

ROUND INSERT CUTTER k0-90° COPYING CUTTER

the universal geniuses for all standard jobs and the most unusual tasks

Properties

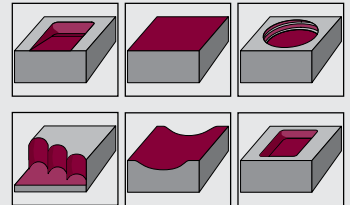
- ⌚ Tool diameter 8 - 160 mm
- ⌚ 0° axial angle for maximum contour accuracy
- ⌚ in conjunction with **DUOPLUG®** maximum stability
- ⌚ 7° axial angle ensures low power consumption
- ⌚ Stable toolholder due to embedded indexable inserts
- ⌚ 8 different hard metal qualities with 9 adapted high-performance coatings

Practical video

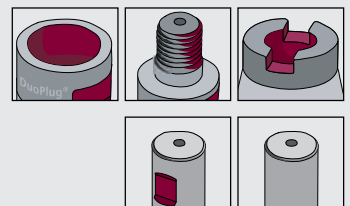
- ⌚ Indexable round insert 02 10 896 in 1.4301 / 304 / X5CrNi18-10



Machining types



Connection types



Sizes

Page

r2.5 - diam. 8 - 20 mm	76
r3.5 - diam. 12 - 30 mm, s 1.99	78
r3.5 - diam. 15 - 42 mm, s 2.38	81
r5 - diam. 20 - 52 mm	85, 90
r5 - diam. 20 - 35 mm, CBN	95
r6 - diam. 24 - 80 mm	97, 101
r8 - diam. 32 - 160 mm	106, 109
r10 - diam. 40 - 160 mm	113

Cutting materials

Carbide grade coating	ISO standard						Insert diam. d (mm) - thickness (s mm)						
	P	M	K	N	S	H	5	7 - s1,99	7 - s2,38	10	12	16	20
HSC05 PVTi; HSC05 PVFN	▽	▽	▽	▽	-	▽	⌚	⌚	⌚	⌚	⌚	⌚	⌚
K10 PVTi	▽	▽	▽	-	▽	▽	-	⌚	⌚	⌚	⌚	⌚	⌚
K10 PVTi (RDHX - concave moulding)	-	▽	-	▽	▽	-	-	⌚	⌚	⌚	⌚	⌚	-
P25 PVTi	▽	-	▽	-	-	-	-	-	⌚	⌚	⌚	⌚	⌚
P25 PVGO	-	▽	-	-	▽	-	-	-	⌚	⌚	⌚	⌚	-
P25 PVSR	▽	-	▽	-	-	▽	-	-	-	⌚	⌚	⌚	-
P40 PVTi	▽	-	-	-	-	-	-	⌚	⌚	⌚	⌚	⌚	⌚
P40 PVGO	▽	-	▽	-	-	-	-	-	⌚	⌚	⌚	⌚	-
P40 PVSR	▽	-	▽	-	-	▽	-	⌚	⌚	⌚	⌚	⌚	-
P40 PVML	▽	-	▽	-	-	▽	-	-	⌚	⌚	⌚	⌚	-
CBN C	-	-	▽	-	-	-	-	-	-	⌚	-	-	-
CBN S	-	-	-	-	-	▽	-	-	⌚	⌚	-	-	-
K10 polished	-	-	-	▽	-	-	-	⌚	⌚	⌚	⌚	⌚	⌚
K10 PVDiaN	-	-	-	▽	-	-	-	⌚	⌚	⌚	⌚	-	-
M40 PVST	▽	▽	-	-	▽	-	-	-	-	⌚	⌚	-	-
HSC03 PPGH	▽	▽	▽	-	-	▽	-	-	⌚	⌚	⌚	-	-
M35 PCTC	-	▽	-	-	▽	-	-	-	⌚	⌚	⌚	⌚	-

▽ major application ▽ minor application

▽ ▽ roughing

▽ ▽ pre-finishing

▽ ▽ finishing

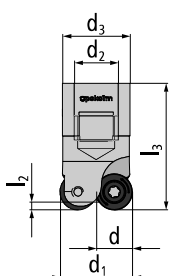


CUTTERS FOR ROUND INSERTS - K0-90°

r2.5 - diam. 8 - 20 mm

Tools especially suitable for milling small dies and engraving.
The larger number of teeth allows much higher feed rates.

