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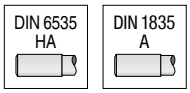
KOMET \ Performance

Premium quality tools for high performance.

The premium quality tools from the **KOMET 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.

Symbol explanation

Shank



Coolant supply version


central internal coolant


lateral internal coolant

ZEFP = Number of flutes

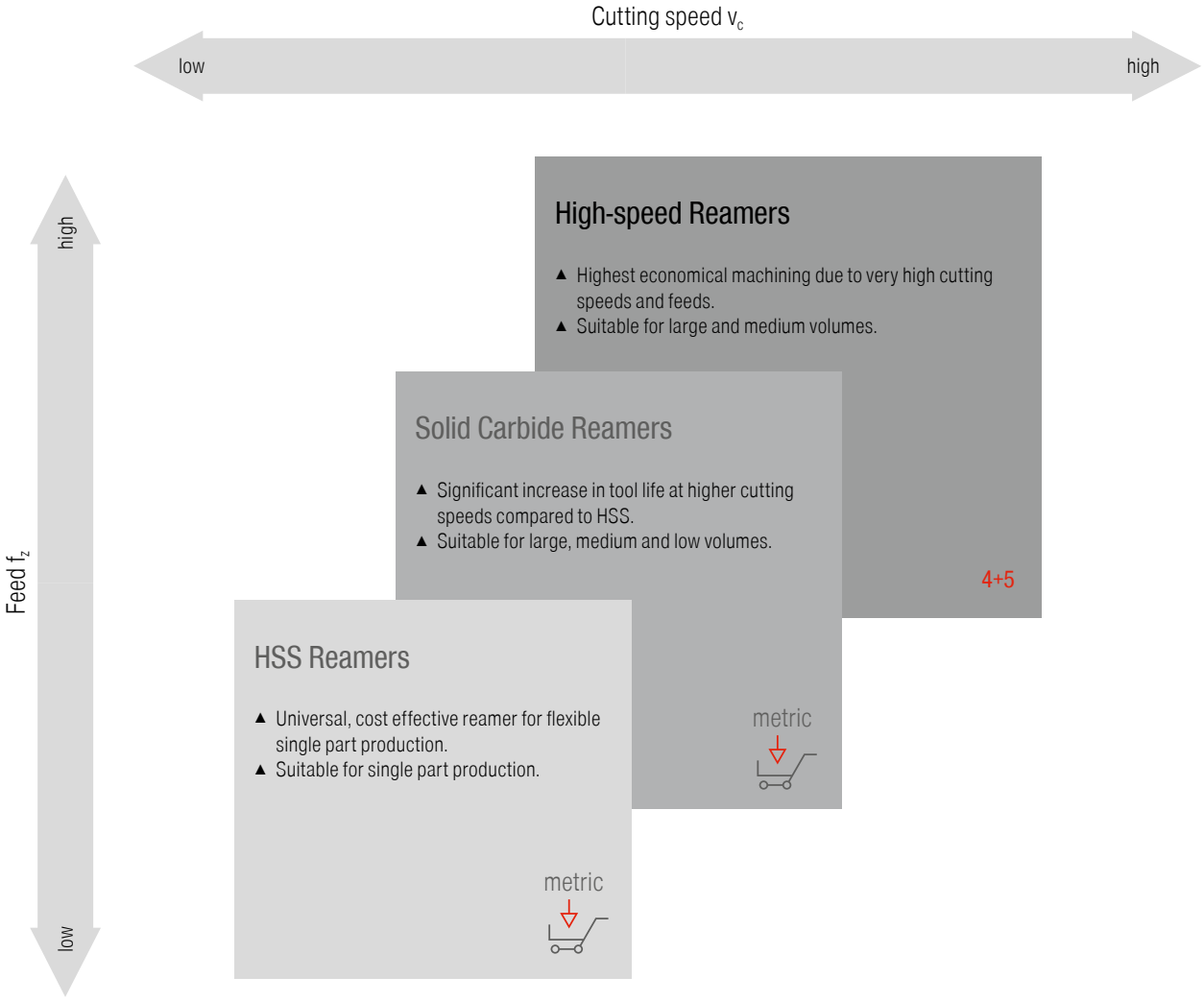
● = **Main Application**

○ = Extended application

metric

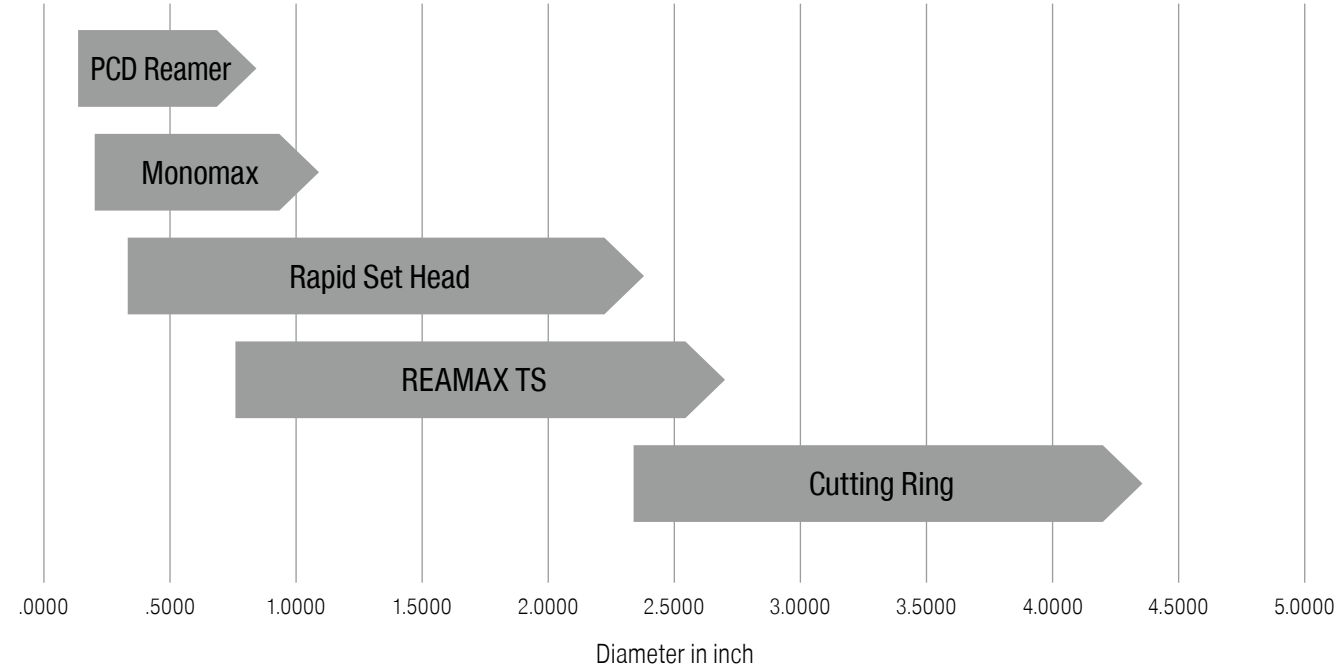
Additional metric items are available in our Online-Shop at cuttingtools.ceratizit.com and in the metric main catalog.

Toolfinder – Reamers

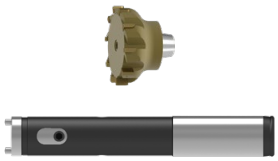
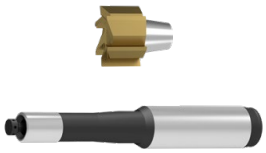
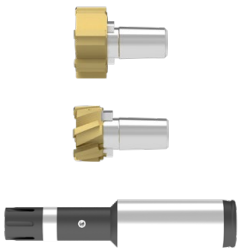
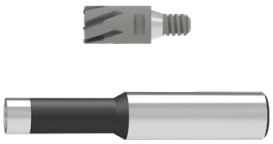
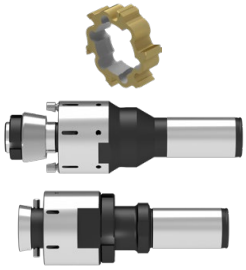
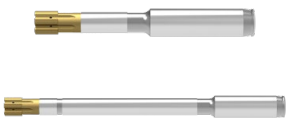


3

Overview of high-speed reamers



Toolfinder – Reamers

Solid carbide – high speed reamers	**REAMAX TS**		▲ highly flexible and economical replaceable head system ▲ all common materials ▲ can be adjusted in µm range ▲ Holder available in 3xD and 5xD ▲ DAH zero holder available in 3xD and 5xD
	REAMAX		▲ Exchangeable head system, optimized for use with air mist coolant (MMS) ▲ Face and taper contact giving run out accuracy ≤ 2 µm ▲ holder available in 3xD and 5xD
	Rapid Set Head		▲ Exchangeable head system ▲ Left hand spiral fluted cutting blades. available for highest productivity ▲ Re-tipping and regrinding available
	MultiChange		▲ flexible quick change system for reaming, countersinking and chamfering ▲ face and taper contact giving run out accuracy ≤ 5 µm ▲ stable holder in solid carbide and steel, from short to long
	Cutting Ring		▲ For large diameter holes. ▲ Compensation for wear through simple readjustment. ▲ Re-tipping and regrinding available
	Monomax		▲ Expandable monoblock reamer in 3xD and 5xD ▲ Re-tipping and regrinding available ▲ All common materials
	Fullmax		▲ High-speed reamer in shorter and longer version ▲ Reamers for machining steel, stainless and acid-resistant steels, cast materials, aluminium and hardened materials up to 63 HRC ▲ Extremely irregular pitch ▲ Standard shank ~ DIN 6535 HA
PCD Reamer	**PCD Reamer**		▲ 2 and 4 blade versions available ▲ High stability from the carbide body ▲ Optimized for finishing pre-cast bores ▲ Re-tipping and regrinding available

Solid Carbide Reamers and HSS Reamers can be found in the metric catalog.

		Hole diameter in inch Ø DC	Through hole	Blind hole	Int. coolant supply	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O	KOMET \ Performance
		.7086 – 2.5590 (18.00 – 65.00 mm)	✓	✓	✓	●	●	●	●	●		○	6–11
					✓								12+13
		.4920 – 1.5748 (12.50 – 40.00 mm)	✓	✓	✓	●	●	●	●		●	○	metric
					✓								
		.3779 – 2.3622 (9.60 – 60.00 mm)	✓	✓	✓	●	●	●	●	●			14–17
		.3779 – 2.3622 (9.60 – 60.00 mm)	✓			●							15+18
					✓								19
		.3150 – 1.2677 (8.00–30.20 mm)	✓	✓	✓	●	●	●	●				metric
					✓								
		2.3858 – 4.3543 (60.60 –110.60 mm)	✓	✓		●	●	●	●	●			20–23
			✓		✓								24
				✓	✓								25+26
	short	.2205 – 1.0196 (5.60 – 25.90 mm)	✓	✓	✓	●	●	●	●	●		○	29–32
	long	.2205 – 1.0196 (5.60 – 25.90 mm)	✓	✓	✓	●	●	●	●	●		○	33–36
	short	.1575 – .6300 (4.00 – 16.00 mm) .1165 – .7894 (2.96 – 20.05 mm)	✓	✓	✓	●	●	●	○	○	○		metric
	long	.1575 – .6300 (4.00 – 16.00 mm) .1165 – .7894 (2.96 – 20.05 mm)	✓	✓	✓	●	●	●	●	○	●	○	
		.1575 – .7913 (4.00 – 20.10 mm)	✓	✓					●				37–39

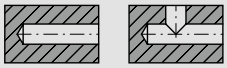
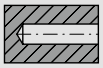
3

REAMAX TS – Selection guide – Through hole

Ø			.7086 – 2.5590 inch							
KOMET no.			75J.65	75J.65	75J.17	75J.71	75J.71	75J.71	75J.93	75J.93	75J.21
Grind geometry			ASG3000	ASG0106	ASG0706	ASG3000	ASG4000	ASG0106	ASG4000	ASG3000	ASG03
Lead angle			45°	45°	45°/8°	45°	25°	45°	25°	45°	30°/2°
Grade / coating			DBG-P	DBG-P	DBC	TiN	TiN	TiN	DST	DST	K10
Article no.			49 586	49 521	49 526	49 534	49 596	49 520	49 597	49 544	49 531
Application			Through hole								
Material sub-group		**Index**									
P	Non alloyed steel	P.1.1									
		P.1.2									
		P.1.3	●			○	●		●	●	
		P.1.4									
		P.1.5									
	Low alloyed steel	P.2.1									
		P.2.2	●			○			●	●	
		P.2.3									
		P.2.4									
	High-alloy steel and high-alloy tool steel	P.3.1									
		P.3.2									
		P.3.3		●				○			
	Stainless steel	P.4.1									
		P.4.2									
M	Stainless steel	M.1.1									
		M.2.1		●				○			
		M.3.1									
K	Grey cast iron	K.1.1	●			○					
		K.1.2									
	Spherulitic graphite cast iron	K.2.1	●						●	●	
		K.2.2									
	Malleable iron	K.3.1	●							●	
		K.3.2							●		
N	Aluminum alloys,	N.1.1									
		N.1.2									
	Cast Aluminium Alloys	N.2.1			●						
		N.2.2									
		N.2.3									
	Copper and copper alloys (Bronze, Brass)	N.3.1								○	
		N.3.2				●					
		N.3.3									
	Magnesium alloys	N.4.1			●						
S	Heat resistant alloys	S.1.1									
		S.1.2									
		S.2.1									
		S.2.2									
		S.2.3									
	Titanium alloys	S.3.1									
		S.3.2									●
		S.3.3									
O	Non-metal materials	O.1.1									
		O.1.2									
		O.2.1									
		O.2.2									
		O.3.1			○						

Applications:	
Main application	●
Additional range of application	○

REAMAX TS – Selection guide – Blind hole

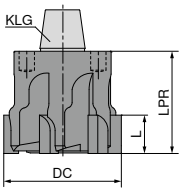
Ø			.7086 – 2.5590 inch						
KOMET no.			75H.65	75H.65	75H.71	75H.71	75H.17	75H.93	75H.21
Grind geometry			ASG3000	ASG0106	ASG0106	ASG3000	ASG0706	ASG3000	ASG03
Lead angle			45°	45°	45°	45°	45°/8°	45°	30°/2°
Grade / coating			DBG-P	DBG-P	TiN	TiN	DBC	DST	K10
Article no.			49 585	49 571	49 527	49 535	49 580	49 539	49 530
Application			Blind hole 						
Material sub-group		Index							
P	Non alloyed steel	P.1.1							
		P.1.2							
		P.1.3	●			○		●	
		P.1.4							
		P.1.5							
	Low alloyed steel	P.2.1							
		P.2.2	●			○		●	
		P.2.3							
		P.2.4							
	High-alloy steel and high-alloy tool steel	P.3.1							
		P.3.2							
		P.3.3		●	○				
	Stainless steel	P.4.1							
		P.4.2							
M	Stainless steel	M.1.1							
		M.2.1		●	○				
		M.3.1							
K	Grey cast iron	K.1.1							
		K.1.2	●			●			
	Spherulitic graphite cast iron	K.2.1							
		K.2.2	●					●	
	Malleable iron	K.3.1							
		K.3.2	●					●	
N	Aluminum alloys,	N.1.1							
		N.1.2							
	Cast Aluminium Alloys	N.2.1							
		N.2.2					●		
		N.2.3							
	Copper and copper alloys (Bronze, Brass)	N.3.1							
		N.3.2				●		○	
		N.3.3							
	Magnesium alloys	N.4.1					●		
S	Heat resistant alloys	S.1.1							
		S.1.2							
		S.2.1							
		S.2.2							
		S.2.3							
	Titanium alloys	S.3.1							
		S.3.2							●
		S.3.3							
O	Non-metal materials	O.1.1							
		O.1.2							
		O.2.1							
		O.2.2							
		O.3.1					○		

Applications:	Main application	●
	Additional range of application	○

3

REAMAX TS – Replaceable reaming heads

- up to tolerance class IT 6
- precise repeatability < .0001"
- high precision grind for maximum quality
- can be adjusted for the smallest hole tolerances
- interface enables head change in the machine
- retraction from the hole at 3–4 times the cutting feed rate
- KLG = coupling size
- ZEFP = number of cutting edges



	DST	DBG-P	DBC	DST
				
	75J.93 ◁ 25° ASG4000 CERMET Through hole	75J.65 ◁ 45° ASG0106 HM Through hole	75J.17 ◁ 45/8° ASG0706 HM Through hole	75J.93 ◁ 45° ASG3000 CERMET Through hole
	49 597 ...	**49 521 ...**	**49 526 ...**	**49 544 ...**
DC inch	L inch	LPR inch	ZEFP	KLG							
0.7087 - 0.7874	0.236	0.787	6	1	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.7874 - 0.8661	0.236	0.787	6	2	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.8661 - 1.0630	0.236	0.787	6	3	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.0630 - 1.2519	0.236	0.984	6	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.2520 - 1.3779	0.236	0.984	8	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.3780 - 1.6535	0.236	0.984	8	5	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.6535 - 2.0472	0.236	1.181	8	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
2.0472 - 2.5590	0.314	1.377	10	7	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
P					●		●				●	
M							●					
K					●						●	
N									●		○	
S												
H												
O									○			

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

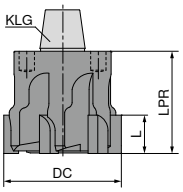
→ v_c Page 41–44

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

Assembly instructions can be found on → **Page 63+64**

REAMAX TS – Replaceable reaming heads

- up to tolerance class IT 6
- precise repeatability < .0001"
- high precision grind for maximum quality
- can be adjusted for the smallest hole tolerances
- interface enables head change in the machine
- retraction from the hole at 3–4 times the cutting feed rate
- KLG = coupling size
- ZEFP = number of cutting edges



	TiN	DBG-P	K10	TiN	TiN
					
	75J.71 ◁ 25° ASG4000 HM Through hole	75J.65 ◁ 45° ASG3000 HM Through hole	75J.21 ◁ 30/2° ASG03 HM Through hole	75J.71 ◁ 45° ASG0106 HM Through hole	75J.71 ◁ 45° ASG3000 HM Through hole
	49 596 ...	**49 586 ...**	**49 531 ...**	**49 520 ...**	**49 534 ...**
DC inch / L inch / LPR inch / ZEFP / KLG					
0.7087 - 0.7874 0.236 0.787 6 1	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.7874 - 0.8661 0.236 0.787 6 2	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.8661 - 1.0630 0.236 0.787 6 3	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
1.0630 - 1.2519 0.236 0.984 6 4	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
1.252 0- 1.3779 0.236 0.984 8 4	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
1.3780 - 1.6535 0.236 0.984 8 5	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
1.6535 - 2.0472 0.236 1.181 8 6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
2.0472 - 2.5590 0.314 1.377 10 7	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
P	●	●		○	○
M				○	
K		●			○
N					●
S			●		
H					
O					

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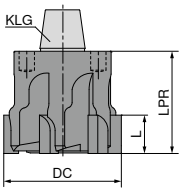
For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

Assembly instructions can be found on → **Page 63+64**

REAMAX TS – Replaceable reaming heads

- up to tolerance class IT 6
- precise repeatability < .0001"
- high precision grind for maximum quality
- can be adjusted for the smallest hole tolerances
- interface enables head change in the machine
- retraction from the hole at 3–4 times the cutting feed rate
- KLG = coupling size
- ZEFP = number of cutting edges



DST	DBG-P	DBC	DBG-P	TiN
				
75H.93 ◁ 45° ASG3000 CERMET Blind hole	75H.65 ◁ 45° ASG0106 HM Blind hole	75H.17 ◁ 45/8° ASG0706 HM Blind hole	75H.65 ◁ 45° ASG3000 HM Blind hole	75H.71 ◁ 45° ASG3000 HM Blind hole
49 539 ...	**49 571 ...**	**49 580 ...**	**49 585 ...**	**49 535 ...**

DC inch	L inch	LPR inch	ZEFP	KLG									
0.7087 - 0.7874	0.236	0.787	6	1	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7874 - 0.8661	0.236	0.787	6	2	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.8661 - 1.0630	0.236	0.787	6	3	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.0630 - 1.2519	0.236	0.984	6	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.2520 - 1.3779	0.236	0.984	8	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.3780 - 1.6535	0.236	0.984	8	5	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.6535 - 2.0472	0.236	1.181	8	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
2.0472 - 2.5590	0.314	1.377	10	7	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
P					●		●				●		○
M							●						
K					●						●		○
N					○				●				●
S													
H													
O									○				

