Solid drilling and bore machining

HSS drilling

Solid carbide drilling

Reamers

1

Threading

HSS taps

Circular and Thread Milling

Thread turning

2

Turning

Turning Tools → Page 3–171

ISO turning → Page 3–49

TriClamp → Page 50–55

XheadClamp → Page 56–61

Reverse-side machining → Page 62–103

VertiClamp → Page 104–130

Coolant connections → Page 131+132

Multi-function tool – EcoCut → Page 172–201

Grooving Tools → Page 204–287

Miniature turning tools → Page 288–342

3

Milling

Solid Carbide milling cutters

4

Workholding

Collets and reduction sleeves

5

Material examples and article no. index

6

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CERATIZIT \ Performance

Premium quality tools for high performance.

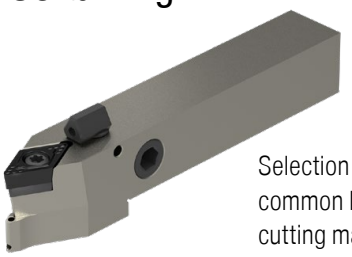
The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

WNT \ Performance

Premium quality tools for high performance.

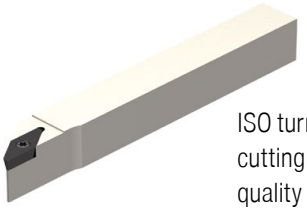
The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

ISO turning



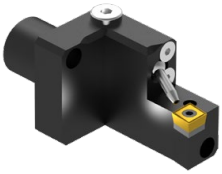
Selection of turning inserts with common ISO geometries in various cutting material grades.

TriClamp



ISO turning inserts with optimised cutting edge for improving the surface quality or increasing the feed rate.

Reverse-side machining

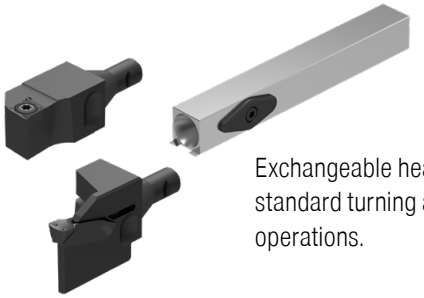


Flexible tool holder system for machining on the second spindle. There are modular, as well as monoblock tool holders available for turning, grooving, boring and threading on the back of the part.

VertiClamp

Specialised systems for use on sliding head lathes with vertically positioned indexable inserts.

XheadClamp



Exchangeable head system for standard turning and grooving operations.

Coding of the chip breakers

-M50

Inserts – Basic Type	Application range	Material		Chip breaker width
	F = Fine	1 = Steel	5 = Heat Resistant alloys	1 = Narrow
0 | N = Negative Inserts	M = Medium	2 = Stainless steel	6 = Hard	
5 | P = Positive Inserts	R = Rough	3 = Cast Iron	7 = Universal	
		4 = Non Ferrous Metals		9 = Wide

Detailed information on the chip breakers can be found in the technical appendix → **pages 149–151**

Symbol explanation

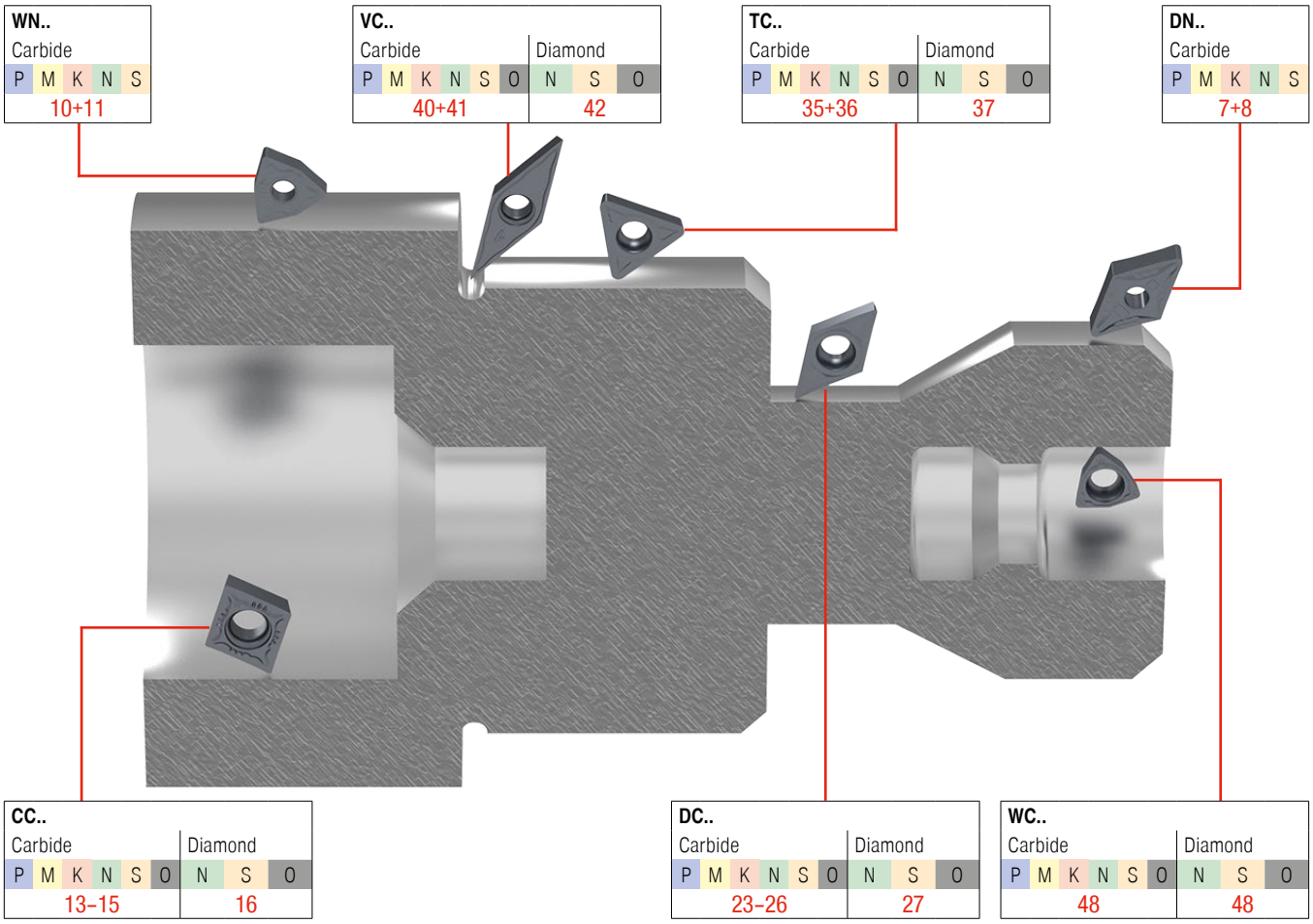
CTCP125-P *Carbide Grade*

F	Fine Machining
M	Medium Machining
R	Rough Machining

	Smooth cut
	Irregular cutting depth
	Interrupted cut

A detailed overview of grades can be found in the technical appendix on → **page 168**

Toolfinder – ISO turning – application



Toolfinder – negative inserts

				P Steel	M Stainless steel	K Cast iron	N Non-ferrous metals	S Heat-resistant	H Tempered steel	O Non-metal materials	DN..	WN..
Sharp – stable	Fine	-F50		●	○	○					7	10
	Medium	-M50		●	○	○					7	10
		-M70		●	○	○					7	10
Sharp – stable	Fine	-F30		○	●			○			8	11
	Medium	-M30		○	●			○			8	11
		-M60		○	●			○				11

This article can be found in our online shop at cuttingtools.ceratizit.com

Toolfinder – positive inserts

			Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O	Geometry CC..	DC..	TC..	VC..	WC..
Sharp – stable	Fine	-SF	●	○	○					13	23	35	40	48
	Medium	-SMF	●	○	○					13+14	23	35	40	
		-SM	●	○	○					13+14	24	35		
		-SMQ	●		○						24			
Sharp – stable	Medium	-M25	○	●			●			14	24	35		
		-M55	○	●			●			14	24	35		
Sharp – stable	Fine	-23P			○	●			○	14	25			
	Medium	-25P	●	●	○	●	●		○	14	25		40	
		-25Q	●	●	○	●	●		○	14	25		40	
		-27	●	●	○	●	●		○	15	25+26	26	40	
		-29			○	●			○	15	25+26			
		-M81		●		○				15	25+26			
	Fine	-F05	●	●		●	●			15	25+26		36	
Sharp – stable	Diamond					●			●	41	16	27	37	48
		-CB1				●			●	41	16	27	37	
		-CB2				●			●	41	16		37	
		-CB3				●			●	41	16		37	

This article can be found in our online shop at cuttingtools.ceratizit.com

Toolfinder – holders

Toolholders and boring bars for negative inserts

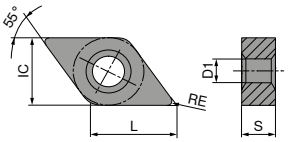
Geometry	Tool holder
DN..	9
WN..	12

Toolholders and boring bars for positive inserts

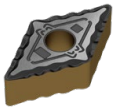
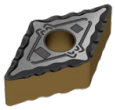
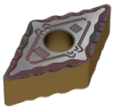
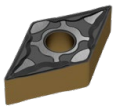
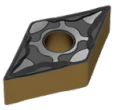
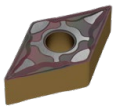
Geometry	Tool holder	Tool holder DirectCooling	Boring bars
CC..	17–20	18+19	21+22
DC..	28–31	30+31	33
TC..	38	45	39
VC..	43		46+47
WC..			49

DNMG / DNGU

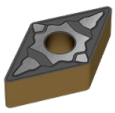
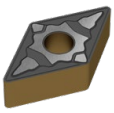
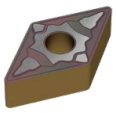
Designation	L mm	S mm	D1 mm	IC mm
DN.. 1104..	11.6	4.76	3.81	9.52



DNMG

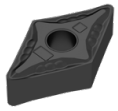
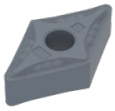
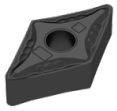
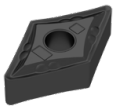
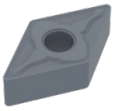
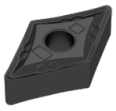
		NEW	NEW	NEW	NEW	NEW	NEW
		-F50 CTCP115-P	-F50 CTCP125-P	-F50 CTCP135-P	-M50 CTCP115-P	-M50 CTCP125-P	-M50 CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG	DNMG
		76 134 ...	76 134 ...	76 134 ...	76 136 ...	76 136 ...	76 136 ...
ISO	RE mm						
110402EN	0.2	30201	50201	70201			
110404EN	0.4	30401	50401	70401	30401	50401	70401
110408EN	0.8	30601	50601	70601	30601	50601	70601
P		●	●	●	●	●	●
M				○			○
K		○	○		○	○	
N							
S							
H							
O							

DNMG

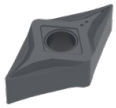
		NEW	NEW	NEW
		-M70 CTCP115-P	-M70 CTCP125-P	-M70 CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
		M	M	M
		DNMG	DNMG	DNMG
		76 263 ...	76 263 ...	76 263 ...
ISO	RE mm			
110408EN	0.8	30601	50601	70601
110412EN	1.2	30801	50801	70801
P		●	●	●
M				○
K		○	○	
N				
S				
H				
O				

3

DNMG

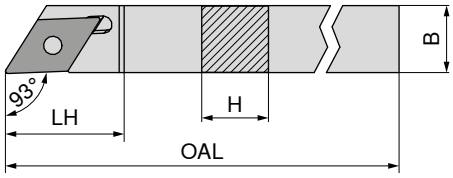
		NEW		NEW	NEW		NEW
		-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125	-M30 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG	DNMG
		75 013 ...	75 013 ...	75 013 ...	75 014 ...	75 014 ...	75 014 ...
ISO	RE mm						
110404EN	0.4	10400	204	30400			
110408EN	0.8	10600	206	30600	10600	206	30600
110412EN	1.2				10800	208	30800
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

DNGU

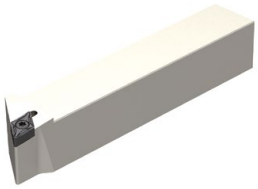
		-F32 WPU7620	-F32 WUU7620
			
		F	F
		DNGU	DNGU
		72 494 ...	72 401 ...
ISO	RE mm		
1104008FN	0.08	50800	33800
1104015FN	0.15	51500	34500
P		●	●
M		○	
K		●	
N		○	○
S		○	○
H			
O		○	○

→ v_c Page 133–147

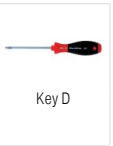
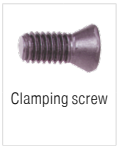
MaxiLock-S – SDJN 93° – Toolholder with screw clamping



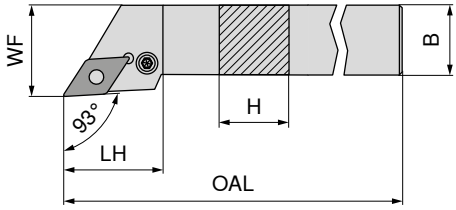
Illustrations show right-hand versions



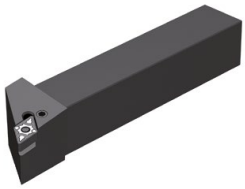
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 699 ...	Right-hand 70 698 ...
SDJN R/L 1012 H11	10	12	100	21.3	12	3,2	DNGU 1104	010	010
SDJN R/L 1212 H11	12	12	100	21.3	12	3,2	DNGU 1104	012	012
SDJN R/L 1616 K11	16	16	125	21.3	16	3,2	DNGU 1104	016	016
SDJN R/L 2020 K11	20	20	125	21.3	20	3,2	DNGU 1104	020	020
SDJN R/L 2525 M11	25	25	150	21.3	25	3,2	DNGU 1104	025	025

Spare parts for Article no.	 Key D 80 950 ...	 Clamping screw 72 950 ...
70 698 010 / 70 699 010	128	007
70 698 012 / 70 699 012	128	007
70 698 016 / 70 699 016	128	007
70 698 020 / 70 699 020	128	007
70 698 025 / 70 699 025	128	007

MaxiLock-N – PDJN 93° – Toolholder with lever clamping



Illustrations show right-hand versions



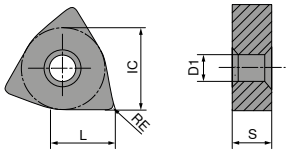
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 541 ...	Right-hand 70 540 ...
PDJN R/L 1616 H11	16	16	100	30	20	3	DN.. 1104	116	116
PDJN R/L 2020 K11	20	20	125	30	25	3	DN.. 1104	12000 1)	12000 1)
PDJN R/L 2525 M11	25	25	150	30	32	3	DN.. 1104	12500 1)	12500 1)

1) nickel-plated

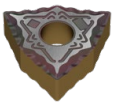
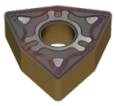
for Article no.	Key I 70 950 ...	Shim 70 950 ...	Assembly pin 70 950 ...	Lever 70 950 ...	Clamping screw 70 950 ...	Solid Carbide Seat D 70 950 ...
70 540 116 / 70 541 116	175	122	191	121	208	120
70 540 12000 / 70 541 12000	175	122	191	121	208	120
70 540 12500 / 70 541 12500	175	122	191	121	208	120

WNMG

Designation	L mm	S mm	D1 mm	IC mm
WNMG 0604..	6.5	4.76	3.81	9.52



WNMG

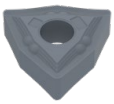
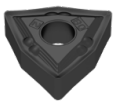
		NEW	NEW	NEW	NEW	NEW	NEW
		-F50 CTCP115-P	-F50 CTCP125-P	-F50 CTCP135-P	-M50 CTCP115-P	-M50 CTCP125-P	-M50 CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		WNMG	WNMG	WNMG	WNMG	WNMG	WNMG
		76 157 ...	76 157 ...	76 157 ...	76 139 ...	76 139 ...	76 139 ...
ISO	RE mm						
060404EN	0.4	30401	50401	70401	30401	50401	70401
060408EN	0.8	30601	50601	70601	30601	50601	70601
P		●	●	●	●	●	●
M				○			○
K		○	○		○	○	
N							
S							
H							
O							

WNMG

		NEW	NEW	NEW
		-M70 CTCP115-P	-M70 CTCP125-P	-M70 CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
		M	M	M
		WNMG	WNMG	WNMG
		76 273 ...	76 273 ...	76 273 ...
ISO	RE mm			
060408EN	0.8	30601	50601	70601
060412EN	1.2	30801	50801	70801
P		●	●	●
M				○
K		○	○	
N				
S				
H				
O				

→ v_c Page 133–147

WNMG

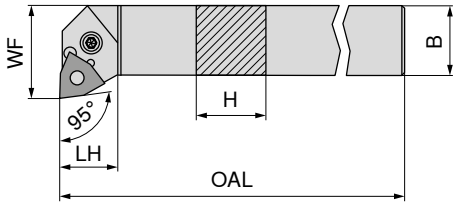
		NEW		NEW	NEW		NEW
		-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125	-M30 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		WNMG	WNMG	WNMG	WNMG	WNMG	WNMG
		75 024 ...	75 024 ...	75 024 ...	75 025 ...	75 025 ...	75 025 ...
ISO	RE mm						
060404EN	0.4	10400	204	30400			
060408EN	0.8	10600	206	30600	10600	206	30600
060412EN	1.2				10800	208	30800
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

WNMG

		NEW		NEW
		-M60 CTCM120	-M60 CTPM125	-M60 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
		M	M	M
		WNMG	WNMG	WNMG
		75 026 ...	75 026 ...	75 026 ...
ISO	RE mm			
060408EN	0.8	10600	206	30600
060412EN	1.2	10800		30800
P		○	○	○
M		●	●	●
K				
N				
S				○
H				
O				

3

MaxiLock-N – PWLN 95° – Toolholder with lever clamping



Illustrations show right-hand versions

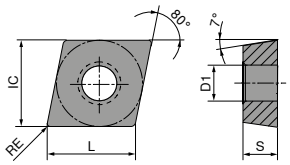
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 543 ...	Right-hand 70 542 ...
PWLN R/L 1616 H06	16	16	100	20	22.5	3	WNMG 0604	**116**	**11600** [1]
PWLN R/L 2020 K06	20	20	125	26	25.0	3	WNMG 0604	**12000** [1]	**12000** [1]
PWLN R/L 2525 M06	25	25	150	19	32.0	3	WNMG 0604	**125**	**12500** [1]

1) nickel-plated

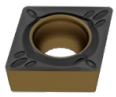
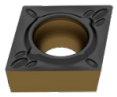
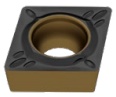
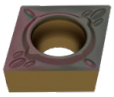
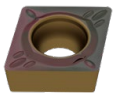
Spare parts for Article no.		Key I 70 950 ...	Shim 70 950 ...	Assembly pin 70 950 ...	Lever 70 950 ...	Clamping screw 70 950 ...	Solid Carbide Seat W 70 950 ...
70 542 11600 / 70 543 116	SW2,5	**175**	**122**	**191**	**185**	**208**	**127**
70 542 12000 / 70 543 12000	SW2,5	**175**	**122**	**191**	**185**	**208**	**127**
70 542 12500 / 70 543 125	SW2,5	**175**	**122**	**191**	**185**	**208**	**127**

CCMT / CCGT / CCET

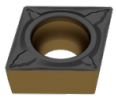
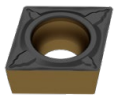
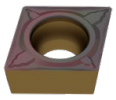
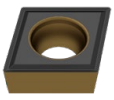
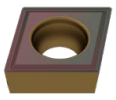
Designation	L mm	S mm	D1 mm	IC mm
CC.T 0602..	6.4	2.38	2.8	6.35
CC.T 09T3..	9.7	3.97	4.4	9.52



CCMT / CCGT

		NEW	NEW	NEW	NEW	NEW
		-SF CTCP115-P	-SF CTCP125-P	-SF CTCP125-P	-SF CTCP135-P	-SF CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		F	F	F	F	F
		CCMT	CCGT	CCMT	CCGT	CCMT
		76 253 ...	76 251 ...	76 253 ...	76 251 ...	76 253 ...
ISO	RE mm					
060202EN	0.2		50201		70201	
060204EN	0.4	30401		50401		70401
09T304EN	0.4	31601		51601		71601
09T308EN	0.8	31801		51801		
P		●	●	●	●	●
M					○	○
K		○	○	○		
N						
S						
H						
O						

CCMT / CCGT

		NEW	NEW	NEW	NEW	NEW
		-SMF CTCP115-P	-SMF CTCP125-P	-SMF CTCP135-P	-SM CTCP125-P	-SM CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		F	F	F	M	M
		CCMT	CCMT	CCMT	CCGT	CCGT
		76 249 ...	76 249 ...	76 249 ...	76 250 ...	76 250 ...
ISO	RE mm					
060202EN	0.2				50201	70201
060204EN	0.4		50401	70401		
060208EN	0.8		50601			
09T304EN	0.4	31601	51601	71601		
09T308EN	0.8	31801	51801			
P		●	●	●	●	●
M				○		○
K		○	○		○	
N						
S						
H						
O						

3

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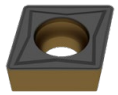
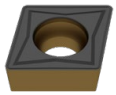
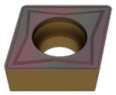
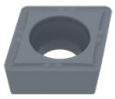
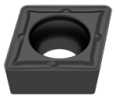
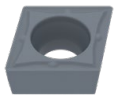
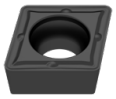
CCMT

		NEW	NEW	NEW
		-SM CTCP115-P	-SM CTCP125-P	-SM CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
		M	M	M
		CCMT	CCMT	CCMT
		76 252 ...	76 252 ...	76 252 ...
ISO	RE mm			
060204EN	0.4	30401	50401	70401
060208EN	0.8	30601		70601
09T304EN	0.4	31601	51601	71601
09T308EN	0.8	31801	51801	71801
P		●	●	●
M				○
K		○	○	
N				
S				
H				
O				

CCMT

		NEW		NEW	NEW		NEW
		-M25 CTCM120	-M25 CTPM125	-M25 CTCM130	-M55 CTCM120	-M55 CTPM125	-M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		CCMT	CCMT	CCMT	CCMT	CCMT	CCMT
		75 210 ...	75 210 ...	75 210 ...	75 211 ...	75 211 ...	75 211 ...
ISO	RE mm						
060204EN	0.4	10400	204	30400	10400	204	
09T304EN	0.4	11600	216	31600	11600	216	31600
09T308EN	0.8	11800	218	31800	11800	218	31800
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

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CCGT

		-23P H216T	-25P H210T	NEW -25P CTPX710 DRAGONSKIN	-25Q H210T	NEW -25Q CTPX710 DRAGONSKIN
		F CCGT 70 255 ...	F CCGT 70 248 ...	M CCGT 70 248 ...	M CCGT 70 248 ...	M CCGT 70 248 ...
ISO	RE mm					
060202FN	0.2	652	636	70200		
060204FN	0.4	654	638	70400	678	75400
09T302FN	0.2		639	71400		
09T304FN	0.4	656	640	71600	680	76600
09T308FN	0.8	658	641	71800	681	76800
P				●		●
M				●		●
K		○	○		○	
N		●	●	●	●	●
S			○	●	○	●
H						
O		○	○		○	

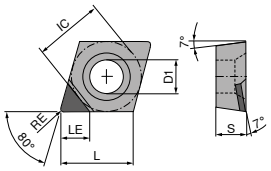
CCXT / CCGT / CCMT / CCET

		-M81 CWN2120	-27 H10T	-27 CWN15	NEW -27 CTPX715 DRAGONSKIN	NEW -29 H216T	NEW -29 CTPX715 DRAGONSKIN	NEW -F05 CTPX710 DRAGONSKIN
		M CCXT 70 254 ...	M CCGT 70 254 ...	M CCGT 70 254 ...	M CCGT 70 254 ...	M CCMT 70 245 ...	M CCMT 70 245 ...	F CCET 76 243 ...
ISO	RE mm							
060201FN	0.1							10100
060202FN	0.2	100	600	300	80200			10200
060204EN	0.4					60400	70400	
060204FN	0.4	102	602	302	80400			10400
09T302FN	0.2	104	604	304	81400			
09T304EN	0.4					61600	71600	
09T304FN	0.4	106	606	306	81600			
09T308EN	0.8					61800	71800	
09T308FN	0.8	108	608	308	81800			
P					●		●	●
M		●		○	●		●	●
K			○		○	○	○	
N		○	●	●	●	●	●	●
S					●		●	●
H								
O			○		○	○	○	

3

CCGT

Designation	L mm	S mm	D1 mm	IC mm
CCGT 0602..	6.4	2.38	2.8	6.35
CCGT 09T3..	9.7	3.97	4.4	9.52



CCGT A

CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				-CB1 CTDPD20	-CB1 CTDPD20	-Q-CB2 CTDPS30	-CB3 CTDPU20	-CB1 CTDCD10	-CB2 CTDCD10
				F DIAMOND CCGT	F DIAMOND CCGT	M DIAMOND CCGT	R DIAMOND CCGT	F DIAMOND CCGT	M DIAMOND CCGT
				71 300 ...	71 305 ...	71 306 ...	71 302 ...	71 300 ...	71 301 ...
ISO	RE mm	TCE (NOI)	LE mm						
060202FN	0.2	A (1)	2.4					302	30200
060202FN	0.2	A (1)	3.3			202			
060202FN	0.2	A (1)	3.4	102					
060204FN	0.4	A (1)	2.2					304	304
060204FN	0.4	A (1)	3.1		104	204			
060204FN	0.4	A (1)	3.2	104			204		
060208FN	0.8	A (1)	2.0					30600	
060208FN	0.8	A (1)	3.0	10600					
09T302FN	0.2	A (1)	2.4						31200
09T302FN	0.2	A (1)	4.4			212			
09T302FN	0.2	A (1)	4.5	112					
09T304FN	0.4	A (1)	2.2					314	314
09T304FN	0.4	A (1)	4.2		114	214			
09T304FN	0.4	A (1)	4.3	114			214		
09T308FN	0.8	A (1)	2.0						31600
09T308FN	0.8	A (1)	4.1	118			218		
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

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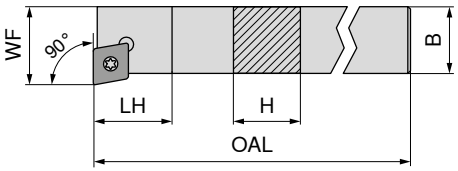
MaxiLock-S – SCFC 90° – Toolholder with screw clamping



Illustrations show right-hand versions

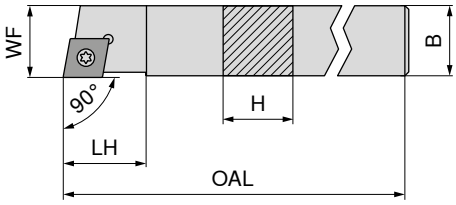
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 761 ...	Right-hand 70 760 ...
SCFC R 0808 D06	8	8	60	10	10	1,2	CC.. 0602		008
SCFC R/L 1010 E06	10	10	70	10	12	1,2	CC.. 0602	010	010
SCFC R/L 1212 F09	12	12	80	13	16	3,2	CC.. 09T3	012	012
SCFC R/L 1616 H09	16	16	100	13	20	3,2	CC.. 09T3	016	016

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...	Carbide type C 70 950 ...	Threaded sleeve 70 950 ...
70 760 008	110		112		
70 760 010 / 70 761 010	110		112		
70 760 012 / 70 761 012	113		113		
70 760 016 / 70 761 016		398	113	165	171

3

MaxiLock-S – SCAC 90° – Toolholder with screw clamping

▲ for sliding head lathes



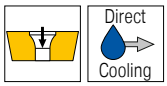
Illustrations show right-hand versions

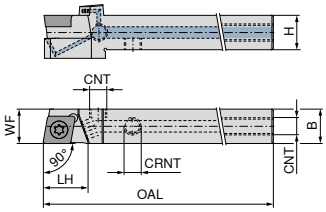
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 757 ...	Right-hand 70 756 ...
SCAC R/L 0808 D06	8	8	60	9	8	1,2	CC.. 0602	008	008
SCAC R/L 1010 E06	10	10	70	9	10	1,2	CC.. 0602	010	010
SCAC R/L 0808 K06	8	8	125	9	8	1,2	CC.. 0602	108	108
SCAC R/L 1010 M06	10	10	150	9	10	1,2	CC.. 0602	110	110
SCAC R/L 1212 F09	12	12	80	13	12	3,2	CC.. 09T3	012	012
SCAC R/L 1616 H09	16	16	100	13	16	3,2	CC.. 09T3	116	116
SCAC R/L 1212 M09	12	12	150	13	12	3,2	CC.. 09T3	112	112
SCAC R/L 1414 M09	14	14	150	13	14	3,2	CC.. 09T3	114	114

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...	Carbide type C 70 950 ...	Threaded sleeve 70 950 ...
70 756 108 / 70 757 108	110		112		
70 756 008 / 70 757 008	110		112		
70 756 110 / 70 757 110	110		112		
70 756 010 / 70 757 010	110		112		
70 756 112 / 70 757 112	113		113		
70 756 012 / 70 757 012	113		113		
70 756 114 / 70 757 114	113		113		
70 756 116 / 70 757 116		398	113	165	171

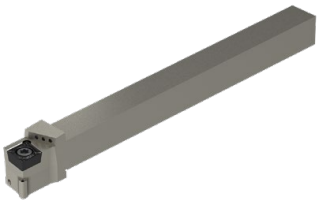
MaxiLock-S – SCAC 90° DC – Tool holder with screw clamping

▲ for sliding head lathes





Illustrations show right-hand versions

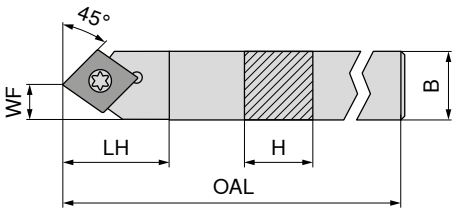


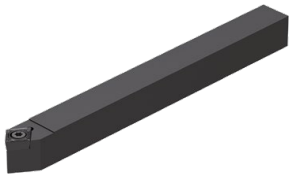
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	CNT	CRNT	torque moment Nm	Insert	NEW Left-hand 70 766 ...	NEW Right-hand 70 766 ...
SCAC R/L 1212 F09 DC	12	12	80	13	12	M6	M6	3,2	CC.. 09T3	**01201**	**01200**
SCAC R/L 1212 M09 DC	12	12	150	13	12	M6	M6	3,2	CC.. 09T3	**11201**	**11200**
SCAC R/L 1616 H09 DC	16	16	100	13	16	G1/8"	M6	3,2	CC.. 09T3	**01601**	**01600**

Spare parts for Article no.	Clamping screw 70 950 ...	Carbide type C 70 950 ...	Grubscrew 70 950 ...	Grubscrew 70 950 ...	Threaded sleeve 70 950 ...
70 766 01200 / 70 766 01201	**859**			**86700**	
70 766 11200 / 70 766 11201	**859**			**86700**	
70 766 01600 / 70 766 01601	**87900**	**165**	**88000**	**86700**	**171**

Spare parts for Article no.	Sealing plugs DC 70 950 ...	Key D 80 950 ...	O-Ring 70 950 ...	Coolant nozzle DC 70 950 ...	Coolant screw plug 70 950 ...
70 766 01200 / 70 766 01201		**120**			
70 766 11200 / 70 766 11201		**120**			
70 766 01600 / 70 766 01601	**87600**	**120**	**88100**	**87700**	**294**

MaxiLock-S – SCDC 45° – Toolholder with screw clamping





Neutral
70 752 ...

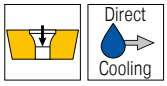
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	
SCDC L 0808 K06	8	8	125	13	4	1,2	CC.. 0602	**008**
SCDC L 1010 M06	10	10	150	13	5	1,2	CC.. 0602	**010**
SCDC L 1212 M09	12	12	150	18	6	3,2	CC.. 09T3	**012**
SCDC L 1414 M09	14	14	150	18	7	3,2	CC.. 09T3	**014**

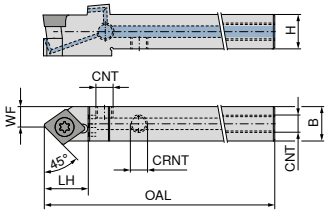
Key D

Clamping screw

Spare parts for Article no.				
		80 950 ...		**70 950 ...**
70 752 008	T08	**110**	M2,5x6	**112**
70 752 010	T08	**110**	M2,5x6	**112**
70 752 012	T15	**113**	M3,5x11	**113**
70 752 014	T15	**113**	M3,5x11	**113**

MaxiLock-S – SCDC 45° DC – Tool holder with screw clamping





NEW
Neutral
70 767 ...

ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	CNT	CRNT	torque moment Nm	Insert	
SCDC L 0808 K06 DC	8	8	125	13	4	M5	M5	1,2	CC.. 0602	**00801**
SCDC L 1010 M06 DC	10	10	150	13	5	M6	M6	1,2	CC.. 0602	**01001**
SCDC L 1212 M09 DC	12	12	150	18	6	M6	M6	3,2	CC.. 09T3	**01201**
SCDC L 1414 M09 DC	14	14	150	18	7	G1/8"	M6	3,2	CC.. 09T3	**01401**

Cylindrical screw

Key D

Coolant screw plug

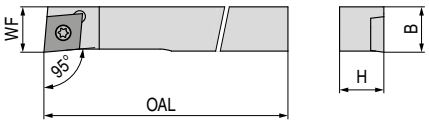
Clamping screw

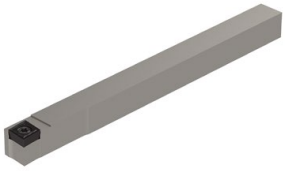
Grubscrew

Spare parts for Article no.					
	83 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**
70 767 00801	**157**	**039**		**112**	
70 767 01001		**039**		**112**	**86700**
70 767 01201		**120**		**113**	**86700**
70 767 01401		**120**	**294**	**113**	**86700**

MaxiLock-S – SCLC 95° – Toolholder with screw clamping

▲ for sliding head lathes





Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	WF mm	Insert	Left-hand 72 353 ...	Right-hand 72 352 ...
SCLC R/L 0808 H06	8	8	100	8	CC.. 0602	**008**	**008**
SCLC R/L 1010 H06	10	10	100	10	CC.. 0602	**010**	**010**
SCLC R/L 1212 H09	12	12	100	12	CC.. 09T3	**012**	**012**

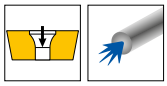
Key D

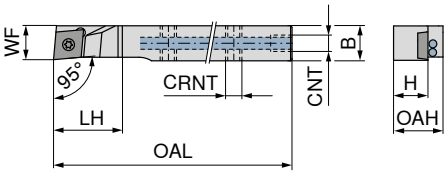
Clamping screw

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
72 352 008 / 72 353 008	T08	**110**	M2,5x6	**112**
72 352 010 / 72 353 010	T08	**110**	M2,5x6	**112**
72 352 012 / 72 353 012	T15	**113**	M3,5x11	**113**

MaxiLock-S – SCLC 95° – Tool holder with thro' coolant

▲ for sliding head lathes





Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	CNT	CRNT	Insert	Left-hand 72 351 ...	Right-hand 72 350 ...
SCLC R/L 0808 H06 IC	8	8	100	16	8	M5	M5	CC.. 0602	**008**	**008**
SCLC R/L 1010 H06 IC	10	10	100	16	10	M5	M5	CC.. 0602	**010**	**010**
SCLC R/L 1212 H09 IC	12	12	100	19	12	M5	M5	CC.. 09T3	**012**	**012**
SCLC R/L 1616 K09 IC	16	16	125	19	16	M5	M5	CC.. 09T3	**016**	**016**

Cylindrical screw

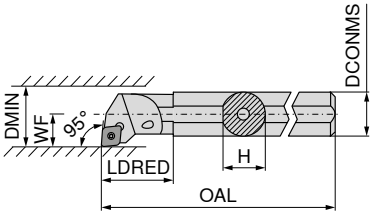
Key D

Clamping screw

Spare parts for Article no.	Cylindrical screw 72 950 ...	Key D 80 950 ...	Clamping screw 70 950 ...
72 350 008 / 72 351 008	**011**	**110**	**112**
72 350 010 / 72 351 010	**011**	**110**	**112**
72 350 012 / 72 351 012	**011**	**113**	**113**
72 350 016 / 72 351 016	**011**	**113**	**113**

MaxiLock-S – SCLC 95° – Boring bar with screw clamping

- A... = with thro' coolant
- S... = without thro' coolant



Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 717 ...	Right-hand 70 716 ...
A08F SCLC R/L 06	8	7.6	80	17	5	11	1,2	CC.. 0602	**208**	**208**
S08H SCLC R/L 06	8	7.2	100		5	11	1,2	CC.. 0602	**008**	**008**
A10H SCLC R/L 06	10	9.5	100	19	7	13	1,2	CC.. 0602	**210**	**210**
S10K SCLC R/L 06	10	9.0	125		7	13	1,2	CC.. 0602	**010**	**010**
A12K SCLC R/L 06	12	11.5	125	22	9	16	1,2	CC.. 0602	**212**	**212**
S12Q SCLC R/L 06	12	11.0	180		9	16	1,2	CC.. 0602	**012**	**012**
A16M SCLC R/L 06	16	14.0	150	50	9	18	1,2	CC.. 0602	**116**	**116**
A16M SCLC R/L 09	16	15.0	150	29	11	20	3,2	CC.. 09T3	**216**	**216**
S16R SCLC R/L 09	16	14.5	200		11	20	3,2	CC.. 09T3	**016**	**016**
A20Q SCLC R/L 09	20	18.5	180	32	13	25	3,2	CC.. 09T3	**220**	**220**
S20S SCLC R/L 09	20	18.0	250		13	25	3,2	CC.. 09T3	**020**	**020**
A25R SCLC R/L 09	25	23.0	200	36	17	32	3,2	CC.. 09T3	**225**	**225**
S25T SCLC R/L 09	25	23.0	300		17	32	3,2	CC.. 09T3	**025**	**025**

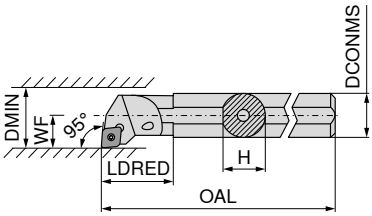
Key D

Clamping screw

Spare parts for Article no.	Key D 80 950 ...	Clamping screw 70 950 ...
70 716 008 / 70 717 008	**110**	**116**
70 716 208 / 70 717 208	**110**	**116**
70 716 010 / 70 717 010	**110**	**116**
70 716 210 / 70 717 210	**110**	**116**
70 716 012 / 70 717 012	**110**	**116**
70 716 212 / 70 717 212	**110**	**116**
70 716 116 / 70 717 116	**110**	**116**
70 716 016 / 70 717 016	**113**	**110**
70 716 216 / 70 717 216	**113**	**110**
70 716 020 / 70 717 020	**113**	**110**
70 716 220 / 70 717 220	**113**	**304**
70 716 025 / 70 717 025	**113**	**113**
70 716 225 / 70 717 225	**113**	**304**

MaxiLock-S – SCLC 95° – Boring bar with screw clamping

▲ Type: Solid carbide



Illustrations show right-hand versions

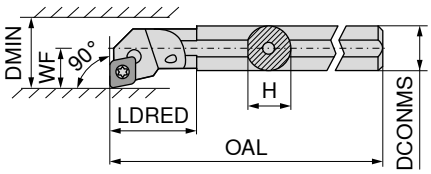
ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 719 ...	Right-hand 70 718 ...
E08H SCLC R/L 06	8	7.6	100		6	11	1,2	CC.. 0602	**008**	**008**
E10K SCLC R/L 06	10	9.0	125	22	7	13	1,2	CC.. 0602	**010**	**010**
E12Q SCLC R/L 06	12	11.5	180	26	9	16	1,2	CC.. 0602	**012**	**012**
E16R SCLC R/L 09	16	15.0	200	34	11	20	3,2	CC.. 09T3	**016**	**016**
E20S SCLC R/L 09	20	18.5	250	38	13	25	3,2	CC.. 09T3	**020**	**020**
E25T SCLC R/L 09	25	23.0	300	43	17	32	3,2	CC.. 09T3	**025**	**025**

Key D

Clamping screw

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 719 008 / 70 718 008	T08	**110**	M2,5x5	**116**
70 719 010 / 70 718 010	T08	**110**	M2,5x5	**116**
70 719 012 / 70 718 012	T08	**110**	M2,5x5	**116**
70 719 016 / 70 718 016	T15	**113**	M3,5x7,2	**110**
70 719 020 / 70 718 020	T15	**113**	M3,5x8,6	**304**
70 719 025 / 70 718 025	T15	**113**	M3,5x11	**113**

MaxiLock-S – SCFC 90° – Boring bar with screw clamping



Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 793 ...	Right-hand 70 792 ...
A08F SCFC R/L 06	8	7.6	80	17	5	11	1,2	CC.. 0602	**208**	**208**
A10H SCFC R/L 06	10	9.5	100	19	7	13	1,2	CC.. 0602	**210**	**210**
A12K SCFC R/L 06	12	11.5	125	22	9	16	1,2	CC.. 0602	**212**	**212**

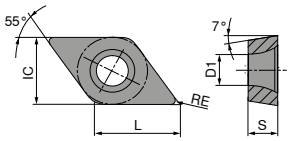
Key D

Clamping screw

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 792 208 / 70 793 208	T08	**110**	M2,5x5	**116**
70 792 210 / 70 793 210	T08	**110**	M2,5x5	**116**
70 792 212 / 70 793 212	T08	**110**	M2,5x5	**116**

DCGT / DCMT / DCXT / DCET

Designation	L mm	S mm	D1 mm	IC mm
DC.T 0702..	7.75	2.38	2.8	6.35
DC.T 11T3..	11.60	3.97	4.4	9.52



DCMT / DCGT

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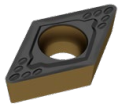
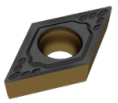
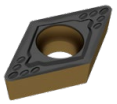
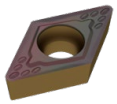
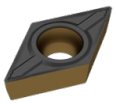
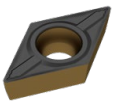
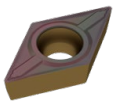
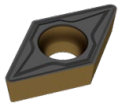
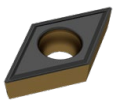
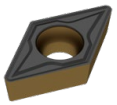
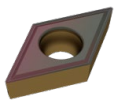
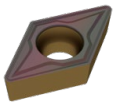
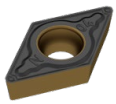
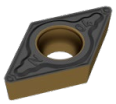
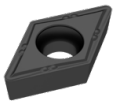
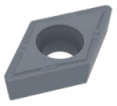
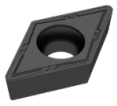
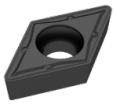
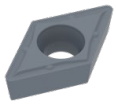
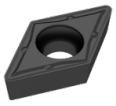
		-SF CTCP115-P	-SF CTCP125-P	-SF CTCP125-P	-SF CTCP135-P	-SMF CTCP115-P	-SMF CTCP125-P	-SMF CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		F	F	F	F	F	F	F
		DCMT	DCGT	DCMT	DCMT	DCMT	DCMT	DCMT
		76 259 ...	76 257 ...	76 259 ...	76 259 ...	76 265 ...	76 265 ...	76 265 ...
ISO	RE mm							
070202EN	0.2		50201					
070204EN	0.4	30401		50401	70401		50401	70401
070208EN	0.8							70601
11T304EN	0.4	31601		51601	71601	31601	51601	71601
11T308EN	0.8	31801		51801	71801	31801	51801	71801
P		●	●	●	●	●	●	●
M					○			○
K		○	○	○		○	○	
N								
S								
H								
O								

3

DCMT / DCGT

		NEW	NEW	NEW	NEW	NEW	NEW	NEW
		-SM CTCP115-P	-SM CTCP125-P	-SM CTCP125-P	-SM CTCP135-P	-SM CTCP135-P	-SMQ CTCP115-P	-SMQ CTCP125-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		M	M	M	M	M	M	M
		DCMT	DCGT	DCMT	DCGT	DCMT	DCMT	DCMT
		76 258 ...	76 256 ...	76 258 ...	76 256 ...	76 258 ...	76 195 ...	76 195 ...
ISO	RE mm							
070202EN	0.2		50201		70201			
070204EN	0.4	30401		50401		70401	30401	50401
070208EN	0.8	30601		50601		70601		
11T304EL	0.4							51601
11T304EN	0.4	31601		51601		71601		51501
11T304ER	0.4							51701
11T308EN	0.8	31801		51801		71801		51801
11T312EN	1.2			52001				
P		●	●	●	●	●	●	●
M					○	○		
K		○	○	○			○	○
N								
S								
H								
O								

DCMT

		NEW		NEW	NEW		NEW
		-M25 CTCM120	-M25 CTPM125	-M25 CTCM130	-M55 CTCM120	-M55 CTPM125	-M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		DCMT	DCMT	DCMT	DCMT	DCMT	DCMT
		75 213 ...	75 213 ...	75 213 ...	75 214 ...	75 214 ...	75 214 ...
ISO	RE mm						
070202EN	0.2	10200	202	30200			
070204EN	0.4	10400	204	30400	10400	204	30400
070208EN	0.8				10600	206	30600
11T302EN	0.2	11400	214	31400			
11T304EN	0.4	11600	216	31600	11600	216	31600
11T308EN	0.8	11800	218	31800	11800	218	31800
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

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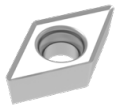
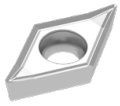
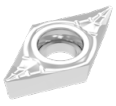
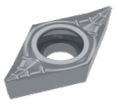
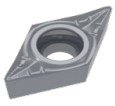
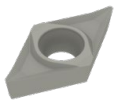
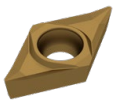
DCGT

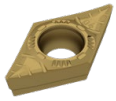
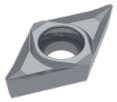
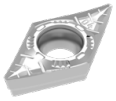
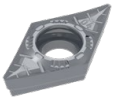
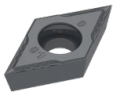
ISO	RE mm	-FM37 WUU7610	-FM37 WPU7610	-FM37 WPU7620
				
		F	F	F
		DCGT	DCGT	DCGT
		72 400 ...	72 400 ...	72 400 ...
0702006FN	0.06	006	706	506
0702015FN	0.15	015	715	515
0702035FN	0.35	035	735	535
11T3008FN	0.08	038	738	538
11T3015FN	0.15	045	745	
11T3035FN	0.35	065	765	565
P		○	●	●
M			●	○
K			○	●
N		●	○	○
S		○	●	○
H				
O		●	○	○

DCGT

ISO	RE mm	-23P H216T	-25P H210T	NEW -25P CTPX710 DRAGONSKIN	-25Q H210T	NEW -25Q CTPX710 DRAGONSKIN	-27 H10T	-27 CWN15
								
		F	F	M	M	M	M	M
		DCGT	DCGT	DCGT	DCGT	DCGT	DCGT	DCGT
		70 261 ...	70 263 ...	70 263 ...	70 263 ...	70 263 ...	70 260 ...	70 260 ...
070202FN	0.2		632	70200			600	300
070204FN	0.4	654	634	70400			602	302
11T302FN	0.2		635	71400			604	304
11T304FL	0.4				670	75700		
11T304FN	0.4	664	636	71600	660	75600	606	306
11T304FR	0.4				680	75800		
11T308FL	0.8				672			
11T308FN	0.8	666	638	71800	662	76000	608	308
11T308FR	0.8				682			
P				●		●		
M				●		●		○
K		○	○		○		○	
N		●	●	●	●	●	●	●
S			○	●	○	●		
H								
O		○	○		○		○	

3

DCXT / DCGT / DCMT / DCET

			NEW	NEW	NEW	NEW
		-M81 CWN2120	-27 CTPX715	-29 H216T	-29 CTPX715	-F05 CTPX710
			DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
						
		M	M	M	M	F
		DCXT	DCGT	DCMT	DCMT	DCET
		70 260 ...	70 260 ...	70 246 ...	70 246 ...	76 254 ...
ISO	RE mm					
0702005FN	0.05					10200
070201FN	0.10					10400
0702015FN	0.15					10600
070202FN	0.20	100	80200			10800
070204FN	0.40	102	80400			
070204EN	0.40			60400	70400	
11T3005FN	0.05					11400
11T301FN	0.10					11600
11T3015FN	0.15					11800
11T302FN	0.20	104	81400			12000
11T304EN	0.40			61600	71600	
11T304FN	0.40	106	81600			12200
11T308EN	0.80			61800	71800	
11T308FN	0.80	108	81800			
P			●		●	●
M		●	●		●	●
K			○	○	○	
N		○	●	●	●	●
S			●		●	●
H						
O			○	○	○	

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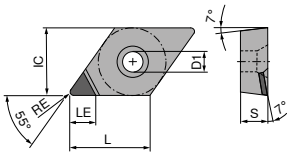
DCGT

Designation	L mm	S mm	D1 mm	IC mm
DCGT 0702..	7.75	2.38	2.8	6.35
DCGT 11T3..	11.60	3.97	4.4	9.52



DCGT A

DCGT

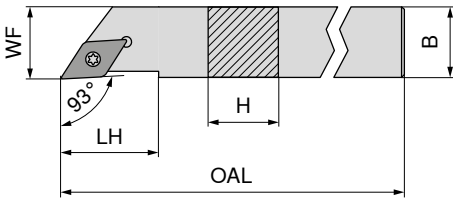
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20	-CB1 CTDPS30	-CB2 CTDPS30	-CB3 CTDPU20	-CB1 CTDCD10	-CB2 CTDCD10
				F DIAMOND DCGT 71 310 ...	F DIAMOND DCGT 71 310 ...	M DIAMOND DCGT 71 311 ...	R DIAMOND DCGT 71 312 ...	F DIAMOND DCGT 71 310 ...	M DIAMOND DCGT 71 311 ...
070201FN	0.1	A (1)	3.8	10100	20100				
070202FN	0.2	A (1)	2.6					302	30200
070202FN	0.2	A (1)	3.7	102	202	202			
070204FN	0.4	A (1)	2.3					304	304
070204FN	0.4	A (1)	3.4	104	204	204	204		
070208FN	0.8	A (1)	2.0						308
070208FN	0.8	A (1)	3.0	108		208			
11T301FN	0.1	A (1)	4.8	11100	21100	21100			
11T302FN	0.2	A (1)	2.6					31200	31200
11T302FN	0.2	A (1)	4.7	112	212	212			
11T304FN	0.4	A (1)	2.3					314	314
11T304FN	0.4	A (1)	4.3	114	214	214	214		
11T308FN	0.8	A (1)	2.0					318	318
11T308FN	0.8	A (1)	4.0	118	218	218	218		
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

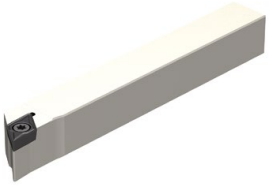
3

MaxiLock-S – SDJC 93° – Toolholder with screw clamping

▲ for sliding head lathes



Illustrations show right-hand versions



ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 685 ...	Right-hand 70 684 ...
SDJC R/L 0808 H07	8	8	100	13.0	8	1,2	DC.. 0702	108	108
SDJC R/L 1010 H07	10	10	100	13.0	10	1,2	DC.. 0702	110	110
SDJC R/L 1212 H07	12	12	100	14.5	12	1,2	DC.. 0702	112	112
SDJC R/L 1616 K07	16	16	125	33.0	16	1,2	DC.. 0702	116	116
SDJC R/L 1212 H11	12	12	100	22.0	12	3,2	DC.. 11T3	212	212
SDJC R/L 1616 K11	16	16	125	33.0	16	3,2	DC.. 11T3	216	216
SDJC R/L 2020 K11	20	20	125		20		DC.. 11T3	220	220

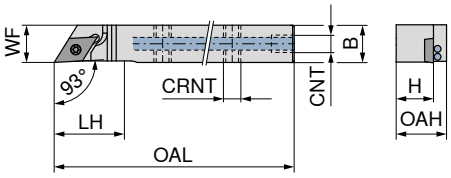
Key D

Clamping screw

Spare parts Insert			80 950 ...	72 950 ...
DC.. 0702	T08		110	002
DC.. 11T3	T15		113	006

MaxiLock-S – SDJC 93° – Tool holder with thro' coolant

▲ for sliding head lathes



Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	CNT	CRNT	Insert	Left-hand 72 357 ...	Right-hand 72 356 ...
SDJC L 0808 H07 IC	8	8	100	17	8	M5	M5	DC.. 0702	008	
SDJC R/L 1010 H07 IC	10	10	100	17	10	M5	M5	DC.. 0702	010	010
SDJC R/L 1212 H07 IC	12	12	100	17	12	M5	M5	DC.. 0702	012	012
SDJC R/L 1616 K07 IC	16	16	125	17	16	G1/8"	M5	DC.. 0702	016	016
SDJC R/L 1010 H11 IC	10	10	100	22	10	M5	M5	DC.. 11T3	110	110
SDJC R/L 1212 H11 IC	12	12	100	22	12	M5	M5	DC.. 11T3	112	112
SDJC R/L 1616 K11 IC	16	16	125	22	16	G1/8"	M5	DC.. 11T3	116	116
SDJC R/L 2020 K11 IC	20	20	125	22	20	G1/8"	M5	DC.. 11T3	120	120

Cylindrical screw

Cylindrical screw

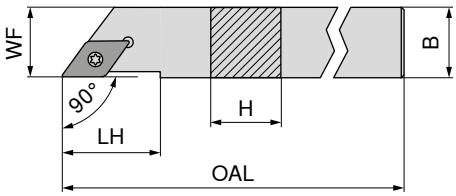
Key D

Clamping screw

Spare parts Insert	CNT		72 950 ...	72 950 ...	80 950 ...	72 950 ...
DC.. 0702	M5			011	110	002
DC.. 0702	G1/8"	010		011	110	002
DC.. 11T3	M5			011	113	006
DC.. 11T3	G1/8"	010		011	113	006

MaxiLock-S – SDAC 90° – Toolholder with screw clamping

▲ for sliding head lathes



Illustrations show right-hand versions

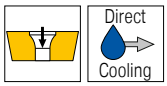
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 789 ...	Right-hand 70 788 ...
SDAC R/L 0808 K07	8	8	125	14	8	1,2	DC.. 0702	**008**	**008**
SDAC R/L 1010 M07	10	10	150	14	10	1,2	DC.. 0702	**010**	**010**
SDAC R/L 1212 M07	12	12	150	14	12	1,2	DC.. 0702	**012**	**012**
SDAC R/L 1414 M11	14	14	150	21	14	3,2	DC.. 11T3	**014**	**014**

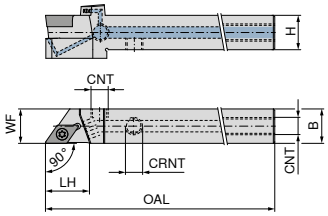
Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 788 008 / 70 789 008	T08	**110**	M2,5x6	**112**
70 788 010 / 70 789 010	T08	**110**	M2,5x6	**112**
70 788 012 / 70 789 012	T08	**110**	M2,5x6	**112**
70 788 014 / 70 789 014	T15	**113**	M3,5x11	**113**

3

MaxiLock-S – SDAC 90° DC – Tool holder with screw clamping

▲ for sliding head lathes



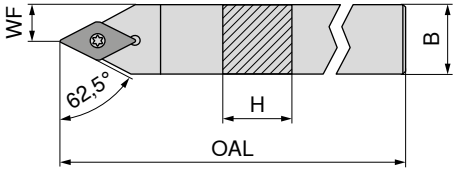


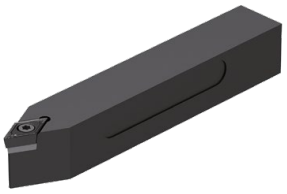
Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	CNT	CRNT	torque moment Nm	Insert	NEW Left-hand 70 771 ...	NEW Right-hand 70 771 ...
SDAC R/L 0808 K07 DC	8	8	125	14	8	M5	M5	1,2	DC.. 0702	**00801**	**00800**
SDAC R/L 1010 M07 DC	10	10	150	14	10	M6	M6	1,2	DC.. 0702	**01001**	**01000**
SDAC R/L 1212 M07 DC	12	12	150	14	12	M6	M6	1,2	DC.. 0702	**01201**	**01200**
SDAC R/L 1212 M11 DC	12	12	150	21	12	M6	M6	3,2	DC.. 11T3	**11201**	**11200**

Spare parts for Article no.	Cylindrical screw 83 950 ...	Key D 80 950 ...	Clamping screw 70 950 ...	Grubscrew 70 950 ...
70 771 00800	**157**	**110**	**112**	
70 771 00801	**157**	**039**	**112**	
70 771 01000 / 70 771 01001		**039**	**112**	**86700**
70 771 01200 / 70 771 01201		**039**	**112**	**86700**
70 771 11200 / 70 771 11201		**113**	**113**	**86700**

MaxiLock-S – SDNC 62.5° – Toolholder with screw clamping

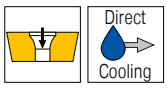


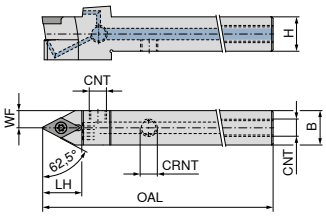


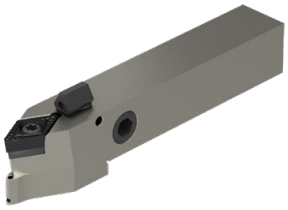
ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Neutral 70 680 ...
SDNC N 0808 D07	8	8	60	4.0	1,2	DC.. 0702	**008**
SDNC N 1010 E07	10	10	70	5.0	1,2	DC.. 0702	**010**
SDNC N 1212 F07	12	12	80	6.0	1,2	DC.. 0702	**012**
SDNC N 1616 H11	16	16	100	8.0	3,2	DC.. 11T3	**016**
SDNC N 2020 K11	20	20	125	10.0	3,2	DC.. 11T3	**020**
SDNC N 2525 M11	25	25	150	12.5	3,2	DC.. 11T3	**025**

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...	Solid Carbide Seat D 70 950 ...	Threaded sleeve 70 950 ...
70 680 008	**110**		**112**		
70 680 010	**110**		**112**		
70 680 012	**110**		**112**		
70 680 016		**398**	**113**	**106**	**171**
70 680 020		**398**	**113**	**106**	**171**
70 680 025		**398**	**113**	**106**	**171**

MaxiLock-S – SDNC 62.5° DC – Tool holder with screw clamping







NEW

Neutral

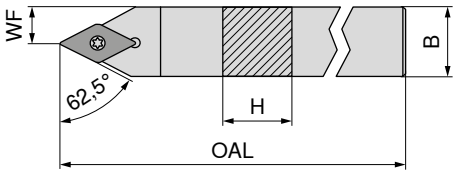
70 774 ...

ISO designation	H mm	B mm	OAL mm	WF mm	CNT	CRNT	torque moment Nm	Insert	
SDNC N 1212 F07 DC	12	12	80	6.0	M6	M6	1,2	DC.. 0702	**01200**
SDNC N 1212 M07 DC	12	12	150	6.0	M6	M6	1,2	DC.. 0702	**11200**
SDNC N 1212 M11 DC	12	12	150	6.0	M6	M6	3,2	DC.. 11T3	**21200**
SDNC N 1616 H11 DC	16	16	100	8.0	G1/8"	M6	3,2	DC.. 11T3	**01600**
SDNC N 2020 K11 DC	20	20	125	10.0	G1/8"	M6	3,2	DC.. 11T3	**02000**
SDNC N 2525 M11 DC	25	25	150	12.5	G1/8"	M6	3,2	DC.. 11T3	**02500**

	Clamping screw	Solid Carbide Seat D	Grubscrew	Grubscrew	Threaded sleeve
	70 950 ...	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**
Spare parts for Article no.					
70 774 01200	**857**			**86700**	
70 774 11200	**857**			**86700**	
70 774 01600	**87900**	**106**	**88000**	**86700**	**171**
70 774 02000	**87900**	**106**	**88000**	**86700**	**171**
70 774 21200	**859**			**86700**	
70 774 02500	**87900**	**106**	**88000**	**86700**	**171**

	Sealing plugs DC	Key D	O-Ring	Coolant nozzle DC	Coolant screw plug
	70 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**
Spare parts for Article no.					
70 774 01200		**039**			
70 774 11200		**039**			
70 774 01600	**87600**	**120**	**88100**	**87700**	**294**
70 774 02000	**87600**	**120**	**88100**	**87700**	**294**
70 774 21200		**120**			
70 774 02500	**87600**	**120**	**88100**	**87700**	**294**

MaxiLock-S – SDNC 62.5° – Toolholder with screw clamping

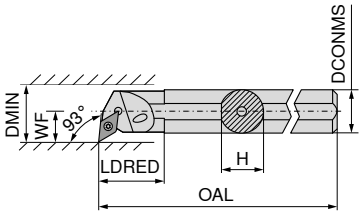


ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Neutral 70 784 ...
SDNC N 0808 K07	8	8	125	4	1,2	DC.. 0702	**008**
SDNC N 1010 M07	10	10	150	5	1,2	DC.. 0702	**010**
SDNC N 1212 M07	12	12	150	6	1,2	DC.. 0702	**012**
SDNC N 1414 M11	14	14	150	7	3,2	DC.. 11T3	**014**

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 784 008	T08	**110**	M2,5x6	**112**
70 784 010	T08	**110**	M2,5x6	**112**
70 784 012	T08	**110**	M2,5x6	**112**
70 784 014	T15	**113**	M3,5x11	**113**

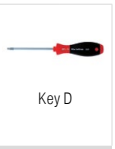
MaxiLock-S – SDUC 93° – Boring bar with screw clamping

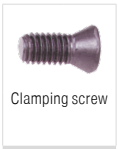
▲ A... = with thro' coolant
▲ S... = without thro' coolant



Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 737 ...	Right-hand 70 736 ...
S12Q SDUC R/L 07	12	11.0	180		9	17	1,2	DC.. 0702	**012**	**012**
A12K SDUC R/L 07	12	11.5	125	22	9	16	1,2	DC.. 0702	**212**	**212**
S16R SDUC R/L 07	16	15.0	200		11	21	1,2	DC.. 0702	**016**	**016**
A16M SDUC R/L 07	16	15.0	150	29	11	20	1,2	DC.. 0702	**216**	**216**
S20S SDUC R 07	20	18.0	250		13	25	1,2	DC.. 0702		**020**
A20Q SDUC R/L 07	20	18.5	180	32	13	25	1,2	DC.. 0702	**220**	**220**
S20S SDUC R 11	20	18.0	250		13	25	3,2	DC.. 11T3		**120**
A20Q SDUC R/L 11	20	18.5	180	32	13	25	3,2	DC.. 11T3	**320**	**320**


Key D

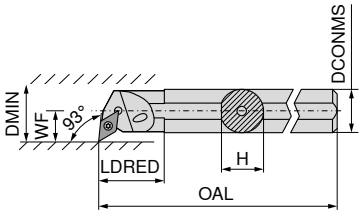

Clamping screw

Spare parts Insert	80 950 ...	70 950 ...
DC.. 0702	**110**	**112**
DC.. 11T3	**113**	**110**

3

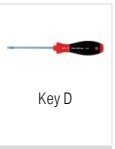
MaxiLock-S – SDUC 93° – Boring bar with screw clamping

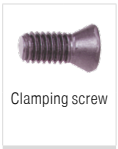
▲ Type: Solid carbide



Illustrations show right-hand versions

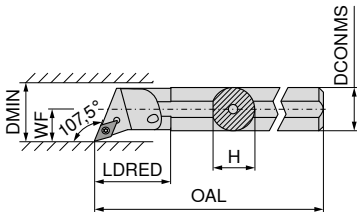
ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 739 ...	Right-hand 70 738 ...
E12Q SDUC R/L 07	12	11.5	180	26	9	16	1,2	DC.. 0702	**012**	**012**
E16R SDUC R/L 07	16	15.0	200	34	11	20	1,2	DC.. 0702	**016**	**016**
E20S SDUC R/L 11	20	18.5	250	38	13	25	3,2	DC.. 11T3	**120**	**120**
E25T SDUC R/L 11	25	23.0	300	43	17	32	3,2	DC.. 11T3	**125**	**125**


Key D


Clamping screw

Spare parts for Article no.	80 950 ...	70 950 ...
70 739 012 / 70 738 012	**110**	**112**
70 739 016 / 70 738 016	**110**	**112**
70 739 120 / 70 738 120	**113**	**304**
70 739 125 / 70 738 125	**113**	**113**

MaxiLock-S – SDQC 107.5° – Boring bar with screw clamping

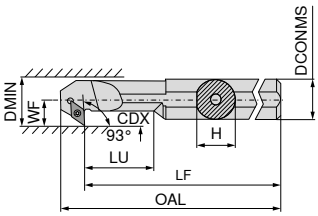


Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 741 ...	Right-hand 70 740 ...
A10H SDQC R/L 07	10	9.0	100	22	7	12.5	1,2	DC.. 0702	**210**	**210**
A12K SDQC R/L 07	12	11.5	125	22	9	16.0	1,2	DC.. 0702	**212**	**212**
A16M SDQC R/L 07	16	15.0	150	29	11	20.0	1,2	DC.. 0702	**216**	**216**
A20Q SDQC R/L 07	20	18.5	180	32	13	25.0	1,2	DC.. 0702	**220**	**220**
A25R SDQC R/L 11	25	23.0	200	36	17	32.0	3,2	DC.. 11T3	**225**	**225**

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...	Solid Carbide Seat D 70 950 ...	Threaded sleeve 70 950 ...
70 740 210 / 70 741 210	**110**		**112**		
70 740 212 / 70 741 212	**110**		**112**		
70 740 216 / 70 741 216	**110**		**112**		
70 740 220 / 70 741 220	**110**		**112**		
70 740 225 / 70 741 225		**398**	**113**	**106**	**171**

MaxiLock-S – SDXC 93° – Boring bar with screw clamping



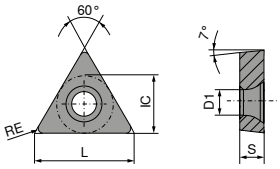
Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	LF mm	OAL mm	LU mm	WF mm	DMIN mm	CDX mm	torque moment Nm	Insert	Left-hand 70 733 ...	Right-hand 70 732 ...
A12K SDXC R/L 07	12	11.5	125	137.0	24	9	16	4.5	1,2	DC.. 0702	**212**	**212**
A16M SDXC R/L 07	16	15.0	150	162.0	36	11	20	4.5	1,2	DC.. 0702	**216**	**216**
A20Q SDXC R/L 11	20	18.5	180	196.5	40	13	25	6.5	3,2	DC.. 11T3	**220**	**220**
A25R SDXC R/L 11	25	23.0	200	216.8	50	17	32	9.5	3,2	DC.. 11T3	**225**	**225**

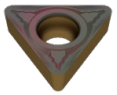
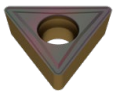
Spare parts for Article no.	Key D 80 950 ...	Clamping screw 70 950 ...
70 733 212 / 70 732 212	**110**	**112**
70 733 216 / 70 732 216	**110**	**112**
70 733 220 / 70 732 220	**113**	**304**
70 733 225 / 70 732 225	**113**	**304**

TCMT / TCGT

Designation	L mm	S mm	D1 mm	IC mm
TCMT 0902..	9.6	2.38	2.5	5.56
TC.T 1102..	11.0	2.38	2.8	6.35



TCMT / TCGT

		NEW	NEW	NEW	NEW	NEW	NEW	NEW
		-SF CTCP125-P	-SMF CTCP115-P	-SMF CTCP135-P	-SM CTCP115-P	-SM CTCP125-P	-SM CTCP135-P	-SM CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		F	F	F	M	M	M	M
		TCMT	TCMT	TCMT	TCMT	TCMT	TCGT	TCMT
		76 275 ...	76 284 ...	76 284 ...	76 274 ...	76 274 ...	76 270 ...	76 274 ...
ISO	RE mm							
090204EN	0.4					50401		70401
110202EN	0.2						71401	
110204EN	0.4	51601			31601	51601		71601
110208EN	0.8	51801	31801	71801	31801			71801
P		●	●	●	●	●	●	●
M				○			○	○
K		○	○		○	○		
N								
S								
H								
O								

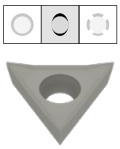
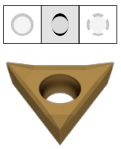
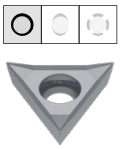
TCMT

		NEW		NEW	NEW		NEW
		-M25 CTCM120	-M25 CTPM125	-M25 CTCM130	-M55 CTCM120	-M55 CTPM125	-M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
		F	F	F	M	M	M
		TCMT	TCMT	TCMT	TCMT	TCMT	TCMT
		75 217 ...	75 217 ...	75 217 ...	75 218 ...	75 218 ...	75 218 ...
ISO	RE mm						
090204EN	0.4				10400	204	30400
110204EN	0.4	11600	216	31600	11600	216	31600
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

3

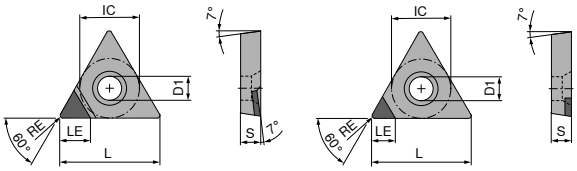
→ v_c Page 133–147

TCGT

		-27 H10T	-27 CWN15	NEW -27 CTPX715 DRAGONSKIN
				
		M TCGT 70 276 ...	M TCGT 70 276 ...	M TCGT 70 276 ...
ISO	RE mm			
110202FN	0.2	**600**	**300**	**71400**
110204FN	0.4	**602**	**302**	**81600**
P				●
M			○	●
K		○		○
N		●	●	●
S				●
H				
O		○		○

TCGT / TCGW

Designation	L mm	S mm	D1 mm	IC mm
TCG. 0902..	9.6	2.38	2.5	5.56
TCG. 1102..	11.0	2.38	2.8	6.35



TCGT A TCGW A

TCGW / TCGT

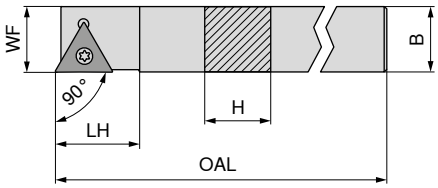
▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW				NEW
				CTDPD20	CTDPD20	-CB1 CTDPD20	-CB2 CTDPS30	CTDPS30
				F	F	F	M	F
				DIAMOND TCGW	DIAMOND TCGT	DIAMOND TCGT	DIAMOND TCGT	DIAMOND TCGT
				71 140 ...	71 184 ...	71 325 ...	71 326 ...	71 184 ...
ISO	RE mm	TCE (NOI)	LE mm					
090202FN	0.2	A (1)	3.7	100		112	212	20001
090204FN	0.4	A (1)	3.4	102		114	214	20101
090208FN	0.8	A (1)	3.0	104	10001			
110202FN	0.2	A (1)	3.7	106	10101	122	222	
110204FN	0.4	A (1)	3.4	108	10201	124	224	20201
110208FN	0.8	A (1)	3.0	110	10301			
P								
M								
K								
N				●	●	●	●	●
S								
H								
O				●	●	●	●	●

3

MaxiLock-S – STAC 90° – Toolholder with screw clamping

▲ for sliding head lathes



Illustrations show right-hand versions

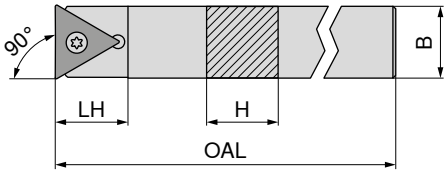
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	torque moment Nm	Insert	Left-hand 70 769 ...	Right-hand 70 768 ...
STAC R/L 1010 K09	10	10	125	12	10	1	TC.. 0902	**010**	**010**
STAC R/L 1212 K11	12	12	125	15	12	1,2	TC.. 1102	**012**	**012**
STAC R 1414 K11	14	14	125	15	14	1,2	TC.. 1102		**014**

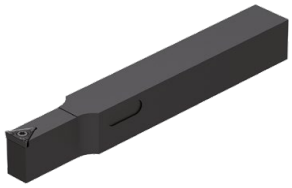
Key D

Clamping screw

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 769 012 / 70 768 012	T08	**110**	M2,5x6	**112**
70 768 014	T08	**110**	M2,5x6	**112**

MaxiLock-S – STCC 90° – Toolholder with screw clamping





ISO designation	H mm	B mm	OAL mm	LH mm	torque moment Nm	Insert	Neutral 70 782 ...
STCC N 0808 K09	8	8	125	11	1	TC.. 0902	**008**
STCC N 1010 K11	10	10	125	15	1,2	TC.. 1102	**010**
STCC N 1212 K11	12	12	125	15	1,2	TC.. 1102	**012**
STCC N 1414 K11	14	14	125	21	1,2	TC.. 1102	**014**
STCC N 1616 K11	16	16	125	24	1,2	TC.. 1102	**016**

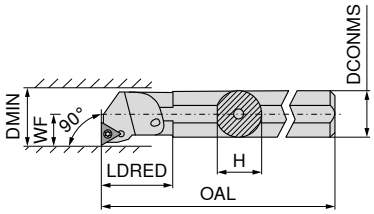
Key D

Clamping screw

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 782 010	T08	**110**	M2,5x6	**112**
70 782 012	T08	**110**	M2,5x6	**112**
70 782 014	T08	**110**	M2,5x6	**112**
70 782 016	T08	**110**	M2,5x6	**112**

MaxiLock-S – STFC 90° – Boring bar with screw clamping

▲ A... = with thro' coolant
▲ S... = without thro' coolant



Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 729 ...	Right-hand 70 728 ...
A10H STFC R/L 09	10	9.5	100	19	7	13	1	TC.. 0902	**210**	**210**
A12K STFC R/L 11	12	11.5	125	22	9	16	1,2	TC.. 1102	**212**	**212**
A16M STFC R/L 11	16	15.0	150	29	11	20	1,2	TC.. 1102	**216**	**216**

Key D

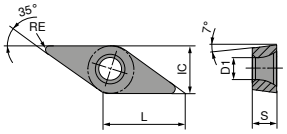
Clamping screw

Spare parts for Article no.		80 950 ...		70 950 ...
70 729 212 / 70 728 212	T08	**110**	M2,5x6	**112**
70 729 216 / 70 728 216	T08	**110**	M2,5x6	**112**

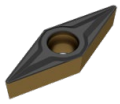
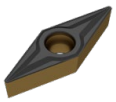
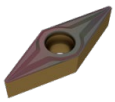
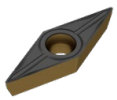
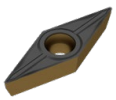
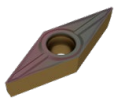
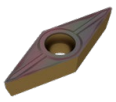
3

VCGT / VCMT / VCET

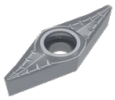
Designation	L mm	S mm	D1 mm	IC mm
VC.T 1103..	11.1	3.18	2.9	6.35



VCGT / VCMT

		NEW	NEW	NEW	NEW	NEW	NEW	NEW
		-SF CTCP115-P	-SF CTCP125-P	-SF CTCP135-P	-SMF CTCP115-P	-SMF CTCP125-P	-SMF CTCP135-P	-SMF CTCP135-P
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		F	F	F	F	F	F	F
		VCGT	VCGT	VCGT	VCMT	VCMT	VCGT	VCMT
		76 277 ...	76 277 ...	76 277 ...	76 288 ...	76 288 ...	76 285 ...	76 288 ...
ISO	RE mm							
110302EN	0.2	31401	51401	71401			71401	
110304EN	0.4	31601	51601	71601	31601	51601		71601
110308EN	0.8	31801	51801	71801				
P		●	●	●	●	●	●	●
M				○			○	○
K		○	○		○	○		
N								
S								
H								
O								

VCGT

			NEW				NEW
		-25P H210T	-25P CTPX710	-25Q H210T	-27 H10T	-27 CWN15	-27 CTPX715
			DRAGONSKIN				DRAGONSKIN
							
		F	M	M	M	M	M
		VCGT	VCGT	VCGT	VCGT	VCGT	VCGT
		70 282 ...	70 282 ...	70 282 ...	70 280 ...	70 280 ...	70 280 ...
ISO	RE mm						
110302FN	0.2	638	71400		606	306	81400
110304FL	0.4			670			
110304FN	0.4	640	71600		608	308	81600
110304FR	0.4			680			
110308FN	0.8				610	310	71800
P			●				●
M			●			○	●
K		○		○	○		○
N		●	●	●	●	●	●
S		○	●	○			●
H							
O		○		○	○		○

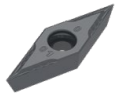
→ v_c Page 133–147

VCET

NEW

-F05
CTPX710

DRAGONSKIN



F
VCET
76 255 ...

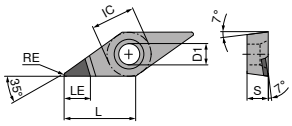
ISO	RE mm	
1103005FN	0.05	**11400**
1103015FN	0.15	**11800**
110301FN	0.10	**11600**
110302FN	0.20	**12000**
110304FN	0.40	**12200**

P	●
M	●
K	
N	●
S	●
H	
O	

3

VCGT

Designation	L mm	S mm	D1 mm	IC mm
VCGT 1103..	11.1	3.18	2.9	6.35



VCGT A

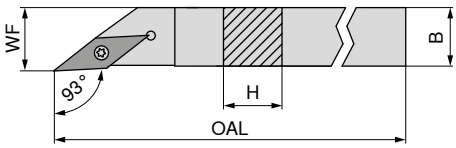
VCGT

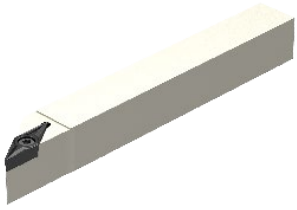
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20	-CB1 CTDPS30	-CB2 CTDPS30	-CB3 CTDPU20	-CB1 CTDCD10	-CB2 CTDCD10
				F	F	M	R	F	M
				DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT
				71 330 ...	71 330 ...	71 331 ...	71 332 ...	71 330 ...	71 331 ...
110301FN	0.1	A (1)	3.0					31000	
110301FN	0.1	A (1)	5.4	11000					
110302FN	0.2	A (1)	3.0					312	312
110302FN	0.2	A (1)	4.6	112	21200	212			
110304FN	0.4	A (1)	3.0					314	314
110304FN	0.4	A (1)	3.9	114	214	214	214		
110308FN	0.8	A (1)	3.3			21800			
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

→ v_c Page 136+137

MaxiLock-S – SVJC 93° – Toolholder with screw clamping





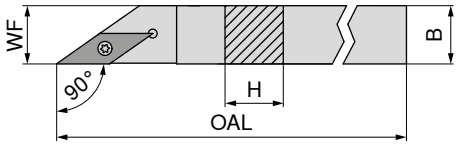
Illustrations show right-hand versions

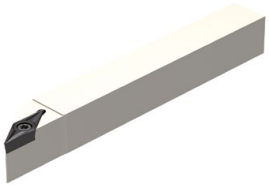
ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Left-hand 70 697 ...	Right-hand 70 696 ...
SVJC R/L 0808 H11	8	8	100	8	1,2	VC.. 1103	008	008
SVJC R/L 1010 H11	10	10	100	10	1,2	VC.. 1103	010	010
SVJC R/L 1212 H11	12	12	100	12	1,2	VC.. 1103	112	112
SVJC R/L 1616 K11	16	16	125	16	1,2	VC.. 1103	116	116

Spare parts Insert	Key D 80 950 ...	Clamping screw 70 950 ...
VC.. 1103	110	112

MaxiLock-S – SVAC 90° – Toolholder with screw clamping

▲ for sliding head lathes





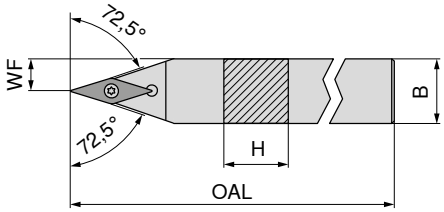
Illustrations show right-hand versions

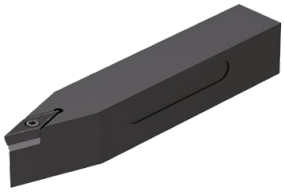
ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Left-hand 70 695 ...	Right-hand 70 694 ...
SVAC R/L 0808 H11	8	8	100	8	1,2	VC.. 1103	008	008
SVAC R/L 1010 H11	10	10	100	10	1,2	VC.. 1103	010	010
SVAC R/L 1212 H11	12	12	100	12	1,2	VC.. 1103	012	012

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 694 008 / 70 695 008	T08	110	M2,5x6	112
70 694 010 / 70 695 010	T08	110	M2,5x6	112
70 694 012 / 70 695 012	T08	110	M2,5x6	112

3

MaxiLock-S – SVVC 72.5° – Toolholder with screw clamping





ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Neutral 70 692 ...
SVVC N 1212 F11	12	12	80	6	1,2	VC.. 1103	**012**
SVVC N 1616 H11	16	16	100	8	1,2	VC.. 1103	**016**
SVVC N 2020 K11	20	20	125	10	1,2	VC.. 1103	**020**

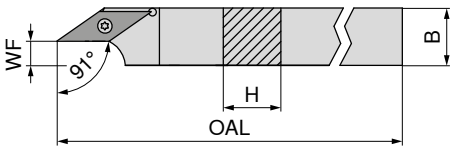
Key D

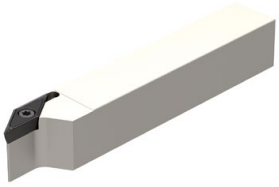
Clamping screw

Spare parts for Article no.	Key D 80 950 ...	Clamping screw 70 950 ...
70 692 012	**110**	**112**
70 692 016	**110**	**112**
70 692 020	**110**	**112**

MaxiLock-S – SVXC 91° – Toolholder with screw clamping

▲ for sliding head lathes





Illustrations show right-hand versions

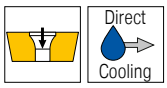
ISO designation	H mm	B mm	OAL mm	WF mm	torque moment Nm	Insert	Left-hand 70 691 ...	Right-hand 70 690 ...
SVXC R/L 1010 H11	10	10	100	2.5	1,2	VC.. 1103	**010**	**010**
SVXC R/L 1212 H11	12	12	100	4.5	1,2	VC.. 1103	**012**	**012**
SVXC R/L 1616 K11	16	16	125	8.5	1,2	VC.. 1103	**016**	**016**

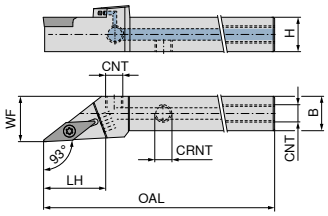
Key D

Clamping screw

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 691 010 / 70 690 010	T08	**110**	M2,5x6	**112**
70 691 012 / 70 690 012	T08	**110**	M2,5x6	**112**
70 691 016 / 70 690 016	T08	**110**	M2,5x6	**112**

MaxiLock-S – SVJC 93° DC – Tool holder with screw clamping



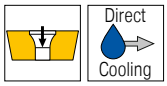


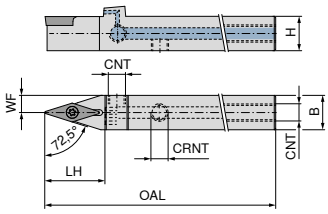
Illustrations show right-hand versions

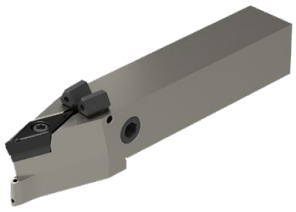
									NEW Left-hand	NEW Right-hand
									70 780 ...	70 780 ...
ISO designation	H mm	B mm	OAL mm	WF mm	CNT	CRNT	torque moment Nm	Insert		
SVJC R/L 1212 F11 DC	12	12	80	16	M6	M6	1,2	VC.. 1103	01201	01200
SVJC R/L 1616 H11 DC	16	16	100	20	G1/8"	M6	1,2	VC.. 1103	01601	01600

	Sealing plugs DC	Key D	O-Ring	Coolant nozzle DC	Coolant screw plug	Clamping screw	Grubscrew	Grubscrew
	70 950 ...	80 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...
Spare parts for Article no.								
70 780 01200 / 70 780 01201		039				857		86700
70 780 01600 / 70 780 01601	87600	039	88100	87700	294	857	88000	86700

MaxiLock-S – SVVC 72.5° DC – Tool holder with screw clamping





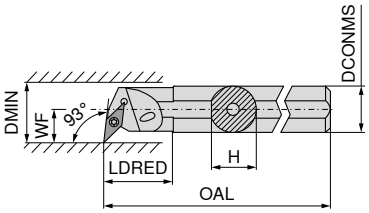


									NEW Neutral
									70 781 ...
ISO designation	H mm	B mm	OAL mm	WF mm	CNT	CRNT	torque moment Nm	Insert	
SVVC N 1212 F11 DC	12	12	80	6	M6	M6	1,2	VC.. 1103	01200
SVVC N 1616 H11 DC	16	16	100	8	G1/8"	M6	1,2	VC.. 1103	01600
SVVC N 2020 K11 DC	20	20	125	10	G1/8"	M6	1,2	VC.. 1103	02000

	Sealing plugs DC	Key D	O-Ring	Coolant nozzle DC	Coolant screw plug	Clamping screw	Grubscrew	Grubscrew
	70 950 ...	80 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...
Spare parts for Article no.								
70 781 01200		039				857		86700
70 781 01600	87600	039	88100	87700	294	857	88000	86700
70 781 02000	87600	039	88100	87800	294	857	88000	86700

3

MaxiLock-S – SVUC 93° – Boring bar with screw clamping



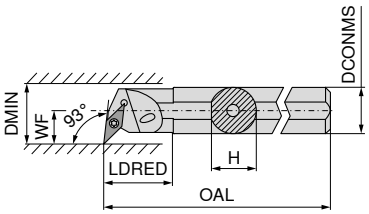
Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 745 ...	Right-hand 70 744 ...
A16M SVUC R/L 11	16	15.0	150	29	11	20	1,2	VC.. 1103	**216**	**216**
A20Q SVUC R/L 11	20	18.5	180	32	13	25	1,2	VC.. 1103	**220**	**220**
A25R SVUC R/L 11	25	23.0	200	36	17	32	1,2	VC.. 1103	**225**	**225**

Spare parts for Article no.	Key D 80 950 ...	Clamping screw 70 950 ...
70 744 216 / 70 745 216	**110**	**112**
70 744 220 / 70 745 220	**110**	**112**
70 744 225 / 70 745 225	**110**	**112**

MaxiLock-S – SVUC 93° – Boring bar with screw clamping

▲ Type: Solid carbide

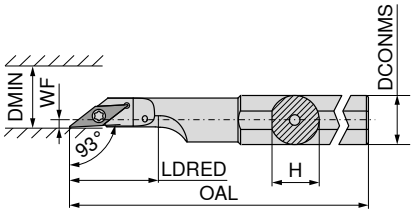


Illustrations show right-hand versions

ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 747 ...	Right-hand 70 746 ...
E16R SVUC R/L 11	16	15.0	200	34	11	20	1,2	VC.. 1103	**016**	**016**
E20S SVUC R/L 11	20	18.5	250	38	13	25	1,2	VC.. 1103	**020**	**020**

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 746 016 / 70 747 016	T08	**110**	M2,5x6	**112**
70 746 020 / 70 747 020	T08	**110**	M2,5x6	**112**

MaxiLock-S – SVJC 93° – Boring bar with screw clamping



Illustrations show right-hand versions

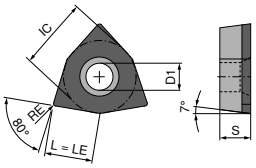
ISO designation	DCONMS mm	H mm	OAL mm	LDRED mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 727 ...	Right-hand 70 726 ...
A16M SVJC R/L 11	16	15	150	30	2	22	1,2	VC.. 1103	**216**	**216**
A20M SVJC R/L 11	20	19	150	38	2	25	1,2	VC.. 1103	**220**	**220**

Spare parts for Article no.	Key D 80 950 ...	Clamping screw 70 950 ...
70 727 216 / 70 726 216	**110**	**112**
70 727 220 / 70 726 220	**110**	**112**

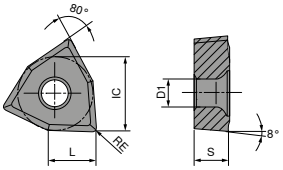
3

WCGT / WCGW

Designation	L mm	S mm	D1 mm	IC mm
WCGW 0201..	2.70	1.58	2.3	3.97
WCGT 0201..	2.71	1.59	2.1	3.97



CBN/PKD WCGW F



WCGT

WCGT

ISO	RE mm	-SF TCM10	-SF CTPP430	-SF H216T
		F	F	F
		CERMET WCGT	WCGT	WCGT
		70 287 ...	70 287 ...	70 287 ...
020102EN	0.2	900	450	600
020104EN	0.4	902	452	602
P		●	●	
M		○	●	
K		○	○	○
N			○	●
S			○	
H				
O				○

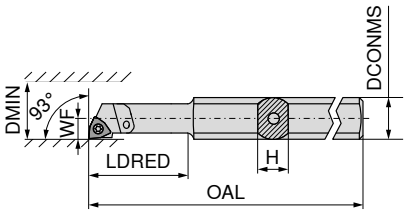
WCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	CTDPD20
				F
				DIAMOND WCGW
				71 154 ...
020102FN	0.2	F	2.7	100
020104FN	0.4	F	2.7	102
P				
M				
K				
N				●
S				
H				
O				●

→ v_c Page 133–147

MaxiLock-S – SWUC 93° – Boring bar with screw clamping



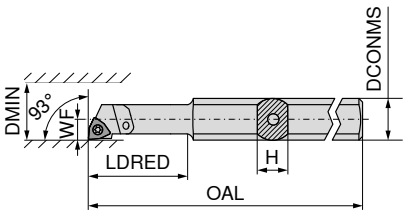
Illustrations show right-hand versions

ISO designation	H mm	OAL mm	LDRED mm	WF mm	DCONMS mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 731 ...	Right-hand 70 730 ...
A0508H SWUC R/L 02	7	100	24	2.9	8	5.8	0,4	WC.. 0201..	005	005
A0608H SWUC R/L 02	7	100	24	3.9	8	7.8	0,4	WC.. 0201..	006	006

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 731 005 / 70 730 005	T06	108	M1,8x3,4	334
70 731 006 / 70 730 006	T06	108	M1,8x3,4	334

MaxiLock-S – SWUC 93° – Boring bar with screw clamping

▲ with carbide core



Illustrations show right-hand versions

ISO designation	H mm	OAL mm	LDRED mm	WF mm	DCONMS mm	DMIN mm	torque moment Nm	Insert	Left-hand 70 743 ...	Right-hand 70 742 ...
E-A0508H SWUC R/L 02	7	100	24	2.9	8	5.8	0,4	WC.. 0201..	005	005
E-A0608H SWUC R/L 02	7	100	24	3.9	8	7.8	0,4	WC.. 0201..	006	006
SET							0,4	WC.. 0201..	999	999

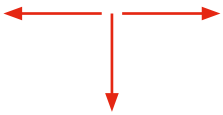
Set includes boring bars 70 743 005 and 70 743 006 or 70 742 005 and 70 742 006

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 743 005 / 70 742 005	T06	108	M1,8x3,4	334
70 743 006 / 70 742 006	T06	108	M1,8x3,4	334

Toolfinder – TriClamp

- Indexable inserts with ground wiper geometry
  Improves surface quality or increases feed rate
- Turning in all three contour directions
  Maximum flexibility without changing the tool
- Smallest corner radii 0.0–0.2 mm
  Generates sharp edges
- Perfect chip control
  Reduces downtime
- High cutting depths can be achieved
  Reduces the retraction distance

