10	1,08	51050 12016	1	N00 71230	
ABS63 FWD...*	A30 5 ... 1	63	12,5–15,9	42	65	45	45	10	1,08	51050 12016	1	N00 71320	
ABS63 FWD16	A30 51601	63	16	48	70	50	48	10	1,27	51050 14016	1	N00 71410	
ABS63 FWD...*	A30 5 ... 1	63	16,1–19,9	48	70	50	48	10	1,27	51050 14016	1	N00 71410	
ABS63 FWD20	A30 52001	63	20	52	75	55	50	10	1,43	51050 16016	1	N00 71500	
ABS63 FWD...*	A30 5 ... 1	63	20,1–24,9	52	75	55	50	10	1,43	51050 16016	1	N00 71500	
ABS63 FWD25	A30 52501	63	25	65	80	–	56	10	2,00	51050 18220	2	N00 71500	
ABS63 FWD...*	A30 5 ... 1	63	25,1–28	65	80	–	56	10	2,00	51050 18220	2	N00 71500	
ABS80 FWD25	A30 62501	80	25	65	80	60	58	10	2,50	51050 18220	2	N00 71600	
ABS80 FWD...*	A30 6 ... 1	80	25,1–28	65	80	60	58	10	2,50	51050 18220	2	N00 71600	
ABS80 FWD...*	A30 6 ... 1	80	28,1–31,9	72	90	70	60	10	2,50	51050 20220	2	N00 71650	
ABS80 FWD32	A30 63201	80	32	72	90	70	60	10	3,02	51050 20220	2	N00 71650	

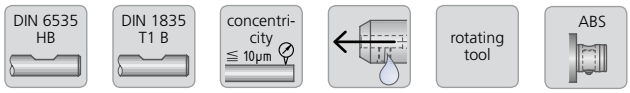
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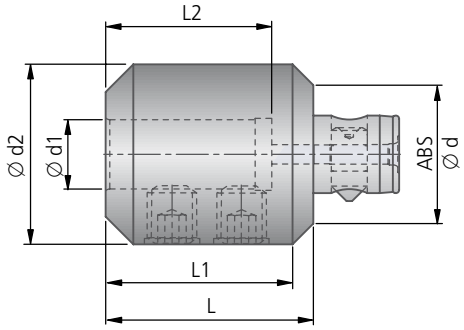
Please enter drilling diameter:
Example Ø 25,1 mm = A30 6**2511**
Ø 31,9 mm = A30 6**3191**

Please note:
For all adaptor sleeves marked with * the clamping diameter d1 varies from DIN 1835 E. All dimensions corredpond to the next standardised clamping diameter d1 downwards.

KOMET ABS HWD

Adaptor sleeve Weldon



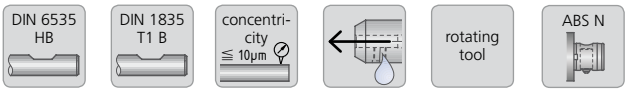


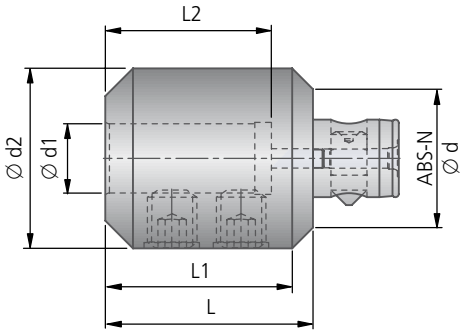
ABS HWD										
									Clamping screw	
Article	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	kg	Order No.	Piece
ABS50-HWD6	**A32 40010**	50	6	25	45	27	40	0,51	**51050 06010**	1
ABS50-HWD8	**A32 40020**	50	8	28	45	27	40	0,49	**51050 08010**	1
ABS50-HWD10	**A32 40030**	50	10	35	55	37	44	0,62	**51050 10012**	1
ABS50-HWD12	**A32 40040**	50	12	42	65	50	49	0,81	**51050 12016**	1
ABS50-HWD14	**A32 40080**	50	14	44	65	50	49	0,85	**51050 12016**	1
ABS50-HWD16	**A32 40050**	50	16	48	65	50	52	0,94	**51050 14016**	1
ABS50-HWD18	**A32 40090**	50	18	50	65	–	52	0,98	**51050 14016**	1
ABS50-HWD20	**A32 40060**	50	20	52	65	–	54	1,03	**51050 16016**	1
ABS50-HWD25	**A32 40070**	50	25	65	75	–	60	1,70	**51050 18220**	2
ABS63-HWD12	**A32 50040**	63	12	42	65	50	49	1,02	**51050 12016**	1
ABS63-HWD14	**A32 50100**	63	14	44	65	50	49	1,06	**51050 12016**	1
ABS63-HWD16	**A32 50050**	63	16	48	65	50	52	1,15	**51050 14016**	1
ABS63-HWD18	**A32 50110**	63	18	50	65	50	52	1,21	**51050 14016**	1
ABS63-HWD20	**A32 50060**	63	20	52	65	45	54	1,26	**51050 16016**	1
ABS63-HWD25	**A32 50070**	63	25	65	75	–	60	1,86	**51050 18220**	2
ABS63-HWD32	**A32 50080**	63	32	72	80	–	64	2,25	**51050 20220**	2
ABS80-HWD20	**A32 60060**	80	20	52	65	45	54	1,84	**51050 16016**	1
ABS80-HWD25	**A32 60070**	80	25	65	75	55	60	2,41	**51050 18220**	2
ABS80-HWD32	**A32 60080**	80	32	72	80	66	64	2,62	**51050 20220**	2

Supply includes: Adaptor sleeve complete with clamping screw.

KOMET ABS N HWD

Adaptor sleeve Weldon



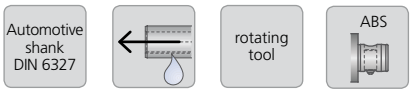


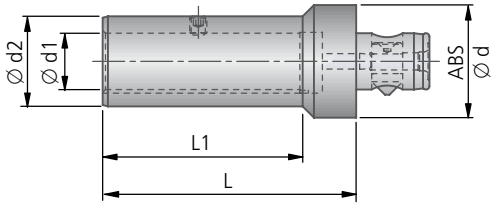
ABS N HWD										
									Clamping screw	
Article	Order No.	ABS-N Ø d	Ø d1	Ø d2	L	L1	L2	kg	Order No.	Piece
ABS50N-HWD20	**A32 40260**	50	20	52	65	–	54	1,03	**51050 16016**	1
ABS50N-HWD25	**A32 40270**	50	25	65	75	–	60	1,70	**51050 18220**	2
ABS63N-HWD32	**A32 50280**	63	32	72	80	–	64	2,25	**51050 20220**	2

Supply includes: Adaptor sleeve complete with clamping screw.

KOMET ABS HTR

Adaptor





ABS HTR							
Article	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	kg
ABS63-HTR28	**A34 05030**	63	28	40	100	85	1,01

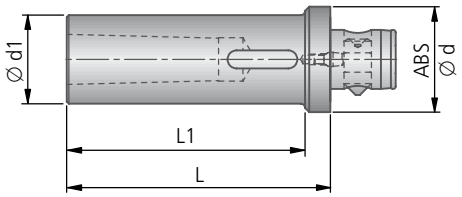
Supply includes:
Adaptor with clamping screw.

KOMET ABS HMK

Adaptor

Morse taper DIN 228 B | rotating tool | ABS

without central coolant supply ■
adaptor sleeves with central coolant supply available on request ■

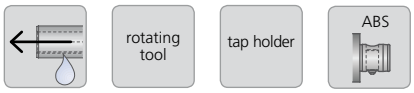


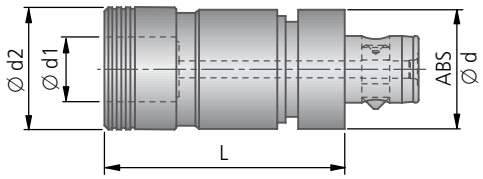
ABS HMK							
Article	Order No.	ABS Ø d	Ø d1	Internal taper DIN 228	L	L1	kg
ABS50-HMK1	**A34 14020**	50	20	MK 1	90	78	0,45
ABS50-HMK2	**A34 14030**	50	30	MK 2	105	93	0,69
ABS50-HMK3	**A34 14040**	50	36	MK 3	125	113	0,96
ABS63-HMK4	**A34 15050**	63	48	MK 4	150	135	1,86

Supply includes:
Adaptor with assembly parts.

KOMET ABS GWF

Tapping chuck



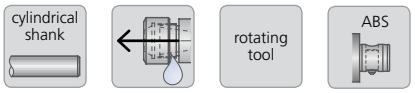


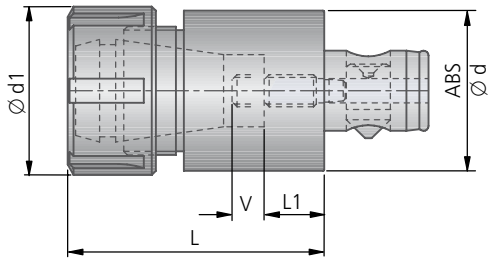
ABS GWF							
Article	Order No.	ABS Ø d	Ø d1	Ø d2	L	Length compensation pressure and tension	kg
ABS 32-GWF19-IK	**A34 32060**	32	19	39	69	7,5	0,46
ABS 40-GWF19-IK	**A34 33060**	40	19	39	73	7,5	0,55
ABS 50-GWF19-IK	**A34 34060**	50	19	39	72	7,5	0,68
ABS 50-GWF31-IK	**A34 34070**	50	31	60	98	10,0	1,50
ABS 63-GWF31-IK	**A34 35070**	63	31	60	111	10,0	1,65
ABS 63-GWF48-IK	**A34 35080**	63	48	86	160	17,5	4,70

Supply includes:
Tapping chuck with assembly parts.

Tapping chucks with tension adjustment on request.

Collet holder





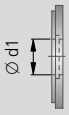
- high concentricity with ground thread on holder and clamping nut
- axial adjustment

ABS SZV							Accessories	Assembly parts			Accessories			
							Hook spanner	Adjusting screw ⑤ short with hole			Adjusting screw short without hole		long with hole	
Article	Order No.	ABS Ø d	Ø d1	Clamping range for collet L	L1	kg	Order No.	Article	Order No.	V	Order No.	V	Order No.	V
ABS25 SZV/ER16	A33 11120	25	28	36,5–40,1	9	0,12	L05 02020	M5	N00 71900	4	N00 71910	4	N00 71020	8
ABS32 SZV/ER20	A33 12130	32	34	49–52,5	14	0,26	L05 02030	M6	N00 71070	8	N00 71940	8	N00 71050	10
ABS40 SZV/ER25	A33 13141	40	42	58,5–62	16	0,50	L05 02040	M8×1	N00 71970	8	N00 71980	8	N00 71150	15
ABS50 SZV/ER32	A33 14151	50	50	65,8–69,3	18	0,86	L05 02050	M10×1	N00 71280	6	N00 71240	10	N00 71250	15
ABS63 SZV/ER40	A33 15161	63	63	74,8–78,3	23	1,58	L05 02060	M12×1	N00 71320	8	N00 71340	15	N00 71350	20
ABS80 SZV/ER50	A33 16171	80	78	92,3–99,3	27	3,22	L05 02070	M16×1	N00 71520	8	–		–	

	Assembly parts	Accessories		
	Collet nut ①	Collet nut ② for washer	Collet nut ③ with friction bearings	Collet nut ④ with friction bearings for washer
for size	Order No.	Order No.	Order No.	Order No.
ER16	51200 00316	51200 00416	52807 03016	52807 01016
ER20	51200 00320	51200 00420	52807 03020	52807 01020
ER25	51200 00325	51200 00425	52807 03025	52807 01025
ER32	51200 00332	51200 00432	52807 03032	52807 01032
ER40	51200 00340	51200 00440	52807 03040	52807 01040

Supply includes:
Collet holder with adjusting screw ⑤ and collet nut ①.
Please order accessories separately.

Washer
for collet nuts ② and ④



Article	Order No.	optional from Ø d1	Clamping range increasing by
DS/ER 16...	52806 16...	3 – 10	0,5 mm
DS/ER 20...	52806 20...	3 – 13	0,5 mm
DS/ER 25...	52806 25...	3 – 16	0,5 mm
DS/ER 32...	52806 32...	3 – 20	0,5 mm
DS/ER 40...	52806 33...	3 – 26	0,5 mm

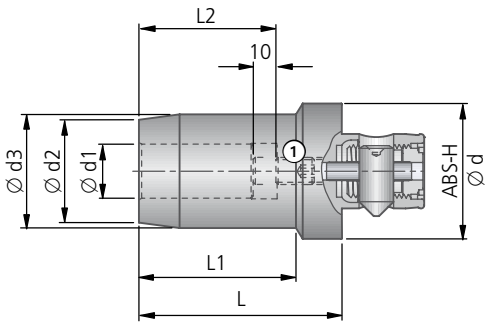
Please state diameter required d1 , e.g. : ▲
035 → Ø 3,5 mm≙d1 3,5–3,0 mm
090 → Ø 9,0 mm≙d1 9,0–8,5 mm
260 → Ø 26,0 mm≙d1 26,0–25,5 mm

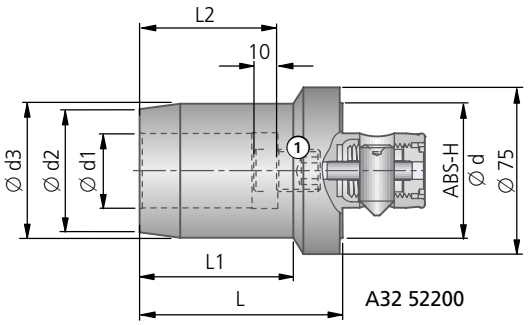
Note: The washers can be used up to a coolant pressure of 100 bar.

KOMET ABS H

Expanding chuck







ABS H Expanding chuck

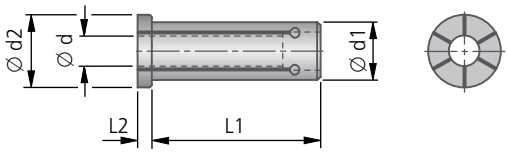
Article	Order No.	ABS-H Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	kg	Adjusting screw ① Article	Adjusting screw ① Order No.
ABS40-H D8	**A32 32060**	40	8	24	28	60	42	37	0,42	M6×12	**N00 71070**
ABS40-H D10	**A32 32070**	40	10	26	30	65	47,5	41	0,46	M8×1×12	**N00 71730**
ABS40-H D12	**A32 32080**	40	12	28	32	65	48	46	0,43	M10×1×12	**N00 71800**
ABS50-H D6	**A32 42110**	50	6	22	26	55	33,5	37	0,53	M5×12	**N00 71020**
ABS50-H D8	**A32 42120**	50	8	24	28	55	34	37	0,60	M6×12	**N00 71070**
ABS50-H D10	**A32 42130**	50	10	26	30	65	45	41	0,56	M8×1×12	**N00 71730**
ABS50-H D12	**A32 42140**	50	12	28	32	65	45,5	46	0,61	M10×1×12	**N00 71800**
ABS50-H D14	**A32 42150**	50	14	30	34	65	46	46	0,60	M10×1×12	**N00 71800**
ABS50-H D16	**A32 42160**	50	16	34	38	70	52	49	0,80	M10×1×12	**N00 71800**
ABS50-H D18	**A32 42170**	50	18	36	40	70	52,5	49	0,85	M10×1×12	**N00 71800**
ABS50-H D20	**A32 42101**	50	20	38	42	75	58	51	0,90	M16×1×16	**N00 71540**
ABS63-H D20	**A32 52180**	63	20	38	42	78	56	51	1,15	M16×1×16	**N00 71540**
ABS63-H D25	**A32 52190**	63	25	53	57	85	60	57		M16×1×16	**N00 71540**
ABS63-H D32	**A32 52200**	63	32	60	64	90	61	61	2,10	M16×1×16	**N00 71540**

Tool shank tolerance: h6 for Ø 6 - 32 mm

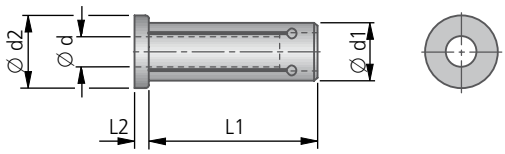
Supply includes: Expanding chuck fitted complete with adjusting screw.

- Axial adjustment: Adjustment is by means of the ABS H spigot with an hexagonal key.
- ABS H connection: ABS H, the ABS variation for use where greater concentricity is required, is fully compatible with the ABS standard programme. During the clamping operation, the design of the ABS H compensates for play in the connection.
- Spindle speed: from 15000 min-1 we recommend that the chuck be balanced before using with clamped tool.
- no maintenance

with slotted collar
for peripheral cooling



with closed collar
for internal coolant supply



Adaptor sleeve						
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 13291	3	12	16,5	45	2	0,1
L01 13301	4					
L01 13321	6					
L01 13331	8					
L01 13261	3	20	24	50,5	2	0,1
L01 13271	4					
L01 13281	5					
L01 13201	6					
L01 13211	8					
L01 13221	10					
L01 13231	12					
L01 13241	14					
L01 13251	16					
L01 13501	6	32	35,5	60,5	2	0,3
L01 13511	8					
L01 13521	10					
L01 13531	12					
L01 13541	14					
L01 13551	16					
L01 13561	18					
L01 13571	20					
L01 13581	25					

Adaptor sleeve						
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 14291	3	12	16,5	45	2	0,1
L01 14301	4					
L01 14311	5					
L01 14321	6					
L01 14331	8					
L01 14261	3	20	24	50,5	2	0,1
L01 14271	4					
L01 14281	5					
L01 14201	6					
L01 14211	8					
L01 14221	10					
L01 14231	12					
L01 14241	14					
L01 14251	16					
L01 14410	8	25	29	54,5	2	0,1
L01 14420	10					
L01 14430	12					
L01 14450	16					
L01 14460	18					
L01 14470	20					
L01 14521	10	32	35,5	60,5	2	0,3
L01 14531	12					
L01 14541	14					
L01 14551	16					
L01 14561	18					
L01 14571	20					
L01 14581	25					

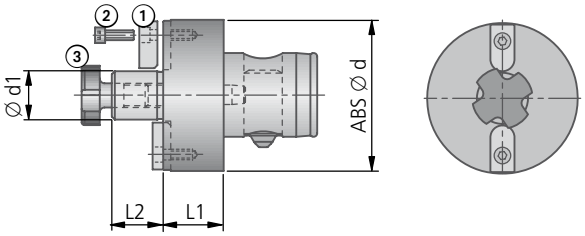
KOMET ABS

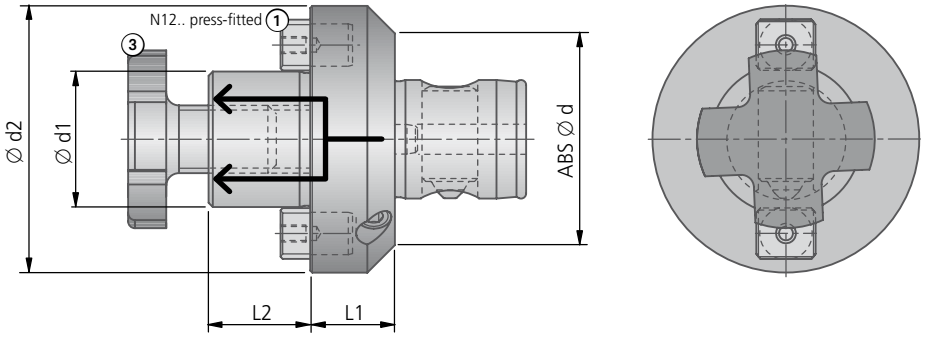
Milling cutter arbor FA / FAM



...FA:

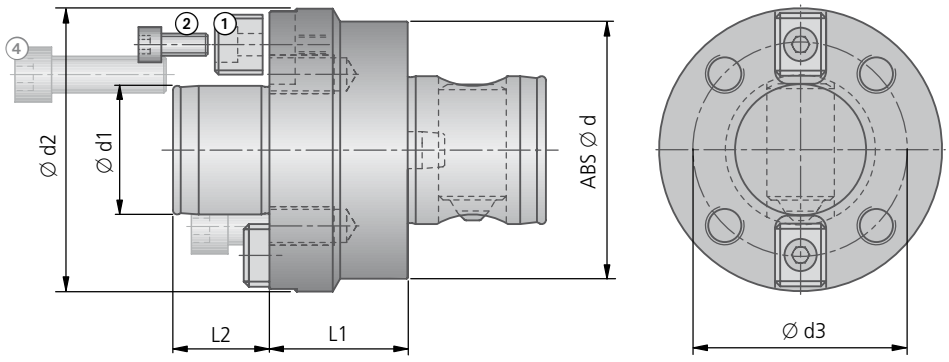
A40 24023 (ABS50 FA16)
without internal coolant supply





...FAM: Milling cutter adaptor with 4 screw-in threads for cutter heads with tool clamping to DIN 2079.

without internal coolant supply



ABS FA									
Order No. Article	ABS Ø d	Ø d1	Ø d2	L1	L2	kg	Drive key ① Key block Order No.	Cylindrical screw ② DIN 912 Order No. Article	Cutter clamping screw ③ DIN 6367 Order No. Article
A40 24023 ABS50 FA16	50	16	–	20	17	0,48	8×15	**55011 03010** M3×10	**55062 00008** M8
A40 24034 ABS50 FA22	50	22	50	20	19	0,51	**N12 20120**	–	**55062 00010** M10
A40 24043 ABS50 FA27	50	27	50	20	21	0,57	**N12 20140**	–	**55062 00012** M12
A40 24053 ABS50 FA32	50	32	63	20	24	0,80	**N12 20170**	–	**55062 00016** M16
A40 25032 ABS63 FA22	63	22	63	22	19	0,84	**N12 20120**	–	**55062 00010** M10
A40 25042 ABS63 FA27	63	27	63	22	21	0,90	**N12 20140**	–	**55062 00012** M12
A40 25052 ABS63 FA32	63	32	63	22	24	0,99	**N12 20170**	–	**55062 00016** M16
A40 25062 ABS63 FA40	63	40	80	22	27	1,41	FA40/16BR	–	**55062 00020** M20
A40 26042 ABS80 FA27	80	27	80	25	21	1,59	**N12 20140**	–	**55062 00012** M12
A40 26052 ABS80 FA32	80	32	80	25	24	1,68	**N12 20170**	–	**55062 00016** M16
A40 26062 ABS80 FA40	80	40	80	25	27	1,85	FA40/16BR	–	**55062 00020** M20
A40 27052 ABS100 FA32	100	32	100	25	24	2,10	**N12 20170**	–	**55062 00016** M16
A40 27062 ABS100 FA40	100	40	100	25	27	2,34	FA40/16BR	–	**55062 00020** M20

Supply includes:
Milling cutter adaptor ..FA with drive key/key block ①/cylindrical screw ② and cutter clamping screw ③.

ABS FAM									Screws ④ for cutter heads with internal bore location
Order No. Article	ABS Ø d	Ø d1	Ø d2	Bolt circle Ø d3	L1	L2	kg	Key block ① Order No. Article	Cylindrical screw ② DIN 912 Order No. Article	Order No. Article
A40 16062 ABS 80-FAM40	80	40	88	66,7	43	30	2,60	**56341 00001** A40	**55011 06016** M6×16	**55011 12040** M12×40
A40 17062 ABS100-FAM40	100	40	88	66,7	38	30	3,50	**56341 00001** A40	**55011 06016** M6×16	**55011 12040** M12×40
A40 17072 ABS100-FAM60	100	60	130	101,6	56	40	6,50	**56341 00003** A50	**55011 12025** M12×25	**55011 16050** M16×50

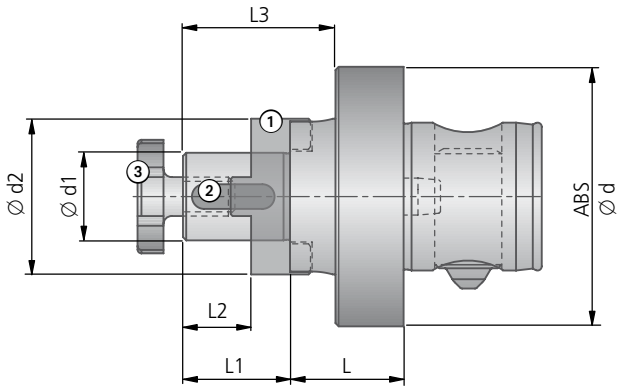
Supply includes:
Milling cutter adaptor ..FAM with key block ① and cylindrical screw ②.
Please order screws ④ for mounting the cutter heads separately.

KOMET ABS

Combination milling cutter arbor

DIN 6358 | rotating tool | ABS

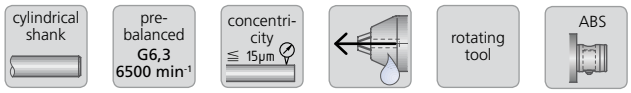
for milling cutters with longitudinal or cross slots

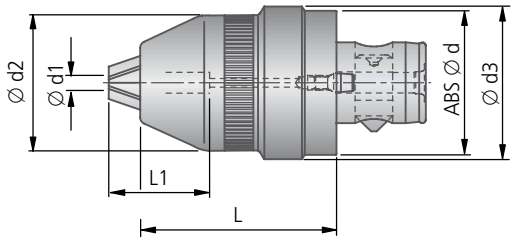


ABS FAK											
Order No. Article	ABS Ø d	Ø d1	Ø d2	L	L1	L2	L3	kg	Driving ring ① DIN 6366 Part 1 Order No. Article	Feather key ② DIN 6885 Part 1 Order No. Article	Cutter clamping screw ③ DIN 6367 Order No. Article
A40 04022 ABS50 FAK16	50	16	32	22	27	17	39	0,46	**55237 00016** 16×10	**51305 04020** A4×4×20	**55062 00008** M8
A40 04032 ABS50 FAK22	50	22	40	22	31	19	43	0,59	**55237 00022** 22×12	**51305 06025** A6×6×25	**55062 00010** M10
A40 05021 ABS63 FAK16	63	16	32	26	27	17	42	1,0	**55237 00016** 16×10	**51305 04020** A4×4×20	**55062 00008** M8
A40 05031 ABS63 FAK22	63	22	40	26	31	19	46	1,15	**55237 00022** 22×12	**51305 06025** A6×6×25	**55062 00010** M10
A40 05041 ABS63 FAK27	63	27	48	26	33	21	48	1,25	**55237 00027** 27×12	**51305 07025** A7×7×25	**55062 00012** M12
A40 06031 ABS80 FAK22	80	22	40	33	31	19	51	1,8	**55237 00022** 22×12	**51305 06025** A6×6×25	**55062 00010** M10
A40 06041 ABS80 FAK27	80	27	48	33	33	21	53	1,9	**55237 00027** 27×12	**51305 07025** A7×7×25	**55062 00012** M12
A40 06051 ABS80 FAK32	80	32	58	33	38	24	58	2,3	**55237 00032** 32×14	**51305 08028** A8×7×28	**55062 00016** M16
A40 06061 ABS80 FAK40	80	40	70	33	41	27	61	2,75	**55237 00040** 40×14	**51305 10032** A10×8×32	**55062 00020** M20

Supply includes: Milling cutter adaptor with driving ring ①, feather key ② and cutter clamping screw ③.

Short drill chuck





ABS NCB								
Article	Order No.	ABS Ø d	Clamping range Ø d1	Ø d2	Ø d3	L	Clamping depth L1	kg
ABS50-NCB1	**A34 24030**	50	0,5-13	49	57,5	95	29	1,56
ABS50-NCB2	**A34 24040**	50	3-16	52	57,5	95	29	1,60

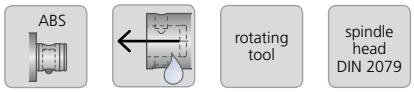
Supply includes:
Short drill chuck with Mimatic key.

- clamping with original Mimatic key only
- the maximum permissible spindle speed for short drill chuck is **6500 min**$^{-1}$ for **pre-balanced** design
- on request: for **fine balanced** version (G2.5), the maximum spindle speed is **20 000 min**$^{-1}$
- higher clamping force (also suitable for milling)

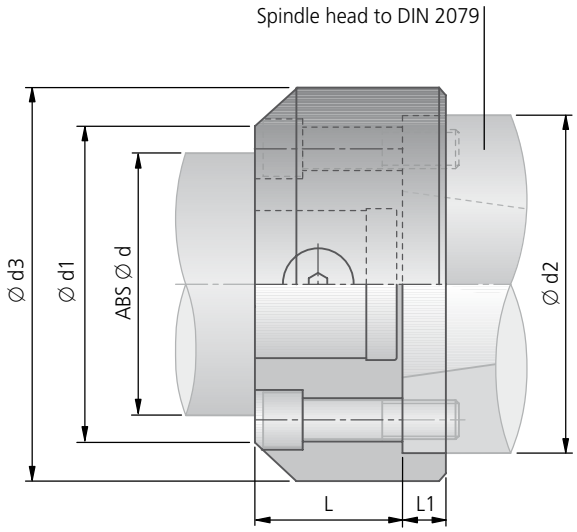
Mimatic is a registered trademark of mimatic GmbH, Betzigau

KOMET ABS

Spindle adaptor flange with ABS connection



This adaptor flange does not have key slots. Drive keys on spindle head must be removed.

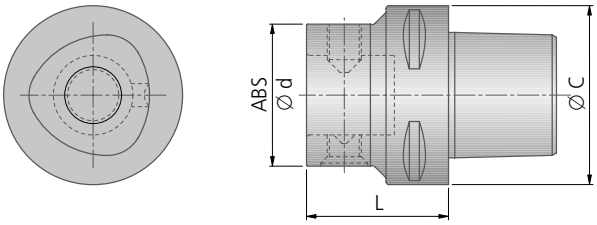


DIN 2079 ABS									
ISO	Article	Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	L	L1	kg
30	ABS32 VFS30	**A01 01130**	32	70	69,83	90	24	11	1,14
30	ABS40 VFS30	**A01 01140**	40	70	69,83	90	28	11	1,24
30	ABS50 VFS30	**A01 01150**	50	70	69,83	90	32	11	1,42
30	ABS63 VFS30	**A01 01160**	63	70	69,83	90	40	11	1,71
40	ABS50 VFS40	**A01 01250**	50	80	88,88	110	32	12	2,15
40	ABS63 VFS40	**A01 01260**	63	80	88,88	110	40	12	2,60
40	ABS80 VFS40	**A01 01270**	80	100	88,88	110	44	12	2,74
50	ABS50 VFS50	**A01 01450**	50	120	128,57	150	32	17	4,57
50	ABS63 VFS50	**A01 01460**	63	120	128,57	150	40	17	5,22
50	ABS80 VFS50	**A01 01470**	80	120	128,57	150	44	17	5,65
50	ABS125 VFS50	**A01 01490**	125	140	128,57	160	72	17	9,24

Supply includes:
Adaptor mounted complete.

PSC Adaptor with ABS connection



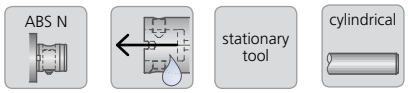


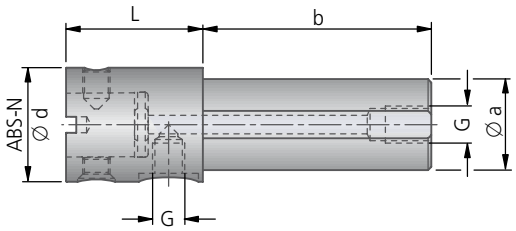
PSC ABS					
Article	Order No.	PSC Ø C	ABS Ø d	L	kg
C4-ABS50-50	**A69 04050**	40	50	50	0,54
C5-ABS50-50	**A69 05050**	50	50	50	0,95
C6-ABS50-50	**A69 06050**	63	50	50	1,00
C6-ABS63-60	**A69 06060**	63	63	60	1,34
C8-ABS50-50	**A69 08050**	80	50	50	1,76
C8-ABS63-60	**A69 08060**	80	63	60	2,11
C8-ABS80-80	**A69 08070**	80	80	80	2,99

Other adaptors with connections for specific manufacturers can be supplied on request.

KOMET ABS N TC

Adaptor with ABS N connection



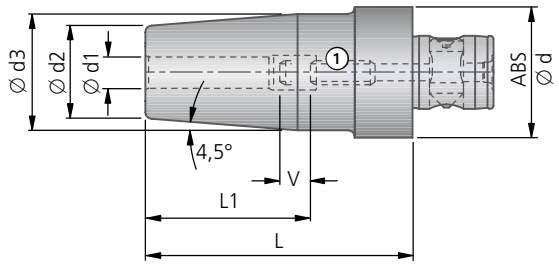


ABS N TC							
Article	Order No.	ABS-N Ø d	L	Ø a	b	G	kg
ABS50N-TC40	**A01 15450**	50	60	40	100	G3/8"	1,67
ABS63N-TC40	**A01 15460**	63	65	40	100	G3/8"	2,25
ABS50N-TC50	**A01 15550**	50	60	50	120	G3/8"	2,50
ABS63N-TC50	**A01 15560**	63	65	50	120	G3/8"	3,10
ABS80N-TC50	**A01 15570**	80	70	50	120	G3/8"	3,94
ABS50N-TC60	**A01 15650**	50	60	60	120	G3/8"	3,35
ABS63N-TC60	**A01 15660**	63	65	60	120	G3/8"	3,87
ABS80N-TC60	**A01 15670**	80	70	60	120	G3/8"	4,84
ABS50N-TC80	**A01 15750**	50	60	80	160	G3/8"	6,87
ABS63N-TC80	**A01 15760**	63	65	80	160	G3/8"	7,41
ABS80N-TC80	**A01 15770**	80	70	80	160	G3/8"	8,25
ABS100N-TC80	**A01 15780**	100	90	80	160	G3/8"	10,38

We supply other shank versions on request.

Thermal expansion chuck ThermoGrip

DIN 6535 HA | DIN 6535 HB | DIN 6535 HE | DIN 1835 T1 A | DIN 1835 T1 B | DIN 1835 T1 E | pre-balanced G6,3 15.000 min^{-1} | rotating tool | ABS



ABS | ThermoGrip										Adjusting screw ①	
Article	Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Article	Order No.
ABS32-T8	**A32 26050**	32	8	21	27	70	36	10	0,30	M6 / SW3	**N00 72010**
ABS32-T10	**A32 26061**	32	10	24	32	70	42	10	0,37	M8×1 / SW4	**N00 72050**
ABS32-T12	**A32 26071**	32	12	24	32	80	47	10	0,40	M10×1 / SW5	**N00 72060**
ABS40-T8	**A32 36050**	40	8	21	27	70	36	10	0,39	M6 / SW3	**N00 72010**
ABS40-T10	**A32 36061**	40	10	24	32	70	42	10	0,44	M8×1 / SW4	**N00 72050**
ABS40-T12	**A32 36071**	40	12	24	32	80	47	10	0,48	M10×1 / SW5	**N00 72060**
ABS40-T16	**A32 36091**	40	16	27	34	90	50	10	0,58	M12×1 / SW6	**N00 72070**
ABS50-T6	**A32 46040**	50	6	21	27	75	36	10	0,64	M5 / SW2,5	**N00 72000**
ABS50-T8	**A32 46050**	50	8	21	27	75	36	10	0,63	M6 / SW3	**N00 72010**
ABS50-T10	**A32 46061**	50	10	24	32	80	42	10	0,70	M8×1 / SW4	**N00 72050**
ABS50-T12	**A32 46071**	50	12	24	32	80	47	10	0,68	M10×1 / SW5	**N00 72060**
ABS50-T14	**A32 46081**	50	14	27	34	80	47	10	0,73	M10×1 / SW5	**N00 72060**
ABS50-T16	**A32 46091**	50	16	27	34	85	50	10	0,71	M12×1 / SW6	**N00 72070**
ABS50-T18	**A32 46101**	50	18	33	42	85	50	10	0,89	M12×1 / SW6	**N00 72070**
ABS50-T20	**A32 46111**	50	20	33	42	90	52	10	0,90	M16×1 / SW8	**N00 72080**
ABS63-T20	**A32 56111**	63	20	33	42	90	52	10	1,21	M16×1 / SW8	**N00 72080**
ABS63-T25	**A32 56121**	63	25	44	53	95	58	10	1,61	M16×1 / SW8	**N00 72080**
ABS63-T32	**A32 56131**	63	32	44	53	95	58	10	1,44	M16×1 / SW8	**N00 72080**

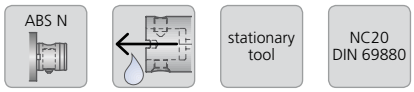
Tool shank tolerance: h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

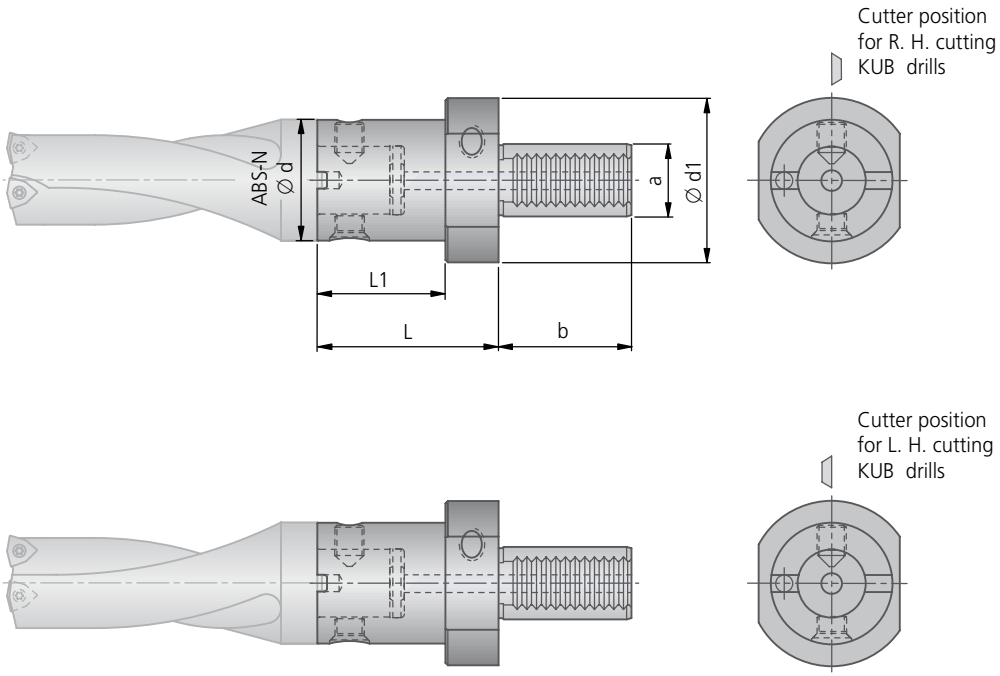
Supply includes: Thermal expansion chuck fitted complete.

ThermoGrip is a registered trademark of Bilz Werkzeugfabrik GmbH & Co. KG

KOMET ABS N NC..20

VDI Adaptor with ABS N connection





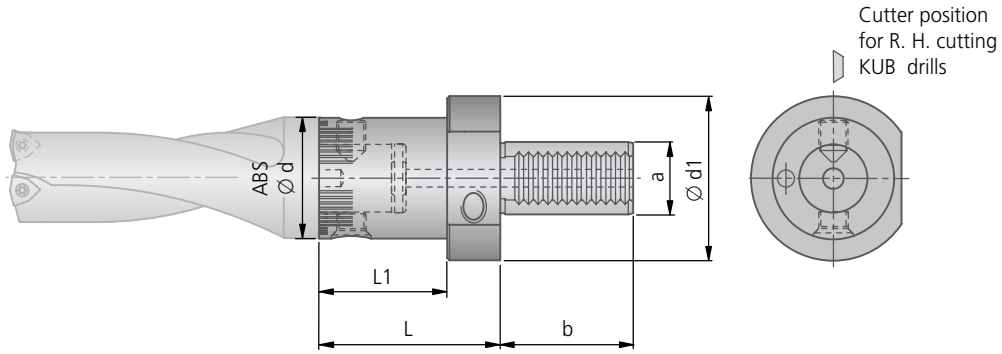
NC..20 ABS N								
Article	Order No.	ABS-N Ø d	L	L1	a	b	Ø d1	kg
ABS50N-NC3020	**A01 11152**	50	60	38	30	55	68	1,33
ABS50N-NC4020	**A01 11252**	50	60	38	40	63	83	1,89
ABS63N-NC4020	**A01 11262**	63	70	48	40	63	83	2,35
ABS80N-NC4020	**A01 11271**	80	75	53	40	63	83	2,97
ABS50N-NC5020	**A01 11352**	50	65	35	50	78	98	3,06
ABS63N-NC5020	**A01 11362**	63	75	45	50	78	98	3,51
ABS80N-NC5020	**A01 11372**	80	75	45	50	78	98	3,86
ABS50N-NC6020	**A01 11452**	50	65	35	60	94	123	4,82
ABS63N-NC6020	**A01 11462**	63	75	45	60	94	123	5,24
ABS80N-NC6020	**A01 11472**	80	75	45	60	94	123	5,61
ABS100N-NC6020	**A01 11482**	100	90	60	60	94	123	7,00

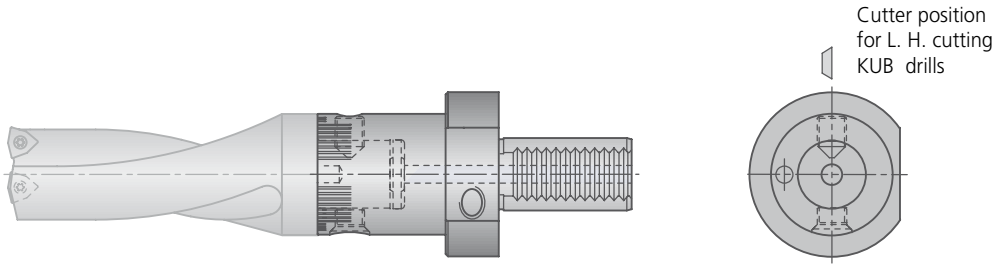
Note:
When adjusting the KUB drill in + X direction, use this adaptor.

KOMET ABS NC..20 TSD

VDI Torsional dampener with ABS connection







NC..20 ABS TSD								
Article	Order No.	ABS Ø d	L	L1	a	b	Ø d1	kg
NC4020 ABS50-TSD	**A01 14251**	50	60	38	40	63	83	1,89
NC4020 ABS63-TSD	**A01 14261**	63	70	48	40	63	83	2,35
NC5020 ABS50-TSD	**A01 14351**	50	65	35	50	78	98	3,06
NC5020 ABS63-TSD	**A01 14361**	63	75	45	50	78	98	3,51
NC5020 ABS80-TSD	**A01 14370**	80	75	45	50	78	98	3,86

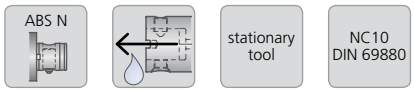
The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:

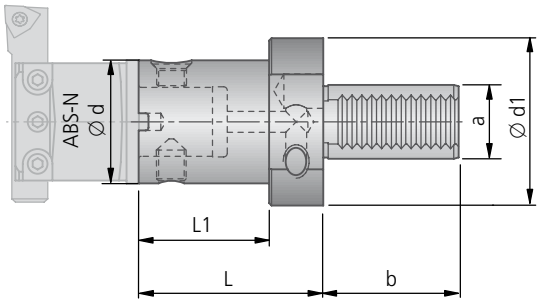
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

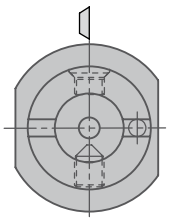
KOMET ABS N NC..10

VDI Adaptor with ABS N connection





Cutter position for
L. H. cutting turning tools

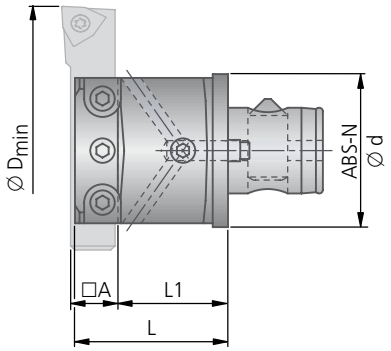


For using KUB drills
we recommend the adaptor NC..20.

ABS N NC..10								
Article	Order No.	ABS-N Ø d	L	L1	a	b	Ø d1	kg
ABS50N-NC3010	A01 10151	50	60	38	30	55	68	1,33
ABS50N-NC4010	A01 10251	50	60	38	40	63	83	1,90
ABS63N-NC4010	A01 10261	63	70	48	40	63	83	2,40
ABS80N-NC4010	A01 10271	80	75	53	40	63	83	2,98
ABS50N-NC5010	A01 10351	50	65	35	50	78	98	3,06
ABS63N-NC5010	A01 10361	63	75	45	50	78	98	3,06
ABS80N-NC5010	A01 10371	80	75	45	50	78	98	3,87
ABS50N-NC6010	A01 10451	50	65	35	60	94	123	4,80
ABS63N-NC6010	A01 10461	63	75	45	60	94	123	5,24
ABS80N-NC6010	A01 10471	80	75	45	60	94	123	5,63

Adaptor with ABS N connection

Turning tool | stationary tool | ABS N



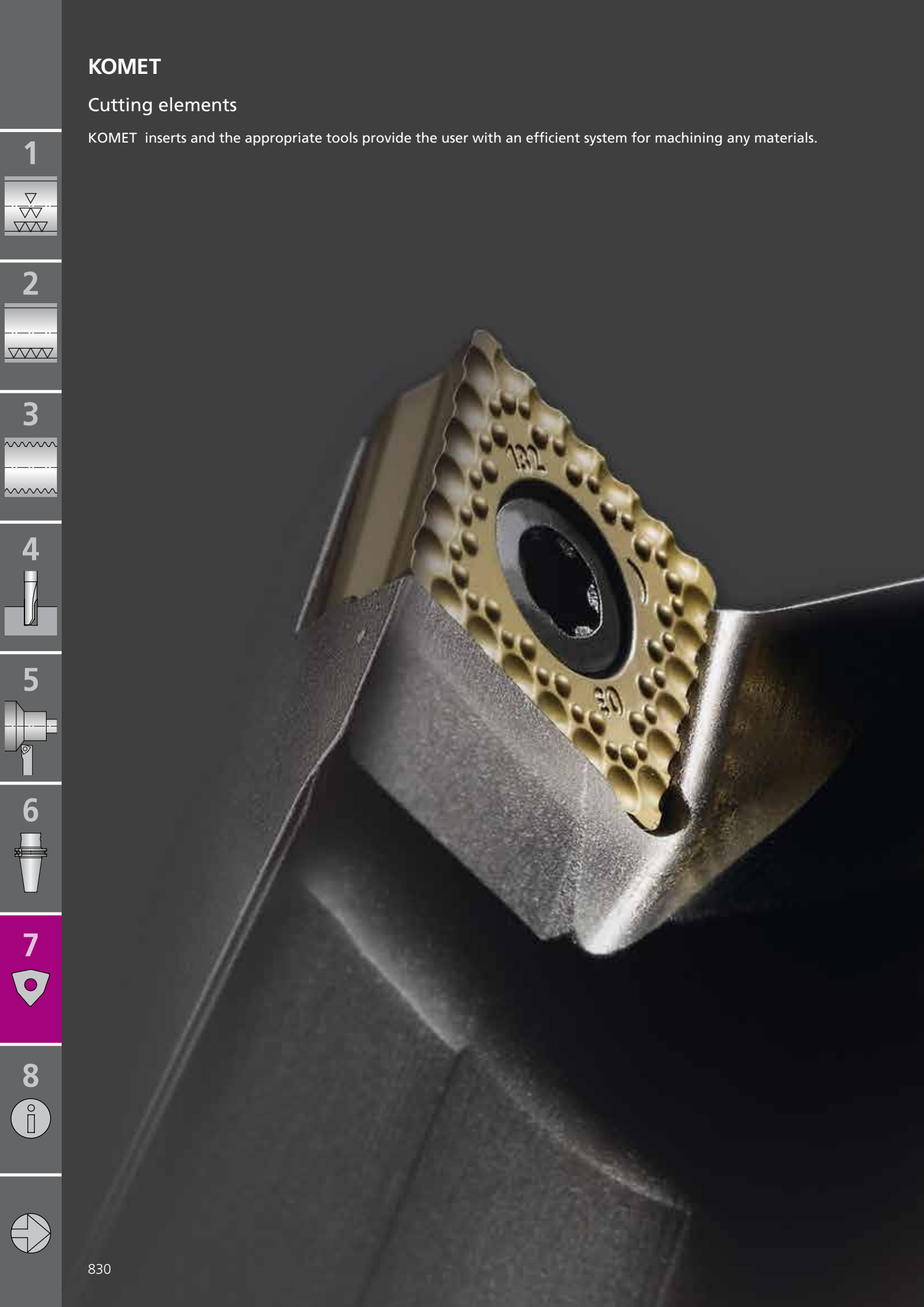
ABS N								
							Threaded pin DIN 915	
Order No.	ABS-N Ø d	Ø D min.	L	L1	□ A	kg	Article	Order No.
A36 33050	40	60	40	29	12		M6×12	55053 06012
A36 34050	50	75	50	36	16		M8×20	55053 08020
A36 35050	63	95	63	45	20		M10×20	55053 10020
A36 36050	80	120	80	58	25		M12×25	55053 12025
A36 37050	100	150	100	72	32		M16×30	55053 16030

Supply includes: Adaptor fitted complete, inclusive threaded pin.

KOMET

Cutting elements

KOMET inserts and the appropriate tools provide the user with an efficient system for machining any materials.





KOMET

Cutting elements

	Page
Programme summary	832 – 834
Cutting tool materials	835 – 841
Unisix Indexable inserts	
W00 | W01 | W04 | W29	842 – 861
Indexable inserts	
W80 | W82 | W83	899 – 908
Indexable inserts	
W30 | W32 | W34 | W37	862 – 886
W57 | W58 | W59	887 – 891
Indexable inserts	
W60 | W78 | W79	892 – 898
W85 | W89	909 – 914
Inserts H60 | H62	915 – 921
Replaceable head H75 | H76	922 – 924
Central drill bit V95, Centring spade V96	925
Numerical coding	926
Clamping screws	Chapter 8

Cutting elements for solid drilling, counterboring, fine boring and lathe machining

84° Unisix Indexable inserts W00 | W01 | W04 | W29



▶ 842

Unisix W00 04 – WOHX
- MicroKom *BluFlex* 2, MicroKom *hi.flex*
- Counterboring tools
- Inside and outside turning tools
- Extremely efficient high-precision indexable inserts for tiny diameters



▶ 843 – 844

Unisix W01 – WOHX
- TwinKom double cutters, Kometric insert seatings
- Counterboring tools
- Inside and outside turning tools
- Extremely efficient high-precision indexable inserts
- Compatible with W29... indexable inserts



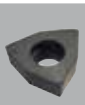
▶ 845

Unisix W01..60 – WOHX
- TwinKom double cutters, Kometric insert seatings
- Counterboring tools
- Inside and outside turning tools
- For cast iron materials
- High-precision indexable insert for difficult application conditions
- Compatible with W29... indexable inserts



▶ 846

Unisix W01 – WOEX with CBN
- TwinKom double cutters, Kometric insert seatings
- Counterboring tools
- Inside and outside turning tools
- CBN: Cast iron materials and C322, hardened materials
- Compatible with W29... indexable inserts



▶ 847 – 848

Unisix Power W01 – WOHX $\varkappa$ = 90° / 75°
- TwinKom double cutters, Kometric insert seatings
- Counterboring tools with large L/D ratios
- For cast iron materials only
- High-precision indexable insert with support chamfer



▶ 849

Unisix W01 – WOHX
- Approach angle 90° for corner milling cutter
- Approach angle 75° for face milling cutter



▶ 850 – 851

Unisix W04 – WNHX
- Counterboring tools
- Inside and outside turning tools
- Six usable cutting edges



▶ 852

Unisix W29..00 – WOEX
- TwinKom double cutters, Kometric insert seatings
- KUB Centron, KUB Trigon, KUB drill
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Rounded cutting edge for light cutting



▶ 853

Unisix W29..01 – WOEX
- KUB Centron, KUB Trigon, KUB drill
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Universal topography with stable, chamfered cutting edge



▶ 854

Unisix W29..02 – WOEX
- TwinKom double cutters
- Counterboring tools
- Extremely stable cutting edge with chip breaker



▶ 855

Unisix W29..03 – WOEX
- KUB Centron, KUB Trigon, KUB drill
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Extreme chip breaking properties for long-chipping and stainless steel materials



▶ 856 – 857

Unisix W29..11 – WOEX
- KUB Centron, KUB Trigon, KUB drill
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Sharp, highly positive topography for non-ferrous metals



▶ 858

Unisix W29..13 – WOEX
- KUB Centron, KUB Trigon, KUB drill
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Highly positive topography with powerful chip breaking properties



▶ 859 – 860

Unisix W29..15 | W29..16 – WOGX
- TwinKom double cutters, Kometric insert seatings
- Counterboring and fine boring tools
- Inside and outside turning tools
- Semi-finishing chip breaking topography, optionally available with wiper geometry



▶ 861

Unisix W29..20 – WOEX
- KUB Centron, KUB Trigon, KUB drill
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Inside and outside turning tools
- Stable, chamfered cutting edge

90° Indexable inserts W80 | W82 | W83



▶ 899

W80..01 – SOGX
- KUB Pentron
- Solid drilling and counterboring tool
- Universal topography with stable cutting edge



▶ 900

W80..03 – SOGX
- KUB Pentron
- Solid drilling and counterboring tool
- Extreme chip breaking properties for long-chipping and stainless steel materials



▶ 901

W80..21 – SOGX
- KUB Pentron
- Soft-cutting topography that reduces cutting forces



▶ 902

W82..21 – SOHX
- Counterboring and fine boring tools
- Inside and outside turning tools
- Precision-ground design
- Compatible with W83 32...



▶ 908

W83 – SPGW
- Counterboring, fine boring and turning tools
- For non-ferrous metals



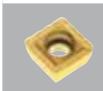
▶ 903

W83..01 – SOEX
- KUB Quatron, KUB Centron Powerline
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Universal topography with stable cutting edge



▶ 904

W83..03 – SOEX
- KUB Quatron, KUB Centron Powerline
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Extreme chip breaking properties for long-chipping and stainless steel materials



▶ 905

W83..13 – SOEX
- KUB Quatron, KUB Centron Powerline
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Highly positive topography with powerful chip breaking properties



▶ 906

W83..21 – SOEX
- KUB Quatron, KUB Centron Powerline
- TwinKom double cutters, Kometric insert seatings
- Solid drilling and counterboring tool
- Sharp, highly positive topography for non-ferrous metals



▶ 907

W83..32/33 – SOEX
- KUB Quatron, KUB Centron Powerline
- Solid drill bit tools
- For reduced burr formation at the hole exit

Cutting elements for solid drilling, counterboring, fine boring and lathe machining

60° Indexable inserts W30 | W32 | W34 | W37 | W57 | W58 | W59



▶ 862 – 864

W30 – TOHX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- High-precision indexable insert in a variety of designs



▶ 865

W30 (F) – TOHX
- KWS and KWZ indexable insert countersinks
- Countersink, end milling cutter
- High-precision indexable insert with three universal chip breakers



▶ 866 – 867

W30..82 | W30..83 – TOHX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- High-precision indexable insert made of Cermet with a sharp, stabilised cutting edge



▶ 868

W30.....31 (UF) – TOHX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- High-precision indexable insert with wiper for high feed rates



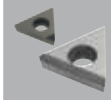
▶ 869 – 870

W30.....32 (US) – TOHX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- High-precision indexable insert for chip control with extremely low cutting depths



▶ 871

W30.....39 – TOHX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- High-precision indexable insert with low thrust forces for tools with long projection lengths



▶ 872 – 876

W30..94 | W30..98 | W30..99 – TOEX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- PCD: Non-ferrous metals, plastics, composite material, graphite
- CBN: Cast iron materials, hardened materials



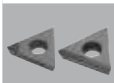
▶ 877 – 879

W32..15 | W32..45 – TPHX
- Kometric insert seatings, MicroKom micro-adjustable head
- Counterboring and fine boring tools
- Highly positive chip shape geometry ground to a polish for non-ferrous metals



▶ 880 – 881

W32..60 – TPHB
- Kometric insert seatings, MicroKom micro-adjustable head
- Counterboring and fine boring tools
- Rake face ground to a polish for non-ferrous metals



▶ 882 – 884

W32..94 | W32..98 | W32..99 – TPHB | TPHX
- Kometric insert seatings, MicroKom micro-adjustable head
- Counterboring and fine boring tools
- PCD: Non-ferrous metals, plastics, composite material, graphite



▶ 885

W34..66 – TOGX
- Counterboring and fine boring tools
- Stable indexable insert with three chip breakers that have been ground through
- Compatible with W59.. indexable inserts



▶ 886

W37..60 – TEHB
- Counterboring and fine boring tools
- 20° clearance angle with rake face ground to a polish for non-ferrous metals



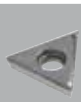
▶ 887

W57..12 – TOGX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- Circumferential, highly positive and sharp topography for non-ferrous metals
- Compatible with W30.. indexable inserts



▶ 888 – 889

W57..14 | W57..18 – TOGX
- MicroKom *hi.flex*, MicroKom *BluFlex* 2, MicroKom M02, MicroKom M03 Speed, MicroKom M04, micro-adjustable heads, boring bars, TwinKom double cutter
- Counterboring and fine boring tools
- Inside and outside turning tools
- Chip breaking topography for extremely low cutting depths for steel materials, cast iron and stainless steels
- Also available in a wiper version
- Compatible with W30.. indexable inserts



▶ 890

W58..12 – TPGX
- Kometric insert seatings, MicroKom micro-adjustable head
- Counterboring and fine boring tools
- Circumferential, highly positive and sharp topography for non-ferrous metals
- Compatible with W32.. indexable inserts



▶ 891

W59..05 – TOHT
- Counterboring and fine boring tools
- Circumferential positive chip breaker for roughing, chamfer and face operations

Tangential insert H60 | H62



▶ 915 – 921

H60 | H62 – XOHX
- KUB Duon
- Double-edged solid drill bit tools
- H60: Tangential, stable geometry for steel and cast iron materials
- H62: Tangential, highly positive geometry for non-ferrous metals

Replaceable head H75 | H76



▶ 922 – 924

- KUB K2
- Double-edged solid drill bit tools
- H75: Geometry for steel and stainless materials
- H76: Geometry for cast iron materials

Central drill bit V95

▶ 925

- KUB Centron, KUB V464
- Solid drill bit tools for high L/D ratios

Centring spade V96

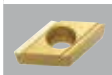


▶ 925

- KUB Centron Powerline
- Double-edged solid drill bit tools for high L/D ratios

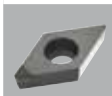
Cutting elements for solid drilling, counterboring, fine boring and lathe machining

55° Indexable inserts W60 | W79



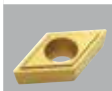
▸ 892 – 894

W60 – DOHT | DOHW:
- Kometric insert seatings
- Inside and outside turning tools, copy turning
- Extremely efficient high-precision indexable inserts



▸ 895

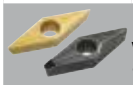
W60..99 – DOEW
- Kometric insert seatings
- Inside and outside turning tools, copy turning
- CBN: Cast iron materials, hardened materials



▸ 898

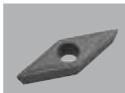
W79..06 – DOHT:
- Kometric insert seatings
- Inside and outside turning tools, copy turning
- Circumferential positive chip breaker
- Compatible with W60.. indexable inserts

35° Indexable inserts W78 | W89



▸ 896 – 897

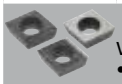
W78..07 – VOHT | W78.99 – VOEW
- Inside and outside turning tools, copy turning
- CBN: Cast iron materials



▸ 914

W89 – VCMT | VBMT:
- Inside and outside turning tools, copy turning
- Positive chip breaker

80° Indexable inserts W85



▸ 909 – 912

W85 – CPGT | CPGW:
- Counterboring, fine boring and turning tools
- For non-ferrous metals



▸ 913

W85 – CCGW
- TwinKom double cutters, Kometric insert seatings
- Counterboring, fine boring and turning tools
- CBN design for cast iron materials and hardened materials

Guidelines
for selecting inserts

All dimensions shown are subject to tolerance in accordance with the relevant requirement.

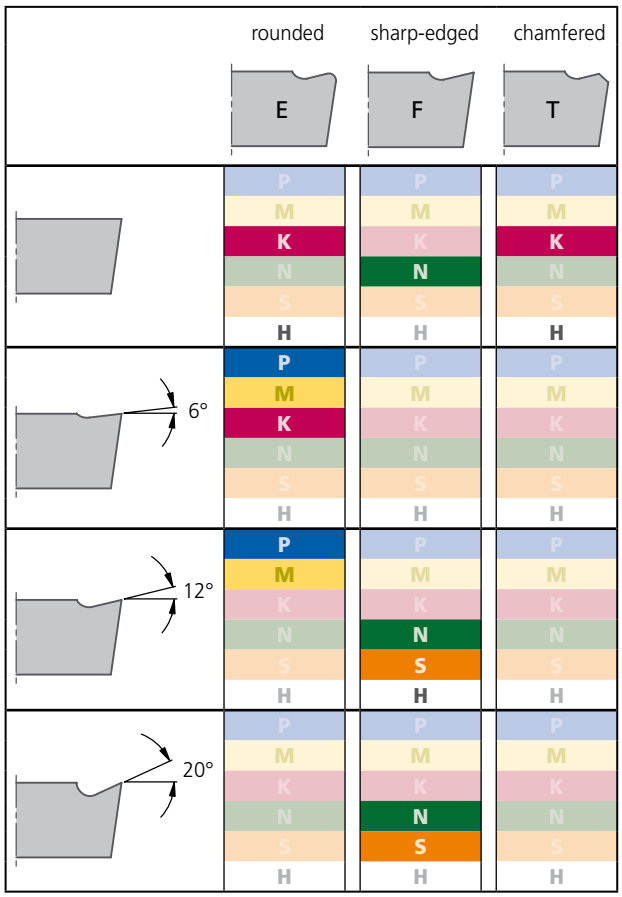
	Workpiece material
P	**Steel:** All types of steel and cast steel, except for stainless steel with an austenitic microstructure
M	**Stainless steel:** Stainless, austenitic and austenitic-ferritic steel and cast steel
K	**Cast iron:** Grey cast iron, spheroidal graphite iron, malleable cast iron, compacted graphite iron
N	**Non-ferrous metals:** Aluminium and other non-ferrous metals, non-metallic materials
S	**Superalloys and titanium:** Highly heat-resistant iron-, nickel- and cobalt-based alloys, titanium and titanium alloys
H	**Hardened materials:** Hardened steel, hardened cast iron materials, white cast iron

Abbreviations used

d1	mm	Incircle diameter
s	mm	Indexable insert thickness
l	mm	Theoretical usable length of cutting edge
γ	°	Rake angle
f	mm	Construction auxiliary dimension
R	mm	Corner radius
d2	mm	Hole diameter

Selecting the top rake
Recommendations for using inserts with ground chip grooves

(W00, W01, W04, W30, W32, W34, W37, W60)



uncoated																				
Cutting material designation	Code	Norm code		Application range: Wear resistance + / Toughness factor −													Properties	Cutting element
				01	05	10	15	20	25	30	35	40	45	50				
P25M	03	HW-P25	P														uncoated: • with excellent wear resistance and good toughness factor • suitable for medium to high cutting speeds for roughing and finishing, also for interrupted cut • for non-alloy steel, malleable cast iron, stainless steel and cast steel	W01 W29 W30 W34 W59 W60 W79
			M															
			K															
			N															
			S															
			H															
P35	14	HW-P35	P														uncoated: • for turning operations with suitable toughness factor and good resistance to wear	W78..
			M															
			K															
			N															
			S															
			H															
P40	04	HW-P40	P														uncoated: • with medium wear resistance at optimum toughness factor • low to medium cutting speeds for roughing and with heavily interrupted cut • also for unstable working conditions • for non-alloy steel, die steel and stainless steels	W00.. W29..01 W29..13 W30..
			M															
			K															
			N															
			S															
			H															
				01	05	10	15	20	25	30	35	40	45	50			main area of application / suitable in some cases	

Summary and list of codes

uncoated

Cutting material designation	Code	Norm code		Application range: Wear resistance (+ / −), Toughness factor (− / +) 01 05 10 15 20 25 30 35 40 45 50	Properties	Cutting element
K10	21	HW-K10	P M K N S H		uncoated: • chamfered and neutral cutter geometry suitable for all grades of cast iron • positively sintered (PD) and ground geometry is used for aluminium e.g.: 12° and 20° top rake, ground sharply and not rounded	W00 W59 W01 W60 W29 W79 W30 W83 W32 W85 W34 W37
K10 / fine grain	23	HW-M10 HW-K15	P M K N S H		uncoated: • fine grain carbide with high wear and thermal resistance • mainly for machining aluminium; PVD coated, also suitable for machining general steels and rust-resistant materials	W57..12

01 05 10 15 20 25 30 35 40 45 50 — main area of application; suitable in some cases

CVD coated

Cutting material designation	Code	Norm code		Application range: Wear resistance (+ / −), Toughness factor (− / +) 01 05 10 15 20 25 30 35 40 45 50	Properties	Cutting element
BK50	50	HC-K10	P M K N S H		diamond coating: • crystalline diamond coating • for cutting aluminium alloys, abrasive materials, graphite, plastics and bonded materials at high cutting speeds	W29..11 W32.. W85..
BK60	60	HC-M10	P M K N S H		CVD-TiC-TiCN-TiN: • multiple coating on P25M carbide base • high tool life, even in the higher cutting speed range	W29..15 W29..16 W57..14
BK6110	6110	HC-P10 HC-K10	P M K N S H	H: < 52 HRC	CVD-TiCN-TiN-Al_2O_3: • for final machining bores in cast iron and steel materials • excellent dimensional stability due to combination of wear resistant substrate and ceramic, surface treated coating	W30
BK6115	6115	HC-P20 HC-K20	P M K N S H	H: <52HRC	CVD-TiCN-TiN-Al_2O_3: • high quality, surface treated coating • mainly for machining cast iron materials under standard to stable conditions, also at high cutting speeds	W01.. W29..00 W29..01 W30.. W80..01 W83..01
BK6130	6130	HC-P30	P M K N S H		CVD-TiCN-TiN-Al_2O_3: • high quality, surface treated coating • mainly for machining cast iron materials • thanks to stabilised cutting edge excellent suitability for steel and stainless steel	W83..21

01 05 10 15 20 25 30 35 40 45 50 — main area of application; suitable in some cases

CVD coated

Cutting material designation	Code	Norm code		Application range: Wear resistance + / Toughness factor − (01 05 10 15 20 25 30 35 40 45 50)	Properties	Cutting element
BK62	62	HC-K15	P M K N S H	H: <52HRC	CVD-TiN-TiCN-Al_2O_3: • for higher cutting speeds in all types of cast iron materials • only limited suitability for extreme interrupted cut • not suitable for aluminium materials	W29..01 W30..
BK6420	6420	HC-P20	P M K N S H		CVD-TiCN-Al_2O_3-TiN: • considerable level of toughness with extremely high wear resistance • for full cut at high cutting speeds in steel, cast steel and stainless steels	W29..01 W83..01 W83..13
BK6425	6425	HC-P25 HC-M15	P M K N S H		MT-CVD-TiCN-Al_2O_3-TiN: • standard grades (grain) • extremely high wear resistance in all steel and stainless materials	W01 W59 W29 W60 W30 W79 W34 W80
BK6440	6440		P M K N S H		MT-CVD-TiCN-Al_2O_3-TiN: • extremely tough standard grit grade • considerable wear resistance in steel and stainless materials, even under unfavourable cutting conditions	W00.. W01.. W29.. W30.. W59.. W79..
BK66	66	HC-P35	P M K N S H		CVD-TiC-TiCN-TiN: • for turning	W78..
BK6730	6730		P M K N S H		CVD-TiCN-Al_2O_3: • extremely wear-resistant grade for use in long-chipping materials, even stainless, with high cutting speeds • very resistant to temperature and abrasion thanks to surface-treated protective layer	W83..03
BK72	72	HC-P30	P M K N S H		CVD-TiCN-TiC-Al_2O_3-TiN: • cutting material with tough substrate • for machining non-alloy and alloy steels, die steels and cast steel • ensures long tool life even at high cutting speeds	W29..01
BK73	73	HC-M20	P M K N S H		CVD-TiCN/TiC/TiN-Al_2O_3-TiN: • tough carbide substrate • for machining rust-resistant and stainless steel materials, plus alloyed steels, even at higher cutting speeds	W29..15 W29..16
BK7325	7325		P M K N S H		CVD-TiCN-TiC-Al_2O_3-TiN: • ideally matched alloyed carbide in conjunction with modern CVD coating • for high-performance machining of rust and acid-resistant steels, even under difficult conditions	W29..13

01 05 10 15 20 25 30 35 40 45 50

main area of application suitable in some cases

Summary and list of codes

CVD coated

Cutting material designation	Code	Norm code		Application range: Wear resistance + / − ; Toughness factor − / + (01 05 10 15 20 25 30 35 40 45 50)	Properties	Cutting element
BK74	74	HC-M25	P, M, K, N, S, H		CVD-TiCN-TiC-Al_2O_3: • extremely tough carbide substrate • for machining rust-resistant and stainless steels	W83..01 W83..13
BK75	75	HC-P25	P, M, K, N, S, H		CVD-TiCN-TiC-Al_2O_3-TiN: • tough carbide substrate • for turning non-alloy and alloy steels, die steels and cast steel	W89..
BK7615	7615	HC-K15	P, M, K, N, S, H	H: <52HRC	CVD-TiCN-Al_2O_3: • main high wear-resistant grade for wet and dry machining of all cast iron materials • extremely good edge stability due to new type of surface finish • can therefore also be used for interrupted cut • highly productive cutting material grade	W01.. W29..00 W29..01 W30.. W59.. W79.. W83..01

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

PVD coated

Cutting material designation	Code	Norm code		Application range: Wear resistance + / − ; Toughness factor − / + (01 05 10 15 20 25 30 35 40 45 50)	Properties	Cutting element
BK2710	2710	HC-K10	P, M, K, N, S, H	H: < 52 HRC	PVD-TiAlN: • extremely wear resistant carbide • for bore end machining stainless steels, structural and tool steels and cast materials • excellent dimensional stability due to combination of hard substrate and TiAln coating with high aluminium content	W00.. W30.. W60.. W79..
BK2715	2715	HC-K20	P, M, K, N, S, H		PVD-TiAlN: • models designed especially for continuous drilling and milling in GJL and GJS • high wear resistance, good edge stability and sufficient toughness reserves • for double-edged continuous drilling, also suitable for high-strength steels and non-ferrous metals	H60..
BK2725	2725		P, M, K, N, S, H		PVD-TiAlN: • coated carbide in the P15-P30, M20-M25 and K15-K25 application areas with universal properties, for a wide scope of applications, also for difficult conditions in the medium speed range	H76..
BK2730	2730	HC-M25	P, M, K, N, S, H		PVD-TiAlN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges	W29..20 W82..21

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

PVD coated

Cutting material designation	Code	Norm code	Application range: Wear resistance / Toughness factor (01 05 10 15 20 25 30 35 40 45 50)	Properties	Cutting element
BK77	77	HC-K10	P, M, K, N, S, H	PVD-TiN: • wear-resistant PVD-coated grade • for cutting aluminium alloys and plastics at medium cutting speeds • sufficient properties of toughness and a high level of resistance against the formation of build-up on the cutting edges	W29..11 W30.. W85..
BK7710	7710	HC-K10	P, M, K, N, S, H	PVD-TiB_2: • coating on extremely high wear resistance K10 carbide • for finish and rough machining aluminium up to approx. 10% Si content and titanium alloys • optimum coating properties to prevent build-up on cutting edges	W29..11 W32.. W57..12 W58..12 W80..01 W80..21 W82..21 W83..21 H62..
BK79	79	HC-M35	P, M, K, N, S, H	PVD-TiAlN: • coated carbide on P40 base substrate with very high reserves of toughness • low to medium cutting speed for roughing and finishing and with interrupted cut • for non-alloy steel, cast steel, die steels and rust-proof and stainless steels	W29..13 W59..
BK7930	7930	HC-M25	P, M, K, N, S, H	PVD-TiAlN: • extremely efficient combination of extremely fine grade carbide • for use on solid drills for stainless and acid resistant steels	H76..
BK7935	7935		P, M, K, N, S, H	PVD-AlTiN: • coating with high aluminium content on tough substrate for continuous drilling of rust- and acid-resistant steels, and special alloys • Use as continuous drilling inner indexable insert and for difficult conditions recommended	W29..01 W80..01 W80..21 W83..01 W83..13 W83..21 W83..32 ..
BK8125	8125	HC-P25	P, M, K, N, S, H	PVD-TiCN: • coated K20/30 extremely fine grade carbide with good hardness level for extremely high resistance to fracturing • for double insert solid drilling in steel materials, particularly at low and medium cutting speeds with high requirements for cutting edge stability	H60..
BK82	82	HC-K15	P, M, K, N, S, H (< 52 HRC)	PVD-TiN: • coated extremely fine grade carbide with extremely good wear resistance and good toughness factor • can be used principally for cast iron, steel and non-ferrous metal machining, and even for special alloys and hardened steels	UniTurn
BK84	84	HC-P25	P, M, K, N, S, H	PVD-TiCN/TiN: • grade which combines toughness with good wear resistance • for machining steel, cast steel and stainless steel	H60..
BK8425	8425	HC-P25	P, M, K, N, S, H	PVD-TiAlN/TiN: • universally usable grade with increased wear resistance thanks to innovative multi-layer design of PVD coating	W01 W29 W30 W59 W80 W83 H75

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

Summary and list of codes

PVD coated

Cutting material designation	Code	Norm code		Application range: Wear resistance + / − ; Toughness factor − / + 01 05 10 15 20 25 30 35 40 45 50	Properties	Cutting element
BK8430	8430	HC-P30	P, M, K, N, S, H		PVD-TiAlN/TiN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges	W29..15 W29..16 W29..20 W57..14 W57..18 W80..03 W80..21 W83..03 W83..21
BK8440	8440	HC-P35	P, M, K, N, S, H		PVD-TiCN/TiN: • coating on extremely tough substrate • for medium cutting speeds and also suitable for interrupted cut	W00.. H60..
BK8450	8450	HC-P35	P, M, K, N, S, H		PVD-TiCN/TiN: • extremely tough carbide with very fine grain • extremely good wear due to coating • for use on non-alloy and alloy steels and on stainless materials	V95.. V96..
BK8530	8530	HC-P30	P, M, K, N, S, H		PVD-TiAlN+TiN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges • optimised PVD grades	W82..21
BK89	89	HSS-Co.	P, M, K, N, S, H		PVD-TiN: • coated HSS-E high quality, high speed steel • first choice for steel and aluminium • used for low cutting speeds with medium to high feed rates • coolant essential!	V95..
BK90	90	HSS-Co.	P, M, K, N, S, H		PVD-TiAlN: • coated HSS-E high quality, high speed steel • first choice for stainless steel and iron cast • good suited for unusual materials, Ti alloys, Ni and Co alloys • coolant essential!	V95..