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

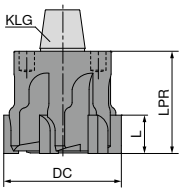
→ v_c Page 41–44

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

Assembly instructions can be found on → **Page 63+64**

REAMAX TS – Replaceable reaming heads

- up to tolerance class IT 6
- precise repeatability < .0001"
- high precision grind for maximum quality
- can be adjusted for the smallest hole tolerances
- interface enables head change in the machine
- retraction from the hole at 3–4 times the cutting feed rate
- KLG = coupling size
- ZEFP = number of cutting edges



K10

TiN

3

					75H.21 ◁ 30/2° ASG03 HM Blind hole		75H.71 ◁ 45° ASG0106 HM Blind hole	
					49 530 ...		**49 527 ...**	
DC inch	**L inch**	**LPR inch**	**ZEFP**	**KLG**				
0.7087 - 0.7874	0.236	0.787	6	1	**xxxx** [1]		**xxxx** [1]	
0.7874 - 0.8661	0.236	0.787	6	2	**xxxx** [1]		**xxxx** [1]	
0.8661 - 1.0630	0.236	0.787	6	3	**xxxx** [1]		**xxxx** [1]	
1.0630 - 1.2519	0.236	0.984	6	4	**xxxx** [1]		**xxxx** [1]	
1.2520 - 1.3779	0.236	0.984	8	4	**xxxx** [1]		**xxxx** [1]	
1.3780 - 1.6535	0.236	0.984	8	5	**xxxx** [1]		**xxxx** [1]	
1.6535 - 2.0472	0.236	1.181	8	6	**xxxx** [1]		**xxxx** [1]	
2.0472 - 2.5590	0.314	1.377	10	7	**xxxx** [1]		**xxxx** [1]	
P							○	
M							○	
K								
N								
S						●		
H								
O								

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 41–44

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

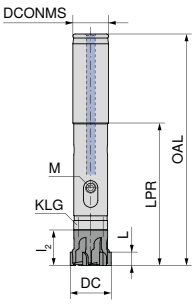
Assembly instructions can be found on → **Page 63+64**

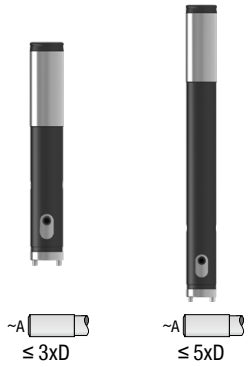
REAMAX TS – Holder

▲ KLG = Coupling Size

Supply details:

Complete holder with pull stud. Reamer head not included





DC inch	KOMET no.	OAL inch	l_2 inch	LPR inch	L inch	DCONMS inch	DCONMS mm	M Nm	KLG	40 501 ...	40 503 ...
0.7087 - 0.7870	75A.40.13010	5.118	0.787	3.149	0.236	0.787	20	1,5	1	**02099**	
0.7087 - 0.7870	75A.40.15010	7.480	0.787	5.511	0.236	0.787	20	1,5	1		**02099**
0.7874 - 0.8657	75A.40.13020	5.118	0.787	3.149	0.236	0.787	20	2,5	2	**02299**	
0.7874 - 0.8657	75A.40.15020	7.480	0.787	5.511	0.236	0.787	20	2,5	2		**02299**
0.8661 - 1.0626	75A.40.13030	5.118	0.787	3.149	0.236	0.787	20	4	3	**02799**	
0.8661 - 1.0626	75A.40.15030	8.267	0.787	6.299	0.236	0.787	20	4	3		**02799**
1.0630 - 1.3776	75A.40.13040	6.929	0.984	4.724	0.236	0.984	25	5	4	**03599**	
1.0630 - 1.3776	75A.40.15040	9.291	0.984	7.086	0.236	0.984	25	5	4		**03599**
1.3780 - 1.6535	75A.40.13050	6.929	0.984	4.724	0.236	0.984	25	6	5	**04299**	
1.3780 - 1.6535	75A.40.15050	10.078	0.984	7.874	0.236	0.984	25	6	5		**04299**
1.6535 - 2.0472	75A.40.13060	7.086	1.181	4.724	0.236	1.259	32	10	6	**05299**	
1.6535 - 2.0472	75A.40.15060	11.023	1.181	8.661	0.236	1.259	32	10	6		**05299**
2.0472 - 2.5590	75A.40.13070	7.086	1.181	4.724	0.314	1.259	32	13	7	**06599**	
2.0472 - 2.5590	75A.40.15070	11.023	1.181	8.661	0.314	1.259	32	13	7		**06599**

Do not heat shrink tools !

Clamping key – T

Screwdriver

Reamax TS pull stud

Spare parts DC		80 397 ...		80 950 ...		40 900 ...
0.7087 - 0.7870			T08 - IP	039		**00100**
0.7874 - 0.8657	SW2,5	025				**00200**
0.8661 - 1.0626	SW3	030				**00300**
1.0630 - 1.3776	SW3	030				**00400**
1.3780 - 1.6535	SW3	030				**00500**
1.6535 - 2.0472	SW4	040				**00500**
2.0472 - 2.5590	SW5	050				**00700**

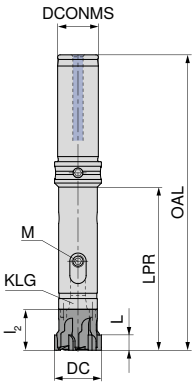
Assembly instructions can be found on → **Page 63+64**

REAMAX TS – Holder

- KLG = Coupling size
- Adjustment inside the machine
- Alignable DAH Zero holder for correction of concentricity error
- DAH Zero holder is pre-loaded and set to a runout of < 0.0002"

Supply details:

Complete holder with pull stud. Reamer head not included



DC inch	KOMET no.	OAL inch	l_2 inch	LPR inch	L inch	DCONMS inch	DCONMS mm	M Nm	KLG	40 504 ...	40 506 ...
0.7087 - 0.7870	75A.41.13010	5.708	0.787	3.149	0.236	0.787	20	1,5	1	**02099**	
0.7087 - 0.7870	75A.41.15010	8.070	0.787	5.511	0.236	0.787	20	1,5	1		**02099**
0.7874 - 0.8657	75A.41.13020	5.708	0.787	3.149	0.236	0.787	20	2,5	2	**02299**	
0.7874 - 0.8657	75A.41.15020	8.070	0.787	5.511	0.236	0.787	20	2,5	2		**02299**
0.8661 - 1.0626	75A.41.13030	5.708	0.787	3.149	0.236	0.787	20	4	3	**02799**	
0.8661 - 1.0626	75A.41.15030	8.858	0.787	6.299	0.236	0.787	20	4	3		**02799**
1.0630 - 1.3776	75A.41.13040	5.708	0.984	4.724	0.236	0.984	25	5	4	**03599**	
1.0630 - 1.3776	75A.41.15040	9.291	0.984	7.086	0.236	0.984	25	5	4		**03599**
1.3780 - 1.6535	75A.41.13050	6.929	0.984	4.724	0.236	0.984	25	6	5	**04299**	
1.3780 - 1.6535	75A.41.15050	9.291	0.984	7.874	0.236	0.984	25	6	5		**04299**

Do not heat shrink tools !


Clamping key – T


Screwdriver


Reamax TS pull stud

Spare parts DC		80 397 ...		T08 - IP	80 950 ...	40 900 ...
0.7087 - 0.7870						**00100**
0.7874 - 0.8657	SW2,5	**025**				**00200**
0.8661 - 1.0626	SW3	**030**				**00300**
1.0630 - 1.3776	SW3	**030**				**00400**
1.3780 - 1.6535	SW3	**030**				**00500**

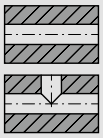
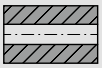
Assembly instructions can be found on → **Page 63+64**

Rapid Set Head – Selection guide

Ø			.3779 – 2.3622 inch							
KOMET no.			340.65	340.65	340.21	340.71	340.71	340.93	340.21	340.21
Grind geometry			ASG3000	ASG0106	ASG03	ASG3000	ASG0106	ASG3000	ASG02	ASG3000
Lead angle			45°	45°	30°/2°	45°	45°	45°	45°/8°	45°
Grade / coating			DBG-P	DBG-P	K10	TiN	TiN	DST	K10	K10
Article no.			49 817	49 816	49 800	49 808	49 809	49 813	49 804	49 801
Application			Through hole + blind hole							
Material sub-group		Index								
P	Non alloyed steel	P.1.1								
		P.1.2								
		P.1.3	●			○		●		○
		P.1.4								
		P.1.5								
	Low alloyed steel	P.2.1								
		P.2.2	●			○		●		○
		P.2.3								
		P.2.4	●			●				
	High-alloy steel and high-alloy tool steel	P.3.1								
		P.3.2		●			●			
		P.3.3								
	Stainless steel	P.4.1		●			●			
		P.4.2								
M	Stainless steel	M.1.1								
		M.2.1		●			●			
		M.3.1								
K	Grey cast iron	K.1.1	●			●				○
		K.1.2								
	Spherulitic graphite cast iron	K.2.1	●					●		○
		K.2.2								
	Malleable iron	K.3.1	●					●		○
		K.3.2								
N	Aluminum alloys,	N.1.1								
		N.1.2								
	Cast Aluminium Alloys	N.2.1							●	○
		N.2.2								
		N.2.3								
	Copper and copper alloys (Bronze, Brass)	N.3.1				○		●	●	○
		N.3.2				○			●	○
		N.3.3				○			●	○
	Magnesium alloys	N.4.1							●	○
S	Heat resistant alloys	S.1.1								
		S.1.2								
		S.2.1								
		S.2.2								
		S.2.3								
	Titanium alloys	S.3.1								
		S.3.2			●					
		S.3.3								
O	Non-metal materials	O.1.1								
		O.1.2								
		O.2.1								
		O.2.2								
		O.3.1								

Applications: ● Main application ○ Additional range of application

Rapid Set Head – Selection guide

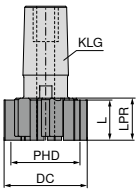
Ø			.3779 – 2.3622 inch	
KOMET no.			340.70	340.92
Grind geometry			ASG05	ASG05
Lead angle			25°	25°
Grade / coating			TiN	DST
Article no.			49 805	49 812
Application			Through hole 	
Material sub-group		Index		
P	Non alloyed steel	P.1.1	○	●
		P.1.2		
		P.1.3		
		P.1.4		
		P.1.5		
	Low alloyed steel	P.2.1	○	●
		P.2.2		
		P.2.3		
		P.2.4	●	
	High-alloy steel and high-alloy tool steel	P.3.1		
		P.3.2		
		P.3.3		
	Stainless steel	P.4.1		
		P.4.2		
M	Stainless steel	M.1.1		
		M.2.1		
		M.3.1		
K	Grey cast iron	K.1.1		
		K.1.2		
	Spherulitic graphite cast iron	K.2.1		
		K.2.2		
	Malleable iron	K.3.1		
		K.3.2		
N	Aluminum alloys,	N.1.1		
		N.1.2		
	Cast Aluminium Alloys	N.2.1		
		N.2.2		
		N.2.3		
	Copper and copper alloys (Bronze, Brass)	N.3.1		
		N.3.2		
		N.3.3		
	Magnesium alloys	N.4.1		
S	Heat resistant alloys	S.1.1		
		S.1.2		
		S.2.1		
		S.2.2		
		S.2.3		
	Titanium alloys	S.3.1		
		S.3.2		
		S.3.3		
O	Non-metal materials	O.1.1		
		O.1.2		
		O.2.1		
		O.2.2		
		O.3.1		

Applications:	
Main application	●
Additional range of application	○

3

Rapid Set Head

- ▲ PHD = Approximate diameter for face machining geometries (ASG)
- ▲ KLG = Coupling Size
- ▲ ZEFP = Number of cutting edges



	TiN	TiN	K10	K10	K10
					
	340.71 ◁ 45° ASG3000 HM Through hole + blind hole	340.71 ◁ 45° ASG0106 HM Through hole + blind hole	340.21 ◁ 45° ASG3000 HM Through hole + blind hole	340.21 ◁ 30/2° ASG03 HM Through hole + blind hole	340.21 ◁ 45/8° ASG02 HM Through hole + blind hole
	49 808 ...	**49 809 ...**	**49 801 ...**	**49 800 ...**	**49 804 ...**

DC inch	L inch	LPR inch	ZEFP	PHD inch	KLG									
0.378 - 0.4957	0.374	0.433	4	DC-0.1220	1	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.4961 - 0.6138	0.413	0.433	4	DC-0.1417	2	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.6142 - 0.7319	0.413	0.433	6	DC-0.1417	3	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.7323 - 0.9449	0.413	0.433	6	DC-0.2008	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.9453 - 1.185	0.413	0.433	6	DC-0.2362	5	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.1854 - 1.2165	0.629	0.669	6	DC-0.2953	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.2169 - 1.5748	0.629	0.669	6	DC-0.2953	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.5752 - 1.9957	0.629	0.669	6	DC-0.3150	7	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
1.9961 - 2.3622	0.629	0.669	6	DC-0.3150	8	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	

P	○	○	○		
M		○			
K	○		○		
N	○		○		●
S				●	
H					
O					

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

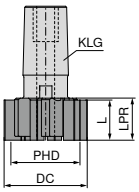
→ v_c Page 57–61

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

Assembly instructions can be found on → **Page 65**

Rapid Set Head

- ▲ PHD = Approximate diameter for face machining geometries (ASG)
- ▲ KLG = Coupling Size
- ▲ ZEFP = Number of cutting edges



	DST	DBG-P	DBG-P
			
	340.93 ◁ 45° ASG3000 CERMET Through hole + blind hole	340.65 ◁ 45° ASG3000 HM Through hole + blind hole	340.65 ◁ 45° ASG0106 HM Through hole + blind hole
	49 813 ...	**49 817 ...**	**49 816 ...**

DC inch	L inch	LPR inch	PHD inch	KLG	ZEFP					
0.378 - 0.4957	0.374	0.433	DC-0.1220	1	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.4961 - 0.6138	0.413	0.433	DC-0.1417	2	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6142 - 0.7319	0.413	0.433	DC-0.1417	4	6			**xxxx** [1]		**xxxx** [1]
0.6142 - 0.7319	0.413	0.433	DC-0.1417	3	6	**xxxx** [1]				
0.7323 - 0.9449	0.413	0.433	DC-0.2008	4	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.9453 - 1.185	0.413	0.433	DC-0.2362	5	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.1854 - 1.2165	0.629	0.669	DC-0.2953	6	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.2169 - 1.5748	0.629	0.669	DC-0.2953	6	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.5752 - 1.9957	0.629	0.669	DC-0.3150	7	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
1.9961 - 2.3622	0.629	0.669	DC-0.3150	8	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
P						●		●		●
M										●
K						●		●		
N						●				
S										
H										
O										

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

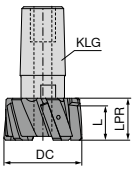
→ v_c Page 57–61

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

Assembly instructions can be found on → **Page 65**

Rapid Set Head

▲ KLG = Coupling Size
▲ ZEFP = Number of cutting edges



TiN

340.70
◁ 25°
ASG05
HM
Through hole

49 805 ...

DST

340.92
◁ 25°
ASG05
CERMET
Through hole

49 812 ...

DC inch	L inch	LPR inch	KLG	ZEFP		
0.378 - 0.4957	0.374	0.433	1	4	**xxxx** [1]	**xxxx** [1]
0.4961 - 0.6138	0.413	0.433	2	4	**xxxx** [1]	**xxxx** [1]
0.6142 - 0.7319	0.413	0.433	3	4	**xxxx** [1]	**xxxx** [1]
0.7323 - 0.9449	0.413	0.433	4	6	**xxxx** [1]	**xxxx** [1]
0.9453 - 1.185	0.413	0.433	5	6	**xxxx** [1]	**xxxx** [1]
1.1854 - 1.2165	0.629	0.669	6	6	**xxxx** [1]	**xxxx** [1]
1.2169 - 1.5748	0.629	0.669	6	6	**xxxx** [1]	**xxxx** [1]
1.5752 - 1.9957	0.629	0.669	7	6	**xxxx** [1]	**xxxx** [1]
1.9961 - 2.3622	0.629	0.669	8	6	**xxxx** [1]	**xxxx** [1]
P					○	●
M						
K						
N						
S						
H						
O						

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 57–61

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 1.5000" ±.0005")

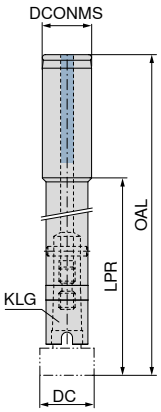
Assembly instructions can be found on → **Page 65**

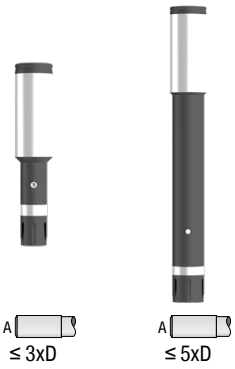
Holder for Rapid Set Head

▲ KLG = Coupling Size

Supply details:

Holder includes radial coolant screw for diameters 0.4961"-2.3622".
Solid screw included for diameters 0.3780"- 0.4957".
Axial coolant screw must be ordered separately.