Application directions

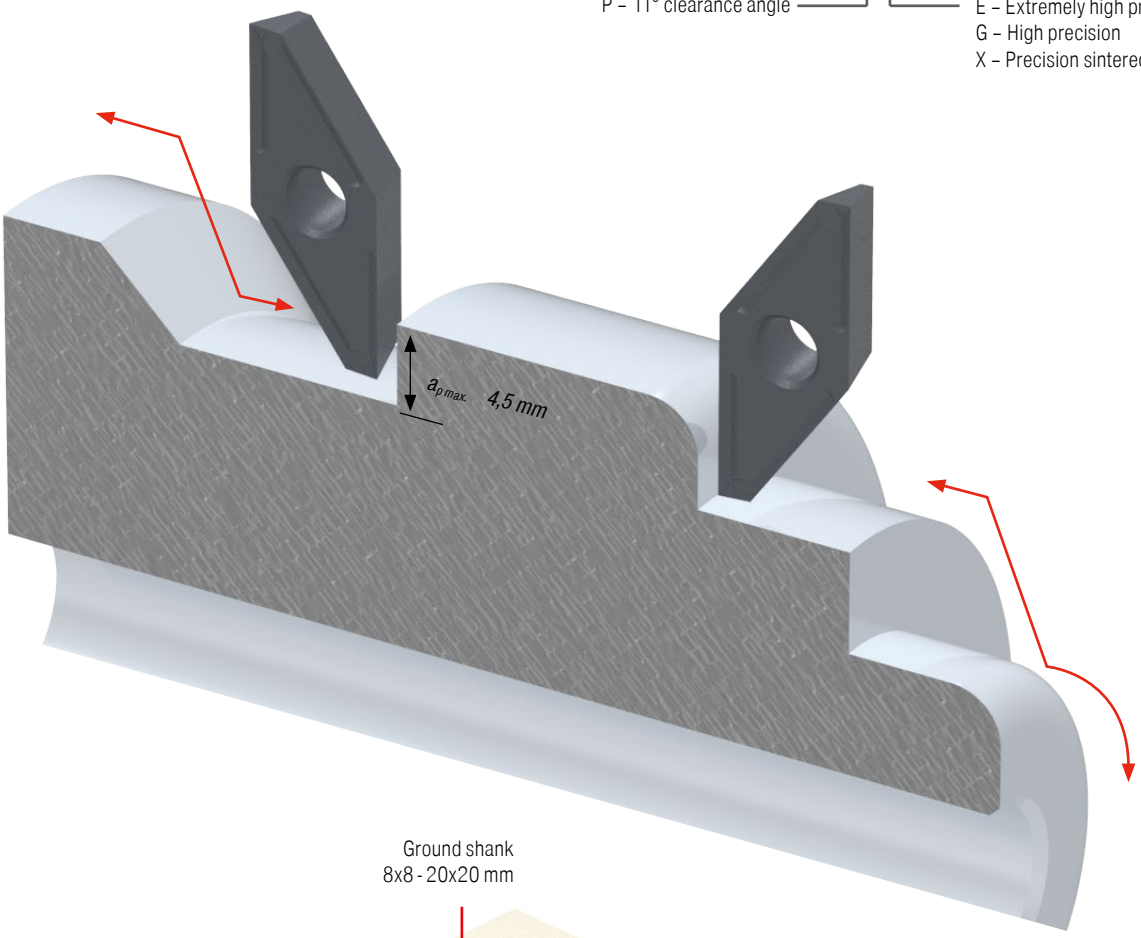


TriClamp system	
V P E T	→ Page 51
V P G T	→ Page 51
V P X T	→ Page 51

Precision

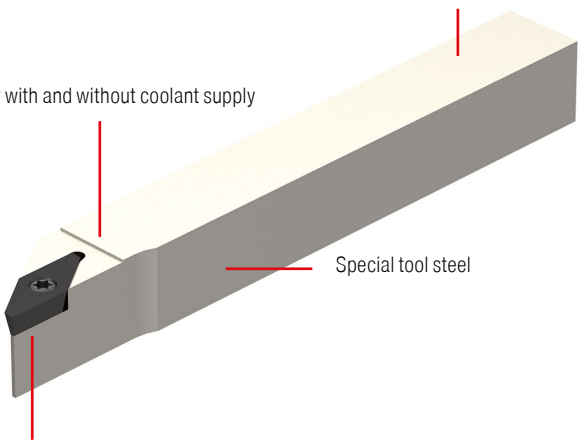
P – 11° clearance angle

E – Extremely high precision
G – High precision
X – Precision sintered



Ground shank
8x8 - 20x20 mm

Holder with and without coolant supply



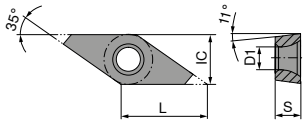
Special tool steel

All tolerance types can be used in the same holder

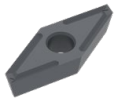
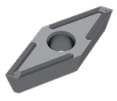
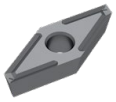
Tool holder	
90°	→ Page 53
91°	→ Page 54
93°	→ Page 53–59

VPGT / VPET / VPXT

Designation	L mm	S mm	D1 mm	IC mm
VP.T 1003..	10	3.18	4.4	6.35

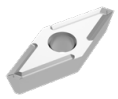
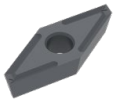
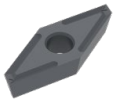


VPGT

		-FL WPU7610	-FR WPU7610	-FL TiAlN+	-FR TiAlN+	NEW -FL WUU7620	NEW -FR WUU7620
							
		F VPGT 72 405 ...	F VPGT 72 404 ...	F VPGT 72 493 ...	F VPGT 72 492 ...	F VPGT 72 493 ...	F VPGT 72 492 ...
ISO	RE mm						
1003ZZ	0.00	760 2)	760 1)	500 2)	500 1)	70000 2)	70000 1)
1003008	0.08	728 2)	728 1)	508 2)	508 1)	70800 2)	70800 1)
1003015	0.15	735 2)	735 1)	515 2)	515 1)	71500 2)	71500 1)
P		●	●	●	●	●	●
M		○	○	○	○		
K		●	●	●	●		
N		○	○	○	○	○	○
S		○	○	○	○	○	○
H							
O		○	○	○	○	○	○

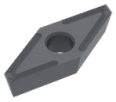
1) Note ! Right hand insert for right hand holder
2) Note ! Left hand insert for left hand holder

VPET

		-FL WUU7610	-FR WUU7610	-FL WPU7610	-FR WPU7610	-FL WPU7620	-FR WPU7620
							
		F VPET 72 403 ...	F VPET 72 402 ...	F VPET 72 403 ...	F VPET 72 402 ...	F VPET 72 403 ...	F VPET 72 402 ...
ISO	RE mm						
1003ZZ	0.00	060 2)	060 1)	760 2)	760 1)	560 2)	560 1)
1003008	0.08	028 2)	028 1)	728 2)	728 1)	528 2)	528 1)
1003015	0.15	035 2)	035 1)	735 2)	735 1)	535 2)	535 1)
P		●	●	●	●	●	●
M				○	○	○	○
K				●	●	●	●
N		○	○	○	○	○	○
S		○	○	○	○	○	○
H							
O		○	○	○	○	○	○

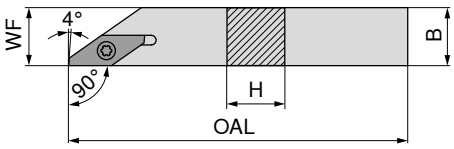
1) Note ! Right hand insert for right hand holder
2) Note ! Left hand insert for left hand holder

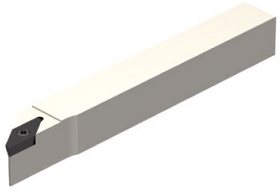
VPXT

ISO	RE mm	-EL TiAlN+	-ER TiAlN+
			
		F VPXT 72 493 ...	F VPXT 72 492 ...
1003015	0.15	615 [2]	615 [1]
1003035	0.35	635 [2]	635 [1]
P		●	●
M		○	○
K		●	●
N		○	○
S		○	○
H			
O		○	○

1) Note ! Right hand insert for right hand holder
2) Note ! Left hand insert for left hand holder

TriClamp – SVAP 90° – Toolholder with screw clamping





Illustrations show right-hand versions

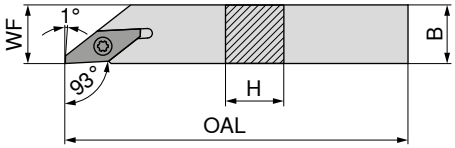
ISO designation	H mm	B mm	OAL mm	WF mm	Insert	Left-hand 72 382 ...	Right-hand 72 380 ...
SVAP R/L 0808 H10	8	8	100	8	VP.. 1003	008	008
SVAP R/L 1010 H10	10	10	100	10	VP.. 1003	010	010
SVAP R/L 1212 H10	12	12	100	12	VP.. 1003	012	012

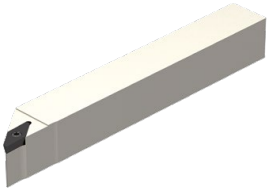
Key D

Clamping screw

Spare parts		Key D 80 950 ...	Clamping screw 72 950 ...
Insert			
VP.. 1003	T08	110	002

TriClamp – SVJP 93° – Toolholder with screw clamping





Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	WF mm	Insert	Left-hand 72 386 ...	Right-hand 72 384 ...
SVJP R/L 0808 H10	8	8	100	8	VP.. 1003	008	008
SVJP R/L 1010 H10	10	10	100	10	VP.. 1003	010	010
SVJP R/L 1212 H10	12	12	100	12	VP.. 1003	012	012
SVJP R/L 1616 K10	16	16	125	16	VP.. 1003	016	016

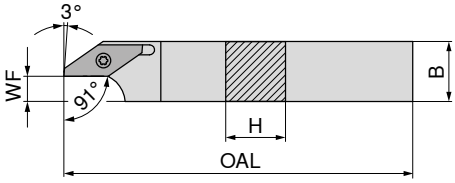
Key D

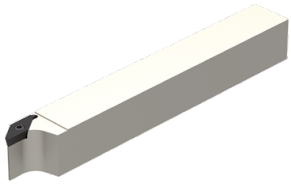
Clamping screw

Spare parts		Key D 80 950 ...	Clamping screw 72 950 ...
Insert			
VP.. 1003	T08	110	002

3

TriClamp – SVXP 91° – Toolholder with screw clamping





Illustrations show right-hand versions

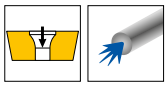
ISO designation	B mm	H mm	OAL mm	WF mm	Insert	Left-hand 72 390 ...	Right-hand 72 388 ...
SVXP R/L 0808 H10	8	8	100	1	VP.. 1003	008	008
SVXP R/L 1010 H10	10	10	100	3	VP.. 1003	010	010
SVXP R/L 1212 H10	12	12	100	5	VP.. 1003	012	012
SVXP R/L 1616 K10	16	16	125	9	VP.. 1003	016	016

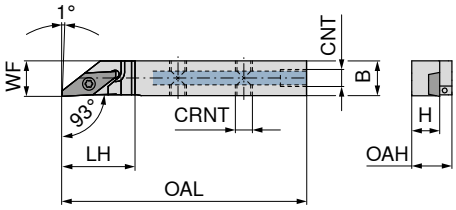
Key D

Clamping screw

Spare parts Insert		Key D 80 950 ...	Clamping screw 72 950 ...
VP.. 1003	T08	110	002

TriClamp – SVJP 93°-IC – Tool holder with screw clamping and thro' coolant





Illustrations show right-hand versions

ISO designation	H mm	B mm	LH mm	WF mm	OAL mm	OAH mm	CRNT	CNT	Insert	Left-hand 72 361 ...	Right-hand 72 360 ...
SVJP R/L 0810 H10 IC	8	10	21	10	100	11.5	M5	M5	VP.. 1003	008	008
SVJP R/L 1010 H10 IC	10	10	21	10	100	13.5	M5	M5	VP.. 1003	010	010
SVJP R/L 1212 H10 IC	12	12	21	12	100	15.5	M5	M5	VP.. 1003	012	012
SVJP R/L 1616 K10 IC	16	16	21	16	125	19.5	M5	G1/8"	VP.. 1003	016	016
SVJP R/L 2020 K10 IC	20	20	21	20	125	23.5	M5	G1/8"	VP.. 1003	020	020

Cylindrical screw

Cylindrical screw

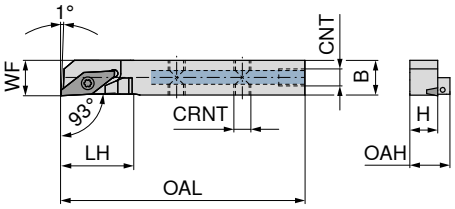
Key D

Clamping screw

Spare parts for Article no.			Cylindrical screw 72 950 ...		Cylindrical screw 72 950 ...		Key D 80 950 ...		Clamping screw 72 950 ...
72 360 008 / 72 361 008				M5x4	011	T08	110		002
72 360 010 / 72 361 010				M5x4	011	T08	110		002
72 360 012 / 72 361 012				M5x4	011	T08	110		002
72 360 016 / 72 361 016	G1/8"		010	M5x4	011	T08	110		002
72 360 020 / 72 361 020	G1/8"		010	M5x4	011	T08	110		002

Suitable accessories can be found on → **Page 131+132**

TriClamp – SVJP 93°-VIC – Reinforced tool holder with screw clamping and thro' coolant



Illustrations show right-hand versions

ISO designation	H mm	B mm	LH mm	WF mm	OAL mm	OAH mm	CRNT	CNT	Insert	Left-hand 72 363 ...	Right-hand 72 362 ...
SVJP R/L 0810 H10 VIC	8	10	21	10	100	11.5	M5	M5	VP.. 1003	008	008
SVJP R/L 1010 H10 VIC	10	10	21	10	100	13.5	M5	M5	VP.. 1003	010	010
SVJP R/L 1212 H10 VIC	12	12	21	12	100	15.5	M5	M5	VP.. 1003	012	012

Cylindrical screw

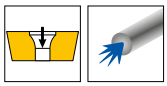
Key D

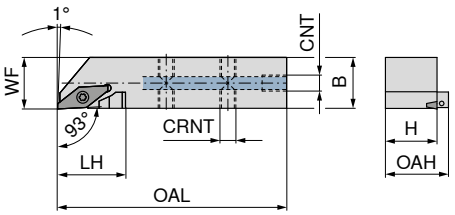
Clamping screw

Spare parts		Cylindrical screw 72 950 ...	Key D 80 950 ...	Clamping screw 72 950 ...
Insert				
VP.. 1003	M5x4	011	T08 110	002

3

TriClamp – SVJP 93°-VIC – Reinforced tool holder with screw clamping and thro' coolant





Illustrations show right-hand versions

ISO designation	H mm	B mm	LH mm	WF mm	OAL mm	OAH mm	CRNT	CNT	Insert	Left-hand 72 365 ...	Right-hand 72 364 ...
SVJP R/L 1616 K10 VIC	16	16	21	16	125	19.5	M5	G1/8"	VP.. 1003	016	016
SVJP R/L 2020 K10 VIC	20	20	21	20	125	23.5	M5	G1/8"	VP.. 1003	020	020

Cylindrical screw

Cylindrical screw

Key D

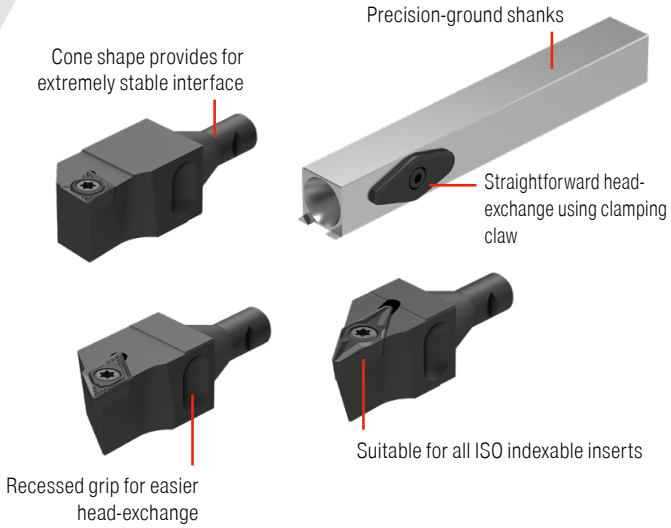
Clamping screw

Spare parts		Cylindrical screw 72 950 ...	Cylindrical screw 72 950 ...	Key D 80 950 ...	Clamping screw 72 950 ...
Insert					
VP.. 1003	G1/8"	010	M5x4 011	T08 110	002

Suitable accessories can be found on → **Page 131+132**

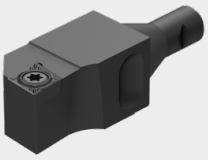
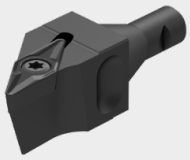
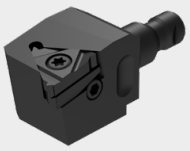
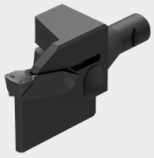
Highlights

- Quick and easy head-exchange
  Reduced downtime
- Uniform height and lengths
  No setup time required
- High repeatability of ±7.5 µm
  Low reject rate
- Ground base holder
  Maximum precision
- Secure positioning of heads
  Repeat inspections not required



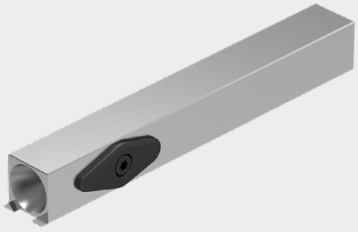
Overview

Exchangeable heads

CC.T	DC.T	VC.T	External thread	GX grooving
				
SCLC 95°	SDJC 93° / SDAC 90° / SDNC 62,5°	SVJC 93°	11.. / 16..	GX09 GX16
→ 57	→ 57+58	→ 59	→ 59+60	→ 60

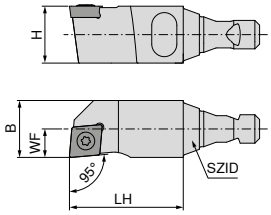
Basic holder

SZID 12: OAL = 63 mm	**SZID 12:** OAL = 93 mm
SZID 16: OAL = 63 mm	**SZID 16:** OAL = 89 mm



→ 61

XheadClamp – SCLC 95° exchangeable head turning tool



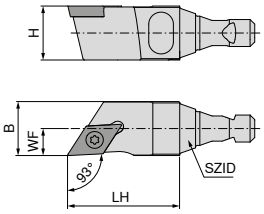
Illustrations show right-hand versions

ISO designation	SZID	H mm	B mm	LH mm	WF mm	Insert	Left-hand 72 809 ...	Right-hand 72 808 ...
SCLC R/L 06 BH12	12	12	12	24	6	CC.. 0602	**221**	**221**
SCLC R/L 06 BH16	16	16	16	28	8	CC.. 0602	**621**	**621**
SCLC R/L 09 BH12	12	12	12	24	6	CC.. 09T3	**222**	**222**
SCLC R/L 09 BH16	16	16	16	28	8	CC.. 09T3	**622**	**622**

Spare parts						
		Key D		Combination Key		Clamping screw
		80 950 ...		**70 950 ...**		**70 950 ...**
Insert						
CC.. 0602	T08	**110**			M2,5x6	**112**
CC.. 09T3			T15/SW	**398**	M3,5x11	**113**

Suitable indexable inserts can be found in the ISO turning section on → **Page 13–16.**

XheadClamp – SDJC 93° exchangeable head turning tool



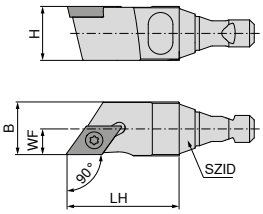
Illustrations show right-hand versions

ISO designation	SZID	H mm	B mm	LH mm	WF mm	Insert	Left-hand 72 811 ...	Right-hand 72 810 ...
SDJC R/L 07-BH12	12	12	12	24	6	DC.. 0702	**230**	**230**
SDJC R/L 07-BH16	16	16	16	28	8	DC.. 0702	**630**	**630**
SDJC R/L 11-BH12	12	12	12	24	6	DC.. 11T3	**231**	**231**
SDJC R/L 11-BH16	16	16	16	28	8	DC.. 11T3	**631**	**631**

Spare parts						
		Key D				Clamping screw
		80 950 ...				**70 950 ...**
Insert						
DC.. 0702			T08	**110**	M2,5x6	**112**
DC.. 11T3			T15	**113**	M4x11	**174**

Suitable indexable inserts can be found in the ISO turning section on → **Page 23–27.**

XheadClamp – SDAC 90° exchangeable head turning tool



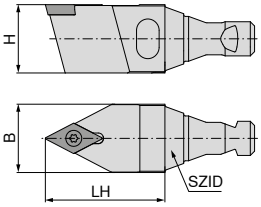
Illustrations show right-hand versions

ISO designation	SZID	B mm	H mm	WF mm	LH mm	Insert	NEW Left-hand 72 811 ...	NEW Right-hand 72 810 ...
SDACR 07-BH12	12	12	12	6	24	DC.. 0702	**228**	**228**
SDACR 07-BH16	16	16	16	8	28	DC.. 0702	**628**	**628**
SDACR 11-BH12	12	12	12	6	24	DC.. 11T3	**229**	**229**
SDACR 11-BH16	16	16	16	8	28	DC.. 11T3	**629**	**629**

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...
72 810 229 / 72 811 229		**398**	**113**
72 810 228 / 72 811 228	**110**		**112**
72 810 628 / 72 811 628	**110**		**112**
72 810 629 / 72 811 629		**398**	**113**

Suitable indexable inserts can be found in the ISO turning section on → **Page 23–27.**

XheadClamp – SDNC 62.5° exchangeable head turning tool

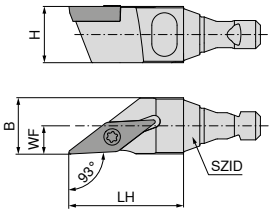


ISO designation	SZID	H mm	B mm	LH mm	Insert	NEW Neutral 72 814 ...
SDNC N 07-BH12	12	12	12	28	DC.. 0702	**232**
SDNC N 07-BH16	16	16	16	28	DC.. 0702	**632**
SDNC N 11-BH12	12	12	12	24	DC.. 11T3	**233**
SDNC N 11-BH16	16	16	16	28	DC.. 11T3	**633**

Spare parts for Article no.	Key D 80 950 ...	Combination Key 70 950 ...	Clamping screw 70 950 ...
72 814 232	**110**		**112**
72 814 632	**110**		**112**
72 814 233		**398**	**113**
72 814 633		**398**	**113**

Suitable indexable inserts can be found in the ISO turning section on → **Page 23–27.**

XheadClamp – SVJC 93° exchangeable head turning tool



Illustrations show right-hand versions

ISO designation	SZID	H mm	B mm	LH mm	WF mm	Insert	Left-hand 72 813 ...	Right-hand 72 812 ...
SVJC R/L 11-BH12	12	12	12	24	6	VC.. 1103	**234**	**234**
SVJC R/L 11-BH16	16	16	16	28	8	VC.. 1103	**634**	**634**

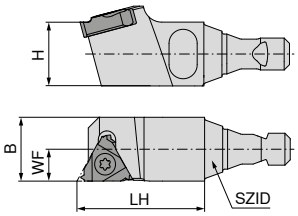
Key D

Clamping screw

Spare parts		Key D 80 950 ...		Clamping screw 70 950 ...
Insert				
VC.. 1103	T08	**110**	M2,5x6	**112**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

XheadClamp – Exchangeable head standard external threading tool



Illustrations show right-hand versions

Designation	SZID	H mm	LH mm	WF mm	Insert	NEW Left-hand 72 803 ...	NEW Right-hand 72 802 ...
SE R/L 11-BH12	12	12	24	6	11 ..	**241**	**241**
SE R/L 11-BH16	16	16	28	8	11 ..	**641**	**641**

Key D

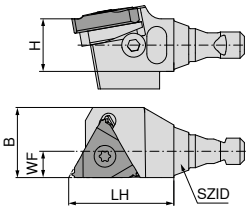
Clamping screw

for Article no.	Key D 80 950 ...	Clamping screw 71 950 ...
72 802 241 / 72 803 241	**110**	**230**
72 802 641 / 72 803 641	**110**	**230**

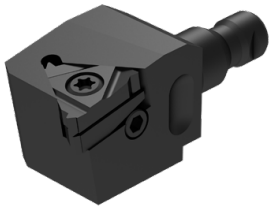
Suitable indexable inserts can be found in **Chapter 2, Thread turning.**

3

XheadClamp – Exchangeable head standard external threading tool



Illustrations show right-hand versions

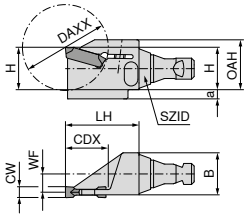


Designation	SZID	H mm	LH mm	WF mm	Insert	NEW Left-hand 72 805 ...	NEW Right-hand 72 804 ...
SE R/L 16-BH12	12	12	24	16	16 ..	**242**	**242**
SE R/L 16-BH16	16	16	28	18	16 ..	**642**	**642**

Spare parts for Article no.	Shim 71 950 ...	Screw-U 71 950 ...	Key D 80 950 ...	Clamping screw 71 950 ...
72 805 242	**129**	**234**	**110**	**231**
72 805 642	**129**	**234**	**110**	**231**
72 804 242	**121**	**234**	**110**	**231**
72 804 642	**121**	**234**	**110**	**231**

Suitable indexable inserts can be found in **Chapter 2, Thread turning.**

XheadClamp – GX 09/16 exchangeable head grooving tool holder



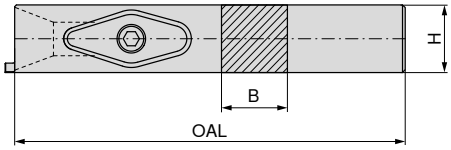
Illustrations show right-hand versions

Designation	SZID	B mm	H mm	OAH mm	LH mm	CDX mm	DAXX mm	WF mm	CW mm	a mm	for grooving inserts	Left-hand 72 801 ...	Right-hand 72 800 ...
GX09-1 R/L -BH12	12	12	12	15	24	12.5	25	5.5	0,60-2,50	4.0	GX 09-1	**112**	**112**
GX09-1 R/L -BH16	16	16	16	19	28	16.0	32	7.5	0,60-2,50	3.5	GX 09-1	**116**	**116**
GX09-2 R/L -BH12	12	12	12	15	24	12.5	25	5.0	0,60-3,00	4.0	GX 09-2	**212**	**212**
GX09-2 R/L -BH16	16	16	16	19	28	16.0	32	7.0	0,60-3,00	3.5	GX 09-2	**216**	**216**
GX16-1 R/L -BH12	12	12	12	15	24	12.5	25	5.5	0,60-2,50	4.0	GX 16-1	**612**	**612**
GX16-1 R/L -BH16	16	16	16	19	28	16.0	32	7.5	0,60-2,50	3.5	GX 16-1	**616**	**616**
GX16-2 R/L -BH12	12	12	12	15	24	12.5	25	5.0	0,60-3,50	4.0	GX 16-2	**712**	**712**
GX16-2 R/L -BH16	16	16	16	19	28	16.0	32	7.0	0,60-3,50	3.5	GX 16-2	**716**	**716**

Spare parts for grooving inserts		Key D 80 950 ...		Clamping screw 70 950 ...
GX 09-1	T15	**113**	M4x11	**174**
GX 09-2	T15	**113**	M4x11	**174**
GX 16-1	T15	**113**	M4x11	**174**
GX 16-2	T15	**113**	M4x11	**174**

Suitable indexable inserts can be found in the grooving tools section on → **Page 229**

XheadClamp – Base holder



Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	For exchangeable heads	Left-hand 72 841 ...	Right-hand 72 840 ...
BHSH.12X63 R/L	12	12	63	BH12	**263**	**263**
BHSH.12X93 R/L	12	12	93	BH12	**293**	**293**
BHSH.16X63 R/L	16	16	63	BH16	**663**	**663**
BHSH.16X89 R/L	16	16	89	BH16	**693**	**693**

	Clamping screw 72 950 ...		Clamp 72 950 ...		Key I 70 950 ...	
Spare parts For exchangeable heads						
BH12	SR.BHSH.12	**801**	PR.BHSH.12	**800**	SW2,5	**175**
BH16	SR.BHSH.16	**803**	PR.BHSH.16	**802**	SW3	**176**

3

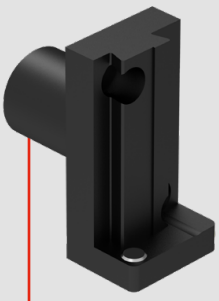
Reverse-side machining – highlights

- **Speed**
  Ultra-fast tool change by tightening / loosening just one bolt
- **Flexibility**
  Flexible on all machines
  Base holders are installed in the same way on all machines and remain in the machines
- **Precision**
  Most accurate height adjustment possible
- **Set-up time optimisation**
  Presetting via an adjustment screw directly in the machine or externally in the presetting device
- **Cooling**
  Optional coolant overpressure by attaching a coolant attachment

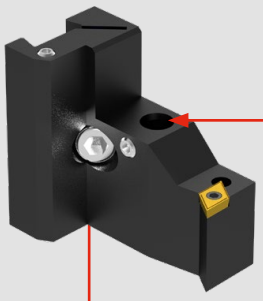
Reverse-side machining – Toolfinder

Modular tools

Distance plates
→ Page 68

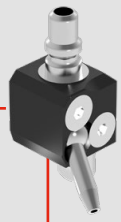


- CITIZIEN → Page 64
- DOOSAN → Page 64
- HANHWA → Page 65
- MAIER → Page 65
- STAR → Page 66
- TORNOS → Page 66
- CITIZEN / GILDEMEISTER / HANWHA / TORNOS / TSUGAMI → Page 67
- TORNOS / TSUGAMI → Page 67



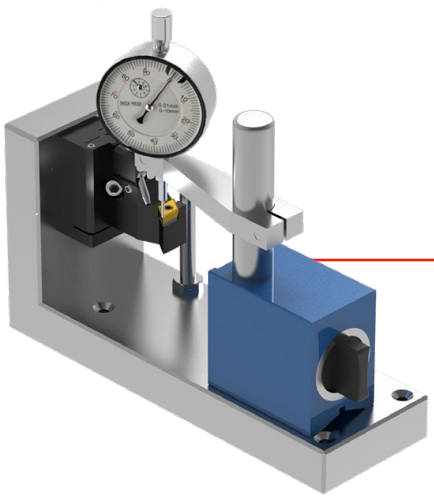
- Turning Holder CC / DC / VC → Page 69–71
- Thread turning holder → Page 72
- Grooving tool holder TX → Page 73
- Drills and boring bars → Page 74
- Cutting inserts → Page 75+76
- Collet Chuck → Page 77

Accessories



Coolant insert
→ Page 100

Setting Device

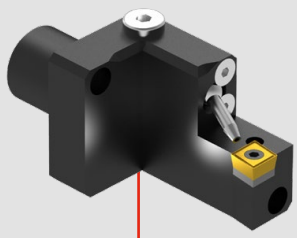


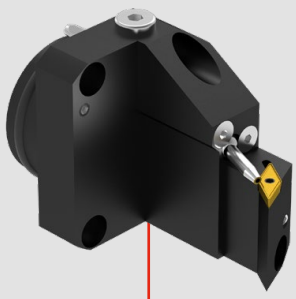
Using the adjustment device, you can set our modular holder to the right height outside the machine, which is a plus in terms of flexibility and time.

Setting Device
→ Page 103

Detailed information on using the adjustment device
→ Page 155+156

Monoblock tools





STAR

Turning Holder CC / DC / VC → Page 78–82

Thread turning holder → Page 83

Grooving tool holder TX → Page 84

Drills and boring bars → Page 96

Cutting inserts → Page 98

TSUGAMI

Turning Holder CC / DC / VC → Page 85–93

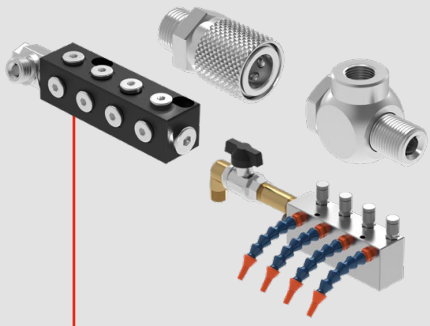
Thread turning holder → Page 94

Grooving tool holder TX → Page 95

Drills and boring bars → Page 97

Cutting inserts → Page 99

Accessories



Coolant manifold → Page 100+101

Coolant nozzles → Page 101

Screw plug → Page 101

Coolant connection → Page 101+102

Threaded adapter → Page 102

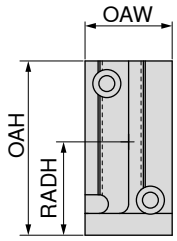
Coolant hoses → Page 102

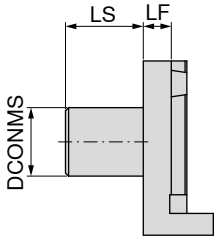
Coupler connector → Page 102

Quick-coupler → Page 102

Protection plug → Page 102

Machine base holder for CITIZEN





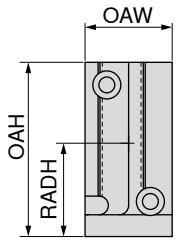
NEW

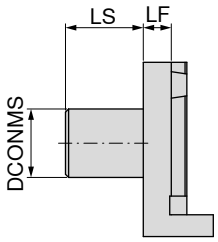
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	72 951 ...
CI.GH 3/4"-40	19.05	28	56	9	40	30	**07004**
CI.GH 25-30	25.00	28	56	9	30	30	**07002**
CI.GH 1"-60	25.40	28	56	9	60	30	**07003**
CI.GH 31-15	31.00	34	58	9	15	32	**07001**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 951 07001	Citizen	A32-VII with drive
72 951 07002	Citizen	L12 / A20 / CL20 with drive
72 951 07003	Citizen	A20 / A32 / C32 / L32 / M32 without drive
72 951 07004	Citizen	C16 / L12 / L20 / M16

Machine base holder for DOOSAN





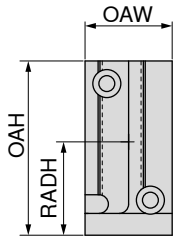
NEW

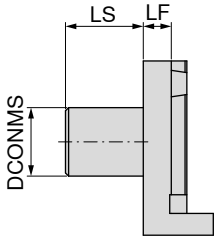
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	72 952 ...
DO.GH 32-25	32	34	56	9	25	30	**07001**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 952 07001	Doosan	Puma ST20G

Machine base holder for HANWHA





NEW

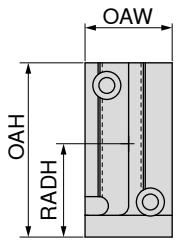
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	72 953 ...
HA.GH 25-40	25	28	56	9	40	30	**07003**
HA.GH 32-27	32	38	56	34	27	30	**07002**
HA.GH 33-40	33	28	56	9	40	30	**07001**

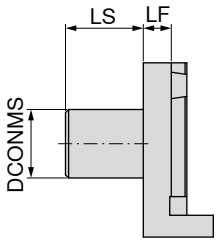
suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 953 07001	Hanwha	XD20 / 26 / 32 / 38
72 953 07002	Hanwha	XD38H
72 953 07003	Hanwha	XE26

3

Machine base holder for MAIER





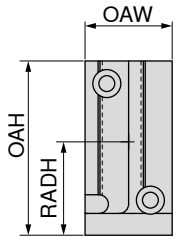
NEW

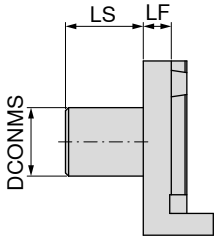
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	72 954 ...
MA.GH 34-20	34	38	56	9	20	30	**07001**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 954 07001	Maier	ML26 / ML32 / ML12C / ML16C / ML16D / ML20

Machine base holder for STAR





NEW

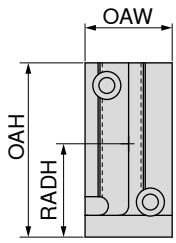
72 955 ...

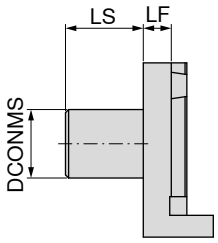
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	
ST.GH 22-20	22	38	56	9	20	30	**07001**
ST.GH 22-25	22	28	56	9	25	30	**07002**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 955 07001	Star	SR32 / SR32J / SR32JN (from mach. no 161)
72 955 07002	Star	ECAS12 / ECAS20 / SR20RIII / SR20N / SR20JN / SR32J / SR10J / SR16R / SR20R / SR20RII

Machine base holder for TORNOS





NEW

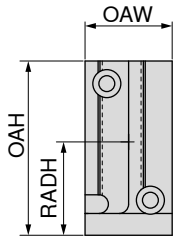
72 956 ...

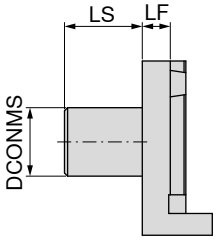
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	
TO.GH 20-100	20	28	56	9	100	30	**07002**
TO.GH 25-100	25	28	56	9	100	30	**07001**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 956 07001	Tornos	Deco 7 / 10 / 13 / 20 (Ø25)
72 956 07002	Tornos	Deco 7 / 10 / 13 / 20 (Ø20)

Machine base holder for CITIZEN / GILDEMEISTER / HANWHA / TORNOS / TSUGAMI





NEW

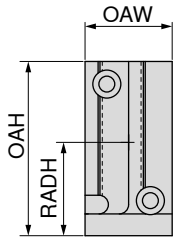
72 958 ...

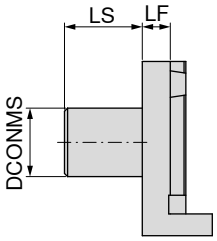
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	
CI/GI/HA/TO/TS.GH 20-40	20	28	56	9	40	30	**07001**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 958 07001	Citizen	K16
	Gildemeister	Sprint 20
	Hanwha	SL 12H
	Tornos	Delta 20 / Gamma 20
	Tsugami	BO 125 / 205

Machine base holder for TORNOS / TSUGAMI





NEW

72 958 ...

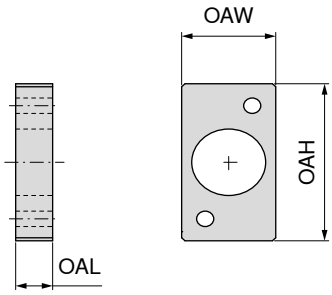
Designation	DCONMS mm	OAW mm	OAH mm	LF mm	LS mm	RADH mm	
TO/TS.GH 32-50	32	28	56	9	50	30	**07002**

suitable for the following machines:

Article no.	Machine manufacturer	Machine type
72 958 07001	Tornos	Delta 385 without drive
	Tsugami	BO 385 / BH 38

Distance plate

▲ flexible adjustment of the projection length



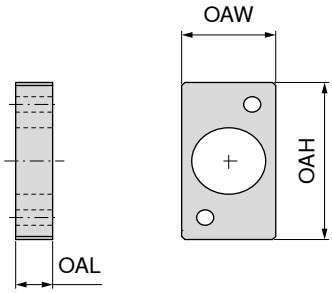
NEW

72 951 ...

Designation	OAW mm	OAH mm	OAL mm	Base holder	
CI.DP-GH1"-60-11	28	52	11	CI.GH1"-60	**04006**
CI.DP-GH25-30-11	28	52	11	CI.GH25-30	**04005**
CI.DP-GH3/4"-40-11	28	52	11	CI.GH3/4"-40	**04007**

Distance plate

▲ flexible adjustment of the projection length



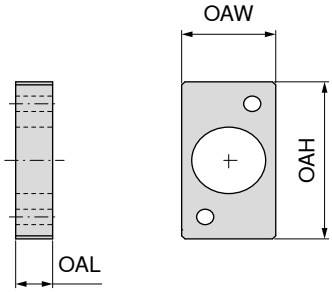
NEW

72 953 ...

Designation	OAW mm	OAH mm	OAL mm	Base holder	
HA.DP-GH33-40-11	35	52	11	HA.GH33-40	**04004**

Distance plate

▲ flexible adjustment of the projection length

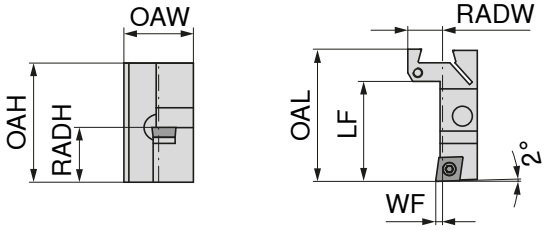


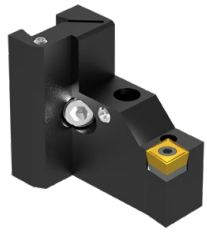
NEW

72 955 ...

Designation	OAW mm	OAH mm	OAL mm	Base holder	
ST.DP-GH22-25-11	28	52	11	ST.GH22-25	**04003**

Tool holder block with screw clamping for CC.. Indexable inserts





NEW

72 981 ...

Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	
MU.AH-CC09-R	28	48	41	14	22	2.5	54	CC.. 09T3	**08001**

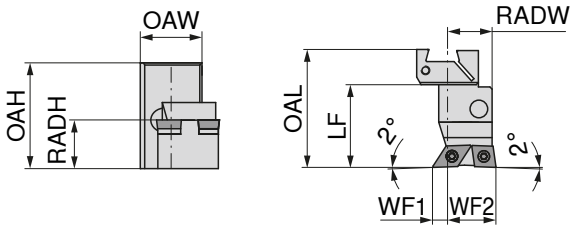
Spare parts for Article no.
72 981 08001

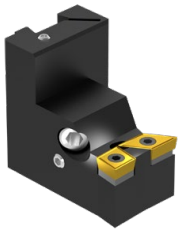
Key D	Clamping screw	Carbide type C	Threaded sleeve
80 950 ...	70 950 ...	70 950 ...	70 950 ...
113	113	165	171

Suitable indexable inserts can be found in the ISO turning section on → **Page 13–16.**

3

Tool holder block (double) with screw clamping for CC.. / DC.. Indexable inserts





NEW

double

72 981 ...

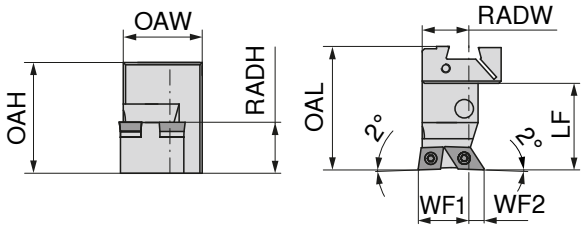
Designation	OAH mm	LF mm	RADW mm	RADH mm	OAL mm	WF1 mm	WF2 mm	Insert	
MU.AH-CC09-L-DC11-R	48	38	20	22	54	22	7	CC.. 09T3 / DC.. 11T3	**08011**

Spare parts for Article no.
72 981 08011

Key D	Combination Key	Clamping screw	Solid Carbide Seat D	Carbide type C	Threaded sleeve
80 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...
113	398	113	106	165	171

Suitable CC.. Indexable inserts can be found in the ISO turning section on → **Page 13–16.**
Suitable DC.. Indexable inserts can be found in the ISO turning section on → **Page 23–27.**

Tool holder block (double) with screw clamping for CC.. / DC.. Indexable inserts



NEW

double

72 981 ...

Designation	OAH mm	LF mm	RADW mm	RADH mm	OAL mm	WF1 mm	WF2 mm	Insert	
MU.AH-CC09-R-DC11-L	48	38	20	22	54	22	7	CC.. 09T3 / DC.. 11T3	**08010**

Key D
80 950 ...

Combination Key
70 950 ...

Clamping screw
70 950 ...

Solid Carbide Seat D
70 950 ...

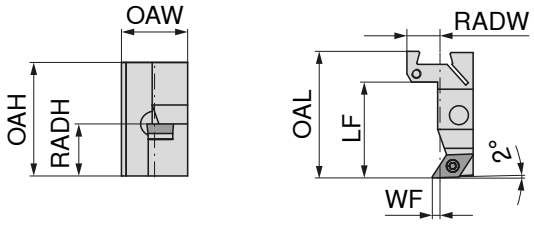
Carbide type C
70 950 ...

Threaded sleeve
70 950 ...

Spare parts for Article no.						
72 981 08010	**113**	**398**	**113**	**106**	**165**	**171**

Suitable CC.. Indexable inserts can be found in the ISO turning section on → **Page 13–16.**
Suitable DC.. Indexable inserts can be found in the ISO turning section on → **Page 23–27.**

Tool holder block with screw clamping for DC.. Indexable inserts



NEW

72 981 ...

Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	
MU.AH-DC07-R	28	48	41	14	22	3.0	54	DC.. 0702	**08002**
MU.AH-DC11-R	28	48	41	14	22	3.5	54	DC.. 11T3	**08003**

Key D
80 950 ...

Combination Key
70 950 ...

Clamping screw
70 950 ...

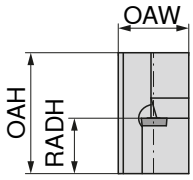
Solid Carbide Seat D
70 950 ...

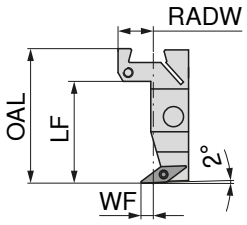
Threaded sleeve
70 950 ...

Spare parts for Article no.					
72 981 08002	**110**		**112**		
72 981 08003		**398**	**113**	**106**	**171**

Suitable indexable inserts can be found in the ISO turning section on → **Page 23–27.**

Tool holder block with screw clamping for VC.. Indexable inserts





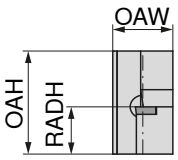
NEW

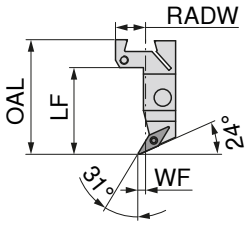
Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	72 981 ...
MU.AH-VC11-R	28	48	41	14	22	5.0	54	VC.. 1103	**08004**
MU.AH-VC16-R	28	48	41	14	22	14.5	54	VC.. 1604	**08005**

	Key D	Combination Key	Clamping screw	Solid Carbide Seat V	Threaded sleeve
	80 950 ...	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**
Spare parts for Article no.					
72 981 08004	**110**		**112**		
72 981 08005		**398**	**113**	**107**	**171**

(VC.. 1103) Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**
(VC.. 1604) Suitable indexable inserts can be found in our OnlineShop.

Tool holder block with screw clamping for VC.. Indexable inserts





NEW

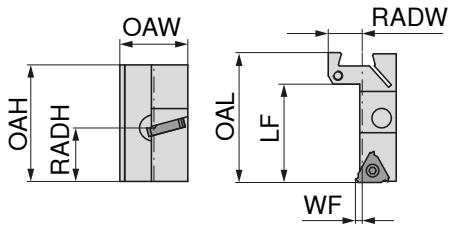
Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	72 981 ...
MU.AH-VC11-24-R	28	48	41	14	22	3	54	VC.. 1103	**08006**

	Key D	Clamping screw
	80 950 ...	**70 950 ...**
Spare parts for Article no.		
72 981 08006	**110**	**112**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

Tool holders for right external thread-turning inserts

- Tool holder with approach angle 1.5°
- Thread-turning inserts with pitch max. 1.5 mm



NEW

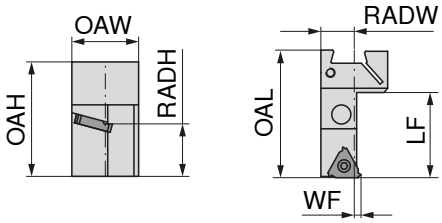
Right-hand

72 981 ...

Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	
MU.AH-ER16-R	28	48	41	14	22	3	54	16 ER..	**08007**

Tool holders for left external thread-turning inserts

- Tool holder with approach angle 1.5°
- Thread-turning inserts with pitch max. 1.5 mm

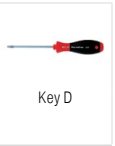


NEW

Left-hand

72 981 ...

Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	
MU.AH-ER16-L	28	48	34	14	22	3	54	16 EL..	**08008**



Key D

80 950 ...

Clamping screw

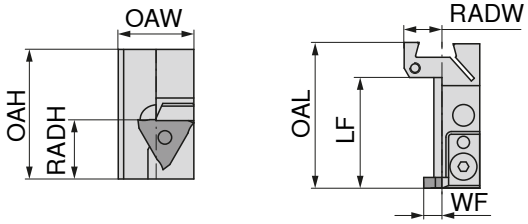
71 950 ...

Spare parts for Article no.		
72 981 08008	**112**	**231**
72 981 08007	**112**	**231**

Suitable indexable inserts can be found in **Chapter 2, Thread turning.**

Tool holder block for TX grooving inserts

▲ Insert width 0.5-4.0 mm



NEW

Right-hand

72 986 ...

Designation	OAW mm	OAH mm	LF mm	RADW mm	RADH mm	WF mm	OAL mm	Insert	
MU.AH-TX-R	28	48	41	14	22	7	54	TX R/N/L ...2/3/4	**16001**

Clamp

72 950 ...

Lock washer

72 950 ...

Countersunk screw

72 950 ...

Guide pin with flange

72 950 ...

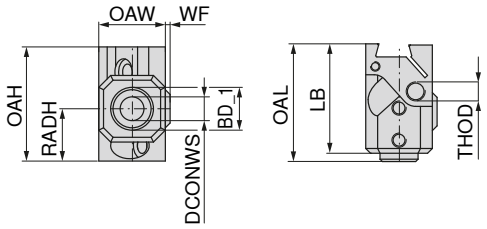
Spare parts for Article no.				
72 986 16001	**19001**	**19002**	**19003**	**19004**

Suitable indexable inserts can be found in the main catalogue, **Chapter 11 Grooving tools.**

3

Tool holder blocks for drills and boring bars

▲ with inner high-pressure coolant supply through the tool



NEW

72 982 ...

Designation	DCONWS mm	BD_1 mm	OAW mm	OAH mm	LB mm	WF mm	OAL mm	RADH mm	THOD	
MU.AH-BH06IK	6	12	28	48	46.0		48.5	22	M6	**03001**
MU.AH-BH08IK	8	14	28	48	46.0		48.5	22	M8	**03002**
MU.AH-BH10IK	10	16	28	48	46.0		49.5	22	M8	**03003**
MU.AH-BH12IK	12	18	28	48	50.0		52.5	22	M10	**03004**
MU.AH-BH14IK	14	19	28	48	50.5		54.0	22	M10	**03005**
MU.AH-BH16IK	16	21	28	48	50.5	2	54.0	22	M10	**03006**

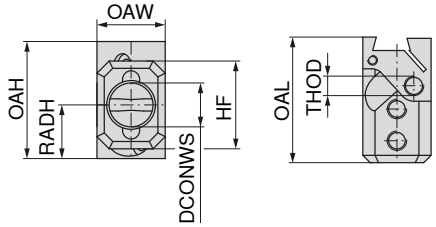
Grubscrew

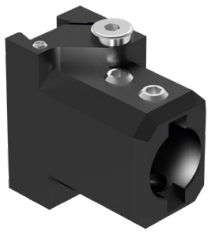
72 950 ...

Spare parts for Article no.	
72 982 03001	**19011**
72 982 03004	**19013**
72 982 03005	**19013**
72 982 03006	**19013**

Tool holders for clamping inserts

- Thro' coolant directly through base holder
- Also suitable for collet chucks





NEW

72 983 ...

Designation	DCONWS $_{H6}$ mm	HF mm	OAW mm	OAH mm	RADH mm	OAL mm	CRNT	
MU.AH-S20IK	20	36	28	48	22	51.5	M8x1	**20001**

Grubscrew

83 950 ...

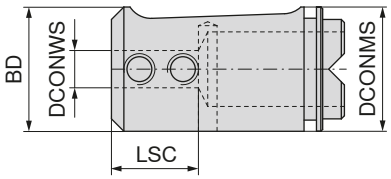
Spare parts for Article no.

72 983 20001 **464**

3

Clamping insert for UltraMini cutting inserts

▲ with inner high-pressure coolant supply through the tool



NEW

72 995 ...

Designation	DCONMS g6 mm	DCONWS mm	BD g6 mm	LSC mm	
MU.ULTRAMINI.KH-DM4	20	4	20	13	**08001**
MU.ULTRAMINI.KH-DM5	20	5	20	14	**08002**
MU.ULTRAMINI.KH-DM6	20	6	20	14	**08003**
MU.ULTRAMINI.KH-DM7	20	7	20	14	**08004**
MU.ULTRAMINI.KH-DM8	20	8	20	19	**08005**

Grubscrew

72 950 ...

Spare parts DCONWS	
4	**19009**
5 - 7	**19010**
8	**19012**

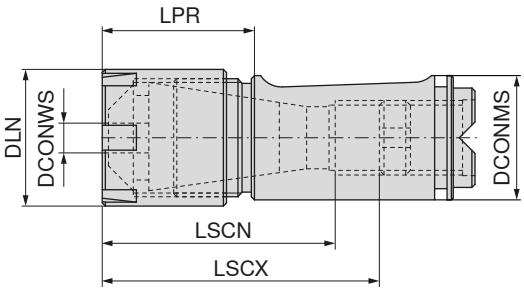
Suitable UltraMini cutting inserts can be found on → **Page 290–309**

ER collet chuck (mini lock nut)

▲ with inner high-pressure coolant supply through the tool

Scope of supply:

Base body without lock nut



NEW

72 984 ...

Designation	LPR mm	DCONMS $_{g6}$ mm	DLN mm	LSCX mm	LSCN mm	for collet	
MU.S20-SPZH-ER16-IK	25.0	20	22	55	38	426E (ER16)	**06001**
MU.S20-SPZH-ER20-IK	27.5	20	28	56	40	428E (ER20)	**06002**

Mini IK

83 950 ...

Spare parts for Article no.	
72 984 06001	**058**
72 984 06002	**059**

Sealing discs can be found in our clamping technology catalogue, Chapter Adapters and accessories on → **Page 269.**

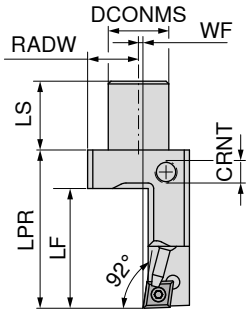
3

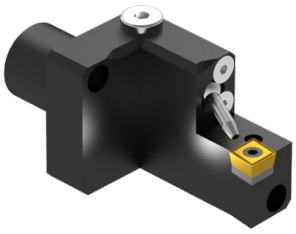
Rear holder with screw clamping for CC.. Indexable inserts

▲ for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	72 955 ...
ST.SR20R4-RE-K-CC09-L-IK	22	25	43.5	1.5	77.5	18.5	M8x1	CC.. 09T3	**08005**
ST.SR20R4-RE-K-CC09-R-IK	22	25	43.5	1.5	57.5	18.5	M8x1	CC.. 09T3	**08004**

	Screw plug	Countersunk screw	Coolant nozzle	Combination Key	Clamping screw	Carbide type C	Threaded sleeve	Alu ring
	72 950 ...	**72 950 ...**	**72 989 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no.								
72 955 08005	**19006**	**19007**	**10002**	**398**	**113**	**165**	**171**	**19008**
72 955 08004	**19006**	**19007**	**10002**	**398**	**113**	**165**	**171**	**19008**

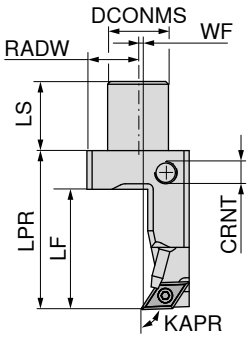
Suitable indexable inserts can be found in the ISO turning section on → **Page 13–16.**

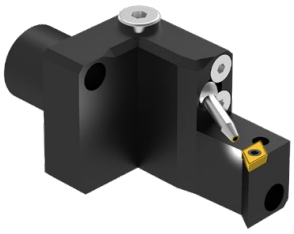
Rear holder with screw clamping for DC.. Indexable inserts

▲ for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

72 955 ...

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	KAPR °	Insert	
ST.SR20R4-RE-K-DC07-R-IK	22	25	43.5	1.5	57.5	18.5	M8x1	92	DC.. 0702	**08006**
ST.SR20R4-RE-K-DC11-R-IK	22	25	43.5	1.0	57.5	18.5	M8x1	92	DC.. 11T3	**08008**
ST.SR20R4-RE-L-DC07-R-IK	22	25	43.5	1.5	77.5	18.5	M8x1	92	DC.. 0702	**08007**
ST.SR20R4-RE-L-DC11-R-IK	22	25	43.5	1.0	77.5	18.5	M8x1	92	DC.. 11T3	**08009**

	Combination Key	Clamping screw	Solid Carbide Seat D	Threaded bush	Alu ring
	70 950 ...	**70 950 ...**	**70 950 ...**	**72 950 ...**	**72 950 ...**
Spare parts for Article no.					
72 955 08006		**112**			**19008**
72 955 08008	**398**	**113**	**106**	**19005**	**19008**
72 955 08007		**112**			**19008**
72 955 08009	**398**	**113**	**106**	**19005**	**19008**

	Screw plug	Countersunk screw	Key D	Coolant nozzle
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**
Spare parts for Article no.				
72 955 08006	**19006**	**19007**	**110**	**10002**
72 955 08008	**19006**	**19007**		**10002**
72 955 08007	**19006**	**19007**	**110**	**10002**
72 955 08009	**19006**	**19007**		**10002**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

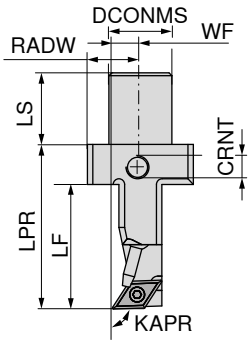
3

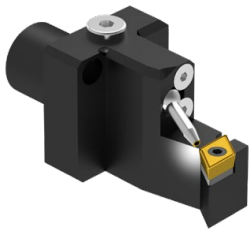
Rear holder with screw clamping for DC.. Indexable inserts

▲ for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

72 955 ...

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	KAPR °	Insert	
ST.SR20R4-RX-K-DC11-R-IK	22	25	43.5	10	57.5	18.5	M8x1	92	DC.. 11T3	**08010**
ST.SR20R4-RX-L-DC11-R-IK	22	25	43.5	10	77.5	18.5	M8x1	92	DC.. 11T3	**08011**

	Screw plug	Countersunk screw	Coolant nozzle	Combination Key	Clamping screw	Solid Carbide Seat D	Threaded sleeve	Alu ring
	72 950 ...	72 950 ...	72 989 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	72 950 ...
Spare parts for Article no.								
72 955 08010	**19006**	**19007**	**10002**	**398**	**113**	**106**	**171**	**19008**
72 955 08011	**19006**	**19007**	**10002**	**398**	**113**	**106**	**171**	**19008**

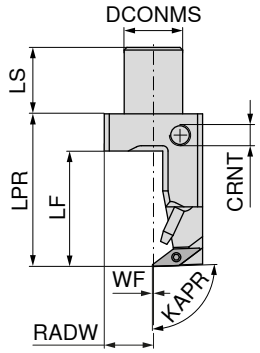
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

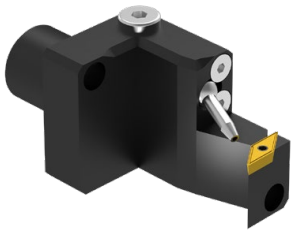
Rear holder with screw clamping for VC.. Indexable inserts

▲ for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	KAPR °	Insert	72 955 ...
ST.SR20R4-RE-K-VC11-R-IK	22	25	43.5	0.5	57.5	18.5	M8x1	92	VC.. 1103	**08012**
ST.SR20R4-RE-L-VC11-R-IK	22	25	43.5	0.5	77.5	18.5	M8x1	92	VC.. 1103	**08013**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no.						
72 955 08012	**19006**	**19007**	**110**	**10002**	**112**	**19008**
72 955 08013	**19006**	**19007**	**110**	**10002**	**112**	**19008**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

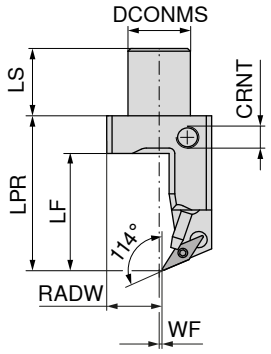
3

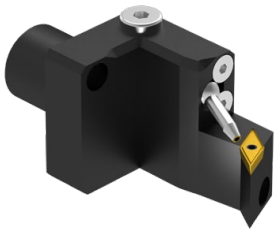
Rear holder with screw clamping for VC.. Indexable inserts

▲ for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

72 955 ...

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	
ST.SR20R4-RE-K-VC11-24-R-IK	22	25	43.5	1.1	57.5	18.5	M8x1	VC.. 1103	**08014**
ST.SR20R4-RE-L-VC11-24-R-IK	22	25	43.5	1.1	77.5	18.5	M8x1	VC.. 1103	**08015**

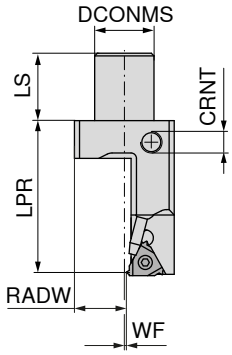
	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no.						
72 955 08014	**19006**	**19007**	**110**	**10002**	**112**	**19008**
72 955 08015	**19006**	**19007**	**110**	**10002**	**112**	**19008**

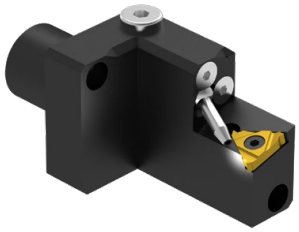
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

Rear holder for right outer thread-turning inserts (ER 16..)

- for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R
- Tool holder with approach angle 1.5°
- Thread-turning inserts with pitch max. 1.5 mm

Scope of supply:
Holder with coolant nozzle and screw plug, without coolant connection





NEW

Right-hand

72 955 ...

Designation	DCONMS g6 mm	LS mm	WF mm	LPR mm	RADW mm	CRNT	Insert	
ST.SR20R4-RE-K-ER16-R-IK	22	25	0.7	57.5	18.5	M8x1	16 ER..	**08016**
ST.SR20R4-RE-L-ER16-R-IK	22	25	0.7	77.5	18.5	M8x1	16 ER..	**08017**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**71 950 ...**	**72 950 ...**
Spare parts for Article no.						
72 955 08016	**19006**	**19007**	**112**	**10002**	**231**	**19008**
72 955 08017	**19006**	**19007**	**112**	**10002**	**231**	**19008**

Suitable indexable inserts can be found in **Chapter 2, Thread turning.**

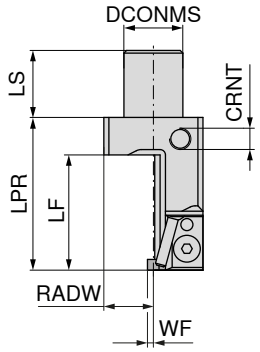
3

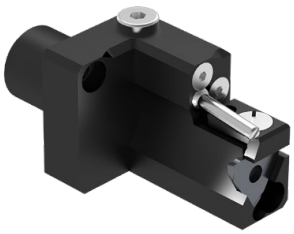
Rear holder for TX grooving inserts

- for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R
- Insert width 0.5-4.0 mm

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	72 955 ...
ST.SR20R4-RE-K-TX-R-IK	22	25	43	2	57	18.5	M8x1	TX R/N/L ...2/3/4	**16018**
ST.SR20R4-RE-L-TX-R-IK	22	25	43	2	77	18.5	M8x1	TX R/N/L ...2/3/4	**16019**

	Screw plug	Clamp	Lock washer	Countersunk screw	Coolant nozzle	Guide pin with flange	Alu ring
	72 950 ...	**72 950 ...**	**72 950 ...**	**72 950 ...**	**72 989 ...**	**72 950 ...**	**72 950 ...**
Spare parts for Article no.							
72 955 16018	**19006**	**19001**	**19002**	**19003**	**10001**	**19004**	**19008**
72 955 16019	**19006**	**19001**	**19002**	**19003**	**10001**	**19004**	**19008**

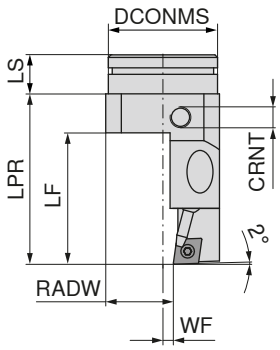
Suitable indexable inserts can be found in the main catalogue, **Chapter 11 Grooving tools.**

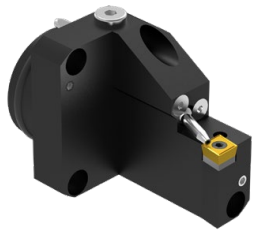
Rear holder with screw clamping for CC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	72 957 ...
TS.RE42.65-CC09-R-IK	42	15	50.5	4	65.5	26	M8x1	CC.. 09T3	**08001**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Carbide type C	Threaded sleeve	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08001	**19006**	**19007**	**113**	**10002**	**113**	**165**	**171**	**19008**

Suitable indexable inserts can be found in the ISO turning section on → **Page 13–16.**

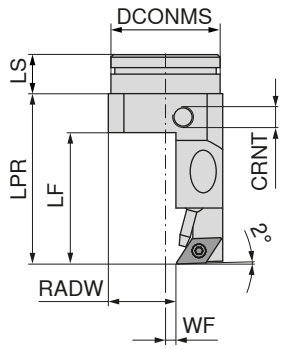
3

Rear holder with screw clamping for DC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

72 957 ...

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	
TS.RE42.65-DC11-R-IK	42	15	50.5	4	65.5	26	M8x1	DC.. 11T3	**08002**

	Screw plug	Countersunk screw	Coolant nozzle	Combination Key	Clamping screw	Solid Carbide Seat D	Threaded sleeve	Alu ring
	72 950 ...	**72 950 ...**	**72 989 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08002	**19006**	**19007**	**10002**	**398**	**113**	**106**	**171**	**19008**

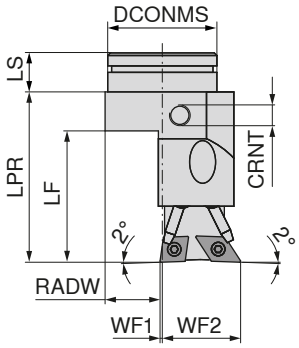
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

Rear holder (double) with screw clamping for CC.. / DC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

double

72 957 ...

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF1 mm	WF2 mm	RADW mm	CRNT	Insert	
TS.RD42.65-CC09-R-DC11-L-IK	42	15	50.5	65.5	1	30	21	M8x1	CC.. 09T3 / DC.. 11T3	**08009**

	Clamping screw	Solid Carbide Seat D	Carbide type C	Threaded sleeve	Alu ring
	70 950 ...	**70 950 ...**	**70 950 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08009	**113**	**106**	**165**	**171**	**19008**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Combination Key
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**
Spare parts for Article no. 72 957 08009	**19006**	**19007**	**113**	**10002**	**398**

Suitable CC.. Indexable inserts can be found in the ISO turning section on → **Page 13–16.**
Suitable DC.. Indexable inserts can be found in the ISO turning section on → **Page 23–27.**

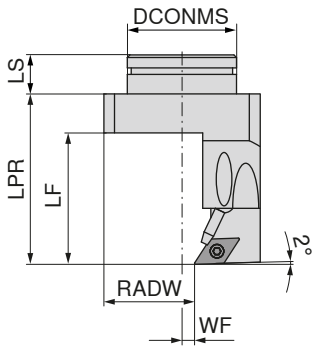
3

Overhead rear holder with screw clamping for DC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF mm	RADW mm	Insert	72 957 ...
TS.RY42.65-DC11-R-IK	42	15	50.5	65.5	4.5	34.5	DC.. 11T3	08007

	Screw plug	Countersunk screw	Coolant nozzle	Combination Key	Clamping screw	Solid Carbide Seat D	Threaded sleeve	Alu ring
	72 950 ...	72 950 ...	72 989 ...	70 950 ...	70 950 ...	70 950 ...	70 950 ...	72 950 ...
Spare parts for Article no. 72 957 08007	19006	19007	10002	398	113	106	171	19008

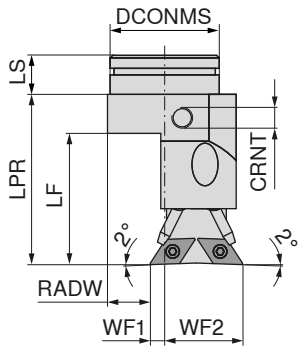
Suitable indexable inserts can be found in the ISO turning section on → **Page 23–27.**

Rear holder (double) with screw clamping for DC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

double

72 957 ...

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF1 mm	WF2 mm	RADW mm	CRNT	Insert	
TS.RD42.65-DC11-R-DC11-L-IK	42	15	50.5	65.5	5.5	30	16.5	M8x1	DC.. 11T3	**08011**

	Screw plug	Countersunk screw	Coolant nozzle	Combination Key	Clamping screw	Solid Carbide Seat D	Threaded sleeve	Alu ring
	72 950 ...	**72 950 ...**	**72 989 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no.								
72 957 08011	**19006**	**19007**	**10002**	**398**	**113**	**106**	**171**	**19008**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

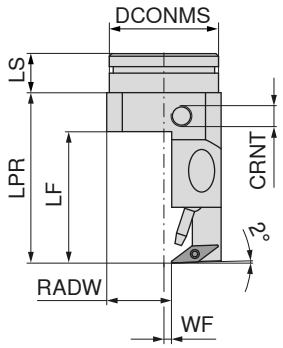
3

Rear holder with screw clamping for VC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF mm	RADW mm	CRNT	Insert	72 957 ...
TS.RE42.65-VC11-R-IK	42	15	50.5	65.5	3	25	M8x1	VC.. 1103	**08003**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08003	**19006**	**19007**	**110**	**10002**	**112**	**19008**

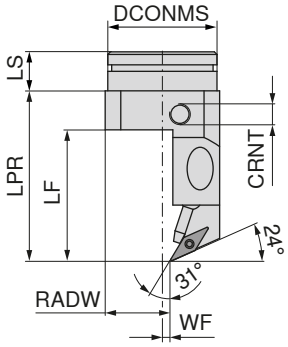
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

Rear holder with screw clamping for VC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF mm	RADW mm	CRNT	Insert	72 957 ...
TS.RE42.65-VC11-24-R-IK	42	15	50.5	65.5	3	25	M8x1	VC.. 1103	**08004**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08004	**19006**	**19007**	**110**	**10002**	**112**	**19008**

Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

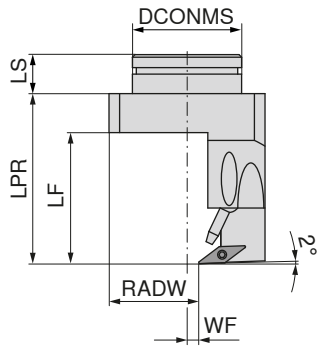
3

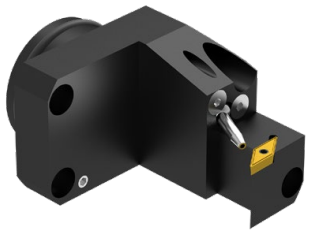
Overhead rear holder with screw clamping for VC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection





NEW

Designation	DCONMS g6 mm	LS mm	WF mm	LF mm	LPR mm	RADW mm	CRNT	Insert	72 957 ...
TS.RY42.65-VC11-R-IK	42	15	3	50.5	65.5	25	M8x1	VC.. 1103	**08008**

	Screw plug	Countersunk screw	Key D	Coolant nozzle	Clamping screw	Alu ring
	72 950 ...	**72 950 ...**	**80 950 ...**	**72 989 ...**	**70 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 08008	**19006**	**19007**	**110**	**10002**	**112**	**19008**

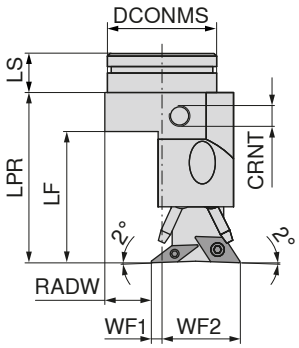
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

Rear holder (double) with screw clamping for VC.. / DC.. Indexable inserts

▲ for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

double

72 957 ...

Designation	DCONMS g6 mm	LS mm	LF mm	LPR mm	WF1 mm	WF2 mm	RADW mm	CRNT	Insert	
TS.RD42.65-VC11-R-DC11-L-IK	42	15	50.5	65.5	4	30	18	M8x1	VC.. 1103 / DC.. 11T3	**08010**

Combination Key

70 950 ...

Clamping screw

70 950 ...

Solid Carbide Seat D

70 950 ...

Threaded sleeve

70 950 ...

Alu ring

72 950 ...

Spare parts for Article no.

72 957 08010	**398**	**113**	**106**	**171**	**19008**

Screw plug

72 950 ...

Countersunk screw

72 950 ...

Key D

80 950 ...

Coolant nozzle

72 989 ...

Spare parts for Article no.

72 957 08010	**19006**	**19007**	**110**	**10002**

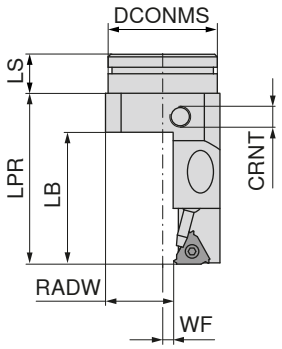
Suitable indexable inserts can be found in the ISO turning section on → **Page 40–42.**

3

Rear holder for right outer thread-turning inserts (ER 16..)

- for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329
- Tool holder with approach angle 1.5°
- Thread-turning inserts with pitch max. 1.5 mm

Scope of supply:
Holder with coolant nozzle and screw plug, without coolant connection



NEW

Right-hand

72 957 ...

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	
TS.RE42.65-ER16-R-IK	42	15	50.5	4	65.5	26	M8x1	16 ER..	**08005**

Screw plug
72 950 ...

Countersunk screw
72 950 ...

Key D
80 950 ...

Coolant nozzle
72 989 ...

Clamping screw
71 950 ...

Alu ring
72 950 ...

Spare parts for Article no.						
72 957 08005	**19006**	**19007**	**112**	**10002**	**231**	**19008**

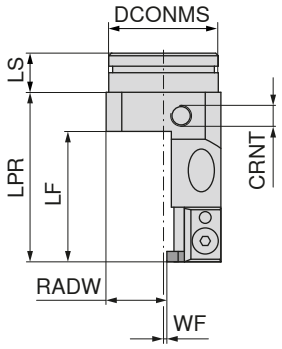
Suitable indexable inserts can be found in **Chapter 2, Thread turning.**

Rear holder for TX grooving inserts

- for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329
- Insert width 0.5-4.0 mm

Scope of supply:

Holder with coolant nozzle and screw plug, without coolant connection



NEW

Designation	DCONMS g6 mm	LS mm	LF mm	WF mm	LPR mm	RADW mm	CRNT	Insert	72 957 ...
TS.RE42.65-TX-R-IK	42	15	50	1	65.5	23	M8x1	TX R/N/L ...2/3/4	**16006**

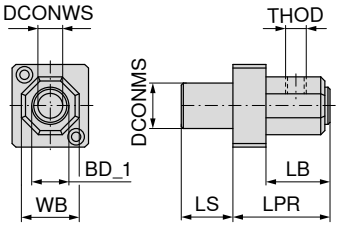
	Screw plug	Clamp	Lock washer	Countersunk screw	Coolant nozzle	Guide pin with flange	Alu ring
	72 950 ...	**72 950 ...**	**72 950 ...**	**72 950 ...**	**72 989 ...**	**72 950 ...**	**72 950 ...**
Spare parts for Article no. 72 957 16006	**19006**	**19001**	**19002**	**19003**	**10001**	**19004**	**19008**

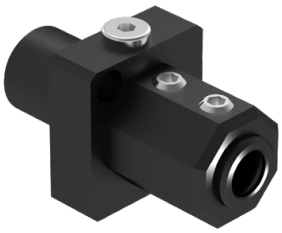
Suitable indexable inserts can be found in the main catalogue, **Chapter 11 Grooving tools.**

3

Rear holder for drills and boring bars

- for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R
- with inner high-pressure coolant supply through the tool





NEW

72 955 ...

Designation	DCONMS g6 mm	DCONWS mm	BD_1 mm	LPR mm	LS mm	WB mm	LB mm	THOD	
ST.SR20R4-BH-06-IK	22	6	12	47	25	28	31	M6	**03020**
ST.SR20R4-BH-08-IK	22	8	14	47	25	28	31	M8	**03021**
ST.SR20R4-BH-10-IK	22	10	16	47	25	28	31	M8	**03022**
ST.SR20R4-BH-12-IK	22	12	18	47	25	28	31	M10	**03023**
ST.SR20R4-BH-14-IK	22	14	19	47	25	28	31	M10	**03024**
ST.SR20R4-BH-66-IK	22	16	21	47	25	32	31	M10	**03025**

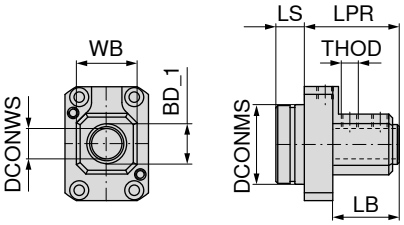
Grubscrew

72 950 ...

Spare parts for Article no.	
72 955 03020	**19011**
72 955 03023	**19013**
72 955 03024	**19013**
72 955 03025	**19013**

Rear holder for drills and boring bars

- for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329
- with inner high-pressure coolant supply through the tool



NEW

72 957 ...

Designation	DCONMS g6 mm	DCONWS mm	BD_1 mm	LPR mm	LS mm	WB mm	LB mm	THOD	
TS.RE42.65-BH-06-IK	42	6	12	50	15	28	35	M6	**03012**
TS.RE42.65-BH-08-IK	42	8	14	50	15	28	35	M8	**03013**
TS.RE42.65-BH-10-IK	42	10	16	50	15	28	35	M8	**03014**
TS.RE42.65-BH-12-IK	42	12	18	50	15	28	35	M10	**03015**
TS.RE42.65-BH-14-IK	42	14	18	50	15	28	35	M10	**03016**
TS.RE42.65-BH-16-IK	42	16	21	50	15	32	35	M10	**03017**

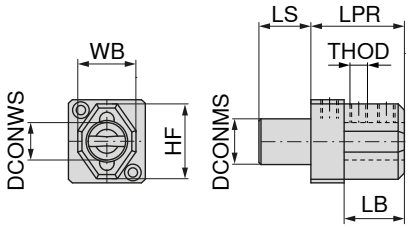
Grubscrew

72 950 ...

Spare parts for Article no.	
72 957 03012	**19011**
72 957 03015	**19013**
72 957 03016	**19013**
72 957 03017	**19013**

Rear holder for clamping inserts

- for **STAR** SR 20 R-IV / 20 JII / 32 JII / 38 / SW 12 / 20 / SV 20 R
- Thro' coolant directly through base holder
- Also suitable for collet holders



NEW

72 955 ...

Designation	DCONMS g6 mm	DCONWS H6 mm	HF mm	LS mm	LB mm	WB mm	LPR mm	CRNT	
ST.SR20R4-S20-IK	22	20	36	25	29	28	45	M8x1	**20027**

Grubscrew

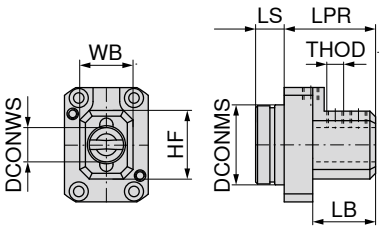
83 950 ...

Spare parts
for Article no.
72 955 20027 **464**

Suitable cutting inserts and collet holders can be found on → **Page 76+77**

Rear holder for clamping inserts

- for **TSUGAMI** BO 266 / 326 / 386 / 38T / HS 267 / 237 / 38M / BW 269 / 329
- Thro' coolant directly through base holder
- Also suitable for collet holders



NEW

72 957 ...

Designation	DCONMS g6 mm	DCONWS H6 mm	HF mm	LS mm	LB mm	WB mm	LPR mm	CRNT	
TS.RE42.65-S-20-IK	42	20	36	15	33	28	48	M8x1	**20018**

Grubscrew

83 950 ...

Spare parts
for Article no.
72 957 20018 **464**

Suitable cutting inserts and collet holders can be found on → **Page 76+77**

3

Coolant attachment for height-adjustable insert holder, left

NEW

Left-hand

72 985 ...

Designation	for	
MU.KS-KA-AH-L	MU.AH-...-L	09003

Coolant attachment for STAR

NEW

72 955 ...

Designation	
ST.KS-KA-STAR	09026

Coolant attachment for height-adjustable insert holder, right

NEW

Right-hand

72 985 ...

Designation	for	
MU.KS-KA-AH-R	MU.AH-...-R	09001

Coolant distributor for high-pressure connections - 6 outlets

Scope of supply:
without quick-couplers

NEW

72 991 ...

Designation	
MU.KSV-45-30-35x6	12003

Coolant attachment for height-adjustable insert holder, double

NEW

double

72 985 ...

Designation	for	
MU.KS-KA-AH-D	MU.AH-...-R/L	09002

Coolant distributor for high-pressure connections - 7 outlets

Scope of supply:
without quick-couplers

NEW

72 991 ...

Designation	
MU.KSV-80-30-30x7	12002

Coolant distributor for high-pressure connections - 8 outlets

Scope of supply:
without quick-couplers

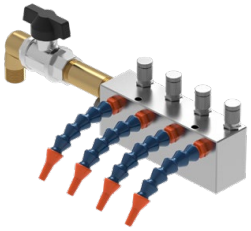
NEW

Designation	72 991 ...
MU.KSV-110-30-30x8	12001

Coolant distributor for STAR SR 32

▲ 4x high-pressure and 4x low-pressure connections (G1/8")

Scope of supply:
without quick-couplers



NEW

Designation	72 991 ...
MU.KSV-45-30-35x6	12004

Coolant nozzle for high-pressure applications

NEW

Designation	72 989 ...
MU.KS-KD-HD	10002

Coolant nozzle for TX grooving tool holder

NEW

Designation	72 989 ...
MU.KS-KD-HO	10001

Coolant nozzle for low-pressure applications

NEW

Designation	72 989 ...
MU.KS-KD-ND	10003

G1/8” screw plug

▲ Max. 200 bar/2900 psi
▲ No sealing ring required

NEW

Designation	THSZMS	72 950 ...
VS.G1/8	G1/8"	010

Angled coolant connection - short

NEW

Designation	THOD	short 72 987 ...
MU.KS-KA-VU-K	M8x1	18001

Angled coolant connection - long

NEW

Designation	THOD	long 72 987 ...
MU.KS-KA-VU-L	M8x1	18002

3

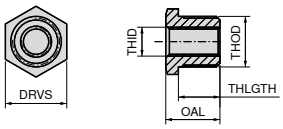
Angled coolant connection for distributor

NEW

72 987 ...

Designation	THOD	THID	
MU.KS-KA-KSV	G1/8"	G1/8"	18003

Threaded adapter



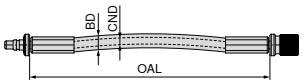
NEW

72 988 ...

THID	THOD	THLGTH mm	DRVS mm	OAL mm	
M8x1	G1/4"	11.5	17	15.0	01003
M8x1	M12x1	11.5	14	15.0	01001
M8x1	M14x1	11.5	17	15.0	01002
M8x1	G1/8"	11.5	14	23.5	01004

Flexible coolant hoses

- incl. prefitted quick-coupler and coupler connector
- extremely flexible
- pressure-resistant up to 300 bar



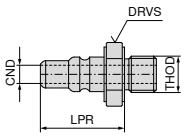
NEW

72 990 ...

Designation	BD mm	CND mm	OAL mm	
MU.KSS-DN3-150	6.0	3	150	11005
MU.KSS-DN3-250	6.0	3	250	11006
MU.KSS-DN5-200	9.5	5	200	11001
MU.KSS-DN5-300	9.5	5	300	11002
MU.KSS-DN5-400	9.5	5	400	11003
MU.KSS-DN5-500	9.5	5	500	11004

Coupler connector

- pressure-resistant up to at least 400 bar



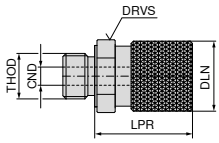
NEW

72 992 ...

Designation	LPR mm	CND mm	DRVS mm	OAL mm	
MU.KSKS-M8x1	18.5	4	12	19	13001

Quick-coupler

- pressure-resistant up to at least 400 bar
- rapid change of coolant distribution without screws thanks to click system



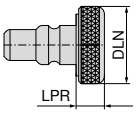
NEW

72 993 ...

THOD	BD mm	DLN mm	LPR mm	CND mm	
G1/8"	16	15.5	21.5	4	15001

Sealing plugs

- for closing off the quick-coupler to protect against contamination



NEW

72 994 ...