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

Super-Hard PCD

Cutting material designation	Code	Norm code		Application range: Wear resistance + / − ; Toughness factor − / + 01 05 10 15 20 25 30 35 40 45 50	Properties	Cutting element
PKD5510	5510		P, M, K, N, S, H		uncoated: • polycrystalline diamond cutting tool material with mixed grain micro-structure • extremely good wear resistance, even with an Si content >12% and high proportions of abrasive filler materials • use in fibre-composite materials (GFRP, CFRP), wood and wood composite materials as well as carbide machining	W30 W32

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

Super-Hard CBN

Cutting material designation	Code	Norm code		Application range: Wear resistance + / − ; Toughness factor − / + (01 05 10 15 20 25 30 35 40 45 50)	Properties	Cutting element
CBN40	40	BL-H05	P M K N S H		• Coated cutting material made from polycrystalline cubic boron nitride (PcBN) • Properties: Low CBN content, average grain size approx. 1µm • For turning hardened steels with over 45 HRC, and nickel-based or cobalt-based highly heat-resistant alloys	W30.. W60.. W85..
CBN57	57	BH-K05	P M K N S H		• Coated cutting material made from polycrystalline cubic boron nitride (PcBN) • Properties: High CBN content, average grain size approx. 2µm • For machining cast materials, powder metallurgical materials and high-temperature alloys	W01.. W30.. W60.. W78.. W85..

Cermet uncoated

CK30	30	HT-P15	P M K N S H		uncoated: • for fine and finish turning • high toughness factor, low wear and comparatively high cutting speeds produce longer tool life and high surface quality	W30..
CK32	32	HT-P15	P M K N S H		uncoated: • for fine and finish turning • low wear and higher cutting speed producing longer tool life and good surface finish • cutting material for high productivity in the upper cutting speed range	W30.. W57..18 W79..
CK3210	3210	HT-P10	P M K N S H		uncoated: • for fine and finish turning • low wear and higher cutting speed producing longer tool life and good surface finish • cutting material for high productivity in the upper cutting speed range	W57..14
CK3230	3230	HT-P20	P M K N S H		uncoated: • extremely tough behaviour and good wear resistance • also suitable for use in interrupted cut	W57..14
CK37	37	HT-P20	P M K N S H		uncoated: • good balance of wear resistance and toughness • allows interrupted cuts and light roughing operations	W29..00 W30.. W79..

Cermet coated

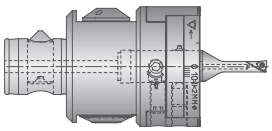
CK38	38	HC-P10	P M K N S H		PVD-TiCN/TiN: • high toughness factor and extremely good wear resistance • his cutting material has a wide range of applications in non-alloy and alloy steel, die steel, rust-resistant and stainless steels and cast irons	W30..

01 05 10 15 20 25 30 35 40 45 50 — main area of application — suitable in some cases

Inserts



Application range:

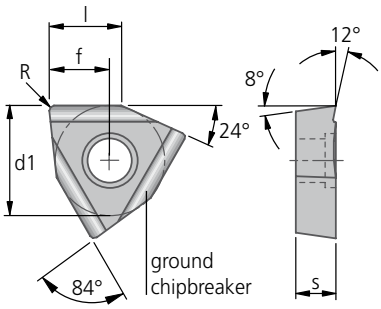


- MicroKom *BluFlex* 2 and MicroKom *hi.flex* Ø 6-8 mm
- External and internal turning
- Special tools

- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:

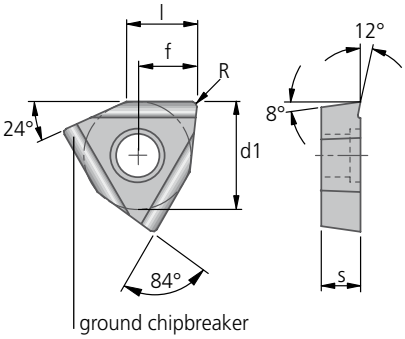
L.H. cutting form „L“



Substrate		Carbide											
Coating type		–	–	PVD	PVD	CVD							
Cutting material designation		P40	K10	BK2710	BK8440	BK6440							
Cutting edge design		E	F	E	E	E							
ISO Code	Order No.												
Cutting edge design E = rounded F = sharp	Enter cutting material code	04	21	2710	8440	6440	d1	s	l	γ	f	R	
WOHX 02T001..L-G12	W00 04120.01..	▲	▲	▲	▲	▲	4,0	1,2	2,6	12°	2,20	0,1	
WOHX 02T002..L-G12	W00 04120.02..			▲	▲						2,19	0,2	
Steel	P	●	◐	●	●	●							
Stainless steel	M	○		○	○	◑							
Cast iron	K		●	●									
Non-ferrous metals	N		●										
Superalloys and titanium	S		●										
Hardened materials	H			○									

Order example:
ISO Code
WOHX 02T001 FL-G12
Cutting material
K10
Order No.
W00 04120.0121

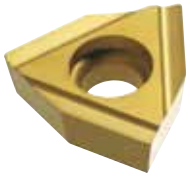
R.H. cutting form „R“



Substrate		Carbide											
Coating type		–	PVD	PVD	CVD								
Cutting material designation		P40	BK2710	BK8440	BK6440								
Cutting edge design		E	E	E	E								
ISO Code	Order No.												
Cutting edge design E = rounded	Enter cutting material code	04	2710	8440	6440	d1	s	l	γ	f	R		
WOHX 02T001..R-G12	W00 04420.01..	▲	▲	▲	▲	4,0	1,2	2,6	12°	2,20	0,1		
WOHX 02T002..R-G12	W00 04420.02..		▲	▲						2,19	0,2		
Steel	P	●	●	●	●								
Stainless steel	M	○	○	○	◑								
Cast iron	K		●										
Non-ferrous metals	N												
Superalloys and titanium	S												
Hardened materials	H		○										

Order example:
ISO Code
WOHX 02T001 ER-G12
Cutting material
BK2710
Order No.
W00 04420.012710

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



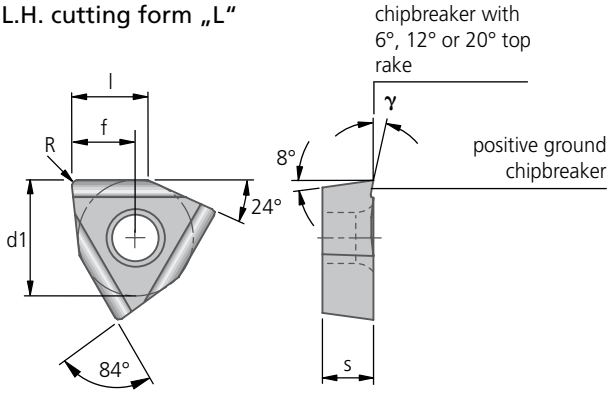
Application range:

- External and internal turning
- TwinKom Double Insert Tools
- Special tools
- Kometric mounted seatings

- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:

L.H. cutting form „L"



Substrate		Carbide											
Coating type		–	–	–	CVD	CVD	PVD						
Cutting material designation		P25M	K10	K10	BK6425	BK6115	BK8425						
Cutting edge design		E	E	F	E	E	E						
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	03	21	21	6425	6115	8425	d1	s	l	γ	f	R
WOHX 030204..L-G06	W01 10060.04..						▲	5,0	2,3	3,2	6°	2,73	0,4
WOHX 030204..L-G12	W01 10120.04..	▲		▲			▲				12°	2,72	0,4
WOHX 040304..L-G12	W01 18120.04..			▲	▲		▲	6,35	3,18	4,1	12°	3,47	0,4
WOHX 05T302..L-G06	W01 24060.02..	▲	▲		▲		▲	8,0	3,8	5,3	6°	4,42	0,2
WOHX 05T304..L-G06	W01 24060.04..					▲						4,40	0,4
WOHX 05T302..L-G12	W01 24120.02..	▲			▲		▲	8,0	3,8	5,3	12°	4,42	0,2
WOHX 05T304..L-G12	W01 24120.04..	▲		▲	▲		▲					4,40	0,4
WOHX 06T302..L-G06	W01 34060.02..	▲	▲		▲		▲	10,0	3,8	6,6	6°	5,53	0,2
WOHX 06T304..L-G06	W01 34060.04..					▲	▲					5,51	0,4
WOHX 06T302..L-G12	W01 34120.02..	▲					▲	10,0	3,8	6,6	12°	5,53	0,2
WOHX 06T304..L-G12	W01 34120.04..	▲		▲	▲		▲					5,51	0,4
WOHX 080402..L-G06	W01 42060.02..	▲			▲		▲	12,0	4,8	7,9	6°	6,64	0,2
WOHX 080404..L-G06	W01 42060.04..		▲			▲						6,62	0,4
WOHX 080402..L-G12	W01 42120.02..				▲		▲	12,0	4,8	7,9	12°	6,64	0,2
WOHX 080404..L-G12	W01 42120.04..	▲		▲	▲		▲					6,62	0,4
WOHX 100504..L-G06	W01 50060.04..	▲	▲		▲		▲	15,0	5,3	9,9	6°	8,29	0,4
WOHX 100504..L-G12	W01 50120.04..			▲			▲				12°	8,29	0,4
WOHX 120606..L-G06	W01 58060.06..						▲	17,6	6,0	11,6	6°	9,71	0,6
WOHX 120606..L-G12	W01 58120.06..						▲				12°	9,71	0,6
Steel P		●	◐	◐	●	◐	●	Order example: ISO Code WOHX 030204 EL-G06 Cutting material BK8425 Order No. W01 10060.048425					
Stainless steel M		○			○		○						
Cast iron K			●	●		●							
Non-ferrous metals N			●	●									
Superalloys and titanium S			●	●									
Hardened materials H						◐ < 52 HRC							

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts

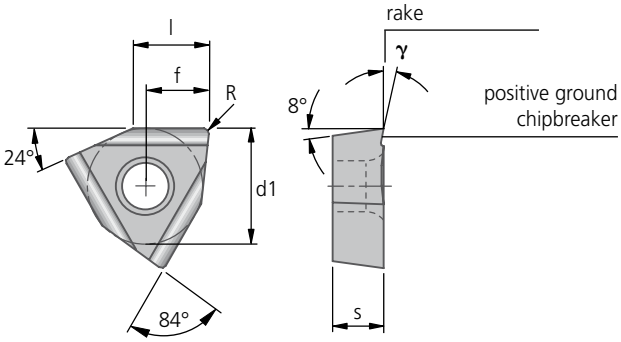


Application range:

- External and internal turning
- TwinKom Double Insert Tools
- Special tools
- Kometric mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:

R.H. cutting form „R“



Substrate		Carbide											
Coating type		–	–	CVD	CVD	PVD							
Cutting material designation		P25M	K10	BK6425	BK6115	BK8425							
Cutting edge design		E	F	E	E	E							
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	 03	 21	 6425	 6115	 8425	d1	s	l	γ	f	R
WOHX 030204..R-G06	**W01 10360.04..**					▲	5,0	2,3	3,2	6°	2,73	0,4
WOHX 030204..R-G12	**W01 10420.04..**					▲				12°	2,72	0,4
WOHX 040304..R-G06	**W01 18360.04..**			▲		▲	6,35	3,18	4,1	6°	3,48	0,4
WOHX 040304..R-G12	**W01 18420.04..**					▲				12°	3,47	0,4
WOHX 05T304..R-G06	**W01 24360.04..**				▲		8,0	3,8	5,3	6°	4,40	0,4
WOHX 05T302..R-G12	**W01 24420.02..**	▲	▲	▲		▲				12°	4,42	0,2
WOHX 06T302..R-G06	**W01 34360.02..**	▲					10,0	3,8	6,6	6°	5,53	0,2
WOHX 06T304..R-G06	**W01 34360.04..**				▲						5,51	0,4
WOHX 06T302..R-G12	**W01 34420.02..**	▲		▲		▲	10,0	3,8	6,6	12°	5,53	0,2
WOHX 080402..R-G06	**W01 42360.02..**	▲					12,0	4,8	7,9	6°	6,64	0,2
WOHX 080404..R-G06	**W01 42360.04..**			▲	▲						6,62	0,4
WOHX 080402..R-G12	**W01 42420.02..**	▲	▲	▲		▲	12,0	4,8	7,9	12°	6,64	0,2
WOHX 080404..R-G12	**W01 42420.04..**					▲					6,62	0,4
WOHX 100504..R-G06	**W01 50360.04..**	▲					15,0	5,3	9,9	6°	8,29	0,4
WOHX 100504..R-G12	**W01 50420.04..**	▲				▲				12°	8,29	0,4
Steel P		●	◐	●	◐	●						
Stainless steel M		○		○		○						
Cast iron K			●		●							
Non-ferrous metals N			●									
Superalloys and titanium S			●									
Hardened materials H					◐ <52 HRC							

Order example:
ISO Code
WOHX 030204 ER-G12
Cutting material
BK8425
Order No.
W01 10420.048425

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



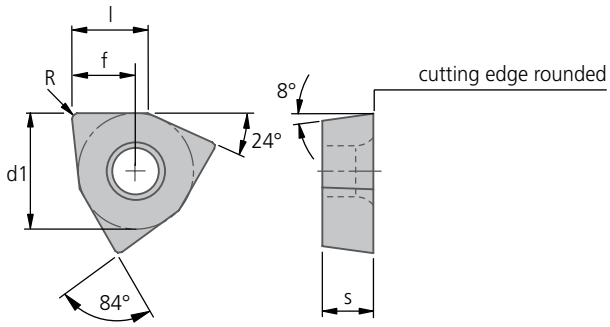
Application range:

Rough boring and turning operations on grey cast iron and SG cast iron materials

- roughing and standard machining under difficult operating conditions (interrupted cut or variations in machining allowances)
- grey cast iron and SG cast iron materials
- can be used on G01 twin cutting tools and on special tools
- extremely efficient because of high cutting speeds

Cutter geometry:

neutral cutting form „N“



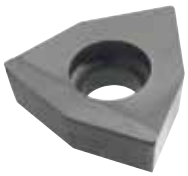
Substrate		Carbide						
Coating type		–	CVD					
Cutting material designation		K10	BK7615					
Cutting edge design		E	E					
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	 21	 7615	d1	s	l	f	R
WOHX 040304 EN	W01 18600.04..	▲	▲	6,35	3,18	4,1	3,48	0,4
WOHX 05T304 EN	W01 24600.04..	▲	▲	8,0	3,8	5,3	4,40	0,4
WOHX 05T308 EN	W01 24600.08..		▲				4,35	0,8
WOHX 06T304 EN	W01 34600.04..	▲	▲	10,0	3,8	6,6	5,51	0,4
WOHX 06T308 EN	W01 34600.08..		▲				5,47	0,8
WOHX 080404 EN	W01 42600.04..		▲	12,0	4,8	7,9	6,62	0,4
WOHX 080408 EN	W01 42600.08..		▲				6,58	0,8
Steel P		◐		Order example: ISO Code WOHX 030204 EN Cutting material BK7615 Order No. W01 10600.047615				
Stainless steel M								
Cast iron K		●	●					
Non-ferrous metals N		●						
Superalloys and titanium S		●						
Hardened materials H			◐ <52HRC					

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

CBN Indexable inserts





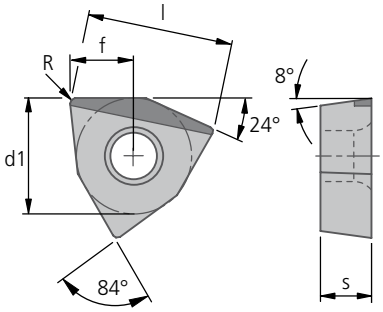
Application range:

CBN application range
Machining cast iron materials etc.

Inserts have the following advantages:
- high cutting speeds
- high dimensional consistency
- enormously long tool life
- above-average surface finish

Cutter geometry:

neutral cutting form „N"



Substrate		CBN					
Coating type		–					
Cutting material designation		CBN57					
Cutting edge design		S					
ISO Code Cutting edge design S = chamfered+rounded ▼	**Order No.** Enter cutting material code ▼	 57	d1	s	l	f	R
WOEX 05T304 S	**W01 24940.04..**	▲	8,0	3,8	10,1	4,40	0,4
WOEX 06T304 S	**W01 34940.04..**	▲	10,0	3,8	12,7	5,51	0,4
Steel P			Order example: ISO Code WOEX 05T304 S Cutting material CBN57 Order No. W01 24940.0457				
Stainless steel M							
Cast iron K		●					
Non-ferrous metals N							
Superalloys and titanium S		◐					
Hardened materials H							

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



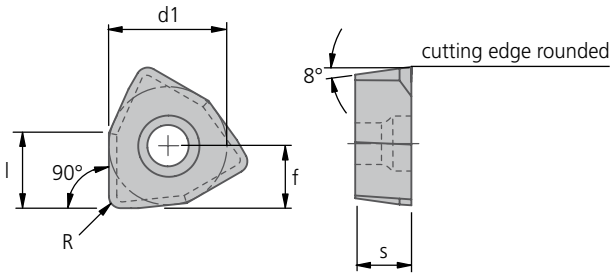
Application range:

Rough boring with double and multiple inserts

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

Cutter geometry:

L.H. cutting form „L“



Substrate		Carbide					
Coating type		CVD					
Cutting material designation		BK6115					
Cutting edge design		E					
ISO Code Cutting edge design E = rounded ▼	**Order No.** Enter cutting material code ▼	 **6115**	d1	s	l	f	R
WOHX 05T3PN EL	**W01 24600.90..**	▲	8,0	3,8	5,1	4,23	0,8
WOHX 06T3PN EL	**W01 34600.90..**	▲	10,0	3,8	6,4	5,34	0,8
WOHX 0804PN EL	**W01 42600.90..**	▲	12,0	4,8	7,7	6,45	0,8
WOHX 1005PN EL	**W01 50600.90..**	▲	15,0	5,3	9,7	8,12	0,8
Steel P Stainless steel M Cast iron K Non-ferrous metals N Superalloys and titanium S Hardened materials H		● ◐ <52HRC	Order example: ISO Code WOHX 05T3PN EL Cutting material BK6115 Order No. W01 24600.906115				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET Unisix Power W01

WOHX

Inserts

for clockwise-rotating tools
approach angle ϰ =75°



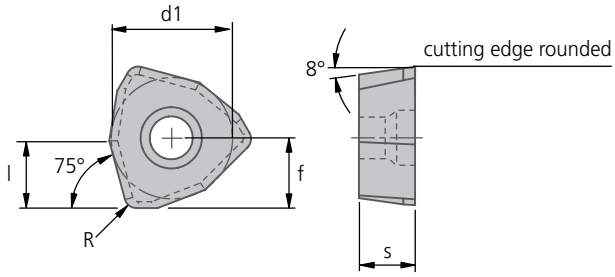
Application range:

Rough boring with double and multiple inserts

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

Cutter geometry:

L.H. cutting form „L“



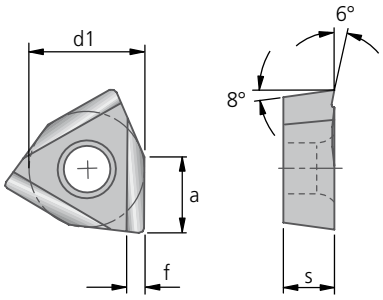
Substrate		Carbide						
Coating type		CVD						
Cutting material designation		BK6115						
Cutting edge design		E						
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	 6115		d1	s	l	f	R
WOHX 05T3EN EL	W01 24600.75..	▲		8,0	3,8	4,4	4,63	0,8
WOHX 06T3EN EL	W01 34600.75..	▲		10,0	3,8	5,7	5,96	0,8
WOHX 0804EN EL	W01 42600.75..	▲		12,0	4,8	6,9	7,29	0,8
WOHX 1005EN EL	W01 50600.75..	▲		15,0	5,3	8,9	9,29	0,8
Steel	P							
Stainless steel	M							
Cast iron	K	●						
Non-ferrous metals	N							
Superalloys and titanium	S							
Hardened materials	H	◐ <52HRC						

Order example:
ISO Code
WOHX 05T3EN EL
Cutting material
BK6115
Order No.
W01 24600.756115

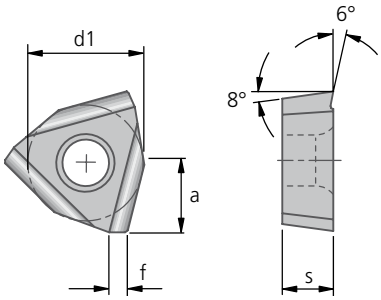
● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



Cutter geometry:



Approach angle 90°
for corner milling cutter F020



Approach angle 75°
for face milling cutter F020

Substrate		Carbide							
Coating type		–	–	CVD					
Cutting material designation		P25M	K10	BK6440					
Cutting edge design		E	E	E					
ISO Code Cutting edge design E = rounded ▼	Order No. Enter cutting material code ▼	03	21	6440	d1	s	γ	f	R
WOHX 06T3PA ER-G06	**W01 34360.34..**	▲	▲	▲	10,0	3,8	6°	1,4	6,0
WOHX 06T3EA ER-G06	**W01 34360.35..**		▲						5,9
WOHX 0804PA ER-G06	**W01 42360.34..**	▲	▲		12,0	4,8	6°	1,4	7,0
Steel P		●	◐	●	Order example: ISO Code WOHX 06T3PA ER-G06 Cutting material P25M Order No. W01 34360.3403				
Stainless steel M		◐		◐					
Cast iron K			●						
Non-ferrous metals N			●						
Superalloys and titanium S			●						
Hardened materials H									

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET Unisix W04..18 WNHX

Inserts

positive ground chipbreaker
P6 cutting edges

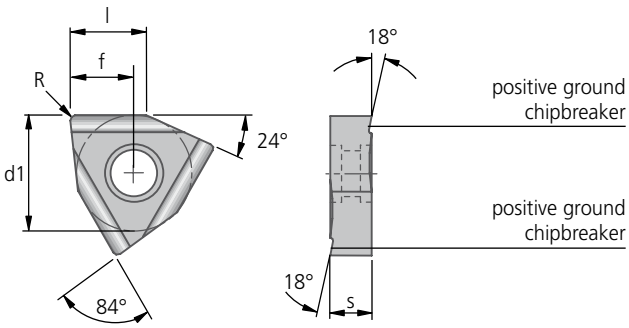


Application range:

Internal and external turning
The Unisix insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating.
The positively ground chipbreakers guarantee a good chip form and a soft cut.

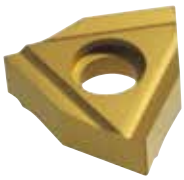
Cutter geometry:

L.H. cutting form „L“



Substrate		Carbide								
Coating type		–	–	–	CVD					
Cutting material designation		P25	P40	K10	BK6425					
Cutting edge design		E	E	F	E					
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	 12	 04	 21	 6425	d1	s	l	f	R
WNHX 060302..L-G18	**W04 34180.02..**	▲				10,0	3,5	6,5	5,53	0,2
WNHX 08T302..L-G18	**W04 42180.02..**	▲	▲	▲	▲	12,0	4,5	7,5	6,64	0,2
WNHX 100404..L-G18	**W04 50180.04..**	▲	▲		▲	15,0	5,0	9,5	8,29	0,4
Steel P		●	●	◐	●	Order example: ISO Code WNHX 060302 EL-G18 Cutting material P25 Order No. W04 34180.0212				
Stainless steel M		○	○		○					
Cast iron K				●						
Non-ferrous metals N				●						
Superalloys and titanium S				●						
Hardened materials H										

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



Inserts

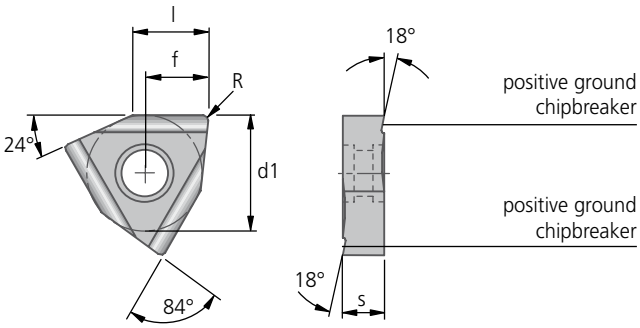
positive ground chipbreaker
P6 cutting edges

Application range:

Internal and external turning
The Unisix insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating.
The positively ground chipbreakers guarantee a good chip form and a soft cut.

Cutter geometry:

R.H. cutting form „R“



Substrate		Carbide								
Coating type		–	–	–	CVD					
Cutting material designation		P25	P40	K10	BK6425					
Cutting edge design		E	E	F	E					
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	 12	 04	 21	 6425	d1	s	l	f	R
WNHX 060302..R-G18	**W04 34480.02..**	▲				10,0	3,5	6,5	5,53	0,2
WNHX 08T302..R-G18	**W04 42480.02..**	▲	▲	▲	▲	12,0	4,5	7,5	6,64	0,2
WNHX 08T304..R-G18	**W04 42480.04..**	▲							6,62	0,4
WNHX 100404..R-G18	**W04 50480.04..**	▲	▲	▲	▲	15,0	5,0	9,5	8,29	0,4
WNHX 120606..R-G18	**W04 58480.06..**	▲				17,6	6,0	11,5	9,71	0,6
Steel P		●	●	◐	●	Order example: ISO Code WNHX 060302ER-G18 Cutting material P25 Order No. W04 34480.0212				
Stainless steel M		○	○		○					
Cast iron K				●						
Non-ferrous metals N				●						
Superalloys and titanium S				●						
Hardened materials H										

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

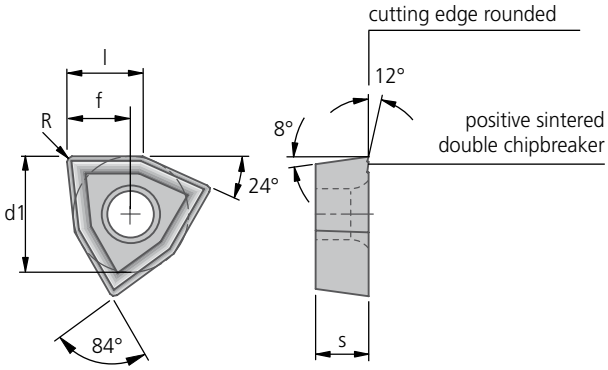
Inserts



Application range:

- External and internal turning
- TwinKom Double Insert Tools
- Special tools
- Kometric mounted seatings
- as outer cutter with KUB solid drill bit
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:



Substrate		Carbide												
Coating type		–	–	CVD	CVD	CVD	CVD	PVD						
Cutting material designation		P25M	K10	BK6425	BK7615	BK6115	BK6440	BK8425						
ISO Code	Order No. Enter cutting material code	03	21	6425	7615	6115	6440	8425	d1	s	l	f	R	
WOEX 05T304-00	**W29 24000.04..**	▲	▲	▲	▲	▲	▲	▲	8,0	3,8	5,3	4,40	0,4	
WOEX 06T304-00	**W29 34000.04..**	▲	▲	▲	▲	▲	▲	▲	10,0	3,8	6,6	5,51	0,4	
WOEX 080404-00	**W29 42000.04..**	▲	▲	▲	▲	▲	▲	▲	12,0	4,8	7,9	6,62	0,4	
WOEX 100504-00	**W29 50000.04..**	▲	▲	▲		▲	▲	▲	15,0	5,3	9,9	8,29	0,4	
WOEX 100508-00	**W29 50000.08..**					▲	▲					8,24	0,8	
WOEX 120608-00	**W29 58000.08..**		▲	▲		▲	▲	▲	17,6	6,0	11,6	9,69	0,8	
Steel P		●	◐	●		●	●	●	Order example:					
Stainless steel M		○		○		◐	◐	○	ISO Code					
Cast iron K			●		●	●		●	WOEX 05T304-00					
Non-ferrous metals N			●						Cutting material					
Superalloys and titanium S			●						P25M					
Hardened materials H					◐				Order No.					
									W29 24000.0403					
External cutting edge		✓	✓	✓	✓	✓	✓	✓						
Internal cutting edge *Recommendation*		*W29..01 – BK8425*												

● Main area of application ◐ Suitable in some cases

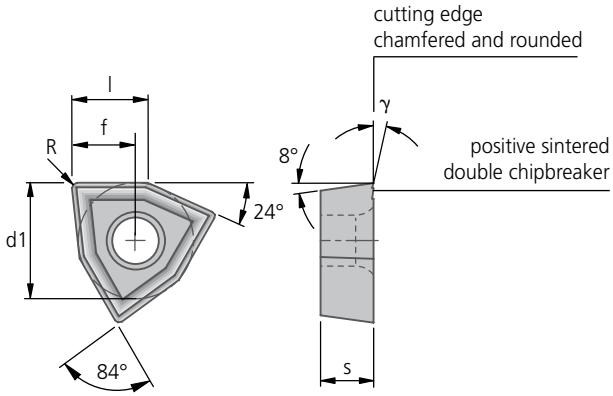
▲ Availability: for delivery see current price and stock list



Application range:

- External and internal turning
- KUB Centron, KUB Trigon, KUB drill
- TwinKom Double Insert Tools
- Special tools
- Kometric mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:



Substrate		Carbide																	
Coating type		–	–	–	CVD	CVD	CVD	CVD	CVD	CVD	CVD	PVD	PVD						
Cutting material designation		P25M	P40	K10	BK 6425	BK 7615	BK 6115	BK 62	BK 6440	BK 6420	BK 72	BK 7935	BK 8425						
ISO Code	Order No.													d1	s	l	γ	f	R
	Enter cutting material code	03	04	21	6425	7615	6115	62	6440	6420	72	7935	8425						
WOEX 020102-01	W29 04010.02..											▲	▲	4,0	1,6	2,6	12°	2,19	0,2
WOEX 030204-01	W29 10010.04..		▲	▲		▲	▲	▲			▲	▲	▲	5,0	2,3	3,2	8°	2,73	0,4
WOEX 040304-01	W29 18010.04..		▲	▲		▲	▲	▲			▲	▲	▲	6,35	3,18	4,1	8°	3,48	0,4
WOEX 05T304-01	W29 24010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	8,0	3,8	5,3	12°	4,40	0,4
WOEX 05T308-01	W29 24010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲					4,35	0,8
WOEX 06T304-01	W29 34010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	10,0	3,8	6,6	12°	5,51	0,4
WOEX 06T308-01	W29 34010.08..			▲	▲	▲	▲	▲	▲		▲	▲	▲					5,47	0,8
WOEX 080404-01	W29 42010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	12,0	4,8	7,9	12°	6,62	0,4
WOEX 080408-01	W29 42010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲					6,58	0,8
WOEX 100504-01	W29 50010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	15,0	5,3	9,9	12°	8,29	0,4
WOEX 100508-01	W29 50010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲					8,24	0,8
WOEX 120608-01	W29 58010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	17,6	6,0	11,6	12°	9,69	0,8
Steel	P	●	●	◐	●		●		●	●	●	◐	●	Order example:					
Stainless steel	M	○	○		○		◐		◐	○	◐	○	○	ISO Code					
Cast iron	K			●		●	●	●		◐		◐	●	WOEX 05T304-01					
Non-ferrous metals	N			●										Cutting material					
Superalloys and titanium	S			●								◐		P25M					
Hardened materials	H					◐		◐ <52 HRC						Order No.					
														W29 24010.0403					
External cutting edge		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Internal cutting edge *Recommendation*		✓	✓	✓	✓	✓	*BK 8425*	✓	✓	*BK 8425*	✓	✓	✓						

● Main area of application ◐ Suitable in some cases

KOMET Unisix W29..02

Inserts

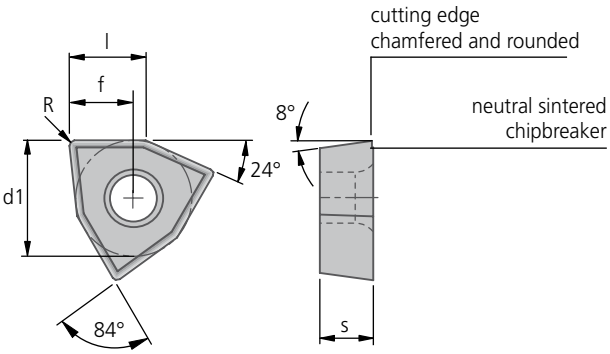
WOEX



Application range:

- TwinKom Double Insert Tools
- Special tools
- as outer cutter with KUB solid drill bit
- excellent for interrupted cut because of stable cutting angle (82°) (top rake 0°) and chamfered cutting edge. A first class chipbreaker also produces good chip formation even from difficult materials.
- cutting edge chamfered and rounded.
- for cutting depths of < 1.5 mm

Cutter geometry:



Substrate		Carbide						
Coating type		CVD	CVD					
Cutting material designation		BK6425	BK6440					
ISO Code	Order No. Enter cutting material code	 6425	 6440	d1	s	l	f	R
WOEX 05T304-02	W29 24020.04..	▲	▲	8,0	3,8	5,3	4,40	0,4
WOEX 05T308-02	W29 24020.08..		▲				4,35	0,8
WOEX 06T304-02	W29 34020.04..	▲	▲	10,0	3,8	6,6	5,51	0,4
WOEX 06T308-02	W29 34020.08..		▲				5,47	0,8
WOEX 080404-02	W29 42020.04..		▲	12,0	4,8	7,9	6,62	0,4
WOEX 080408-02	W29 42020.08..		▲				6,58	0,8
WOEX 100504-02	W29 50020.04..		▲	15,0	5,3	9,9	8,29	0,4
WOEX 100508-02	W29 50020.08..		▲				8,24	0,8
WOEX 120608-02	W29 58020.08..		▲	17,6	6,0	11,6	9,69	0,8
Steel P		●	●	Order example: ISO Code WOEX 05T304-02 Cutting material BK6440 Order No. W29 24020.046440				
Stainless steel M		◐	◐					
Cast iron K								
Non-ferrous metals N								
Superalloys and titanium S								
Hardened materials H								
External cutting edge		✓	✓					
Internal cutting edge *Recommendation*		*W29..01 – BK8425*						

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

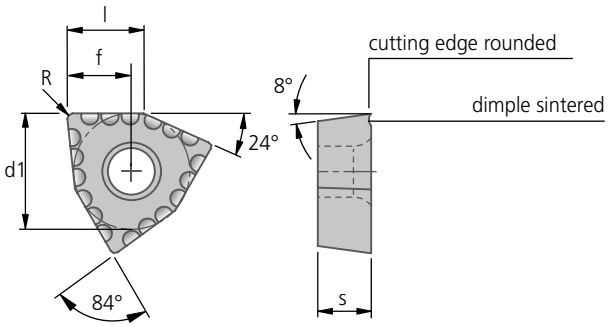


Application range:

- KUB Centron, KUB Trigon, KUB drill
- TwinKom double insert tools
- Special tools
- Internal and external machining

The dimple shaped chipbreaker causes a different chip flow action.
The chip is compressed in cross section and tends to break more rapidly.

Cutter geometry:

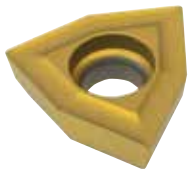


Substrate		Carbide							
Coating type		–	CVD	PVD					
Cutting material designation		P25M	BK6425	BK8425					
ISO Code	Order No. Enter cutting material code	03	6425	8425	d1	s	l	f	R
WOEX 030204-03	**W29 10030.04..**		▲	▲	5,0	2,3	3,2	2,73	0,4
WOEX 040304-03	**W29 18030.04..**		▲	▲	6,35	3,18	4,1	3,48	0,4
WOEX 05T304-03	**W29 24030.04..**		▲	▲	8,0	3,8	5,3	4,40	0,4
WOEX 05T308-03	**W29 24030.08..**		▲					4,35	0,8
WOEX 06T304-03	**W29 34030.04..**	▲	▲	▲	10,0	3,8	6,6	5,51	0,4
WOEX 06T308-03	**W29 34030.08..**		▲	▲				5,47	0,8
WOEX 080404-03	**W29 42030.04..**	▲	▲	▲	12,0	4,8	7,9	6,62	0,4
WOEX 080408-03	**W29 42030.08..**		▲	▲				6,58	0,8
WOEX 100504-03	**W29 50030.04..**	▲	▲	▲	15,0	5,3	9,9	8,29	0,4
WOEX 100508-03	**W29 50030.08..**		▲	▲				8,24	0,8
WOEX 120608-03	**W29 58030.08..**		▲	▲	17,6	6,0	11,6	9,69	0,8
Steel P		●	●	●	Order example: ISO Code WOEX 030201-03 Cutting material BK6425 Order No. W29 10030.046425				
Stainless steel M		◐	◐	◐					
Cast iron K				●					
Non-ferrous metals N									
Superalloys and titanium S									
Hardened materials H									
External cutting edge		✓	✓	✓					
Internal cutting edge *Recommendation*		*W29..01 – BK8425*							

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts

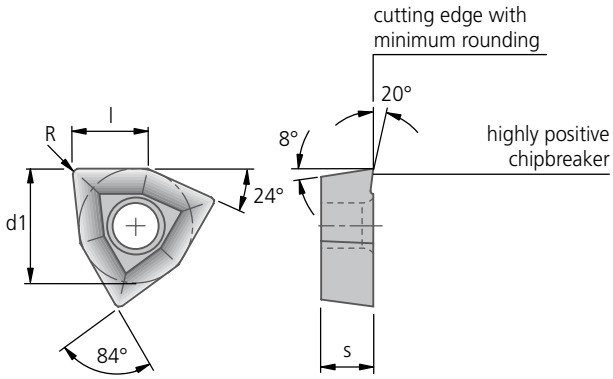


Application range:

- KUB Centron, KUB Trigon, KUB drill
- TwinKom double insert tools
- Special tools
- Internal and external machining

The highly positive chip groove with minimal chamfer for soft cutting operations, mainly on aluminium

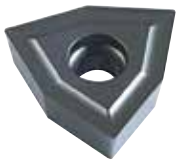
Cutter geometry:



Substrate		Carbide						
Coating type		–	PVD	PVD				
Cutting material designation		K10	BK77	BK7710				
ISO Code	Order No. Enter cutting material code	 21	 77	 7710	d1	s	l	R
WOEX 030204-11	**W29 10110.04..**	▲	▲	▲	5,0	2,3	3,2	0,4
WOEX 040304-11	**W29 18110.04..**	▲	▲	▲	6,35	3,18	4,1	0,4
WOEX 05T304-11	**W29 24110.04..**	▲	▲	▲	8,0	3,8	5,3	0,4
WOEX 06T304-11	**W29 34110.04..**	▲	▲	▲	10,0	3,8	6,6	0,4
WOEX 080404-11	**W29 42110.04..**	▲	▲	▲	12,0	4,8	7,9	0,4
WOEX 100504-11	**W29 50110.04..**	▲	▲	▲	15,0	5,3	9,9	0,4
Steel P		◐			Order example:			
Stainless steel M					ISO Code			
Cast iron K		●			WOEX 030204-11			
Non-ferrous metals N		●	●	●	Cutting material			
Superalloys and titanium S		●	●	◐	K10			
Hardened materials H				◐	Order No.			
					W29 10110.0421			

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

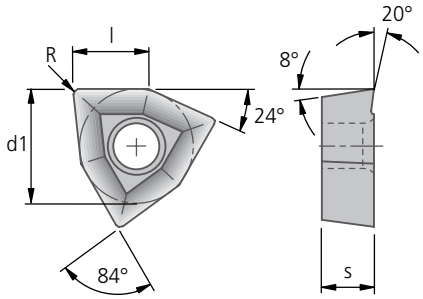


Application range:

- KUB Centron, KUB Trigon, KUB drill
- TwinKom double insert tools
- Special tools
- Internal and external machining

The highly positive chip groove with minimal chamfer for soft cutting operations, mainly on aluminium

Cutter geometry:



Substrate		NCD				
Cutting material designation		BK50				
Cutting edge design		F				
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	 50	d1	s	l	R
WOEX 030204-11	**W29 10110.04..**	▲	5,0	2,3	3,2	0,4
WOEX 040304-11	**W29 18110.04..**	▲	6,35	3,18	4,1	0,4
WOEX 05T304-11	**W29 24110.04..**	▲	8,0	3,8	5,3	0,4
WOEX 06T304-11	**W29 34110.04..**	▲	10,0	3,8	6,6	0,4
WOEX 080404-11	**W29 42110.04..**	▲	12,0	4,8	7,9	0,4
WOEX 100504-11	**W29 50110.04..**	▲	15,0	5,3	9,9	0,4
Aluminium alloys Si < 12%		●				
Aluminium alloys Si > 12%		◐				
CFRP, GFRP, plastics, composites		◐				
Ceramics						
Glass, quartz glass	N					
sintered carbides (G10-G60)						
Metal Matrix Composites (MMC)		◐				
Graphite		●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●				

Order example:
ISO Code
WOEX 030204-11
Cutting material
BK50
Order No.
W29 10110.0450

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts



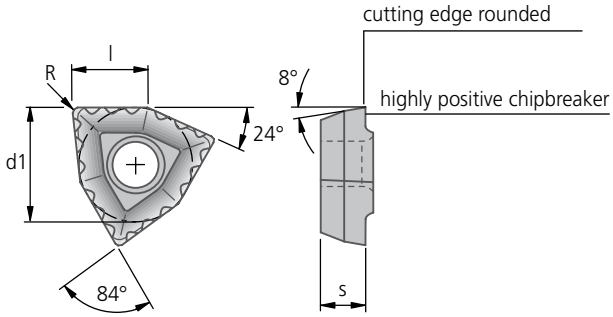
Application range:

- KUB Centron, KUB Trigon, KUB drill
- TwinKom double insert tools
- Special tools
- Internal and external machining

The dimple shaped chipbreaker causes a different chip flow action.

The chip is compressed in cross section and tends to break more rapidly.

Cutter geometry:



Substrate		Carbide							
Coating type		–	CVD	PVD	PVD				
Cutting material designation		P40	BK7325	BK79	BK8425				
ISO Code	Order No. Enter cutting material code	 04	 7325	 79	 8425	d1	s	l	R
WOEX 030204-13	**W29 10130.04..**	▲	▲	▲	▲	5,0	2,3	3,2	0,4
WOEX 040304-13	**W29 18130.04..**	▲	▲	▲	▲	6,35	3,18	4,1	0,4
WOEX 05T304-13	**W29 24130.04..**	▲	▲	▲	▲	8,0	3,8	5,3	0,4
WOEX 06T304-13	**W29 34130.04..**		▲	▲	▲	10,0	3,8	6,6	0,4
WOEX 080404-13	**W29 42130.04..**	▲	▲	▲	▲	12,0	4,8	7,9	0,4
WOEX 100504-13	**W29 50130.04..**	▲	▲	▲	▲	15,0	5,3	9,9	0,4
WOEX 120608-13	**W29 58130.08..**	▲	▲	▲	▲	17,6	6,0	11,6	0,8
Steel P		●	●	●	●	Order example: ISO Code WOEX 030204-13 Cutting material P40 Order No. W29 10130.0404			
Stainless steel M		○	○	○	○				
Cast iron K					●				
Non-ferrous metals N									
Superalloys and titanium S				◐					
Hardened materials H									

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

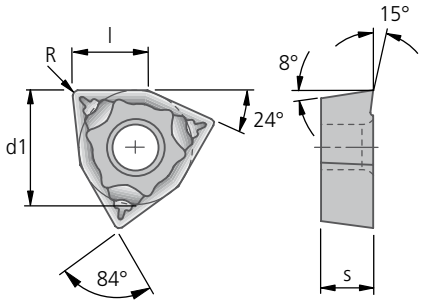


Application range:

- TwinKom double insert tools
- Special tools
- Internal and external machining

Optimum chip formation for cutting depths from 0.25 mm.

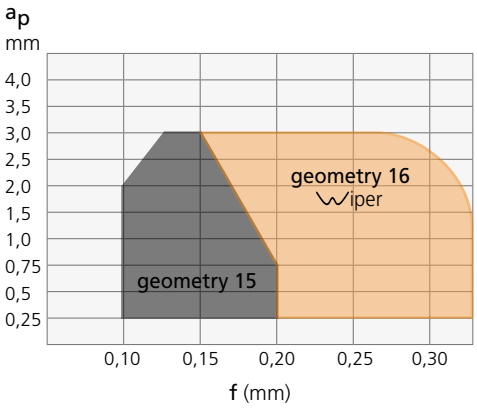
Cutter geometry:



Substrate		Carbide						
Coating type		CVD	CVD	PVD				
Cutting material designation		BK60	BK73	BK8430				
ISO Code	Order No. Enter cutting material code ▼	60	73	8430	d1	s	l	R
WOGX 030204-15	**W29 10150.04..**			▲	5,0	2,3	3,2	0,4
WOGX 040304-15	**W29 18150.04..**	▲		▲	6,35	3,18	4,1	0,4
WOGX 05T304-15	**W29 24150.04..**	▲	▲	▲	8,0	3,8	5,3	0,4
WOGX 06T304-15	**W29 34150.04..**	▲		▲	10,0	3,8	6,6	0,4
WOGX 080404-15	**W29 42150.04..**	▲	▲	▲	12,0	4,8	7,9	0,4
Steel	P	●	●	●	Order example: ISO Code WOGX 030204-15 Cutting material BK60 Order No. W29 10150.0460			
Stainless steel	M		○	○				
Cast iron	K	●		◐				
Non-ferrous metals	N							
Superalloys and titanium	S							
Hardened materials	H							

Application area

Semi-finishing



● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET Unisix W29..16 Wiper

WOGX

Inserts

approach angle $\varkappa$ = 90°



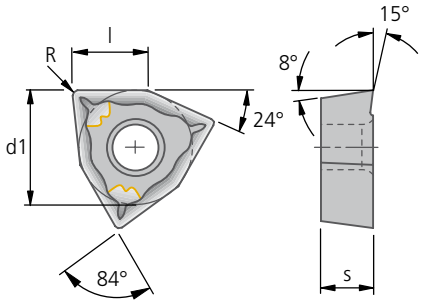
Application range:

Wiper

- TwinKom double insert tools
- Special tools
- Internal and external machining

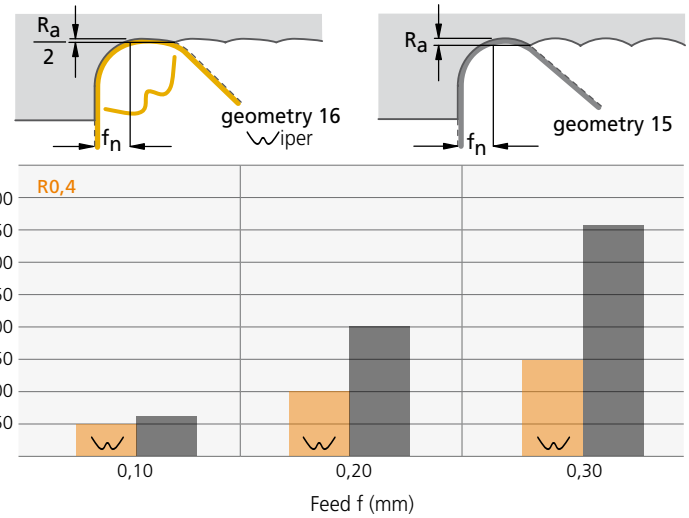
Optimum chip formation for cutting depths from 0.25 mm.

Cutter geometry:

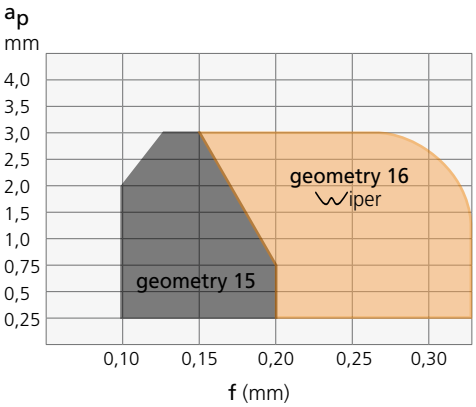


Substrate		Carbide						
Coating type		CVD	CVD	PVD				
Cutting material designation		BK60	BK73	BK8430				
ISO Code	Order No. Enter cutting material code	60	73	8430	d1	s	l	R
WOGX 030204-16	W29 10160.04..	▲		▲	5,0	2,3	3,2	0,4
WOGX 040304-16	W29 18160.04..		▲	▲	6,35	3,18	4,1	0,4
WOGX 05T304-16	W29 24160.04..	▲		▲	8,0	3,8	5,3	0,4
WOGX 06T304-16	W29 34160.04..	▲	▲	▲	10,0	3,8	6,6	0,4
WOGX 080404-16	W29 42160.04..	▲		▲	12,0	4,8	7,9	0,4
Steel P		●	●	●	Order example: ISO Code WOGX 030204-16 Cutting material BK60 Order No. W29 10160.0460			
Stainless steel M			○	○				
Cast iron K		●		◐				
Non-ferrous metals N								
Superalloys and titanium S								
Hardened materials H								

Surface quality results: Comparison of surface quality results for "Wiper" – R0,4 for $\varkappa$ = 90° in X40Cr13 / 1.4034

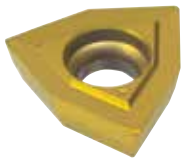


Application area



● Main area of application ◐ Suitable in some cases

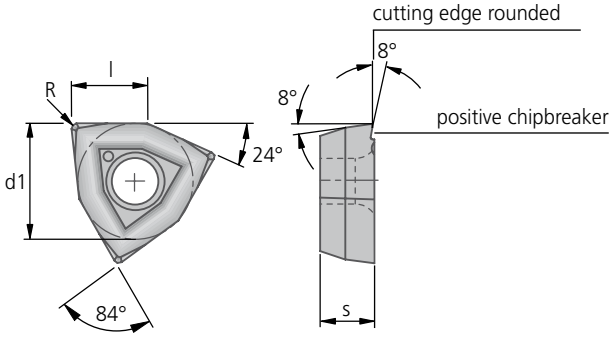
▲ Availability: for delivery see current price and stock list



Application range:

- External and internal turning
- KUB solid drill
- TwinKom double insert tools
- Kometric mounted seatings

Cutter geometry:



Substrate		Carbide					
Coating type		PVD	PVD				
Cutting material designation		BK2730	BK8430				
ISO Code	Order No. Enter cutting material code	2730	8430	d1	s	l	R
WOEX 030204-20	**W29 10200.04..**	▲	▲	5,0	2,3	3,2	0,4
WOEX 040304-20	**W29 18200.04..**	▲	▲	6,35	3,18	4,1	0,4
WOEX 05T304-20	**W29 24200.04..**	▲	▲	8,0	3,8	5,3	0,4
WOEX 06T304-20	**W29 34200.04..**	▲	▲	10,0	3,8	6,6	0,4
WOEX 080404-20	**W29 42200.04..**	▲	▲	12,0	4,8	7,9	0,4
WOEX 100504-20	**W29 50200.04..**	▲	▲	15,0	5,3	9,9	0,4
Steel P		◐	●	Order example:			
Stainless steel M		○	○	ISO Code			
Cast iron K		●	◑	WOEX 030204-20			
Non-ferrous metals N		◐	◐	Cutting material			
Superalloys and titanium S		◐	◐	BK2730			
Hardened materials H		◑		Order No.			
				W29 10200.042730			

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W30..06 / W30..12 / W30..20

TOHX

Inserts



Application range:

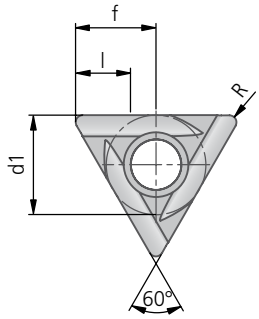
- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

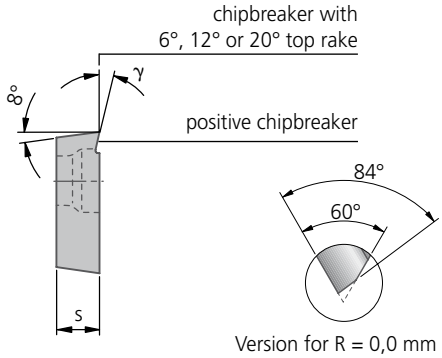
Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of chipbreakers and carbides suitable for almost any materials.

Important note! The cutting edge on Cermet inserts is rounded.

Cutter geometry:

L.H. cutting form „L“





Version for R = 0,0 mm

Substrate		Carbide								Cermet								
Coating type		–	–	CVD	CVD	CVD	CVD	PVD	PVD	–	–	–	PVD					
Cutting material designation		P25M	K10	BK 6425	BK 7615	BK 6110	BK 6440	BK 2710	BK 8425	CK 30	CK 32	CK 37	CK 38					
Cutting edge design		E F	E F	E	E	E	E	E	E	E	E	E	E					
ISO Code	Order No.													d1	s	l	γ	f	R
Cutting edge design E = rounded F = sharp	Enter cutting material code	03	21	6425	7615	6110	6440	2710	8425	30	32	37	38						
TOHX 06T100..L-G06	W30 04060.30..		▲	▲					▲					4,0	1,8	1	6°	3,25	0,0
TOHX 06T102..L-G06	W30 04060.02..	▲	▲	▲	▲	▲	▲	▲	▲									3,32	0,2
TOHX 06T103..L-G06	W30 04060.03..	▲	▲	▲	▲	▲	▲	▲	▲									3,25	0,3
TOHX 06T104..L-G06	W30 04060.04..	▲	▲	▲			▲											3,17	0,4
TOHX 06T100..L-G12	W30 04120.30..			▲					▲					4,0	1,8	1	12°	3,25	0,0
TOHX 06T102..L-G12	W30 04120.02..	▲	▲	▲			▲		▲	▲	▲	▲	▲					3,32	0,2
TOHX 06T103..L-G12	W30 04120.03..	▲	▲	▲			▲		▲		▲	▲						3,25	0,3
TOHX 06T104..L-G12	W30 04120.04..	▲	▲	▲			▲		▲	▲			▲					3,17	0,4
TOHX 06T102..L-G20	W30 04200.02..		▲	▲					▲					4,0	1,8	1	20°	3,32	0,2
TOHX 06T103..L-G20	W30 04200.03..		▲	▲														3,25	0,3
TOHX 090200..L-G06	W30 14060.30..		▲	▲					▲					5,6	2,5	2,5	6°	4,55	0,0
TOHX 090202EL-G06	W30 14060.02..	▲		▲	▲	▲	▲	▲	▲									4,70	0,2
TOHX 090204EL-G06	W30 14060.04..	▲		▲	▲	▲	▲	▲	▲									4,56	0,4
TOHX 090208EL-G06	W30 14060.08..			▲	▲	▲		▲	▲									4,26	0,8
TOHX 090200..L-G12	W30 14120.30..			▲	▲				▲					5,6	2,5	2,5	12°	4,55	0,0
TOHX 090202..L-G12	W30 14120.02..	▲		▲	▲		▲		▲	▲	▲	▲	▲					4,70	0,2
TOHX 090204..L-G12	W30 14120.04..	▲		▲	▲		▲		▲	▲	▲	▲	▲					4,56	0,4
TOHX 090208..L-G12	W30 14120.08..			▲	▲				▲									4,26	0,8
TOHX 090202..L-G20	W30 14200.02..	▲		▲	▲				▲					5,6	2,5	2,5	20°	4,70	0,2
TOHX 090204..L-G20	W30 14200.04..			▲	▲													4,56	0,4
TOHX 140302EL-G06	W30 26060.02..	▲	▲	▲	▲	▲		▲	▲					8,2	3,0	4,5	6°	6,96	0,2
TOHX 140304EL-G06	W30 26060.04..	▲	▲	▲	▲	▲	▲	▲	▲									6,81	0,4
TOHX 140305EL-G06	W30 26060.05..	▲	▲	▲	▲	▲	▲	▲	▲									6,74	0,5
TOHX 140308EL-G06	W30 26060.08..			▲	▲	▲		▲	▲									6,52	0,8
TOHX 140300EL-G12	W30 26120.30..			▲										8,2	3,0	4,5	12°	6,28	0,0
TOHX 140302..L-G12	W30 26120.02..	▲	▲	▲			▲		▲		▲	▲	▲					6,96	0,2
TOHX 140304..L-G12	W30 26120.04..	▲	▲	▲					▲	▲			▲					6,81	0,4
TOHX 140305..L-G12	W30 26120.05..	▲	▲	▲			▲		▲		▲	▲						6,74	0,5
TOHX 140308EL-G12	W30 26120.08..			▲					▲									6,52	0,8
TOHX 140302FL-G20	W30 26200.02..		▲											8,2	3,0	4,5	20°	6,96	0,2
TOHX 140304FL-G20	W30 26200.04..		▲															6,81	0,4
TOHX 140305FL-G20	W30 26200.05..		▲															6,74	0,5
TOHX 22T308EL-G06	W30 44060.08..								▲					12,7	4,3	10,5	6°	10,41	0,8
Steel P		●	◐	●		◐	●	●	●	●	●	●	●						
Stainless steel M		○		○			◑	○	○	○	○	○	○						
Cast iron K			●		●	●		●	●	◐	◐	◐	◐						
Non-ferrous metals N			●								◐	◐							
Superalloys and titanium S			●																
Hardened materials H					◑	◑		○											

Order example:
ISO Code
TOHX 06T100 EL-G06
Cutting material
BK6425
Order No.
W30 04060.306425

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

Inserts

R.H. cutting form „R“



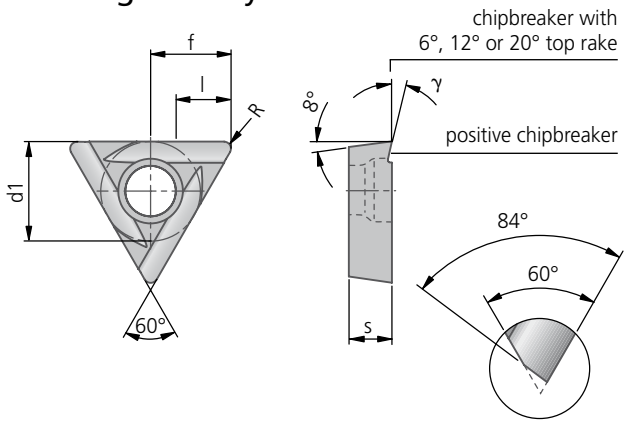
Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of chipbreakers and carbides suitable for almost any materials.

Important note! The cutting edge on Cermet inserts is rounded.

Cutter geometry:



Version for R = 0,0 mm

Substrate		Carbide								Cermet									
Coating type		–	–	CVD	CVD	CVD	PVD	–	–	–	PVD								
Cutting material designation		P25M	K10	BK6425	BK7615	BK6440	BK8425	CK30	CK32	CK37	CK38								
Cutting edge design		E F	E F	E	E	E	E	E	E	E	E								
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	03	21	6425	7615	6440	8425	30	32	37	38	d1	s	l	γ	f	R		
TOHX 06T102..R-G06	W30 04360.02..	▲	▲	▲			▲									3,32	0,2		
TOHX 06T103..R-G06	W30 04360.03..	▲	▲	▲		▲	▲					4,0	1,8	1	6°	3,25	0,3		
TOHX 06T104ER-G06	W30 04360.04..			▲			▲									3,17	0,4		
TOHX 06T102..R-G12	W30 04420.02..	▲	▲	▲			▲	▲	▲	▲	▲					3,32	0,2		
TOHX 06T103..R-G12	W30 04420.03..	▲	▲	▲		▲	▲			▲		4,0	1,8	1	12°	3,25	0,3		
TOHX 06T104ER-G12	W30 04420.04..			▲			▲	▲			▲					3,17	0,4		
TOHX 06T102..R-G20	W30 04500.02..		▲									4,0	1,8	1	20°	3,32	0,2		
TOHX 06T103..R-G20	W30 04500.03..		▲													3,25	0,3		
TOHX 090200ER-G06	W30 14360.30..	▲														4,55	0,0		
TOHX 090202ER-G06	W30 14360.02..	▲	▲	▲			▲					5,6	2,5	2,5	6°	4,70	0,2		
TOHX 090204ER-G06	W30 14360.04..	▲	▲	▲	▲	▲	▲									4,56	0,4		
TOHX 090208ER-G06	W30 14360.08..						▲									4,25	0,8		
TOHX 090202..R-G12	W30 14420.30..		▲													4,55	0,0		
TOHX 090202..R-G12	W30 14420.02..	▲	▲	▲			▲		▲	▲	▲	5,6	2,5	2,5	12°	4,70	0,2		
TOHX 090204..R-G12	W30 14420.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲					4,56	0,4		
TOHX 090202..R-G20	W30 14500.02..		▲									5,6	2,5	2,5	20°	4,70	0,2		
TOHX 090204..R-G20	W30 14500.04..		▲	▲												4,56	0,4		
TOHX 140302ER-G06	W30 26360.02..		▲				▲									6,96	0,2		
TOHX 140304ER-G06	W30 26360.04..			▲								8,2	3,0	4,5	6°	6,81	0,4		
TOHX 140305ER-G06	W30 26360.05..	▲	▲	▲		▲	▲									6,74	0,5		
TOHX 140302..R-G12	W30 26420.02..			▲												6,96	0,2		
TOHX 140304ER-G12	W30 26420.04..										▲	8,2	3,0	4,5	12°	6,81	0,4		
TOHX 140305..R-G12	W30 26420.05..	▲		▲	▲		▲			▲						6,74	0,5		
TOHX 140305ER-G20	W30 26500.05..						▲					8,2	3,0	4,5	20°	6,74	0,5		
TOHX 22T308ER-G06	W30 44360.08..	▲					▲					12,7	4,3	10,5	6°	10,41	0,8		
TOHX 22T308ER-G12	W30 44420.08..						▲					12,7	4,3	10,5	12°	10,41	0,8		
Steel P		●	◐	●		●	●	●	●	●	●	Order example:							
Stainless steel M		○		○		◐	○	○	○	○	○	ISO Code TOHX 06T102 ER-G06							
Cast iron K			●		●		●	◐	◐	◐	◐	Cutting material P25M							
Non-ferrous metals N			●						◐	◐		Order No. W30 04360.0203							
Superalloys and titanium S			●																
Hardened materials H					◐														

● Main area of application ◐ Suitable in some cases

Inserts



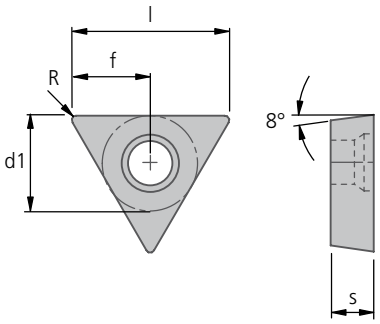
Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact.

Cutter geometry:

neutral cutting form „N“



Substrate		Carbide										
Coating type		–	–	CVD	CVD	CVD	PVD					
Cutting material designation		P25M	K10	BK6425	BK7615	BK62	BK8425					
Cutting edge design		E	E	E	E	E	E					
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	03	21	6425	7615	62	8425	d1	s	l	f	R
TOHX 06T102 EN	W30 04600.02..		▲					4,0	1,8	6,5	3,32	0,2
TOHX 06T103 EN	W30 04600.03..	▲	▲	▲	▲		▲			6,5	3,25	0,3
TOHX 090202 EN	W30 14600.02..		▲					5,6	2,5	9,4	4,70	0,2
TOHX 090204 EN	W30 14600.04..	▲	▲	▲	▲	▲	▲			9,1	4,56	0,4
TOHX 090208 EN	W30 14600.08..				▲					8,5	4,26	0,8
TOHX 140304 EN	W30 26600.04..				▲			8,2	3,0	13,6	6,81	0,4
TOHX 140305 EN	W30 26600.05..	▲	▲		▲		▲			13,5	6,74	0,5
TOHX 140308 EN	W30 26600.08..		▲	▲	▲					13,0	6,52	0,8
TOHX 22T308 EN	W30 44600.08..		▲		▲			12,7	4,3	20,8	10,41	0,8
Steel P		●	◐	●			●	Order example:				
Stainless steel M		○		○			○	ISO Code				
Cast iron K			●		●	●	●	TOHX 06T103 EN				
Non-ferrous metals N			●					Cutting material				
Superalloys and titanium S			●					K10				
Hardened materials H					◐	◐ <52 HRC		Order No.				
								W30 04600.0321				

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



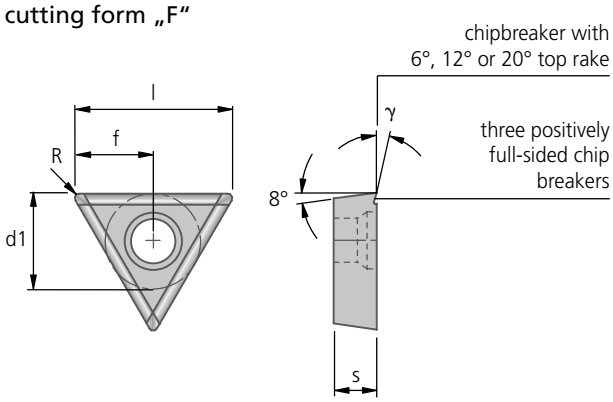
Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of chipbreakers and carbides suitable for almost any materials.

Cutter geometry:

cutting form „F“



Substrate		Carbide													
Coating type		–	–	–	–	CVD	CVD	CVD	PVD						
Cutting material designation		P25M	P40	K10	K10	BK6425	BK7615	BK6440	BK8425						
Cutting edge design		E	E	E	F	E	E	E	E						
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	03	04	21	21	6425	7615	6440	8425	d1	s	l	γ	f	R
TOHX 06T103 ..N-G06	**W30 04660.03..**	▲		▲		▲		▲	▲	4,0	1,8	6,5	6°	3,25	0,3
TOHX 06T103 ..N-G12	**W30 04720.03..**	▲			▲	▲							12°	3,25	0,3
TOHX 090202 ..N-G06	**W30 14660.02..**								▲	5,6	2,5	9,1	6°	4,70	0,2
TOHX 090204 ..N-G06	**W30 14660.04..**	▲	▲	▲		▲	▲	▲	▲					4,56	0,4
TOHX 090204 ..N-U8.77	**W30 14660.33..**	▲		▲		▲		▲	▲					4,56	0,4
TOHX 090202 ..N-G12	**W30 14720.02..**					▲				5,6	2,5	9,4	12°	4,70	0,2
TOHX 090204 ..N-G12	**W30 14720.04..**	▲			▲	▲		▲	▲	5,6	2,5	9,1	12°	4,56	0,4
TOHX 090204 ..N-G20	**W30 14800.04..**				▲								20°	4,56	0,4
TOHX 140305 ..N-G06	**W30 26660.05..**	▲		▲		▲	▲	▲	▲	8,2	3,0	13,5	6°	6,74	0,5
TOHX 140305 ..N-G12	**W30 26720.05..**	▲			▲	▲							12°	6,74	0,5
TOHX 22T308 ..N-G06	**W30 44660.08..**	▲		▲		▲	▲	▲		12,7	4,3	20,8	6°	10,41	0,8
TOHX 22T308 ..N-G12	**W30 44720.08..**				▲	▲							12°	10,41	0,8
Steel P		●	●	◐	◐	●		●	●	Order example:					
Stainless steel M		○	○			○		◑	○	ISO Code					
Cast iron K				●	●		●		●	TOHX 06T103 EN-G06					
Non-ferrous metals N				●	●					Cutting material					
Superalloys and titanium S				●	●					P25M					
Hardened materials H							◑			Order No.					
										W30 04660.0303					

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts



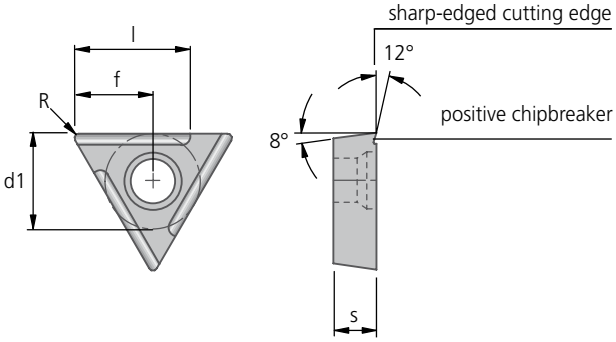
Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of chipbreakers and carbides suitable for almost any materials.

Cutter geometry:

L.H. cutting form „L“



Substrate		Cermet							
Coating type		–	–	PVD					
Cutting material designation		CK30	CK32	CK38					
Cutting edge design		F	F	F					
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 30	 32	 38	d1	s	l	f	R
TOHX 06T102 FL-G12	**W30 04820.02..**	▲	▲	▲	4,0	1,8	1	3,32	0,2
TOHX 06T103 FL-G12	**W30 04820.03..**		▲					3,25	0,3
TOHX 06T104 FL-G12	**W30 04820.04..**	▲		▲				3,17	0,4
TOHX 090202 FL-G12	**W30 14820.02..**	▲	▲	▲	5,6	2,5	2,5	4,70	0,2
TOHX 090204 FL-G12	**W30 14820.04..**	▲	▲	▲				4,56	0,4
TOHX 140302 FL-G12	**W30 26820.02..**		▲	▲	8,2	3,0	4,5	6,96	0,2
TOHX 140304 FL-G12	**W30 26820.04..**			▲				6,81	0,4
TOHX 140305 FL-G12	**W30 26820.05..**		▲					6,74	0,5
Steel P		●	●	●	Order example: ISO Code TOHX 06T102 FL-G12 Cutting material CK30 Order No. W30 04820.0230				
Stainless steel M		◐	◐	◐					
Cast iron K		◐	◐	◐					
Non-ferrous metals N									
Superalloys and titanium S									
Hardened materials H									

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



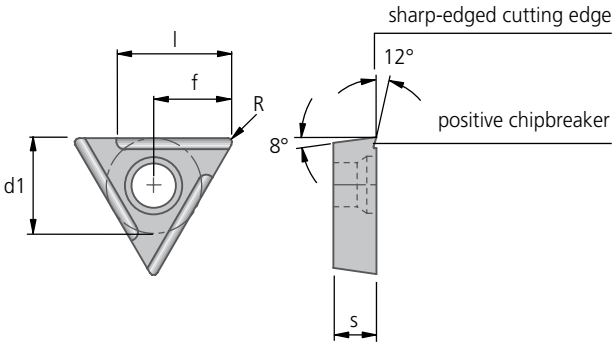
Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Precision indexable insert ground around the circumference. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of chipbreakers and carbides suitable for almost any materials.

Cutter geometry:

R.H. cutting form „R“



Substrate		Cermet						
Coating type		–						
Cutting material designation		CK32						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 32		d1	s	l	f	R
TOHX 06T102 FR-G12	**W30 04830.02..**	▲		4,0	1,8	1	3,32	0,2
TOHX 090202 FR-G12	**W30 14830.02..**	▲		5,6	2,5	2,5	4,70	0,2
	Steel P	●		Order example: ISO Code TOHX 06T102 FR-G12 Cutting material CK32 Order No. W30 04830.0232				
	Stainless steel M	◐						
	Cast iron K	◐						
	Non-ferrous metals N							
	Superalloys and titanium S							
	Hardened materials H							

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts



Application range:

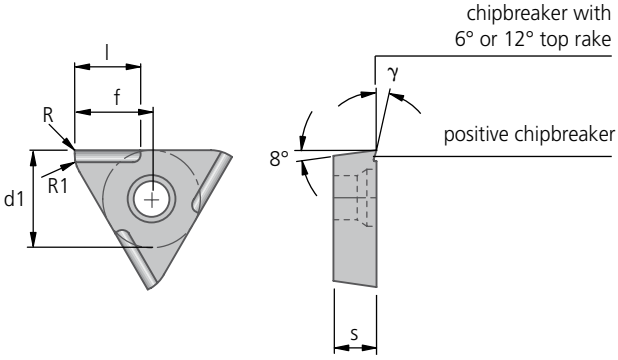
Internal turning
with high feed rates for stable conditions for tools up to a max. of 2.5 × D

Precision indexable insert ground around the circumference.

Ideal cutting depths:
Steel a_p = 0.1 – 0.25 mm
Cast iron a_p = 0.15 – 0.3 mm

Cutter geometry:

L.H. cutting form „L“



Important note!
The cutting edge on Cermet inserts is rounded.

Substrate		Carbide						Cermet								
Coating type		–	–	CVD	CVD	CVD	PVD	–	PVD							
Cutting material designation		K10	K10	BK6425	BK7615	BK6440	BK8425	CK30	CK38							
Cutting edge design		E	F	E	E	E	E	E	E							
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	21	21	6425	7615	6440	8425	30	38	d1	s	l	γ	f	R	R1
TOHX 06T102..L-UF06	**W30 04060.31..**			▲	▲	▲				4,0	1,8	2,8	6°	3,24	0,15	2,0
TOHX 06T102..L-UF12	**W30 04120.31..**		▲	▲			▲	▲	▲				12°	3,24	0,15	2,0
TOHX 090202..L-UF06	**W30 14060.31..**	▲		▲	▲	▲				5,6	2,5	4,0	6°	4,31	0,2	3,0
TOHX 090202..L-UF12	**W30 14120.31..**			▲		▲	▲	▲	▲				12°	4,30	0,2	3,0
TOHX 140302..L-UF06	**W30 26060.31..**	▲		▲	▲	▲	▲			8,2	3,0	5,5	6°	6,46	0,2	3,0
TOHX 140302..L-UF12	**W30 26120.31..**			▲		▲	▲	▲					12°	6,45	0,2	3,0
Steel P		●	●	●		●	●	●	●							
Stainless steel M				○		◑	○	○	○							
Cast iron K		●	●		●		●	◐	◐							
Non-ferrous metals N		●	●													
Superalloys and titanium S		●	●													
Hardened materials H																

Order example:
ISO Code
TOHX06T102 EL-UF06
Cutting material
BK6425
Order No.
W30 04060.316425

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



Application range:

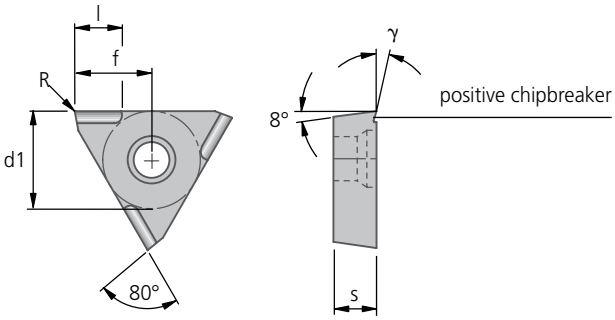
- Small boring bars
- Internal fine machinig

Precision indexable insert ground around the circumference. Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths.
A flat ground secondary cutting edge provides increased corner stability.