DC inch	KOMET no.	OAL inch	LPR inch	DCONMS h6 inch	DCONMS mm	KLG	49 890 ...	49 891 ...
0.3780 - 0.4957	540.56.001	3.740	1.969	0.500	12.700	1	**01399**	
0.3780 - 0.4957	540.13.001	6.220	4.449	0.500	12.700	1		**01399**
0.4961 - 0.6138	540.56.002	4.252	2.362	0.625	15.875	2	**01699**	
0.4961 - 0.6138	540.13.002	6.260	4.370	0.625	15.875	2		**01699**
0.6142 - 0.7319	540.56.003	4.330	2.362	0.625	15.875	3	**01999**	
0.6142 - 0.7319	540.13.003	6.732	4.764	0.625	15.875	3		**01999**
0.7323 - 0.9449	540.56.004	5.117	3.150	0.750	19.050	4	**02499**	
0.7323 - 0.9449	540.13.004	7.520	5.550	0.750	19.050	4		**02499**
0.9453 - 1.1850	540.56.005	6.220	3.857	1.000	25.400	5	**03099**	
0.9453 - 1.1850	540.13.005	8.622	6.260	1.000	25.400	5		**03099**
1.1854 - 1.5748	540.56.006	6.457	4.094	1.000	25.400	6	**04099**	
1.1854 - 1.5748	540.13.006	8.857	6.495	1.000	25.400	6		**04099**
1.5752 - 1.9957	540.56.007	7.244	4.094	1.000	25.400	7	**05199**	
1.5752 - 1.9957	540.13.007	11.142	7.992	1.000	25.400	7		**05199**
1.9961 - 2.3622	540.56.008	7.420	4.272	1.000	25.400	8	**06099**	
1.9961 - 2.3622	540.13.008	11.355	8.209	1.000	25.400	8		**06099**


Differential Axial Coolant


Differential Radial Coolant


Threaded pin

Screw short version

Screw long version


Bushing

Spare parts DC	40 950 ...	40 950 ...	40 950 ...	40 950 ...	40 950 ...	40 950 ...
0.3780 - 0.4957				**41600**		
0.3780 - 0.4957					**41700**	
0.4961 - 0.6138	**40600**	**40100**	**41800**			**41100**
0.6142 - 0.7319	**40700**	**40200**	**41900**			**41200**
0.7323 - 0.9449	**40800**	**40300**	**42000**			**41300**
0.9453 - 1.1850	**40900**	**40400**	**42100**			**41400**
1.1854 - 1.5748	**40900**	**40400**	**42100**			**41400**
1.5752 - 1.9957	**41000**	**40500**	**42200**			**41500**
1.9961 - 2.3622	**41000**	**40500**	**42200**			**41500**

Assembly instructions can be found on → **Page 65**

Cutting Ring – Selection guide

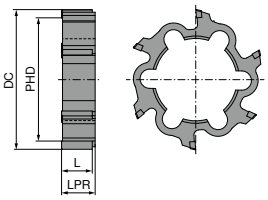
Ø			2.3858 – 4.3543 inch							
KOMET no.			300.65	300.65	300.17	300.05	300.05	300.45	300.25	300.05	300.45
Grind geometry			ASG3000	ASG0106	ASG0706	ASG3000	ASG0106	ASG3000	ASG03	ASG4000	ASG4000
Lead angle			45°	45°	45°/8°	45°	45°	45°	30°/2°	25°	45°
Grade / coating			DBG-P	DBG-P	DBC	TiN	TiN	DST	K10	TiN	DST
Article no.			49 836	49 835	49 839	49 823	49 824	49 827	49 832	49 831	49 828
Application			Through hole + blind hole							Through hole	
Material sub-group		**Index**									
P	**Non alloyed steel**	**P.1.1**									
		P.1.2									
		P.1.3	●			○		●		●	●
		P.1.4									
		P.1.5									
	Low alloyed steel	**P.2.1**									
		P.2.2	●			○		●			●
		P.2.3									
		P.2.4	●			○					
	High-alloy steel and high-alloy tool steel	**P.3.1**					●				
		P.3.2		●							
		P.3.3									
	Stainless steel	**P.4.1**		●			○				
		P.4.2									
M	**Stainless steel**	**M.1.1**									
		M.2.1		●			○				
		M.3.1									
K	**Grey cast iron**	**K.1.1**	●			○					
		K.1.2									
	Spherulitic graphite cast iron	**K.2.1**	●					●			
		K.2.2									
	Malleable iron	**K.3.1**	●					●			
		K.3.2									
N	**Aluminum alloys,**	**N.1.1**									
		N.1.2									
	Cast Aluminium Alloys	**N.2.1**			●						
		N.2.2									
		N.2.3									
	Copper and copper alloys (Bronze, Brass)	**N.3.1**				○		●		○	
		N.3.2				○				○	
		N.3.3				○				○	
	Magnesium alloys	**N.4.1**			●						
S	**Heat resistant alloys**	**S.1.1**									
		S.1.2									
		S.2.1									
		S.2.2									
		S.2.3									
	Titanium alloys	**S.3.1**									
		S.3.2							●		
		S.3.3									
O	**Non-metal materials**	**O.1.1**									
		O.1.2									
		O.2.1									
		O.2.2									
		O.3.1									

Applications:

Main application	●
Additional range of application	○

Cutting ring

▲ PHD = Approximate diameter for face machining geometries (ASG)
▲ ZEFP = Number of cutting edges



					DBG-P	DBG-P	K10	TiN	TiN
					300.65 ◁ 45° ASG3000 HM Through hole + blind hole	300.65 ◁ 45° ASG0106 HM Through hole + blind hole	300.25 ◁ 30/2° ASG03 HM Through hole + blind hole	300.05 ◁ 45° ASG3000 HM Through hole + blind hole	300.05 ◁ 45° ASG0106 HM Through hole + blind hole
					49 836 ...	**49 835 ...**	**49 832 ...**	**49 823 ...**	**49 824 ...**
DC inch	**L inch**	**LPR inch**	**PHD inch**	**ZEFP**					
2.3858 - 2.5823	0.629	0.728	DC-0.3307	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
2.5827 - 2.7791	0.629	0.728	DC-0.3307	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
2.7795 - 2.9760	0.629	0.728	DC-0.3307	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
2.9764 - 3.1335	0.629	0.728	DC-0.3307	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
3.1339 - 3.3697	0.629	0.728	DC-0.3307	8	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
3.3701 - 3.5665	0.629	0.728	DC-0.3307	8	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
3.5669 - 3.7634	0.629	0.728	DC-0.3307	8	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
3.7638 - 3.9602	0.629	0.728	DC-0.3307	8	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
3.9606 - 4.3539	0.629	0.728	DC-0.3307	10	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]	**xxxx**
P					●	●		○	●
M						●			○
K					●			○	
N								○	
S							●		
H									
O									

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

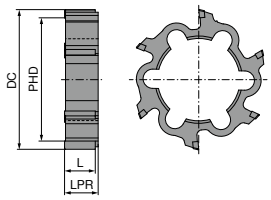
→ v_c Page 52–56

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 2.5000" ±.0005")

Assembly instructions can be found on → **Page 66+67**

Cutting ring

▲ PHD = Approximate diameter for face machining geometries (ASG)
▲ ZEFP = Number of cutting edges



DST

300.45
◁ 45°
ASG3000
CERMET
Through hole + blind hole

49 827 ...

DBC

300.17
◁ 45°
ASG0706
HM
Through hole + blind hole

49 839 ...

DC inch	L inch	LPR inch	PHD inch	ZEFP		
2.3858 - 2.5823	0.629	0.688	DC-0.3307	6	**xxxx** [1]	
2.3858 - 2.5823	0.629	0.728	DC-0.3307	6		**xxxx** [1]
2.5827 - 2.7791	0.629	0.688	DC-0.3307	6	**xxxx** [1]	
2.5827 - 2.7791	0.629	0.728	DC-0.3307	6		**xxxx** [1]
2.7795 - 2.9760	0.629	0.688	DC-0.3307	6	**xxxx** [1]	
2.7795 - 2.9760	0.629	0.728	DC-0.3307	6		**xxxx** [1]
2.9764 - 3.1335	0.629	0.688	DC-0.3307	6	**xxxx** [1]	
2.9764 - 3.1335	0.629	0.728	DC-0.3307	6		**xxxx** [1]
3.1339 - 3.3697	0.629	0.688	DC-0.3307	8	**xxxx** [1]	
3.1339 - 3.3697	0.629	0.728	DC-0.3307	8		**xxxx** [1]
3.3701 - 3.5665	0.629	0.688	DC-0.3307	8	**xxxx** [1]	
3.3701 - 3.5665	0.629	0.728	DC-0.3307	8		**xxxx** [1]
3.5669 - 3.7634	0.629	0.688	DC-0.3307	8	**xxxx** [1]	
3.5669 - 3.7634	0.629	0.728	DC-0.3307	8		**xxxx** [1]
3.7638 - 3.9602	0.629	0.688	DC-0.3307	8	**xxxx** [1]	
3.7638 - 3.9602	0.629	0.728	DC-0.3307	8		**xxxx** [1]
3.9606 - 4.3539	0.629	0.688	DC-0.3307	10	**xxxx** [1]	
3.9606 - 4.3539	0.629	0.728	DC-0.3307	10		**xxxx** [1]

P	●	
M		
K	●	
N	●	●
S		
H		
O		

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

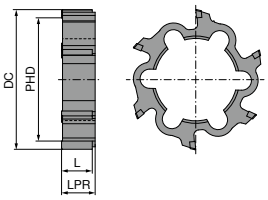
→ v_c Page 52–56

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 2.5000" ±.0005")

Assembly instructions can be found on → **Page 66+67**

Cutting ring

▲ PHD = Approximate diameter for face machining geometries (ASG)
▲ ZEFP = Number of cutting edges



TiN

DST

3

DC inch	L inch	LPR inch	PHD inch	ZEFP	300.05 ◁ 25° ASG4000 HM Through hole 49 831 ...	300.45 ◁ 25° ASG4000 CERMET Through hole 49 828 ...
2.3858 - 2.5823	0.629	0.728	DC-0.3307	6	**xxxx** [1]	
2.3858 - 2.5823	0.629	0.688	DC-0.3307	6		**xxxx** [1]
2.5827 - 2.7791	0.629	0.728	DC-0.3307	6	**xxxx** [1]	
2.5827 - 2.7791	0.629	0.688	DC-0.3307	6		**xxxx** [1]
2.7795 - 2.9760	0.629	0.728	DC-0.3307	6	**xxxx** [1]	
2.7795 - 2.9760	0.629	0.688	DC-0.3307	6		**xxxx** [1]
2.9764 - 3.1335	0.629	0.728	DC-0.3307	6	**xxxx** [1]	
2.9764 - 3.1335	0.629	0.688	DC-0.3307	6		**xxxx** [1]
3.1339 - 3.3697	0.629	0.728	DC-0.3307	8	**xxxx** [1]	
3.1339 - 3.3697	0.629	0.688	DC-0.3307	8		**xxxx** [1]
3.3701 - 3.5665	0.629	0.728	DC-0.3307	8	**xxxx** [1]	
3.3701 - 3.5665	0.629	0.688	DC-0.3307	8		**xxxx** [1]
3.5669 - 3.7634	0.629	0.728	DC-0.3307	8	**xxxx** [1]	
3.5669 - 3.7634	0.629	0.688	DC-0.3307	8		**xxxx** [1]
3.7638 - 3.9602	0.629	0.728	DC-0.3307	8	**xxxx** [1]	
3.7638 - 3.9602	0.629	0.688	DC-0.3307	8		**xxxx** [1]
3.9606 - 4.3539	0.629	0.728	DC-0.3307	10	**xxxx** [1]	
3.9606 - 4.3539	0.629	0.688	DC-0.3307	10		**xxxx** [1]
P					●	●
M						
K						
N					○	
S						
H						
O						

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 52–56

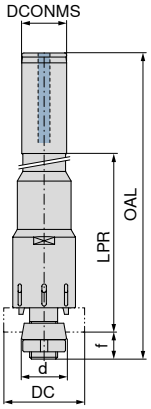
For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø 2.5000" ±.0005")

Assembly instructions can be found on → **Page 66+67**

Cutting ring holder for through hole machining

Supply details:

Holder includes positioning pin, taper ring and adjusting nut. Does not include cutting ring.



A ≤ 3xD

A ≤ 5xD

DC inch	KOMET no.	OAL inch	LPR inch	DCONMS inch	DCONMS mm	d mm	f inch	40 892 ...	40 893 ...
2.3858 - 2.7795	503.76.008	7.460	4.133	1.259	32	40.000	0.964	**07199**	
2.3858 - 2.7795	504.76.009	12.657	9.330	1.259	32	40.000	0.964		**07199**
2.7795 - 3.1338	503.76.009	7.460	4.133	1.259	32	40.000	0.964	**08099**	
2.7795 - 3.1338	504.76.010	12.657	9.330	1.259	32	40.000	0.964		**08099**
3.1339 - 3.5669	503.76.010	8.011	4.133	1.574	40	56.200	1.122	**09199**	
3.1339 - 3.5669	504.76.011	13.326	9.448	1.574	40	56.200	1.122		**09199**
3.5669 - 3.9606	503.76.011	8.011	4.133	1.574	40	56.200	1.122	**10199**	
3.5669 - 3.9606	504.76.012	13.326	9.448	1.574	40	56.200	1.122		**10199**

Position Pin

Taper Ring

Adjustic Nut

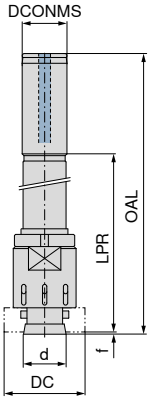
Spare parts DC	40 950 ...	40 950 ...	40 950 ...
2.3858 - 2.7795	**50700**	**50500**	**50100**
2.7795 - 3.1338	**50700**	**50500**	**50100**
3.1339 - 3.5669	**50800**	**50600**	**50200**
3.5669 - 3.9606	**50800**	**50600**	**50200**

Assembly instructions can be found on → **Page 66+67**

Cutting ring holder for blind hole machining

Supply details:

Holder includes bushing, taper screw and adjusting nut. Does not include cutting ring.



A ≤ 3xD

A ≤ 5xD

DC inch	KOMET no.	OAL inch	LPR inch	DCONMS inch	DCONMS mm	d inch	f inch	40 895 ...	40 897 ...
2.3858 - 2.7795	513.81.008	6.555	4.133	1.259	32	1.456	0.059	**07199**	
2.3858 - 2.7795	514.81.008	11.752	9.330	1.259	32	1.456	0.059		**07199**
2.7795 - 3.1338	513.81.009	6.555	4.133	1.259	32	1.456	0.059	**08099**	
2.7795 - 3.1338	514.81.009	11.752	9.330	1.259	32	1.456	0.059		**08099**
3.1339 - 3.5669	513.81.010	6.948	4.133	1.574	40	2.094	0.059	**09199**	
3.1339 - 3.5669	514.81.010	12.263	9.448	1.574	40	2.094	0.059		**09199**
3.5669 - 3.9606	513.81.011	6.948	4.133	1.574	40	2.094	0.059	**10199**	
3.5669 - 3.9606	514.81.011	12.263	9.448	1.574	40	2.094	0.059		**10199**

Bushing

Taper Screw

Adjustic Nut

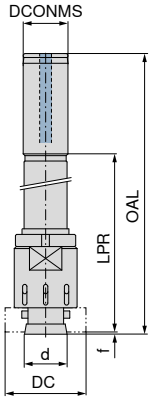
Spare parts DC	40 950 ...	40 950 ...	40 950 ...
2.3858 - 2.7795	**51500**	**51300**	**50300**
2.7795 - 3.1338	**51600**	**51300**	**50300**
3.1339 - 3.5669	**51700**	**51400**	**50400**
3.5669 - 3.9606	**51800**	**51400**	**50400**

Assembly instructions can be found on → **Page 66+67**

Cutting ring holder for blind hole machining

Supply details:

Holder includes bushing, taper screw and adjusting nut. Does not include cutting ring.



A ≤ 3xD

A ≤ 5xD

DC inch	KOMET no.	OAL inch	LPR inch	DCONMS inch	DCONMS mm	d inch	f inch	40 894 ...	40 896 ...
2.3858 - 2.7795	513.76.008	6.555	4.133	1.259	32	1.456	0.059	**07199**	
2.3858 - 2.7795	514.76.008	11.752	9.330	1.259	32	1.456	0.059		**07199**
2.7795 - 3.1338	513.76.009	6.555	4.133	1.259	32	1.456	0.059	**08099**	
2.7795 - 3.1338	514.76.009	11.752	9.330	1.259	32	1.456	0.059		**08099**
3.1339 - 3.5669	513.76.010	6.948	4.133	1.574	40	2.094	0.059	**09199**	
3.1339 - 3.5669	514.76.010	12.263	9.448	1.574	40	2.094	0.059		**09199**
3.5669 - 3.9606	513.76.011	6.948	4.133	1.574	40	2.094	0.059	**10199**	
3.5669 - 3.9606	514.76.011	12.263	9.448	1.574	40	2.094	0.059		**10199**

Bushing

Taper Screw

Adjustic Nut

Spare parts DC	40 950 ...	40 950 ...	40 950 ...
2.3858 - 2.7795	**51500**	**51100**	**50300**
2.7795 - 3.1338	**51600**	**51100**	**50300**
3.1339 - 3.5669	**51700**	**51200**	**50400**
3.5669 - 3.9606	**51800**	**51200**	**50400**

Assembly instructions can be found on → **Page 66+67**

Monomax – Selection guide – Through hole

Ø			.2205 – 1.0196 inch								
KOMET no. (3xD)			56J.65	56.J65	56J.17	56J.71	56J.71	56J.71	56J.93	56J.93	56J.21
KOMET no. (5xD)			56R.65	56.R65	56R.17	56R.71	56R.71	56R.71	56R.93	56R.93	56R.21
Grind geometry			ASG0106	ASG3000	ASG0706	ASG4000	ASG3000	ASG0106	ASG4000	ASG3000	ASG03
Lead angle			45°	45°	45°/8°	45°	45°	45°	25°	45°	30°/2°
Grade / coating			DBG-P	DBG-P	DBC	TiN	TIN	TiN	DST	DST	K10
Article no. (3xD)			49 652	49 676	49 648	49 688	49 605	49 656	49 635	49 625	49 672
Article no. (5xD)			49 653	49 677	49 649	49 689	49 606	49 661	49 636	49 626	49 673
Application			Through hole								
Material sub-group		Index									
P	Non alloyed steel	P.1.1									
		P.1.2									
		P.1.3				●	○		●	●	
		P.1.4									
		P.1.5									
	Low alloyed steel	P.2.1									
		P.2.2					○		●	●	
		P.2.3									
		P.2.4	●								
	High-alloy steel and high-alloy tool steel	P.3.1									
		P.3.2									
		P.3.3	●					○			
	Stainless steel	P.4.1									
		P.4.2									
M	Stainless steel	M.1.1									
		M.2.1	●					○			
		M.3.1									
K	Grey cast iron	K.1.1		●			○				
		K.1.2									
	Spherulitic graphite cast iron	K.2.1		●					○	●	
		K.2.2									
	Malleable iron	K.3.1		●					○	●	
		K.3.2									
N	Aluminum alloys,	N.1.1									
		N.1.2									
	Aluminium-Gusslegierungen	N.2.1			●						
		N.2.2									
		N.2.3									
	Copper and copper alloys (Bronze, Brass)	N.3.1								○	
		N.3.2					●				
		N.3.3									
	Magnesium alloys	N.4.1									
S	Heat resistant alloys	S.1.1									
		S.1.2									
		S.2.1									
		S.2.2									
		S.2.3									
	Titanium alloys	S.3.1									
		S.3.2									●
		S.3.3									
O	Non-metal materials	O.1.1									
		O.1.2									
		O.2.1									
		O.2.2									
		O.3.1			○						

Applications:
Main application ●
Additional range of application ○

3

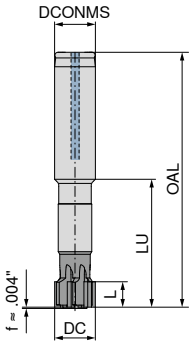
Monomax – Selection guide – Blind hole

Ø			.2205 – 1.0196 inch						
KOMET no. (3xD)			56H.65	56H.65	56H.71	56H.71	56H.17	56H.93	56H.21
KOMET no. (5xD)			56Q.65	56Q.65	56Q.71	56Q.71	56Q.17	56Q.93	56Q.21
Grind geometry			ASG3000	ASG0106	ASG3000	ASG0106	ASG0706	ASG3000	ASG03
Lead angle			45°	45°	45°	45°	45°/8°	45°	30°/2°
Grade / coating			DBG-P	DBG-P	TiN	TiN	DBC	DST	K10
Article no. (3xD)			49 657	49 644	49 684	49 660	49 640	49 680	49 668
Article no. (5xD)			49 665	49 645	49 685	49 664	49 641	49 681	49 669
Application			Blind hole						
	Material sub-group	**Index**							
P	Non alloyed steel	P.1.1							
		P.1.2							
		P.1.3	●		○			●	
		P.1.4							
		P.1.5							
	Low alloyed steel	P.2.1							
		P.2.2	●		○			●	
		P.2.3							
		P.2.4	●						
	High-alloy steel and high-alloy tool steel	P.3.1							
		P.3.2							
		P.3.3		●		○			
	Stainless steel	P.4.1							
		P.4.2							
M	Stainless steel	M.1.1							
		M.2.1		●		○			
		M.3.1							
K	Grey cast iron	K.1.1	●		○				
		K.1.2							
	Spherulitic graphite cast iron	K.2.1	●					●	
		K.2.2							
	Malleable iron	K.3.1	●					●	
		K.3.2							
N	Aluminum alloys,	N.1.1							
		N.1.2							
	Aluminium-Gusslegierungen	N.2.1					●		
		N.2.2							
		N.2.3							
	Copper and copper alloys (Bronze, Brass)	N.3.1						○	
		N.3.2			●				
		N.3.3							
	Magnesium alloys	N.4.1							
S	Heat resistant alloys	S.1.1							
		S.1.2							
		S.2.1							
		S.2.2							
		S.2.3							
	Titanium alloys	S.3.1							
		S.3.2							●
		S.3.3							
O	Non-metal materials	O.1.1							
		O.1.2							
		O.2.1							
		O.2.2							
		O.3.1					○		

Applications:	Main application	●
	Additional range of application	○

Monomax – High-speed reamers, short

- ▲ adjustable for smallest bore tolerances
- ▲ wear compensation within the tolerance zone
- ▲ retraction from the hole at 3–4 times the cutting feed rate
- ▲ up to tolerance class IT 5
- ▲ ZEFP = number of cutting edges



	DST	DBC	DBG-P	DST	TiN
					
	56J.93 ≤ 3xD ◁ 45° ASG3000 CERMET Through hole	56J.17 ≤ 3xD ◁ 45/8° ASG0706 HM Through hole	56J.65 ≤ 3xD ◁ 45° ASG0106 HM Through hole	56J.93 ≤ 3xD ◁ 25° ASG4000 CERMET Through hole	56J.71 ≤ 3xD ◁ 45° ASG3000 HM Through hole
	49 625 ...	**49 648 ...**	**49 652 ...**	**49 635 ...**	**49 605 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP									
0.2205 - 0.3504	3.346	1.574	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.6259	3.740	1.968	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	3.937	1.968	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	4.724	2.362	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]

P	●		●	●	○
M			●		
K	●			○	○
N	○	●			●
S					
H					
O		○			

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 46–51

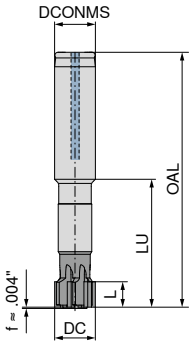
Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

3

Monomax – High-speed reamers, short

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



	K10	DBG-P	TiN	TiN
				
	56J.21 ≤ 3xD ◁ 30/2° ASG03 HM Through hole	56J.65 ≤ 3xD ◁ 45° ASG3000 HM Through hole	56J.17 ≤ 3xD ◁ 25° ASG4000 HM Through hole	56J.71 ≤ 3xD ◁ 45° ASG0106 HM Through hole
	49 672 ...	**49 676 ...**	**49 688 ...**	**49 656 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP							
0.2205 - 0.3504	3.346	1.574	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.6259	3.740	1.968	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	3.937	1.968	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	4.724	2.362	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]

P											●		○
M													○
K									●				
N													
S					●								
H													
O													

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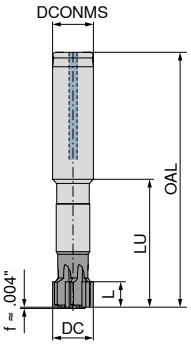
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, short

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



56H.65
≤ 3xD
◁ 45°
ASG0106
HM
Blind hole

49 644 ...