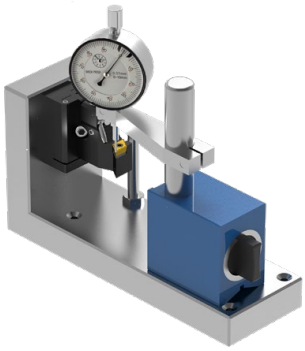
Designation	LPR mm	DLN mm	
MU.KSVS	5.5	15.5	17001

Adjustment device for setting height of tool block holder

- Reduced setup times thanks to convenient presetting away from the machine
- prevention of machine downtimes
- best positional accuracy following tool change by presetting away from the machine

Scope of supply:

72 996 05001: Adjustment device with dial gauge and dial gauge stand
72 996 05002: Adjustment device without dial gauge and dial gauge stand



NEW

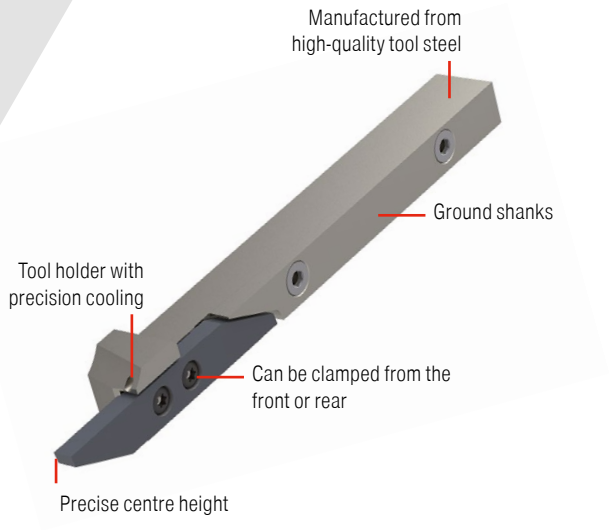
Designation	72 996 ...
MU.EV MAX	05001
MU.EV MAX-OMU	05002

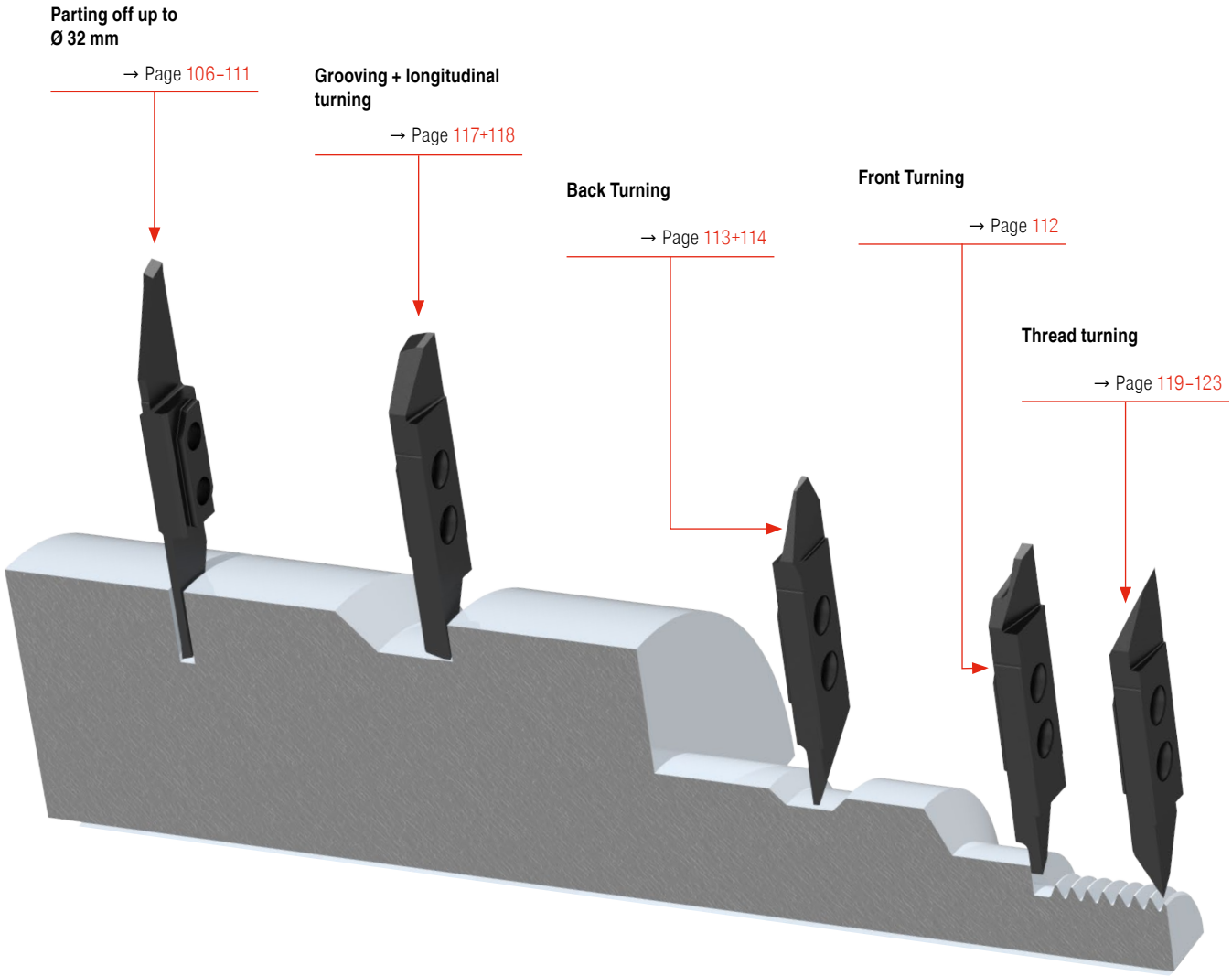
Information on correct usage, and any conversions required can be found on → **Page 155+156**

3

Toolfinder – VertiClamp

- Vertical arrangement of cutting edges
  Less space required
- Second cutting edge can still be used in the event of breakage
  Minimises costs
- Insert seat protected against swarf
  Increases the service life of the holder
- High changeover precision
  Reduces unproductive times
- Large selection of indexable inserts and geometries
  Increases flexibility
- Optional coolant supply to cutting edge
  Increases service life and improves surface quality

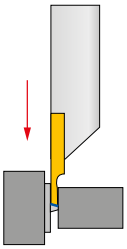




Overview – VertiClamp

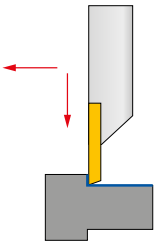
Inserts

Parting



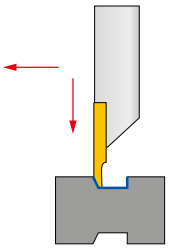
→ Page 106–111

Front Turning



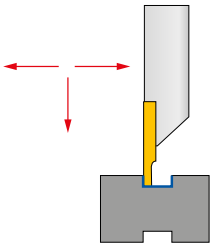
→ Page 112

Back Turning



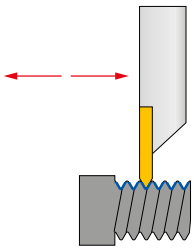
→ Page 113+114

Grooving + longitudinal turning



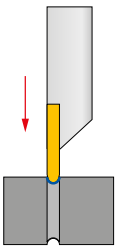
→ Page 115–118

Thread turning



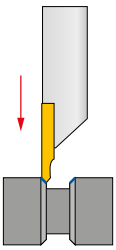
→ Page 119–123

Radius Grooving



→ Page 124

Chamfers



→ Page 125

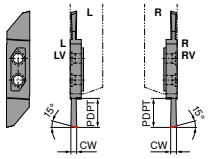
Tool holder

	Standard tool holders	Offset tool holders	Contra tool holders
normal	→ Page 127	→ Page 128	→ Page 130
with through coolant	→ Page 127	→ Page 129	

3

3002 L / 3002 LV / 3002 R / 3002 RV

Designation	CW mm	PDPT mm
3002-0,8-6	0.8	6
3002-0,8-10	0.8	10
3002-1,0-6	1.0	6
3002-1,0-13	1.0	13
3002-1,2-6	1.2	6
3002-1,5-8	1.5	8
3002-1,5-16	1.5	16
3002-1,8-8	1.8	8
3002-2,0-10	2.0	10
3002-2,0-16	2.0	16
3002-2,5-13	2.5	13
3002-2,5-16	2.5	16
3002-3,0-16	3.0	16



3002 L/LV / 3002 R/RV

3002 L / 3002 LV / 3002 R / 3002 RV

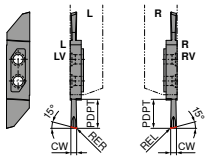
▲ for parting off

	WPU7620	WPU7620	WPU7620	WPU7620
	F	F	F	F
	3002 L	3002 LV	3002 R	3002 RV
	72 420 ...	72 422 ...	72 416 ...	72 418 ...
ISO				
3002-0,8-6	510	510	510	510
3002-0,8-10	530	530	530	530
3002-1,0-6	512	512	512	512
3002-1,0-13	532	532	532	532
3002-1,2-6	514	514	514	514
3002-1,5-8	516	516	516	516
3002-1,5-16	536	536	536	536
3002-1,8-8	518	518	518	518
3002-2,0-10	520	520	520	520
3002-2,0-16	540	540	540	540
3002-2,5-13	522 1)	522 1)	522 1)	522 1)
3002-2,5-16	542 1)	542 1)	542 1)	542 1)
3002-3,0-16	524 1)	524 1)	524 1)	524 1)
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

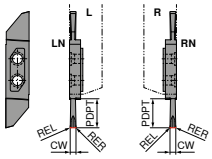
1) used with tool holders with 12 mm and larger shank size

3002 L / 3002 LN / 3002 LV / 3002 R / 3002 RN / 3002 RV

Designation	CW mm	PDPT mm
3002-1,5-8	1.5	8
3002-1,5-10	1.5	10
3002-1,5-16	1.5	16
3002-2,0-10	2.0	10
3002-2,0-16	2.0	16
3002-2,5-13	2.5	13
3002-2,5-16	2.5	16
3002-3,0-16	3.0	16



3002 L/LV / 3002 R/RV



3002 LN / 3002 RN

3002 L / 3002 LN / 3002 LV / 3002 R / 3002 RN / 3002 RV

▲ for parting off

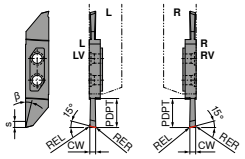
			-SC WPU7620	-SC WPU7620	-SC WPU7620	-SC WPU7620	-SC WPU7620	-SC WPU7620
			F 3002 L	F 3002 LN	F 3002 LV	F 3002 R	F 3002 RN	F 3002 RV
			72 432 ...	72 426 ...	72 434 ...	72 428 ...	72 424 ...	72 430 ...
ISO	REL mm	RER mm						
3002-1,5-8	0.00	0.08	508		508			
3002-1,5-8	0.08	0.00				508		508
3002-1,5-10	0.08	0.08		510			510	
3002-1,5-16	0.08	0.08		530			530	
3002-1,5-16	0.08	0.00				528		528
3002-1,5-16	0.00	0.08	528		528			
3002-2,0-10	0.08	0.08		512			512	
3002-2,0-10	0.08	0.00				510		510
3002-2,0-10	0.00	0.08	510		510			
3002-2,0-16	0.08	0.08		532			532	
3002-2,0-16	0.08	0.00				530		530
3002-2,0-16	0.00	0.08	530		530			
3002-2,5-13	0.08	0.08		514 [1]			514 [1]	
3002-2,5-13	0.08	0.00				512 [1]		512 [1]
3002-2,5-13	0.00	0.08	512 [1]		512 [1]			
3002-2,5-16	0.08	0.08		534 [1]			534 [1]	
3002-2,5-16	0.08	0.00				532 [1]		532 [1]
3002-2,5-16	0.00	0.08	532 [1]		532 [1]			
3002-3,0-16	0.08	0.08		516 [1]			516 [1]	
3002-3,0-16	0.08	0.00				514 [1]		514 [1]
3002-3,0-16	0.00	0.08	514 [1]		514 [1]			
P			●	●	●	●	●	●
M			●	●	●	●	●	●
K			○	○	○	○	○	○
N			○	○	○	○	○	○
S			●	●	●	●	●	●
H								
O			○	○	○	○	○	○

1) used with tool holders with 12 mm and larger shank size

3

3002 L / 3002 LV / 3002 R / 3002 RV

Designation	CW mm	PDPT mm	s mm
3002-0,8-10	0.8	10	2
3002-0,8-10	1.0	10	2
3002-1,0-13	1.0	13	2
3002-1,5-8-06	1.5	8	2
3002-1,5-8-12	1.5	8	2
3002-1,5-16	1.5	16	2
3002-2,0-10-06	2.0	10	2
3002-2,0-10-12	2.0	10	2
3002-2,0-16-12	2.0	16	2
3002-2,0-16-06	2.0	16	2
3002-2,5-13-12	2.5	13	2
3002-2,5-13-06	2.5	13	2
3002-2,5-16-12	2.5	16	2
3002-2,5-16-06	2.5	16	2
3002-3,0-16-12	3.0	16	2
3002-3,0-16-06	3.0	16	2



3002 L/LV / 3002 R/RV

3002 L / 3002 LV / 3002 R / 3002 RV

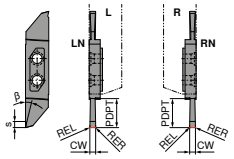
▲ for parting off

	-SPT WPU7620	-SPT WPU7620	-SPT WPU7620	-SPT WPU7620
	F 3002 L	F 3002 LV	F 3002 R	F 3002 RV
	72 440 ...	72 442 ...	72 436 ...	72 438 ...
ISO				
3002-0,8-10	50600	50600	50600	50600
3002-1,0-13	52800	52800	52800	52800
3002-1,5-16	53000	53000	53000	53000
3002-1,5-8-06	540	540		
3002-1,5-8-06			540	540
3002-1,5-8-12	570	570		
3002-1,5-8-12			570	570
3002-2,0-10-06	572	572		
3002-2,0-10-06			572	572
3002-2,0-10-12	582	582		
3002-2,0-10-12			582	582
3002-2,0-16-06	552	552		
3002-2,0-16-06			552	552
3002-2,0-16-12	592	592		
3002-2,0-16-12			592	592
3002-2,5-13-06	554	554		
3002-2,5-13-06			554	554
3002-2,5-13-12	584	584		
3002-2,5-13-12			584	584
3002-2,5-16-06	574	574		
3002-2,5-16-06			574	574
3002-2,5-16-12	594	594		
3002-2,5-16-12			594	594
3002-3,0-16-06	556	556		
3002-3,0-16-06			556	556
3002-3,0-16-12	586	586		
3002-3,0-16-12			586	586
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

ISO	REL mm	RER mm
3002-0,8-10	0.00	0.00
3002-1,0-13	0.00	0.00
3002-1,5-16	0.00	0.00
3002-1,5-8-06	0.00	0.05
3002-1,5-8-06	0.05	0.00
3002-1,5-8-12	0.00	0.05
3002-1,5-8-12	0.05	0.00
3002-2,0-10-06	0.00	0.05
3002-2,0-10-06	0.05	0.00
3002-2,0-10-12	0.00	0.05
3002-2,0-10-12	0.05	0.00
3002-2,0-16-06	0.00	0.05
3002-2,0-16-06	0.05	0.00
3002-2,0-16-12	0.00	0.05
3002-2,0-16-12	0.05	0.00
3002-2,5-13-06	0.00	0.05
3002-2,5-13-06	0.05	0.00
3002-2,5-13-12	0.00	0.05
3002-2,5-13-12	0.05	0.00
3002-2,5-16-06	0.00	0.05
3002-2,5-16-06	0.05	0.00
3002-2,5-16-12	0.00	0.05
3002-2,5-16-12	0.05	0.00
3002-3,0-16-06	0.00	0.05
3002-3,0-16-06	0.05	0.00
3002-3,0-16-12	0.00	0.05
3002-3,0-16-12	0.05	0.00

3002 LN / 3002 RN

Designation	CW mm	PDPT mm	s mm	β°
3002-1,0-10	1.0	10	2	20
3002-1,5-10-06	1.5	10	2	6
3002-1,5-10-12	1.5	10	2	12
3002-1,5-16	1.5	16	2	20
3002-2,0-10-06	2.0	10	2	6
3002-2,0-10-12	2.0	10	2	12
3002-2,0-16-12	2.0	16	2	12
3002-2,0-16-06	2.0	16	2	6
3002-2,5-13-12	2.5	13	2	12
3002-2,5-13-06	2.5	13	2	6
3002-2,5-16-06	2.5	16	2	6
3002-2,5-16-12	2.5	16	2	12
3002-3,0-16-12	3.0	16	2	12
3002-3,0-16-06	3.0	16	2	6



3002 LN / 3002 RN

3002 LN / 3002 RN

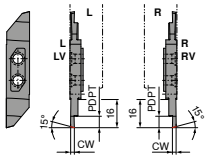
▲ for parting off

ISO	REL mm	RER mm	-SPT WPU7620 F 3002 LN 72 515 ...	-SPT WPU7620 F 3002 RN 72 514 ...
3002-1,0-10	0.05	0.05	50800	50800
3002-1,5-10-06	0.05	0.05	550	550
3002-1,5-10-12	0.05	0.05	580	580
3002-1,5-16	0.05	0.05	53000	53000
3002-2,0-10-06	0.05	0.05	572	572
3002-2,0-10-12	0.05	0.05	582	582
3002-2,0-16-06	0.05	0.05	552	552
3002-2,0-16-12	0.05	0.05	592	592
3002-2,5-13-06	0.05	0.05	554	554
3002-2,5-13-12	0.05	0.05	584	584
3002-2,5-16-06	0.05	0.05	574	574
3002-2,5-16-12	0.05	0.05	594	594
3002-3,0-16-06	0.05	0.05	556	556
3002-3,0-16-12	0.05	0.05	586	586
P			●	●
M			●	●
K			○	○
N			○	○
S			●	●
H				
O			○	○

3

3002 L-16 / 3002 LV-16 / 3002 R-16 / 3002 RV-16

Designation	CW mm	PDPT mm
3002-0,8-..	0.8	6
3002-1,0-..	1.0	6
3002-1,2-..	1.2	6



3002 L/LV / 3002 R/RV

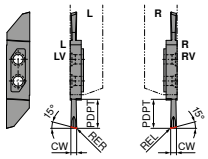
3002 L-16 / 3002 LV-16 / 3002 R-16 / 3002 RV-16

▲ For parting off with pick-up spindle

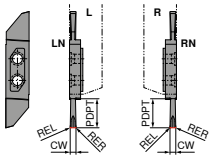
	WPU7620	WPU7620	WPU7620	WPU7620
	F	F	F	F
	3002 L-16	3002 LV-16	3002 R-16	3002 RV-16
	72 497 ...	72 499 ...	72 496 ...	72 498 ...
ISO				
3002-0,8-6-16	510 51200 514	510 51200 514	510 51200 514	510 51200 514
3002-1,0-6-16				
3002-1,2-6-16				
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

3002 L / 3002 LN / 3002 LV / 3002 R / 3002 RN / 3002 RV

Designation	CW mm	PDPT mm
3002-2,0-10..	2	10



3002 L/LV / 3002 R/RV



3002 LN / 3002 RN

3002 L / 3002 LN / 3002 LV / 3002 R / 3002 RN / 3002 RV

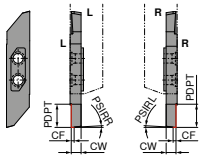
- ▲ For parting off
- ▲ **E:** Blade with rounded cutting edge
- ▲ **F:** Blade with sharp cutting edge

			-GS WPU7620	-GS WPU7620	-GS WPU7620	-GS WPU7620	-GS WPU7620	-GS WPU7620
			F	F	F	F	F	F
			3002 L	3002 LN	3002 LV	3002 R	3002 RN	3002 RV
			72 501 ...	72 505 ...	72 507 ...	72 500 ...	72 504 ...	72 506 ...
ISO	REL mm	RER mm						
3002-2,0-10 E	0.2	0.2		512			512	
3002-2,0-10 E	0.2	0.0				512		512
3002-2,0-10 E	0.0	0.2	512		512			
3002-2,0-10 F	0.2	0.2		552			552	
3002-2,0-10 F	0.2	0.0				552		552
3002-2,0-10 F	0.0	0.2	552		552			
P			●	●	●	●	●	●
M			●	●	●	●	●	●
K			○	○	○	○	○	○
N			○	○	○	○	○	○
S			●	●	●	●	●	●
H								
O			○	○	○	○	○	○

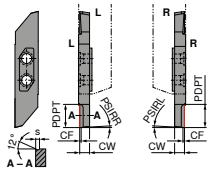
3

3003 L / 3003 R

Designation	CBMD	CW mm	CF mm	s mm	PDPT mm
3003-3,4-..	-SPU	3.4	0.2	1.2	8
3003-3,4-..		3.4	1.0	-	8



3003 L / 3003 R



-SPU 3002 L / 3002 R

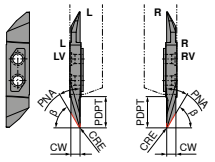
3003 L / 3003 R

▲ for front turning

	WPU7620	WPU7620	-SPU WPU7620	-SPU WPU7620
	F 3003 L	F 3003 R	F 3003 L	F 3003 R
	72 446 ...	72 444 ...	72 521 ...	72 520 ...
ISO				
3003-3,4-8	510	510	510	510
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

3004 L / 3004 LV / 3004 R / 3004 RV

Designation	CRE mm	CW mm	PDPT mm	PNA °	β°
3004-3,2-5 35015	0.15	3.2	11	35	55
3004-3,2-5 35035	0.35	3.2	11	35	55
3004-3,2-6 29008	0.08	3.2	11	29	61
3004-3,2-6 29015	0.15	3.2	11	29	61
3004-3,2-6 29035	0.35	3.2	11	29	61
3004-3,2-6 29075	0.75	3.2	11	29	61



3004 L/LV / 3004 R/RV

3004 L / 3004 LV / 3004 R / 3004 RV

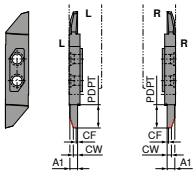
▲ for back turning

	-SP WPU7620	-SP WPU7620	-SP WPU7620	-SP WPU7620
	F 3004 L	F 3004 LV	F 3004 R	F 3004 RV
	72 562 ...	72 563 ...	72 560 ...	72 561 ...
ISO				
3004-3,2-5 35015	514		514	
3004-3,2-5 35035	516		516	
3004-3,2-6 29008	508	508	508	508
3004-3,2-6 29015	510	510	510	510
3004-3,2-6 29035	512	512	512	512
3004-3,2-6 29075	515	515	515	515
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

3

3004 L / 3004 R

Designation	CW mm	CF mm	PDPT mm	a_1 mm
3004-0,8-..	0.8	0.5	6	2.0
3004-1,0-..	1.0	0.5	6	2.2
3004-1,2-..	1.2	0.5	8	2.4
3004-1,5-..	1.5	0.5	8	2.7
3004-1,8-..	1.8	0.5	8	3.0



3004 L / 3004 R

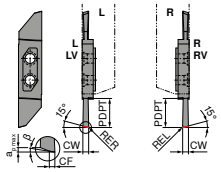
3004 L / 3004 R

▲ for back turning

ISO	WPU7620 F 3004 L 72 457 ...	WPU7620 F 3004 R 72 456 ...
3004-0,8-6	504	504
3004-1,0-6	506	506
3004-1,2-8	508	508
3004-1,5-8	510	510
3004-1,8-8	512	512
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3002-015 L / 3002-015 LV / 3002-015 R / 3002-015 RV

Designation	CW mm	CF mm	PDPT mm	β°	$a_{p\,max}$ mm
3002-015-..	2	0.3	10	1,5	0.45



3002-015 L/LV / 3002-015 R/RV

3002-015 L / 3002-015 LV / 3002-015 R / 3002-015 RV

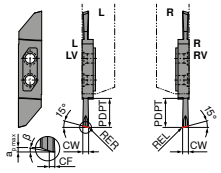
▲ For turning and parting off

	WPU7620	WPU7620	WPU7620	WPU7620
	F	F	F	F
	3002-015 L	3002-015 LV	3002-015 R	3002-015 RV
	72 517 ...	72 519 ...	72 516 ...	72 518 ...
ISO				
3002-015-2,0-10	510	510	510	510
P	●	●	●	●
M	●	●	●	●
K	○	○	○	○
N	○	○	○	○
S	●	●	●	●
H				
O	○	○	○	○

3

3002-015 L / 3002-015 LV / 3002-015 R / 3002-015 RV

Designation	CW mm	CF mm	PDPT mm	β°	$a_{p\,max}$ mm
3002-015-..	2	0.3	10	15	0.45



3002-015 L/LV / 3002-015 R/RV

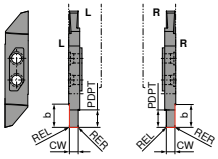
3002-015 L / 3002-015 LV / 3002-015 R / 3002-015 RV

▲ For turning and parting off

			-SC WPU7620	-SC WPU7620	-SC WPU7620	-SC WPU7620
			F	F	F	F
			3002-015 L	3002-015 LV	3002-015 R	3002-015 RV
			72 511 ...	72 513 ...	72 510 ...	72 512 ...
ISO	REL mm	RER mm				
3002-015-2,0-10	0.15	0.00		510	510	
3002-015-2,0-10	0.00	0.15	510			510
P			●	●	●	●
M			●	●	●	●
K			○	○	○	○
N			○	○	○	○
S			●	●	●	●
H						
O			○	○	○	○

3005 L / 3005 R

Designation	CW mm	PDPT mm	b mm
3005-1,0-..	1.0	2.5	8
3005-1,5-..	1.5	3.0	8
3005-2,0-..	2.0	4.0	8
3005-2,5-..	2.5	5.0	8
3005-3,0-..	3.0	6.0	8



3005 L / 3006 R

3005 L / 3005 R

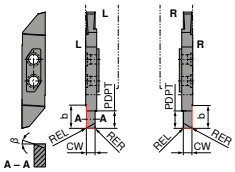
▲ for grooving and turning

ISO	REL mm	RER mm	WPU7620 F 3005 L 72 466 ...	WPU7620 F 3005 R 72 464 ...
3005-1,0-2,5	0.05	0.05	518	518
3005-1,5-3	0.05	0.05	510	510
3005-2,0-4	0.05	0.05	512	512
3005-2,5-5	0.05	0.05	514	514
3005-3,0-6	0.05	0.05	516	516
P			●	●
M			●	●
K			○	○
N			○	○
S			●	●
H				
O			○	○

3

3005 L / 3005 R

Designation	CW mm	PDPT mm	b mm	β°
3005-0,8-2,5	0.8	2.5	8	10
3005-1,0-3,5	1.0	3.5	8	10
3005-1,5-4	1.5	4.0	8	10
3005-1,5-4 R08	1.5	4.0	8	10
3005-2,0-5	2.0	5.0	8	10
3005-2,0-5 R08	2.0	5.0	8	10
3005-2,0-5 R15	2.0	5.0	8	10
3005-2,5-6	2.5	6.0	8	10
3005-2,5-6 R08	2.5	6.0	8	10
3005-2,5-6 R15	2.5	6.0	8	10
3005-3,0-6	3.0	6.0	8	10
3005-3,0-6 R08	3.0	6.0	8	10
3005-3,0-6 R15	3.0	6.0	8	10



3005 L / 3006 R

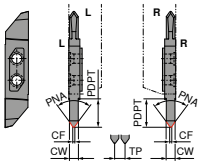
3005 L / 3005 R

▲ for grooving and turning

ISO	REL mm	RER mm	-CP WPU7620 F 3005 L 72 470 ...	-CP WPU7620 F 3005 R 72 468 ...
3005-0,8-2,5	0.00	0.00	508	508
3005-1,0-3,5	0.00	0.00	518	518
3005-1,5-4	0.00	0.00	510	528
3005-1,5-4 R08	0.08	0.08	519	519
3005-2,0-5	0.00	0.00	512	512
3005-2,0-5 R08	0.08	0.08	522	522
3005-2,0-5 R15	0.15	0.15	532	532
3005-2,5-6	0.00	0.00	514	514
3005-2,5-6 R08	0.08	0.08	524	524
3005-2,5-6 R15	0.15	0.15	534	534
3005-3,0-6	0.00	0.00	516	516
3005-3,0-6 R08	0.08	0.08	526	526
3005-3,0-6 R15	0.15	0.15	536	536
P			●	●
M			●	●
K			○	○
N			○	○
S			●	●
H				
O			○	○

3006 L / 3006 R

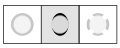
Designation	TP mm	CW mm	PDPT mm	PNA °	CF mm
3006-2-6-..	0,25 - 2,0	2	6	60	0.035
3006-3-10..	0,25 - 2,0	3	10	60	0.035



3006 L / 3006 R

3006 L / 3006 R

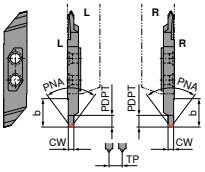
▲ For thread turning (partial profile)

	WPU7620	WPU7620
		
	F	F
	3006 L	3006 R
	72 478 ...	72 476 ...
ISO		
3006-2-6-60	510	510
3006-3-10-60	512	512
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3

3006 VP L / 3006 VP R

Designation	TP mm	TD mm	CW mm	PDPT mm	b mm	PNA °
3006-0,15..	0.15	M0,6	0.16	0.275	8	60
3006-0,25..	0.25	M1 - M1,2	0.28	0.275	8	60
3006-0,35..	0.35	M1,6 - M1,8	0.36	0.275	8	60
3006-0,35..	0.35	M1,6 - M1,8	0.38	0.275	8	60
3006-0,4-..	0.40	M2	0.44	0.275	8	60
3006-0,45..	0.45	M2,2 - M2,5	0.50	0.275	8	60
3006-0,5-..	0.50	M3	0.70	1.400	8	60
3006-0,6-..	0.60	M3,5	0.80	1.400	8	60
3006-0,7-..	0.70	M4	0.90	1.800	8	60
3006-0,75..	0.75	M4,5	0.95	1.900	8	60
3006-0,8-..	0.80	M5	1.00	2.000	8	60
3006-1,0-..	1.00	M6 - M7	1.20	2.400	8	60
3006-1,25..	1.25	M8 - M9	1.45	2.900	8	60
3006-1,5-..	1.50	M10 - M11	1.74	3.400	8	60
3006-1,75..	1.75	M12	1.95	3.900	8	60
3006-2,0-..	2.00	M14 - M16	2.20	4.000	8	60



3006 L / 3006 R

3006 VP L / 3006 VP R

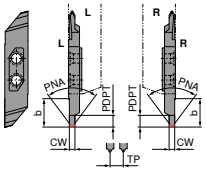
▲ For thread turning (full profile)

M

	WPU7620	WPU7620
	F	F
	3006 VP L	3006 VP R
	72 474 ...	72 472 ...
ISO		
3006-0,15-10-60 VP	50800	50800
3006-0,25-10-60 VP	510	510
3006-0,35-10-60 VP	512	512
3006-0,4-10-60 VP	514	514
3006-0,45-10-60 VP	516	516
3006-0,5-10-60 VP	518	518
3006-0,6-10-60 VP	520	520
3006-0,7-10-60 VP	522	522
3006-0,75-10-60 VP	524	524
3006-0,8-10-60 VP	526	526
3006-1,0-10-60 VP	528	528
3006-1,25-10-60 VP	530	530
3006-1,5-10-60 VP	532	532
3006-1,75-10-60 VP	534	534
3006-2,0-10-60 VP		53600
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3006 VP L / 3006 VP R

Designation	TP mm	CW mm	PDPT mm	b mm	PNA °
3006-13 U..	1.954	2.4	4.2	8	60
3006-14 U..	1.814	2.2	3.9	8	60
3006-16 U..	1.588	1.8	3.6	8	60
3006-18 U..	1.411	1.6	3.4	8	60
3006-20 U..	1.270	1.4	2.9	8	60
3006-24 U..	1.058	1.2	2.4	8	60
3006-28 U..	0.907	1.2	2.2	8	60
3006-32 U..	0.794	1.0	2.0	8	60
3006-36 U..	0.705	0.8	1.8	8	60
3006-40 U..	0.635	0.8	1.8	8	60
3006-44 U..	0.577	0.8	1.4	8	60
3006-48 U..	0.529	0.6	1.4	8	60



3006 L / 3006 R

3006 VP L / 3006 VP R

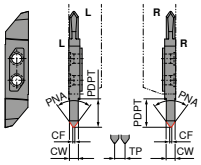
▲ for thread turning (full profile UN)

	NEW	NEW
	WPU7620	WPU7620
	F	F
	3006 VP L	3006 VP R
	72 531 ...	72 530 ...
ISO		
3006-13 UN 10-60 VP	52400	52400
3006-14 UN 10-60 VP	52200	52200
3006-16 UN 10-60 VP	52000	52000
3006-18 UN 10-60 VP	51800	51800
3006-20 UN 10-60 VP	51600	51600
3006-24 UN 10-60 VP	51400	51400
3006-28 UN 10-60 VP	51200	51200
3006-32 UN 10-60 VP	51000	51000
3006-36 UN 10-60 VP	50800	50800
3006-40 UN 10-60 VP	50600	50600
3006-44 UN 10-60 VP	50400	50400
3006-48 UN 10-60 VP	50200	50200
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3

3006 L / 3006 R

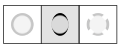
Designation	TP mm	CW mm	PDPT mm	PNA °	CF mm
3006-2-6-..	0,25 - 2,0	2	6	55	0.035
3006-3-10..	0,25 - 2,0	3	10	55	0.035



3006 L / 3006 R

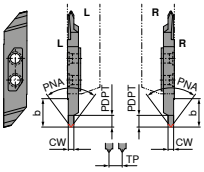
3006 L / 3006 R

▲ For thread turning (partial profile)

	WPU7620	WPU7620
		
	F	F
	3006 L	3006 R
	72 527 ...	72 526 ...
ISO		
3006-2-6-55	50000	50000
3006-3-10-55	50200	50200
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3006 VP L / 3006 VP R

Designation	TP mm	TD mm	CW mm	PDPT mm	b mm	PNA °
3006-G11-..	2.309	1-11 - 6-11	2.54	5.0	8	55
3006-G14-..	1.814	1/2-14 - 7/8-14	2.00	4.5	8	55
3006-G19-..	1.337	1/4-19 - 3/8-19	1.48	3.3	8	55
3006-G28-..	0.907	1/8-28 - 1/16-28	1.00	2.3	8	55

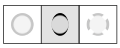


3006 L / 3006 R

3006 VP L / 3006 VP R

▲ For thread turning (full profile)

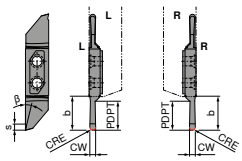
G

	WPU7620	WPU7620
		
	F	F
	3006 VP L	3006 VP R
	72 529 ...	72 528 ...
ISO		
3006-G11-10-55 VP	51100	51100
3006-G14-10-55 VP	51400	51400
3006-G19-10-55 VP	51900	51900
3006-G28-10-55 VP	52800	52800
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3

3007 L / 3007 R

Designation	CW mm	b mm	PDPT mm	CRE mm	s mm	β°
3007-R0,25-2-..	0.5	12	2.0	0.25	2	6
3007-R0,5-2,5..	1.0	12	2.5	0.50	2	6
3007-R0,6-2,5..	1.2	12	2.5	0.60	2	6
3007-R0,75-3-..	1.5	12	3.0	0.75	2	6
3007-R0,8-3-1..	1.6	12	3.0	0.80	2	6
3007-R1,0-10	2.0	12	10.0	1.00	2	6
3007-R1,5-10	3.0	12	10.0	1.50	2	6
3007-R1,5-16	3.0	17	16.0	1.50	2	6



3007 L / 3008 R

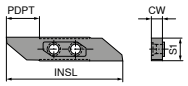
3007 L / 3007 R

▲ for radius turning

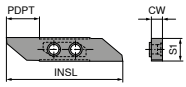
	WPU7620	WPU7620
	F 3007 L 72 482 ...	F 3007 R 72 480 ...
ISO		
3007-R0,25-2-10	510	510
3007-R0,5-2,5-10	512	512
3007-R0,6-2,5-10	514	514
3007-R0,75-3-10	516	516
3007-R0,8-3-10	518	518
3007-R1,0-10	520	520
3007-R1,5-10	522	522
3007-R1,5-16	524	524
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

3012 L / 3012 R / 3001 L / 3001 R

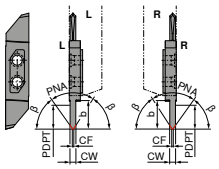
Designation	CW mm	PDPT mm	b mm	PNA °	CF mm
3012-2-6-..	2.0	2	10	60	0.035
3012-2-10..	2.0	10	12	90	0.02
3001-3,5-..	3.5	11	-	-	-



3001 L



3001 R



3012 L / 3012 R

3012 L / 3012 R

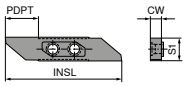
▲ for chamfering

	NEW	NEW
	WPU7620	WPU7620
	F	F
	3012 L	3012 R
	72 486 ...	72 484 ...
ISO		
3012-2-6-60	**51000**	**51000**
3012-2-10-45	**51200**	**51200**
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

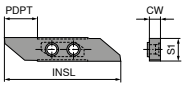
3

3012 L / 3012 R / 3001 L / 3001 R

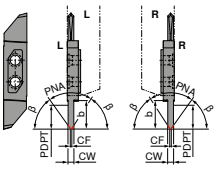
Designation	CW mm	PDPT mm	S1 mm	INSL mm
3001-3,5-..	3.5	11	8	40.5
3001-3,6-..	3.6	17	8	51.5
3012-2-10..	2.0	10	8	40.0
3012-2-6-..	2.0	2	8	40.0



3001 L



3001 R



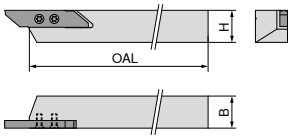
3012 L / 3012 R

3001 L / 3001 R

▲ Blank

ISO	NEW WUU7620 3001 L 72 414 ...	NEW WUU7620 3001 R 72 412 ...
3001-3,5-10	11000	11000
3001-3,6-17	13000	13000

VertiClamp – Standard tool holder



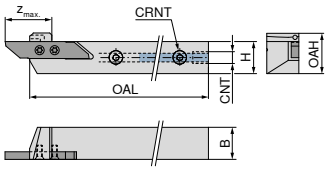
Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	Insert	Left-hand 72 302 ...	Right-hand 72 300 ...
3000-08x100 .	8	8	100	30..	008	008
3000-10x100 .	10	10	100	30..	010	010
3000-12x100 .	12	12	100	30..	012	012
3000-16x125 .	16	16	125	30..	016	016
3000-20x125 .	20	20	125	30..	020	020
3000-25x150 .	25	25	150	30..	025	

Spare parts for Article no.		Key D 80 950 ...	Clamping screw 72 950 ...
72 300 016 / 72 302 016	T08	110	005
72 300 008 / 72 302 008	T08	110	004
72 300 010 / 72 302 010	T08	110	005
72 300 012 / 72 302 012	T08	110	005
72 300 020 / 72 302 020	T08	110	005
72 302 025	T08	110	005

3

VertiClamp – Standard holder with thro' coolant

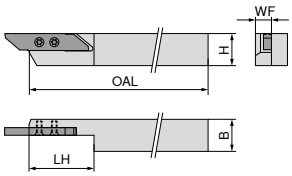


Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	OAH mm	$z_{max.}$ mm	CRNT	CNT	Insert	NEW Left-hand 72 311 ...	NEW Right-hand 72 310 ...
3000-08x100 .IC	8	12	100	12.2	26	M5	M5	30..	008	008
3000-10x100 .IC	10	12	100	14.0	26	M5	M5	30..	010	010
3000-12x100 .IC	12	12	100	16.0	26	M5	M5	30..	012	012
3000-16x100 .IC	16	16	125	20.0	26	M5	G1/8"	30..	016	016
3000-20x100 .IC	20	20	125	24.0	26	M5	G1/8"	30..	020	020
3000-25x100 .IC	25	25	125	29.0	26	M5	G1/8"	30..	025	025

Spare parts for Article no.		Cylindrical screw 72 950 ...		Cylindrical screw 72 950 ...		Key D 80 950 ...		Clamping screw 72 950 ...
72 310 008 / 72 311 008			M5x4	011	T08	110		004
72 310 010 / 72 311 010			M5x4	011	T08	110		005
72 310 012 / 72 311 012			M5x4	011	T08	110		005
72 310 016 / 72 311 016	G1/8"	010	M5x4	011	T08	110		005
72 310 020 / 72 311 020	G1/8"	010	M5x4	011	T08	110		005
72 310 025 / 72 311 025	G1/8"	010	M5x4	011	T08	110		005

VertiClamp – Offset tool holder

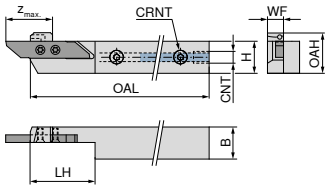


Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	Insert	Left-hand 72 309 ...	Right-hand 72 308 ...
3000-10x100 .A	10	10	100	37	8	30..	006	006
3000-12x100 .A	12	12	100	37	8	30..	008	008
3000-16x125 .A	16	16	125	37	8	30..	010	010

Spare parts for Article no.		Key D 80 950 ...	Clamping screw 72 950 ...
72 308 006 / 72 309 006	T08	110	004
72 308 008 / 72 309 008	T08	110	004
72 308 010 / 72 309 010	T08	110	004

VertiClamp – Offset holder with thro' coolant

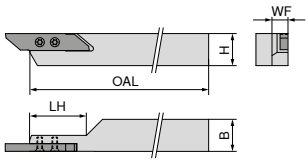


Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	WF mm	LH mm	OAH mm	$z_{max.}$ mm	CNT	CRNT	Insert	NEW Left-hand 72 315 ...	NEW Right-hand 72 314 ...
3000-16x125 .A IC	16	16	125	8	37	20	27	G1/8"	M5	30..	016	016

Spare parts for Article no.		Cylindrical screw 72 950 ...		Cylindrical screw 72 950 ...		Key D 80 950 ...	Clamping screw 72 950 ...
72 314 016 / 72 315 016	G1/8"	010	M5x4	011	T08	110	004

VertiClamp – Offset holder with offset insert seat



Illustrations show right-hand versions

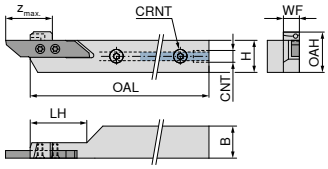
ISO designation	H mm	B mm	OAL mm	LH mm	WF mm	Insert	NEW Left-hand 72 317 ...	NEW Right-hand 72 316 ...
3000-10x100 .AV	10	10	100	28	8	30..	010	010
3000-12x100 .AV	12	12	100	28	8	30..	012	
3000-16x125 .AV	16	16	125	28	8	30..	016	016

Key D

Clamping screw

Spare parts for Article no.		Key D 80 950 ...	Clamping screw 72 950 ...
72 316 010 / 72 317 010	T08	110	004
72 317 012	T08	110	004
72 316 016 / 72 317 016	T08	110	004

VertiClamp – Offset holder with offset insert seat and thro' coolant



Illustrations show right-hand versions

ISO designation	H mm	B mm	OAL mm	OAH mm	$Z_{max.}$ mm	CRNT	CNT	Insert	NEW Left-hand 72 313 ...	NEW Right-hand 72 312 ...
3000-16x125 .AV IC	16	16	125	20	27	M5	G1/8"	30..	016	016

Cylindrical screw

Cylindrical screw

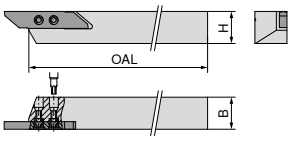
Key D

Clamping screw

Spare parts for Article no.			Cylindrical screw 72 950 ...		Cylindrical screw 72 950 ...		Key D 80 950 ...	Clamping screw 72 950 ...
72 312 016 / 72 313 016	G1/8"	010		M5x4	011	T08	110	004

3

VertiClamp – Combi tool holder

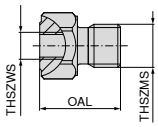


ISO designation	H mm	B mm	OAL mm	Insert	Left-hand 72 306 ...	Right-hand 72 304 ...
3000-08x100 .C	8	8	100	30..	**008**	**008**
3000-10x100 .C	10	10	100	30..	**010**	**010**
3000-12x100 .C	12	12	100	30..	**012**	**012**
3000-16x125 .C	16	16	125	30..	**016**	**016**
3000-20x125 .C	20	20	125	30..	**020**	**020**

Spare parts for Article no.		Key D 80 950 ...	Clamping screw 72 950 ...	Threaded sleeve 72 950 ...
72 304 008 / 72 306 008	T08	**110**	**003**	**008**
72 304 010 / 72 306 010	T08	**110**	**003**	**008**
72 304 012 / 72 306 012	T08	**110**	**003**	**008**
72 304 016 / 72 306 016	T08	**110**	**003**	**008**
72 304 020 / 72 306 020	T08	**110**	**003**	**008**

Reducer fitting

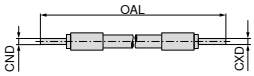
- Max. 200 bar/2900 psi
- No sealing ring required



Designation	THSZWS	THSZMS	OAL mm	72 301 ...
RV.100.M6-M5	M5	M6	18	002
RV.100.M8x1-M5	M5	M8x1	15	008
RV.100.M10x1-M5	M5	M10x1	15	007
RV.100.G1/8-M5	M5	G1/8"	15	006

Hose (connecting piece/connecting piece)

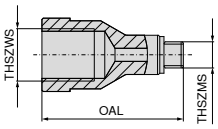
- Max. 200 bar/2900 psi



Designation	CND mm	CXD mm	OAL mm	72 305 ...
HDKS.150.4-4	4	4	150	003
HDKS.200.4-4	4	4	200	014
HDKS.300.4-4	4	4	300	025
HDKS.500.4-4	4	4	500	037

Reducer fitting

- Max. 200 bar/2900 psi
- Includes sealing ring



Designation	THSZWS	THSZMS	OAL mm	72 301 ...
RV.100.M5-M6	M6	M5	15	001
RV.100.M5-M8x1	M8x1	M5	23	003
RV.100.M5-M10x1	M10x1	M5	27	005
RV.100.M5-G1/8	G1/8"	M5	27	004

Sealing ring

Spare parts for Article no.	72 950 ...
72 301 001	009
72 301 003	009
72 301 005	009
72 301 004	009

Hose (connecting piece/thread)

- Max. 200 bar/2900 psi
- No sealing ring required

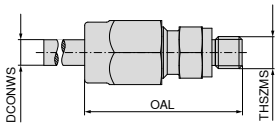
Designation	THSZMS	CXD mm	OAL mm	72 305 ...
HDKS.150.M5-4	M5	4	150	010
HDKS.200.M5-4	M5	4	200	021
HDKS.300.M5-4	M5	4	300	033
HDKS.500.M5-4	M5	4	500	045

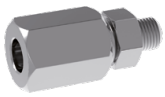
3

Coolant connections are supplied-to-order items

Straight fitting

▲ Max. 200 bar/2900 psi



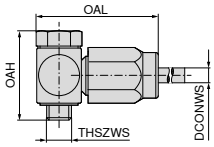


72 307 ...

Designation	DCONWS mm	THSZMS	OAL mm	
KA. M5-4	4	M5	27	**009**
KA. G1/8-4	4	G1/8"	32	**003**

Swivel fitting

▲ Max. 200 bar/2900 psi

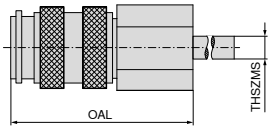


72 307 ...

Designation	DCONWS mm	OAH mm	THSZMS	OAL mm	
KA.SV.M5-4	4	21	M5	28	**017**
KA.SV.G1/8-4	4	30	G1/8"	37	**012**

Quick connection (coupling)

▲ Max. 200 bar/2900 psi

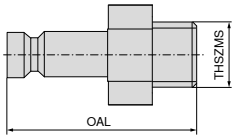


72 319 ...

Designation	THSZMS	OAL mm	
KIG.M5	M5	26	**001**

Quick connection (connector)

▲ Max. 200 bar/2900 psi
▲ No sealing ring required



72 320 ...

Designation	THSZMS	OAL mm	
SAG.M5	M5	20	**001**

Coolant connections are supplied-to-order items

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe – basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

* Tensile strength

3

Cutting data standard values

		DRAGONSKIN																
	TCM10	CTCP115	CTCP125	CTCP135	CTCM120	CTPM125	CTCM130	CTPP430	CWN2120	CTPX710 -M34	CTPX710 -25P/-25Q	CTPX715 -27	H210T	H10T/ H216T	CWN15	WUU7610	WPU7610	WPU7620
Index	v_c in m/min																	
P.1.1	**309**	**370**	**295**	**210**	229	203	184	**215**		**325**	**340**	**275**				85	**110**	**115**
P.1.2	**266**	**315**	**250**	**175**	200	171	152	**190**		**286**	**300**	**236**				50	**65**	**70**
P.1.3	**227**	**270**	**210**	**145**	173	142	123	**165**		**250**	**260**	**200**				50	**65**	**70**
P.1.4	**213**	**250**	**200**	**135**	164	132	113	**160**		**238**	**250**	**188**				50	**65**	**70**
P.1.5	**193**	**230**	**180**	**120**	150	118	98	**150**		**220**	**235**	**170**				50	**65**	**70**
P.2.1	**273**	**325**	**260**	**180**	204	176	157	**200**		**292**	**300**	**242**				50	**65**	**70**
P.2.2	**210**	**250**	**195**	**130**	161	130	110	**160**		**235**	**250**	**185**				50	**65**	**70**
P.2.3	**193**	**230**	**180**	**120**	150	118	98	**140**		**220**	**235**	**170**				50	**65**	**70**
P.2.4	**144**	**170**	**130**	**85**	116	81	61	**110**		**175**	**190**	**125**				50	**65**	**70**
P.3.1	**219**	**200**	**170**	**150**	159	142	124	**140**		**140**	**150**	**138**				50	**65**	**70**
P.3.2	**167**	**140**	**105**	**95**	116	97	81	**100**		**85**	**95**	**81**				50	**65**	**70**
P.3.3	**114**	**85**	**40**	**35**	73	51	38	**70**		**30**	**35**	**24**				50	**65**	**70**
P.4.1	**219**	**200**	**170**	**155**	159	142	124	**140**		**140**	**155**	**138**				50	**65**	**70**
P.4.2	**193**	**170**	**135**	**125**	138	119	103	**120**		**113**	**130**	**109**				50	**65**	**70**
M.1.1	219			155	**159**	**142**	**124**	**140**	**130**	**140**	**150**	**138**			100		**55**	**65**
M.2.1				95	**116**	**97**	**81**	**100**	**85**	**85**	**90**	**81**			55		**40**	**45**
M.3.1				135	**146**	**128**	**111**	**130**	**115**	**124**	**130**	**120**			85		**55**	**65**
K.1.1		255	170					140				200	170	140			**110**	**115**
K.1.2		235	160					130				160	130	115			**110**	**115**
K.2.1	260	270	180					140				190	180	150			**110**	**115**
K.2.2	215	205	160					140				150	130	110			**110**	**115**
K.3.1	300	250	200					100				210	190	170			**110**	**115**
K.3.2	205	210	160					100				180	160	140			**110**	**115**
N.1.1								300	1750	1840	**1840**	**1750**	**1650**	**1400**	**1650**	**180**	**200**	220
N.1.2								315	1500	1600	**1600**	**1500**	**1350**	**1100**	**1400**	**180**	**200**	220
N.2.1								270	1250	1250	**1250**	**1200**	**1200**	**950**	**1250**	**180**	**200**	220
N.2.2								140	1250	1250	**1250**	**1200**	**1100**	**950**	**1200**	**180**	**200**	220
N.2.3								180	700	750	**750**	**700**	**600**	**500**	**750**	**180**	**200**	220
N.3.1								200	650	650	**650**	**625**	**525**	**425**	**600**	**180**	**200**	220
N.3.2								200	600	630	**630**	**600**	**500**	**400**	**570**	**180**	**200**	220
N.3.3								200	480	500	**500**	**475**	**375**	**275**	**460**	**180**	**200**	220
N.4.1								200	330	340	**340**	**325**	**275**	**225**	**280**	**180**	**200**	220
S.1.1							35	65		**100**	**110**	**40**	43			40	45	45
S.1.2							26	50		**80**	**85**	**30**	33			40	45	45
S.2.1							20	45		**63**	**75**	**30**	33			35	40	40
S.2.2							20	40		**40**	**45**	**24**	25			35	40	40
S.2.3							18	40		**38**	**43**	**20**	20					
S.3.1							110	65		**95**	**100**	**110**	110					
S.3.2							63	50		**55**	**60**	**70**	70			35	**45**	**45**
S.3.3							45	40		**40**	**45**	**50**	50			35	**45**	**45**
H.1.1																		
H.1.2																		
H.1.3																		
H.1.4																		
H.2.1																		
H.3.1																		
O.1.1												140	160	130		**180**	200	220
O.1.2																**180**	200	220
O.2.1												150	140	105				
O.2.2																		
O.3.1																		

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine.
The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Machinability of non-ferrous metals with carbide indexable inserts

	Material group	Material examples			Machinability of aluminium alloys *	Comments
N	Pure aluminium	non hardenable	Al 99,5	W7	5	▲ Snarl chips ▲ Possibly bad surface ▲ Excessive built-up edge ▲ Long tool life ▲ Use coolant emulsion
			Al 99,5	F13	4	
			Al 99	W8	5	
			Al 99	F14	4	
	Aluminium wrought alloys	non hardenable	Al Mn	W10	5	▲ Snarl, continuous or fragmented chip ▲ Large feed rates necessary for good swarf control ▲ Built-up edge ▲ Long tool life ▲ Emulsion coolant is advantageous
			Al Mn	F16	4	
			Al Mg 1	W10	5	
			Al Mg 1	F19	4	
			Al Mg 3	W18	4	
			Al Mg 3	F25	3	
			Al Mg 5	W25	4	
			AL Mg 5	F28	2	
			Al Mg 4,5 Mn	W27	4	
			Al Mg 4,5 Mn	G35	3	
		hardenable	Al Mg Si 0,5	W	4	▲ Good swarf control with higher feed rates
			Al Mg Si 0,5	F13-25	3	
			Al Mg Si 1	W	4	
			Al Mg Si 1	F21-30	3	
			Al Mg Si Pb	F20-28	2	▲ Very good swarf control ▲ No built up edge ▲ Very good surface quality
			Al Cu Si Pb	F28-37	1	
			Al Cu Mg Pb	F34-37	1	
			Al Cu Mg 1	W	3	▲ Good swarf control ▲ Good surface quality ▲ Little built-up edge
			Al Cu Mg 1	F33-40	2	
			Al Cu Mg 2	W	3	
			Al Cu Mg 2	F40-47	2	
			Al Cu Si Mn	W	3	
			Al Cu Si Mn	F43-46	2	
			Al Zn Mg Cu 1,5	F50-52	2	
			Al Sn 6 Cu		1	
	Cast Aluminium Alloys	non hardenable	G-Al Si 12		3	▲ Good swarf control ▲ Built-up edge ▲ Higher Si content results in lower tool life
			G-Al Si 10 Mg		3	
			G-Al Si 5 Mg		2	
			G-Al Si 7 Mg (9 Mg)		2	
			G-Al Si Cu 3		2	▲ High wear of the carbide
			G-Al Si 6 Cu 4		2	
			G-Al Mg 3 (Mg 5)		2	▲ Good swarf control ▲ Good surface quality ▲ Long tool life
			G-Al Mg 9		2	
			G-Al Mg 10		2	
			G-Al Mg 3 Si (5 Si)		2	
			G-Al Cu 4 Ti (Mg)		2	
			G-Al Si 12 Cu Mg Ni		2	
	Copper wrought alloys		Cu Ag			
			Cu As			
			Cu Cd			
			Cu Cd Sn			
			Cu Mg			
			Cu Mn			
		brass	Cu Zn Al			
		bronze	Cu Sn			
			Cu Sn Zn			
			Cu Ni			
			Cu Ni Fe			
			Cu Al			
O	Non metal materials	Duroplastics				
		Fibre-reinforced plastics				
		hard rubber				

* 1 = good machinability, 5 = bad machinability

3

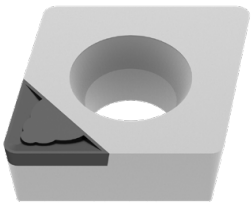
Cutting data standard values for diamond cutting materials CTD PD20 / PS30 / PU20 / CD10 / MD05

Index	Material group		a_p = 0,04–0,4 mm Surface roughness R_z in µm 2,5–5,0	a_p = 0,04–0,4 mm Surface roughness R_z in µm 5,0–10	a_p = 0,4–1,0 mm Surface roughness R_z in µm 2,5–5,0	a_p = 0,4–1,0 mm Surface roughness R_z in µm 5,0–10	a_p = 0,4–2,5 mm Surface roughness R_z in µm 2,5–5,0	a_p = 0,4–2,5 mm Surface roughness R_z in µm 5,0–10
			CTD ...	CTD ...	CTD ...	CTD ...	CTD ...	CTD ...
N.1.1 N.1.2	Aluminium wrought alloys without Si f=0.05–0.5 mm/rev.	Tool Material	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05
		v_c in m/min	**400–2500**	**400–2500**	**400–2000**	**400–2000**	**400–1600**	**400–1600**
		Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
		v_c in m/min		**400–2500**		**400–2000**		**400–1600**
		Tool Material	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20
		v_c in m/min	**400–2500**	**400–2500**	**400–2000**	**400–2000**	**400–1600**	**400–1600**
N.2.1	Cast Aluminium Alloys Si≤12 % – hardened or Si=12–20% – non hardened f=0,05–0,5 mm/rev.	Tool Material	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05
		v_c in m/min	**600–2000**	**600–2200**	**600–1800**	**600–2000**	**600–1500**	**600–1800**
		Tool Material	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**400–2000**	**400–2200**	**400–1800**	**600–2000**	**400–1500**	**400–1800**
		Tool Material	PS30	PS30	PS30	PS30	PS30	
		v_c in m/min	**600–2000**	**600–2200**	**600–1800**	**600–2000**	**600–1500**	
N.2.2 N.2.3	Aluminium cast alloys Si=12–20 % f=0.05–0.5 mm/rev.	Tool Material	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05
		v_c in m/min	**800-1200**	**400–1800**	**700–1000**	**400–1500**	**600–900**	**400–1200**
		Tool Material		PU20 / CD10		PU20 / CD10		PU20 / CD10
		v_c in m/min		**600–1800**		**600–1500**		**600–1200**
		Tool Material		PU20		PU20		
		v_c in m/min		**600–1800**		**600–1500**		
N.3.1 N.3.2 N.3.3	Copper and copper wrought alloys f=0.05–0.5 mm/rev.	Tool Material	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05
		v_c in m/min	**400–1800**	**300–1600**	**400–1600**	**300–1600**	**400–1400**	**400–1500**
		Tool Material	PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10
		v_c in m/min	**300–1500**	**300–1500**	**400–1600**	**300–1500**	**400–1500**	**300–1400**
		Tool Material		PD20 / PU20		PS30 / PU20	PD20 / PU20	PS30 / PU20
		v_c in m/min		**300–1800**		**300–1700**	**300–1600**	**200–1300**
O.1.1 O.1.2	Plastic materials without reinforcement (acrylic glass) f=0.05–0.7 mm/rev.	Tool Material		PD20 / CD10 / MD05		PD20 / CD10 / MD05		PS30 / CD10 / MD05
		v_c in m/min		**400–1200**		**300–1000**		**200–1000**
		Tool Material		PD20 / CD10		PD20 / CD10		PS30 / CD10
		v_c in m/min		**300–1200**		**200–1000**		**200–900**
		Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
		v_c in m/min		**400–1200**		**300–1000**		**200–1000**
O.2.1 O.2.2	Plastic materials with reinforcement (glass-fibre, carbon-fibre reinforced) f=0.05–0.7 mm/rev.	Tool Material	PS30 / PU20 / CD10 / MD05		PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05
		v_c in m/min	**500–1000**		**400–900**	**300–900**	**300–800**	**200–1200**
		Tool Material	PS30 / PU20 / CD10		PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**400–900**		**300–800**	**200–900**	**200–800**	**200–1400**
		Tool Material	PU20		PU20	PU20	PU20	
		v_c in m/min	**500–1000**		**400–800**	**300–1000**	**300–800**	
O.3.1	Graphite	Tool Material	PD20 / PS30 / PU20 / CD10		PD20 / PS30 / PU20 / CD10		PD20 / PS30 / PU20 / CD10	
		v_c in m/min	**100–3000**		**100–3000**		**100–3000**	

Smooth cut	Irregular cutting depth	Interrupted cut

Cutting data standard values for the CB chip breaker geometries

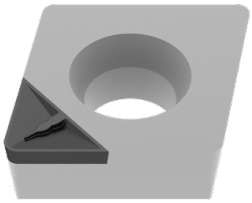
-CB1



3D-Chip Breaker -CB1				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,1 mm	0,05	0,30	0,02	0,05
0,2 mm	0,06	0,40	0,03	0,08
0,4 mm	0,10	0,80	0,04	0,15
0,8 mm	0,15	1,00	0,08	0,20
1,2 mm	0,30	1,50	0,12	0,25

- Finish and Superfinish
- Extremely sharp cutting edge geometry
- Depth of Cut a_p: 0.05–1.5 mm
- Smallest cutting pressure for highest accuracies
- For machining of thin-walled and unstable workpieces

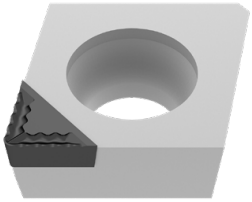
-CB2



3D-Chip Breaker -CB2				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,2 mm	0,50	0,80	0,08	0,12
0,4 mm	0,60	1,50	0,08	0,20
0,8 mm	0,70	1,50	0,15	0,30
1,2 mm	0,80	2,00	0,20	0,40

- Semi-finish and Finish machining
- Negative edge preperation
- Cutting Depth a_p: 0,5–2,0 mm
- High surface quality and tight tolerances
- Machining of solid workpieces under stable conditions

-CB3



3D-Chip Breaker -CB3				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,4 mm	1,00	3,00	0,10	0,20
0,8 mm	1,00	3,00	0,15	0,35

- Medium and rough machining
- Highly aggressive chip breaker
- Cutting depth a_p: 1,0–3,0 mm
- Stable component conditions necessary
- Cooling must be ensured

Cutting data standard values – VertiClamp system

	Parting				Turning				
	WPU7620	Fine	Medium	Rough	WPU7620		Fine	Medium	Rough
Index	v_c in m/min	f	f	f	v_c in m/min	a_p in mm	f	f	f
P.1.1	**80**	0,005–0,080	0,02–0,15	0,10–0,25	**80**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.1.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.1.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.1.4	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.1.5	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.2.1	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.2.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.2.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.2.4	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.3.1	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.3.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.3.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	**75**	< 3	0,005–0,080	0,02–0,15	0,10–0,25
P.4.1	**75**	0,005–0,080	0,01–0,12	0,10–0,20	**75**	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
P.4.2	**75**	0,005–0,080	0,01–0,12	0,10–0,20	**75**	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
M.1.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20	**55**	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
M.2.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20	**55**	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
M.3.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20	**55**	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.1.1	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.1.2	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.2.1	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.2.2	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.3.1	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
K.3.2	70	0,005–0,080	0,01–0,12	0,10–0,20	70	< 2,5	0,005–0,080	0,01–0,12	0,10–0,20
N.1.1	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.1.2	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.2.1	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.2.2	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.2.3	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.3.1	180	0,050–0,200	0,02–0,25	0,10–0,40	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.3.2	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.3.3	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
N.4.1	180	0,050–0,200	0,02–0,25	0,10–0,30	180	< 3	0,050–0,200	0,02–0,25	0,10–0,30
S.1.1	45	0,005–0,060	0,02–0,08	0,10–0,25	45	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
S.1.2	45	0,005–0,060	0,02–0,08	0,10–0,25	45	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
S.2.1	40	0,005–0,060	0,02–0,08	0,10–0,25	40	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
S.2.2	40	0,005–0,060	0,02–0,08	0,10–0,25	40	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
S.2.3									
S.3.1									
S.3.2	**45**	0,005–0,060	0,02–0,08	0,10–0,25	**45**	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
S.3.3	**45**	0,005–0,060	0,02–0,08	0,10–0,25	**45**	< 2,5	0,005–0,060	0,02–0,08	0,10–0,25
H.1.1									
H.1.2									
H.1.3									
H.1.4									
H.2.1									
H.3.1									
O.1.1	220	0,050–0,200	0,02–0,25	0,10–0,30	220	< 3	0,050–0,200	0,02–0,25	0,10–0,30
O.1.2	220	0,050–0,200	0,02–0,25	0,10–0,30	220	< 3	0,005–0,200	0,02–0,25	0,10–0,30
O.2.1									
O.2.2									
O.3.1									

The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Cutting data standard values – VertiClamp and TriClamp system

	VertiClamp system				TriClamp system					
	Grooving				Turning					
	WPU7620	Fine	Medium	Rough	WUU7610	WPU7610	WPU7620	WUU7620		
Index	v_c in m/min	f	f	f	v_c in m/min				f	$a_{p\,max.}$ in mm
P.1.1	**80**	0,005–0,080	0,02–0,15	0,10–0,25	85	**110**	**115**	**80**	0,005–0,080	1,5
P.1.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	**40**	0,005–0,080	1,5
P.1.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	**40**	0,005–0,080	1,5
P.1.4	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	**40**	0,005–0,080	1,5
P.1.5	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	**40**	0,005–0,080	1,5
P.2.1	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.2.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.2.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.2.4	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.3.1	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.3.2	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.3.3	**75**	0,005–0,080	0,02–0,15	0,10–0,25	50	**65**	**70**	40	0,005–0,080	1,5
P.4.1	**75**	0,005–0,080	0,01–0,12	0,10–0,20	50	**65**	**70**	40	0,005–0,080	1,5
P.4.2	**75**	0,005–0,080	0,01–0,12	0,10–0,20	50	**65**	**70**	40	0,005–0,080	1,5
M.1.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20		**55**	**65**		0,005–0,080	1,5
M.2.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20		**40**	**45**		0,005–0,080	1,5
M.3.1	**55**	0,005–0,080	0,01–0,12	0,10–0,20		**55**	**65**		0,005–0,080	1,5
K.1.1	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
K.1.2	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
K.2.1	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
K.2.2	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
K.3.1	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
K.3.2	70	0,005–0,080	0,01–0,12	0,10–0,20		110	115		0,005–0,080	1,5
N.1.1	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.1.2	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.2.1	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.2.2	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.2.3	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.3.1	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.3.2	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.3.3	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
N.4.1	180	0,050–0,200	0,02–0,25	0,10–0,30	**180**	**200**	220	180	0,050–0,200	1,5
S.1.1	45	0,005–0,060	0,02–0,08	0,10–0,25	40	45	45	40	0,005–0,060	1,0
S.1.2	45	0,005–0,060	0,02–0,08	0,10–0,25	40	45	45	40	0,005–0,060	1,0
S.2.1	40	0,005–0,060	0,02–0,08	0,10–0,25	35	40	40	35	0,005–0,060	1,0
S.2.2	40	0,005–0,060	0,02–0,08	0,10–0,25	35	40	40	35	0,005–0,060	1,0
S.2.3										
S.3.1										
S.3.2	**45**	0,005–0,060	0,02–0,08	0,10–0,25	35	**45**	**45**	40	0,005–0,060	1,0
S.3.3	**45**	0,005–0,060	0,02–0,08	0,10–0,25	35	**45**	**45**	40	0,005–0,060	1,0
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1	220	0,050–0,200	0,02–0,25	0,10–0,30	**180**	200	220	180	0,050–0,200	2,0
O.1.2	220	0,050–0,200	0,02–0,25	0,10–0,30	**180**	200	220	180	0,050–0,200	2,0
O.2.1										
O.2.2										
O.3.1										

The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Cutting data standard values for negative inserts

Designation	-F50						-M50					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm			mm/rev.			mm		
CN.. 090304	0,06	**0,15**	0,25	0,2	**0,5**	1,5						
CN.. 090308	0,10	**0,20**	0,30	0,4	**1,0**	2,0						
CN.. 120404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**2,0**	5,0
CN.. 120408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**2,0**	5,0
CN.. 120412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**2,0**	5,0
CN.. 120416							0,25	**0,40**	0,60	1,4	**2,0**	5,0
CN.. 160608							0,15	**0,25**	0,40	0,6	**3,0**	8,0
CN.. 160612							0,20	**0,30**	0,50	1,0	**3,0**	8,0
CN.. 160616							0,25	**0,40**	0,60	1,4	**3,0**	8,0
CN.. 160624												
CN.. 190608												
CN.. 190612												
CN.. 190616												
CN.. 190624												
CN.. 250924												
DN.. 110402	0,04	**0,10**	0,20	0,1	**0,4**	2,3						
DN.. 110404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**1,5**	4,0
DN.. 110408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**1,5**	4,0
DN.. 110412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**1,5**	4,0
DN.. 150404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**2,0**	5,0
DN.. 150408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**2,0**	5,0
DN.. 150412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**2,0**	5,0
DN.. 150416							0,25	**0,40**	0,60	1,4	**2,0**	5,0
DN.. 150604	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**2,0**	5,0
DN.. 150608	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**2,0**	5,0
DN.. 150612	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**2,0**	5,0
DN.. 150616							0,25	**0,40**	0,60	1,4	**2,0**	5,0
SN.. 090308	0,10	**0,20**	0,30	0,4	**1,0**	2,0						
SN.. 120404	0,06	**0,15**	0,25	0,2	**0,6**	1,5						
SN.. 120408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**2,0**	5,0
SN.. 120412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**2,0**	5,0
SN.. 120416							0,25	**0,40**	0,60	1,4	**2,0**	5,0
SN.. 150608							0,15	**0,25**	0,40	0,6	**3,0**	8,0
SN.. 150612							0,20	**0,30**	0,50	1,0	**3,0**	8,0
SN.. 150616							0,25	**0,40**	0,60	1,4	**3,0**	8,0
SN.. 190612												
SN.. 190616												
SN.. 190624												
SN.. 250724												
SN.. 250924												
TN.. 110304	0,06	**0,15**	0,25	0,2	**0,6**	1,5						
TN.. 110308	0,10	**0,20**	0,30	0,4	**1,0**	2,0						
TN.. 160404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**2,0**	5,0
TN.. 160408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**2,0**	5,0
TN.. 160412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**2,0**	5,0
TN.. 220404												
TN.. 220408							0,15	**0,25**	0,40	0,6	**3,0**	8,0
TN.. 220412							0,20	**0,30**	0,50	1,0	**3,0**	8,0
TN.. 220416												
VN.. 160404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**1,0**	4,0
VN.. 160408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**1,0**	4,0
VN.. 160412							0,20	**0,30**	0,50	1,0	**1,0**	4,0
WN.. 060404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**1,0**	3,0
WN.. 060408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**1,0**	3,0
WN.. 060412							0,20	**0,30**	0,50	1,0	**1,0**	3,0
WN.. 080404	0,06	**0,15**	0,25	0,2	**0,6**	1,5	0,10	**0,20**	0,30	0,4	**1,5**	4,0
WN.. 080408	0,10	**0,20**	0,30	0,4	**1,0**	2,0	0,15	**0,25**	0,40	0,6	**1,5**	4,0
WN.. 080412	0,14	**0,25**	0,35	0,6	**1,4**	2,6	0,20	**0,30**	0,50	1,0	**1,5**	4,0
WN.. 080416							0,25	**0,40**	0,60	1,4	**1,5**	4,0

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The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-M70					
	f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm		
CN.. 090304						
CN.. 090308						
CN.. 120404						
CN.. 120408	0,20	**0,30**	0,45	0,8	**3,0**	6,0
CN.. 120412	0,25	**0,40**	0,60	1,2	**3,0**	6,0
CN.. 120416	0,30	**0,45**	0,70	1,6	**3,0**	6,0
CN.. 160608	0,20	**0,30**	0,45	0,8	**4,0**	8,0
CN.. 160612	0,25	**0,40**	0,60	1,2	**4,0**	8,0
CN.. 160616	0,30	**0,45**	0,70	1,6	**4,0**	8,0
CN.. 160624	0,40	**0,70**	1,20	2,4	**4,0**	8,0
CN.. 190608	0,20	**0,30**	0,45	0,8	**4,5**	9,0
CN.. 190612	0,25	**0,40**	0,60	1,2	**4,5**	9,0
CN.. 190616	0,30	**0,45**	0,70	1,6	**4,5**	9,0
CN.. 190624	0,40	**0,70**	1,20	2,4	**4,5**	9,0
CN.. 250924	0,40	**0,70**	1,20	2,4	**6,0**	13,0
DN.. 110402						
DN.. 110404						
DN.. 110408	0,20	**0,25**	0,45	0,8	**2,0**	5,0
DN.. 110412	0,25	**0,35**	0,60	1,2	**2,0**	5,0
DN.. 150404						
DN.. 150408	0,20	**0,25**	0,45	0,8	**2,5**	6,0
DN.. 150412	0,25	**0,35**	0,60	1,2	**2,5**	6,0
DN.. 150416	0,30	**0,40**	0,70	1,6	**2,5**	6,0
DN.. 150604						
DN.. 150608	0,20	**0,25**	0,45	0,8	**2,5**	6,0
DN.. 150612	0,25	**0,35**	0,60	1,2	**2,5**	6,0
DN.. 150616	0,30	**0,40**	0,70	1,6	**2,5**	6,0
SN.. 090308						
SN.. 120404						
SN.. 120408	0,20	**0,30**	0,50	0,8	**3,0**	6,0
SN.. 120412	0,25	**0,40**	0,65	1,2	**3,0**	6,0
SN.. 120416	0,30	**0,45**	0,70	1,6	**3,0**	6,0
SN.. 150608						
SN.. 150612	0,25	**0,40**	0,65	1,2	**4,0**	8,0
SN.. 150616	0,30	**0,45**	0,75	1,6	**4,0**	8,0
SN.. 190612	0,25	**0,40**	0,65	1,2	**4,5**	9,0
SN.. 190616	0,30	**0,45**	0,75	1,6	**4,5**	9,0
SN.. 190624	0,40	**0,70**	1,20	2,4	**4,5**	9,0
SN.. 250724						
SN.. 250924	0,40	**0,70**	1,20	2,4	**6,0**	13,0
TN.. 110304						
TN.. 110308						
TN.. 160404						
TN.. 160408	0,20	**0,25**	0,45	0,8	**2,5**	6,0
TN.. 160412	0,25	**0,35**	0,60	1,2	**2,5**	6,0
TN.. 220404	0,15	**0,20**	0,30	0,4	**3,0**	7,0
TN.. 220408	0,20	**0,25**	0,45	0,8	**3,0**	7,0
TN.. 220412	0,25	**0,35**	0,60	1,2	**3,0**	7,0
TN.. 220416	0,30	**0,40**	0,70	1,6	**3,0**	7,0
VN.. 160404						
VN.. 160408						
VN.. 160412						
WN.. 060404						
WN.. 060408	0,20	**0,30**	0,45	0,8	**2,0**	4,0
WN.. 060412	0,25	**0,40**	0,60	1,2	**2,0**	4,0
WN.. 080404						
WN.. 080408	0,20	**0,30**	0,45	0,8	**2,5**	5,0
WN.. 080412	0,25	**0,40**	0,60	1,2	**2,5**	5,0
WN.. 080416	0,30	**0,45**	0,70	1,6	**2,5**	5,0

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 149–152**

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Cutting data standard values for negative inserts

Designation	-F30						-M30					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm			mm/rev.			mm		
CN.. 090304												
CN.. 090308												
CN.. 120404	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
CN.. 120408	0,10	**0,22**	0,35	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**2,0**	4,5
CN.. 120412							0,20	**0,30**	0,50	1,2	**2,5**	5,0
CN.. 120416							0,25	**0,35**	0,55	1,6	**2,5**	5,0
CN.. 160608												
CN.. 160612												
CN.. 160616												
CN.. 160624												
CN.. 190608												
CN.. 190612												
CN.. 190616												
CN.. 190624												
CN.. 250924												
DN.. 110402												
DN.. 110404	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
DN.. 110408	0,10	**0,20**	0,35	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**2,0**	4,5
DN.. 110412							0,20	**0,30**	0,50	1,2	**2,0**	4,5
DN.. 150404												
DN.. 150408												
DN.. 150412												
DN.. 150416												
DN.. 150604	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
DN.. 150608	0,10	**0,20**	0,35	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**2,0**	5,5
DN.. 150612							0,20	**0,30**	0,50	1,2	**2,0**	5,5
DN.. 150616												
SN.. 090308												
SN.. 120404	0,10	**0,15**	0,30	0,4	**1,0**	2,0						
SN.. 120408	0,15	**0,20**	0,40	0,8	**1,5**	2,5	0,20	**0,25**	0,45	1,0	**2,0**	4,5
SN.. 120412	0,15	**0,20**	0,40	1,2	**1,8**	2,5	0,25	**0,30**	0,50	1,2	**2,0**	5,0
SN.. 120416												
SN.. 150608												
SN.. 150612												
SN.. 150616												
SN.. 190612												
SN.. 190616												
SN.. 190624												
SN.. 250724												
SN.. 250924												
TN.. 110304												
TN.. 110308												
TN.. 160404	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
TN.. 160408	0,10	**0,15**	0,35	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**2,0**	4,5
TN.. 160412							0,20	**0,30**	0,50	1,2	**2,0**	4,5
TN.. 220404												
TN.. 220408												
TN.. 220412												
TN.. 220416												
VN.. 160404	0,08	**0,10**	0,20	0,4	**1,0**	2,0						
VN.. 160408	0,10	**0,15**	0,30	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**1,5**	4,0
VN.. 160412												
WN.. 060404	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
WN.. 060408	0,10	**0,20**	0,30	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**1,5**	3,5
WN.. 060412							0,20	**0,30**	0,45	1,2	**1,5**	4,0
WN.. 080404	0,05	**0,15**	0,25	0,4	**1,0**	2,0						
WN.. 080408	0,10	**0,20**	0,35	0,8	**1,5**	2,5	0,15	**0,25**	0,40	1,0	**2,0**	4,5
WN.. 080412							0,20	**0,30**	0,50	1,2	**2,0**	5,0
WN.. 080416												

Sharp ← → stable

The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-M60						-M34					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm			mm/rev.			mm		
CN.. 090304												
CN.. 090308												
CN.. 120404							0,08	**0,12**	0,18	1,0	**1,5**	3,0
CN.. 120408	0,25	**0,30**	0,50	1,5	**2,5**	6,0	0,10	**0,15**	0,35	1,0	**1,8**	3,5
CN.. 120412	0,30	**0,35**	0,55	2,0	**3,0**	6,0	0,13	**0,20**	0,40	1,5	**2,0**	4,0
CN.. 120416	0,30	**0,40**	0,60	2,0	**3,0**	6,0	0,15	**0,25**	0,45	2,0	**3,0**	4,5
CN.. 160608												
CN.. 160612	0,30	**0,35**	0,55	2,0	**3,0**	8,0						
CN.. 160616												
CN.. 160624												
CN.. 190608												
CN.. 190612												
CN.. 190616												
CN.. 190624												
CN.. 250924												
DN.. 110402												
DN.. 110404												
DN.. 110408												
DN.. 110412												
DN.. 150404							0,08	**0,12**	0,18	0,8	**1,2**	2,5
DN.. 150408							0,10	**0,15**	0,30	1,0	**1,8**	3,5
DN.. 150412							0,13	**0,20**	0,38	1,5	**2,0**	4,0
DN.. 150416												
DN.. 150604												
DN.. 150608	0,25	**0,30**	0,45	1,5	**2,5**	6,0	0,10	**0,15**	0,30	1,0	**1,8**	3,5
DN.. 150612	0,30	**0,40**	0,55	1,5	**2,5**	6,0	0,13	**0,20**	0,38	1,5	**2,0**	4,0
DN.. 150616												
SN.. 090308												
SN.. 120404												
SN.. 120408	0,30	**0,35**	0,50	1,5	**2,0**	6,0	0,15	**0,25**	0,40	1,0	**2,0**	4,0
SN.. 120412	0,30	**0,40**	0,55	2,0	**2,5**	6,0	0,15	**0,25**	0,45	1,5	**2,5**	4,5
SN.. 120416	0,30	**0,40**	0,60	2,0	**2,5**	6,0						
SN.. 150608												
SN.. 150612												
SN.. 150616												
SN.. 190612												
SN.. 190616												
SN.. 190624												
SN.. 250724												
SN.. 250924												
TN.. 110304												
TN.. 110308												
TN.. 160404												
TN.. 160408	0,25	**0,25**	0,45	1,5	**2,5**	5,0	0,10	**0,15**	0,35	1,0	**2,0**	4,0
TN.. 160412	0,30	**0,30**	0,55	2,0	**2,5**	5,5						
TN.. 220404							0,10	**0,15**	0,35	1,0	**2,0**	4,0
TN.. 220408							0,13	**0,20**	0,40	1,5	**2,5**	4,0
TN.. 220412												
TN.. 220416							0,15	**0,25**	0,45	2,0	**2,5**	4,5
VN.. 160404							0,07	**0,10**	0,18	0,8	**1,2**	2,0
VN.. 160408							0,10	**0,15**	0,20	1,0	**1,5**	2,5
VN.. 160412							0,13	**0,18**	0,25	1,5	**1,8**	3,0
WN.. 060404												
WN.. 060408	0,25	**0,30**	0,45	1,5	**2,0**	4,0						
WN.. 060412	0,30	**0,35**	0,50	2,0	**2,5**	4,5						
WN.. 080404												
WN.. 080408	0,25	**0,30**	0,50	1,5	**2,0**	5,0	0,10	**0,15**	0,35	1,0	**2,0**	4,0
WN.. 080412	0,30	**0,35**	0,55	2,0	**2,5**	5,5	0,13	**0,20**	0,40	1,5	**2,0**	4,0
WN.. 080416												

Sharp ← → stable

Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 149–152**

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Cutting data values for positive inserts

Designation	-SF						-SMF					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
		mm/rev.			mm			mm/rev.			mm	
CC.. 060200	0,02	**0,035**	0,05	0,1	**0,4**	1,5						
CC.. 060201	0,02	**0,035**	0,05	0,2	**0,4**	1,5						
CC.. 060202	0,03	**0,1**	0,15	0,2	**0,4**	1,5						
CC.. 060204	0,05	**0,1**	0,2	0,2	**0,6**	1,5	0,07	**0,15**	0,25	0,3	**0,7**	2
CC.. 060208	0,05	**0,125**	0,2	0,2	**1**	1,5	0,1	**0,17**	0,27	0,6	**1**	2
CC.. 09T300	0,02	**0,035**	0,05	0,2	**0,75**	2						
CC.. 09T301	0,02	**0,035**	0,05	0,2	**0,75**	2						
CC.. 09T302	0,05	**0,075**	0,1	0,2	**0,75**	2						
CC.. 09T304	0,05	**0,12**	0,2	0,2	**0,75**	2	0,07	**0,15**	0,25	0,3	**0,8**	2,5
CC.. 09T308	0,05	**0,125**	0,25	0,4	**1**	2	0,1	**0,17**	0,27	0,6	**1**	2,5
CC.. 09T312												
CC.. 120402	0,05	**0,075**	0,1	0,2	**0,8**	2,5						
CC.. 120404	0,05	**0,12**	0,2	0,2	**1**	2,5	0,07	**0,15**	0,25	0,3	**1**	3
CC.. 120408	0,08	**0,15**	0,25	0,4	**1**	2,5	0,1	**0,17**	0,27	0,6	**1,2**	3
CC.. 120412	0,08	**0,15**	0,25	0,4	**1,5**	2,5						
DC.. 0702005												
DC.. 070201												
DC.. 0702015												
DC.. 070202	0,03	**0,1**	0,15	0,1	**0,4**	1,5						
DC.. 070204	0,05	**0,12**	0,2	0,2	**0,6**	1,5	0,07	**0,15**	0,25	0,3	**0,7**	2
DC.. 070208							0,1	**0,17**	0,27	0,6	**1**	2
DC.. 11T3005												
DC.. 11T301												
DC.. 11T3015												
DC.. 11T302												
DC.. 11T304	0,05	**0,12**	0,2	0,2	**0,7**	2	0,07	**0,15**	0,25	0,3	**0,8**	2,5
DC.. 11T308	0,08	**0,15**	0,25	0,4	**1**	2	0,1	**0,17**	0,27	0,6	**1,2**	2,5
DC.. 11T312												
RC.. 0602M0												
RC.. 0803M0												
RC.. 1003M0												
RC.. 1204M0												
RC.. 1606M0							0,15	**0,3**	0,6	0,25	**2**	3,5
RC.. 2006M0												
RC.. 2507M0												
SC.. 09T304	0,05	**0,12**	0,2	0,2	**0,7**	2	0,07	**0,15**	0,25	0,3	**0,8**	2,5
SC.. 09T308	0,08	**0,15**	0,25	0,4	**1**	2	0,1	**0,17**	0,27	0,6	**1**	2,5
SC.. 120408	0,08	**0,15**	0,25	0,4	**1**	2,5	0,1	**0,17**	0,27	0,6	**1,2**	3
SC.. 120412												
TC.. 090204												
TC.. 110202												
TC.. 110204	0,05	**0,12**	0,2	0,2	**0,7**	2						
TC.. 110208	0,08	**0,15**	0,25	0,4	**1**	2	0,1	**0,17**	0,27	0,6	**1**	2,5
TC.. 16T302												
TC.. 16T304	0,05	**0,12**	0,2	0,2	**0,8**	2,5	0,07	**0,15**	0,25	0,3	**1**	3
TC.. 16T308	0,08	**0,15**	0,25	0,4	**1**	2,5	0,1	**0,17**	0,27	0,6	**1,2**	3
TC.. 16T312												
TC.. 220408												
VC.. 1103005												
VC.. 110301												
VC.. 1103015												
VC.. 110302	0,02	**0,08**	0,15	0,1	**0,4**	1,5	0,05	**0,1**	0,18	0,2	**0,5**	2
VC.. 110304	0,05	**0,1**	0,2	0,2	**0,6**	1,5	0,07	**0,15**	0,23	0,3	**0,7**	2
VC.. 110308	0,08	**0,12**	0,22	0,4	**1**	1,5						
VC.. 160402												
VC.. 160404	0,05	**0,1**	0,2	0,2	**0,7**	2	0,07	**0,15**	0,23	0,3	**0,8**	2,5
VC.. 160408	0,08	**0,12**	0,22	0,4	**1**	2	0,1	**0,17**	0,27	0,6	**1**	2,5
VC.. 160412												
VC.. 220530												
WC.. 020102	0,02	**0,075**	0,1	0,1	**0,4**	1						
WC.. 020104	0,02	**0,1**	0,2	0,1	**0,6**	1,5						

Sharp ← → stable

The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-SM						-SMQ					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm			mm/rev.			mm		
CC.. 060200												
CC.. 060201												
CC.. 060202	0,04	**0,12**	0,2	0,2	**0,6**	2,5						
CC.. 060204	0,08	**0,17**	0,3	0,4	**0,8**	2,5						
CC.. 060208	0,12	**0,2**	0,35	0,8	**1**	2,5						
CC.. 09T300												
CC.. 09T301												
CC.. 09T302												
CC.. 09T304	0,08	**0,17**	0,3	0,4	**1**	3	0,10	**0,25**	0,4	0,4	**2**	4
CC.. 09T308	0,12	**0,2**	0,35	0,8	**1,2**	3	0,15	**0,30**	0,5	0,8	**2**	4
CC.. 09T312	0,15	**0,22**	0,4	1,2	**1,5**	3						
CC.. 120402												
CC.. 120404	0,08	**0,17**	0,3	0,4	**1,2**	3,5	0,10	**0,25**	0,4	0,4	**2**	4
CC.. 120408	0,12	**0,2**	0,35	0,8	**1,5**	3,5	0,15	**0,30**	0,5	0,8	**2**	4
CC.. 120412	0,15	**0,22**	0,4	1,2	**2**	3,5						
DC.. 0702005												
DC.. 070201												
DC.. 0702015												
DC.. 070202	0,04	**0,12**	0,2	0,2	**0,6**	2,5						
DC.. 070204	0,08	**0,17**	0,3	0,4	**0,8**	2,5	0,10	**0,18**	0,25	0,4	**1,5**	3
DC.. 070208	0,12	**0,2**	0,3	0,8	**1**	2,5						
DC.. 11T3005												
DC.. 11T301												
DC.. 11T3015												
DC.. 11T302												
DC.. 11T304	0,8	**0,17**	0,3	0,4	**1**	3	0,10	**0,25**	0,4	0,4	**2**	4
DC.. 11T308	0,12	**0,2**	0,35	0,8	**1,2**	3	0,15	**0,30**	0,5	0,8	**2**	4
DC.. 11T312	0,15	**0,22**	0,4	1,2	**1,7**	3						
RC.. 0602M0	0,2	**0,3**	0,5	0,2	**0,5**	1,5						
RC.. 0803M0	0,2	**0,3**	0,6	0,2	**0,6**	2						
RC.. 1003M0	0,25	**0,4**	0,7	0,2	**0,7**	2,5						
RC.. 1204M0	0,3	**0,5**	0,8	0,2	**0,8**	3						
RC.. 1606M0	0,4	**0,6**	1	0,3	**1**	3,5						
RC.. 2006M0	0,5	**0,8**	1,2	0,4	**1,2**	4						
RC.. 2507M0	0,6	**0,9**	1,4	0,6	**2**	5						
SC.. 09T304	0,08	**0,17**	0,3	0,4	**1**	3						
SC.. 09T308	0,12	**0,2**	0,35	0,8	**1,2**	3						
SC.. 120408	0,12	**0,2**	0,35	0,8	**1,5**	3,5						
SC.. 120412	0,15	**0,22**	0,4	1,2	**2**	3,5						
TC.. 090204	0,08	**0,12**	0,2	0,4	**0,8**	2						
TC.. 110202	0,08	**0,1**	0,2	0,4	**0,6**	3						
TC.. 110204	0,12	**0,2**	0,35	0,8	**1,2**	3						
TC.. 110208	0,12	**0,2**	0,35	0,8	**1,2**	3						
TC.. 16T302												
TC.. 16T304	0,08	**0,17**	0,3	0,4	**1,2**	3,5						
TC.. 16T308	0,12	**0,2**	0,35	0,8	**1,5**	3,5						
TC.. 16T312	0,15	**0,22**	0,4	1,2	**1,7**	3,5						
TC.. 220408	0,12	**0,2**	0,35	0,8	**2,5**	6						
VC.. 1103005												
VC.. 110301												
VC.. 1103015												
VC.. 110302												
VC.. 110304												
VC.. 110308												
VC.. 160402												
VC.. 160404	0,08	**0,17**	0,25	0,4	**1**	3						
VC.. 160408	0,12	**0,2**	0,3	0,8	**1,2**	3						
VC.. 160412	0,15	**0,22**	0,32	1,2	**1,5**	3						
VC.. 220530												
WC.. 020102												
WC.. 020104												

Sharp ← → stable

Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 149–152**

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Cutting data values for positive inserts

Designation	-M25						-M55					
	f			a_p			f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm			mm/rev.			mm		
CC.. 060200												
CC.. 060201												
CC.. 060202												
CC.. 060204	0,06	**0,13**	0,20	0,2	**1,1**	2,0	0,06	**0,13**	0,20	0,4	**1,5**	2,6
CC.. 060208												
CC.. 09T300												
CC.. 09T301												
CC.. 09T302												
CC.. 09T304	0,06	**0,14**	0,22	0,2	**1,2**	2,2	0,08	**0,16**	0,24	0,4	**1,7**	3,0
CC.. 09T308	0,10	**0,20**	0,30	0,4	**1,8**	3,2	0,12	**0,24**	0,35	0,8	**2,4**	4,0
CC.. 09T312												
CC.. 120402												
CC.. 120404							0,08	**0,18**	0,28	0,4	**2,2**	4,0
CC.. 120408							0,12	**0,26**	0,40	0,8	**2,8**	4,8
CC.. 120412												
DC.. 0702005												
DC.. 070201												
DC.. 0702015												
DC.. 070202	0,04	**0,09**	0,13	0,1	**0,9**	1,6						
DC.. 070204	0,06	**0,12**	0,18	0,2	**1,1**	2,0	0,06	**0,14**	0,22	0,4	**1,3**	2,2
DC.. 070208							0,08	**0,16**	0,24	0,8	**1,6**	2,4
DC.. 11T3005												
DC.. 11T301												
DC.. 11T3015												
DC.. 11T302	0,04	**0,10**	0,16	0,1	**1,1**	2,0						
DC.. 11T304	0,06	**0,14**	0,22	0,2	**1,2**	2,2	0,08	**0,16**	0,24	0,4	**1,7**	3,0
DC.. 11T308	0,10	**0,20**	0,30	0,4	**1,8**	3,2	0,12	**0,24**	0,35	0,8	**2,4**	4,0
DC.. 11T312												
RC.. 0602M0												
RC.. 0803M0												
RC.. 1003M0												
RC.. 1204M0												
RC.. 1606M0												
RC.. 2006M0												
RC.. 2507M0												
SC.. 09T304							0,12	**0,24**	0,35	0,8	**2,4**	4,0
SC.. 09T308							0,12	**0,26**	0,40	0,8	**2,8**	4,8
SC.. 120408												
SC.. 120412												
TC.. 090204							0,06	**0,12**	0,18	0,4	**1,3**	2,2
TC.. 110202												
TC.. 110204	0,06	**0,13**	0,20	0,2	**1,2**	2,2	0,06	**0,14**	0,22	0,4	**1,4**	2,4
TC.. 110208												
TC.. 16T302												
TC.. 16T304	0,06	**0,14**	0,22	0,2	**1,6**	3,0						
TC.. 16T308	0,10	**0,20**	0,30	0,4	**1,9**	3,4	0,12	**0,24**	0,35	0,8	**2,6**	4,4
TC.. 16T312												
TC.. 220408												
VC.. 1103005												
VC.. 110301												
VC.. 1103015												
VC.. 110302												
VC.. 110304												
VC.. 110308												
VC.. 160402												
VC.. 160404	0,06	**0,13**	0,20	0,2	**1,2**	2,2	0,08	**0,14**	0,20	0,4	**1,7**	3,0
VC.. 160408	0,10	**0,15**	0,25	0,4	**1,4**	3,0	0,12	**0,21**	0,30	0,8	**2,1**	3,4
VC.. 160412												
VC.. 220530												
WC.. 020102												
WC.. 020104												

Sharp ← → stable

The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-F05					
	f			a_p		
	min.	Recom-mended	max.	min.	Recom-mended	max.
	mm/rev.			mm		
CC.. 060200						
CC.. 060201						
CC.. 060202						
CC.. 060204						
CC.. 060208						
CC.. 09T300						
CC.. 09T301						
CC.. 09T302						
CC.. 09T304						
CC.. 09T308						
CC.. 09T312						
CC.. 120402						
CC.. 120404						
CC.. 120408						
CC.. 120412						
DC.. 0702005	0,02	**0,025**	0,04	0,1	**1**	2
DC.. 070201	0,02	**0,03**	0,05	0,1	**1**	2
DC.. 0702015	0,02	**0,04**	0,075	0,1	**1**	2
DC.. 070202	0,02	**0,05**	0,1	0,1	**1**	2
DC.. 070204						
DC.. 070208						
DC.. 11T3005	0,02	**0,025**	0,04	0,1	**1,25**	2,5
DC.. 11T301	0,02	**0,03**	0,05	0,1	**1,25**	2,5
DC.. 11T3015	0,02	**0,04**	0,075	0,1	**1,25**	2,5
DC.. 11T302	0,02	**0,075**	0,1	0,1	**1,25**	2,5
DC.. 11T304	0,02	**0,1**	0,25	0,1	**1,25**	2,5
DC.. 11T308						
DC.. 11T312						
RC.. 0602M0						
RC.. 0803M0						
RC.. 1003M0						
RC.. 1204M0						
RC.. 1606M0						
RC.. 2006M0						
RC.. 2507M0						
SC.. 09T304						
SC.. 09T308						
SC.. 120408						
SC.. 120412						
TC.. 090204						
TC.. 110202						
TC.. 110204						
TC.. 110208						
TC.. 16T302						
TC.. 16T304						
TC.. 16T308						
TC.. 16T312						
TC.. 220408						
VC.. 1103005	0,02	**0,025**	0,04	0,1	**1,25**	2,5
VC.. 110301	0,02	**0,03**	0,05	0,1	**1,25**	2,5
VC.. 1103015	0,02	**0,04**	0,075	0,1	**1,25**	2,5
VC.. 110302	0,02	**0,075**	0,1	0,1	**1,25**	2,5
VC.. 110304	0,02	**0,15**	0,25	0,1	**1,25**	2,5
VC.. 110308						
VC.. 160402						
VC.. 160404						
VC.. 160408						
VC.. 160412						
VC.. 220530						
WC.. 020102						
WC.. 020104						

Sharp ← → stable

Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 149–152**

Diamond as a cutting material

Ensures

- Optimal surface quality
- burr-free workpieces
- high service lives
- lowest cutting forces
- High Process Security

Complete programme of roughing, finishing and wiper inserts for machining aluminium, non ferrous metals, plastics, ...

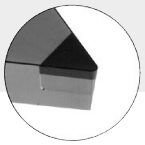
The cutting materials

	CTD CD10 (CVD)	CTD PD20 (PKD)	CTD PU20 (PKD)	CTD PS30 (PKD)
	Fine grain Size (N10)	Fine grain grade (N20)	Coarse grain grade (N20)	Coarse grain Size (N30)
Properties	▲ perfect sharp edges ▲ no cutting pressure ▲ very close tolerances ▲ highest abrasion resistance with highest toughness ▲ very high heat conductivity	▲ high sharpness ▲ lower cutting pressure than PDC-S ▲ close tolerance ▲ lower abrasion resistance with increased toughness	▲ Very sharp cutting edge ▲ Reduced cutting pressure ▲ Tight tolerances ▲ Very high level of wear resistance and toughness	▲ high sharpness ▲ lower cutting pressure ▲ close tolerance ▲ lower abrasion resistance than with the PDC, with increased toughness
Material	suitable for superfinishing and semi-finishing of all non ferrous metals and NE-composite materials with small to high levels of abrasiveness	suitable for fine machining of all NE-materials with low abrasiveness	suitable for finishing to roughing non-ferrous metals and non-ferrous materials with highly abrasive alloying element. High chip removal on fibre-reinforced plastics such as CFRP and GFRP.	suitable for fine machining of all NE-materials and non-ferrous metals with low to very high levels of abrasiveness

Cutting Geometries

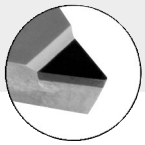
Neutral rake angle:

- higher cuting force
- higher temperature
- improved surface quality
- for stable workpieces



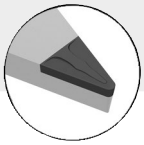
Positive rake angle:

- Lower cutting force
- Lower temperature
- reduction in surface quality
- for unstable workpieces
- improved accuracy



CB chip breaker geometries:

- Reliable chip control
- Ideal for low-alloy aluminium
- For F | M | R applications

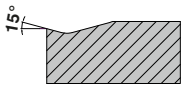
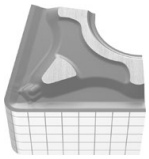
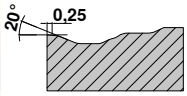
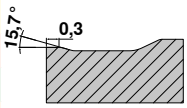


Notes on diamond usage

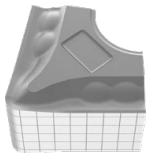
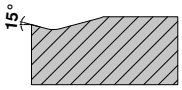
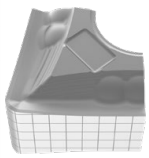
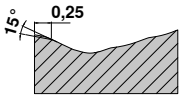
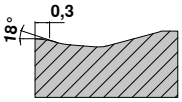
- Coolant is not generally needed, however it facilitates chip removal
- Note the chemical reaction to carbide-forming elements (PCD)
- Note the thermal interaction and critical temperature:
  PCD: 600 °C, CVD: 700 °C
  Depending on the material, use cooling.

Standard chip breakers / application notes

Negative

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
Main application steel and cast iron, secondary application stainless steels	**-F50** ▲ Fine turning chip breaker for fine machining ▲ Steel and stainless steels ▲ Excellent chip control ▲ High surface quality	 F	**CTCP115 / CTCP125**	CTCP115 / CTCP125 / CTCP135 CTCP135	**CTCP135** CTCP135	 0,10–2,60	0,06–0,35	CN.. DN.. SN.. TN.. VN.. WN..
	-M50 ▲ Medium machining ▲ First choice for steel machining ▲ Universal application ▲ Wide range of applications	 M	**CTCP115 / CTCP125 / CTCK110 / CTCK120** CTCP115 CTCP115 / CTCP125 / **CTCK110 / CTCK120**	CTCP115 / **CTCP125** CTCP125 CTCP115 / CTCP125 / **CTCK110 / CTCK120**	CTCP125 / **CTCP135** CTCP135 CTCP125 / **CTCK120**	 0,50–5,00	0,12–0,40	CN.. DN.. SN.. TN.. VN.. WN..
	-M70 ▲ Light to medium rough machining ▲ Cast crust and forging skin ▲ Stable cutting edge ▲ Interrupted cut ▲ Raw materials and forgings	 M R	**CTCK110 / CTCK120 / CTCP115** CTCP115 **CTCK110 / CTCK120 /** CTCP115 / CTCP125	CTCP115 / **CTCP125** CTCP125 **CTCK120 /** CTCP125	**CTCP125 / CTCP135** CTCP135 CTCP125 / **CTCK120**	 1,50–4,50	0,20–0,80	CN.. DN.. SN.. TN.. WN..