Milling cutter bodies

Milling cutter bodies													
	Catalogue no.									Accessories			Features
	d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z				
	3 12 225 SG	12	5	2.5	24.5	1.3	-	M 7	10.8	3	A, B, C, D, E	   	
	4 15 225 SG	15	5	2.5	28	1.3	-	M 10	14	4	A, B, C, D, E	   	
	4 16 225 SG	16	5	2.5	28	1.3	-	M 10	15	4	A, B, C, D, E	   	
	5 20 225 SG	20	5	2.5	28	1.3	-	M 12	18.5	5	A, B, C, D, E	   	

Threaded shank end mill bodies

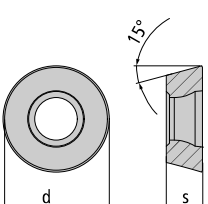
	2 10 225 M6	10	5	2.5	19	-	-	M 6	9.75	2	A, B, C, D, E	✓
	3 12 225 M6	12	5	2.5	20.5	1.3	-	M 6	11.5	3	A, B, C, D, E	✓
	4 15 225	15	5	2.5	20.5	1.3	-	M 8	13.8	4	A, B, C, D, E	✓
	5 20 225	20	5	2.5	25.5	1.3	-	M 10	18	5	A, B, C, D, E	✓

Plain shank end mill bodies

	30 08 125	8	5	2.5	30	-	18	diam. 10	-	1	A, B, C, D, E	△
	30 10 125	10	5	2.5	30	-	24	diam. 10	-	2	A, B, C, D, E	✓
	30 12 125	12	5	2.5	30	1.3	24	diam. 12	-	3	A, B, C, D, E	✓
	30 16 125	16	5	2.5	30	1.3	23.5	diam. 16	-	5	A, B, C, D, E	✓

Accessories

21 500 Torx screw A > Page 195	06 500 Torx-screwdriver B > Page 196	TV 04-1 Screwdriver torque Vario®-S with window scale, C > Page 197	T6 500 Torx interchangeable bit for Torque Vario® D > Page 197	T6 502 Torx MagicSpring compati- ble bit f. Torque Vario® E > Page 198	
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Indexable inserts								
	Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
	01 05 835	RDHX 0501 M0T	HSC 05	PVTi	5	1.5	2.5	M 2.0

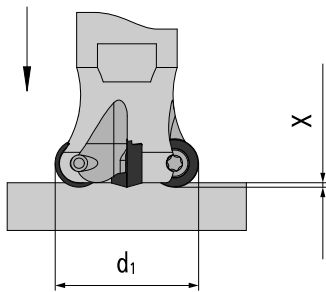
Feed per tooth (fz) | d.o.c. (ap)

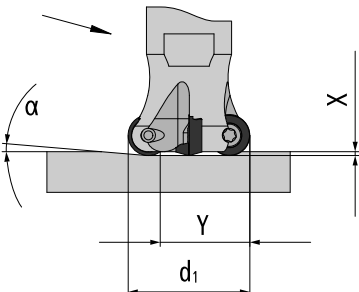
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f_z (mm) a_p (mm)	0,1-0,2 0,1-0,2	0,1 0,1	0,1-0,15 0,1-0,2	0,1-0,15 0,1-0,2	-	0,1-0,12 0,1-0,15

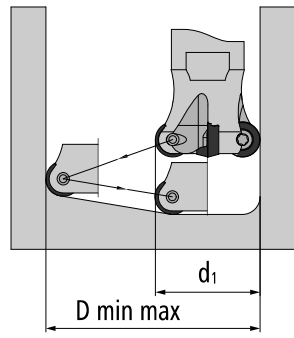
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing	-	-	-	-	-	-
	pre finishing	▽150 275 400	▽100 150 200	▽150 225 300	▽200 500 800	-	▽35 143 250
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800	-	▽35 143 250

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
8-20	1

Ramping		
		
Cutter diam. d1	α°	y
8	-	-
10	-	-
12	< 14,0	4
15	< 8,1	7
16	< 7,1	8
20	< 4,7	24

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
8	10	16
10	12	20
12	16	24
15	22	30
16	24	32
20	32	40



CUTTERS FOR ROUND INSERTS - K0-90°

r3.5 - diam. 12 - 30 mm, s 1.99 mm

Tools especially suitable for milling small dies or engraving.
The larger number of teeth allows much higher feed rates.