56H.17
≤ 3xD
◁ 45/8°
ASG0706
HM
Blind hole

49 640 ...

56H.65
≤ 3xD
◁ 45°
ASG3000
HM
Blind hole

49 657 ...

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP					
0.2205 - 0.3504	3.346	1.574	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.6259	3.740	1.968	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	3.937	1.968	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	4.724	2.362	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]

P							●				●
M							●				
K											●
N									●		
S											
H											
O									○		

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

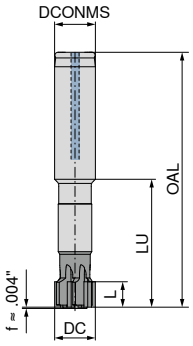
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, short

- ▲ adjustable for smallest bore tolerances
- ▲ wear compensation within the tolerance zone
- ▲ retraction from the hole at 3–4 times the cutting feed rate
- ▲ up to tolerance class IT 5
- ▲ ZEFP = number of cutting edges



	TiN	K10	DST	TiN
				
	56H.71 ≤ 3xD ◁ 45° ASG0106 HM Blind hole	56H.21 ≤ 3xD ◁ 30/2° ASG03 HM Blind hole	56H.93 ≤ 3xD ◁ 45° ASG3000 CERMET Blind hole	56H.71 ≤ 3xD ◁ 45° ASG3000 HM Blind hole
	49 660 ...	**49 668 ...**	**49 680 ...**	**49 684 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP							
0.2205 - 0.3504	3.346	1.574	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.6259	3.740	1.968	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	3.937	1.968	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	4.724	2.362	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]

P							○				●		○
M							○						
K											●		○
N											○		●
S									●				
H													
O													

1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

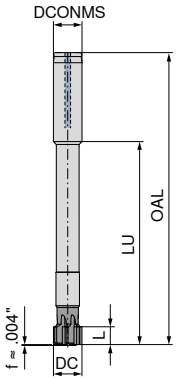
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, long

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



	DST	DBC	DBG-P	DST	TiN
					
	56R.93 ≤ 5xD ◁ 45° ASG3000 CERMET Through hole	56R.17 ≤ 5xD ◁ 45/8° ASG0706 HM Through hole	56R.65 ≤ 5xD ◁ 45° ASG0106 HM Through hole	56R.93 ≤ 5xD ◁ 25° ASG4000 CERMET Through hole	56R.71 ≤ 5xD ◁ 45° ASG3000 HM Through hole
	49 626 ...	**49 649 ...**	**49 653 ...**	**49 636 ...**	**49 606 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP									
0.2205 - 0.3504	5.118	3.346	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.3504 - 0.3897	5.118	3.346	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.3898 - 0.6259	6.299	4.527	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.6260 - 0.7441	7.086	5.118	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	
0.7441 - 1.0197	7.874	5.511	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]	

P	●		●	●	○
M			●		
K	●			○	○
N	○	●			●
S					
H					
O		○			

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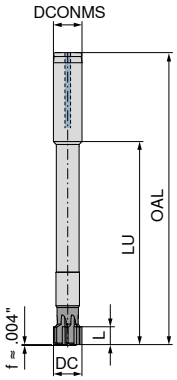
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, long

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



	TiN	DBG-P	K10	TiN
				
	56R.71 ≤ 5xD ◁ 45° ASG4000 HM Through hole	56R.65 ≤ 5xD ◁ 45° ASG3000 HM Through hole	56R.21 ≤ 5xD ◁ 30/2° ASG03 HM Through hole	56R.71 ≤ 5xD ◁ 45° ASG0106 HM Through hole
	49 689 ...	**49 677 ...**	**49 673 ...**	**49 661 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP							
0.2205 - 0.3504	5.118	3.346	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.3897	5.118	3.346	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3898 - 0.6259	6.299	4.527	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	7.086	5.118	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	7.874	5.511	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]

P	●			○
M				○
K		●		
N				
S			●	
H				
O				

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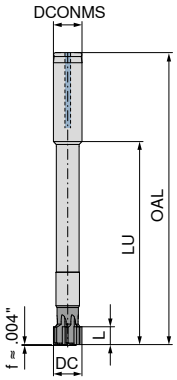
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, long

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



56Q.65
≤ 5xD
◁ 45°
ASG0106
HM
Blind hole

56Q.17
≤ 5xD
◁ 45/8°
ASG0706
HM
Blind hole

56Q.65
≤ 5xD
◁ 45°
ASG3000
HM
Blind hole

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP	49 645 ...	49 641 ...	49 665 ...
0.2205 - 0.3504	5.118	3.346	0.393	0.472	12	4	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.3504 - 0.3897	5.118	3.346	0.393	0.472	12	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.3898 - 0.6259	6.299	4.527	0.393	0.472	12	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.6260 - 0.7441	7.086	5.118	0.393	0.629	16	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
0.7441 - 1.0197	7.874	5.511	0.393	0.787	20	6	**xxxx** [1]	**xxxx** [1]	**xxxx** [1]
P							●		●
M							●		
K									●
N								●	
S									
H									
O								○	

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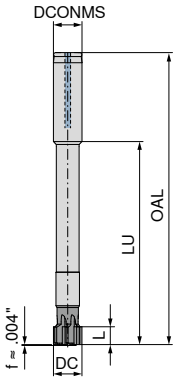
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Monomax – High-speed reamers, long

- adjustable for smallest bore tolerances
- wear compensation within the tolerance zone
- retraction from the hole at 3–4 times the cutting feed rate
- up to tolerance class IT 5
- ZEFP = number of cutting edges



	DST	TiN	K10	TiN
				
	56Q.93 ≤ 5xD ◁ 45° ASG3000 CERMET Blind hole	56Q.71 ≤ 5xD ◁ 45° ASG3000 HM Blind hole	56Q.21 ≤ 5xD ◁ 30/2° ASG03 HM Blind hole	56Q.71 ≤ 5xD ◁ 45° ASG0106 HM Blind hole
	49 681 ...	**49 685 ...**	**49 669 ...**	**49 664 ...**

DC inch	OAL inch	LU inch	L inch	DCONMS $_{h6}$ inch	DCONMS mm	ZEFP							
0.2205 - 0.3504	5.118	3.346	0.393	0.472	12	4	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3504 - 0.3897	5.118	3.346	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.3898 - 0.6259	6.299	4.527	0.393	0.472	12	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.6260 - 0.7441	7.086	5.118	0.393	0.629	16	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
0.7441 - 1.0197	7.874	5.511	0.393	0.787	20	6	**xxxx** [1]		**xxxx** [1]		**xxxx** [1]		**xxxx** [1]
P							●		○				○
M													○
K							●		○				
N							○		●				
S											●		
H													
O													

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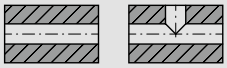
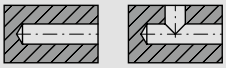
→ v_c Page 46–51

Do not heat shrink tools !

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

PCD Reamers – Selection guide

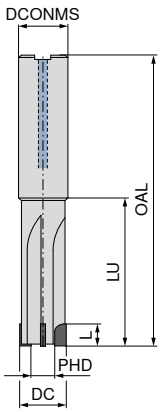
Ø			.1575 – .7913 inch			
KOMET no.			690.10	690.11	690.13	690.14
Number of flutes			2	4	2	4
Grind geometry			ASG1101		ASG1101	
Lead angle			45°		45°	
Grade / coating			PCD-U		PCD-U	
Article no.			49 200	49 201	49 204	49 205
Application			Through hole 		Blind hole 	
Material sub-group		**Index**				
P	**Non alloyed steel**	**P.1.1**				
		P.1.2				
		P.1.3				
		P.1.4				
		P.1.5				
	Low alloyed steel	**P.2.1**				
		P.2.2				
		P.2.3				
		P.2.4				
	High-alloy steel and high-alloy tool steel	**P.3.1**				
		P.3.2				
		P.3.3				
	Stainless steel	**P.4.1**				
		P.4.2				
M	**Stainless steel**	**M.1.1**				
		M.2.1				
		M.3.1				
K	**Grey cast iron**	**K.1.1**				
		K.1.2				
	Spherulitic graphite cast iron	**K.2.1**				
		K.2.2				
	Malleable iron	**K.3.1**				
		K.3.2				
N	**Aluminum alloys,**	**N.1.1**				
		N.1.2				
	Aluminium-Gusslegierungen	**N.2.1**	●		●	
		N.2.2				
		N.2.3				
	Copper and copper alloys (Bronze, Brass)	**N.3.1**				
		N.3.2				
		N.3.3				
	Magnesium alloys	**N.4.1**	●		●	
S	**Heat resistant alloys**	**S.1.1**				
		S.1.2				
		S.2.1				
		S.2.2				
		S.2.3				
	Titanium alloys	**S.3.1**				
		S.3.2				
		S.3.3				
O	**Non-metal materials**	**O.1.1**				
		O.1.2				
		O.2.1				
		O.2.2				
		O.3.1				

Applications:
Main application ●
Additional range of application ○

3

PCD – Reamers

- Solid Carbide body
- PHD = Diameter for face machining
- ZEFP = Number of cutting edges



PCD-U

690.13
~A
90°
ASG1101
HM
Blind hole

PCD-U

690.14
~A
90°
ASG1101
HM
Blind hole

DC inch	OAL inch	L inch	LU inch	PHD inch	DCONMS h6 inch	DCONMS mm	ZEFP	49 204 ...	49 205 ...
0.1575 - 0.1811	2.519	0.275	1.102	DC-0.0945	0.236	6	2	xxxx 1)	
0.1811 - 0.2008	2.519	0.275	1.102	DC-0.1024	0.236	6	2	xxxx 1)	
0.2008 - 0.2205	2.519	0.275	1.102	DC-0.1063	0.236	6	2	xxxx 1)	
0.2205 - 0.2402	2.795	0.275	1.377	DC-0.1102	0.236	6	2	xxxx 1)	
0.2402 - 0.2598	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2599 - 0.2795	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2796 - 0.2992	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2993 - 0.3189	2.992	0.275	1.574	DC-0.1417	0.314	8	2	xxxx 1)	
0.3189 - 0.3386	3.346	0.275	1.574	DC-0.1417	0.472	12	2	xxxx 1)	
0.3386 - 0.3583	3.346	0.275	1.574	DC-0.1614	0.472	12	2	xxxx 1)	
0.3583 - 0.3976	3.346	0.275	1.574	DC-0.1811	0.472	12	2	xxxx 1)	
0.3780 - 0.3976	3.346	0.275	1.574	DC-0.1496	0.472	12	4		xxxx 1)
0.3977 - 0.4567	3.740	0.275	1.968	DC-0.1969	0.472	12	2	xxxx 1)	
0.3977 - 0.4567	3.740	0.275	1.968	DC-0.1496	0.472	12	4		xxxx 1)
0.4567 - 0.5551	3.740	0.275	1.968	DC-0.2362	0.472	12	2	xxxx 1)	
0.4567 - 0.5551	3.740	0.275	1.968	DC-0.1496	0.472	12	4		xxxx 1)
0.5552 - 0.5945	3.858	0.275	1.968	DC-0.2598	0.629	16	2	xxxx 1)	
0.5552 - 0.5945	3.858	0.275	1.968	DC-0.1535	0.629	16	4		xxxx 1)
0.5945 - 0.6339	3.858	0.275	1.968	DC-0.2795	0.629	16	2	xxxx 1)	
0.5945 - 0.6339	3.858	0.275	1.968	DC-0.1535	0.629	16	4		xxxx 1)
0.6339 - 0.7126	4.251	0.275	2.362	DC-0.3150	0.629	16	2	xxxx 1)	
0.6339 - 0.7126	4.251	0.275	2.362	DC-0.1811	0.629	16	4		xxxx 1)
0.7126 - 0.7913	4.330	0.275	2.362	DC-0.3386	0.787	20	2	xxxx 1)	
0.7126 - 0.7913	4.330	0.275	2.362	DC-0.1811	0.787	20	4		xxxx 1)

P		
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O		

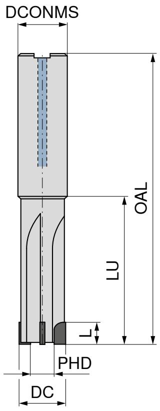
1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 62

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

PCD - Reamers

- ▲ Solid Carbide body
- ▲ PHD = Diameter for face machining
- ▲ ZEFP = Number of cutting edges



3

	PCD-U	PCD-U
		
	690.10	690.11
	~A	~A
	90°	90°
	ASG1101	ASG1101
	HM	HM
	Through hole	Through hole

DC inch	OAL inch	L inch	LU inch	PHD inch	DCONMS h6 inch	DCONMS mm	ZEFP	49 200 ...	49 201 ...
0.2205 - 0.2402	2.795	0.275	1.377	DC-0.1102	0.236	6	2	xxxx 1)	
0.2402 - 0.2598	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2599 - 0.2795	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2796 - 0.2992	2.992	0.275	1.574	DC-0.1339	0.314	8	2	xxxx 1)	
0.2993 - 0.3189	2.992	0.275	1.574	DC-0.1417	0.314	8	2	xxxx 1)	
0.3189 - 0.3386	3.346	0.275	1.574	DC-0.1417	0.472	12	2	xxxx 1)	
0.3386 - 0.3583	3.346	0.275	1.574	DC-0.1614	0.472	12	2	xxxx 1)	
0.3583 - 0.3976	3.346	0.275	1.574	DC-0.1811	0.472	12	2	xxxx 1)	
0.3780 - 0.3976	3.346	0.275	1.574	DC-0.1417	0.472	12	4		xxxx 1)
0.3977 - 0.4567	3.740	0.275	1.968	DC-0.1969	0.472	12	2	xxxx 1)	
0.3977 - 0.4567	3.740	0.275	1.968	DC-0.1496	0.472	12	4		xxxx 1)
0.4567 - 0.5551	3.740	0.275	1.968	DC-0.2362	0.472	12	2	xxxx 1)	
0.4567 - 0.5551	3.740	0.275	1.968	DC-0.1496	0.472	12	4		xxxx 1)
0.5552 - 0.5945	3.858	0.275	1.968	DC-0.2598	0.629	16	2	xxxx 1)	
0.5552 - 0.5945	3.858	0.275	1.968	DC-0.1535	0.629	16	4		xxxx 1)
0.5945 - 0.6339	3.858	0.275	1.968	DC-0.2795	0.629	16	2	xxxx 1)	
0.5945 - 0.6339	3.858	0.275	1.968	DC-0.1535	0.629	16	4		xxxx 1)
0.6339 - 0.7126	4.251	0.275	2.362	DC-0.3150	0.629	16	2	xxxx 1)	
0.6339 - 0.7126	4.251	0.275	2.362	DC-0.1811	0.629	16	4		xxxx 1)
0.7126 - 0.7913	4.330	0.275	2.362	DC-0.3386	0.787	20	2	xxxx 1)	
0.7126 - 0.7913	4.330	0.275	2.362	DC-0.1811	0.787	20	4		xxxx 1)

	49 200 ...	49 201 ...
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1) Not available from stock, articles are non-returnable and cannot be exchanged / Minimum order 2 pieces

→ v_c Page 62

For xxxx please indicate piece part bore diameter and tolerance. (e.g. Ø .5000" ±.0005")

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength lbf/in²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0.15 % C	Annealed	60900 lbf/in² / 125 HB	1.0401	1015	1.0301	1010
		P.1.2	< 0.45 % C	Annealed	92800 lbf/in² / 190 HB	1.1191	1045	1.0737	12L14
		P.1.3		Tempered	121800 lbf/in² / 250 HB	1.1191	1045	1.0503	1043
		P.1.4	< 0.75 % C	Annealed	132000 lbf/in² / 270 HB	1.1223	1060	1.0535	1055
		P.1.5		Tempered	146500 lbf/in² / 300 HB	1.1223	1060	1.1274	1095
	Low-alloy steel	P.2.1		Annealed	88500 lbf/in² / 180 HB	1.7131	5115	1.6523	8620
		P.2.2		Tempered	134900 lbf/in² / 275 HB	1.7131	5115	1.6582	4340
		P.2.3		Tempered	146500 lbf/in² / 300 HB	1.7225	4142	1.7131	5115
		P.2.4		Tempered	174000 lbf/in² / 375 HB	1.7225	4142	17223	4140
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	98600 lbf/in² / 200 HB	1.4021	420	1.2379	D2
		P.3.2		Hardened and tempered	159500 lbf/in² / 300 HB	1.2343	H11	1.3343	M2
		P.3.3		Hardened and tempered	188500 lbf/in² / 400 HB	1.2343	H11	1.2363	A2
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	98600 lbf/in² / 200 HB	1.4016	430	1.4125	440C
		P.4.2	Martensitic	Tempered	117500 lbf/in² / 250 HB	1.4112	S44003	1.4021	420
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	88500 lbf/in² / 200 HB	1.4301	304	1.4401	316
		M.2.1	Austenitic	Tempered	300 HB	1.4841	314	1.4568	17-7 PH
		M.3.1	Austenitic / ferritic (Duplex)		113100 lbf/in² / 230 HB	1.4462	S32205	1.4410	S32750
K	Grey cast iron	K.1.1	Pearlitic / ferritic		88500 lbf/in² / 180 HB	0.6010	A48-20B	0.6025	A48-40 B
		K.1.2	Pearlitic (martensitic)		127600 lbf/in² / 260 HB	0.6030	A48-45B	0.6040	A48-60 B
	Spherulitic graphite cast iron	K.2.1	Ferritic		78300 lbf/in² / 160 HB	0.7040	60-40-18	0.7050	65-45-12
		K.2.2	Pearlitic		122600 lbf/in² / 250 HB	0.7070	100-70-03	0.7660	A439 Type D2
	Malleable iron	K.3.1	Ferritic		63800 lbf/in² / 130 HB	0.8035	GTW-35-04		
		K.3.2	Pearlitic		113100 lbf/in² / 230 HB	0.8170	70003		
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	A91060	3.0255	A91060
		N.1.2	Hardenable		49300 lbf/in² / 100 HB	3.1355	2024	3.1355	2024
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		36300 lbf/in² / 75 HB	3.2581	A04130 / A413-0	3.2581	A04130 / A413-0
		N.2.2	≤ 12 % Si, hardenable		43500 lbf/in² / 90 HB	3.2134	G-AlSi5Cu1Mg		
		N.2.3	> 12 % Si, non-hardenable		63800 lbf/in² / 130 HB		G-AlSi17Cu4Mg		
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		54400 lbf/in² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0380	C37700
		N.3.2	CuZn, CuSnZn		43500 lbf/in² / 90 HB	2.0331	CuZn15	2.0331	C34000
		N.3.3	CuSn, lead-free copper and electrolytic copper		49300 lbf/in² / 100 HB	2.0060	E-Cu57		
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn		
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	98600 lbf/in² / 200 HB	1.4864	X12NiCrSi 36-16	1.4864	330
		S.1.2			137800 lbf/in² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4980	S66286
		S.2.1	Ni or Co basis	Annealed	121800 lbf/in² / 250 HB	2.4856	Inconel 625	2.4812	Hastelloy C
		S.2.2			171100 lbf/in² / 350 HB	2.4952	Nimonic 80A	2.4668	Inconel 718
		S.2.3		Cast	156600 lbf/in² / 320 HB	2.4674	Nimocast PK24	2.4670	Nimocast 713
	Titanium alloys	S.3.1	Pure titanium		5800 lbf/in²	3.7025	Ti99,8		
		S.3.2	Alpha + beta alloys		152300 lbf/in²	3.7165	TiAl6V4		
		S.3.3	Beta alloys		203100 lbf/in² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr		
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		≤ 21800 lbf/in²				
		O.1.2	Plastics, thermoplastic		≤ 14500 lbf/in²				
		O.2.1	Aramid fibre-reinforced		≤ 145000 lbf/in²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 145000 lbf/in²				
		O.3.1	Graphite						