Negative

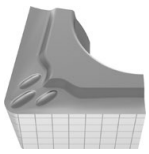
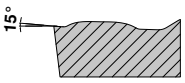
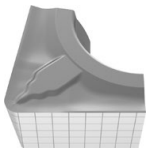
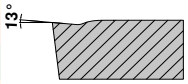
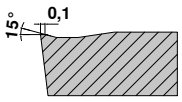
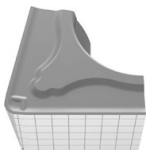
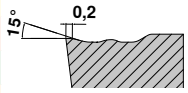
	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
Main application stainless steels, secondary application steel and super alloys	**-F30** ▲ Finishing of stainless steels ▲ Continous cut ▲ High surface quality ▲ Good swarf control	 F	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	 0,08–2,5	0,10–0,35	CN.. DN.. SN.. TN.. VN.. WN..
	-M30 ▲ Option for stainless steel machining ▲ Good swarf control ▲ Little edg build up ▲ Low cutting forces ▲ Little built-up edge ▲ Applicable on unstable machines	 F	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	 1,00-4,50	0,15-0,40	CN.. DN.. SN.. TN.. VN.. WN..
	-M60 ▲ Light to medium roughing ▲ Stable cutting edge ▲ Interrupted cut ▲ Forged skin and cast crust	 F M	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	 1,50–6,00	0,25–0,50	CN.. DN.. SN.. TN.. WN..

3

Standard chip breakers / application notes

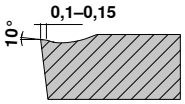
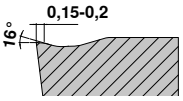
Positive

Main application steel and cast iron, secondary application stainless steels

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-SF ▲ Finishing / contour turning ▲ Good swarf control ▲ High surface quality ▲ Low cutting forces	 F	**CTCP115**	**CTCP125**	**CTCP125 / CTCP135**		0,05–2,50	0,05–0,25	CC.. DC.. SC.. TC.. VC.. WC..
			CTCP125	CTCP125			
-SMF ▲ Finishing to medium machining ▲ Low cutting forces ▲ Good swarf control ▲ High surface quality	 F M	**CTEP110 / CTCP115**	**TCM10 / CTCP125 / CTCP115**	**CTCP135**		0,20–1,30	0,06–0,25	CC.. DC.. SC.. TC.. VC..
		CTEP110	CTCP135	CTCP135			
		CTEP110					
-SM ▲ Medium machining ▲ Universal application ▲ Stable cutting edge ▲ Varying depths of cut ▲ Wide range of applications	 M	**CTCP115 / CTCP125**	**CTCP125 / CTCP135 / CTCP115**	**CTCP125 / CTCP135**		0,05–5,00	0,15–0,45	CC.. DC.. RC.. SC.. TC.. VC..
			CTCP135	CTCP135			
		CTCP115 / **CTCK110 / CTCK120**	CTCP125 / **CTCK110 / CTCK120**	CTCK120			
-SMQ ▲ Positive wiper geometry ▲ Finishing to medium machining ▲ Very high feeds ▲ High surface quality	 M	**CTCP115**	**CTCP125**	**CTCP125**		1,00–4,00	0,15–0,45	CC.. DC..
		CTCP125 / CTCP115	CTCP125	CTCP125			

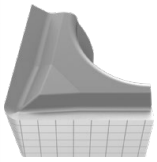
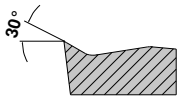
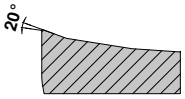
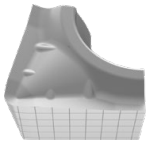
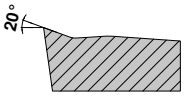
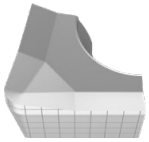
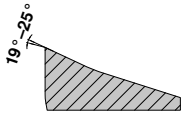
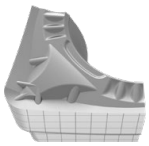
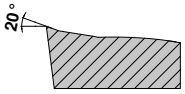
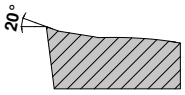
Positive

Main application stainless steels, secondary application steel and super alloys

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-M25 ▲ First choice for medium machining of stainless steels ▲ High surface quality ▲ Little built-up edge	 F M	CTCM120 / CTPM125	CTCM120 / CTPM125 / CTCM130	CTCM130		0,40–3,20	0,10–0,30	CC.. DC.. TC.. VC..
		CTCM120 / CTPM125	**CTCM120 / CTPM125 / CTCM130**	**CTCM130**			
-M55 ▲ First choice for medium machining to roughing of stainless steels ▲ Smooth to lightly interrupted cut ▲ Good swarf control ▲ Stable cutting edge	 M	CTCM120 / CTPM125	CTCM120 / CTPM125 / CTCM130	CTCM130		0,40–4,80	0,06–0,35	CC.. DC.. SC.. TC.. VC..
		CTCM120 / CTPM125	**CTCM120 / CTPM125 / CTCM130**	**CTCM130**			

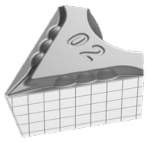
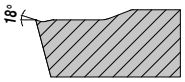
Standard chip breakers / application notes

Main application non-ferrous metals, secondary application stainless steels, steels, super alloys, cast iron

positive	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-23P ▲ Maximum tolerance class ▲ Outstanding chip control, even with the smallest cutting depths ▲ Very low cutting forces	 F	H216T **H216T** H216T	H216T **H216T** H216T	**H216T** H216T	 0,2–4,0	0,05–0,3	CC.. DC..
-25P ▲ Low adhesion ▲ Good chip control with soft aluminium alloys	 F M	**CTPX710** **CTPX710** **CTPX710 / H216T** **CTPX710** CTPX710	CTPX710 CTPX710 **CTPX710 / H216T** CTPX710 CTPX710	**CTPX710 / H216T**	 0,50–4,50	0,05–0,60	CC.. DC.. SC.. VC..
-25Q ▲ Sharp cutting edge ▲ Good swarf control on soft aluminium alloys ▲ Low adhesion	 M	**CTPX710** **CTPX710** H210T **H210T / CTPX710** H210T / **CTPX710** H210T	CTPX710 CTPX710 H210T **H210T / CTPX710** H210T / CTPX710 H210T	**H210T / CTPX710**	 0,05–6,50	0,05–0,60	CC.. DC.. VC..
-27 ▲ Wiper geometry ▲ High feeds ▲ High surface quality ▲ Good chip control with softer aluminium alloys ▲ Low adhesion	 M R	**CTPX715** **CTPX715** CTPX715 / H216T **CTPX715 / H216T** **CTPX715** CTPX715 / H216T	CTPX715 CTPX715 CTPX715 / H216T **CTPX715 / H216T** CTPX715 CTPX715 / H216T	**CTPX715 / H216T**	 1,00–10,00	0,10–0,75	CC.. DC.. RC.. SC.. TC.. VC..
-29 ▲ Direct sintered aluminium geometry ▲ Positive rake angle ▲ Good chip control ▲ For medium to rough machining	 M	CTPX715 CTPX715 **CTPX715** **CTPX715 / H216T**	CTPX715 CTPX715 **CTPX715** **CTPX715 / H216T**	**H216T** **H216T**	 1,00–6,00	0,25–0,60	CC.. DC.. VC..
-M81 ▲ Dircetly pressed insert ▲ Positive rake angle ▲ Good swarf control ▲ For medium to rough machining	 M	**CWN2120** CWN2120	CWN2120	CWN2120	 1,00–6,00	0,25–0,60	CC.. DC.. VC..

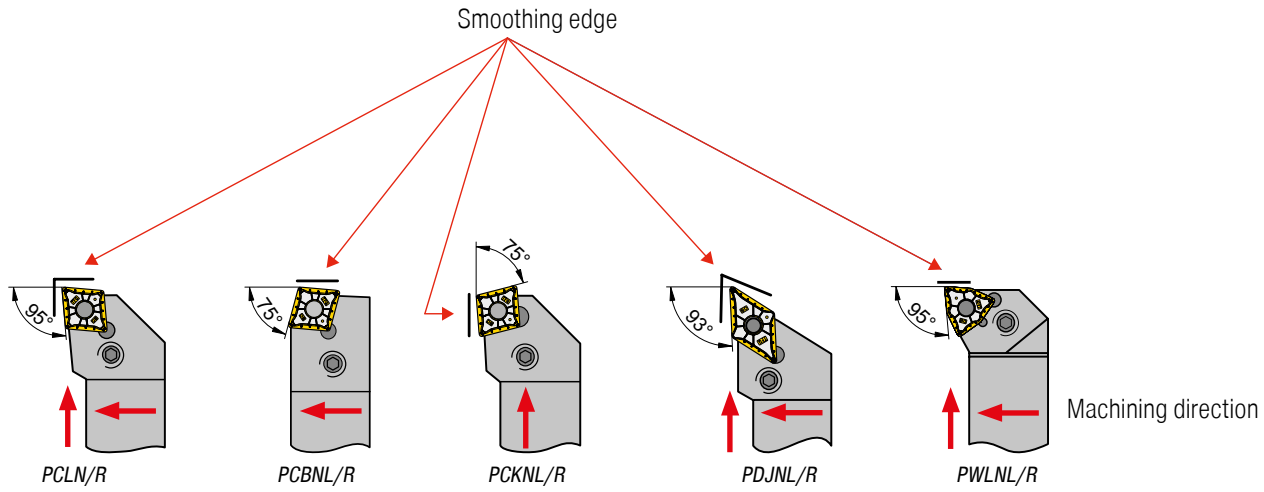
3

Standard chip breakers / application notes

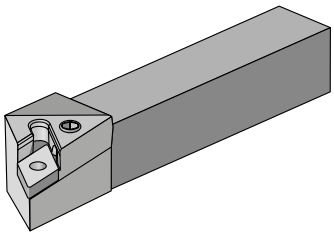
Positive	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
Main application super alloys and stainless steels, secondary application steels and non-ferrous metals -F05 ▲ The universal Alu geometry ▲ Sharp cutting edge ▲ Extremely positive rake angle ▲ Low adhesion ▲ High feed rates	 F	**CTPX710**	CTPX710				DC.. VC..
		CTPX710	CTPX710				
		CTPX710	CTPX710				
		CTPX710	**CTPX710**				
		CTPX710	**CTPX710**				
					0,10–2,50	0,02–0,25	
		CTPX710	CTPX710				

Masterfinish – smoothing geometry – information

High-quality surfaces can be produced inexpensively using indexable inserts with smoothing edge (-TFQ; -TMQ; -SMQ; -25Q).

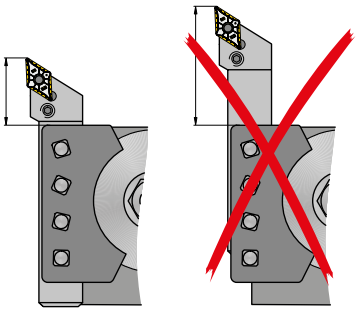


All turning inserts with smoothing cutting edge are clamped in standard ISO tool holders

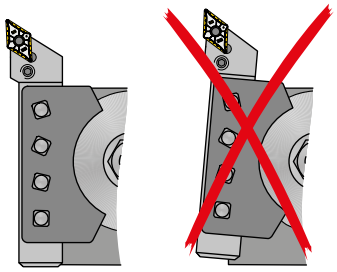


Check toolholder:

- Insert seat
- Shim
- Clamping Lever



Short tool overhang



Ensure correct tool alignment

Feed rate guide values for surface finish quality

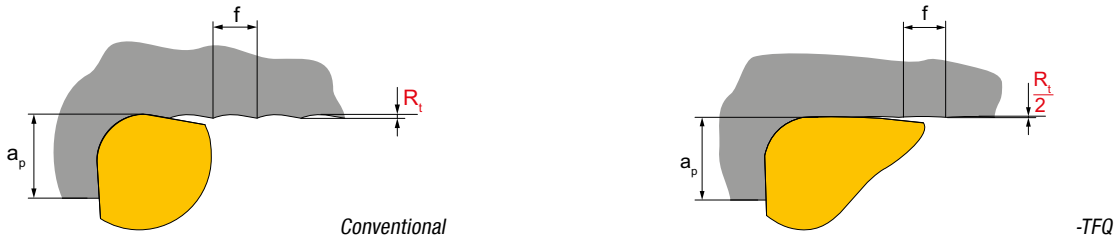
Roughness range R_Z in µm	$R_{t\,max.}$	Corresponds to R_a	Roughness index	ISO 1302	Corner radius r_ε in mm and feed rate f in mm/rev.			
					r_ε = 0,4	r_ε = 0,8	r_ε = 1,2	r_ε = 1,6
63–100	R_t100	12,5–25	N11	25		0,51	0,69	0,88
40–63	R_t63	6,3–25	N10	12,5	0,27	0,43	0,56	0,68
31,5–40	R_t40	4,9–6,3	N9	6,3	0,25	0,37	0,49	0,57
25–31,5	R_t31,5	4,0–4,9			0,22	0,32	0,41	0,47
16–25	R_t25	2,5–4,0	N8	3,2	0,20	0,28	0,36	0,39
10–16	R_t16	1,6–2,5			0,15	0,22	0,29	0,31
6,3–10	R_t10	1,0–1,6	N7	1,6	0,10	0,13	0,18	0,20

Masterfinish – smoothing geometry – operating principle

Relationship of feed rate to surface roughness

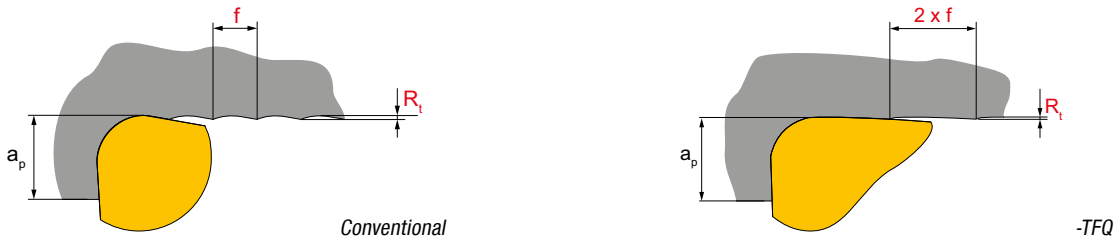
Improved Surface Quality

Given identical feed rates, the indexable insert with smoothing geometry attains an R_t value that is many times better than a conventional indexable insert.



Shorter machining time

If the same R_t value is achieved as with a standard indexable insert, the indexable insert with the smoothing geometry can be moved at twice the feed speed **(= lower cycle times!)**



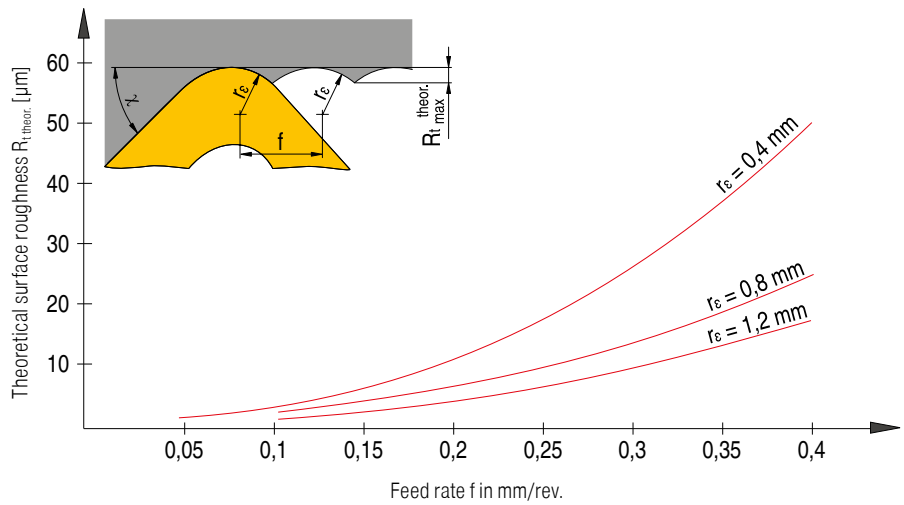
Theoretical Surface Quality

The maximum theoretical surface roughness with turning $Rt_{theor.}$ is the combination of feed rate and corner radius:

$$Rt_{theor.} = \left(r_\varepsilon - \sqrt{r_\varepsilon^2 - \frac{f^2}{4}}\right) \cdot 1000$$

or approximately:

$$Rt_{theor.} = \frac{125 \cdot f^2}{r\varepsilon} \quad [\mu m]$$



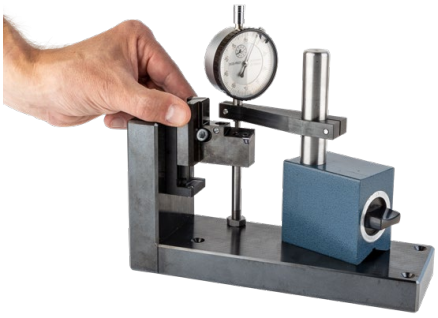
Setting Device

The adjustment device is profitable if the tool system is expanded with several tool holder blocks on several machines. The tool system can be preset so that holders on every machine have a suitable centre height in relation to the turning centre of the machine.

Setting Device

1. Zero the dial gauge on the surface of the measuring stick.

2. Place tool holder block on the device and gently tighten the clamping screw until the holder sits on the device free of play. Ideally, set the centre height slightly below the centre, so that the tool holder block is pushed upward when the height is set.

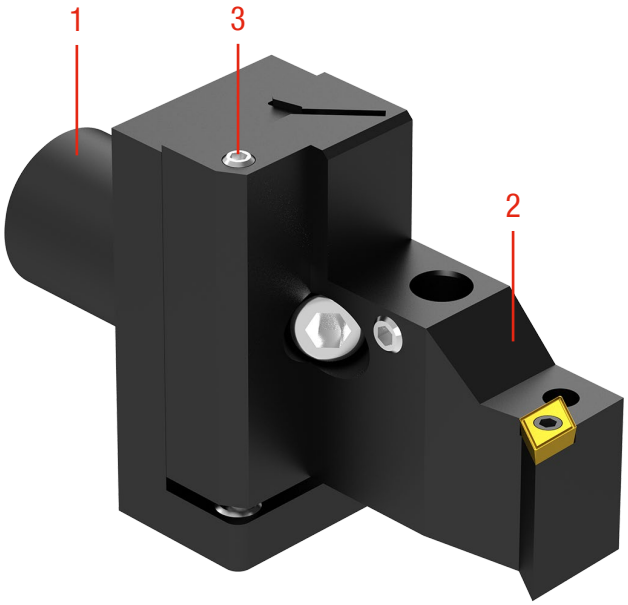


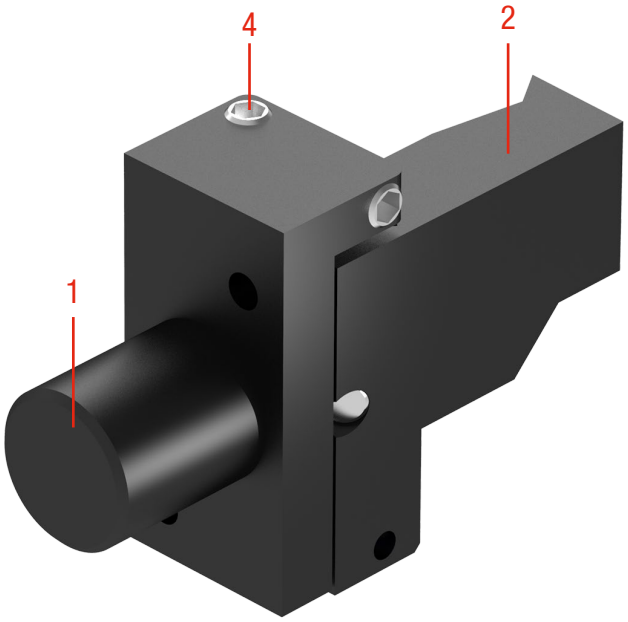
3. Carefully place the dial gauge on the tip of the tool's cutting edge.

4. Adjust the height adjustment screw until the dial gauge is set to zero.

Procedure when retrofitting on the CT tool system

1. Screw all base holders (1) into the machine.
2. Clamp the height-adjustable screw (4) of the individual base holders (1) and set to the same height using the dial gauge.
3. Clamp a tool holder block (2) onto any base holder (1) and set precisely on the turning centre using the height-adjustable screw (3) of the tool holder block (2).
4. Remove the tool holder block (2) from the machine and clamp it on the height presetting device.
5. Set the dial gauge on the tool to zero and adjust the measuring pin on the presetting device.
6. Each additional tool holder block (2) is set to zero once on the presetting device using the measuring pin and dial gauge.





If several tool holders are arranged side-by-side, you can quickly and reliably fix them at the same height using height adjustment screws (3) and (4).

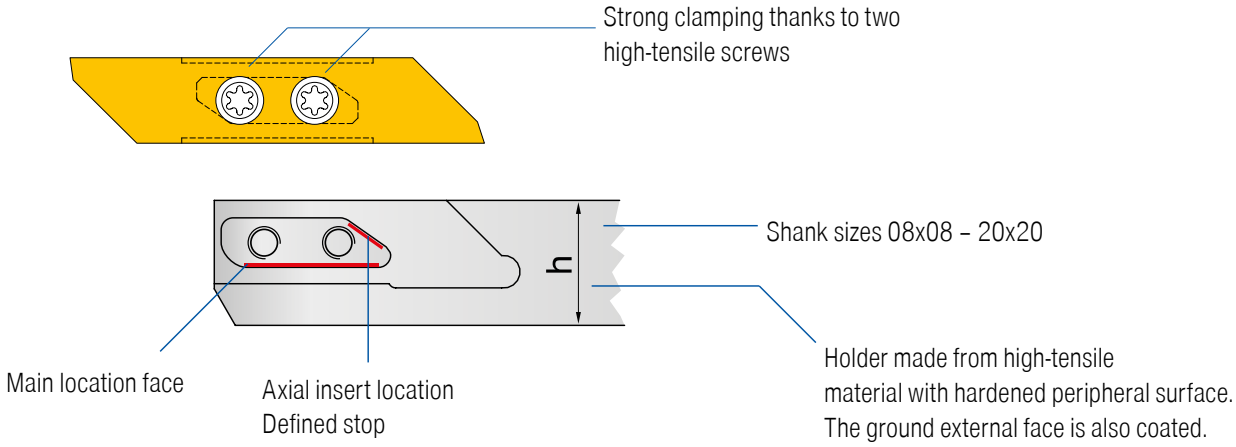
The same tool holders (2) can be used for multiple machines without presetting them again individually. However, the base holders (1) of the other machines must be adjusted to one another.

This is done as follows:

1. Screw all base holders into machine 2.
2. Clamp a preset tool block holder from machine 1 on any base holder in machine 2 and adjust the turning centre precisely using the height-adjustment screw of the base holder.
3. Set all other height-adjustable screws on the rest of the base holders in machine 2 to the same height using the dial gauge.
   The preset tool block holders can thus be used on each tool station of several machines without readjustment.

VertiClamp

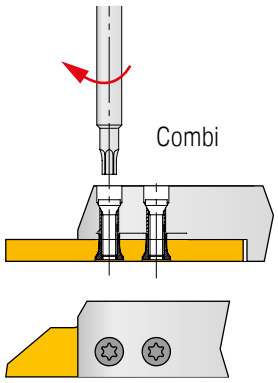
Features



Advantages

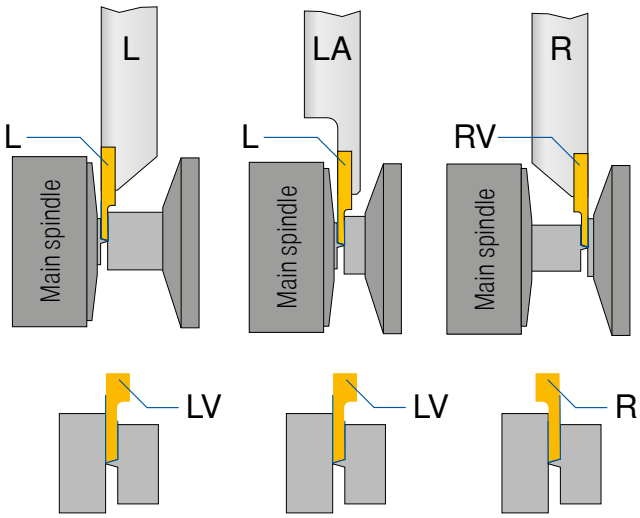
- The connection between the indexable insert and holder guarantees optimum fixation
- The second cutting edge can always be used, even if the first cutting edge is broken off
- Shearing forces do not act on the screws
- For all cutting edge forms, the overhang of the cutting edge from the tool holder is identical
- Vertical insert orientation maintained thanks to large seating surface
- The indexable insert seat is completely protected against swarf
- Inserts are clamped through two high-tensile screws and a tapered axial stop of 30° in all cutting directions

Clamping of cutting edge
With combi holders

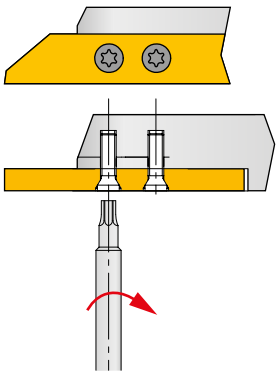


3

Turning away from the spindle



Clamping of cutting edge
With standard holders

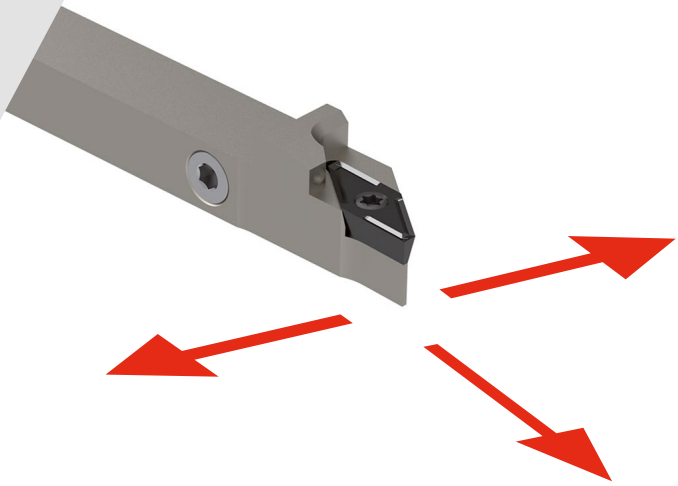


TriClamp

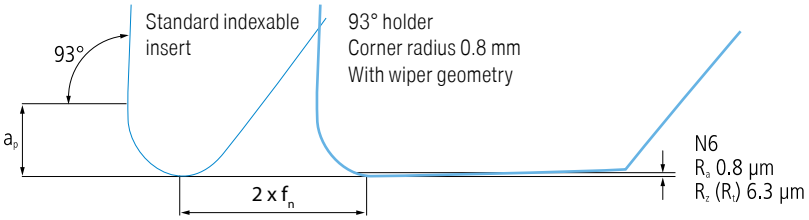
The feed rate can be doubled through the use of the TriClamp system with wiper geometry and 93° holder. This in turn allows machining times to be reduced considerably with no impact on quality, or the surface quality can be improved whilst retaining the same machining time. The ability to machine in a radial direction and in both axial directions makes this system particularly flexible.

Advantages

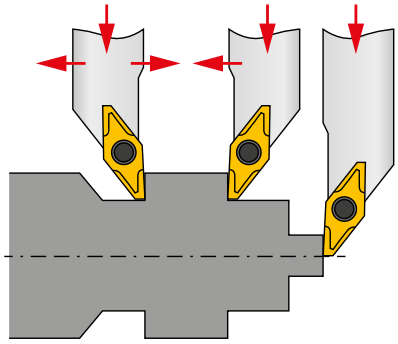
- Expansion of the ISO range
- Turning in three directions
- All cutting edges can easily be replaced
- Sharp positive cutting edges with 11° clearance angle
- Small corner radii 0.08 mm and 0.2 mm
- Perfect chip control
- Special holders for sliding head lathes (Cross-sections 8x8 mm to 16x16 mm)



Wiper geometry in detail:

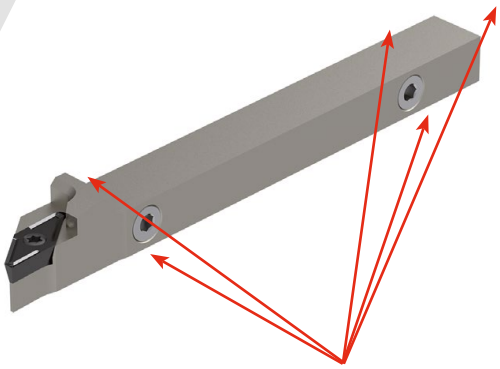


Applications:



Tool holders with a thro' coolant supply increase the performance of indexable inserts and improve the quality of components, particularly in the case of difficult-to-machine materials such as stainless steels and super alloys.

- All IC holders have five coolant supply options
- Made from highly tempered steel
- Precise coolant jet on the cutting edge
- Can be used at any coolant pressure



Coolant connection options

XheadClamp

The fast tool change with high repeatability has become a competitive advantage for series that usually have to be manufactured with the maximum chip evacuation possible. Ceratizit has taken this production requirement into account with the newly developed XheadClamp holder system. Time savings and an extremely short setup process are key advantages of the system. The XheadClamp system is also setting standards in terms of flexibility and ease of use.
With the XheadClamp, changing the indexable insert or geometry – e.g. switching from turning to grooving inserts – can be accomplished quickly, easily and with maximum precision.

Clamping method

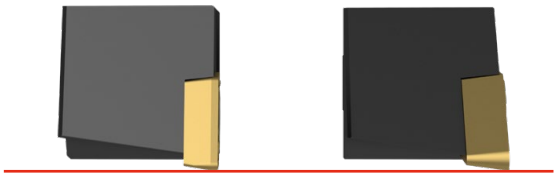
- Extremely high clamping forces
- Release and clamping of an exchangeable head using only one screw
- Repeatability of less than ± 7.5 µm
- Maximum stability

Versatility

- All heads can be installed regardless of system size
- Tools can be adapted to the component
- Fastest indexable insert change thanks to exchangeable head

Accuracy

- No variable X and Y dimensions when changing the head
- Repeatability of less than ±7.5 µm
- Centre height is retained even when the insert size is changed
- Two-nose system guarantees the correct position



ISO designation system for inserts

Indexable inserts – metric

C	N	M	G	12	04	08	E	N	-	M50
1	2	3	4	5	6	7	8	9		13

Indexable inserts – inch

C	N	M	G	4	3	2	E	N	-	M50
1	2	3	4	5	6	7	8	9		13

Indexable inserts, CBN, ceramic – metric

C	N	G	A	12	04	08	S	N	-	020D	_	B	3	-	Q
1	2	3	4	5	6	7	8	9		10		11	12		13

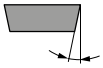
Indexable inserts, CBN, ceramic – inch

C	N	G	A	4	3	2	S	N	-	020D	_	B	3	-	Q
1	2	3	4	5	6	7	8	9		10		11	12		13

1 Insert shape

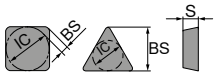
V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	
H	120°	
O	135°	
R	-	
S	90°	
T	60°	
W	80°	

2 Clearance angle



	α		α
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°		
O	Clearance angles not included within the standard for which particular information is necessary.		

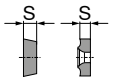
3 Tolerances



	IC±		BS		S	
	mm	inch	mm	inch	mm	inch
A	0,025	.0010	0,005	.0002	0,025	.001
F	0,013	.0005	0,005	.0002	0,025	.001
C	0,025	.0010	0,013	.0005	0,025	.001
H	0,013	.0005	0,013	.0005	0,025	.001
E	0,025	.0010	0,025	.0010	0,025	.001
G	0,025	.0010	0,025	.0010	0,13	.005
J	0,05-0,15*	.002-.006*	0,005	.0002	0,025	.001
K	0,05-0,15*	.002-.006*	0,013	.0005	0,025	.001
L	0,05-0,15*	.002-.006*	0,025	.0010	0,025	.001
M	0,05-0,15*	.002-.006*	0,05-0,20*	.003-.008*	0,13	.005
N	0,05-0,15*	.002-.006*	0,05-0,20*	.003-.008*	0,025	.001
U	0,08-0,25*	.003-.010*	0,13-0,38*	.005-.015*	0,13	.005

* Depends on insert size

6 Insert thickness



		Code	
mm	inch	mm	inch
1,59	1/16	01	1
2,38	3/32	02	
3,18	1/8	03	2
3,97	5/32	T3	
4,76	3/16	04	3
5,56	7/32	05	
6,35	1/4	06	4
7,94	5/16	07	5
9,52	3/8	09	6

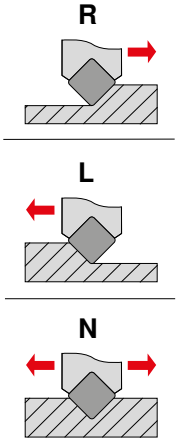
7 Corner radius

		Code		RN **00** RC **MO**
mm	inch	mm	inch	
≤ 0,05	.0015	00	X0	
0,1	.004	01	0	
0,2	.008	02	.5	
0,4	1/64	04	1	
0,8	1/32	08	2	
1,2	3/64	12	3	
1,6	1/16	16	4	
2,0	5/64	20	5	
2,4	3/32	24	6	
2,8	7/64	28	7	
3,2	1/8	32	8	

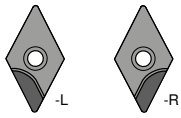
8 Cutting edge

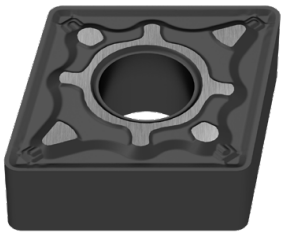
F	Sharp
E	rounded
T	chamfered
S	Chamfered and honed
K	Double-chamfered
P	Double-chamfered and honed
R	Round chamfer

9 Direction of cut



CBN and PCD segment orientation





4 Characteristics

N	
R	
F	
A	
M, P	
G, P	
W	
T	
Q	
U	
B	
H	
C	
J	
X	Special version

inch
Change at inscribed circle
IK < 1/4"

IK > 1/4"	IK < 1/4"
N / R / F	E
A / M / G	D
X	X

5 Cutting length

Type	ISO	ANSI	L mm	L inch	IC mm	IC inch
C	06	2	6,4	.250	6,35	.250
	09	3	9,7	.382	9,525	.375
	12	4	12,9	.508	12,70	.500
	16	5	16,1	.634	15,875	.625
	19	6	19,3	.760	19,05	.750
	25	8	25,8	1.016	25,4	1.000
	32	12	35,24	1.269	31,75	1.250
S	06	2	6,35	.250	6,35	.250
	09	3	9,525	.375	9,525	.375
	12	4	12,7	.500	12,7	.500
	15	5	15,875	.625	15,875	.625
	19	6	19,05	.750	19,05	.750
	25	8	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
D	07	2	7,7	.303	6,35	.250
	11	3	11,6	.457	9,525	.375
	15	4	15,5	.610	12,70	.500
V	11	2	11,1	.437	6,35	.250
	16	3	16,6	.653	9,525	.375
	22	4	22,10	.870	12,70	.500

* inch version

Type	ISO	ANSI	L mm	L inch	IC mm	IC inch
T	06	1.2	6,9	.272	3,97	.156
	09	1.8	9,6	.378	5,56	.219
	11	2	11,0	.433	6,35	.250
	16	3	16,5	.650	9,525	.375
	22	4	22,	.079	12,70	.039
	27	5	27,5	1.083	15,875	.625
	33	6	33,0	1.299	19,05	.750
W	06	3	6,5	.256	9,525	.375
	08	4	8,7	.331	12,70	.039
	10	5	10,9	.429	15,875	.625
R	06	2	6,35	.250	6,35	.250
	08	-	8,0	.315	8,0	.315
	09	3	9,52	.375	9,52	.375
	10	-	10,0	.394	10,0	.394
	12*	-	12,0	.472	12,0	.472
	12	4	12,7	.488	12,70	.488
	15	5	15,875	.625	15,875	.625
	16	-	16,0	.630	16,0	.630
	19	6	19,05	.750	19,05	.750
	25	8	25,0	.984	25,0	.984
	25*	-	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
	32	-	32,0	1.260	32,0	1.260

10 Chamfer type

T / S — K / P [1)]

	mm	inch		
015	0,15	.006	A	05°
020	0,20	.008	B	10°
025	0,25	.010	C	15°
050	0,50	.020	D	20°
075	0,75	.030	E	25°
100	1,00	.040	F	30°
			G	35°

1) Two letters are assigned for double-chamfered cutting edges
e.g. BE =
chamfer angle 1 (y_1) = 10°
chamfer angle 2 (y_2) = 25°

11 Number of cutting edges

Single sided

A	
B	
C	
D	
G	
H	

Complete insert thickness

T	
U	
V	
W	
X	
Y	

Double sided

K	
L	
M	
N	
P	
Q	

Entire clamping flat

S	
F	
E	

12 Segment length

LE

Approx. specification in mm

13 Chip breaker designation

You can find a comprehensive chip breaker overview on
→ **page 149–152**

3

ISO designation system for tool holders

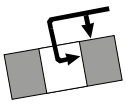
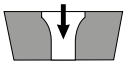
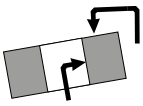
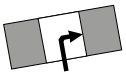
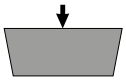
		P	C	L	N	R	20	20	K	12	- T
		1	2	3	4	5	6	7	8	9	10
UT50	-	P	C	L	N	R				-12	
0		1	2	3	4	5	6	7	8	9	10
HSK-T63	-	D	C	L	N	R				-12	
0		1	2	3	4	5	6	7	8	9	10

0 System/size

UT = UTS
according to ISO 26622
UT40 = UTS 40 mm
UT50 = UTS 50 mm
UT63 = UTS 63 mm

HSK-T
according to ISO 12164
HSK-T63 = 63 mm
HSK-T100 = 100 mm

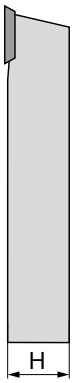
1 Tool holder

D  Retained from above and via bore	**S**  Retained via centre screw
M  Retained from above and via bore	**P**  Retained via the bore
C  Retained from above	**X** Special version

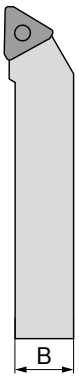
2 Insert shape

V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	Other shapes
H	120°	Other shapes
O	135°	Other shapes
R	-	Other shapes
S	90°	Other shapes
T	60°	Other shapes
W	80°	Other shapes

6 Shank height

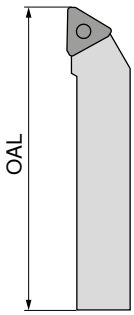


7 Shank width

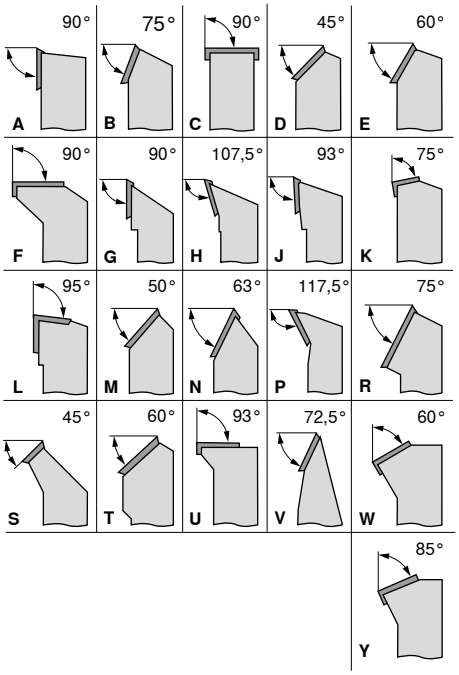


8 Tool length

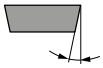
OAL			OAL		
mm	inch		mm	inch	
32	4.000	**A**	160	4.500	**N**
40	4.500	**B**	170	5.500	**P**
50	5.000	**C**	180	–	**Q**
60	6.000	**D**	200	6.000	**R**
70	7.000	**E**	250	7.000	**S**
80	8.000	**F**	300	8.000	**T**
90	5.500	**G**	350	5.500	**U**
100	5.625	**H**	400	3.500	**V**
110	5.300	**J**	450	3.500	**W**
125	14.000	**K**	500	3.750	**Y**
140	6.800	**L**	Special version		**X**
150	4.400	**M**			



3 Style

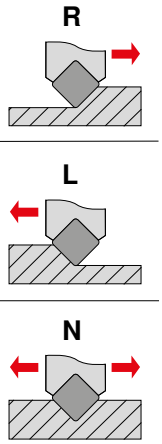


4 Clearance angle

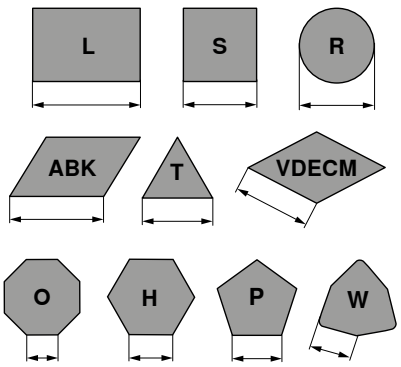


	α		α
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°		
O	Clearance angles not included within the standard for which particular information is necessary.		

5 Direction of cut



9 Cutting length



10 Manufacturer specification

T = Toggle
Special length (mm)
Insert thickness (deviating from standard)
Special version (X..)
Machine manufacturer (specific)

ISO designation system for boring bars

	1	2	3	4	5	6	7	8	9	10
A	25	R		P	C	L	N	R	12	
UT40 –		25	G –	P	C	L	N	R –	12	
HSK–T63 –		50	Q –	D	C	L	N	R –	12	

0

System/size

UT = UTS
according to ISO 26622
UT40 = UTS 40 mm
UT50 = UTS 50 mm
UT63 = UTS 63 mm

HSK–T
according to ISO 12164
HSK–T63 = 63 mm
HSK–T100 = 100 mm

1

Shank type

S	Steel shank	**E**	As C with coolant hole
A	Steel shank with coolant hole	**F**	As C with antivibration system
B	Steel shank with antivibration system	**G**	As C with coolant hole and antivibration system
D	Steel shank with coolant hole and antivibration system	**H**	Heavy metal
C	Carbide shank with steel head	**J**	Heavy metal with coolant hole

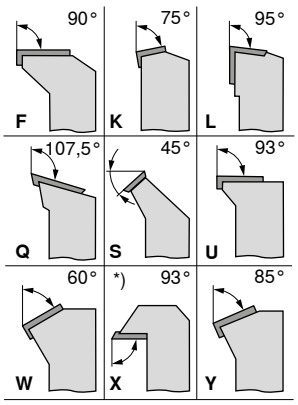
5

Insert shape

V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	
H	120°	
O	135°	
R	–	
S	90°	
T	60°	
W	80°	

6

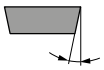
Style



*) CERATIZIT factory standard

7

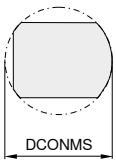
Clearance angle



	α		α
A	3°	**F**	25°
B	5°	**G**	30°
C	7°	**N**	0°
D	15°	**P**	11°
E	20°		
O	Clearance angles not included within the standard for which particular information is necessary.		

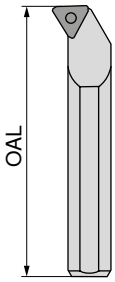
2 Shank type & size

DCONMS mm	DCONMS inch
08	A two-digit figure indicating the boring bar diameter in 1/16 of an inch.
10	
12	
16	
20	
25	
32	
40	
50	
60	



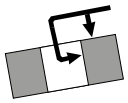
3 Tool length

OAL mm	OAL inch	
80	3	F
100	3,5	H
110	4	J
125	4,5	K
140	5	L
150	5,5	M
160	6	N
170	6,5	P
180	6,75	Q
200	7	R
250	8	S
300	10	T
350	12	U
400	14	V
450	16	W
500	18	Y
	20	
Special version		X



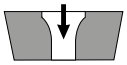
4 Clamping method

D



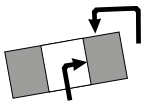
Retained from above and via bore

S



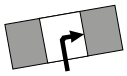
Retained via centre screw

M



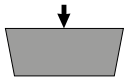
Retained from above and via bore

P



Retained via the bore

C



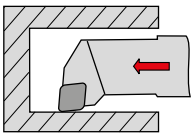
Retained from above

X

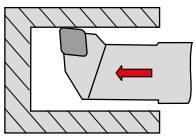
Special version

8 Direction of cut

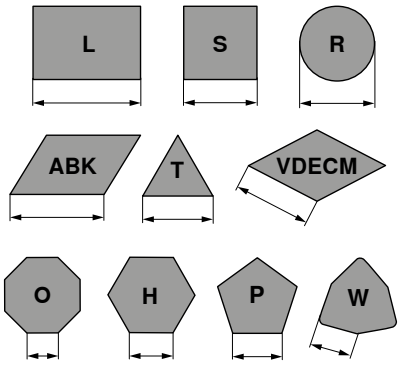
R



L



9 Cutting length



10 Manufacturer specification

T = Toggle
Special length (mm)
Insert thickness (deviating from standard)
Special version (X..)
Machine manufacturer (specific)

3

Types of wear

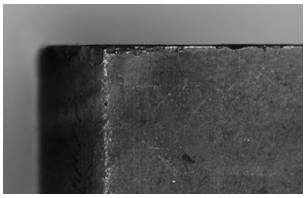
Wear on clearance face

Abrasion on flank: normal wear after a certain machining time

Cause
- Too high cutting speed
- Carbide grade with too low wear resistance
- Feed rate not adapted

Remedy
- Reduce cutting speed
- Use grade with higher wear resistance
- Adapt feed rate to cutting speed and cutting depth

Edge chipping

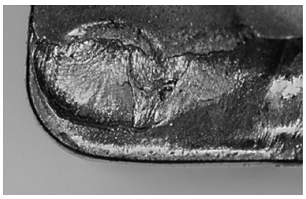


Through excessive mechanical stress at the cutting edge fracture and chipping can occur.

Cause
- Grade with too high wear resistance
- Vibration
- Too high cutting speed and / or feed rate
- Interrupted cut
- Swarf damage

Remedy
- Use tougher grade
- Use negative cutting edge geometry with chip groove
- Improve stability (tool, work piece)

Cratering

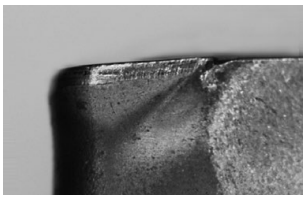


The hot chip which is being evacuated causes cratering at the rake face of the cutting edge.

Cause
- Too high cutting speed and / or feed rate
- Rake angle too shallow
- Grade with insufficient wear resistance
- Insufficient coolant supply

Remedy
- Reduce cutting speed and / or feed rate
- Use grade with higher wear resistance
- Increase coolant quantity and / or pressure, optimise coolant supply
- Use grade which is more resistant to cratering

Plastic deformation

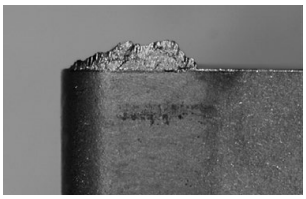


High machining temperature and simultaneous mechanical stress can lead to plastic deformation.

Cause
- Too high machining temperature resulting in softening of substrate
- Damage of coating
- Grade with insufficient wear resistance
- Insufficient coolant supply

Remedy
- Reduce cutting speed
- Use grade with higher wear resistance
- Provide cooling

Built-up edge

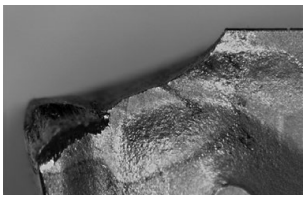


Built-up material / edges occur when the chip is not evacuated properly due to insufficient cutting temperature.

Cause
- Insufficient cutting speed
- Rake angle too shallow
- Wrong cutting material
- Lack of cooling / lubrication

Remedy
- Increase cutting speed
- Increase rake angle
- Apply TiN coating
- Use emulsion with higher concentration

Insert breakage



Excessive stress of the insert causes breakage.

Cause
- Excessive stress of cutting material
- Lack of stability
- Clearance angle too small

Remedy
- Use tougher grade
- Use protective edge chamfer
- Increase edge hone
- Use geometry with higher stability

Recommendation for Optimum Results

Type of problem														
Type of wear						Work piece problems				Swarf control				
Wear on clearance face	Cratering	Edge chipping	Plastic deformation	Insert breakage	Built-up edge	Vibration	Formation of pips and burrs	Chattered surface	Surface quality	Chip too long (snarl chip)	Chip too short (fragmented chip)			
↓↓	↓↓		↓↓		↓↓	↓			↑	↓		Cutting speed	Cutting data	Remedy measures
~		↓↓	↓	↓↓		↑		↓↓	↓↓	↑↑	↓↓	Feed rate		
↓	↓↓	↓↓	↓				↓↓	↓	↓			Feed rate at centre		
		↑↑	~		↓↓	~	↓↓	↓↓	↓	↓↓	↑↑	Chip groove ↑ ↓	Insert selection	
↑↑		↑↑	↑↑	↑		↓	↓↓	↓	↑			Corner radius ↑ larger / smaller ↓		
↑↑	↑↑	↓↓	↑↑	↓↓								Tool Material ↑ Wear resistance / toughness ↓		
		~		~		~		~	~			Tool clamping	General criteria	
		~		~		~		~	~			Work piece clamping		
		~		~		~			↓			Overhang		
~		~				~	~		~			Tip height		
●	~		●		●		●		●	●		Cooling lubricant		

↑↑ raise, increase large influence
↑ raise, increase small influence
↓↓ avoid, reduce large influence
↓ avoid, reduce small influence
~ check, optimise
● use

3

Grades Overview

Grade designation		Standard designation	ISO application range (01 05 10 15 20 25 30 35 40 45 50)	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O
CTCP115-P	DRAGONSKIN	P15 K25		●		○				
CTCP125-P	DRAGONSKIN	P25 K30		●		○				
CTCP135-P	DRAGONSKIN	P35 M25		●	○					
CTCM120	DRAGONSKIN	P30 M20		○	●					
CTPM125	DRAGONSKIN	P35 M25		○	●					
CTCM130	DRAGONSKIN	P40 M35 K30		○	●			○		
CTPP430	DRAGONSKIN	P35 K25		●		●				
CTPX710	DRAGONSKIN	P10 M10 N10 S15		●	●		●	●		
CTPX715	DRAGONSKIN	P10 M10 K15 N10 S15 O10		●	●	○	●	●		○
H216T		K15 N15 O10				○	●			○
H10T		K15 N15 O10				○	●			○
CWN15		M20 N20			○		●			
TCM10		P15 M10 K10		●	○	○				
WUU7610		P10 N10 S15 O15		○			●	○		●
WPU7610		P10 M10 K10 N10 S10 O10		●	●	○	●	●		○
WPU7620		P20 M20 K20 N20 S20 O20		●	●	○	○	●		○

● **Main Application**
○ Extended application

wear-resistant V_c+ ⟷ V_c– tough

Grades Overview

Grade designation	Standard designation	ISO application range (01, 05, 10, 15, 20, 25, 30, 35, 40, 45, 50)	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Stainless steels O
VertiClamp									
WPU7620	P20		●	●	○	○	●		○
	M20								
	K20								
	N20								
	S20								
	O20								
TriClamp									
WUU7610	P10		○			●	○		●
	N10								
	S15								
	O15								
WUU7620	P20		●			○	○		○
	N20								
	S20								
	O20								
WPU7610	P10		●	●	○	●	●		○
	M10								
	K10								
	N10								
	S10								
	O10								
WPU7620	P20		●	●	○	○	●		○
	M20								
	K20								
	N20								
	S20								
	O20								
TiAlN+	P20		●	●	○	○	●		○
	M20								
	K20								
	N20								
	S20								
	O20								

● **Main Application**
○ Extended application

wear-resistant V_c+ ⟷ V_c− tough

3

Grade description

CTCP115-P DRAGONSKIN
- Carbide, TiCN-Al_2O_3-coated
- with wear detection
- ISO | **P15** | K25
- The wear-resistant high-performance grades for stable conditions and continuous long cutting

CTCP125-P DRAGONSKIN
- Carbide, TiCN-Al_2O_3-coated
- with wear detection
- ISO | **P25** | K30
- The first choice for universal machining of steels

CTCP135-P DRAGONSKIN
- Carbide, TiCN-Al_2O_3-coated
- with wear detection
- ISO | **P35** | M25
- The robust alternative for heavily interrupted cutting and variable conditions

CTCM120 DRAGONSKIN
- Carbide, TiCN-Al_2O_3-coated
- ISO | P15 | **M20**
- Wear-resistant turning grade for austenitic stainless steel; top performance for smooth cuts

CTPM125 DRAGONSKIN
- ISO | P35 | **M25**
- The universal carbide grade with maximum toughness, without affecting the necessary hot hardness and wear resistance for stainless machining

CTCM130 DRAGONSKIN
- Carbide, TiCN-Al_2O_3-coated
- ISO | P25 | **M30**
- Robust turning grade for austenitic stainless steel with interrupted cuts

CTPX710 DRAGONSKIN
- Carbide, AlTiN-coated
- ISO | **P10** | **M10** | K10 | **N10** | **S15**
- Universal multi-material grade from the X7 line for highest machining requirements

CTPX715 DRAGONSKIN
- Carbide, AlTiN-coated
- ISO | **P10** | **M10** | K10 | **N10** | **S15** | O10
- Universal multi-material grade from the X7 line for highest machining requirements

CTPP430 DRAGONSKIN
- Carbide, TiAlN-coated
- ISO | **P30** | **M25** | K30 | S25 | N25
- The universal high-performance grades for steel, austenitic steel and heat-resistant alloys

H10T
- Carbide, uncoated
- ISO | K15 | **N15** | O10
- The uncoated carbide grade for machining aluminium and other non-ferrous metals

H210T
- Carbide, uncoated
- ISO | **N10** | **S10** | K10 | O10
- The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

H216T
- Carbide, uncoated
- ISO | K15 | **N15** | O10
- The uncoated carbide grade for machining aluminium and other non-ferrous metals
- Also highly suitable for HSC machining

CWN15
- Carbide, TiN-coated
- ISO | M15 | **K15**
- Special carbide grade for abrasive aluminium alloys

WUU7610
- Carbide, uncoated
- ISO | P10 | **N10** | S10
- Uncoated carbide grades tailored for machining non-ferrous metals

WUU7620
- Carbide, uncoated
- ISO | **P20** | **N20** | S20
- Uncoated carbide for steel machining

WPU7610
- Carbide, PVD-AlTiN
- ISO | **P10** | **K10** | M10 | N10 | **S10**
- Wear-resistant carbide grades for machining stainless steels and super alloys

WPU7620
- Carbide, PVD-AlTiN
- ISO | **P20** | M20 | **K20** | N20 | S20
- Universal, PVD-coated carbide grades for a wide range of applications

TiAlN+
- Carbide, TiAlN-coated
- ISO | **P20** | **M20** | K20 | N20 | **S20**
- Universal, PVD-coated carbide grades for a wide range of applications

CWN2120
- Carbide, TiN coating
- ISO | **K20** | N10
- The universal carbide grades for stainless steel and super alloys

Grade description

C T C P 1 2 5 (Example)

Main application – material

1|P	Steel
2|M	Stainless steel
3|K	Cast iron
4|N	Light and non ferrous metals
5|S	Super alloys, titanium
6|H	Hard materials
7|X	Universal application

Application

1	Turning
2	Milling
3	Grooving
4	Drilling
5	Thread turning
6	Others
7	Several processes

Degree of hardness

05	ISO 05
10	ISO 10
15	ISO 15
	...

Environmentally friendly, sustainable & cost-effective

Certified recycling of valuable carbide

By deliberately conserving limited primary resources, we aim to significantly increase the proportion of recovered materials using carbide recycling. Our certified recycling process allows us to transform our used carbide products into a reusable powder and, using extremely low amounts of energy, to completely convert the finished product back into its original form.

Join our sustainable material cycle

As part of our long-term partnership, we hope that we can together complete the cycle from the secondary raw material to a new finished product. Send us your used carbide. We will then process it in the approved manner. The price we offer for the returned carbide is always based on the current market price. Best of all: We take care of the entire process for you and also provide free, quantity-specific collection containers and transport solutions. Do you want to conserve valuable resources and make an important contribution to protecting the environment together with us? If so, our recycling process is just what you need.

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CERATIZIT \ Performance

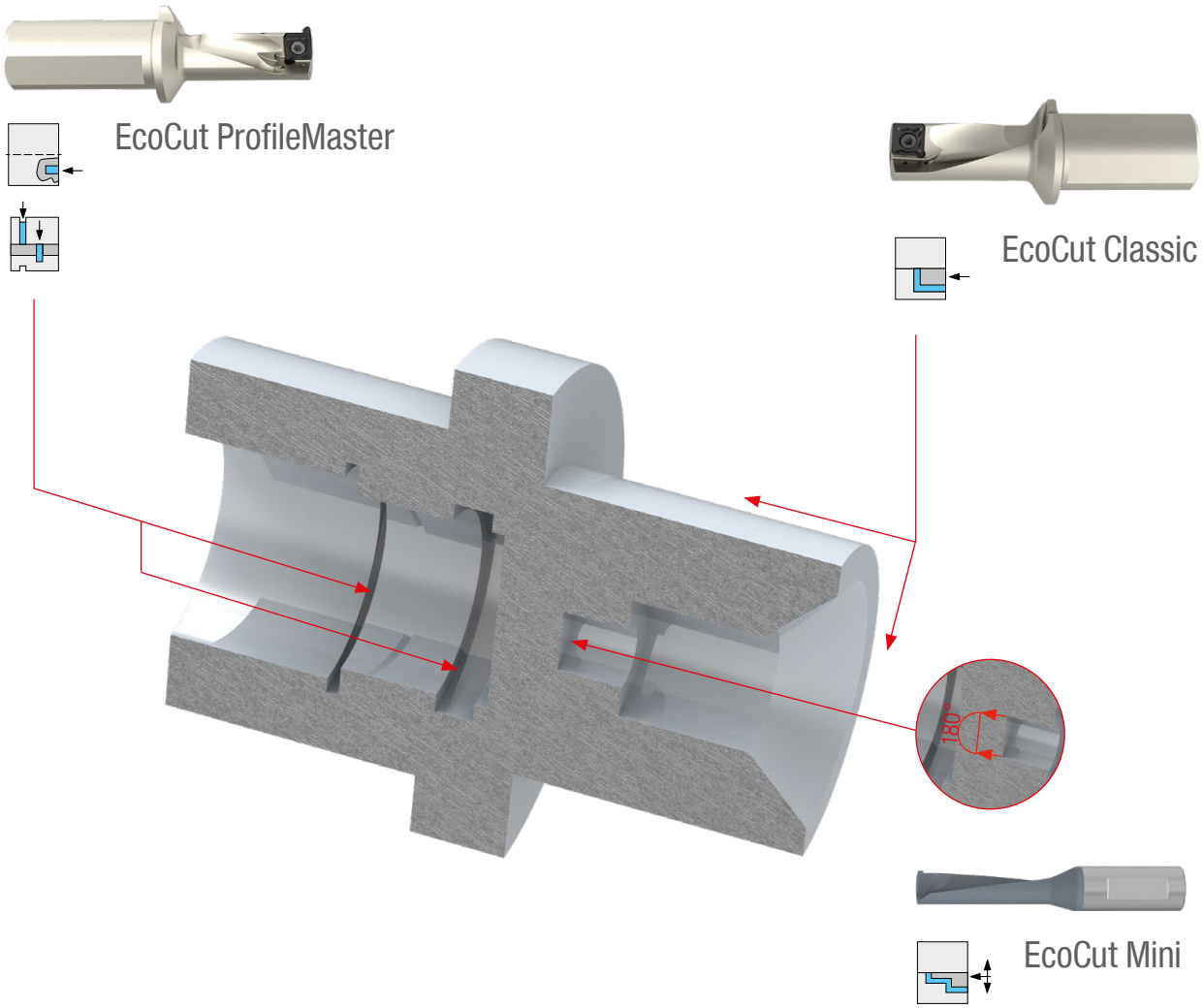
Premium quality tools for high performance.

The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

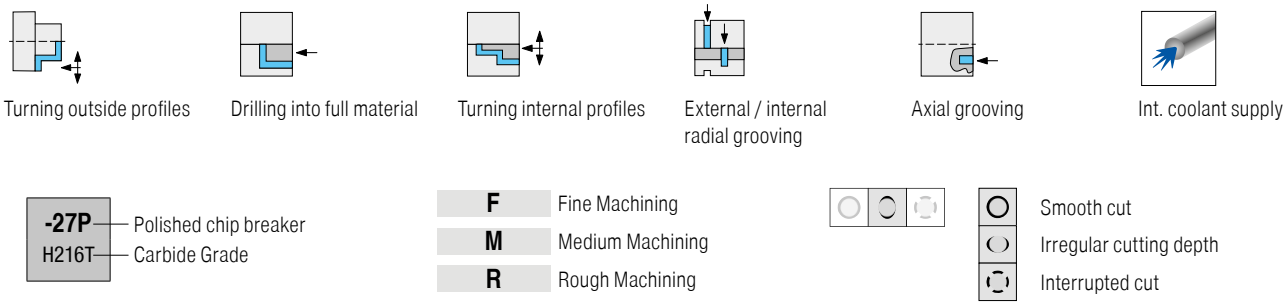
Advantages of EcoCut

- reduced machining time
- reduced need for tool positions
- generates flat bottom of hole
- less programming
- lower set-up costs / reduced setting time
- time savings due to fewer tool changes

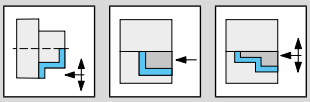
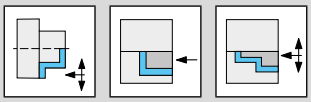
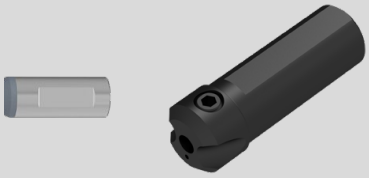
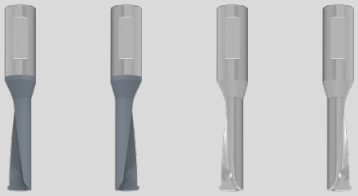
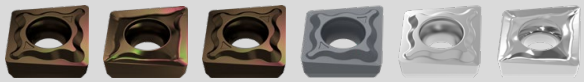
Application examples



Symbol explanation

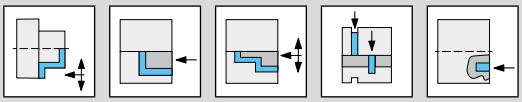


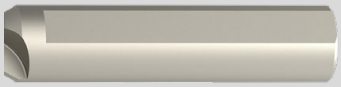
Toolfinder

Tool system	EcoCut Mini	EcoCut Classic
Application		
Machine interface	 → 177–178 Adapter for EcoCut Mini	 HSK-T 63
Lengths and diameters Versions	2,25xD Ø 2–8 → 176 4,0xD Ø 2–8 → 176	1,5xD Ø 8–32 → 180 2,25xD Ø 8–32 → 181 3,0xD Ø 8–32 → 182 2,25xD Ø 25–32
Cutting material designation	CTPP435	CTPP435	CTWN425	CTWN425	CTCP425	-M50Q CTCP425	CTCP435	CTPP430	-27P H216T	-27Q H210T
Cutting conditions	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		
										
	Solid carbide	Solid carbide	Solid carbide	Solid carbide	M	M	M	M	M	M
	Left-hand	Right-hand	Left-hand	Right-hand	XCNT	XCNT	XCNT	XCNT	XCET	XCET
Application range	●	●			●	●	●	●		
	●	●			○	○	○	●		
	○	○	○	○	○	○	○	○	●	○
	○	○	●	●				○	●	●
	●	●	○	○			○	○	○	●
	○	○	○	○				○	○	○
Page No.	→ 176	→ 176	→ 176	→ 176	→ 179	→ 179	→ 179	→ 179	→ 179	→ 179
	→ v_c Page 187				→ v_c Page 187					

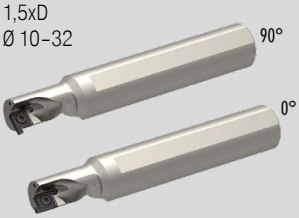
EcoCut tools are suitable for off-centre drilling. This permits certain deviations from the nominal tool diameter to be achieved
→ **For details, see the technical information.**

EcoCut ProfileMaster





1,5xD
Ø 10–32



→ 184

2,25xD
Ø 10–32

→ 185

-M20 CTPP430	-M20 CTPP430
DRAGONSKIN	DRAGONSKIN

M	M
PM-R	PM-L
●	●
●	●
○	○
○	○
●	●
○	○
→ 183	→ 183

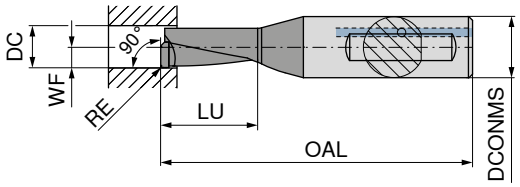
→ v_c Page 187

3

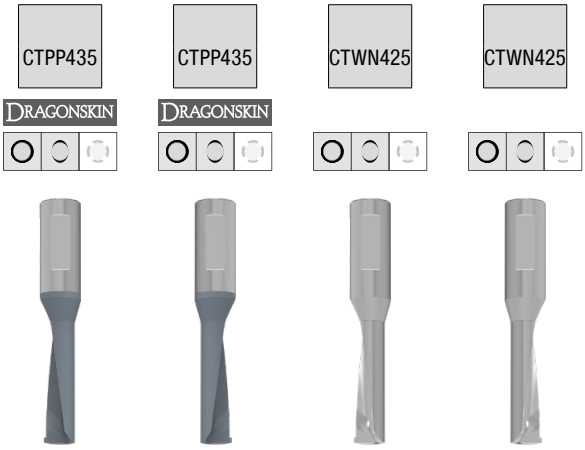
EcoCut – Mini

▲ Drilling and turning tool for small diameters

≥ Ø 2 mm



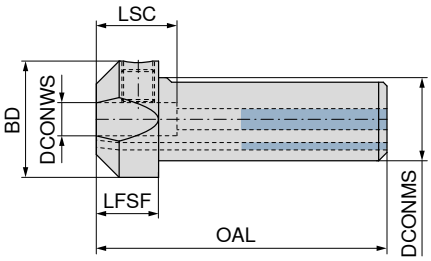
Illustrations show right-hand versions



Designation	DC mm	DCONMS mm	OAL mm	LU mm	WF mm	RE mm	Solid carbide Left-hand 70 805 ...	Solid carbide Right-hand 70 804 ...	Solid carbide Left-hand 70 805 ...	Solid carbide Right-hand 70 804 ...
ECM 02 R/L 2,25D	2.0	4	28	4.50	1.00	0.1	320	320		
ECM 02 R/L 2,25D AL	2.0	4	28	4.50	1.00	0.1			420	420
ECM 02 R/L 4,00D	2.0	4	31	8.00	1.00	0.1	321	321		
ECM 02 R/L 4,00D AL	2.0	4	31	8.00	1.00	0.1			421	421
ECM 02,5 R/L 2,25D	2.5	4	29	5.63	1.25	0.1	325	325		
ECM 02,5 R/L 2,25D AL	2.5	4	29	5.63	1.25	0.1			425	425
ECM 02,5 R/L 4,00D	2.5	4	33	10.00	1.25	0.1	326	326		
ECM 02,5 R/L 4,00D AL	2.5	4	33	10.00	1.25	0.1			426	426
ECM 03 R/L 2,25D	3.0	4	31	6.75	1.50	0.1	330	330		
ECM 03 R/L 2,25D AL	3.0	4	31	6.75	1.50	0.1			430	430
ECM 03 R/L 4,00D	3.0	4	35	12.00	1.50	0.1	331	331		
ECM 03 R/L 4,00D AL	3.0	4	35	12.00	1.50	0.1			431	431
ECM 03,5 R/L 2,25D	3.5	4	32	7.88	1.75	0.1	335	335		
ECM 03,5 R/L 2,25D AL	3.5	4	32	7.88	1.75	0.1			435	435
ECM 03,5 R/L 4,00D	3.5	4	37	14.00	1.75	0.1	336	336		
ECM 03,5 R/L 4,00D AL	3.5	4	37	14.00	1.75	0.1			436	436
ECM 04 R/L 2,25D	4.0	6	35	9.00	2.00	0.2	300	300		
ECM 04 R/L 2,25D AL	4.0	6	35	9.00	2.00	0.2			450	450
ECM 04 R/L 4,00D	4.0	6	41	16.00	2.00	0.2	301	301		
ECM 04 R/L 4,00D AL	4.0	6	41	16.00	2.00	0.2			451	451
ECM 05 R/L 2,25D	5.0	6	37	11.25	2.50	0.2	302	302		
ECM 05 R/L 2,25D AL	5.0	6	37	11.25	2.50	0.2			452	452
ECM 05 R/L 4,00D	5.0	6	45	20.00	2.50	0.2	303	303		
ECM 05 R/L 4,00D AL	5.0	6	45	20.00	2.50	0.2			453	453
ECM 06 R/L 2,25D	6.0	8	38	13.50	3.00	0.2	306	306		
ECM 06 R/L 2,25D AL	6.0	8	38	13.50	3.00	0.2			456	456
ECM 06 R/L 4,00D	6.0	8	49	24.00	3.00	0.2	312	312		
ECM 06 R/L 4,00D AL	6.0	8	49	24.00	3.00	0.2			462	462
ECM 07 R/L 2,25D	7.0	8	42	15.75	3.50	0.2	308	308		
ECM 07 R/L 2,25D AL	7.0	8	42	15.75	3.50	0.2			458	458
ECM 07 R/L 4,00D	7.0	8	53	28.00	3.50	0.2	314	314		
ECM 07 R/L 4,00D AL	7.0	8	53	28.00	3.50	0.2			464	464
ECM 08 R/L 2,25D	8.0	8	45	18.00	4.00	0.2	310	310		
ECM 08 R/L 2,25D AL	8.0	8	45	18.00	4.00	0.2			460	460
ECM 08 R/L 4,00D	8.0	8	57	32.00	4.00	0.2	316	316		
ECM 08 R/L 4,00D AL	8.0	8	57	32.00	4.00	0.2			466	466
P							●	●		
M							●	●		
K							○	○	○	○
N							○	○	●	●
S							●	●	○	○
H										
O							○	○	○	○

→ v_c Page 187

EcoCut – Adapter Mini

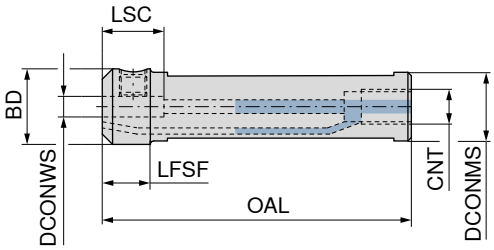


Designation	DCONWS mm	DCONMS mm	BD mm	OAL mm	LFSF mm	LSC mm	70 800 ...
EC-ADX16-04	4	16.00	22	59.0	14	18	**716**
EC-ADX12-04-E	4	19.05	25	63.5	14	18	**719**
EC-ADX20-04	4	20.00	25	64.0	14	18	**720**
EC-ADX16-06	6	16.00	22	59.0	14	18	**976**
EC-ADX12-06-E	6	19.05	25	63.5	14	18	**986**
EC-ADX20-06	6	20.00	25	64.0	14	18	**996**
EC-ADX16-08	8	16.00	22	59.0	14	18	**978**
EC-ADX12-08-E	8	19.05	25	63.5	14	18	**988**
EC-ADX20-08	8	20.00	25	64.0	14	18	**998**

Clamping screw

Spare parts for Article no.		70 950 ...
70 800 716	M5x10 ISO 4026	**867**
70 800 719	M5x10 ISO 4026	**867**
70 800 720	M5x10 ISO 4026	**867**
70 800 976	M8x1x8 – SW4	**123**
70 800 986	M8x1x8 – SW4	**123**
70 800 996	M8x1x8 – SW4	**123**
70 800 978	M8x1x8 – SW4	**123**
70 800 988	M8x1x8 – SW4	**123**
70 800 998	M8x1x8 – SW4	**123**

EcoCut – Mini adapter with coolant connection thread



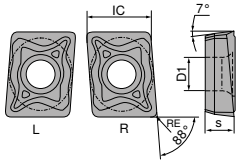
Designation	DCONWS mm	DCONMS mm	BD mm	OAL mm	LFSF mm	LSC mm	Thread	70 801 ...
ECA 16-04	4	16.00	20.0	75	14	18	G 1/8	**716**
ECA 0750-04	4	19.05	20.0	100	14	18	G 1/8	**719**
ECA 20-04	4	20.00	19.6	90	14	18	G 1/8	**720**
ECA 22-04	4	22.00	21.6	110	14	18	G 1/8	**722**
ECA 25-04	4	25.00	24.6	110	14	18	G 1/8	**725**
ECA 1000-04	4	25.40	25.0	110	14	18	G 1/8	**726**
ECA 16-06	6	16.00	22.0	75	14	18	G 1/8	**816**
ECA 0750-06	6	19.05	22.0	100	14	18	G 1/8	**819**
ECA 20-06	6	20.00	22.0	90	14	18	G 1/8	**820**
ECA 22-06	6	22.00	21.6	110	14	18	G 1/8	**822**
ECA 25-06	6	25.00	24.6	110	14	18	G 1/8	**825**
ECA 1000-06	6	25.40	25.0	110	14	18	G 1/8	**826**
ECA 16-08	8	16.00	22.0	75	14	18	G 1/8	**916**
ECA 0750-08	8	19.05	22.0	100	14	18	G 1/8	**919**
ECA 20-08	8	20.00	22.0	90	14	18	G 1/8	**920**
ECA 22-08	8	22.00	21.6	110	14	18	G 1/8	**922**
ECA 25-08	8	25.00	24.6	110	14	18	G 1/8	**925**
ECA 1000-08	8	25.40	25.0	110	14	18	G 1/8	**926**

Clamping screw

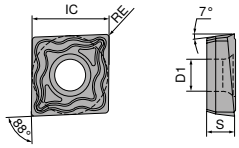
Spare parts for Article no.		70 950 ...
70 801 716	M5X8 – DIN 913	**13200**
70 801 719	M5X8 – DIN 913	**13200**
70 801 720	M5X8 – DIN 913	**13200**
70 801 722	M5X8 – DIN 913	**13200**
70 801 725	M5x10 ISO 4026	**867**
70 801 726	M5x10 ISO 4026	**867**
70 801 816	M8x1x8 – SW4	**123**
70 801 819	M8x1x8 – SW4	**123**
70 801 820	M8x1x8 – SW4	**123**
70 801 822	M8x1x8 – SW4	**123**
70 801 825	M8x1x8 – SW4	**123**
70 801 826	M8x1x8 – SW4	**123**
70 801 916	M8x1x8 – SW4	**123**
70 801 919	M8x1x8 – SW4	**123**
70 801 920	M8x1x8 – SW4	**123**
70 801 922	M8x1x8 – SW4	**123**
70 801 925	M8x1x8 – SW4	**123**
70 801 926	M8x1x8 – SW4	**123**

XCNT / XCET

Designation	S mm	D1 mm	IC mm
XC.T 0401..	1.80	2.10	4.5
XC.T 0502..	2.10	2.25	5.8
XC.T 0602..	2.38	2.50	6.5
XC.T 0703..	3.18	2.80	7.6
XC.T 0803..	3.18	3.40	8.5

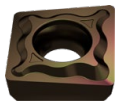
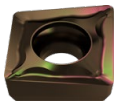
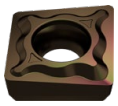
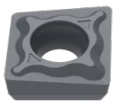
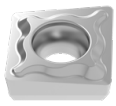


XC. T 04..



XC. T 05../06../07../08../09../10../13../17..

XCNT / XCET

		CTCP425	-M50Q CTCP425	CTCP435	CTPP430	-27P H216T	-27Q H210T
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		
							
		M	M	M	M	M	M
		XCNT	XCNT	XCNT	XCNT	XCET	XCET
		70 386 ...	70 386 ...	70 386 ...	70 386 ...	70 286 ...	70 286 ...
ISO	RE mm						
040102EL	0.2	720		820	920		
040102ER	0.2	722		822	922		
040102FL	0.2					620	120
040102FR	0.2					622	122
040104EL	0.4	700	750	800	900		
040104ER	0.4	702	752	802	902		
040104FL	0.4					600	100
040104FR	0.4					602	102
050202EN	0.2	723		823	923		
050202FN	0.2					623	123
050204EN	0.4	703	753	803	903		
050204FN	0.4					603	103
060202EN	0.2	724		824	924		
060202FN	0.2					624	124
060204EN	0.4	704	754	804	904		
060204FN	0.4					604	104
070304EN	0.4	705	755	805	905		
070304FN	0.4					605	105
080304EN	0.4	706	756	806	906		
080304FN	0.4					606	106
P		●	●	●	●		
M		○	○	○	●		
K		○	○	○	○	●	○
N					○	●	●
S				○	○	○	●
H							
O					○	○	○

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3

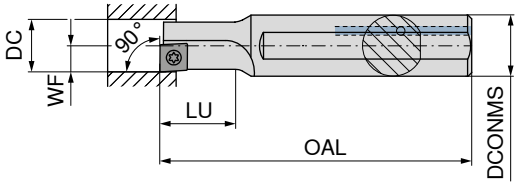
EcoCut – Classic 1.5xD

▲ Drilling and turning tool

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

≥ Ø 8 mm



Illustrations show right-hand versions

Left-hand

Right-hand

Designation	DC mm	DCONMS mm	OAL mm	LU mm	WF mm	torque moment Nm	Insert	70 805 ...	70 804 ...
ECC 08 L 1,5D 04	8	12	80	12	4	0,4	XC.T 0401..EL	**008** [2]	
ECC 08 R 1,5D 04	8	12	80	12	4	0,4	XC.T 0401..ER		**008** [1]
ECC 10 R/L 1,5D 05	10	12	90	15	5	0,7	XC.T 0502..	**010**	**010**
ECC 12 R/L 1,5D 06	12	16	100	18	6	1,0	XC.T 0602..	**012**	**012**
ECC 14 R/L 1,5D 07	14	16	110	21	7	1,2	XC.T 0703..	**014**	**014**
ECC 16 R/L 1,5D 08	16	20	125	24	8	2,2	XC.T 0803..	**016**	**016**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Key D

Clamping screw

Spare parts for Article no.		80 950 ...		70 950 ...
70 805 008	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 804 008	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 805 010 / 70 804 010	T06 – IP	**123**	M2x4,3 – IP	**863**
70 805 012 / 70 804 012	T07 – IP	**124**	M2,2x5 – IP	**856**
70 805 014 / 70 804 014	T08 – IP	**125**	M2,5x6 – IP	**857**
70 805 016 / 70 804 016	T09 – IP	**126**	M3x7 – IP	**819**

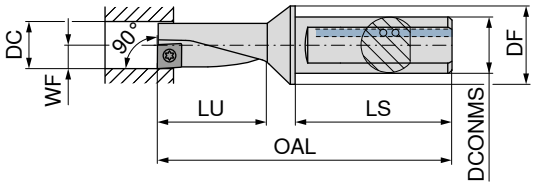
EcoCut – Classic 2.25xD

▲ Drilling and turning tool

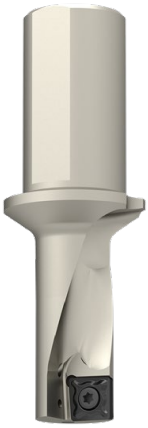
Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

≥ Ø 8 mm



Illustrations show right-hand versions



Designation	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	LS mm	WF mm	torque moment Nm	Insert	Left-hand 70 805 ...	Right-hand 70 804 ...
ECC 08 L 2,25D 04	8	10	12	60.0	18.0	38	4	0,4	XC.T 0401..EL	**108** 2)	
ECC 08 R 2,25D 04	8	10	12	60.0	18.0	38	4	0,4	XC.T 0401..ER		**108** 1)
ECC 10 R/L 2,25D 05	10	12	16	69.5	22.5	42	5	0,7	XC.T 0502..	**110**	**110**
ECC 12 R/L 2,25D 06	12	16	20	78.0	27.0	45	6	1,0	XC.T 0602..	**112**	**112**
ECC 14 R/L 2,25D 07	14	16	20	83.5	31.5	45	7	1,2	XC.T 0703..	**114**	**114**
ECC 16 R/L 2,25D 08	16	20	25	94.0	36.0	50	8	2,2	XC.T 0803..	**116**	**116**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

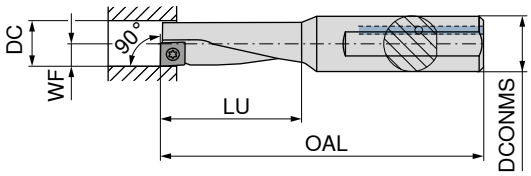
Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 805 108	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 804 108	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 805 110 / 70 804 110	T06 – IP	**123**	M2x4,3 – IP	**863**
70 805 112 / 70 804 112	T07 – IP	**124**	M2,2x5 – IP	**856**
70 805 114 / 70 804 114	T08 – IP	**125**	M2,5x6 – IP	**857**
70 805 116 / 70 804 116	T09 – IP	**126**	M3x7 – IP	**819**

EcoCut – Classic 3xD – Heavy metal

- ▲ Drilling and turning tool
- ▲ vibration-damped

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver



Illustrations show right-hand versions

Designation	DC mm	DCONMS mm	OAL mm	LU mm	WF mm	torque moment Nm	Insert	Left-hand 70 805 ...	Right-hand 70 804 ...
ECC 08 L 3,00D 04 H	8	12	80	24	4	0,4	XC.T 0401..EL	**608** 2)	
ECC 08 R 3,00D 04 H	8	12	80	24	4	0,4	XC.T 0401..ER		**608** 1)
ECC 10 R/L 3,00D 05 H	10	12	85	30	5	0,7	XC.T 0502..	**610**	**610**
ECC 12 R/L 3,00D 06 H	12	16	95	36	6	1,0	XC.T 0602..	**612**	**612**
ECC 14 R/L 3,00D 07 H	14	16	100	42	7	1,2	XC.T 0703..	**614**	**614**
ECC 16 R/L 3,00D 08 H	16	20	110	48	8	2,2	XC.T 0803..	**616**	**616**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

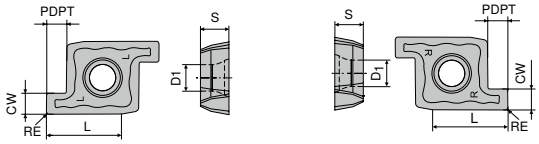
Key D

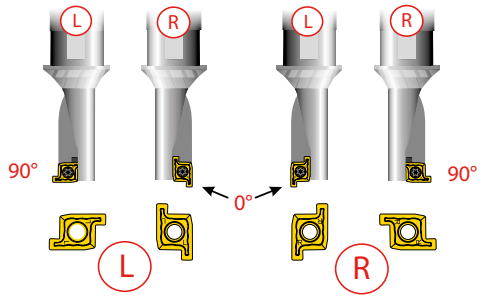
Clamping screw

Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 805 608	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 804 608	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 805 610 / 70 804 610	T06 – IP	**123**	M2x4,3 – IP	**863**
70 805 612 / 70 804 612	T07 – IP	**124**	M2,2x5 – IP	**856**
70 805 614 / 70 804 614	T08 – IP	**125**	M2,5x6 – IP	**857**
70 805 616 / 70 804 616	T09 – IP	**126**	M3x7 – IP	**819**

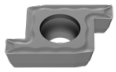
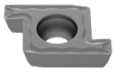
PM-R / PM-L

Designation	CW mm	PDPT mm	L mm	S mm	D1 mm
PM 10 G 201504	2.0	1.5	5	2.10	2.1
PM 12 G 201804	2.0	1.8	6	2.30	2.5
PM 16 G 252004	2.5	2.0	8	2.80	3.4





PM-L / PM-R

ISO	RE mm	-M20 CTPP430 DRAGONSKIN	-M20 CTPP430 DRAGONSKIN
			
		M PM-L 70 289 ...	M PM-R 70 289 ...
PM 10 G 201504	0.4	510	511
PM 12 G 201804	0.4	515	516
PM 16 G 252004	0.4	520	521
P		●	●
M		●	●
K		○	○
N		○	○
S		●	●
H			
O		○	○

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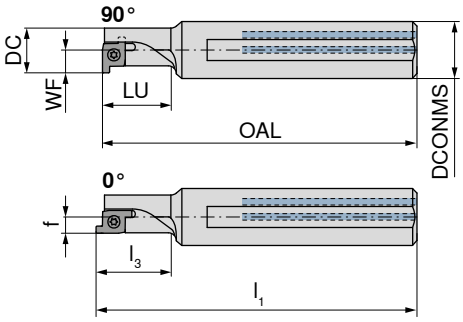
EcoCut – ProfileMaster 1.5xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver

≥ Ø 10 mm



Illustrations show right-hand versions

Designation	DC mm	DCONMS mm	OAL mm	LU mm	WF mm	l_1 mm	l_3 mm	f mm	torque moment Nm	Insert	Left-hand 70 821 ...	Right-hand 70 820 ...
PMC 10 R/L 1,5D	10	12	80	15	5				0,4	PM 10R/L	**010** [1]	**010** [1]
PMC 12 R/L 1,5D	12	16	90	18	6				1,0	PM 12R/L	**012** [1]	**012** [1]
PMC 16 R/L 1,5D	16	20	125	24	8	127.3	26.3	5.7	2,2	PM 16R/L	**016**	**016**

1) only usable as 90° version

Spare parts		Key D 80 950 ...		Clamping screw 70 950 ...
70 820 010 / 70 821 010	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 820 012 / 70 821 012	T07 – IP	**124**	M2,2x4,2 – IP	**137**
70 820 016 / 70 821 016	T09 – IP	**126**	M3x5,7 – IP	**008**

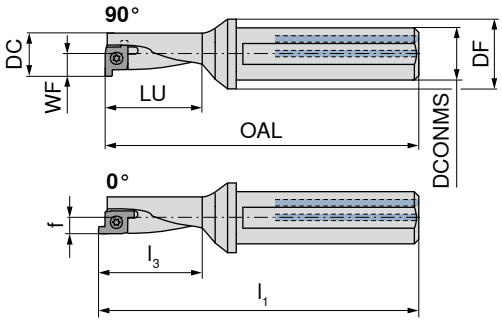
EcoCut – ProfileMaster 2.25xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver

≥ Ø 10 mm



Illustrations show right-hand versions

Designation	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	WF mm	l_1 mm	l_3 mm	f mm	torque moment Nm	Insert	Left-hand 70 821 ...	Right-hand 70 820 ...
PMC 10 R/L 2,25D	10	12	18	72.4	22.5	5				0,4	PM 10R/L	**110** [1]	**110** [1]
PMC 12 R/L 2,25D	12	16	22	78.0	27.0	6				1,0	PM 12R/L	**112** [1]	**112** [1]
PMC 16 R/L 2,25D	16	20	28	96.5	36.0	8	98.8	38.3	5.7	2,2	PM 16R/L	**116**	**116**

1) only usable as 90° version

Key D

Clamping screw

Spare parts		Key D 80 950 ...		Clamping screw 70 950 ...
70 820 110 / 70 821 110	T06 – IP	**123**	M1,8x3,6 – IP	**862**
70 820 112 / 70 821 112	T07 – IP	**124**	M2,2x4,2 – IP	**137**
70 820 116 / 70 821 116	T09 – IP	**126**	M3x5,7 – IP	**008**

3

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe – basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

Cutting data standard values for EcoCut

		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN
	EcoCut Mini CTWN425	EcoCut Mini CTPP435	EcoCut Classic CTCP425	EcoCut Classic CTCP435	EcoCut Classic CTPP430	EcoCut Classic H210T	EcoCut Classic H216T	EcoCut ProfileMaster CTPP430
Index	v_c in m/min							
P.1.1		**146**	**227**	**208**	**182**			**168**
P.1.2		**125**	**197**	**179**	**156**			**141**
P.1.3		**106**	**169**	**151**	**132**			**115**
P.1.4		**100**	**160**	**142**	**124**			**106**
P.1.5		**90**	**146**	**128**	**112**			**94**
P.2.1		**128**	**202**	**183**	**160**			**145**
P.2.2		**98**	**158**	**140**	**122**			**104**
P.2.3		**90**	**146**	**128**	**112**			**94**
P.2.4		**67**	**112**	**94**	**82**			**61**
P.3.1		**104**	**156**	**143**	**116**			**112**
P.3.2		**67**	**113**	**98**	**86**			**76**
P.3.3		**31**	**70**	**53**	**56**			**39**
P.4.1		**104**	**156**	**143**	**116**			**112**
P.4.2		**86**	**134**	**120**	**101**			**94**
M.1.1		**104**	156	143	**116**			**112**
M.2.1		**67**			**86**			**76**
M.3.1		**93**			**107**			**102**
K.1.1	140	140	205	185	160	110	**170**	180
K.1.2	115	120	205	185	140	90	**130**	260
K.2.1	150	140	200	180	160	120	**180**	160
K.2.2	110	120	200	180	140	85	**130**	250
K.3.1	170	150	195	175	125	140	**190**	130
K.3.2	140	125	195	175	110	110	**160**	230
N.1.1	**300**	40			40	**40**	**60**	300
N.1.2	**50**	290			290	**290**	**310**	200
N.2.1	**300**	290			290	**290**	**60**	300
N.2.2	**300**	190			190	**190**	**460**	200
N.2.3	**450**	340			340	**340**	**60**	150
N.3.1	**350**	240			240	**240**	**460**	300
N.3.2	**350**	240			240	**240**	**460**	300
N.3.3	**250**	190			190	**190**	**360**	200
N.4.1	**200**	140			140	**140**	**260**	200
S.1.1	38	**35**		35	55	**33**	43	**35**
S.1.2	28	**30**		30	55	**25**	33	**30**
S.2.1	28	**18**		18	55	**25**	33	**20**
S.2.2	24	**15**		15	55	**20**	25	**15**
S.2.3	20	**15**		15	55	**20**	20	**15**
S.3.1	90	**85**		85	70	**65**	110	**85**
S.3.2	55	**40**		40	60	**43**	70	**40**
S.3.3	40	**30**		30	40	**30**	50	**30**
H.1.1								
H.1.2								
H.1.3								
H.1.4								
H.2.1								
H.3.1								
O.1.1	130	110			110	110	155	130
O.1.2								
O.2.1	105	95			95	95	140	105
O.2.2								
O.3.1								

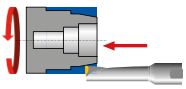
The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

3

Depth of Cut and Feedrate for EcoCut Mini

Turning

2.25xD

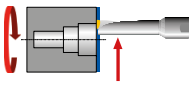


EcoCut Mini Size		Depth of Cut a_p in mm								
	0,25	0,5	0,75	1,0	1,5	2,0	2,5	3,0	3,5	4,0
		Feed rate f in mm/rev.								
ECM 02..	0,02–0,07	0,02–0,07								
ECM 02,5..	0,02–0,07	0,02–0,07	0,02–0,05							
ECM 03..	0,02–0,07	0,02–0,07	0,02–0,05	0,02–0,05						
ECM 03,5..	0,02–0,07	0,02–0,07	0,02–0,05	0,02–0,05	0,02–0,05					
ECM 04..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,07	0,01–0,05				
ECM 05..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,02–0,06	0,01–0,04			
ECM 06..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,02–0,06	0,01–0,04		
ECM 07..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,02–0,06	0,01–0,04	
ECM 08..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,02–0,06	0,01–0,04

4xD

EcoCut Mini Size		Depth of Cut a_p in mm								
	0,25	0,5	0,75	1,0	1,5	2,0	2,5	3,0	3,5	4,0
		Feed rate f in mm/rev.								
ECM 02..	0,02–0,05	0,01–0,05								
ECM 02,5..	0,02–0,05	0,01–0,05								
ECM 03..	0,02–0,05	0,02–0,05	0,01–0,05							
ECM 03,5..	0,02–0,05	0,02–0,05	0,02–0,05	0,01–0,05						
ECM 04..	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,01–0,05					
ECM 05..	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,085	0,02–0,06	0,01–0,04				
ECM 06..	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,085	0,02–0,06	0,01–0,04				
ECM 07..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,03–0,08	0,02–0,06	0,01–0,04			
ECM 08..	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,1	0,04–0,095	0,03–0,08	0,02–0,06	0,01–0,04		

Face turning

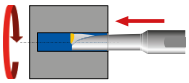


EcoCut Mini Size	2,25xD		4xD	
	$a_{p\,max.}$ in mm	f in mm/rev.	$a_{p\,max.}$ in mm	f in mm/rev.
ECM 02..	0,30	0,01–0,05	0,30	0,01–0,03
ECM 02,5..	0,30	0,01–0,05	0,30	0,01–0,03
ECM 03..	0,50	0,01–0,06	0,50	0,01–0,04
ECM 03,5..	0,50	0,01–0,06	0,50	0,01–0,04
ECM 04..	0,70	0,03–0,07	0,70	0,02–0,05
ECM 05..	0,70	0,03–0,07	0,70	0,02–0,05
ECM 06..	0,70	0,03–0,07	0,70	0,02–0,05
ECM 07..	1,00	0,04–0,08	1,00	0,03–0,06
ECM 08..	1,00	0,04–0,08	1,00	0,03–0,06

Depth of Cut and Feedrate for EcoCut Mini

Drilling

Feed rate



EcoCut Mini Size	2,25xD	4xD
	f in mm/rev.	f in mm/rev.
ECM 02..	0,0025–0,0075	0,0025–0,005
ECM 02,5..	0,0025–0,010	0,0025–0,005
ECM 03..	0,0025–0,0125	0,0025–0,010
ECM 03,5..	0,0025–0,0150	0,0025–0,010
ECM 04..	0,005–0,030	0,005–0,0125
ECM 05..	0,005–0,030	0,005–0,015
ECM 06..	0,005–0,030	0,005–0,020
ECM 07..	0,005–0,035	0,005–0,025
ECM 08..	0,005–0,040	0,005–0,030

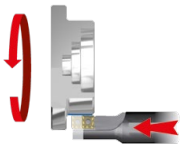
max. bore depth

EcoCut Mini Size	2,25xD	4xD
	Max. hole depth in mm	Max. hole depth in mm
ECM 02..	4,50	8,0
ECM 02,5..	5,63	10,0
ECM 03..	6,75	12,0
ECM 03,5..	7,88	14,0
ECM 04..	9,0	16,0
ECM 05..	11,25	20,0
ECM 06..	13,5	24,0
ECM 07..	15,75	28,0
ECM 08..	18,0	32,0

Depth of Cut and Feedrate for EcoCut Classic

Turning

1.5xD



EcoCut Classic Size	Depth of Cut a_p in mm											
	1	2	3	4	5	6	7	8	9	10	12	14
	Feed rate f in mm/rev.											
ECC 08	0,06–0,12	0,06–0,12	0,04–0,10	0,02–0,08								
ECC 10	0,07–0,15	0,07–0,15	0,05–0,13	0,04–0,11	0,02–0,09							
ECC 12	0,08–0,16	0,08–0,16	0,08–0,16	0,06–0,14	0,04–0,12	0,02–0,10						
ECC 14	0,09–0,18	0,09–0,18	0,09–0,18	0,09–0,18	0,07–0,16	0,05–0,14	0,02–0,11					
ECC 16	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20	0,08–0,18	0,06–0,16	0,04–0,14	0,02–0,12				
ECC 18	0,11–0,22	0,11–0,22	0,11–0,22	0,11–0,22	0,11–0,22	0,09–0,20	0,07–0,18	0,05–0,16	0,03–0,13			
ECC 20	0,12–0,24	0,12–0,24	0,12–0,24	0,12–0,24	0,12–0,24	0,11–0,23	0,09–0,21	0,07–0,19	0,05–0,17	0,03–0,15		
ECC 25	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,11–0,24	0,09–0,22	0,07–0,20	0,03–0,16	
ECC 32	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,14–0,30	0,15–0,30	0,15–0,30	0,13–0,28	0,11–0,26	0,07–0,22	0,03–0,18

Feed f may be increased by 50–75 % when using -M50Q and -27Q.