Milling cutter bodies

Catalogue no.

d₁

d

r

l₃

l₂

l₁

d₂

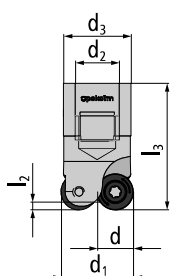
d₃

z

Accessories

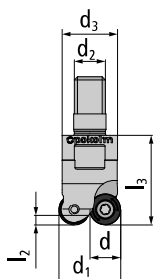
Features

DuoPlug®



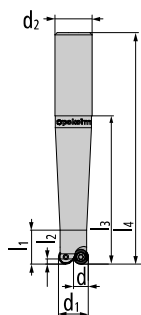
2 12 235 SG	12	7	3.5	24.5	-	-	M 7	10.8	2	B, C, D, E, F	✓	☐	☐	☐	☐	☐
3 15 235 SG	15	7	3.5	28	1.5	-	M 10	14	3	A, C, D, E, F	✓	☐	☐	☐	☐	☐
5 25 235 SG	25	7	3.5	30	1.5	-	M 16	23.5	5	A, C, D, E, F	☐	☐	☐	☐	☐	☐

Threaded shank end mill bodies



12 200 M6	12	7	3.5	28.5	-	-	M 6	11.5	2	B, C, D, E, F	✓	☐	☐	☐	☐	☐
12 200	12	7	3.5	28.5	-	-	M 8	11.8	2	B, C, D, E, F	✓	☐	☐	☐	☐	☐
3 15 235	15	7	3.5	28.5	1.5	-	M 8	13.8	3	A, C, D, E, F	✓	☐	☐	☐	☐	☐
4 20 235	20	7	3.5	28.5	1.5	-	M 10	18	4	A, C, D, E, F	✓	☐	☐	☐	☐	☐
5 25 235	25	7	3.5	28.5	1.5	-	M 12	21	5	A, C, D, E, F	✓	☐	☐	☐	☐	☐
6 30 235	30	7	3.5	28.5	1.5	-	M 16	29	6	A, C, D, E, F	☐	☐	☐	☐	☐	☐

Plain shank end mill bodies



30 12 100	12	7	3.5	30	-	23	diam. 12	-	2	B, C, D, E, F	✓	☐	☐	☐	☐	☐

Milling cutter bodies											Accessories	Features
Catalogue no.		d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z		

End mill bodies with plain shanks and flats

	40 12 100	12	7	3.5	40	-	19.5	diam. 16	-	2	B, C, D, E, F	☑ I II III IV V
	60 12 100	12	7	3.5	60	-	19.5	diam. 16	-	2	B, C, D, E, F	☑ I II III IV V
	80 12 100	12	7	3.5	80	-	19.5	diam. 16	-	2	B, C, D, E, F	☑ I II III IV V
	30 15 100	15	7	3.5	30	1.2	19.5	diam. 12	-	3	A, C, D, E, F	☑ I II III IV

Accessories					
25 500 Torx screw A > Page 195	25 500 K Torx screw B > Page 195	07 500 Torx-screwdriver C > Page 196	TV 04-1 Screwdriver torque Vario®-S with window scale, D > Page 197	T7 500 Torx interchangeable bit for Torque Vario® E > Page 197	T7 502, Torx Magic- Spring compatible bit f. Torque Vario® F > Page 198

Indexable inserts								
Catalogue no.		DIN Specification	Carbide Grade	Coating	d	s	r	M
	01 07 835	RDHX 07T1 M0T	HSC 05	PVTi	7	1.99	3.5	M 2.5
	01 07 840	RDHX 07T1 M0T	P40	PVTi	7	1.99	3.5	M 2.5
	01 07 842	RDEX 07T1 M0T	P40	PVSR	7	1.99	3.5	M 2.5
	01 07 8042	RDEX 07T1 M0T	P40	PCSR	7	1.99	3.5	M 2.5
	01 07 860	RDHX 07T1 M0T	K10	PVTi	7	1.99	3.5	M 2.5
	01 07 831P	RDHX 07T1 M0E	K10	polished	7	1.99	3.5	M 2.5
	01 07 880 D	RDHX 07T1 M0E	K10	PVDiaN	7	1.99	3.5	M 2.5
	01 07 880	RDHX 07T1 M0E	K10	PVTi	7	1.99	3.5	M 2.5