*** Tensile Strength at Rupture (Rm)**

Cutting data standard values for REAMAX TS

	Grade / coating	DBG-P						DBG-P			
	Article no. / type	49 586 ..., 49 585 ... / 75J.65, 75H.65 – ASG3000						49 521 ..., 49 571 ... / 75J.65, 75H.65 – ASG0106			
	Nominal Ø in inches	.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590			.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590
	Reaming allowance Ø	.008 – .012	.008 – .012	.012 – .016	.012 – .016			.008 – .012	.008 – .012	.012 – .016	.012 – .016
	Number of flutes	6	6	8	10			6	6	8	10
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.1.2	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.1.3	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.1.4	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.1.5	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.2.1	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.2.2	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.2.3	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.2.4	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110						
P.3.1							**100** (80–160)	**100** (80–130)	.024–.035	.031–.043	.043–.059	.059–.091
P.3.2							**100** (80–160)	**100** (80–130)	.024–.035	.031–.043	.043–.059	.059–.091
P.3.3							**100** (80–160)	**100** (80–130)	.024–.035	.031–.043	.043–.059	.059–.091
P.4.1							**150** (110–200)	**130** (110–160)	.024–.035	.031–.043	.043–.059	.059–.091
P.4.2							**150** (110–200)	**130** (110–160)	.024–.035	.031–.043	.043–.059	.059–.091
M.1.1							**150** (110–200)	**130** (110–160)	.024–.035	.031–.043	.043–.059	.059–.091
M.2.1							**150** (110–200)	**130** (110–160)	.024–.035	.031–.043	.043–.059	.059–.091
M.3.1							**100** (80–160)	**100** (80–130)	.024–.035	.031–.043	.043–.059	.059–.091
K.1.1	**490** (430–720)	**390** (330–490)	.035–.051	.047–.067	.063–.091	.091–.134						
K.1.2	**490** (430–720)	**390** (330–490)	.035–.051	.047–.067	.063–.091	.091–.134						
K.2.1	**570** (490–980)	**490** (430–590)	.035–.051	.047–.067	.063–.091	.091–.134						
K.2.2	**390** (330–590)	**390** (330–490)	.031–.043	.039–.055	.051–.075	.075–.110						
K.3.1	**390** (330–590)	**390** (330–490)	.031–.043	.039–.055	.051–.075	.075–.110						
K.3.2	**390** (330–590)	**390** (330–490)	.031–.043	.039–.055	.051–.075	.075–.110						
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
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S.2.2												
S.2.3												
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S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

3

Cutting data standard values for REAMAX TS

	Grade / coating	TiN						TiN					
	Article no. / type	49 534 ..., 49 535 ... / 75J.71, 75H.71 – ASG3000						49 596 ... / 75J.71 – ASG4000					
	Nominal Ø in inches	.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590			.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590		
	Reaming allowance Ø	.008 – .012	.008 – .012	.012 – .016	.012 – .016			.008 – .012	.008 – .012	.012 – .016	.012 – .016		
	Number of flutes	6	6	8	10			6	6	8	10		
Index	v_c ft/min		f	f	f	f		v_c ft/min		f	f	f	f
	3xD	5xD	inch/rev.	inch/rev.	inch/rev.	inch/rev.		3xD	5xD	inch/rev.	inch/rev.	inch/rev.	inch/rev.
P.1.1	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110		**330** (260–460)	**260** (200–390)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.2	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110		**330** (260–460)	**260** (200–390)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.3	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110		**330** (260–460)	**260** (200–390)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.4	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110		**330** (260–460)	**260** (200–390)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.5	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110		**330** (260–460)	**260** (200–390)	.039–.051	.047–.067	.067–.091	.094–.134
P.2.1	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110							
P.2.2	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110							
P.2.3	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110							
P.2.4	330 (260–460)	260 (200–390)	.031–.004	.039–.055	.051–.075	.075–.110							
P.3.1													
P.3.2													
P.3.3													
P.4.1													
P.4.2													
M.1.1													
M.2.1													
M.3.1													
K.1.1	260 (200–430)	260 (200–390)	.035–.051	.047–.067	.063–.091	.091–.134							
K.1.2	260 (200–430)	260 (200–390)	.035–.051	.047–.067	.063–.091	.091–.134							
K.2.1													
K.2.2													
K.3.1													
K.3.2													
N.1.1													
N.1.2													
N.2.1													
N.2.2													
N.2.3													
N.3.1	**390** (330–660)	**390** (330–660)	.035–.051	.043–.067	.059–.091	.091–.134							
N.3.2	**260** (200–490)	**260** (200–390)	.028–.043	.035–.055	.047–.075	.067–.102							
N.3.3	**390** (330–660)	**390** (330–490)	.028–.043	.035–.055	.047–.075	.067–.102							
N.4.1													
S.1.1													
S.1.2													
S.2.1													
S.2.2													
S.2.3													
S.3.1													
S.3.2													
S.3.3													
H.1.1													
H.1.2													
H.1.3													
H.1.4													
H.2.1													
H.3.1													
O.1.1													
O.1.2													
O.2.1													
O.2.2													
O.3.1													

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for REAMAX TS

	Grade / coating	TiN				DBC			
	Article no. / type	49 520 ..., 49 527 ... / 75J.71, 75H.71 – ASG0106				49 526 ..., 49 580 ... / 75J.17, 75H.17 – ASG0706			
	Nominal Ø in inches	.7086-.8660	.8661-1.2519	1.2520-2.0471	2.0472-2.5590	.7086-.8660	.8661-1.2519	1.2520-2.0471	2.0472-2.5590
	Reaming allowance Ø	.008 - .012	.008 - .012	.012 - .016	.012 - .016	.008 - .012	.008 - .012	.012 - .016	.012 - .016
	Number of flutes	6	6	8	10	6	6	8	10
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1												
P.1.2												
P.1.3												
P.1.4												
P.1.5												
P.2.1												
P.2.2												
P.2.3												
P.2.4												
P.3.1	70 (50-110)	70 (50-90)	.024-.035	.031-.043	.043-.059	.059-.091						
P.3.2	70 (50-110)	70 (50-90)	.024-.035	.031-.043	.043-.059	.059-.091						
P.3.3	70 (50-110)	70 (50-90)	.024-.035	.031-.043	.043-.059	.059-.091						
P.4.1	100 (70-130)	90 (70-110)	.024-.035	.031-.043	.043-.059	.059-.091						
P.4.2	100 (70-130)	90 (70-110)	.024-.035	.031-.043	.043-.059	.059-.091						
M.1.1	100 (70-130)	90 (70-110)	.024-.035	.031-.043	.043-.059	.059-.091						
M.2.1	100 (70-130)	90 (70-110)	.024-.035	.031-.043	.043-.059	.059-.091						
M.3.1	70 (50-110)	70 (50-90)	.024-.035	.031-.043	.043-.059	.059-.091						
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
N.1.1							**490** (430-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
N.1.2							**490** (430-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
N.2.1							**660** (590-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
N.2.2							**660** (590-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
N.2.3							**660** (590-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
N.3.1												
N.3.2												
N.3.3												
N.4.1							**490** (430-980)	**490** (430-660)	.035-.051	.043-.067	.059-.091	.087-.134
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1							820 (720-890)	820 (720-890)	.035-.051	.043-.067	.059-.091	.087-.134

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for REAMAX TS

	Grade / coating	DST						DST			
	Article no. / type	49 544 ..., 40 539 ... / 75J.93, 75H.93 – ASG3000						49 597 ... / 75J.93 – ASG4000			
	Nominal Ø in inches	.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590			.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590
	Reaming allowance Ø	.008 – .012	.008 – .012	.012 – .016	.012 – .016			.008 – .012	.008 – .012	.012 – .016	.012 – .016
	Number of flutes	6	6	8	10			6	6	8	10
Index	v_c ft/min		f	f	f	f	v_c ft/min		f	f	f	f
	3xD	5xD	inch/rev.	inch/rev.	inch/rev.	inch/rev.	3xD	5xD	inch/rev.	inch/rev.	inch/rev.	inch/rev.
P.1.1	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.2	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.3	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.4	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.1.5	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.2.1	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.2.2	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.2.3	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.2.4	**490** (430–660)	**390** (330–520)	.031–.043	.039–.055	.051–.075	.075–.110	**490** (430–660)	**390** (330–520)	.039–.051	.047–.067	.067–.091	.094–.134
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1												
K.1.2												
K.2.1	**570** (490–980)	**490** (430–590)	.035–.051	.047–.067	.063–.091	.091–.134	**740** (660–980)	**590** (520–790)	.047–.063	.059–.079	.079–.106	.114–.161
K.2.2	**380** (330–490)	**330** (260–390)	.031–.043	.039–.055	.051–.075	.075–.110	**390** (330–490)	**330** (260–390)	.047–.063	.059–.079	.079–.106	.114–.161
K.3.1	**390** (330–590)	**390** (330–490)	.031–.043	.039–.055	.051–.075	.075–.110						
K.3.2	**390** (330–590)	**390** (330–490)	.031–.043	.039–.055	.051–.075	.075–.110	**390** (330–590)	**390** (330–490)	.039–.051	.047–.067	.067–.091	.094–.134
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1	490 (430–1050)	490 (430–660)	.035–.051	.043–.067	.059–.091	.083–.122						
N.3.2	490 (430–1050)	490 (430–660)	.035–.051	.043–.067	.059–.091	.083–.122						
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for REAMAX TS

	Grade / coating	DST				K10			
	Article no. / type	49 539 ... / 75H.93 – ASG3000				49 531 ..., 49 530 ... / 75J.21, 75H.21 – ASG03			
	Nominal Ø in inches	.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590	.7086–.8660	.8661–1.2519	1.2520–2.0471	2.0472–2.5590
	Reaming allowance Ø	.008 – .012	.008 – .012	.012 – .016	.012 – .016	.008 – .012	.008 – .012	.012 – .016	.012 – .016
	Number of flutes	6	6	8	10	6	6	8	10
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.1.2	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.1.3	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.1.4	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.1.5	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.2.1	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.2.2	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.2.3	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.2.4	**490** (430–660)	**390** (330–520)	.031–.043	.043–.055	.051–.075	.075–.110						
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1												
K.1.2												
K.2.1	**570** (490–980)	**490** (430–590)	.035–.051	.047–.067	.063–.091	.091–.134						
K.2.2	**390** (330–490)	**330** (260–390)	.031–.043	.043–.055	.051–.075	.075–.110						
K.3.1	**390** (330–590)	**390** (330–490)	.031–.043	.043–.055	.051–.075	.075–.110						
K.3.2	**390** (330–590)	**390** (330–490)	.031–.043	.043–.055	.051–.075	.075–.110						
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1	490 (430–1050)	490 (330–660)	.035–.051	.043–.067	.059–.091	.083–.122						
N.3.2	490 (430–1050)	490 (330–660)	.035–.051	.043–.067	.059–.091	.083–.122						
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1							**30** (20–40)	**30** (20–40)	.024–.035	.031–.047	.043–.063	.063–.094
S.3.2							**30** (20–40)	**30** (20–40)	.024–.035	.031–.047	.043–.063	.063–.094
S.3.3							**30** (20–40)	**30** (20–40)	.024–.035	.031–.047	.043–.063	.063–.094
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

3

Cutting data standard values for Monomax

	Grade / coating	DBG-P						DBG-P			
	Article no. / type	49 657 ..., 49 665 ... / 56H.65, 56Q.65 – ASG3000						49 676 ..., 49 677 ... / 56J.65, 56R.65 – ASG3000			
	Nominal Ø in inches	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196			.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196
	Reaming allowance Ø	.004 – .008	.004 – .012	.008 – .012	.008 –. 016			.004 – .008	.004 – .012	.008 – .012	.008 –. 016
	Number of flutes	4	6	6	6			4	6	6	6
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.1.2	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.1.3	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.1.4	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.1.5	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.2.1	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.2.2	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.2.3	**490** (430–660)	**390** (330–520)	.012–.020	.020–.028	.028–.039	0.90–1.30						
P.2.4	**200** (160–330)	**390** (330–520)	.008–.012	.016–.020	.020–.028	0.60–0.90						
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1	**490** (430–720)	**390** (330–490)	.016–.024	.028–.035	.035–.047	.043–.059	**490** (430–720)	**390** (330–490)	.016–.024	.028–.035	.035–.047	.043–.059
K.1.2	**490** (430–720)	**390** (330–490)	.016–.024	.028–.035	.035–.047	.043–.059	**490** (430–720)	**390** (330–490)	.016–.024	.028–.035	.035–.047	.043–.059
K.2.1	**570** (490–980)	**490** (430–590)	.016–.024	.028–.035	.035–.047	.043–.059	**570** (490–980)	**490** (430–590)	.016–.024	.028–.035	.035–.047	.043–.059
K.2.2	**390** (330–590)	**390** (330–490)	.012–.020	.020–.028	.028–.039	.035–.051	**390** (330–590)	**390** (330–490)	.012–.020	.020–.028	.028–.039	.035–.051
K.3.1	**490** (430–820)	**390** (330–520)	.016–.024	.028–.035	.035–.047	.043–.059	**490** (430–820)	**390** (330–520)	.016–.024	.028–.035	.035–.047	.043–.059
K.3.2	**390** (330–590)	**390** (330–490)	.012–.020	.020–.028	.028–.039	.035–.051	**390** (330–590)	**390** (330–490)	.012–.020	.020–.028	.028–.039	.035–.051
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for Monomax

	Grade / coating	DBG-P				TiN			
	Article no. / type	49 652 ..., 49 653... / 56J.65, 56R.65 – ASG0106				49 656, 49 661, 49 660, 49 664 / 56J.71, 56R.71, 56H.71, 56Q.71 – ASG0106			
	Nominal Ø in inches	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196
	Reaming allowance Ø	.004 – .008	.004 – .012	.008 – .012	.008 –. 016	.004 – .008	.004 – .012	.008 – .012	.008 –. 016
	Number of flutes	4	6	6	6	4	6	6	6
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1												
P.1.2												
P.1.3												
P.1.4												
P.1.5												
P.2.1												
P.2.2												
P.2.3												
P.2.4	**200** (160–330)	**200** (160–330)	.008–.012	.016–.020	.020–.028	.024–.035						
P.3.1	**130** (110–200)	**130** (110–200)	.008–.012	.016–.020	.020–.028	.024–.035	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039
P.3.2	**130** (110–200)	**130** (110–200)	.008–.012	.016–.020	.020–.028	.024–.035	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039
P.3.3	**100** (80–160)	**100** (80–130)	.012–.016	.016–.024	.024–.031	.028–.039	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039
P.4.1	**150** (110–200)	**130** (110–160)	.012–.016	.016–.024	.024–.031	.028–.039	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039
P.4.2	**150** (110–200)	**130** (110–160)	.012–.016	.016–.024	.024–.031	.028–.039	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039
M.1.1	**330** (260–520)	**100** (80–130)	.012–.016	.016–.024	.024–.031	.028–.039	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039
M.2.1	**330** (260–520)	**100** (80–130)	.012–.016	.016–.024	.024–.031	.028–.039	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039
M.3.1	**330** (260–520)	**100** (80–130)	.012–.016	.016–.024	.024–.031	.028–.039	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

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Cutting data standard values for Monomax

	Grade / coating	TiN						TiN			
	Article no. / type	49 605, 49 606, 49 684, 49 685 / 56J.71, 56R.71, 56H.71, 56Q.71 – ASG3000						49 688 ..., 49 689 ... / 56J.71, 56R.71 – ASG4000			
	Nominal Ø in inch	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196			.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196
	Reaming allowance Ø	.004 – .008	.004 – .012	.008 – .012	.008 –. 016			.004 – .008	.004 – .012	.008 – .012	.008 –. 016
	Number of flutes	4	6	6	6			4	6	6	6
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.		v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051		**330** (260–460)	**260** (200–390)	.016–.024	.028–.035	.035–.047	.047–.059
P.1.2	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051		**330** (260–460)	**260** (200–390)	.016–.024	.028–.035	.035–.047	.047–.059
P.1.3	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051		**330** (260–460)	**260** (200–390)	.016–.024	.028–.035	.035–.047	.047–.059
P.1.4	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051		**330** (260–460)	**260** (200–390)	.016–.024	.028–.035	.035–.047	.047–.059
P.1.5	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051		**330** (260–460)	**260** (200–390)	.016–.024	.028–.035	.035–.047	.047–.059
P.2.1	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051							
P.2.2	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051							
P.2.3	330 (260–460)	260 (200–390)	.012–.020	.020–.028	.028–.039	.035–.051							
P.2.4													
P.3.1													
P.3.2													
P.3.3													
P.4.1													
P.4.2													
M.1.1													
M.2.1													
M.3.1													
K.1.1	260 (200–430)	260 (200–390)	.016–.024	.028–.035	.035–.047	.043–.059							
K.1.2	260 (200–430)	260 (200–390)	.016–.024	.028–.035	.035–.047	.043–.059							
K.2.1													
K.2.2													
K.3.1													
K.3.2													
N.1.1													
N.1.2													
N.2.1													
N.2.2													
N.2.3													
N.3.1	**390** (330–660)	**390** (330–490)	.016–.024	.024–.035	.031–.047	.043–.059							
N.3.2	**390** (330–660)	**390** (330–490)	.016–.024	.024–.035	.031–.047	.043–.059							
N.3.3	**260** (200–490)	**260** (200–390)	.016–.024	.024–.035	.031–.047	.043–.059							
N.4.1													
S.1.1													
S.1.2													
S.2.1													
S.2.2													
S.2.3													
S.3.1													
S.3.2													
S.3.3													
H.1.1													
H.1.2													
H.1.3													
H.1.4													
H.2.1													
H.3.1													
O.1.1													
O.1.2													
O.2.1													
O.2.2													
O.3.1													

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for Monomax

	Grade / coating	TiN				DBC			
	Article no. / type	49 656, 49 661, 49 660, 49 664 / 56J.71, 56R.71, 56H.71, 56Q.71 – ASG0106				49 648, 49 649, 49 640, 49 641 / 56J.17, 56R.17, 56H.17, 56Q.17 – ASG0706			
	Nominal Ø in inches	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196	.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196
	Reaming allowance Ø	.004 – .008	.004 – .012	.008 – .012	.008 –. 016	.004 – .008	.004 – .012	.008 – .012	.008 –. 016
	Number of flutes	4	6	6	6	4	6	6	6
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1												
P.1.2												
P.1.3												
P.1.4												
P.1.5												
P.2.1												
P.2.2												
P.2.3												
P.2.4												
P.3.1	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039						
P.3.2	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039						
P.3.3	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039						
P.4.1	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039						
P.4.2	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039						
M.1.1	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039						
M.2.1	150 (110–200)	130 (110–160)	.012–.016	.016–.024	.024–.031	.028–.039						
M.3.1	100 (80–160)	100 (80–130)	.012–.016	.016–.024	.024–.031	.028–.039						
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
N.1.1							**490** (430–980)	**490** (430–660)	.016–.024	.016–.024	.031–.047	.031–.059
N.1.2							**490** (430–980)	**490** (430–660)	.016–.024	.016–.024	.031–.047	.031–.059
N.2.1							**660** (590–980)	**490** (430–660)	.016–.024	.016–.024	.031–.047	.031–.059
N.2.2							**660** (590–980)	**490** (430–660)	.016–.024	.016–.024	.031–.047	.031–.059
N.2.3							**660** (590–980)	**490** (430–660)	.016–.024	.016–.024	.031–.047	.031–.059
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1							820 (720–890)	820 (720–890)	.016–.024	.016–.024	.031–.047	.031–.059