2.25xD

EcoCut Classic Size	Depth of Cut a_p in mm										
	1,0	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	7,0
	Feed rate f in mm/rev.										
ECC 08	0,06–0,12	0,04–0,10	0,02–0,08								
ECC 10	0,07–0,15	0,05–0,13	0,03–0,11	0,02–0,09							
ECC 12	0,08–0,16	0,08–0,16	0,06–0,14	0,04–0,12	0,02–0,10						
ECC 14	0,09–0,18	0,09–0,18	0,07–0,16	0,05–0,14	0,04–0,13	0,02–0,11					
ECC 16	0,10–0,20	0,10–0,20	0,09–0,19	0,07–0,17	0,05–0,15	0,03–0,13					
ECC 18	0,11–0,22	0,11–0,22	0,11–0,22	0,09–0,20	0,07–0,18	0,05–0,16	0,03–0,14				
ECC 20	0,12–0,24	0,12–0,24	0,12–0,24	0,12–0,24	0,10–0,22	0,08–0,20	0,06–0,18	0,04–0,16			
ECC 25	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,13–0,26	0,12–0,25	0,10–0,23	0,08–0,21	0,06–0,19	0,04–0,17	
ECC 32	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,14–0,29	0,12–0,27	0,10–0,25	0,08–0,23	0,05–0,20

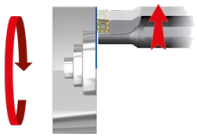
Feed f may be increased by 50–75 % when using -M50Q and -27Q.

3xD

EcoCut Classic Size	Depth of Cut a_p in mm								
	1,0	2,0	2,5	3,0	3,5	4,0	5,0	6,0	7,0
	Feed rate f in mm/rev.								
ECC 08	0,05–0,10	0,02–0,06							
ECC 10	0,06–0,11	0,03–0,07							
ECC 12	0,06–0,12	0,04–0,10	0,02–0,08						
ECC 14	0,07–0,13	0,05–0,11	0,02–0,09						
ECC 16	0,07–0,15	0,06–0,14	0,04–0,12	0,02–0,09					
ECC 18	0,08–0,16	0,08–0,16	0,06–0,14	0,04–0,12					
ECC 20	0,09–0,18	0,09–0,18	0,09–0,18	0,07–0,16	0,05–0,14	0,03–0,12			
ECC 25	0,10–0,19	0,10–0,19	0,10–0,19	0,08–0,17	0,06–0,15	0,03–0,13			
ECC 32	0,11–0,22	0,11–0,22	0,11–0,22	0,11–0,22	0,09–0,20	0,07–0,18	0,03–0,14		

Depth of Cut and Feedrate for EcoCut Classic

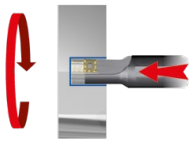
Face turning



EcoCut Classic Size	1,5xD		2,25xD		3xD	
	a_p in mm	f in mm/rev.	a_p in mm	f in mm/rev.	a_p in mm	f in mm/rev.
ECC 08	2,00	0,05–0,10	1,90	0,04–0,09	1,10	0,04–0,07
ECC 10	2,50	0,06–0,12	2,20	0,05–0,10	1,20	0,04–0,09
ECC 12	3,00	0,07–0,14	2,60	0,06–0,12	1,40	0,05–0,11
ECC 14	3,50	0,08–0,16	3,00	0,07–0,14	1,60	0,06–0,12
ECC 16	4,00	0,09–0,18	3,40	0,08–0,16	1,90	0,06–0,13
ECC 18	4,50	0,10–0,20	3,80	0,09–0,18	2,00	0,07–0,14
ECC 20	5,00	0,11–0,22	4,20	0,10–0,20	2,20	0,08–0,15
ECC 25	6,00	0,12–0,24	5,00	0,11–0,22	2,60	0,09–0,18
ECC 32	8,00	0,13–0,27	6,00	0,12–0,25	3,00	0,10–0,20

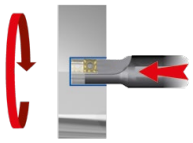
Drilling

Feed rate



EcoCut Classic Size	1,5xD	2,25xD	3xD
	f in mm/rev.	f in mm/rev.	f in mm/rev.
ECC 08	0,01–0,04	0,01–0,04	0,01–0,02
ECC 10	0,01–0,05	0,01–0,05	0,01–0,03
ECC 12	0,01–0,05	0,01–0,05	0,01–0,04
ECC 14	0,01–0,07	0,01–0,07	0,01–0,05
ECC 16	0,02–0,08	0,02–0,08	0,02–0,06
ECC 18	0,03–0,09	0,03–0,09	0,03–0,07
ECC 20	0,03–0,10	0,03–0,10	0,03–0,08
ECC 25	0,03–0,12	0,03–0,12	0,04–0,09
ECC 32	0,05–0,15	0,05–0,15	0,05–0,11

max. bore depth

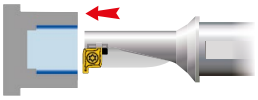


EcoCut Classic Size	1,5xD	2,25xD	3xD
	Max. hole depth in mm	Max. hole depth in mm	Max. hole depth in mm
ECC 08	12,0	18,0	24,0
ECC 10	15,0	22,5	30,0
ECC 12	18,0	27,0	36,0
ECC 14	21,0	31,5	42,0
ECC 16	24,0	36,0	48,0
ECC 18	27,0	40,5	54,0
ECC 20	30,0	45,0	60,0
ECC 25	37,5	56,5	75,0
ECC 32	48,0	72,0	96,0

Depth of Cut and Feedrate for EcoCut ProfileMaster 90°

Turning

1,5xD



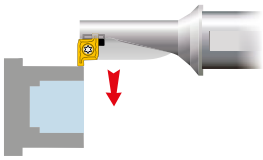
EcoCut ProfileMaster Size	Depth of Cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
EC PM 10	0,07–0,20	0,05–0,17	0,02–0,12					
EC PM 12	0,07–0,20	0,05–0,17	0,02–0,12					
EC PM 16	0,10–0,25	0,07–0,23	0,05–0,21	0,02–0,17				
EC PM 20	0,12–0,27	0,10–0,26	0,007–0,24	0,05–0,20	0,02–0,14			
EC PM 25	0,15–0,30	0,15–0,30	0,13–0,28	0,10–0,26	0,05–0,22	0,02–0,18		
EC PM 32	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,10–0,27	0,07–0,24	0,05–0,21	0,02–0,15

2,25xD

EcoCut ProfileMaster Size	Depth of Cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
EC PM 10	0,07–0,19	0,02–0,13						
EC PM 12	0,07–0,19	0,02–0,13						
EC PM 16	0,10–0,25	0,07–0,21	0,02–0,13					
EC PM 20	0,12–0,27	0,07–0,24	0,05–0,19					
EC PM 25	0,15–0,30	0,10–0,27	0,07–0,23	0,02–0,15				
EC PM 32	0,15–0,30	0,15–0,30	0,10–0,27	0,07–0,23	0,02–0,15			

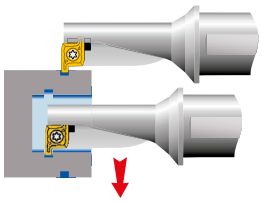
Face turning

1.5xD and 2.25xD



EcoCut ProfileMaster Size	Depth of Cut a_p in mm					
	1,0	1,5	2,0	2,5	3,0	3,5
	Feed rate f in mm/rev.					
EC PM 10	0,02–0,15	0,02–0,15				
EC PM 12	0,02–0,15	0,02–0,15				
EC PM 16	0,05–0,20	0,05–0,20	0,05–0,20			
EC PM 20	0,08–0,22	0,08–0,22	0,08–0,22	0,08–0,22		
EC PM 25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	
EC PM 32	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25

Internal + external – radial grooving

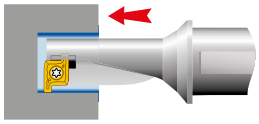


EcoCut ProfileMaster Size	1,5xD
	f in mm/rev.
EC PM 10	0,01–0,08
EC PM 12	0,02–0,10
EC PM 16	0,04–0,15
EC PM 20	0,04–0,16
EC PM 25	0,07–0,20
EC PM 32	0,08–0,22

EcoCut ProfileMaster Size	2,25xD
	f in mm/rev.
EC PM 10	0,01–0,08
EC PM 12	0,02–0,10
EC PM 16	0,04–0,15
EC PM 20	0,04–0,16
EC PM 25	0,07–0,20
EC PM 32	0,08–0,22

Drilling

Feed and max. hole depth



EcoCut ProfileMaster Size	1,5xD	
	f in mm/rev.	Max. hole depth in mm
EC PM 10	0,01–0,05	15,0
EC PM 12	0,01–0,06	18,0
EC PM 16	0,02–0,09	24,0
EC PM 20	0,03–0,10	30,0
EC PM 25	0,04–0,12	37,5
EC PM 32	0,04–0,14	48,0

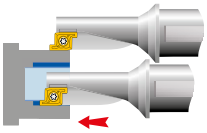
EcoCut ProfileMaster Size	2,25xD	
	f in mm/rev.	Max. hole depth in mm
EC PM 10	0,01–0,05	22,5
EC PM 12	0,01–0,06	27,0
EC PM 16	0,02–0,09	36,0
EC PM 20	0,03–0,10	45,0
EC PM 25	0,04–0,12	56,3
EC PM 32	0,04–0,14	72,0

Depth of Cut and Feedrate for EcoCut ProfileMaster 0°

EcoCut ProfileMaster Sizes 10 and 12 can not be used as 0 ° version.

Turning

1,5xD



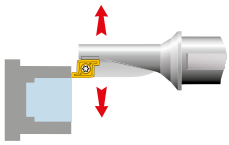
EcoCut ProfileMaster Size	Depth of cut a_p in mm					
	1,0	1,5	2,0	2,5	3,0	3,5
	Feed rate f in mm/rev.					
EC PM 16	0,04–0,20	0,04–0,20	0,04–0,20			
EC PM 20	0,06–0,22	0,06–0,22	0,06–0,22	0,06–0,22		
EC PM 25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	
EC PM 32	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28

2,25xD

EcoCut ProfileMaster Size	Depth of cut a_p in mm					
	1,0	1,5	2,0	2,5	3,0	3,5
	Feed rate f in mm/rev.					
EC PM 16	0,04–0,20	0,04–0,20	0,04–0,20			
EC PM 20	0,06–0,22	0,06–0,22	0,06–0,22	0,06–0,22		
EC PM 25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	
EC PM 32	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28

Face turning

1,5xD

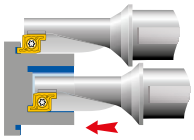


EcoCut ProfileMaster Size	Depth of cut a_p in mm						
	1,0	1,5	2,0	2,5	3,0	3,5	4,0
	Feed rate f in mm/rev.						
EC PM 16	0,05–0,20	0,05–0,20	0,05–0,20				
EC PM 20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20			
EC PM 25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25		
EC PM 32	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25

2,25xD

EcoCut ProfileMaster Size	Depth of cut a_p in mm						
	1,0	1,5	2,0	2,5	3,0	3,5	4,0
	Feed rate f in mm/rev.						
EC PM 16	0,05–0,20	0,05–0,20	0,05–0,20				
EC PM 20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20			
EC PM 25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25		
EC PM 32	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25

Axial grooving external + internal

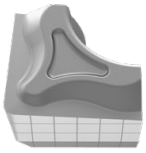
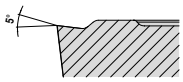
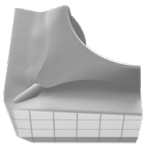
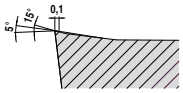
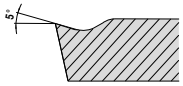
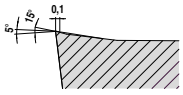


EcoCut ProfileMaster Size	1,5xD
	Feed rate f in mm/rev.
EC PM 16	0,02–0,12
EC PM 20	0,04–0,14
EC PM 25	0,06–0,18
EC PM 32	0,08–0,20

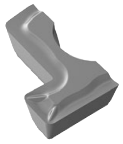
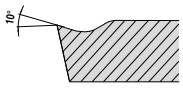
EcoCut ProfileMaster Size	2,25xD
	Feed rate f in mm/rev.
EC PM 16	0,02–0,12
EC PM 20	0,04–0,14
EC PM 25	0,06–0,18
EC PM 32	0,08–0,20

Chip Breakers Overview

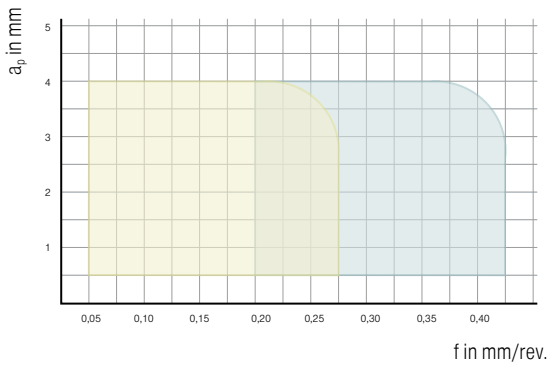
EcoCut Classic

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration f mm
-EN ▲ Universal geometry ▲ Excellent chip breakage ▲ Positive cutting edge ▲ Low to medium feeds		**CTCP425** **CTCP425 / CTPP430** CTCP425 CTPP430 CTCP435 / CTPP430 CTCP435 / CTPP430	**CTCP435 / CTPP430** **CTPP430** CTCP435 / CTPP430 CTPP430 CTCP435 / CTPP430 CTCP435 / CTPP430	**CTPP430 / CTCP435** **CTPP430** CTCP435 CTPP430 CTCP435 CTCP435	 0,05–0,275
-M50Q ▲ With smoothing geometry ▲ Excellent surface qualities ▲ Good chip formation ▲ Medium to high feeds		**CTCP425** CTCP425 CTCP425	**CTCP425** CTCP425		 0,2–0,425
-27P ▲ Positive cutting edge ▲ Periphery ground ▲ Polished rake face ▲ First choice for non-ferrous metals		**H216T** **H216T** H216T H216T	**H216T** **H216T** H216T H216T	**H216T** **H216T**	 0,1–0,4
-27Q ▲ With smoothing geometry ▲ Extremely positive geometry ▲ Periphery ground ▲ Low adhesion		H210T **H210T** **H210T** H210T	H210T **H210T** **H210T** H210T		 0,2–0,5

EcoCut ProfileMaster

-M20 ▲ Positive geometry ▲ Universal application ▲ Low to medium feeds		**CTPP430** **CTPP430** CTPP430 CTPP430 **CTPP430** CTPP430	**CTPP430** **CTPP430** CTPP430 CTPP430 **CTPP430** CTPP430	**CTPP40** **CTPP430** CTPP430 CTPP430 CTPP430	 0,05–0,25

Application area of -EN and -M50Q chip breakers



EcoCut Classic 2.25xD – ECC16 – XCNT 080304

= -M50Q

= Standard

EcoCut Classic – Application as the most stable boring tool

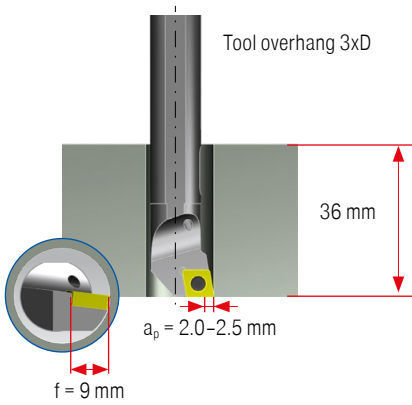
EcoCut can be used not only as a multifunctional tool. In comparison with a boring bar EcoCut used as a pure boring tool gives the user enormous benefits.

Example: machining bores, 16 mm diameter by 36 mm depth

Differences in the tool

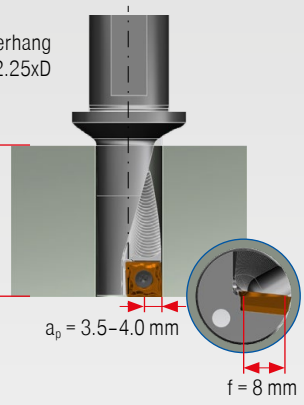
Boring Bar

A12K SCFCR 06



EcoCut Classic

ECC 16R-2.25D 08



Your Advantages

Large, stable toolholder

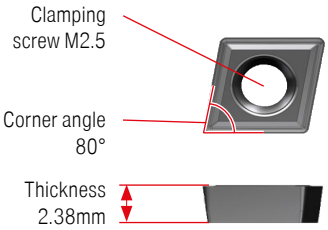
- Absorption of high cutting forces
- Low vibration
- Chip Booster for perfect cooling and chip evacuation

Benefits

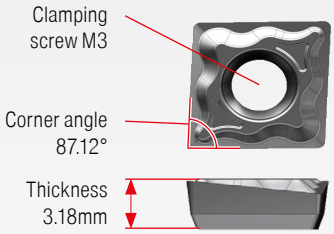
- High surface quality
- Perfect chip control
- Max. process security

Differences in the insert

CCMT 060204



XCNT 080304



Large and stable insert

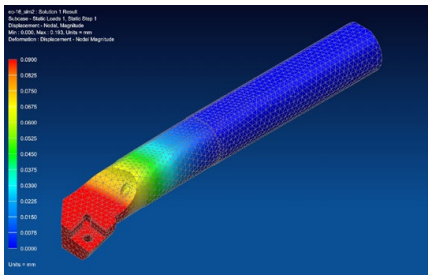
- Increased process security
- Enables large depths of cut
- Higher cutting data
- Higher tool life

Benefits

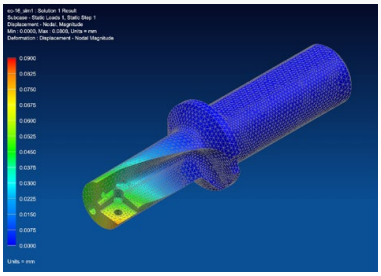
- Reduction in machining time
- Increased productivity
- Reduced tooling costs

Stability Comparison

Calculation using FEM
A load of 1000 N on the insert seat corresponds to an approx. a_p of 2.0 mm and f 0.2 mm



Deflection 0.19mm

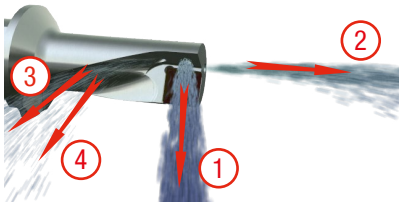


Deflection 0.08mm

Practical experience shows:

- Reduced machining time by up to **75 %**
- Increase in tool life by **400 %** possible

Innovative chip removal – Chip-Booster



EcoCut tools are equipped with a unique coolant and chip removal system.

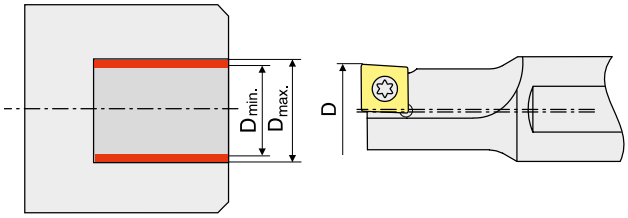
1. Cooling of the indexable insert
2. General coolant stream
3. Chip booster for improved chip transport
4. Chip booster prevents chips from getting stuck between tool and workpiece

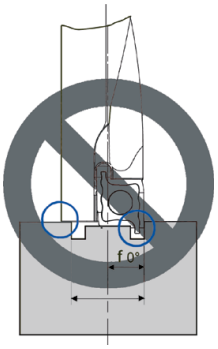
For maximum chip transport efficiency when drilling, coolant pressure must be 3–6 bar minimum (optimal 7–10 bar).

Application Tips

Drilling Off centre

Due to the special construction of the EcoCut tool and insert, off-centre drilling is possible.
Deviations from the tool nominal Ø,can be achieved (see adjacent table).





ProfileMaster 0°
Not suitable for drilling!

EcoCut Mini	Tool nominal-Ø	Work piece bore Ø	
	D in mm	$D_{min.}$ in mm	$D_{max.}$ in mm
ECM 02 L/R – ...D	2	1,95	2,1
ECM 02,5 L/R – ...D	2,5	2,45	2,6
ECM 03 L/R – ...D	3	2,95	3,15
ECM 03,5 L/R – ...D	3,5	3,45	3,65
ECM 04 R/L – ...D	4	3,90	4,20
ECM 05 R/L – ...D	5	4,90	5,20
ECM 06 R/L – ...D	6	5,90	6,20
ECM 07 R/L – ...D	7	6,90	7,20
ECM 08 R/L – ...D	8	7,90	8,20

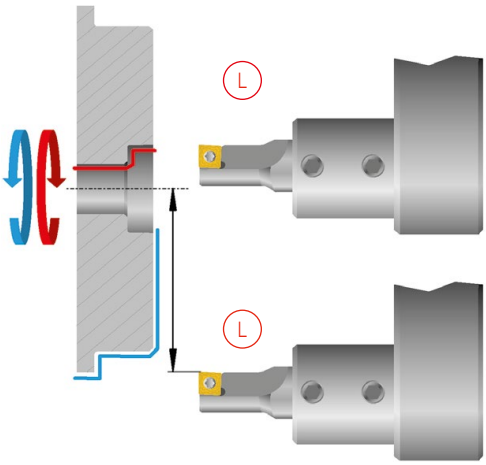
EcoCut Classic	Tool nominal-Ø	Work piece bore Ø	
	D in mm	$D_{min.}$ in mm	$D_{max.}$ in mm
ECC 08 R/L – ... 04	8	7,85	8,30
ECC 10 R/L – ... 05	10	9,85	10,50
ECC 12 R/L – ... 06	12	11,85	12,50
ECC 14 R/L – ... 07	14	13,85	14,50
ECC 16 R/L – ... 08	16	15,85	16,50
ECC 18 R/L – ... 09	18	17,85	18,50
ECC 20 R/L – ... 10	20	19,80	20,50
ECC 25 R/L – ... 13	25	24,80	25,80
ECC 32 R/L – ... 17	32	31,80	33,00

EcoCut ProfileMaster	Tool nominal-Ø	Work piece bore Ø	
	D in mm	$D_{min.}$ in mm	$D_{max.}$ in mm
PM 10R/L ...	10	9,85	12
PM 12R/L ...	12	11,85	15
PM 16R/L ...	16	15,85	19
PM 20R/L ...	20	19,80	24
PM 25R/L ...	25	24,80	29
PM 32R/L ...	32	31,80	38

Machining over centre

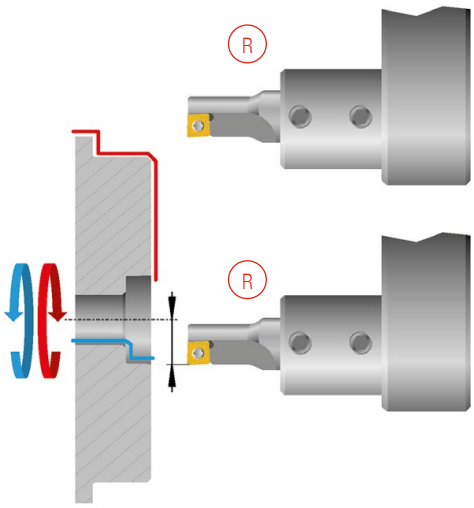
Problem

In case of insufficient movement of the machine across the centre line, the external diameter can not be machined with the same tool.



Solution

Use a right hand EcoCut tool.

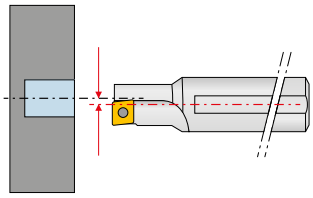


Application Tips

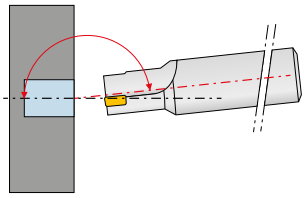
With axial displacement there is the danger of collision!

Problems

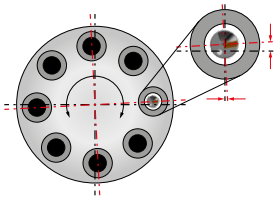
Displacement in x-direction:



Angular error:



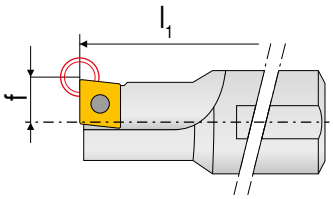
Turret position error:



Remedy

When pre-setting the tool:

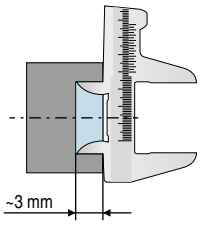
- Definition as an internal turning tool for programming



- Enter the tool nominal Ø as bore target Ø

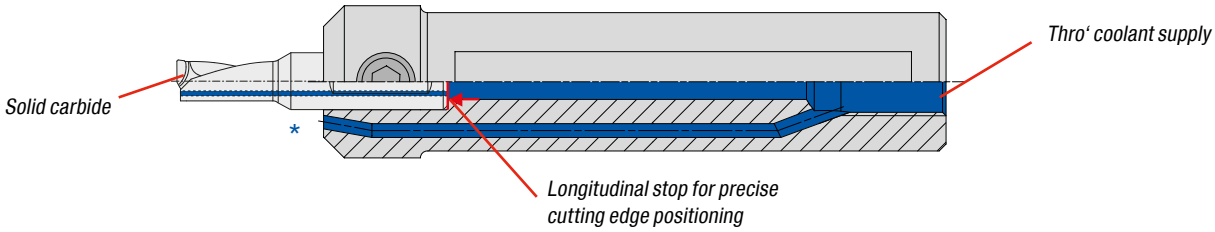
At the machine:

- Make measuring cut, approx. 3 mm deep
- Measure drilled diameter produced



- If necessary correct drilling Ø
- Start machining

EcoCut Mini adapter – Design



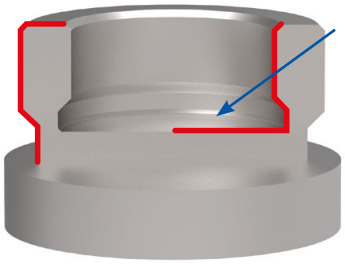
* Cross-section rotated by 90° for clarity

Mounting of the insert for EcoCut Classic

For tools up to Ø 8 mm right and left handed inserts are required. From Ø 10-32 mm neutral inserts are used.

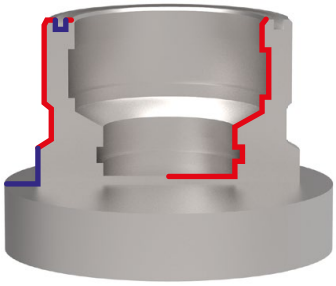
Note!
Ensure correct installation position.

EcoCut ProfileMaster – the highlight with regard to efficiency

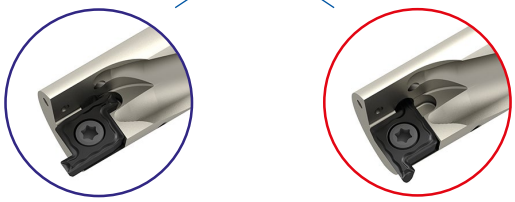


Right hand tool

right hand insert

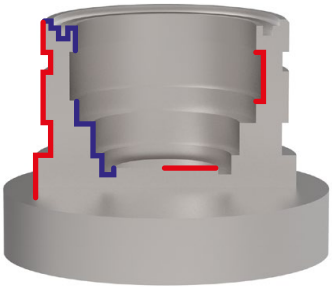


Right hand tool



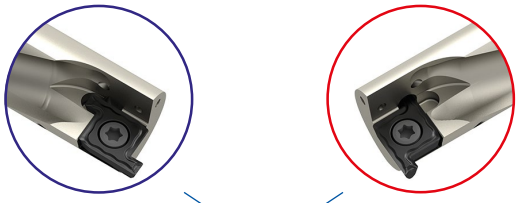
left hand insert

right hand insert



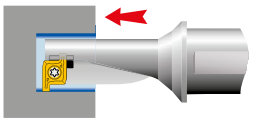
Left hand tool

Right hand tool



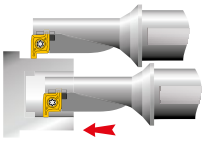
right hand insert

Version 90°



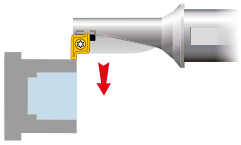
Drilling into solid material with flat bottom hole

Boring

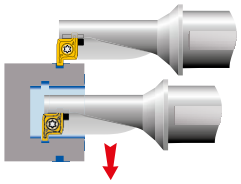


Turning External Diameters

Turning Internal Diameters



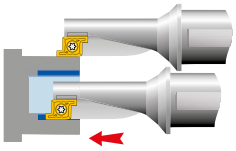
Turning Profiles



External radial grooving

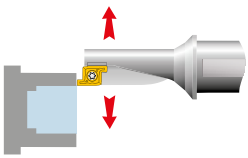
Internal radial grooving

Version 0°

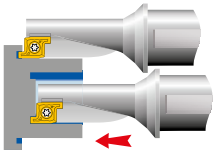


Turning External Diameters

Turning Internal Diameters



Turning Profiles



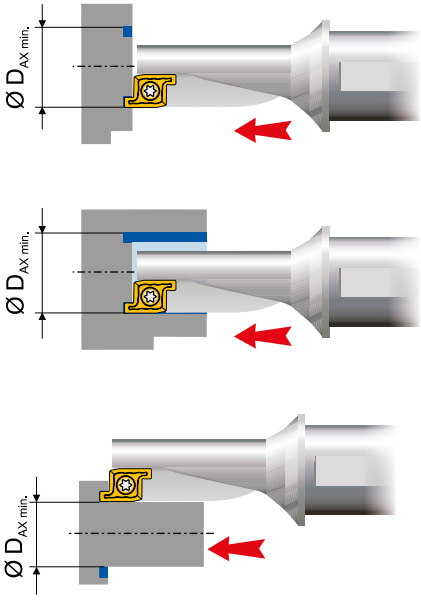
Axial grooving external

Axial grooving internal

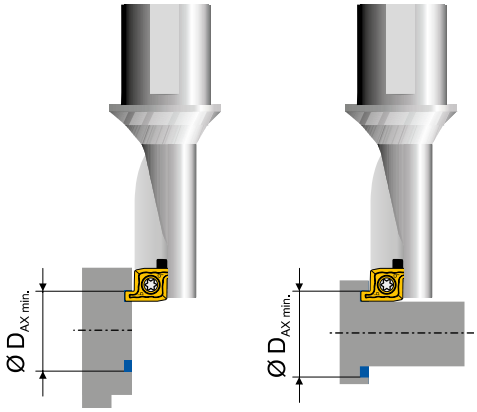
For maximum chip transport efficiency when drilling, coolant pressure must be 3 – 6 bar minimum (optimal 7 – 10 bar).

EcoCut ProfileMaster – Axial Grooving

0° (from Ø 16 mm)

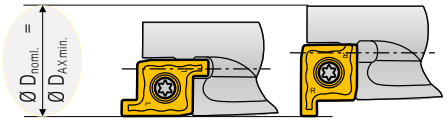


90°



EcoCut ProfileMaster	Ø $D_{noml.}$ mm	Ø $D_{AX\ min.}$ mm	Ø $D_{AX\ max.}$ mm
PM 10R/L 1,5D	10	10	> 10
PM 10R/L 2,25D	10	10	> 10
PM 12R/L 1,5D	12	12	> 12
PM 12R/L 2,25D	12	12	> 12
PM 16R/L 1,5D	16	16	> 16
PM 16R/L 2,25D	16	16	> 16
PM 20R/L 1,5D	20	20	> 20
PM 20R/L 2,25D	20	20	> 20
PM 25R/L 1,5D	25	25	> 25
PM 25R/L 2,25D	25	25	> 25
PM 32R/L 1,5D	32	32	> 32
PM 32R/L 2,25D	32	32	> 32

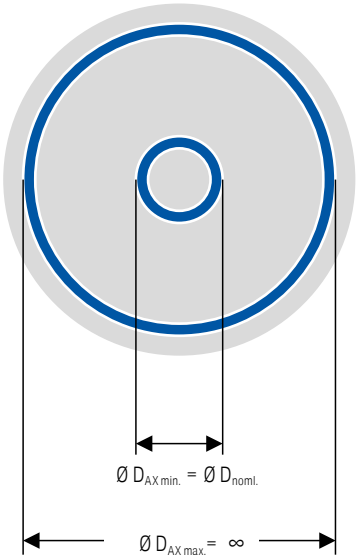
Ø $D_{AX\ min.}$ = Ø $D_{noml.}$



Ø $D_{noml.}$ = Nominal tool diameter

Ø $D_{AX\ min.}$ = smallest diameter for axial grooving

Ø $D_{AX\ max.}$ = largest diameter for axial grooving



3

Application Tips

Recommendation for Optimum Results

Type of problem										
Type of wear				Work piece problems		Swarf control				
Edge breakage	Built-up edge	Wear on clearance face	Plastic deformation	Vibration	Surface quality	Chip too long (snarl chip)	Chip too short (fragmented chip)	Remedy measures		
	↑	↓	↓	↓	↑	↓		Cutting data	Cutting speed	
↓		~	↓	↑	↓	↑	↓	Cutting data	Feed rate	
↑		↑	↑	↓	↑			Insert selection	Corner radius	↑ larger / ↓ smaller
↓		↑	↑					Insert selection	Tool Material	↑ Wear resistance / ↓ toughness
~				~	~			General criteria	Tool clamping	
~				~	~			General criteria	Work piece clamping	
~				~	↓			General criteria	Overhang	
~		~		~	~			General criteria	Tip height	
	●	●	●		●	●		General criteria	Cooling lubricant	

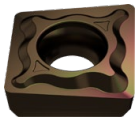
↑ raise, increase large influence
↑ raise, increase small influence
↓ avoid, reduce large influence
↓ avoid, reduce small influence
~ control, optimize
● use

Designation System

EcoCut – indexable insert designation

X C E T 17 05 08 F N - 27P

1 2 3 4 5 6 7 8 9 10



1 Insert shape
2 Clearance angle
3 Tolerances
4 Characteristics
5 Cutting length
6 Insert thickness
7 Corner radius
8 Cutting edge
9 Direction of cut
10 Chip groove

EcoCut – holder designation

ECC 32 R - 3.0D 17 H

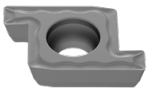
1 2 3 4 5 6

1 System
2 Nominal diameter in mm
3 Direction of cut
4 maximum hole depth
5 insert size
6 Tool holder version in Densimet

EcoCut ProfileMaster – indexable insert designation

PM 25 R G 35 30 04 - M20

1 2 3 4 5 6 7 8



1 ProfileMaster
2 Nominal diameter in mm
3 Direction of cut
4 Version
5 Groove width in mm/10
6 Groove depth in mm/10
7 Corner radius
8 Chip groove

EcoCut ProfileMaster – holder designation

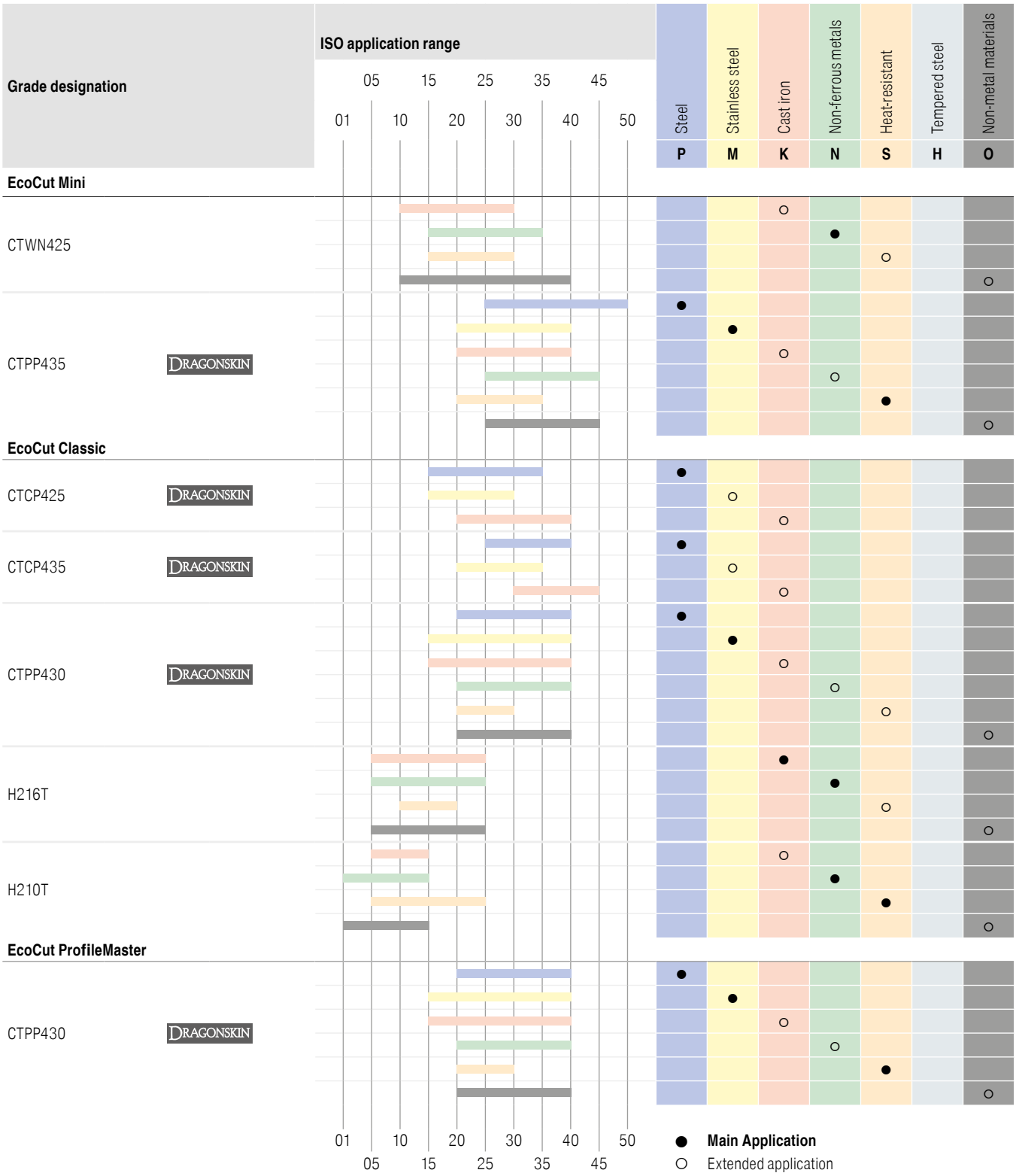
PMC 25 R - 2.25D

1 2 3 4

1 ProfileMaster
2 Nominal diameter in mm
3 Direction of cut
4 maximum hole depth

3

Application



Grades Overview

EcoCut Classic

CTCP425
DRAGONSKIN

- Carbide, Ti+Al_2O_3-coated
- ISO | **P25** | K30 | M20
- The wear-resistant choice for steel and cast iron materials under stable conditions and at high cutting speeds

CTCP435
DRAGONSKIN

- Carbide, Ti+Al_2O_3-coated
- ISO | **P35** | M30 | K40
- The reliable choice for steel and cast iron materials under unstable conditions

CTPP430
DRAGONSKIN

- Carbide. TiAlN-coated
- ISO | **P30** | **M25** | K30 | N25 | S25 | O25
- The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

H210T

- Carbide, uncoated
- ISO | K10 | **N10** | **S10** | O10
- The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

H216T

- Carbide, uncoated
- ISO | **K15** | **N15** | S15 | O15
- The uncoated carbide grade for machining aluminium and other non-ferrous metals
- Also highly suitable for HSC machining

EcoCut Mini

CTPP435
DRAGONSKIN

- Carbide, TiAlN-coated
- ISO | **P35** | **M30** | K30 | N30 | **S30** | O30
- The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

CTWN425

- Carbide, uncoated
- ISO | K20 | **N25** | S25 | O25
- The uncoated carbide grade for machining aluminium and other non-ferrous metals

EcoCut ProfileMaster

CTPP430
DRAGONSKIN

- Carbide. TiAlN-coated
- ISO | **P30** | **M25** | K30 | N25 | **S25** | O25
- The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

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Toolfinder – Internal Machining	208+209
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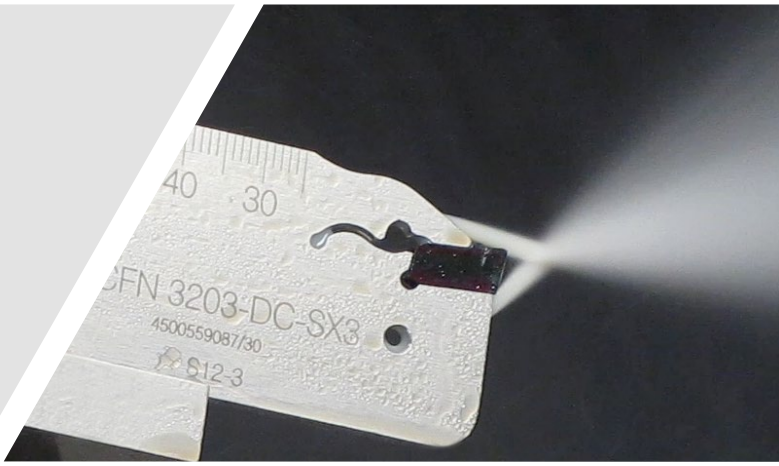
CERATIZIT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

Advantages of the DirectCooling blade

- The best machining results, even with reduced pump output
  Highest flow volume of all thro' coolant blades on the market
- User friendly
  Reinforced blades without sealing screw
- Process-secure spare part for easy handling and a long service life
  Single-piece sealing screw made from steel (for standard blades)



Symbol explanation

Grooving

Main Application

Turning

Extended application

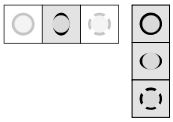
Face turning

Repeatability

Axial grooving

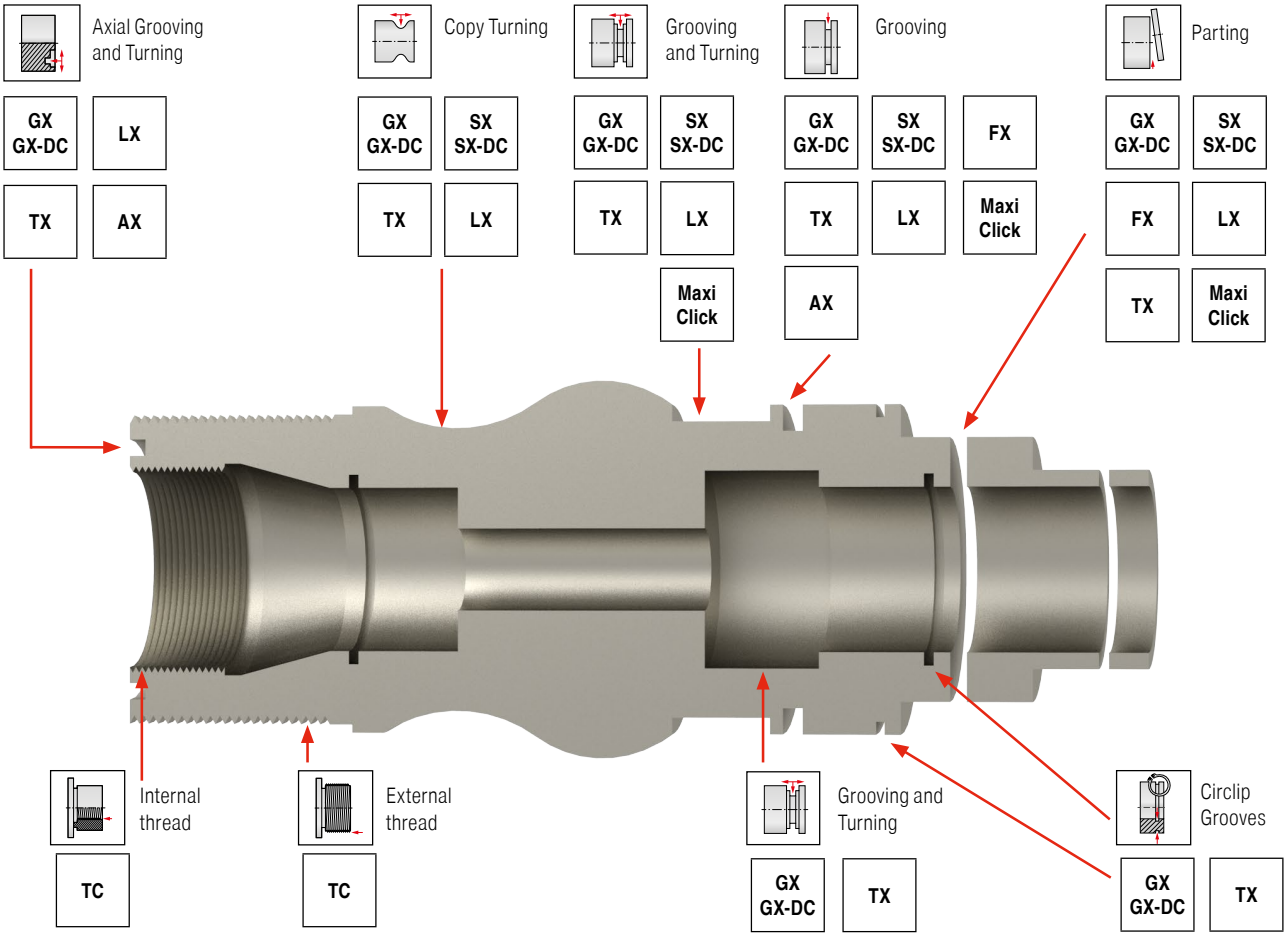
F	M	R

F: Fine Machining
M: Medium Machining
R: Rough Machining


Smooth cut
Irregular cutting depth
Interrupted cut

CTCP325 Carbide Grade

Toolfinder – System Overview



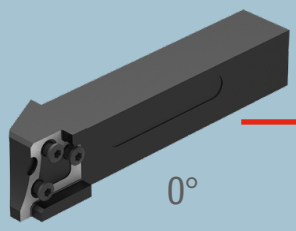
System Description

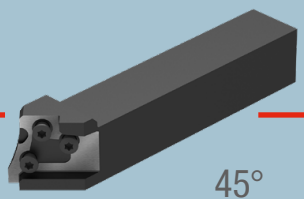
		Page No.
SX	The single edged SX grooving system is even more versatile with the -M3 chip breaker. Besides grooving / parting with the -F2, -M2, or -27P chip breakers, the SX -M3 type also allows copying turning operations with the highest chip control. With this additional option, the SX grooving system can cover all areas of grooving making it a universal grooving tool. Available as a Modular or Mono system.	210–216
SX-DC	Our tried-and-tested single-edged SX grooving system is now available with targeted DirectCooling (DC) thro' coolant supply. The coolant is guided through two coolant holes – one above and one below the grooving insert – straight to the point where it will be most effective: the cutting edge itself.	215
FX	A single-edged grooving system with a variety of specialized chip geometries. From fine machining in unstable parts through to high-performance machining under stable conditions. Available as a Modular or Mono system.	217–222
GX	Double edged grooving system for grooving, parting off, turning and for producing circlip grooves. Available in sizes GX09, GX16 and GX24. Available as a Modular or Mono system.	223–243
GX-DC	Our tried-and-tested two-edged GX grooving system is now available with targeted DirectCooling (DC) thro' coolant supply. The coolant is guided through two coolant holes – one above and one below the grooving insert – straight to the point where it will be most effective: the cutting edge itself.	233+244
TX	Three-edged system for parting, grooving, axial grooving, radial grooving, and fine turning. Positive ground cutting geometries, with a very soft cut with minimum cutting forces. Universally applicable for almost all materials. Available as a Monosystem.	
LX	Single edged system for extreme applications starting from a cutting width of 8.0 mm. The LX system is for use in stable conditions. Available as a Modular or Mono system	
AX	Double-edged Axial grooving system for grooving and groove turning with high precision. Due to the three different depths (5 mm, 10 mm and 15 mm) stable tools are available for each application.	
TC	Double-edged thread turning system for the production of external and internal threads. Advantage is the use without pitch angle correction and in narrow or difficult areas of application. Available as a Modular or Mono system.	246–253
Maxi Click	Five-edged grooving system for grooving and parting	254–258

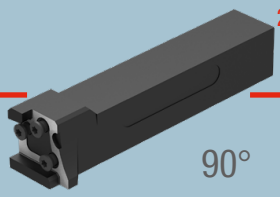
3

Toolfinder – External Machining

ModularClamp


259
0°


45°


260
90°

GX 09

230
231

GX 16

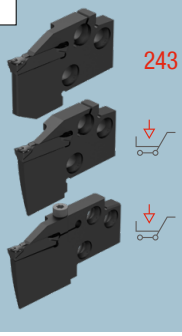
230
231

Deep Radial Grooving, Parting and Turning

Axial Grooving and Face Turning

Deep Axial Grooving and Face Turning

GX 24


243

GX 09

Circlip grooves

228
Cutting width
CW = 0,5–3,15 mm (H13)

Radius grooves

Standard

229
CRE = 0,8–1,2 mm

Grooving and Turning

-F2

223

Standard

224

-M40

225
Cutting width
CW = 2,0–3,5 mm

GX 16

Circlip grooves

228
Cutting width
CW = 0,5–5,15 mm (H13)

Radius grooves

Standard

229

-27P

CRE = 0,8–3,0 mm

Grooving and Turning

-F2

223

Standard

224

-M40

225

-M1

226

-27P

227
Cutting width
CW = 2,0–6,0 mm

GX 24

Radial, axial and deep axial grooving and parting, face turning and turning

-F2

237

-E

238

-M1

239

-M40

240

-M3

241

-27P

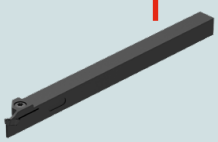
242
Cutting width
CW = 2,0–6,0 mm

-27P

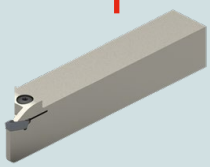
CRE = 1,5–4,0 mm

MonoClamp

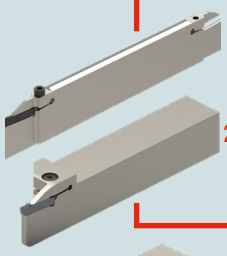
GX 09

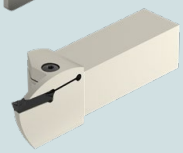

232

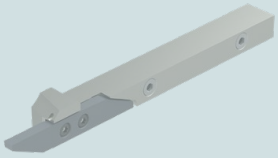
GX 16 - GX-DC


233+234

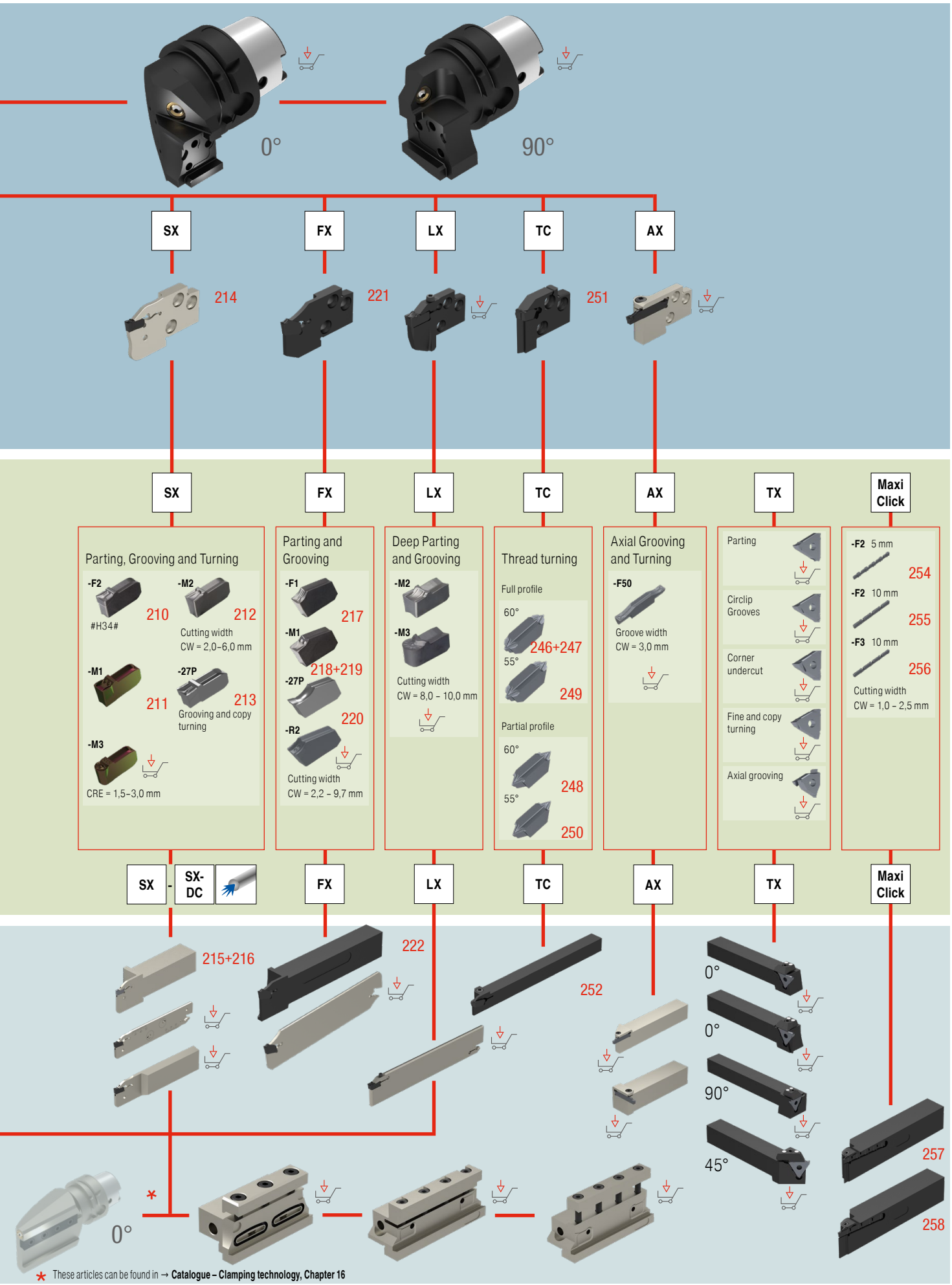
GX 24 - GX-DC


244+245



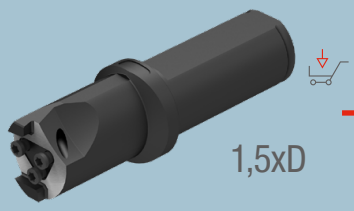


The VertiClamp grooving system can be found **in Chapter 3 Turning using VertiClamp**


0°
90°
SX
FX
LX
TC
AX
214
221
251
SX
FX
LX
TC
AX
TX
Maxi Click
Parting, Grooving and Turning
-F2
#H34#
210
-M2
212
Cutting width
CW = 2,0–6,0 mm
-M1
211
-27P
213
Grooving and copy turning
-M3
CRE = 1,5–3,0 mm
Parting and Grooving
-F1
217
-M1
218+219
-27P
220
-R2
Cutting width
CW = 2,2 – 9,7 mm
Deep Parting and Grooving
-M2
-M3
Cutting width
CW = 8,0 – 10,0 mm
Thread turning
Full profile
60°
246+247
55°
249
Partial profile
60°
248
55°
250
Axial Grooving and Turning
-F50
Groove width
CW = 3,0 mm
Parting
Circlip Grooves
Corner undercut
Fine and copy turning
Axial grooving
-F2 5 mm
254
-F2 10 mm
255
-F3 10 mm
256
Cutting width
CW = 1,0 – 2,5 mm
SX
SX-DC
FX
LX
TC
AX
TX
Maxi Click
215+216
222
252
0°
0°
90°
45°
257
258
0°
*
* These articles can be found in → Catalogue – Clamping technology, Chapter 16

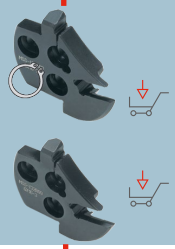
Toolfinder – Internal Machining

ModularClamp

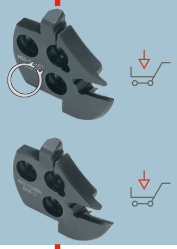


1,5xD

GX 09



GX 16



GX 09

Circlip grooves

228

Cutting width
CW = 0,5–3,15 mm (H13)

Radius grooves

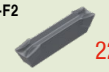
Standard

229

CRE = 0,8–1,2 mm

Grooving and Turning

-F2



223

Standard

224

-M40

225

Cutting width
CW = 2,0–3,5 mm

GX 16

Circlip grooves

228

Cutting width
CW = 0,5–5,15 mm (H13)

Radius grooves

Standard

229

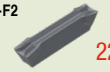
-27P

227

CRE = 0,8–3,0 mm

Grooving and Turning

-F2



223

Standard

224

-M40

225

-M1

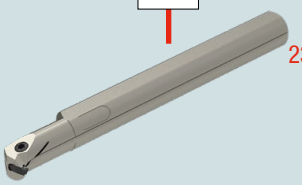
226

-27P

Cutting width
CW = 2,0–6,0 mm

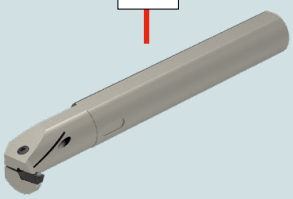
MonoClamp

GX 09

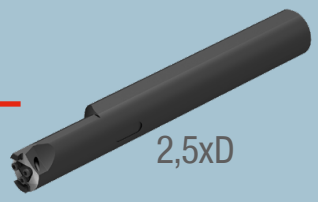


235

GX 16



236



2,5xD

GX 24

TC

GX 24

Radial, axial and deep axial grooving and parting, face turning and turning

-M1 239

-M40 240

-E 238

-F2 237

-27P 227

Cutting width
CW = 2,0 - 6,0 mm

-M3 241

-27PF

CRE = 1,5 - 4,0 mm

TC

Thread turning

Partial profile 60° 248

Full profile 60° 247

Full profile 55° 249

Partial profile 55° 250

TX

Parting

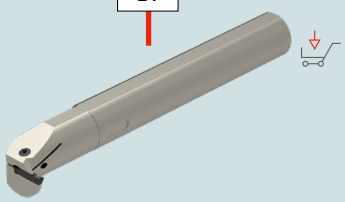
Circlip Grooving Inserts

For corner relief

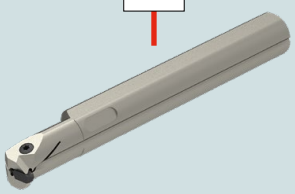
Fine and copy turning

Axial grooving

GX 24

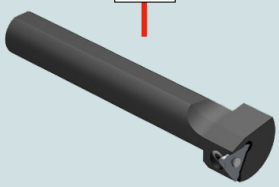


TC



253

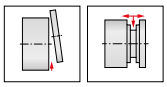
TX



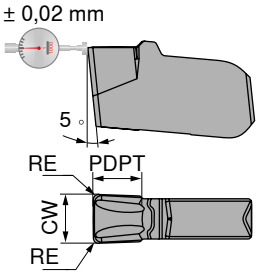
3

Insert SX

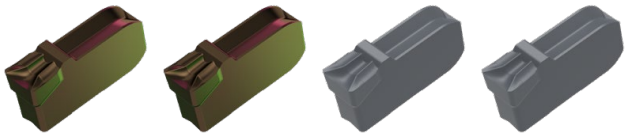
▲ High precision ground geometry



F	M	R



-F2 CTCP325	-F2 CTCP335	-F2 CTPP345	-F2 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 346 ...	70 346 ...	70 346 ...	70 346 ...
SX E2.00 N 0.20	2	0.2	1.5	-SX2			**822**	**622**
SX E3.00 N 0.30	3	0.3	2.0	-SX3	**923**	**523**	**823**	**623**
P					●	●	●	●
M					○	○	●	●
K					●	●		●
N								○
S					○		○	●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 266

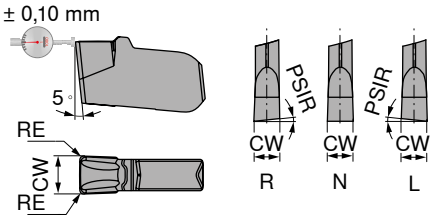
Internal machining		*External machining*						
		→ 214	→ 215+216					

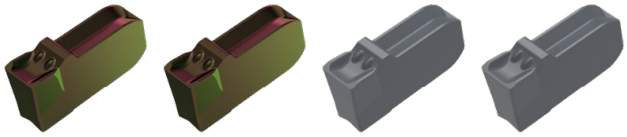
Insert SX

▲ Specially developed geometry with negative edge-chamfers available in right, left and neutral types

F	M	R

-M1 CTCP325	-M1 CTCP335	-M1 CTPP345	-M1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN





Designation	IH	CW +/-0,05 mm	RE +/-0,05 mm	PSIR	for tool holder	70 342 ...	70 342 ...	70 342 ...	70 342 ...
SX E2.00 L 6	L	2	0.2	6°	-SX2				612
SX E3.00 L 6	L	3	0.2	6°	-SX3	913			613
SX E2.00 N 0.20	N	2	0.2		-SX2	922		822	622
SX E3.00 N 0.20	N	3	0.2		-SX3	923	523	823	623
SX E2.00 R 6	R	2	0.2	6°	-SX2				602
SX E3.00 R 6	R	3	0.2	6°	-SX3	903			603
P						●	●	●	●
M						○	○	●	●
K						●	●		●
N									○
S						○		○	●
H									
O									○

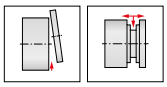
→ v_c Page 261
→ Application recommendation on page 267

Note: reduce feed rate by 20–50 % with R/L version!

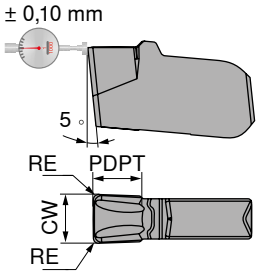
Internal machining	*External machining*	
	→ 214	→ 215+216

Insert SX

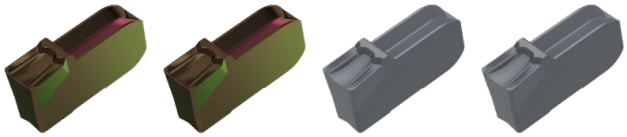
▲ All purpose geometry for parting, grooving & turning.



F	M	R



-M2 CTCP325	-M2 CTCP335	-M2 CTPP345	-M2 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



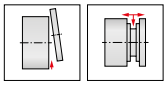
Designation	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 343 ...	70 343 ...	70 343 ...	70 343 ...
SX E2.00 N 0.20	2	0.2	1.5	-SX2	**922**	**522**	**822**	**622**
SX E3.00 N 0.30	3	0.3	2.0	-SX3	**923**	**523**	**823**	**623**
P					●	●	●	●
M					○	○	●	●
K					●	●		●
N								○
S					○		○	●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 266

Internal machining		*External machining*						
		→ 214	→ 215+216					

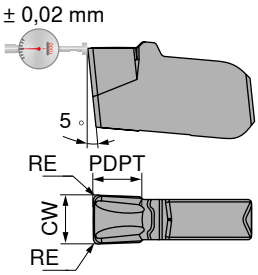
Insert SX

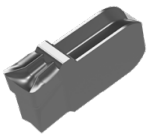
- Insert with highly positive cutting edge geometry and sharp cutting edge
- Specialist for aluminum and other soft long-chipping non-ferrous metals



F	M	R

-27P
H216T





70 349 ...

Designation	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	
SX E2.00 N 0.20	2	0.2	2.0	-SX2	**122**
SX E3.00 N 0.30	3	0.3	2.5	-SX3	**123**

P	
M	
K	●
N	●
S	○
H	
O	○

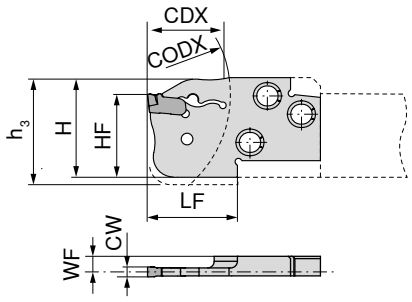
→ v_c Page 261
→ Application recommendation on page 266

Internal machining		*External machining*						
		→ 214	→ 215+216					

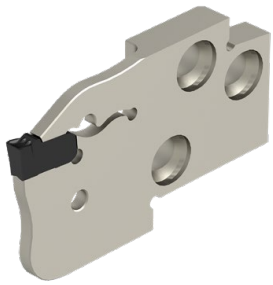
3

ModularClamp MSS – Radial grooving module SX

▲ for parting, grooving and finish turning



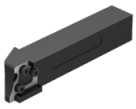
Illustrations show right-hand versions



Designation	HF mm	CW mm	WF mm	LF mm	H mm	h_3 mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 897 ...	Right-hand 70 896 ...
E20 R/L 20-SX2	20	2	3.57	22	24	27	60	20	SX .2..	**020**	**020**
E20 R/L 20-SX3	20	3	3.20	22	24	27	60	20	SX .3..	**120**	**120**

Ejector SX

Spare parts for grooving inserts		70 950 ...
SX .2..	SX 2-3	**836**
SX .3..	SX 2-3	**836**

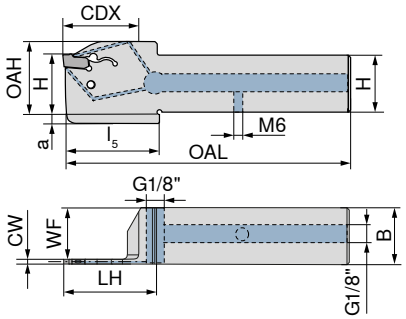


→ 210–213

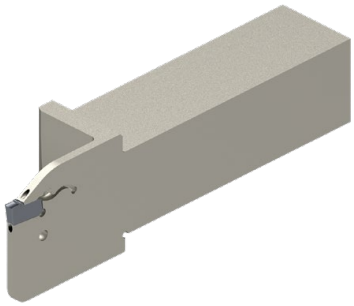
→ 259

Please order SX assembly key separately if required.

MonoClamp – Radial Monoholder SX-DC



Illustrations show right-hand versions



Designation	H mm	B mm	CW mm	WF mm	OAL mm	LH mm	l_5 mm	OAH mm	CDX mm	a mm	for grooving inserts	Left-hand 70 847 ...	Right-hand 70 847 ...
E12 R/L 0022-1212X-K-DC-SX2	12	12	2	11.2	71	27	28	22	22	5	SX .2..	**21201**	**21200**
E16 R/L 0026-1616X-K-DC-SX2	16	16	2	15.2	87	32	33	26	26	4	SX .2..	**21601**	**21600**
E20 R/L 0026-2020X-K-DC-SX2	20	20	2	19.2	102	32	33	31	26	5	SX .2..	**22001**	**22000**
E16 R/L 0026-1616X-K-DC-SX3	16	16	3	14.8	87	32	33	26	26	4	SX .3..	**31601**	**31600**
E20 R/L 0026-2020X-K-DC-SX3	20	20	3	18.8	102	32	33	31	26	5	SX .3..	**32001**	**32000**

Ejector SX

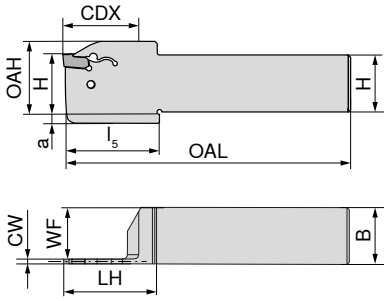
Spare parts for grooving inserts		70 950 ...
SX .2..	SX 2-3	**836**
SX .3..	SX 2-3	**836**

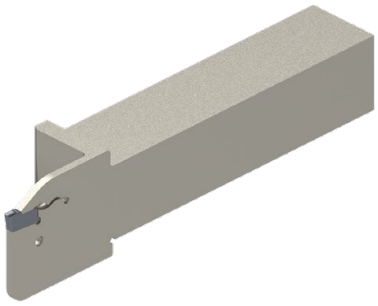
→ 210–213

Please order SX assembly key separately if required.

3

MonoClamp – Radial Monoholder SX





Illustrations show right-hand versions

Designation	H mm	B mm	CW mm	WF mm	OAL mm	LH mm	l_5 mm	OAH mm	CDX mm	a mm	for grooving inserts	Left-hand 70 846 ...	Right-hand 70 846 ...
E12 R/L 0022-1212K-K-SX2	12	12	2	11.2	125	27	28	22	22	5	SX .2..	**21201**	**21200**
E16 R/L 0026-1616K-K-SX2	16	16	2	15.2	125	33	33	26	26	4	SX .2..	**21601**	**21600**
E20 R/L 0026-2020K-K-SX2	20	20	2	19.2	125	33	33	31	26	5	SX .2..	**22001**	**22000**
E16 R/L 0026-1616K-K-SX3	16	16	3	14.8	125	33	33	26	26	4	SX .3..	**31601**	**31600**
E20 R/L 0026-2020K-K-SX3	20	20	3	18.8	125	31	33	31	26	5	SX .3..	**32001**	**32000**

Ejector SX

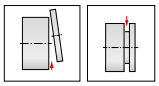
Spare parts for grooving inserts	70 950 ...
SX .2..	SX 2-3 **836**
SX .3..	SX 2-3 **836**

→ 210–213

Please order SX assembly key separately if required.

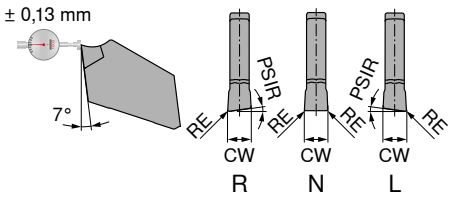
Insert FX

- Excellent cutting geometry with low cutting forces
- Very good swarf control also with low feed rates
- Reduced built-up edge



F	M	R

-F1 CTCP325	-F1 CTPP345	-F1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	IH	CW -0.1 mm	RE +/-0,05 mm	PSIR	for tool holder	70 331 ...	70 331 ...	70 331 ...
FX 2.2 L 5-F1	L	2.2	0.15	5°	-FX 2.2		847	647
FX 3.1 L 5-F1	L	3.1	0.20	5°	-FX 3.1		851	651
FX 3.1 L 8-F1	L	3.1	0.20	8°	-FX 3.1		855	
FX 2.2 N 0.15-F1	N	2.2	0.15		-FX 2.2	998	848	648
FX 3.1 N 0.20-F1	N	3.1	0.20		-FX 3.1	902	852	652
FX 3.1 N 0.40-F1	N	3.1	0.40		-FX 3.1	906	856	656
FX 2.2 R 5-F1	R	2.2	0.15	5°	-FX 2.2		849	649
FX 3.1 R 5-F1	R	3.1	0.20	5°	-FX 3.1		853	653
FX 3.1 R 8-F1	R	3.1	0.20	8°	-FX 3.1		857	
P						●	●	●
M						○	●	●
K						●		●
N								○
S						○	○	●
H								
O								○

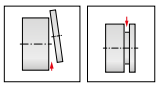
→ v_c Page 261
→ Application recommendation on page 268

Note: reduce feed rate by 20–50 % with R/L version!

Internal machining	*External machining*	
	→ 221	→ 222

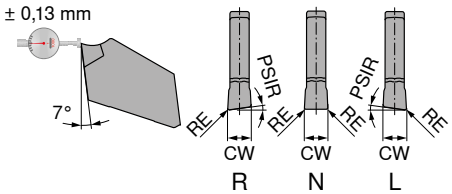
Insert FX

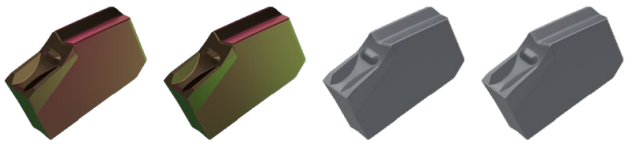
▲ narrow version



F	M	R

-M1 CTCP325	-M1 CTCP335	-M1 CTPP345	-M1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN





Designation	IH	CW -0.1 mm	RE +/-0,05 mm	PSIR	for tool holder	70 330 ...	70 330 ...	70 330 ...	70 330 ...
FX 2.2 L 4-M1	L	2.2	0.1	4°	-FX 2.2		550	800	600
FX 2.2 N 0.10-M1	N	2.2	0.1		-FX 2.2	902	552	802	602
FX 2.2 R 4-M1	R	2.2	0.1	4°	-FX 2.2		554	804	604
P						●	●	●	●
M						○	○	●	●
K						●	●		●
N									○
S						○		○	●
H									
O									○

→ v_c Page 261
→ Application recommendation on page 268

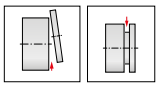
Note: reduce feed rate by 20–50 % with R/L version!

Internal machining | *External machining*

→ 221 → 222

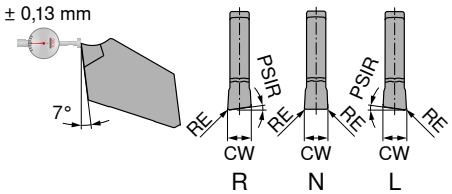
Insert FX

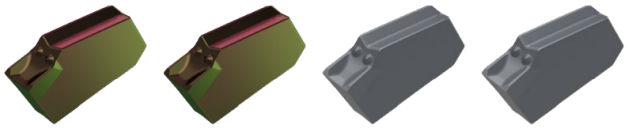
▲ wide version



F	M	R

-M1 CTCP325	-M1 CTCP335	-M1 CTPP345	-M1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN





Designation	IH	CW +/-0,05 mm	RE +/-0,05 mm	PSIR	for tool holder	70 332 ...	70 332 ...	70 332 ...	70 332 ...
FX 3.1 L 6-M1	L	3.1	0.15	6°	-FX 3.1	**900**	**550**	**800**	**600**
FX 3.1 N 0.15-M1	N	3.1	0.15		-FX 3.1	**902**	**552**	**802**	**602**
FX 3.1 R 6-M1	R	3.1	0.15	6°	-FX 3.1	**904**	**554**	**804**	**604**
P						●	●	●	●
M						○	○	●	●
K						●	●		●
N									○
S						○		○	●
H									
O									○

→ v_c Page 261
→ Application recommendation on page 268

Note: reduce feed rate by 20–50 % with R/L version!

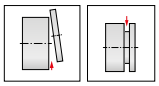
Internal machining | *External machining*

→ 221 → 222

3

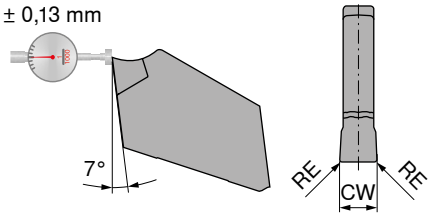
Insert FX

- ▲ Insert with highly positive cutting edge geometry and sharp cutting edge, polished chip breaker
- ▲ Reduced built-up edge

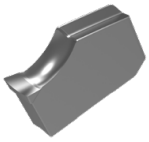


F	M	R

-27P
H216T



N



70 334 ...

Designation	IH	CW -0,1 mm	RE +/-0,05 mm	for tool holder	
FX 2.2 N 0.10	N	2.2	0.10	-FX 2.2	**650**
FX 3.1 N 0.15	N	3.1	0.15	-FX 3.1	**652**

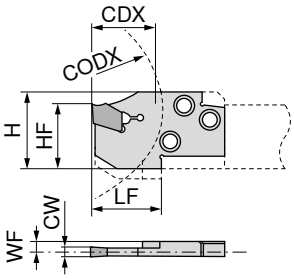
P	
M	
K	●
N	●
S	○
H	
O	○

→ v_c Page 261
→ Application recommendation on page 268

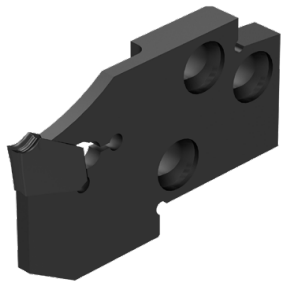
Internal machining		*External machining*						
		→ 221	→ 222					

ModularClamp MSS – Radial grooving module FX short/long

▲ For parting and grooving



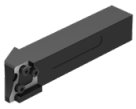
Illustrations show right-hand versions



Designation	HF mm	CW mm	WF mm	LF mm	H mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 876 ...	Right-hand 70 875 ...
E20 R/L 20-FX 2.2	23	2.2	3.58	22	27	60	20	FX 2.2 ..	**020**	**020**
E20 R/L 20-FX 3.1	23	3.1	3.20	22	27	60	20	FX 3.1 ..	**120**	**120**

Ejector

Spare parts for grooving inserts	70 950 ...
FX 2.2 ..	**375**
FX 3.1 ..	**376**



→ 217–220

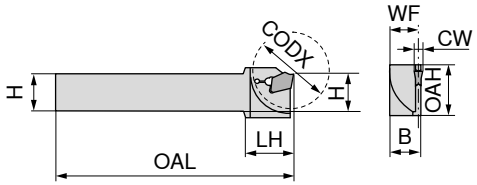
→ 259+260

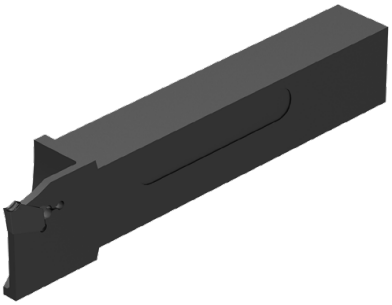
3

MonoClamp – Radial Monoholder FX

Scope of supply:

Blade and ejector





Illustrations show right-hand versions

Designation	H mm	B mm	OAL mm	LH mm	OAH mm	CW mm	WF mm	CODX mm	for grooving inserts	Left-hand 70 837 ...	Right-hand 70 836 ...
XLCE R/L 1010 M-FX2.2	10	10	150	19.4	21	2.2	9.18	30	FX 2.2 ..	**101**	**101**
XLCE R/L 1212 F-FX2.2	12	12	80	21.0	21	2.2	11.18	30	FX 2.2 ..	**102**	**102**
XLCE R/L 1212 M-FX2.2	12	12	150	19.4	21	2.2	11.18	30	FX 2.2 ..	**103**	**103**
XLCE R/L 1414 M-FX2.2	14	14	150	19.4	21	2.2	13.18	30	FX 2.2 ..	**104**	**104**
XLCE R/L 1612 H-FX2.2	16	12	100	21.0	21	2.2	11.18	30	FX 2.2 ..	**105**	**105**
XLCF R/L 1612 H-FX3.1	16	12	100	21.4	25	3.1	10.80	35	FX 3.1 ..	**106**	**106**
XLCF R/L 2016 K-FX3.1	20	16	125	26.4	26	3.1	14.80	40	FX 3.1 ..	**107**	**107**

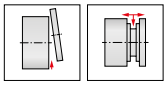
Ejector

Spare parts for grooving inserts	70 950 ...
FX 2.2 ..	**375**
FX 3.1 ..	**376**

→ 217–220

Insert GX 09/16

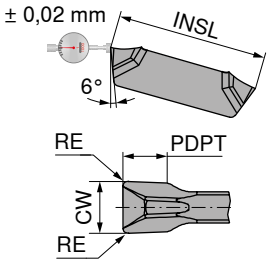
- ▲ Insert with ground periphery
- ▲ Suitable also for parting off tubes and thin-walled workpieces



F	M	R

-F2
CTP1340

DRAGONSKIN



70 360 ...

Designation	INSL mm	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	
GX 09-1 E2.00 N 0.20	9	2.0	0.2	1.5	GX 09-1	**600**
GX 09-1 E2.50 N 0.20	9	2.5	0.2	1.5	GX 09-1	**602**
GX 09-2 E3.00 N 0.30	9	3.0	0.3	2.0	GX 09-2	**604**
GX 16-1 E2.00 N 0.20	16	2.0	0.2	2.5	GX 16-1	**650**
GX 16-2 E3.00 N 0.30	16	3.0	0.3	3.0	GX 16-2	**652**

P	●
M	●
K	●
N	○
S	●
H	
O	○

→ v_c Page 261
→ Application recommendation on page 262

Internal machining

→ 235+236

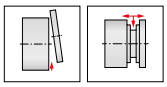
External machining

→ 230+231
→ 232

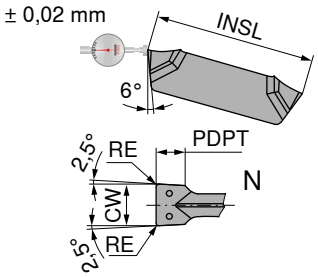
3

Insert GX 09/16 – Standard

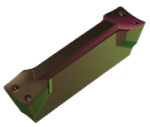
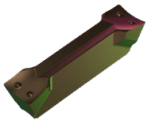
▲ Suitable for parting thin-walled workpieces



F	M	R



CTCP325	CTCP335	CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN

Designation	INSL mm	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 350 ...	70 350 ...	70 350 ...
GX 09-1 E2.00 N 0.20	9	2.0	0.2	1.5	GX 09-1	**984**		**634**
GX 09-1 E2.50 N 0.20	9	2.5	0.2	1.5	GX 09-1	**988**		**638**
GX 09-2 E3.00 N 0.30	9	3.0	0.3	2.0	GX 09-2	**992**		**642**
GX 16-1 E2.00 N 0.20	16	2.0	0.2	2.5	GX 16-1	**900**	**500**	**600**
GX 16-1 E2.50 N 0.20	16	2.5	0.2	2.5	GX 16-1	**904**	**504**	**604**
GX 16-2 E3.00 N 0.30	16	3.0	0.3	3.0	GX 16-2	**908**	**508**	**608**
GX 16-2 E3.00 N 0.50	16	3.0	0.5	3.0	GX 16-2	**910**		
P						●	●	●
M						○	○	●
K						●	●	●
N								○
S						○		●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 262

Internal machining

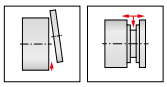
→ 235+236

External machining

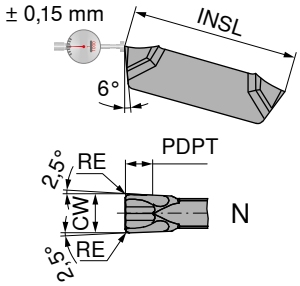
→ 230+231
→ 232

Insert GX 09/16

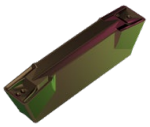
▲ Very good swarf control



F	M	R



-M40 CTCP325	-M40 CTPP345	-M40 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	INSL mm	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 351 ...	70 351 ...	70 351 ...
GX 09-1 E2.00 N 0.20	9	2	0.2	1.5	GX 09-1	**986**	**886**	**686**
GX 09-2 E3.00 N 0.30	9	3	0.3	2.0	GX 09-2	**994**	**894**	**694**
GX 16-1 E2.00 N 0.20	16	2	0.2	2.5	GX 16-1	**902**	**802**	**602**
GX 16-2 E3.00 N 0.30	16	3	0.3	3.0	GX 16-2	**910**	**810**	**610**
P						●	●	●
M						○	●	●
K						●		●
N								○
S						○	○	●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 262

Internal machining

→ 235+236

External machining

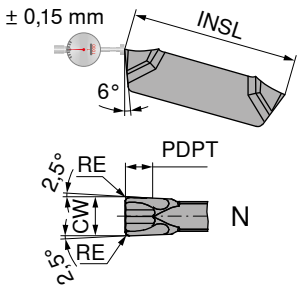
→ 230+231
→ 232

3

Insert GX 16

▲ Very good swarf control

F	M	R



-M1 CTCP325	-M1 CTPP345	-M1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN

Designation	INSL mm	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 362 ...	70 362 ...	70 362 ...
GX 16-1 E2.00 N 0.20	16	2	0.2	2.0	GX 16-1		**800**	**600**
GX 16-2 E3.00 N 0.20	16	3	0.2	2.5	GX 16-2	**902**	**802**	**602**
P						●	●	●
M						○	●	●
K						●		●
N								○
S						○	○	●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 263

Internal machining

→ 236

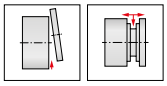
External machining

→ 230+231

→ 232

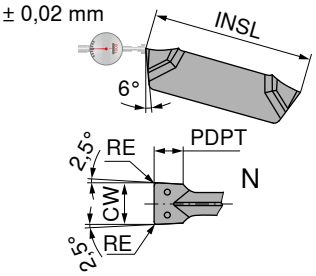
Insert GX 16

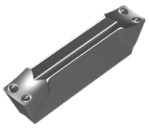
▲ Insert with highly positive cutting edge geometry and sharp cutting edge
▲ ground periphery



F	M	R

-27P
H216T





70 350 ...