Feed per tooth (f_z) | d.o.c. (a_p)

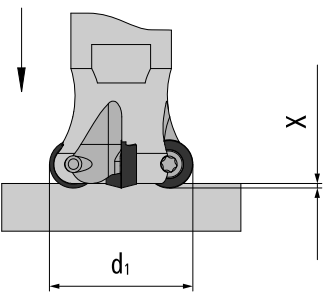
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,1-0,2 0,1-0,3	0,1 0,1	0,1-0,3 0,1-0,5	0,1-0,2 0,1-0,4	-	0,1-0,12 0,1-0,15
P40 PVTi	f _z (mm) a _p (mm)	0,1-0,3 0,1-0,5	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,1-0,3 0,1-0,7	-	0,1-0,3 0,1-0,5	-	-	0,1-0,15 0,1-0,2
P40 PCSR	f _z (mm) a _p (mm)	0,05-0,45 0,05-0,7	-	0,1-0,4 0,05-0,65	-	-	-
K10 PVTi	f _z (mm) a _p (mm)	0,1 0,1	0,1 0,1	0,1-0,3 0,1-0,5	-	0,1-0,15 0,1-0,3	0,1-0,12 0,1-0,15
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-0,7	-	-
K10 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-0,7	-	-

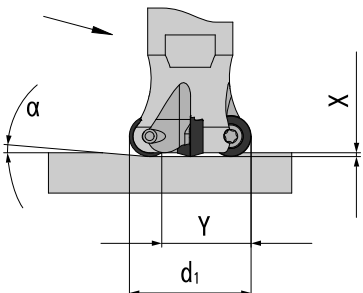
major application
 minor application
 roughing
 pre-finishing
 finishing

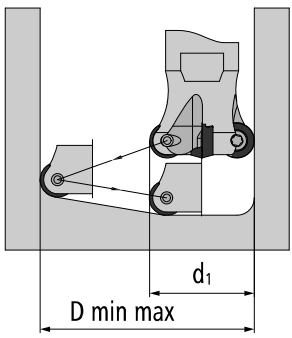
Cutting speed (Vc in m/min)

Material											
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel				
HSC 05 PVTi	roughing pre finishing finishing	-	-	▽100 150 200	-	-	-				
		▽150 275 400	-	▽150 225 300	▽200 500 800		▽35 143 250				
		▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800		▽35 143 250				
P40 PVTi	roughing pre finishing finishing	▽100 160 220	-	-	-	-	-				
		▽100 175 250									
		-									
P40 PVSR	roughing pre finishing finishing	▽100 200 300	-	▽160 190 220	-	-	-				
		▽100 200 300		▽160 190 220				▽70 110 150			
		-		▽160 190 220				-			
P40 PCSR	roughing pre finishing finishing	▽130 190 250	-	▽120 170 220	-	-	-				
		▽150 225 300		▽150 200 250				-			
		-		▽180 230 280				-			
K10 PVTi	roughing pre finishing finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-				
		-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180				
		▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-				
K10 polished	roughing pre finishing finishing	-	-	-	▽100 450 800	-	-				
					▽100 450 800						
					▽100 450 800						
K10 PVDiaN	roughing pre finishing finishing	-	-	-	▽100 450 800	-	-				
					▽100 450 800						
					▽100 450 800						

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
12-30	1.2

Ramping		
		
Cutter diam. d1	α°	y
12	-	-
15	<26,5	2
20	<8,5	8
25	<5,3	13
30	<3,8	18

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
12	14	24
15	17	30
20	28	40
25	38	50
30	48	60

CUTTERS FOR ROUND INSERTS - K0-90°

r3.5 - diam. 15 - 42 mm, s 2.38 mm

Our all-purpose milling cutter:

- for high-speed machining centres
- for roughing and finishing applications



Milling cutter bodies											Accessories	Features
Catalogue no.		d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z		