Important note!
The cutting edge on Cermet inserts is rounded.
Also be supplied in Cermet for sharp-edged version.

Cutter geometry:

L.H. cutting form „L“



Substrate		Carbide				Cermet											
Coating type		CVD	CVD	CVD	PVD	–	–	–	PVD								
Cutting material designation		BK6425	BK6440	BK6115	BK8425	CK30	CK32	CK37	CK38								
Cutting edge design		E	E	E	E	E	E	E	E								
ISO Code Cutting edge design E = rounded ▼	Order No. Enter cutting material code ▼	6425	6440	6115	8425	30	32	37	38	d1	s	l	γ	f	R		
TOHX 06T102EL-US12	**W30 04120.32..**	▲	▲		▲	▲	▲	▲	▲	4,0	1,8	1,5	12°	2,95	0,2		
TOHX 090202EL-US12	**W30 14120.32..**	▲	▲	▲	▲	▲	▲	▲	▲	5,6	2,5	2,0	12°	4,28	0,2		
TOHX 140302EL-US12	**W30 26120.32..**	▲	▲		▲	▲	▲	▲	▲	8,2	3,0	2,0	12°	6,44	0,2		
Steel	P	●	●	◐	●	●	●	●	●	Order example:							
Stainless steel	M	○	◐		○	○	○	○	○	ISO Code							
Cast iron	K			●	●	◐	◐	◐	◐	TOHX 06T102 EL-US12							
Non-ferrous metals	N						◐	◐		Cutting material							
Superalloys and titanium	S									BK6425							
Hardened materials	H									Order No.							
										W30 04120.326425							

Ideal Cutting depth:
Steel a_p = 0.01 – 0.15 mm
Only suitable for non-ferrous metals in certain circumstances.

● Main area of application ◐ Suitable in some cases

KOMET W30.....32 TOHX

Inserts

L.H. cutting form „L“
sharp-edged cutting edge

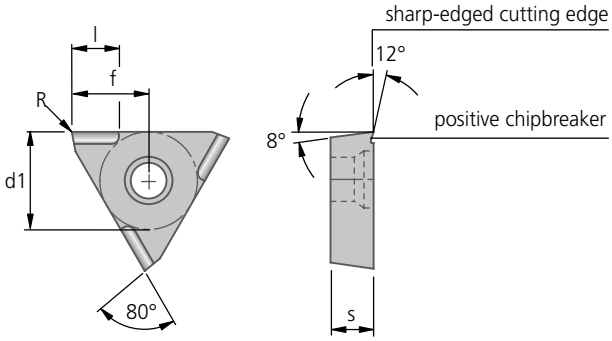


Application range:

- Small boring bars
- Internal fine machinig

Precision indexable insert ground around the circumference. Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths.
A flat ground secondary cutting edge provides increased corner stability.
Also be supplied in Cermet for rounded version.

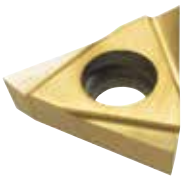
Cutter geometry:



Substrate		Cermet							
Coating type		–	–	PVD					
Cutting material designation		CK30	CK32	CK38					
Cutting edge design		F	F	F					
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 30	 32	 38	d1	s	l	f	R
TOHX 06T102 FL-US12	**W30 04820.32..**	▲		▲	4,0	1,8	1,5	2,95	0,2
TOHX 090202 FL-US12	**W30 14820.32..**	▲	▲	▲	5,6	2,5	2,0	4,28	0,2
TOHX 140302 FL-US12	**W30 26820.32..**	▲		▲	8,2	3,0	2,0	6,44	0,2
Steel P		●	●	●	Order example: ISO Code TOHX 06T102 FL-US12 Cutting material CK30 Order No. W30 04820.3230				
Stainless steel M		○	○	○					
Cast iron K		◐	◐	◐					
Non-ferrous metals N			◐						
Superalloys and titanium S									
Hardened materials H									

Ideal Cutting depth:
Steel a_p = 0.01 – 0.15 mm
Only suitable for non-ferrous metals in certain circumstances.

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



Application range:

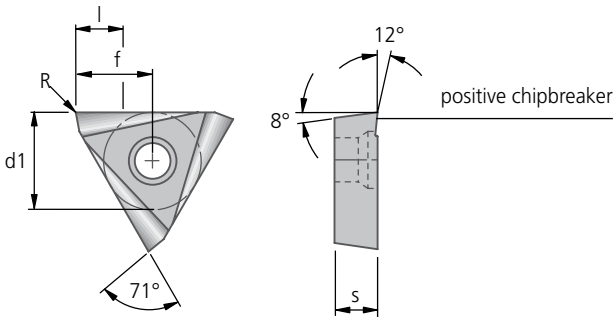
Sharp cutting edge

Precision indexable insert ground around the circumference. Insert with 0.05 mm centre radius for internal machining for tools with long overhang.

Ideal cutting depths:
Steel a_p = 0.02 – 0.1 mm
Non-ferrous metal a_p = 0.05 – 0.25 mm

Cutter geometry:

L.H. cutting form „L“



Substrate		Carbide						
Coating type		PVD						
Cutting material designation		BK77						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	**Order No.** Enter cutting material code ▼	 77		d1	s	l	f	R
TOHX 06T1ZZ FL-39G12	**W30 04120.39..**	▲		4,0	1,8	2,0	3,18	0,05
TOHX 0902ZZ FL-39G12	**W30 14120.39..**	▲		5,6	2,5	3,0	4,45	0,05
TOHX 1403ZZ FL-39G12	**W30 26120.39..**	▲		8,2	3,0	4,0	6,60	0,05
Steel	P							
Stainless steel	M							
Cast iron	K							
Non-ferrous metals	N	●						
Superalloys and titanium	S	●						
Hardened materials	H							

Order example:
ISO Code
TOHX 06T1ZZ FL-39G12
Cutting material
BK77
Order No.
W30 04120.3977

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

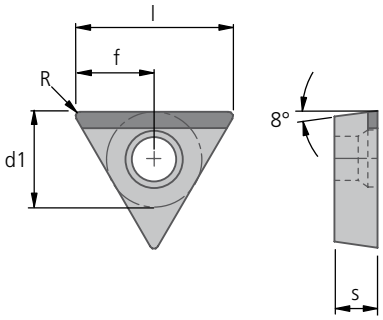
PCD Indexable inserts



Application range:

Turning and for processing with very high cutting parameters and with interrupted cuts and for other non-ferrous metal materials.

Cutter geometry:



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	**Order No.** Enter cutting material code ▼	PCD **5510**	d1	s	l	f	R	
TOEX 090204 F	**W30 14940.04..**	▲	5,6	2,5	9,12	4,56	0,4	
TOEX 140305 F	**W30 26940.05..**	▲	8,2	3,0	13,5	6,74	0,5	
Aluminium alloys Si < 12%		●						
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		◐						
Ceramics		◐						
Glass, quartz glass	**N**	◐						
sintered carbides (G10-G60)								
Metal Matrix Composites (MMC)		●						
Graphite		◐						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

Order example:
ISO Code
TOEX 090204 F
Cutting material
PKD5510
Order No.
W30 14940.045510

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

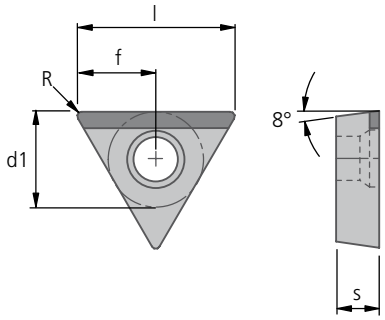


Application range:

Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

Cutter geometry:



Substrate		CBN						
Coating type		–						
Cutting material designation		CBN57						
Cutting edge design		T						
ISO Code Cutting edge design T = chamfered ▼	**Order No.** Enter cutting material code ▼	 57		d1	s	l	f	R
TOEX 090204 T	**W30 14940.04..**	▲		5,6	2,5	9,12	4,56	0,4
TOEX 140305 T	**W30 26940.05..**	▲		8,2	3,0	13,5	6,74	0,5
Steel	P							
Stainless steel	M							
Cast iron	K	●						
Non-ferrous metals	N							
Superalloys and titanium	S	◐						
Hardened materials	H	○ < 52 HRC						

Order example:
ISO Code
TOEX 090204 T
Cutting material
CBN57
Order No.
W30 14940.0457

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W30..98

TOEX

PCD Indexable inserts

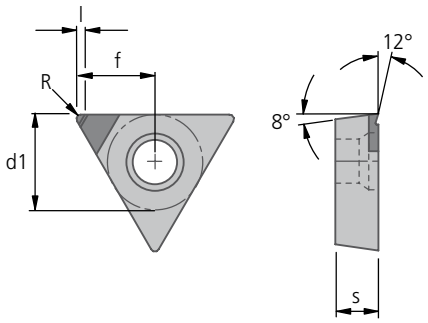


Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

Cutter geometry:



Substrate			PCD					
Cutting material designation			PKD5510					
Cutting edge design			F					
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code		PCD 5510	d1	s	l	f	R
TOEX 06T103 FN-G12	**W30 04980.03..**		▲	4,0	1,8	0,6	3,25	0,3
TOEX 090204 FN-G12	**W30 14980.04..**		▲	5,6	2,5	0,6	4,56	0,4
TOEX 140305 FN-G12	**W30 26980.05..**		▲	8,2	3,0	0,6	6,74	0,5
Aluminium alloys Si < 12%			●					
Aluminium alloys Si > 12%			●					
CFRP, GFRP, plastics, composites			◐					
Ceramics			◐					
Glass, quartz glass		N	◐					
sintered carbides (G10-G60)								
Metal Matrix Composites (MMC)			●					
Graphite			◐					
other non-ferrous metals (Cu / bronze / brass / Mg)			●					

Order example:
ISO Code
TOEX 06T103 FN
Cutting material
PKD5510
Order No.
W30 04980.035510

● Main area of application ◐ Suitable in some cases

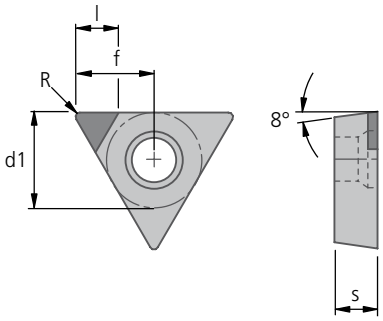
▲ Availability: for delivery see current price and stock list



Application range:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

Cutter geometry:



Substrate		PCD					
Cutting material designation		PKD5510					
Cutting edge design		F					
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	PCD 5510	d1	s	l	f	R
TOEX 06T102 FN	**W30 04990.02..**	▲	4,0	1,8	1,8	3,32	0,2
TOEX 06T103 FN	**W30 04990.03..**	▲				3,25	0,3
TOEX 06T104 FN	**W30 04990.04..**	▲				3,17	0,4
TOEX 090202 FN	**W30 14990.02..**	▲	5,6	2,5	2,7	4,70	0,2
TOEX 090204 FN	**W30 14990.04..**	▲				4,56	0,4
TOEX 090208 FN	**W30 14990.08..**	▲				4,26	0,8
TOEX 140302 FN	**W30 26990.02..**	▲	8,2	3,0	2,7	6,96	0,2
TOEX 140304 FN	**W30 26990.04..**	▲				6,81	0,4
TOEX 140305 FN	**W30 26990.05..**	▲				6,74	0,5
Aluminium alloys Si < 12%		●					
Aluminium alloys Si > 12%		●					
CFRP, GFRP, plastics, composites		◐					
Ceramics		◐					
Glass, quartz glass	**N**	◐					
sintered carbides (G10-G60)							
Metal Matrix Composites (MMC)		●					
Graphite		◐					
other non-ferrous metals (Cu / bronze / brass / Mg)		●					

Order example:
ISO Code
TOEX 06T102 FN
Cutting material
PKD5510
Order No.
W30 04990.025510

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

CBN Indexable inserts



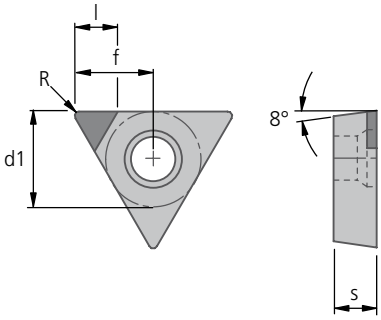
Application range:

Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

CBN 40: For machining hardened steels (harder than 45 HRC)

Cutter geometry:



Substrate		CBN						
Coating type		–	–					
Cutting material designation		CBN57	CBN40					
Cutting edge design		T	T					
ISO Code Cutting edge design T = chamfered	Order No. Enter cutting material code	 57	 40	d1	s	l	f	R
TOEX 06T102 TN	**W30 04990.02..**	▲	▲	4,0	1,8	1,8	3,32	0,2
TOEX 06T103 TN	**W30 04990.03..**	▲					3,25	0,3
TOEX 090202 TN	**W30 14990.02..**	▲	▲	5,6	2,5	2,7	4,70	0,2
TOEX 090204 TN	**W30 14990.04..**	▲	▲				4,56	0,4
TOEX 090208 TN	**W30 14990.08..**	▲					4,26	0,8
TOEX 140302 TN	**W30 26990.02..**	▲		8,2	3,0	2,7	6,96	0,2
TOEX 140304 TN	**W30 26990.04..**	▲	▲				6,81	0,4
TOEX 140305 TN	**W30 26990.05..**	▲					6,74	0,5

Steel	P		
Stainless steel	M		
Cast iron	K	●	
Non-ferrous metals	N		
Superalloys and titanium	S	◐	◐
Hardened materials	H		○ ≥ 52 HRC

Order example:
ISO Code
TOEX 06T102 TN
Cutting material
CBN57
Order No.
W30 04990.0257

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Application range:

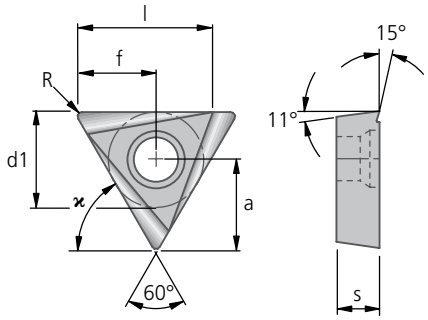
11° TPHX insert with chip surface (polished ground for uncoated carbide) for softer aluminium materials and other non-ferrous metals.
10 – 15° top rake with axial and radial tilt.

Please note:
Should a TPHB be used instead of this insert, dimension "a" changes according to angle "$\varkappa$"

$$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R - \left(\frac{\varkappa}{90°} \times \Delta\right)$$

Δ 0.03 for R = 0.4
Δ 0.06 for R = 0.8

Cutter geometry:



Substrate		Carbide						
Coating type		–	PVD					
Cutting material designation		K10	BK7710					
Cutting edge design		F	F					
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21	 7710	d1	s	l	f $\varkappa$=90°	R
TPHX 060104 FL-P15	**W32 03150.04..**	▲	▲	3,97	1,60	3,3	3,12	0,4
TPHX 090204 FL-P15	**W32 13150.04..**	▲	▲	5,56	2,38	4,5	4,49	0,4
TPHX 090208 FL-P15	**W32 13150.08..**	▲	▲			4,2	4,17	0,8
TPHX 110204 FL-P15	**W32 18150.04..**	▲	▲	6,35	2,38	4,6	5,17	0,4
TPHX 110208 FL-P15	**W32 18150.08..**	▲	▲			4,3	4,87	0,8
TPHX 130304 FL-P15	**W32 23150.04..**	▲		7,94	3,18	5,0	6,55	0,4
TPHX 130308 FL-P15	**W32 23150.08..**		▲			4,7	6,25	0,8
TPHX 160304 FL-P15	**W32 32150.04..**	▲		9,52	3,18	8,0	7,92	0,4
Steel P		◐		Order example: ISO Code TPHX 060104 FL-P15 Cutting material K10 Order No. W32 03150.0421				
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N		●	●					
Superalloys and titanium S		●	●					
Hardened materials H								

● Main area of application ◐ Suitable in some cases

NCD Indexable inserts

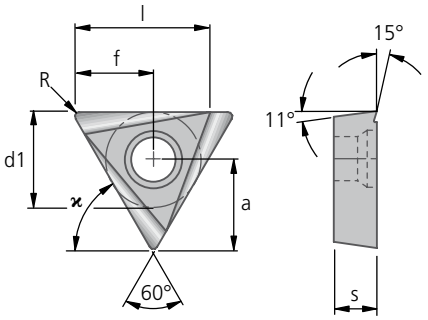


Application range:

L.H. cutting form „L"

11° TPHX insert with chip surface for softer aluminium materials and other non-ferrous metals.
10 – 15° top rake with axial and radial tilt.

Cutter geometry:



Please note:
Should a TPHB be used instead of this insert, dimension "a" changes according to angle "ϰ"

$$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R - \left(\frac{\varkappa}{90°} \times \Delta\right)$$

Δ 0.03 for R = 0.4
Δ 0.06 for R = 0.8

Substrate		NCD						
Cutting material designation		BK50						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	 50	d1	s	l	f ϰ=90°	R
TPHX 060104 FL-P15	**W32 03150.04..**	▲	3,97	1,60	3,3	3,12	0,4
TPHX 090204 FL-P15	**W32 13150.04..**	▲	5,56	2,38	4,5	4,49	0,4
TPHX 090208 FL-P15	**W32 13150.08..**	▲			4,2	4,17	0,8
TPHX 110208 FL-P15	**W32 18150.08..**	▲	6,35	2,38	4,3	4,87	0,8
TPHX 130304 FL-P15	**W32 23150.04..**	▲	7,94	3,18	5,0	6,55	0,4
TPHX 160304 FL-P15	**W32 32150.04..**	▲	9,52	3,18	8,0	7,92	0,4
Aluminium alloys Si < 12%		●						
Aluminium alloys Si > 12%		◐						
CFRP, GFRP, plastics, composites		◐						
Ceramics								
Glass, quartz glass	N							
sintered carbides (G10-G60)								
Metal Matrix Composites (MMC)		◐						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

Order example:
ISO Code
TPHX 060104 FL-P15
Cutting material
BK50
Order No.
W32 03150.0450

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list



Inserts

R.H. cutting form „R“
for machining aluminium

Application range:

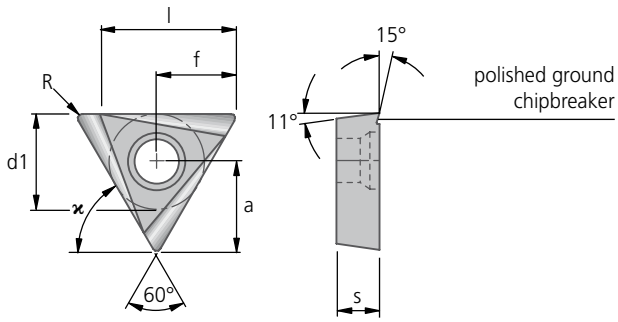
11° TPHX insert with polished ground chip surface for softer aluminium materials and other non-ferrous metals.
10 – 15° top rake with axial and radial tilt.

Please note:
Should a TPHB be used instead of this insert, dimension "a" changes according to angle "ϰ"

$$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R - \left(\frac{\varkappa}{90°} \times \Delta\right)$$

Δ 0.03 for R = 0.4
Δ 0.06 for R = 0.8

Cutter geometry:



Substrate		Carbide						
Coating type		–						
Cutting material designation		K10						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21		d1	s	l	f ϰ=90°	R
TPHX 060104 FR-P15	**W32 03450.04..**	▲		3,97	1,60	3,3	3,12	0,4
TPHX 090204 FR-P15	**W32 13450.04..**	▲		5,56	2,38	4,5	4,49	0,4
TPHX 110204 FR-P15	**W32 18450.04..**	▲		6,35	2,38	4,6	5,17	0,4
Steel	P	◐						
Stainless steel	M							
Cast iron	K	●						
Non-ferrous metals	N	●						
Superalloys and titanium	S	●						
Hardened materials	H							

Order example:
ISO Code
TPHX 060104 FL-P15
Cutting material
K10
Order No.
W32 03150.0421

● Main area of application ◐ Suitable in some cases

KOMET W32..60

TPHB

Inserts

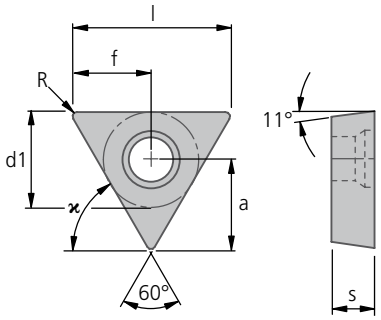
neutral cutting form „N“
for machining aluminium



Application range:

11° TPHB insert (polished chip surface for uncoated carbide) for high tensile strength cast aluminium alloys. 5° top rake due to axial tilt for cutting speed range of ≦ 300 m/min.

Cutter geometry:



$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R$

Substrate		Carbide						
Coating type		–						
Cutting material designation		K10						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21		d1	s	l	f ϰ=90°	R
TPHB 060104 FN-P	W32 03600.04..	▲		3,97	1,60	6,29	3,15	0,4
TPHB 090204 FN-P	W32 13600.04..	▲		5,56	2,38	9,04	4,52	0,4
TPHB 090208 FN-P	W32 13600.08..	▲				8,46	4,23	0,8
TPHB 110204 FN-P	W32 18600.04..	▲		6,35	2,38	10,41	5,21	0,4
TPHB 110208 FN-P	W32 18600.08..	▲				9,83	4,91	0,8
TPHB 130304 FN-P	W32 23600.04..	▲		7,94	3,18	13,17	6,58	0,4
TPHB 130308 FN-P	W32 23600.08..	▲				12,58	6,29	0,8
TPHB 160304 FN-P	W32 32600.04..	▲		9,52	3,18	15,9	7,95	0,4
TPHB 160308 FN-P	W32 32600.08..	▲				15,32	7,66	0,8
TPHB 220404 FN-P	W32 44600.04..	▲		12,7	4,30	21,41	10,71	0,4
TPHB 220408 FN-P	W32 44600.08..	▲				20,83	10,41	0,8
Steel P		◐		Order example: ISO Code TPHB 060104 FN-P Cutting material K10 Order No. W32 03600.0421				
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N		●						
Superalloys and titanium S		●						
Hardened materials H								

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

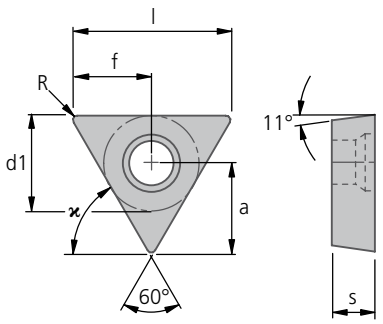


Application range:

neutral cutting form „N“

11° TPHB insert for high tensile strength cast aluminium alloys.
5° top rake due to axial tilt for cutting speed range of ≦ 300 m/min.

Cutter geometry:



$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R$

Substrate		NCD						
Cutting material designation		BK50						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 50	d1	s	l	f $\varkappa$=90°	R
TPHB 060104 FN-P	**W32 03600.04..**	▲	3,97	1,60	6,29	3,15	0,4
TPHB 090204 FN-P	**W32 13600.04..**	▲	5,56	2,38	9,04	4,52	0,4
TPHB 090208 FN-P	**W32 13600.08..**	▲			8,46	4,23	0,8
TPHB 110204 FN-P	**W32 18600.04..**	▲	6,35	2,38	10,41	5,21	0,4
TPHB 110208 FN-P	**W32 18600.08..**	▲			9,83	4,91	0,8
TPHB 130304 FN-P	**W32 23600.04..**	▲	7,94	3,18	13,17	6,58	0,4
TPHB 160304 FN-P	**W32 32600.04..**	▲	9,52	3,18	15,9	7,95	0,4
TPHB 160308 FN-P	**W32 32600.08..**	▲			15,32	7,66	0,8
TPHB 220408 FN-P	**W32 44600.08..**	▲	12,7	4,30	20,83	10,41	0,8
Aluminium alloys Si < 12%		●					
Aluminium alloys Si > 12%		◐					
CFRP, GFRP, plastics, composites		◐					
Ceramics							
Glass, quartz glass	**N**						
sintered carbides (G10-G60)							
Metal Matrix Composites (MMC)		◐					
Graphite		●					
other non-ferrous metals (Cu / bronze / brass / Mg)		●					

Order example:
ISO Code
TPHB 060104 FN-P
Cutting material
BK50
Order No.
W32 03600.0450

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

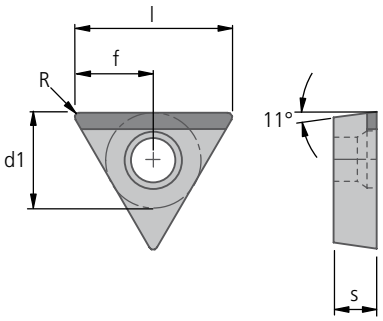
PCD Indexable inserts



Application range:

PCD: Turning and for processing with very high cutting parameters and with interrupted cuts and for other non-ferrous metal materials.

Cutter geometry:

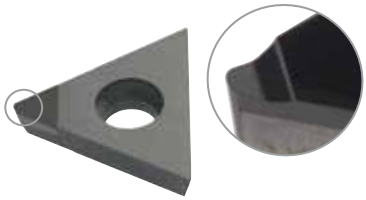


Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	PCD 5510	d1	s	l	f	R
TPHB 090204 F	W32 13940.04..	▲	5,56	2,38	9,05	4,52	0,4
TPHB 110204 F	W32 18940.04..	▲	6,35	2,38	10,41	5,21	0,4
TPHB 110208 F	W32 18940.08..	▲				4,91	0,8
TPHB 130304 F	W32 23940.04..	▲	7,94	3,18	13,17	6,59	0,4
TPHB 160304 F	W32 32940.04..	▲	9,52	3,18	15,9	7,95	0,4
Aluminium alloys Si < 12%		●						
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		◐						
Ceramics		◐						
Glass, quartz glass	N	◐						
sintered carbides (G10-G60)								
Metal Matrix Composites (MMC)		●						
Graphite		◐						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

Order example:
ISO Code
TPHB 090204 F
Cutting material
PKD5510
Order No.
W32 13940.045510

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

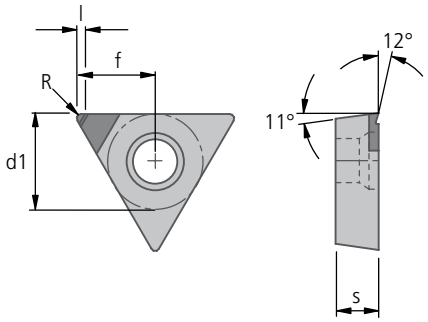


Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

Cutter geometry:



Substrate		PCD					
Cutting material designation		PKD5510					
Cutting edge design		F					
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	PCD 5510	d1	s	l	f	R
TPHX 060104 FN	**W32 03980.04..**	▲	3,97	1,60	0,6	3,15	0,4
TPHX 090202 FN	**W32 13980.02..**	▲	5,56	2,38	0,6	5,35	0,2
TPHX 090204 FN	**W32 13980.04..**	▲				4,67	0,4
TPHX 110204 FN	**W32 18980.04..**	▲	6,35	2,38	0,6	5,21	0,4
TPHX 130304 FN	**W32 23980.04..**	▲	7,94	3,18	0,6	6,59	0,4
TPHX 160304 FN	**W32 32980.04..**	▲	9,52	3,18	0,6	7,95	0,4
Aluminium alloys Si < 12%		●					
Aluminium alloys Si > 12%		●					
CFRP, GFRP, plastics, composites		◐					
Ceramics		◐					
Glass, quartz glass	**N**	◐					
sintered carbides (G10-G60)							
Metal Matrix Composites (MMC)		●					
Graphite		◐					
other non-ferrous metals (Cu / bronze / brass / Mg)		●					

Order example:
ISO Code
TPHX 060104 FN
Cutting material
PKD5510
Order No.
W32 03980.045510

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

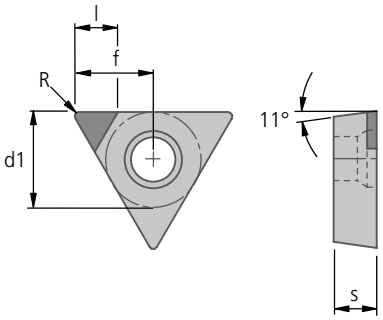
PCD Indexable inserts



Application range:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

Cutter geometry:



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	PCD 5510	d1	s	l	f	R
TPHB 060104 FN	**W32 03990.04..**	▲	3,97	1,60	1,8	3,15	0,4
TPHB 090204 FN	**W32 13990.04..**	▲	5,56	2,38	2,7	4,52	0,4
TPHB 110204 FN	**W32 18990.04..**	▲	6,35	2,38	3,8	5,21	0,4
TPHB 130304 FN	**W32 23990.04..**	▲	7,94	3,18	3,8	6,59	0,4
TPHB 160304 FN	**W32 32990.04..**	▲	9,52	3,18	3,8	7,95	0,4
Aluminium alloys Si < 12%		●						
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		◐						
Ceramics		◐						
Glass, quartz glass	N	◐						
sintered carbides (G10-G60)								
Metal Matrix Composites (MMC)		●						
Graphite		◐						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

Order example:
ISO Code
TPHB 060104 FN
Cutting material
PKD5510
Order No.
W32 03990.045510

● Main area of application ◐ Suitable in some cases

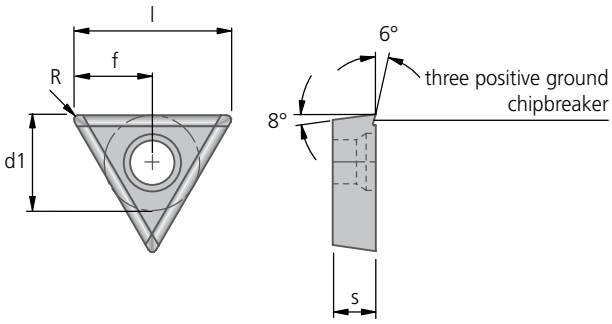
▲ Availability: for delivery see current price and stock list



Application range:

Peripheral and surface ground triangular insert for roughing and facing operations:
2-sided contact produces a very high changeover accuracy when changing the insert.

Cutter geometry:



Substrate		Carbide						
Coating type		–	CVD					
Cutting material designation		K10	BK6425					
Cutting edge design		E	E					
ISO Code Cutting edge design E = rounded ▼	Order No. Enter cutting material code ▼	 21	 6425	d1	s	l	f	R
TOHT 110304 EN-G06	**W34 18660.04..**	▲	▲	6,35	3,18	10,4	5,21	0,4
Steel	P	◐	●	Order example: ISO Code TOHT 110304 EN-G06 Cutting material K10 Order No. W34 18660.0421				
Stainless steel	M		○					
Cast iron	K	●						
Non-ferrous metals	N	●						
Superalloys and titanium	S	●						
Hardened materials	H							

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W37..60

TEHB

Inserts

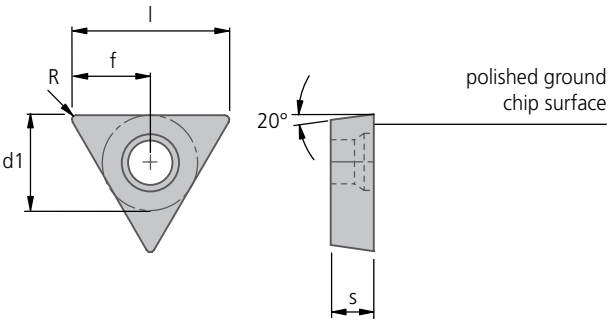
neutral cutting form „N“
for machining aluminium



Application range:

20° TEHB insert with polished chip surface for softer aluminium materials and other non-ferrous metals.
10 – 12° top rake with axial and radial tilt.

Cutter geometry:



Substrate		Carbide						
Coating type		–						
Cutting material designation		K10						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	21	d1	s	l	f	R
TEHB 110204 FN-P	W37 18600.04..	▲	6,35	2,38	10,4	5,21	0,4
TEHB 110208 FN-P	W37 18600.08..	▲			9,8	4,91	0,8
TEHB 130308 FN-P	W37 23600.08..	▲	7,94	3,18	12,6	6,29	0,8
Steel P		◐	Order example: ISO Code TEHB 110204 FN-P Cutting material K10 Order No. W37 18600.0421					
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N		●						
Superalloys and titanium S		●						
Hardened materials H								

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list

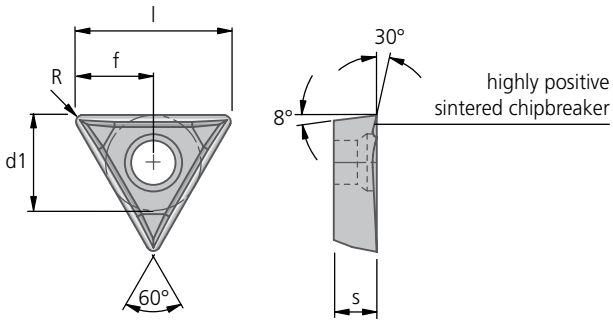


Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

Cutter geometry:



Substrate		Carbide						
Coating type		–	PVD					
Cutting material designation		K10	BK7710					
Cutting edge design		F	F					
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	 23	 7710	d1	s	l	f	R
TOGX 06T102 FN-12	**W57 04120.02..**	▲	▲	4,00	1,80	6,64	3,32	0,2
TOGX 090204 FN-12	**W57 14120.04..**	▲	▲	5,60	2,50	9,12	4,56	0,4
TOGX 140304 FN-12	**W57 26120.04..**	▲	▲	8,20	3,00	13,62	6,81	0,4
Steel P				Order example: ISO Code TOGX 06T102 FN-12 Cutting material K10 Order No. W57 04120.0223				
Stainless steel M		◐						
Cast iron K								
Non-ferrous metals N		●	●					
Superalloys and titanium S		●						
Hardened materials H								

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W57..14 TOGX

Indexable inserts

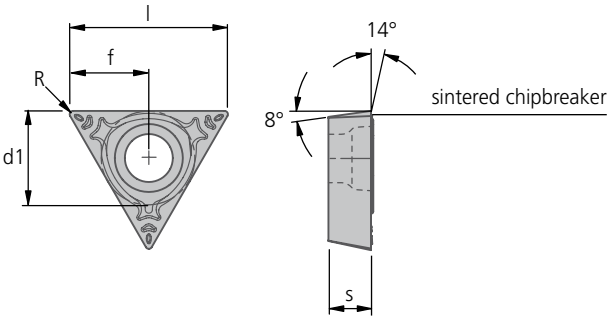


Application range:

- Internal and external machining
- Special tools
- Fine boring

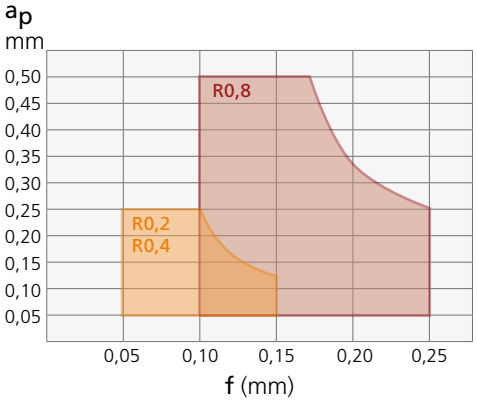
Controlled chip formation for fine and high precision machining.Wear resistant grades: CVD and PVD coated and uncoated Cermet.
CK3210: Extremely high resistance to wear
CK3230: Optimum toughness, suitable for interrupted cutting

Cutter geometry:



Substrate		Carbide		Cermet						
Coating type		CVD	PVD	–	–					
Cutting material designation		BK60	BK8430	CK3210	CK3230					
Cutting edge design		E	E	E	E					
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	 60	 8430	 3210	 3230	d1	s	l	f	R
TOGX 06T102 EN-14	W57 04140.02..	▲	▲	▲	▲	4,0	1,8	6,64	3,32	0,2
TOGX 06T104 EN-14	W57 04140.04..	▲	▲	▲	▲			6,35	3,17	0,4
TOGX 090202 EN-14	W57 14140.02..	▲	▲	▲	▲	5,6	2,5	9,41	4,70	0,2
TOGX 090204 EN-14	W57 14140.04..	▲	▲	▲	▲			9,12	4,56	0,4
TOGX 140302 EN-14	W57 26140.02..		▲	▲	▲	8,2	3,0	13,91	6,96	0,2
TOGX 140304 EN-14	W57 26140.04..	▲	▲	▲	▲			13,62	6,81	0,4
TOGX 140308 EN-14	W57 26140.08..		▲					13,03	6,52	0,8
Steel P		●	●	●	●	Order example: ISO Code TOGX 06T102 EN-14 Cutting material BK60 Order No. W57 04140.0260				
Stainless steel M			◐	◐	◐					
Cast iron K		●	◐	◐	◐					
Non-ferrous metals N				◐	◐					
Superalloys and titanium S										
Hardened materials H										

Application area



● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



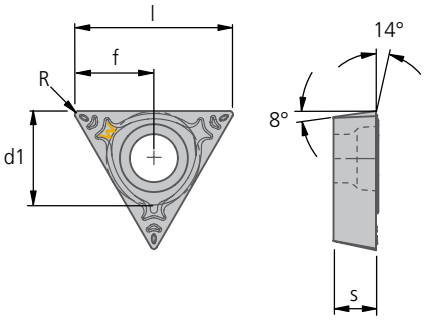
Application range:

Wiper

- Internal and external machining
- Special tools
- Fine boring

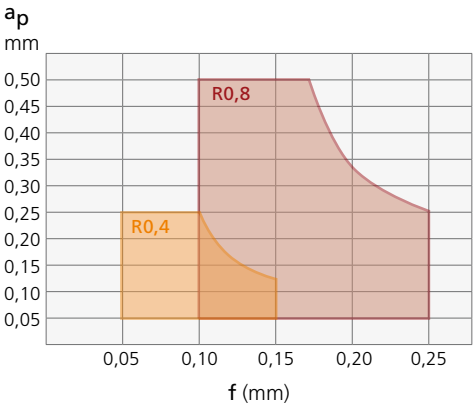
Controlled chip formation for fine and high precision machining with optimised feed:surface ratio for best surface finish.
Wear resistant grades: Finest grade carbide + PVD coating and uncoated Cermet.

Cutter geometry:

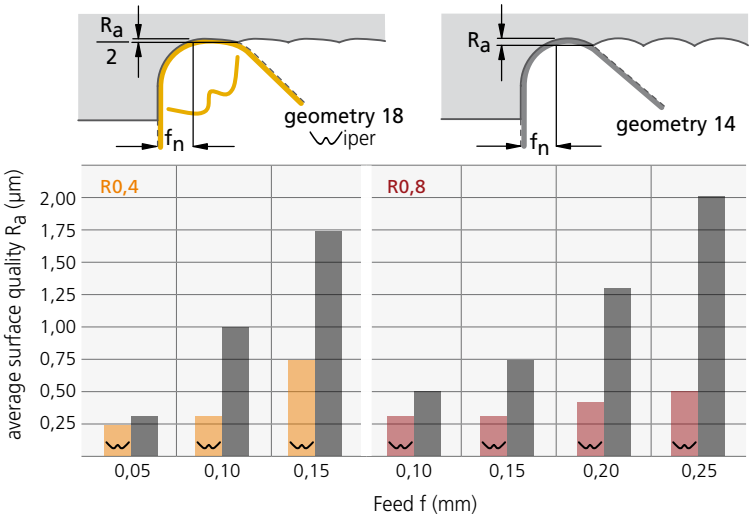


Substrate		Carbide	Cermet					
Coating type		PVD	–					
Cutting material designation		BK8430	CK32					
Cutting edge design		E	E					
ISO Code Cutting edge design E = rounded ▼	Order No. Enter cutting material code ▼	8430	32	d1	s	l	f	R
TOGX 060104 EN-18	W57 04180.04..	▲	▲	4,0	1,8	6,3	3,17	0,4
TOGX 090204 EN-18	W57 14180.04..	▲	▲	5,6	2,5	9,1	4,56	0,4
TOGX 090208 EN-18	W57 14180.08..	▲	▲			8,52	4,26	0,8
TOGX 140304 EN-18	W57 26180.04..	▲	▲	8,2	3,0	13,6	6,81	0,4
TOGX 140308 EN-18	W57 26180.08..	▲				13,01	6,51	0,8
Steel P		●	●	Order example: ISO Code TOGX 060104 EN-18 Cutting material BK8430 Order No. W57 04180.048430				
Stainless steel M		●	●					
Cast iron K		●	◐					
Non-ferrous metals N			◐					
Superalloys and titanium S		◐						
Hardened materials H		◐						

Application area



Surface quality results: Comparison of surface quality results for "Wiper" – R0,4 / R0,8 for ϰ = 90° in X40Cr13 / 1.4034



● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W58..12 TOGX

Inserts

for machining aluminium

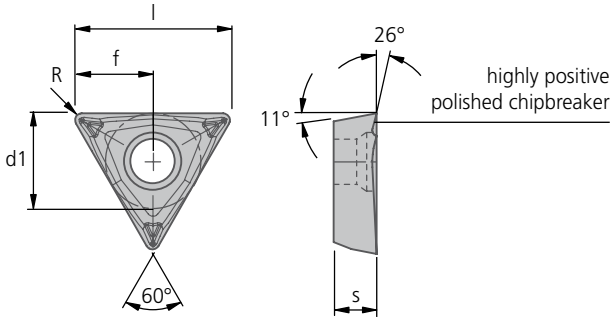


Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

Cutter geometry:



Substrate		Carbide						
Coating type		PVD						
Cutting material designation		BK7710						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	**Order No.** Enter cutting material code ▼	 **7710**		d1	s	l	f	R
TPGX 060104 FN-12	**W58 03120.04..**	▲		3,97	1,60	6,29	3,15	0,4
TPGX 090204 FN-12	**W58 13120.04..**	▲		5,56	2,38	9,05	4,52	0,4
TPGX 110204 FN-12	**W58 18120.04..**	▲		6,35	2,38	10,41	5,21	0,4
TPGX 130304 FN-12	**W58 23120.04..**	▲		7,94	3,18	13,17	6,58	0,4
TPGX 160304 FN-12	**W58 32120.04..**	▲		9,52	3,18	15,90	7,95	0,4
Steel P Stainless steel M Cast iron K Non-ferrous metals N Superalloys and titanium S Hardened materials H		●	Order example: ISO Code TPGX 060104 FN-12 Cutting material BK7710 Order No. W58 03120.047710					

● Main area of application ◐ Suitable in some cases

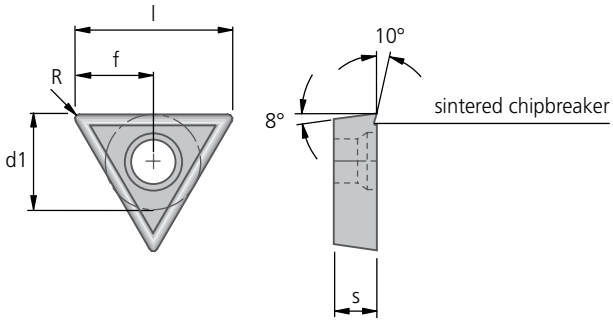
▲ Availability: for delivery see current price and stock list



Application range:

Peripheral and surface ground triangular insert for roughing and facing operations:
2-sided contact produces a very high changeover accuracy when changing the insert.

Cutter geometry:



Substrate		Carbide												
Coating type		–	–	CVD	CVD	CVD	PVD	PVD						
Cutting material designation		P25M	K10	BK6425	BK7615	BK6440	BK79	BK8425						
Cutting edge design		E	E	E	E	E	E	E						
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	03	21	6425	7615	6440	79	8425	d1	s	l	f	R	
TOHT 110304 EN-05	**W59 18050.04..**	▲	▲	▲	▲	▲	▲	▲	6,35	3,18	10,4	5,21	0,4	
TOHT 160408 EN-05	**W59 32050.08..**	▲	▲	▲	▲	▲	▲	▲	9,52	4,76	15,3	7,66	0,8	
Steel	P	●	◐	●		●	●	●	Order example:					
Stainless steel	M	○		○		◑	○	○	ISO Code					
Cast iron	K		●		●			●	TOHT 110304 EN-05					
Non-ferrous metals	N		●						Cutting material					
Superalloys and titanium	S		●				◐		P25M					
Hardened materials	H				◐ < 52 HRC				Order No.					
									W59 18050.0403					

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W60..06 / W60..12 / W60..20 DOHT

Inserts

L.H. cutting form „L“

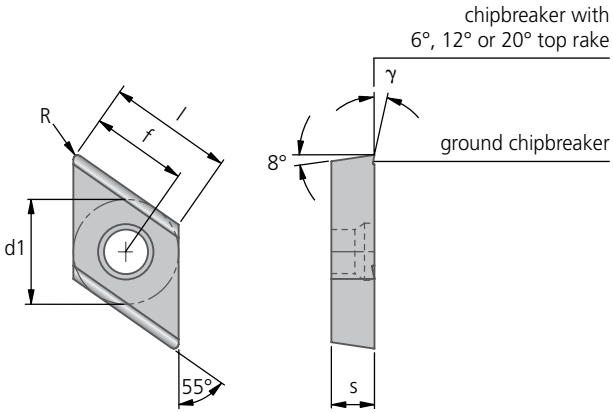


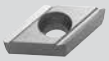
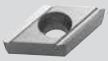
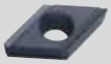
Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

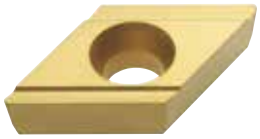
Cutter geometry:



Substrate		Carbide										
Coating type		–	–	CVD	PVD							
Cutting material designation		P25M	K10	BK6425	BK2710							
Cutting edge design		E	F	E	E							
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	 03	 21	 6425	 2710	d1	s	l	γ	f	R
DOHT 070202..L-G06	**W60 18060.02..**	▲				6,35	2,4	7,4	6°	5,92	0,2
DOHT 070204..L-G06	**W60 18060.04..**			▲						5,73	0,4
DOHT 070202..L-G12	**W60 18120.02..**	▲	▲	▲	▲	6,35	2,4	7,4	12°	5,92	0,2
DOHT 070204..L-G12	**W60 18120.04..**	▲	▲	▲	▲					5,73	0,4
DOHT 070202..L-G20	**W60 18200.02..**		▲			6,35	2,4	7,4	20°	5,92	0,2
DOHT 11T302..L-G12	**W60 32120.02..**	▲	▲	▲		9,52	4,0	11,2	12°	8,96	0,2
DOHT 11T304..L-G12	**W60 32120.04..**	▲	▲	▲	▲					8,78	0,4
DOHT 11T308..L-G12	**W60 32120.08..**			▲	▲					8,41	0,8
Steel P		●	◐	●	◐	Order example: ISO Code DOHT 070202 EL-G06 Cutting material P25M Order No. W60 18060.0203					
Stainless steel M		○		○	◑						
Cast iron K			●		●						
Non-ferrous metals N			●								
Superalloys and titanium S			●		●						
Hardened materials H											

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

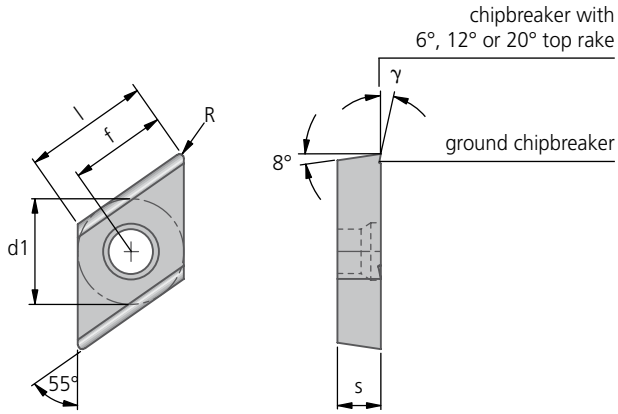


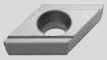
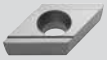
Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

Cutter geometry:



Substrate		Carbide									
Coating type		–	–	CVD							
Cutting material designation		P25M	K10	BK6425							
Cutting edge design		E	F	E							
ISO Code Cutting edge design E = rounded F = sharp ▼	Order No. Enter cutting material code ▼	 03	 21	 6425	d1	s	l	γ	f	R
DOHT 070202..R-G06	**W60 18360.02..**	▲		▲	6,35	2,4	7,4	6°	5,92	0,2
DOHT 070204..R-G06	**W60 18360.04..**			▲					5,73	0,4
DOHT 070202..R-G12	**W60 18420.02..**	▲	▲	▲	6,35	2,4	7,4	12°	5,92	0,2
DOHT 070204..R-G12	**W60 18420.04..**	▲	▲	▲					5,73	0,4
DOHT 070202..R-G20	**W60 18500.02..**		▲		6,35	2,4	7,4	20°	5,92	0,2
DOHT 070204..R-G20	**W60 18500.04..**		▲						5,73	0,4
DOHT 11T308..R-G06	**W60 32360.08..**			▲	9,52	4,0	11,2	6°	8,41	0,8
DOHT 11T302..R-G12	**W60 32420.02..**	▲	▲	▲	9,52	4,0	11,2	12°	8,96	0,2
DOHT 11T304..R-G12	**W60 32420.04..**	▲	▲	▲					8,78	0,4
DOHT 11T308..R-G12	**W60 32420.08..**			▲					8,41	0,8
Steel P		●	◐	●	Order example: ISO Code DOHT 070202 ER-G06 Cutting material P25M Order No. W60 18360.0203					
Stainless steel M		○		○						
Cast iron K			●							
Non-ferrous metals N			●							
Superalloys and titanium S			●							
Hardened materials H										

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W60..60

DOHW

Inserts

neutral cutting form „N“

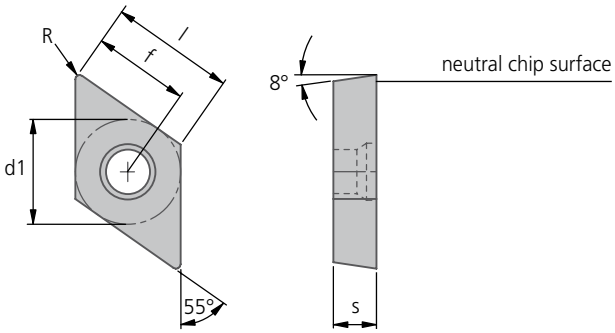


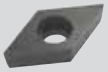
Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials.

Cutter geometry:



Substrate		Carbide						
Coating type		–						
Cutting material designation		K10						
Cutting edge design		E						
ISO Code Cutting edge design E = rounded	Order No. Enter cutting material code	 21		d1	s	l	f	R
DOHW 070202 EN	W60 18600.02..	▲		6,35	2,4	7,4	5,20	0,2
DOHW 070204 EN	W60 18600.04..	▲					5,73	0,4
DOHW 11T304 EN	W60 32600.04..	▲		9,52	4,0	11,2	8,78	0,4
Steel	P	◐						
Stainless steel	M							
Cast iron	K	●						
Non-ferrous metals	N	●						
Superalloys and titanium	S	●						
Hardened materials	H							

Order example:
ISO Code
DOHW 070202 EN
Cutting material
K10
Order No.
W60 18600.0221

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



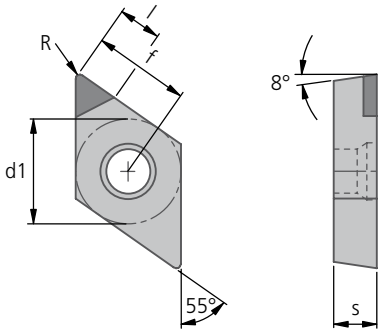
Application range:

Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

CBN 40: For machining hardened steels (over 52 HRC).

Cutter geometry:



Substrate		CBN						
Coating type		–	–					
Cutting material designation		CBN57	CBN40					
Cutting edge design		T	T					
ISO Code Cutting edge design T = chamfered ▼	Order No. Enter cutting material code ▼	 57	 40	d1	s	l	f	R
DOEW 070202 TN	W60 18990.02..		▲	6,35	2,4	3,0	5,92	0,2
DOEW 070204 TN	W60 18990.04..	▲	▲				5,73	0,4
DOEW 11T302 TN	W60 32990.02..		▲	9,52	4,0	3,0	8,96	0,2
DOEW 11T304 TN	W60 32990.04..	▲	▲				8,78	0,4
Steel P Stainless steel M Cast iron K Non-ferrous metals N Superalloys and titanium S Hardened materials H		● ◐	◐ ○ ≥ 52 HRC	Order example: ISO Code DOEW 070202 TN Cutting material CBN40 Order No. W60 18990.0240				

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts

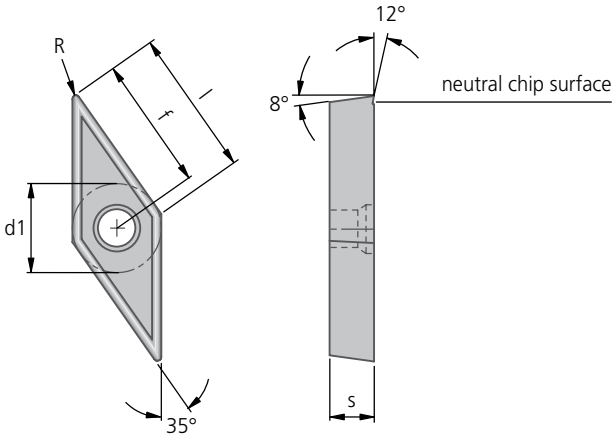


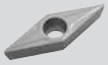
Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use.
The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

Cutter geometry:



Substrate		Carbide						
Coating type		–	CVD					
Cutting material designation		P35	BK66					
ISO Code	Order No. Enter cutting material code ▼	 14	 66	d1	s	l	f	R
VOHT 110302-07	**W78 18070.02..**	▲	▲	6,35	3,18	11	9,64	0,2
VOHT 110304-07	**W78 18070.04..**	▲	▲				9,20	0,4
VOHT 160404-07	**W78 32070.04..**	▲	▲	9,52	4,76	16	14,23	0,4
VOHT 160408-07	**W78 32070.08..**	▲	▲				13,36	0,8
Steel P		●	●	Order example: ISO Code VOHT 110302-07 Cutting material P35 Order No. W78 18070.0214				
Stainless steel M		◐	◐					
Cast iron K								
Non-ferrous metals N								
Superalloys and titanium S								
Hardened materials H								

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list

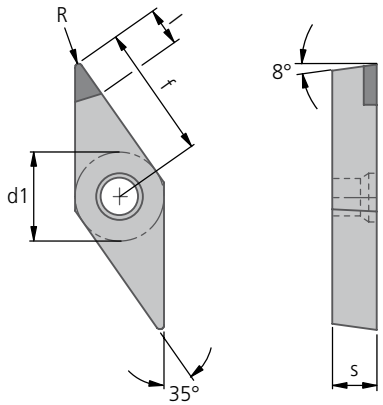


Application range:

Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

Cutter geometry:



Substrate		CBN						
Coating type		–						
Cutting material designation		CBN57						
Cutting edge design		T						
ISO Code Cutting edge design T = chamfered ▼	Order No. Enter cutting material code ▼	 57		d1	s	l	f	R
VOEW 110304 TN	**W78 18990.04..**	▲		6,35	3,18	2,5	9,20	0,4
VOEW 160408 TN	**W78 32990.08..**	▲		9,52	4,76	3,5	13,36	0,8
Steel	P							
Stainless steel	M							
Cast iron	K	●						
Non-ferrous metals	N							
Superalloys and titanium	S	◐						
Hardened materials	H							

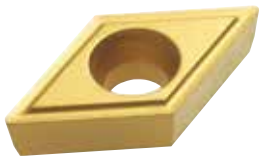
Order example:
ISO Code
VOEW 110304 TN
Cutting material
CBN57
Order No.
W78 18990.0457

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts

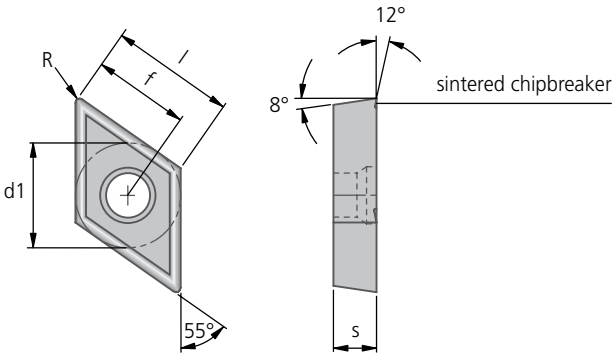


Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use.
The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

Cutter geometry:



Substrate		Carbide										
Coating type		–	–	CVD	CVD	CVD	PVD					
Cutting material designation		P25M	K10	BK6425	BK7615	BK6440	BK2710					
ISO Code	Order No. Enter cutting material code	03	21	6425	7615	6440	2710	d1	s	l	f	R
DOHT 070202-06	W79 18060.02..	▲	▲	▲		▲	▲				5,92	0,2
DOHT 070204-06	W79 18060.04..	▲	▲	▲	▲	▲	▲	6,35	2,4	7,4	5,73	0,4
DOHT 070208-06	W79 18060.08..			▲		▲					5,36	0,8
DOHT 11T302-06	W79 32060.02..		▲	▲							8,96	0,2
DOHT 11T304-06	W79 32060.04..	▲	▲	▲		▲	▲	9,52	4,0	11,2	8,78	0,4
DOHT 11T308-06	W79 32060.08..		▲	▲		▲	▲				8,41	0,8
Steel P		●	◐	●		●	◐	Order example:				
Stainless steel M		○		○		◑	◑	ISO Code				
Cast iron K			●		●		●	DOHT 070202-06				
Non-ferrous metals N			●					Cutting material				
Superalloys and titanium S			●				●	P25M				
Hardened materials H					◐ < 52 HRC			Order No.				
								W79 18060.0203				

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

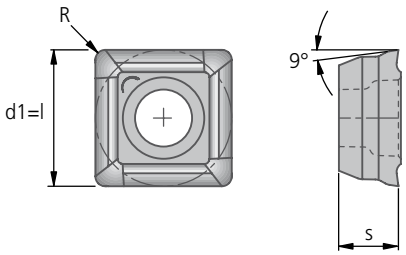


Application range:

- Solid drilling with KUB Pentron
- Special tools

All-round geometry for KUB Pentron:
wear-resistant indexable insert for universal use

Cutter geometry:



Substrate		Carbide								
Coating type		CVD	CVD	PVD	PVD	PVD				
Cutting material designation		BK6115	BK6425	BK7935	BK7710	BK8425				
ISO Code	Order No. Enter cutting material code ▼	6115	6425	7935	7710	8425	d1	s	l	R
SOGX 040204-01	W80 10010.04..	▲	▲	▲	▲	▲	4,8	2,2	4,8	0,4
SOGX 050204-01	W80 12010.04..	▲	▲	▲	▲	▲	5,5	2,4	5,5	0,4
SOGX 060206-01	W80 18010.06..	▲	▲	▲	▲	▲	6,2	2,75	6,2	0,6
SOGX 07T208-01	W80 20010.08..	▲	▲	▲	▲	▲	7,1	2,97	7,1	0,8
SOGX 080308-01	W80 24010.08..	▲	▲	▲	▲	▲	8,0	3,4	8,0	0,8
SOGX 09T308-01	W80 28010.08..	▲	▲	▲	▲	▲	8,9	3,9	8,9	0,8
SOGX 100408-01	W80 32010.08..	▲	▲	▲	▲	▲	9,8	4,2	9,8	0,8
SOGX 110408-01	W80 38010.08..	▲	▲	▲	▲	▲	10,9	4,5	10,9	0,8
SOGX 120408-01	W80 42010.08..	▲	▲	▲	▲	▲	12,0	4,8	12,0	0,8
SOGX 130508-01	W80 46010.08..	▲	▲	▲	▲	▲	13,2	5,2	13,2	0,8
Steel P		◐	●	◐		●	Order example:			
Stainless steel M		◐	●	●		●	ISO Code			
Cast iron K		●	◐	◐		◐	SOGX 050204-01			
Non-ferrous metals N					●	◐	Cutting material			
Superalloys and titanium S				◐	◐		BK6115			
Hardened materials H		◐					Order No.			
							W80 12010.046115			
External cutting edge		✓	✓	✓	✓	✓				
Internal cutting edge *Recommendation*		*BK8425*	*BK8425*	✓	✓	✓				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W80..03

Inserts

SOGX

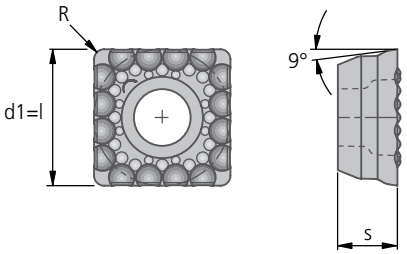


Application range:

- Solid drilling with KUB Pentron
- Special tools

The problem-solving SOGX -03 dome topography is designed for use in long-chipping materials. Thanks to optimum chip formation, it ensures that chips are removed reliably even at high L/D ratios.
The SOGX -03 can be used not only in all general steel materials but in stainless and acid-resistant steels too.

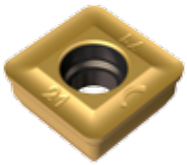
Cutter geometry:



Substrate		Carbide				
Coating type		PVD				
Cutting material designation		BK8430				
ISO Code	Order No. Enter cutting material code	 8430	d1	s	l	R
SOGX 040204-03	**W80 10030.04..**	▲	4,8	2,2	4,8	0,4
SOGX 050204-03	**W80 12030.04..**	▲	5,5	2,4	5,5	0,4
SOGX 060206-03	**W80 18030.06..**	▲	6,2	2,75	6,2	0,6
SOGX 07T208-03	**W80 20030.08..**	▲	7,1	2,97	7,1	0,8
SOGX 080308-03	**W80 24030.08..**	▲	8,0	3,4	8,0	0,8
SOGX 09T308-03	**W80 28030.08..**	▲	8,9	3,9	8,9	0,8
SOGX 100408-03	**W80 32030.08..**	▲	9,8	4,2	9,8	0,8
SOGX 110408-03	**W80 38030.08..**	▲	10,9	4,5	10,9	0,8
SOGX 120408-03	**W80 42030.08..**	▲	12,0	4,8	12,0	0,8
SOGX 130508-03	**W80 46030.08..**	▲	13,2	5,2	13,2	0,8
Steel P		●	Order example: ISO Code SOGX 040204-03 Cutting material BK8430 Order No. W80 10030.048430			
Stainless steel M		◐				
Cast iron K		◐				
Non-ferrous metals N		◐				
Superalloys and titanium S						
Hardened materials H						
External cutting edge		✓				
Internal cutting edge *Recommendation*		✓				

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

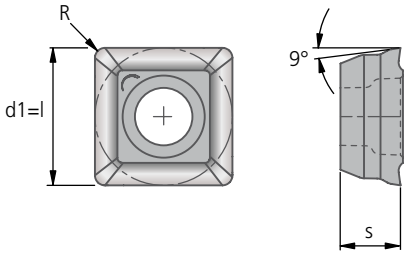


Application range:

- Solid drilling with KUB Pentron
- Special tools

Soft-cutting topography that reduces cutting forces for the KUB Pentron: Wear-resistant, high-positive indexable insert

Cutter geometry:



Substrate		Carbide						
Coating type		PVD	PVD	PVD				
Cutting material designation		BK8430	BK7935	BK7710				
ISO Code	Order No. Enter cutting material code	8430	7935	7710	d1	s	l	R
SOGX 040204-21	W80 10210.04..	▲	▲	▲	4,8	2,2	4,8	0,4
SOGX 050204-21	W80 12210.04..	▲	▲	▲	5,5	2,4	5,5	0,4
SOGX 060206-21	W80 18210.06..	▲	▲	▲	6,2	2,75	6,2	0,6
SOGX 07T208-21	W80 20210.08..	▲	▲	▲	7,1	2,97	7,1	0,8
SOGX 080308-21	W80 24210.08..	▲	▲	▲	8,0	3,4	8,0	0,8
SOGX 09T308-21	W80 28210.08..		▲	▲	8,9	3,9	8,9	0,8
SOGX 100408-21	W80 32210.08..	▲	▲	▲	9,8	4,2	9,8	0,8
SOGX 110408-21	W80 38210.08..	▲	▲	▲	10,9	4,5	10,9	0,8
SOGX 120408-21	W80 42210.08..	▲	▲	▲	12,0	4,8	12,0	0,8
SOGX 130508-21	W80 46210.08..	▲	▲	▲	13,2	5,2	13,2	0,8
Steel P		●	◐		Order example:			
Stainless steel M		○	○		ISO Code			
Cast iron K		◐	◐		SOGX 040204-21			
Non-ferrous metals N		◐		●	Cutting material			
Superalloys and titanium S			◐	◐	BK8430			
Hardened materials H					Order No.			
					W80 10210.048430			
External cutting edge		✓	✓	✓				
Internal cutting edge *Recommendation*		✓	*W80..21 - BK8430*	✓				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W82..21

SOHX

Inserts

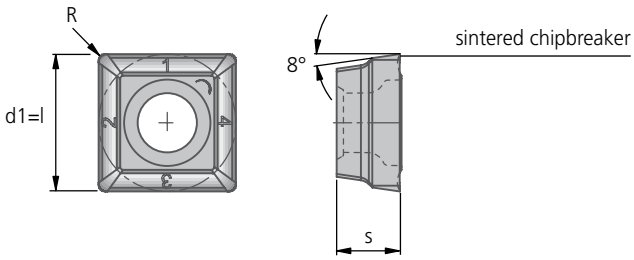


Application range:

- Special tools
- Roughing
- Precision boring
- Turning

Reduced cutting forces thanks high positive chip forming step, four effective cutting edges. High indexing and repeatability due to precision-ground circumference. Compatible with SOEX indexable inserts, additional labelling for easy identification.

Cutter geometry:



Substrate		Carbide					
Coating type		PVD	PVD				
Cutting material designation		BK2730	BK8530				
ISO Code	**Order No.** Enter cutting material code ▼	 **2730**	 **8530**	**d1**	**s**	**l**	**R**
SOHX 090404-21	**W82 32210.04..**		▲	9,52	4,37	9,52	0,4
SOHX 090408-21	**W82 32210.08..**	▲	▲				0,8
Steel P		◐	●	Order example: ISO Code SOHX 090404-21 Cutting material BK8530 Order No. W82 32210.048530			
Stainless steel M		◐	◐				
Cast iron K		●					
Non-ferrous metals N							
Superalloys and titanium S							
Hardened materials H							

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

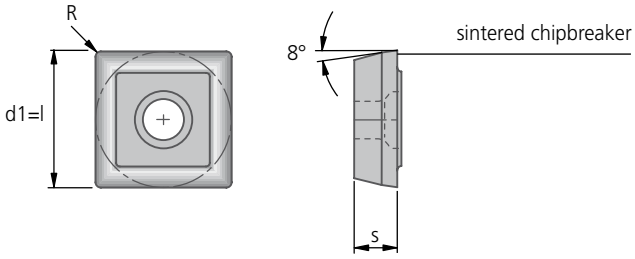


Application range:

- KUB Quatron, KUB Centron Powerline
- TwinKom double insert tools
- Kometric mounted seatings

Optimum solution for all roughing operations.
Suitable for medium and strong steels and cast iron according to quality.
All-round geometry:
Wear-resistant insert for universal use for internal and external cutting.

Cutter geometry:



Substrate		Carbide									
Coating type		CVD	CVD	CVD	CVD	PVD	PVD				
Cutting material designation		BK7615	BK6115	BK6420	BK74	BK7935	BK8425				
ISO Code	Order No. Enter cutting material code	7615	6115	6420	74	7935	8425	d1	s	l	R
SOEX 050204-01	W83 13000.01..		▲		▲			5,56	2,38	5,56	0,4
	W83 13010.04..	▲		▲		▲	▲				
SOEX 060306-01	W83 18000.09..		▲		▲			6,35	3,18	6,35	0,6
	W83 18010.06..	▲		▲		▲	▲				
SOEX 07T308-01	W83 23000.01..		▲		▲			7,94	3,58	7,94	0,8
	W83 23010.08..	▲		▲		▲	▲				
SOEX 090408-01	W83 32000.15..		▲		▲			9,52	4,37	9,52	0,8
	W83 32010.08..	▲		▲		▲	▲				
SOEX 120508-01	W83 44000.18..		▲		▲			12,7	5,16	12,7	0,8
	W83 44010.08..	▲		▲		▲	▲				
Steel P			◐	●	◐	◐	●	Order example:			
Stainless steel M				○	○	○	○	ISO Code			
Cast iron K		●	●	◐		◐	●	SOEX 050204-01			
Non-ferrous metals N								Cutting material			
Superalloys and titanium S					●	◐		BK6420			
Hardened materials H		◐	◐ <52HRC					Order No.			
								W83 13010.046420			
External cutting edge		✓	✓	✓	✓	✓	✓				
Internal cutting edge *Recommendation*		*BK8425*	*BK8425*	*BK8425*	✓	✓	✓				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W83..03

SOEX

Inserts

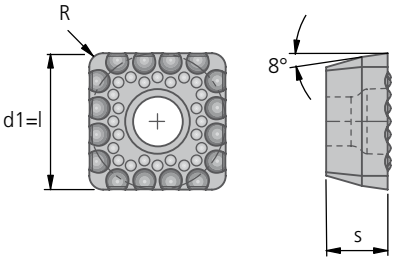


Application range:

- KUB Quatron, KUB Centron Powerline
- Special tools and Easy Special

Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.

Cutter geometry:



BK6730: Only suitable to be used for outer cutters. All-round cutting material BK8430 should be used for inner cutters.
BK8430 all-round cutting material: Wear-resistant, universal indexable insert for inner and outer cutters.

Substrate		Carbide					
Coating type		CVD	PVD				
Cutting material designation		BK6730	BK8430				
ISO Code	Order No. Enter cutting material code	 6730	 8430	d1	s	l	R
SOEX 050204-03	**W83 13030.04..**	▲	▲	5,56	2,38	5,56	0,4
SOEX 060306-03	**W83 18030.06..**	▲	▲	6,35	3,18	6,35	0,6
SOEX 07T308-03	**W83 23030.08..**	▲	▲	7,94	3,58	7,94	0,8
SOEX 090408-03	**W83 32030.08..**	▲	▲	9,52	4,37	9,52	0,8
SOEX 120508-03	**W83 44030.08..**	▲	▲	12,7	5,16	12,7	0,8
Steel P		●	●	Order example: ISO Code SOEX 050204-03 Cutting material BK8430 Order No. W83 13030.048430			
Stainless steel M		○	○				
Cast iron K		◐	◐				
Non-ferrous metals N		◐	◐				
Superalloys and titanium S							
Hardened materials H							
External cutting edge		✓	✓				
Internal cutting edge *Recommendation*		*BK8430*	✓				

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list

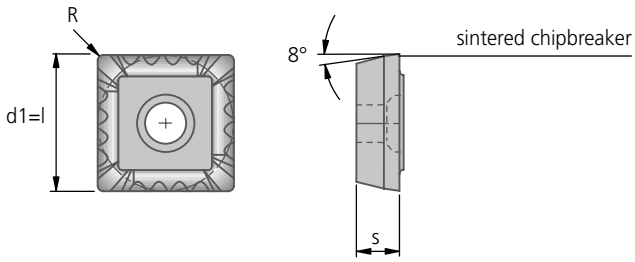


Application range:

- KUB Quatron, KUB Centron Powerline
- TwinKom double insert tools
- Kometric mounted seatings
- Special tools

Optimum solution for steel with low carbon content and for stainless steels. Suitable for medium to high cutting speeds for internal and external cutting edge.

Cutter geometry:



Substrate		Carbide							
Coating type		CVD	CVD	PVD	PVD				
Cutting material designation		BK6420	BK74	BK7935	BK8425				
ISO Code	Order No. Enter cutting material code	6420	74	7935	8425	d1	s	l	R
SOEX 050204-13	W83 13130.04..			▲	▲	5,56	2,38	5,56	0,4
SOEX 060306-13	W83 18000.10..		▲			6,35	3,18	6,35	0,6
	W83 18130.06..	▲		▲	▲				
SOEX 060308-13	W83 18130.08..	▲	▲	▲	▲				0,8
SOEX 07T308-13	W83 23000.02..		▲			7,94	3,58	7,94	0,8
	W83 23130.08..	▲		▲	▲				
SOEX 090408-13	W83 32000.17..		▲			9,52	4,37	9,52	0,8
	W83 32130.08..	▲		▲	▲				
SOEX 110508-13	W83 39130.08..	▲	▲	▲	▲	11,1	4,76	11,1	0,8
SOEX 120508-13	W83 44000.19..		▲			12,7	5,16	12,7	0,8
	W83 44130.08..	▲		▲	▲				
Steel P		●	◐	◐	●	Order example: ISO Code SOEX 050204-13 Cutting material BK6420 Order No. W83 13130.046420			
Stainless steel M		○	○	○	○				
Cast iron K		◐		◐	●				
Non-ferrous metals N									
Superalloys and titanium S			●	◐					
Hardened materials H									
External cutting edge		✓	✓	✓	✓				
Internal cutting edge *Recommendation*		*BK8425*	✓	✓	✓				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts

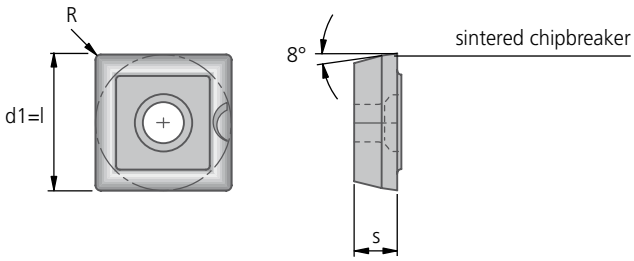


Application range:

- KUB Quatron, KUB Centron Powerline
- TwinKom double insert tools
- Kometric mounted seatings

For cutting stainless and general steels and aluminium materials.