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

3

Cutting data standard values for Monomax

	Grade / coating	DST				
	Article no. / type	49 625, 49 626, 49 680, 49 681 / 56J.93, 56R.93, 56H.93, 56Q.93 – ASG3000				
	Nominal Ø in inches	.2205-.3503	.3504-.4727	.4728-.8664	.8665-1.0196	
	Reaming allowance Ø	.004 - .008	.004 - .012	.008 - .012	.008 - .016	
	Number of flutes	4	6	6	6	
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.1.2	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.1.3	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.1.4	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.1.5	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.2.1	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.2.2	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.2.3	**490** (430-660)	**390** (330-520)	.012-.020	.020-.028	.028-.039	.035-.051
P.2.4						
P.3.1						
P.3.2						
P.3.3						
P.4.1						
P.4.2						
M.1.1						
M.2.1						
M.3.1						
K.1.1						
K.1.2						
K.2.1	**570** (490-980)	**490** (430-590)	.016-.024	.028-.035	.035-.047	.043-.059
K.2.2	**390** (330-490)	**330** (260-390)	.012-.020	.020-.028	.028-.039	.035-.051
K.3.1	**490** (430-820	**390** (330-660)	.016-.024	.028-.035	.035-.047	.043-.059
K.3.2	**390** (330-590)	**390** (330-490)	.012-.020	.020-.028	.028-.039	.035-.051
N.1.1						
N.1.2						
N.2.1						
N.2.2						
N.2.3						
N.3.1	490 (430-980)	490 (430-660)	.016-.024	.024-.035	.031-.047	.043-.059
N.3.2	490 (430-980)	490 (430-660)	.016-.024	.024-.035	.031-.047	.043-.059
N.3.3						
N.4.1						
S.1.1						
S.1.2						
S.2.1						
S.2.2						
S.2.3						
S.3.1						
S.3.2						
S.3.3						
H.1.1						
H.1.2						
H.1.3						
H.1.4						
H.2.1						
H.3.1						
O.1.1						
O.1.2						
O.2.1						
O.2.2						
O.3.1						

		DST				
		49 635 ..., 49 636 ... / 56J.93. 56R.93 – ASG4000				
		.2205-.3503	.3504-.4727	.4728-.8664	.8665-1.0196	
		.004 - .008	.004 - .012	.008 - .012	.008 - .016	
		4	6	6	6	
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.1.2	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.1.3	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.1.4	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.1.5	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.2.1	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.2.2	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.2.3	**490** (430-660)	**390** (330-520)	.016-.024	.028-.035	.035-.047	.047-.059
P.2.4						
P.3.1						
P.3.2						
P.3.3						
P.4.1						
P.4.2						
M.1.1						
M.2.1						
M.3.1						
K.1.1						
K.1.2						
K.2.1	570 (490-980)	490 (430-590)	.016-.024	.028-.035	.035-.047	.043-.059
K.2.2	390 (330-590)	390 (330-490)	.012-.020	.020-.028	.028-.039	.035-.051
K.3.1	390 (330-590)	390 (330-490)	.012-.020	.020-.028	.028-.039	.035-.051
K.3.2	390 (330-590)	390 (330-490)	.012-.020	.020-.028	.028-.039	.035-.051
N.1.1						
N.1.2						
N.2.1						
N.2.2						
N.2.3						
N.3.1						
N.3.2						
N.3.3						
N.4.1						
S.1.1						
S.1.2						
S.2.1						
S.2.2						
S.2.3						
S.3.1						
S.3.2						
S.3.3						
H.1.1						
H.1.2						
H.1.3						
H.1.4						
H.2.1						
H.3.1						
O.1.1						
O.1.2						
O.2.1						
O.2.2						
O.3.1						

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting data standard values for Monomax

	Grade / coating		K10			
	Article no. / type		49 672, 49 673, 49 668, 49 669 / 56J.21, 56Q.21, 56H.21, 56R.21 – ASG03			
	Nominal Ø in inches		.2205–.3503	.3504–.4727	.4728–.8664	.8665–1.0196
	Reaming allowance Ø		.004 – .008	.004 – .012	.008 – .012	.008 –. 016
	Number of flutes		4	6	6	6
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				
P.1.1						
P.1.2						
P.1.3						
P.1.4						
P.1.5						
P.2.1						
P.2.2						
P.2.3						
P.2.4						
P.3.1						
P.3.2						
P.3.3						
P.4.1						
P.4.2						
M.1.1						
M.2.1						
M.3.1						
K.1.1						
K.1.2						
K.2.1						
K.2.2						
K.3.1						
K.3.2						
N.1.1						
N.1.2						
N.2.1						
N.2.2						
N.2.3						
N.3.1						
N.3.2						
N.3.3						
N.4.1						
S.1.1						
S.1.2						
S.2.1						
S.2.2						
S.2.3						
S.3.1	**30** (20–40)	**30** (20–40)	.012–.016	.016–.024	.024–.031	.031–.043
S.3.2	**30** (20–40)	**30** (20–40)	.012–.016	.016–.024	.024–.031	.031–.043
S.3.3	**30** (20–40)	**30** (20–40)	.012–.016	.016–.024	.024–.031	.031–.043
H.1.1						
H.1.2						
H.1.3						
H.1.4						
H.2.1						
H.3.1						
O.1.1						
O.1.2						
O.2.1						
O.2.2						
O.3.1						

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Cutting Ring

	Grade / coating	DBG-P				DBG-P				
	Article no. / type	49 836 ... / 300.65 – ASG3000				49 835 ... / 300.65 – ASG0106				
	Nominal Ø in inches	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		
	Reaming allowance Ø	.012 – .020	.012 – .020	.012 – .020		.012 – .020	.012 – .020	.012 – .020		
	Number of flutes	6	8	10		6	8	10		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.1.2	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.1.3	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.1.4	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.1.5	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.2.1	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.2.2	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.2.3	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.2.4	**490** (430–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110					
P.3.1						**100** (80–160)	**100** (80–130)	.035–.051	.047–.071	.059–.091
P.3.2						**100** (80–160)	**100** (80–130)	.035–.051	.047–.071	.059–.091
P.3.3						**100** (80–160)	**100** (80–130)	.035–.051	.047–.071	.059–.091
P.4.1						**150** (110–200)	**130** (110–160)	.035–.051	.047–.071	.059–.091
P.4.2						**150** (110–200)	**130** (110–160)	.035–.051	.047–.071	.059–.091
M.1.1						**150** (110–200)	**130** (110–160)	.035–.051	.047–.071	.059–.091
M.2.1						**150** (110–200)	**130** (110–160)	.035–.051	.047–.071	.059–.091
M.3.1						**100** (80–160)	**100** (80–130)	.035–.051	.047–.071	.059–.091
K.1.1	**490** (430–720)	**390** (330–490)	.085–.080	.073–.107	.091–.134					
K.1.2	**490** (430–720)	**390** (330–490)	.085–.080	.073–.107	.091–.134					
K.2.1	**570** (490–980)	**490** (430–590)	.085–.080	.073–.107	.091–.134					
K.2.2	**390** (330–590)	**390** (330–490)	.045–.066	.060–.088	.075–.110					
K.3.1	**390** (330–590)	**390** (330–490)	.045–.066	.060–.088	.075–.110					
K.3.2	**390** (330–590)	**390** (330–490)	.045–.066	.060–.088	.075–.110					
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1										
N.3.2										
N.3.3										
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Cutting Ring

	Grade / coating	TiN				TiN				
	Article no. / type	49 823 ... / 300.05 – ASG3000				49 824 ... / 300.05 – ASG0106				
	Nominal Ø in inches	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		
	Reaming allowance Ø	.012 – .020	.012 – .020	.012 – .020		.012 – .020	.012 – .020	.012 – .020		
	Number of flutes	6	8	10		6	8	10		
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.1.2	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.1.3	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.1.4	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.1.5	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.2.1	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.2.2	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.2.3	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.2.4	330 (260–460)	260 (200–390)	.043–.067	.059–.091	.075–.110					
P.3.1						**100** (80–150)	**100** (80–150)	.031–.047	.043–.063	.051–.079
P.3.2						**100** (80–150)	**100** (80–150)	.031–.047	.043–.063	.051–.079
P.3.3										
P.4.1						**100** (80–150)	**100** (80–150)	.031–.047	.043–.063	.051–.079
P.4.2						**100** (80–150)	**100** (80–150)	.031–.047	.043–.063	.051–.079
M.1.1						**100** (80–150)	**100** (80–130)	.035–.051	.047–.071	.059–.091
M.2.1						**70** (50–110)	**70** (50–110)	.035–.051	.047–.071	.059–.091
M.3.1						**70** (50–110)	**70** (50–110)	.035–.051	.047–.071	.059–.091
K.1.1	260 (200–430)	260 (200–390)	.055–.079	.075–.079	.091–.134					
K.1.2	260 (200–430)	260 (200–390)	.055–.079	.075–.079	.091–.134					
K.2.1										
K.2.2										
K.3.1										
K.3.2										
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1	390 (330–660)	390 (330–660)	.047–.075	.067–.098	.083–.122					
N.3.2	390 (330–660)	390 (330–660)	.039–.059	.055–.083	.067–.102					
N.3.3	260 (200–490)	260 (200–390)	.039–.059	.055–.083	.067–.102					
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

3

Cutting Data Standard Values for Cutting Ring

	Grade / coating	TiN			DBC		
	Article no. / type	49 831 ... / 300.05 – ASG4000			49 839 ... / 300.17 - ASG0706		
	Nominal Ø in inches	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543
	Reaming allowance Ø	.012 – .020	.012 – .020	.012 – .020	.012 – .020	.012 – .020	.012 – .020
	Number of flutes	6	8	10	6	8	10
Index	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min 3xD	v_c ft/min 5xD	f inch/rev.	f inch/rev.	f inch/rev.
P.1.1	**330** (260–460)	**260** (200–390)	.055–.079	.012–.020	.012–.020					
P.1.2	**330** (260–460)	**260** (200–390)	.055–.079	.012–.020	.012–.020					
P.1.3	**330** (260–460)	**260** (200–390)	.055–.079	.012–.020	.012–.020					
P.1.4	**330** (260–460)	**260** (200–390)	.055–.079	.012–.020	.012–.020					
P.1.5	**330** (260–460)	**260** (200–390)	.055–.079	.012–.020	.012–.020					
P.2.1										
P.2.2										
P.2.3										
P.2.4										
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1										
K.1.2										
K.2.1										
K.2.2										
K.3.1										
K.3.2										
N.1.1						**490** (430–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
N.1.2						**490** (430–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
N.2.1						**660** (590–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
N.2.2						**660** (590–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
N.2.3						**660** (590–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
N.3.1	390 (330–660)	390 (330–660)	.047–.075	.067–.098	.083–.122					
N.3.2	390 (330–660)	390 (330–660)	.039–.059	.055–.083	.067–.102					
N.3.3	260 (200–490)	260 (200–390)	.039–.059	.055–.083	.067–.102					
N.4.1						**490** (430–980)	**490** (430–660)	.052–.080	.070–.107	.087–.134
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Cutting Ring

	Grade / coating	DST				DST				
	Article no. / type	49 827 ... / 300.45 – ASG3000				49 828 ... / 300.45 – ASG4000				
	Nominal Ø in inches	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		2.3858–3.1338	3.1339–3.9605	3.9606–4.3543		
	Reaming allowance Ø	.012 – .020	.012 – .020	.012 – .020		.012 – .020	.012 – .020	.012 – .020		
	Number of flutes	6	8	10		6	8	10		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.1.2	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.1.3	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.1.4	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.1.5	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.2.1	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.2.2	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.2.3	**490** (390–660)	**390** (330–520)	.043–.067	.059–.091	.075–.110	**490** (390–660)	**390** (330–520)	.055–.079	.075–.106	.094–.134
P.2.4										
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1										
K.1.2										
K.2.1	**570** (390–980)	**490** (390–590)	.055–.079	.075–.106	.091–.134					
K.2.2	**490** (390–820)	**390** (260–490)	.043–.067	.059–.091	.075–.110					
K.3.1	**390** (330–590)	**390** (260–490)	.055–.079	.075–.106	.091–.134					
K.3.2	**390** (330–590)	**390** (260–490)	.043–.067	.059–.091	.075–.110					
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1	**490** (390–1050)	**490** (390–660)	.047–.075	.067–.098	.083–.122					
N.3.2										
N.3.3										
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

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Cutting Data Standard Values for Cutting Ring

	Grade / coating	K10		
	Article no. / type	**49 832 ... / 300.25 – ASG03**		
	Nominal Ø in inches	2.3858–3.1338	3.1339–3.9605	3.9606–4.3543
	Reaming allowance Ø	.012 – .020	.012 – .020	.012 – .020
	Number of flutes	6	8	10
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD			
P.1.1					
P.1.2					
P.1.3					
P.1.4					
P.1.5					
P.2.1					
P.2.2					
P.2.3					
P.2.4					
P.3.1					
P.3.2					
P.3.3					
P.4.1					
P.4.2					
M.1.1					
M.2.1					
M.3.1					
K.1.1					
K.1.2					
K.2.1					
K.2.2					
K.3.1					
K.3.2					
N.1.1					
N.1.2					
N.2.1					
N.2.2					
N.2.3					
N.3.1					
N.3.2					
N.3.3					
N.4.1					
S.1.1					
S.1.2					
S.2.1					
S.2.2					
S.2.3					
S.3.1	**30** (20–40)	**30** (20–40)	.031–.043	.041–.057	.052–.072
S.3.2	**30** (20–40)	**30** (20–40)	.031–.043	.041–.057	.052–.072
S.3.3	**30** (20–40)	**30** (20–40)	.031–.043	.041–.057	.052–.072
H.1.1					
H.1.2					
H.1.3					
H.1.4					
H.2.1					
H.3.1					
O.1.1					
O.1.2					
O.2.1					
O.2.2					
O.3.1					

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Rapid Set Head

	Grade / coating	DBG-P				DBG-P				
	Article no. / type	49 816 ... / 340.65 – ASG0106				49 817 ... / 340.65 – ASG3000				
	Nominal Ø in inches	.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622		.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622		
	Reaming allowance Ø	.004 – .012	.008 – .016	.008 – .016		.004 – .012	.008 – .016	.008 – .016		
	Number of flutes	4	6	6		4	6	6		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.1.2						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.1.3						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.1.4						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.1.5						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.2.1						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.2.2						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.2.3						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.2.4						**490** (430–660)	**390** (330–520)	.012–.020	.035–.051	.043–.059
P.3.1	**100** (80–160)	**100** (80–130)	.012–.016	.028–.039	.035–.047					
P.3.2	**100** (80–160)	**100** (80–130)	.012–.016	.028–.039	.035–.047					
P.3.3	**100** (80–160)	**100** (80–130)	.012–.016	.028–.039	.035–.047					
P.4.1	**150** (110–200)	**130** (110–160)	.012–.016	.028–.039	.035–.047					
P.4.2	**150** (110–200)	**130** (110–160)	.012–.016	.028–.039	.035–.047					
M.1.1	**150** (110–200)	**130** (110–160)	.012–.016	.028–.039	.035–.047					
M.2.1	**150** (110–200)	**130** (110–160)	.012–.016	.028–.039	.035–.047					
M.3.1	**100** (80–160)	**100** (80–130)	.012–.016	.028–.039	.035–.047					
K.1.1						**490** (430–720)	**390** (330–490)	.016–.024	.043–.059	.051–.075
K.1.2						**490** (430–720)	**390** (330–490)	.016–.024	.043–.059	.051–.075
K.2.1						**570** (490–980)	**490** (430–590)	.016–.024	.043–.059	.051–.075
K.2.2						**390** (330–590)	**390** (330–490)	.012–.020	.035–.051	.043–.059
K.3.1						**390** (330–590)	**390** (330–490)	.012–.020	.035–.051	.043–.059
K.3.2						**390** (330–590)	**390** (330–490)	.012–.020	.035–.051	.043–.059
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1										
N.3.2										
N.3.3										
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

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Cutting Data Standard Values for Rapid Set Head

	Grade / coating	DST				DST				
	Article no. / type	49 812 ... / 340.92 – ASG05				49 813 ... / 340.93 – ASG3000				
	Nominal Ø in inches	.3779 - .6138	.6139 - 1.1850	1.1851 - 2.3622		.3779 - .6138	.6139 - 1.1850	1.1851 - 2.3622		
	Reaming allowance Ø	.004 - .012	.008 - .016	.008 - .016		.004 - .012	.008 - .016	.008 - .016		
	Number of flutes	4	6	6		4	6	6		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.1.2	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.1.3	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.1.4	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.1.5	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.2.1	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.2.2	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.2.3	**490** (390–660)	**490** (390–520)	.024–.031	.047–.059	.055–.075	**490** (390–660)	**490** (390–520)	.012–.020	.035–.051	.043–.059
P.2.4										
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1										
K.1.2										
K.2.1						**570** (490–980)	**570** (490–980)	.016–.024	.043–.024	.051–.075
K.2.2						**490** (390–820)	**490** (390–820)	.016–.024	.043–.024	.051–.075
K.3.1						**390** (330–590)	**390** (330–590)	.016–.024	.043–.024	.051–.075
K.3.2						**390** (330–590)	**390** (330–590)	.016–.024	.043–.024	.051–.075
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1						**490** (390–1050)	**490** (390–1050)	.016–.024	.043–.059	.047–.067
N.3.2										
N.3.3										
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Rapid Set Head

	Grade / coating	TiN				TiN				
	Article no. / type	49 805 ... / 340.70 – ASG05				49 808 ... / 340.71 – ASG3000				
	Nominal Ø in inches	.3779 - .6138	.6139 - 1.1850	1.1851 - 2.3622		.3779 - .6138	.6139 - 1.1850	1.1851 - 2.3622		
	Reaming allowance Ø	.004 - .012	.008 - .016	.008 - .016		.004 - .012	.008 - .016	.008 - .016		
	Number of flutes	4	6	6		4	6	6		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.1.2	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.1.3	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.1.4	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.1.5	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.2.1	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.2.2	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.2.3	330 (260–460)	260 (200–390)	.024–.031	.047–.059	.055–.075	330 (260–460)	260 (200–390)	.012–.020	.035–.051	.043–.059
P.2.4	**330** (260–460)	**260** (200–390)	.024–.031	.047–.059	.055–.075	**330** (260–460)	**260** (200–390)	.012–.020	.035–.051	.043–.059
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1						**260** (200–430)	**260** (200–390)	.016–.024	.043–.059	.051–.075
K.1.2						**260** (200–430)	**260** (200–390)	.016–.024	.043–.059	.051–.075
K.2.1										
K.2.2										
K.3.1										
K.3.2										
N.1.1										
N.1.2										
N.2.1										
N.2.2										
N.2.3										
N.3.1						390 (330–660)	390 (330–660)	.016–.024	.043–.059	.047–.067
N.3.2						260 (200–490)	260 (200–490)	.012–.020	.035–.051	.039–.055
N.3.3						260 (200–490)	260 (200–490)	.012–.020	.035–.051	.039–.055
N.4.1										
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