Designation	INSL mm	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	
GX 16-1 E2.00 N 0.20	16	2	0.2	2.5	GX 16-1	**650**
GX 16-2 E3.00 N 0.30	16	3	0.3	3.0	GX 16-2	**658**

P	
M	
K	●
N	●
S	○
H	
O	○

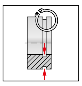
→ v_c Page 261
→ Application recommendation on page 262

Internal machining | *External machining*

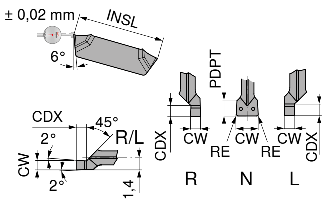
→ 236
→ 230+231
→ 232

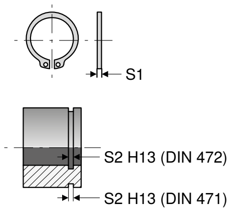
3

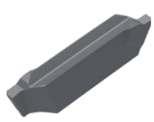
Circlip groove insert GX 09/16 – Standard



F	M	R







Designation	IH	INSL mm	s_1 mm	s_2 mm	CW $_{+/-0,02}$ mm	RE $_{+/-0,05}$ mm	CDX mm	PDPT mm	for tool holder	CTP1340 DRAGONSKIN 70 352 ...	CTP1340 DRAGONSKIN 70 352 ...
GX 09-1 S0.60 L	L	9	0.40	0.50	0.60		0.75		R/L 02-GX 09-1		679
GX 09-1 S0.80 L	L	9	0.60	0.70	0.80		0.94		R/L 02-GX 09-1		681
GX 09-1 S0.90 L	L	9	0.70	0.80	0.90		1.04		R/L 02-GX 09-1		683
GX 09-1 S1.00 L	L	9	0.80	0.90	1.00		1.14		R/L 02-GX 09-1		684
GX 09-1 S1.20 L	L	9	1.00	1.10	1.20		1.34		R/L 02-GX 09-1		686
GX 09-1 S1.40 L	L	9	1.20	1.30	1.40		1.53		R/L 02-GX 09-1		688
GX 09-1 S1.70 L	L	9	1.50	1.60	1.70		1.82		R/L 02-GX 09-1		690
GX 16-2 S0.60 L	L	16	0.40	0.50	0.60		0.75		R/L 03-GX 16-2		607
GX 16-2 S0.80 L	L	16	0.60	0.70	0.80		0.94		R/L 03-GX 16-2		609
GX 16-2 S0.90 L	L	16	0.70	0.80	0.90		1.04		R/L 03-GX 16-2		611
GX 16-2 S1.00 L	L	16	0.80	0.90	1.00		1.14		R/L 03-GX 16-2		612
GX 16-2 S1.20 L	L	16	1.00	1.10	1.20		1.34		R/L 03-GX 16-2		614
GX 16-2 S1.40 L	L	16	1.20	1.30	1.40		1.53		R/L 03-GX 16-2		616
GX 16-2 S1.70 L	L	16	1.50	1.60	1.70		1.82		R/L 03-GX 16-2		618
GX 16-2 S1.95 L	L	16	1.75	1.85	1.95		2.07		R/L 03-GX 16-2		620
GX 16-2 S2.25 L	L	16	2.00	2.15	2.25		2.36		R/L 03-GX 16-2		622
GX 09-1 S1.95 N	N	9	1.75	1.85	1.95	0.1		2	GX 09-1	692	
GX 09-1 S2.25 N	N	9	2.00	2.15	2.25	0.1		2	GX 09-1	694	
GX 09-2 S2.75 N	N	9	2.50	2.65	2.75	0.1		2	GX 09-2	696	
GX 09-2 S3.25 N	N	9	3.00	3.15	3.25	0.1		2	GX 09-2	698	
GX 16-2 S2.75 N	N	16	2.50	2.65	2.75	0.1		3	GX 16-2	624	
GX 16-2 S3.25 N	N	16	3.00	3.15	3.25	0.1		3	GX 16-2	626	
GX 09-1 S0.60 R	R	9	0.40	0.50	0.60		0.75		R/L 02-GX 09-1		670
GX 09-1 S0.80 R	R	9	0.60	0.70	0.80		0.94		R/L 02-GX 09-1		672
GX 09-1 S0.90 R	R	9	0.70	0.80	0.90		1.04		R/L 02-GX 09-1		674
GX 09-1 S1.00 R	R	9	0.80	0.90	1.00		1.14		R/L 02-GX 09-1		676
GX 09-1 S1.20 R	R	9	1.00	1.10	1.20		1.34		R/L 02-GX 09-1		678
GX 09-1 S1.40 R	R	9	1.20	1.30	1.40		1.53		R/L 02-GX 09-1		680
GX 09-1 S1.70 R	R	9	1.50	1.60	1.70		1.82		R/L 02-GX 09-1		682
GX 16-2 S0.60 R	R	16	0.40	0.50	0.60		0.75		R/L 03-GX 16-2		695
GX 16-2 S0.80 R	R	16	0.60	0.70	0.80		0.94		R/L 03-GX 16-2		697
GX 16-2 S0.90 R	R	16	0.70	0.80	0.90		1.04		R/L 03-GX 16-2		699
GX 16-2 S1.00 R	R	16	0.80	0.90	1.00		1.14		R/L 03-GX 16-2		600
GX 16-2 S1.20 R	R	16	1.00	1.10	1.20		1.34		R/L 03-GX 16-2		602
GX 16-2 S1.40 R	R	16	1.20	1.30	1.40		1.53		R/L 03-GX 16-2		604
GX 16-2 S1.70 R	R	16	1.50	1.60	1.70		1.82		R/L 03-GX 16-2		606
GX 16-2 S1.95 R	R	16	1.75	1.85	1.95		2.07		R/L 03-GX 16-2		608
GX 16-2 S2.25 R	R	16	2.00	2.15	2.25		2.36		R/L 03-GX 16-2		610

	CTP1340	CTP1340
P	●	●
M	●	●
K	●	●
N	○	○
S	●	●
H		
O	○	○

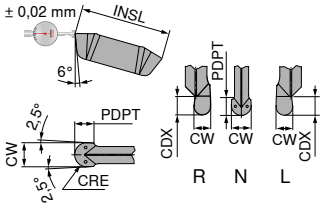
→ v_c Page 261
→ Application recommendation on page 262

Attention - applies only to internal machining:
Right-hand insert → left-hand module or monobloc boring bar
Left-hand insert → right-hand module or monobloc boring bar

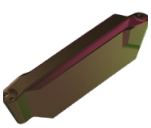
Internal machining	*External machining*	
→ 235+236	→ 230+231	→ 232

Radius groove insert GX 09/16

F	M	R



CTCP325	CTCP325	CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	IH	INSL mm	CW +/-0,02 mm	CRE mm	PDPT mm	CDX mm	for tool holder	70 354 ...	70 354 ...	70 354 ...
GX 09-1 R0.80 L	L	9	1.6	0.8		1.78	R/L 02-GX 09-1	**988**		
GX 16-2 R0.80 L	L	16	1.6	0.8		1.78	R/L 03-GX 16-2	**912**		
GX 16-2 R1.00 L	L	16	2.0	1.0		2.18	R/L 03-GX 16-2	**916**		
GX 16-2 R1.20 L	L	16	2.4	1.2		2.58	R/L 03-GX 16-2	**920**		
GX 09-1 R1.00 N	N	9	2.0	1.0	1.0		GX 09-1		**992**	
GX 09-1 R1.20 N	N	9	2.4	1.2	1.2		GX 09-1		**996**	
GX 16-2 R1.50 N	N	16	3.0	1.5	1.5		GX 16-2		**924**	**624**
GX 09-1 R0.80 R	R	9	1.6	0.8		1.78	R/L 02-GX 09-1	**984**		
GX 16-2 R0.80 R	R	16	1.6	0.8		1.78	R/L 03-GX 16-2	**900**		
GX 16-2 R1.00 R	R	16	2.0	1.0		2.18	R/L 03-GX 16-2	**904**		
GX 16-2 R1.20 R	R	16	2.4	1.2		2.58	R/L 03-GX 16-2	**908**		
P								●	●	●
M								○	○	●
K								●	●	●
N										○
S								○	○	●
H										
O										○

→ v_c Page 261
→ Application recommendation on page 263

3

Attention - applies only to internal machining:
Right-hand insert → left-hand module or monobloc boring bar
Left-hand insert → right-hand module or monobloc boring bar

Internal machining

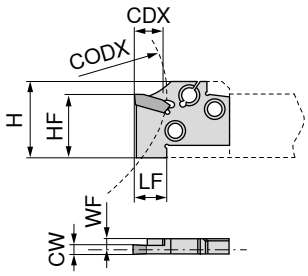
→ 235+236

External machining

→ 230+231
→ 232

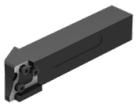
ModularClamp MSS – Radial grooving module GX 09/16

- For circlip grooves ≤ 2,75 mm
- For radius grooves up to ≤ 1,2 mm
- For external recessing



Illustrations show right-hand versions

Designation	CW mm	WF mm	LF mm	HF mm	H mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 871 ...	Right-hand 70 870 ...
E12 R/L 02-GX 09-1	<1,95	3.15	8	12	14.5	36	2	GX 09-1 ..R/L	**112**	**112**
E16 R/L 02-GX 09-1	<1,95	3.15	8	16	19.5	48	2	GX 09-1 ..R/L	**116**	**116**
E20 R/L 03-GX 16-2	<2,75	3.40	13	20	24.0	60	3	GX 16-2 ..R/L	**120**	**120**

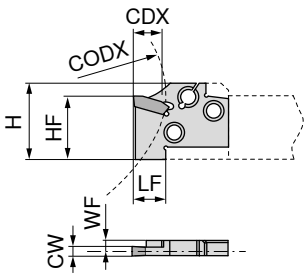


→ 223–229

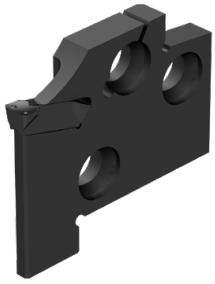
→ 259+260

ModularClamp MSS – Radial grooving module GX 09/16

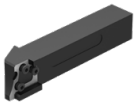
- For grooving and turning
- For circlip grooves ≤ 5,25 mm
- For radius grooves up to ≤ 2,5 mm
- For external recessing



Illustrations show right-hand versions



Designation	CW mm	WF mm	LF mm	HF mm	H mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 866 ...	Right-hand 70 865 ...
E12 R/L 07-GX 09-1	2,00 - 2,75	3.15	8	12	14.5	36	7	GX 09-1 ..N	**012**	**012**
E12 R/L 07-GX 09-2	2,76 - 3,75	3.15	8	12	14.5	36	7	GX 09-2 ..N	**112**	**112**
E16 R/L 07-GX 09-1	2,00 - 2,75	3.15	8	16	19.5	48	7	GX 09-1 ..N	**016**	**016**
E16 R/L 07-GX 09-2	2,76 - 3,75	3.15	8	16	19.5	48	7	GX 09-2 ..N	**116**	**116**
E20 R/L 12-GX 16-1	2,00 - 2,75	3.75	13	20	24.0	60	12	GX 16-1 ..N	**020**	**020**
E20 R/L 12-GX 16-2	2,76 - 3,75	3.40	13	20	24.0	60	12	GX 16-2 ..N	**120**	**120**

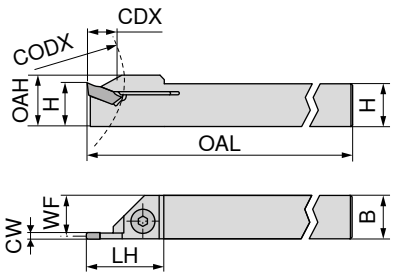


→ 223–229

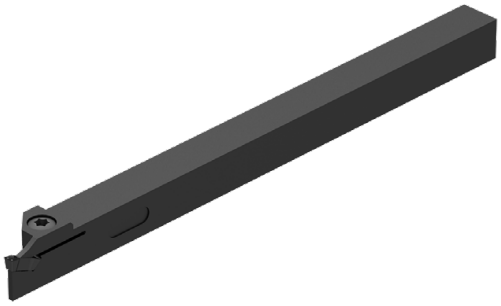
→ 259+260

3

MonoClamp – Radial Monoholder GX 09

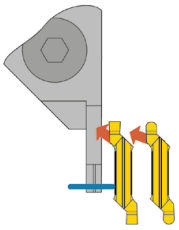


Illustrations show right-hand versions



Designation	H mm	B mm	CW mm	WF mm	OAH mm	OAL mm	LH mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 863 ...	Right-hand 70 862 ...
E10 R/L 00-1010M-GX09	10	10	2,00 - 3,50	9.35	12	150	18	30	7	GX 09 ..	**010**	**010**

When using 'R' or 'L' tools the tool must be modified at the end face to ensure cutting clerance.

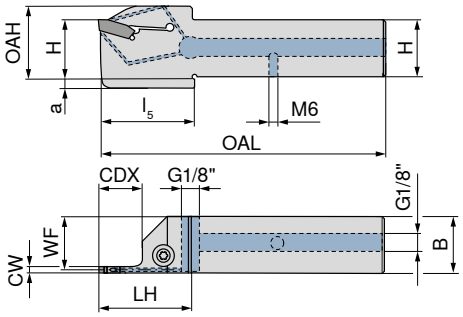


Spare parts for grooving inserts		Key D 80 950 ...		Clamping screw 70 950 ...
GX 09 ..	T15	**113**	M4x11	**442**

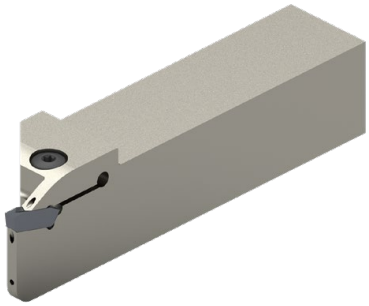
→ 223–229

MonoClamp – Radial Monoholder GX-DC 16

Direct Cooling



Illustrations show right-hand versions



Designation	H mm	B mm	CW mm	WF mm	OAH mm	OAL mm	LH mm	l_5 mm	a mm	CDX mm	for grooving inserts	NEW Left-hand 70 842 ...	NEW Right-hand 70 842 ...
E16 R/L 0013S2-1616X-S-DC-GX16	16	16	2	15.20	21	90	35	36	4	13	GX 16-1 E2..	**21601**	**21600**
E16 R/L 0013S3-1616X-S-DC-GX16	16	16	3	14.85	21	90	35	36	4	13	GX 16-2 E3..	**31601**	**31600**
E20 R/L 0013S2-2020X-S-DC-GX16	20	20	2	19.20	25	104	35			13	GX 16-1 E2..	**22001**	**22000**
E20 R/L 0013S3-2020X-S-DC-GX16	20	20	3	18.85	25	104	35			13	GX 16-2 E3..	**32001**	**32000**

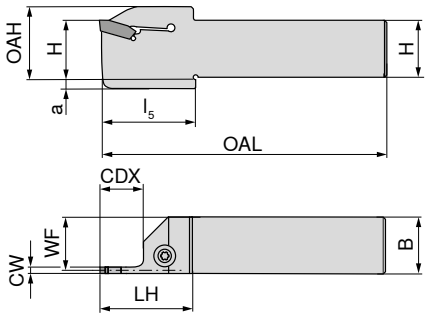
Key D

Spare parts for grooving inserts		80 950 ...
GX 16-1 E2..	T15 - IP	**128**
GX 16-2 E3..	T15 - IP	**128**

Suitable indexable inserts and cutting data can be found in the catalogue Cutting tools → **Chapter 11 – Grooving tools**

3

MonoClamp – Radial Monoholder GX 16



Illustrations show right-hand versions

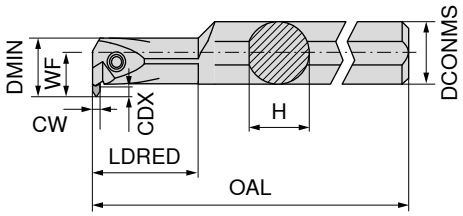
Designation	H mm	B mm	CW mm	WF mm	OAH mm	OAL mm	LH mm	l_5 mm	a mm	CDX mm	for grooving inserts	NEW Left-hand 70 843 ...	NEW Right-hand 70 843 ...
E12 R/L 0013S2-1212K-S-GX16	12	12	2	11.20	17	125	25	26	4	13	GX 16-1 E2..	**21201**	**21200**
E12 R/L 0013S3-1212K-S-GX16	12	12	3	10.85	17	125	25	26	4	13	GX 16-2 E3..	**31201**	**31200**
E16 R/L 0013S2-1616K-S-GX16	16	16	2	15.20	21	125	25	26	4	13	GX 16-1 E2..	**21601**	**21600**
E16 R/L 0013S3-1616K-S-GX16	16	16	3	14.85	21	125	25	26	4	13	GX 16-2 E3..	**31601**	**31600**
E20 R/L 0013S2-2020K-S-GX16	20	20	2	19.20	25	125	25			13	GX 16-1 E2..	**22001**	**22000**
E20 R/L 0013S3-2020K-S-GX16	20	20	3	18.85	25	125	25			13	GX 16-2 E3..	**32001**	**32000**

Key D

Spare parts for grooving inserts	80 950 ...
GX 16-1 E2..	T15 - IP **128**
GX 16-2 E3..	T15 - IP **128**

Suitable indexable inserts and cutting data can be found in the catalogue Cutting tools → **Chapter 11 – Grooving tools**

MonoClamp – Radial Mono-boring bars GX 09

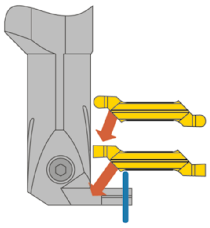


Illustrations show right-hand versions

Designation	H mm	DCONMS mm	DMIN mm	CW mm	CDX mm	WF mm	OAL mm	LDRED mm	for grooving inserts	Left-hand 70 859 ...	Right-hand 70 858 ...
I12 R/L 90-2,5D-GX09	15.25	16	16	2,00 - 3,75	3	11	150	30	GX 09 ..	012	012

Right hand boring bar→ left hand insert only
Left hand boring bar→ right hand insert only

When using „R“ or „L“ tools the insert support seat requires modification to prevent the insert fouling.



Key D

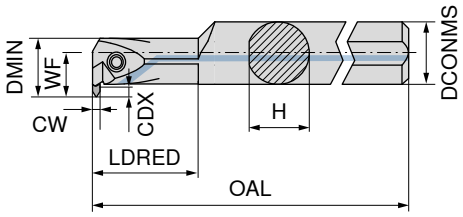
Clamping screw

Spare parts for grooving inserts		Key D 80 950 ...		Clamping screw 70 950 ...
GX 09 ..	T15	113	M3,5x12,5	441

→ 223-229

3

MonoClamp – Radial Mono-boring bars GX 16

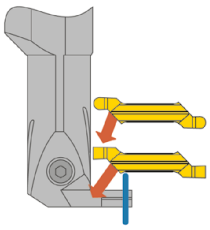


Illustrations show right-hand versions

Designation	H mm	DCONMS mm	DMIN mm	CW mm	CDX mm	WF mm	OAL mm	LDRED mm	for grooving inserts	Left-hand 70 893 ...	Right-hand 70 892 ...
I16 R/L 90-2.0D-GX16-1	15.25	16	20.5	2,00 - 2,75	5.0	13.5	150	32	GX 16-1	**516**	**516**
I16 R/L 90-2.0D-GX16-2	15.25	16	20.5	2,76 - 3,75	5.0	13.5	150	32	GX 16-2	**616**	**616**
I20 R/L 90-2.0D-GX16-2	19.00	20	25.0	2,76 - 3,75	5.5	15.5	180	40	GX 16-2	**620**	**620**

Right hand boring bar→ left hand insert only
Left hand boring bar→ right hand insert only

When using „R“ or „L“ tools the insert support seat requires modification to prevent the insert fouling.

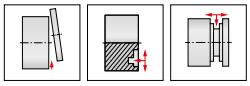


Spare parts for grooving inserts		Key D 80 950 ...		Clamping screw 70 950 ...
GX 16-1	T15	**113**	M4x14	**403**
GX 16-2	T15	**113**	M4x14	**403**

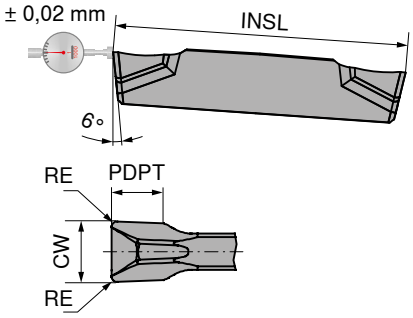
→ 223–229

Insert GX 24

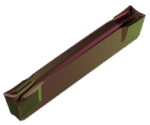
- ▲ Insert with ground periphery
- ▲ Suitable also for parting off tubes and thin-walled workpieces



F	M	R



-F2 CTCP325	-F2 CTPP345	-F2 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



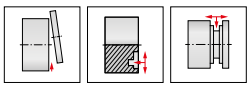
Designation	INSL mm	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 350 ...	70 350 ...	70 350 ...
GX 24-2 E3.00 N 0.30	24	3.0	0.3	2.5	GX 24-2	**962**	**862**	**662**
GX 24-2 E3.50 N 0.30	24	3.5	0.3	2.5	GX 24-2		**864**	
P						●	●	●
M						○	●	●
K						●		●
N								○
S						○	○	●
H								
O								○

→ v_c Page 261
→ Application recommendation on page 262

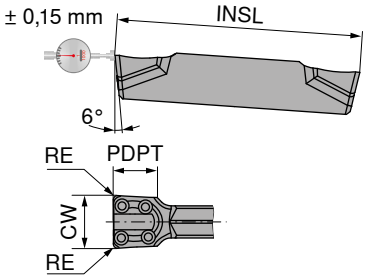
Internal machining	*External machining*
	→ 243

3

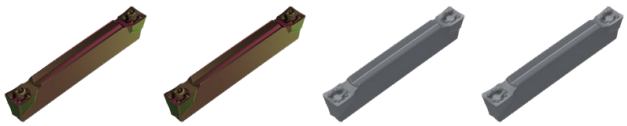
Insert GX 24



F	M	R



-E CTCP325	-E CTCP335	-E CTPP345	-E CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	INSL mm	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 350 ...	70 350 ...	70 350 ...	70 350 ...
GX 24-2 E3.00 N 0.30	24	3	0.3	2.5	GX 24-2	**932**	**532**	**832**	**632**
P						●	●	●	●
M						○	○	●	●
K						●	●		●
N									○
S						○		○	●
H									
O									○

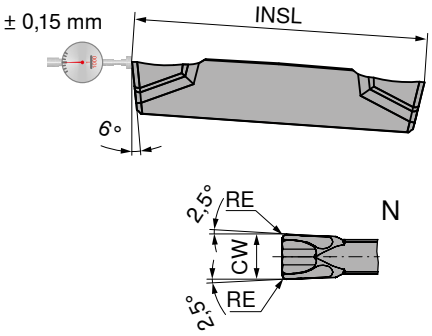
→ v_c Page 261
→ Application recommendation on page 262

Internal machining	*External machining*
	→ 243

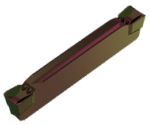
Insert GX 24

▲ Very good swarf control

F	M	R



-M1 CTCP325	-M1 CTPP345	-M1 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	INSL mm	CW +/-0,05 mm	RE +/-0,05 mm	for tool holder	70 363 ...	70 363 ...	70 363 ...
GX 24-1 E2.00 N 0.20	24	2	0.2	GX 24-1	**900**	**800**	**600**
GX 24-2 E3.00 N 0.20	24	3	0.2	GX 24-2	**902**	**802**	**602**
P					●	●	●
M					○	●	●
K					●		●
N							○
S					○	○	●
H							
O							○

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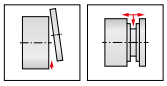
→ Application recommendation on page 263

Internal machining	*External machining*
	→ 243

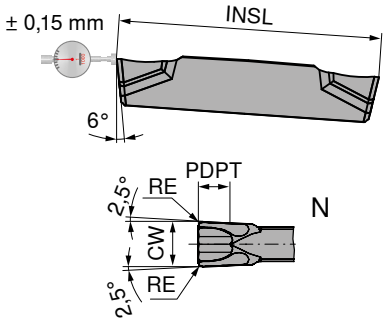
3

Insert GX 24

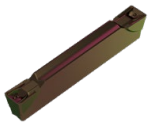
▲ Very good swarf control



F	M	R



-M40 CTCP325	-M40 CTPP345	-M40 CTP1340
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



Designation	INSL mm	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 364 ...	70 364 ...	70 364 ...
GX 24-2 E3.00 N 0.30	24	3	0.3	3.5	GX 24-2	**900**	**800**	**600**
P						●	●	●
M						○	●	●
K						●		●
N								○
S						○	○	●
H								
O								○

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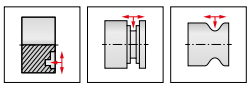
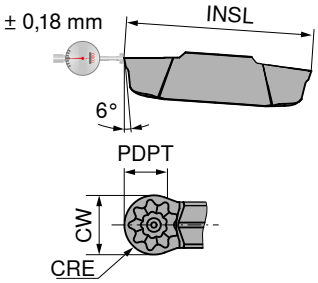
→ Application recommendation on page 262

Internal machining	*External machining*
	→ 243

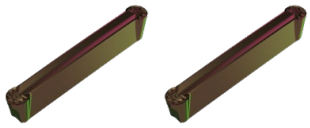
Radius groove insert GX 24



F	M	R



-M3 CTCP325	-M3 CTCP335
DRAGONSKIN	DRAGONSKIN



Designation	INSL mm	CW +/-0,05 mm	CRE mm	PDPT mm	for tool holder	70 354 ...	70 354 ...
GX 24-2 R1.50 N	24.4	3	1.5	1.5	GX 24-2	952	552
P						●	●
M						○	○
K						●	●
N							
S						○	
H							
O							

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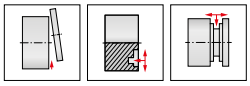
→ Application recommendation on page 263

Internal machining	*External machining*
	→ 243

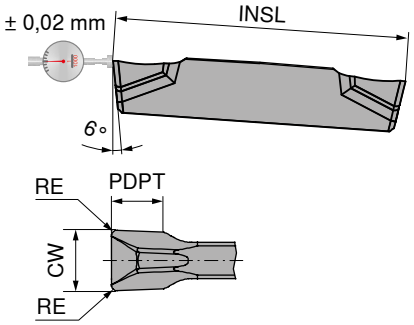
3

Insert GX 24

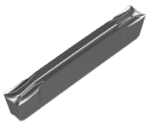
- Insert with highly positive cutting edge geometry and sharp cutting edge
- ground periphery



F	M	R



-27P
H216T



70 350 ...

Designation	INSL mm	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	
GX 24-2 E3.00 N 0.30	24	3	0.3	2.5	GX 24-2	**682**

P	
M	
K	●
N	●
S	○
H	
O	○

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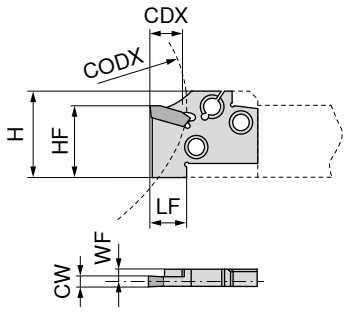
→ Application recommendation on page 262

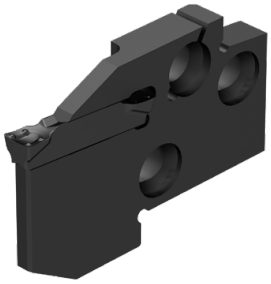
Internal machining	*External machining*
	→ 243

ModularClamp MSS – Radial grooving module GX 24

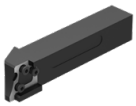
- For deep radial parting and grooving
- For turning



Illustrations show right-hand versions



									Left-hand	Right-hand
									70 868 ...	70 867 ...
Designation	CW mm	WF mm	LF mm	HF mm	H mm	CODX mm	CDX mm	for grooving inserts		
E20 R/L 21-GX 24-1	2,00 - 2,75	3.85	22	20	24	60	21	GX 24-1	**020**	**020**
E20 R/L 21-GX 24-2	3	3.40	22	20	24	60	21	GX 24-2	**120**	**120**



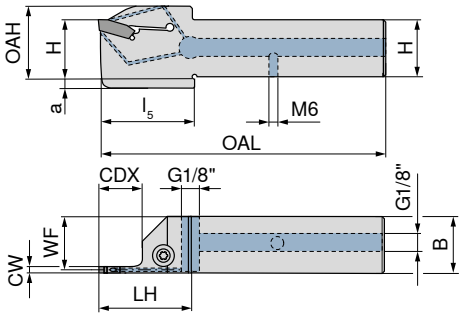
→ 237-242

→ 259+260

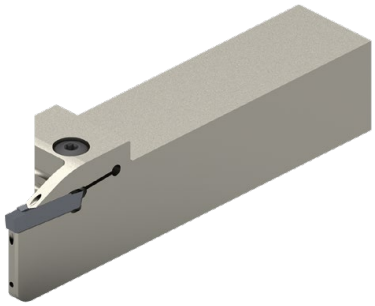
3

MonoClamp – Radial Monoholder GX-DC 24

Direct Cooling



Illustrations show right-hand versions



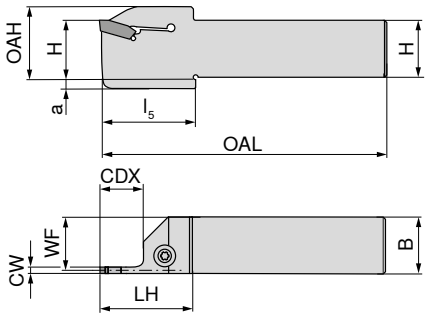
Designation	H mm	B mm	CW mm	WF mm	OAH mm	OAL mm	LH mm	l_5 mm	a mm	CDX mm	for grooving inserts	NEW Left-hand 70 844 ...	NEW Right-hand 70 844 ...
E16 R/L 0021S2-1616X-S-DC-GX24	16	16	2	15.2	22	94	39	40	4	21	GX 24-1 E2..	**21601**	**21600**
E16 R/L 0021S3-1616X-S-DC-GX24	16	16	3	14.8	22	94	39	40	4	21	GX 24-2 E3..	**31601**	**31600**
E20 R/L 0021S2-2020X-S-DC-GX24	20	20	2	19.2	26	109	40			21	GX 24-1 E2..	**22001**	**22000**
E20 R/L 0021S3-2020X-S-DC-GX24	20	20	3	18.8	26	109	40			21	GX 24-2 E3..	**32001**	**32000**

Key D

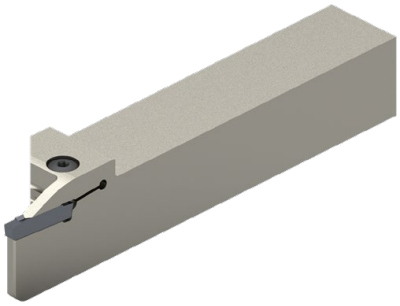
Spare parts for grooving inserts		80 950 ...
GX 24-1 E2..	T15 - IP	**128**
GX 24-2 E3..	T15 - IP	**128**

Suitable indexable inserts and cutting data can be found in the catalogue Cutting tools → **Chapter 11 – Grooving tools**

MonoClamp – Radial Monoholder GX 24



Illustrations show right-hand versions



Designation	H mm	B mm	CW mm	WF mm	OAH mm	OAL mm	LH mm	l_5 mm	a mm	CDX mm	for grooving inserts	NEW Left-hand 70 845 ...	NEW Right-hand 70 845 ...
E16 R/L 0021S2-1616K-S-GX24	16	16	2	15.2	22	125	39	40	4	21	GX 24-1 E2..	**21601**	**21600**
E16 R/L 0021S3-1616K-S-GX24	16	16	3	14.8	22	125	39	40	4	21	GX 24-2 E3..	**31601**	**31600**
E20 R/L 0021S2-2020K-S-GX24	20	20	2	19.2	26	125	40			21	GX 24-1 E2..	**22001**	**22000**
E20 R/L 0021S3-2020K-S-GX24	20	20	3	18.8	26	125	40			21	GX 24-2 E3..	**32001**	**32000**

Key D

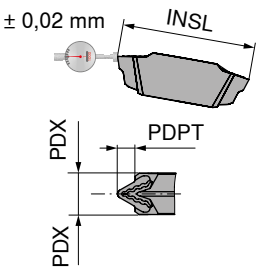
Spare parts for grooving inserts	80 950 ...
GX 24-1 E2..	T15 - IP **128**
GX 24-2 E3..	T15 - IP **128**

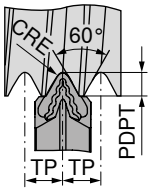
Suitable indexable inserts and cutting data can be found in the catalogue Cutting tools → **Chapter 11 – Grooving tools**

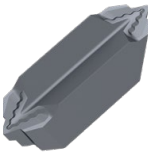
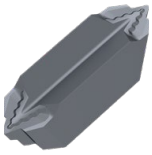
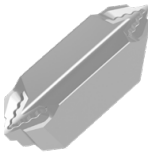
3

Threading inserts TC full profile – External thread 60°

F	M	R





CTPP520	CTPP535	-27P H216T
DRAGONSKIN	DRAGONSKIN	
		

Designation	Size	TP mm	INSL mm	PDPT mm	PDX mm	CRE mm	for tool holder	70 357 ...	70 357 ...	70 357 ...
TC 16-1 E 0.5 ISO	TC 16-1 ...	0.50	16	0.32	1.05	0.06	E.. R/L TC 16-1	**010**	**110**	**610**
TC 16-1 E 0.75 ISO	TC 16-1 ...	0.75	16	0.48	1.05	0.09	E.. R/L TC 16-1	**012**	**112**	**612**
TC 16-1 E 1.0 ISO	TC 16-1 ...	1.00	16	0.64	1.05	0.12	E.. R/L TC 16-1	**014**	**114**	**614**
TC 16-1 E 1.25 ISO	TC 16-1 ...	1.25	16	0.80	1.05	0.15	E.. R/L TC 16-1	**016**	**116**	**616**
TC 16-1 E 1.5 ISO	TC 16-1 ...	1.50	16	0.95	1.05	0.18	E.. R/L TC 16-1	**018**	**118**	**618**
TC 16-2 E 1.75 ISO	TC 16-2 ...	1.75	16	1.10	2.15	0.22	E.. R/L/N TC 16-2	**030**	**130**	**630**
TC 16-2 E 2.0 ISO	TC 16-2 ...	2.00	16	1.26	2.15	0.25	E.. R/L/N TC 16-2	**032**	**132**	**632**
TC 16-2 E 2.5 ISO	TC 16-2 ...	2.50	16	1.58	2.15	0.32	E.. R/L/N TC 16-2	**034**	**134**	**634**
TC 16-2 E 3.0 ISO	TC 16-2 ...	3.00	16	1.89	2.15	0.38	E.. R/L/N TC 16-2	**036**	**136**	**636**

P	●	●	
M	●	●	
K	●	●	●
N			●
S	○	●	
H	○		
O			○

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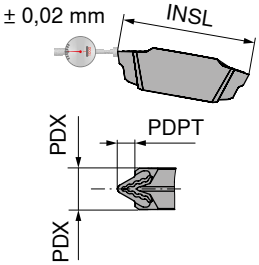
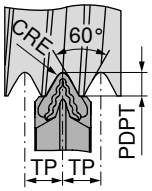
→ Application recommendation on page 269

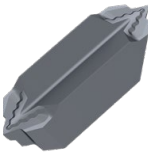
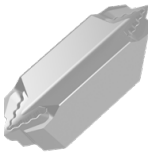
Internal machining		*External machining*	
		→ 251	→ 252

Threading inserts TC full profile – Internal thread 60°

F	M	R





	CTPP535	CTPP520	-27P H216T
	DRAGONSKIN	DRAGONSKIN	
			
	70 358 ...	70 358 ...	70 358 ...

Designation	Size	TP mm	INSL mm	PDPT mm	PDX mm	CRE mm	for tool holder	70 358 ...	70 358 ...	70 358 ...
TC 16-1 I 1.0 ISO	TC 16-1 ...	1.00	16	0.59	1.05	0.06	I32 R/L TC 16-1	**114**	**014**	
TC 16-1 I 1.25 ISO	TC 16-1 ...	1.25	16	0.74	1.05	0.07	I32 R/L TC 16-1		**016**	
TC 16-1 I 1.5 ISO	TC 16-1 ...	1.50	16	0.89	1.05	0.09	I32 R/L TC 16-1	**118**	**018**	**618**
TC 16-2 I 1.75 ISO	TC 16-2 ...	1.75	16	1.02	2.15	0.11	I32 R/L TC 16-2		**030**	
TC 16-2 I 2.0 ISO	TC 16-2 ...	2.00	16	1.17	2.15	0.13	I32 R/L TC 16-2	**132**	**032**	
TC 16-2 I 3.0 ISO	TC 16-2 ...	3.00	16	1.76	2.15	0.19	I32 R/L TC 16-2	**136**	**036**	**636**

P	●	●	
M	●	●	
K	●	●	●
N			●
S	●	○	
H		○	
O			○

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→ Application recommendation on page 269

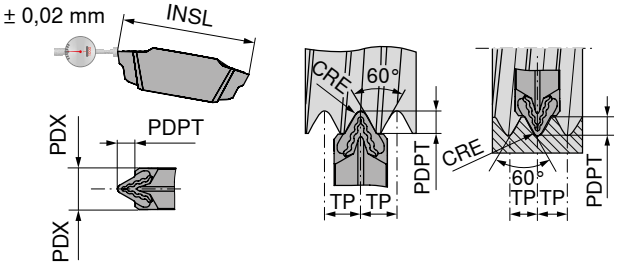
Internal machining | *External machining*

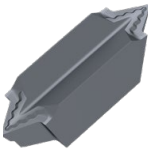
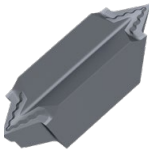
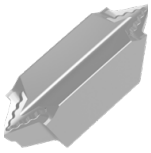
→ 253

3

Threading inserts TC partial profile 60°

F	M	R



	CTPP535	CTPP520	-27P H216T
	DRAGONSKIN	DRAGONSKIN	
			
	70 355 ...	70 355 ...	70 355 ...

Designation	Size	TP mm	INSL mm	PDPT mm	PDX mm	CRE mm	for tool holder	70 355 ...	70 355 ...	70 355 ...
TC 16-1 EI A 60	TC 16-1 ...	0,5 - 1,5	16	1.27	1.05	0.03	E/I.. R/L TC 16-1	**110**	**010**	**610**
TC 16-2 EI AG 60	TC 16-2 ...	0,5 - 3,0	16	2.57	2.15	0.03	E/I.. R/L/N TC 16-2	**132**	**032**	**632**
TC 16-2 EI G 60	TC 16-2 ...	1,75 - 3,0	16	2.49	2.15	0.11	E/I.. R/L/N TC 16-2	**130**	**030**	**630**
P								●	●	
M								●	●	
K								●	●	●
N										●
S								●	○	
H									○	
O										○

→ v_c Page 261
→ Application recommendation on page 269

Internal machining

→ 253

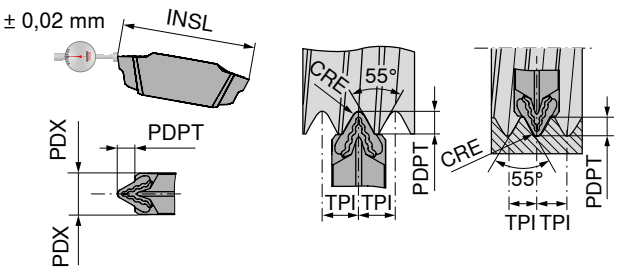
External machining

→ 251

→ 252

Threading inserts TC full profile 55°

F	M	R



CTPP520	CTPP535	-27P H216T
DRAGONSKIN	DRAGONSKIN	

Designation	Size	TPI 1/"	INSL mm	PDPT mm	PDX mm	CRE mm	for tool holder	70 359 ...	70 359 ...	70 359 ...
TC 16-1 EI 28 W	TC 16-1 ...	28	16	0.60	1.05	0.12	E/I.. R/L TC 16-1	**010**	**110**	
TC 16-1 EI 20 W	TC 16-1 ...	20	16	0.84	1.05	0.17	E/I.. R/L TC 16-1	**016**		
TC 16-1 EI 19 W	TC 16-1 ...	19	16	0.88	1.05	0.17	E/I.. R/L TC 16-1	**018**	**118**	**618**
TC 16-1 EI 16 W	TC 16-1 ...	16	16	1.05	1.05	0.21	E/I.. R/L TC 16-1	**022**		
TC 16-2 EI 14 W	TC 16-2 ...	14	16	1.20	2.15	0.23	E/I.. R/L/N TC 16-2	**030**	**130**	**630**
TC 16-2 EI 12 W	TC 16-2 ...	12	16	1.40	2.15	0.27	E/I.. R/L/N TC 16-2		**132**	
TC 16-2 EI 11 W	TC 16-2 ...	11	16	1.53	2.15	0.30	E/I.. R/L/N TC 16-2	**034**	**134**	**634**

P	●	●	
M	●	●	
K	●	●	●
N			●
S	○	●	
H	○		
O			○

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Internal machining

→ 253

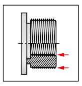
External machining

→ 251

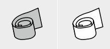
→ 252

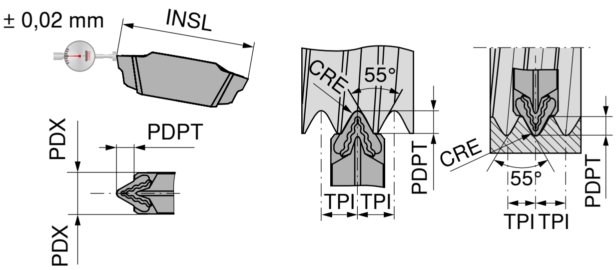
3

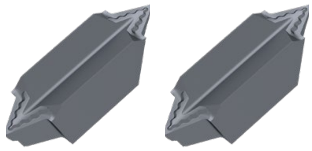
Threading inserts TC partial profile 55°



F	M	R







Designation	Size	TPI 1/"	INSL mm	PDPT mm	PDX mm	CRE mm	for tool holder	CTPP535 DRAGONSKIN 70 356 ...	CTPP520 DRAGONSKIN 70 356 ...
TC 16-1 EI A 55	TC 16-1 ...	28 - 16	16	1.39	1.05	0.12	E/I.. R/L TC 16-1	**110**	**010**
TC 16-2 EI AG 55	TC 16-2 ...	28 - 8	16	2.91	2.15	0.12	E/I.. R/L/N TC 16-2	**132**	**032**
TC 16-2 EI G 55	TC 16-2 ...	14 - 8	16	2.78	2.15	0.23	E/I.. R/L/N TC 16-2	**130**	**030**

	CTPP535	CTPP520
P	●	●
M	●	●
K	●	●
N		
S	●	○
H		○
O		

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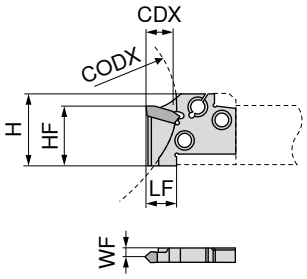
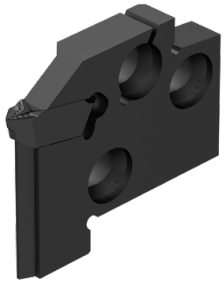
→ Application recommendation on page 269

Internal machining		*External machining*	
→ 253		→ 251	→ 252

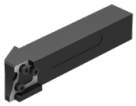
ModularClamp MSS – Threading module TC for external threads



Illustrations show right-hand versions



Designation	TP mm	TPI 1/"	WF mm	HF mm	LF mm	H mm	CODX mm	CDX mm	for grooving inserts	Left-hand 70 872 ...	Neutral 70 872 ...	Right-hand 70 872 ...
E20 R/L TC 16-1	0,5 - 1,5	28 - 16	3.45	13	20	24	60	8	TC 16-1 ...	**120**		**020**
E20 N TC 16-2	1,75 - 3,0	14 - 8	2.20	13	20	24		12	TC 16-2 ...		**220**	

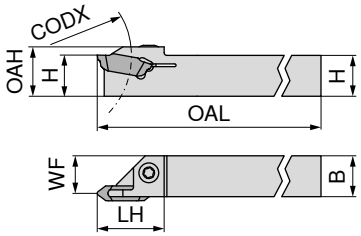


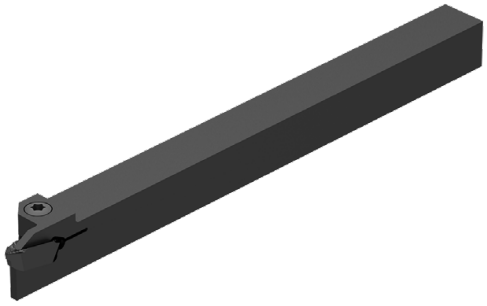
→ 246–250

→ 259+260

3

MonoClamp – Monoholder TC – external thread





Illustrations show right-hand versions

Designation	TP mm	TPI 1/"	H mm	B mm	OAL mm	LH mm	OAH mm	WF mm	CODX mm	for grooving inserts	Left-hand 70 883 ...	Right-hand 70 882 ...
E12 R/L 00-1212 TC16	0,5 - 3	28 - 8	12	12	150	20	14.5	11	30	TC16-1/2..	012	012

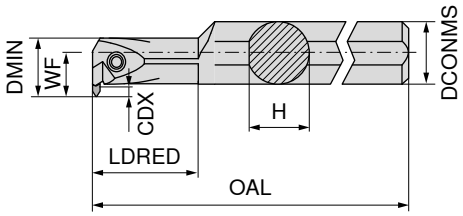
Key D

Clamping screw

Spare parts for grooving inserts		Key D 80 950 ...		Clamping screw 70 950 ...
TC16-1/2..	T15	113	M4x11	442

→ 246–250

MonoClamp – Monobloc boring bar TC – internal thread



Illustrations show right-hand versions

Designation	WF mm	DCONMS mm	H mm	OAL mm	LDRED mm	CDX mm	DMIN mm	for grooving inserts	Left-hand 70 857 ...	Right-hand 70 856 ...
I16 L 90-2D TC16	14.0	20	18	180	32	4	20	TC16-1/2..	**016**	
I20 R/L 90-2D TC16	17.5	25	23	200	40	5	25	TC16-..	**020**	**020**

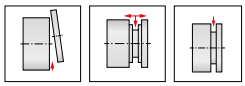
Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 857 016	T15	**113**	M4x14	**403**
70 857 020 / 70 856 020			M5x18	**404**

→ 246–250

3

MaxiClick – Insert – cutting depth 5 mm

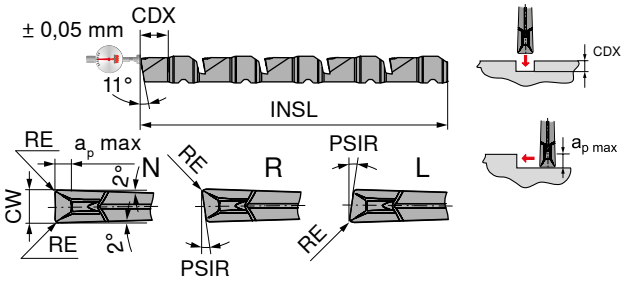
▲ 5 cutting edges

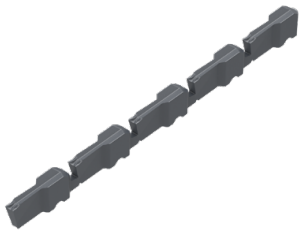


F	M	R

-F2
CTP1340

DRAGONSKIN





70 338 ...

Designation	IH	CW mm	RE mm	PSIR	INSL mm	$a_{p\,max}$ mm	CDX mm	for tool holder	
MC 05-5-1.00 L 07-F2	L	1.0	0.1	7°	59.2		5	MC 05 R/L	**250**
MC 05-5-1.50 L 07-F2	L	1.5	0.1	7°	59.2		5	MC 05 R/L	**260**
MC 05-5-1.00 N 0.10-F2	N	1.0	0.1		59.2	0.5	5	MC 05 R/L	**210**
MC 05-5-1.50 N 0.10-F2	N	1.5	0.1		59.2	1.0	5	MC 05 R/L	**220**
MC 05-5-1.00 R 07-F2	R	1.0	0.1	7°	59.2		5	MC 05 R/L	**230**
MC 05-5-1.50 R 07-F2	R	1.5	0.1	7°	59.2		5	MC 05 R/L	**240**

P	●
M	●
K	●
N	○
S	●
H	
O	○

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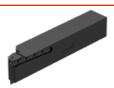
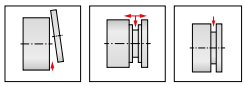
→ Application recommendation on page 265

Internal machining	*External machining*
	
	→ 257

MaxiClick – Insert – cutting depth 10 mm

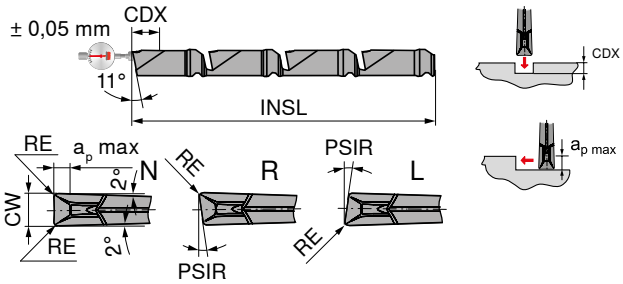
▲ 4 cutting edges



F	M	R

-F2
CTP1340

DRAGONSKIN



70 339 ...

Designation	IH	CW mm	RE mm	PSIR	INSL mm	$a_{p\,max}$ mm	CDX mm	for tool holder	
MC 10-4-1.50 L 07-F2	L	1.5	0.1	7°	59.2		10	MC 10 R/L	270
MC 10-4-2.00 L 07-F2	L	2.0	0.1	7°	59.2		10	MC 10 R/L	280
MC 10-4-2.50 L 07-F2	L	2.5	0.1	7°	59.2		10	MC 10 R/L	290
MC 10-4-1.50 N 0.10-F2	N	1.5	0.1		59.2	1.0	10	MC 10 R/L	210
MC 10-4-2.00 N 0.10-F2	N	2.0	0.1		59.2	1.5	10	MC 10 R/L	220
MC 10-4-2.50 N 0.10-F2	N	2.5	0.1		59.2	2.0	10	MC 10 R/L	230
MC 10-4-1.50 R 07-F2	R	1.5	0.1	7°	59.2		10	MC 10 R/L	240
MC 10-4-2.00 R 07-F2	R	2.0	0.1	7°	59.2		10	MC 10 R/L	250
MC 10-4-2.50 R 07-F2	R	2.5	0.1	7°	59.2		10	MC 10 R/L	260

P	●
M	●
K	●
N	○
S	●
H	
O	○

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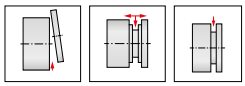
→ Application recommendation on page 265

Internal machining	*External machining*
	→ 258

3

MaxiClick – Insert – cutting depth 10 mm

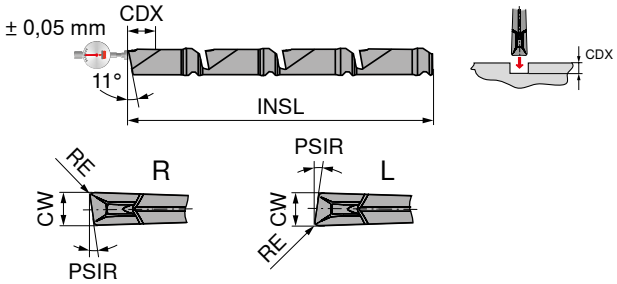
▲ 4 cutting edges



F	M	R

-F3
CTP1340

DRAGONSKIN



70 340 ...

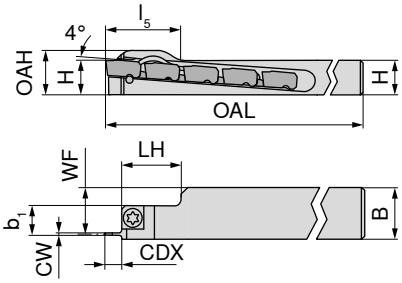
Designation	IH	CW mm	RE mm	PSIR	INSL mm	CDX mm	for tool holder	
MC 10-4-1.50 L 12-F3	L	1.5	0.1	12°	59.2	10	MC 10 R/L	**270**
MC 10-4-2.00 L 12-F3	L	2.0	0.1	12°	59.2	10	MC 10 R/L	**280**
MC 10-4-2.50 L 12-F3	L	2.5	0.1	12°	59.2	10	MC 10 R/L	**290**
MC 10-4-1.50 R 12-F3	R	1.5	0.1	12°	59.2	10	MC 10 R/L	**240**
MC 10-4-2.00 R 12-F3	R	2.0	0.1	12°	59.2	10	MC 10 R/L	**250**
MC 10-4-2.50 R 12-F3	R	2.5	0.1	12°	59.2	10	MC 10 R/L	**260**

P	●
M	●
K	●
N	○
S	●
H	
O	○

→ v_c Page 261
→ Application recommendation on page 265

Internal machining	*External machining*
	→ 258

MaxiClick – Toolholder – cutting depth 5 mm



Illustrations show right-hand versions

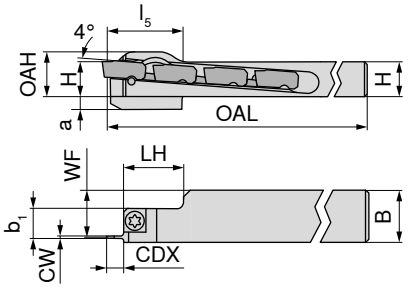
Designation	H mm	OAH mm	B mm	CW mm	CDX mm	WF mm	OAL mm	LH mm	l_5 mm	for grooving inserts	Left-hand 70 873 ...	Right-hand 70 873 ...
MC 05 R/L -1010K	10	13	10	1,00 - 1,50	5	8.5	125	23	27	MC 05	**210**	**110**
MC 05 R/L -1212K	12	15	12	1,00 - 1,50	5	10.5	125	23	27	MC 05	**212**	**112**
MC 05 R/L -1616K	16	19	16	1,00 - 1,50	5	14.5	125	23	20	MC 05	**216**	**116**
MC 05 R/L -2020K	20	23	20	1,00 - 1,50	5	18.8	125	23	20	MC 05	**220**	**120**

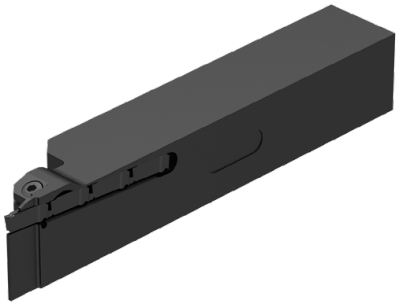
Spare parts for grooving inserts		Key-T 70 950 ...		Clamping screw 70 950 ...
MC 05	T15	**738**	M4x11	**174**

→ 254

3

MaxiClick – Toolholder – cutting depth 10 mm





Illustrations show right-hand versions

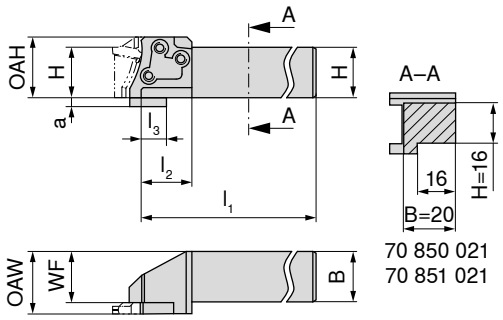
Designation	H mm	OAH mm	B mm	a mm	CW mm	CDX mm	WF mm	OAL mm	LH mm	l_5 mm	for grooving inserts	Left-hand 70 874 ...	Right-hand 70 874 ...
MC 10 R/L -1010K	10	13	10		1,50 - 2,50	10	8.5	125	28		MC 10	**210**	**110**
MC 10 R/L -1010K-S	10	13	10	6	1,50 - 2,50	10	8.5	125	28	27	MC 10	**410** 1)	**310** 1)
MC 10 R/L -1212K	12	15	12		1,50 - 2,50	10	10.5	125	28		MC 10	**212**	**112**
MC 10 R/L -1212K-S	12	15	12	4	1,50 - 2,50	10	10.5	125	28	27	MC 10	**412** 1)	**312** 1)
MC 10 R -1616K	16	19	16		1,50 - 2,50	10	14.5	125	28	20	MC 10		**116**
MC 10 R/L -2020K	20	23	20		1,50 - 2,50	10	18.8	125	28	20	MC 10	**220**	**120**

1) -S = strengthened variant

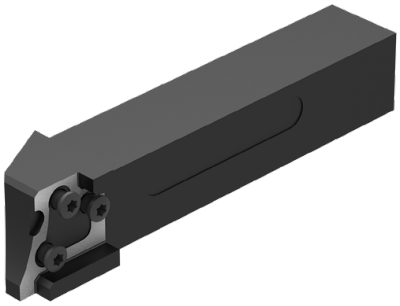
Spare parts for grooving inserts		Key-T 70 950 ...		Clamping screw 70 950 ...
MC 10	T15	**738**	M4x11	**174**

→ 255+256

ModularClamp MSS – Tool holder 0°



Illustrations show right-hand versions



Designation	H mm	B mm	OAW mm	OAH mm	WF mm	l_1 mm	l_2 mm	for modules	Left-hand 70 851 ...	Right-hand 70 850 ...
E12 R/L 00-1212E	12	12	15.25	14.5	11.75	70	12	E12 R/L ...	**012**	**012**
E16 R/L 00-1616G	16	16	19.25	19.5	15.75	90	16	E16 R/L ...	**016**	**016**
E20 R/L 00-1620G	16	20	24.25	24.0	20.15	90	20	E20 R/L ...	**021** 1)	**021** 1)
E20 R/L 00-2020J	20	20	24.25	24.0	20.15	110	20	E20 R/L ...	**020**	**020**

1) see view A-A

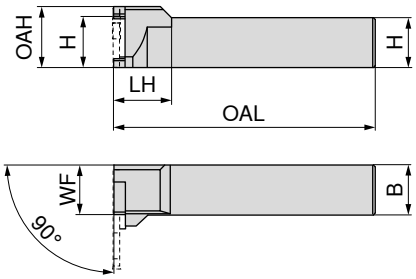
Spare parts for Article no.	Key D 80 950 ...		Clamping screw 70 950 ...	
70 851 012 / 70 850 012	T08	**110**	M2,5x10	**440**
70 851 016 / 70 850 016	T15	**113**	M3,5x12,5	**441**
70 851 021 / 70 850 021	T15	**113**	M4x14	**403**
70 851 020 / 70 850 020	T15	**113**	M4x14	**403**

Module Overview

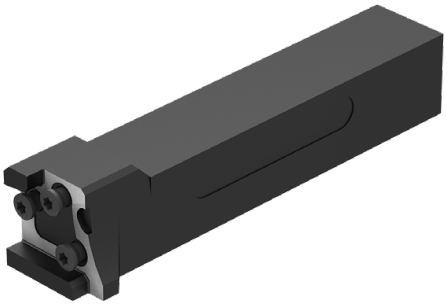
→ 206+207

3

ModularClamp MSS – Tool holder 90°



Illustrations show right-hand versions



Designation	H mm	B mm	OAH mm	WF mm	OAL mm	LH mm	for modules	Left-hand 70 855 ...	Right-hand 70 854 ...
E20 R/L 90-2020J	20	20	24	20	110	20	E20 R/L ...	020	020

For right hand holder → left hand module only
For left hand holder → right hand module only

Spare parts for Article no.		Key D 80 950 ...		Clamping screw 70 950 ...
70 855 020 / 70 854 020	T15	113	M4x14	403

Module Overview

→ 206+207

Cutting data values for grooving inserts GX/LX/FX/SX/AX/TC/MaxiClick

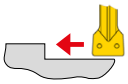
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		
	CTCP325	CTCP335	CTPP345	CTPP520	CTPP535	CTP1340	H216T (SX/FX/GX)	H216T (TC)
Index	v_c in m/min.							
P.1.1	**220**	**184**	**135**	**236**	**180**	**177**		
P.1.2	**194**	**160**	**119**	**204**	**152**	**149**		
P.1.3	**171**	**138**	**105**	**174**	**126**	**123**		
P.1.4	**163**	**131**	**100**	**165**	**118**	**115**		
P.1.5	**151**	**120**	**93**	**150**	**105**	**102**		
P.2.1	**198**	**164**	**122**	**209**	**157**	**153**		
P.2.2	**161**	**129**	**99**	**162**	**116**	**112**		
P.2.3	**151**	**120**	**93**	**150**	**105**	**102**		
P.2.4	**121**	**92**	**74**	**113**	**73**	**70**		
P.3.1	**149**	**127**	**101**	**185**	**119**	**112**		
P.3.2	**96**	**89**	**80**	**131**	**88**	**76**		
P.3.3	**44**	**51**	**59**	**76**	**58**	**39**		
P.4.1	**149**	**127**	**101**	**185**	**119**	**112**		
P.4.2	**123**	**108**	**90**	**158**	**103**	**94**		
M.1.1	149	127	**101**	**185**	**119**	**112**		
M.2.1	96	89	**80**	**131**	**88**	**76**		
M.3.1	133	116	**94**	**169**	**109**	**102**		
K.1.1	**170**	**135**		**140**	**165**	**150**	**140**	**140**
K.1.2	**150**	**115**		**115**	**150**	**125**	**115**	**115**
K.2.1	**160**	**130**		**180**	**145**	**140**	**150**	**150**
K.2.2	**145**	**105**		**115**	**155**	**120**	**110**	**110**
K.3.1	**210**	**150**		**130**	**190**	**170**	**170**	**170**
K.3.2	**140**	**115**		**110**	**145**	**120**	**140**	**140**
N.1.1						300	**400**	**450**
N.1.2						200	**100**	**450**
N.2.1						300	**450**	**300**
N.2.2						200	**450**	**300**
N.2.3						150	**500**	**225**
N.3.1						300	**425**	**190**
N.3.2						300	**400**	**290**
N.3.3						200	**275**	**290**
N.4.1						200	**225**	**290**
S.1.1	35			40	**30**	**35**	38	
S.1.2	30		30	30	**25**	**30**	28	
S.2.1	20		25	20	**15**	**20**	28	
S.2.2	15			15	**15**	**15**	24	
S.2.3	15			18	**15**	**15**	20	
S.3.1				125	**85**	**85**	90	
S.3.2				50	**35**	**40**	55	
S.3.3				35	**25**	**30**	40	
H.1.1				30				
H.1.2				25				
H.1.3								
H.1.4								
H.2.1				25				
H.3.1				40				
O.1.1						130	130	290
O.1.2								
O.2.1						105	105	290
O.2.2								
O.3.1								

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

GX – Depths of cut and feed rates

GX Standard / GX-E

Turning



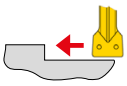
Parting / Grooving

	Depth of Cut a_p in mm							
GX Standard / GX-E	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**GX Standard / GX-E**
Cutting width in mm	Feed rate f in mm/rev.							Feed rate f in mm/rev.
2	0,10–0,15	0,05–0,15	0,05–0,12	0,05–0,10				0,05–0,20
3	0,10–0,17	0,05–0,17	0,05–0,17	0,05–0,15	0,05–0,12			0,10–0,25
4	0,10–0,20	0,07–0,20	0,07–0,20	0,07–0,20	0,07–0,17	0,07–0,15		0,10–0,25
5	0,10–0,25	0,10–0,25	0,07–0,25	0,07–0,25	0,07–0,22	0,07–0,20		0,10–0,30
6	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,25	0,15–0,22	0,15–0,35

When axial grooving reduce feed by 40%.

GX-F2

Turning



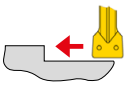
Parting / Grooving

	Depth of Cut a_p in mm								
GX-F2	**0,50**	**0,75**	**1,00**	**1,25**	**1,50**	**1,75**	**2,00**	**2,25**	**2,50**	**GX-F2**
Cutting width in mm	Feed rate f in mm/rev.									Feed rate f in mm/rev.
2	0,03–0,15	0,03–0,15	0,03–0,15	0,03–0,10						0,05–0,15
3	0,04–0,17	0,04–0,17	0,04–0,17	0,04–0,15	0,04–0,13	0,04–0,12				0,075–0,20
4	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,17	0,05–0,15			0,10–0,25
5	0,07–0,20	0,07–0,20	0,07–0,20	0,07–0,20	0,07–0,20	0,07–0,20	0,07–0,17	0,07–0,15		0,10–0,30
6	0,10–0,23	0,10–0,23	0,10–0,23	0,10–0,23	0,10–0,23	0,10–0,23	0,10–0,23	0,10–0,19	0,10–0,15	0,15–0,325

When axial grooving reduce feed by 40%.

GX-M40

Turning



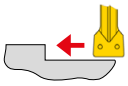
Parting / Grooving

	Depth of Cut a_p in mm								
GX-M40	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**	**GX-M40**
Cutting width in mm	Feed rate f in mm/rev.								Feed rate f in mm/rev.
2	0,10–0,20	0,05–0,20	0,05–0,17	0,05–0,15					0,05–0,15
3	0,10–0,22	0,10–0,22	0,10–0,21	0,10–0,20	0,10–0,17				0,075–0,20
4	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,22	0,10–0,17			0,10–0,25
5	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,27	0,10–0,23	0,10–0,20		0,10–0,30
6	0,10–0,35	0,10–0,35	0,10–0,35	0,10–0,35	0,10–0,32	0,10–0,27	0,10–0,23	0,10–0,20	0,15–0,325

When axial grooving reduce feed by 40%.

GX-27P

Turning



Parting / Grooving

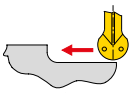
	Depth of Cut a_p in mm								
GX-27P	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**	**GX-27P**
Cutting width in mm	Feed rate f in mm/rev.								Feed rate f in mm/rev.
2	0,05–0,23	0,05–0,23	0,05–0,23	0,05–0,20					0,05–0,20
3	0,05–0,25	0,05–0,25	0,05–0,25	0,05–0,25	0,05–0,20				0,05–0,25
4	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,25			0,05–0,30
5	0,10–0,35	0,10–0,35	0,10–0,35	0,10–0,35	0,10–0,35	0,10–0,32	0,10–0,30		0,10–0,35
6	0,10–0,40	0,10–0,40	0,10–0,40	0,10–0,40	0,10–0,40	0,10–0,36	0,10–0,33	0,10–0,30	0,10–0,40

When axial grooving reduce feed by 40%.

GX – Depths of cut and feed rates

GX-M3

Turning



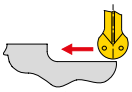
	Depth of Cut a_p in mm							
GX-M3	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**
Radius RE in mm	Feed rate f in mm/rev.							
1,5	0,15–0,35	0,15–0,35	0,15–0,30					
2	0,15–0,40	0,15–0,40	0,15–0,40	0,15–0,30				
2,5	0,15–0,50	0,15–0,50	0,15–0,50	0,15–0,40	0,15–0,35			
3	0,20–0,70	0,20–0,70	0,20–0,70	0,20–0,60	0,20–0,50	0,20–0,40		

Parting / Grooving

GX-M3
Feed rate f in mm/rev.
0,05–0,20
0,10–0,25
0,10–0,25
0,10–0,35

GX-27P Full Radius

Turning



	Depth of Cut a_p in mm							
GX-27P Full Radius	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**
Radius RE in mm	Feed rate f in mm/rev.							
1,5	0,10–0,45	0,05–0,45	0,05–0,40					
2	0,15–0,50	0,10–0,50	0,10–0,50	0,10–0,40				
2,5	0,15–0,60	0,10–0,60	0,10–0,60	0,10–0,50	0,10–0,45			
3	0,25–0,70	0,20–0,70	0,15–0,70	0,15–0,70	0,15–0,65	0,15–0,60	0,15–0,55	
4	0,25–0,80	0,20–0,80	0,15–0,80	0,15–0,80	0,15–0,80	0,15–0,80	0,15–0,75	0,15–0,70

Parting / Grooving

GX-27P Full Radius
Feed rate f in mm/rev.
0,05–0,15
0,075–0,20
0,10–0,25
0,10–0,30
0,15–0,35

GX-M1

Parting / Grooving

GX-M1	
Cutting width in mm	Feed rate f in mm/rev.
2	0,05–0,15
3	0,10–0,20
4	0,10–0,25

GX Radius grooving inserts

Parting / Grooving

GX Radius grooving insert	
Radius RE in mm	Feed rate f in mm/rev.
0,80	0,05–0,10
1,00	0,05–0,15
1,20	0,05–0,15

GX circlip grooving

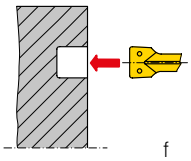
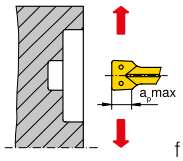
Grooving

GX circlip grooves	
Cutting width in mm	Feed rate f in mm/rev.
0,60–1,70	0,02–0,09
1,95–2,25	0,05–0,10
2,75–3,25	0,05–0,12

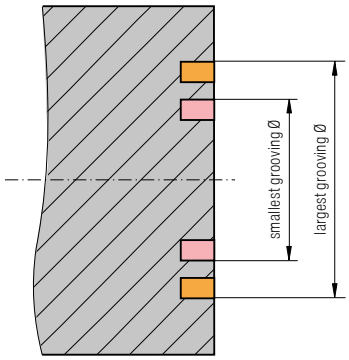
Feed guide and machining instructions for axial grooving and face turning with GX 24 axial

Approximate feed rates

GX

Designation	 f in mm/rev.	 f in mm/rev.	$a_p$max mm
GX 24-2 E 3.00 ..	0,05–0,15	0,05–0,20	2,5
GX 24-3 E 4.00 ..	0,05–0,15	0,05–0,25	3,0
GX 24-3 E 5.00 ..	0,05–0,15	0,10–0,25	3,0
GX 24-4 E 6.00 ..	0,05–0,20	0,10–0,30	3,5

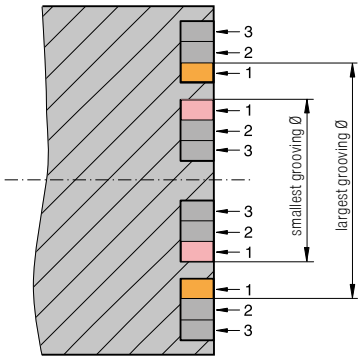
Axial grooving



It is only possible to plunge within the fixed diameter range of the axial grooving module or monoholder (e.g. 50 – 70 mm).

Important: The indicated diameter range is always valid for the external diameter of the groove!

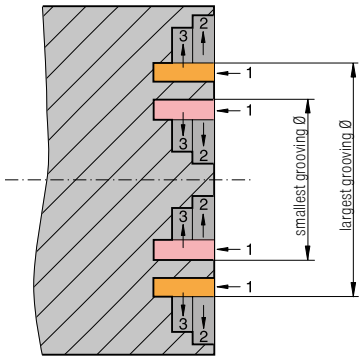
Axial grooving – Groove widening



In case of face turning it is possible to widen the groove above and below the diameter range indicated on the Axial grooving module or monoholder.

Important: Only the first groove must lie within the diameter range of the axial grooving module or axial monoholder. The depth of the widening groove must not be larger than the depth of the original groove.

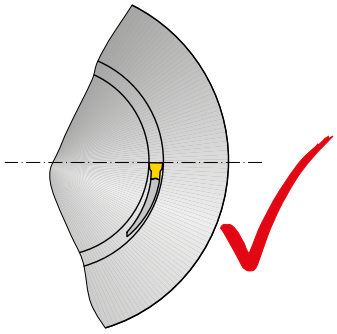
Axial grooving and face turning



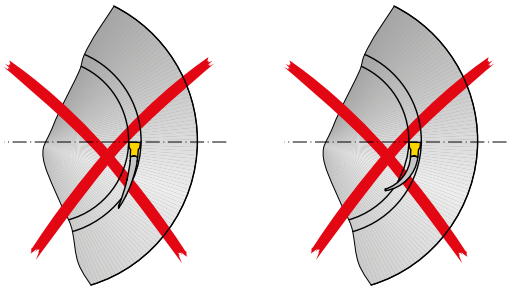
Groove widening by face turning in the diameter range above and below the values specified for the Axial grooving module and Axial monoholder are possible.

Important: Only the first groove must lie within the diameter range of the module.

Attention: The diameter of face grooves must lie within the diameter range indicated on the axial grooving module and axial monoholder. Not following this range will result in the tool being damaged or destroyed.



Correct Axial mono holder

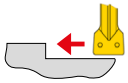


Incorrect Axial mono holder

MaxiClick – Depths of cut and feed rates

MaxiClick 05

Turning



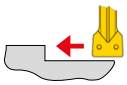
	Depth of Cut a_p in mm		
MaxiClick 05	**0,25**	**0,50**	**0,75**
Cutting width in mm	Feed rate f in mm/rev.		
1	0,02–0,15	0,02–0,10	
1,5	0,02–0,20	0,02–0,20	0,02–0,14

Parting / Grooving

MaxiClick 05
Feed rate f in mm/rev.
0,03–0,10
0,03–0,11

MaxiClick 10

Turning

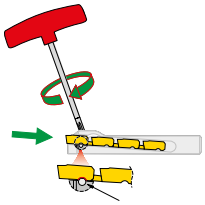


	Depth of Cut a_p in mm				
MaxiClick 10	**0,50**	**0,75**	**1,00**	**1,25**	**1,50**
Cutting width in mm	Feed rate f in mm/rev.				
1,5	0,02–0,20	0,02–0,15	0,02–0,10		
2	0,02–0,20	0,02–0,20	0,02–0,14	0,02–0,10	
2,5	0,02–0,20	0,02–0,20	0,02–0,17	0,02–0,13	0,02–0,10

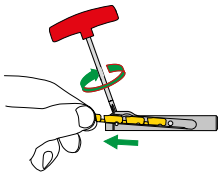
Parting / Grooving

MaxiClick 10
Feed rate f in mm/rev.
0,03–0,11
0,03–0,12
0,03–0,15

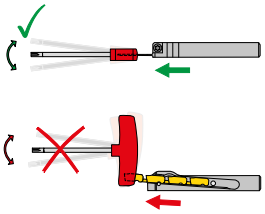
MaxiClick – System function



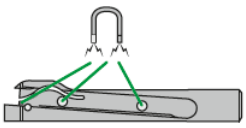
correct insert location in the seat



Withdraw cutting insert



Worn-out cutting edge is broken off towards the left or right side



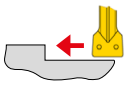
Magnets prevent the cutting insert from falling out of the tool holder during positioning

3

SX – Depths of cut and feed rates

SX -F2

Turning

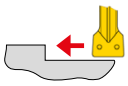


Parting / Grooving

	Depth of Cut a_p in mm									
SX -F2	**0,50**	**0,75**	**1,00**	**1,25**	**1,50**	**1,75**	**2,00**	**2,25**	**2,50**	**SX -F2**
Cutting width in mm	Feed rate f in mm/rev.									Feed rate f in mm/rev.
2	0,03–0,15	0,03–0,15	0,03–0,15	0,03–0,10						0,05–0,15
3	0,04–0,17	0,04–0,17	0,04–0,17	0,04–0,15	0,04–0,13	0,04–0,12				0,075–0,20
4	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,17	0,05–0,15			0,10–0,25

SX-M2

Turning

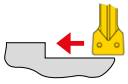


Parting / Grooving

	Depth of Cut a_p in mm								
SX-M2	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**	**SX-M2**
Cutting width in mm	Feed rate f in mm/rev.								Feed rate f in mm/rev.
2	0,05–0,17	0,05–0,13	0,05–0,10						0,05–0,15
3	0,07–0,20	0,07–0,20	0,07–0,18	0,07–0,15					0,075–0,20
4	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,22	0,10–0,18				0,10–0,25
5	0,12–0,27	0,12–0,27	0,12–0,27	0,12–0,25	0,12–0,22				0,10–0,30
6	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,30	0,15–0,25	0,15–0,20			0,15–0,35

SX-27P

Turning



Parting / Grooving

	Depth of Cut a_p in mm								
SX-27P	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**	**SX-27P**
Cutting width in mm	Feed rate f in mm/rev.								Feed rate f in mm/rev.
2	0,05–0,23	0,05–0,23	0,05–0,23	0,05–0,20					0,05–0,20
3	0,05–0,25	0,05–0,25	0,05–0,25	0,05–0,25	0,05–0,20				0,05–0,25
4	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,30	0,10–0,25			0,05–0,30

SX/LX – Depths of cut and feed rates

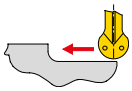
SX-M1

Parting / Grooving

SX-M1	
Cutting width in mm	Feed rate f in mm/rev.
2	0,05–0,15
3	0,10–0,20
4	0,10–0,25
5	0,15–0,30
6	0,15–0,35

SX-M3

Turning



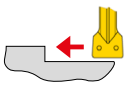
	Depth of Cut a_p in mm							
SX-M3	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**
Radius in mm	Feed rate f in mm/rev.							
1,5	0,15–0,35	0,15–0,35	0,15–0,30					
2	0,15–0,40	0,15–0,40	0,15–0,40	0,15–0,30				
2,5	0,15–0,50	0,15–0,50	0,15–0,50	0,15–0,40	0,15–0,35			
3	0,20–0,70	0,20–0,70	0,20–0,70	0,20–0,60	0,20–0,50	0,20–0,40		

Parting / Grooving

SX-M3
Feed rate f in mm/rev.
0,05–0,20
0,10–0,25
0,10–0,25
0,10–0,35

LX-M2

Turning



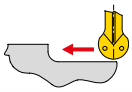
	Depth of Cut a_p in mm							
LX-M2	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**
Cutting width in mm	Feed rate f in mm/rev.							
8	0,17–0,45	0,17–0,45	0,17–0,45	0,17–0,45	0,17–0,40	0,17–0,37	0,17–0,35	
10	0,20–0,50	0,20–0,50	0,20–0,50	0,20–0,50	0,20–0,46	0,20–0,42	0,20–0,38	0,20–0,35

Parting / Grooving

LX-M2
Feed rate f in mm/rev.
0,20–0,50
0,20–0,50

LX-M3

Turning



	Depth of Cut a_p in mm							
LX-M3	**0,5**	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**	**3,5**	**4,0**
Radius in mm	Feed rate f in mm/rev.							
4	0,25–0,80	0,25–0,80	0,25–0,80	0,25–0,80	0,25–0,80	0,25–0,70	0,25–0,60	0,25–0,50

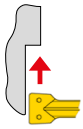
Parting / Grooving

LX-M3
Feed rate f in mm/rev.
0,15–0,35

AX/FX – Depths of cut and feed rates

AX-F50

Face turning



	Depth of Cut a_p in mm			
AX-F50	**0,5**	**1,0**	**1,5**	**2,3**
Size	Feed rate f in mm/rev.			
AX 05	0,03–0,10	0,03–0,10		
AX 10	0,03–0,13	0,03–0,13	0,03–0,135	
AX 15	0,03–0,15	0,03–0,15	0,03–0,15	0,03–0,15

Axial grooving

1. Plunging	
Feed rate f in mm/rev.	Feed rate f in mm/rev.
0,025–0,080	0,025–0,20
0,025–0,065	0,05–0,25
0,025–0,050	0,05–0,30

FX-F1

Parting / Grooving

FX-F1	
Cutting width in mm	Feed rate f in mm/rev.
2,2	0,025–0,10
3,1	0,05–0,15
4,1	0,05–0,20

FX-M1

Parting / Grooving

FX-M1	
Cutting width in mm	Feed rate f in mm/rev.
2,20	0,05–0,15
3,10	0,08–0,18
4,10	0,10–0,20
5,10	0,15–0,28
6,50	0,15–0,33
8,20	0,20–0,40
9,70	0,20–0,40

FX-27P

Parting / Grooving

FX-27P	
Cutting width in mm	Feed rate f in mm/rev.
2,20	0,01–0,10
3,10	0,015–0,125
4,10	0,05–0,15

FX-R2

Grooving

FX-R2	
Cutting width in mm	Feed rate f in mm/rev.
3,10	0,10–0,275
4,10	0,15–0,35

TC – Reference values for profile depth and number of passes

All listed values are guide values for steel machining

Metric ISO 60° external thread

Pitch in mm	0,5	0,75	1,0	1,25	1,5	1,75	2,0	2,5	3,0	3,5	4,0	4,5	5,0
Number/cuts	4–6	4–7	4–8	5–9	6–10	7–11	8–12	9–14	10–18	10–18	12–20	12–20	12–20
Thread profile depth in mm	0,32	0,48	0,64	0,8	0,95	1,10	1,26	1,58	1,89	2,21	2,53	2,84	3,16

Metric ISO 60° internal thread

Pitch in mm	0,5	0,75	1,0	1,25	1,5	1,75	2,0	2,5	3,0	3,5	4,0	4,5	5,0
Number/cuts	4–6	4–7	4–8	5–9	6–10	7–11	8–12	9–14	10–18	10–18	12–20	12–20	12–20
Thread profile depth in mm	0,30	0,45	0,59	0,74	0,89	1,02	1,17	1,46	1,76	2,02	2,35	2,64	2,93

Whitworth 55° external and internal thread

TPI	28	26	24	20	19	18	16	14	12	11	10	9	8	7	6	5
Number/cuts	5–8	5–8	5–9	5–9	6–10	6–10	7–11	8–12	9–14	9–14	10–17	10–18	10–18	12–20	12–20	12–20
Thread profile depth in mm	0,60	0,65	0,70	0,84	0,88	0,93	1,05	1,20	1,40	1,53	1,68	1,87	2,11	2,41	2,81	3,37

Partial profile 60° external and internal thread

External	TC 16-2EI-AG60																
	TC 16-1EI-A60									TC 16-2EI-G60				TC 16-3EI-N60			
Pitch in mm	0,5	0,75	1,0	1,25	1,5	1,75	2,0	2,5	3,0	1,75	2,0	2,5	3,0	3,5	4,0	4,5	5,0
Number/cuts	4–6	4–7	5–9	6–10	7–11	8–12	9–14	10–15	12–19	8–12	9–14	10–15	12–20	12–20	13–21	14–22	14–22
Thread profile depth in mm	0,33	0,52	0,71	0,90	1,09	1,28	1,47	1,84	2,22	1,23	1,42	1,79	2,17	2,45	2,83	3,21	3,59

Internal	TC 16-2EI-AG60																
	TC 16-1EI-A60									TC 16-2EI-G60				TC 16-3EI-N60			
Pitch in mm	0,5	0,75	1,0	1,25	1,5	1,75	2,0	2,5	3,0	1,75	2,0	2,5	3,0	3,5	4,0	4,5	5,0
Number/cuts	4–6	4–7	5–9	6–10	7–11	8–12	9–14	10–15	12–19	8–12	9–14	10–15	12–20	12–20	13–21	14–22	14–22
Thread profile depth in mm	0,27	0,44	0,60	0,76	0,92	1,09	1,25	1,57	1,90	1,04	1,20	1,52	1,85	2,07	2,40	2,72	3,05

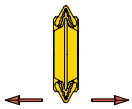
Partial profile 55° external and internal thread

External	TC 16-2EI-AG55												
	TC 16-1EI-A55												
TPI	28	26	24	20	19	18	16	14	12	11	10	9	8
Number/cuts	5–8	5–8	6–9	6–9	7–12	7–12	8–14	9–14	10–16	10–16	11–18	12–20	12–20
Thread profile depth in mm	0,66	0,72	0,79	0,95	1,01	1,07	1,21	1,39	1,63	1,79	1,97	2,20	2,48

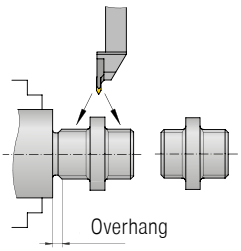
Internal	TC 16-2EI-G55						TC 16-3EI-N55		
TPI	14	12	11	10	9	8	7	6	5
Number/cuts	8–12	9–14	10–15	11–18	12–20	12–20	12–20	12–20	14–22
Thread profile depth in mm	1,22	1,46	1,56	1,80	2,03	2,31	2,40	2,89	3,56

Comparison threading system with TC and conventional

TC

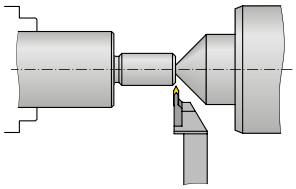


- Neutral configuration of insert makes operation in both directions possible
- Only one threading insert per pitch for partial profile and Whitworth thread; only two threading inserts (internal – external) per pitch for ISO threads
- Reduced stock holding
- good chip formation due to chip breaker with rake angle + 10 °

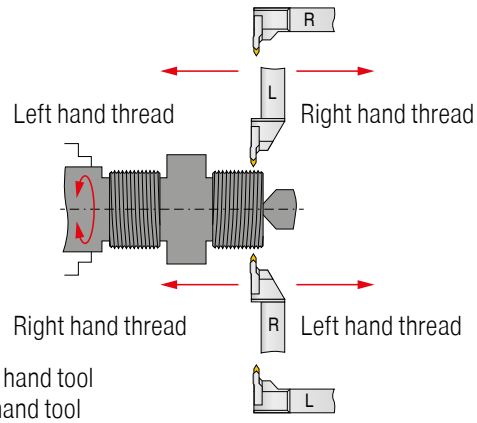


Greater efficiency through:

- shorter operating time
- Less tool changing
- High stability wih small overhang
- Material saving
- Thread turning between shoulders
- Fewer tools and indexable inserts



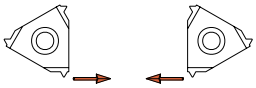
- Very good access to workpiece, therefore use of tailstock also possible with small thread diameters



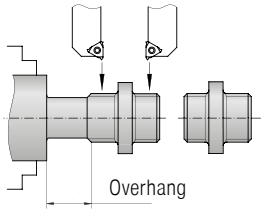
R = Right hand tool
L = Left hand tool

- ease of use, as the tools have no pitch angle correction they can be used in both directions

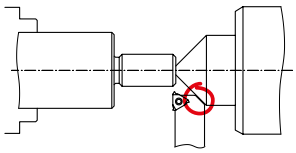
Conventional



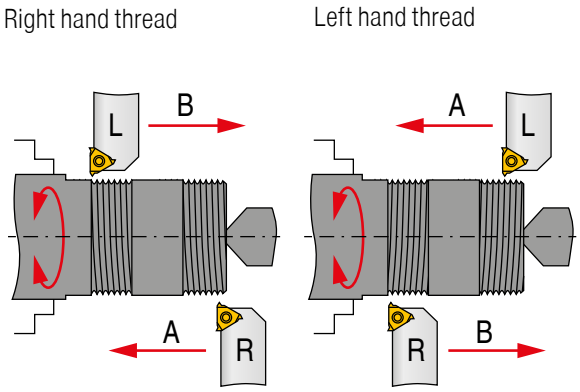
- Right-hand and left-hand version of indexable insert, therefore operation only in one direction
- For every pitch 4 threading inserts are necessary (right – left, internal – external)



- For this machining method 2 tools are required
- additional material and stability loss with large overhang



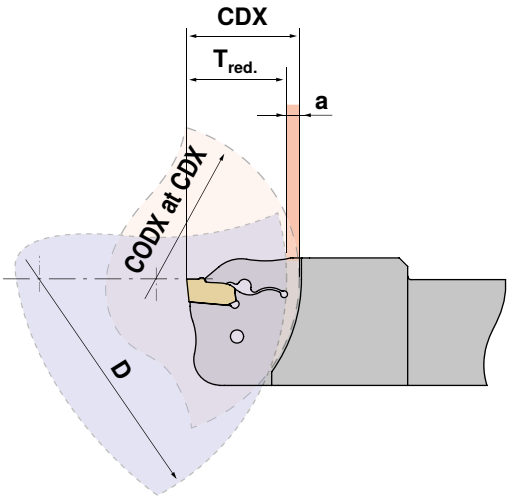
- poor accessibility
- Collision danger



- With conventional thread turning the correction of the helix angle is necessary, therefore a high degree of application know-how is required
- Can only be operated in one direction

ModularClamp

GX | SX | LX | FX



The ModularClamp grooving modules are matched according to size on a particular workpiece diameter CODX. If the diameter of the workpiece is greater than CODX of the grooving Modules, this reduces the achievable penetration depth by the dimension „a“. The extent of reduction can be determined with the following table.

CDX maximum plunge depth in mm
CODX maximum workpiece Ø with full penetration depth in mm
a Reduction amount in mm

$T_{red.}$ = CDX – a

Grooving depth reduction

	Reduction a (mm) of the maximum grooving depth (CDX)																
Size		0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0
E12	35	40	45	60	75	115	>250										
E16	50	55	60	70	80	100	130	200	>420								
E20	60	65	70	75	85	95	110	130	165	220	>330						
E25	75	80	85	90	100	110	125	140	160	190	240	320	>500				
E32	95	100	105	110	120	125	135	145	160	180	200	225	270	320	400	530	>800
	Workpiece diameter D (mm)																

Maximum workpiece diameter (CODX)
with full penetration depth (CDX) in mm

Calculation example:

E25R**21**-GX24-3

Size 25

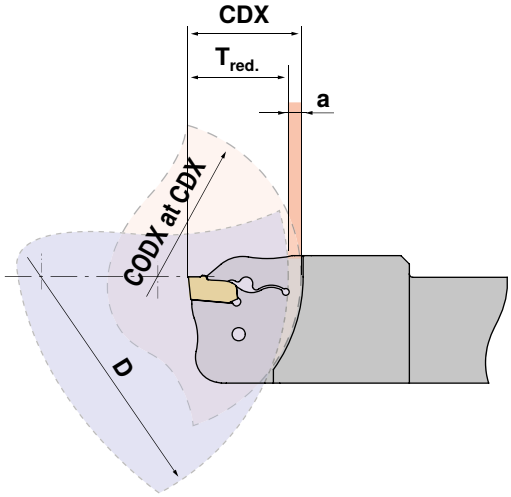
CDX = 21 mm, Ø 75 mm

D = Ø 100 mm

CDX – a = $T_{red.}$
21 – 2 = 19 mm

MonoClamp

SX



Depending on the groove width and shank size, the MonoClamp tools are designed for use with a specific workpiece diameter CODX. If the workpiece diameter is larger than the CODX of the grooving module, the achievable groove depth is reduced by the dimension „a“. The extent of the reduction is determined using the following table.

CDX maximum plunge depth in mm
CODX maximum workpiece Ø with full penetration depth in mm
a Reduction amount in mm

$T_{red.}$ = CDX – a

Grooving depth reduction

	Reduction a (mm) of the maximum grooving depth (CDX)																
Shank	0	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8
E12R/L0022...	44	70	80	95	115	150	225	>450									
E16R/L0026...	52	90	105	125	155	210	305	>600									
E20R/L0026...	52	110	125	140	160	195	240	320	475	>950							
E20R/L0033...	66	110	125	140	160	195	240	320	475	>950							
E25R/L0026...	52	140	160	190	235	310	465	>930									
E25R/L0033...	66	155	175	200	230	275	340	450	675	>1350							
E25R/L0040...	80	155	175	200	230	275	340	450	675	>1350							
	Workpiece diameter D (mm)																

Maximum workpiece diameter (CODX) with full penetration depth (CDX) in mm

Calculation example:

E25R**0033...**

CDX = 33 mm, Ø 66 mm

D = Ø 200 mm	CDX – a = $T_{red.}$ 33 – 1,5 = 31,5 mm

Clamping Method – SX-System

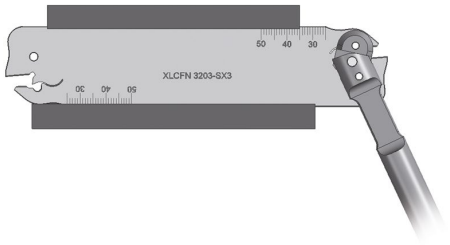
System function – inserting and removing the cutting inserts

Precision system for internal and external grooving.

The key has been designed in such a way that it will not stress the material beyond its ‘elastic limit’.

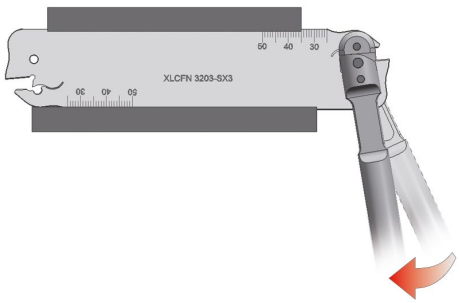
With this alternate system the material always remains in its flexible range and provides a substantial increase in tool life.

1



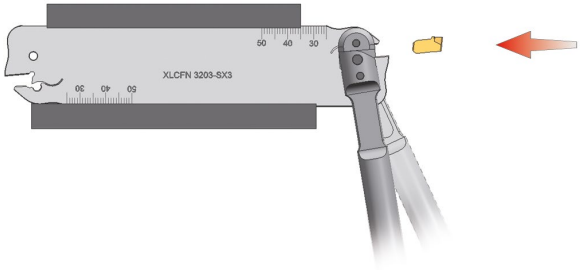
Locate wrench into blade with pins located in two holes

2



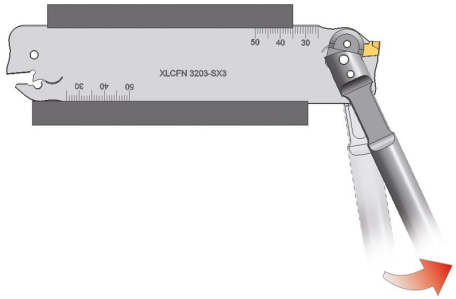
Movement of the fitting key in the direction of the insert seat opens the tool.

3



Load the grooving insert into position and press against the seat.

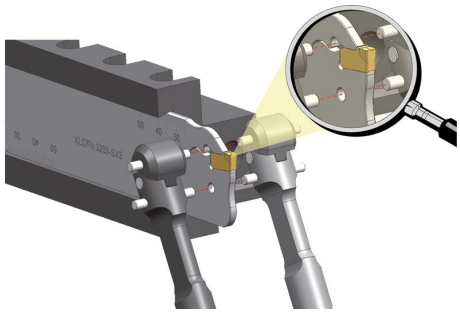
4



Moving the key forward causes the insert seat to close and clamp the insert.

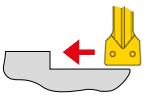
When changing the inserts, always maintain tension on the key!

The clamp is designed so that the wrench can be inserted from both sides of the blade according to the accessibility.



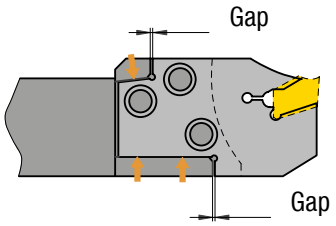
Maximum blade projection when turning

Blade	max. overhang
SX 2 – SX 3	25 mm
SX 4 – SX 5	30 mm
SX 6	35 mm



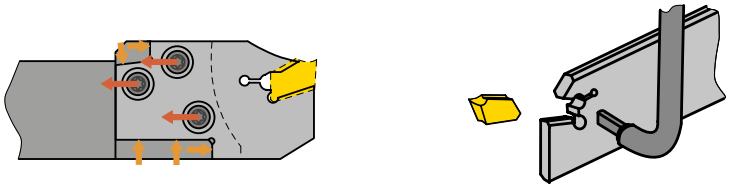
Clamping function – ModularClamp-Module

Module unclamped



- Gap between module and support face for axial clamping

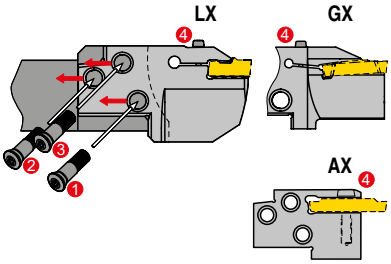
Module clamped



- Axial clamping with support face
- Connection free from play, therefore maximum stability

GX LX AX

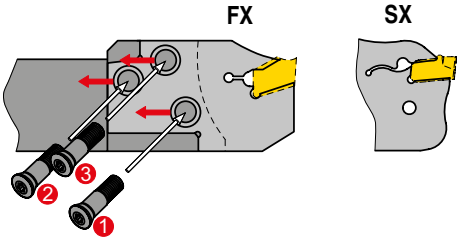
Active insert clamping



Clamping screws 1, 2 and 3 are used to clamp the modules.
The insert is clamped in the module via the additional screw 4.

FX SX

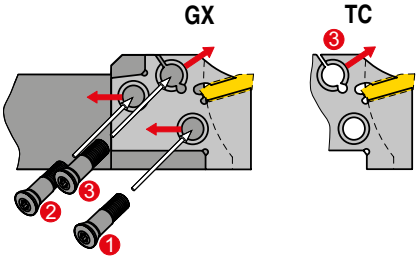
Self clamping of the insert



Clamping screws 1, 2 and 3 are used for clamping the module.
The insert is self-clamping.

GX TC

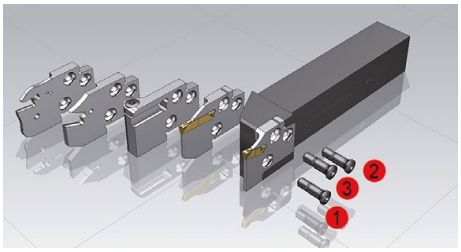
Active insert clamping



Clamping screws 1 and 2 are used for clamping the module.
Important: first tighten clamp screws 1 and 2.
Then clamp the insert with screw 3.

Torque Moment ModularClamp Module Screws

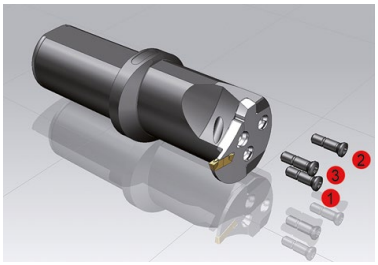
ModularClamp – Tool holder



Tighten screws to the correct Torque moment in this order.