Cutter geometry:



Substrate		Carbide							
Coating type		PVD	PVD	PVD	CVD				
Cutting material designation		BK8430	BK7935	BK7710	BK6130				
ISO Code	Order No. Enter cutting material code	 8430	 7935	 7710	 6130	d1	s	l	R
SOEX 050204-21	W83 13210.04..	▲	▲	▲	▲	5,56	2,38	5,56	0,4
SOEX 060306-21	W83 18210.06..	▲	▲	▲	▲	6,35	3,18	6,35	0,6
SOEX 060308-21	W83 18210.08..	▲	▲	▲	▲				0,8
SOEX 07T308-21	W83 23210.08..	▲	▲	▲	▲	7,94	3,58	7,94	0,8
SOEX 090408-21	W83 32210.08..	▲	▲	▲	▲	9,52	4,37	9,52	0,8
SOEX 110508-21	W83 39210.08..	▲	▲	▲	▲	11,1	4,76	11,1	0,8
SOEX 120508-21	W83 44210.08..	▲	▲	▲	▲	12,7	5,16	12,7	0,8
Steel P		●	◐		●	Order example: ISO Code SOEX 050204-21 Cutting material BK2730 Order No. W83 13210.042730			
Stainless steel M		●	●		●				
Cast iron K		◐	◐		◐				
Non-ferrous metals N		◐		●					
Superalloys and titanium S		◐	◐		◐				
Hardened materials H									
External cutting edge		✓	✓	✓	✓				
Internal cutting edge *Recommendation*		✓	*W83..01 – BK8425*	✓	*W83..01 – BK8425*				

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Application range:

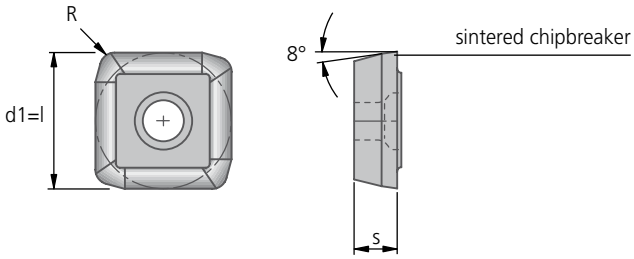
- **Solid drilling**
- **Special tools**

For cutting steel and cast iron materials.
Minimum burring at bore entrance and exit.

- Drive shaft machining
- Safe removal of the disc at the hole bottom when the drill exits
- C70 connecting rod machining with minimal burring

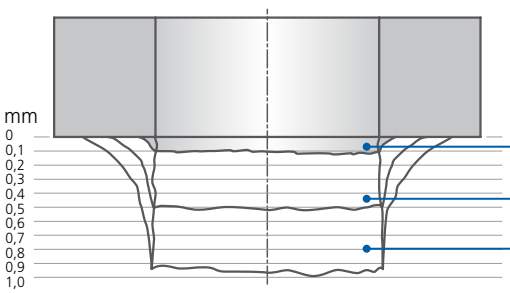


Cutter geometry:



Substrate		Carbide						Important Note	
Coating type		PVD	PVD					Because of design there is a nominal diameter reduction for standard KUB Quatron	
Cutting material designation		BK7935	BK8425						
ISO Code	Order No. Enter cutting material code	7935	8425	d1	s	l	R	Tool-Ø	Reduction
SOEX 050204-32	**W83 13320.04..**	▲	▲	5,56	2,38	5,56	0,4	14,0-16,0 16,1-17,5	0,05 0,08
SOEX 060306-33	**W83 18330.06..**	▲	▲	6,35	3,18	6,35	0,6	17,6-21,5	0,10
SOEX 07T308-33	**W83 23330.08..**	▲	▲	7,94	3,58	7,94	0,8	21,6-27,0 44,1-52,0	0,09
SOEX 090408-32	**W83 32320.08..**	▲	▲	9,52	4,37	9,52	0,8	27,1-33,0 52,1-65,0	0,11
SOEX 120508-32	**W83 44320.08..**	▲	▲	12,7	5,16	12,7	0,8	33,1-44,0	0,13
Steel P		◐	●						
Stainless steel M		○	○						
Cast iron K		◐	●						
Non-ferrous metals N									
Superalloys and titanium S		◐							
Hardened materials H									

Order example:
ISO Code
SOEX 050204-32
Cutting material
BK7935
Order No.
W83 13320.047935



Burr formation at hole exit

Material: C15 (1.0401)

0,102 height of burring — KUB Quatron with burr minimising insert

0,506 height of burring — Insert drill: Competitor 1

0,988 height of burring — Insert drill: Competitor 2

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W83

SPGW

Inserts

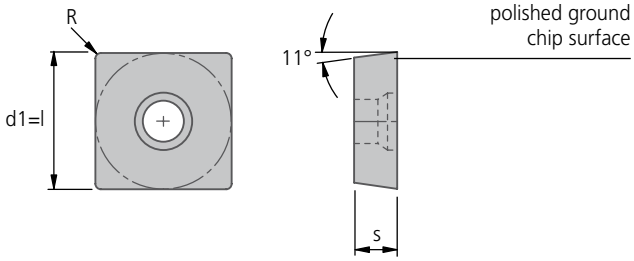
for machining aluminium



Application range:

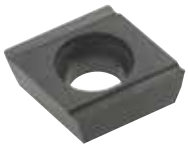
with K10
For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

Cutter geometry:



Substrate		Carbide				
Coating type		–				
Cutting material designation		K10				
Cutting edge design		F				
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21	d1	s	l	R
SPGW 060202 FN	**W83 18000.15..**	▲	6,35	2,38	6,35	0,2
SPGW 060204 FN	**W83 18000.16..**	▲				0,4
SPGW 09T304 FN	**W83 32000.18..**	▲	9,52	3,97	9,52	0,4
SPGW 09T308 FN	**W83 32000.19..**	▲				0,8
Steel P		◐	Order example: ISO Code SPGW 060202 FN Cutting material K10 Order No. W83 18000.1521			
Stainless steel M						
Cast iron K		●				
Non-ferrous metals N		●				
Superalloys and titanium S		●				
Hardened materials H						

● Main area of application ◐ Suitable in some cases
▲ Availability: for delivery see current price and stock list

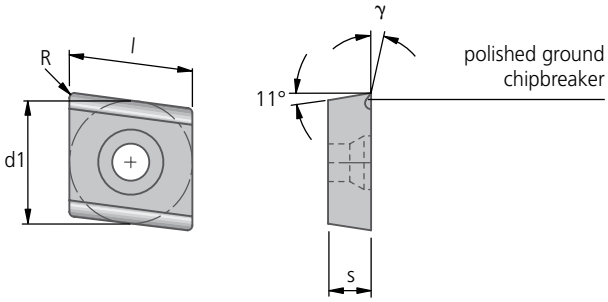


L.H. cutting form „L“
for machining aluminium

Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).

Cutter geometry:



Substrate		Carbide						
Coating type		–	PVD					
Cutting material designation		K10	BK77					
Cutting edge design		F	F					
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	 21	 77	d1	s	l	γ	R
CPGT 040102 FL-P18	W85 09000.01..	▲		4,76	1,59	4,8	18°	0,2
CPGT 040104 FL-P18	W85 09000.03..	▲	▲					0,4
CPGT 04T104 FL-P18	W85 09000.12..	▲		4,76	1,98	4,8	18°	0,4
CPGT 060202 FL-P18	W85 18000.06..	▲		6,35	2,38	6,45	18°	0,2
CPGT 060204 FL-P18	W85 18000.08..	▲	▲					0,4
CPGT 080302 FL-P18	W85 23000.01..	▲		7,94	3,18	8,06	18°	0,2
CPGT 080304 FL-P18	W85 23000.02..	▲						0,4
CPGT 09T304 FL-P18	W85 32000.23..	▲	▲	9,52	3,97	9,65	18°	0,4
CPGT 09T308 FL-P18	W85 32000.24..	▲	▲					0,8
CPGT 120404 FL-P18	W85 44000.29..		▲	12,7	4,76	12,9	18°	0,4
CPGT 120408 FL-P18	W85 44000.30..		▲					0,8
Steel P		◐		Order example: ISO Code CPGT 040102 FL-P18 Cutting material BK50 Order No. W85 09000.0150				
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N		●	●					
Superalloys and titanium S		●	●					
Hardened materials H								

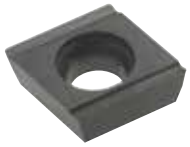
● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET W85 CPGT

NCD Indexable inserts

NCD

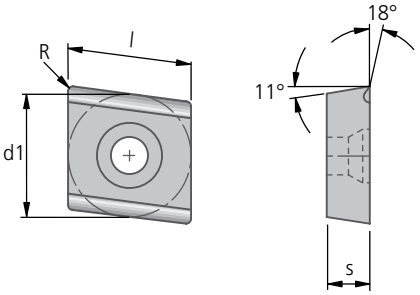


Application range:

L.H. cutting form „L“

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).

Cutter geometry:



Substrate		NCD				
Cutting material designation		BK50				
Cutting edge design		F				
ISO Code Cutting edge design F = sharp	Order No. Enter cutting material code	 50	d1	s	l	R
CPGT 09T304 FL-P18	**W85 32000.23..**	▲	9,52	3,97	9,65	0,4
CPGT 09T308 FL-P18	**W85 32000.24..**	▲				0,8
CPGT 120404 FL-P18	**W85 44000.29..**	▲	12,7	4,76	12,9	0,4
Aluminium alloys Si < 12%		●				
Aluminium alloys Si > 12%		◐				
CFRP, GFRP, plastics, composites		◐				
Ceramics						
Glass, quartz glass	N					
sintered carbides (G10-G60)						
Metal Matrix Composites (MMC)		◐				
Graphite		●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●				

Order example:
ISO Code
CPGT 09T304 FL-P18
Cutting material
BK50
Order No.
W85 32000.2350

● Main area of application ◐ Suitable in some cases

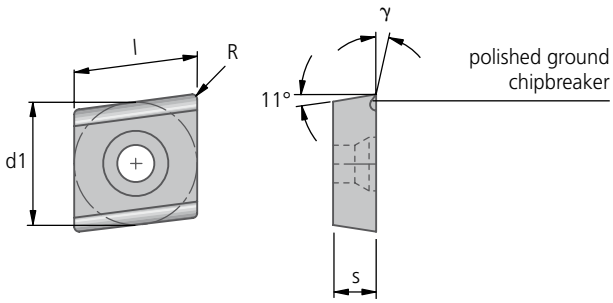
▲ Availability: for delivery see current price and stock list



Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).

Cutter geometry:



Substrate		Carbide						
Coating type		–						
Cutting material designation		K10						
Cutting edge design		F						
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21	d1	s	l	γ	R
CPGT 04T102 FR-P18	**W85 09000.13..**	▲	4,76	1,98	4,8	18°	0,2
CPGT 04T104 FR-P18	**W85 09000.14..**	▲					0,4
CPGT 060202 FR-P18	**W85 18000.27..**	▲	6,35	2,38	6,45	18°	0,2
CPGT 060204 FR-P18	**W85 18000.28..**	▲					0,4
CPGT 080302 FR-P18	**W85 23000.03..**	▲	7,94	3,18	8,06	18°	0,2
CPGT 080304 FR-P18	**W85 23000.04..**	▲					0,4
CPGT 09T304 FR-P18	**W85 32000.34..**	▲	9,52	3,97	9,65	18°	0,4
CPGT 09T308 FR-P18	**W85 32000.35..**	▲					0,8
CPGT 120408 FR-P18	**W85 44000.39..**	▲	12,7	4,76	12,9	18°	0,8
Steel P		◐	Order example: ISO Code CPGT 040102 FR-P18 Cutting material K10 Order No. W85 09000.0921					
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N		●						
Superalloys and titanium S		●						
Hardened materials H								

● Main area of application ◐ Suitable in some cases

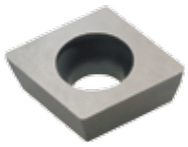
Important: See chapter 8 for more application details and safety notes!

KOMET W85

CPGW

Inserts

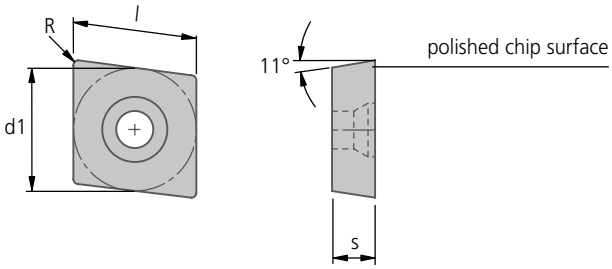
for machining aluminium



Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

Cutter geometry:



Substrate		Carbide				
Coating type		–				
Cutting material designation		K10				
Cutting edge design		F				
ISO Code Cutting edge design F = sharp ▼	Order No. Enter cutting material code ▼	 21	d1	s	l	R
CPGW 060202 FN	**W85 18000.17..**	▲	6,35	2,38	6,45	0,2
CPGW 060204 FN	**W85 18000.18..**	▲				0,4
CPGW 09T304 FN	**W85 32000.26..**	▲	9,52	3,97	9,65	0,4
CPGW 120404 FN	**W85 44000.32..**	▲	12,7	4,76	12,9	0,4
CPGW 120408 FN	**W85 44000.33..**	▲				0,8
Steel P		◐	Order example: ISO Code CPGW 060202 FN Cutting material K10 Order No. W85 18000.1721			
Stainless steel M						
Cast iron K		●				
Non-ferrous metals N		●				
Superalloys and titanium S		●				
Hardened materials H						

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

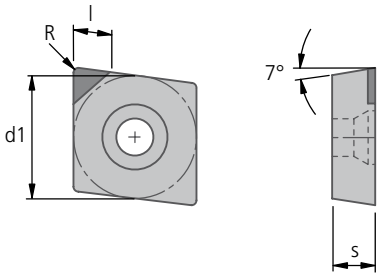


Application range:

CBN57
for cutting cast iron (GJL) and alloyed cast iron (ferrite content <10%) and chilled cast iron and some heat resistant alloys
v_c = 500 ... 800 (1500) m/min
f = 0.1 ... 0.5 mm
a_p = 0.1 ... 1 mm

CBN40
for cutting hardened steels >48 HRC
v_c = 100 ... 160 m/min
f = 0.1 ... 0.3 mm
a_p = 0.1 ... 0.5 mm

Cutter geometry:



Substrate		CBN					
Coating type		–	–				
Cutting material designation		CBN40	CBN57				
Cutting edge design		T	T				
ISO Code Cutting edge design T = chamfered ▼	Order No. Enter cutting material code ▼	40	57	d1	s	l	R
CCGW 060204 TN	W85 18000.26..		▲	6,35	2,38	3,0	0,4
CCGW 09T304 TN	W85 32000.31..	▲	▲	9,52	3,97	3,0	0,4
Steel P				Order example:			
Stainless steel M				ISO Code			
Cast iron K			●	CCGW 060204 TN			
Non-ferrous metals N				Cutting material			
Superalloys and titanium S		◐	◐	CBN57			
Hardened materials H		○ ≥ 52 HRC		Order No.			
				W85 18000.2657			

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting material on request.

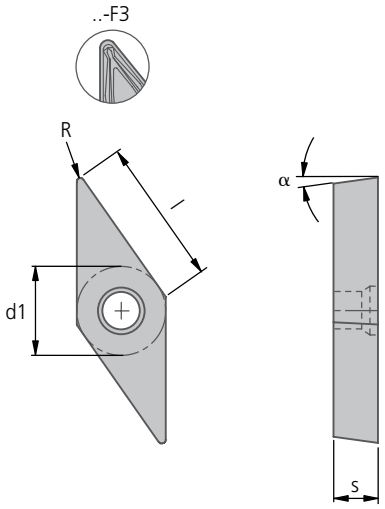
● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

Inserts



Cutter geometry:



Substrate		Carbide								
Coating type		CVD	CVD							
Cutting material designation		BK75	BK76							
ISO Code	Order No. Enter cutting material code ▼	 75	 76	f mm	a_p mm	d1	s	l	α	R
VCMT 160404-F3	**W89 32000.05..**		▲	0,12-0,25	1,0-5,0	9,52	4,76	16,5	7°	0,4
VCMT 160408-F3	**W89 32000.06..**	▲	▲	0,12-0,30						0,8
Steel	P	●	●	Order example: ISO Code VCMT 160404-F3 Cutting material BK76 Order No. W89 32000.0576						
Stainless steel	M	◐								
Cast iron	K		●							
Non-ferrous metals	N									
Superalloys and titanium	S									
Hardened materials	H									

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Inserts Ø 17,3 - 21,2 mm

For KUB Duon

Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾∅	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾∅	Order No. Enter cutting material code ▾	7710
XOHX 0802-17,3	H60 17300. ..				XOHX 0802-17,3-62	H62 17300. ..	
XOHX 0802-17,4	H60 17400. ..				XOHX 0802-17,4-62	H62 17400. ..	
XOHX 0802-17,5	H60 17500. ..	▲	▲	▲	XOHX 0802-17,5-62	H62 17500. ..	
XOHX 0802-17,6	H60 17600. ..				XOHX 0802-17,6-62	H62 17600. ..	
XOHX 0802-17,7	H60 17700. ..	▲			XOHX 0802-17,7-62	H62 17700. ..	
XOHX 0802-17,8	H60 17800. ..			▲	XOHX 0802-17,8-62	H62 17800. ..	
XOHX 0802-17,9	H60 17900. ..				XOHX 0802-17,9-62	H62 17900. ..	
XOHX 0802-18,0	H60 18000. ..	▲		▲	XOHX 0802-18,0-62	H62 18000. ..	
XOHX 0802-18,1	H60 18100. ..	▲			XOHX 0802-18,1-62	H62 18100. ..	
XOHX 0802-18,2	H60 18200. ..				XOHX 0802-18,2-62	H62 18200. ..	
XOHX 0802-18,3	H60 18300. ..				XOHX 0802-18,3-62	H62 18300. ..	
XOHX 0802-18,4	H60 18400. ..				XOHX 0802-18,4-62	H62 18400. ..	
XOHX 0802-18,5	H60 18500. ..	▲		▲	XOHX 0802-18,5-62	H62 18500. ..	
XOHX 0802-18,6	H60 18600. ..				XOHX 0802-18,6-62	H62 18600. ..	
XOHX 0802-18,7	H60 18700. ..				XOHX 0802-18,7-62	H62 18700. ..	
XOHX 0802-18,8	H60 18800. ..				XOHX 0802-18,8-62	H62 18800. ..	
XOHX 0802-18,9	H60 18900. ..				XOHX 0802-18,9-62	H62 18900. ..	
XOHX 0802-19,0	H60 19000. ..	▲	▲	▲	XOHX 0802-19,0-62	H62 19000. ..	
XOHX 0802-19,1	H60 19100. ..	▲			XOHX 0802-19,1-62	H62 19100. ..	
XOHX 0802-19,2	H60 19200. ..				XOHX 0802-19,2-62	H62 19200. ..	
XOHX 0802-19,3	H60 19300. ..				XOHX 0802-19,3-62	H62 19300. ..	
XOHX 0802-19,4	H60 19400. ..				XOHX 0802-19,4-62	H62 19400. ..	
XOHX 0802-19,5	H60 19500. ..	▲	▲	▲	XOHX 0802-19,5-62	H62 19500. ..	
XOHX 0802-19,6	H60 19600. ..				XOHX 0802-19,6-62	H62 19600. ..	
XOHX 0802-19,7	H60 19700. ..				XOHX 0802-19,7-62	H62 19700. ..	
XOHX 0802-19,8	H60 19800. ..		▲		XOHX 0802-19,8-62	H62 19800. ..	
XOHX 0802-19,9	H60 19900. ..				XOHX 0802-19,9-62	H62 19900. ..	
XOHX 0802-20,0	H60 20000. ..	▲	▲		XOHX 0802-20,0-62	H62 20000. ..	
XOHX 0802-20,1	H60 20100. ..				XOHX 0802-20,1-62	H62 20100. ..	▲
XOHX 0802-20,2	H60 20200. ..				XOHX 0802-20,2-62	H62 20200. ..	
XOHX 0802-20,3	H60 20300. ..				XOHX 0802-20,3-62	H62 20300. ..	
XOHX 0802-20,4	H60 20400. ..				XOHX 0802-20,4-62	H62 20400. ..	
XOHX 0802-20,5	H60 20500. ..		▲	▲	XOHX 0802-20,5-62	H62 20500. ..	
XOHX 0802-20,6	H60 20600. ..				XOHX 0802-20,6-62	H62 20600. ..	
XOHX 0802-20,7	H60 20700. ..	▲			XOHX 0802-20,7-62	H62 20700. ..	
XOHX 1003-20,8	H60 20800. ..		▲		XOHX 1003-20,8-62	H62 20800. ..	
XOHX 1003-20,9	H60 20900. ..				XOHX 1003-20,9-62	H62 20900. ..	
XOHX 1003-21,0	H60 21000. ..	▲	▲	▲	XOHX 1003-21,0-62	H62 21000. ..	▲
XOHX 1003-21,1	H60 21100. ..		▲	▲	XOHX 1003-21,1-62	H62 21100. ..	
XOHX 1003-21,2	H60 21200. ..				XOHX 1003-21,2-62	H62 21200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◐	XOHX 0802-17,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 17300.8440		

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET H60 | H62

XOHX

Inserts Ø 21,3 - 25,2 mm

For KUB Duon



Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾Ø	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾Ø	Order No. Enter cutting material code ▾	7710
XOHX 1003-21,3	H60 21300. ..			▲	XOHX 1003-21,3-62	H62 21300. ..	
XOHX 1003-21,4	H60 21400. ..				XOHX 1003-21,4-62	H62 21400. ..	
XOHX 1003-21,5	H60 21500. ..	▲	▲		XOHX 1003-21,5-62	H62 21500. ..	
XOHX 1003-21,6	H60 21600. ..				XOHX 1003-21,6-62	H62 21600. ..	
XOHX 1003-21,7	H60 21700. ..		▲		XOHX 1003-21,7-62	H62 21700. ..	
XOHX 1003-21,8	H60 21800. ..	▲	▲		XOHX 1003-21,8-62	H62 21800. ..	
XOHX 1003-21,9	H60 21900. ..				XOHX 1003-21,9-62	H62 21900. ..	
XOHX 1003-22,0	H60 22000. ..	▲	▲	▲	XOHX 1003-22,0-62	H62 22000. ..	
XOHX 1003-22,1	H60 22100. ..			▲	XOHX 1003-22,1-62	H62 22100. ..	
XOHX 1003-22,2	H60 22200. ..	▲		▲	XOHX 1003-22,2-62	H62 22200. ..	
XOHX 1003-22,3	H60 22300. ..				XOHX 1003-22,3-62	H62 22300. ..	
XOHX 1003-22,4	H60 22400. ..			▲	XOHX 1003-22,4-62	H62 22400. ..	
XOHX 1003-22,5	H60 22500. ..			▲	XOHX 1003-22,5-62	H62 22500. ..	
XOHX 1003-22,6	H60 22600. ..			▲	XOHX 1003-22,6-62	H62 22600. ..	
XOHX 1003-22,7	H60 22700. ..	▲			XOHX 1003-22,7-62	H62 22700. ..	
XOHX 1003-22,8	H60 22800. ..				XOHX 1003-22,8-62	H62 22800. ..	
XOHX 1003-22,9	H60 22900. ..				XOHX 1003-22,9-62	H62 22900. ..	
XOHX 1003-23,0	H60 23000. ..	▲	▲	▲	XOHX 1003-23,0-62	H62 23000. ..	
XOHX 1003-23,1	H60 23100. ..				XOHX 1003-23,1-62	H62 23100. ..	
XOHX 1003-23,2	H60 23200. ..				XOHX 1003-23,2-62	H62 23200. ..	
XOHX 1003-23,3	H60 23300. ..				XOHX 1003-23,3-62	H62 23300. ..	
XOHX 1003-23,4	H60 23400. ..				XOHX 1003-23,4-62	H62 23400. ..	
XOHX 1003-23,5	H60 23500. ..	▲		▲	XOHX 1003-23,5-62	H62 23500. ..	
XOHX 1003-23,6	H60 23600. ..				XOHX 1003-23,6-62	H62 23600. ..	
XOHX 1003-23,7	H60 23700. ..				XOHX 1003-23,7-62	H62 23700. ..	
XOHX 1003-23,8	H60 23800. ..		▲	▲	XOHX 1003-23,8-62	H62 23800. ..	
XOHX 1003-23,9	H60 23900. ..				XOHX 1003-23,9-62	H62 23900. ..	
XOHX 1003-24,0	H60 24000. ..	▲	▲	▲	XOHX 1003-24,0-62	H62 24000. ..	
XOHX 1003-24,1	H60 24100. ..				XOHX 1003-24,1-62	H62 24100. ..	
XOHX 1003-24,2	H60 24200. ..				XOHX 1003-24,2-62	H62 24200. ..	
XOHX 1003-24,3	H60 24300. ..				XOHX 1003-24,3-62	H62 24300. ..	
XOHX 1003-24,4	H60 24400. ..				XOHX 1003-24,4-62	H62 24400. ..	
XOHX 1003-24,5	H60 24500. ..		▲	▲	XOHX 1003-24,5-62	H62 24500. ..	
XOHX 1003-24,6	H60 24600. ..		▲		XOHX 1003-24,6-62	H62 24600. ..	
XOHX 1003-24,7	H60 24700. ..				XOHX 1003-24,7-62	H62 24700. ..	
XOHX 12T3-24,8	H60 24800. ..			▲	XOHX 12T3-24,8-62	H62 24800. ..	
XOHX 12T3-24,9	H60 24900. ..		▲		XOHX 12T3-24,9-62	H62 24900. ..	
XOHX 12T3-25,0	H60 25000. ..	▲	▲	▲	XOHX 12T3-25,0-62	H62 25000. ..	▲
XOHX 12T3-25,1	H60 25100. ..			▲	XOHX 12T3-25,1-62	H62 25100. ..	
XOHX 12T3-25,2	H60 25200. ..				XOHX 12T3-25,2-62	H62 25200. ..	
Steel P		●	◐	●	Order example:		
Stainless steel M					ISO Code		
Cast iron K			●	◐	XOHX 1003-21,3		
Non-ferrous metals N			◐	◐	Cutting material		●
Superalloys and titanium S					BK8440		
Hardened materials H					Order No.		
					H60 21300.8440		

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Inserts Ø 25,3 - 29,2 mm

For KUB Duon

Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾∅	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾∅	Order No. Enter cutting material code ▾	7710
XOHX 12T3-25,3	H60 25300. ..				XOHX 12T3-25,3-62	H62 25300. ..	
XOHX 12T3-25,4	H60 25400. ..				XOHX 12T3-25,4-62	H62 25400. ..	
XOHX 12T3-25,5	H60 25500. ..			▲	XOHX 12T3-25,5-62	H62 25500. ..	
XOHX 12T3-25,6	H60 25600. ..				XOHX 12T3-25,6-62	H62 25600. ..	
XOHX 12T3-25,7	H60 25700. ..	▲		▲	XOHX 12T3-25,7-62	H62 25700. ..	
XOHX 12T3-25,8	H60 25800. ..		▲		XOHX 12T3-25,8-62	H62 25800. ..	
XOHX 12T3-25,9	H60 25900. ..	▲			XOHX 12T3-25,9-62	H62 25900. ..	
XOHX 12T3-26,0	H60 26000. ..	▲	▲	▲	XOHX 12T3-26,0-62	H62 26000. ..	
XOHX 12T3-26,1	H60 26100. ..				XOHX 12T3-26,1-62	H62 26100. ..	
XOHX 12T3-26,2	H60 26200. ..				XOHX 12T3-26,2-62	H62 26200. ..	
XOHX 12T3-26,3	H60 26300. ..				XOHX 12T3-26,3-62	H62 26300. ..	
XOHX 12T3-26,4	H60 26400. ..				XOHX 12T3-26,4-62	H62 26400. ..	
XOHX 12T3-26,5	H60 26500. ..	▲	▲	▲	XOHX 12T3-26,5-62	H62 26500. ..	
XOHX 12T3-26,6	H60 26600. ..				XOHX 12T3-26,6-62	H62 26600. ..	
XOHX 12T3-26,7	H60 26700. ..			▲	XOHX 12T3-26,7-62	H62 26700. ..	
XOHX 12T3-26,8	H60 26800. ..				XOHX 12T3-26,8-62	H62 26800. ..	
XOHX 12T3-26,9	H60 26900. ..				XOHX 12T3-26,9-62	H62 26900. ..	
XOHX 12T3-27,0	H60 27000. ..	▲	▲	▲	XOHX 12T3-27,0-62	H62 27000. ..	
XOHX 12T3-27,1	H60 27100. ..		▲	▲	XOHX 12T3-27,1-62	H62 27100. ..	
XOHX 12T3-27,2	H60 27200. ..				XOHX 12T3-27,2-62	H62 27200. ..	
XOHX 12T3-27,3	H60 27300. ..				XOHX 12T3-27,3-62	H62 27300. ..	
XOHX 12T3-27,4	H60 27400. ..				XOHX 12T3-27,4-62	H62 27400. ..	
XOHX 12T3-27,5	H60 27500. ..	▲			XOHX 12T3-27,5-62	H62 27500. ..	
XOHX 12T3-27,6	H60 27600. ..				XOHX 12T3-27,6-62	H62 27600. ..	
XOHX 12T3-27,7	H60 27700. ..				XOHX 12T3-27,7-62	H62 27700. ..	
XOHX 12T3-27,8	H60 27800. ..				XOHX 12T3-27,8-62	H62 27800. ..	
XOHX 12T3-27,9	H60 27900. ..				XOHX 12T3-27,9-62	H62 27900. ..	
XOHX 12T3-28,0	H60 28000. ..	▲	▲	▲	XOHX 12T3-28,0-62	H62 28000. ..	
XOHX 12T3-28,1	H60 28100. ..			▲	XOHX 12T3-28,1-62	H62 28100. ..	
XOHX 12T3-28,2	H60 28200. ..			▲	XOHX 12T3-28,2-62	H62 28200. ..	
XOHX 12T3-28,3	H60 28300. ..		▲		XOHX 12T3-28,3-62	H62 28300. ..	
XOHX 12T3-28,4	H60 28400. ..				XOHX 12T3-28,4-62	H62 28400. ..	
XOHX 12T3-28,5	H60 28500. ..	▲	▲	▲	XOHX 12T3-28,5-62	H62 28500. ..	
XOHX 12T3-28,6	H60 28600. ..			▲	XOHX 12T3-28,6-62	H62 28600. ..	
XOHX 12T3-28,7	H60 28700. ..				XOHX 12T3-28,7-62	H62 28700. ..	
XOHX 12T3-28,8	H60 28800. ..				XOHX 12T3-28,8-62	H62 28800. ..	
XOHX 12T3-28,9	H60 28900. ..				XOHX 12T3-28,9-62	H62 28900. ..	
XOHX 12T3-29,0	H60 29000. ..		▲		XOHX 12T3-29,0-62	H62 29000. ..	
XOHX 12T3-29,1	H60 29100. ..			▲	XOHX 12T3-29,1-62	H62 29100. ..	
XOHX 12T3-29,2	H60 29200. ..				XOHX 12T3-29,2-62	H62 29200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◐	XOHX 12T3-25,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 25300.8440		

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET H60 | H62

XOHX

Inserts Ø 29,3 - 33,2 mm

For KUB Duon



Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾Ø	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾Ø	Order No. Enter cutting material code ▾	7710
XOHX 12T3-29,3	H60 29300. ..	▲			XOHX 12T3-29,3-62	H62 29300. ..	
XOHX 12T3-29,4	H60 29400. ..				XOHX 12T3-29,4-62	H62 29400. ..	
XOHX 12T3-29,5	H60 29500. ..	▲	▲	▲	XOHX 12T3-29,5-62	H62 29500. ..	
XOHX 12T3-29,6	H60 29600. ..				XOHX 12T3-29,6-62	H62 29600. ..	
XOHX 12T3-29,7	H60 29700. ..	▲	▲	▲	XOHX 12T3-29,7-62	H62 29700. ..	
XOHX 1504-29,8	H60 29800. ..			▲	XOHX 1504-29,8-62	H62 29800. ..	
XOHX 1504-29,9	H60 29900. ..				XOHX 1504-29,9-62	H62 29900. ..	
XOHX 1504-30,0	H60 30000. ..	▲	▲	▲	XOHX 1504-30,0-62	H62 30000. ..	
XOHX 1504-30,1	H60 30100. ..			▲	XOHX 1504-30,1-62	H62 30100. ..	
XOHX 1504-30,2	H60 30200. ..				XOHX 1504-30,2-62	H62 30200. ..	
XOHX 1504-30,3	H60 30300. ..				XOHX 1504-30,3-62	H62 30300. ..	
XOHX 1504-30,4	H60 30400. ..				XOHX 1504-30,4-62	H62 30400. ..	
XOHX 1504-30,5	H60 30500. ..		▲	▲	XOHX 1504-30,5-62	H62 30500. ..	
XOHX 1504-30,6	H60 30600. ..				XOHX 1504-30,6-62	H62 30600. ..	
XOHX 1504-30,7	H60 30700. ..	▲			XOHX 1504-30,7-62	H62 30700. ..	
XOHX 1504-30,8	H60 30800. ..		▲		XOHX 1504-30,8-62	H62 30800. ..	
XOHX 1504-30,9	H60 30900. ..				XOHX 1504-30,9-62	H62 30900. ..	
XOHX 1504-31,0	H60 31000. ..	▲	▲		XOHX 1504-31,0-62	H62 31000. ..	
XOHX 1504-31,1	H60 31100. ..			▲	XOHX 1504-31,1-62	H62 31100. ..	
XOHX 1504-31,2	H60 31200. ..				XOHX 1504-31,2-62	H62 31200. ..	▲
XOHX 1504-31,3	H60 31300. ..				XOHX 1504-31,3-62	H62 31300. ..	
XOHX 1504-31,4	H60 31400. ..				XOHX 1504-31,4-62	H62 31400. ..	
XOHX 1504-31,5	H60 31500. ..			▲	XOHX 1504-31,5-62	H62 31500. ..	
XOHX 1504-31,6	H60 31600. ..				XOHX 1504-31,6-62	H62 31600. ..	
XOHX 1504-31,7	H60 31700. ..				XOHX 1504-31,7-62	H62 31700. ..	
XOHX 1504-31,8	H60 31800. ..		▲	▲	XOHX 1504-31,8-62	H62 31800. ..	
XOHX 1504-31,9	H60 31900. ..				XOHX 1504-31,9-62	H62 31900. ..	
XOHX 1504-32,0	H60 32000. ..	▲	▲	▲	XOHX 1504-32,0-62	H62 32000. ..	
XOHX 1504-32,1	H60 32100. ..	▲			XOHX 1504-32,1-62	H62 32100. ..	
XOHX 1504-32,2	H60 32200. ..				XOHX 1504-32,2-62	H62 32200. ..	
XOHX 1504-32,3	H60 32300. ..				XOHX 1504-32,3-62	H62 32300. ..	
XOHX 1504-32,4	H60 32400. ..				XOHX 1504-32,4-62	H62 32400. ..	
XOHX 1504-32,5	H60 32500. ..				XOHX 1504-32,5-62	H62 32500. ..	
XOHX 1504-32,6	H60 32600. ..				XOHX 1504-32,6-62	H62 32600. ..	
XOHX 1504-32,7	H60 32700. ..	▲			XOHX 1504-32,7-62	H62 32700. ..	
XOHX 1504-32,8	H60 32800. ..				XOHX 1504-32,8-62	H62 32800. ..	
XOHX 1504-32,9	H60 32900. ..	▲			XOHX 1504-32,9-62	H62 32900. ..	
XOHX 1504-33,0	H60 33000. ..	▲	▲	▲	XOHX 1504-33,0-62	H62 33000. ..	
XOHX 1504-33,1	H60 33100. ..			▲	XOHX 1504-33,1-62	H62 33100. ..	
XOHX 1504-33,2	H60 33200. ..				XOHX 1504-33,2-62	H62 33200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◑	XOHX 12T3-29,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 29300.8440		

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Inserts Ø 33,3 - 37,2 mm

For KUB Duon

Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾∅	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾∅	Order No. Enter cutting material code ▾	7710
XOHX 1504-33,3	H60 33300. ..				XOHX1504-33,3-62	H62 33300. ..	
XOHX 1504-33,4	H60 33400. ..		▲		XOHX1504-33,4-62	H62 33400. ..	
XOHX 1504-33,5	H60 33500. ..				XOHX1504-33,5-62	H62 33500. ..	
XOHX 1504-33,6	H60 33600. ..				XOHX1504-33,6-62	H62 33600. ..	
XOHX 1504-33,7	H60 33700. ..			▲	XOHX1504-33,7-62	H62 33700. ..	
XOHX 1504-33,8	H60 33800. ..				XOHX1504-33,8-62	H62 33800. ..	
XOHX 1504-33,9	H60 33900. ..				XOHX1504-33,9-62	H62 33900. ..	
XOHX 1504-34,0	H60 34000. ..		▲		XOHX1504-34,0-62	H62 34000. ..	
XOHX 1504-34,1	H60 34100. ..				XOHX1504-34,1-62	H62 34100. ..	
XOHX 1504-34,2	H60 34200. ..				XOHX1504-34,2-62	H62 34200. ..	
XOHX 1504-34,3	H60 34300. ..				XOHX1504-34,3-62	H62 34300. ..	
XOHX 1504-34,4	H60 34400. ..				XOHX1504-34,4-62	H62 34400. ..	
XOHX 1504-34,5	H60 34500. ..	▲			XOHX1504-34,5-62	H62 34500. ..	
XOHX 1504-34,6	H60 34600. ..				XOHX1504-34,6-62	H62 34600. ..	
XOHX 1504-34,7	H60 34700. ..				XOHX1504-34,7-62	H62 34700. ..	
XOHX 1504-34,8	H60 34800. ..				XOHX1504-34,8-62	H62 34800. ..	
XOHX 1504-34,9	H60 34900. ..			▲	XOHX1504-34,9-62	H62 34900. ..	
XOHX 1504-35,0	H60 35000. ..	▲	▲	▲	XOHX1504-35,0-62	H62 35000. ..	
XOHX 1504-35,1	H60 35100. ..				XOHX1504-35,1-62	H62 35100. ..	
XOHX 1504-35,2	H60 35200. ..	▲			XOHX1504-35,2-62	H62 35200. ..	
XOHX 1504-35,3	H60 35300. ..	▲	▲		XOHX1504-35,3-62	H62 35300. ..	
XOHX 1504-35,4	H60 35400. ..				XOHX1504-35,4-62	H62 35400. ..	
XOHX 1504-35,5	H60 35500. ..		▲		XOHX1504-35,5-62	H62 35500. ..	
XOHX 1504-35,6	H60 35600. ..				XOHX1504-35,6-62	H62 35600. ..	
XOHX 1504-35,7	H60 35700. ..			▲	XOHX1504-35,7-62	H62 35700. ..	
XOHX 1504-35,8	H60 35800. ..				XOHX1504-35,8-62	H62 35800. ..	
XOHX 1504-35,9	H60 35900. ..				XOHX1504-35,9-62	H62 35900. ..	
XOHX 1504-36,0	H60 36000. ..	▲		▲	XOHX1504-36,0-62	H62 36000. ..	
XOHX 1504-36,1	H60 36100. ..			▲	XOHX1504-36,1-62	H62 36100. ..	
XOHX 1504-36,2	H60 36200. ..				XOHX1504-36,2-62	H62 36200. ..	
XOHX 2205-36,3	H60 36300. ..				XOHX 2205-36,3-62	H62 36300. ..	
XOHX 2205-36,4	H60 36400. ..				XOHX 2205-36,4-62	H62 36400. ..	
XOHX 2205-36,5	H60 36500. ..			▲	XOHX 2205-36,5-62	H62 36500. ..	
XOHX 2205-36,6	H60 36600. ..				XOHX 2205-36,6-62	H62 36600. ..	
XOHX 2205-36,7	H60 36700. ..				XOHX 2205-36,7-62	H62 36700. ..	
XOHX 2205-36,8	H60 36800. ..		▲		XOHX 2205-36,8-62	H62 36800. ..	
XOHX 2205-36,9	H60 36900. ..				XOHX 2205-36,9-62	H62 36900. ..	
XOHX 2205-37,0	H60 37000. ..		▲	▲	XOHX 2205-37,0-62	H62 37000. ..	
XOHX 2205-37,1	H60 37100. ..		▲		XOHX 2205-37,1-62	H62 37100. ..	
XOHX 2205-37,2	H60 37200. ..				XOHX 2205-37,2-62	H62 37200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◐	XOHX 1504-33,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 33300.8440		

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET H60 | H62

XOHX

Inserts Ø 37,3 - 41,2 mm

For KUB Duon



Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾Ø	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾Ø	Order No. Enter cutting material code ▾	7710
XOHX 2205-37,3	H60 37300. ..				XOHX 2205-37,3-62	H62 37300. ..	
XOHX 2205-37,4	H60 37400. ..				XOHX 2205-37,4-62	H62 37400. ..	
XOHX 2205-37,5	H60 37500. ..	▲	▲	▲	XOHX 2205-37,5-62	H62 37500. ..	
XOHX 2205-37,6	H60 37600. ..				XOHX 2205-37,6-62	H62 37600. ..	
XOHX 2205-37,7	H60 37700. ..				XOHX 2205-37,7-62	H62 37700. ..	
XOHX 2205-37,8	H60 37800. ..				XOHX 2205-37,8-62	H62 37800. ..	
XOHX 2205-37,9	H60 37900. ..				XOHX 2205-37,9-62	H62 37900. ..	
XOHX 2205-38,0	H60 38000. ..			▲	XOHX 2205-38,0-62	H62 38000. ..	
XOHX 2205-38,1	H60 38100. ..				XOHX 2205-38,1-62	H62 38100. ..	
XOHX 2205-38,2	H60 38200. ..				XOHX 2205-38,2-62	H62 38200. ..	
XOHX 2205-38,3	H60 38300. ..				XOHX 2205-38,3-62	H62 38300. ..	
XOHX 2205-38,4	H60 38400. ..				XOHX 2205-38,4-62	H62 38400. ..	
XOHX 2205-38,5	H60 38500. ..				XOHX 2205-38,5-62	H62 38500. ..	
XOHX 2205-38,6	H60 38600. ..				XOHX 2205-38,6-62	H62 38600. ..	
XOHX 2205-38,7	H60 38700. ..				XOHX 2205-38,7-62	H62 38700. ..	
XOHX 2205-38,8	H60 38800. ..				XOHX 2205-38,8-62	H62 38800. ..	
XOHX 2205-38,9	H60 38900. ..				XOHX 2205-38,9-62	H62 38900. ..	
XOHX 2205-39,0	H60 39000. ..		▲		XOHX 2205-39,0-62	H62 39000. ..	
XOHX 2205-39,1	H60 39100. ..				XOHX 2205-39,1-62	H62 39100. ..	
XOHX 2205-39,2	H60 39200. ..		▲		XOHX 2205-39,2-62	H62 39200. ..	▲
XOHX 2205-39,3	H60 39300. ..	▲			XOHX 2205-39,3-62	H62 39300. ..	
XOHX 2205-39,4	H60 39400. ..				XOHX 2205-39,4-62	H62 39400. ..	
XOHX 2205-39,5	H60 39500. ..		▲		XOHX 2205-39,5-62	H62 39500. ..	
XOHX 2205-39,6	H60 39600. ..				XOHX 2205-39,6-62	H62 39600. ..	
XOHX 2205-39,7	H60 39700. ..			▲	XOHX 2205-39,7-62	H62 39700. ..	
XOHX 2205-39,8	H60 39800. ..				XOHX 2205-39,8-62	H62 39800. ..	
XOHX 2205-39,9	H60 39900. ..				XOHX 2205-39,9-62	H62 39900. ..	
XOHX 2205-40,0	H60 40000. ..	▲	▲		XOHX 2205-40,0-62	H62 40000. ..	
XOHX 2205-40,1	H60 40100. ..				XOHX 2205-40,1-62	H62 40100. ..	
XOHX 2205-40,2	H60 40200. ..				XOHX 2205-40,2-62	H62 40200. ..	
XOHX 2205-40,3	H60 40300. ..				XOHX 2205-40,3-62	H62 40300. ..	
XOHX 2205-40,4	H60 40400. ..				XOHX 2205-40,4-62	H62 40400. ..	
XOHX 2205-40,5	H60 40500. ..				XOHX 2205-40,5-62	H62 40500. ..	
XOHX 2205-40,6	H60 40600. ..				XOHX 2205-40,6-62	H62 40600. ..	
XOHX 2205-40,7	H60 40700. ..				XOHX 2205-40,7-62	H62 40700. ..	
XOHX 2205-40,8	H60 40800. ..				XOHX 2205-40,8-62	H62 40800. ..	
XOHX 2205-40,9	H60 40900. ..				XOHX 2205-40,9-62	H62 40900. ..	
XOHX 2205-41,0	H60 41000. ..				XOHX 2205-41,0-62	H62 41000. ..	
XOHX 2205-41,1	H60 41100. ..				XOHX 2205-41,1-62	H62 41100. ..	
XOHX 2205-41,2	H60 41200. ..				XOHX 2205-41,2-62	H62 41200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◐	XOHX 2205-37,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 37300.8440		

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list



Inserts Ø 41,3 - 44,2 mm

For KUB Duon

Substrate		Carbide			Substrate		Carbide
Coating type		PVD	PVD	PVD	Coating type		PVD
Cutting material designation		BK8440	BK2715	BK84	Cutting material designation		BK7710
ISO Code ▾∅	Order No. Enter cutting material code ▾	8440	2715	84	ISO Code ▾∅	Order No. Enter cutting material code ▾	7710
XOHX 2205-41,3	H60 41300. ..				XOHX 2205-41,3-62	H62 41300. ..	
XOHX 2205-41,4	H60 41400. ..				XOHX 2205-41,4-62	H62 41400. ..	
XOHX 2205-41,5	H60 41500. ..				XOHX 2205-41,5-62	H62 41500. ..	
XOHX 2205-41,6	H60 41600. ..				XOHX 2205-41,6-62	H62 41600. ..	
XOHX 2205-41,7	H60 41700. ..				XOHX 2205-41,7-62	H62 41700. ..	
XOHX 2205-41,8	H60 41800. ..				XOHX 2205-41,8-62	H62 41800. ..	
XOHX 2205-41,9	H60 41900. ..				XOHX 2205-41,9-62	H62 41900. ..	
XOHX 2205-42,0	H60 42000. ..	▲	▲		XOHX 2205-42,0-62	H62 42000. ..	
XOHX 2205-42,1	H60 42100. ..				XOHX 2205-42,1-62	H62 42100. ..	
XOHX 2205-42,2	H60 42200. ..				XOHX 2205-42,2-62	H62 42200. ..	
XOHX 2205-42,3	H60 42300. ..				XOHX 2205-42,3-62	H62 42300. ..	
XOHX 2205-42,4	H60 42400. ..				XOHX 2205-42,4-62	H62 42400. ..	
XOHX 2205-42,5	H60 42500. ..				XOHX 2205-42,5-62	H62 42500. ..	
XOHX 2205-42,6	H60 42600. ..				XOHX 2205-42,6-62	H62 42600. ..	
XOHX 2205-42,7	H60 42700. ..				XOHX 2205-42,7-62	H62 42700. ..	
XOHX 2205-42,8	H60 42800. ..				XOHX 2205-42,8-62	H62 42800. ..	
XOHX 2205-42,9	H60 42900. ..				XOHX 2205-42,9-62	H62 42900. ..	
XOHX 2205-43,0	H60 43000. ..		▲	▲	XOHX 2205-43,0-62	H62 43000. ..	
XOHX 2205-43,1	H60 43100. ..				XOHX 2205-43,1-62	H62 43100. ..	
XOHX 2205-43,2	H60 43200. ..				XOHX 2205-43,2-62	H62 43200. ..	
XOHX 2205-43,3	H60 43300. ..				XOHX 2205-43,3-62	H62 43300. ..	
XOHX 2205-43,4	H60 43400. ..				XOHX 2205-43,4-62	H62 43400. ..	
XOHX 2205-43,5	H60 43500. ..				XOHX 2205-43,5-62	H62 43500. ..	
XOHX 2205-43,6	H60 43600. ..				XOHX 2205-43,6-62	H62 43600. ..	
XOHX 2205-43,7	H60 43700. ..				XOHX 2205-43,7-62	H62 43700. ..	
XOHX 2205-43,8	H60 43800. ..				XOHX 2205-43,8-62	H62 43800. ..	
XOHX 2205-43,9	H60 43900. ..				XOHX 2205-43,9-62	H62 43900. ..	
XOHX 2205-44,0	H60 44000. ..		▲		XOHX 2205-44,0-62	H62 44000. ..	
XOHX 2205-44,1	H60 44100. ..				XOHX 2205-44,1-62	H62 44100. ..	
XOHX 2205-44,2	H60 44200. ..				XOHX 2205-44,2-62	H62 44200. ..	
Steel P		●	◐	●	Order example:	P	
Stainless steel M					ISO Code	M	
Cast iron K			●	◐	XOHX 2205-41,3	K	
Non-ferrous metals N			◐	◐	Cutting material	N	●
Superalloys and titanium S					BK8440	S	
Hardened materials H					Order No.	H	
					H60 41300.8440		

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET H75 | H76

Replaceable head Ø 10,0 – 13,9 mm

For KUB K2



Substrate		Carbide			
Coating type		PVD			PVD
Cutting material designation		BK8425			BK2725
Ø	Order No. Enter cutting material code ▼	 8425		Order No. Enter cutting material code ▼	 2725
10,0	H75 10000.01....			H76 10000.01....	
10,1	H75 10100.01....			H76 10100.01....	
10,2	H75 10200.01....	▲		H76 10200.01....	▲
10,3	H75 10300.01....			H76 10300.01....	
10,4	H75 10400.01....			H76 10400.01....	
10,5	H75 10500.01....			H76 10500.01....	
10,6	H75 10600.01....			H76 10600.01....	
10,7	H75 10700.01....	▲		H76 10700.01....	▲
10,8	H75 10800.01....			H76 10800.01....	
10,9	H75 10900.01....			H76 10900.01....	
11,0	H75 11000.01....			H76 11000.01....	
11,1	H75 11100.01....			H76 11100.01....	
11,2	H75 11200.01....	▲		H76 11200.01....	▲
11,3	H75 11300.01....			H76 11300.01....	
11,4	H75 11400.01....			H76 11400.01....	
11,5	H75 11500.01....			H76 11500.01....	
11,6	H75 11600.01....			H76 11600.01....	
11,7	H75 11700.01....	▲		H76 11700.01....	▲
11,8	H75 11800.01....			H76 11800.01....	
11,9	H75 11900.01....			H76 11900.01....	
12,0	H75 12000.01....			H76 12000.01....	
12,1	H75 12100.01....			H76 12100.01....	
12,2	H75 12200.01....	▲		H76 12200.01....	▲
12,3	H75 12300.01....			H76 12300.01....	
12,4	H75 12400.01....			H76 12400.01....	
12,5	H75 12500.01....			H76 12500.01....	
12,6	H75 12600.01....			H76 12600.01....	
12,7	H75 12700.01....	▲		H76 12700.01....	▲
12,8	H75 12800.01....			H76 12800.01....	
12,9	H75 12900.01....			H76 12900.01....	
13,0	H75 13000.01....			H76 13000.01....	
13,1	H75 13100.01....			H76 13100.01....	
13,2	H75 13200.01....	▲		H76 13200.01....	▲
13,3	H75 13300.01....			H76 13300.01....	
13,4	H75 13400.01....			H76 13400.01....	
13,5	H75 13500.01....			H76 13500.01....	
13,6	H75 13600.01....			H76 13600.01....	
13,7	H75 13700.01....	▲		H76 13700.01....	▲
13,8	H75 13800.01....			H76 13800.01....	
13,9	H75 13900.01....			H76 13900.01....	
Steel P Stainless steel M Cast iron K Non-ferrous metals N Superalloys and titanium S Hardened materials H		●		Order example: for Ø D 10,0 mm Cutting material BK8425 Order No. H75 10000.018425	◐
		◐			●

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

Replaceable head Ø 14,0 – 17,9 mm

For KUB K2



	Substrate	Carbide		
	Coating type	PVD		PVD
	Cutting material designation	BK8425		BK2725
Ø	Order No. Enter cutting material code ▼	 8425	Order No. Enter cutting material code ▼	 2725
14,0	H75 14000.01....		H76 14000.01....	
14,1	H75 14100.01....		H76 14100.01....	
14,2	H75 14200.01....	▲	H76 14200.01....	▲
14,3	H75 14300.01....		H76 14300.01....	
14,4	H75 14400.01....		H76 14400.01....	
14,5	H75 14500.01....		H76 14500.01....	
14,6	H75 14600.01....		H76 14600.01....	
14,7	H75 14700.01....	▲	H76 14700.01....	▲
14,8	H75 14800.01....		H76 14800.01....	
14,9	H75 14900.01....		H76 14900.01....	
15,0	H75 15000.01....		H76 15000.01....	
15,1	H75 15100.01....		H76 15100.01....	
15,2	H75 15200.01....	▲	H76 15200.01....	▲
15,3	H75 15300.01....		H76 15300.01....	
15,4	H75 15400.01....		H76 15400.01....	
15,5	H75 15500.01....		H76 15500.01....	
15,6	H75 15600.01....		H76 15600.01....	
15,7	H75 15700.01....	▲	H76 15700.01....	▲
15,8	H75 15800.01....		H76 15800.01....	
15,9	H75 15900.01....		H76 15900.01....	
16,0	H75 16000.01....		H76 16000.01....	
16,1	H75 16100.01....		H76 16100.01....	
16,2	H75 16200.01....	▲	H76 16200.01....	▲
16,3	H75 16300.01....		H76 16300.01....	
16,4	H75 16400.01....		H76 16400.01....	
16,5	H75 16500.01....		H76 16500.01....	
16,6	H75 16600.01....		H76 16600.01....	
16,7	H75 16700.01....	▲	H76 16700.01....	▲
16,8	H75 16800.01....		H76 16800.01....	
16,9	H75 16900.01....		H76 16900.01....	
17,0	H75 17000.01....		H76 17000.01....	
17,1	H75 17100.01....		H76 17100.01....	
17,2	H75 17200.01....	▲	H76 17200.01....	▲
17,3	H75 17300.01....		H76 17300.01....	
17,4	H75 17400.01....		H76 17400.01....	
17,5	H75 17500.01....		H76 17500.01....	
17,6	H75 17600.01....		H76 17600.01....	
17,7	H75 17700.01....	▲	H76 17700.01....	▲
17,8	H75 17800.01....		H76 17800.01....	
17,9	H75 17900.01....		H76 17900.01....	
	Steel P	●	Order example: for Ø D 14,0 mm Cutting material BK8425 Order No. H75 14000.018425	◐
	Stainless steel M			
	Cast iron K	◐		●
	Non-ferrous metals N			
	Superalloys and titanium S			
	Hardened materials H			

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

KOMET H75 | H76

Replaceable head Ø 18,0 – 20,5 mm

For KUB K2



Substrate		Carbide		
Coating type		PVD		PVD
Cutting material designation		BK8425		BK2725
Ø	Order No. Enter cutting material code ▼	 8425	Order No. Enter cutting material code ▼	 2725
18,0	H75 18000.01....		H76 18000.01....	
18,1	H75 18100.01....		H76 18100.01....	
18,2	H75 18200.01....	▲	H76 18200.01....	▲
18,3	H75 18300.01....		H76 18300.01....	
18,4	H75 18400.01....		H76 18400.01....	
18,5	H75 18500.01....		H76 18500.01....	
18,6	H75 18600.01....		H76 18600.01....	
18,7	H75 18700.01....	▲	H76 18700.01....	▲
18,8	H75 18800.01....		H76 18800.01....	
18,9	H75 18900.01....		H76 18900.01....	
19,0	H75 19000.01....		H76 19000.01....	
19,1	H75 19100.01....		H76 19100.01....	
19,2	H75 19200.01....	▲	H76 19200.01....	▲
19,3	H75 19300.01....		H76 19300.01....	
19,4	H75 19400.01....		H76 19400.01....	
19,5	H75 19500.01....		H76 19500.01....	
19,6	H75 19600.01....		H76 19600.01....	
19,7	H75 19700.01....	▲	H76 19700.01....	▲
19,8	H75 19800.01....		H76 19800.01....	
19,9	H75 19900.01....		H76 19900.01....	
20,0	H75 20000.01....		H76 20000.01....	
20,1	H75 20100.01....		H76 20100.01....	
20,2	H75 20200.01....	▲	H76 20200.01....	▲
20,3	H75 20300.01....		H76 20300.01....	
20,4	H75 20400.01....		H76 20400.01....	
20,5	H75 20500.01....		H76 20500.01....	
Steel P Stainless steel M Cast iron K Non-ferrous metals N Superalloys and titanium S Hardened materials H		● ◐	Order example: for Ø D 18,0 mm Cutting material BK8425 Order No. H75 18000.018425	◐ ●

● Main area of application ◐ Suitable in some cases

▲ Availability: for delivery see current price and stock list

KOMET V95

Central drill bit Ø 5 – 20 mm

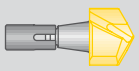
for KUB Centron and KUB V464

		Substrate	HSS			Carbide
		Coating type	PVD	PVD		PVD
		Cutting material designation	BK89	BK90		BK8450
Ø	Order No. Enter cutting material code ▼		 89	 90	Order No. Enter cutting material code ▼	 8450
5	V95 10012.00..		▲	▲	V95 10310.	▲
6	V95 10022.00..		▲	▲	V95 10320.	▲
8	V95 10032.00..		▲	▲	V95 10330.	▲
10	V95 10042.00..		▲	▲	V95 10340.	▲
12	V95 10050.00..		▲	▲		
16	V95 10063.00..		▲	▲		
20	V95 10213.00..		▲	▲		
Order example: for Ø D 5 mm Cutting material BK8450 Order No. V95 10310.8450		Steel P	●		P	
		Stainless steel M		○	M	
		Cast iron K		●	K	◐
		Non-ferrous metals N	●	●	N	◐
		Superalloys and titanium S			S	
		Hardened materials H			H	

KOMET V96

Centring spade Ø 10,3 – 16,3 mm

for KUB Centron Powerline

		Substrate	Carbide
		Coating type	PVD
		Cutting material designation	BK8450
Ø	Order No. Enter cutting material code ▼		 8450
10,3	V96 01100.		▲
11,3	V96 01110.		▲
12,3	V96 01120.		▲
13,3	V96 01130.		▲
14,3	V96 01140.		▲
15,3	V96 01150.		▲
16,3	V96 01160.		▲
Order example: for Ø D 10,3 mm Cutting material BK8450 Order No. V96 01100.8450		Steel P	●
		Stainless steel M	◐
		Cast iron K	●
		Non-ferrous metals N	●
		Superalloys and titanium S	●
		Hardened materials H	○ < 52 HRC

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes!

ISO Codes for inserts

W	N	M	G	0	8	0	4	0	8	F	L	–	0	1
1	2	3	4	5	6	7	8	9	10	11	12		13	14
Form	Clearance angle	Tolerance	Type	Cutting edge length		Thickness		Corner radius		Cutting edge	Cutting direction		Topography	

Form

1

A		85°
C		80° / 100°
D		55°
E		75°
H		120°
L		90°
O		135°
R		
S		90°
T		60°
V		35°
W		80°
X	special design	

Clearance angle

2

B		5°
C		7°
D		15°
E		20°
N		0°
O		according to manufacturer specification
P		11°

Tolerance

3

	m	*s*	*IC*
A	±0,005	±0,025	±0,025
C	±0,013	±0,025	±0,025
E	±0,025	±0,025	±0,025
G	±0,025	±0,13	±0,025
H	±0,013	±0,025	±0,013
K	±0,013	±0,025	±0,05...±0,15
L	±0,025	±0,025	±0,05...±0,15
M	±0,08...±0,18[1)]	±0,13	±0,05...±0,13[1)]
U	±0,13...±0,38[1)]	±0,13	±0,08...±0,25[1)]

[1)] Tolerance in mm: class M / U

Ø *IC*	at *m* Class M	at *m* Class U	at *IC* Class M	at *IC* Class U
6,35	±0,08	±0,13	d±0,05	±0,08
9,52	±0,08	±0,13	d±0,05	±0,08
12,70	±0,13	±0,20	±0,08	±0,13
15,87	±0,15	±0,27	±0,10	±0,18
19,05	±0,15	±0,27	±0,10	±0,18
25,40	±0,18	±0,38	±0,13	±0,25

Type

4

A		no chipformer, with hole
B		no chipformer, countersunk hole 70-90°
G		chipformer both sides, with hole
H		chipformer on one side, countersunk hole 70-90°
M		chipformer on one side, with hole
N		no chipformer, no hole
P		neg/pos. one or two sides, with hole
R		chipformer on one side, no hole
T		chipformer on one side, countersunk hole 40-60°
U		chipformer both sides, with countersunk hole
W		no chipformer, countersunk hole 40-60°
X	special design, drawing required	

Cutting edge length

5 - 6

IC mm	A	C	D	E	H	L	R	S	T	V	W
3,97									06	07	02
4,76		04									
4,80						06					03
5,00							05				
5,56		05						05	09		
6,00							06				
6,35	10	06	07					06	11	11	04
7,00							07				
7,25						09					
7,94		08						07	13	13	
8,00	12						08	08	14		05
9,00							09				
9,52		09	11			12		09	16	16	
10,00							10				06
11,10	16										
11,40								11			
12,00				12			12				08
12,70		12	15					12	22	22	08
15,00											10
15,88								15	27		
16,00							16				
16,30					06						
17,60											12
19,05		19						19	33		13
20,00							20				
25,00							25				
25,40								25			

Thickness

7 - 8

T0	1,20 mm	
01	1,59 mm	
T1	1,80 / 1,98 mm	
02	2,38 mm	
T2	2,97 mm	
03	3,18 mm	
T3	3,97 mm	
04	4,76 mm	
05	5,56 mm	
06	6,35 mm	
07	7,94 mm	

Corner radius

9 - 10

00	0,0 mm
01	0,1 mm
02	0,2 mm
03	0,3 mm
04	0,4 mm
05	0,5 mm
06	0,6 mm
08	0,8 mm
10	1,0 mm
12	1,2 mm
16	1,6 mm
20	2,0 mm
24	2,4 mm
MO	IC for round insert
ZZ	Face cutting edge

Cutting edge

11

E		rounded
F		sharp
S		chamfered and rounded
T		chamfered (negative)

Cutting direction

12

R		R.H.
L		L.H.
N		R.H. and L.H.

Topography

13 - 14

-01
-05
-11
-13
-14
-15
-21
...

Numerical coding for W... inserts

W	2	9	2	4	0	1	0	.	0	4	8	4	2	5
1	2	3	4	5	6	7	8		9	10	11	12	13	14
Main group	Type | Form		Size | IC		Topography		Index		Corner radius		Cutting material code			

Type | Form

2 - 3

			Version	peripheral	Clearance angle,other
00	W... Unisix	84°	standard	ground	
01	W... Unisix	84°	strengthened	ground	
04	W... Unisix	84°	6 edged	ground	0°
05	W... Unisix	84°	6 edged	ground	0°, wide flute
24	W... Unisix	95°	strengthened	sintered	
25	W... Unisix	84°	standard	sintered	
27	W... Unisix	95°	strengthened	ground	
28	W... Unisix	84°	standard	ground	
29	W... Unisix	84°	strengthened		
30	T...	60°		ground	8°
32	T...	60°		ground	11°
34	T...	60°	strengthened	ground	
36	T...	60°	6 edged	ground	0°
37	T...	60°		ground	20°
57	T...	60°		ground	11°
58	T...	60°		ground	IC tolerance ±0,025
59	T...	60°	strengthened	ground	
60	D...	55°		ground	
78	V...	35°		ground	
79	D...	55°		ground	
80	S...	90°		sintered	
82	S...	90°		ground	
83	S...	90°		sintered	

Size | IC

4 - 5

03	3,97 mm	26	8,2 mm
04	4,0 mm	28	8,9 mm
10	4,8 mm 5,0 mm	32	9,52 mm 9,8 mm
12	5,5 mm	34	10,0 mm
13	5,56 mm	38	10,9 mm 11,1 mm
14	5,6 mm	42	12,0 mm
17	6,0 mm	44	12,7 mm
18	6,2 mm 6,35 mm	46	13,2 mm
20	7,0 mm 7,1 mm	50	15,0 mm
22	7,7 mm	53	15,88 mm
23	7,94 mm	58	17,6 mm
24	8,0 mm	62	19,05 mm

Topography

6 - 7

Code ground	
00	L.H. cutting, neutral
06	L.H. cutting, 6°
12	L.H. cutting, 12°
15	L.H. cutting, 15°
18	L.H. cutting, 18°
20	L.H. cutting, 20°
30	R.H. cutting, neutral
36	R.H. cutting, 6°
42	R.H. cutting, 12°
45	R.H. cutting, 15°
48	R.H. cutting, 18°
50	R.H. cutting, 20°
60	neutral
66	3× ground, 6°
70	3× ground, 10°
72	3× ground, 12°
80	3× ground, 20°
82	L.H. cutting, 12°, sharp-edged
83	R.H. cutting, 12°, sharp-edged
94	neutral, bright complete, L.H. + R.H. cutting
98	bright with flute on corner, L.H. + R.H. cutting
99	neutral, bright on corner, L.H. + R.H. cutting

Code sintered	
00	Double chip groove (PD), cutting edge rounded
01	Double chip groove (K), cutting edge chamfered and rounded
02	Step geometry (KS), cutting edge chamfered and rounded
03	Dimple geometry (KX), cutting edge rounded
04	Finished geometry
05	10° chip groove (T), cutting edge rounded
06	12° chip groove (C), cutting edge rounded
07	Finished geometry
10	Shank geometry, cutting edge chamfered and rounded
11	20° chip groove, cutting edge rounded
12	AI / finished geometry
13	Shank geometry, cutting edge rounded
14	Finishing-Topographie
15	Semi-finishing Topographie
16	Semi-finishing Topographie with "Wiper" corner
17	22° Topographie / tangential insert
18	Finishing-Topographie with "Wiper" corner
20	Universal topography 8° top rake
21	20° Highly positive "Technology 21"
32	peripheral ground with minimal burring
33	peripheral sintered with minimal burring

Corner radius

9 - 10

01	R 0,1	06	R 0,6
02	R 0,2	08	R 0,8
03	R 0,3	10	R 1,0
04	R 0,4	12	R 1,2
05	R 0,5	16	R 1,6
30	U8.00 R 0		
31	UF		
32	US		
33	U8.77	15° clearance angle additional cutting edge form for Unisix milling cutter inserts	
34	F / KUF 90°		
35	F / KUF 75°		
36	F / KUF 60°		
39	R 0,05		
40	45° corner for chamfering cartridge		
75	Support chamfer 75° L.H.		
90	Support chamfer 90° L.H.		

KOMET

Informations

	Page
Performation calculation	930 – 931
Dimensional variation	932
Types of wear on indexable inserts	933
Usage and safety notes	934 – 935
Clamping screws	936 – 939
KOMET ABS	940 – 943
KOMET KomLoc HSK	944 – 947
Coolant transfer	948
KOMET Company concept	949
International material classification	950 – 951
Numerical index	952 – 975

Performation calculation

Example: Material 42CrMo4, bore 40 mm diameter
a_p = cutting width in mm = 5 mm
f = feed in mm/rev = 0,15 mm/rev
k_c = special cutting force in N/mm² = 2450 N/mm²

D = diameter in mm = 40 mm
v_c = cutting speed in m/min = 180 m/min
n = spindle speed in min^{-1} = 1433 min^{-1}
η = machine output 0,7-0,85 (0,8) = 0,8

Solid drilling

The machine power in kW

$$P_a = \frac{v_c \times f \times D \times k_c}{1000 \times 60 \times 4 \times \eta}$$

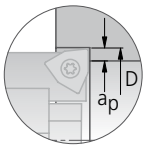
The feed F_f required is approx.:

$$F_f \approx 0,7 \times \frac{D}{2} \times f \times k_c$$

$$P_a = \frac{180 \times 0,15 \times 40 \times 2450}{1000 \times 60 \times 4 \times 0,8} = 13,8 \text{ kW}$$

$$F_f \approx 0,7 \times \frac{40}{2} \times 0,15 \times 2450 = 5145 \text{ N}$$

Roughing / Fine boring



The machine power in kW

$$P_a = \frac{a_p \times f \times k_c \times n\,(D - a_p)}{2000 \times 9550 \times \eta}$$

The feed F_f required is approx.:

$$F_f \approx 0,7 \times a_p \times f \times k_c$$

$$P_a = \frac{5 \times 0,15 \times 2450 \times 1433\,(40 - 5)}{2000 \times 9550 \times 0,8} = 6 \text{ kW}$$

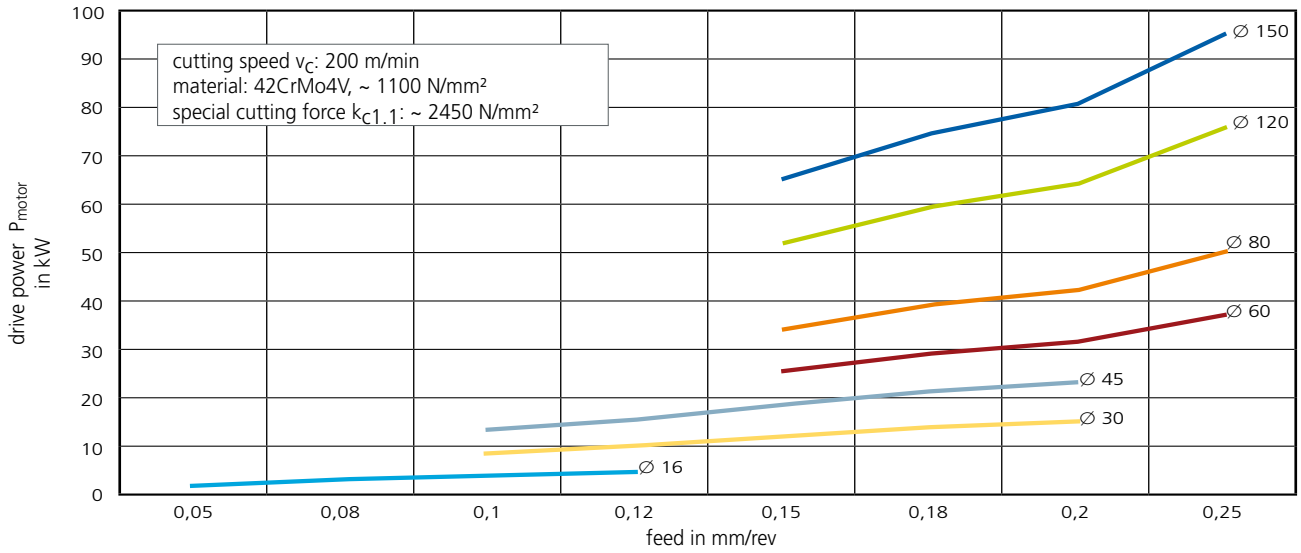
$$F_f \approx 0,7 \times 5 \times 0,15 \times 2450 = 1286,25 \text{ N}$$

The k_c values depend on the feed rate. The table therefore shows the upper limits for these. This means the performance figure calculated may be slightly higher (~ 10 – 20%) than the actual performance required. This is necessary because of the variation in the effective level and provides a safeguard against bad results.

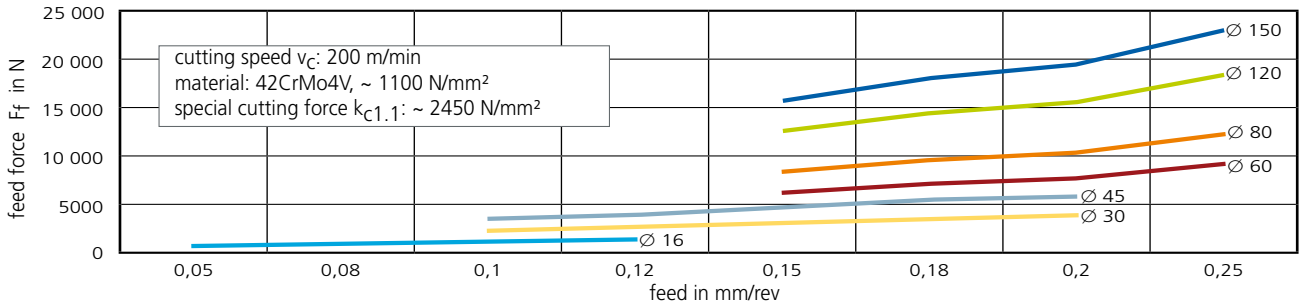
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Special cutting force k_c (N/mm²)
P	1.0	≤500		non-alloy steels	1.0037 (S235JR) |1.0715 (11SMn30) |1.0044 (S2575JR)	1740
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) | 1.0535 (C55) | 1.7131 (16MnCr5)	2060
P	2.1	<500		lead alloys	1.0718 (11SMnPb30)	1250
P	3.0	>900		non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) | 1.1221 (C60E)	2450
P	4.0	>900		high alloy steels	1.2341 (6CrMo15-5) | 1.2601 (X165CrMoV12)	1820
P	4.1			HSS		1860
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) | 2.4631 (Nimonic 80A)	2090
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	1370
M	6.0	≤600		stainless steels	1.4306 (X2CrNi19-11) | 1.4401 (X5CrNiMo17-12-2)	2400
M	6.1	<900		stainless steels	1.4511 (X3CrNb17) | 1.4571 (X10CrNiMoTi17-12-2)	2530
M	7.0	>900		stainless / fireproof steels	1.4713 (X10CrAlSi7) | 1.4862 (X8NiCrSi38-18)	2580
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) | 0.6035 (EN-GJL-350)	1140
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	1280
K	9.0	≤600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	1080
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) | 0.7055 (GGG-55) | 0.8055 (GTW-55)	1135
K	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) | 0.8165 (GTS-65)	1050
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	1180
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 | EN-GJV Ti > 0,2	1050
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) | 2.1182.01 (G-CuPb15Sn)	780
N	12.1		100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) | 2.0060 (E-Cu57)	780
N	13.0		60	wrought aluminium alloys	3.3315 (AlMg1) | 3.0517 (AlMnCu)	650
N	13.1		75	cast alum. alloy: Si-content <10%, magnesium alloy	3.3561 (G-AlMg5) | 3.2373.61 (G-AlSi9Mg wa)	780
N	14.0		100	cast alum.alloy: Si-content >10%	3.2381.01 (G-AlSi10Mg)	830
H	15.0	1400		hardened steels < 45 HRC		2880
H	16.0	1800		hardened steels > 45 HRC		3300

Important: See page 934 – 935 for application details and safety notes!