3

Cutting Data Standard Values for Rapid Set Head

	Grade / coating	TiN					K10				
	Article no. / type	49 809 ... / 340.71 – ASG0106					49 800 ... / 340.21 – ASG03				
	Nominal Ø in inches	.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622			.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622		
	Reaming allowance Ø	.004 – .012	.008 – .016	.008 – .016			.004 – .012	.008 – .016	.008 – .016		
	Number of flutes	4	6	6			4	6	6		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	
	3xD	5xD				3xD	5xD				
P.1.1											
P.1.2											
P.1.3											
P.1.4											
P.1.5											
P.2.1											
P.2.2											
P.2.3											
P.2.4											
P.3.1	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
P.3.2	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
P.3.3	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
P.4.1	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
P.4.2	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
M.1.1	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
M.2.1	**70** (50–110)	**70** (50–110)	.012–.016	.028–.039	.035–.047						
M.3.1	**100** (70–130)	**100** (70–130)	.012–.016	.028–.039	.035–.047						
K.1.1											
K.1.2											
K.2.1											
K.2.2											
K.3.1											
K.3.2											
N.1.1											
N.1.2											
N.2.1											
N.2.2											
N.2.3											
N.3.1											
N.3.2											
N.3.3											
N.4.1											
S.1.1											
S.1.2											
S.2.1											
S.2.2											
S.2.3											
S.3.1						**30** (20–40)	**30** (20–40)	.012–.016	.031–.043	.035–.051	
S.3.2						**30** (20–40)	**30** (20–40)	.012–.016	.031–.043	.035–.051	
S.3.3						**30** (20–40)	**30** (20–40)	.012–.016	.031–.043	.035–.051	
H.1.1											
H.1.2											
H.1.3											
H.1.4											
H.2.1											
H.3.1											
O.1.1											
O.1.2											
O.2.1											
O.2.2											
O.3.1											

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

Cutting Data Standard Values for Rapid Set Head

	Grade / coating	K10				K10				
	Article no. / type	49 804 ... / 340.21 – ASG02				49 801 ... / 340.21 – ASG3000				
	Nominal Ø in inches	.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622		.3779 – .6138	.6139 – 1.1850	1.1851 – 2.3622		
	Reaming allowance Ø	.004 – .012	.008 – .016	.008 – .016		.004 – .012	.008 – .016	.008 – .016		
	Number of flutes	4	6	6		4	6	6		
Index	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.	v_c ft/min		f inch/rev.	f inch/rev.	f inch/rev.
	3xD	5xD				3xD	5xD			
P.1.1						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.1.2						100 (50–150)	100 (50–150)	.012–.020	.035–.051	.043–.059
P.1.3						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.1.4						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.1.5						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.2.1						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.2.2						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.2.3						30 (20–30)	30 (20–30)	.012–.020	.035–.051	.043–.059
P.2.4										
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1						50 (40–80)	50 (40–80)	.016–.024	.043–.059	.051–.075
K.1.2						50 (40–80)	50 (40–80)	.016–.024	.043–.059	.051–.075
K.2.1						40 (30–60)	40 (30–60)	.016–.024	.043–.059	.051–.075
K.2.2						40 (30–50)	40 (30–50)	.012–.020	.035–.051	.043–.059
K.3.1						40 (30–60)	40 (30–60)	.012–.020	.035–.051	.043–.059
K.3.2						40 (30–60)	40 (30–60)	.012–.020	.035–.051	.043–.059
N.1.1	**50** (30–100)	**50** (30–100)	.012–.020	.035–.051	.043–.059	50 (40–100)	50 (40–100)	.012–.020	.035–.051	.043–.059
N.1.2	**50** (30–100)	**50** (30–100)	.012–.020	.035–.051	.043–.059	50 (40–100)	50 (40–100)	.012–.020	.035–.051	.043–.059
N.2.1	**40** (30–70)	**12** (10–20)	.016–.024	.043–.059	.047–.075	50 (40–100)	50 (40–100)	.016–.024	.043–.059	.047–.075
N.2.2	**40** (30–70)	**40** (30–70)	.016–.024	.043–.059	.047–.075	50 (40–100)	50 (40–100)	.016–.024	.043–.059	.047–.075
N.2.3	**40** (30–70)	**40** (30–70)	.016–.024	.043–.059	.047–.075	40 (30–70)	40 (30–70)	.016–.024	.043–.059	.047–.075
N.3.1	**50** (30–100)	**50** (30–100)	.016–.024	.043–.059	.047–.075	50 (40–100)	50 (40–100)	.016–.024	.043–.059	.047–.067
N.3.2	**50** (30–100)	**50** (30–100)	.016–.024	.043–.059	.047–.075	40 (30–70)	40 (30–70)	.012–.020	.035–.051	.039–.055
N.3.3	**40** (30–70)	**40** (30–70)	.012–.020	.035–.051	.039–.055	40 (30–70)	40 (30–70)	.012–.020	.035–.051	.039–.055
N.4.1	**50** (30–100)	**50** (30–100)	.016–.024	.043–.059	.047–.075	50 (40–100)	50 (40–100)	.016–.024	.043–.059	.047–.075
S.1.1										
S.1.2										
S.2.1										
S.2.2										
S.2.3										
S.3.1										
S.3.2										
S.3.3										
H.1.1										
H.1.2										
H.1.3										
H.1.4										
H.2.1										
H.3.1										
O.1.1										
O.1.2										
O.2.1										
O.2.2										
O.3.1										

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

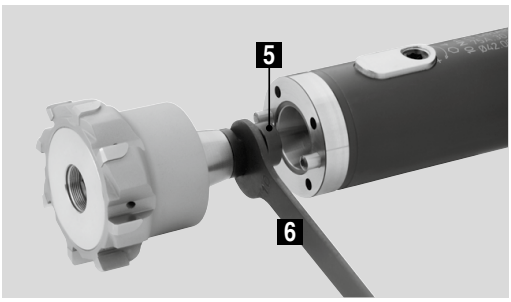
3

Cutting Data Standard Values for PCD Reamers

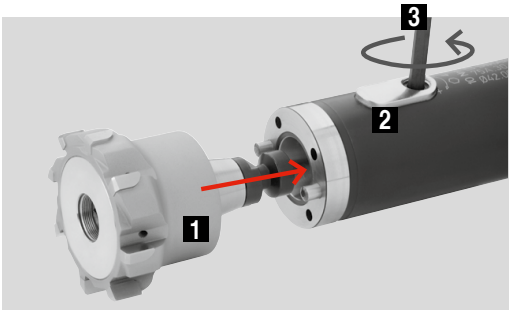
	Grade / coating	PCD			PCD
	Article no. / type	49 200 ..., 49 204 ... / 690.10, 690.13 – ASG1101			49 201..., 49 205 ... / 690.11, 690.14 – ASG1101
	Nominal Ø in inches	.1575 – .3150	.3151 – .7913		.3780 – .7913
	Reaming allowance Ø	.004 – .012	.004 – .016		.004 – .016
	Number of flutes	2	2		4
Index	v_c ft/min	f inch/rev.	f inch/rev.	v_c ft/min	f inch/rev.
P.1.1					
P.1.2					
P.1.3					
P.1.4					
P.1.5					
P.2.1					
P.2.2					
P.2.3					
P.2.4					
P.3.1					
P.3.2					
P.3.3					
P.4.1					
P.4.2					
M.1.1					
M.2.1					
M.3.1					
K.1.1					
K.1.2					
K.2.1					
K.2.2					
K.3.1					
K.3.2					
N.1.1	**490** (360 – 1080)	.005 – .016	.005 – .016	**490** (360 – 1080)	.009 – .031
N.1.2	**490** (360 – 1080)	.005 – .016	.005 – .016	**490** (360 – 1080)	.009 – .031
N.2.1	**660** (360 – 1800)	.005 – .016	.005 – .016	**660** (360 – 1800)	.009 – .031
N.2.2	**660** (360 – 1800)	.005 – .016	.005 – .016	**660** (360 – 1800)	.009 – .031
N.2.3	**660** (360 – 1440)	.005 – .016	.005 – .016	**660** (360 – 1440)	.009 – .031
N.3.1					
N.3.2					
N.3.3					
N.4.1	**490** (360 – 1080)	.005 – .016	.005 – .016	**490** (360 – 1080)	.009 – .031
S.1.1					
S.1.2					
S.2.1					
S.2.2					
S.2.3					
S.3.1					
S.3.2					
S.3.3					
H.1.1					
H.1.2					
H.1.3					
H.1.4					
H.2.1					
H.3.1					
O.1.1					
O.1.2					
O.2.1					
O.2.2					
O.3.1					

The cutting data depend extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced, inside the bracket, according to the application conditions.

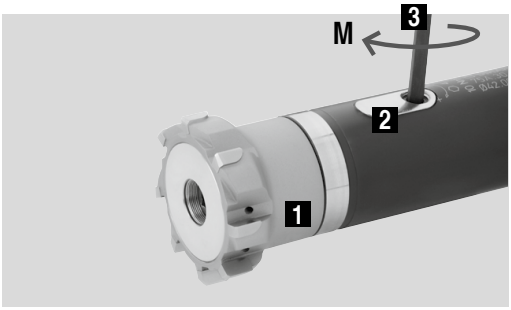
REAMAX TS – Assembly instructions



Clean the Morse taper adapter/face contact → grease-free.
Screw the pull stud (5) into the reaming head and tighten using the open-ended spanner (6).

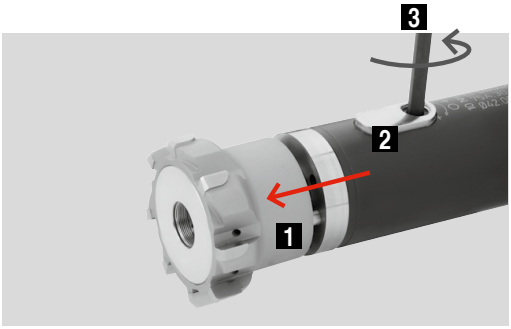


Use key (3) to open jaws (2), but do not fully release, and insert reaming head (1).

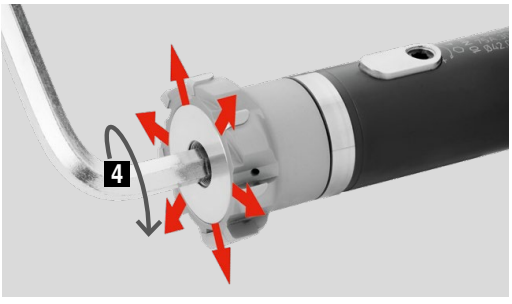


Use the key (3) to close the jaws (2), observe the recommended tightening torque.
When inserting the reaming head (1), this is pulled into its final position when the jaws (2) are closed.

Ø Range	Tightening torque (M)
.7087 – .7873	13 in-lbs
.7874 – .8661	22 in-lbs
.8662 – 1.0629	35 in-lbs
1.0630 – 1.3779	44 in-lbs
1.3780 – 1.6535	53 in-lbs
1.6536 – 2.0472	89 in-lbs
2.0473 – 2.7560	115 in-lbs



When removing the reamer head (1), it is pressed out of its position by the jaws (2) and can thus be easily removed from the holder:
Use key (3) to open the jaws (2) but do not fully release, and remove reamer head (1).



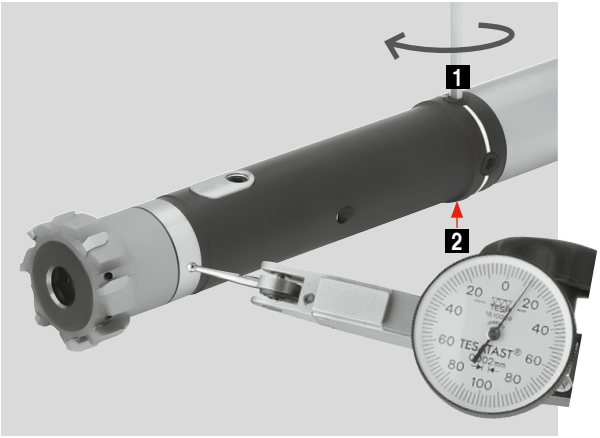
Expansion for wear compensation:
The smallest drilling tolerances up to IT4 can be achieved through adjustment with the hex key (4).

REAMAX TS – Operating instructions

Aligning the DAH Zero holder

The tool is recommended for radial alignment of max. .0008".

1. Loosen all adjustment screws and pre-load with 9 in-lbs. (new tools are already supplied like this).
2. Place dial gauge with .0001" display on the ground indicating band diameter.
3. Turn the tool to determine the point with the largest runout error using the dial gauge.
4. Adjust the corresponding adjustment screw with the hex key clockwise (1) until half the runout error has been corrected. In doing so, over-tighten by approx. .0002".
5. Release the opposite adjustment screw (2) by the over-tightened amount.
6. Adjust all 4 adjustment screws until the runout is < .0001".

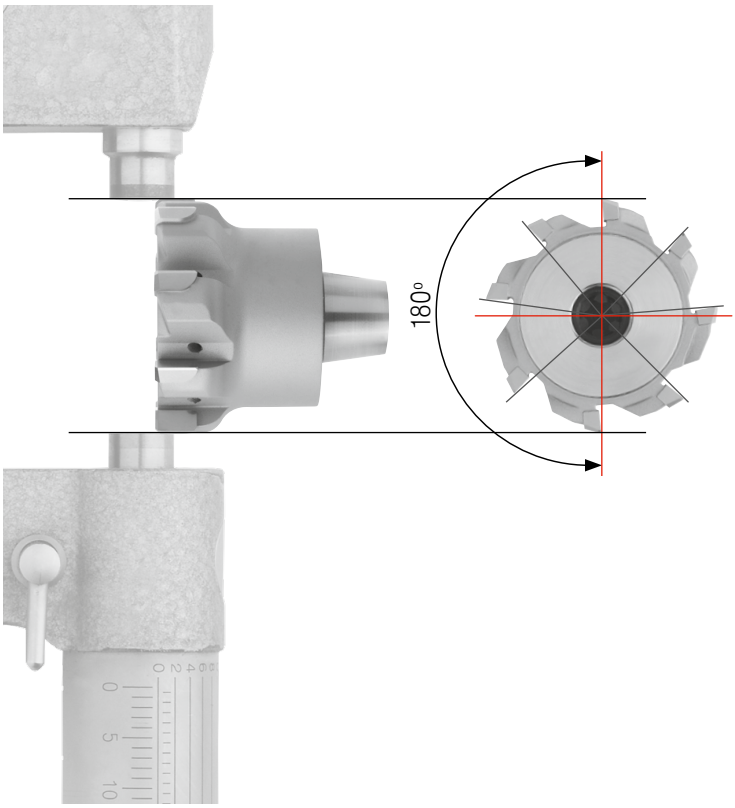


Please note:

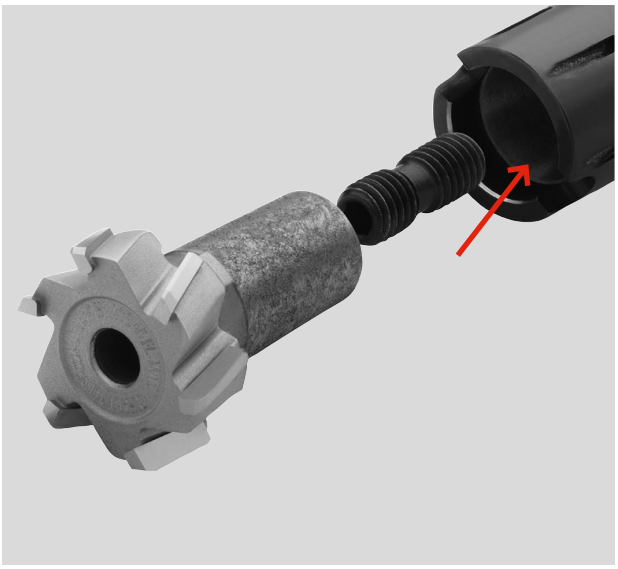
- The run-out must be checked and if necessary, re-aligned after an adapter changeover, change of application, and after any adjustment for wear compensation, using adjustment steps 1 to 6.
- Adjustment screws must always be tightened during usage with at least 9 in-lbs.
- The max. re-adjustment torque is 40 in-lbs.

Caution!

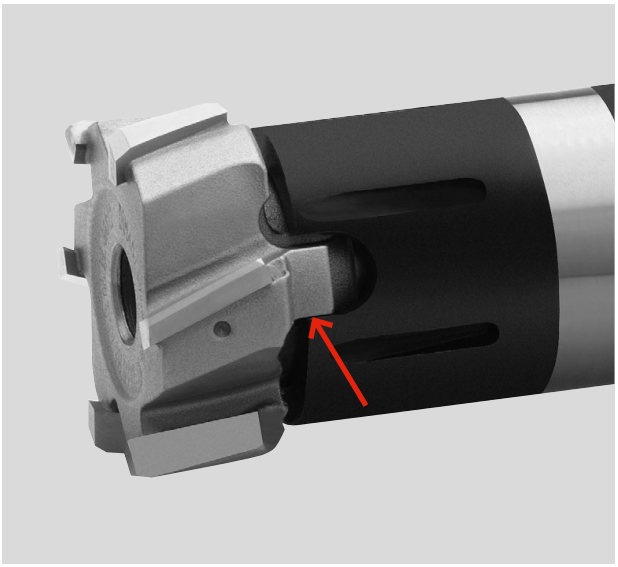
- Uneven angle distribution!
- There are 2 cutting edges 180° opposite each other = measuring teeth
- Measure the diameter at the front on the cutting edge (due to back taper, see diagram)
- Avoid damage to the cutting edge



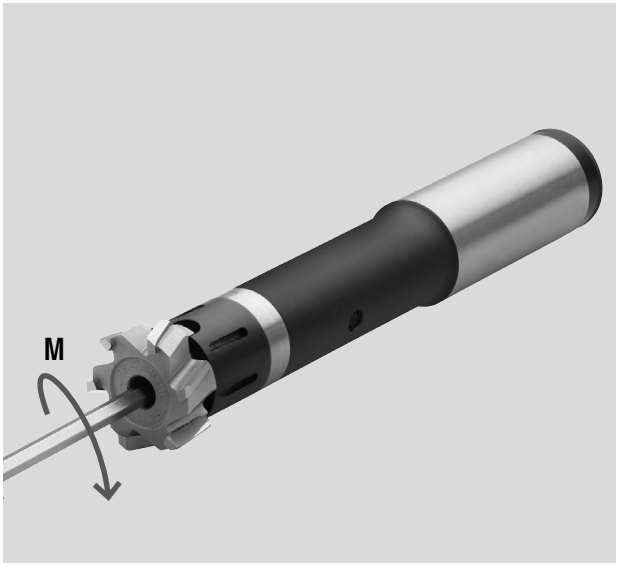
Rapid Set Head – Assembly instructions



Each rapid set head is delivered with slightly greased taper.
Do not wipe off!
Taper must be slightly greased with copper grease!
Clean taper in holder thoroughly → free of grease.
Turn the differential screw one rotation into the head (counter-clockwise thread).



Before tightening turn the drive keys of the rapid set head against the direction of machining until it hits the holder.

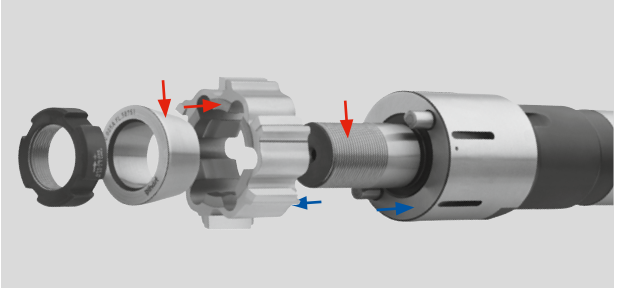


Tightening the left-/right screw. Observe the specified tightening torque M in the index table.

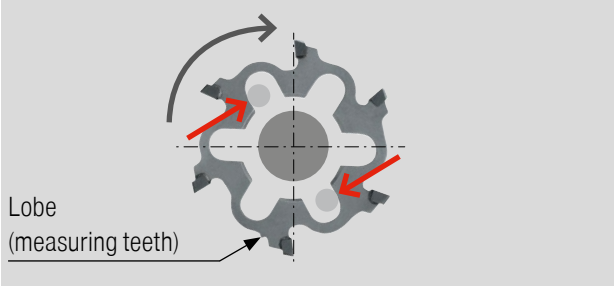
Ø range	Tightening torque (M)
0.496 – 0.614	6 – 8 in-lbs
0.615 – 0.732	10 – 12 in-lbs
0.733 – 0.945	16 – 20 in-lbs
0.946 – 1.575	27 – 34 in-lbs
1.576 – 2.362	46 – 58 in-lbs

Rapid set heads up to diameter 0.496" are assembled with a clamping screw at the back of the holder. The screw has a counter-clockwise thread.