ModularClamp – Tool holder	Screw	Torx	Torque moment	
			Nm	in.lbs
E12..	M2,5x10	T08	1,2	10,6
E16..	M3,5x12,5	T15	3,2	28,3
E20..	M4x14	T15	4,0	35,4
E25..	M5x18	T20	5,0	44,3
E32..	M6x20	T25	6,0	53,1

ModularClamp – Boring bar



Tighten screws to the correct Torque moment in this order.

ModularClamp – Boring bar	Screw	Torx	Torque moment	
			Nm	in.lbs
I16..	M2,5x10	T08	1,2	10,6
I20..	M3x11	T10	2,0	17,7
I25..	M3,5x12,5	T15	3,2	28,3
I32..	M4,5x17	T20	4,0	35,4
I40..	M5x18	T20	5,0	44,3

Tightening torque for the insert clamping

Recommended tightening torque

Grooving systems	Screw	Torx	Torque moment	
			Nm	in.lbs
GX / AX / LX	M3,5	T15	3,2	28,3
	M4,0	T15/T20	4,0	35,4
	M5,0	T20	5,0	44,3

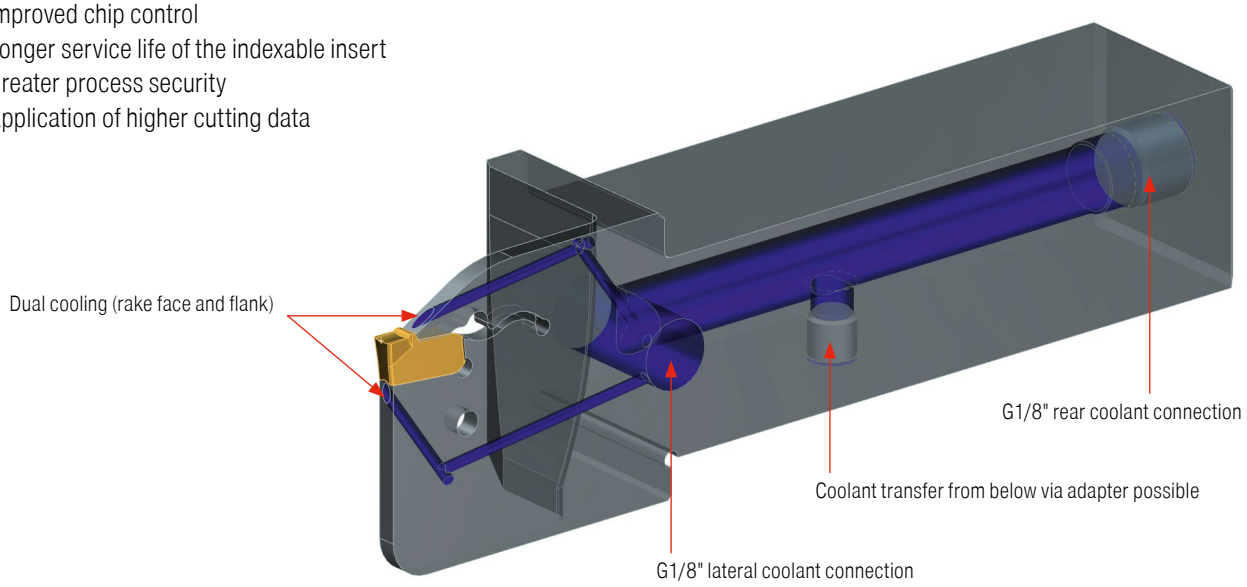
Advantages due to DirectCooling

Internal coolant supply with groove machining has a decisively positive effect on your turning process.
In our CERATIZIT grooving range, the following grooving systems have an internal coolant supply:

- **SX** Grooving holder (single tool)
- **GX** Grooving holder (single tool)

Advantages due to DirectCooling

- Improved chip control
- Longer service life of the indexable insert
- Greater process security
- Application of higher cutting data



Advantages of the trochoidal turning strategy

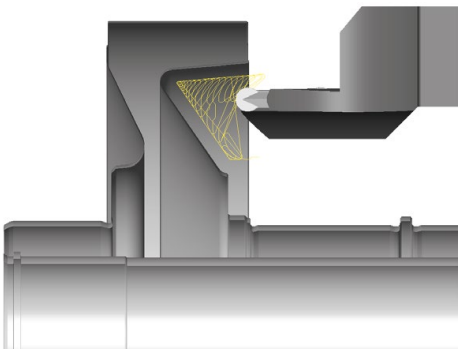
- Less wear and longer tool life due to softer entry and exit
- Smaller angle of engagement = less vibration
- Up to 40% higher feed rate values possible
- Broad field of application in austenitic steels, heat-resistant steels, Inconel and nickel-base alloys as well as long-chipping ductile materials
- Savings on tools

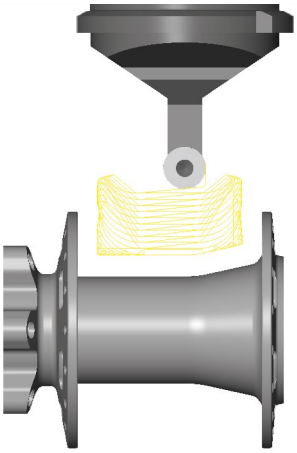
Trochoidal turning with support of the following CAM systems:

- hyperMill – High-performance turning
- Esprit CAM – ProfitTurning
- SolidCAM – Turning
- EdgeCAM – Waveform turning
- MasterCAM – Dynamic turning

Possible applications

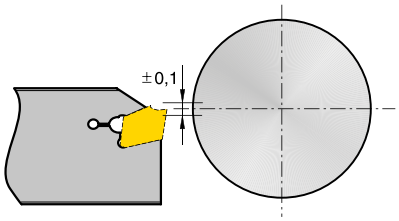
- Radial and axial recesses and grooves
- Rough machining – high-speed turning with button insert

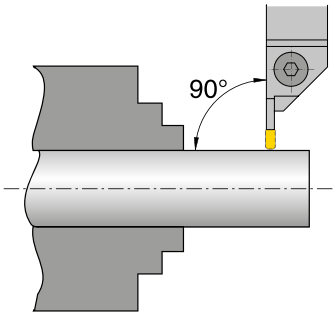




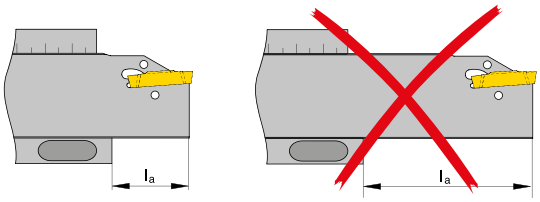
General references

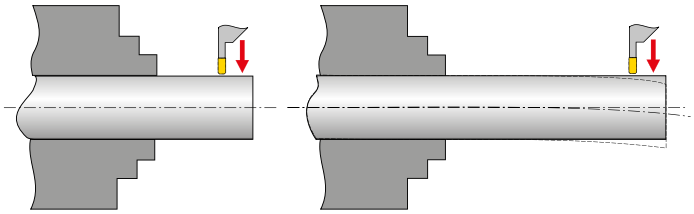
Tool position





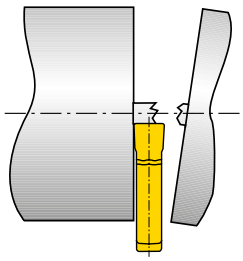
Tool overhang



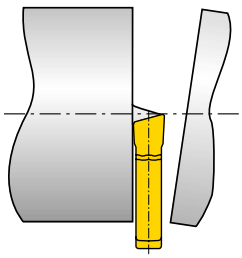


As a rule of thumb: Overhang l_a should not be greater than 8 x s (Groove width).

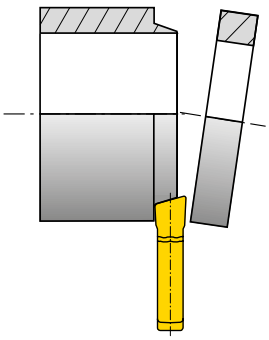
References for Parting off



From Ø 5 mm on, reduce feed "f" by approx. 50%. No parting across centre (risk of breakage).

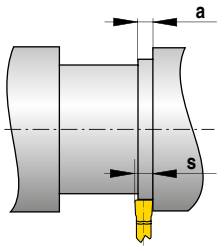


For parting pip-free, use R or L inserts. In order to minimize lateral deflection reduce feed by approx. 20–50 %.

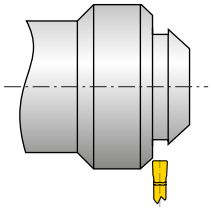


In order to prevent ring formation, use R or L inserts. Reduce feed "f" because of lateral deflection by approx. 20 % – 50%.

References for grooving



When grooving with an axial displacement the width **„a“** should amount to at least 70 % of the grooving width **„s“**.



When grooving oblique surfaces the feed should be reduced by approx. 20% – 50 % until fully engaged.

3

Trouble shooting guide for grooving FX/SX/GX/LX

Type of problem												
Type of wear				Work piece problems				Swarf control				
Edge breakage	Built-up edge	Wear on clearance face	Plastic deformation	Vibration	Formation of pips and burrs	Chattered surface	Surface quality	Chip too long (snarl chip)	Chip too short (fragmented chip)			
	↑	↓	↓	↓			↑	↓		Cutting speed	Cutting data	Remedy measures
↓			↓	↑		↓	↓	↑	↓	Feed rate		
↓		↓	↓		↓	↓	↓			Feed rate at centre (-R -F -M ↑ ↓)		
↑	↓		~	~	↓	↓	↓	↓	↑	Chip groove	Insert selection	
					●					R/L execution		
↑		↑	↑	↓	↓	↓	↑			Corner radius (↑ larger, ↓ smaller)		
↓		↑	↑							Tool Material (↑ Wear resistance, ↓ toughness)		
				↓		↑	↑			Groove width		
~				~		~	~			Tool clamping	General criteria	
~				~		~	~			Work piece clamping		
~				~			↓			Overhang		
~		~		~	~		~			Tip height		
	●	●	●		●		●	●		Cooling lubricant		

↑ raise, increase large influence
↑ raise, increase small influence
↓ avoid, reduce large influence
↓ avoid, reduce small influence
~ check, optimise
● use

Trouble shooting guide for TC threading

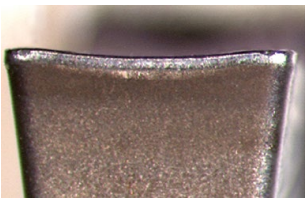
Type of problem													
Type of wear				Workpiece				Swarf control					
Wear on clearance face	Break out cut	Plastic deformation	Built-up edge	Formation of a shoulder at the external thread Ø	Profile	Surface quality	Chatter marks, vibrations	Chip too thick	Chip too thin	Chip shape (snarl chip)			
↓		↓	↑			↑	↓				Cutting speed	Cutting data	Remedy measures
a, b	a, b		a, b	a, b		a, b	a, b	a, b		a, b	Feed (a – over the flanks; b – Alternating flanks)	Cutting data	Remedy measures
↑	↓	↓		↓	↓	↓	↓	↓	↑	~	Feed (Cutting depth)	Cutting data	Remedy measures
↓	↑	↑		~	~	↑	~	↑	↓	↓	Number of passes	Cutting data	Remedy measures
				●	●	●					Spring cut (Air cut)	Cutting data	Remedy measures
			●			●	●			●	Chip groove	Indexable insert selection	Remedy measures
↑	↓	↑									Tool Material (Wear resistance ↑ toughness ↓)	Indexable insert selection	Remedy measures
				●	●	●					Full profile	Indexable insert selection	Remedy measures
											Partial profile	Indexable insert selection	Remedy measures
	~					~	~				Stable tool holder / insert	Various criteria	Remedy measures
	~					~	~				Stable workpiece	Various criteria	Remedy measures
	↓					↓	↓				Overhang	Various criteria	Remedy measures
~	~	~			~	~	~				Tip height	Various criteria	Remedy measures
●	●	●	●	●		●					Cooling lubricant	Various criteria	Remedy measures

↑ raise, increase large influence
↑ raise, increase small influence
↓ avoid, reduce large influence
↓ avoid, reduce small influence
~ check, optimise
● use

3

Wear causes

Wear on clearance face



Abrasion on the flank, normal wear after a given operation time

Cause

- cutting speed too high
- grade with too low wear resistance
- insufficient coolant

Remedy

- Reduce the cutting speed
- select a more wear resistant grade
- Improve/check coolant feed

Edge chipping

Excessive mechanical stress on the cutting edge causing carbide particles to break out.

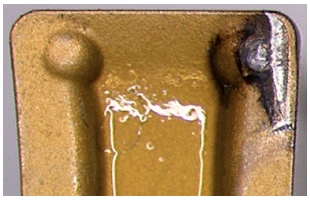
Cause

- too hard grade
- vibration
- too high feed and depth of cut
- chip impact

Remedy

- use tougher grade
- use negative geometry with chip breaker
- reduce overhang, check center height
- stabilize the cutting edge

Cratering



The outgoing hot chip causes cratering of the insert on the clamping surface.

Cause

- too high cutting speed, feed, or both
- too low rake angle
- grade with too low wear resistance
- incorrectly supplied cooling

Remedy

- Reduce cutting speed and / or feed
- Check coolant flow and / or increase pressure
- Use harder grade

Plastic deformation

Large mechanical load produces high temperature machining, this can lead to plastic deformation.

Cause

- too high operating temperature, thus softening the base material
- unsuitable grade
- inadequate coolant supply

Remedy

- Reduce the cutting speed
- select a more wear resistant grade
- use coolant

Built-up edge

Weld deposits of material on the cutting edge occurs when the chip does not flow caused by low average temperature.

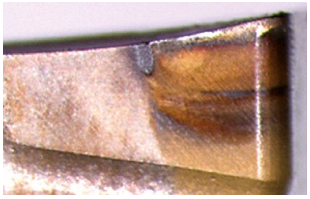
Cause

- too low cutting speed
- too low rake angle
- Incorrect grade
- lack of cooling / lubrication

Remedy

- Increase the cutting speed
- Increase rake angle
- Use TiN coating
- increase coolant strength

Notch wear



Contraction at maximum cutting depth.

Cause

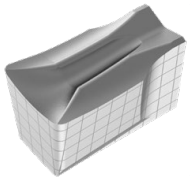
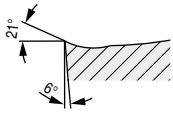
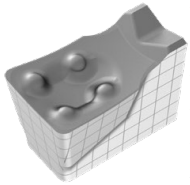
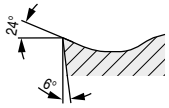
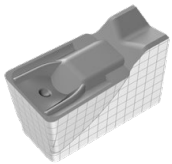
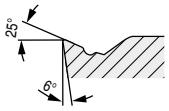
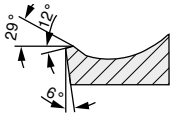
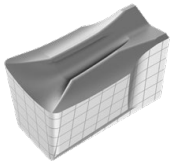
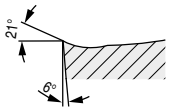
- Oxidation at the cutting edge
- Too high a temperature at the edge

Remedy

- Use different cutting depths
- Reduce cutting speed
- Improve/check coolant feed

Chip breakers / Applications

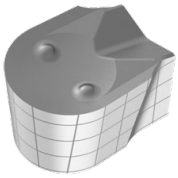
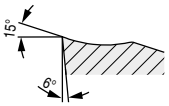
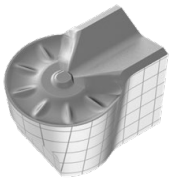
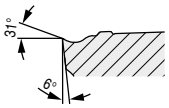
System GX

		Smooth cut	irregular cut	interrupted cut	Model	f in mm/rev.
-F2 ▲ very positive geometry ▲ honed cutting edge ▲ low feed rates ▲ low cutting forces ▲ first choice for stainless materials		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTP1340** **CTP1340/CTPP345** **CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTPP345 		0,05–0,15
-Standard / -E ▲ positive geometry ▲ low-medium feed rates ▲ low cutting forces ▲ universal application ▲ first choice for axial grooving		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTCP335/CTP1340** **CTP1340/CTPP345** **CTCP335/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTP1340 CTPP345 		0,05–0,17
-M40 ▲ stable geometry ▲ medium feed rates ▲ universal application ▲ good chip control		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTP1340** **CTP1340/CTPP345** **CTCP325/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTP1340 CTPP345 		0,075–0,20
-M1 ▲ very stable cutting edge ▲ medium-high feed rates ▲ for intterrupted cut ▲ for high tensile materials ▲ first choice for parting off		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTP1340** **CTP1340/CTPP345** **CTCP325/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTP1340 CTPP345 		0,1–0,20
-27P ▲ very positive geometry ▲ ground periphery ▲ sharp cutting edge ▲ polished chip breaker ▲ first choice for non-ferrous metals		 **H216T** **H216T** H216T H216T	 **H216T** **H216T** H216T 	 **H216T** **H216T** 		0,05–0,25

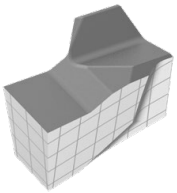
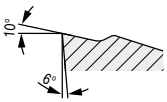
3

Chip breakers / Applications

System GX

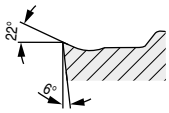
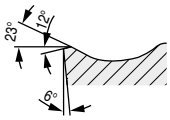
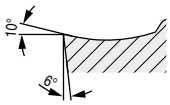
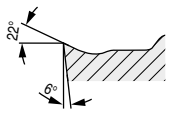
		Smooth cut	irregular cut	interrupted cut	Model	f in mm/rev.
Standard – Radius ▲ positive geometry ▲ honed cutting edge ▲ low-medium feed rates ▲ low cutting forces ▲ Radius grooving/copy turning		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTCP325/CTP1340** **CTP1340** **CTCP325/CTP1340** **CTP1340** CTP1340	CTP1340 CTP1340 CTP1340 		0,05–0,20
-M3 – Radius ▲ stable geometry ▲ medium-high feed rates ▲ high surface quality ▲ Radius grooving/copy turning		**CTCP325** CTCP335 **CTCP325** CTCP325 CTCP325 	**CTCP325/CTCP335** CTCP335 **CTCP325/CTCP335** 	**CTCP335** **CTCP335** 		0,07–0,20

Circlip grooving

Standard ▲ positive geometry ▲ honed cuttign edge ▲ low feed rates ▲ small corner radius ▲ Circlip grooves		**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	CTP1340 CTP1340 CTP1340 CTP1340 CTP1340 		0,05–0,30

Chip breakers / Applications

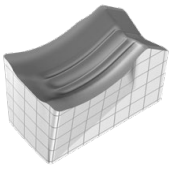
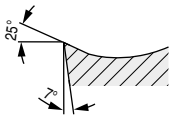
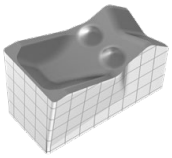
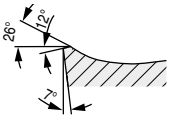
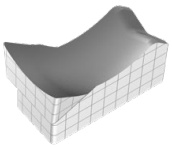
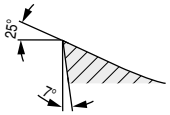
System SX

		Smooth cut	irregular cut	interrupted cut	Model	f in mm/rev.
-F2 ▲ very positive geometry ▲ honed cutting edge ▲ low feed rates ▲ low cutting forces ▲ first choice for stainless materials		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTCP325/CTP1340** **CTP1340/CTPP345** **CTCP325/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** **CTP1340** CTPP345 		0,05–0,15
-M1 ▲ very stable cutting edge ▲ medium-high feed rates ▲ for intterrupted cut ▲ for high tensile materials ▲ first choice for parting off		CTCP325 **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	CTCP335/CTP1340 **CTP1340** **CTCP325/CTP1340** **CTP1340** CTP1340	CTPP345 **CTPP345** CTP1340 CTPP345 		0,10–0,20
-M2 ▲ stable geometry ▲ medium feed rates ▲ universal application ▲ good chip control		CTCP325 **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	CTCP335/CTP1340 **CTP1340** **CTCP325/CTP1340** **CTP1340** CTP1340	CTPP345 **CTPP345** CTP1340 CTPP345 		0,075–0,20
-27P ▲ very positive geometry ▲ ground periphery ▲ sharp cutting edge ▲ polished chip breaker ▲ first choice for non-ferrous metals		 **H216T** **H216T** H216T H216T	 **H216T** **H216T** H216T 	 **H216T** **H216T** 		0,05–0,25

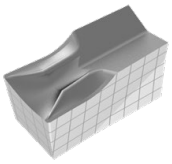
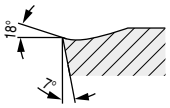
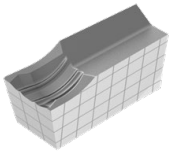
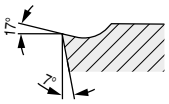
3

Chip breakers / Applications

System FX

		Smooth cut	irregular cut	interrupted cut	Model	f in mm/rev.
-F1 ▲ very positive geometry ▲ low-medium feed rates ▲ low cutting forces ▲ good chip control ▲ low cutting edge build up		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTCP325/CTP1340** **CTP1340/CTPP345** **CTCP325/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTP1340 CTPP345 		0,05–0,15
-M1 ▲ very stable cutting edge ▲ medium-high feed rates ▲ for intterrupted cut ▲ for high tensile materials ▲ first choice for parting off		**CTCP325** **CTP1340** **CTCP325** **CTP1340** CTCP325 CTP1340	**CTCP335/CTP1340** **CTP1340/CTPP345** **CTCP325/CTP1340** **CTP1340** CTP1340	**CTPP345** **CTPP345** CTP1340 CTPP345 		0,08–0,20
-27P ▲ very positive geometry ▲ ground periphery ▲ sharp cutting edge ▲ polished chip breaker ▲ first choice for non-ferrous metals		 **H216T** **H216T** H216T H216T	 **H216T** **H216T** H216T 	 **H216T** **H216T** 		0,03–0,13

System MC

-F2 ▲ very positive geometry ▲ honed cutting edge ▲ low feed rates ▲ low cutting forces ▲ first choice for stainless materials		**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	CTP1340 CTP1340 CTP1340 CTP1340 CTP1340 		0,05–0,10
-F3 ▲ very positive geometry ▲ honed cutting edge ▲ low feed rates ▲ low cutting forces ▲ reduced burrs / edge build up		**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	**CTP1340** **CTP1340** **CTP1340** CTP1340 **CTP1340** CTP1340	CTP1340 CTP1340 CTP1340 CTP1340 CTP1340 		0,02–0,06

Example of Coding Grooving Tools

Grooving insert

GX	16	2	E	3.00	N	0.50
Grooving system (GX)	Insert length (16 mm)	Width class of the holder / module or support surface (2 mm)	Type of insert, application	Groove width (3.0 mm)	Insert seat N=Neutral L=Left Handed R=Right Handed	Corner radius size (0.5 mm)

Module

E	25	R	12	GX	16	2
Application E = external I = internal	Size (25 mm)	Module version R=Right Handed L=Left Handed	Maximum groove depth (12 mm)	Grooving system (GX)	Insert size (16 mm)	Width class 2

Basic holder

E	25	R	00	2525	L
Application E = external I = internal	Size (25 mm)	Holder version R=Right Handed L=Left Handed	Approach angle 0°	Shank type 25x25mm	Shank length L = (sh. ISO)

GX mono holder (old)

E	25	R	00	21		2525	M			GX24-3

GX mono holder (new)

E	25	R	00	21	NEW S4	2525	M	NEW S		GX24
					Groove width grooving insert			Insert clamping screw		

GX mono holder (new with DC)

E	25	R	00	21	NEW S4	2525	M	NEW S	NEW DC	GX24
					Groove width grooving insert			Insert clamping screw	DirectCooling	

Compilation

Basic holder	Module	Grooving insert
E25 R 00 – 2525L	E25 R 12 – GX 16-2	GX 16-2 E3.00 N 0.50

Grades Overview

CTCP325
DRAGONSKIN

- Carbide, TiCN-Al_2O_3-coated
- ISO | **P25** | M20 | **K30** | S25
- The wear-resistant solution for steel and cast iron materials at high cutting speeds

CTCP335
DRAGONSKIN

- Carbide, TiCN-Al_2O_3-coated
- ISO | **P35** | M30 | **K35**
- The reliable choice for machining steel and cast iron materials

CTPP345
DRAGONSKIN

- Carbide, TiAlTaN-coated
- ISO | **P45** | **M40** | S40
- The reliable solution for steel materials and austenitic steels under unstable conditions

CTP1340
DRAGONSKIN

- Carbide, TiAlTaN-coated
- ISO | **P30** | **M25** | **K30** | N30 | **S30** | O30
- The universal high-performance grade for steel materials, austenitic steel, cast iron materials and heat-resistant alloys

CTPP520
DRAGONSKIN

- Carbide, TiAlTaN-coated
- ISO | **P20** | **M15** | **K25** | S25 | H5
- The wear-resistant grade for wet machining of steels

CTPP535
DRAGONSKIN

- Carbide, AlTiN-coated
- ISO | **P35** | **M30** | **K25** | **S30**
- The tough thread turning grade for universal application

H216T

- Carbide, uncoated
- ISO | **K15** | **N15** | S15 | O5
- The uncoated carbide grade for machining aluminium and other non-ferrous metals
- Also highly suitable for HSC machining

Application

Grade designation		ISO application range (01 10 20 30 40 50 / 05 15 25 35 45)	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O
Grooving									
CTCP325	DRAGONSKIN		●						
				○					
					●				
							○		
CTCP335	DRAGONSKIN		●						
				○					
					●				
CTPP345	DRAGONSKIN		●						
				●					
							○		
CTP1340	DRAGONSKIN		●						
				●					
					●				
						○			
							●		
									○
H216T					●				
						●			
							○		
									○
TC thread									
CTPP520	DRAGONSKIN		●						
				●					
					●				
							○		
								○	
CTPP535	DRAGONSKIN		●						
				●					
					●				
							●		
H216T					●				
						●			
									○

● **Main Application**
○ Extended application

wear-resistant v_c+ ◯ ⟷ ⟨⟩ v_c– tough

Table of contents

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Product programme	
UltraMini	290–320
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Symbol explanation, coatings and thread types	342

WNT \ Performance

Premium quality tools for high performance.

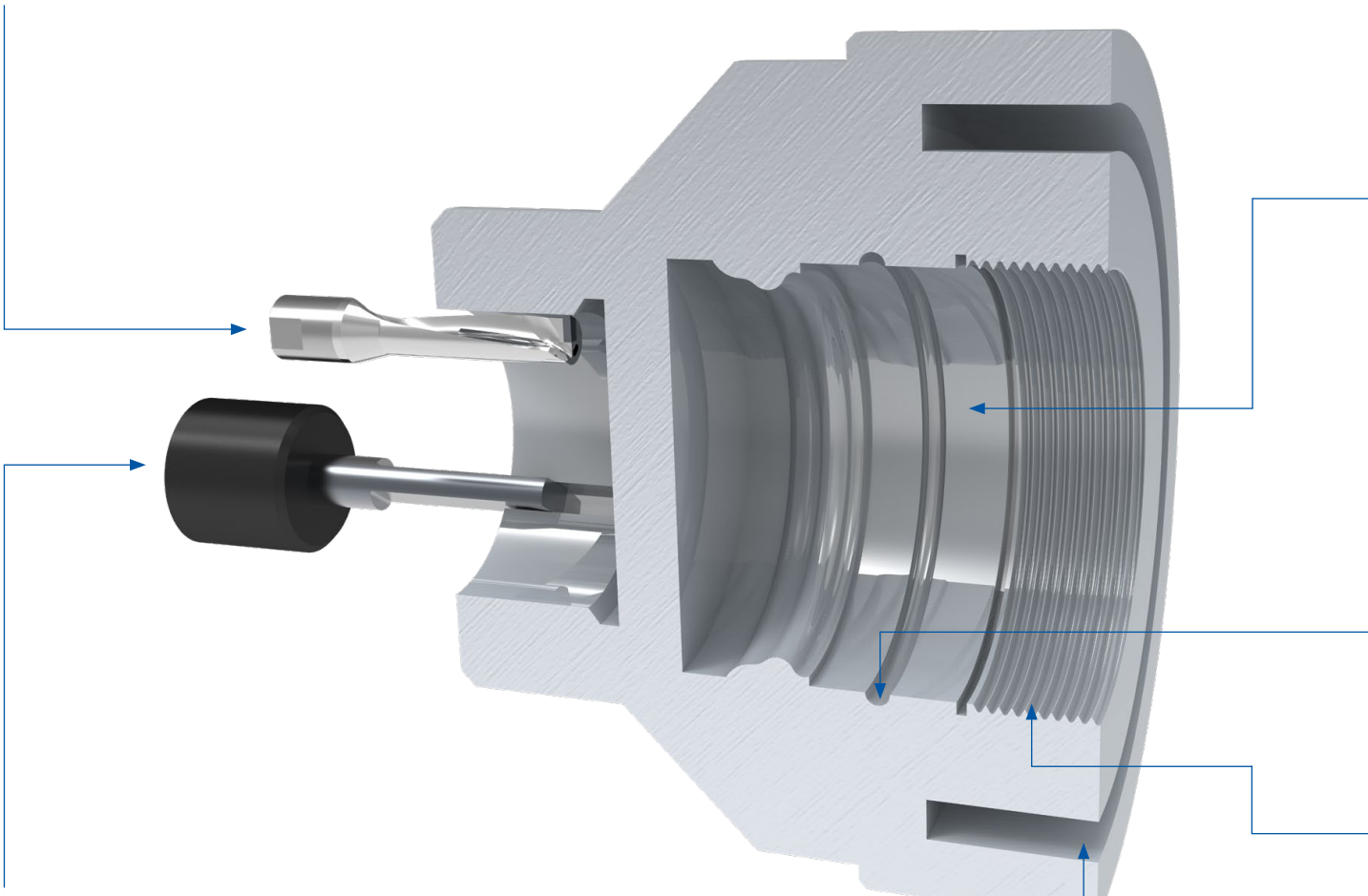
The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

Toolfinder

EcoCut Mini

From Ø 2 mm

Inserts and tool holders can be found in → **Chapter 10 – EcoCut**



SlotCut – Broaching

Inserts + Holder DIN138

Products and product information can be found in our main catalogue and online shop.

System overview

UltraMini

- from Ø 0.5 mm
- flexible system
- ground inserts
- high repeatability
- coolant supply to the cutting edge

MiniCut

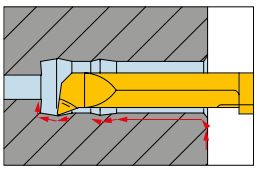
- from Ø 7.8 mm
- stable three-rib interface
- easy handling
- coolant supply to the cutting edge
- precise cutting edge position

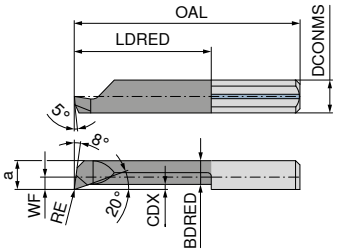
	UltraMini											MiniCut					
Hole diameter in mm		**≥ 0,5**	**≥ 2**	**≥ 2,4**	**≥ 2,8**	**≥ 3**	**≥ 4**	**≥ 5**	**≥ 6**	**≥ 8**	**≥ 16**		**≥ 8**	**≥ 9**	**≥ 11**	**≥ 14**	**≥ 16**
Internal turning and profiling		290–293	290–293	290–293	290–293		290–293	290–293	290–293				321	321	321	321	
Internal turning and profiling – hard turning																	
High-feed turning			295			295	295	295	295								
Turning and profile turning – super alloys			294		294		294	294	294								
Internal turning					296		296	296					322	322	322	322	
Back boring						297	297	297	297				323	323	323	323	
Turning and chamfering								298	298				323	323	323	323	
Pre-parting and chamfering							298	298	298				324	324	324	324	
Groove turning			299–301			299–301	299–301	299–301	299–301				325+326	325+326	325+326	325+326	
Internal Undercuts			302		302		302	302	302				327	327	327	327	
Groove and profile turning							303	303	303				328	328	328	328	
Internal thread turning				304-306			304-306	304-306	304-306				329-331	329-331	329-331	329-331	
Axial grooving								309–314	309–314	309–314	309–314		332+333	332+333	332+333	332+333	
suitable holder		315–320											334–337				
Sets																	

3

UltraMini – Inserts for internal turning and profiling

▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 005 ...	Right-hand 73 004 ...	Left-hand 73 005 ...	Right-hand 73 004 ...
R/L 050.05-2	4		0.5	0.4	20	2	0.03	0.32	0.02	645.00..-D	500	500		
R/L 050.06-2	4		0.6	0.5	20	2	0.05	0.40	0.04	645.00..-D	510	510		
R/L 050.06-3	4		0.6	0.5	20	3	0.05	0.40	0.04	645.00..-D	511	511		
R/L 050.08-4	4		0.8	0.7	20	4	0.05	0.60	0.04	645.00..-D			812	812
R/L 050.1-8	4		1.0	0.9	22	8	0.10	0.75	0.05	645.00..-D			813	813
R/L 050.15-5	4		1.5	1.3	19	5	0.10	1.15	0.05	645.00..-D	515	515		
R/L 050.15-10	4		1.5	1.3	24	10	0.10	1.15	0.05	645.00..-D	516	516		
R/L 050.15-12	4		1.5	1.3	26	12	0.10	1.15	0.05	645.00..-D			818	818
R/L 050.2-5	4		2.0	1.7	19	5	0.10	1.50	0.05	645.00..-D	520	520		
R/L 050.2-10	4		2.0	1.7	24	10	0.10	1.50	0.05	645.00..-D	521	521		
R/L 050.2-15	4		2.0	1.7	29	15	0.10	1.50	0.05	645.00..-D	522	522		
R/L 050.3-10	4	0.6	2.8	2.6	24	10	0.20	2.30	0.10	645.00..-D	531	531		
R/L 050.3-16	4	0.6	2.8	2.6	30	16	0.20	2.30	0.10	645.00..-D	530	530		
R/L 050.3-20	4	0.6	2.8	2.6	34	20	0.20	2.30	0.10	645.00..-D	532	532		
R/L 050.35-10	4	1.1	3.5	3.1	24	10	0.25	2.80	0.10	645.00..-D			835	835
R/L 050.35-16	4	1.1	3.5	3.1	30	16	0.25	2.80	0.10	645.00..-D			836	836
R/L 050.35-20	4	1.1	3.5	3.1	34	20	0.25	2.80	0.10	645.00..-D			837	837
R/L 050.35-24	4	1.1	3.5	3.1	38	24	0.25	2.80	0.10	645.00..-D			838	838
R/L 050.4-10	4	1.5	4.0	3.5	24	10	0.30	3.00	0.10	645.00..-D	541	541	841	841
R/L 050.4-16	4	1.5	4.0	3.5	30	16	0.30	3.00	0.10	645.00..-D	540	540	840	840
R/L 050.4-20	4	1.5	4.0	3.5	34	20	0.30	3.00	0.10	645.00..-D	542	542	842	842
R/L 050.4-24	4	1.5	4.0	3.5	38	24	0.30	3.00	0.10	645.00..-D	545	545	845	845
R/L 050.4-28	4	1.5	4.0	3.5	42	28	0.30	3.00	0.10	645.00..-D	546	546	846	846
R/L 050.5-10	5	1.9	5.0	4.4	25	10	0.50	3.80	0.15	645.00..-D	551	551	851	851
R/L 050.5-15	5	1.9	5.0	4.4	30	15	0.50	3.80	0.15	645.00..-D	552	552	852	852
R/L 050.5-20	5	1.9	5.0	4.4	35	20	0.50	3.80	0.15	645.00..-D	550	550	850	850
R/L 050.5-25	5	1.9	5.0	4.4	40	25	0.50	3.80	0.15	645.00..-D	553	553	853	853
R/L 050.5-30	5	1.9	5.0	4.4	45	30	0.50	3.80	0.15	645.00..-D	554	554	854	854
R/L 050.5-35	5	1.9	5.0	4.4	50	35	0.50	3.80	0.15	645.00..-D	556	556	856	856
R/L 050.5-40	5	1.9	5.0	4.4	55	40	0.50	3.80	0.15	645.00..-D			857	857
R/L 050.6-15	6	2.3	6.0	5.3	30	15	0.50	4.50	0.15	676.00..-D	561	561	861	861
R/L 050.6-22	6	2.3	6.0	5.3	37	22	0.50	4.50	0.15	676.00..-D	560	560	860	860
R/L 050.6-25	6	2.3	6.0	5.3	40	25	0.50	4.50	0.15	676.00..-D	562	562	862	862
R/L 050.6-30	6	2.3	6.0	5.3	45	30	0.50	4.50	0.15	676.00..-D	563	563	863	863
R/L 050.6-35	6	2.3	6.0	5.3	50	35	0.50	4.50	0.15	676.00..-D	564	564	864	864
R/L 050.6-42	6	2.3	6.0	5.3	57	42	0.50	4.50	0.15	676.00..-D	565	565	865	865
R/L 050.7-20	7	2.8	6.8	6.3	35	20	0.60	5.50	0.15	676.00..-D	572	572	872	872
R/L 050.7-25	7	2.8	6.8	6.3	40	25	0.60	5.50	0.15	676.00..-D	573	573	873	873
R/L 050.7-30	7	2.8	6.8	6.3	45	30	0.60	5.50	0.15	676.00..-D	574	574	874	874
R/L 050.7-35	7	2.8	7.0	6.3	50	35	0.60	5.50	0.15	676.00..-D	575	575	875	875
R/L 050.7-40	7	2.8	7.0	6.3	55	40	0.60	5.50	0.15	676.00..-D	576	576	876	876
R/L 050.7-45	7	2.8	7.0	6.3	60	45	0.60	5.50	0.15	676.00..-D	577	577	877	877
R/L 050.7-50	7	2.8	7.0	6.3	65	50	0.60	5.50	0.15	676.00..-D	578	578	878	878
P											●	●	●	●
M											●	●	●	●
K											●	●	●	●
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S											○	○	●	●
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O											●	●	●	●

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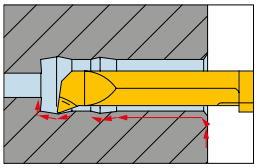
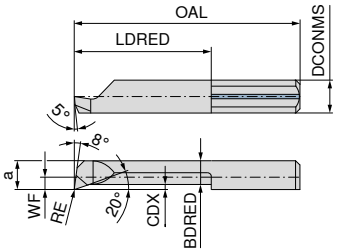
UltraMini – Inserts for internal turning and profiling

▲ CDX = Maximum depth of cut when turning outwards





Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 005 ...	Right-hand 73 004 ...
R/L 050.2-5	4		2.0	1.7	19	5	0.1	1.5	0.05	645.00..-D	020	020
R/L 050.2-10	4		2.0	1.7	24	10	0.1	1.5	0.05	645.00..-D	021	021
R/L 050.2-15	4		2.0	1.7	29	15	0.1	1.5	0.05	645.00..-D	022	022
R/L 050.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.10	645.00..-D	031	031
R/L 050.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.10	645.00..-D	030	030
R/L 050.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.10	645.00..-D	032	032
R/L 050.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.10	645.00..-D	041	041
R/L 050.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.10	645.00..-D	040	040
R/L 050.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.10	645.00..-D	042	042
R/L 050.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.15	645.00..-D	051	051
R/L 050.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.15	645.00..-D	052	052
R/L 050.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.15	645.00..-D	050	050
R/L 050.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	0.15	645.00..-D	053	053
R 050.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.05	645.00..-D		054
L 050.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.15	645.00..-D	054	
R/L 050.6-15	6	2.3	6.0	5.3	30	15	0.5	4.5	0.15	676.00..-D	061	061
R/L 050.6-22	6	2.3	6.0	5.3	37	22	0.5	4.5	0.15	676.00..-D	060	060
R/L 050.6-25	6	2.3	6.0	5.3	40	25	0.5	4.5	0.15	676.00..-D	062	062
R/L 050.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	0.15	676.00..-D	063	063
R/L 050.7-20	7	2.8	6.8	6.3	35	20	0.6	5.5	0.15	676.00..-D	072	072
R/L 050.7-25	7	2.8	6.8	6.3	40	25	0.6	5.5	0.15	676.00..-D	073	073
R/L 050.7-30	7	2.8	6.8	6.3	45	30	0.6	5.5	0.15	676.00..-D	074	074

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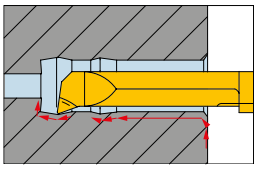
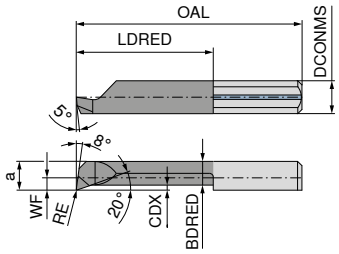
3

UltraMini – Inserts for internal turning and profiling

▲ with corner radius ≤ 0.05 mm
▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 021 ...	Right-hand 73 020 ...	Left-hand 73 023 ...	Right-hand 73 022 ...
R/L 053.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.03	645.00..-D	310	310		
R/L 053.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.03	645.00..-D	316	316		
R/L 053.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.03	645.00..-D	320	320		
R/L 053.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.03	645.00..-D	410	410		
R/L 053.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.03	645.00..-D	416	416		
R/L 053.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.03	645.00..-D	420	420		
R/L 053.4-24	4	1.5	4.0	3.5	38	24	0.3	3.0	0.03	645.00..-D	424	424		
R/L 053.4-28	4	1.5	4.0	3.5	42	28	0.3	3.0	0.03	645.00..-D	428	428		
R/L 055.2-10	4		2.0	1.7	24	10	0.1	1.5	0.05	645.00..-D			210	210
R/L 055.2-15	4		2.0	1.7	29	15	0.1	1.5	0.05	645.00..-D			215	215
R/L 055.2-5	4		2.0	1.7	19	5	0.1	1.5	0.05	645.00..-D			205	205
R/L 055.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.05	645.00..-D			310	310
R/L 055.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.05	645.00..-D			316	316
R/L 055.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.05	645.00..-D			320	320
R/L 055.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.05	645.00..-D			410	410
R/L 055.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.05	645.00..-D			416	416
R/L 055.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.05	645.00..-D			420	420
R/L 055.4-24	4	1.5	4.0	3.5	38	24	0.3	3.0	0.05	645.00..-D			424	424
R/L 055.4-28	4	1.5	4.0	3.5	42	28	0.3	3.0	0.05	645.00..-D			428	428
R/L 055.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.05	645.00..-D			510	510
R/L 055.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.05	645.00..-D			515	515
R/L 055.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.05	645.00..-D			520	520
R/L 055.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	0.05	645.00..-D			525	525
R/L 055.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.05	645.00..-D			530	530
R/L 055.5-35	5	1.9	5.0	4.4	50	35	0.5	3.8	0.05	645.00..-D			535	535
R/L 055.6-15	6	2.3	6.0	5.3	30	15	0.5	4.5	0.05	676.00..-D			615	615
R/L 055.6-22	6	2.3	6.0	5.3	37	22	0.5	4.5	0.05	676.00..-D			622	622
R/L 055.6-25	6	2.3	6.0	5.3	40	25	0.5	4.5	0.05	676.00..-D			625	625
R/L 055.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	0.05	676.00..-D			630	630
R/L 055.6-35	6	2.3	6.0	5.3	50	35	0.5	4.5	0.05	676.00..-D			635	635
R/L 055.6-42	6	2.3	6.0	5.3	57	42	0.5	4.5	0.05	676.00..-D			642	642
P											●	●	●	●
M											●	●	●	●
K											●	●	●	●
N											●	●	●	●
S											●	●	●	●
H											●	●	●	●
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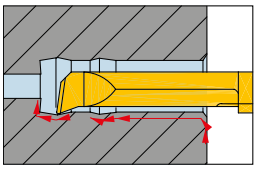
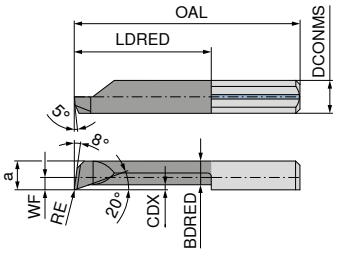
UltraMini – Inserts for internal turning and profiling

▲ with chip former





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

Right-hand

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	73 017 ... Left-hand	73 016 ... Right-hand
R/L 050.4-10C	4	1.5	4	3.5	24	10	0.3	3.0	0.2	645.00..-D	**410**	**410**
R/L 050.4-16C	4	1.5	4	3.5	30	16	0.3	3.0	0.2	645.00..-D	**416**	**416**
R/L 050.4-20C	4	1.5	4	3.5	34	20	0.3	3.0	0.2	645.00..-D	**420**	**420**
R/L 050.4-24C	4	1.5	4	3.5	38	24	0.3	3.0	0.2	645.00..-D	**424**	**424**
R/L 050.4-28C	4	1.5	4	3.5	42	28	0.3	3.0	0.2	645.00..-D	**428**	**428**
R/L 050.5-10C	5	1.9	5	4.4	25	10	0.5	3.8	0.2	645.00..-D	**510**	**510**
R/L 050.5-15C	5	1.9	5	4.4	30	15	0.5	3.8	0.2	645.00..-D	**515**	**515**
R/L 050.5-20C	5	1.9	5	4.4	35	20	0.5	3.8	0.2	645.00..-D	**520**	**520**
R/L 050.5-25C	5	1.9	5	4.4	40	25	0.5	3.8	0.2	645.00..-D	**525**	**525**
R/L 050.5-30C	5	1.9	5	4.4	45	30	0.5	3.8	0.2	645.00..-D	**530**	**530**
R/L 050.5-35C	5	1.9	5	4.4	50	35	0.5	3.8	0.2	645.00..-D	**535**	**535**
R/L 050.6-15C	6	2.3	6	5.3	30	15	0.5	4.5	0.2	676.00..-D	**615**	**615**
R/L 050.6-22C	6	2.3	6	5.3	37	22	0.5	4.5	0.2	676.00..-D	**622**	**622**
R/L 050.6-25C	6	2.3	6	5.3	40	25	0.5	4.5	0.2	676.00..-D	**625**	**625**
R/L 050.6-30C	6	2.3	6	5.3	45	30	0.5	4.5	0.2	676.00..-D	**630**	**630**
R/L 050.6-35C	6	2.3	6	5.3	50	35	0.5	4.5	0.2	676.00..-D	**635**	**635**
R/L 050.6-42C	6	2.3	6	5.3	57	42	0.5	4.5	0.2	676.00..-D	**642**	**642**
R/L 050.7-20C	7	2.8	7	6.3	35	20	0.6	5.5	0.2	676.00..-D	**720**	**720**
R/L 050.7-25C	7	2.8	7	6.3	40	25	0.6	5.5	0.2	676.00..-D	**725**	**725**
R/L 050.7-30C	7	2.8	7	6.3	45	30	0.6	5.5	0.2	676.00..-D	**730**	**730**
R/L 050.7-35C	7	2.8	7	6.3	50	35	0.6	5.5	0.2	676.00..-D	**735**	**735**
R/L 050.7-40C	7	2.8	7	6.3	55	40	0.6	5.5	0.2	676.00..-D	**740**	**740**
R/L 050.7-45C	7	2.8	7	6.3	60	45	0.6	5.5	0.2	676.00..-D	**745**	**745**
R/L 050.7-50C	7	2.8	7	6.3	65	50	0.6	5.5	0.2	676.00..-D	**750**	**750**

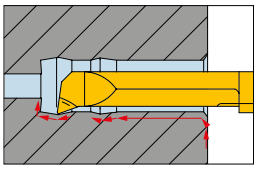
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

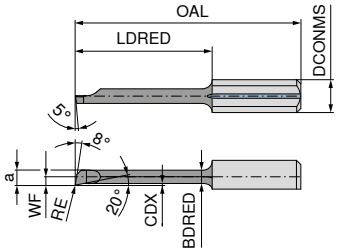
→ v_c Page 339

3

UltraMini – Inserts for internal turning and profiling

- ▲ Specially designed for super alloys
- ▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

DPX 57S DRAGONSKIN

Left-hand

73 027 ...

DPX 57S DRAGONSKIN

Right-hand

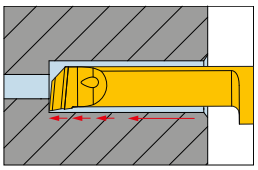
73 026 ...

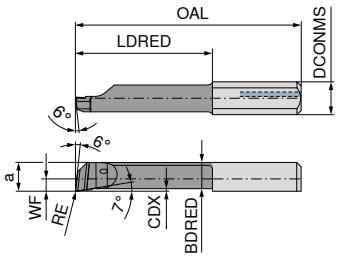
Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 027 ...	Right-hand 73 026 ...
R/L M050.05-2	4	0.20	0.5	0.40	20	2	0.02	0.02	0.02	645.00..-D	**052**	**052**
R/L M050.08-4	4	0.35	0.8	0.70	20	4	0.08	0.03	0.02	645.00..-D	**082**	**082**
R/L M050.1-5	4	0.40	1.0	0.90	20	5	0.05	0.05	0.02	645.00..-D	**102**	**102**
R/L M050.1-7	4	0.40	1.0	0.90	22	7	0.05	0.05	0.02	645.00..-D	**103**	**103**
R/L M050.15-5	4	0.60	1.5	1.15	19	5	0.08	0.08	0.02	645.00..-D	**151**	**151**
R/L M050.15-10	4	0.60	1.5	1.15	24	10	0.08	0.08	0.02	645.00..-D	**154**	**154**
R/L M050.2-5	4	0.80	2.0	1.70	19	5	0.08	0.08	0.02	645.00..-D	**201**	**201**
R/L M050.2-10	4	0.80	2.0	1.70	24	10	0.08	0.08	0.02	645.00..-D	**204**	**204**
R/L M050.25-5	4	0.20	2.5	2.20	19	5	0.10	0.10	0.02	645.00..-D	**251**	**251**
R/L M050.25-10	4	0.20	2.5	2.20	24	10	0.10	0.10	0.02	645.00..-D	**254**	**254**
R/L M050.3-10	4	0.60	3.0	2.60	24	10	0.15	0.15	0.02	645.00..-D	**304**	**304**
R/L M050.3-16	4	0.60	3.0	2.60	30	16	0.15	0.15	0.02	645.00..-D	**307**	**307**
R/L M050.35-10	4	1.10	3.5	3.10	24	10	0.17	0.17	0.02	645.00..-D	**350**	**350**
R/L M050.35-16	4	1.10	3.5	3.10	30	16	0.17	0.17	0.02	645.00..-D	**353**	**353**
R/L M050.35-20	4	1.10	3.5	3.10	34	20	0.17	0.17	0.02	645.00..-D	**354**	**354**
R/L M050.4-10	4	1.50	4.0	3.50	24	10	0.20	0.20	0.02	645.00..-D	**400**	**400**
R/L M050.4-16	4	1.50	4.0	3.50	30	16	0.20	0.20	0.02	645.00..-D	**403**	**403**
R/L M050.4-20	4	1.50	4.0	3.50	34	20	0.20	0.20	0.02	645.00..-D	**404**	**404**
R/L M050.4-24	4	1.50	4.0	3.50	38	24	0.20	0.20	0.02	645.00..-D	**406**	**406**
P											●	●
M											●	●
K											○	○
N											○	○
S											●	●
H											○	○
O											○	○

→ v_c Page 339

UltraMini – Inserts for internal turning

▲ with chip former
▲ High-feed internal turning





Illustrations show right-hand versions

DPX77S DRAGONSKIN

Left-hand

DPX77S DRAGONSKIN

Right-hand

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	73 001 ...	73 000 ...
R/L X050.1-5	4		1.0	0.90	20	5	0.03	0.85	0.05	645.00..-D	121	121
R/L X050.15-7	4		1.5	1.35	22	7	0.05	1.25	0.10	645.00..-D	233	233
R/L X050.2-5	4		2.0	1.80	19	5	0.10	1.60	0.15	645.00..-D	245	245
R/L X050.2-10	4		2.0	1.80	24	10	0.10	1.60	0.05	645.00..-D	215	215
R/L X050.2-10	4		2.0	1.80	24	10	0.10	1.60	0.15	645.00..-D	241	241
R/L X050.3-10	4	0.7	3.0	2.70	24	10	0.15	2.55	0.05	645.00..-D	341	341
R/L X050.3-10	4	0.7	3.0	2.70	24	10	0.15	2.55	0.20	645.00..-D	347	347
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.05	645.00..-D	371	371
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.10	645.00..-D	373	373
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.20	645.00..-D	377	377
R/L X050.4-10	4	1.6	4.0	3.60	24	10	0.20	3.20	0.10	645.00..-D	403	403
R/L X050.4-10	4	1.6	4.0	3.60	24	10	0.20	3.20	0.20	645.00..-D	407	407
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.05	645.00..-D	431	431
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.10	645.00..-D	433	433
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.20	645.00..-D	437	437
R/L X050.4-24	4	1.6	4.0	3.60	38	24	0.20	3.20	0.10	645.00..-D	463	463
R/L X050.4-24	4	1.6	4.0	3.60	38	24	0.20	3.20	0.20	645.00..-D	467	467
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.05	645.00..-D	511	511
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.10	645.00..-D	513	513
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.20	645.00..-D	517	517
R/L X050.5-25	5	2.1	5.0	4.60	40	25	0.30	4.05	0.10	645.00..-D	543	543
R/L X050.5-25	5	2.1	5.0	4.60	40	25	0.30	4.05	0.20	645.00..-D	547	547
R/L X050.5-30	5	2.1	5.0	4.60	45	30	0.30	4.05	0.10	645.00..-D	553	553
R/L X050.5-30	5	2.1	5.0	4.60	45	30	0.30	4.05	0.20	645.00..-D	557	557
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.05	676.00..-D	611	611
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.10	676.00..-D	613	613
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.20	676.00..-D	617	617
R/L X050.6-22	6	2.5	6.0	5.50	37	22	0.40	4.90	0.20	676.00..-D	637	637
R/L X050.6-30	6	2.5	6.0	5.50	45	30	0.40	4.90	0.20	676.00..-D	657	657
R/L X050.6-35	6	2.5	6.0	5.50	50	35	0.40	4.90	0.20	676.00..-D	667	667
R/L X050.6-50	6	2.5	6.0	5.50	65	50	0.40	4.90	0.20	676.00..-D	697	697
R/L X050.7-25	7	3.0	7.0	6.50	40	25	0.50	5.90	0.20	676.00..-D	747	747
R/L X050.7-30	7	3.0	7.0	6.50	45	30	0.50	5.90	0.20	676.00..-D	757	757

P	●	●
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K	●	●
N	○	○
S	○	○
H	○	○
O	○	○

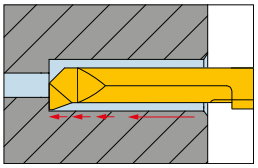
→ v_c Page 340+341

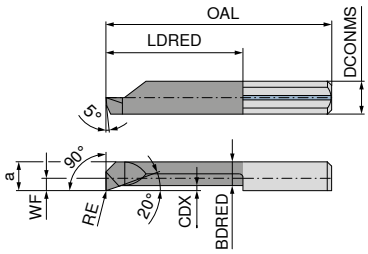
3

UltraMini – Inserts for internal turning

▲ CDX = Maximum depth of cut when turning outwards

TiN TiN





Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 015 ...	Right-hand 73 014 ...
R/L 090.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.2	645.00..-D	**541**	**541**
R/L 090.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.2	645.00..-D	**542**	**542**
R/L 090.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.2	645.00..-D	**545**	**545**
R/L 090.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.2	645.00..-D	**546**	**546**
R/L 090.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.2	645.00..-D	**550**	**550**
R/L 090.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.2	645.00..-D	**551**	**551**
R/L 090.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.2	645.00..-D	**552**	**552**
P											●	●
M											●	●
K											●	●
N											●	●
S											○	○
H											○	○
O											●	●

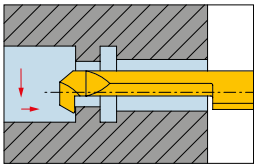
→ v_c Page 339

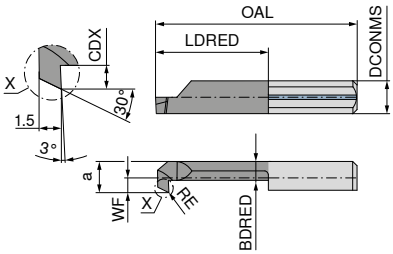
Suitable holders can be found on → page 315–320

UltraMini – Inserts for back boring

▲ CDX = Maximum depth of cut when turning outwards

TiN | TiN





Illustrations show right-hand versions

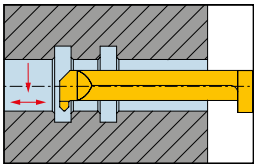
Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	Standard tool holder	Left-hand 73 013 ...	Right-hand 73 012 ...
R/L 080.0003-15	4	0.6	3	2.6	29	15	0.5	2.0	0.10	645.00..-D	**542**	**542**
R/L 080.0003-20	4	0.6	3	2.6	34	20	0.5	2.0	0.10	645.00..-D	**544**	**544**
R/L 080.0004-15	4	1.5	4	3.5	29	15	0.8	2.4	0.15	645.00..-D	**546**	**546**
R/L 080.0004-25	4	1.5	4	3.5	39	25	0.8	2.4	0.15	645.00..-D	**548**	**548**
R/L 080.0005-20	5	1.9	5	4.4	35	20	1.0	3.3	0.20	645.00..-D	**554**	**554**
R/L 080.0005-30	5	1.9	5	4.4	45	30	1.0	3.3	0.20	645.00..-D	**558**	**558**
R/L 080.0006-20	6	2.3	6	5.3	35	20	1.8	3.4	0.20	676.00..-D	**564**	**564**
R/L 080.0006-30	6	2.3	6	5.3	45	30	1.8	3.4	0.20	676.00..-D	**568**	**568**
R/L 080.0007-20	7	2.7	7	6.3	35	20	2.5	3.8	0.20	676.00..-D	**574**	**574**
R/L 080.0007-30	7	2.7	7	6.3	45	30	2.5	3.8	0.20	676.00..-D	**578**	**578**
P											●	●
M											●	●
K											●	●
N											●	●
S											○	○
H											○	○
O											●	●

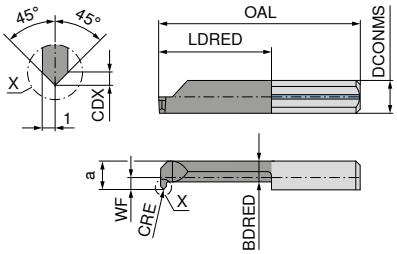
→ v_c Page 339

3

UltraMini – Inserts for internal turning and chamfering

▲ CDX = Maximum depth of cut when turning outwards





TiN | TiN

Illustrations show right-hand versions

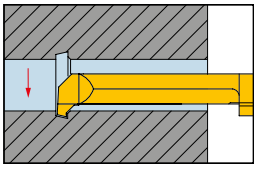
Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CRE mm	Standard tool holder	Left-hand 73 007 ...	Right-hand 73 006 ...
R/L 060.5-15	5	1.9	5.0	4.4	30	15	0.7	3.3	0.2	645.00..-D	551	551
R/L 060.5-20	5	1.9	5.0	4.4	35	20	0.7	3.3	0.2	645.00..-D	550	550
R/L 060.7-20	7	2.7	6.8	6.3	35	20	0.7	3.8	0.2	676.00..-D	570	570

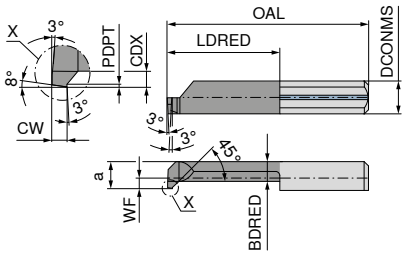
P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

→ v_c Page 339

UltraMini – Inserts for internal chamfering for subsequent parting off

▲ CDX = Maximum depth of cut when turning outwards





TiN | TiN

Illustrations show right-hand versions

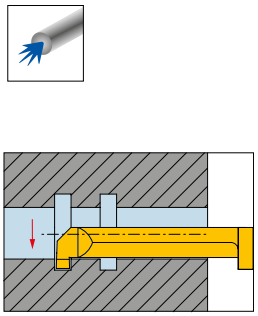
Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	PDPT mm	Standard tool holder	Left-hand 73 009 ...	Right-hand 73 008 ...
R/L 070.4-10	4	1.5	4	3.5	25	10	0.8	2.4	1	0.2	645.00..-D	410	410
R/L 070.4-16	4	1.5	4	3.5	30	16	0.8	2.4	1	0.2	645.00..-D	416	416
R/L 070.5-15	5	1.9	5	4.4	30	15	1.0	3.3	1	0.2	645.00..-D	551	551
R/L 070.5-20	5	1.9	5	4.4	35	20	1.0	3.3	1	0.2	645.00..-D	550	550
R/L 070.5-30	5	1.9	5	4.4	45	30	1.0	3.3	1	0.2	645.00..-D	530	530
R/L 070.6-30	6	2.3	6	5.3	45	30	1.0	4.2	1	0.2	676.00..-D	630	630
R/L 070.6-42	6	2.3	6	5.3	57	42	1.0	4.2	1	0.2	676.00..-D	642	642

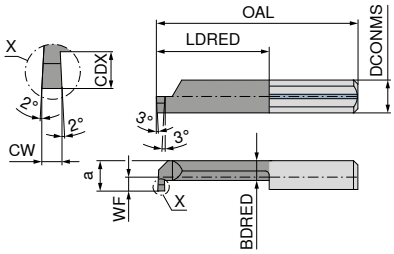
P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

→ v_c Page 339

UltraMini – Inserts for Internal Grooving

▲ CDX = Maximum depth of cut when turning outwards





TiN

TiN

Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	Standard tool holder	Left-hand 73 003 ...	Right-hand 73 002 ...	Left-hand 73 003 ...	Right-hand 73 002 ...
R/L 004.0100-10	4	1.5	4.0	3.5	24	10	0.8	2.4	1.0	645.00..-D	040	040	540	540
R/L 004.0100-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	645.00..-D	041	041	541	541
R/L 004.0100-20	4	1.5	4.0	3.5	34	20	0.8	2.4	1.0	645.00..-D	042	042	542	542
R/L 005.0100-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.0	645.00..-D	150	150	650	650
R/L 005.0150-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.5	645.00..-D	154	154	654	654
R/L 005.0200-10	5	1.9	5.0	4.4	25	10	1.0	3.3	2.0	645.00..-D	158	158	658	658
R/L 005.0100-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.0	645.00..-D	151	151	651	651
R/L 005.0150-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.5	645.00..-D	155	155	655	655
R/L 005.0200-15	5	1.9	5.0	4.4	30	15	1.0	3.3	2.0	645.00..-D	159	159	659	659
R/L 005.0100-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	645.00..-D	051	051	551	551
R/L 005.0150-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	645.00..-D	052	052	552	552
R/L 005.0200-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	645.00..-D	053	053	553	553
R/L 005.0100-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.0	645.00..-D	152	152	652	652
R/L 005.0150-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.5	645.00..-D	156	156	656	656
R/L 005.0200-25	5	1.9	5.0	4.4	40	25	1.0	3.3	2.0	645.00..-D	250	250	750	750
R/L 005.0100-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.0	645.00..-D	153	153	653	653
R/L 005.0150-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.5	645.00..-D	157	157	657	657
R/L 005.0200-30	5	1.9	5.0	4.4	45	30	1.0	3.3	2.0	645.00..-D	251	251	751	751
R/L 005.0100-35	5	1.9	5.0	4.4	50	35	1.0	3.3	1.0	645.00..-D			680	680
R/L 006.0100-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.0	676.00..-D	160	160	660	660
R/L 006.0150-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.5	676.00..-D	164	164	664	664
R/L 006.0200-10	6	2.3	6.0	5.3	25	10	1.8	3.4	2.0	676.00..-D	168	168	668	668
R/L 006.0100-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.0	676.00..-D	161	161	661	661
R/L 006.0150-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.5	676.00..-D	165	165	665	665
R/L 006.0200-15	6	2.3	6.0	5.3	30	15	1.8	3.4	2.0	676.00..-D	169	169	669	669
R/L 006.0100-22	6	2.3	6.0	5.3	37	22	1.8	3.4	1.0	676.00..-D	061	061	561	561
R/L 006.0150-22	6	2.3	6.0	5.3	37	22	1.8	3.4	1.5	676.00..-D	062	062	562	562
R/L 006.0200-22	6	2.3	6.0	5.3	37	22	1.8	3.4	2.0	676.00..-D	063	063	563	563
R/L 006.0100-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	676.00..-D	162	162	662	662
R/L 006.0150-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	676.00..-D	166	166	666	666
R/L 006.0200-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	676.00..-D	260	260	760	760
R/L 006.0100-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.0	676.00..-D	163	163	663	663
R/L 006.0150-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.5	676.00..-D	167	167	667	667
R/L 006.0200-30	6	2.3	6.0	5.3	45	30	1.8	3.4	2.0	676.00..-D	261	261	761	761
R/L 006.0100-35	6	2.3	6.0	5.3	50	35	1.8	3.4	1.0	676.00..-D			682	682
R/L 006.0150-35	6	2.3	6.0	5.3	50	35	1.8	3.4	1.5	676.00..-D			684	684
R/L 006.0100-42	6	2.3	6.0	5.3	57	42	1.8	3.4	1.0	676.00..-D			685	685
R/L 007.0100-10	7	2.7	6.8	6.3	25	10	2.5	3.8	1.0	676.00..-D	070	070	570	570
R/L 007.0150-10	7	2.7	6.8	6.3	25	10	2.5	3.8	1.5	676.00..-D	075	075	575	575
R/L 007.0200-10	7	2.7	6.8	6.3	25	10	2.5	3.8	2.0	676.00..-D	170	170	670	670
R/L 007.0100-15	7	2.7	6.8	6.3	30	15	2.5	3.8	1.0	676.00..-D	071	071	571	571
R/L 007.0150-15	7	2.7	6.8	6.3	30	15	2.5	3.8	1.5	676.00..-D	076	076	576	576
R/L 007.0200-15	7	2.7	6.8	6.3	30	15	2.5	3.8	2.0	676.00..-D	171	171	671	671
R/L 007.0100-22	7	2.7	6.8	6.3	37	22	2.5	3.8	1.0	676.00..-D	072	072	572	572
R/L 007.0150-22	7	2.7	6.8	6.3	37	22	2.5	3.8	1.5	676.00..-D	077	077	577	577
R/L 007.0200-22	7	2.7	6.8	6.3	37	22	2.5	3.8	2.0	676.00..-D	172	172	672	672
R/L 007.0100-25	7	2.7	6.8	6.3	40	25	2.5	3.8	1.0	676.00..-D	073	073	573	573
R/L 007.0150-25	7	2.7	6.8	6.3	40	25	2.5	3.8	1.5	676.00..-D	078	078	578	578
R/L 007.0200-25	7	2.7	6.8	6.3	40	25	2.5	3.8	2.0	676.00..-D	173	173	673	673
R/L 007.0100-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.0	676.00..-D	074	074	574	574
R/L 007.0150-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.5	676.00..-D	079	079	579	579
R/L 007.0200-30	7	2.7	6.8	6.3	45	30	2.5	3.8	2.0	676.00..-D	174	174	674	674
R/L 007.0100-35	7	2.7	7.0	6.3	50	35	2.5	3.8	1.0	676.00..-D			688	688
R/L 007.0150-35	7	2.7	7.0	6.3	50	35	2.5	3.8	1.5	676.00..-D			690	690
R/L 007.0200-35	7	2.7	7.0	6.3	50	35	2.5	3.8	2.0	676.00..-D			692	692
R/L 007.0100-40	7	2.7	7.0	6.3	55	40	2.5	3.8	1.0	676.00..-D			700	700
R/L 007.0150-40	7	2.7	7.0	6.3	55	40	2.5	3.8	1.5	676.00..-D			702	702
R/L 007.0100-45	7	2.7	7.0	6.3	60	45	2.5	3.8	1.0	676.00..-D			712	712
R/L 007.0100-50	7	2.7	7.0	6.3	65	50	2.5	3.8	1.0	676.00..-D			714	714
P													●	●
M													●	●
K													●	●
N											○	○	●	●
S													○	○
H													○	○
O											●	●	●	●

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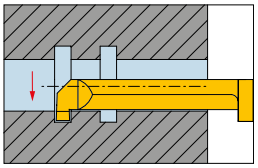
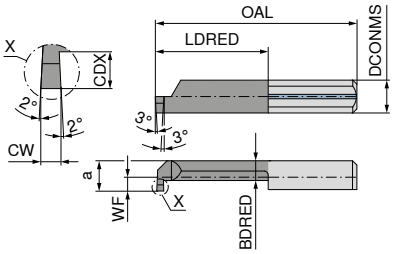
UltraMini – Inserts for Internal Grooving

▲ CDX = Maximum depth of cut when turning outwards

TiAlN

TiAlN





Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	Standard tool holder	Left-hand 73 003 ...	Right-hand 73 002 ...
R/L 002.0050-5	4		2	1.8	19	5	0.4	1.2	0.5	645.00..-D	**820**	**820**
R/L 002.0050-10	4		2	1.8	24	10	0.4	1.2	0.5	645.00..-D	**821**	**821**
R/L 002.0050-15	4		2	1.8	29	15	0.4	1.2	0.5	645.00..-D	**822**	**822**
R/L 003.0070-5	4	0.7	3	2.7	19	5	0.6	1.9	0.7	645.00..-D	**830**	**830**
R/L 003.0070-10	4	0.7	3	2.7	24	10	0.6	1.9	0.7	645.00..-D	**831**	**831**
R/L 003.0070-16	4	0.7	3	2.7	30	16	0.6	1.9	0.7	645.00..-D	**832**	**832**

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

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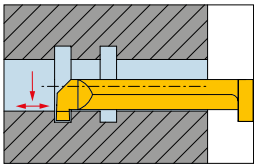
Suitable holders can be found on → page 315–320

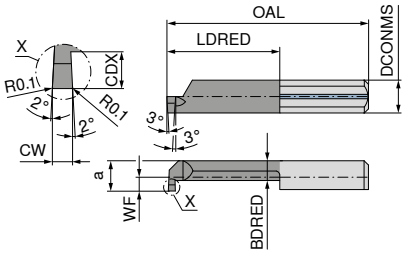
UltraMini – Inserts for Internal Grooving

▲ CDX = Maximum depth of cut when turning outwards

TiAlN

TiAlN





Illustrations show right-hand versions

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	Standard tool holder	Left-hand 73 203 ...	Right-hand 73 202 ...
R/L 004M0100-10	4	1.5	4.0	3.5	24	10	0.8	2.4	1.0	645.00..-D	800	800
R/L 004M0100-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	645.00..-D	802	802
R/L 004M0100-20	4	1.5	4.0	3.5	34	20	0.8	2.4	1.0	645.00..-D	804	804
R/L 005M0100-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.0	645.00..-D	806	806
R/L 005M0150-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.5	645.00..-D	816	816
R/L 005M0200-10	5	1.9	5.0	4.4	25	10	1.0	3.3	2.0	645.00..-D	826	826
R/L 005M0100-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.0	645.00..-D	808	808
R/L 005M0150-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.5	645.00..-D	818	818
R/L 005M0200-15	5	1.9	5.0	4.4	30	15	1.0	3.3	2.0	645.00..-D	828	828
R/L 005M0100-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	645.00..-D	810	810
R/L 005M0150-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	645.00..-D	820	820
R/L 005M0200-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	645.00..-D	830	830
R/L 005M0100-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.0	645.00..-D	812	812
R/L 005M0150-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.5	645.00..-D	822	822
R/L 005M0200-25	5	1.9	5.0	4.4	40	25	1.0	3.3	2.0	645.00..-D	832	832
R/L 005M0100-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.0	645.00..-D	814	814
R/L 005M0150-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.5	645.00..-D	824	824
R/L 005M0200-30	5	1.9	5.0	4.4	45	30	1.0	3.3	2.0	645.00..-D	834	834
R/L 006M0100-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.0	676.00..-D	836	836
R/L 006M0150-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.5	676.00..-D	846	846
R/L 006M0200-10	6	2.3	6.0	5.3	25	10	1.8	3.4	2.0	676.00..-D	856	856
R/L 006M0100-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.0	676.00..-D	838	838
R/L 006M0150-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.5	676.00..-D	848	848
R/L 006M0200-15	6	2.3	6.0	5.3	30	15	1.8	3.4	2.0	676.00..-D	858	858
R/L 006M0100-20	6	2.3	6.0	5.3	35	22	1.8	3.4	1.0	676.00..-D	840	840
R/L 006M0150-20	6	2.3	6.0	5.3	37	22	1.8	3.4	1.5	676.00..-D	850	850
R/L 006M0200-20	6	2.3	6.0	5.3	37	22	1.8	3.4	2.0	676.00..-D	860	860
R/L 006M0100-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	676.00..-D	842	842
R/L 006M0150-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	676.00..-D	852	852
R/L 006M0200-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	676.00..-D	862	862
R/L 006M0100-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.0	676.00..-D	844	844
R/L 006M0150-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.5	676.00..-D	854	854
R/L 006M0200-30	6	2.3	6.0	5.3	45	30	1.8	3.4	2.0	676.00..-D	864	864
R/L 007M0100-10	7	2.7	6.8	6.3	25	10	2.5	3.7	1.0	676.00..-D	866	866
R/L 007M0150-10	7	2.7	6.8	6.3	25	10	2.5	3.7	1.5	676.00..-D	876	876
R/L 007M0200-10	7	2.7	6.8	6.3	25	10	2.5	3.7	2.0	676.00..-D	886	886
R/L 007M0100-15	7	2.7	6.8	6.3	30	15	2.5	3.7	1.0	676.00..-D	868	868
R/L 007M0150-15	7	2.7	6.8	6.3	30	15	2.5	3.7	1.5	676.00..-D	878	878
R/L 007M0200-15	7	2.7	6.8	6.3	30	15	2.5	3.7	2.0	676.00..-D	888	888
R/L 007M0100-22	7	2.7	6.8	6.3	37	22	2.5	3.7	1.0	676.00..-D	870	870
R/L 007M0150-22	7	2.7	6.8	6.3	37	22	2.5	3.7	1.5	676.00..-D	880	880
R/L 007M0200-22	7	2.7	6.8	6.3	37	22	2.5	3.7	2.0	676.00..-D	890	890
R/L 007M0100-25	7	2.7	6.8	6.3	40	25	2.5	3.7	1.0	676.00..-D	872	872
R/L 007M0150-25	7	2.7	6.8	6.3	40	25	2.5	3.7	1.5	676.00..-D	882	882
R/L 007M0200-25	7	2.7	6.8	6.3	40	25	2.5	3.7	2.0	676.00..-D	892	892
R/L 007M0100-30	7	2.7	6.8	6.3	45	30	2.5	3.7	1.0	676.00..-D	874	874
R/L 007M0150-30	7	2.7	6.8	6.3	45	30	2.5	3.7	1.5	676.00..-D	884	884
R/L 007M0200-30	7	2.7	6.8	6.3	45	30	2.5	3.7	2.0	676.00..-D	894	894

P	●	●
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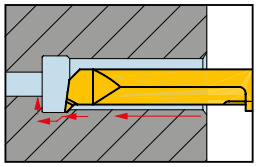
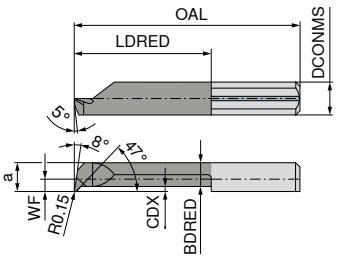
3

UltraMini – Inserts for internal undercuts

▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

	TiN	TiN	TiAlN	TiAlN
	Left-hand	Right-hand	Left-hand	Right-hand
	73 011 ...	73 010 ...	73 011 ...	73 010 ...

Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	Standard tool holder	73 011 ...	73 010 ...	73 011 ...	73 010 ...
R/L 047.2-10	4		2.0	1.7	24	10	0.4	1.2	645.00..-D			**221**	**221**
R/L 047.3-15	4	0.6	2.8	2.6	29	15	0.6	1.9	645.00..-D			**231**	**231**
R/L 047.4-10	4	1.5	4.0	3.5	24	10	0.6	2.8	645.00..-D			**241**	**241**
R/L 047.T4-20	4	1.5	4.0	3.5	34	20	0.6	2.8	645.00..-D			**242**	**242**
R/L 047.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	645.00..-D	**542**	**542**		
R/L 047.5-15	5	1.9	5.0	4.4	30	15	0.8	3.5	645.00..-D			**251**	**251**
R/L 047.T5-25	5	1.9	5.0	4.4	40	25	0.8	3.5	645.00..-D			**252**	**252**
R/L 047.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	645.00..-D	**552**	**552**		
R/L 047.T6-22	6	2.3	6.0	5.3	37	22	1.8	3.4	676.00..-D			**262**	**262**
R/L 047.T6-30	6	2.3	6.0	5.3	45	30	1.8	3.4	676.00..-D			**263**	**263**
R/L 047.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	676.00..-D	**562**	**562**		
P										●	●	●	●
M										●	●	●	●
K										●	●	●	●
N										●	●	●	●
S										○	○	●	●
H										○	○	●	●
O										●	●	●	●

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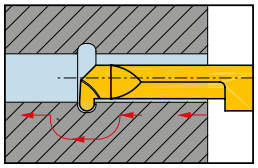
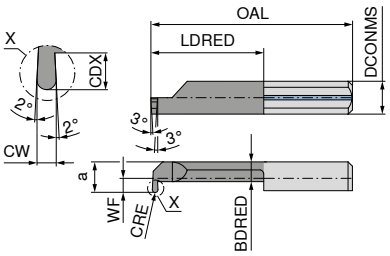
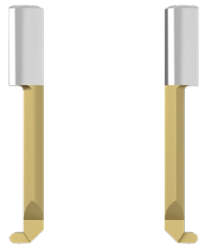
UltraMini – Inserts for internal grooving and turning

▲ CDX = Maximum depth of cut when turning outwards

TiN TiN







Illustrations show right-hand versions

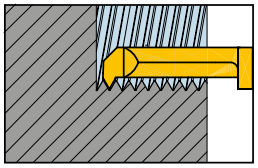
Designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	CRE mm	Standard tool holder	Left-hand 73 019 ...	Right-hand 73 018 ...
R/L 006-0.75-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	0.75	676.00..-D	**564**	**564**
R/L 004-0.50-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	0.50	645.00..-D	**541**	**541**
R/L 005-0.50-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	0.50	645.00..-D	**552**	**552**
R/L 005-0.75-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	0.75	645.00..-D	**554**	**554**
R/L 005-1.00-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	1.00	645.00..-D	**556**	**556**
R/L 006-0.50-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	0.50	676.00..-D	**562**	**562**
R/L 006-1.00-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	1.00	676.00..-D	**566**	**566**
R/L 007-0.50-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.0	0.50	676.00..-D	**572**	**572**
R/L 007-0.75-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.5	0.75	676.00..-D	**574**	**574**
R/L 007-1.00-30	7	2.7	6.8	6.3	45	30	2.5	3.8	2.0	1.00	676.00..-D	**576**	**576**
P												●	●
M												●	●
K												●	●
N												●	●
S												○	○
H												○	○
O												●	●

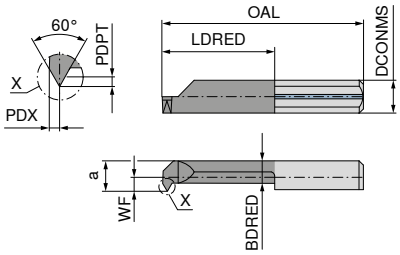
→ v_c Page 339

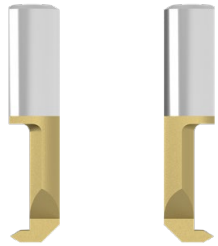
3

UltraMini – Inserts for internal threading (Partial profile)

TiN | TiN







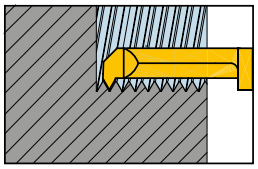
Illustrations show right-hand versions

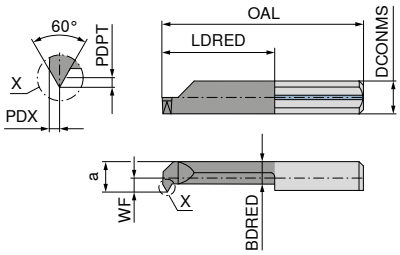
Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	Standard tool holder	Left-hand 73 101 ...	Right-hand 73 100 ...
R/L 005.0510-15	5	1 - 1,25	1.9	4.8	4.4	30	15	3.3	0.55	0.55	645.00..-D	545	545
R/L 005.0510-20	5	1 - 1,25	1.9	4.8	4.4	35	20	3.3	0.55	0.55	645.00..-D	544	544
R/L 006.0612-15	6	1,25 - 1,5	2.3	6.0	5.3	30	15	3.4	0.68	0.65	676.00..-D	547	547
R/L 006.0612-22	6	1,25 - 1,5	2.3	6.0	5.3	37	22	3.4	0.68	0.65	676.00..-D	546	546
R/L 006.0815-15	6	1,5 - 1,75	2.3	6.0	5.3	30	15	3.4	0.81	0.75	676.00..-D	549	549
R/L 006.0815-22	6	1,5 - 1,75	2.3	6.0	5.3	37	22	3.4	0.81	0.75	676.00..-D	548	548
R/L 007.0815-15	7	1,5 - 1,75	2.7	7.0	6.3	30	15	3.8	0.81	0.75	676.00..-D	550	550
P												●	●
M												●	●
K												●	●
N												●	●
S												○	○
H												○	○
O												●	●

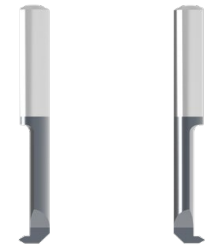
→ v_c Page 339

UltraMini – Inserts for internal threading (Partial profile)

TiAlN | TiAlN







Illustrations show right-hand versions

Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	Standard tool holder	Left-hand 73 101 ...	Right-hand 73 100 ...
R/L 003.0105-8	4	0,5 - 0,7	0.30	2.4	2.3	22	8	1.8	0.27	0.33	645.00..-D	551	551
R/L 004.0408-15	4	0,8 - 1	1.75	4.0	3.5	30	15	2.4	0.43	0.45	645.00..-D	552	552
P												●	●
M												●	●
K												●	●
N												●	●
S												●	●
H												●	●
O												●	●

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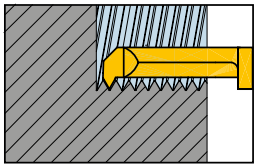
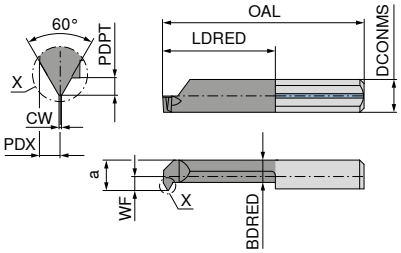
UltraMini – Inserts for Internal thread turning (Full profile)

TiAlN

TiAlN





Illustrations show right-hand versions

Left-hand

Right-hand

Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	CW mm	Standard tool holder	73 209 ... Left-hand	73 208 ... Right-hand
R/L 105.0408-15	5	0.80	1.9	4.8	4.4	30	15	3.3	0.43	0.50	0.10	645.00..-D	**799**	**799**
R/L 105.510-15	5	1.00	1.9	4.8	4.4	30	15	3.3	0.54	0.55	0.12	645.00..-D	**800**	**800**
R/L 106.612-15	6	1.25	2.3	6.0	5.3	30	15	3.4	0.67	0.65	0.15	676.00..-D	**802**	**802**
R/L 106.815-15	6	1.50	2.3	6.0	5.3	30	15	3.4	0.81	0.75	0.18	676.00..-D	**804**	**804**
R/L 106.815-15	7	1.50	2.7	7.0	6.3	30	15	3.8	0.81	0.75	0.18	676.00..-D	**806**	**806**
P													●	●
M													●	●
K													●	●
N													●	●
S													●	●
H													●	●
O													●	●

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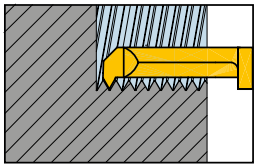
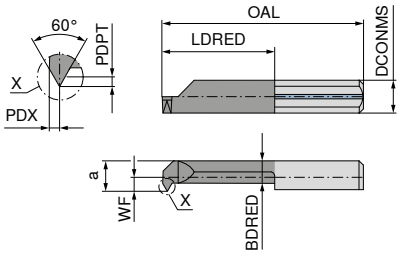
3

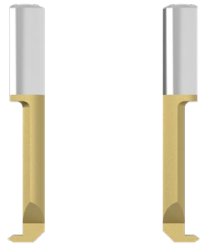
UltraMini – Inserts for internal thread turning (Partial profile)

MF 60°

TiN TiN







Illustrations show right-hand versions

Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	Standard tool holder	Left-hand 73 103 ...	Right-hand 73 102 ...
R/L 004.0205-15	4	0,5 - 0,75	1.5	4	3.5	30	15	2.4	0.27	0.35	645.00..-D	510	510
R/L 005.0205-20	5	0,5 - 0,75	1.9	5	4.4	35	20	3.3	0.27	0.35	645.00..-D	540	540
R/L 005.0205-15	5	0,5 - 0,75	1.9	5	4.4	30	15	3.3	0.27	0.35	645.00..-D	539	539
L 005.0407-15	5	0,75 - 1	1.9	5	4.4	30	15	3.3	0.40	0.45	645.00..-D	541	
R/L 005.0407-20	5	0,75 - 1	1.9	5	4.4	35	20	3.3	0.40	0.45	645.00..-D	542	542
R 005.0407-15	5	0,75 - 1	1.9	5	4.4	30	15	3.3	0.40	0.45	645.00..-D		541
R/L 006.0510-22	6	1 - 1,25	2.3	6	5.3	37	22	3.4	0.55	0.55	676.00..-D	544	544
R/L 006.0510-15	6	1 - 1,25	2.3	6	5.3	30	15	3.4	0.55	0.55	676.00..-D	543	543

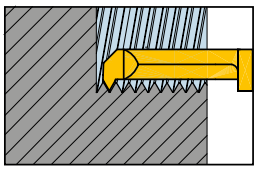
P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

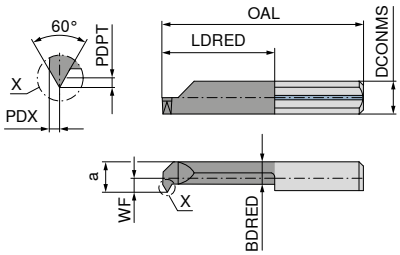
→ v_c Page 339

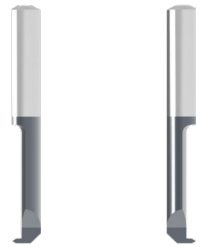
UltraMini – Inserts for internal thread turning (Partial profile)

MF 60°

TiAlN TiAlN







Illustrations show right-hand versions

Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	Standard tool holder	Left-hand 73 103 ...	Right-hand 73 102 ...
R/L 004.0105-10	4	0,5 - 0,75	1	3.2	3	24	10	2.3	0.27	0.44	645.00..-D	509	509

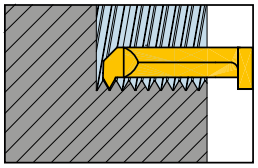
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

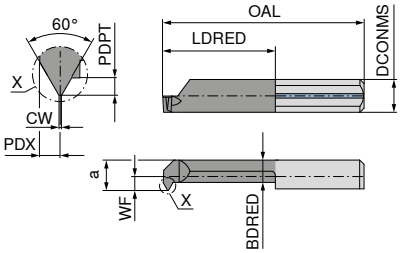
→ v_c Page 339

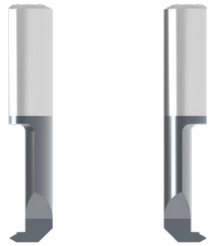
UltraMini – Inserts for Internal thread turning (Full profile)

MF | 60°

TiAlN | TiAlN







Illustrations show right-hand versions

Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	CW mm	Standard tool holder	Left-hand 73 207 ...	Right-hand 73 206 ...
R/L 104.0205-15	5	0.50	1.5	4	3.5	30	15	2.4	0.27	0.35	0.06	645.00..-D	800	800
R/L 105.0205-15	5	0.50	1.9	5	4.4	30	15	3.3	0.27	0.35	0.06	645.00..-D	802	802
R/L 105.0407-15	5	0.75	1.9	5	4.4	30	15	3.3	0.40	0.45	0.09	645.00..-D	804	804
R/L 106.0510-15	6	1.00	2.3	6	5.3	30	15	3.4	0.54	0.55	0.12	676.00..-D	806	806

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

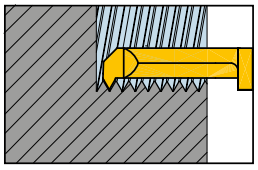
→ v_c Page 339

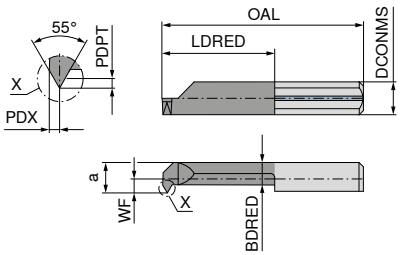
3

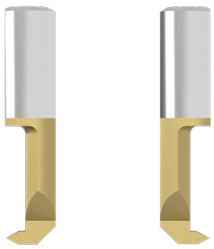
UltraMini – Inserts for internal thread turning (Partial profile)

G | 55°

TiN | TiN







Illustrations show right-hand versions

Designation	DCONMS h6 mm	TPI 1/"	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	Standard tool holder	Left-hand 73 105 ...	Right-hand 73 104 ...
R/L 005.5548-15	5	48 - 24	1.9	4.8	4.4	30	15	3.3	0.40	0.45	645.00..-D	552	552
R/L 006.5548-15	6	48 - 24	2.3	6.0	5.3	30	15	3.4	0.40	0.45	676.00..-D	562	562
R/L 006.5524-15	6	24 - 16	2.3	6.0	5.3	30	15	3.4	0.81	0.75	676.00..-D	563	563
R/L 007.5524-15	7	24 - 16	2.7	7.0	6.3	30	15	3.8	0.81	0.75	676.00..-D	572	572

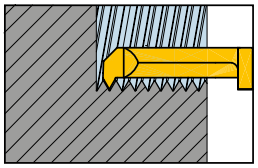
P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

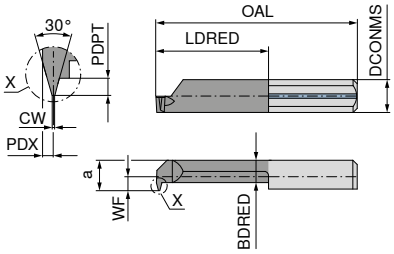
→ v_c Page 339

UltraMini – Inserts for internal thread turning (Partial profile)

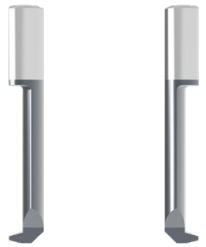
▲ Trapezoidal thread DIN 103

TiAlN TiAlN





Illustrations show right-hand versions



	Left-hand	Right-hand
	73 211 ...	73 210 ...

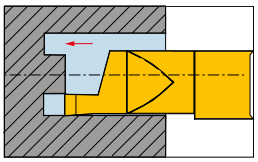
Designation	DCONMS h6 mm	TP mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	CW mm	Standard tool holder		
R/L 007.1220-22	7	2	2.8	7	6.3	37	22	3.8	1.25	0.75	0.6	676.00..-D	**222**	**222**
R/L 007.1220-30	7	2	2.8	7	6.3	45	30	3.8	1.25	0.75	0.6	676.00..-D	**230**	**230**
R/L 007.1730-22	7	3	2.8	7	6.3	37	22	3.8	1.75	1.10	1.0	676.00..-D	**322**	**322**
R/L 007.1730-30	7	3	2.8	7	6.3	45	30	3.8	1.75	1.10	1.0	676.00..-D	**330**	**330**

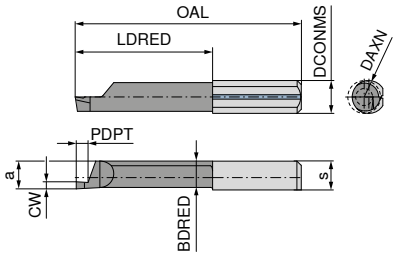
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 339

Suitable holders can be found on → page 315–320

UltraMini – Inserts for axial grooving





Illustrations show right-hand versions

	TiN	TiN	TiAlN	TiAlN
	Left-hand	Right-hand	Left-hand	Right-hand
	73 051 ...	73 050 ...	73 053 ...	73 052 ...

Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	Standard tool holder				
R/L 010.1006-10	6	5.2	6	5.3	26	11	1.5	4.9	1.0	676.00..-D	561	561	561	561
R/L 010.1506-10	6	5.2	6	5.3	26	11	2.0	4.9	1.5	676.00..-D	563	563	563	563
R/L 010.1008-10	7	5.9	8	6.3	26	11	1.5	5.6	1.0	676.00..-D	571	571	571	571
R/L 010.1008-20	7	5.9	8	6.3	35	20	1.5	5.6	1.0	676.00..-D	671	671	671	671
R/L 010.1008-30	7	5.9	8	6.3	45	30	1.5	5.6	1.0	676.00..-D	771	771	771	771
R/L 010.1508-10	7	5.9	8	6.3	26	11	2.5	5.6	1.5	676.00..-D	573	573	573	573
R/L 010.1508-20	7	5.9	8	6.3	35	20	2.5	5.6	1.5	676.00..-D	673	673	673	673
R/L 010.1508-30	7	5.9	8	6.3	45	30	2.5	5.6	1.5	676.00..-D	773	773	773	773
R/L 010.2008-10	7	5.9	8	6.3	26	11	3.0	5.6	2.0	676.00..-D	575	575	575	575
R/L 010.2008-20	7	5.9	8	6.3	35	20	3.0	5.6	2.0	676.00..-D	675	675	675	675
R/L 010.2008-30	7	5.9	8	6.3	45	30	3.0	5.6	2.0	676.00..-D	775	775	775	775
R/L 010.2508-10	7	5.9	8	6.3	26	11	3.5	5.6	2.5	676.00..-D	577	577	577	577
R/L 010.2508-20	7	5.9	8	6.3	35	20	3.5	5.6	2.5	676.00..-D	677	677	677	677
R/L 010.2508-30	7	5.9	8	6.3	45	30	3.5	5.6	2.5	676.00..-D	777	777	777	777
R/L 010.3008-10	7	5.9	8	6.3	26	11	3.5	5.6	3.0	676.00..-D	579	579	579	579
R/L 010.3008-20	7	5.9	8	6.3	35	20	3.5	5.6	3.0	676.00..-D	679	679	679	679
R/L 010.3008-30	7	5.9	8	6.3	45	30	3.5	5.6	3.0	676.00..-D	779	779	779	779

P	●	●	●	●
M	●	●	●	●
K	●	●	●	●
N	●	●	●	●
S	○	○	●	●
H	○	○	●	●
O	●	●	●	●

→ v_c Page 339

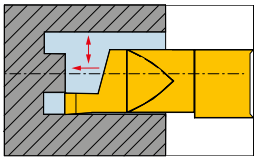
3

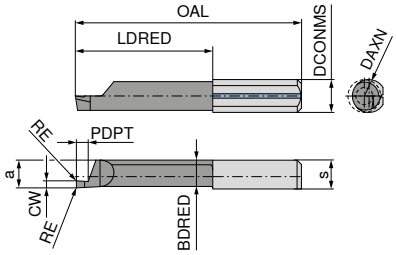
UltraMini – Inserts for axial grooving

▲ with corner radius

TiAlN

TiAlN





Illustrations show right-hand versions

Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	RE mm	Standard tool holder	Left-hand 73 253 ...	Right-hand 73 252 ...
R/L 510M1008-10	5	4.3	5	6.3	26	11	2	4.0	1.0	0.05	645.00..-D	**510**	**510**
R/L 510M1008-20	5	4.3	5	6.3	35	20	2	4.0	1.0	0.05	645.00..-D	**610**	**610**
R/L 510M1508-10	5	4.3	5	6.3	26	11	3	4.0	1.5	0.05	645.00..-D	**515**	**515**
R/L 510M1508-20	5	4.3	5	6.3	35	20	3	4.0	1.5	0.05	645.00..-D	**615**	**615**
R/L 510M2008-10	5	4.3	5	6.3	26	11	4	4.0	2.0	0.05	645.00..-D	**520**	**520**
R/L 510M2008-20	5	4.3	5	6.3	35	20	4	4.0	2.0	0.05	645.00..-D	**620**	**620**
R/L 010M1008-10	7	5.9	8	6.3	26	11	2	5.6	1.0	0.10	676.00..-D	**800**	**800**
R/L 010M1008-20	7	5.9	8	6.3	35	20	2	5.6	1.0	0.10	676.00..-D	**810**	**810**
R/L 010M1008-30	7	5.9	8	6.3	45	30	2	5.6	1.0	0.10	676.00..-D	**820**	**820**
R/L 010M1508-10	7	5.9	8	6.3	26	11	3	5.6	1.5	0.10	676.00..-D	**802**	**802**
R/L 010M1508-20	7	5.9	8	6.3	35	20	3	5.6	1.5	0.10	676.00..-D	**812**	**812**
R/L 010M1508-30	7	5.9	8	6.3	45	30	3	5.6	1.5	0.10	676.00..-D	**822**	**822**
R/L 010M2008-10	7	5.9	8	6.3	26	11	4	5.6	2.0	0.10	676.00..-D	**804**	**804**
R/L 010M2008-20	7	5.9	8	6.3	35	20	4	5.6	2.0	0.10	676.00..-D	**814**	**814**
R/L 010M2008-30	7	5.9	8	6.3	45	30	4	5.6	2.0	0.10	676.00..-D	**824**	**824**
R/L 010M2508-10	7	5.9	8	6.3	26	11	5	5.6	2.5	0.10	676.00..-D	**806**	**806**
R/L 010M2508-20	7	5.9	8	6.3	35	20	5	5.6	2.5	0.10	676.00..-D	**816**	**816**
R/L 010M2508-30	7	5.9	8	6.3	45	30	5	5.6	2.5	0.10	676.00..-D	**826**	**826**
R/L 010M3008-10	7	5.9	8	6.3	26	11	6	5.6	3.0	0.10	676.00..-D	**808**	**808**
R/L 010M3008-20	7	5.9	8	6.3	35	20	6	5.6	3.0	0.10	676.00..-D	**818**	**818**
R/L 010M3008-30	7	5.9	8	6.3	45	30	6	5.6	3.0	0.10	676.00..-D	**828**	**828**

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

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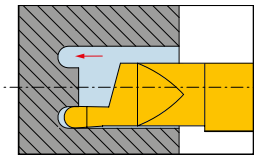
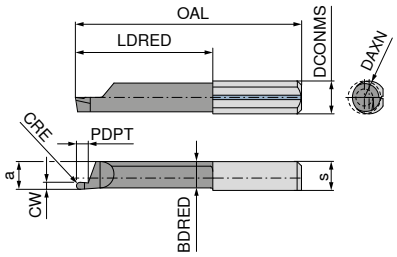
Suitable holders can be found on → page 315–320

UltraMini – Inserts for axial grooving (Full radius)





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

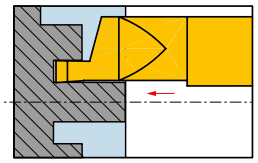
Right-hand

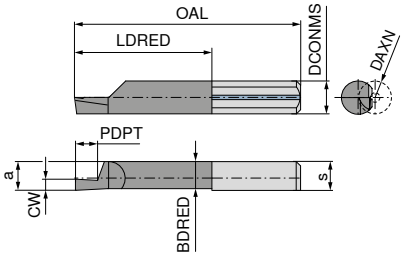
Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	CRE mm	Standard tool holder	73 059 ... Left-hand	73 058 ... Right-hand
R/L 610.1005-10	6	5.2	6	5.3	26	11	2	4.9	1.0	0.50	676.00..-D	071	071
R/L 610.1005-20	6	5.2	6	5.3	35	20	2	4.9	1.0	0.50	676.00..-D	171	171
R/L 610.1608-10	6	5.2	6	5.3	26	11	3	4.9	1.6	0.80	676.00..-D	073	073
R/L 610.1608-20	6	5.2	6	5.3	35	20	3	4.9	1.6	0.80	676.00..-D	173	173
R/L 610.2010-10	6	5.2	6	5.3	26	11	4	4.9	2.0	1.00	676.00..-D	075	075
R/L 610.2010-20	6	5.2	6	5.3	35	20	4	4.9	2.0	1.00	676.00..-D	175	175
R/L 610.2512-10	6	5.2	6	5.3	26	11	5	4.9	2.5	1.25	676.00..-D	077	077
R/L 610.2512-20	6	5.2	6	5.3	35	20	5	4.9	2.5	1.25	676.00..-D	177	177
R/L 610.3015-10	6	5.2	6	5.3	26	11	6	4.9	3.0	1.50	676.00..-D	079	079
R/L 610.3015-20	6	5.2	6	5.3	35	20	6	4.9	3.0	1.50	676.00..-D	179	179
R/L 010.1005-10	7	5.9	8	6.3	26	11	2	5.6	1.0	0.50	676.00..-D	571	571
R/L 010.1005-20	7	5.9	8	6.3	35	20	2	5.6	1.0	0.50	676.00..-D	671	671
R/L 010.1608-10	7	5.9	8	6.3	26	11	3	5.6	1.6	0.80	676.00..-D	573	573
R/L 010.1608-20	7	5.9	8	6.3	35	20	3	5.6	1.6	0.80	676.00..-D	673	673
R/L 010.2010-10	7	5.9	8	6.3	26	11	4	5.6	2.0	1.00	676.00..-D	575	575
R/L 010.2010-20	7	5.9	8	6.3	35	20	4	5.6	2.0	1.00	676.00..-D	675	675
R/L 010.2512-10	7	5.9	8	6.3	26	11	5	5.6	2.5	1.25	676.00..-D	577	577
R/L 010.2512-20	7	5.9	8	6.3	35	20	5	5.6	2.5	1.25	676.00..-D	677	677
R/L 010.3015-10	7	5.9	8	6.3	26	11	6	5.6	3.0	1.50	676.00..-D	579	579
R/L 010.3015-20	7	5.9	8	6.3	35	20	6	5.6	3.0	1.50	676.00..-D	679	679
P												●	●
M												●	●
K												●	●
N												●	●
S												●	●
H												●	●
O												●	●

→ v_c Page 339

3

UltraMini – Inserts for axial grooving over a spigot





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

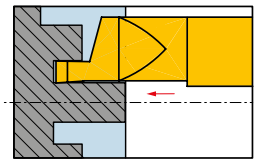
Right-hand

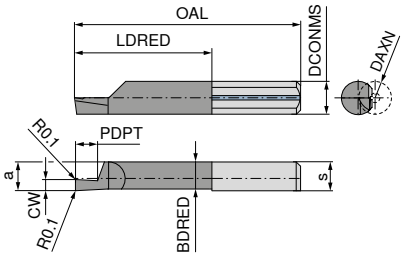
Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	Standard tool holder	Left-hand 73 061 ...	Right-hand 73 060 ...
R/L 620.1006-20	6	5.2	6	5.3	35	20	2	4.9	1.0	676.00..-D	**561**	**561**
R/L 620.1506-20	6	5.2	6	5.3	35	20	3	4.9	1.5	676.00..-D	**563**	**563**
R/L 620.2006-20	6	5.2	6	5.3	35	20	4	4.9	2.0	676.00..-D	**565**	**565**
R/L 620.2506-20	6	5.2	6	5.3	35	20	5	4.9	2.5	676.00..-D	**567**	**567**
R/L 620.3006-20	6	5.2	6	5.3	35	20	6	4.9	3.0	676.00..-D	**569**	**569**
P											●	●
M											●	●
K											●	●
N											●	●
S											●	●
H											●	●
O											●	●

→ v_c Page 339

UltraMini – Inserts for axial grooving over a spigot

▲ with corner radius





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

Right-hand

Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	Standard tool holder	Left-hand 73 261 ...	Right-hand 73 260 ...
R/L 620M1006-20	6	5.2	6	5.3	35	20	2	4.9	1.0	676.00..-D	**800**	**800**
R/L 620M1506-20	6	5.2	6	5.3	35	20	3	4.9	1.5	676.00..-D	**802**	**802**
R/L 620M2006-20	6	5.2	6	5.3	35	20	4	4.9	2.0	676.00..-D	**804**	**804**
R/L 620M2506-20	6	5.2	6	5.3	35	20	5	4.9	2.5	676.00..-D	**806**	**806**
R/L 620M3006-20	6	5.2	6	5.3	35	20	6	4.9	3.0	676.00..-D	**808**	**808**
P											●	●
M											●	●
K											●	●
N											●	●
S											●	●
H											●	●
O											●	●

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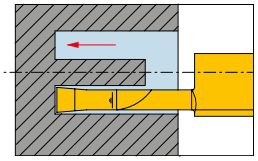
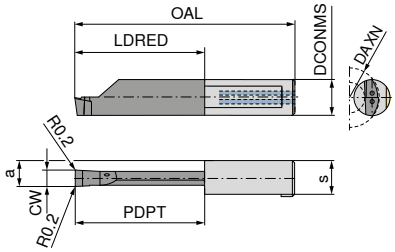
UltraMini – Inserts for axial grooving

- up to 70 bar
- dual cooling channel





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

Right-hand

Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	CW mm	Standard tool holder	73 263 ... Left-hand	73 262 ... Right-hand
R/L 012.0200-10	8	5.00	12	7.3	30	10	10	2.0	687.00..-D	700	700
R/L 012.0200-15	8	5.00	12	7.3	35	15	15	2.0	687.00..-D	702	702
R/L 012.0250-10	8	5.25	12	7.3	30	10	10	2.5	687.00..-D	704	704
R/L 012.0250-20	8	5.25	12	7.3	40	20	20	2.5	687.00..-D	706	706
R/L 016.0300-10	8	5.50	16	7.3	30	10	10	3.0	687.00..-D	800	800
R/L 016.0300-20	8	5.50	16	7.3	40	20	20	3.0	687.00..-D	802	802
R/L 020.0300-25	8	5.50	20	7.3	45	25	25	3.0	687.00..-D	804	804
R/L 020.0300-30	8	5.50	20	7.3	50	30	30	3.0	687.00..-D	806	806
R/L 020.0300-35	8	5.50	20	7.3	55	35	35	3.0	687.00..-D	808	808
R/L 020.0300-40	8	5.50	20	7.3	60	40	40	3.0	687.00..-D	810	810
R/L 016.0400-10	8	6.00	16	7.3	30	10	10	4.0	687.00..-D	812	812
R/L 016.0400-20	8	6.00	16	7.3	40	20	20	4.0	687.00..-D	814	814
R/L 020.0400-25	8	6.00	20	7.3	45	25	25	4.0	687.00..-D	816	816
R/L 020.0400-30	8	6.00	20	7.3	50	30	30	4.0	687.00..-D	818	818
R/L 020.0400-35	8	6.00	20	7.3	55	35	35	4.0	687.00..-D	820	820
R/L 020.0400-40	8	6.00	20	7.3	60	40	40	4.0	687.00..-D	822	822
R/L 020.0500.20	8	6.50	20	7.3	40	20	20	5.0	687.00..-D	824	824
R/L 020.0500.25	8	6.50	20	7.3	45	25	25	5.0	687.00..-D	826	826
R/L 020.0500.30	8	6.50	20	7.3	50	30	30	5.0	687.00..-D	828	828
R/L 020.0500.35	8	6.50	20	7.3	55	35	35	5.0	687.00..-D	830	830
R/L 020.0500.40	8	6.50	20	7.3	60	40	40	5.0	687.00..-D	832	832
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

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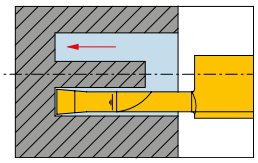
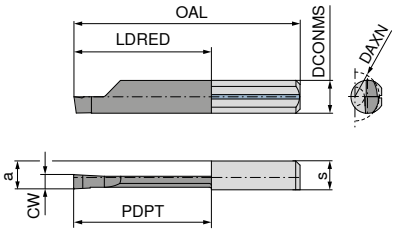
UltraMini – Inserts for axial grooving





Illustrations show right-hand versions

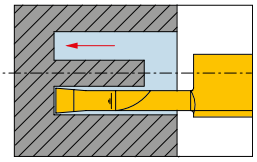
	TiN	TiN	TiAlN	TiAlN
	Left-hand	Right-hand	Left-hand	Right-hand
	73 055 ...	73 054 ...	73 057 ...	73 056 ...

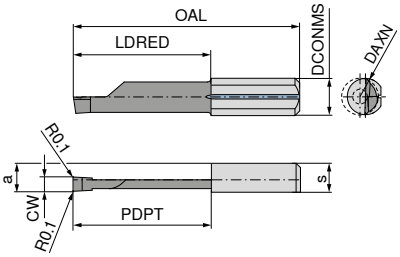
Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	CW mm	Standard tool holder				
R/L 015.2515-20	7	5.9	15	6.3	35	20	20	2.5	676.00..-D	572	572	572	572
R/L 015.3015-20	7	5.9	15	6.3	35	20	20	3.0	676.00..-D	574	574	574	574
R/L 015.3015-30	7	5.9	15	6.3	45	30	30	3.0	676.00..-D	674	674	674	674
P										●	●	●	●
M										●	●	●	●
K										●	●	●	●
N										●	●	●	●
S										○	○	●	●
H										○	○	●	●
O										●	●	●	●

→ v_c Page 339

UltraMini – Inserts for axial grooving

▲ with corner radius





Illustrations show right-hand versions

	TiAlN	TiAlN
	Left-hand	Right-hand
	73 257 ...	73 256 ...

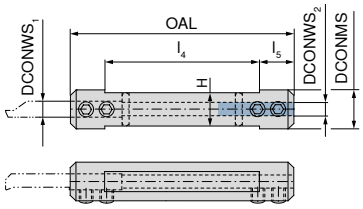
Designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	CW mm	Standard tool holder		
R/L 015M2515-20	7	5.9	8	6.3	35	20	20	2.5	676.00..-D	800	800
R/L 015M3015-20	7	5.9	8	6.3	35	20	20	3.0	676.00..-D	802	802
R/L 015M3015-30	7	5.9	8	6.3	45	30	30	3.0	676.00..-D	804	804
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

→ v_c Page 339

UltraMini – Standard tool holder for cutting inserts

- double ended
- Machining diameter from Ø 0.5 mm

Scope of supply:
Tool holder with allen key



Designation	DCONWS1 mm	DCONWS2 mm	DCONMS mm	OAL mm	l4 mm	l5 mm	H mm	73 080 ...
645.0012-D	4	5	12.00	75	55	10	10.3	**163**
645.0016-D	4	5	16.00	75	55	10	14.0	**164**
645.001905-D	4	5	19.05	90	70	10	17.2	**170**
645.0020-D	4	5	20.00	90	70	10	18.0	**165**
645.0022-D	4	5	22.00	90	70	10	20.0	**171**
645.00254-D	4	5	25.40	95	75	10	23.4	**172**
676.0016-D	6	7	16.00	75	55	10	14.0	**166**
676.001905-D	6	7	19.05	90	70	10	17.2	**173**
676.0020-D	6	7	20.00	90	70	10	18.0	**167**
676.0022-D	6	7	22.00	90	70	10	20.0	**174**
676.00254-D	6	7	25.40	95	75	10	23.4	**175**
687.0016-D	7	8	16.00	75	55	10	14.0	**168**
687.0020-D	7	8	20.00	90	70	10	18.0	**169**

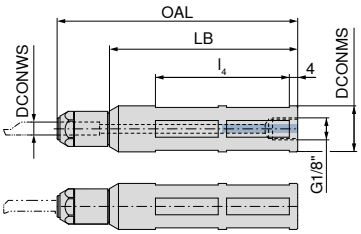
3

Spare parts for Article no.	Key I	70 950 ...	Clamping screw	73 082 ...
73 080 169	SW2,5	**175**	M6x6	**014**
73 080 163	SW2,5	**175**	M5x4	**013**
73 080 164	SW2,5	**175**	M5x6	**001**
73 080 165	SW2,5	**175**	M5x8	**008**
73 080 166	SW2,5	**175**	M5x6	**001**
73 080 167	SW2,5	**175**	M5x8	**008**
73 080 168	SW2,5	**175**	M6x6	**014**
73 080 170	SW2,5	**175**	M5x6	**001**
73 080 171	SW2,5	**175**	M5x8	**008**
73 080 172	SW2,5	**175**	M5x8	**008**
73 080 173	SW2,5	**175**	M5x6	**001**
73 080 174	SW2,5	**175**	M5x8	**008**
73 080 175	SW2,5	**175**	M5x8	**008**

UltraMini – Quick change tool holder for cutting inserts

Scope of supply:

Tool holder, lock nut and clamping wedge



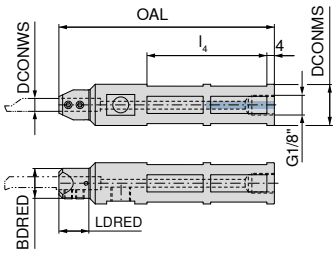
Designation	DCONWS mm	DCONMS g6 mm	OAL mm	LB mm	l_4 mm	73 089 ...
UM600H.0012.4	4	12.00	115	90	64	124
UM600H.0016.4	4	16.00	115	90	64	164
UM600H.001905.4	4	19.05	115	90	64	194
UM600H.0020.4	4	20.00	115	90	64	204
UM600H.0022.4	4	22.00	115	90	64	224
UM600H.0025.4	4	25.00	115	90	64	254
UM600H.00254.4	4	25.40	115	90	64	264
UM600H.0028.4	4	28.00	115	90	64	284
UM600H.0012.5	5	12.00	115	90	64	125
UM600H.0016.5	5	16.00	115	90	64	165
UM600H.001905.5	5	19.05	115	90	64	195
UM600H.0020.5	5	20.00	115	90	64	205
UM600H.0022.5	5	22.00	115	90	64	225
UM600H.0025.5	5	25.00	115	90	64	255
UM600H.00254.5	5	25.40	115	90	64	265
UM600H.0028.5	5	28.00	115	90	64	285
UM600H.0012.6	6	12.00	115	90	64	126
UM600H.0016.6	6	16.00	115	90	64	166
UM600H.001905.6	6	19.05	115	90	64	196
UM600H.0020.6	6	20.00	115	90	64	206
UM600H.0022.6	6	22.00	115	90	64	226
UM600H.0025.6	6	25.00	115	90	64	256
UM600H.00254.6	6	25.40	115	90	64	266
UM600H.0028.6	6	28.00	115	90	64	286
UM600H.0012.7	7	12.00	115	90	64	127
UM600H.0016.7	7	16.00	115	90	64	167
UM600H.001905.7	7	19.05	115	90	64	197
UM600H.0020.7	7	20.00	115	90	64	207
UM600H.0022.7	7	22.00	115	90	64	227
UM600H.0025.7	7	25.00	115	90	64	257
UM600H.00254.7	7	25.40	115	90	64	267
UM600H.0028.7	7	28.00	115	90	64	287

Avoid pulling cuts. Ensure a suitable clamping force is used when using thro' coolant supply. Can be tightened using a key.

Spare parts DCONWS		Lock nut UM600H 73 950 ...	Clamping wedge UM600H 73 950 ...
4	M4	104	111
5	M5	105	111
6	M6	106	111
7	M7	107	111

UltraMini – Toolholder for inserts

▲ Tool holder suitable for high coolant pressures



73 088 ...

Designation	DCONWS mm	BDRED mm	DCONMS g6 mm	OAL mm	LDRED mm	l_4 mm	
UMST.0016.4	4	16	16.00	115	24	42	**164**
UMST.001905.4	4	16	19.05	115	24	42	**194**
UMST.0020.4	4	16	20.00	115	24	42	**204**
UMST.0022.4	4	16	22.00	115	24	42	**224**
UMST.00254.4	4	16	25.40	115	24	42	**264**
UMST.0028.4	4	16	28.00	115	24	42	**284**
UMST.0016.5	5	16	16.00	115	24	42	**165**
UMST.001905.5	5	16	19.05	115	24	42	**195**
UMST.0020.5	5	16	20.00	115	24	42	**205**
UMST.0022.5	5	16	22.00	115	24	42	**225**
UMST.00254.5	5	16	25.40	115	24	42	**265**
UMST.0028.5	5	16	28.00	115	24	42	**285**
UMST.0016.6	6	16	16.00	115	24	42	**166**
UMST.001905.6	6	16	19.05	115	24	42	**196**
UMST.0020.6	6	16	20.00	115	24	42	**206**
UMST.0022.6	6	16	22.00	115	24	42	**226**
UMST.00254.6	6	16	25.40	115	24	42	**266**
UMST.0028.6	6	16	28.00	115	24	42	**286**
UMST.0016.7	7	16	16.00	115	24	42	**167**
UMST.001905.7	7	16	19.05	115	24	42	**197**
UMST.0020.7	7	16	20.00	115	24	42	**207**
UMST.0022.7	7	16	22.00	115	24	42	**227**
UMST.00254.7	7	16	25.40	115	24	42	**267**
UMST.0028.7	7	16	28.00	115	24	42	**287**
UMST.0016.8	8	16	16.00	115	24	42	**168**
UMST.001905.8	8	16	19.05	115	24	42	**198**
UMST.0020.8	8	16	20.00	115	24	42	**208**
UMST.0022.8	8	16	22.00	115	24	42	**228**
UMST.00254.8	8	16	25.40	115	24	42	**268**
UMST.0028.8	8	16	28.00	115	24	42	**288**

up to 150 bar

Key D

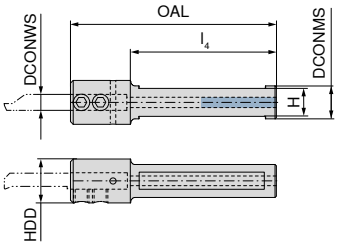
Clamping screw

Spare parts DCONWS		80 950 ...		73 950 ...
4	T10	**104**	M5x0,5x6T10	**050**
5	T10	**104**	M5x0,5x6T10	**050**
6	T10	**104**	M5x0,5x6T10	**050**
7	T10	**104**	M5x0,5x6T10	**050**
8	T10	**104**	M5x0,5x6T10	**050**

UltraMini – Toolholder for inserts

▲ single ended

Scope of supply:
Tool holder with allen key

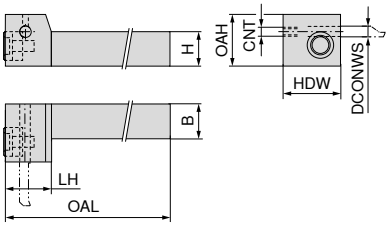


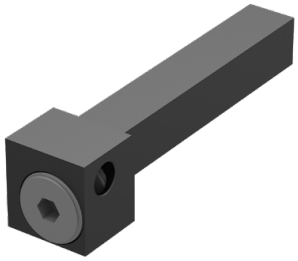
Designation	DCONWS mm	HDD mm	DCONMS mm	OAL mm	l_4 mm	H mm	73 081 ...
640.0012-D	4	16	12	75	53	10.2	**264**
650.0012-D	5	16	12	75	53	10.2	**265**
660.0012-D	6	16	12	75	53	10.2	**266**
670.0012-D	7	16	12	75	53	10.2	**267**
680.0012-D	8	16	12	75	53	10.2	**268**

	Key I		Clamping screw	
		70 950 ...		**73 082 ...**
Spare parts DCONWS				
4	SW2,5	**175**	M5x0,5x6	**010**
5	SW2,5	**175**	M5x0,5x6	**010**
6	SW2,5	**175**	M5x0,5x6	**010**
7	SW2,5	**175**	M5x0,5x6	**010**
8	SW2,5	**175**	M5x0,5x6	**010**

UltraMini – Toolholder for inserts

Scope of supply:
Tool holder with allen key





Designation	DCONWS mm	OAL mm	LH mm	B mm	HDW mm	H mm	OAH mm	CNT	Left-hand 73 083 ...	Right-hand 73 084 ...
R/L .IK.UHCM.1212.4	4	90	17	12	20	12	18	M5	124	124
R/L .IK.UHCM.1212.5	5	90	17	12	20	12	18	M5	125	125
R/L .IK.UHCM.1212.6	6	90	17	12	20	12	21	M5	126	126
R/L .IK.UHCM.1212.7	7	90	17	12	20	12	21	M5	127	127

Suitable coolant connections can be found on → **page 131+132**

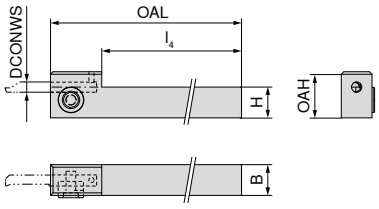
Clamping screw

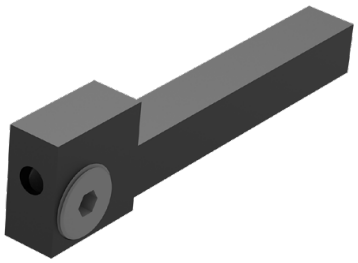
Spare parts DCONWS		73 082 ...
4	UM 12	011
5	UM 12	011
6	UM 16	012
7	UM 16	012

3

UltraMini – Toolholder for inserts

Scope of supply:
Tool holder with allen key





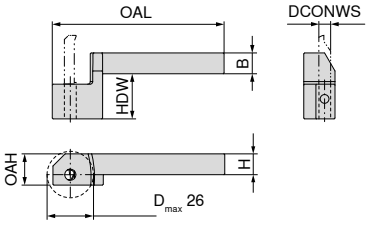
Designation	DCONWS mm	OAL mm	l_4 mm	B mm	H mm	OAH mm	73 086 ...
UM.1010.4	4	100	75	10	10	20	104
UM.1212.4	4	100	75	12	12	22	124
UM.1010.5	5	100	75	10	10	20	105
UM.1212.5	5	100	75	12	12	22	125
UM.1212.6	6	100	75	12	12	22	126

Clamping screw

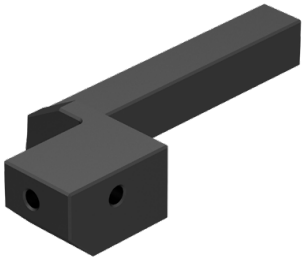
Spare parts DCONWS		73 082 ...
4	UM 12	011
5	UM 12	011
6	UM 16	012

UltraMini – Toolholder for inserts

Scope of supply:
Tool holder with allen key



Illustrations show right-hand versions

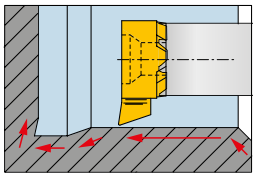


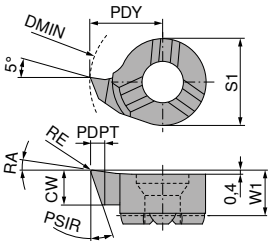
Designation	DCONWS mm	OAL mm	B mm	HDW mm	H mm	OAH mm	Left-hand 73 091 ...	Right-hand 73 090 ...
R/L UM.18.1010.4	4	99	10	38	10	16	104	104
R/L UM.28.1010.4	4	99	10	48	10	16	204	204
R/L UM.18.1212.4	4	99	12	38	12	18	124	124
R/L UM.28.1212.4	4	99	12	48	12	18	224	224
R/L UM.18.1010.5	5	99	10	38	10	16	105	105
R/L UM.28.1010.5	5	99	10	48	10	16	205	205
R/L UM.18.1212.5	5	99	12	38	12	18	125	125
R/L UM.28.1212.5	5	99	12	48	12	18	225	225
R/L UM.18.1010.6	6	99	10	38	10	16	106	106
R/L UM.28.1010.6	6	99	10	48	10	16	206	206
R/L UM.18.1212.6	6	99	12	38	12	18	126	126
R/L UM.28.1212.6	6	99	12	48	12	18	226	226
R/L UM.18.1010.7	7	99	10	38	10	16	107	107
R/L UM.28.1010.7	7	99	10	48	10	16	207	207
R/L UM.18.1212.7	7	99	12	38	12	18	127	127
R/L UM.28.1212.7	7	99	12	48	12	18	227	227

Spare parts DCONWS	Key I	70 950 ...	Clamping screw	73 082 ...
4	SW2,5	175	M5x8	008
5	SW2,5	175	M5x8	008
6	SW2,5	175	M5x8	008
7	SW2,5	175	M5x8	008

MiniCut – Insert for turning and profiling

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW mm	W1 mm	PDY mm	S1 mm	RE mm	PDPT mm	PSIR °	RA °	Left-hand 73 324 ...	Right-hand 73 322 ...
08	8,00. R/L .3,30.18°	7.8	3.3	3.5	4.65	6.0	0.20	0.6	18	8	033	033
	8,00. R/L .3,50.18°	7.8	3.5	3.5	4.65	6.0	0.05	0.6	18	8	035	035
	8,00. R/L .3,50.20°	7.8	3.5	3.5	4.65	6.0	0.20	0.6	20	20	135	135
09	9,00. R/L .3,60.18°	9.0	3.6	3.6	5.50	6.2	0.20	0.8	18	8	136	136
	9,00. R/L .3,60.20°	9.0	3.6	3.6	5.50	6.2	0.20	0.8	20	20	236	236
11	9,80. R/L .3,90.18°	9.8	3.9	4.2	5.50	8.0	0.20	1.0	18	8	139	139
	11,00. R/L .3,90.18°	11.0	3.9	4.2	6.70	8.0	0.20	1.0	18	8	339	339
	11,00. R/L .4,20.20°	11.0	4.2	4.2	6.70	8.0	0.20	1.0	20	20	342	342
14	14,00. R/L .5,00.18°	13.8	5.0	5.1	8.70	9.0	0.20	1.5	18	8	550	550
	14,00. R/L .5,30.20°	14.0	5.3	5.3	8.70	9.0	0.20	1.5	20	20	553	553
P											●	●
M											●	●
K											●	●
N											●	●
S											●	●
H											●	●
O											●	●

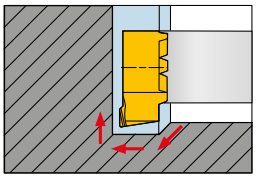
→ v_c Page 339

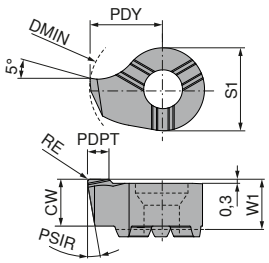
3

MiniCut – Insert for copy turning

▲ with chip breaker

CWX500 CWX500





Illustrations show right-hand versions

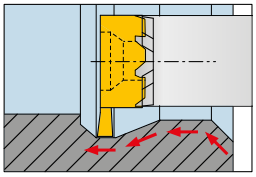
Size	Designation	DMIN mm	CW mm	W1 mm	PDY mm	S1 mm	RE mm	PDPT mm	PSIR °	Left-hand 73 388 ...	Right-hand 73 386 ...
08	8,00. R/L .3,40.10°	8	3.4	3.5	4.65	6.0	0.2	0.5	10	13400	13400
09	9,00. R/L .3,50.10°	9	3.5	3.6	5.50	6.2	0.2	0.5	10	136	136
11	11,00. R .4,10.10°	11	4.1	4.2	6.70	8.0	0.2	0.5	10	14100	14100
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

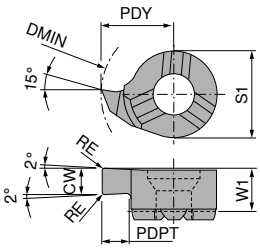
→ v_c Page 339

MiniCut – Internal turning insert

▲ CDX = ap_{max} (material dependant)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW +0.05 mm	PDPT mm	W1 mm	PDY mm	S1 mm	RE mm	CDX mm	Left-hand 73 316 ...	Right-hand 73 314 ...
08	8,00. R/L .1,50.1,0	8	1.5	1.0	3.3	4.8	6.0	0.2	0.2	015	015
	8,00. R/L .2,00.1,0	8	2.0	1.0	3.3	4.8	6.0	0.2	0.2	020	020
09	9,00. R/L .1,50.2,0	9	1.5	2.0	3.6	5.5	6.2	0.2	0.2	115	115
	9,00. R/L .1,50.3,0	10	1.5	3.0	3.6	6.5	6.2	0.2	0.2	121	121
	9,00. R/L .2,00.2,0	9	2.0	2.0	3.6	5.5	6.2	0.2	0.2	120	120
	9,00. R/L .2,00.3,0	10	2.0	3.0	3.6	6.5	6.2	0.2	0.2	122	122
11	11,00. R/L .1,50.2,3	11	1.5	2.3	4.2	6.7	8.0	0.2	0.2	315	315
	11,00. R/L .2,00.2,3	11	2.0	2.3	4.2	6.7	8.0	0.2	0.2	320	320
14	14,00. R/L .1,50.4,0	14	1.5	4.0	5.3	9.0	9.0	0.2	0.2	515	515
	14,00. R/L .1,50,5,5	16	1.5	5.5	5.2	10.5	9.0	0.2	0.2	516	516
	14,00. R/L .1,50.6,5	17	1.5	6.5	5.2	11.5	9.0	0.2	0.2	517	517
	14,00. R/L .2,00.4,0	14	2.0	4.0	5.3	9.0	9.0	0.2	0.2	520	520
	14,00. R/L .2,00.5,5	16	2.0	5.5	5.2	10.5	9.0	0.2	0.2	521	521
	14,00. R/L .2,00.6,5	17	2.0	6.5	5.2	11.5	9.0	0.2	0.2	522	522
	14,00. R/L .2,50.5,5	16	2.5	5.5	5.2	10.5	9.0	0.2	0.2	525	525
	14,00. R/L .2,50.6,5	17	2.5	6.5	5.2	11.5	9.0	0.2	0.2	526	526
	14,00. R/L .3,00.5,5	16	3.0	5.5	5.2	10.5	9.0	0.2	0.2	530	530
	14,00. R/L .3,00.6,5	17	3.0	6.5	5.2	11.5	9.0	0.2	0.2	531	531
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

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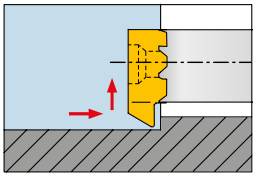
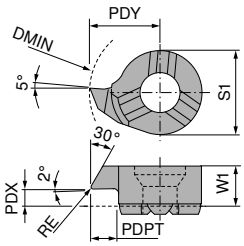
Suitable holders can be found on → page 334–337

MiniCut – Back boring insert

▲ CDX = ap_{max} (material dependant)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	RE mm	CDX mm	Left-hand 73 332 ...	Right-hand 73 330 ...
08	8,00. R/L .30°.1,3	7.8	1.3	3.50	1.0	4.65	6.0	0.2	0.6	013	013
09	9,00. R/L .30°.1,7	9.0	1.7	3.55	1.2	5.50	6.2	0.2	0.8	117	117
	9,00. R/L .30°.2,3	10.0	2.3	3.55	1.2	6.50	6.2	0.2	0.8	123	123
11	11,00. R/L .30°.2,3	11.0	2.3	4.30	1.6	6.70	8.0	0.2	1.0	323	323
14	14,00. R/L .30°.3,5	13.8	3.5	5.40	2.4	8.70	9.0	0.2	1.5	535	535
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

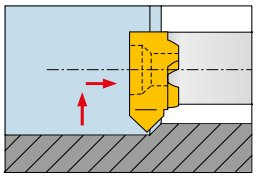
→ v_c Page 339

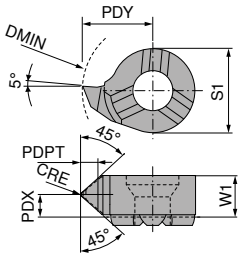
3

MiniCut – Internal turning and chamfering insert

▲ CDX = ap_{max} (material dependant)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	CRE mm	CDX mm	Left-hand 73 336 ...	Right-hand 73 334 ...
08	8,00. R/L .45°.1,4	8	1.4	3.50	1.8	4.8	6.0	0.2	0.6	010	010
09	9,00. R/L .45°.1,3	9	1.3	3.55	1.8	5.5	6.2	0.2	0.8	110	110
11	11,00. R/L .45°.1,5	11	1.5	4.30	2.2	6.7	8.0	0.2	1.0	310	310
14	14,00. R/L .45°.1,5	14	1.5	5.40	2.8	9.0	9.0	0.2	1.2	510	510
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

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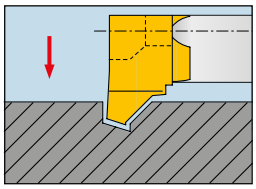
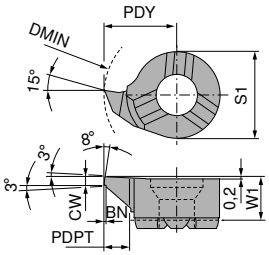
MiniCut – Insert for pregrooving and chamfering

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW mm	PDPT mm	W1 mm	PDY mm	S1 mm	BN mm	Left-hand 73 340 ...	Right-hand 73 338 ...
08	8,00. R/L .1,00.45°	8	1	1.0	3.3	4.8	6.0	0.2	100	100
09	9,00. R/L .1,00.45°	9	1	1.5	3.6	5.5	6.2	0.2	215	215
11	11,00. R/L .1,00.45°	11	1	1.5	4.2	6.7	8.0	0.2	315	315
14	14,00. R/L .1,00.45°	14	1	1.5	5.3	9.0	9.0	0.2	515	515

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

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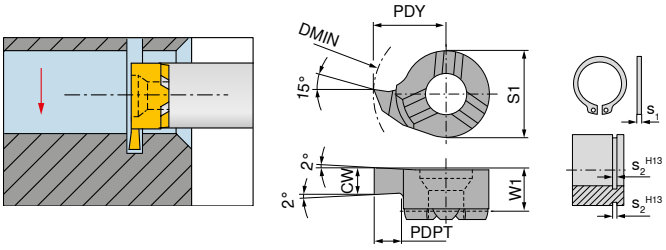
Suitable holders can be found on → page 334–337

MiniCut – Grooving insert

CWX500 CWX500



Illustrations show right-hand versions

Size	Designation	DMIN mm	CW mm	PDPT mm	W1 mm	s_1 mm	$s_{2\ H13}$ mm	PDY mm	S1 mm	Left-hand 73 312 ...	Right-hand 73 310 ...
08	8,00. R/L .0,73.1,0	8	0.73	1.0	3.3	0.6	0.7	4.8	6.0	073	073
	8,00. R/L .0,83.1,0	8	0.83	1.0	3.3	0.7	0.8	4.8	6.0	083	083
	8,00. R/L .0,93.1,0	8	0.93	1.0	3.3	0.8	0.9	4.8	6.0	093	093
	8,00. R/L .1,00.1,0	8	1.00	1.0	3.3			4.8	6.0	110	110
	8,00. R/L .1,20.1,0	8	1.20	1.0	3.3	1.0	1.1	4.8	6.0	112	112
	8,00. R/L .1,40.1,0	8	1.40	1.0	3.3	1.2	1.3	4.8	6.0	114	114
	8,00. R/L .1,50.1,0	8	1.50	1.0	3.3			4.8	6.0	115	115
	8,00. R/L .1,70.1,0	8	1.70	1.0	3.3	1.5	1.6	4.8	6.0	117	117
	8,00. R/L .2,00.1,0	8	2.00	1.0	3.3			4.8	6.0	120	120
09	9,00. R/L .0,73.1,2	9	0.73	1.2	3.6	0.6	0.7	5.5	6.2	173	173
	9,00. R/L .0,83.1,3	9	0.83	1.3	3.6	0.7	0.8	5.5	6.2	183	183
	9,00. R/L .0,93.1,5	9	0.93	1.5	3.6	0.8	0.9	5.5	6.2	193	193
	9,00. R/L .1,00.1,8	9	1.00	1.8	3.6			5.5	6.2	210	210
	9,00. R/L .1,20.1,8	9	1.20	1.8	3.6	1.0	1.1	5.5	6.2	212	212
	9,00. R/L .1,40.1,8	9	1.40	1.8	3.6	1.2	1.3	5.5	6.2	214	214
	9,00. R/L .1,50.1,8	9	1.50	1.8	3.6			5.5	6.2	215	215
	9,00. R/L .1,70.1,8	9	1.70	1.8	3.6	1.5	1.6	5.5	6.2	217	217
	9,00. R/L .2,00.1,8	9	2.00	1.8	3.6			5.5	6.2	220	220
	9,00. R/L .2,50.1,8	9	2.50	1.8	3.6			5.5	6.2	225	225
	9,00. R/L .3,00.1,8	9	3.00	1.8	3.6			5.5	6.2	230	230
11	11,00. R/L .0,73.1,2	11	0.73	1.2	4.2	0.6	0.7	6.7	8.0	373	373
	11,00. R/L .0,83.1,3	11	0.83	1.3	4.2	0.7	0.8	6.7	8.0	383	383
	11,00. R .0,93.1,5	11	0.93	1.5	4.2	0.9	0.9	6.7	8.0		393
	11,00. L .0,93.1,5	11	0.93	1.5	4.2	0.8	0.9	6.7	8.0	393	
	11,00. R/L .1,00.2,3	11	1.00	2.3	4.2			6.7	8.0	310	310
	11,00. R/L .1,20.2,3	11	1.20	2.3	4.2	1.0	1.1	6.7	8.0	312	312
	11,00. R/L .1,40.2,3	11	1.40	2.3	4.2	1.2	1.3	6.7	8.0	314	314
	11,00. R/L .1,50.2,3	11	1.50	2.3	4.2			6.7	8.0	315	315
	11,00. R/L .1,70.2,3	11	1.70	2.3	4.2	1.5	1.6	6.7	8.0	317	317
	11,00. R/L .2,00.2,3	11	2.00	2.3	4.2			6.7	8.0	320	320
	11,00. R/L .2,50.2,3	11	2.50	2.3	4.2			6.7	8.0	325	325
	11,00. R/L .3,00.2,3	11	3.00	2.3	4.2			6.7	8.0	330	330
14	14,00. R/L .0,73.1,2	14	0.73	1.2	5.3	0.6	0.7	9.0	9.0	573	573
	14,00. R/L .0,83.1,3	14	0.83	1.3	5.3	0.7	0.8	9.0	9.0	583	583
	14,00. R/L .0,93.1,5	14	0.93	1.5	5.3	0.8	0.9	9.0	9.0	593	593
	14,00. R/L .1,20.4,0	14	1.20	4.0	5.3	1.0	1.1	9.0	9.0	512	512
	14,00. R/L .1,40.4,0	14	1.40	4.0	5.3	1.2	1.3	9.0	9.0	514	514
	14,00. R/L .1,50.4,0	14	1.50	4.0	5.3			9.0	9.0	515	515
	14,00. R/L .1,70.4,0	14	1.70	4.0	5.3	1.5	1.6	9.0	9.0	517	517
	14,00. R/L .2,00.4,0	14	2.00	4.0	5.3			9.0	9.0	520	520
	14,00. R/L .2,50.4,0	14	2.50	4.0	5.3			9.0	9.0	525	525
	14,00. R/L .3,00.4,0	14	3.00	4.0	5.3			9.0	9.0	530	530
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

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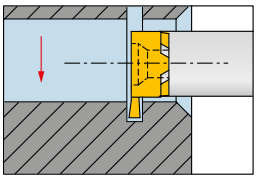
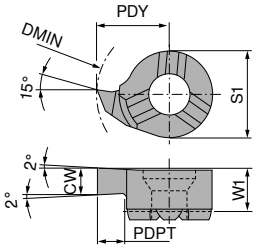
3

MiniCut – Grooving insert

▲ large groove depth ($T_{max.}$ 5.5 mm)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW +0.03 mm	PDPT mm	W1 mm	PDY mm	S1 mm	Left-hand 73 372 ...	Right-hand 73 370 ...
14	14,00. R/L .1,50.5,5	16	1.5	5.5	5.2	10.5	9	715	715
	14,00. R/L .2,00.5,5	16	2.0	5.5	5.2	10.5	9	720	720
	14,00. R/L .2,50.5,5	16	2.5	5.5	5.2	10.5	9	725	725
	14,00. R/L .3,00.5,5	16	3.0	5.5	5.2	10.5	9	730	730

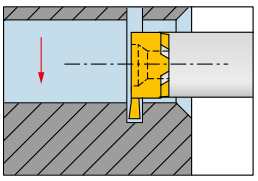
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

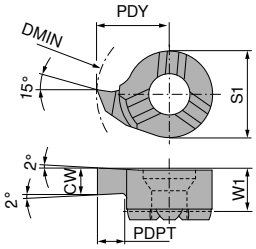
→ v_c Page 339

MiniCut – Grooving insert

▲ large groove depth ($T_{max.}$ 6.5 mm)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW +0.03 mm	PDPT mm	W1 mm	PDY mm	S1 mm	Left-hand 73 384 ...	Right-hand 73 382 ...
14	14,00. R/L .1,50.6,5	17	1.5	6.5	5.2	11.5	9	515	515
	14,00. R/L .2,00.6,5	17	2.0	6.5	5.2	11.5	9	520	520
	14,00. R/L .2,50.6,5	17	2.5	6.5	5.2	11.5	9	525	525
	14,00. R/L .3,00.6,5	17	3.0	6.5	5.2	11.5	9	530	530

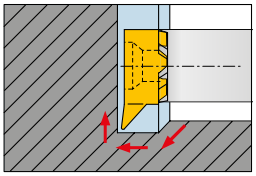
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

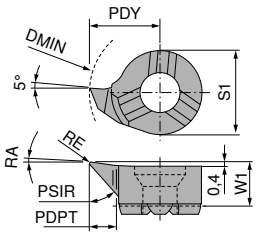
→ v_c Page 339

MiniCut – Internal undercut insert

▲ CDX = ap_{max} (material dependant)

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	PDPT mm	W1 mm	PDY mm	S1 mm	RE mm	CDX mm	PSIR °	RA °	Left-hand 73 328 ...	Right-hand 73 326 ...
08	8,00. R/L .30°.1,0	7.8	1.0	3.5	4.65	6.0	0.2	0.4	30	3	010	010
	8,00. R/L .47°.1,2	7.8	1.2	3.5	4.65	6.0	0.2	0.4	47	3	012	012
09	9,00. R/L .47°.1,5	9.0	1.5	3.6	5.50	6.2	0.2	0.5	47	3	115	115
11	11,00. R/L .30°.2,3	11.0	2.3	4.2	6.70	8.0	0.2	0.6	30	3	423	423
	11,00. R/L .47°.2,3	11.0	2.3	4.2	6.70	8.0	0.2	0.6	47	3	323	323
14	13,70. R/L .47°.3,0	13.7	3.0	5.3	8.70	9.0	0.2	0.8	47	3	530	530
	13,70. R/L .30°.4,0	13.7	4.0	5.3	8.70	9.0	0.2	0.8	30	3	540	540

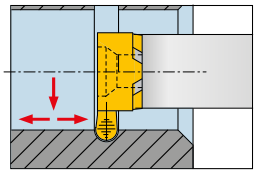
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

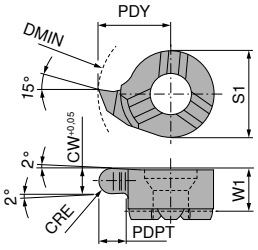
→ v_c Page 339

3

MiniCut – Full radius grooving and turning insert

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	CW mm	PDPT mm	W1 mm	PDY mm	S1 mm	CRE mm	Left-hand 73 320 ...	Right-hand 73 318 ...
08	8,00. R/L .0,80.1,0	8	0.8	1.0	3.3	4.8	6.0	0.4	008	008
	8,00. R/L .1,20.1,0	8	1.2	1.0	3.3	4.8	6.0	0.6	012	012
	8,00. R/L .1,80.1,0	8	1.8	1.0	3.3	4.8	6.0	0.9	018	018
	8,00. R/L .2,00.1,0	8	2.0	1.0	3.3	4.8	6.0	1.0	020	020
09	9,00. R/L .0,80.1,6	9	0.8	1.6	3.6	5.5	6.2	0.4	108	108
	9,00. R/L .1,20.1,6	9	1.2	1.6	3.6	5.5	6.2	0.6	112	112
	9,00. R/L .1,80.1,6	9	1.8	1.6	3.6	5.5	6.2	0.9	118	118
	9,00. R/L .2,00.1,6	9	2.0	1.6	3.6	5.5	6.2	1.0	120	120
11	11,00. R/L .0,80.2,3	11	0.8	2.3	4.2	6.7	8.0	0.4	308	308
	11,00. R/L .1,20.2,3	11	1.2	2.3	4.2	6.7	8.0	0.6	312	312
	11,00. R/L .1,60.2,3	11	1.6	2.3	4.2	6.7	8.0	0.8	316	316
	11,00. R/L .1,80.2,3	11	1.8	2.3	4.2	6.7	8.0	0.9	318	318
	11,00. R/L .2,00.2,3	11	2.0	2.3	4.2	6.7	8.0	1.0	320	320
	11,00. R/L .2,40.2,3	11	2.4	2.3	4.2	6.7	8.0	1.2	324	324
	11,00. R/L .3,00.2,3	11	3.0	2.3	4.2	6.7	8.0	1.5	330	330
14	14,00. R/L .0,80.4,0	14	0.8	4.0	5.3	9.0	9.0	0.4	508	508
	14,00. R/L .1,20.4,0	14	1.2	4.0	5.3	9.0	9.0	0.6	512	512
	14,00. R/L .1,80.4,0	14	1.8	4.0	5.3	9.0	9.0	0.9	518	518
	14,00. R/L .2,00.4,0	14	2.0	4.0	5.3	9.0	9.0	1.0	520	520
	14,00. R/L .2,20.4,0	14	2.2	4.0	5.3	9.0	9.0	1.1	522	522
	14,00. R/L .3,00.4,0	14	3.0	4.0	5.3	9.0	9.0	1.5	530	530
P									●	●
M									●	●
K									●	●
N									●	●
S									●	●
H									●	●
O									●	●

→ v_c Page 339

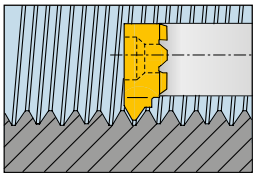
Suitable holders can be found on → page 334–337

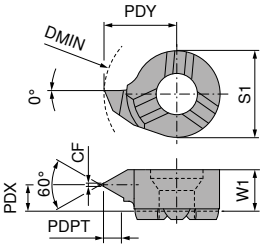
MiniCut – Threading insert (Partial profile)

M

CWX500

CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	TP mm	CF mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	Left-hand 73 344 ...	Right-hand 73 342 ...
08	8,00. R/L .0,5/0,75.60°	8	0,5 - 0,75	0.06	0.43	3.50	2.7	4.8	6.0	012	012
	8,00. R/L .1,0/1,25.60°	8	1,0 - 1,25	0.12	0.70	3.50	2.7	4.8	6.0	014	014
	8,00. R/L .1,5/1,75.60°	8	1,5 - 1,75	0.18	0.95	3.50	2.5	4.8	6.0	010	010
09	9,00. R/L .0,5/0,75.60°	9	0,5 - 0,75	0.06	0.27	3.55	3.2	5.5	6.2	112	112
	9,00. R/L .1,0/1,25.60°	9	1,0 - 1,25	0.12	0.54	3.55	3.0	5.5	6.2	114	114
	9,00. R/L .1,5/1,75.60°	9	1,5 - 1,75	0.18	0.81	3.55	2.8	5.5	6.2	116	116
	9,00. R/L .1,75/2,0.60°	9	1,75 - 2,0	0.20	0.95	3.55	2.6	5.5	6.2	118	118
	9,00. R/L .2,0/2,5.60°	9	2,0 - 2,5	0.25	1.08	3.55	2.5	5.5	6.2	120	120
	9,00. R/L .2,5/3,0.60°	9	2,5 - 3,0	0.31	1.35	3.55	2.1	5.5	6.2	122	122
	9,00. R/L .3,0/3,5.60°	9	3,0 - 3,5	0.37	1.62	3.55	1.9	5.5	6.2	124	124
11	11,00. R/L .0,5/0,75.60°	11	0,5 - 0,75	0.06	0.75	4.30	3.5	6.7	8.0	312	312
	11,00. R/L .1,0/1,25.60°	11	1,0 - 1,25	0.12	0.55	4.30	3.5	6.7	8.0	314	314
	11,00. R/L .1,5/1,75.60°	11	1,5 - 1,75	0.18	0.81	4.30	3.5	6.7	8.0	316	316
	11,00. R/L .2,0/2,5.60°	11	2,0 - 2,5	0.25	1.08	4.30	3.0	6.7	8.0	310	310
	11,00. R/L .2,5/3,0.60°	11	2,5 - 3,0	0.31	1.35	4.30	3.0	6.7	8.0	320	320
14	14,00. R/L .1,0/1,25.60°	14	1,0 - 1,25	0.12	0.55	5.40	4.7	9.0	9.0	512	512
	14,00. R/L .1,5/1,75.60°	14	1,5 - 1,75	0.18	0.81	5.40	4.5	9.0	9.0	514	514
	14,00. R/L .2,0/2,5.60°	14	2,0 - 2,5	0.25	1.08	5.40	4.2	9.0	9.0	510	510
	14,00. R/L .2,5/3,0.60°	14	2,5 - 3,0	0.31	1.35	5.40	4.7	9.0	9.0	520	520

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 339

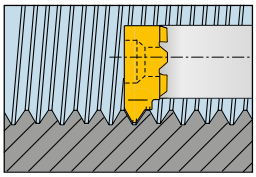
3

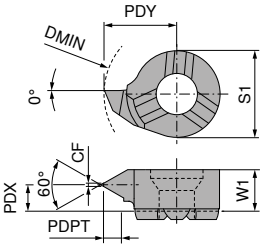
MiniCut – Threading insert (Full profile)

M

CWX500

CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	TP mm	CF mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	Left-hand 73 348 ...	Right-hand 73 346 ...
09	9,00. R/L .0,5.60°	9	0.50	0.06	0.27	3.55	3.25	5.5	6.2	405	405
	9,00. R/L .1,0.60°	9	1.00	0.12	0.54	3.55	3.00	5.5	6.2	410	410
	9,00. R/L .1,5.60°	9	1.50	0.18	0.81	3.55	2.80	5.5	6.2	415	415
	9,00. R/L .1,75.60°	9	1.75	0.20	0.95	3.55	2.70	5.5	6.2	418	418
	9,00. R/L .2,0.60°	9	2.00	0.25	1.08	3.55	2.60	5.5	6.2	420	420
	9,00. R/L .2,5.60°	9	2.50	0.31	1.35	3.55	2.50	5.5	6.2	425	425
	9,00. R/L .3,0.60°	9	3.00	0.37	1.62	3.55	2.20	5.5	6.2	430	430
11	11,00. R/L .1,0.60°	11	1.00	0.12	0.54	4.30	3.50	6.7	8.0	314	314
	11,00. R/L .1,5.60°	11	1.50	0.18	0.81	4.30	3.50	6.7	8.0	316	316
	11,00. R/L .2,0.60°	11	2.00	0.25	1.08	4.30	3.20	6.7	8.0	310	310
	11,00. R/L .2,5.60°	11	2.50	0.31	1.35	4.30	3.00	6.7	8.0	320	320
	11,00. R/L .3,0.60°	11	3.00	0.37	1.62	4.30	2.90	6.7	8.0	330	330
14	14,00. R/L .0,5.60°	14	0.50	0.06	0.27	5.40	3.50	9.0	9.0	510	510
	14,00. R/L .1,0.60°	14	1.00	0.12	0.54	5.40	3.50	9.0	9.0	512	512
	14,00. R/L .1,5.60°	14	1.50	0.18	0.81	5.40	3.30	9.0	9.0	514	514
	14,00. R/L .2,0.60°	14	2.00	0.25	1.08	5.40	4.20	9.0	9.0	610	610
	14,00. R/L .2,5.60°	14	2.50	0.31	1.35	5.40	4.70	9.0	9.0	520	520
P										●	●
M										●	●
K										●	●
N										●	●
S										●	●
H										●	●
O										●	●

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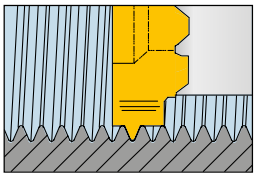
Suitable holders can be found on → page 334–337

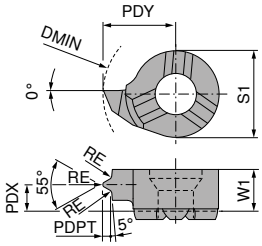
MiniCut – Threading insert (Full profile)

G

CWX500

CWX500





Illustrations show right-hand versions

Size	Designation	DMIN mm	TP mm	TPI 1/"	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	RE mm	Left-hand 73 352 ...	Right-hand 73 350 ...
11	11,00. R/L .1,814.55°	11	1.814	14	1.16	4.30	3.0	6.7	8	0.24	306	306
	11,00. R/L .1,337.55°	11	1.337	19	0.85	4.30	2.7	6.7	8	0.18	304	304
14	14,00. R/L .1,814.55°	14	1.814	14	1.16	5.35	3.6	9.0	9	0.24	506	506
	14,00. R/L .1,337.55°	14	1.337	19	0.85	5.35	3.8	9.0	9	0.18	504	504

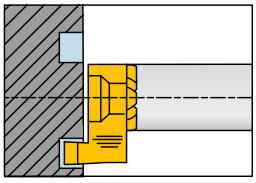
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

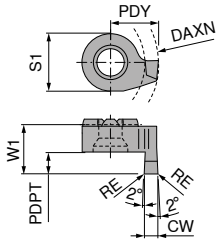
→ v_c Page 339

3

MiniCut – Axial grooving insert

CWX500 CWX500





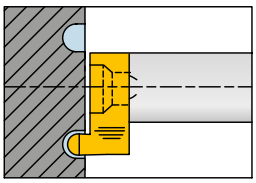
Illustrations show right-hand versions

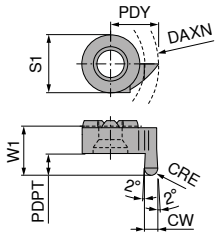
Size	Designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	RE mm	S1 mm	Left-hand 73 364 ...	Right-hand 73 362 ...
14	14,00. R/L .1,0.1,5	14	1.0	1.5	8.3	9		9	510	510
	14,00. R/L .1,5.2,5	14	1.5	2.5	8.3	9	0.2	9	515	515
	14,00. R/L .2,0.3,0	14	2.0	3.0	8.3	9	0.2	9	520	520
	14,00. R/L .2,0.5,0	14	2.0	5.0	10.3	9	0.2	9	620	620
	14,00. R/L .2,5.3,0	14	2.5	3.0	8.3	9	0.2	9	525	525
	14,00. R/L .2,5.5,0	14	2.5	5.0	10.3	9	0.2	9	625	625
	14,00. R/L .3,0.3,0	14	3.0	3.0	8.3	9	0.2	9	530	530
	14,00. R/L .3,0.5,0	14	3.0	5.0	10.3	9	0.2	9	630	630
P									●	●
M									●	●
K									●	●
N									●	●
S									●	●
H									●	●
O									●	●

→ v_c Page 339

MiniCut – Full radius axial grooving insert

CWX500 CWX500





Illustrations show right-hand versions

Size	Designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	CRE mm	S1 mm	Left-hand 73 376 ...	Right-hand 73 374 ...
14	14,00. R/L . 1,0.1,5	14	1.0	1.5	8.3	9	0.5	9	510	510
	14,00. R/L . 1,6.2,5	14	1.6	2.5	8.3	9	0.8	9	516	516
	14,00. R/L . 2,0.3,0	14	2.0	3.0	8.3	9	1.0	9	520	520
	14,00. R/L . 2,5.3,0	14	2.5	3.0	8.3	9	1.2	9	525	525
	14,00. R/L . 3,0.3,0	14	3.0	3.0	8.3	9	1.5	9	530	530
P									●	●
M									●	●
K									●	●
N									●	●
S									●	●
H									●	●
O									●	●

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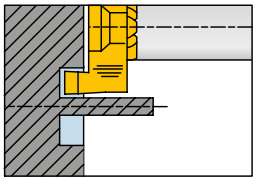
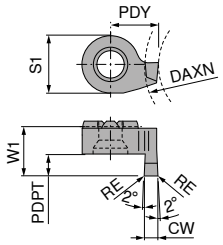
MiniCut – Axial grooving insert over a spigot

CWX500 CWX500





Illustrations show right-hand versions

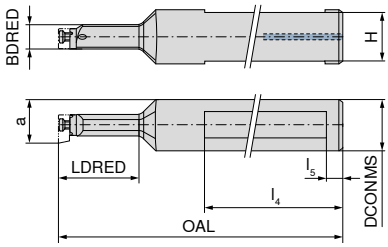
Size	Designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	RE mm	S1 mm	Left-hand 73 360 ...	Right-hand 73 358 ...
14	14/12. R/L .1,0.1,5	12	1.0	1.5	8.3	7.0		9	310	310
	14/12. R/L .1,5.2,5	12	1.5	2.5	8.3	7.5	0.2	9	315	315
	14/12. R/L .2,0.3,0	12	2.0	3.0	8.3	8.0	0.2	9	320	320
	14/12. R/L .2,0.5,0	12	2.0	5.0	10.3	8.0	0.2	9	420	420
	14/12. R/L .2,5.3,0	12	2.5	3.0	8.3	8.5	0.2	9	325	325
	14/12. R/L .2,5.5,0	12	2.5	5.0	10.3	8.5	0.2	9	425	425
	14/12. R/L .3,0.3,0	12	3.0	3.0	8.3	9.0	0.2	9	330	330
	14/12. R/L .3,0.5,0	12	3.0	5.0	10.3	9.0	0.2	9	430	430

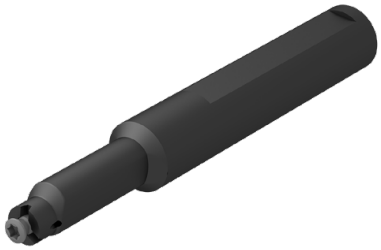
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 339

3

MiniCut – Steel Tool holder

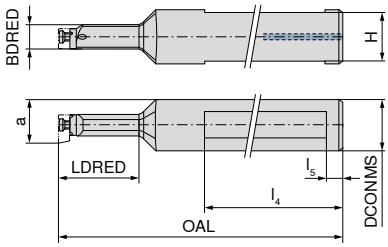


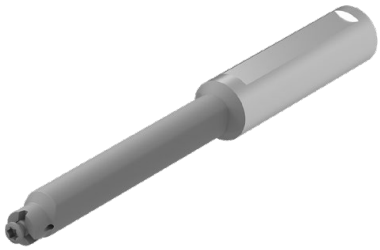


Size	Designation	a mm	DCONMS f7 mm	OAL mm	l_4 mm	LDRED mm	BDRED mm	H mm	l_5 mm	73 522 ...
08	8,00/16.N.12.1,0	7.8	16	80	60	12	6.0	15.0	5	012
	8,00/16.N.22.1,0	7.8	16	90	60	22	6.0	15.0	5	122
09	9,00/16.N.14.1,8	8.6	16	95	60	14	7.4	15.0	5	014
	9,00/16.N.25.1,8	8.6	16	105	60	25	7.4	15.0	5	125
11	11,00/16.N.16.2,3	10.7	16	97	60	16	8.0	14.5	5	016
	11,00/16.N.29.2,3	10.7	16	110	60	29	8.0	14.5	5	129
14	14,00/16.N.18.4,0	13.8	16	100	60	18	11.0	14.5	5	018
	14,00/16.N.38.4,0	13.8	16	120	60	38	11.0	14.5	5	138

Spare parts Size	Key D 80 950 ...		Clamping screw 73 082 ...	
08	T08	110	M2,6	002
09	T08	110	M2,6	002
11	T10	112	M3,5	003
14	T15	113	M4	004

MiniCut – Solid Carbide Tool holder – vibration damped



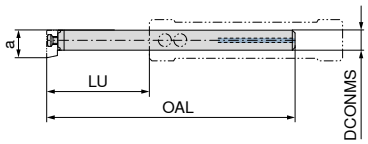


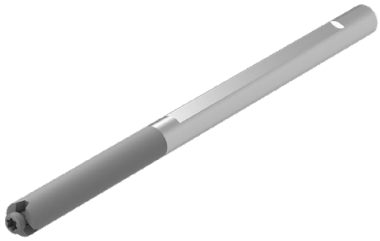
Size	Designation	a mm	DCONMS f7 mm	OAL mm	l_4 mm	LDRED mm	BDRED mm	H mm	l_5 mm	73 520 ...
08	8,00/12.N.21.1,0 HM	7.8	12	80	48	21	6.0	11.0	5	021
	8,00/12.N.30.1,0 HM	7.8	12	90	48	30	6.0	11.0	5	030
	8,00/12.N.42.1,0 HM	7.8	12	100	48	42	6.0	11.0	5	042
	8,00/12.N.50.1,0 HM	7.8	12	115	48	50	6.0	11.0	5	050
09	9,00/12.N.22.1,0 HM	8.6	12	90	60	22	7.4	11.0	5	222
	9,00/12.N.30.2,0 HM	8.6	12	98	60	30	7.4	11.0	5	230
	9,00/12.N.42.3,0 HM	8.6	12	110	60	42	7.4	11.0	5	242
	9,00/12.N.56.4,0 HM	8.6	12	122	60	56	7.4	11.0	5	256
11	11,00/12.N.29.2,3 HM	10.7	12	95	60	29	8.0	10.5	5	129
	11,00/12.N.42.2,3 HM	10.7	12	110	60	42	8.0	10.5	5	142
	11,00/12.N.56.2,3 HM	10.7	12	120	60	56	8.0	10.5	5	156
	11,00/12.N.64.2,3 HM	10.7	12	130	60	64	8.0	10.5	5	164
14	14,00/12.N.34.4,0 HM	13.8	12	100	60	34	11.0	10.5	5	234
	14,00/12.N.45.4,0 HM	13.8	12	110	60	45	11.0	10.5	5	245
	14,00/12.N.64.4,0 HM	13.8	12	130	60	64	11.0	10.5	5	264
	14,00/16.N.34.4,0 HM	13.8	16	100	60	34	11.0	14.5	5	334
	14,00/16.N.45.4,0 HM	13.8	16	110	60	45	11.0	14.5	5	345
	14,00/16.N.64.4,0 HM	13.8	16	130	60	64	11.0	14.5	5	364
	14,00/16.N.75.4,0 HM	13.8	16	145	60	75	11.0	14.5	5	375

Spare parts Size	Key D	80 950 ...	Clamping screw	73 082 ...
08	T08	110	M2,6	002
09	T08	110	M2,6	002
11	T10	112	M3,5	003
14	T15	113	M4	004

3

MiniCut – HM – Flexoholder





Size	Designation	DCONMS mm	OAL mm	LU mm	a mm	73 525 ...
08	8,0/6.N16/2	6	65	18	8	818
	8,0/6.N40/4	6	103	40	8	840
11	11,0/8.N20/2	8	79	20	11	120 1)
	11,0/8.N50/4	8	129	50	11	150 1)

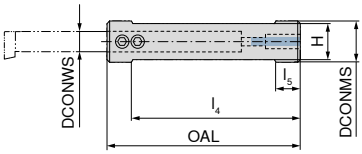
1) with thro' coolant

Key D

Clamping screw

Spare parts Size		Key D 80 950 ...		Clamping screw 73 082 ...
08	T08	110	M2,6	002
11	T10	112	M3,5	003

MiniCut – Base holder for solid carbide Flexoholder



Size	Designation	DCONWS mm	DCONMS mm	H mm	OAL mm	l_4 mm	l_5 mm	73 526 ...
08	8/16.75	6	16	14	75	55	10	816
	8/20.75	6	20	18	75	70	10	820
11	11/16.75	8	16	14	75	55	10	116
	11/20.75	8	20	18	75	70	10	120

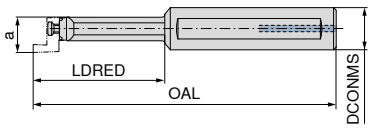
Key I

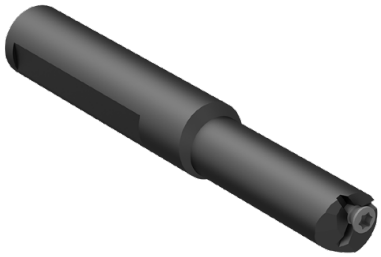
Clamping screw

Spare parts for Article no.		Key I 70 950 ...		Clamping screw 73 082 ...
73 526 816	SW2,5	175	M5x0,5x6	010
73 526 820	SW2,5	175	M5x0,5x6	010
73 526 116	SW2,5	175	M5x0,5x4	009
73 526 120	SW2,5	175	M5x0,5x6	010

MiniCut – Steel holder

▲ for axial machining





Size	Designation	a mm	DCONMS mm	OAL mm	LDRED mm	Left-hand 73 523 ...	Right-hand 73 524 ...
14	14,0/16. R/L .25.1,0	13.5	16	90	25	025	025
	14,0/16. R/L .45.1,0	13.5	16	110	45	145	145

Key D

Clamping screw

Spare parts Size		Key D 80 950 ...		Clamping screw 73 082 ...
14	T15	113	M4	004

3

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe – basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

Cutting data standard values

Index	UltraMini K10F uncoated	UltraMini K10F-TiN	UltraMini K10-TiAlN	UltraMini DPX 57S	MiniCut CWX500	UltraMini TiAlN+	MiniCut CBN
	v_c in m/min						
P.1.1		90	110	110	160	110	
P.1.2		80	100	100	140	100	
P.1.3		60	80	80	140	80	
P.1.4		60	80	80	110	80	
P.1.5		60	60	60	100	60	
P.2.1		60	80	80	110	80	
P.2.2		60	60	60	100	60	
P.2.3		50	60	60	90	60	
P.2.4		50	60	60	80	60	
P.3.1		50	60	60	80	60	
P.3.2		30	50	50	70	50	
P.3.3		30	30	30	50	30	
P.4.1		60	70	70	100	70	
P.4.2		50	60	60	90	60	
M.1.1		60	80	80	80	80	
M.2.1		50	60	60	70	60	
M.3.1		40	50	50	60	50	
K.1.1		80	100	100	90	100	
K.1.2		60	70	70	100	70	
K.2.1		60	60	60	80	60	
K.2.2		50	60	60	70	60	
K.3.1		80	100	100	120	100	
K.3.2		70	80	80	100	80	
N.1.1	100	200	230	230	290	230	
N.1.2	100	180	220	220	280	220	
N.2.1	90	160	190	190	240	190	
N.2.2	70	140	170	170	200	170	
N.2.3	50	80	100	100	120	100	
N.3.1	80	140	170	170	210	170	
N.3.2	70	120	140	140	180	140	
N.3.3	50	100	120	120	130	120	
N.4.1	50	100	120	120	100	120	
S.1.1		30	50	50	50	50	
S.1.2		30	30	30	30	30	30
S.2.1		30	50	50	50	50	50
S.2.2		30	30	30	40	30	30
S.2.3			30	30	30	30	30
S.3.1		30	50	50	50	50	
S.3.2		20	30	30	40	30	
S.3.3			20	20	30	20	20
H.1.1		30	40	40	50	40	40
H.1.2			30	30	40	30	30
H.1.3				20		30	30
H.1.4							
H.2.1							
H.3.1		20	30	30	40	30	30
O.1.1	50	90	110	110	150	110	
O.1.2	50	100	120	120	150	120	
O.2.1		90	110	110	130	110	
O.2.2		60	80	80	100	80	
O.3.1	50	100	120	120	150	120	

	UltraMini	MiniCut
	f in mm/rev.	
Internal turning and profiling	0,02–0,05	0,03–0,10
Internal turning and profiling – hard turning	0,02–0,06	0,03–0,10
Turning and profile turning – super alloys	0,02–0,08	
Internal turning	0,02–0,05	0,01–0,03
Back boring	0,02–0,04	0,03–0,10
Turning and chamfering	0,01–0,03	0,03–0,10
Pre-parting and chamfering	0,01–0,02	0,01–0,03
Groove turning	0,01–0,02	0,01–0,03
Internal Undercuts	0,01–0,03	0,03–0,08
Groove and profile turning	0,01–0,02	0,01–0,03
Axial grooving	0,02–0,05	0,02–0,05

3

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Cutting data standard values – 73 000 .../ 73 001 ...

Index	UltraMini DPX77S	Roughing										
		Ø ≤ 2 mm Corner radius in mm			Ø 2,5–4 mm Corner radius in mm				Ø ≥ 5 mm Corner radius in mm			
		0,05	0,1	0,15	0,05	0,1	0,15	0,2 / 0,4	0,05	0,1	0,15	0,2 / 0,4
	v_c in m/min	f in mm/rev.			f in mm/rev.				f in mm/rev.			
P.1.1	110	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.2	100	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.3	80	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.4	80	0,023–0,065	0,025–0,071	0,026–0,076	0,046–0,13	0,05–0,142	0,053–0,151	0,055–0,158	0,085–0,244	0,093–0,266	0,099–0,284	0,104–0,297
P.1.5	60	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
P.2.1	80	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
P.2.2	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
P.2.3	60	0,019–0,054	0,021–0,059	0,022–0,063	0,038–0,109	0,042–0,119	0,044–0,127	0,046–0,132	0,071–0,204	0,078–0,222	0,083–0,238	0,087–0,248
P.2.4	60	0,018–0,051	0,02–0,056	0,021–0,06	0,036–0,103	0,039–0,112	0,042–0,12	0,044–0,125	0,067–0,193	0,074–0,21	0,079–0,224	0,082–0,235
P.3.1	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
P.3.2	50	0,02–0,057	0,022–0,063	0,023–0,067	0,04–0,115	0,044–0,125	0,047–0,134	0,049–0,14	0,075–0,215	0,082–0,235	0,088–0,251	0,092–0,262
P.3.3	30	0,016–0,045	0,017–0,049	0,018–0,053	0,032–0,091	0,035–0,099	0,037–0,106	0,039–0,11	0,06–0,17	0,065–0,185	0,069–0,198	0,072–0,207
P.4.1	70	0,022–0,064	0,024–0,069	0,026–0,074	0,044–0,127	0,048–0,138	0,052–0,148	0,054–0,155	0,083–0,238	0,091–0,26	0,097–0,277	0,101–0,29
P.4.2	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
M.1.1	80	0,015–0,042	0,016–0,046	0,017–0,049	0,03–0,085	0,032–0,092	0,034–0,099	0,036–0,103	0,056–0,159	0,061–0,173	0,065–0,185	0,068–0,193
M.2.1	60	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
M.3.1	50	0,014–0,039	0,015–0,043	0,016–0,046	0,028–0,079	0,03–0,086	0,032–0,092	0,033–0,096	0,052–0,147	0,056–0,161	0,06–0,172	0,063–0,179
K.1.1	100	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
K.1.2	70	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
K.2.1	60	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
K.2.2	60	0,021–0,059	0,022–0,064	0,024–0,069	0,041–0,118	0,045–0,129	0,048–0,137	0,05–0,144	0,077–0,221	0,084–0,241	0,09–0,257	0,094–0,269
K.3.1	100	0,025–0,073	0,028–0,079	0,03–0,084	0,051–0,145	0,055–0,158	0,059–0,169	0,062–0,177	0,095–0,272	0,104–0,297	0,111–0,317	0,116–0,331
K.3.2	80	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
N.1.1	230	0,032–0,091	0,035–0,099	0,037–0,106	0,064–0,181	0,069–0,198	0,074–0,211	0,077–0,221	0,119–0,34	0,13–0,371	0,139–0,396	0,145–0,414
N.1.2	220	0,031–0,089	0,034–0,097	0,036–0,104	0,062–0,178	0,068–0,194	0,073–0,208	0,076–0,217	0,117–0,335	0,128–0,365	0,136–0,389	0,142–0,407
N.2.1	190	0,03–0,085	0,032–0,092	0,034–0,099	0,059–0,169	0,065–0,185	0,069–0,197	0,072–0,206	0,111–0,318	0,121–0,346	0,129–0,37	0,135–0,386
N.2.2	170	0,029–0,083	0,032–0,091	0,034–0,097	0,058–0,166	0,063–0,181	0,068–0,194	0,071–0,202	0,109–0,312	0,119–0,34	0,127–0,363	0,133–0,38
N.2.3	100	0,029–0,082	0,031–0,089	0,033–0,095	0,057–0,163	0,062–0,178	0,067–0,19	0,07–0,199	0,107–0,306	0,117–0,334	0,125–0,356	0,13–0,373
N.3.1	170	0,03–0,085	0,032–0,092	0,034–0,099	0,059–0,169	0,065–0,185	0,069–0,197	0,072–0,206	0,111–0,318	0,121–0,346	0,129–0,37	0,135–0,386
N.3.2	140	0,028–0,08	0,031–0,087	0,033–0,093	0,056–0,16	0,061–0,175	0,065–0,187	0,068–0,195	0,105–0,301	0,115–0,328	0,122–0,35	0,128–0,366
N.3.3	120	0,027–0,077	0,029–0,084	0,031–0,09	0,054–0,154	0,059–0,168	0,063–0,18	0,066–0,188	0,101–0,289	0,11–0,315	0,118–0,337	0,123–0,352
N.4.1	120	0,027–0,077	0,029–0,084	0,031–0,09	0,054–0,154	0,059–0,168	0,063–0,18	0,066–0,188	0,101–0,289	0,11–0,315	0,118–0,337	0,123–0,352
S.1.1	50	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
S.1.2	30	0,019–0,053	0,02–0,058	0,022–0,062	0,037–0,106	0,04–0,115	0,043–0,123	0,045–0,129	0,069–0,198	0,076–0,216	0,081–0,231	0,085–0,242
S.2.1	50	0,018–0,051	0,02–0,056	0,021–0,06	0,036–0,103	0,039–0,112	0,042–0,12	0,044–0,125	0,067–0,193	0,074–0,21	0,079–0,224	0,082–0,235
S.2.2	30	0,014–0,039	0,015–0,043	0,016–0,046	0,028–0,079	0,03–0,086	0,032–0,092	0,033–0,096	0,052–0,147	0,056–0,161	0,06–0,172	0,063–0,179
S.2.3	30	0,015–0,042	0,016–0,046	0,017–0,049	0,03–0,085	0,032–0,092	0,034–0,099	0,036–0,103	0,056–0,159	0,061–0,173	0,065–0,185	0,068–0,193
S.3.1	50	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
S.3.2	30	0,019–0,054	0,021–0,059	0,022–0,063	0,038–0,109	0,042–0,119	0,044–0,127	0,046–0,132	0,071–0,204	0,078–0,222	0,083–0,238	0,087–0,248
S.3.3	20	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
H.1.1	40	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
H.1.2	30	0,011–0,03	0,012–0,033	0,012–0,035	0,021–0,06	0,023–0,066	0,025–0,07	0,026–0,074	0,036–0,102	0,039–0,111	0,042–0,119	0,043–0,124
H.1.3												
H.1.4												
H.2.1	30	0,014–0,041	0,016–0,044	0,017–0,048	0,029–0,082	0,031–0,089	0,033–0,095	0,035–0,099	0,054–0,153	0,058–0,167	0,062–0,178	0,065–0,186
H.3.1	30	0,013–0,036	0,014–0,04	0,015–0,042	0,025–0,073	0,028–0,079	0,03–0,084	0,031–0,088	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166
O.1.1	110	0,031–0,089	0,034–0,097	0,036–0,104	0,062–0,178	0,068–0,194	0,073–0,208	0,076–0,217	0,117–0,335	0,128–0,365	0,136–0,389	0,142–0,407
O.1.2	120	0,028–0,079	0,03–0,086	0,032–0,092	0,055–0,157	0,06–0,171	0,064–0,183	0,067–0,191	0,103–0,295	0,112–0,321	0,12–0,343	0,126–0,359
O.2.1	110	0,017–0,05	0,019–0,054	0,02–0,058	0,035–0,1	0,038–0,109	0,041–0,116	0,043–0,121	0,065–0,187	0,071–0,204	0,076–0,218	0,08–0,228
O.2.2	80	0,017–0,048	0,018–0,053	0,02–0,056	0,034–0,097	0,037–0,105	0,039–0,113	0,041–0,118	0,064–0,181	0,069–0,198	0,074–0,211	0,077–0,221
O.3.1	120											

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine.
The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Index	Finishing												
	Ø ≤ 2 mm Corner radius in mm			Ø 2,5–4 mm Corner radius in mm					Ø ≥ 5 mm Corner radius in mm				
	0,05	0,1	0,15	0,05	0,1	0,15	0,2	0,4	0,05	0,1	0,15	0,2	0,4
	f in mm/rev.			f in mm/rev.					f in mm/rev.				
P.1.1	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.2	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.3	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.4	0,006–0,016	0,007–0,019	0,008–0,022	0,015–0,042	0,017–0,05	0,02–0,056	0,022–0,061	0,028–0,079	0,023–0,065	0,027–0,077	0,03–0,086	0,033–0,095	0,043–0,122
P.1.5	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
P.2.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
P.2.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
P.2.3	0,005–0,014	0,006–0,016	0,006–0,018	0,012–0,036	0,015–0,042	0,016–0,047	0,018–0,051	0,023–0,066	0,019–0,055	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102
P.2.4	0,005–0,013	0,005–0,015	0,006–0,017	0,012–0,034	0,014–0,039	0,015–0,044	0,017–0,049	0,022–0,063	0,018–0,052	0,021–0,061	0,024–0,068	0,026–0,075	0,034–0,097
P.3.1	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
P.3.2	0,005–0,014	0,006–0,017	0,007–0,019	0,013–0,038	0,015–0,044	0,017–0,049	0,019–0,054	0,025–0,07	0,02–0,058	0,024–0,068	0,027–0,076	0,029–0,084	0,038–0,108
P.3.3	0,004–0,011	0,005–0,013	0,005–0,015	0,01–0,03	0,012–0,035	0,014–0,039	0,015–0,043	0,019–0,055	0,016–0,046	0,019–0,053	0,021–0,06	0,023–0,066	0,03–0,085
P.4.1	0,006–0,016	0,007–0,019	0,007–0,021	0,015–0,041	0,017–0,049	0,019–0,055	0,021–0,06	0,027–0,078	0,022–0,064	0,026–0,075	0,029–0,084	0,032–0,092	0,042–0,119
P.4.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
M.1.1	0,004–0,011	0,004–0,012	0,005–0,014	0,01–0,028	0,011–0,032	0,013–0,036	0,014–0,04	0,018–0,052	0,015–0,043	0,017–0,05	0,02–0,056	0,022–0,062	0,028–0,08
M.2.1	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
M.3.1	0,003–0,01	0,004–0,012	0,005–0,013	0,009–0,026	0,011–0,03	0,012–0,034	0,013–0,037	0,017–0,048	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074
K.1.1	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
K.1.2	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
K.2.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
K.2.2	0,005–0,015	0,006–0,017	0,007–0,02	0,013–0,039	0,016–0,045	0,018–0,051	0,02–0,056	0,025–0,072	0,021–0,059	0,024–0,069	0,027–0,078	0,03–0,086	0,039–0,111
K.3.1	0,006–0,018	0,007–0,021	0,008–0,024	0,017–0,047	0,019–0,056	0,022–0,062	0,024–0,069	0,031–0,089	0,026–0,073	0,03–0,085	0,034–0,096	0,037–0,106	0,048–0,136
K.3.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
N.1.1	0,008–0,023	0,009–0,027	0,011–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.1.2	0,008–0,022	0,009–0,026	0,01–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.1	0,007–0,021	0,009–0,025	0,01–0,028	0,019–0,055	0,023–0,065	0,025–0,073	0,028–0,08	0,036–0,103	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.2	0,007–0,021	0,009–0,024	0,01–0,028	0,019–0,054	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.3	0,007–0,021	0,008–0,024	0,009–0,027	0,019–0,053	0,022–0,062	0,025–0,07	0,027–0,077	0,035–0,1	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.1	0,007–0,021	0,009–0,025	0,01–0,028	0,019–0,055	0,023–0,065	0,025–0,073	0,028–0,08	0,036–0,103	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.2	0,007–0,02	0,008–0,024	0,009–0,027	0,018–0,052	0,021–0,061	0,024–0,069	0,027–0,076	0,034–0,098	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.3	0,007–0,019	0,008–0,023	0,009–0,026	0,018–0,05	0,021–0,059	0,023–0,066	0,026–0,073	0,033–0,094	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.4.1	0,007–0,019	0,008–0,023	0,009–0,026	0,018–0,05	0,021–0,059	0,023–0,066	0,026–0,073	0,033–0,094	0,027–0,078	0,032–0,091	0,036–0,102	0,039–0,112	0,051–0,145
S.1.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
S.1.2	0,005–0,013	0,005–0,016	0,006–0,018	0,012–0,035	0,014–0,04	0,016–0,046	0,018–0,05	0,023–0,065	0,019–0,053	0,022–0,062	0,025–0,07	0,027–0,077	0,035–0,099
S.2.1	0,005–0,013	0,005–0,015	0,006–0,017	0,012–0,034	0,014–0,039	0,015–0,044	0,017–0,049	0,022–0,063	0,018–0,052	0,021–0,061	0,024–0,068	0,026–0,075	0,034–0,097
S.2.2	0,003–0,01	0,004–0,012	0,005–0,013	0,009–0,026	0,011–0,03	0,012–0,034	0,013–0,037	0,017–0,048	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074
S.2.3	0,004–0,011	0,004–0,012	0,005–0,014	0,01–0,028	0,011–0,032	0,013–0,036	0,014–0,04	0,018–0,052	0,015–0,043	0,017–0,05	0,02–0,056	0,022–0,062	0,028–0,08
S.3.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
S.3.2	0,005–0,014	0,006–0,016	0,006–0,018	0,012–0,036	0,015–0,042	0,016–0,047	0,018–0,051	0,023–0,066	0,019–0,055	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102
S.3.3	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
H.1.1	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
H.1.2	0,003–0,008	0,003–0,009	0,004–0,01	0,007–0,02	0,008–0,023	0,009–0,026	0,01–0,029	0,013–0,037	0,011–0,03	0,012–0,036	0,014–0,04	0,015–0,044	0,02–0,057
H.1.3													
H.1.4													
H.2.1	0,004–0,01	0,004–0,012	0,005–0,014	0,009–0,027	0,011–0,031	0,012–0,035	0,014–0,039	0,017–0,05	0,014–0,041	0,017–0,048	0,019–0,054	0,021–0,059	0,027–0,077
H.3.1	0,003–0,009	0,004–0,011	0,004–0,012	0,008–0,024	0,01–0,028	0,011–0,031	0,012–0,034	0,016–0,044	0,013–0,036	0,015–0,043	0,017–0,048	0,018–0,053	0,024–0,068
O.1.1	0,008–0,022	0,009–0,026	0,01–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
O.1.2	0,007–0,02	0,008–0,023	0,009–0,026	0,018–0,051	0,021–0,06	0,024–0,068	0,026–0,074	0,034–0,096	0,028–0,079	0,032–0,093	0,036–0,104	0,04–0,114	0,052–0,148
O.2.1	0,004–0,013	0,005–0,015	0,006–0,017	0,011–0,033	0,013–0,038	0,015–0,043	0,017–0,047	0,021–0,061	0,018–0,05	0,021–0,059	0,023–0,066	0,025–0,073	0,033–0,094
O.2.2	0,004–0,012	0,005–0,014	0,006–0,016	0,011–0,032	0,013–0,037	0,015–0,042	0,016–0,046	0,021–0,059	0,017–0,049	0,02–0,057	0,022–0,064	0,025–0,07	0,032–0,091
O.3.1													

Symbol explanation

UltraMini

Internal turning and profiling

High-feed turning

Turning and profile turning – super alloys

Internal turning

Back boring

Turning and chamfering

Pre-parting and chamfering

Groove turning

Internal Undercuts

Groove and profile turning

Internal thread turning

Axial grooving

MiniCut

Internal turning and profiling

Internal turning

Back boring

Turning and chamfering

Pre-parting and chamfering

Groove turning

Internal Undercuts

Groove and profile turning

Internal thread turning

Axial grooving

Coatings

TiN
- TiN coating
- Maximum application temperature: 450°C

TiAlN
- TiAlN multilayer coating
- Maximum application temperature: 900°C

CWX500
- Carbide, TiAlN-coated
- The universal carbide grade for almost all materials

DPX57S DRAGONSKIN
- TiCrN coating
- Maximum application temperature: 900°C

DPX77S DRAGONSKIN
- TiAlN+X-coating
- Maximum application temperature: 900°C

Thread types

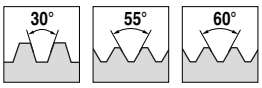
M Metric ISO standard thread

MF Metric ISO fine thread

G Whitworth thread

Tr Metric ISO trapezoidal fine thread

Thread flank angle

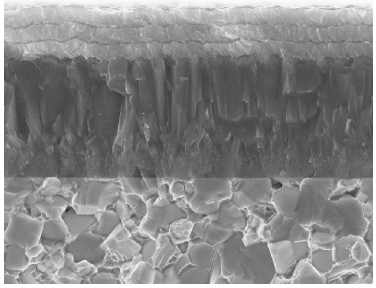


Cooling

with thro' coolant

Machining without compromise

The product category Dragonskin is intended to help make tools easily recognizable and quick to find using CERATIZIT's high-performance coating technology. All products that are marked with the Dragonskin icon represent unmatchable performance, maximum tool life and maximum process reliability.



Dragonskin Coating