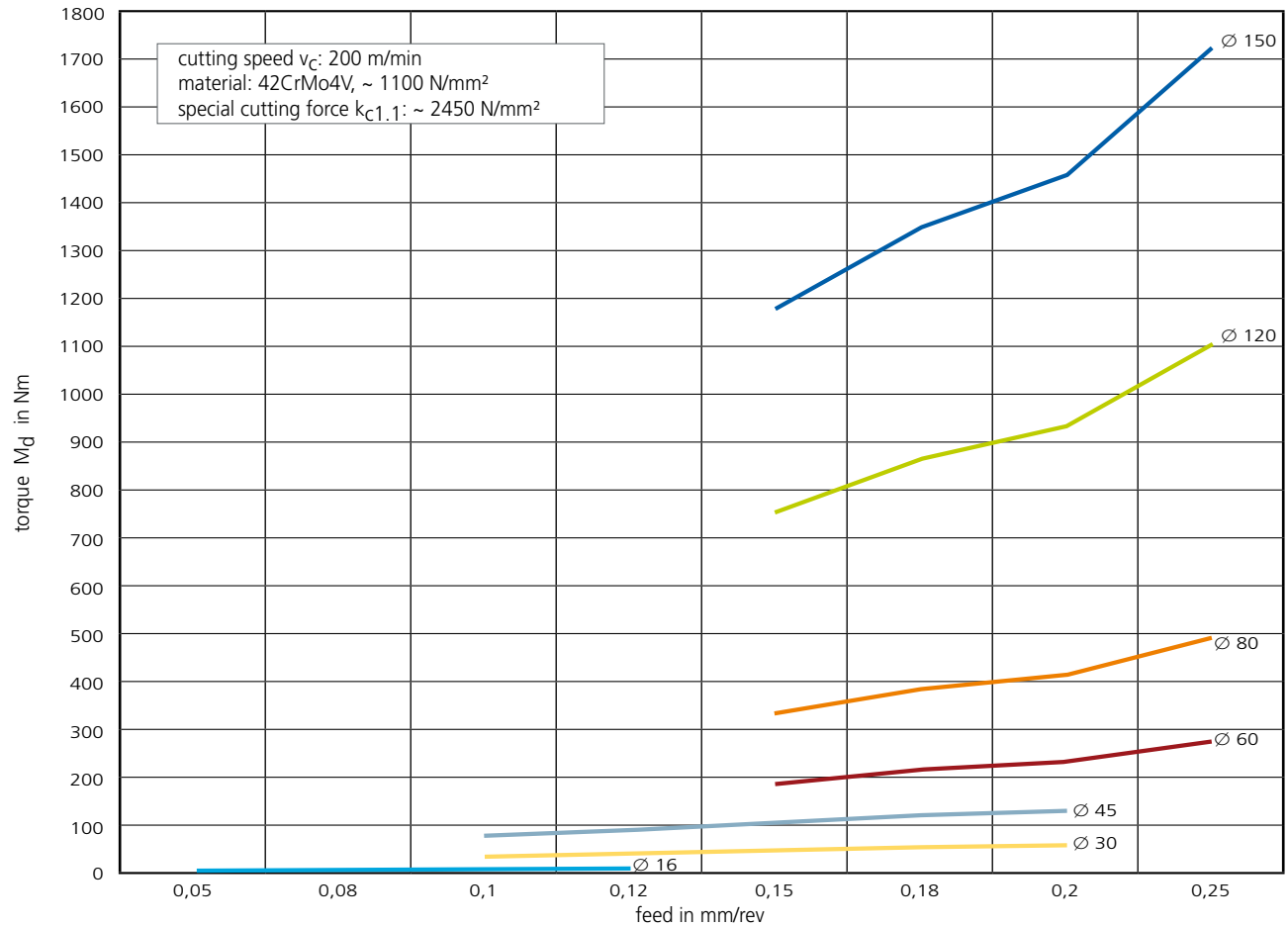
Drive power kW



Feed force F_f

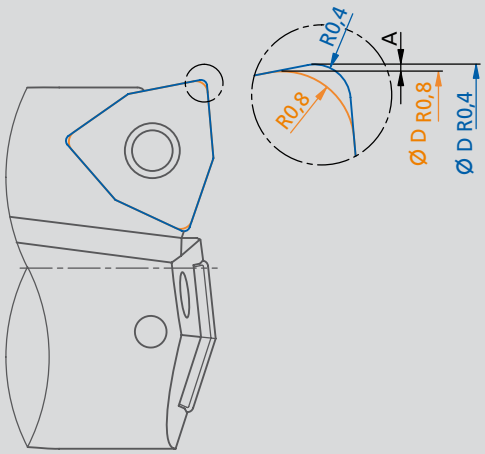


Torque M_d



Dimensional variation

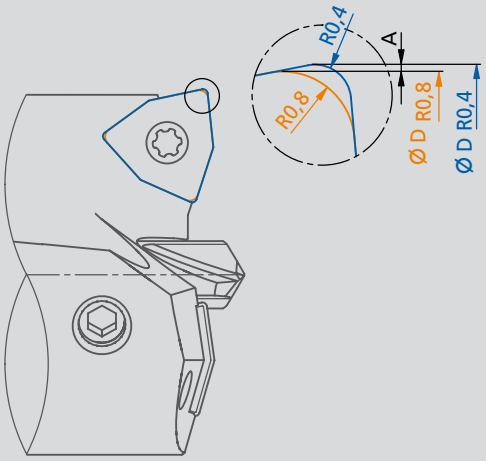
KUB Trigon, KUB drill



Ø D	A
25,0 – 27,9	0,08
28,0 – 28,9	0,09
29,0 – 29,9	0,10
30,0 – 31,9	0,08
32,0 – 33,9	0,09
34,0 – 36,9	0,10
37,0 – 38,9	0,08
39,0 – 41,9	0,09
42,0 – 44,9	0,10

$$D_{R0,8} = D_{R0,4} - 2 \times A$$

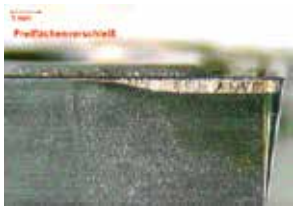
KUB Centron



Ø D	A
33,0 – 37,9	0,08
38,0 – 54,9	0,09
55,0 – 64,9	0,10

$$D_{R0,8} = D_{R0,4} - 2 \times A$$

Types of wear on inserts

1. 

Wear on clearance face
normal type of wear expected

remedy:
- use hardened/wear-resistant cutting materials
- reduce cutting parameters

2. 

Pitting
caused by:
- coating/substrate not sufficiently wear-resistant
- chip geometry too negative

rectified by:
- substrate or coatings with better wear resistance
- positive chip geometries

3. 

Microscopic fracturing
caused by:
- coating/substrate too brittle
- vibrations on part or tool
- interrupted cut
- build-up on cutting edges

correcting by:
- tougher coating
- avoidance of vibrations
- avoidance of build-up on cutting edges

4. 

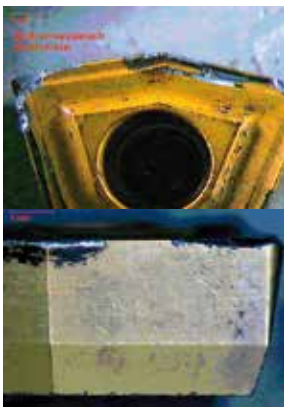
Stress fracture
caused by:
- wrong/excessively high cutting parameters
- no allowance for tool restrictions
- interrupted cut

rectified by:
- checking of cutting data
- checking of tool restrictions

5. 

Thermal wear
caused by:
- cutting speed too high
- excessive heat

rectified by:
- reduction of cutting speed
- wear-resistant, more thermally stable coatings or substrate

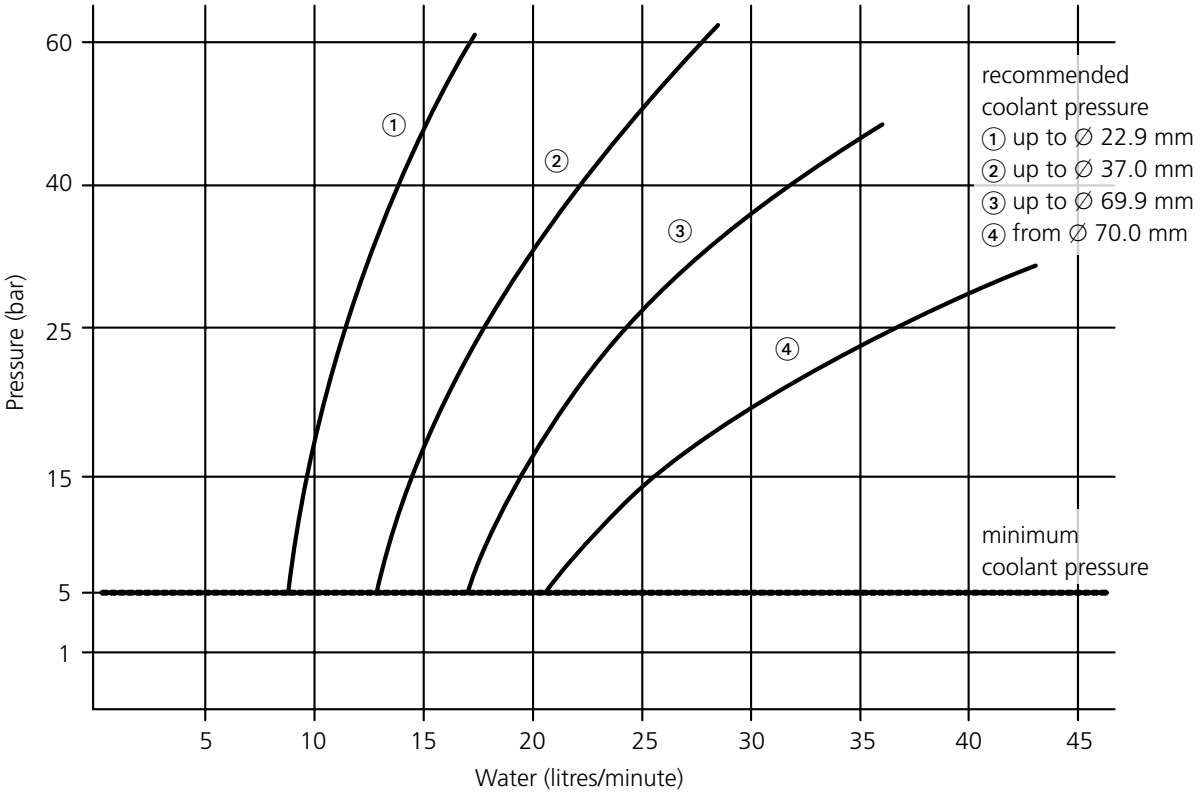
6. 

Fracture of centre insert
caused by:
- basic substrate/coatings too brittle
- central position of internal insert too high (insert protrudes over centre)

rectified by:
- tougher coatings and substrate
- check lower central position of internal insert
- use centre plate with stronger chamfering
- use internal and external insert with same geometry

Usage and safety notes

Coolant flow / coolant pressure:





- **Important note!** On exit of the drill a disc as shown is ejected. With rotating components this can cause accidents. Please arrange suitable guarding.
- The technical notes provided in the application details depend on the environmental and application conditions (such as machine, environmental temperature, lubrication/coolant used and desired machining results): these are based on proper application conditions, use and compliance with the spindle speed limits given for the tools.
- To prevent damage to machine and tool, we recommend that the drive power be calculated in advance (see performance calculation). The drive power which is actually available will be found in the machine manufacturer's spindle speed/performance diagram.
- Safety equipment should be provided to protect personnel from flying chips.
  Please see our safety note (enclosed with packing).
- To ensure the best possible tool life, the insert should be changed promptly.
  Acceptable width of flank wear marks on inserts: W29 10... to W29 18... VB max = 0.20 mm
  W29 24... to W29 34... VB max = 0.25 mm
  W29 42... to W29 58... VB max = 0.30 mm

The application details given depend on the environmental and application conditions (e.g. machine, ambient temperature, lubricant/coolant used and machining result required): they are based on the correct application conditions, correct use and compliance with the spindle speed limits given for the tools.

All measurement specifications stated in the catalogue apply to the metric unit system, unless they are expressly identified using another unit of measurement.

Hazard warning:

If using tungsten carbide-based hard metal products together with cobalt as a binder metal, please read our safety data sheets, which are available for you to download from our website.
(http://www.kometgroup.com/navigation-top/download/service/datenblaetter.html)

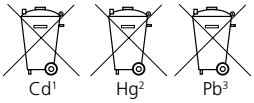
Balancing note:

Tool holders or adaptors are only balanced as supplied, i.e. no allowance has been made for items which can alter this, such as boring tools, milling cutters, inserts, etc. When used at high speeds, we recommend precision balancing be carried out when the tool is fitted ready for use.

In accordance with German battery legislation, we are required to state the following:

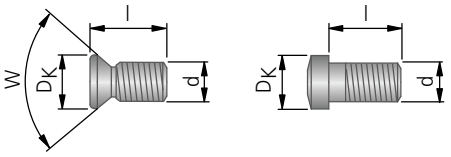
Do not dispose of old batteries along with household waste. You can return used batteries free of charge to our shipping depot. As a consumer, you are legally obliged to return old batteries.

Batteries containing hazardous substances are marked with a crossed-out wheelie bin and the chemical symbol (Cd, Hg or Pb) that determines its classification as a hazardous-substance-containing heavy metal:



[1] „Cd“ stands for cadmium
[2] „Hg“ stands for mercury
[3] „Pb“ stands for lead

Clamping screw



Order No.	Article	Packing unit piece	Thread d	Length l	Screw head D_K	Screw head taper angle W	Screw turning slot TorxPlus	Screw turning slot WAF	Screw turning slot Torx	Tightening torque Nm
N00 55050	M3×7,8 /75°	10	3	7,8	4,5	75°		1,5		2,25
N00 55060	M3,5×9,4/60°	10	3,5	9,4	4,6	60°		1,5		2,8
N00 55070	M3,5×11,4/60°	10	3,5	11,4	4,6	60°		1,5		2,8
N00 55100	M4,5×12,4	10	4,5	12,4	5,9			2,5		4,5
N00 55110	M4,5×14,5	10	4,5	14,5	5,9			2,5		4,5
N00 55120	M4,5×16,4	10	4,5	16,4	5,9			2,5		4,5
N00 55130	M4,5×18,7	10	4,5	18,7	5,9			2,5		4,5
N00 55140	M4,5×22,5	10	4,5	22,5	5,9			2,5		4,5
N00 55180	M5,5×29,2	10	5,5	29,2	7,1			3		6,5
N00 55551	M2,5×2,8-8IP	10	2,5	2,8	3,45		8IP			1,28
N00 55561	M2,5×4-8IP	10	2,5	4	3,45		8IP			1,28
N00 55571	M2,5×6-8IP	10	2,5	6	3,45		8IP			1,28
N00 55581	M2,5×4,5-8IP	10	2,5	4,5	3,45		8IP			1,28
N00 55701	M3,5×5-8IP	10	3,5	5	5,15		8IP			2,25
N00 55711	M3,5×7,4-8IP	10	3,5	7,4	5,15		8IP			2,25
N00 55801	M4,5×6-10IP	10	4,5	6	6,05		10IP			4,3
N00 55811	M4,5×7-10IP	10	4,5	7	6,05		10IP			4,3
N00 55821	M4,5×9-10IP	10	4,5	9	6,05		10IP			4,3
N00 55851	M5×13,5-15IP	10	5	13,5	7,25		15IP			6,25
N00 55891	M5,5×8,5-20IP	10	5,5	8,5	7,25		20IP			6,25
N00 55901	M5,5×13,5-20IP	10	5,5	13,5	7,25		20IP			6,25
N00 56011	S/M1,8×2,9-5IP	10	1,8	2,95	2,4	75°	5IP			0,38
N00 56021	S/M2×3,8-6IP	10	2	3,8	2,7	75°	6IP			0,62
N00 56031	S/M2×4,9-6IP	10	2	4,9	2,7	75°	6IP			0,62
N00 56041	S/M2×4,3-6IP	10	2	4,3	2,7	75°	6IP			0,62
N00 56051	S/M1,8×3,8-5IP	10	1,8	3,85	2,4	75°	5IP			0,38
N00 56101	S/M2,6×5,2-8IP	10	2,6	5,2	3,4	75°	8IP			1,28
N00 56111	S/M2,6×6,2-8IP	10	2,6	6,2	3,4	75°	8IP			1,28
N00 56121	S/M2,6×4,7-8IP	10	2,6	4,7	3,4	75°	8IP			1,28
N00 56201	S/M3,5×6,2-10IP	10	3,5	6,2	4,65	75°	10IP			2,8
N00 56211	S/M3,5×7,3-10IP	10	3,5	7,3	4,65	75°	10IP			2,8
N00 56301	S/M4×8-10IP	10	4	8	5,15	75°	10IP			4,3
N00 56401	S/M5×9,4-20IP	10	5	9,4	6,65	75°	20IP			6,25
N00 56411	S/M5×13,4-20IP	10	5	13,4	6,65	75°	20IP			6,25
N00 56591	S2247-6IP	10	2,2	4,7	3,15	60°	6IP			1,01
N00 56651	S2560-8IP	10	2,5	6	3,5	55°	8IP			1,28
N00 56751	S3574-10IP	10	3,5	7,4	5,5	55°	10IP			2,8
N00 56771	S35102-10IP	10	3,5	10,25	5,5	55°	10IP			2,8
N00 56811	S40101-20IP	10	4	10,1	7,2	60°	20IP			4,3
N00 56851	S45111-20IP	10	4,5	11,1	6,9	55°	20IP			6,25
N00 56861	S4514-20IP	10	4,5	14	6,9	55°	20IP			4,3
N00 57191	S2043-6IP	10	2	4,3	2,7	55°	6IP			0,62
N00 57201	S2536-7IP	10	2,5	3,6	3,5	55°	7IP			0,9
N00 57211	S2542-8IP	10	2,5	4,2	3,5	55°	8IP			1,28
N00 57221	S2553-7IP	10	2,5	5,3	3,5	55°	7IP			0,9
N00 57241	S3070-8IP	10	3	7	4,3	55°	8IP			2,25

Order No.	Article	Packing unit piece	Thread d	Length l	Screw head D_K	Screw head taper angle W	Screw turning slot TorxPlus	Screw turning slot TORX	Tightening torque Nm
N00 57251	S3076-8IP	10	3	7,6	4,3	55°	8IP		2,25
N00 57261	S3575-15IP	10	3,5	7,5	5,5	55°	15IP		2,8
N00 57271	S3585-15IP	10	3,5	8,5	5,5	55°	15IP		2,8
N00 57281	S3598-15IP	10	3,5	9,8	5,5	55°	15IP		2,8
N00 57301	S45100-20IP	10	4,5	10	6,4	55°	20IP		6,25
N00 57321	S2556-8IP	10	2,5	5,6	3,8	50°	8IP		1,28
N00 57341	S3066-9IP	10	3	6,6	4,4	60°	9IP		2,5
N00 57411	S40101-15IP	10	4	10,1	5,5	60°	15IP		4,3
N00 57421	S/M4,5×7,8-15IP	10	4,5	7,8	6,7	60°	15IP		6,25
N00 57431	S3066-8IP	10	3	6,6	5	55°	8IP		2,25
N00 57440	S4089-15IP	10	4	8,9	5,5	55°	15IP		4,3
N00 57450	S50115-20IP	10	5	11,5	7,4	55°	20IP		6,25
N00 57460	S55140-20IP	10	5,5	14	8,2	55°	20IP		6,25
N00 57470	S60160-20IP	10	6	16	8,8	55°	20IP		6,25
N00 57480	S2564-8IP	10	2,5	6,4	3,5	55°	8IP		1,28
N00 57490	S3074-8IP	10	3	7,4	4,3	55°	8IP		2,25
N00 57500	S45105-20IP	10	4,5	10,5	6,4	55°	20IP		6,25
N00 57511	S/M2,5×7,2-8IP	10	2,5	7,2	3,4	75°	8IP		1,28
N00 57521	S/M3,5×7,3-10IP	10	3,5	7,3	5,1	75°	10IP		2,8
N00 57531	S/M4,5×9-15IP	10	4,5	9	6,0	75°	15IP		6,25
N00 57541	S/M5,5×11-20IP	10	5,5	11	7,2	75°	20IP		6,25
N00 57553	S/M2,2×5,5-6IP	10	2,2	5,5	3,1	75°	6IP		1,01
N00 57571	S/M2,5×6,3-8IP	10	2,5	6,3	3,4	75°	8IP		1,28
N00 57611	S/M3,5×6,6-10IP	10	3,5	6,6	5,1	75°	10IP		2,8
N00 57630	S/M3×5,8-8IP	10	3	5,8	3,8	75°	8IP		2,25
N00 57640	S/M3,5×6,9-10IP	10	3,5	6,9	4,6	75°	10IP		2,8
N00 57650	S/M4×8,7-15IP	10	4	8,7	5,3	75°	15IP		4,3
N00 57660	S/M2,2×4,8-6IP	10	2,2	4,8	2,9	75°	6IP		1,01
N00 57670	S/M5×10,4-20IP	10	5	10,4	6,6	75°	20IP		6,25
N00 57710	S3090-9IP	10	3	9	4,4	60°	9IP		2,5
N00 57780	S/M2,5×8,8-8IP	10	2,5	8,8	3,4	75°	8IP		1,28
N00 57790	S/M3,5×7,3-10IP	10	3,5	7,3	5,1	75°	10IP		2,8
N00 57810	S40120-15IP	10	4	12	5,5	60°	15IP		4,3
N00 57820	S2550-T8-55°	10	2,5	5,0	3,45	55°		T8	1,2
N00 57830	S3073-T8-55°	10	3	7,3	4,1	55°		T8	2
N00 57840	S3075-10IP	10	3	7,5	4,2	55°	10IP		2
N00 57860	S3572-T15-55°	10	3,5	7,2	5,2	55°		T15	3,2
N00 57870	S3586-T15-55°	10	3,5	8,6	5,2	55°		T15	3,2
N00 57880	S45105-T20-55°	10	4,5	10,5	6,6	55°		T20	5
N00 57890	S40110-15IP	10	4	11,0	6,6	55°	15IP		4,3
N00 57900	S45130-20IP	10	4,5	13,0	5,3	55°	20IP		5
N00 57910	S4085-T15-55°	10	4	8,5	5,3	55°		T15	4,25
N00 57920	S40110-T15	10	4	11,0	5,3	55°		T15	4,25

KOMET

Allocation of indexable insert to clamping screw

Insert Size	Clamping screw Order No.	Article
W00 WOHX		
W00 04..	N00 56011	S/M1,8×2,9-5IP
W00 10..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W00 17..	N00 55581	M2,5×4,5-8IP
	N00 55551*	M2,5×2,8-8IP
	N00 55561*	M2,5×4-8IP
W00 24..	N00 55571	M2,5×6-8IP
	N00 55561*	M2,5×4-8IP
	N00 55581*	M2,5×4,5-8IP
W00 34..	N00 55701	M3,5×5-8IP
	N00 55711	M3,5×7,4-8IP
W00 42..	N00 55811	M4,5×7-10IP
	N00 55801*	M4,5×6-10IP
	N00 55821*	M4,5×9-10IP
W00 50..	N00 55811	M4,5×7-10IP
	N00 55821*	M4,5×9-10IP
W00 58..	N00 55891	M5,5×8,5-20IP
	N00 55901*	M5,5×13,5-20IP
W01 WOHX		
W01 10..	N00 56041	S/M2×4,3-6IP
W01 18..	N00 57553	S/M2,2×5,5-6IP
W01 24..	N00 57511	S/M2,5×7,2-8IP
W01 34..	N00 57521	S/M3,5×7,3-10IP
W01 42..	N00 57531	S/M4,5×9-15IP
W01 50..	N00 57531	S/M4,5×9-15IP
W01 58..	N00 57541	S/M5,5×11-20IP
W04 WNHX		
W04 22..	N00 55050	M3×7,8 /75°-⬡1,5
	N00 55050	M3×7,8 /75°-⬡1,5
W04 34..	N00 55060	M3,5×9,4/60°-⬡1,5
	N00 55070	M3,5×11,4/60°-⬡1,5
W04 42..	N00 55100	M4,5×12,4-⬡2,5
	N00 55110	M4,5×14,5-⬡2,5
	N00 55130	M4,5×18,7-⬡2,5
W04 50..	N00 55120	M4,5×16,4-⬡2,5
	N00 55140	M4,5×22,5-⬡2,5
W04 58..	N00 55180	M5,5×29,2-⬡3
W24		
W24 12..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W24 20..	N00 56651	S2560-8IP
W27		
W27 12..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W27 20..	N00 56651	S2560-8IP
W28 WOEX		
W28 10..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W28 17..	N00 55581	M2,5×4,5-8IP
	N00 55551*	M2,5×2,8-8IP
	N00 55561*	M2,5×4-8IP
W28 24..	N00 55571	M2,5×6-8IP
	N00 55561*	M2,5×4-8IP
	N00 55581*	M2,5×4,5-8IP
W28 34..	N00 55701	M3,5×5-8IP
	N00 55711	M3,5×7,4-8IP
W28 42..	N00 55811	M4,5×7-10IP
	N00 55801*	M4,5×6-10IP
	N00 55821*	M4,5×9-10IP
W28 50..	N00 55811	M4,5×7-10IP
	N00 55821*	M4,5×9-10IP
W28 58..	N00 55891	M5,5×8,5-20IP
	N00 55901*	M5,5×13,5-20IP
W28 72..	N00 55901	M5,5×13,5-20IP
W29 WOEX		
W29 04..	N00 56051	S/M1,8×3,8-5IP
W29 10..	N00 56041	S/M2×4,3-6IP
W29 18..	N00 57553	S/M2,2×5,5-6IP
W29 24..	N00 57511	S/M2,5×7,2-8IP
W29 34..	N00 57521	S/M3,5×7,3-10IP
	N00 57790**	S/M3,5×7,3-10IP
W29 42..	N00 57531	S/M4,5×9-15IP
W29 50..	N00 57531	S/M4,5×9-15IP
W29 58..	N00 57541	S/M5,5×11-20IP
W30 TOHX | TOGX		
W30 04..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W30 14..	N00 56111	S/M2,6×6,2-8IP
	N00 56101*	S/M2,6×5,2-8IP
	N00 56121*	S/M2,6×4,7-8IP
W30 26..	N00 56201	S/M3,5×6,2-10IP
	N00 56211*	S/M3,5×7,3-10IP
W30 44.	N00 56401	S/M5×9,4-20IP
	N00 56411*	S/M5×13,4-20IP
W32 TPHX		
W32 03..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W32 13..	N00 56111	S/M2,6×6,2-8IP
	N00 56101*	S/M2,6×5,2-8IP
W32 18..	N00 56111	S/M2,6×6,2-8IP
	N00 56121*	S/M2,6×4,7-8IP
W32 23..	N00 56201	S/M3,5×6,2-10IP
	N00 56211*	S/M3,5×7,3-10IP
W32 32..	N00 56301	S/M4×8-10IP
W32 44..	N00 56401	S/M5×9,4-20IP
	N00 56411*	S/M5×13,4-20IP
W34 TOHT		
W34 18..	N00 56651	S2560-8IP
W34 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W37 TPHB		
W37 18..	N00 56111	S/M2,6×6,2-8IP
	N00 56101*	S/M2,6×5,2-8IP
	N00 56121*	S/M2,6×4,7-8IP
W37 23..	N00 56201	S/M3,5×6,2-10IP
	N00 56211*	S/M3,5×7,3-10IP
W37 32..	N00 56301	S/M4×8-10IP
W57 TOHX | TOGX		
W57 04..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W57 14..	N00 56111	S/M2,6×6,2-8IP
	N00 56101*	S/M2,6×5,2-8IP
	N00 56121*	S/M2,6×4,7-8IP
W57 26..	N00 56201	S/M3,5×6,2-10IP
	N00 56211*	S/M3,5×7,3-10IP
W58 TPHX		
W58 03..	N00 56031	S/M2×4,9-6IP
	N00 56021*	S/M2×3,8-6IP
W58 13..	N00 56111	S/M2,6×6,2-8IP
	N00 56101*	S/M2,6×5,2-8IP
W58 18..	N00 56111	S/M2,6×6,2-8IP
	N00 56121*	S/M2,6×4,7-8IP
W58 23..	N00 56201	S/M3,5×6,2-10IP
	N00 56211*	S/M3,5×7,3-10IP
W58 32..	N00 56301	S/M4×8-10IP
W59 TOHT		
W59 18..	N00 56651	S2560-8IP
W59 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W60 DOHT		
W60 18..	N00 56651	S2560-8IP
W60 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W78 VOHT | VOGW		
W78 18..	N00 56651	S2560-8IP
W78 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W79 DOHT		
W79 18..	N00 56651	S2560-8IP
W79 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W80 SOGX		
W80 10..	N00 56051	S/M1,8×3,8-5IP
W80 12..	N00 56041	S/M2×4,3-6IP
W80 18..	N00 57553	S/M2,2×5,5-6IP
W80 20..	N00 57553	S/M2,2×5,5-6IP
W80 24..	N00 57571	S/M2,5×6,3-8IP
W80 28..	N00 57251	S3076-8IP
W80 32..	N00 57261	S3575-15IP
W80 38..	N00 57261	S3575-15IP
W80 42..	N00 57301	S45100-20IP
W80 46..	N00 57301	S45100-20IP

Allocation of indexable insert to clamping screw

Insert Size	Clamping screw Order No.	Article
W82 SOHX		
W82 32..	N00 57261	S3575-15IP
W83 SOEX		
W83 13..	N00 56041	S/M2×4,3-6IP
W83 18..	N00 57553	S/M2,2×5,5-6IP
W83 23..	N00 57571	S/M2,5×6,3-8IP
	N00 57780**	S/M2,5×8,8-8IP
W83 32..	N00 57261	S3575-15IP
W83 39..	N00 57271	S3585-15IP
W83 44..	N00 57301	S45100-20IP
W83 SPGT/SPGW		
W83 18..	N00 57221	S2553-7IP
W83 32..	N00 57261	S3575-15IP
W83 44..	N00 56851	S45111-20IP
W84		
W84 18..	N00 56651	S2560-8IP
W84 32..	N00 56771	S35102-10IP
W85 CPGT/CPGW		
W85 09..	N00 57191	S2043-6IP
W85 18..	N00 57221	S2553-7IP
W85 18.. .01 | .02	N00 56651	S2560-8IP
W85 23..	N00 57341	S3066-9IP
W85 32..	N00 57261	S3575-15IP
W85 32.. .02 | .03 .04 | .05	N00 56751	S3574-10IP
W85 44..	N00 56851	S45111-20IP
W86		
W86 18..	N00 56651	S2560-8IP
W86 32..	16301 00537	
W89 VCMT/VBMT		
W89 23..	51560 74551	
W89 32.. .05 | .06	16301 00537	
W89 32.. .07 | .08	N00 57271	S3585-15IP
C79 VBGT | VBGW		
C79 03..	N00 56031	S/M2×4,9-6IP
C79 18..	N00 57221	S2553-7IP
C79 32..	N00 57271	S3585-15IP
C83 SCMT | SCGW		
C83 32..	N00 57261	S3575-15IP
C83 44..	N00 56851	S45111-20IP
C84 TCGT | TCGW		
C84 13..	N00 57660	S/M2,2×4,8-6IP
C84 18..	N00 56651	S2560-8IP
C84 32..	N00 56771	S35102-10IP
C85 CCGT | CCGW		
C85 18..	N00 57221	S2553-7IP
C85 32..	N00 56751	S3574-10IP
C85 44..	N00 56851	S45111-20IP

Insert Size	Clamping screw Order No.	Article
C86 DCGT | DCGW		
C86 18..	N00 56651	S2560-8IP
C86 32..	N00 57261	S3575-15IP
C87 RCGT | RCGW		
C87 34..	N00 57261	S3575-15IP
C88 RCGT | RCGW		
C88 17..	N00 57221	S2553-7IP
C88 24..	N00 57341	S3066-9IP
C88 34..	N00 57261	S3575-15IP
C88 42..	N00 57261	S3575-15IP
C89 VCGT | VCGW		
C89 03..	N00 56031	S/M2×4,9-6IP
C89 18..	N00 57221	S2553-7IP
C89 32..	N00 57271	S3585-15IP
C95 CPGT | CPGW		
C95 09..	N00 57191	S2043-6IP
C95 18..	N00 57221	S2553-7IP
C95 23..	N00 57341	S3066-9IP
C95 32..	N00 57261	S3575-15IP
C95 44..	N00 56851	S45111-20IP
C98 RDHX		
C98 10..	N00 56051	SM1,8×3,8-5IP
C98 20..	N00 57221	S2553-7IP
C98 34..	N00 57261	S3575-15IP
C98 42..	N00 57261	S3575-15IP
H60 | H62 XOHX		
XOHX0802	N00 57660	S/M2,2×4,8-6IP
XOHX1003	N00 57630	S/M3×5,8-8IP
XOHX12T3	N00 57640	S/M3,5×6,9-10IP
XOHX1504	N00 57650	S/M4×8,7-15IP
XOHX2205	N00 57670	S/M5×10,4-20IP
H80 LNHX		
LNHX09T3	N00 57251	S3076-8IP
LNHX1205	N00 57411	S40101-15IP
Q09 SPGW | SPMT | SEHW | SEHT		
Q09 13..	N00 57221	S2553-7IP
Q09 18..	N00 57221	S2553-7IP
Q09 44..	N00 57301	S45100-20IP
Q09 53..	N00 57301	S45100-20IP
Q12 TCAA | TNAA | TCAX | TNAX | TPAX		
Q12 18..	N00 57201	S2536-7IP
	N00 57211	S2542-8IP
	N00 57221	S2553-7IP
Q12 32.. .05 | .06	N00 57231	S3056-8IP
Q12 32.. .07	N00 57241	S3070-8IP
Q12 32.. .08 | .09	N00 57271	S3585-15IP
Q12 32.. .15 | .16 .17	N00 57281	S3598-15IP
Q12 32.. .18 | .19 .20	N00 57251	S3076-8IP
Q12 32.. .38 | .41 .42 | .43	N00 57281	S3598-15IP
Q12 32.. .52 | .53	N00 57431	S3066-8IP
Q12 44..	N00 57301	S45100-20IP
Q15 CPMT | CPMW		
Q15 18..	N00 57221	S2553-7IP
Q15 32..	N00 57261	S3575-15IP
Q21		
Q21 24..	N00 57251	S3076-8IP
Q21 32..	N00 57261	S3575-15IP
Q21 44..	N00 57301	S45100-20IP
Q33		
Q33 18..	N00 56651	S2560-8IP
Q33 23..	N00 57241	S3070-8IP
	N00 57251	S3076-8IP
Q36 APKT		
Q36 18..	N00 57321	S2556-8IP
Q36 24..	N00 57341	S3066-9IP
Q36 38..	N00 57411	S40101-15IP
Q40 HOKT | HPCT | HPKT		
Q40 53..	N00 57890	S40110-15IP
Q43 SDHT | SDKT | SDMX		
Q43 28..	N00 57830	S3073-T8-55°
Q43 38.. Ø24,5	N00 57910	S4085-T15-55°
Q43 38.. Ø32,5-92,5	N00 57890	S40110-15IP
Q47 EOMT		
Q47 34.. Ø31,7	N00 57910	S4085-T15-55°
Q47 34.. Ø39,7-99,7	N00 57890	S40110-15IP
Q55 RPMX | RPHX | RDHW | RDHX		
Q55 34..	N00 57840	S3075-10IP
Q55 42.. Ø25-32	N00 57910	S4085-T15-55°
Q55 42.. Ø40-100	N00 57890	S40110-15IP
Q56 XPLT | XDLT | XOLT		
Q56 20..	N00 57820	S2550-T8-55°
Q56 32..	N00 57860	S3572-T15-55°
Q56 46..	N00 57880	S45105-T20-55°
Q63 SOKU		
Q63 46..	N00 57890	S40110-15IP
Q63 53..	N00 57900	S45130-20IP
Q75 RNKU | ROHU		
Q75 42..	N00 57890	S40110-15IP
Q80 LNGU		
Q80 09..	N00 57191	S2043-6IP
Q80 20..	N00 57251	S3076-8IP
Q80 32..	N00 57411	S40101-15IP

* only be used for special tools

** tensile strength 1600 N/mm²

KOMET ABS

Even more perfectly joined

One benefit of the new version of the KOMET ABS connection is substantially higher clamping forces. It is fully compatible with the existing system, and also matches the original's high precision demands. In tooling systems, the tool adapter is an important element between the tool and machine.

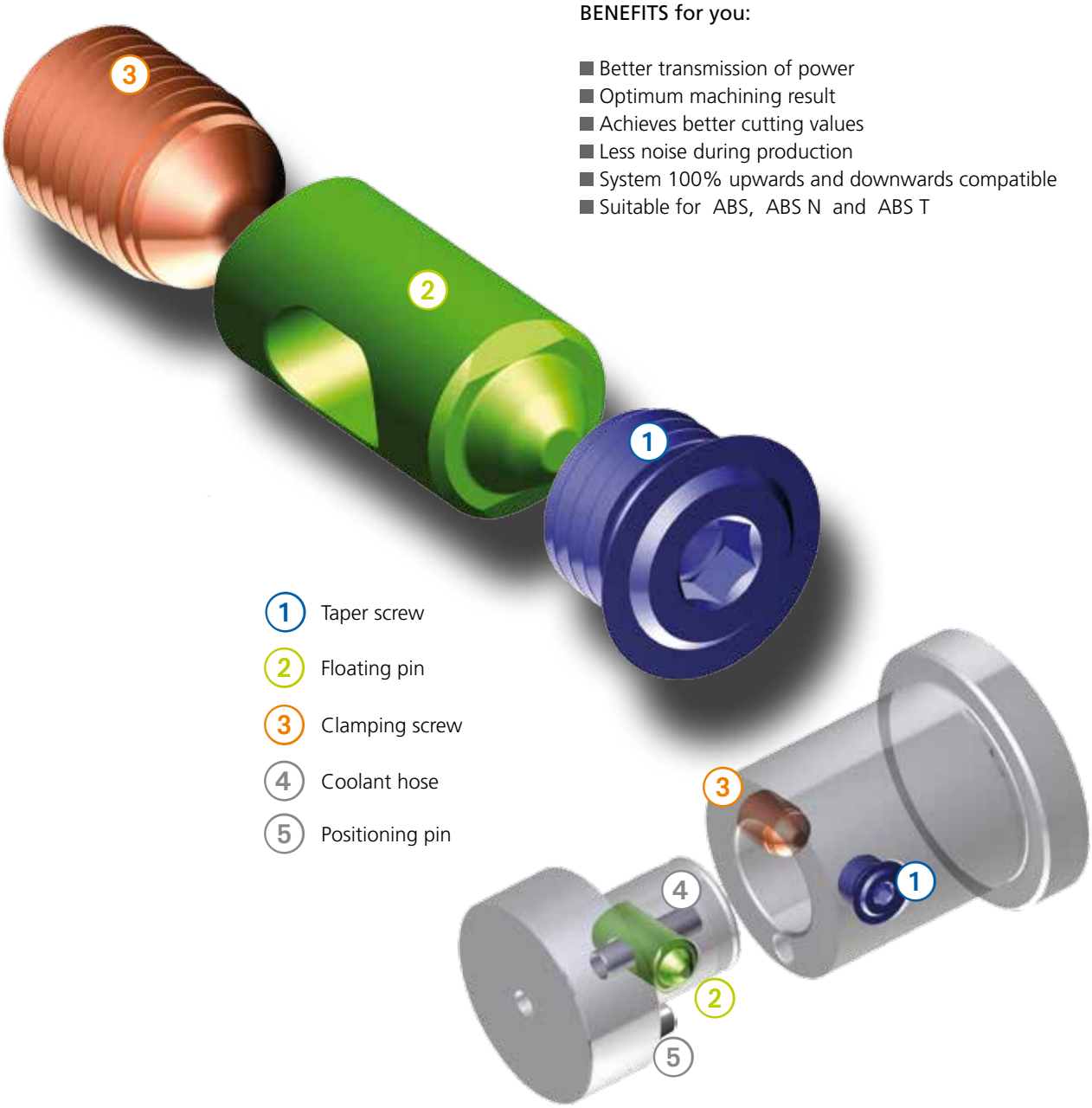
It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process. KOMET ABS connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

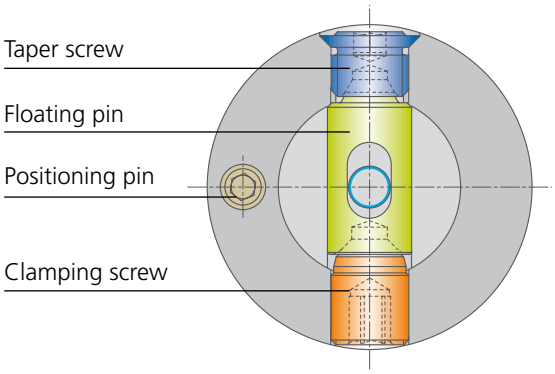
Since its launch by KOMET in 1981, the system has become established globally. It has fully developed components for each requirement.

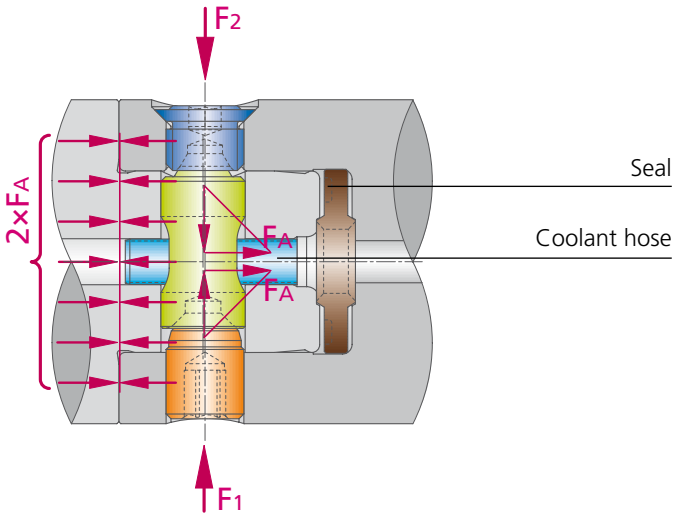
The new KOMET ABS is a technological leap forwards. The patented modifications have led to an increase of approx. 20 % in the clamping force. This means better transmission of power along with the corresponding effects on the machining result. During use, the new KOMET ABS connections are quieter, and can achieve better cutting values. On the other hand, it also means reduced tightening torque at a constant required clamping force. The service life of the assembly parts are therefore longer. With 100% system compatibility, existing and new components can be combined with each other.

BENEFITS for you:

- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production
- System 100% upwards and downwards compatible
- Suitable for ABS, ABS N and ABS T







The ABS connection consists of a location (spindle) and a shank with spigot (tool). In addition to the cylindrical bore on the location, there are two cross threads with the clamping screw and the taper screw. On the shank section, in addition to the cylindrical pin with cross bore, there is a sliding pin and positioning pin.

By axially offsetting the clamping screw/taper screw and sliding pin, the tapered surfaces are brought into contact when the screws are tightened and produce double the expansion force through axial components 2×FA. If cutting forces or moments arise, there is sufficient play between the positioning pin and the positioning bore to allow for a specific, minimum torsion. Exact positioning is achieved with a suitable positioning pin. On tools where an accurately defined cutting position is required, positioning and torque transmission is by means of 2 key slots on the holder or 2 key blocks on the tool.

The exactly adjusted dimensions of the ABS System in conjunction with an extremely low amount of adjustment play produces minimum distortion from self-centering contact at four points. This in turn produces increased strength, a higher tool change repeatability and low vibration.

The ABS coupling system is protected by patent application domestically and abroad.

Tools with the Original ABS connection system are manufactured and/or marketed exclusively by KOMET and companies specifically authorised by KOMET. All authorised (licenced) manufacturers are contractually bound to use manufacturing specifications supplied by KOMET.
Original ABS systems are identified with "ABS ... under licence to KOMET". All authorised ABS manufacturers guarantee a quality standard which complies with KOMET manufacturing specifications. Quality and safety is guaranteed subject to original ABS tools being correctly used. No guarantee can be given where tools are used with modular connections which are not identified as original ABS tools. This particularly applies for connections which are designed to be combined and used with original ABS tools.

Please ensure that tools are used with original ABS connections only.

Features / changes:

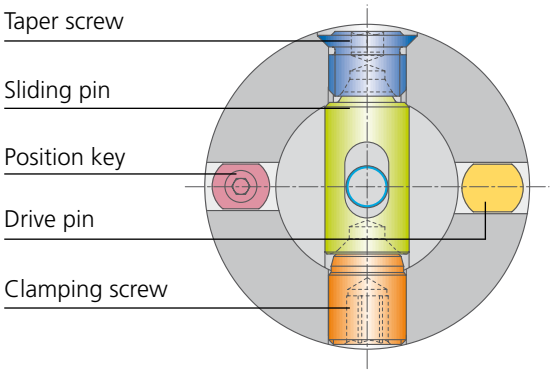
- The new ABS is generally compatible with all conventional ABS systems. You can see the variation possibilities illustrated above.

- Instead of a 90° tip, the floating pin now has a stepped shape at the flank towards the taper screw at which two contact parts are planned. Through the new shape, the basic body of the floating pin is longer and thus, a better guidance in the bore of the spigot is achieved.

- The taper screw was also improved by a new design with the features described above. This results in an increase of the clamping force and a higher accuracy of the ABS system.
  Through the modifications mentioned, a better overall rigidity of the ABS system is achieved in addition. More efficient cutting tools can be used with the new ABS without any problems.

KOMET ABS

ABS N – The slotted ABS version



Features:
For cutting operations which set high demands, the ABS system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS and ABS N are consistently high.

Compatibility:
- Standard ABS tools can be used in ABS N adaptors
- Because ABS tools can be easily converted, the tool can be held in standard adaptors.

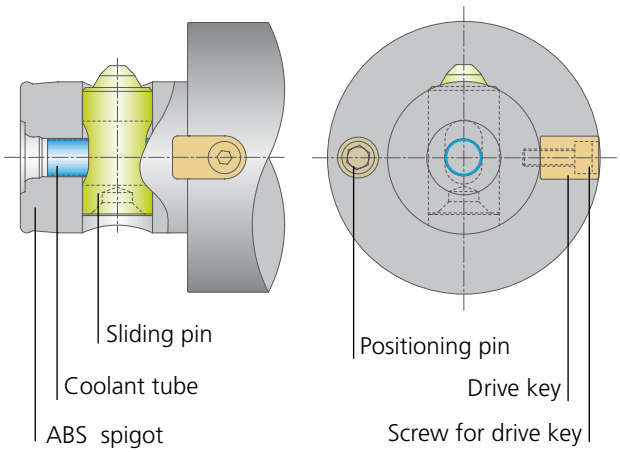


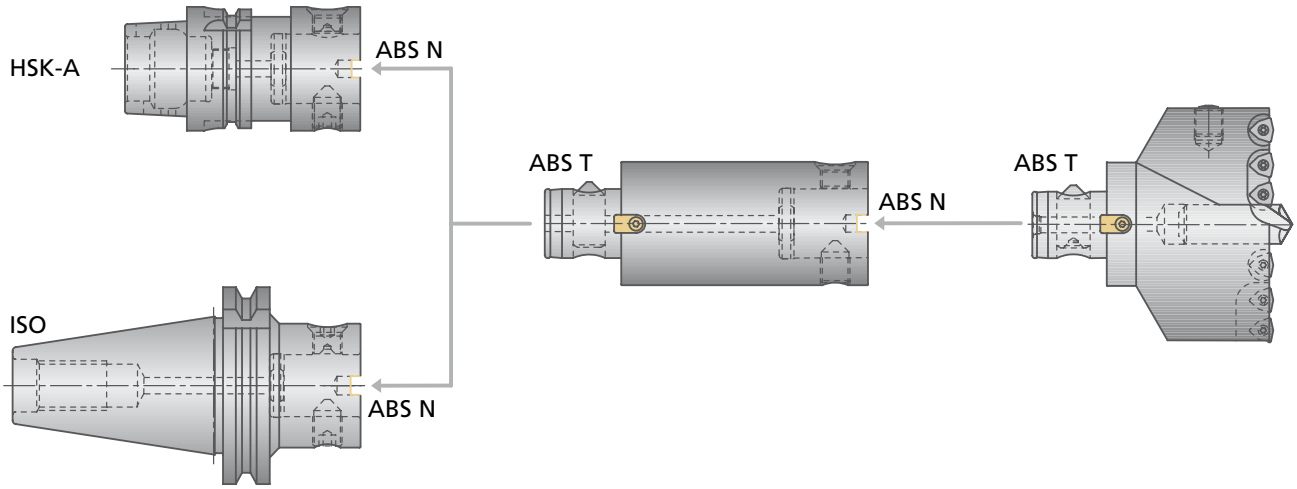
High stability from ABS face connection with slots

ABS T – for increased torque requirements

Features:
For cutting operations which set high demands, the ABS system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS N and ABS T are consistently high.

Compatibility:
- standard ABS T tools can be used in ABS N adaptors
- removal the drive key, ABS T tool can be held in standard adaptors ABS.

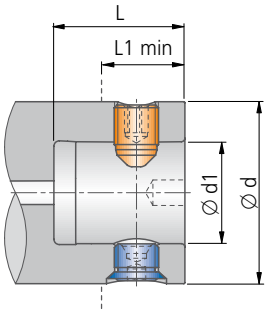




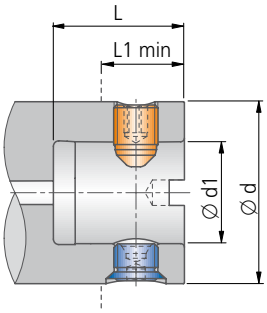
A colour code system is used for the ABS, ABS N and ABS T ∅ d size so that selection of tools with a specific location size can be made quickly and accurately.

Location hole

ABS



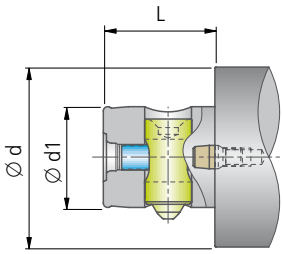
ABS N



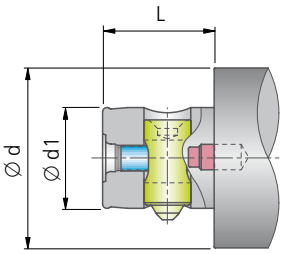
ABS / ABS N					
size	size	Ø d	Ø d1	L	L1 min.
ABS 25	ABS 25 N	25	13	24	13,0
ABS 32	ABS 32 N	32	16	27	16,0
ABS 40	ABS 40 N	40	20	31	18,5
ABS 50	ABS 50 N	50	28	36	22,0
ABS 63	ABS 63 N	63	34	43	28,0
ABS 80	ABS 80 N	80	46	48	34,0
ABS 100	ABS 100 N	100	56	60	40,5
ABS 125	ABS 125 N	125	70	76	51,0
ABS 160	ABS 160 N	160	90	96	65,0

Location spigot

ABS



ABS N / ABS T



ABS / ABS N / ABS T					
size	size	size	Ø d	Ø d1	L
ABS 25	ABS 25 N		25	13	20
ABS 32	ABS 32 N		32	16	23
ABS 40	ABS 40 N		40	20	26
ABS 50	ABS 50 N	ABS 50 T	50	28	31
ABS 63	ABS 63 N	ABS 63 T	63	34	38
ABS 80	ABS 80 N	ABS 80 T	80	46	43
ABS 100	ABS 100 N		100	56	55
ABS 125	ABS 125 N		125	70	70
ABS 160	ABS 160 N		160	90	90

KOMET KomLoc HSK

KomLoc clamping system

Features of the system
- uncomplicated, low cost spindle contour
- small number of extremely sturdy components
- maximum clamping force
- specially suited to high speed machining (HSC)
- internal coolant supply
- practical ejector function

Application area
There are numerous situations which require hollow taper shank tools to be clamped manual. The KOMET HSK clamping device is used universally on transfer lines, machining centres, turning machines, multi-head machines and setting devices.
- direct mounting on multi-spindle boring heads and short boring spindles
- spindle mounting and adaptor flanges
- adaptors as extensions or reducers

Using the KomLoc clamping system
By using a hexagonal key, operating the KomLoc clamping system is quite simple. A low draw-in moment automatically produces an excellent and stable clamping effect. In addition an axial movement or turning of the locking ring prevents dirt and chips from penetrating into the clamping mechanism.

Ability for HSC (High Speed Cutting)
Because of the radially outward effect of the clamping action, the new KomLoc clamping system is almost predestined for use at high clamping speeds. The clamping cartridge is designed to be completely symmetric in rotation.

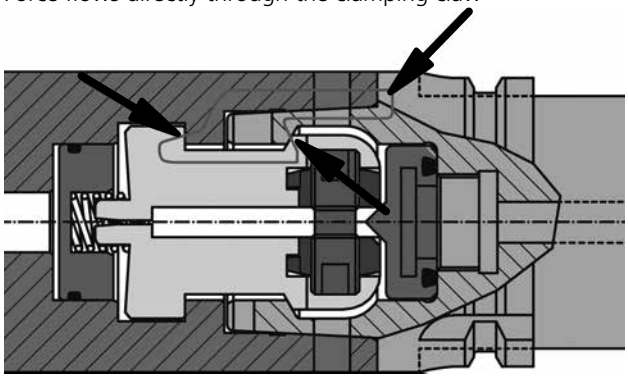
Emulsion (water-miscible cooling lubricant)
Internal coolant supply is introduced by two coolant hoses which form a cage with the ejector and the distributor. This cage is supported on floating bearings and produces a seal for a coolant pressure of p > 2 bar.

Application details
By maintaining the correct draw-in moments and clamping forces the clamping device ensures a excellent transmission of the bending and torsion moments. The direction of these moments is not affected by the position of clamping cartridge.

KomLoc HSK clamping system – System K

Function

Force flows directly through the clamping claw



Clamping mechanism
- The two clamping nuts are moved radially outwards by using a hexagonal key on the threaded spindle.
- The two clamping elements are applied to the clamping shoulder of the hollow taper shank.
- The high axial clamping force produces a positive connection.

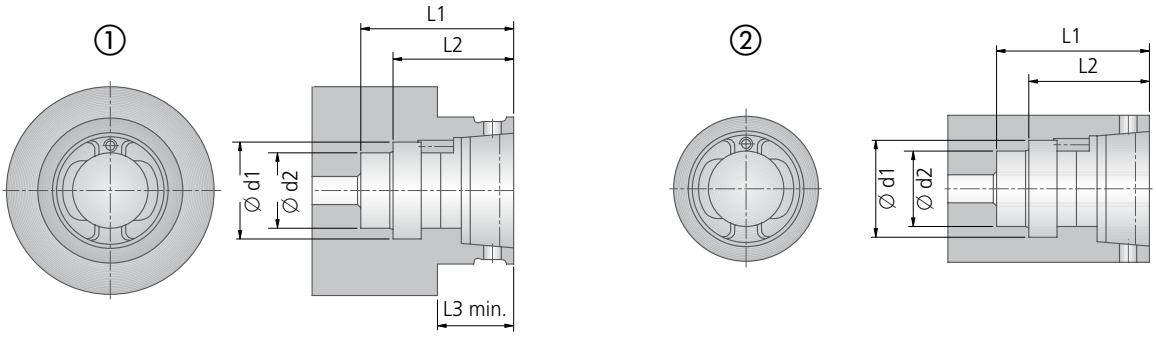
Release mechanism
Clamping is released by moving the two clamping elements inwards back to the block. This activates the ejector which releases the connection.

Clamping force / Rigidity
The high clamping forces (see table) produce excellent bending resistance.
Depending on the operation temperature and the lubrication on the clamping element, clamping forces may vary by ± 15%.

Torque setting (Nm) | Tension force (KN)									
HSK size	WAF for operating					KOMET standard value			
		Nm	KN	Nm	KN	Nm	KN	Nm	KN
25	2	–	–	1	3,5	1,5	5,5	2	7
32	2,5	1,5	6,5	2	8	2,5	9	3,5	11
40	3	4	16	5	18	6	20	8	25
50	4	5	19	7,5	25	10	31	15	41
63	5	10	28	12,5	32	15	40	17,5	51
80	6	15	37	20	45	25	50	30	60
100	8	30	40	50	60	60	70	60	70



Spindle contour



Montage

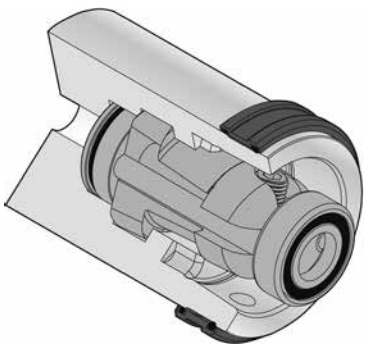
The KomLoc clamping cartridge is extremely easy to fit. Insert the KomLoc cartridge, rotate 90° and secure with threaded pin. This can be effected from any side and requires no alignment.

Note

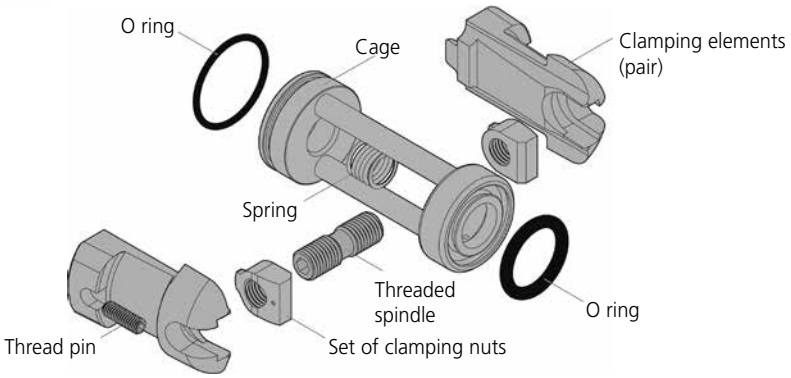
Sealing ring for use on short bore spindles to DIN 69002 in conjunction with centrifuge ring available on request.
Detailed dimensional drawings can be supplied on request (free of charge).

Fitting dimensions					①		②	
HSK size	L1	L2	Ø d1	Ø d2	Sealing ring, shifting Order No.	L3 min.	Sealing ring, turning Order No.	Ball pressure screw Order No.
32	34,3	27,3	21,1	17,0		16	L07 01730	
40	42,4	33,8	26,4	21,0	L07 01440	19	L07 01740	N10 30738
50	53,0	42,2	33,0	26,0	L07 01450	24	L07 01750	N10 30739
63	65,0	52,8	42,5	34,0	L07 01460	29	L07 01761	N10 30740
80	84,8	67,6	52,8	42,0		37	L07 01771	N10 30741
100	106,0	84,4	66,0	52,0	L07 01480	47		N10 30742

Components

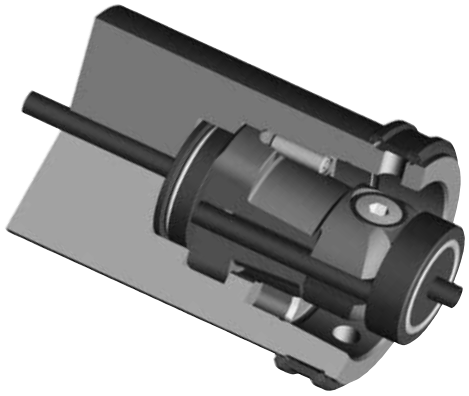


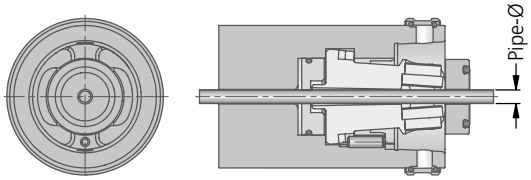
KomLoc Clamping cartridge	
Article	Order No.
System K IKZ-HSK25	L07 01020
System K IKZ-HSK32	L07 01030
System K IKZ-HSK40	L07 01040
System K IKZ-HSK50	L07 01050
System K IKZ-HSK63	L07 01060
System K IKZ-HSK80	L07 01070
System K IKZ-HSK100	L07 01080



KOMET KomLoc HSK

KomLoc HSK clamping system – System K for MQL





Description / features

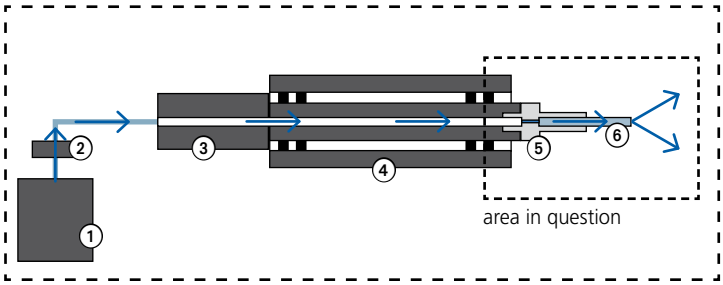
- KomLoc minimal lubrication clamping element with open central area
- through hose for supply of minimal lubrication
- high clamping force similar to KomLoc
- integral ejector
- compatible with existing KomLoc contour
- available in sizes HSK 40, 50, 63, 80 and 100
- operating key can be held on both sides

KomLoc System K			
Article	**Order No.** with ejector	Pipe-Ø	Clamping force in kN
System K MQL-HSK40	**L07 02040**	3,9	20
System K MQL-HSK50	**L07 02050**	4,9	30
System K MQL-HSK63	**L07 02060**	6,9	40
System K MQL-HSK80	**L07 02070**	7,9	50
System K MQL-HSK100	**L07 02080**	9,9	70

Overall system (MLC)

One important aspect for trouble-free functioning of the MLC system is the interplay of the individual elements in the overall minimal lubrication system. It is not generally sufficient for example for the tool just to be suitable for use with minimal lubrication. In fact all the elements need to be appropriately matched with one another.

machine tool

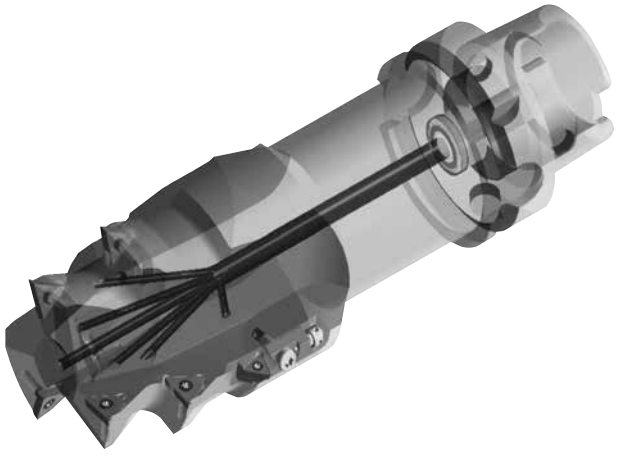


Components for an MLC machine tool

① MLC unit
② stop valve
③ rotating supply
④ operating spindle
⑤ toolholder
⑥ tool

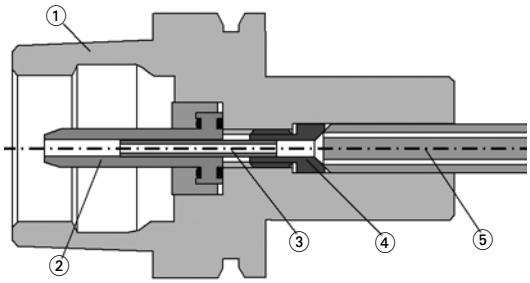
Tool design for minimal lubrication

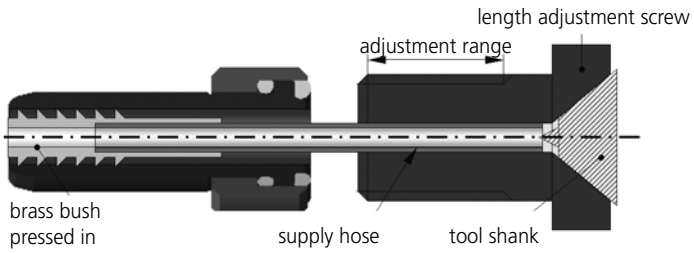
Our external engineers and our project team are at your disposal at any time for queries on concrete projects.



Automatic tool change

View of elements in question using an HSK connection as an example



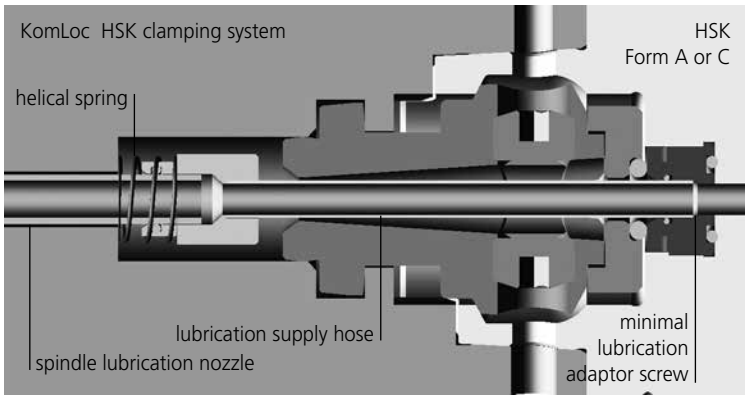


① toolholder
② coolant supply hose
③ minimal lubrication supply hose
④ length adjustment screw
⑤ tool

Accessories such as adjusting screws can be supplied for any chucks and supply hoses.

Manual tool change

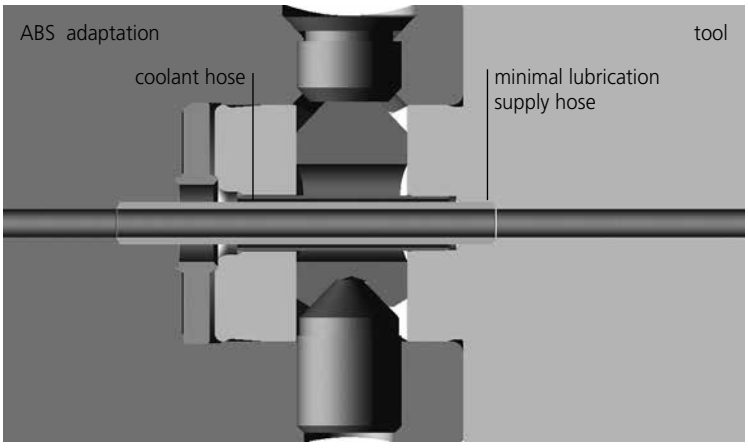
To successfully implement the manual clamping system, a solution for minimal lubrication supply on the machine was found for OEM projects. Here a system was applied which allowed the lubricant to be used in the best possible way. This solution involved connection by means of an HSK Form C adaptor with additional thread (as Form A) for the minimal lubricant adaptor screw to be fitted.



Layout for minimal lubrication with KomLoc HSK clamping system

ABS modular connection

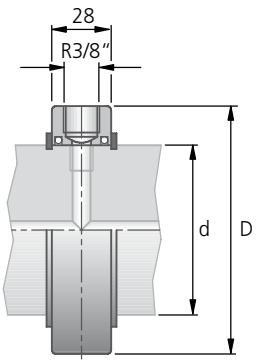
For ABS connections and ABS adaptors there are standard KOMET GROUP solutions. Please ask for information on the relevant projects. ABS connections usually involve connections with a tool or a form of adaptation with which an extension or a reduction is required.



ABS supply solution for minimal lubrication

Coolant supply ring
for rotating adaptor

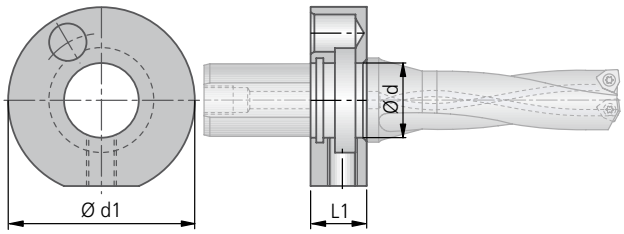
- For machines with manual tool change.
- Peripheral speed: 15 - 20 m/ sec.
- Coolant pressure up to approx.10 bar.



Coolant supply ring KRD					
Order No. Article	d	D	kg	Sealing ring Order No.	Retaining ring DIN 471 Order No. Article
L01 00001 KRD 40	40	81	0,83	L01 00900	55231 04017 40×1,75
L01 00011 KRD 50	50	91	1,08	L01 00910	55231 05020 50×2
L01 00031 KRD 70	70	110	1,33	L01 00930	55231 07025 70×2,5
L01 00041 KRD 80	80	120	1,49	L01 00940	55231 08025 80×2,5
L01 00051 KRD 100	100	140	1,80	L01 00950	55231 10030 100×3

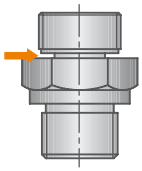
Coolant supply ring
for axial coolant supply

Coolant supply to DIN 69880



Coolant supply ring for NC adaptors				
Order No.	Ø d	Ø d1	L1	kg
L01 01100	30	68	15	0,34
L01 01000	40	83	15	0,46

Coolant connection



Coolant connection	
Article	Order No.
KUB-3/8	L01 00800

NOTE:
For safety reasons, only use a pipe connection with a definite shear point. Switch on coolant supply before starting operation.

We recommend use of KOMET pipe connections to prevent any risk of accident from torn pipes should the coolant ring seize.

A PLUS for our customers and the environment

The company targets

KOMET pursues a consistent policy of investments and achieves long-term and profitable growth via continuous improvement of products and processes as well as via consistent qualification of employees. This increases the value of the company. KOMET consistently increases its innovation quota via research and development, offering the market new products every year. KOMET is a premium quality manufacturer and motivates employee qualification and customers. The training quota of vocational beginners is exemplary for the entire field of business.

The products and services

KOMET products and services offer the customer incomparable added value. KOMET develops, manufactures and sells the comprehensive, modular portfolio on bore machining as full-range suppliers. KOMET offers the innovative technologies, thereby taking the high economic viability, best quality and most attractive designs into account. KOMET sees itself not purely as a tool manufacturer, but rather as suppliers of innovative solutions and ideas for the benefit of the customer.

The customer

KOMET places value on long-term, binding customer relations, seeing itself as a partner of the customer in a balance of benefit supplies and benefit harvests.
KOMET records customers' demands and then produces the most effective ideas and tool solutions for their machining tasks. KOMET offers the customer information and collaboration via their worldwide presence in local Service Centres.

The environment / surroundings

KOMET feels itself obliged to avoid any wastage, and therefore commits itself to responsible usage of raw materials and careful utilisation of remaining materials.
KOMET management is well aware of its responsibilities towards society, and creates the foundations for modern working environments and working conditions. The specifications on ergonomics and work safety are taken into account.

With these claims in mind, KOMET has introduced a modern, integrated management system, known as KMS (KOMET Management System), which is certified in accordance with ISO 9001:2015, ISO 14001:2015.