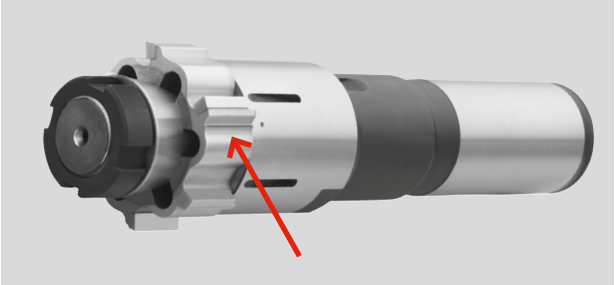
Cutting Ring – Assembly Instructions on Holder for Through Hole Machining



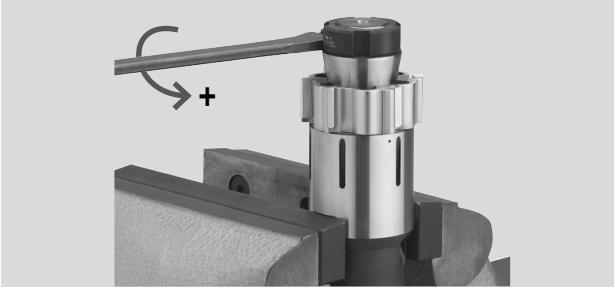
Arrow markings:
- light grease
- face surfaces on holder and cutting ring are grease-free



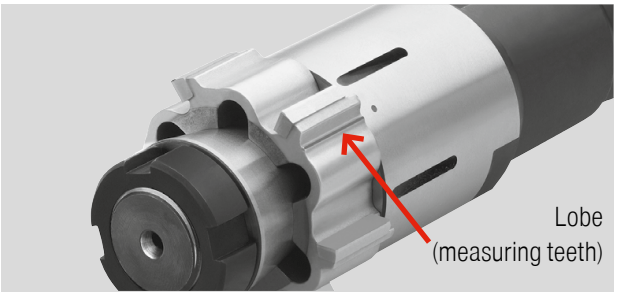
The position for the drive pins is marked with a lobe or in red. Before tightening and adjusting turn the cutting ring against the direction of machining until hitting the drive pins.



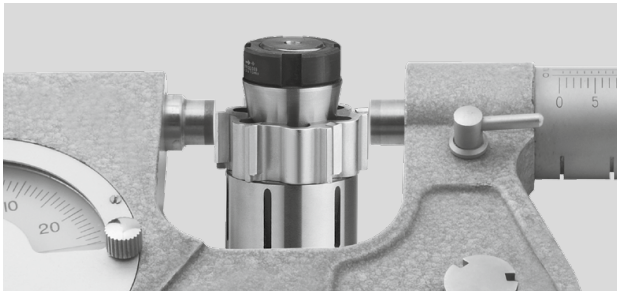
Please observe the marking on holder and cutting ring, check alignment of the coolant bores.



Adjust the diameter to the middle of the tolerance (counter-clockwise thread).

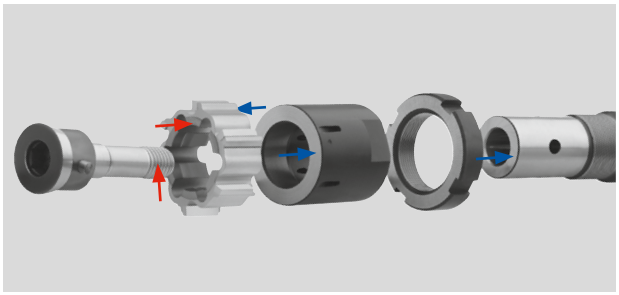


The diameter can only be measured at the marked cutting edges due to unequal angular position!

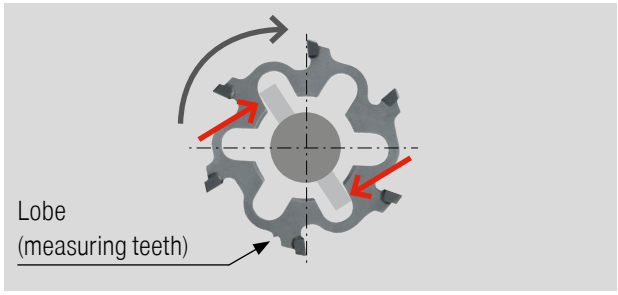


Measure the diameter. If the diameter was set too large, the conical ring must be loosened and the cutting ring readjusted.

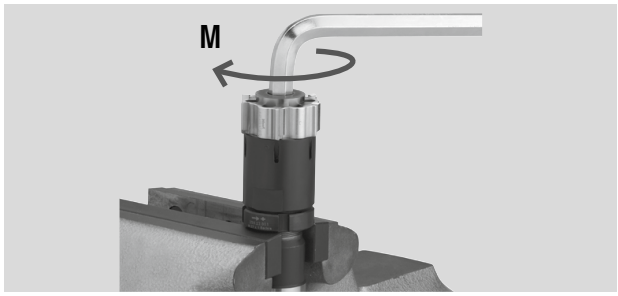
Cutting Ring – Assembly Instructions on Holder for Blind Hole Machining



Arrow markings:
- light grease
- face surfaces on holder and cutting ring are grease-free

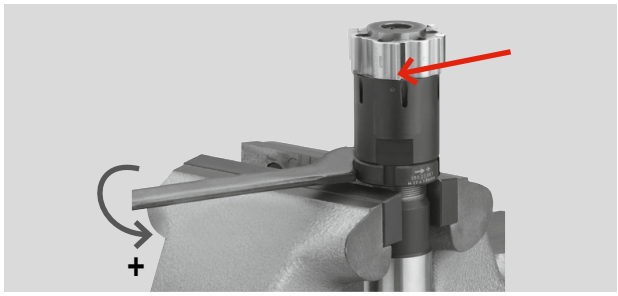


The position for the drive pins is marked with a lobe or in red. Before tightening and adjusting turn the cutting ring against the direction of machining until hitting the drive pin.

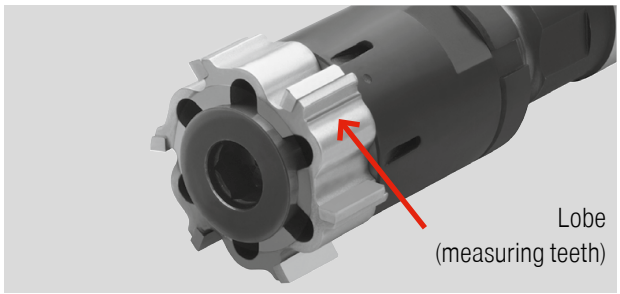


Screw the nut onto the holder with the smooth face against the bushing. Mount the cutting ring with the conical screw.
After fastening the conical screw check that there is space between bushing and ring.
Fasten conical screw according to index table.

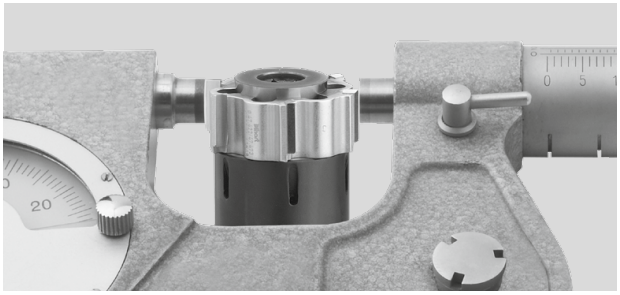
Ø range	Tightening torque (M)
2.3622	796 – 974 in-lbs.
2.4016 – 3.1102	1062 – 1239 in-lbs.
3.1496 – 3.9370	1593 – 1947 in-lbs.



Please observe the marking on holder and cutting ring, check alignment of the coolant bores. Adjust the diameter to the middle of the tolerance.

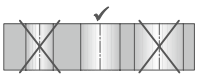


The diameter can only be measured at the marked cutting edges due to unequal angular position!



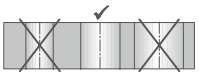
Measure the diameter. If the diameter was set too large, the nut must be loosened and the cutting ring readjusted.

Problems / possible causes / solutions



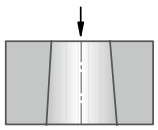
Hole too large

- Runout error for reamer in the spindle (rotating tool) → use DAH compensation system and correct runout
- Inaccurate alignment, reamer cuts at the back end (stationary tool) → correct alignment and use DPS floating holder
- Built-up edge → reduce cutting speed v_c for uncoated carbide cutting material, increase it for DST and coated cutting material or increase the oil content of the coolant
- Reamer too large → have reamer repaired



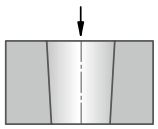
Hole too small

- Worn reamer → have reamer adjusted, replaced or repaired
- Reaming allowance too small → increase reaming allowance
- Cutting force too high → reduce feed or select other lead geometry (ASG)
- Reamer too small → have reamer adjusted, replaced or repaired



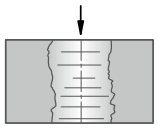
Conical hole, tapered backwards

- Inaccurate alignment → correct alignment and use DPS floating holder
- Misalignment between headstock and turret → correct turret and use DPS floating holder



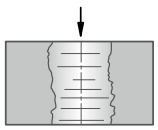
Conical hole, tapered forwards

- Poor alignment, cutting edges push at start → correct alignment and use DPS floating holder



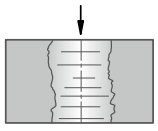
Hole is not round

- Reamer runout error too large → correct the runout with DAH compensation system
- Alignment error → correct alignment error and use DPS floating holder
- Asymmetric initial cutting through angled entry surface → countersink hole
- Workpiece deforming due to clamping → correct clamping of the workpiece
- Poor pre-machining → optimize pre-machining
- Feed too high → reduce feed



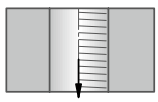
Hole exhibits chatter marks

- Cutting speed v_c too high → reduce cutting speed
- L to D ratio too high→ reduce the speed of entry, pilot the bore or select other lead geometry (ASG)



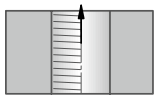
Poor surface quality

- Built-up edge → reduce cutting speed v_c for uncoated carbide cutting material, increase it for DST and coated cutting material or increase the oil content of the coolant
- Cutting edge worn→ have cutting edge repaired or replace the tool
- Reamer runout error → correct the runout with DAH compensation system
- No or insufficient cooling, chips are getting trapped → use thru coolant supply and increase coolant pressure
- Unsuitable coolant → increase the oil content of the coolant
- Incorrect cutting data→ use data according to catalog recommendation



Grooves in the hole "Feed marks"

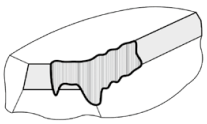
- Faulty cutting edge (edge breakage) → have reamer replaced or repaired
- Built-up edges → reduce cutting speed v_c for uncoated carbide cutting material, increase it for DST and coated cutting material or increase the oil content of the coolant



Grooves in the hole "Retraction marks"

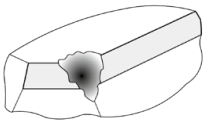
- Cutting edges moved too far out of the hole → move no more than lead length + .079" out of the hole
- Material springs back → do not retract at high speed but with increased (2-3 times) feed rate

Types of wear



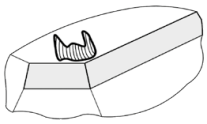
Wear on clearance face

Reduce the cutting speed and select a more wear resistant cutting material or coating.



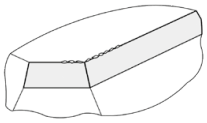
Cutting edge breakage

Reduce feed and reaming allowance. In the case of interrupted holes, use coated carbide instead of DST.



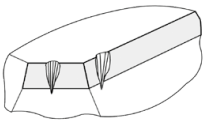
Cratering

Reduce the cutting speed and use a positive cutting edge geometry.



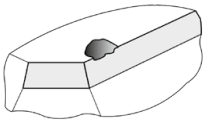
Edge breakages

Increase the cutting speed and use larger rake angle.



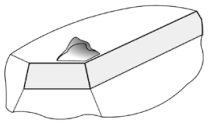
Notch wear

Reduce the cutting speed and select a more wear resistant cutting material or coating.



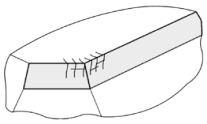
Fatigue fracture

Reduce feed, increase reamer stability.



Built-up edge

Use positive cutting edge geometry, increase the oil content of the coolant, reduce the cutting speed v_c for uncoated carbide cutting material, increase it for DST and coated cutting material.

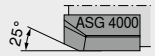
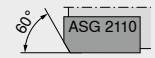


Cracks at right angles to the cutting edge

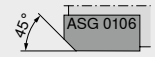
Use sufficient coolant and thru coolant, reduce the cutting speed.

Common cutting edge geometries in the performance area

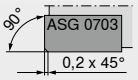
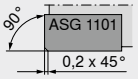
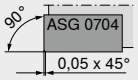
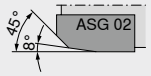
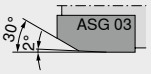
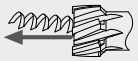
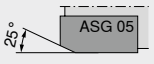
Standard geometries

Geometry	Flute type	Chip flow	Lead angle	
ASG4000	straight	←		Through hole
ASG2210	left-hand helix	←		
ASG2231	left-hand helix	←		
ASG2270	straight	←		
ASG2110	straight	→		Blind hole
ASG2131	straight	→		
ASG2170	straight	→		

Standard geometries

Geometry	Flute type	Chip flow	Lead angle	
ASG3000	straight	↔		Through hole-Blind hole
ASG0706	straight	↔		
ASG0106	straight	↔		
ASG2350	straight	↔		
ASG2360	straight	↔		

Special geometries

Geometry	Flute type	Chip flow Comments	Lead angle
ASG0703	straight	Face cutting	
ASG1101	straight	Face cutting	
ASG0704	straight	Face cutting with increased positional accuracy	
ASG09B	straight	Chip control < Ø 1.26 inch	
ASG1402	straight	Chip control > Ø 1.26 inch	
ASG02	straight	↔	
ASG03	straight	↔	
ASG05	left-handed		

Achievable surface quality

Material group		Roughness	N11	N10	N9	N8		N7	N6		N5	N4	N3	N2	N1
		Average roughness R_a	25	12,5	6,3	3,2		1,6	0,8		0,4	0,2	0,1	0,05	0,025
		Surface roughness R_z	100	63	40	25	16	10	6,3	4	2,5	1,6	1	0,63	0,25
P	1.0 – 4.2						▬	▬	▬	▬	▬				
M	1.1 – 3.1						▬	▬	▬	▬	▬				
K	1.1 + 2.1 + 3.1					▬	▬	▬	▬						
	1.2 + 2.2 + 3.2						▬	▬	▬	▬					
N	1.1 – 2.3						▬	▬	▬	▬	▬				
	3.1 – 3.3						▬	▬	▬	▬					
S	1.1 – 3.3						▬	▬	▬	▬					
H	1.1 – 1.3							▬	▬	▬					

reachable ▬ conditionally reachable

This information is based on experience and may vary from case to case, depending on the prevailing conditions.
(all other surface values on request)

Tolerances

IT tolerance class DIN 7151

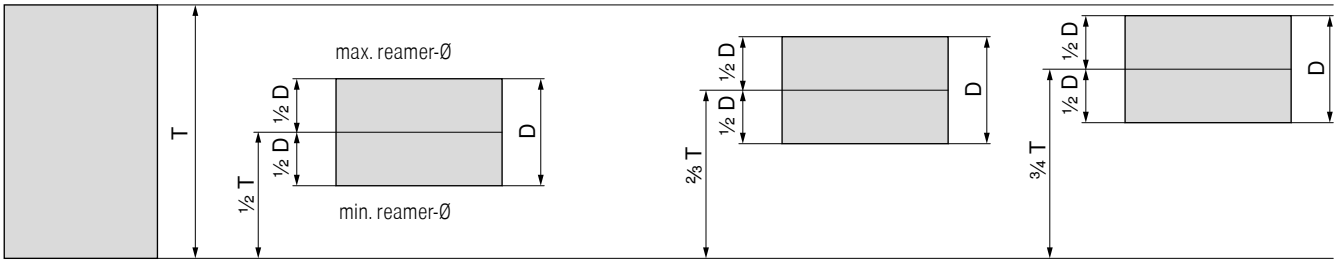
Nominal dimension range (inch)	IT tolerance class (inch)											
	IT 1	IT 2	IT 3	IT 4	IT 5	IT 6	IT 7	IT 8	IT 9	IT 10	IT 11	IT 12
.039 – .118	.00003	.00005	.00008	.00012	.00016	.00024	.00039	.00055	.00098	.00158	.00236	.00394
> .118 – .236	.00004	.00006	.00010	.00016	.00020	.00032	.00047	.00071	.00118	.00189	.00295	.00472
> .236 – .394	.00004	.00006	.00010	.00016	.00024	.00035	.00059	.00087	.00142	.00228	.00354	.00591
> .394 – .709	.00005	.00008	.00012	.00020	.00032	.00043	.00071	.00106	.00169	.00276	.00433	.00709
> .709 – 1.181	.00006	.00010	.00016	.00024	.00035	.00051	.00083	.00130	.00205	.00331	.00512	.00827
> 1.181 – 1.969	.00006	.00010	.00016	.00028	.00043	.00063	.00098	.00154	.00244	.00394	.00630	.00984
> 1.969 – 3.150	.00008	.00012	.00020	.00032	.00051	.00075	.00118	.00181	.00291	.00472	.00748	.01181
> 3.150 – 4.724	.00010	.00016	.00024	.00039	.00059	.00087	.00138	.00213	.00343	.00551	.00866	.01378
> 4.724 – 7.087	.00014	.00020	.00032	.00047	.00071	.00098	.00158	.00248	.00394	.00630	.00984	.01575
> 7.087 – 9.843	.00018	.00028	.00039	.00055	.00079	.00114	.00181	.00284	.00453	.00728	.01142	.01811
> 9.843 – 12.402	.00024	.00032	.00047	.00063	.00091	.00126	.00205	.00319	.00512	.00827	.01260	.02047

Nominal dimension range (mm)	IT tolerance class (metric) (in 0.001 mm)											
	IT 1	IT 2	IT 3	IT 4	IT 5	IT 6	IT 7	IT 8	IT 9	IT 10	IT 11	IT 12
1 – 3	0.8	1.2	2	3	4	6	10	14	25	40	60	100
> 3 – 6	1	1.5	2.5	4	5	8	12	18	30	48	75	120
> 6 – 10	1	1.5	2.5	4	6	9	15	22	36	58	90	150
> 10 – 18	1.2	2	3	5	8	11	18	27	43	70	110	180
> 18 – 30	1.5	2.5	4	6	9	13	21	33	52	84	130	210
> 30 – 50	1.5	2.5	4	7	11	16	25	39	62	100	160	250
> 50 – 80	2	3	5	8	13	19	30	46	74	120	190	300
> 80 – 120	2.5	4	6	10	15	22	35	54	87	140	220	350
> 120 – 180	3.5	5	8	12	18	25	40	63	100	160	250	400
> 180 – 250	4.5	7	10	14	20	29	46	72	115	185	290	460
> 250 – 315	6	8	12	16	23	32	52	81	130	210	320	520

Manufacturer's tolerance of the reamer

T = Hole tolerance range
D = Manufacturer's tolerance of the reamer

max. hole-Ø



min. hole-Ø

Manufacturer's tolerance of adjustable reamers

The diameter of an adjustable reamer is ground to the middle of drilling tolerance T (REAMAX TS / Monomax). The adjustment capability of the reamer facilitates wear compensation.

Manufacturer's tolerance of fixed reamers

The manufacturer tolerance D of fixed reamers is two thirds (REAMAX) or three quarters (Fullmax) of the drilling tolerance T.

Coatings – Reaming

DBC

- Diamond-like carbon coating
- Specially for machining non-ferrous metals
- Maximum application temperature: 400 °C

DBG-P

- AlTiN Multilayer coating
- Especially for universal use in a variety of materials at high cutting speeds
- Suitable for MMS application
- Maximum application temperature: 1000 °C

TiN

- TiN coating
- Maximum application temperature: 450°C

Grade description – Reamers

DST

- Cermet, uncoated
- ISO | **P15** | **M10** | K10
- The uncoated cermet grade for finish machining stainless and hardened steel
- Particularly wear resistant thanks to high heat resistance

PCD-U

- Polycrystalline diamond cutting material, uncoated
- Particularly wear-resistant PCD grade for process reliable machining of aluminium

K10

- Carbide, uncoated
- ISO | **K10**
- Uncoated carbide grade for machining grey cast iron or non-ferrous metals, depending on the cutting edge geometry