Certification

https://www.kometgroup.com/meta-navigation/downloads/zertifikate/

International material classification (to VDI 3323 standard)

	Material		DIN	AISI / SAAE	BS EN	AFNOR	SS	UNI	UNE	JIS
P	1.0	1.0038	RSt37-2	A570-36	4360 40C	E24-2NE	1311			
	1.0	1.0116	St37-3	A573-81 65	4360 40B	E24-U	1312			
	1.0	1.0144	St44-3	A573-81	4360 43C	E28-4	1412			
	1.0	1.0201	St36	1006		Fd5	1160			
	1.0	1.0345	H1	A515 65	1 501 161	A37CP	1330			
	2.0	1.0401	C15	1015;1016;1017	080M15	CC12	1350	C15C16	F.111	
	2.0	1.0402	C22	1020;1023	055M15;070M20 ... 2C	AF42C20;XC25;1C22	1450	C20; C21; C25	1C22F.112	S20C; S22C
	2.0	1.0436	Ast45	A662C	1 501 224	A48FP	2103			
	2.0	1.0443	GS-45	A27 65-35	A1	E23-45M				
	2.0	1.0473	19Mn6	A537 1	1 501 224	A52CP	2101			
	2.0	1.0501	C35	1035	060A35	CC35	1550	C35	F.113	
	2.0	1.0503	C45	1043	080M46	AF65C45	1650	C45	F.5110	
	2.0	1.0503	C45	1045	080M46	CC45	1650	C45	F.114	
	2.0	1.0511	C40	1040	080M40	AF60C40		C40	F.114.A	
	2.0	1.0535	C55	1055	070M55		1655	C55	F.115	
	2.0	1.0551	GS-52	A27 70-36	A2	280-480M	1505			
	2.0	1.0553	GS-60	A148 80-40	A3	320-560M	1606			
	2.0	1.0577	Ast 52	A738	1 501 224	A52FP	2107			
	2.0	1.0601	C60	1060	080A62 ... 43D	CC55		C60		
	2.0	1.0841	St52-3	5120	150M19	20MC5	2172	Fe52	F.431	
	2.0	1.1121	Ck10	1010	045M10	XC10	1265	C10	F.1510-C10K	
	2.0	1.1133	20Mn5	1022;1518	120M19	20M5	1132	G22Mn3;20Mn7	F.1515-20Mn6	SMnC420
	2.0	1.1141	CK 15	1015, 1017	080M15	XC18	1370		F.1511	
	2.0	1.1158	C25E;Ck25	1025	070M26	2C25;XC25	1450	C25	F.1120-C25k	S25C; S28C
	2.0	1.1183	Cf35	1035	060A35	XC38TS	1572	C36		S35C
	2.0	1.1191	Ck45	1042	080A47	XC45	1660	C45	F.1140	
	2.0	1.1545	C105W1	W110	BW1A	Y105	1880	C36KU	F.5118	SK3
	2.0	1.5415	15Mo3	ASTM A204Gr.A	1501-240	15D3	2912	16Mo3KW	16Mo3	STBA 12
	2.0	1.5423	16Mo5	4520	1503-245-420			16Mo5	16Mo5	
	2.0	1.5622	14Ni6	ASTM A350LF5		16N6		14Ni6	15Ni6	
	2.1	1.0715	9 SMn28	1213	230M07	S250	1912	CF9SMn28	11SMn28	SUM22
	2.1	1.0718	9 SMnPb28	12 L 13		S250Pb	1914	CF9SMnPb28	11SMnPb28	SUM22,3,4L
	2.1	1.0722	10 SPb20	11 L 08		10PbF2		CF10 SPb20	10SPb20	
	2.1	1.0726	35S20	1140	212M36 ... 8M	35M F6	1957		F.210.G	
	2.1	1.0727	45S20	1146		45M F4	1973			
	2.1	1.0736	9SMn36	1215	240M07 ... 1b	S300		CF9SMn36	12SMn35	SUM25
	2.1	1.0737	9SMnPb36	12 L 14		S300Pb	1926	CF9SMnPb36	12SMnP35	
	3.0	1.0904	55Si7	9255	250A53 ... 45	55S7	2085	55Si8	56Si7	
	3.0	1.0961	60SiCr8	9262		60SC6		60SiCr8	60SiCr8	
	3.0	1.1157	40Mn4	1039	150M36 ... 15	35M5				
	3.0	1.1167	36Mn5	1335	150M36	40M5	2120		36Mn5	SMn438(H)
	3.0	1.1170	28Mn6	1330	150M28 ... 14A	20M5		C28Mn		SCMn1
	3.0	1.1203	Ck55	1055	070M55	XC55		C50	F.1203-36MnG	S55C
	3.0	1.1213	Cf53	1050	060A52	XC48TS	1674	C53		S50C
	3.0	1.1221	Ck60	1064	060A62	XC65	1678	C60	F.1150	
	3.0	1.1231	Ck67	1070	070A72	XC68	1770	C70	F.141	
	3.0	1.1248	Ck75	1080	060A78	XC75	1774		F.5107	
	3.0	1.1274	Ck101	1095	060A96	XC100	1870		F.5117	
	3.0	1.2713	55NiCrMoV6	L6		55NCDV7			F.520.S	SKT4
	3.0	1.2721	50NiCr13	L6		55NCV6	2550		F.528.S	
	3.0	1.3401	G-X120Mn12	ASTM A128 75	BW10	Z120M12	2183	GX120Mn12	AM-X120Mn12	SCMnH/1
	3.0	1.3505	100Cr6	52100	534A99 ... 31	100C6	2258	100Cr6	F.131	SUJ2
	3.0	1.5662	X8Ni9	ASM A353	502-650	9 Ni		X10Ni9	F.2645	SL9N60(53)
	3.0	1.5680	12Ni19	2515 (2517)	12Ni19	Z18N5		12Ni19	12Ni19	SL5N60
	3.0	1.5710	36NiCr6	3135	640A35 ... 111A	35NC6				SNC236
	3.0	1.5732	14NilCr10	3415		14NC11		16NiCr11	15NiCr11	SNC415(H)
	3.0	1.5752	14NilCr14	3310	655M13 ... 36A	12NC15				SNC815(H)
	3.0	1.6511	36CrNiMo4	9840	816M40 ... 110	40NCD3		36NiCrMo4(KB)	F.128	
	3.0	1.6523	21NiCrMo2	8620, 8617	805M20 ... 362	20NCD2	2506	20NiCrMo2	20NiCrMo2	SNCM220(H)
	3.0	1.6546	40NiCrMo22	8740, 8640, 8742	311-Type 7	40NCD2		40NiCrMo2(KB)	F.129	SNCM240
	3.0	1.6582	35CrNiMo6	4340	817M40 ... 24	35NCD6	2541	35NiCrMo6(KB)	F.127	
	3.0	1.6587	17CrNiMo6	4317	820A16	18NCD6			14NiCrMo13	
	3.0	1.6657	14NiCrMo13-4	9310	832M13 ... 36C			15NiCrMo13	14NiCrMo131	
	3.0	1.7015	15Cr3	5015	523M15	12C3				SCr415(H)
	3.0	1.7033	34Cr4	5132	530A32 ... 18B	32C4		34Cr4(KB)	35Cr4	SCr430(H)
	3.0	1.7035	41Cr4	5140	530M40 ... 18	42C4		41Cr4	42Cr4	SCr440(H)
	3.0	1.7039	34MoCrS4 G	L1	524A14		2092	105WCR 5		
	3.0	1.7045	42Cr4	5140			2245		42Cr4	SCr440
	3.0	1.7131	16MnCr5	5115	(527M20)	16MC5	2511	16MnCr5	16MnCr5	
	3.0	1.7139	16MnCr5				2127			
	3.0	1.7176	55Cr3	5155	527A60 ... 48	55C3				SUP9(A)
	3.0	1.7218	25CrMo4	4130	1717CDS110	25CD4	2225	25CrMo4(KB)	55Cr3	SCM420/430
	3.0	1.7220	34CrMo4	4135, 4137	34CrMo4	34CD4	2234	35CrMo4	34CrMo4	SCM435TK
	3.0	1.7223	41CrMo4	4142				41CrMo4	42CrMo4	SNB 22-1
	3.0	1.7225	42CrMo4	4140	708M40 ... 19A	42CD4	2244	42CrMo4	42CrMo4	SCM440(H)
	3.0	1.7262	15CrMo5			12CD4	2216		12CrMo4	SCM415(H)
	3.0	1.7335	13CrMo4 4	ASTM A182 F-12				14CrMo4 5	14CrMo45	
	3.0	1.7337	16CrMo44	ASTM A387 12-2	1501 620	15CD 4.5	2216	12CrMo910		
	3.0	1.7361	32CrMo12		722M24 ... 40B	30CD12	2240	32CrMo12	F.124.A	
	3.0	1.7715	14MoV6 3		1503-660-440				13MoCrV6	
	3.0	1.8159	50CrV4	6150				50CrV4	F.143	
	3.0	1.8509	41CrAlMo7	ASTM A290	905M39 ... 41B	40CAD6, 12	2940	41CrAlMo7	41CrAlMo7	
	3.0	1.8515	31 CeMo 12		722M24	30 CD 12	2240	30CrMo12	F.01712	
	3.0	1.8523	39CrMoV13 9		897M39 ... 40C			36CrMoV12		
	4.0	1.2067	100Cr6	L3	BL3	Y100C6			100Cr6	
	4.0	1.2080	X210Cr12	D3	BD3	Z200C12		X210Cr13KU	X210Cr12	SKD1
	4.0	1.2083	X42Cr13			X40Cr14	2314		F.5263	
	4.0	1.2344	X40CrMoV5 1	H13	BH13	Z40CDV5	2242	X40CrMoV511KU	F.5318	SKD61

International material classification (to VDI 3323 standard)

	Material		DIN	AISI / SAAE	BS EN	AFNOR	SS	UNI	UNE	JIS
P	4.0	1.2363	X100CrMoV5 1	A2	BA2	Z100CDV5	2260	X100CrMoV51KU	F.5227	SKD12
	4.0	1.2379	X155CrVMo121	D2	BD2	Z160CDV12	2310	X155CrVMo12 1KU	F.520.A	SKD11
	4.0	1.2419	105WCr6			105WC13	2140	107WCr5	105WCr5	SKS31
	4.0	1.2436	X210 CrW 12	D4 (D6)	BD6	Z200CD12-01	2312	X215CrW12 1KU	F.5213	
	4.0	1.2542	45WCrV7	S1	BS1	45WCrV8	2710	45WCrV8KU	F.524	
	4.0	1.2581	X30WCrV9 3	H21	BH21	Z30WCV9		X30WCrV9 3KU	F.526	SKD5
	4.0	1.2601	X165CrMoV12				2310	X165CrMoW12KU	F.5211	
	4.1	1.3243	S6/5/2/5	M35	BM35	6-5-2-5	2723	HS6 5 2 5	F.5613	SKH55
	4.1	1.3343	S6/5/2	M2	BM2	Z85WDCV	2722	HS6 5 2	F.5604	SKH51
	4.1	1.3348	S2/9/2	M7		2 9 2	2782	HS2 9 2		
S	5.0	–	CoCr22W14	AMS 5772		KC22				
	5.0	1.4362	X2CrNiN23 4	S32304		Z2CN23-04AZ	2327			
	5.0	1.4460	X8CrNiMo27-5	S32900			2324			
	5.0	1.4462	X2CrNiMoN2253	S31803		Z2CND22-05-03	2377			
	5.0	2.4375	NiCu30Al	4676	3072-76					
	5.0	2.4603	NiCr 30 FeMo	5390A		NC22FeD				
	5.0	2.4630	NiCr20Ti		HR5,203-4	NC20T				
	5.0	2.4631	NiCr20TiAk		Hr40,601	NC20TA				
	5.0	2.4856	NiCr22Mo9N	5666		NC22FeDNB				
	5.0	2.4973	NiCr19Co11	AMS 5399		NC19KDT				
	5.0	LW2.467	S-NiCr13A16	5391	3146-3	NC12AD				
	5.0	LW2.466	NiFe35Cr14	5660		ZSNCDT42				
	5.0	LW2.466	NiCr19Fe19	5383	HR8	NC19FeNb				
	5.0	LW2.466	NiCr19Fe19	AMS 5544		NC20K14				
	5.0	LW2.467	NiCo15Cr10	AMS 5397						
	5.0	LW2.496	CoCr20W15	5537C		KC20WN				
	5.1	–	TiAl4Mo4Sn4Si0.5							
	5.1	–	TiAl6V4ELI	AMS R56401	TA11					
	5.1	3.7114	TiAl5Sn2.5	AMS R54520	TA14/17	T-A5E				
	5.1	3.7164	TiAl6V4	AMS R56400	TA10-13/TA2	T-A6V				
M	6.0	1.4000	X7Cr13	403	403S17	Z6C13	2301	X6Cr13	F.3110	SUS403
	6.0	1.4006	X10Cr13	410	410S21 ... 56A	Z10C14	2302	X12Cr13	F.3401	SUS410
	6.0	1.4021	X20Cr13	420	420S37	Z20C13	2303	X20Cr13		
	6.0	1.4034	X46Cr13		420S45 ... 56D	Z40CM	2304	X40Cr14	F.3405	SUS420J2
	6.0	1.4057	X22CrNi17	431	431S29 ... 57	Z15CNi6.02	2321	X16CrNi16	F.3427	SUS431
	6.0	1.4104	X12CrMoS17	430F		Z10CF17	2383	X10CrS17	F.3117	SUS430F
	6.0	1.4112	X90 CrMoV 18	440B						
	6.0	1.4113	X6CrMo17	434	434S17	Z8CD17.01	2325	X8CrMo17		SUS434
	6.0	1.4305	X12CrNiS18 8	303	303S21 ... 58M	Z10CNF18.09	2346	X10CrNiS18.09	F.3508	SUS303
	6.0	1.4306	X2CrNiN18 9	304L	304S12	Z2CrNi18 10	2352	X2CrNi18 11	F.3503	SCS19
	6.0	1.4310	X12CrNi17 7	301		Z12CN17.07	2331	X12CrNi17 07	F.3517	SUS301
	6.0	1.4311	X4CrNiN18 10	304LN	304S62	Z2CN18.10	2371			SUS304LN
	6.0	1.4313	X5CrNi13 4		425C11	Z4CND13.4M				SCS5
	6.0	1.4350	X5CrNi189	304	304S31 ... 58E	Z6CN18.09	2332/2333	X5CrNi18 10	F.3551	SUS304
	6.0	1.4401	X5CrNiMo18 10	316	316S16 ... 58J	Z2CND17.11	2347	X5CrNiMo17 12	F.3543	SUS316
	6.1	1.4429	X2CrNiMoN1813	316LN		Z2CND17.13	2375			SUS316LN
	6.1	1.4435	X2CrNiMo18 12	316L	316S13	Z2CND17.12	2353			X2CrNiMo17 12
	6.1	1.4438	X2CrNiMo18 16	317L	317S12	Z2CND19.15	2367			X2CrNiMo18 16
	6.1	1.4541	X10CrNiTi18 9	321	321S12 ... 58B	Z6CNT18.10	2337	X6CrNiTi18 11	F.3553	SUS321
	6.1	1.4542/1.4548	X5CrNiCuNb17-4-4	630		Z7CNU17-04				
	6.1	1.4550	X10CrNiNb	347	347S17 ... 58F	Z6CNNb18.10	2338	X6CrNiNb18 11	F.3552	SUS347
	6.1	1.4568/1.4504	X12CrNiAl177	17-7PH	316S111			Z8CNA17-07	X2CrNiMo1712	
	6.1	1.4571	X10CrNiMoTi18	316Ti	320S17 ... 58J	Z6NDT17.12	2350	X6CrNiMoTi17 12	F.3535	
	6.1	1.4583	X10CrNiMoNb18	318		Z6CNDNb17 13B		X6CrNiMoNb	17 13	
	7.0	1.4718	X45CrSi9 3	HW 3	401S45 ... 52	Z45CS9		X45CrSi8	F.3220	SUH1
	7.0	1.4724	X10CrA113	405	403S17	Z10C13		X10CrA112	F.311	SUS405
	7.0	1.4742	X10CrA118	430	439S15 ... 60	Z10CAS18		X8Cr17	F.3113	SUS430
	7.0	1.4747	X80CrNiSi20	HNV6	443S65 ... 59	Z80CSN20.02		X80CrSiNi20	F.320B	SUH4
	7.0	1.4762	X10CrA124	446		Z10CAS24	2322	X16Cr26		SUH446
	7.0	1.4828	X15CrNiSi20 12	309	309S24	Z15CNS20.12				SUH309
	7.0	1.4845	X12CrNi25 21	310S	310S24	Z12CN25 20	2361	X6CrNi25 20	F.331	SUH310
	7.0	1.4864	X12NiCrSi	330		Z12NCS35.16				SUH330
	7.0	1.4865	G-X40NiCrSi		330C11			XG50NiCr		SCH15
	7.0	1.4871	X53CrMnNiN219	EV8	349S54	Z52CMN21.09		X53CrMnNiN		SUH35,SUH36
K	8.0	0.6010	GG10	A48 20 B		Ft10D	01 10-00	G10	FG10	
	8.0	0.6015	GG15	A48 25 B	Grade 150	Ft15D	01 15-00	G14	FG15	
	8.0	0.6020	GG20	A48 30 B	Grade 220	Ft20D	01 20-00	G20	FG20	
	8.0	0.6025	GG25	A48 35 B	Grade 260	Ft25D	01 25-00	G25	FG25	
	8.0	0.6030	GG30	A48 45 B	Grade 300	Ft30D	01 30-00	G30	FG30	
	8.0	0.6035	GG35	A48 50 B	Grade 350	Ft35D	01 35-00	G35	FG35	
	8.0	0.6040	GG40	A48 60 B	Grade 400	Ft40D	01 40-00			
	9.0	0.7033	GGG35.3				07 17-1			
	9.0	0.7040	GGG40	60-40-18	SNG420/12	FGS400-12	07 17-0 2	GS400-12		FCD40
	9.0	0.7043	GGG40.3	0.7043	SNG370/17	FGS370-17	07 17-1 5	GSO42/15		
	9.0	0.7050	GGG50	80-55-06	SNG500/7	FGS500-7	07 27-0 2	GS500/7		FCD50
	9.0	0.7060	GGG60		SNG600/3	FGS600-3	07 32-0 3	GS600/3		FCD60
	9.0	0.7070	GGG70	100-70-03	SNG700/2	FGS700-2	07 37-0 1	GS700/2		FCD70
	9.0	0.8135	GTS-35	32510	B340/12	MN35-10	08 15			
	9.0	0.8145	GTS-45	400 10	P440/7		08 52			
	9.0	0.8155	GTS-55	50005	P510/4	MP50-5	08 54			
	9.0	0.8165	GTS-65	70003	P570/3	MP60-3	08 58			
N	14.0	3.2162	GD-AlSi8Cu3	A380.1	LM24		4250			
	14.0	3.2381	G-AlSi10Mg	A360.2	LM9		4253			
	14.0	3.2581	G-AlSi12	A413.2	LM6		4261			
	14.0	3.2583	G-AlSi12(Cu)	A413.1	LM20		4260			
	14.0	3.2982	GD-AlSi12	A413.0			4247			

Numerical index

Order No.	Page
099.00.090	490
099.00.090	492
099.00.090	494
099.00.092	490
099.00.092	492
099.00.092	494
099.00.095	492
099.00.095	494
099.03.002	418
15E.30.10010	475
15E.30.10020	475
15E.30.10030	475
15E.30.10040	475
15E.30.10050	475
15E.30.10070	475
15F.00.30001	522
18050 10030	219
18050 10040	218
18050 35050	183
18589 00012	377
18589 00017	377
18589 10010	376
18589 10010	377
18589 10010	394
18589 10010	395
18589 10014	376
18589 10014	394
18589 10017	395
300.05	485
300.07	485
300.08	485
300.17	485
300.25	485
300.45	485
300.65	485
300.30.007	490
300.30.007	492
300.30.007	494
300.30.008	490
300.30.008	492
300.30.008	494
301.80.006	490
301.80.006	492
301.80.006	494
301.80.007	490
301.80.007	492
301.80.007	494
306.20.001	492
306.20.001	494
30802005001150	626
30802007001150	626
30970001000020	578
30970001000022	578
30970001000024	578
30970002000094	579
30970002000113	579
33G.17	479
33G.21	479
33G.37	479
33G.65	479
33G.67	479
33G.71	479
33G.85	479
33G.93	479
340.20	427
340.21	427
340.37	427
340.38	427
340.62	427
340.65	427
340.66	427
340.67	427
340.70	427
340.71	427
340.92	427
340.93	427
350.23.002	491
350.23.002	493
350.23.002	495
350.23.003	491
350.23.003	493
350.23.003	495

Order No.	Page
37140026004000	697
37140026005000	697
37140026006300	697
37140026010000	697
37140026012500	697
37140026016000	697
37150026004000	697
37150026005000	697
37150026006300	697
37150026008000	697
37150026010000	697
37150026012500	697
37150026016000	697
37155099004000	697
37155099005000	697
37155099006300	697
37155099008000	697
37155099010000	697
37155099012500	697
37170026003200	699
37170026004000	699
37170026005000	699
37170026006300	699
37310001001000	701
37310001001200	701
37310001001600	701
37310001002000	701
37310001002500	701
37310001003200	701
37340098001000	695
37340098001200	695
37340098001600	695
37340099001000	695
37340099001200	695
37340099001600	695
37340099002000	695
37340099002500	695
37341099001000	697
37341099001200	697
37341099001600	697
37341099002000	697
37341099002500	697
37341099003200	697
38170099001600	699
38170099002000	699
38170099002500	699
38300057000600	705
38300072001000	705
38300090001600	705
38304057000600	704
38304063000800	704
38304072001000	704
38320001001000	701
38320001001200	701
38320001001600	701
38320001002000	701
38320001002500	701
38320001003200	701
38321001001000	701
38321001001200	701
38321001001600	701
38321001002000	701
38321001002500	701
38321001003200	701
38390000000600	695
38390000000800	695
38390000001000	695
38390000001200	695
38391000001600	695
38391000002000	695
38392057000600	695
38392063000800	695
38392072001000	695
38392083001200	695
38393004002000	695
38393090001600	695
38802005001150	626
38802007001150	626
38896003001100	627
38896003001150	627
38896005001100	627
38896005001150	627
38896007001100	627
38896007001150	627

Order No.	Page
38970001000020	578
38970001000022	578
38970001000024	578
38970002000094	579
38970002000113	579
50111002000111	613
50111002000112	613
50111002000113	613
50111025000002	613
50115002000111	613
50115002000112	613
50115002000113	613
50161002000111	613
50161002000113	613
50161002000115	613
50161010000017	613
50161025000003	613
50165002000111	613
50165002000113	613
50165002000115	613
50221002000111	613
50221002000113	613
50221002000115	613
50221025000004	613
50225002000111	613
50225002000113	613
50225002000115	613
50225002000117	613
50225010000021	613
50225025000004	613
50271002000113	613
50271002000115	613
50271025000004	613
50275002000113	613
50275002000115	613
50275010000021	613
50275025000004	613
50310016001050	611
50310016001080	611
50310020002060	611
50310020002096	611
50310025004136	611
50341001001020	610
50341001001525	610
50341001251100	610
50341001251400	610
50341002001020	610
50341002003040	610
50341004005060	610
50391045011600	610
50391045022000	610
50391045043400	610
504.76.009	490
504.76.010	490
504.76.011	490
504.76.012	490
507150..	672
507160..	672
507350..	672
507360..	672
507.02.008	492
507.02.009	492
507.02.010	492
507.02.011	492
507.02.012	492
507.02.043	492
507.02.044	492
50775026000600	673
50775026000800	673
50775026001000	673
50775026001200	673
50775026001400	673
50775026001600	673
50776026000600	673
50776026000800	673
50776026001000	673
50776026001200	673
50776026001400	673
50776026001600	673
50795131002000	668
50795135002000	668
50795135003200	668
508.53.009	494

Order No.	Page
508.53.010	494
508.53.011	494
508.53.020	494
508.53.021	494
508.53.022	494
510.15.008	491
510.15.008	493
510.15.008	495
510.15.009	491
510.15.009	493
510.15.009	495
510.15.010	491
510.15.010	493
510.15.010	495
510.15.011	491
510.15.011	493
510.15.011	495
510.45.007	491
510.45.007	493
510.45.007	495
510.45.008	491
510.45.008	493
510.45.008	495
510.55.007	491
510.55.007	493
510.55.007	495
510.55.008	491
510.55.008	493
510.55.008	495
51050 06010	808
51050 06010	809
51050 06010	810
51050 08010	808
51050 08010	809
51050 08010	810
51050 10012	808
51050 10012	809
51050 10012	810
51050 12016	808
51050 12016	809
51050 12016	810
51050 14016	809
51050 14016	810
51050 16016	809
51050 16016	810
51050 16016	811
51050 18220	809
51050 18220	810
51050 18220	811
51050 20220	809
51050 20220	810
51050 20220	811
51200 00316	815
51200 00320	815
51200 00325	815
51200 00332	815
51200 00340	815
51200 00416	815
51200 00420	815
51200 00425	815
51200 00432	815
51200 00440	815
513.76.008	491
513.76.009	491
513.76.010	491
513.76.011	491
513.81.008	491
513.81.009	491
513.81.010	491
513.81.011	491
51305 04020	820
51305 06025	820
51305 07025	820
51305 08028	820
51305 10032	820
51391 20001	669
51391 20002	669
51391 20004	669
51391 20005	669
51391 20006	669
51391 20007	669
51391 20008	669
51391 20009	669
51391 20010	669

Order No.	Page
51391 20011	669
51391 20012	669
51391 20013	669
51391 20014	669
51391 20015	669
51391 20016	669
51391 30001	669
51391 30002	669
51391 30004	669
51391 30005	669
51391 30006	669
51391 30007	669
51391 30008	669
51391 30009	669
51391 30010	669
51391 30011	669
51391 30012	669
51391 30013	669
51391 30014	669
51391 30015	669
51391 30016	669
514.76.008	491
514.76.009	491
514.76.010	491
514.76.011	491
514.81.008	491
514.81.009	491
514.81.010	491
514.81.011	491
517.76.008	493
517.76.009	493
517.76.010	493
517.76.011	493
517.81.008	493
517.81.009	493
517.81.010	493
517.81.011	493
518.78.009	495
518.78.010	495
518.78.011	495
518.78.013	495
518.78.014	495
518.82.009	495
518.82.010	495
518.82.011	495
518.82.013	495
518.82.014	495
52805 20045	669
52805 20060	669
52805 20070	669
52805 20080	669
52805 20090	669
52805 20100	669
52805 20110	669
52805 32060	669
52805 32070	669
52805 32080	669
52805 32090	669
52805 32100	669
52805 32110	669
52805 32120	669
52805 32140	669
52805 32160	669
52806 20045	669
52806 20060	669
52806 20070	669
52806 20080	669
52806 20090	669
52806 20100	669
52806 20110	669
52806 32060	669
52806 32070	669
52806 32080	669
52806 32090	669
52806 32100	669
52806 32110	669
52806 32120	669
52806 32140	669
52806 32160	669
52807 01016	815
52807 01020	815
52807 01025	815
52807 01032	815
52807 01040	815

Order No.	Page
52807 03016	815
52807 03020	815
52807 03025	815
52807 03032	815
52807 03040	815
52G.55	403
52H.55	403
52J.65	403
52K.65	403
52M.57	403
52M.57.0397	406
52M.57.0398	406
52M.57.0399	406
52M.57.0400	406
52M.57.0401	406
52M.57.0402	406
52M.57.0403	406
52M.57.0497	406
52M.57.0498	406
52M.57.0499	406
52M.57.04H7	404
52M.57.0500	406
52M.57.0501	406
52M.57.0502	406
52M.57.0503	406
52M.57.0597	406
52M.57.0598	406
52M.57.0599	406
52M.57.05H7	404
52M.57.0600	406
52M.57.0601	406
52M.57.0602	406
52M.57.0603	406
52M.57.0697	406
52M.57.0698	406
52M.57.0699	406
52M.57.06H7	404
52M.57.0700	406
52M.57.0701	406
52M.57.0702	406
52M.57.0703	406
52M.57.0797	406
52M.57.0798	406
52M.57.0799	406
52M.57.07H7	404
52M.57.0800	406
52M.57.0801	406
52M.57.0802	406
52M.57.0803	406
52M.57.0897	407
52M.57.0898	407
52M.57.0899	407
52M.57.08H7	404
52M.57.0900	407
52M.57.0901	407
52M.57.0902	407
52M.57.0903	407
52M.57.0997	407
52M.57.0998	407
52M.57.0999	407
52M.57.09H7	404
52M.57.1000	407
52M.57.1001	407
52M.57.1002	407
52M.57.1003	407
52M.57.1097	407
52M.57.1098	407
52M.57.1099	407
52M.57.10H7	404
52M.57.1100	407
52M.57.1101	407
52M.57.1102	407
52M.57.1103	407
52M.57.1197	407
52M.57.1198	407
52M.57.1199	407
52M.57.11H7	404
52M.57.1200	407
52M.57.1201	407
52M.57.1202	407
52M.57.1203	407
52M.57.12H7	404
52M.57.1597	407
52M.57.1598	407
52M.57.1599	407
52M.57.1600	407
52M.57.1601	407
52M.57.1602	407
52M.57.1603	407
52M.57.16H7	404
52N.17	403
52N.17.04H7	405
52N.17.05H7	405
52N.17.06H7	405
52N.17.07H7	405
52N.17.08H7	405
52N.17.09H7	405
52N.17.10H7	405
52N.17.11H7	405
52N.17.12H7	405
52N.17.16H7	405
52P.57	403
52P.57.0397	406
52P.57.0398	406
52P.57.0399	406
52P.57.0400	406
52P.57.0401	406
52P.57.0402	406
52P.57.0403	406
52P.57.0497	406
52P.57.0498	406
52P.57.0499	406
52P.57.04H7	404
52P.57.0500	406
52P.57.0501	406
52P.57.0502	406
52P.57.0503	406
52P.57.0597	406
52P.57.0598	406
52P.57.0599	406
52P.57.05H7	404
52P.57.0600	406
52P.57.0601	406
52P.57.0602	406
52P.57.0603	406
52P.57.0697	406
52P.57.0698	406
52P.57.0699	406
52P.57.06H7	404
52P.57.0700	406
52P.57.0701	406
52P.57.0702	406
52P.57.0703	406
52P.57.0797	406
52P.57.0798	406
52P.57.0799	406
52P.57.07H7	404
52P.57.0800	406
52P.57.0801	406
52P.57.0802	406
52P.57.0803	406
52P.57.0897	407
52P.57.0898	407
52P.57.0899	407
52P.57.08H7	404
52P.57.0900	407
52P.57.0901	407
52P.57.0902	407
52P.57.0903	407
52P.57.0997	407
52P.57.0998	407
52P.57.0999	407
52P.57.09H7	404
52P.57.1000	407
52P.57.1001	407
52P.57.1002	407
52P.57.1003	407
52P.57.1097	407
52P.57.1098	407
52P.57.1099	407
52P.57.10H7	404
52P.57.1100	407
52P.57.1101	407
52P.57.1102	407
52P.57.1103	407
52P.57.1197	407
52P.57.1198	407
52P.57.1199	407
52Q.17	403
52Q.17.04H7	405
52Q.17.05H7	405
52Q.17.06H7	405
52Q.17.07H7	405
52Q.17.08H7	405
52Q.17.09H7	405
52Q.17.10H7	405
52Q.17.11H7	405
52Q.17.12H7	405
52Q.17.16H7	405
540.36.000	428
540.36.001	428
540.36.002	428
540.36.003	428
540.36.004	428
540.36.005	428
540.36.006	428
540.36.007	428
540.66.000	428
540.66.001	428
540.66.002	428
540.66.003	428
540.66.004	428
540.66.005	428
540.66.006	428
540.66.007	428
545.00.001	506
545.00.002	506
545.00.003	506
545.07.002	506
545.07.003	506
545.07.004	506
545.07.005	506
545.07.006	506
545.07.009	506
545.07.010	506
545.07.011	506
545.10.001	507
545.10.003	507
545.10.004	507
545.10.011	507
545.25.001	509
545.25.002	509
545.25.010	509
545.27.001	509
545.27.002	509
545.40.001	510
545.40.002	510
545.40.003	510
545.40.004	510
545.40.006	510
545.40.007	510
545.62.004	510
545.62.014	510
545.62.015	510
545.62.016	510
545.62.017	510
545.62.018	510
545.77.001	507
545.77.003	507
545.77.004	507
545.77.011	507
54B.10.00030	513
54B.10.00040	513
54B.90.00030	513
54B.91.00030	513
55011 03010	819
55011 03016	178
55011 04020	178
55011 04020	196
55011 05012	153
55011 05012	158
55011 05012	159
55011 05012	178
55011 05016	178
55011 05016	218
55011 05016	219
55011 05016	221
55011 05016	222
55011 05016	223
55011 05016	225
55011 05016	227
55011 05020	778
55011 05025	178
55011 05025	196
55011 05030	232
55011 06016	819
55011 06025	196
55011 06030	178
55011 08030	196
55011 08030	509
55011 08035	178
55011 08045	178
55011 10035	196
55011 12025	819
55011 12040	819
55011 12045	196
55011 16050	819
55011 16055	196
55012 04006	352
55012 04006	354
55012 04006	355
55012 04008	166
55012 04010	166
55012 06012	166
55021 03008	320
55021 03008	321
55021 03008	322
55021 03008	324
55021 03008	325
55021 03008	326
55021 03008	327
55021 03008	329
55021 03008	330
55021 03008	331
55021 03008	337
55021 03008	338
55021 03008	339
55021 03008	340
55021 03008	341
55021 03008	388
55021 03008	389
55021 03008	394
55021 03008	395
55021 04010	376
55021 04010	377
55021 05012	376
55021 05012	377
55021 05012	394
55021 05012	395
55023 00206	320
55023 00206	321
55023 00206	322
55023 00206	323
55023 00206	324
55023 00206	325
55023 00206	326
55023 00206	327
55023 00206	328
55023 00206	329
55023 00206	330
55023 00206	331
55023 00206	332
55023 00206	333
55023 00206	334
55023 00206	335
55023 00206	336
55023 00206	337
55023 00206	338
55023 00206	339
55023 00206	340
55023 00206	341
55023 00206	388
55023 00206	389
55023 00206	390
55024 06012	706
55051 02005	347
55051 02505	178
55051 03006	102
55051 03006	347
55051 03008	166
55051 03010	196
55051 04008	153
55051 04008	166
55051 04008	178
55051 04008	258
55051 04010	102
55051 04010	148
55051 04010	153
55051 04010	178
55051 04010	196
55051 04012	102
55051 04016	196
55051 04504	254
55051 04504	256
55051 05005	246
55051 05008	150
55051 05010	150
55051 05016	158
55051 05020	183
55051 05025	196
55051 06006	250
55051 06008	152
55051 06008	158
55051 06008	246
55051 06008	256
55051 06012	178
55051 06020	158
55051 06020	178
55051 08006	509
55051 08008	218
55051 08008	233
55051 08008	250
55051 08008	509
55051 08010	152
55051 08010	233
55051 08010	246
55051 08010	250
55051 08020	178
55051 08025	152
55051 08035	196
55051 08050	196
55051 08120	218
55051 08120	219
55051 10012	246
55051 10080	196
55051 12012	250
55051 12016	246
55051 16016	250
55051 20020	246
55051 20020	250
55051 20025	246
55051 20030	250
55052 06008	509
55052 06010	509
55052 12016	158
55052 12020	158
55053 06012	829
55053 08020	829
55053 10020	829
55053 12025	829
55053 16030	829
55054 02504	388
55054 02504	389
55054 03004	333
55054 03005	321
55054 03005	331
55054 03005	332
55054 03005	333
55054 03005	334
55054 03005	335
55054 03005	336
55054 03005	337
55054 03005	338
55054 03005	339
55054 03005	340
55054 03005	341

Numerical index

Order No.	Page
55054 03006	388
55054 03006	389
55054 04008	320
55054 04008	321
55054 04008	322
55054 04008	323
55054 04008	324
55054 04008	325
55054 04008	326
55054 04008	327
55054 04008	328
55054 04008	329
55054 04008	331
55054 04008	336
55054 04008	337
55054 04008	338
55054 04008	339
55054 04008	341
55054 04008	342
55054 04008	388
55054 04008	389
55054 04008	390
55054 05012	320
55054 05012	321
55054 05012	322
55054 05012	324
55054 05012	325
55054 05012	326
55054 05012	327
55054 05012	329
55054 05012	330
55054 05012	331
55054 05012	337
55054 05012	338
55054 05012	339
55054 05012	340
55054 05012	341
55054 05012	388
55054 05012	389
55054 05014	321
55054 05014	331
55054 05014	341
55062 00008	819
55062 00008	820
55062 00010	819
55062 00010	820
55062 00012	819
55062 00012	820
55062 00016	819
55062 00016	820
55062 00020	819
55062 00020	820
55231 04017	948
55231 05020	948
55231 07025	948
55231 08025	948
55231 10030	948
55232 01010	451
55232 01210	451
55232 01610	451
55232 02210	451
55237 00016	820
55237 00022	820
55237 00027	820
55237 00032	820
55237 00040	820
55311 01505	345
55311 02006	345
55311 02008	345
55311 03010	356
55311 04010	357
55311 05012	357
56341 00001	819
56341 00003	819
56771 10053	221
56771 10053	222
56771 10053	223
56771 10053	225
56771 10054	345
56H.17	415
56H.21	415
56H.37	415
56H.65	415
56H.67	415
56H.71	415
56H.93	415
56J.17	415
56J.21	415
56J.37	415
56J.65	415
56J.65.06H7N	420
56J.65.08H7N	420
56J.65.10H7N	420
56J.65.12H7N	420
56J.65.14H7N	420
56J.65.15H7N	420
56J.65.16H7N	420
56J.65.18H7N	420
56J.65.20H7N	420
56J.67	415
56J.71	415
56J.71.06H7D	420
56J.71.06H7N	420
56J.71.08H7D	420
56J.71.08H7N	420
56J.71.10H7D	420
56J.71.10H7N	420
56J.71.12H7D	420
56J.71.12H7N	420
56J.71.14H7D	420
56J.71.14H7N	420
56J.71.15H7D	420
56J.71.15H7N	420
56J.71.16H7D	420
56J.71.16H7N	420
56J.71.18H7D	420
56J.71.18H7N	420
56J.71.20H7D	420
56J.71.20H7N	420
56J.93	415
56J.93.06H7D	420
56J.93.06H7N	420
56J.93.08H7D	420
56J.93.08H7N	420
56J.93.10H7D	420
56J.93.10H7N	420
56J.93.12H7D	420
56J.93.12H7N	420
56J.93.14H7D	420
56J.93.14H7N	420
56J.93.15H7D	420
56J.93.15H7N	420
56J.93.16H7D	420
56J.93.16H7N	420
56J.93.18H7D	420
56J.93.18H7N	420
56J.93.20H7D	420
56J.93.20H7N	420
56Q.17	417
56Q.21	417
56Q.37	417
56Q.65	417
56Q.67	417
56Q.71	417
56Q.93	417
56R.17	417
56R.21	417
56R.37	417
56R.65	417
56R.65.06H7N	421
56R.65.08H7N	421
56R.65.10H7N	421
56R.65.12H7N	421
56R.65.14H7N	421
56R.65.15H7N	421
56R.65.16H7N	421
56R.65.18H7N	421
56R.65.20H7N	421
56R.67	417
56R.71	417
56R.71.06H7D	421
56R.71.06H7N	421
56R.71.08H7D	421
56R.71.08H7N	421
56R.71.10H7D	421
56R.71.10H7N	421
56R.71.12H7D	421
56R.71.12H7N	421
56R.71.14H7D	421
56R.71.14H7N	421
56R.71.15H7D	421
56R.71.15H7N	421
56R.71.16H7D	421
56R.71.16H7N	421
56R.71.18H7D	421
56R.71.18H7N	421
56R.71.20H7D	421
56R.71.20H7N	421
56R.93	417
56R.93.06H7D	421
56R.93.06H7N	421
56R.93.08H7D	421
56R.93.08H7N	421
56R.93.10H7D	421
56R.93.10H7N	421
56R.93.12H7D	421
56R.93.12H7N	421
56R.93.14H7D	421
56R.93.14H7N	421
56R.93.15H7D	421
56R.93.15H7N	421
56R.93.16H7D	421
56R.93.16H7N	421
56R.93.18H7D	421
56R.93.18H7N	421
56R.93.20H7D	421
56R.93.20H7N	421
56X.21	418
57B.40.00010	515
57B.40.00020	515
57B.49.00010	514
57B.49.00020	514
57B.49.00030	514
57B.49.00040	514
57B.50.00010	515
57B.50.00020	515
58310016001050	611
58310016001080	611
58310020002060	611
58310020002096	611
58310025004136	611
58M.17	435
58M.21	435
58M.57	435
58M.57.12H7	438
58M.57.14H7	438
58M.57.15H7	438
58M.57.16H7	438
58M.57.18H7	438
58M.57.20H7	438
58M.57.22H7	438
58M.57.24H7	438
58M.57.25H7	438
58M.57.26H7	438
58M.57.28H7	438
58M.57.30H7	438
58M.65	435
58M.85	435
58M.93	435
58M.93.12H7	439
58M.93.14H7	439
58M.93.15H7	439
58M.93.16H7	439
58M.93.18H7	439
58M.93.20H7	439
58M.93.22H7	439
58M.93.24H7	439
58M.93.25H7	439
58M.93.26H7	439
58M.93.28H7	439
58M.93.30H7	439
58N.17	435
58N.21	435
58N.57	435
58N.58	435
58N.58.12H7	438
58N.58.14H7	438
58N.58.15H7	438
58N.58.16H7	438
58N.58.18H7	438
58N.58.20H7	438
58N.58.22H7	438
58N.58.24H7	438
58N.58.25H7	438
58N.58.26H7	438
58N.58.28H7	438
58N.58.30H7	438
58N.62	435
58N.65	435
58N.82	435
58N.85	435
58N.92	435
58N.92.12H7	439
58N.92.14H7	439
58N.92.15H7	439
58N.92.16H7	439
58N.92.18H7	439
58N.92.20H7	439
58N.92.22H7	439
58N.92.24H7	439
58N.92.25H7	439
58N.92.26H7	439
58N.92.28H7	439
58N.92.30H7	439
58N.93	435
58T.17	437
58T.21	437
58T.57	437
58T.65	437
58T.85	437
58T.93	437
58U.17	437
58U.21	437
58U.57	437
58U.58	437
58U.62	437
58U.65	437
58U.82	437
58U.85	437
58U.92	437
58U.93	437
61000 00388	669
640.20	445
640.21	445
640.26	445
640.27	445
640.36	445
640.37	445
640.62	445
640.65	445
640.66	445
640.67	445
640.70	445
640.71	445
640.92	445
640.93	445
640.01.001	447
640.01.002	447
640.01.003	447
640.01.005	447
640.01.006	447
640.03.001	451
640.03.002	451
640.03.003	451
640.03.004	451
640.03.005	451
640.04.001	451
640.04.002	451
640.04.003	451
640.04.005	451
640.04.006	451
640.81.001	447
640.81.002	447
640.81.003	447
640.81.005	447
640.81.006	447
640.84.001	451
640.84.002	451
640.84.003	451
640.84.005	451
640.84.006	451
640.65.15H7N	446
640.65.16H7N	446
640.65.18H7N	446
640.65.20H7N	446
640.65.22H7N	446
640.65.24H7N	446
640.65.25H7N	446
640.65.28H7N	446
640.65.30H7N	446
640.65.40H7N	446
640.93.15H7D	446
640.93.15H7N	446
640.93.16H7D	446
640.93.16H7N	446
640.93.18H7D	446
640.93.18H7N	446
640.93.20H7D	446
640.93.20H7N	446
640.93.22H7D	446
640.93.22H7N	446
640.93.24H7D	446
640.93.24H7N	446
640.93.25H7D	446
640.93.25H7N	446
640.93.28H7D	446
640.93.28H7N	446
640.93.30H7D	446
640.93.30H7N	446
640.93.40H7D	446
640.93.40H7N	446
70W.37.01040A	522
70W.37.01045A	522
70W.37.01050A	522
70W.37.01055A	522
70W.37.01060A	522
70W.37.01065A	522
70W.37.01070A	522
70W.37.01075A	522
70W.37.01080A	522
70W.37.01090A	522
70W.37.01100A	522
70W.37.01110A	522
70W.37.01120A	522
70W.37.01130A	522
70W.93.02040A	522
70W.93.02045A	522
70W.93.02050A	522
70W.93.02055A	522
70W.93.02060A	522
70W.93.02065A	522
70W.93.02070A	522
70W.93.02075A	522
70W.93.02080A	522
70W.93.02090A	522
70W.93.02100A	522
70W.93.02110A	522
70W.93.02120A	522
70W.93.02130A	522
71G.65	501
71G.65.0700D	498
71G.65.0700N	498
71G.65.0750D	498
71G.65.0750N	498
71G.93	501
71G.93.0700D	498
71G.93.0700N	498
71G.93.0750D	498
71G.93.0750N	498
71H.65	501
71H.65.0800D	498
71H.65.0800N	498
71H.65.0850D	498
71H.65.0850N	498
71H.65.0900D	498
71H.65.0900N	498
71H.65.0950D	498
71H.65.0950N	498
71H.65.1000D	498
71H.65.1000N	498
71H.93	501
71H.93.0800D	498
71H.93.0800N	498
71H.93.0850D	498
71H.93.0850N	498
71H.93.0900D	498
71H.93.0900N	498
71H.93.0950D	498

Order No.	Page
71H.93.0950N	498
71H.93.1000D	498
71H.93.1000N	498
72A.30.07000	499
72A.30.07500	499
72A.30.08000	499
72A.30.08500	499
72A.30.09000	499
72A.30.09500	499
72A.30.10000	499
72A.60.07000	499
72A.60.07500	499
72A.60.08000	499
72A.60.08500	499
72A.60.09000	499
72A.60.09500	499
72A.60.10000	499
75A.30.13060	473
75A.30.13070	473
75A.30.15060	473
75A.30.15070	473
75A.40.13010	473
75A.40.13020	473
75A.40.13030	473
75A.40.13040	473
75A.40.13050	473
75A.40.13060	473
75A.40.13070	473
75A.40.15010	473
75A.40.15020	473
75A.40.15030	473
75A.40.15040	473
75A.40.15050	473
75A.40.15060	473
75A.40.15070	473
75A.41.13010	473
75A.41.13020	473
75A.41.13030	473
75A.41.13040	473
75A.41.13050	473
75A.41.15010	473
75A.41.15020	473
75A.41.15030	473
75A.41.15040	473
75A.41.15050	473
75A.60.13050	473
75A.60.13060	473
75A.60.13070	473
75H.17	461
75H.21	461
75H.37	461
75H.65	461
75H.67	461
75H.71	461
75H.85	461
75H.93	461
75J.17	461
75J.21	461
75J.37	461
75J.65	461
75J.65.18H7N	463
75J.65.20H7N	463
75J.65.22H7N	463
75J.65.24H7N	463
75J.65.25H7N	463
75J.65.28H7N	463
75J.65.30H7N	463
75J.65.32H7N	463
75J.65.35H7N	463
75J.65.40H7N	463
75J.65.50H7N	463
75J.67	461
75J.71	461
75J.71.18H7D	463
75J.71.18H7N	463
75J.71.20H7D	463
75J.71.20H7N	463
75J.71.22H7D	463
75J.71.22H7N	463
75J.71.24H7D	463
75J.71.24H7N	463
75J.71.25H7D	463
75J.71.25H7N	463
75J.71.26H7D	463
75J.71.26H7N	463
75J.71.28H7D	463
75J.71.28H7N	463
75J.71.30H7D	463
75J.71.30H7N	463
75J.71.32H7D	463
75J.71.32H7N	463
75J.71.35H7D	463
75J.71.35H7N	463
75J.71.40H7D	463
75J.71.40H7N	463
75J.71.42H7D	463
75J.71.42H7N	463
75J.71.50H7D	463
75J.71.50H7N	463
75J.71.54H7D	463
75J.71.54H7N	463
75J.85	461
75J.93	461
75J.93.18H7D	462
75J.93.18H7N	462
75J.93.20H7D	462
75J.93.20H7N	462
75J.93.22H7D	462
75J.93.22H7N	462
75J.93.24H7D	462
75J.93.24H7N	462
75J.93.25H7D	462
75J.93.25H7N	462
75J.93.26H7D	462
75J.93.26H7N	462
75J.93.28H7D	462
75J.93.28H7N	462
75J.93.30H7D	462
75J.93.30H7N	462
75J.93.32H7D	462
75J.93.32H7N	462
75J.93.35H7D	462
75J.93.35H7N	462
75J.93.40H7D	462
75J.93.40H7N	462
75J.93.42H7D	462
75J.93.42H7N	462
75J.93.50H7D	462
75J.93.50H7N	462
75J.93.54H7D	462
75J.93.54H7N	462
76H.17	469
76H.21	469
76H.37	469
76H.65	469
76H.67	469
76H.71	469
76H.85	469
76H.93	469
76J.17	469
76J.21	469
76J.37	469
76J.65	469
76J.67	469
76J.71	469
76J.85	469
76J.93	469
77H.17	467
77H.21	467
77H.37	467
77H.65	467
77H.67	467
77H.71	467
77H.85	467
77H.93	467
77J.17	467
77J.21	467
77J.37	467
77J.65	467
77J.67	467
77J.71	467
77J.85	467
77J.93	467
78M.17	455
78M.21	455
78M.57	455
78M.57.18H7	456
78M.57.20H7	456
78M.57.22H7	456
78M.57.24H7	456
78M.57.25H7	456
78M.57.26H7	456
78M.57.28H7	456
78M.57.30H7	456
78M.65	455
78M.85	455
78M.93	455
78M.93.18H7	457
78M.93.20H7	457
78M.93.22H7	457
78M.93.24H7	457
78M.93.25H7	457
78M.93.26H7	457
78M.93.28H7	457
78M.93.30H7	457
78N.17	455
78N.21	455
78N.57	455
78N.58	455
78N.58.18H7	456
78N.58.20H7	456
78N.58.22H7	456
78N.58.24H7	456
78N.58.25H7	456
78N.58.26H7	456
78N.58.28H7	456
78N.58.30H7	456
78N.62	455
78N.65	455
78N.82	455
78N.85	455
78N.92	455
78N.92.18H7	457
78N.92.20H7	457
78N.92.22H7	457
78N.92.24H7	457
78N.92.25H7	457
78N.92.26H7	457
78N.92.28H7	457
78N.92.30H7	457
78N.93	455
80126001000015	639
80126001000017	639
80126001000018	639
80126001000020	639
80126001000022	639
80127001000024	639
80127001000025	639
80127001000026	639
80128001000015	639
80128001000017	639
80128001000018	639
80128001000020	639
80128001000022	639
80129001000024	639
80129001000025	639
80129001000026	639
80270001000015	563
80270001000017	563
80270001000018	563
80270001000020	563
80270001000022	563
80273001000015	572
80273001000017	572
80273001000018	572
80273001000020	572
80273001000022	572
80273001000024	572
80273001000025	572
80273001000026	572
80273001000028	572
80273002000070	573
80273002000094	573
80273002000113	573
80273002000131	573
80273002000147	573
80273025000001	574
80273025000002	574
80292001000015	572
80292001000017	572
80292001000018	572
80292001000020	572
80292001000022	572
80292001000024	572
80292001000025	572
80292001000026	572
80292001000028	572
80292002000070	573
80292002000094	573
80292002000113	573
80292002000131	573
80292002000147	573
80292025000001	574
80292025000002	574
80296001000015	570
80296001000017	570
80296001000018	570
80296001000020	570
80296001000022	570
80296001000024	570
80296001000025	570
80296001000026	570
80296001000028	570
80296002000037	571
80296002000048	571
80296002000070	571
80296002000094	571
80296002000111	571
80296002000113	571
80296002000131	571
80296002000147	571
80297001000015	570
80297001000017	570
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80297002000037	571
80297002000048	571
80297002000070	571
80297002000094	571
80297002000111	571
80297002000113	571
80297002000131	571
80297002000147	571
80334001000018	597
80334001000020	597
80334001000022	597
80334001000024	597
80335001000018	597
80335001000020	597
80335001000022	597
80335001000024	597
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80341001000020	597
80341001000022	597
80341001000024	597
80345001000018	597
80345001000020	597
80345001000022	597
80345001000024	597
80356001000018	598
80356001000020	598
80356001000022	598
80356001000024	598
80361001000018	598
80361001000020	598
80361001000022	598
80361001000024	598
80369001000018	599
80369001000020	599
80369001000022	599
80369001000024	599
80373001000018	599
80373001000020	599
80373001000022	599
80373001000024	599
80380001000018	599
80380001000020	599
80380001000022	599
80380001000024	599
80416001000018	638
80416001000020	638
80416001000022	638
80418001000018	640
80418001000020	640
80418001000022	640
80420001000013	637
80420001000015	637
80420001000017	637
80420001000018	637
80420001000020	637
80420001000022	637
80420002000029	641
80420002000048	641
80420002000070	641
80421001000024	637
80421002000094	641
80421002000113	641
80421002000131	641
80421002000147	641
80444001000013	638
80444001000015	638
80444001000017	638
80444001000018	638
80444001000020	638
80444001000022	638
80444002000029	642
80444002000048	642
80444002000070	642
80445001000024	638
80445002000094	642
80445002000113	642
80445002000131	642
80445002000147	642
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80456001000017	636
80456001000018	636
80456001000020	636
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80457001000024	636
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80472001000020	648
80472001000022	648
80474001000015	648
80474001000017	648
80474001000018	648
80474001000020	648
80474001000022	648
80475001000024	648
80476001000015	649
80476001000017	649
80476001000018	649
80476001000020	649
80476001000022	649
80477001000024	649
80494001000015	650
80494001000017	650
80494001000018	650
80494001000020	650
80494001000022	650
80495001000024	650
80574001000015	648
80574001000017	648
80574001000018	648
80574001000020	648
80574001000022	648
80575001000024	648
80576001000015	649
80576001000017	649
80576001000018	649
80576001000020	649
80576001000022	649
80577001000024	649
80584001000013	651
80584001000015	651
80584001000017	651
80584001000018	651
80584001000020	651
80585002000070	653
80585002000094	653
80586001000013	652
80586001000015	652
80586001000017	652
80586001000018	652
80586001000020	652

Numerical index

Order No.	Page
80587002000070	654
80587002000094	654
80594001000015	650
80594001000017	650
80594001000018	650
80594001000020	650
80594001000022	650
80595001000024	650
80635001000018	600
80635001000020	600
80635001000022	600
80635001000024	600
80635002000070	601
80635002000094	601
80635002000111	601
80635002000113	601
80641001000018	600
80641001000020	600
80641001000022	600
80641001000024	600
80641002000048	601
80641002000070	601
80641002000094	601
80641002000111	601
80641002000113	601
80641002000131	601
80641010000011	602
80641010000012	602
80641010000013	602
80641010000015	602
80641011000011	603
80641011000012	603
80641011000013	603
80641011000015	603
80641025000001	604
80641025000002	604
80670001000018	580
80670001000020	580
80670001000022	580
80670001000024	580
80670002000070	581
80670002000094	581
80670002000113	581
80670002000131	581
80670002000147	581
80690001000018	580
80690001000020	580
80690001000022	580
80690001000024	580
80692001000018	580
80692001000020	580
80692001000022	580
80692001000024	580
80692002000070	581
80692002000094	581
80692002000113	581
80692002000131	581
80692002000147	581
80700001000018	552
80700001000022	552
80700001010018	552
80700001010022	552
80700001020018	552
80700001020022	552
80700001030018	552
80700001030022	552
80700001040018	552
80700001040022	552
80700001050018	552
80700001050022	552
80700001060018	552
80700001060022	552
80700001070022	552
80700002000094	553
80700002010094	553
80700002020094	553
80700002030094	553
80700002040094	553
80700002050094	553
80700002060094	553
80700002070094	553
80700002080094	553
80700002090094	553
80700002091094	553

Order No.	Page
80703001000018	552
80703001000022	552
80703001010018	552
80703001010022	552
80703001020018	552
80703001020022	552
80703001030018	552
80703001030022	552
80703001040018	552
80703001040022	552
80703001050018	552
80703001050022	552
80703001060018	552
80703001060022	552
80703001070022	552
80703002000094	553
80703002010094	553
80703002020094	553
80703002030094	553
80703002040094	553
80703002050094	553
80703002060094	553
80703002070094	553
80703002080094	553
80703002090094	553
80703002091094	553
80752001000018	605
80752001000020	605
80752001000022	605
80752001000024	605
80758001000018	605
80758001000020	605
80758001000022	605
80758001000024	605
80802002001100	615
80802002001150	615
80802004001100	615
80802004001150	615
80802005001012	617
80802005001020	617
80802005001024	617
80802005001100	615
80802005001150	615
80802005001200	615
80802006001012	617
80802006001020	617
80802006001024	617
80802006001100	615
80802006001150	615
80802006001200	615
80802006001300	615
80802006002014	618
80802007001008	617
80802007001012	617
80802007001020	617
80802007001024	617
80802007001100	615
80802007001150	615
80802007001200	615
80802007001300	615
80802007002011	618
80802007002014	618
80802008001008	617
80802008001012	617
80802008001020	617
80802008001100	615
80802008001150	615
80802008001200	615
80802008001300	615
80802008002011	618
80802008002014	618
80803004001100	616
80803004001150	616
80803006001100	616
80803006001150	616
80803008001150	616
80803008001200	616
80806006001100	621
80806006001150	621
80806008001150	621
80806008001200	621
80806008001300	621
80819006001150	620
80819008001150	620

Order No.	Page
80842002001100	615
80842002001150	615
80842004001100	615
80842004001150	615
80842005001100	615
80842005001150	615
80842005001200	615
80842006001100	615
80842006001150	615
80842006001200	615
80842006001300	615
80842006002014	618
80842007001100	615
80842007001150	615
80842007001200	615
80842007001300	615
80842007002011	618
80842007002014	618
80842008001100	615
80842008001150	615
80842008001200	615
80842008001300	615
80842008002011	618
80842008002014	618
80843004001100	616
80843004001150	616
80843006001100	616
80843006001150	616
80843008001150	616
80843008001200	616
80872016000005	619
80872016000007	619
80872017000005	619
80872017000007	619
80875016000005	619
80875016000007	619
80875017000005	619
80875017000007	619
80882006001100	623
80882006001150	623
80882006001200	623
80882006002014	624
80882008001100	623
80882008001150	623
80882008001200	623
80882008001300	623
80882008002011	624
80882008002014	624
80885006001100	623
80885006001150	623
80885006001200	623
80885006002014	624
80885008001100	623
80885008001150	623
80885008001200	623
80885008001300	623
80885008002011	624
80885008002014	624
80896006001100	622
80896006001150	622
80896006001200	622
80896008001100	622
80896008001150	622
80896008001200	622
80901001000013	589
80904001000015	590
80904001000017	590
80904001000018	590
80904001000020	590
80904001000022	590
80906001000013	589
80934001000015	588
80934001000017	588
80934001000018	588
80934001000020	588
80934001000022	588
80934001000024	588
80935001000015	589
80935001000017	589
80935001000018	589
80935001000020	589
80935001000022	589
80935001000024	589
80935001000025	589

Order No.	Page
80935001000026	589
80935002000070	593
80935002000094	593
80935002000111	593
80935002000113	593
80935051000018	592
80935051000020	592
80935051000022	592
80935051000024	592
80941001000015	589
80941001000017	589
80941001000018	589
80941001000020	589
80941001000022	589
80941001000024	589
80941001000025	589
80941001000026	589
80941002000048	593
80941002000070	593
80941002000094	593
80941002000111	593
80941002000113	593
80941002000131	593
80941002000147	593
80941010000011	594
80941010000012	594
80941010000013	594
80941010000015	594
80941011000011	595
80941011000012	595
80941011000013	595
80941011000015	595
80941025000001	596
80941025000002	596
80941051000018	592
80941051000020	592
80941051000022	592
80941051000024	592
80943001000018	591
80943001000020	591
80943001000022	591
80943001000024	591
80945001000015	588
80945001000017	588
80945001000018	588
80945001000020	588
80945001000022	588
80945001000024	588
80945002000070	593
80945002000094	593
80945002000113	593
80945010000011	594
80945010000012	594
80945010000013	594
80945010000015	594
80945011000011	595
80945011000012	595
80945011000013	595
80945011000015	595
80949001000018	591
80949001000020	591
80949001000022	591
80949001000024	591
80956001000018	590
80956001000020	590
80956001000022	590
80956001000024	590
80961001000017	590
80961001000018	590
80961001000020	590
80961001000022	590
80961001000024	590
80961001000026	590
80970001000008	563
80970001000013	563
80970001000015	563
80970001000017	563
80970001000018	563
80970001000020	563
80970001000022	563
80970001000024	563
80970001000025	563
80970001000026	563
80970001000028	563

Order No.	Page
80970002000037	565
80970002000048	565
80970002000070	565
80970002000094	565
80970002000111	565
80970002000113	565
80970002000131	565
80970002000147	565
80970010000011	566
80970010000012	566
80970010000013	566
80970010000015	566
80970011000011	567
80970011000012	567
80970011000013	567
80970011000014	567
80970011000015	567
80970016000001	568
80970016000002	568
80970016000003	568
80970016000004	568
80970017000002	568
80970017000003	568
80970017000004	568
80970025000001	569
80970025000002	569
80970025000003	569
80973001000015	562
80973001000017	562
80973001000018	562
80973001000020	562
80973001000022	562
80973001000024	562
80973001000025	562
80973001000026	562
80973001000028	562
80973002000070	564
80973002000094	564
80973002000113	564
80973002000131	564
80973002000147	564
80973010000011	566
80973010000012	566
80973010000013	566
80973010000015	566
80973011000011	567
80973011000012	567
80973011000013	567
80973011000014	567
80973011000015	567
80973016000002	568
80973016000003	568
80973016000004	568
80973017000002	568
80973017000003	568
80973017000004	568
80973025000001	569
80973025000002	569
80977001000013	576
80977001000015	576
80977001000017	576
80977001000018	576
80977001000020	576
80977001000022	576
80977001000024	576
80977002000113	577
80977002000131	577
80977002000147	577
80980001000015	545
80980001000017	545
80980001000018	545
80980001000020	545
80980001000022	545
80980001000024	545
80980001000025	545
80980002000094	546
80980002000113	546
80980010000009	547
80980010000010	547
80980010000011	547
80980010000012	547
80980010000013	547
80980010000014	547
80980010000015	547

Order No.	Page
80980010000016	547
80980010000017	547
80980011000009	548
80980011000010	548
80980011000011	548
80980011000012	548
80980011000013	548
80980011000014	548
80980011000015	548
80980011000016	548
80980011000017	548
80980025000001	549
80980025000002	549
80980025000003	549
80981001000008	562
80981001000013	562
80981001000015	562
80981001000017	562
80981001000018	562
80981001000020	562
80981001000022	562
80981001000024	562
80981001000025	562
80981001000026	562
80981001000028	562
80981002000070	564
80981002000094	564
80981002000111	564
80981002000113	564
80981002000131	564
80981002000147	564
80981010000011	566
80981010000012	566
80981010000013	566
80981010000015	566
80981011000011	567
80981011000012	567
80981011000013	567
80981011000014	567
80981011000015	567
80981025000001	569
80981025000002	569
80981025000003	569
80983001000015	545
80983001000017	545
80983001000018	545
80983001000020	545
80983001000022	545
80983001000024	545
80983001000025	545
80983002000094	546
80983002000113	546
80983010000009	547
80983010000010	547
80983010000011	547
80983010000012	547
80983010000013	547
80983010000014	547
80983010000015	547
80983010000016	547
80983010000017	547
80983011000009	548
80983011000010	548
80983011000011	548
80983011000012	548
80983011000013	548
80983011000014	548
80983011000015	548
80983011000016	548
80983011000017	548
80983025000001	549
80983025000002	549
80983025000003	549
80987001000015	554
80987001000017	554
80987001000018	554
80987001000020	554
80987001000022	554
80987001000024	554
80987002000113	555
80987002000131	555
80987002000147	555
80990001000017	563
80990001000018	563
80990001000020	563
80990001000022	563
80990001000024	563
80992001000015	563
80992001000017	563
80992001000018	563
80992001000020	563
80992001000022	563
80992001000024	563
80992001000025	563
80992001000026	563
80992001000028	563
80992002000070	565
80992002000094	565
80992002000113	565
80992002000131	565
80992002000147	565
80992010000011	566
80992010000012	566
80992010000013	566
80992010000015	566
80992011000011	567
80992011000012	567
80992011000013	567
80992011000014	567
80992011000015	567
80992025000001	569
80992025000002	569
80995001000018	563
80995001000020	563
80995001000022	563
80995001000024	563
88270001000015	563
88270001000017	563
88270001000018	563
88270001000020	563
88270001000022	563
88273001000015	572
88273001000017	572
88273001000018	572
88273001000020	572
88273001000022	572
88273001000024	572
88273001000025	572
88273001000026	572
88273001000028	572
88273002000070	573
88273002000094	573
88273002000113	573
88273002000131	573
88273002000147	573
88273025000001	574
88273025000002	574
88292001000015	572
88292001000017	572
88292001000018	572
88292001000020	572
88292001000022	572
88292001000024	572
88292001000025	572
88292001000026	572
88292001000028	572
88292002000070	573
88292002000094	573
88292002000113	573
88292002000131	573
88292002000147	573
88292025000001	574
88292025000002	574
88296001000015	570
88296001000017	570
88296001000018	570
88296001000020	570
88296001000022	570
88296001000024	570
88296001000025	570
88296001000026	570
88296001000028	570
88296002000037	571
88296002000048	571
88296002000070	571
88296002000094	571
88296002000111	571
88296002000113	571
88296002000131	571
88296002000147	571
88297001000015	570
88297001000017	570
88297001000018	570
88297001000020	570
88297001000022	570
88297001000024	570
88297001000025	570
88297001000026	570
88297001000028	570
88297002000037	571
88297002000048	571
88297002000070	571
88297002000094	571
88297002000111	571
88297002000113	571
88297002000131	571
88297002000147	571
88334001000018	597
88334001000020	597
88334001000022	597
88334001000024	597
88335001000018	597
88335001000020	597
88335001000022	597
88335001000024	597
88341001000018	597
88341001000020	597
88341001000022	597
88341001000024	597
88345001000018	597
88345001000020	597
88345001000022	597
88345001000024	597
88356001000018	598
88356001000020	598
88356001000022	598
88356001000024	598
88361001000018	598
88361001000020	598
88361001000022	598
88361001000024	598
88369001000018	599
88369001000020	599
88369001000022	599
88369001000024	599
88373001000018	599
88373001000020	599
88373001000022	599
88373001000024	599
88380001000018	599
88380001000020	599
88380001000022	599
88380001000024	599
88635001000018	600
88635001000020	600
88635001000022	600
88635001000024	600
88635002000070	601
88635002000094	601
88635002000111	601
88635002000113	601
88641001000018	600
88641001000020	600
88641001000022	600
88641001000024	600
88641002000048	601
88641002000070	601
88641002000094	601
88641002000111	601
88641002000113	601
88641002000131	601
88641010000011	602
88641010000012	602
88641010000013	602
88641010000015	602
88641011000011	603
88641011000012	603
88641011000013	603
88641011000015	603
88641025000001	604
88641025000002	604
88670001000018	580
88670001000020	580
88670001000022	580
88670001000024	580
88670002000070	581
88670002000094	581
88670002000113	581
88670002000131	581
88670002000147	581
88690001000018	580
88690001000020	580
88690001000022	580
88690001000024	580
88692001000018	580
88692001000020	580
88692001000022	580
88692001000024	580
88692002000070	581
88692002000094	581
88692002000113	581
88692002000131	581
88692002000147	581
88700001000018	552
88700001000022	552
88700001010018	552
88700001010022	552
88700001020018	552
88700001020022	552
88700001030018	552
88700001030022	552
88700001040018	552
88700001040022	552
88700001050018	552
88700001050022	552
88700001060018	552
88700001060022	552
88700001070022	552
88700002000094	553
88700002010094	553
88700002020094	553
88700002030094	553
88700002040094	553
88700002050094	553
88700002060094	553
88700002070094	553
88700002080094	553
88700002090094	553
88700002091094	553
88703001000018	552
88703001000022	552
88703001010018	552
88703001010022	552
88703001020018	552
88703001020022	552
88703001030018	552
88703001030022	552
88703001040018	552
88703001040022	552
88703001050018	552
88703001050022	552
88703001060018	552
88703001060022	552
88703001070022	552
88703002000094	553
88703002010094	553
88703002020094	553
88703002030094	553
88703002040094	553
88703002050094	553
88703002060094	553
88703002070094	553
88703002080094	553
88703002090094	553
88703002091094	553
88752001000018	605
88752001000020	605
88752001000022	605
88752001000024	605
88758001000018	605
88758001000020	605
88758001000022	605
88758001000024	605
88802002001100	615
88802002001150	615
88802004001100	615
88802004001150	615
88802005001012	617
88802005001020	617
88802005001024	617
88802005001100	615
88802005001150	615
88802005001200	615
88802006001012	617
88802006001020	617
88802006001024	617
88802006001100	615
88802006001150	615
88802006001200	615
88802006001300	615
88802006002014	618
88802007001008	617
88802007001012	617
88802007001020	617
88802007001024	617
88802007001100	615
88802007001150	615
88802007001200	615
88802007001300	615
88802007002011	618
88802007002014	618
88802008001008	617
88802008001012	617
88802008001020	617
88802008001100	615
88802008001150	615
88802008001200	615
88802008001300	615
88802008002011	618
88802008002014	618
88803004001100	616
88803004001150	616
88803006001100	616
88803006001150	616
88803008001150	616
88803008001200	616
88806006001100	621
88806006001150	621
88806008001150	621
88806008001200	621
88806008001300	621
88819006001150	620
88819008001150	620
88842002001100	615
88842002001150	615
88842004001100	615
88842004001150	615
88842005001100	615
88842005001150	615
88842005001200	615
88842006001100	615
88842006001150	615
88842006001200	615
88842006001300	615
88842006002014	618
88842007001100	615
88842007001150	615
88842007001200	615
88842007001300	615
88842007002011	618
88842007002014	618
88842008001100	615
88842008001150	615
88842008001200	615
88842008001300	615
88842008002011	618
88842008002014	618
88843004001100	616
88843004001150	616
88843006001100	616
88843006001150	616
88843008001150	616
88843008001200	616
88872016000005	619
88872016000007	619
88872017000005	619
88872017000007	619
88875016000005	619
88875016000007	619
88875017000005	619

Numerical index

Order No.	Page
88875017000007	619
88882006001100	623
88882006001150	623
88882006001200	623
88882006002014	624
88882008001100	623
88882008001150	623
88882008001200	623
88882008001300	623
88882008002011	624
88882008002014	624
88885006001100	623
88885006001150	623
88885006001200	623
88885006002014	624
88885008001100	623
88885008001150	623
88885008001200	623
88885008001300	623
88885008002011	624
88885008002014	624
88896006001100	622
88896006001150	622
88896006001200	622
88896008001100	622
88896008001150	622
88896008001200	622
88901001000013	589
88904001000015	590
88904001000017	590
88904001000018	590
88904001000020	590
88904001000022	590
88906001000013	589
88934001000015	588
88934001000017	588
88934001000018	588
88934001000020	588
88934001000022	588
88934001000024	588
88935001000015	589
88935001000017	589
88935001000018	589
88935001000020	589
88935001000022	589
88935001000024	589
88935001000025	589
88935001000026	589
88935002000070	593
88935002000094	593
88935002000111	593
88935002000113	593
88935051000018	592
88935051000020	592
88935051000022	592
88935051000024	592
88941001000015	589
88941001000017	589
88941001000018	589
88941001000020	589
88941001000022	589
88941001000024	589
88941001000025	589
88941001000026	589
88941002000048	593
88941002000070	593
88941002000094	593
88941002000111	593
88941002000113	593
88941002000131	593
88941002000147	593
88941010000011	594
88941010000012	594
88941010000013	594
88941010000015	594
88941011000011	595
88941011000012	595
88941011000013	595
88941011000015	595
88941025000001	596
88941025000002	596
88941051000018	592
88941051000020	592
88941051000022	592
88941051000024	592
88943001000018	591
88943001000020	591
88943001000022	591
88943001000024	591
88945001000015	588
88945001000017	588
88945001000018	588
88945001000020	588
88945001000022	588
88945001000024	588
88945002000070	593
88945002000094	593
88945002000113	593
88945010000011	594
88945010000012	594
88945010000013	594
88945010000015	594
88945011000011	595
88945011000012	595
88945011000013	595
88945011000015	595
88949001000018	591
88949001000020	591
88949001000022	591
88949001000024	591
88956001000018	590
88956001000020	590
88956001000022	590
88956001000024	590
88961001000017	590
88961001000018	590
88961001000020	590
88961001000022	590
88961001000024	590
88961001000026	590
88970001000008	563
88970001000013	563
88970001000015	563
88970001000017	563
88970001000018	563
88970001000020	563
88970001000022	563
88970001000024	563
88970001000025	563
88970001000026	563
88970001000028	563
88970002000037	565
88970002000048	565
88970002000070	565
88970002000094	565
88970002000111	565
88970002000113	565
88970002000131	565
88970002000147	565
88970010000011	566
88970010000012	566
88970010000013	566
88970010000015	566
88970011000011	567
88970011000012	567
88970011000013	567
88970011000014	567
88970011000015	567
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88970016000002	568
88970016000003	568
88970016000004	568
88970017000002	568
88970017000003	568
88970017000004	568
88970025000001	569
88970025000002	569
88970025000003	569
88973001000015	562
88973001000017	562
88973001000018	562
88973001000020	562
88973001000022	562
88973001000024	562
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88973001000026	562
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88973002000070	564
88973002000094	564
88973002000113	564
88973002000131	564
88973002000147	564
88973010000011	566
88973010000012	566
88973010000013	566
88973010000015	566
88973011000011	567
88973011000012	567
88973011000013	567
88973011000014	567
88973011000015	567
88973016000002	568
88973016000003	568
88973016000004	568
88973017000002	568
88973017000003	568
88973017000004	568
88973025000001	569
88973025000002	569
88977001000001	575
88977001000004	575
88977001000005	575
88977001000008	575
88977001000009	575
88977001000011	575
88977001000013	576
88977001000015	576
88977001000017	576
88977001000018	576
88977001000020	576
88977001000022	576
88977001000024	576
88977002000113	577
88977002000131	577
88977002000147	577
88980001000015	545
88980001000017	545
88980001000018	545
88980001000020	545
88980001000022	545
88980001000024	545
88980001000025	545
88980002000094	546
88980002000113	546
88980010000009	547
88980010000010	547
88980010000011	547
88980010000012	547
88980010000013	547
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88980010000015	547
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88980011000009	548
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88980011000011	548
88980011000012	548
88980011000013	548
88980011000014	548
88980011000015	548
88980011000016	548
88980011000017	548
88980025000001	549
88980025000002	549
88980025000003	549
88981001000008	562
88981001000013	562
88981001000015	562
88981001000017	562
88981001000018	562
88981001000020	562
88981001000022	562
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88981002000094	564
88981002000111	564
88981002000113	564
88981002000131	564
88981002000147	564
88981010000011	566
88981010000012	566
88981010000013	566
88981010000015	566
88981011000011	567
88981011000012	567
88981011000013	567
88981011000014	567
88981011000015	567
88981025000001	569
88981025000002	569
88981025000003	569
88983001000015	545
88983001000017	545
88983001000018	545
88983001000020	545
88983001000022	545
88983001000024	545
88983001000025	545
88983002000094	546
88983002000113	546
88983010000009	547
88983010000010	547
88983010000011	547
88983010000012	547
88983010000013	547
88983010000014	547
88983010000015	547
88983010000016	547
88983010000017	547
88983011000009	548
88983011000010	548
88983011000011	548
88983011000012	548
88983011000013	548
88983011000014	548
88983011000015	548
88983011000016	548
88983011000017	548
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88983025000002	549
88983025000003	549
88987001000015	554
88987001000017	554
88987001000018	554
88987001000020	554
88987001000022	554
88987001000024	554
88987002000113	555
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88987002000147	555
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88990001000018	563
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88990001000022	563
88990001000024	563
88992001000015	563
88992001000017	563
88992001000018	563
88992001000020	563
88992001000022	563
88992001000024	563
88992001000025	563
88992001000026	563
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88992002000070	565
88992002000094	565
88992002000113	565
88992002000131	565
88992002000147	565
88992010000011	566
88992010000012	566
88992010000013	566
88992010000015	566
88992011000011	567
88992011000012	567
88992011000013	567
88992011000014	567
88992011000015	567
88992025000001	569
88992025000002	569
88995001000018	563
88995001000020	563
88995001000022	563
88995001000024	563
90174001000018	655
90174001000020	655
90174001000022	655
90175001000024	655
90175002000094	658
90175002000113	658
90176001000018	656
90176001000020	656
90176001000022	656
90177001000024	656
90374001000018	655
90374001000020	655
90374001000022	655
90375001000024	655
90456001000018	634
90456001000020	634
90456001000022	634
90457001000024	634
90496001000018	657
90496001000020	657
90496001000022	657
90497001000024	657
90520001000018	635
90520001000020	635
90520001000022	635
90521001000024	635
90521001000025	635
90521001000026	635
90521001000028	635
90774001000022	659
90775001000024	659
90775001000026	659
90775001000028	659
90775002000094	661
90775002000113	661
90775002000147	661
90776001000022	660
90777001000024	660
90777001000026	660
90777001000028	660
90777002000094	662
90777002000113	662
90777002000147	662
A01 01130	822
A01 01140	822
A01 01150	822
A01 01160	822
A01 01250	822
A01 01260	822
A01 01270	822
A01 01450	822
A01 01460	822
A01 01470	822
A01 01490	822
A01 10151	828
A01 10251	828
A01 10261	828
A01 10271	828
A01 10351	828
A01 10361	828
A01 10371	828
A01 10451	828
A01 10461	828
A01 10471	828
A01 11152	826
A01 11252	826
A01 11262	826
A01 11271	826
A01 11352	826
A01 11362	826
A01 11372	826
A01 11452	826
A01 11462	826
A01 11472	826
A01 11482	826
A01 14251	827
A01 14261	827
A01 14351	827
A01 14361	827
A01 14370	827
A01 15450	824

Order No.	Page
A01 15460	824
A01 15550	824
A01 15560	824
A01 15570	824
A01 15650	824
A01 15660	824
A01 15670	824
A01 15750	824
A01 15760	824
A01 15770	824
A01 15780	824
A06 00120	772
A06 00130	772
A06 10140	772
A06 20121	772
A06 20131	772
A06 20141	772
A06 20151	772
A06 30050	773
A06 30070	773
A06 30120	772
A06 30130	772
A06 30140	772
A06 30150	772
A06 30160	772
A06 30170	772
A06 30220	772
A06 30251	775
A06 30261	775
A06 30270	775
A06 36730	774
A06 40150	772
A06 50050	773
A06 50060	773
A06 50070	773
A06 50120	772
A06 50130	772
A06 50140	772
A06 50150	772
A06 50160	772
A06 50170	772
A06 50180	772
A06 50251	775
A06 50261	775
A06 50270	775
A06 53650	317
A06 56730	774
A06 56740	774
A08 61031	776
A08 61060	778
A08 71031	776
A08 91060	778
A20 00020	798
A20 00030	798
A20 00040	798
A20 00050	798
A20 00060	798
A20 00070	798
A20 00080	798
A20 00090	798
A20 00150	798
A20 00160	798
A20 00170	798
A20 00220	798
A20 00230	798
A20 00240	798
A20 00250	798
A20 00260	798
A20 00270	798
A20 00280	798
A20 00290	798
A20 00530	798
A20 00540	798
A20 00550	798
A20 00560	798
A20 00570	798
A20 00580	798
A20 00620	800
A20 00630	800
A20 00651	802
A20 00661	802
A20 00670	802
A20 01060	804
A20 01070	804

Order No.	Page
A20 01080	804
A20 01160	804
A20 01170	804
A20 01180	804
A20 01220	807
A20 01230	807
A20 01240	806
A20 01250	806
A20 01260	806
A20 01270	806
A20 01320	807
A20 01330	807
A20 01420	807
A20 01430	807
A20 05450	799
A20 05460	799
A20 05470	799
A20 05480	799
A20 05640	799
A20 05652	799
A20 05661	799
A20 05671	799
A20 05680	799
A20 05751	799
A20 05760	799
A20 05770	799
A20 05840	799
A20 05851	799
A20 05861	799
A20 05871	799
A20 05880	799
A20 05910	799
A20 05920	799
A20 05930	799
A20 05950	799
A20 05960	799
A20 05970	799
A20 10120	796
A20 10220	796
A20 10230	796
A20 10320	796
A20 10330	796
A20 10340	796
A20 10420	796
A20 10430	796
A20 10440	796
A20 10450	796
A20 10530	796
A20 10540	796
A20 10550	796
A20 10560	796
A20 10650	796
A20 10660	796
A20 10670	796
A20 10770	796
A20 10780	796
A20 11560	805
A20 11670	805
A20 20340	797
A20 20450	797
A20 20550	797
A20 20560	797
A20 20650	797
A20 20670	797
A20 21450	797
A20 21560	797
A20 60530	803
A20 60540	803
A20 60550	803
A20 60560	803
A20 60570	803
A30 10601	808
A30 10801	808
A30 11001	808
A30 20601	808
A30 20801	808
A30 21001	808
A30 21201	808
A30 30601	809
A30 30801	809
A30 31001	809
A30 31201	809
A30 31601	809
A30 40601	809

Order No.	Page
A30 40801	809
A30 41001	809
A30 41201	809
A30 41601	809
A30 42002	809
A30 42502	809
A30 51001	809
A30 51201	809
A30 51601	809
A30 52001	809
A30 52501	809
A30 62501	809
A30 63201	809
A32 26050	825
A32 26061	825
A32 26071	825
A32 32060	816
A32 32070	816
A32 32080	816
A32 36050	825
A32 36061	825
A32 36071	825
A32 36091	825
A32 40010	810
A32 40020	810
A32 40030	810
A32 40040	810
A32 40050	810
A32 40060	810
A32 40070	810
A32 40080	810
A32 40090	810
A32 40260	811
A32 40270	811
A32 42101	816
A32 42110	816
A32 42120	816
A32 42130	816
A32 42140	816
A32 42150	816
A32 42160	816
A32 42170	816
A32 46040	825
A32 46050	825
A32 46061	825
A32 46071	825
A32 46081	825
A32 46091	825
A32 46101	825
A32 46111	825
A32 50040	810
A32 50050	810
A32 50060	810
A32 50070	810
A32 50080	810
A32 50100	810
A32 50110	810
A32 50280	811
A32 52180	816
A32 52190	816
A32 52200	816
A32 56111	825
A32 56121	825
A32 56131	825
A32 60060	810
A32 60070	810
A32 60080	810
A33 11120	815
A33 12130	815
A33 13141	815
A33 14151	815
A33 15161	815
A33 16171	815
A34 05030	812
A34 14020	813
A34 14030	813
A34 14040	813
A34 15050	813
A34 24030	821
A34 24040	821
A34 32060	814
A34 33060	814
A34 34060	814
A34 34070	814

Order No.	Page
A34 35070	814
A34 35080	814
A36 33050	829
A36 34050	829
A36 35050	829
A36 36050	829
A36 37050	829
A40 04022	820
A40 04032	820
A40 05021	820
A40 05031	820
A40 05041	820
A40 06031	820
A40 06041	820
A40 06051	820
A40 06061	820
A40 16062	819
A40 17062	819
A40 17072	819
A40 24023	819
A40 24034	819
A40 24043	819
A40 24053	819
A40 25032	819
A40 25042	819
A40 25052	819
A40 25062	819
A40 26042	819
A40 26052	819
A40 26062	819
A40 27052	819
A40 27062	819
A50 00120	781
A50 00130	781
A50 00140	781
A50 00150	781
A50 00160	781
A50 00320	781
A50 00330	781
A50 00340	781
A50 00350	781
A50 00360	781
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A50 00390	781
A50 00650	783
A50 00850	783
A50 00860	783
A50 00870	783
A50 00880	783
A50 01351	785
A50 01361	785
A50 01451	785
A50 01461	785
A50 01470	785
A50 55120	780
A50 55130	780
A50 55140	780
A50 55150	780
A50 55160	780
A50 55250	780
A50 55260	780
A50 55320	780
A50 55330	780
A50 55340	780
A50 55350	780
A50 55360	780
A50 55370	780
A50 55380	780
A50 56150	784
A50 56160	784
A50 56350	784
A50 56360	784
A50 57151	786
A50 57161	786
A50 57351	786
A50 57361	786
A50 57371	786
A50 57381	786
A50 76350	782
A50 76360	782
A50 76370	782
A50 76380	782
A54 00140	793

Order No.	Page
A54 00150	793
A54 00160	793
A54 00330	793
A54 00340	793
A54 00350	793
A54 00360	793
A54 00370	793
A54 00380	793
A54 10850	794
A54 10860	794
A54 10870	794
A54 10880	794
A55 00120	787
A55 00130	787
A55 00140	787
A55 00150	787
A55 00160	787
A55 00330	787
A55 00340	787
A55 00350	787
A55 00360	787
A55 00370	787
A55 00380	787
A55 02150	792
A55 02160	792
A55 02350	792
A55 02360	792
A55 10650	789
A55 10850	789
A55 10860	789
A55 10870	789
A55 50350	788
A55 50360	788
A55 50370	788
A55 55150	788
A55 55160	788
A55 55350	788
A55 55360	788
A55 55370	788
A55 55380	788
A55 56150	791
A55 56160	791
A55 56350	791
A55 56360	791
A55 57121	790
A55 57131	790
A55 57141	790
A55 57151	790
A55 57161	790
A55 57331	790
A55 57341	790
A55 57351	790
A55 57361	790
A55 57371	790
A55 57381	790
A69 04050	823
A69 04200	317
A69 04210	317
A69 04220	317
A69 05050	823
A69 05210	317
A69 05220	317
A69 05230	317
A69 06050	823
A69 06060	823
A69 06220	317
A69 06230	317
A69 06240	317
A69 08050	823
A69 08060	823
A69 08070	823
A69 08230	317
A69 08250	317
B00 00010	722
B00 00020	722
B00 00030	722
B00 00050	722
B00 00070	722
B00 00410	722
B00 00420	722
B00 00430	722
B00 00450	722
B00 00600	723

Numerical index

Order No.	Page
B00 00610	723
B00 00620	723
B00 00630	723
B00 00640	723
B00 00650	723
B00 00680	234
B00 00690	234
B00 05010	722
B00 05020	722
B00 05030	722
B00 05050	722
B00 05060	722
B00 05070	722
B00 05410	722
B00 05420	722
B00 05430	722
B00 05440	722
B00 05450	722
B00 05460	722
B00 05470	722
B00 05600	723
B00 05610	723
B00 05620	723
B00 05630	723
B00 05640	723
B00 05650	723
B00 05670	723
B00 10610	727
B00 10620	727
B00 10630	727
B00 10640	727
B00 15510	238
B00 15510	726
B00 15530	238
B00 15530	726
B00 15610	238
B00 15610	726
B00 15620	238
B00 15620	726
B00 15630	238
B00 15630	726
B00 15640	238
B00 15640	726
B00 15650	238
B00 15650	726
B00 15661	238
B00 15661	726
B00 15671	238
B00 15671	726
B00 15681	238
B00 15681	726
B00 15691	238
B00 15691	726
B00 15710	238
B00 15710	726
B00 15720	726
B00 15730	726
B00 15741	726
B00 15751	238
B00 15751	726
B00 25510	240
B00 25530	240
B00 25540	240
B00 25610	240
B00 25620	240
B00 25630	240
B00 25640	240
B00 25650	240
B00 25661	240
B00 25671	240
B00 25681	240
B00 25691	240
B00 25700	240
B00 25710	240
B00 25810	240
B00 25820	240
B00 25830	240
B00 25840	240
B00 25850	240
B00 25861	240
B00 25871	240
B00 25911	240
B00 30280	234
B00 30280	714

Order No.	Page
B00 30290	234
B00 30290	714
B00 30300	714
B00 30311	714
B00 30321	714
B00 30331	714
B00 30411	715
B00 30421	715
B00 30431	715
B00 35300	714
B00 35311	714
B00 35321	714
B00 35331	714
B00 35400	715
B00 35411	715
B00 35421	715
B00 35431	715
B00 37010	238
B00 37010	726
B00 37020	238
B00 37020	726
B05 20100	218
B05 20100	219
B05 20100	220
B05 20120	218
B05 20120	220
B05 20140	219
B05 20140	220
B05 20160	218
B05 20160	220
B05 20180	219
B05 20180	220
B05 20220	218
B05 20220	219
B05 20220	220
B05 20260	219
B05 20260	220
B10 01011	316
B10 02011	316
B10 03011	316
B10 04011	316
B10 05011	316
B10 06011	316
B10 07011	316
B30 01010	246
B30 01220	246
B30 02010	246
B30 02200	246
B30 03010	246
B30 04010	246
B30 05010	246
B30 06010	246
B30 07010	246
B30 11010	250
B30 11020	250
B30 12010	250
B30 12020	250
B30 13010	250
B30 13020	250
B30 14010	250
B30 14020	250
B30 15010	250
B30 15020	250
B30 16010	250
B30 16020	250
B30 17010	250
B30 17020	250
B30 17030	250
D00 70020	740
D00 70030	740
D00 70040	740
D00 70050	740
D00 70060	740
D00 70070	740
D00 70130	739
D00 70140	739
D00 70150	739
D00 70160	739
D00 70440	741
D00 70450	741
D00 70460	741
D00 75010	740
D00 75020	740

Order No.	Page
D00 75030	740
D00 75040	740
D00 75050	740
D00 75060	740
D00 75070	740
D00 75120	739
D00 75130	739
D00 75140	739
D00 75150	739
D00 75160	739
D00 75410	741
D00 75420	741
D00 75430	741
D00 75440	741
D00 75450	741
D00 75460	741
D01 20042	742
D01 20052	742
D01 20062	742
D01 25012	742
D01 25022	742
D01 25032	742
D01 25042	742
D01 25052	742
D01 25062	742
D02 10023	720
D02 10033	720
D02 10043	720
D02 10053	720
D02 10063	720
D02 10122	718
D02 10133	718
D02 10143	718
D02 10153	718
D02 10163	718
D02 10173	718
D02 10571	719
D02 10581	719
D02 10591	719
D02 10601	719
D02 10671	721
D02 10681	721
D02 10691	721
D02 10701	721
D02 15023	720
D02 15033	720
D02 15043	720
D02 15053	720
D02 15063	720
D02 15073	720
D02 15122	718
D02 15133	718
D02 15143	718
D02 15153	718
D02 15163	718
D02 15173	718
D02 15571	719
D02 15671	721
D02 15681	721
D02 20001	725
D02 20011	725
D02 20021	725
D02 20031	725
D02 20111	724
D02 20121	724
D02 20131	724
D02 20141	724
D02 25001	725
D02 25011	725
D02 25021	725
D02 25031	725
D02 25041	725
D02 25111	724
D02 25121	724
D02 25131	724
D02 25141	724
D03 15011	728
D03 15021	728
D03 15031	728
D03 15041	728
D03 15051	728
D03 50030	717
D03 50120	716
D03 50130	716

Order No.	Page
D03 50140	716
D03 50150	716
D03 50160	716
D03 55120	716
D03 55130	716
D03 55140	716
D03 55150	716
D03 55160	716
D10 00030	745
D10 00040	745
D10 00050	745
D10 05010	744
D10 05020	744
D10 05030	745
D10 05040	745
D10 05050	745
D10 15010	743
D10 15110	743
D10 15240	743
D20 00000	363
D20 00020	363
D20 00040	363
D20 00060	363
D20 00091	363
D20 00100	364
D20 00120	364
D20 00140	364
D20 00160	364
D20 00171	364
D20 00191	364
D20 00200	365
D20 00220	365
D20 00240	365
D20 00271	365
D20 00400	366
D20 00420	366
D20 00440	366
D20 00460	366
D20 00471	366
D20 00500	367
D20 00520	367
D20 00600	368
D20 00620	368
D20 00640	368
D20 00660	368
D20 00691	368
D20 00791	369
D20 05000	363
D20 05020	363
D20 05060	363
D20 05071	363
D20 05091	363
D20 05100	364
D20 05120	364
D20 05200	365
D20 05220	365
D20 05240	365
D20 05271	365
D20 05291	365
D20 05400	366
D20 05420	366
D20 05440	366
D20 05471	366
D20 05491	366
D20 05500	367
D20 05520	367
D20 05540	367
D20 05560	367
D20 05571	367
D20 05600	368
D20 05620	368
D20 05640	368
D20 05691	368
D20 05700	369
D20 05720	369
D20 05740	369
D20 05760	369
D20 05791	369
D20 05800	369
D20 10030	371
D20 10050	371
D20 10071	371
D20 10091	371
D20 10111	371

Order No.	Page
D20 10131	371
D20 10630	372
D20 10650	372
D20 10691	372
D20 10711	372
D20 10731	372
D20 10810	373
D20 10830	373
D20 10850	373
D20 10891	373
D20 15010	371
D20 15030	371
D20 15050	371
D20 15091	371
D20 15111	371
D20 15131	371
D20 15671	372
D20 15810	373
D20 15830	373
D20 15891	373
D20 20040	374
D20 20060	374
D20 20081	374
D20 20101	374
D20 20220	375
D20 20240	375
D20 20260	375
D20 20281	375
D20 20301	375
D20 20321	375
D20 40000	349
D20 40010	349
D20 40100	350
D20 40210	351
D20 40310	352
D20 40320	352
D20 40410	353
D20 45310	352
D20 50090	363
D20 50120	364
D20 50190	364
D20 50420	366
D20 50490	366
D20 50590	367
D20 50620	368
D20 50690	368
D20 50720	369
D20 50790	369
D20 55090	363
D20 55120	364
D20 55490	366
D20 80360	354
D20 80460	355
D40 00160	331
D40 00170	331
D40 00180	331
D40 00460	333
D40 00470	333
D40 00670	334
D40 00860	335
D40 00870	335
D40 00970	336
D40 01020	337
D40 01040	337
D40 01110	338
D40 01120	338
D40 01140	338
D40 01210	339
D40 01220	339
D40 01240	339
D40 02010	388
D40 02020	388
D40 02030	388
D40 02040	388
D40 05160	331
D40 05170	331
D40 05180	331
D40 05190	331
D40 05260	332
D40 05270	332
D40 05460	333
D40 05470	333
D40 05660	334
D40 05670	334

Order No.	Page
D40 05860	335
D40 05870	335
D40 05970	336
D40 05980	336
D40 06010	337
D40 06020	337
D40 06040	337
D40 06110	338
D40 06140	338
D40 06210	339
D40 06220	339
D40 06240	339
D40 06430	390
D40 06500	340
D40 06520	340
D40 06551	340
D40 06600	341
D40 06610	341
D40 06630	341
D40 06640	341
D40 06700	330
D40 06710	330
D40 06801	330
D40 06811	330
D40 06821	330
D40 06901	330
D40 06911	330
D40 06921	330
D40 07000	388
D40 07010	388
D40 07020	388
D40 07030	388
D40 07130	331
D40 07140	331
D40 07200	389
D40 07210	389
D40 07220	389
D40 07230	389
D40 07240	389
D40 07250	389
D40 50011	320
D40 50020	320
D40 50120	321
D40 50140	321
D40 50820	328
D40 50920	329
D40 50940	329
D40 55020	320
D40 55040	320
D40 55111	321
D40 55120	321
D40 55140	321
D40 55150	321
D40 55160	321
D40 55170	321
D40 55190	343
D40 55211	322
D40 55220	322
D40 55240	322
D40 55311	323
D40 55320	323
D40 55411	324
D40 55420	324
D40 55440	324
D40 55460	324
D40 55511	325
D40 55520	325
D40 55540	325
D40 55611	326
D40 55620	326
D40 55640	326
D40 55720	327
D40 55740	327
D40 55811	328
D40 55820	328
D40 55911	329
D40 55920	329
D40 55940	329
D40 58000	342
D40 58400	342
D40 65011	345
D40 65081	345
D40 65131	345
D40 65180	343

Order No.	Page
D40 65190	343
D50 00800	387
D50 00810	387
D50 50290	153
D50 50300	159
D50 50310	159
D50 55090	153
D50 55100	103
D50 55100	159
D50 55100	162
D50 55110	103
D50 55110	107
D50 55110	159
D50 55110	162
D50 55120	103
D50 55120	107
D50 55120	162
D50 55130	103
D50 55130	107
D50 55300	162
D50 55310	107
D50 55310	162
D50 55320	107
D50 55320	162
D50 55330	107
D52 01100	356
D52 01110	356
D52 06110	356
D52 50090	357
D52 50100	357
D52 50110	357
D52 50120	357
D52 50130	357
D52 55090	357
D52 55100	357
D52 55130	357
D53 05110	166
D53 05120	166
D53 05310	166
D53 05320	166
D53 51430	347
D53 51440	347
D53 53200	153
D53 53220	153
D53 53230	153
D53 53240	153
D53 53350	159
D53 53360	158
D53 53360	159
D53 53370	158
D53 53370	159
D53 53380	158
D53 53380	159
D53 53390	158
D53 53390	159
D53 53400	158
D53 53400	159
D53 53410	158
D53 53410	159
D53 53420	158
D53 53420	159
D53 53430	158
D53 53430	159
D53 56201	102
D53 56211	102
D53 56221	102
D53 56231	102
D53 56410	347
D53 56430	347
D53 56440	347
D54 60030	181
D54 60040	181
D54 60050	181
D54 60060	181
D54 60070	181
D54 60070	183
D54 60070	198
D54 60070	264
D54 60130	181
D54 60140	181
D54 60150	181
D54 60160	181
D54 60170	181
D54 60170	183

Order No.	Page
D54 60330	181
D54 60340	181
D54 60360	181
D54 60370	183
D54 60460	181
D54 60470	181
D54 60470	183
D54 60510	181
D54 60520	181
D54 60560	181
D54 60570	181
D54 60570	183
D54 60610	181
D54 60620	181
D54 60760	181
D54 60770	181
F10 00051	204
F10 00061	204
F10 00071	204
F10 00081	204
F10 00091	204
F10 00101	204
F10 00350	204
F10 00370	204
F10 00380	204
F10 00390	204
F10 00400	204
F10 10021	202
F10 10031	202
F10 10040	202
F10 10050	202
F10 10060	202
F10 11070	202
F10 11080	202
F10 11090	202
F10 11100	202
F10 11110	202
F10 11120	202
F10 11130	202
F51 02350	706
F51 02360	706
F51 34110	706
F51 34120	706
F51 34130	706
G01 63532	183
G01 63542	183
G01 63552	183
G01 70552	180
G01 70562	180
G01 71022	180
G01 71072	180
G01 71132	180
G01 71522	180
G01 71622	180
G01 72022	180
G01 72122	180
G01 72522	180
G01 72622	180
G01 73032	180
G01 73042	180
G01 73122	180
G01 73562	180
G01 73572	180
G03 10281	183
G03 10291	183
G03 10301	183
G03 50510	197
G03 50520	197
G03 50530	197
G03 50540	197
G03 50550	197
G03 50560	197
G03 50570	197
G03 60510	197
G03 60520	197
G03 60530	197
G03 60540	197
G03 60550	197
G03 60560	197
G03 60570	197
G03 70011	181
G03 70021	181

Order No.	Page
G03 70031	181
G03 70041	181
G03 70061	181
G03 70071	181
G03 70081	181
G03 70091	181
G03 70141	180
G03 70150	180
G03 70160	180
G03 70170	180
G03 70180	180
G03 70190	180
G03 70200	180
G03 70210	180
G03 70220	180
G03 70230	180
G03 70240	180
G03 70250	180
G03 70260	180
G03 70330	180
G03 80021	180
G03 80030	180
G03 80040	180
G03 80050	180
G03 80060	180
G03 80070	180
G03 80080	180
G03 80090	180
G03 80100	180
G03 80110	180
G03 80120	180
G03 80310	180
G04 00500	196
G04 01000	196
G04 01010	196
G04 01500	196
G04 01510	196
G04 02000	196
G04 02010	196
G04 02020	196
G04 02500	196
G04 02510	196
G04 03000	196
G04 03010	196
G04 03500	196
G05 00100	198
G05 00100	264
G05 10100	198
G05 10100	264
G05 10110	198
G05 10110	264
G05 20100	198
G05 20100	264
G10 10111	242
G10 10111.15	234
G10 10111.15	242
G10 10121	242
G10 10121.15	242
G10 10131	242
G10 10131.15	234
G10 10131.15	242
G10 10141	242
G10 10141.15	242
G10 10151	242
G10 10151.15	242
G10 10161	242
G10 10161.15	242
G10 10611	242
G10 10621	242
G10 10631	242
G10 10641	242
G10 10651	242
G10 10661	242
G10 12060	234
G10 12070	234
G10 12080	234
G10 12621	234
G10 12711	234
G10 12731	234
G10 12841	234
G10 12861	234
H01 15010	746
H01 15020	746

Order No.	Page
H01 15030	748
H01 15110	747
H01 15110	748
H01 15120	748
H01 15130	747
H05 25110	729
H05 25120	729
H05 25210	735
H05 25220	735
H05 25230	735
H05 35010	735
H05 35020	735
H05 35030	735
H05 35040	735
H05 35050	735
H05 35060	735
H05 65010	729
H05 65020	729
H10 15010.91	746
H10 15020.02	746
H10 15020.91	746
H10 15110.02	747
H10 15110.91	747
H10 15130.02	747
H10 15130.91	747
H10 15210.91	748
H10 15220.91	748
H10 15230.91	748
H10 15240.91	748
H10 15250.91	748
H10 15260.91	748
H10 15270.91	748
H10 15280.91	748
H10 15290.91	748
H10 15300.91	748
H15 21100.93	730
H15 21110.02	237
H15 21110.02	730
H15 21110.21	237
H15 21110.21	730
H15 21110.93	730
H15 21120.02	237
H15 21120.02	730
H15 21120.21	237
H15 21120.21	730
H15 21120.93	730
H15 21130.21	237
H15 21130.21	730
H15 21130.93	730
H15 21140.21	237
H15 21140.21	730
H15 21140.93	730
H15 21150.02	730
H15 21150.93	730
H15 21160.02	730
H15 21160.21	730
H15 21160.93	730
H15 21200.93	731
H15 21210.02	731
H15 21210.93	731
H15 21220.93	731
H15 21230.21	731
H15 21230.93	731
H15 21240.21	731
H15 21240.93	731
H15 21250.93	731
H15 21260.02	731
H15 21260.21	731
H15 21260.93	731
H15 21310.93	732
H15 21320.93	732
H15 21330.02	732
H15 21330.93	732
H15 21340.21	732
H15 21340.93	732
H15 21350.93	732
H15 21360.02	732
H15 21360.93	732
H15 21410.93	733
H15 21420.02	733
H15 21420.21	733
H15 21420.93	733
H15 21430.02	733
H15 21430.93	733

Numerical index

Order No.	Page
H15 21440.93	733
H15 21450.93	733
H15 21460.21	733
H15 21460.93	733
H15 21530.02	734
H15 21530.93	734
H15 21540.02	734
H15 21540.93	734
H15 21550.93	734
H15 21560.02	734
H15 21560.93	734
H15 22110.93	730
H15 22120.21	730
H15 22130.93	730
H15 22140.93	730
H15 22150.02	730
H15 23110.02	730
H15 23110.21	730
H15 23110.93	730
H15 23120.02	730
H15 23120.21	730
H15 23120.93	730
H15 23130.21	730
H15 23130.93	730
H15 23140.21	730
H15 23140.93	730
H15 23150.02	730
H15 23150.93	730
H15 23160.21	730
H15 23160.93	730
H15 23220.93	731
H15 23230.02	731
H15 23240.93	731
H15 23250.02	731
H15 23250.93	731
H15 23260.93	731
H15 23330.93	732
H15 23340.93	732
H15 23350.93	732
H15 23360.93	732
H15 23450.93	733
H15 31010.91	735
H15 31020.91	735
H15 31030.91	735
H15 31040.91	736
H15 31050.91	736
H15 31110.91	735
H15 31120.91	735
H15 31130.91	735
H15 31140.91	736
H15 31150.91	736
H15 31210.91	735
H15 31220.91	735
H15 31230.91	735
H15 31240.91	736
H15 31250.91	736
H15 31310.91	735
H15 31320.91	735
H15 31330.91	735
H15 31340.91	736
H15 31350.91	736
H15 31410.91	735
H15 31430.91	735
H15 31440.91	736
H15 31510.91	735
H15 31520.91	735
H15 31530.91	735
H15 31540.91	736
H15 31550.91	736
H15 32030.91	736
H15 32040.91	736
H15 32120.91	736
H15 32130.91	736
H15 32220.91	736
H15 32230.91	736
H15 32240.91	736
H15 32330.91	736
H15 32540.91	736
H15 32550.91	736
H50 01240	754
H50 01281	754
H50 01640	754
H50 01681	754
H50 21640	754

Order No.	Page
H50 21680	754
H50 23240	754
H50 23280	754
H51 31100.0182	756
H51 31150.0182	756
H51 31200.0182	756
H51 32100.0182	756
H51 32150.0182	756
H51 32200.0182	756
H51 41100.0182	756
H51 41150.0182	756
H51 41200.0182	756
H51 41250.0182	756
H51 42100.0182	756
H51 42150.0182	756
H51 42200.0182	756
H51 42250.0182	756
H51 51100.0282	756
H51 51150.0282	756
H51 51200.0282	756
H51 51250.0282	756
H51 51300.0282	756
H51 52100.0282	756
H51 52150.0282	756
H51 52200.0282	756
H51 52250.0282	756
H51 52300.0282	756
H51 61150.0282	756
H51 61200.0282	756
H51 61250.0282	756
H51 61300.0282	756
H51 61350.0282	756
H51 62150.0282	756
H51 62200.0282	756
H51 62250.0282	756
H51 62300.0282	756
H51 62350.0282	756
H51 81150.0282	756
H51 81200.0282	756
H51 81250.0282	756
H51 81300.0282	756
H51 81350.0282	756
H51 81400.0282	756
H51 82150.0282	756
H51 82200.0282	756
H51 82250.0282	756
H51 82300.0282	756
H51 82350.0282	756
H51 82400.0282	756
H52 31100.1082	758
H52 31150.1082	758
H52 32100.1082	758
H52 32150.1082	758
H52 41100.1082	758
H52 41150.1082	758
H52 41200.1082	758
H52 42100.1082	758
H52 42150.1082	758
H52 42200.1082	758
H52 42250.1082	758
H52 51150.1082	758
H52 51150.2082	758
H52 51200.1082	758
H52 51200.1582	758
H52 51200.2082	758
H52 51300.1082	758
H52 52100.1082	758
H52 52100.1582	758
H52 52100.2082	758
H52 52150.1082	758
H52 52150.2082	758
H52 52200.1082	758
H52 52200.1582	758
H52 52200.2082	758
H52 52250.1082	758
H52 52250.1582	758
H52 52250.2082	758
H52 52300.1082	758
H52 52300.2082	758
H52 61150.1082	758
H52 61150.1582	758
H52 61150.2082	758
H52 61200.1082	758
H52 61200.1582	758

Order No.	Page
H52 61200.2082	758
H52 61250.2082	758
H52 61300.1082	758
H52 61300.2082	758
H52 61350.1082	758
H52 62150.1082	758
H52 62150.1582	758
H52 62150.2082	758
H52 62200.1082	758
H52 62200.1582	758
H52 62200.2082	758
H52 62250.1082	758
H52 62250.2082	758
H52 62300.1082	758
H52 62300.1582	758
H52 62300.2082	758
H52 62350.1082	758
H52 62350.1582	758
H52 62350.2082	758
H52 81150.1082	758
H52 81150.1582	758
H52 81150.2082	758
H52 81200.1082	758
H52 81200.1582	758
H52 81200.2082	758
H52 81250.1082	758
H52 81250.1582	758
H52 81250.2082	758
H52 81300.2082	758
H52 81350.2082	758
H52 81400.1582	758
H52 81400.2082	758
H52 82150.1082	758
H52 82150.1582	758
H52 82150.2082	758
H52 82200.1082	758
H52 82200.1582	758
H52 82200.2082	758
H52 82250.1082	758
H52 82250.1582	758
H52 82250.2082	758
H52 82300.1082	758
H52 82300.1582	758
H52 82300.2082	758
H52 82350.1082	758
H52 82350.1582	758
H52 82350.2082	758
H52 82400.1082	758
H52 82400.1582	758
H52 82400.2082	758
H54 51150.1082	764
H54 52150.1082	764
H54 62150.1282	764
H54 82150.1582	764
H54 82150.1782	764
H55 31100.0182	760
H55 32100.0182	760
H55 32150.0182	760
H55 41200.0182	760
H55 42150.0182	760
H55 42200.0182	760
H55 51150.0282	760
H55 51200.0282	760
H55 52150.0282	760
H55 52250.0282	760
H55 61300.0282	760
H55 62200.0282	760
H55 62300.0282	760
H55 81200.0282	760
H55 82400.0282	760
H56 31100.0140	762
H56 32100.0140	762
H56 41121.0140	762
H56 42121.0140	762
H56 51151.0140	762
H56 52151.0140	762
H56 61201.0140	762
H56 62201.0140	762
H56 81251.0140	762
H56 82251.0140	762
H60 17500.2715	915
H60 17500.84	915
H60 17500.8440	915
H60 17700.8440	915

Order No.	Page
H60 17800.84	915
H60 18000.84	915
H60 18000.8440	915
H60 18100.8440	915
H60 18500.84	915
H60 18500.8440	915
H60 19000.2715	915
H60 19000.84	915
H60 19000.8440	915
H60 19100.8440	915
H60 19500.2715	915
H60 19500.84	915
H60 19500.8440	915
H60 19800.2715	915
H60 20000.2715	915
H60 20000.8440	915
H60 20500.2715	915
H60 20500.84	915
H60 20700.8440	915
H60 20800.2715	915
H60 21000.2715	915
H60 21000.84	915
H60 21000.8440	915
H60 21100.2715	915
H60 21100.84	915
H60 21300.84	916
H60 21500.2715	916
H60 21500.8440	916
H60 21700.2715	916
H60 21800.2715	916
H60 21800.8440	916
H60 22000.2715	916
H60 22000.84	916
H60 22000.8440	916
H60 22100.84	916
H60 22200.84	916
H60 22200.8440	916
H60 22400.84	916
H60 22500.84	916
H60 22600.84	916
H60 22700.8440	916
H60 23000.2715	916
H60 23000.84	916
H60 23000.8440	916
H60 23500.84	916
H60 23500.8440	916
H60 23800.2715	916
H60 23800.84	916
H60 24000.2715	916
H60 24000.84	916
H60 24000.8440	916
H60 24500.2715	916
H60 24500.84	916
H60 24600.2715	916
H60 24800.84	916
H60 24900.2715	916
H60 25000.2715	916
H60 25000.84	916
H60 25000.8440	916
H60 25100.84	916
H60 25500.84	917
H60 25700.84	917
H60 25700.8440	917
H60 25800.2715	917
H60 25900.8440	917
H60 26000.2715	917
H60 26000.84	917
H60 26000.8440	917
H60 26500.2715	917
H60 26500.84	917
H60 26500.8440	917
H60 26700.84	917
H60 27000.2715	917
H60 27000.84	917
H60 27000.8440	917
H60 27100.2715	917
H60 27100.84	917
H60 27500.8440	917
H60 28000.2715	917
H60 28000.84	917
H60 28000.8440	917
H60 28100.84	917
H60 28200.84	917
H60 28300.2715	917

Order No.	Page
H60 28500.2715	917
H60 28500.84	917
H60 28500.8440	917
H60 28600.84	917
H60 29000.2715	917
H60 29100.84	917
H60 29300.8440	918
H60 29500.2715	918
H60 29500.84	918
H60 29500.8440	918
H60 29700.2715	918
H60 29700.84	918
H60 29700.8440	918
H60 29800.84	918
H60 30000.2715	918
H60 30000.84	918
H60 30000.8440	918
H60 30100.84	918
H60 30500.2715	918
H60 30500.84	918
H60 30700.8440	918
H60 30800.2715	918
H60 31000.2715	918
H60 31000.8440	918
H60 31100.84	918
H60 31500.84	918
H60 31800.2715	918
H60 31800.84	918
H60 32000.2715	918
H60 32000.84	918
H60 32000.8440	918
H60 32100.8440	918
H60 32700.8440	918
H60 32900.8440	918
H60 33000.2715	918
H60 33000.84	918
H60 33000.8440	918
H60 33100.84	918
H60 33400.2715	919
H60 33700.84	919
H60 34000.2715	919
H60 34500.8440	919
H60 34900.84	919
H60 35000.2715	919
H60 35000.84	919
H60 35000.8440	919
H60 35200.8440	919
H60 35300.2715	919
H60 35300.8440	919
H60 35500.2715	919
H60 35700.84	919
H60 36000.84	919
H60 36000.8440	919
H60 36100.84	919
H60 36500.84	919
H60 36800.2715	919
H60 37000.2715	919
H60 37000.84	919
H60 37100.2715	919
H60 37500.2715	920
H60 37500.84	920
H60 37500.8440	920
H60 38000.84	920
H60 39000.2715	920
H60 39200.2715	920
H60 39300.8440	920
H60 39500.2715	920
H60 39700.84	920
H60 40000.2715	920
H60 40000.8440	920
H60 42000.2715	921
H60 42000.8440	921
H60 43000.2715	921
H60 43000.84	921
H60 44000.2715	921
H62 20100.7710	915
H62 21000.7710	915
H62 25000.7710	916
H62 31200.7710	918
H62 39200.7710	920
H75 10000.018425	22
H75 10000.018425	922
H75 10100.018425	22
H75 10100.018425	922

Order No.	Page
H75 10200.018425	22
H75 10200.018425	922
H75 10300.018425	22
H75 10300.018425	922
H75 10400.018425	22
H75 10400.018425	922
H75 10500.018425	22
H75 10500.018425	922
H75 10600.018425	22
H75 10600.018425	922
H75 10700.018425	22
H75 10700.018425	922
H75 10800.018425	22
H75 10800.018425	922
H75 10900.018425	22
H75 10900.018425	922
H75 11000.018425	22
H75 11000.018425	922
H75 11100.018425	22
H75 11100.018425	922
H75 11200.018425	22
H75 11200.018425	922
H75 11300.018425	22
H75 11300.018425	922
H75 11400.018425	22
H75 11400.018425	922
H75 11500.018425	22
H75 11500.018425	922
H75 11600.018425	22
H75 11600.018425	922
H75 11700.018425	22
H75 11700.018425	922
H75 11800.018425	22
H75 11800.018425	922
H75 11900.018425	22
H75 11900.018425	922
H75 12000.018425	22
H75 12000.018425	922
H75 12100.018425	22
H75 12100.018425	922
H75 12200.018425	22
H75 12200.018425	922
H75 12300.018425	22
H75 12300.018425	922
H75 12400.018425	22
H75 12400.018425	922
H75 12500.018425	22
H75 12500.018425	922
H75 12600.018425	22
H75 12600.018425	922
H75 12700.018425	22
H75 12700.018425	922
H75 12800.018425	22
H75 12800.018425	922
H75 12900.018425	22
H75 12900.018425	922
H75 13000.018425	22
H75 13000.018425	922
H75 13100.018425	22
H75 13100.018425	922
H75 13200.018425	22
H75 13200.018425	922
H75 13300.018425	22
H75 13300.018425	922
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H75 13400.018425	922
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H75 13500.018425	922
H75 13600.018425	22
H75 13600.018425	922
H75 13700.018425	22
H75 13700.018425	922
H75 13800.018425	22
H75 13800.018425	922
H75 13900.018425	22
H75 13900.018425	922
H75 14000.018425	24
H75 14000.018425	923
H75 14100.018425	24
H75 14100.018425	923
H75 14200.018425	24
H75 14200.018425	923
H75 14300.018425	24
H75 14300.018425	923
H75 14400.018425	24
H75 14400.018425	923
H75 14500.018425	24
H75 14500.018425	923
H75 14600.018425	24
H75 14600.018425	923
H75 14700.018425	24
H75 14700.018425	923
H75 14800.018425	24
H75 14800.018425	923
H75 14900.018425	24
H75 14900.018425	923
H75 15000.018425	24
H75 15000.018425	923
H75 15100.018425	24
H75 15100.018425	923
H75 15200.018425	24
H75 15200.018425	923
H75 15300.018425	24
H75 15300.018425	923
H75 15400.018425	24
H75 15400.018425	923
H75 15500.018425	24
H75 15500.018425	923
H75 15600.018425	24
H75 15600.018425	923
H75 15700.018425	24
H75 15700.018425	923
H75 15800.018425	24
H75 15800.018425	923
H75 15900.018425	24
H75 15900.018425	923
H75 16000.018425	24
H75 16000.018425	923
H75 16100.018425	24
H75 16100.018425	923
H75 16200.018425	24
H75 16200.018425	923
H75 16300.018425	24
H75 16300.018425	923
H75 16400.018425	24
H75 16400.018425	923
H75 16500.018425	24
H75 16500.018425	923
H75 16600.018425	24
H75 16600.018425	923
H75 16700.018425	24
H75 16700.018425	923
H75 16800.018425	24
H75 16800.018425	923
H75 16900.018425	24
H75 16900.018425	923
H75 17000.018425	26
H75 17000.018425	923
H75 17100.018425	26
H75 17100.018425	923
H75 17200.018425	26
H75 17200.018425	923
H75 17300.018425	26
H75 17300.018425	923
H75 17400.018425	26
H75 17400.018425	923
H75 17500.018425	26
H75 17500.018425	923
H75 17600.018425	26
H75 17600.018425	923
H75 17700.018425	26
H75 17700.018425	923
H75 17800.018425	26
H75 17800.018425	923
H75 17900.018425	26
H75 17900.018425	923
H75 18000.018425	26
H75 18000.018425	924
H75 18100.018425	26
H75 18100.018425	924
H75 18200.018425	26
H75 18200.018425	924
H75 18300.018425	26
H75 18300.018425	924
H75 18400.018425	26
H75 18400.018425	924
H75 18500.018425	26
H75 18500.018425	924
H75 18600.018425	26
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H75 18700.018425	26
H75 18700.018425	924
H75 18800.018425	26
H75 18800.018425	924
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H75 19000.018425	26
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H75 19100.018425	924
H75 19200.018425	26
H75 19200.018425	924
H75 19300.018425	26
H75 19300.018425	924
H75 19400.018425	26
H75 19400.018425	924
H75 19500.018425	26
H75 19500.018425	924
H75 19600.018425	26
H75 19600.018425	924
H75 19700.018425	26
H75 19700.018425	924
H75 19800.018425	26
H75 19800.018425	924
H75 19900.018425	26
H75 19900.018425	924
H75 20000.018425	26
H75 20000.018425	924
H75 20100.018425	26
H75 20100.018425	924
H75 20200.018425	26
H75 20200.018425	924
H75 20300.018425	26
H75 20300.018425	924
H75 20400.018425	26
H75 20400.018425	924
H75 20500.018425	26
H75 20500.018425	924
H76 10000.012725	22
H76 10000.012725	922
H76 10100.012725	22
H76 10100.012725	922
H76 10200.012725	22
H76 10200.012725	922
H76 10300.012725	22
H76 10300.012725	922
H76 10400.012725	22
H76 10400.012725	922
H76 10500.012725	22
H76 10500.012725	922
H76 10600.012725	22
H76 10600.012725	922
H76 10700.012725	22
H76 10700.012725	922
H76 10800.012725	22
H76 10800.012725	922
H76 10900.012725	22
H76 10900.012725	922
H76 11000.012725	22
H76 11000.012725	922
H76 11100.012725	22
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H76 11900.012725	922
H76 12000.012725	22
H76 12000.012725	922
H76 12100.012725	22
H76 12100.012725	922
H76 12200.012725	22
H76 12200.012725	922
H76 12300.012725	22
H76 12300.012725	922
H76 12400.012725	22
H76 12400.012725	922
H76 12500.012725	22
H76 12500.012725	922
H76 12600.012725	22
H76 12600.012725	922
H76 12700.012725	22
H76 12700.012725	922
H76 12800.012725	22
H76 12800.012725	922
H76 12900.012725	22
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H76 13000.012725	22
H76 13000.012725	922
H76 13100.012725	22
H76 13100.012725	922
H76 13200.012725	22
H76 13200.012725	922
H76 13300.012725	22
H76 13300.012725	922
H76 13400.012725	22
H76 13400.012725	922
H76 13500.012725	22
H76 13500.012725	922
H76 13600.012725	22
H76 13600.012725	922
H76 13700.012725	22
H76 13700.012725	922
H76 13800.012725	22
H76 13800.012725	922
H76 13900.012725	22
H76 13900.012725	922
H76 14000.012725	24
H76 14000.012725	923
H76 14100.012725	24
H76 14100.012725	923
H76 14200.012725	24
H76 14200.012725	923
H76 14300.012725	24
H76 14300.012725	923
H76 14400.012725	24
H76 14400.012725	923
H76 14500.012725	24
H76 14500.012725	923
H76 14600.012725	24
H76 14600.012725	923
H76 14700.012725	24
H76 14700.012725	923
H76 14800.012725	24
H76 14800.012725	923
H76 14900.012725	24
H76 14900.012725	923
H76 15000.012725	24
H76 15000.012725	923
H76 15100.012725	24
H76 15100.012725	923
H76 15200.012725	24
H76 15200.012725	923
H76 15300.012725	24
H76 15300.012725	923
H76 15400.012725	24
H76 15400.012725	923
H76 15500.012725	24
H76 15500.012725	923
H76 15600.012725	24
H76 15600.012725	923
H76 15700.012725	24
H76 15700.012725	923
H76 15800.012725	24
H76 15800.012725	923
H76 15900.012725	24
H76 15900.012725	923
H76 16000.012725	24
H76 16000.012725	923
H76 16100.012725	24
H76 16100.012725	923
H76 16200.012725	24
H76 16200.012725	923
H76 16300.012725	24
H76 16300.012725	923
H76 16400.012725	24
H76 16400.012725	923
H76 16500.012725	24
H76 16500.012725	923
H76 16600.012725	24
H76 16600.012725	923
H76 16700.012725	24
H76 16700.012725	923
H76 16800.012725	24
H76 16800.012725	923
H76 16900.012725	24
H76 16900.012725	923
H76 17000.012725	26
H76 17000.012725	923
H76 17100.012725	26
H76 17100.012725	923
H76 17200.012725	26
H76 17200.012725	923
H76 17300.012725	26
H76 17300.012725	923
H76 17400.012725	26
H76 17400.012725	923
H76 17500.012725	26
H76 17500.012725	923
H76 17600.012725	26
H76 17600.012725	923
H76 17700.012725	26
H76 17700.012725	923
H76 17800.012725	26
H76 17800.012725	923
H76 17900.012725	26
H76 17900.012725	923
H76 18000.012725	26
H76 18000.012725	924
H76 18100.012725	26
H76 18100.012725	924
H76 18200.012725	26
H76 18200.012725	924
H76 18300.012725	26
H76 18300.012725	924
H76 18400.012725	26
H76 18400.012725	924
H76 18500.012725	26
H76 18500.012725	924
H76 18600.012725	26
H76 18600.012725	924
H76 18700.012725	26
H76 18700.012725	924
H76 18800.012725	26
H76 18800.012725	924
H76 18900.012725	26
H76 18900.012725	924
H76 19000.012725	26
H76 19000.012725	924
H76 19100.012725	26
H76 19100.012725	924
H76 19200.012725	26
H76 19200.012725	924
H76 19300.012725	26
H76 19300.012725	924
H76 19400.012725	26
H76 19400.012725	924
H76 19500.012725	26
H76 19500.012725	924
H76 19600.012725	26
H76 19600.012725	924
H76 19700.012725	26
H76 19700.012725	924
H76 19800.012725	26
H76 19800.012725	924
H76 19900.012725	26
H76 19900.012725	924
H76 20000.012725	26
H76 20000.012725	924
H76 20100.012725	26
H76 20100.012725	924
H76 20200.012725	26
H76 20200.012725	924
H76 20300.012725	26
H76 20300.012725	924
H76 20400.012725	26
H76 20400.012725	924
H76 20500.012725	26
H76 20500.012725	924

Numerical index

Order No.	Page
H80 32000.012710	200
H80 32000.016110	200
H80 35000.012710	200
H80 35000.016110	200
H80 37500.012710	200
H80 37500.016110	200
H80 40000.012710	200
H80 40000.016110	200
H80 42000.012710	200
H80 42000.016110	200
H80 44000.012710	200
H80 44000.016110	200
H80 46000.012710	200
H80 46000.016110	200
H80 48000.012710	200
H80 48000.016110	200
H80 50000.012710	200
H80 50000.016110	200
H80 52000.012710	200
H80 52000.016110	200
H80 54000.012710	200
H80 54000.016110	200
H80 56000.012710	200
H80 56000.016110	200
H80 58000.012710	200
H80 58000.016110	200
H80 60000.012710	200
H80 60000.016110	200
H80 62000.012710	200
H80 62000.016110	200
H80 67000.012710	200
H80 67000.016110	200
H80 72000.012710	200
H80 72000.016110	200
H80 77000.012710	200
H80 77000.016110	200
H80 82000.012710	200
H80 82000.016110	200
H80 87000.012710	200
H80 87000.016110	200
H80 92000.012710	200
H80 92000.016110	200
H80 97000.012710	200
H80 97000.016110	200
L01 00001	948
L01 00011	948
L01 00031	948
L01 00041	948
L01 00051	948
L01 00800	948
L01 00900	948
L01 00910	948
L01 00930	948
L01 00940	948
L01 00950	948
L01 01000	948
L01 01100	948
L01 02041	775
L01 02051	775
L01 02061	775
L01 03990	148
L01 04000	148
L01 04010	148
L01 04020	148
L01 04020	150
L01 04150	150
L01 04160	150
L01 04190	148
L01 04190	150
L01 04240	150
L01 04300	158
L01 04310	152
L01 04350	158
L01 04370	152
L01 04450	152
L01 04450	158
L01 10431	236
L01 10441	236
L01 13201	817
L01 13211	817
L01 13221	817
L01 13231	817
L01 13241	817

Order No.	Page
L01 13251	817
L01 13261	817
L01 13271	817
L01 13281	817
L01 13291	817
L01 13301	817
L01 13321	817
L01 13331	817
L01 13501	817
L01 13511	817
L01 13521	817
L01 13531	817
L01 13541	817
L01 13551	817
L01 13561	817
L01 13571	817
L01 13581	817
L01 14201	511
L01 14201	817
L01 14211	511
L01 14211	817
L01 14221	511
L01 14221	817
L01 14231	511
L01 14231	817
L01 14241	511
L01 14241	817
L01 14251	511
L01 14251	817
L01 14261	511
L01 14261	817
L01 14271	511
L01 14271	817
L01 14281	511
L01 14281	817
L01 14291	511
L01 14291	817
L01 14301	511
L01 14301	817
L01 14311	511
L01 14311	817
L01 14321	511
L01 14321	817
L01 14331	511
L01 14331	817
L01 14410	511
L01 14410	817
L01 14420	511
L01 14420	817
L01 14430	511
L01 14430	817
L01 14450	511
L01 14450	817
L01 14460	511
L01 14460	817
L01 14470	511
L01 14470	817
L01 14521	511
L01 14521	817
L01 14531	511
L01 14531	817
L01 14541	817
L01 14551	511
L01 14551	817
L01 14561	511
L01 14561	817
L01 14571	511
L01 14571	817
L01 14581	511
L01 14581	817
L02 30170	320
L02 30170	321
L02 30170	322
L02 30170	323
L02 30170	324
L02 30170	325
L02 30170	326
L02 30170	328
L02 30170	329
L02 30170	330
L02 30170	331
L02 30170	332
L02 30170	333
L02 30170	334

Order No.	Page
L02 30170	335
L02 30170	336
L02 30170	337
L02 30170	338
L02 30170	339
L02 30170	340
L02 30170	341
L02 11000	745
L02 11010	745
L02 11040	744
L02 11040	745
L02 11110	743
L02 20010	337
L02 20010	340
L02 20040	337
L02 20110	338
L02 20120	338
L02 20140	338
L02 20220	321
L02 20220	330
L02 20220	331
L02 20220	341
L02 20220	388
L02 20220	390
L02 20250	321
L02 20250	331
L02 20250	341
L02 20310	321
L02 20310	322
L02 20310	324
L02 20310	325
L02 20310	326
L02 20310	328
L02 20310	329
L02 20310	330
L02 20310	331
L02 20310	332
L02 20310	333
L02 20310	334
L02 20310	335
L02 20310	336
L02 20310	341
L02 20310	388
L02 20310	389
L02 20410	323
L02 20420	323
L02 20520	324
L02 20520	330
L02 20540	324
L02 20540	330
L02 20720	328
L02 20720	337
L02 20810	339
L02 20820	339
L02 20840	339
L02 20920	320
L02 20920	325
L02 20920	326
L02 20920	329
L02 20920	336
L02 21040	337
L02 21110	338
L02 21140	338
L02 21200	331
L02 21200	333
L02 21200	335
L02 21220	321
L02 21220	331
L02 21220	388
L02 21720	328
L02 21720	337
L02 21810	339
L02 21820	339
L02 21840	339
L02 21940	329
L02 30010	321
L02 30010	324
L02 30010	331
L02 30010	332
L02 30010	333
L02 30010	334
L02 30010	335
L02 30010	340
L02 30010	388

Order No.	Page
L02 30010	389
L02 30020	320
L02 30020	321
L02 30020	322
L02 30020	323
L02 30020	324
L02 30020	325
L02 30020	326
L02 30020	327
L02 30020	328
L02 30020	329
L02 30020	330
L02 30020	331
L02 30020	332
L02 30020	333
L02 30020	334
L02 30020	335
L02 30020	336
L02 30020	337
L02 30020	338
L02 30020	339
L02 30020	340
L02 30020	341
L02 30020	342
L02 30020	345
L02 30020	388
L02 30020	389
L02 30020	390
L02 30030	320
L02 30030	321
L02 30030	322
L02 30030	324
L02 30030	325
L02 30030	326
L02 30030	327
L02 30030	329
L02 30030	330
L02 30030	331
L02 30030	337
L02 30030	338
L02 30030	339
L02 30030	340
L02 30030	341
L02 30030	388
L02 30030	389
L02 30100	321
L02 30100	324
L02 30100	331
L02 30100	332
L02 30100	333
L02 30100	334
L02 30100	335
L02 30100	340
L02 30111	321
L02 30111	324
L02 30111	331
L02 30111	332
L02 30111	333
L02 30111	334
L02 30111	335
L02 30111	340
L02 30111	389
L02 30121	320
L02 30121	321
L02 30121	322
L02 30121	323
L02 30121	324
L02 30121	325
L02 30121	326
L02 30121	328
L02 30121	329
L02 30121	330
L02 30121	331
L02 30121	332
L02 30121	333
L02 30121	334
L02 30121	335
L02 30121	336
L02 30121	338
L02 30121	339
L02 30121	340
L02 30121	341
L02 30121	389
L02 30130	320

Order No.	Page
L02 30130	321
L02 30130	322
L02 30130	323
L02 30130	324
L02 30130	325
L02 30130	326
L02 30130	327
L02 30130	328
L02 30130	329
L02 30130	330
L02 30130	331
L02 30130	336
L02 30130	337
L02 30130	338
L02 30130	339
L02 30130	341
L02 30130	343
L02 30130	388
L02 30130	389
L02 30130	390
L02 30140	321
L02 30140	322
L02 30140	324
L02 30140	325
L02 30140	326
L02 30140	327
L02 30140	329
L02 30140	330
L02 30140	331
L02 30140	337
L02 30140	338
L02 30140	339
L02 30140	340
L02 30140	341
L02 30140	342
L02 30140	343
L02 30140	388
L02 30140	389
L02 30160	321
L02 30160	331
L02 30160	341
L02 30160	389
L02 30300	166
L02 30851	343
L02 30860	343
L02 30880	343
L02 30890	343
L02 30920	780
L02 30920	784
L02 30920	785
L02 30920	788
L02 30920	791
L02 30920	792
L02 30930	780
L02 30930	785
L02 30940	780
L02 30940	784
L02 30940	785
L02 30940	788
L02 30940	791
L02 30940	792
L02 31010	345
L02 31020	345
L05 01010	378
L05 01020	246
L05 01020	379
L05 01020	381
L05 01020	382
L05 01020	392
L05 01030	246
L05 01030	379
L05 01030	381
L05 01030	382
L05 01030	392
L05 01040	246
L05 01040	379
L05 01040	381
L05 01040	382
L05 01040	392
L05 01050	246
L05 01050	379
L05 01050	381
L05 01060	246
L05 01060	379

Order No.	Page
L05 01060	381
L05 01070	246
L05 01070	379
L05 01070	381
L05 01110	218
L05 01110	219
L05 01120	218
L05 01120	219
L05 01240	218
L05 01240	219
L05 02020	815
L05 02030	815
L05 02040	815
L05 02050	815
L05 02060	815
L05 02070	815
L05 10170	23
L05 10170	25
L05 10170	27
L07 01020	945
L07 01030	945
L07 01040	945
L07 01050	776
L07 01050	778
L07 01050	945
L07 01060	776
L07 01060	945
L07 01070	945
L07 01080	778
L07 01080	945
L07 01440	945
L07 01450	776
L07 01450	945
L07 01460	776
L07 01460	945
L07 01480	945
L07 01730	945
L07 01740	945
L07 01750	945
L07 01761	778
L07 01761	945
L07 01771	945
L07 01790	778
L07 02040	946
L07 02050	946
L07 02060	946
L07 02070	946
L07 02080	946
M01 00001	801
M01 00011	801
M01 00021	801
M03 00115	254
M03 00515	254
M03 01025	256
M03 01535	256
M03 02045	256
M03 02555	256
M03 10011	255
M03 10021	255
M03 10033	224
M03 10033	257
M03 10033	259
M03 10043	224
M03 10043	226
M03 10043	228
M03 10043	257
M03 10043	259
M03 10063	257
M03 10070	261
M03 11100	255
M03 11110	255
M03 11120	224
M03 11120	257
M03 11120	259
M03 11130	224
M03 11130	226
M03 11130	228
M03 11130	257
M03 11200	255
M03 11210	255
M03 11230	225
M03 11230	227
M03 11230	229

Order No.	Page
M03 11230	257
M03 11230	259
M03 11250	257
M03 11260	261
M03 11310	255
M03 11320	225
M03 11320	257
M03 11320	259
M03 11330	225
M03 11330	227
M03 11330	229
M03 11330	257
M03 11330	259
M03 11350	257
M03 12000	255
M03 12020	224
M03 12020	257
M03 12020	259
M03 12030	224
M03 12030	226
M03 12030	228
M03 12030	257
M03 12030	259
M03 12120	224
M03 12120	257
M03 12120	259
M03 12130	224
M03 12130	226
M03 12130	228
M03 12130	257
M03 12130	259
M03 12160	261
M03 12210	255
M03 12220	225
M03 12220	257
M03 12220	259
M03 12230	225
M03 12230	227
M03 12230	229
M03 12230	257
M03 12230	259
M03 12260	261
M03 12300	255
M03 12320	225
M03 12320	257
M03 12320	259
M03 12330	225
M03 12330	227
M03 12330	229
M03 12330	257
M03 12330	259
M03 12350	257
M03 12360	261
M03 20090	260
M03 20100	260
M03 20110	260
M03 20120	260
M03 20140	258
M03 20150	258
M03 20160	258
M03 20170	258
M03 20180	258
M03 20190	258
M04 30000	219
M04 30000	219
M04 30000.20	219
M04 30000.23	219
M04 30000.24	219
M04 30010	219
M04 30100	219
M04 30110	219
M05 00010	218
M05 01000	218
M05 20101	218
M05 20101	219
M05 20101	221
M05 20110	221
M05 20151	218
M05 20151	219
M05 20151	221
M05 20151	222
M05 20151	223
M05 21100	224
M05 21150	224

Order No.	Page
M05 21150	226
M05 21150	228
M05 80101	218
M05 80101	219
M05 80101	223
M05 80101	228
M05 80200	223
M05 80200	228
M05 80300	223
M05 80300	228
M05 80400	223
M05 80400	228
M05 80500	223
M05 80500	228
M05 80510	223
M05 80510	228
M05 80520	223
M05 80520	228
M05 80530	223
M05 80530	228
M05 80540	223
M05 80540	228
M05 90100	218
M05 90100	219
M05 90100	221
M05 90100	224
M05 90200	233
M05 90210	233
M05 90220	233
M05 90230	233
M05 90240	233
M05 90300	232
M05 90501	218
M05 90501	219
M05 90501	222
M05 90501	223
M05 90501	227
M10 50010.15	244
M10 50011	244
M10 50021	244
M10 50021.15	244
M10 50030.15	244
M10 50031	244
M30 00011	378
M30 00031	247
M30 00031	379
M30 00031	382
M30 00041	379
M30 00051	379
M30 00051	382
M30 00061	379
M30 00071	379
M30 00071	382
M30 00081	379
M30 00091	379
M30 00101	379
M30 00111	379
M30 00121	379
M30 00131	379
M30 00161	379
M30 02031	247
M30 02031	381
M30 02031	392
M30 02041	247
M30 02041	381
M30 02041	392
M30 02051	247
M30 02051	381
M30 02051	392
M30 02061	247
M30 02061	381
M30 02061	392
M30 02071	247
M30 02071	381
M30 02071	392
M30 02081	247
M30 02081	381
M30 02081	392
M30 02091	247
M30 02091	381
M30 02101	247
M30 02101	381
M30 02111	247
M30 02111	381

Order No.	Page
M30 02121	247
M30 02121	381
M30 02131	247
M30 02131	381
M30 02141	247
M30 02141	381
M30 02151	247
M30 02151	381
M30 02161	247
M30 02161	381
M30 02231	247
M30 02241	247
M30 02251	247
M30 02261	247
M30 02271	247
M30 02281	247
M30 02291	247
M30 02301	247
M30 02311	247
M30 02321	247
M30 02331	247
M30 02341	247
M30 02351	247
M30 02361	247
M30 04011	247
M30 04011	382
M30 04111	247
M30 04121	247
M30 20011	250
M30 20011	383
M30 20021	250
M30 20021	383
M30 20031	250
M30 20031	383
M30 20041	250
M30 20041	383
M30 20051	198
M30 20051	250
M30 20051	264
M30 20051	383
M30 20061	250
M30 20061	383
M30 20071	250
M30 20071	383
M30 20201	393
M30 20211	393
M30 20221	393
M30 50021	379
M30 50031	379
M30 50041	379
M30 50051	379
M30 50061	379
M30 50071	379
M30 50111.21	378
M30 51021	379
M30 51031	379
M30 51041	379
M30 51051	379
M30 51061	379
M30 51071	379
M30 51111.21	378
M30 52021	247
M30 52021	381
M30 52031	247
M30 52031	381
M30 52041	247
M30 52041	381
M30 52051	247
M30 52051	381
M30 52061	247
M30 52061	381
M30 52071	247
M30 52071	381
M30 52421	247
M30 52421	392
M30 52431	247
M30 52431	392
M30 52441	247
M30 52441	392
M30 53021	381
M30 53031	381
M30 53041	381
M30 53051	381
M30 53061	381

Order No.	Page
M30 54011	247
M30 54011	382
M30 54021	247
M30 54021	382
M30 54030	382
M30 54040	382
M31 00022	376
M31 00032	376
M31 00042	376
M31 00122	394
M31 00153	394
M31 00162	394
M31 01022	377
M31 01032	377
M31 01042	377
M31 01122	395
M31 01153	395
M31 01162	395
N00 02062	218
N00 02062	219
N00 40010	386
N00 40020	386
N00 40030	386
N00 40040	386
N00 40050	386
N00 52000	103
N00 52000	153
N00 52000	159
N00 52000	162
N00 52000	356
N00 52000	357
N00 52010	103
N00 52010	107
N00 52010	159
N00 52010	162
N00 52010	357
N00 52020	103
N00 52020	107
N00 52020	357
N00 52500	349
N00 52500	350
N00 52510	349
N00 52510	350
N00 52510	351
N00 52510	352
N00 52510	353
N00 52520	352
N00 52520	354
N00 52520	355
N00 55050	936
N00 55060	743
N00 55060	936
N00 55070	936
N00 55100	936
N00 55110	744
N00 55110	745
N00 55110	936
N00 55120	743
N00 55120	936
N00 55130	745
N00 55130	936
N00 55140	745
N00 55140	936
N00 55180	936
N00 55551	936
N00 55561	349
N00 55561	350
N00 55561	936
N00 55571	153
N00 55571	357
N00 55571	936
N00 55581	148
N00 55581	150
N00 55581	202
N00 55581	936
N00 55600	356
N00 55701	103
N00 55701	150
N00 55701	159
N00 55701	162
N00 55701	349
N00 55701	350
N00 55701	351

Numerical index

Order No.	Page
N00 55701	352
N00 55701	353
N00 55701	356
N00 55701	357
N00 55701	936
N00 55711	936
N00 55801	936
N00 55811	936
N00 55821	103
N00 55821	107
N00 55821	159
N00 55821	162
N00 55821	357
N00 55821	936
N00 55851	936
N00 55891	103
N00 55891	936
N00 55901	107
N00 55901	357
N00 55901	936
N00 56011	220
N00 56011	234
N00 56011	238
N00 56011	714
N00 56011	715
N00 56011	726
N00 56011	936
N00 56021	220
N00 56021	238
N00 56021	240
N00 56021	244
N00 56021	247
N00 56021	250
N00 56021	347
N00 56021	349
N00 56021	350
N00 56021	379
N00 56021	381
N00 56021	382
N00 56021	383
N00 56021	388
N00 56021	389
N00 56021	392
N00 56021	393
N00 56021	394
N00 56021	395
N00 56021	722
N00 56021	723
N00 56021	726
N00 56021	727
N00 56021	936
N00 56031	221
N00 56031	225
N00 56031	234
N00 56031	247
N00 56031	255
N00 56031	257
N00 56031	259
N00 56031	331
N00 56031	333
N00 56031	334
N00 56031	335
N00 56031	363
N00 56031	364
N00 56031	365
N00 56031	366
N00 56031	367
N00 56031	368
N00 56031	369
N00 56031	371
N00 56031	373
N00 56031	375
N00 56031	379
N00 56031	381
N00 56031	392
N00 56031	724
N00 56031	725
N00 56031	936
N00 56041	35
N00 56041	39
N00 56041	51
N00 56041	55
N00 56041	59
N00 56041	77
N00 56041	81
N00 56041	87
N00 56041	95
N00 56041	98
N00 56041	148
N00 56041	202
N00 56041	321
N00 56041	324
N00 56041	376
N00 56041	377
N00 56041	714
N00 56041	715
N00 56041	936
N00 56051	51
N00 56051	55
N00 56051	59
N00 56051	81
N00 56051	936
N00 56101	204
N00 56101	220
N00 56101	225
N00 56101	227
N00 56101	229
N00 56101	232
N00 56101	234
N00 56101	238
N00 56101	240
N00 56101	242
N00 56101	247
N00 56101	250
N00 56101	257
N00 56101	259
N00 56101	261
N00 56101	347
N00 56101	350
N00 56101	351
N00 56101	352
N00 56101	353
N00 56101	376
N00 56101	379
N00 56101	381
N00 56101	382
N00 56101	383
N00 56101	388
N00 56101	389
N00 56101	392
N00 56101	393
N00 56101	394
N00 56101	395
N00 56101	722
N00 56101	723
N00 56101	724
N00 56101	725
N00 56101	726
N00 56101	727
N00 56101	936
N00 56111	204
N00 56111	221
N00 56111	222
N00 56111	223
N00 56111	247
N00 56111	250
N00 56111	331
N00 56111	332
N00 56111	333
N00 56111	334
N00 56111	335
N00 56111	336
N00 56111	345
N00 56111	356
N00 56111	363
N00 56111	364
N00 56111	365
N00 56111	366
N00 56111	367
N00 56111	368
N00 56111	369
N00 56111	371
N00 56111	372
N00 56111	373
N00 56111	374
N00 56111	375
N00 56111	377
N00 56111	379
N00 56111	381
N00 56111	383
N00 56111	936
N00 56121	349
N00 56121	936
N00 56201	166
N00 56201	347
N00 56201	352
N00 56201	376
N00 56201	377
N00 56201	388
N00 56201	389
N00 56201	394
N00 56201	395
N00 56201	724
N00 56201	725
N00 56201	936
N00 56211	204
N00 56211	220
N00 56211	225
N00 56211	226
N00 56211	228
N00 56211	247
N00 56211	250
N00 56211	256
N00 56211	258
N00 56211	331
N00 56211	336
N00 56211	356
N00 56211	363
N00 56211	364
N00 56211	366
N00 56211	367
N00 56211	368
N00 56211	369
N00 56211	379
N00 56211	381
N00 56211	383
N00 56211	722
N00 56211	723
N00 56211	936
N00 56301	388
N00 56301	389
N00 56301	936
N00 56401	166
N00 56401	256
N00 56401	260
N00 56401	936
N00 56411	331
N00 56411	369
N00 56411	389
N00 56411	936
N00 56591	340
N00 56591	936
N00 56651	331
N00 56651	337
N00 56651	338
N00 56651	339
N00 56651	341
N00 56651	718
N00 56651	719
N00 56651	720
N00 56651	721
N00 56651	742
N00 56651	936
N00 56751	337
N00 56751	338
N00 56751	339
N00 56751	341
N00 56751	345
N00 56751	718
N00 56751	719
N00 56751	720
N00 56751	721
N00 56751	742
N00 56751	936
N00 56771	331
N00 56771	936
N00 56811	936
N00 56851	341
N00 56851	936
N00 56861	499
N00 56861	936
N00 57191	936
N00 57201	936
N00 57211	148
N00 57211	936
N00 57221	387
N00 57221	936
N00 57241	522
N00 57241	936
N00 57251	51
N00 57251	55
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N00 57251	937
N00 57261	35
N00 57261	37
N00 57261	39
N00 57261	53
N00 57261	57
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N00 57261	138
N00 57261	140
N00 57261	142
N00 57261	330
N00 57261	390
N00 57261	937
N00 57271	138
N00 57271	140
N00 57271	340
N00 57271	937
N00 57281	937
N00 57301	37
N00 57301	40
N00 57301	53
N00 57301	57
N00 57301	71
N00 57301	138
N00 57301	140
N00 57301	142
N00 57301	330
N00 57301	937
N00 57321	937
N00 57341	340
N00 57341	937
N00 57411	937
N00 57421	937
N00 57431	937
N00 57440	138
N00 57440	148
N00 57440	937
N00 57450	140
N00 57450	937
N00 57460	140
N00 57460	142
N00 57460	150
N00 57460	937
N00 57470	142
N00 57470	152
N00 57470	937
N00 57480	138
N00 57480	148
N00 57480	937
N00 57490	138
N00 57490	148
N00 57490	937
N00 57500	140
N00 57500	150
N00 57500	937
N00 57511	77
N00 57511	83
N00 57511	89
N00 57511	91
N00 57511	95
N00 57511	98
N00 57511	148
N00 57511	150
N00 57511	153
N00 57511	197
N00 57511	202
N00 57511	320
N00 57511	321
N00 57511	322
N00 57511	323
N00 57511	324
N00 57511	325
N00 57511	326
N00 57511	328
N00 57511	329
N00 57511	343
N00 57511	345
N00 57511	354
N00 57511	355
N00 57511	363
N00 57511	364
N00 57511	365
N00 57511	366
N00 57511	367
N00 57511	368
N00 57511	369
N00 57511	371
N00 57511	372
N00 57511	716
N00 57511	717
N00 57511	739
N00 57511	740
N00 57511	741
N00 57511	937
N00 57521	77
N00 57521	83
N00 57521	91
N00 57521	95
N00 57521	98
N00 57521	150
N00 57521	158
N00 57521	159
N00 57521	162
N00 57521	197
N00 57521	202
N00 57521	320
N00 57521	321
N00 57521	322
N00 57521	323
N00 57521	324
N00 57521	325
N00 57521	326
N00 57521	327
N00 57521	328
N00 57521	329
N00 57521	342
N00 57521	357
N00 57521	363
N00 57521	364
N00 57521	365
N00 57521	366
N00 57521	368
N00 57521	369
N00 57521	371
N00 57521	372
N00 57521	373
N00 57521	375
N00 57521	673
N00 57521	716
N00 57521	728
N00 57521	739
N00 57521	740
N00 57521	741
N00 57521	937
N00 57531	91
N00 57531	98
N00 57531	102
N00 57531	103
N00 57531	107
N00 57531	150
N00 57531	158
N00 57531	159
N00 57531	162
N00 57531	197
N00 57531	202
N00 57531	320
N00 57531	321
N00 57531	322
N00 57531	324
N00 57531	325
N00 57531	326
N00 57531	327
N00 57531	329
N00 57531	343
N00 57531	357
N00 57531	371
N00 57531	372
N00 57531	374

Order No.	Page
N00 57531	375
N00 57531	716
N00 57531	728
N00 57531	739
N00 57531	740
N00 57531	741
N00 57531	937
N00 57541	102
N00 57541	103
N00 57541	107
N00 57541	197
N00 57541	357
N00 57541	728
N00 57541	937
N00 57553	35
N00 57553	39
N00 57553	51
N00 57553	55
N00 57553	59
N00 57553	77
N00 57553	81
N00 57553	83
N00 57553	89
N00 57553	95
N00 57553	98
N00 57553	138
N00 57553	140
N00 57553	148
N00 57553	321
N00 57553	364
N00 57553	366
N00 57553	368
N00 57553	369
N00 57553	937
N00 57553	330
N00 57571	35
N00 57571	37
N00 57571	39
N00 57571	51
N00 57571	55
N00 57571	59
N00 57571	71
N00 57571	138
N00 57571	140
N00 57571	142
N00 57571	153
N00 57571	330
N00 57571	357
N00 57571	937
N00 57611	102
N00 57611	103
N00 57611	937
N00 57630	119
N00 57630	121
N00 57630	937
N00 57640	121
N00 57640	123
N00 57640	937
N00 57650	123
N00 57650	125
N00 57650	127
N00 57650	937
N00 57660	117
N00 57660	937
N00 57670	127
N00 57670	129
N00 57670	131
N00 57670	937
N00 57710	937
N00 57780	937
N00 57790	937
N00 57810	937
N00 57820	937
N00 57830	937
N00 57840	937
N00 57860	937
N00 57870	937
N00 57880	937
N00 57890	937
N00 57900	937
N00 57910	937
N00 57920	937
N00 70080	242
N00 70090	242
N00 70140	242
N00 70160	673
N00 70190	242
N00 70210	673
N00 70370	158
N00 70380	158
N00 70400	673
N00 70460	158
N00 70800	158
N00 70910	148
N00 70920	148
N00 70930	148
N00 70940	148
N00 70950	150
N00 70960	150
N00 70970	152
N00 71000	808
N00 71000	809
N00 71020	673
N00 71020	815
N00 71020	816
N00 71050	808
N00 71050	809
N00 71050	815
N00 71070	673
N00 71070	815
N00 71070	816
N00 71100	808
N00 71110	808
N00 71120	809
N00 71130	673
N00 71130	809
N00 71150	815
N00 71200	808
N00 71210	808
N00 71220	673
N00 71220	809
N00 71230	673
N00 71230	809
N00 71240	815
N00 71250	815
N00 71280	815
N00 71300	808
N00 71310	809
N00 71320	809
N00 71320	815
N00 71340	815
N00 71350	815
N00 71400	673
N00 71400	809
N00 71410	809
N00 71500	809
N00 71520	815
N00 71540	816
N00 71600	809
N00 71650	809
N00 71730	816
N00 71800	816
N00 71900	815
N00 71910	815
N00 71940	815
N00 71970	815
N00 71980	815
N00 72000	825
N00 72010	825
N00 72050	825
N00 72060	825
N00 72070	825
N00 72080	825
N10 11010	102
N10 11200	347
N10 11210	178
N10 11310	178
N10 11310	347
N10 11320	178
N10 11400	102
N10 11400	178
N10 11400	347
N10 11500	102
N10 11500	178
N10 11500	387
N10 11510	153
N10 11510	178
N10 12010	138
N10 12020	140
N10 12030	140
N10 12050	140
N10 12050	142
N10 12060	142
N10 12070	142
N10 20220	343
N10 30738	945
N10 30739	778
N10 30739	945
N10 30740	945
N10 30741	945
N10 30742	778
N10 30742	945
N12 20120	819
N12 20140	819
N12 20170	819
U10 01402	39
U10 01502	39
U10 01550	39
U10 01600	39
U10 01700	39
U10 11750	39
U10 11800	39
U10 11850	39
U10 11900	39
U10 11950	39
U10 12000	39
U10 12050	39
U10 12100	39
U10 12200	39
U10 12250	39
U10 12300	39
U10 22400	39
U10 22450	39
U10 22500	39
U10 22600	39
U10 22650	39
U10 22700	39
U10 22800	39
U10 22850	39
U10 22900	39
U10 22950	39
U10 23000	39
U10 23100	39
U10 23150	39
U10 23200	39
U10 23300	39
U10 23400	40
U10 23500	40
U10 23600	40
U10 23700	40
U10 23750	40
U10 23800	40
U10 23900	40
U10 23950	40
U10 24000	40
U10 24100	40
U10 24200	40
U10 24300	40
U10 24400	40
U10 33300	39
U10 33400	40
U10 33500	40
U10 33600	40
U10 33700	40
U10 33750	40
U10 33800	40
U10 33900	40
U10 33950	40
U10 34000	40
U10 34100	40
U10 34200	40
U10 34300	40
U10 34400	40
U10 71402	35
U10 71502	35
U10 71550	35
U10 71600	35
U10 71700	35
U10 71750	35
U10 71800	35
U10 71850	35
U10 71900	35
U10 71950	35
U10 72000	35
U10 72050	35
U10 72100	35
U10 72200	35
U10 72250	35
U10 72300	35
U10 72400	35
U10 72450	35
U10 72500	35
U10 72600	35
U10 72650	35
U10 72700	35
U10 72800	35
U10 72850	35
U10 72900	35
U10 72950	35
U10 73000	35
U10 73100	35
U10 73150	35
U10 73200	35
U10 73300	35
U10 73400	37
U10 73500	37
U10 73600	37
U10 73700	37
U10 73750	37
U10 73800	37
U10 73900	37
U10 73950	37
U10 74000	37
U10 74100	37
U10 74200	37
U10 74300	37
U10 74400	37
U10 84500	37
U10 84600	37
U10 84700	37
U10 84800	37
U10 84900	37
U10 85000	37
U10 85100	37
U10 85200	37
U10 85300	37
U10 85400	37
U10 95500	37
U10 95600	37
U10 95700	37
U10 95800	37
U10 95900	37
U10 96000	37
U10 96100	37
U10 96200	37
U10 96300	37
U10 96400	37
U10 96500	37
U11 51402	35
U11 51502	35
U11 51550	35
U11 51600	35
U11 51650	35
U11 51700	35
U11 51750	35
U11 51800	35
U11 51850	35
U11 51900	35
U11 51950	35
U11 52000	35
U11 52050	35
U11 52100	35
U11 52200	35
U11 52250	35
U11 52300	35
U11 52400	35
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U11 52950	35
U11 53000	35
U11 53100	35
U11 53150	35
U11 53200	35
U11 53300	35
U11 53400	37
U11 53500	37
U11 53600	37
U11 53700	37
U11 53750	37
U11 53800	37
U11 53900	37
U11 53950	37
U11 54000	37
U11 54100	37
U11 54200	37
U11 54300	37
U11 54400	37
U11 61402	39
U11 61502	39
U11 61550	39
U11 61600	39
U11 61650	39
U11 61700	39
U11 71750	39
U11 71800	39
U11 71850	39
U11 71900	39
U11 71950	39
U11 72000	39
U11 72050	39
U11 72100	39
U11 72200	39
U11 72250	39
U11 72300	39
U11 82400	39
U11 82450	39
U11 82500	39
U11 82600	39
U11 82650	39
U11 82700	39
U11 82800	39
U11 82850	39
U11 82900	39
U11 82950	39
U11 83000	39
U11 83100	39
U11 83150	39
U11 83200	39
U11 83300	39
U11 83400	40
U11 83500	40
U11 83600	40
U11 83700	40
U11 83750	40
U11 83800	40
U11 83900	40
U11 83950	40
U11 84000	40
U11 84100	40
U11 84200	40
U11 84300	40
U11 84400	40
U11 93300	39
U11 93400	40
U11 93500	40
U11 93600	40
U11 93700	40
U11 93750	40
U11 93800	40
U11 93900	40
U11 93950	40
U11 94000	40
U11 94100	40
U11 94200	40
U11 94300	40
U11 94400	40
U12 34500	37
U12 34600	37
U12 34700	37
U12 34800	37
U12 34900	37
U12 35000	37
U12 35100	37

Numerical index

Order No.	Page
U12 35200	37
U12 35300	37
U12 35400	37
U12 45500	37
U12 45600	37
U12 45700	37
U12 45800	37
U12 45900	37
U12 46000	37
U12 46100	37
U12 46200	37
U12 46300	37
U12 46400	37
U12 46500	37
U20 01750	117
U20 01800	117
U20 01850	117
U20 01900	117
U20 01950	117
U20 02000	117
U20 02050	117
U20 02100	119
U20 02150	119
U20 02200	119
U20 02250	119
U20 02300	119
U20 02350	119
U20 02400	119
U20 02450	121
U20 02500	121
U20 02550	121
U20 02600	121
U20 02650	121
U20 02700	121
U20 02750	121
U20 02800	123
U20 02850	123
U20 02900	123
U20 02950	123
U20 03000	123
U20 03050	123
U20 03100	123
U20 03150	125
U20 03200	125
U20 03250	125
U20 03300	125
U20 03350	125
U20 03400	125
U20 03450	125
U20 03500	127
U20 03550	127
U20 03600	127
U20 13650	127
U20 13700	127
U20 13750	127
U20 13800	127
U20 13850	129
U20 13900	129
U20 13950	129
U20 14000	129
U20 14050	129
U20 14100	129
U20 14150	129
U20 14200	131
U20 14250	131
U20 14300	131
U20 14350	131
U20 14400	131
U20 71750	117
U20 71800	117
U20 71850	117
U20 71900	117
U20 81950	117
U20 82000	117
U20 82050	117
U20 82100	119
U20 82150	119
U20 82200	119
U20 82250	119
U20 82300	119
U20 82350	119
U20 82400	119
U20 82450	121
U20 82500	121

Order No.	Page
U20 82550	121
U20 82600	121
U20 82650	121
U20 82700	121
U20 92750	121
U20 92800	123
U20 92850	123
U20 92900	123
U20 92950	123
U20 93000	123
U20 93050	123
U20 93100	123
U20 93150	125
U20 93200	125
U20 93250	125
U20 93300	125
U20 93350	125
U20 93400	125
U20 93450	125
U20 93500	127
U20 93550	127
U20 93600	127
U22 21750	133
U22 22100	133
U22 22500	133
U22 23000	133
U22 43650	133
U22 71750	133
U22 82100	133
U22 82500	133
U22 93000	133
U40 61400	58
U40 61450	58
U40 61500	58
U40 61550	58
U40 61600	58
U40 61650	58
U40 61700	58
U40 61750	58
U40 61800	58
U40 61850	58
U40 61900	58
U40 61950	58
U40 62000	58
U40 62050	58
U40 62100	58
U40 62150	58
U40 62200	58
U40 62250	58
U40 62300	58
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U40 62700	58
U40 62750	58
U40 62800	58
U40 62850	58
U40 62900	58
U40 62950	58
U40 63000	58
U40 71600	58
U40 71650	58
U40 71700	58
U40 71750	58
U40 71800	58
U40 71850	58
U40 71900	58
U40 71950	58
U40 72000	58
U40 72050	58
U40 72100	58
U40 72150	58
U40 72200	58
U40 72250	58
U40 72300	58
U40 72350	58
U40 72400	58
U40 72450	58
U40 72500	58
U40 72550	58

Order No.	Page
U40 72600	58
U40 72650	58
U40 72700	58
U40 72750	58
U40 72800	58
U40 72850	58
U40 72900	58
U40 72950	58
U40 73000	58
U42 01400	54
U42 01450	54
U42 01500	54
U42 01550	54
U42 01600	54
U42 01650	54
U42 01700	54
U42 11750	54
U42 11800	54
U42 11850	54
U42 11900	54
U42 11950	54
U42 12000	54
U42 12050	54
U42 12100	54
U42 12150	54
U42 12200	54
U42 12250	54
U42 12300	54
U42 22350	54
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U42 23000	54
U42 33050	56
U42 33100	56
U42 33150	56
U42 33200	56
U42 33250	56
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U42 34150	56
U42 34200	56
U42 34250	56
U42 34300	56
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U42 34400	56
U42 34450	56
U42 34500	56
U42 34550	56
U42 34600	56
U42 51400	50
U42 51450	50
U42 51500	50
U42 51550	50
U42 51600	50
U42 51650	50
U42 51700	50
U42 51750	50
U42 51800	50
U42 51850	50

Order No.	Page
U42 51900	50
U42 51950	50
U42 52000	50
U42 52050	50
U42 52100	50
U42 52150	50
U42 52200	50
U42 52250	50
U42 52300	50
U42 52350	50
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U42 63050	52
U42 63100	52
U42 63150	52
U42 63200	52
U42 63250	52
U42 63300	52
U42 63350	52
U42 63400	52
U42 63450	52
U42 63500	52
U42 63550	52
U42 63600	52
U42 63650	52
U42 63700	52
U42 63750	52
U42 63800	52
U42 63850	52
U42 63900	52
U42 63950	52
U42 64000	52
U42 64050	52
U42 64100	52
U42 64150	52
U42 64200	52
U42 64250	52
U42 64300	52
U42 64350	52
U42 64400	52
U42 64450	52
U42 64500	52
U42 64550	52
U42 64600	52
U43 01400	54
U43 01450	54
U43 01500	54
U43 01550	54
U43 01600	54
U43 01650	54
U43 01700	54
U43 11750	54
U43 11800	54
U43 11850	54
U43 11900	54
U43 11950	54
U43 12000	54
U43 12050	54
U43 12100	54
U43 12150	54
U43 12200	54
U43 12250	54
U43 12300	54
U43 22350	54
U43 22400	54
U43 22450	54
U43 22500	54
U43 22550	54
U43 22600	54
U43 22650	54
U43 22700	54
U43 22750	54
U43 22800	54

Order No.	Page
U43 22850	54
U43 22900	54
U43 22950	54
U43 23000	54
U43 33050	56
U43 33100	56
U43 33150	56
U43 33200	56
U43 33250	56
U43 33300	56
U43 33350	56
U43 33400	56
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U43 34200	56
U43 34250	56
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U43 34500	56
U43 34550	56
U43 34600	56
U43 51400	50
U43 51450	50
U43 51500	50
U43 51550	50
U43 51600	50
U43 51650	50
U43 51700	50
U43 51750	50
U43 51800	50
U43 51850	50
U43 51900	50
U43 51950	50
U43 52000	50
U43 52050	50
U43 52100	50
U43 52150	50
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U43 63150	52
U43 63200	52
U43 63250	52
U43 63300	52
U43 63350	52
U43 63400	52
U43 63450	52
U43 63500	52
U43 63550	52
U43 63600	52
U43 63650	52
U43 63700	52
U43 63750	52

Order No.	Page
U43 63800	52
U43 63850	52
U43 63900	52
U43 63950	52
U43 64000	52
U43 64050	52
U43 64100	52
U43 64150	52
U43 64200	52
U43 64250	52
U43 64300	52
U43 64350	52
U43 64400	52
U43 64450	52
U43 64500	52
U43 64550	52
U43 64600	52
U44 01400	55
U44 01450	55
U44 01500	55
U44 01550	55
U44 01600	55
U44 01650	55
U44 01700	55
U44 11750	55
U44 11800	55
U44 11850	55
U44 11900	55
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U44 12000	55
U44 12050	55
U44 12100	55
U44 12150	55
U44 12200	55
U44 12250	55
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U44 33100	57
U44 33150	57
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U44 33250	57
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U44 34000	57
U44 34050	57
U44 34100	57
U44 34150	57
U44 34200	57
U44 34250	57
U44 34300	57
U44 34350	57
U44 34400	57
U44 34450	57
U44 34500	57
U44 34550	57
U44 34600	57
U44 51400	51
U44 51450	51

Order No.	Page
U44 51500	51
U44 51550	51
U44 51600	51
U44 51650	51
U44 51700	51
U44 51750	51
U44 51800	51
U44 51850	51
U44 51900	51
U44 51950	51
U44 52000	51
U44 52050	51
U44 52100	51
U44 52150	51
U44 52200	51
U44 52250	51
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U44 63150	53
U44 63200	53
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U44 64250	53
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U44 64600	53
U45 01400	55
U45 01450	55
U45 01500	55
U45 01550	55
U45 01600	55
U45 01650	55
U45 01700	55
U45 11750	55
U45 11800	55
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U45 11900	55
U45 11950	55
U45 12000	55
U45 12050	55
U45 12100	55
U45 12150	55
U45 12200	55
U45 12250	55
U45 12300	55
U45 22350	55
U45 22400	55

Order No.	Page
U45 22450	55
U45 22500	55
U45 22550	55
U45 22600	55
U45 22650	55
U45 22700	55
U45 22750	55
U45 22800	55
U45 22850	55
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U45 22950	55
U45 23000	55
U45 33050	57
U45 33100	57
U45 33150	57
U45 33200	57
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U45 34100	57
U45 34150	57
U45 34200	57
U45 34250	57
U45 34300	57
U45 34350	57
U45 34400	57
U45 34450	57
U45 34500	57
U45 34550	57
U45 34600	57
U45 51400	51
U45 51450	51
U45 51500	51
U45 51550	51
U45 51600	51
U45 51650	51
U45 51700	51
U45 51750	51
U45 51800	51
U45 51850	51
U45 51900	51
U45 51950	51
U45 52000	51
U45 52050	51
U45 52100	51
U45 52150	51
U45 52200	51
U45 52250	51
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U45 52850	51
U45 52900	51
U45 52950	51
U45 53000	51
U45 63050	53
U45 63100	53
U45 63150	53
U45 63200	53
U45 63250	53
U45 63300	53
U45 63350	53

Order No.	Page
U45 63400	53
U45 63450	53
U45 63500	53
U45 63550	53
U45 63600	53
U45 63650	53
U45 63700	53
U45 63750	53
U45 63800	53
U45 63850	53
U45 63900	53
U45 63950	53
U45 64000	53
U45 64050	53
U45 64100	53
U45 64150	53
U45 64200	53
U45 64250	53
U45 64300	53
U45 64350	53
U45 64400	53
U45 64450	53
U45 64500	53
U45 64550	53
U45 64600	53
U49 02600	71
U49 03300	71
U49 03900	71
U49 04500	71
U53 21000	23
U53 21050	23
U53 21100	23
U53 21150	23
U53 31200	23
U53 31250	23
U53 31300	23
U53 31400	25
U53 31500	25
U53 41600	25
U53 41700	27
U53 41800	27
U53 41900	27
U55 21000	23
U55 21050	23
U55 21100	23
U55 21150	23
U55 31200	23
U55 31250	23
U55 31300	23
U55 31400	25
U55 31500	25
U55 41600	25
U55 41700	27
U55 41800	27
U55 41900	27
U57 21000	23
U57 21050	23
U57 21100	23
U57 21150	23
U57 31200	23
U57 31250	23
U57 31300	23
U57 31400	25
U57 31500	25
U57 41600	25
U57 41700	27
U57 41800	27
U57 41900	27
V03 06000.145510	17
V03 08000.145510	17
V03 10000.145510	17
V11 00800.135210	12
V11 01000.135210	12
V11 01500.135210	12
V11 01600.135210	12
V11 01700.135210	12
V11 01800.135210	12
V11 01900.135210	12
V11 02000.135210	12
V11 02100.135210	12
V11 02200.135210	12
V11 02300.135210	12
V11 02400.135210	12

Order No.	Page
V11 02500.135210	12
V11 02600.135210	12
V11 02700.135210	12
V11 02800.135210	12
V11 02900.135210	12
V11 03000.135210	12
V11 03100.135210	12
V11 03200.135210	12
V11 03300.135210	12
V11 03400.135210	12
V11 03500.135210	12
V11 03600.135210	12
V11 03700.135210	12
V11 03800.135210	12
V11 03900.135210	12
V11 04000.135210	12
V11 04100.135210	12
V11 04200.135210	12
V11 04300.135210	12
V11 04400.135210	12
V11 04500.135210	12
V11 04600.135210	12
V11 04700.135210	12
V11 04800.135210	12
V11 04830.135210	12
V11 04900.135210	12
V11 04930.135210	12
V11 05000.135210	12
V11 05100.135210	12
V11 05200.135210	12
V11 05300.135210	12
V11 05400.135210	12
V11 05500.135210	12
V11 05600.135210	12
V11 05700.135210	12
V11 05800.135210	12
V11 05900.135210	12
V11 06000.135210	12
V11 06000.135510	16
V11 06000.235510	16
V11 06100.135210	12
V11 06200.135210	12
V11 06300.135210	12
V11 06350.135210	12
V11 06400.135210	12
V11 06500.135210	12
V11 06600.135210	12
V11 06700.135210	12
V11 06800.135210	12
V11 06900.135210	12
V11 07000.135210	12
V11 07100.135210	12
V11 07200.135210	13
V11 07300.135210	13
V11 07400.135210	13
V11 07500.135210	13
V11 07600.135210	13
V11 07700.135210	13
V11 07800.135210	13
V11 07900.135210	13
V11 07930.135210	13
V11 08000.135210	13
V11 08000.135510	16
V11 08000.235510	16
V11 08100.135210	13
V11 08200.135210	13
V11 08300.135210	13
V11 08400.135210	13
V11 08500.135210	13
V11 08600.135210	13
V11 08700.135210	13
V11 08800.135210	13
V11 08900.135210	13
V11 09000.135210	13
V11 09100.135210	13
V11 09200.135210	13
V11 09300.135210	13
V11 09400.135210	13
V11 09500.135210	13
V11 09520.135210	13
V11 09600.135210	13
V11 09700.135210	13
V11 09800.135210	13
V11 09900.135210	13

Numerical index

Order No.	Page
V11 10000.135210	13
V11 10000.135510	16
V11 10000.235510	16
V11 10100.135210	13
V11 10200.135210	13
V11 10300.135210	13
V11 10400.135210	13
V11 10500.135210	13
V11 10600.135210	13
V11 10700.135210	13
V11 10800.135210	13
V11 10900.135210	13
V11 11000.135210	13
V11 11100.135210	13
V11 11200.135210	13
V11 11300.135210	13
V11 11400.135210	13
V11 11500.135210	13
V11 11600.135210	13
V11 11700.135210	13
V11 11800.135210	13
V11 11900.135210	13
V11 12000.135210	13
V11 12100.135210	13
V11 12200.135210	13
V11 12300.135210	13
V11 12400.135210	13
V11 12500.135210	13
V11 12600.135210	13
V11 12700.135210	13
V11 12800.135210	13
V11 12900.135210	13
V11 13000.135210	13
V13 34500	106
V13 34600	106
V13 34700	106
V13 34800	106
V13 34900	106
V13 35000	106
V13 35100	106
V13 35200	106
V13 35300	106
V13 35400	106
V13 74500	106
V13 74600	106
V13 74700	106
V13 74800	106
V13 74900	106
V13 75000	106
V13 75100	106
V13 75200	106
V13 75300	106
V13 75400	106
V14 35500	106
V14 35600	106
V14 35700	106
V14 35800	106
V14 35900	106
V14 36000	106
V14 36100	106
V14 36200	106
V14 36300	106
V14 36400	106
V14 36500	106
V14 36600	106
V14 36700	106
V14 36800	106
V14 36900	106
V14 37000	106
V14 37100	106
V14 37200	106
V14 37300	106
V14 37400	106
V14 37500	106
V14 37600	106
V14 37700	106
V14 37800	106
V14 37900	106
V14 38000	106
V14 38100	106
V14 38200	106
V14 75500	106
V14 75600	106
V14 75700	106

Order No.	Page
V14 75800	106
V14 75900	106
V14 76000	106
V14 76100	106
V14 76200	106
V14 76300	106
V14 76400	106
V14 76500	106
V14 76600	106
V14 76700	106
V14 76800	106
V14 76900	106
V14 77000	106
V14 77100	106
V14 77200	106
V14 77300	106
V14 77400	106
V14 77500	106
V14 77600	106
V14 77700	106
V14 77800	106
V14 77900	106
V14 78000	106
V14 78100	106
V14 78200	106
V21 05000.135210	14
V21 05100.135210	14
V21 05200.135210	14
V21 05300.135210	14
V21 05400.135210	14
V21 05500.135210	14
V21 05600.135210	14
V21 05700.135210	14
V21 05800.135210	14
V21 05900.135210	14
V21 06000.135210	14
V21 06100.135210	14
V21 06200.135210	14
V21 06300.135210	14
V21 06400.135210	14
V21 06500.135210	14
V21 06600.135210	14
V21 06700.135210	14
V21 06800.135210	14
V21 06900.135210	14
V21 07000.135210	14
V21 07100.135210	14
V21 07200.135210	14
V21 07300.135210	14
V21 07400.135210	14
V21 07500.135210	14
V21 07600.135210	14
V21 07700.135210	14
V21 07800.135210	14
V21 07900.135210	14
V21 08000.135210	14
V21 08100.135210	14
V21 08200.135210	14
V21 08300.135210	14
V21 08400.135210	14
V21 08500.135210	14
V21 08600.135210	14
V21 08700.135210	14
V21 08800.135210	14
V21 08900.135210	14
V21 09000.135210	15
V21 09100.135210	15
V21 09200.135210	15
V21 09300.135210	15
V21 09400.135210	15
V21 09500.135210	15
V21 09600.135210	15
V21 09700.135210	15
V21 09800.135210	15
V21 09900.135210	15
V21 10000.135210	15
V21 10100.135210	15
V21 10200.135210	15
V21 10300.135210	15
V21 10400.135210	15
V21 10500.135210	15
V21 10600.135210	15
V21 10700.135210	15
V21 10800.135210	15

Order No.	Page
V21 10900.135210	15
V21 11000.135210	15
V21 11100.135210	15
V21 11200.135210	15
V21 11300.135210	15
V21 11400.135210	15
V21 11500.135210	15
V21 11600.135210	15
V21 11700.135210	15
V21 11800.135210	15
V21 11900.135210	15
V21 12000.135210	15
V21 12100.135210	15
V21 12200.135210	15
V21 12300.135210	15
V21 12400.135210	15
V21 12500.135210	15
V21 12600.135210	15
V21 12700.135210	15
V21 12800.135210	15
V21 12900.135210	15
V21 13000.135210	15
V30 21402	95
V30 21502	95
V30 21600	95
V30 21700	95
V30 21800	95
V30 21900	95
V30 22000	95
V30 22100	95
V30 22200	95
V30 22300	95
V30 22400	95
V30 22500	95
V30 22600	95
V30 22700	95
V30 22800	95
V30 22900	95
V30 23000	95
V30 23100	95
V30 23200	95
V30 23300	95
V30 23400	95
V30 23500	95
V30 23600	95
V30 23700	95
V30 23800	95
V30 23900	95
V30 24000	95
V30 24100	95
V30 24200	95
V30 24300	95
V30 24400	95
V30 31403	76
V30 31503	76
V30 31551	76
V30 31601	76
V30 31701	76
V30 31751	76
V30 31801	76
V30 31851	76
V30 31901	76
V30 31951	76
V30 32001	76
V30 32101	76
V30 32201	76
V30 32251	76
V30 32301	76
V30 32401	76
V30 32451	76
V30 32501	76
V30 32601	76
V30 32651	76
V30 32701	76
V30 32801	76
V30 32851	76
V30 32901	76
V30 32951	76
V30 33001	76
V30 33101	76
V30 33151	76
V30 33201	76
V30 33301	76
V30 33401	76

Order No.	Page
V30 33501	76
V30 33601	76
V30 33701	76
V30 33751	76
V30 33801	76
V30 33901	76
V30 33951	76
V30 34001	76
V30 34101	76
V30 34201	76
V30 34301	76
V30 34401	76
V30 61402	95
V30 61502	95
V30 61600	95
V30 61700	95
V30 61800	95
V30 61900	95
V30 62000	95
V30 62100	95
V30 62200	95
V30 62300	95
V30 62400	95
V30 62500	95
V30 62600	95
V30 62700	95
V30 62800	95
V30 62900	95
V30 63000	95
V30 63100	95
V30 63200	95
V30 63300	95
V30 63400	95
V30 63500	95
V30 63600	95
V30 63700	95
V30 63800	95
V30 63900	95
V30 64000	95
V30 64100	95
V30 64200	95
V30 64300	95
V30 64400	95
V30 71403	76
V30 71503	76
V30 71551	76
V30 71601	76
V30 71701	76
V30 71751	76
V30 71801	76
V30 71851	76
V30 71901	76
V30 71951	76
V30 72001	76
V30 72101	76
V30 72201	76
V30 72251	76
V30 72301	76
V30 72401	76
V30 72451	76
V30 72501	76
V30 72601	76
V30 72651	76
V30 72701	76
V30 72801	76
V30 72851	76
V30 72901	76
V30 72951	76
V30 73001	76
V30 73101	76
V30 73151	76
V30 73201	76
V30 73301	76
V30 73401	76
V30 73501	76
V30 73601	76
V30 73701	76
V30 73751	76
V30 73801	76
V30 73901	76
V30 73951	76
V30 74001	76
V30 74101	76
V30 74201	76

Order No.	Page
V30 74301	76
V30 74401	76
V30 91403	77
V30 91503	77
V30 91551	77
V30 91601	77
V30 91701	77
V30 91751	77
V30 91801	77
V30 91851	77
V30 91901	77
V30 91951	77
V30 92001	77
V30 92101	77
V30 92201	77
V30 92251	77
V30 92301	77
V30 92401	77
V30 92451	77
V30 92501	77
V30 92601	77
V30 92651	77
V30 92701	77
V30 92801	77
V30 92851	77
V30 92901	77
V30 92951	77
V30 93001	77
V30 93101	77
V30 93151	77
V30 93201	77
V30 93301	77
V30 93401	77
V30 93501	77
V30 93601	77
V30 93701	77
V30 93751	77
V30 93801	77
V30 93901	77
V30 93951	77
V30 94001	77
V30 94101	77
V30 94201	77
V30 94301	77
V30 94401	77
V36 71402	87
V36 71502	87
V36 71600	87
V36 71700	87
V36 71800	87
V36 71900	87
V36 72000	89
V36 72100	89
V36 72200	89
V36 72300	89
V36 72400	89
V37 61402	98
V37 61502	98
V37 61600	98
V37 61700	98
V37 61800	98
V37 61900	98
V37 62000	98
V37 62100	98
V37 62200	98
V37 62300	98
V37 62400	98
V37 71402	87
V37 71502	87
V37 71600	87
V37 71700	87
V37 71800	87
V37 71900	87
V37 72000	89
V37 72100	89
V37 72200	89
V37 72300	89
V37 72400	89
V37 72600	89
V37 72800	89
V37 72900	89
V38 61402	98
V38 61502	98
V38 61600	98

Order No.	Page
V38 61700	98
V38 61800	98
V38 61900	98
V38 62000	98
V38 62100	98
V38 62200	98
V38 62300	98
V38 62400	98
V38 62500	98
V38 62600	98
V38 62700	98
V38 62800	98
V38 62900	98
V38 63000	98
V38 63100	98
V38 63200	98
V38 63300	98
V38 63400	98
V38 63500	98
V38 63600	98
V38 63700	98
V38 63800	98
V38 63900	98
V38 64000	98
V38 64100	98
V38 64200	98
V38 64300	98
V38 64400	98
V38 71402	87
V38 71502	87
V38 71600	87
V38 71700	87
V38 71800	87
V38 71900	87
V38 72000	89
V38 72100	89
V38 72200	89
V38 72300	89
V38 72400	89
V38 72500	89
V38 72600	89
V38 72700	89
V38 72800	89
V38 72900	89
V38 73000	91
V38 73100	91
V38 73200	91
V38 73300	91
V38 73400	91
V38 73500	91
V38 73600	91
V38 73700	91
V38 73800	91
V38 73900	91
V38 74000	91
V38 74100	91
V38 74200	91
V38 74300	91
V38 74400	91
V38 91402	87
V38 91502	87
V38 91550	87
V38 91600	87
V38 91700	87
V38 91750	87
V38 91800	87
V38 91850	87
V38 91900	87
V38 91950	87
V38 92000	89
V38 92100	89
V38 92200	89
V38 92250	89
V38 92300	89
V38 92400	89
V38 92450	89
V38 92500	89
V38 92600	89
V38 92650	89
V38 92700	89
V38 92800	89
V38 92850	89
V38 92900	89
V38 92950	89

Order No.	Page
V38 93000	91
V38 93100	91
V38 93150	91
V38 93200	91
V38 93300	91
V38 93400	91
V38 93500	91
V38 93600	91
V39 61402	98
V39 61502	98
V39 61600	98
V39 61700	98
V39 61800	98
V39 61900	98
V39 62000	98
V39 62100	98
V39 62200	98
V39 62300	98
V39 62400	98
V39 62500	98
V39 62600	98
V39 62700	98
V39 62800	98
V39 62900	98
V39 63000	98
V39 63100	98
V39 63200	98
V39 63300	98
V39 63400	98
V39 63500	98
V39 63600	98
V39 63700	98
V39 63800	98
V39 63900	98
V39 64000	98
V39 64100	98
V39 64200	98
V39 64300	98
V39 64400	98
V39 71402	87
V39 71502	87
V39 71600	87
V39 71700	87
V39 71800	87
V39 71900	87
V39 72000	89
V39 72100	89
V39 72200	89
V39 72300	89
V39 72400	89
V39 72500	89
V39 72600	89
V39 72700	89
V39 72800	89
V39 72900	89
V39 73000	91
V39 73100	91
V39 73200	91
V39 73300	91
V39 73400	91
V39 73500	91
V39 73600	91
V39 73700	91
V39 73800	91
V39 73900	91
V39 74000	91
V39 74100	91
V39 74200	91
V39 74300	91
V39 74400	91
V39 91402	87
V39 91502	87
V39 91550	87
V39 91600	87
V39 91700	87
V39 91750	87
V39 91800	87
V39 91850	87
V39 91900	87
V39 91950	87
V39 92000	89
V39 92100	89
V39 92200	89
V39 92250	89

Order No.	Page
V39 92300	89
V39 92400	89
V39 92450	89
V39 92500	89
V39 92600	89
V39 92650	89
V39 92700	89
V39 92800	89
V39 92850	89
V39 92900	89
V39 92950	89
V39 93000	91
V39 93100	91
V39 93150	91
V39 93200	91
V39 93300	91
V39 93400	91
V39 93500	91
V39 93600	91
V39 93700	91
V39 93750	91
V39 93800	91
V39 93900	91
V39 93950	91
V39 94000	91
V39 94100	91
V39 94200	91
V39 94300	91
V39 94400	91
V43 31202	80
V43 31272	80
V43 31302	80
V43 31372	80
V43 31404	80
V43 31504	80
V43 31552	80
V43 31602	80
V43 31702	80
V43 31752	80
V43 31802	80
V43 31852	80
V43 31902	80
V43 31952	80
V43 32002	80
V43 32102	80
V43 32202	80
V43 32252	80
V43 32302	80
V43 32402	82
V43 32452	82
V43 71202	80
V43 71272	80
V43 71302	80
V43 71372	80
V43 71404	80
V43 71504	80
V43 71552	80
V43 71602	80
V43 71702	80
V43 71752	80
V43 71802	80
V43 71852	80
V43 71902	80
V43 71952	80
V43 72002	80
V43 72102	80
V43 72202	80
V43 72252	80
V43 72302	80
V43 72402	82
V43 72452	82
V43 91404	81
V43 91504	81
V43 91602	81
V43 91702	81
V43 91802	81
V43 91902	81
V44 32002	80
V44 32102	80
V44 32202	80
V44 32252	80
V44 32302	80
V44 32402	82
V44 32452	82

Order No.	Page
V44 32502	82
V44 32602	82
V44 32652	82
V44 32702	82
V44 32802	82
V44 32852	82
V44 32902	82
V44 32952	82
V44 71404	80
V44 71504	80
V44 71552	80
V44 71602	80
V44 71702	80
V44 71752	80
V44 71802	80
V44 71852	80
V44 71902	80
V44 71952	80
V44 72002	80
V44 72102	80
V44 72202	80
V44 72252	80
V44 72302	80
V44 72402	82
V44 72452	82
V44 72502	82
V44 72602	82
V44 72652	82
V44 72702	82
V44 72802	82
V44 72852	82
V44 72902	82
V44 72952	82
V44 92002	81
V44 92102	81
V44 92202	81
V44 92302	81
V44 92402	83
V44 92452	83
V45 32402	82
V45 32452	82
V45 32502	82
V45 32602	82
V45 32652	82
V45 32702	82
V45 32802	82
V45 32852	82
V45 32902	82
V45 32952	82
V45 33002	82
V45 33102	82
V45 33152	82
V45 33202	82
V45 33302	82
V45 33402	82
V45 33502	82
V45 33602	82
V45 33702	82
V45 33752	82
V45 33802	82
V45 33902	82
V45 33952	82
V45 34002	82
V45 34102	82
V45 34202	82
V45 34302	82
V45 34402	82
V45 72002	80
V45 72102	80
V45 72202	80
V45 72252	80
V45 72302	80
V45 72402	82
V45 72452	82
V45 72502	82
V45 72602	82
V45 72652	82
V45 72702	82
V45 72802	82
V45 72852	82
V45 72902	82
V45 72952	82
V45 73002	82
V45 73102	82

Order No.	Page
V45 73152	82
V45 73202	82
V45 73302	82
V45 73402	82
V45 73502	82
V45 73602	82
V45 73702	82
V45 73752	82
V45 73802	82
V45 73902	82
V45 73952	82
V45 74002	82
V45 74102	82
V45 74202	82
V45 74302	82
V45 74402	82
V45 92502	83
V45 92602	83
V45 92702	83
V45 92802	83
V45 92902	83
V45 93002	83
V45 93102	83
V45 93202	83
V45 93302	83
V45 93402	83
V45 93502	83
V45 93602	83
V46 22000	138
V46 22100	138
V46 22200	138
V46 22300	138
V46 22400	138
V46 22500	138
V46 22600	138
V46 22620	138
V46 22650	138
V46 22700	138
V46 22800	138
V46 22900	138
V46 23000	138
V46 23100	138
V46 23200	138
V46 23300	138
V46 23320	138
V46 23400	138
V46 23500	138
V46 23600	138
V46 23700	138
V46 23800	138
V46 23900	138
V46 23920	138
V46 24000	140
V46 24100	140
V46 24200	140
V46 24300	140
V46 24400	140
V46 24500	140
V46 24600	140
V46 24700	140
V46 24800	140
V46 24900	140
V46 25000	140
V46 25100	140
V46 25200	140
V46 25300	140
V46 25400	140
V46 25500	140
V46 25600	140
V46 25700	140
V46 25800	140
V46 25900	140
V46 26000	142
V46 26100	142
V46 26200	142
V46 26300	142
V46 26400	142
V46 26500	142
V46 40801	158
V46 40851	158
V46 40901	158
V46 40951	158
V46 41001	158
V46 41051	158

Numerical index

Order No.	Page
V46 41101	158
V46 41151	158
V46 41201	158
V46 41251	158
V46 41301	158
V46 41351	158
V46 41401	158
V46 41451	158
V46 41501	158
V46 41551	158
V46 50201	148
V46 50211	148
V46 50221	148
V46 50231	148
V46 50241	148
V46 50251	148
V46 50260	148
V46 50270	148
V46 50280	148
V46 50290	148
V46 50300	148
V46 50310	148
V46 50320	148
V46 50330	148
V46 50340	148
V46 50350	148
V46 50360	148
V46 50370	148
V46 50380	148
V46 50390	148
V46 50400	150
V46 50410	150
V46 50420	150
V46 50430	150
V46 50440	150
V46 50450	150
V46 50460	150
V46 50470	150
V46 50480	150
V46 50490	150
V46 50500	150
V46 50510	150
V46 50520	150
V46 50530	150
V46 50540	150
V46 50550	150
V46 50560	150
V46 50570	150
V46 50580	150
V46 50590	150
V46 50600	150
V46 50610	150
V46 50620	150
V46 50630	150
V46 50640	150
V46 50650	152
V46 50660	152
V46 50670	152
V46 50680	152
V46 50690	152
V46 50700	152
V46 50710	152
V46 50720	152
V46 50730	152
V46 50740	152
V46 50750	152
V46 50760	152
V46 50770	152
V46 50780	152
V46 50790	152
V46 50800	152
V46 50810	152
V47 20201	138
V47 20201	148
V47 20261	138
V47 20261	148
V47 20331	138
V47 20331	148
V47 20401	140
V47 20401	150
V47 20461	140
V47 20461	150
V47 20551	140
V47 20551	142

Order No.	Page
V47 20551	150
V47 20651	142
V47 20651	152
V47 20721	152
V47 40201	138
V47 40201	148
V47 40261	138
V47 40261	148
V47 40331	138
V47 40331	148
V47 40401	140
V47 40401	150
V47 40461	140
V47 40461	150
V47 40551	140
V47 40551	142
V47 40551	150
V47 40651	142
V47 40651	152
V47 40721	152
V47 60201	138
V47 60201	148
V47 60261	138
V47 60261	148
V47 60331	138
V47 60331	148
V47 60401	140
V47 60401	150
V47 60461	140
V47 60461	150
V47 60551	140
V47 60551	142
V47 60551	150
V47 60651	142
V47 60651	152
V47 60721	152
V50 30830	162
V50 30880	162
V50 30930	162
V50 30980	162
V50 31030	162
V50 31080	162
V50 31130	162
V50 31180	162
V50 31230	162
V50 31280	162
V59 64500	98
V59 64600	98
V59 64700	98
V59 64800	98
V59 64900	98
V59 65000	98
V59 65100	98
V59 65400	98
V59 74500	91
V59 74600	91
V59 74700	91
V59 74800	91
V59 74900	91
V59 75000	91
V59 75100	91
V59 75200	91
V59 75300	91
V59 75400	91
V71 00200	166
V71 00210	166
V71 00250	166
V71 00260	166
V71 00330	166
V82 73900	102
V82 74000	102
V82 74100	102
V82 74200	102
V82 74300	102
V82 74400	102
V83 74500	102
V83 74600	102
V83 74700	102
V83 74800	102
V83 74900	102
V83 75000	102
V83 75100	102
V83 75200	102
V83 75300	102

Order No.	Page
V83 75400	102
V84 75500	102
V84 75600	102
V84 75700	102
V84 75800	102
V84 75900	102
V84 76000	102
V84 76100	102
V84 76200	102
V84 76300	102
V84 76400	102
V84 76500	102
V84 76600	102
V84 76700	102
V84 76800	102
V84 76900	102
V84 77000	102
V84 77100	102
V84 77200	102
V84 77300	102
V84 77400	102
V84 77500	102
V84 77600	102
V84 77700	102
V84 77800	102
V84 77900	102
V84 78000	102
V84 78100	102
V95 10012.0089	149
V95 10012.0089	925
V95 10012.0090	149
V95 10012.0090	925
V95 10022.0089	149
V95 10022.0089	925
V95 10022.0090	149
V95 10022.0090	925
V95 10032.0089	151
V95 10032.0089	925
V95 10032.0090	151
V95 10032.0090	925
V95 10042.0089	151
V95 10042.0089	925
V95 10042.0090	151
V95 10042.0090	925
V95 10050.0089	153
V95 10050.0089	925
V95 10050.0090	153
V95 10050.0090	925
V95 10063.0089	159
V95 10063.0089	925
V95 10063.0090	159
V95 10063.0090	925
V95 10213.0089	159
V95 10213.0089	925
V95 10213.0090	159
V95 10213.0090	925
V95 10310.8450	149
V95 10310.8450	925
V95 10320.8450	149
V95 10320.8450	925
V95 10330.8450	151
V95 10330.8450	925
V95 10340.8450	151
V95 10340.8450	925
V96 01100.8450	139
V96 01100.8450	141
V96 01100.8450	143
V96 01100.8450	925
V96 01110.8450	139
V96 01110.8450	141
V96 01110.8450	143
V96 01110.8450	925
V96 01120.8450	139
V96 01120.8450	141
V96 01120.8450	143
V96 01120.8450	925
V96 01130.8450	139
V96 01130.8450	141
V96 01130.8450	143
V96 01130.8450	925
V96 01140.8450	139
V96 01140.8450	141
V96 01140.8450	925
V96 01150.8450	139

Order No.	Page
V96 01150.8450	141
V96 01150.8450	925
V96 01160.8450	139
V96 01160.8450	141
V96 01160.8450	143
V96 01160.8450	925
W00 04120.0104	842
W00 04120.0121	842
W00 04120.012710	842
W00 04120.016440	842
W00 04120.018440	842
W00 04120.022710	842
W00 04120.028440	842
W00 04420.0104	842
W00 04420.012710	842
W00 04420.016440	842
W00 04420.018440	842
W00 04420.022710	842
W00 04420.028440	842
W01 10060.048425	843
W01 10120.0403	843
W01 10120.0421	843
W01 10120.048425	843
W01 10360.048425	844
W01 10420.048425	844
W01 18120.0421	843
W01 18120.046425	843
W01 18120.048425	843
W01 18360.046425	844
W01 18360.048425	844
W01 18420.048425	844
W01 18600.0421	845
W01 18600.047615	845
W01 24060.0203	843
W01 24060.0221	843
W01 24060.026425	843
W01 24060.028425	843
W01 24060.046115	843
W01 24120.0203	843
W01 24120.026425	843
W01 24120.028425	843
W01 24120.0403	843
W01 24120.0421	843
W01 24120.046425	843
W01 24120.048425	843
W01 24360.046115	844
W01 24420.0203	844
W01 24420.0221	844
W01 24420.026425	844
W01 24420.028425	844
W01 24600.0421	845
W01 24600.047615	845
W01 24600.087615	845
W01 24600.756115	848
W01 24600.906115	847
W01 24940.0457	846
W01 34060.0203	843
W01 34060.0221	843
W01 34060.026425	843
W01 34060.028425	843
W01 34060.046115	843
W01 34060.048425	843
W01 34120.0203	843
W01 34120.028425	843
W01 34120.0403	843
W01 34120.0421	843
W01 34120.046425	843
W01 34120.048425	843
W01 34360.0203	844
W01 34360.046115	844
W01 34360.3403	849
W01 34360.3421	849
W01 34360.346440	849
W01 34360.3521	849
W01 34420.0203	844
W01 34420.026425	844
W01 34420.028425	844
W01 34600.0421	845
W01 34600.047615	845
W01 34600.087615	845
W01 34600.756115	848
W01 34600.906115	847
W01 34940.0457	846

Order No.	Page
W01 42060.0203	843
W01 42060.026425	843
W01 42060.028425	843
W01 42060.0421	843
W01 42060.046115	843
W01 42120.026425	843
W01 42120.028425	843
W01 42120.0403	843
W01 42120.0421	843
W01 42120.046425	843
W01 42120.048425	843
W01 42360.0203	844
W01 42360.046115	844
W01 42360.046425	844
W01 42360.3403	849
W01 42360.3421	849
W01 42420.0203	844
W01 42420.0221	844
W01 42420.026425	844
W01 42420.028425	844
W01 42420.048425	844
W01 42600.047615	845
W01 42600.087615	845
W01 42600.756115	848
W01 42600.906115	847
W01 50060.0403	843
W01 50060.0421	843
W01 50060.046425	843
W01 50060.048425	843
W01 50120.0421	843
W01 50120.048425	843
W01 50360.0403	844
W01 50420.0403	844
W01 50420.048425	844
W01 50600.756115	848
W01 50600.906115	847
W01 58060.068425	843
W01 58120.068425	843
W04 34180.0212	850
W04 34480.0212	851
W04 42180.0204	850
W04 42180.0212	850
W04 42180.0221	850
W04 42180.026425	850
W04 42480.0204	851
W04 42480.0212	851
W04 42480.0221	851
W04 42480.026425	851
W04 42480.0412	851
W04 50180.0404	850
W04 50180.0412	850
W04 50180.046425	850
W04 50480.0404	851
W04 50480.0412	851
W04 50480.0421	851
W04 50480.046425	851
W04 58480.0612	851
W29 04010.027935	853
W29 04010.028425	853
W29 10010.0404	853
W29 10010.0421	853
W29 10010.046115	853
W29 10010.0462	853
W29 10010.0472	853
W29 10010.047615	853
W29 10010.047935	853
W29 10010.048425	853
W29 10030.046425	855
W29 10030.048425	855
W29 10110.0421	856
W29 10110.0450	857
W29 10110.0477	856
W29 10110.047710	856
W29 10130.0404	858
W29 10130.047325	858
W29 10130.0479	858
W29 10130.048425	858
W29 10150.048430	859
W29 10160.0460	860
W29 10160.048430	860
W29 10200.042730	861
W29 10200.048430	861
W29 18010.0404	853
W29 18010.0421	853

Order No.	Page
W29 18010.046115	853
W29 18010.0462	853
W29 18010.0472	853
W29 18010.047615	853
W29 18010.047935	853
W29 18010.048425	853
W29 18030.046425	855
W29 18030.048425	855
W29 18110.0421	856
W29 18110.0450	857
W29 18110.0477	856
W29 18110.047710	856
W29 18130.0404	858
W29 18130.047325	858
W29 18130.0479	858
W29 18130.048425	858
W29 18150.0460	859
W29 18150.048430	859
W29 18160.0473	860
W29 18160.048430	860
W29 18200.042730	861
W29 18200.048430	861
W29 24000.0403	852
W29 24000.0421	852
W29 24000.046115	852
W29 24000.046425	852
W29 24000.046440	852
W29 24000.047615	852
W29 24000.048425	852
W29 24010.0403	853
W29 24010.0404	853
W29 24010.0421	853
W29 24010.046115	853
W29 24010.0462	853
W29 24010.046420	853
W29 24010.046425	853
W29 24010.046440	853
W29 24010.0472	853
W29 24010.047615	853
W29 24010.047935	853
W29 24010.048425	853
W29 24010.0803	853
W29 24010.0804	853
W29 24010.0821	853
W29 24010.086115	853
W29 24010.0862	853
W29 24010.086420	853
W29 24010.086425	853
W29 24010.086440	853
W29 24010.087615	853
W29 24010.087935	853
W29 24010.088425	853
W29 24020.046425	854
W29 24020.046440	854
W29 24020.086440	854
W29 24030.046425	855
W29 24030.048425	855
W29 24030.086425	855
W29 24110.0421	856
W29 24110.0450	857
W29 24110.0477	856
W29 24110.047710	856
W29 24130.0404	858
W29 24130.047325	858
W29 24130.0479	858
W29 24130.048425	858
W29 24150.0460	859
W29 24150.0473	859
W29 24150.048430	859
W29 24160.0460	860
W29 24160.048430	860
W29 24200.042730	861
W29 24200.048430	861
W29 34000.0403	852
W29 34000.0421	852
W29 34000.046115	852
W29 34000.046425	852
W29 34000.046440	852
W29 34000.047615	852
W29 34000.048425	852
W29 34010.0403	853
W29 34010.0404	853
W29 34010.0421	853
W29 34010.046115	853
W29 34010.0462	853
W29 34010.046420	853
W29 34010.046425	853
W29 34010.046440	853
W29 34010.0472	853
W29 34010.047615	853
W29 34010.047935	853
W29 34010.048425	853
W29 34010.0821	853
W29 34010.086115	853
W29 34010.0862	853
W29 34010.086425	853
W29 34010.086440	853
W29 34010.0872	853
W29 34010.087615	853
W29 34010.087935	853
W29 34010.088425	853
W29 34020.046425	854
W29 34020.046440	854
W29 34020.086440	854
W29 34030.0403	855
W29 34030.046425	855
W29 34030.048425	855
W29 34030.086425	855
W29 34030.088425	855
W29 34110.0421	856
W29 34110.0450	857
W29 34110.0477	856
W29 34110.047710	856
W29 34130.047325	858
W29 34130.0479	858
W29 34130.048425	858
W29 34150.0460	859
W29 34150.048430	859
W29 34160.0460	860
W29 34160.0473	860
W29 34160.048430	860
W29 34200.042730	861
W29 34200.048430	861
W29 42000.0403	852
W29 42000.0421	852
W29 42000.046115	852
W29 42000.046425	852
W29 42000.046440	852
W29 42000.047615	852
W29 42000.048425	852
W29 42010.0403	853
W29 42010.0404	853
W29 42010.0421	853
W29 42010.046115	853
W29 42010.0462	853
W29 42010.046420	853
W29 42010.046425	853
W29 42010.046440	853
W29 42010.0472	853
W29 42010.047615	853
W29 42010.047935	853
W29 42010.048425	853
W29 42010.0803	853
W29 42010.0804	853
W29 42010.0821	853
W29 42010.086115	853
W29 42010.0862	853
W29 42010.086420	853
W29 42010.086425	853
W29 42010.086440	853
W29 42010.0872	853
W29 42010.087615	853
W29 42010.087935	853
W29 42010.088425	853
W29 42020.046440	854
W29 42020.086440	854
W29 42030.0403	855
W29 42030.046425	855
W29 42030.048425	855
W29 42030.086425	855
W29 42030.088425	855
W29 42110.0421	856
W29 42110.0450	857
W29 42110.0477	856
W29 42110.047710	856
W29 42130.0404	858
W29 42130.047325	858
W29 42130.0479	858
W29 42130.048425	858
W29 42150.0460	859
W29 42150.0473	859
W29 42150.048430	859
W29 42160.0460	860
W29 42160.048430	860
W29 42200.042730	861
W29 42200.048430	861
W29 50000.0403	852
W29 50000.0421	852
W29 50000.046115	852
W29 50000.046425	852
W29 50000.046440	852
W29 50000.048425	852
W29 50000.086115	852
W29 50000.086440	852
W29 50010.0403	853
W29 50010.0404	853
W29 50010.0421	853
W29 50010.046115	853
W29 50010.0462	853
W29 50010.046420	853
W29 50010.046425	853
W29 50010.046440	853
W29 50010.0472	853
W29 50010.047615	853
W29 50010.047935	853
W29 50010.048425	853
W29 50010.0803	853
W29 50010.0804	853
W29 50010.0821	853
W29 50010.086115	853
W29 50010.0862	853
W29 50010.086420	853
W29 50010.086425	853
W29 50010.086440	853
W29 50010.087615	853
W29 50010.087935	853
W29 50010.088425	853
W29 50020.046440	854
W29 50020.086440	854
W29 50030.0403	855
W29 50030.046425	855
W29 50030.048425	855
W29 50030.086425	855
W29 50030.088425	855
W29 50110.0421	856
W29 50110.0450	857
W29 50110.0477	856
W29 50110.047710	856
W29 50130.0404	858
W29 50130.047325	858
W29 50130.0479	858
W29 50130.048425	858
W29 50200.042730	861
W29 50200.048430	861
W29 58000.0821	852
W29 58000.086115	852
W29 58000.086425	852
W29 58000.086440	852
W29 58000.088425	852
W29 58010.0803	853
W29 58010.0804	853
W29 58010.0821	853
W29 58010.086115	853
W29 58010.0862	853
W29 58010.086420	853
W29 58010.086425	853
W29 58010.086440	853
W29 58010.0872	853
W29 58010.087615	853
W29 58010.087935	853
W29 58010.088425	853
W29 58020.086440	854
W29 58030.086425	855
W29 58030.088425	855
W29 58130.0804	858
W29 58130.087325	858
W29 58130.0879	858
W29 58130.088425	858
W30 04060.0203	862
W30 04060.0221	862
W30 04060.022710	862
W30 04060.026110	862
W30 04060.026425	862
W30 04060.026440	862
W30 04060.027615	862
W30 04060.028425	862
W30 04060.0303	862
W30 04060.0321	862
W30 04060.032710	862
W30 04060.036110	862
W30 04060.036425	862
W30 04060.036440	862
W30 04060.037615	862
W30 04060.038425	862
W30 04060.0403	862
W30 04060.0421	862
W30 04060.046425	862
W30 04060.046440	862
W30 04060.3021	862
W30 04060.306425	862
W30 04060.308425	862
W30 04060.316425	868
W30 04060.316440	868
W30 04060.317615	868
W30 04120.0203	862
W30 04120.0221	862
W30 04120.0230	862
W30 04120.0232	862
W30 04120.0237	862
W30 04120.0238	862
W30 04120.026425	862
W30 04120.026440	862
W30 04120.028425	862
W30 04120.0303	862
W30 04120.0321	862
W30 04120.0332	862
W30 04120.0337	862
W30 04120.036425	862
W30 04120.036440	862
W30 04120.038425	862
W30 04120.0403	862
W30 04120.0421	862
W30 04120.0430	862
W30 04120.0438	862
W30 04120.046425	862
W30 04120.046440	862
W30 04120.048425	862
W30 04120.306425	862
W30 04120.308425	862
W30 04120.3121	868
W30 04120.3130	868
W30 04120.3138	868
W30 04120.316425	868
W30 04120.318425	868
W30 04120.3230	869
W30 04120.3232	869
W30 04120.3237	869
W30 04120.3238	869
W30 04120.326425	869
W30 04120.326440	869
W30 04120.328425	869
W30 04120.3977	871
W30 04200.0221	862
W30 04200.026425	862
W30 04200.028425	862
W30 04200.0321	862
W30 04200.036425	862
W30 04360.0203	863
W30 04360.0221	863
W30 04360.026425	863
W30 04360.028425	863
W30 04360.0303	863
W30 04360.0321	863
W30 04360.036425	863
W30 04360.036440	863
W30 04360.038425	863
W30 04360.046425	863
W30 04360.048425	863
W30 04420.0203	863
W30 04420.0221	863
W30 04420.0230	863
W30 04420.0232	863
W30 04420.0237	863
W30 04420.0238	863
W30 04420.026425	863
W30 04420.028425	863
W30 04420.0303	863
W30 04420.0321	863
W30 04420.0337	863
W30 04420.036425	863
W30 04420.036440	863
W30 04420.038425	863
W30 04420.0430	863
W30 04420.0438	863
W30 04420.046425	863
W30 04420.048425	863
W30 04500.0221	863
W30 04500.0321	863
W30 04600.0221	864
W30 04600.0303	864
W30 04600.0321	864
W30 04600.036425	864
W30 04600.037615	864
W30 04600.038425	864
W30 04660.0303	865
W30 04660.0321	865
W30 04660.036425	865
W30 04660.036440	865
W30 04660.038425	865
W30 04720.0303	865
W30 04720.0321	865
W30 04720.036425	865
W30 04820.0230	866
W30 04820.0232	866
W30 04820.0238	866
W30 04820.0332	866
W30 04820.0430	866
W30 04820.0438	866
W30 04820.3230	870
W30 04820.3238	870
W30 04830.0232	867
W30 04980.035510	874
W30 04990.0240	876
W30 04990.025510	875
W30 04990.0257	876
W30 04990.035510	875
W30 04990.0357	876
W30 04990.045510	875
W30 14060.0203	862
W30 14060.0221	862
W30 14060.022710	862
W30 14060.026110	862
W30 14060.026425	862
W30 14060.026440	862
W30 14060.027615	862
W30 14060.028425	862
W30 14060.0403	862
W30 14060.0421	862
W30 14060.042710	862
W30 14060.046110	862
W30 14060.046425	862
W30 14060.046440	862
W30 14060.047615	862
W30 14060.048425	862
W30 14060.0821	862
W30 14060.082710	862
W30 14060.086110	862
W30 14060.086425	862
W30 14060.087615	862
W30 14060.088425	862
W30 14060.3021	862
W30 14060.306425	862
W30 14060.308425	862
W30 14060.3121	868
W30 14060.316425	868
W30 14060.316440	868
W30 14060.317615	868
W30 14120.0203	862
W30 14120.0221	862
W30 14120.0230	862
W30 14120.0232	862
W30 14120.0237	862
W30 14120.0238	862
W30 14120.026425	862
W30 14120.026440	862
W30 14120.028425	862
W30 14120.0403	862
W30 14120.0421	862
W30 14120.0430	862
W30 14120.0432	862

Numerical index

Order No.	Page
W30 14120.0437	862
W30 14120.0438	862
W30 14120.046425	862
W30 14120.046440	862
W30 14120.048425	862
W30 14120.0821	862
W30 14120.086425	862
W30 14120.088425	862
W30 14120.3021	862
W30 14120.306425	862
W30 14120.308425	862
W30 14120.3130	868
W30 14120.3138	868
W30 14120.316425	868
W30 14120.316440	868
W30 14120.318425	868
W30 14120.3230	869
W30 14120.3232	869
W30 14120.3237	869
W30 14120.3238	869
W30 14120.326115	869
W30 14120.326425	869
W30 14120.326440	869
W30 14120.328425	869
W30 14120.3977	871
W30 14200.0203	862
W30 14200.0221	862
W30 14200.026425	862
W30 14200.028425	862
W30 14200.0421	862
W30 14200.046425	862
W30 14360.0203	863
W30 14360.0221	863
W30 14360.026425	863
W30 14360.028425	863
W30 14360.0403	863
W30 14360.0421	863
W30 14360.046425	863
W30 14360.046440	863
W30 14360.047615	863
W30 14360.048425	863
W30 14360.088425	863
W30 14360.3003	863
W30 14420.0203	863
W30 14420.0221	863
W30 14420.0232	863
W30 14420.0237	863
W30 14420.0238	863
W30 14420.026425	863
W30 14420.028425	863
W30 14420.0403	863
W30 14420.0421	863
W30 14420.0430	863
W30 14420.0432	863
W30 14420.0437	863
W30 14420.0438	863
W30 14420.046425	863
W30 14420.046440	863
W30 14420.047615	863
W30 14420.048425	863
W30 14420.3021	863
W30 14500.0221	863
W30 14500.0421	863
W30 14500.046425	863
W30 14600.0221	864
W30 14600.0403	864
W30 14600.0421	864
W30 14600.0462	864
W30 14600.046425	864
W30 14600.047615	864
W30 14600.048425	864
W30 14600.087615	864
W30 14660.028425	865
W30 14660.0403	865
W30 14660.0404	865
W30 14660.0421	865
W30 14660.046425	865
W30 14660.046440	865
W30 14660.047615	865
W30 14660.048425	865
W30 14660.3303	865
W30 14660.3321	865
W30 14660.336425	865
W30 14660.336440	865

Order No.	Page
W30 14660.338425	865
W30 14720.026425	865
W30 14720.0403	865
W30 14720.0421	865
W30 14720.046425	865
W30 14720.046440	865
W30 14720.048425	865
W30 14800.0421	865
W30 14820.0230	866
W30 14820.0232	866
W30 14820.0238	866
W30 14820.0430	866
W30 14820.0432	866
W30 14820.0438	866
W30 14820.3230	870
W30 14820.3232	870
W30 14820.3238	870
W30 14830.0232	867
W30 14940.045510	872
W30 14940.0457	873
W30 14980.045510	874
W30 14990.0240	876
W30 14990.025510	875
W30 14990.0257	876
W30 14990.0440	876
W30 14990.045510	875
W30 14990.0457	876
W30 14990.085510	875
W30 14990.0857	876
W30 26060.0203	862
W30 26060.0221	862
W30 26060.022710	862
W30 26060.026110	862
W30 26060.026425	862
W30 26060.027615	862
W30 26060.028425	862
W30 26060.0403	862
W30 26060.0421	862
W30 26060.042710	862
W30 26060.046110	862
W30 26060.046425	862
W30 26060.046440	862
W30 26060.047615	862
W30 26060.048425	862
W30 26060.0503	862
W30 26060.0521	862
W30 26060.052710	862
W30 26060.056110	862
W30 26060.056425	862
W30 26060.056440	862
W30 26060.057615	862
W30 26060.058425	862
W30 26060.082710	862
W30 26060.086110	862
W30 26060.086425	862
W30 26060.087615	862
W30 26060.088425	862
W30 26060.3121	868
W30 26060.316425	868
W30 26060.316440	868
W30 26060.317615	868
W30 26060.318425	868
W30 26120.0203	862
W30 26120.0221	862
W30 26120.0232	862
W30 26120.0237	862
W30 26120.0238	862
W30 26120.026425	862
W30 26120.026440	862
W30 26120.028425	862
W30 26120.0403	862
W30 26120.0421	862
W30 26120.0430	862
W30 26120.0438	862
W30 26120.046425	862
W30 26120.048425	862
W30 26120.0503	862
W30 26120.0521	862
W30 26120.0532	862
W30 26120.0537	862
W30 26120.056425	862
W30 26120.056440	862
W30 26120.058425	862
W30 26120.086425	862

Order No.	Page
W30 26120.088425	862
W30 26120.306425	862
W30 26120.3130	868
W30 26120.316425	868
W30 26120.316440	868
W30 26120.318425	868
W30 26120.3230	869
W30 26120.3232	869
W30 26120.3237	869
W30 26120.3238	869
W30 26120.326425	869
W30 26120.326440	869
W30 26120.328425	869
W30 26120.3977	871
W30 26200.0221	862
W30 26200.0421	862
W30 26200.0521	862
W30 26360.0221	863
W30 26360.028425	863
W30 26360.046425	863
W30 26360.0503	863
W30 26360.0521	863
W30 26360.056425	863
W30 26360.056440	863
W30 26360.058425	863
W30 26420.0221	863
W30 26420.026425	863
W30 26420.0438	863
W30 26420.0503	863
W30 26420.0521	863
W30 26420.0537	863
W30 26420.056425	863
W30 26420.058425	863
W30 26500.058425	863
W30 26600.047615	864
W30 26600.0503	864
W30 26600.0521	864
W30 26600.057615	864
W30 26600.058425	864
W30 26600.0821	864
W30 26600.086425	864
W30 26600.087615	864
W30 26660.0503	865
W30 26660.0521	865
W30 26660.056425	865
W30 26660.056440	865
W30 26660.057615	865
W30 26660.058425	865
W30 26720.0503	865
W30 26720.0521	865
W30 26720.056425	865
W30 26820.0232	866
W30 26820.0238	866
W30 26820.0438	866
W30 26820.0532	866
W30 26820.3230	870
W30 26820.3238	870
W30 26940.055510	872
W30 26940.0557	873
W30 26980.055510	874
W30 26990.025510	875
W30 26990.0257	876
W30 26990.0440	876
W30 26990.045510	875
W30 26990.0457	876
W30 26990.055510	875
W30 26990.0557	876
W30 44060.088425	862
W30 44360.0803	863
W30 44360.088425	863
W30 44420.088425	863
W30 44600.0821	864
W30 44600.087615	864
W30 44660.0803	865
W30 44660.0821	865
W30 44660.086425	865
W30 44660.086440	865
W30 44660.087615	865
W30 44720.0821	865
W30 44720.086425	865
W32 03150.0421	877
W32 03150.0450	878
W32 03150.047710	877
W32 03450.0421	879

Order No.	Page
W32 03600.0421	880
W32 03600.0450	881
W32 03980.045510	883
W32 03990.045510	884
W32 13150.0421	877
W32 13150.0450	878
W32 13150.047710	877
W32 13150.0821	877
W32 13150.0850	878
W32 13150.087710	877
W32 13450.0421	879
W32 13600.0421	880
W32 13600.0450	881
W32 13600.0821	880
W32 13600.0850	881
W32 13940.045510	882
W32 13980.025510	883
W32 13980.045510	883
W32 13990.045510	884
W32 18150.0421	877
W32 18150.047710	877
W32 18150.0821	877
W32 18150.0850	878
W32 18150.087710	877
W32 18450.0421	879
W32 18600.0421	880
W32 18600.0450	881
W32 18600.0821	880
W32 18600.0850	881
W32 18940.045510	882
W32 18940.085510	882
W32 18980.045510	883
W32 18990.045510	884
W32 23150.0421	877
W32 23150.0450	878
W32 23150.087710	877
W32 23600.0421	880
W32 23600.0450	881
W32 23600.0821	880
W32 23940.045510	882
W32 23980.045510	883
W32 23990.045510	884
W32 32150.0421	877
W32 32150.0450	878
W32 32600.0421	880
W32 32600.0450	881
W32 32600.0821	880
W32 32600.0850	881
W32 32940.045510	882
W32 32980.045510	883
W32 32990.045510	884
W32 44600.0421	880
W32 44600.0821	880
W32 44600.0850	881
W34 18660.0421	885
W34 18660.046425	885
W37 18600.0421	886
W37 18600.0821	886
W37 23600.0821	886
W57 04120.0223	887
W57 04120.027710	887
W57 04140.023210	888
W57 04140.023230	888
W57 04140.0260	888
W57 04140.028430	888
W57 04140.043210	888
W57 04140.043230	888
W57 04140.0460	888
W57 04140.048430	888
W57 04180.0432	889
W57 04180.048430	889
W57 14120.0423	887
W57 14120.047710	887
W57 14140.023210	888
W57 14140.023230	888
W57 14140.0260	888
W57 14140.028430	888
W57 14140.043210	888
W57 14140.043230	888
W57 14140.0460	888
W57 14140.048430	888
W57 14180.0432	889
W57 14180.048430	889
W57 14180.0832	889

Order No.	Page
W57 14180.088430	889
W57 26120.0423	887
W57 26120.047710	887
W57 26140.023210	888
W57 26140.023230	888
W57 26140.028430	888
W57 26140.043210	888
W57 26140.043230	888
W57 26140.0460	888
W57 26140.048430	888
W57 26140.088430	888
W57 26180.0432	889
W57 26180.048430	889
W57 26180.088430	889
W58 03120.047710	890
W58 13120.047710	890
W58 18120.047710	890
W58 23120.047710	890
W58 32120.047710	890
W59 18050.0403	891
W59 18050.0421	891
W59 18050.046425	891
W59 18050.046440	891
W59 18050.047615	891
W59 18050.0479	891
W59 18050.048425	891
W59 32050.0803	891
W59 32050.0821	891
W59 32050.086425	891
W59 32050.086440	891
W59 32050.087615	891
W59 32050.0879	891
W59 32050.088425	891
W60 18060.0203	892
W60 18060.046425	892
W60 18120.0203	892
W60 18120.0221	892
W60 18120.022710	892
W60 18120.026425	892
W60 18120.0403	892
W60 18120.0421	892
W60 18120.042710	892
W60 18120.046425	892
W60 18200.0221	892
W60 18360.0203	893
W60 18360.026425	893
W60 18360.046425	893
W60 18420.0203	893
W60 18420.0221	893
W60 18420.026425	893
W60 18420.0403	893
W60 18420.0421	893
W60 18420.046425	893
W60 18500.0221	893
W60 18500.0421	893
W60 18600.0221	894
W60 18600.0421	894
W60 18990.0240	895
W60 18990.0440	895
W60 18990.0457	895
W60 32120.0203	892
W60 32120.0221	892
W60 32120.026425	892
W60 32120.0403	892
W60 32120.0421	892
W60 32120.042710	892
W60 32120.046425	892
W60 32120.082710	892
W60 32120.086425	892
W60 32360.086425	893
W60 32420.0203	893
W60 32420.0221	893
W60 32420.026425	893
W60 32420.0403	893
W60 32420.0421	893
W60 32420.046425	893
W60 32420.086425	893
W60 32600.0421	894
W60 32990.0240	895
W60 32990.0440	895
W60 32990.0457	895
W78 18070.0214	896
W78 18070.0266	896
W78 18070.0414	896

Order No.	Page
W78 18070.0466	896
W78 18990.0457	897
W78 32070.0414	896
W78 32070.0466	896
W78 32070.0814	896
W78 32070.0866	896
W78 32990.0857	897
W79 18060.0203	898
W79 18060.0221	898
W79 18060.022710	898
W79 18060.026425	898
W79 18060.026440	898
W79 18060.0403	898
W79 18060.0421	898
W79 18060.042710	898
W79 18060.046425	898
W79 18060.046440	898
W79 18060.047615	898
W79 18060.086425	898
W79 18060.086440	898
W79 32060.0221	898
W79 32060.026425	898
W79 32060.0403	898
W79 32060.0421	898
W79 32060.042710	898
W79 32060.046425	898
W79 32060.046440	898
W79 32060.0821	898
W79 32060.082710	898
W79 32060.086425	898
W79 32060.086440	898
W80 10010.046115	899
W80 10010.046425	899
W80 10010.047710	899
W80 10010.047935	899
W80 10010.048425	899
W80 10030.048430	900
W80 10210.047710	901
W80 10210.047935	901
W80 10210.048430	901
W80 12010.046115	899
W80 12010.046425	899
W80 12010.047710	899
W80 12010.047935	899
W80 12010.048425	899
W80 12030.048430	900
W80 12210.047710	901
W80 12210.047935	901
W80 12210.048430	901
W80 18010.066115	899
W80 18010.066425	899
W80 18010.067710	899
W80 18010.067935	899
W80 18010.068425	899
W80 18030.068430	900
W80 18210.067710	901
W80 18210.067935	901
W80 18210.068430	901
W80 20010.086115	899
W80 20010.086425	899
W80 20010.087710	899
W80 20010.087935	899
W80 20010.088425	899
W80 20030.088430	900
W80 20210.087710	901
W80 20210.087935	901
W80 20210.088430	901
W80 24010.086115	899
W80 24010.086425	899
W80 24010.087710	899
W80 24010.087935	899
W80 24010.088425	899
W80 24030.088430	900
W80 24210.087710	901
W80 24210.087935	901
W80 24210.088430	901
W80 28010.086115	899
W80 28010.086425	899
W80 28010.087710	899
W80 28010.087935	899
W80 28010.088425	899
W80 28030.088430	900
W80 28210.087710	901
W80 28210.087935	901

Order No.	Page
W80 32010.086115	899
W80 32010.086425	899
W80 32010.087710	899
W80 32010.087935	899
W80 32010.088425	899
W80 32030.088430	900
W80 32210.087710	901
W80 32210.087935	901
W80 32210.088430	901
W80 38010.086115	899
W80 38010.086425	899
W80 38010.087710	899
W80 38010.087935	899
W80 38010.088425	899
W80 38030.088430	900
W80 38210.087710	901
W80 38210.087935	901
W80 38210.088430	901
W80 42010.086115	899
W80 42010.086425	899
W80 42010.087710	899
W80 42010.087935	899
W80 42010.088425	899
W80 42030.088430	900
W80 42210.087710	901
W80 42210.087935	901
W80 42210.088430	901
W80 46010.086115	899
W80 46010.086425	899
W80 46010.087710	899
W80 46010.087935	899
W80 46010.088425	899
W80 46030.088430	900
W80 46210.087710	901
W80 46210.087935	901
W80 46210.088430	901
W82 32210.048530	902
W82 32210.082730	902
W82 32210.088530	902
W83 13000.016115	903
W83 13000.0174	903
W83 13010.046420	903
W83 13010.047615	903
W83 13010.047935	903
W83 13010.048425	903
W83 13030.046730	904
W83 13030.048430	904
W83 13130.047935	905
W83 13130.048425	905
W83 13210.046130	906
W83 13210.047710	906
W83 13210.047935	906
W83 13210.048430	906
W83 13320.047935	907
W83 13320.048425	907
W83 18000.096115	903
W83 18000.0974	903
W83 18000.1074	905
W83 18000.1521	908
W83 18000.1621	908
W83 18010.066420	903
W83 18010.067615	903
W83 18010.067935	903
W83 18010.068425	903
W83 18030.066730	904
W83 18030.068430	904
W83 18130.066420	905
W83 18130.067935	905
W83 18130.068425	905
W83 18130.086420	905
W83 18130.0874	905
W83 18130.087935	905
W83 18130.088425	905
W83 18210.066130	906
W83 18210.067710	906
W83 18210.067935	906
W83 18210.068430	906
W83 18210.086130	906
W83 18210.087710	906
W83 18210.087935	906
W83 18210.088430	906
W83 18330.067935	907
W83 18330.068425	907
W83 23000.016115	903

Order No.	Page
W83 23000.0174	903
W83 23000.0274	905
W83 23010.086420	903
W83 23010.087615	903
W83 23010.087935	903
W83 23010.088425	903
W83 23030.086730	904
W83 23030.088430	904
W83 23130.086420	905
W83 23130.087935	905
W83 23130.088425	905
W83 23210.086130	906
W83 23210.087710	906
W83 23210.087935	906
W83 23210.088430	906
W83 23330.087935	907
W83 23330.088425	907
W83 32000.156115	903
W83 32000.1574	903
W83 32000.1774	905
W83 32000.1821	908
W83 32000.1921	908
W83 32010.086420	903
W83 32010.087615	903
W83 32010.087935	903
W83 32010.088425	903
W83 32030.086730	904
W83 32030.088430	904
W83 32130.086420	905
W83 32130.087935	905
W83 32130.088425	905
W83 32210.086130	906
W83 32210.087710	906
W83 32210.087935	906
W83 32210.088430	906
W83 32320.087935	907
W83 32320.088425	907
W83 39130.086420	905
W83 39130.0874	905
W83 39130.087935	905
W83 39130.088425	905
W83 39210.086130	906
W83 39210.087710	906
W83 39210.087935	906
W83 39210.088430	906
W83 44000.186115	903
W83 44000.1874	903
W83 44000.1974	905
W83 44010.086420	903
W83 44010.087615	903
W83 44010.087935	903
W83 44010.088425	903
W83 44030.086730	904
W83 44030.088430	904
W83 44130.086420	905
W83 44130.087935	905
W83 44130.088425	905
W83 44210.086130	906
W83 44210.087710	906
W83 44210.087935	906
W83 44210.088430	906
W83 44320.087935	907
W83 44320.088425	907
W85 09000.0121	909
W85 09000.0321	909
W85 09000.0377	909
W85 09000.1221	909
W85 09000.1321	911
W85 09000.1421	911
W85 18000.0621	909
W85 18000.0821	909
W85 18000.0877	909
W85 18000.1721	912
W85 18000.1821	912
W85 18000.2657	913
W85 18000.2721	911
W85 18000.2821	911
W85 23000.0121	909
W85 23000.0221	909
W85 23000.0321	911
W85 23000.0421	911
W85 32000.2321	909
W85 32000.2350	910
W85 32000.2377	909

Order No.	Page
W85 32000.2421	909
W85 32000.2450	910
W85 32000.2477	909
W85 32000.2621	912
W85 32000.3140	913
W85 32000.3157	913
W85 32000.3421	911
W85 32000.3521	911
W85 44000.2950	910
W85 44000.2977	909
W85 44000.3077	909
W85 44000.3221	912
W85 44000.3321	912
W85 44000.3921	911
W89 32000.0576	914
W89 32000.0675	914
W89 32000.0676	914

Order No.	Page

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The Cutting Tools team is creating a new, leading player in the field of machining technology. In the future, partners and customers will benefit from a highly attractive, holistic service promise: one of the largest ranges on the market. Enormously efficient logistics. Leading expertise in future technologies from digitization to nanotechnology. Deep industry expertise based on many years of experience. All under one roof.



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Cutting Solutions by CERATIZIT has decades of experience in the manufacture of carbide tools and indexable inserts as a specialist in the field of machining.

KOMET

KOMET is the global technology leader for high-precision drilling, reaming, milling and threading. Like other members of the CERATIZIT Group, KOMET has established itself as a leader in the development of innovative products as a manufacturer of high-quality cutting tools.

WNT

Through a European network of sales offices with technical support, WNT can provide industry-leading services that enable customers to consistently maximize machining efficiency.

KLENK

KLENK focuses primarily on the aerospace industry and is a leader in rotary tools for drilling, milling, reaming and countersinking. Many of these products are custom-made for customers worldwide and are predestined for machining CFRP, titanium, aluminum and steel components.

CERATIZIT GROUP