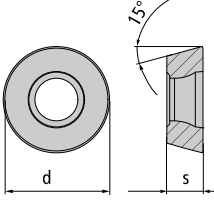
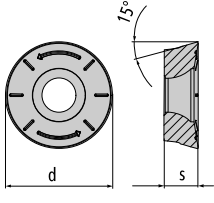
DuoPlug®												
	2 16 200 SG	16	7	3.5	28.5	1.5	-	M 10	15	2	A, B, C, D, E	
	3 16 200 SG	16	7	3.5	28.5	1.5	-	M 10	15	3	A, B, C, D, E	
	4 20 200 SG	20	7	3.5	28.5	1.5	-	M 12	18.6	4	A, B, C, D, E	
	5 25 200 SG	25	7	3.5	30	1.5	-	M 16	23.5	5	A, B, C, D, E	

Threaded shank end mill bodies												
	15 200	15	7	3.5	28.5	1.5	-	M 8	13.8	2	A, B, C, D, E	
	3 16 200	16	7	3.5	28.5	1.5	-	M 8	13.8	3	A, B, C, D, E	
	4 20 200	20	7	3.5	28.5	1.5	-	M 10	18	4	A, B, C, D, E	
	5 25 200	25	7	3.5	28.5	1.5	-	M 12	21	5	A, B, C, D, E	
	5 30 200	30	7	3.5	28.5	1.5	-	M 16	29	5	A, B, C, D, E	
	6 35 200	35	7	3.5	28.5	1.5	-	M 16	29	6	A, B, C, D, E	
	7 42 200	42	7	3.5	42.5	1.5	-	M 16	29	7	A, B, C, D, E	

End mill bodies with plain shanks and flats												
	40 15 100	15	7	3.5	40	2.6	23	diam. 16	-	2	A, B, C, D, E	
	60 15 100	15	7	3.5	60	2.6	23	diam. 16	-	2	A, B, C, D, E	
	80 15 100	15	7	3.5	80	2.6	22	diam. 20	-	2	A, B, C, D, E	
	100 15 100	15	7	3.5	100	2.6	22	diam. 20	-	2	A, B, C, D, E	

Accessories					
25 500 Torx screw A > Page 195	07 500 Torx-screwdriver B > Page 196	TV 04-1 Screwdriver torque Vario®-S with window scale, C > Page 197	T7 500 Torx interchangeable bit for Torque Vario® D > Page 197	T7 502 Torx MagicSpring compatible bit f. Torque Vario® E > Page 198	

major application
 minor application
 roughing
 pre-finishing
 finishing

Indexable inserts		Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
		02 07 835	RDHX 0702 M0T	HSC 05	PVTi	7	2.38	3.5	M 2.5
		02 07 840	RDHX 0702 M0T	P40	PVTi	7	2.38	3.5	M 2.5
		02 07 842	RDEX 0702 M0T	P40	PVSR	7	2.38	3.5	M 2.5
		02 07 8042	RDEX 0702 M0T	P40	PCSR	7	2.38	3.5	M 2.5
		02 07 844	RDHX 0702 M0T	P40	PVML	7	2.38	3.5	M 2.5
		02 07 846	RDMX 0702 M0T	P40	PVGO	7	2.38	3.5	M 2.5
		02 07 850	RDHX 0702 M0T	P25	PVTi	7	2.38	3.5	M 2.5
		02 07 860	RDHX 0702 M0T	K10	PVTi	7	2.38	3.5	M 2.5
		02 07 892	RDHX 0702 M0T	CBN for steel	uncoated	7	2.38	3.5	M 2.5
		02 07 848	RDMX 0702 M0T	P40	PVGO	7	2.38	3.5	M 2.5
		02 07 831P	RDHX 0702 M0E	K10	polished	7	2.38	3.5	M 2.5
		02 07 880	RDHX 0702 M0E	K10	PVTi	7	2.38	3.5	M 2.5
		02 07 880 D	RDHX 0702 M0E	K10	PVDiaN	7	2.38	3.5	M 2.5
		02 07 896	RDMT 0702 M0EN	M40	PVST	7	2.38	3.5	M 2.5
		02 07 8099	RDMT 0702 M0EN	M35	PCTC	7	2.38	3.5	M 2.5
		02 07 897	RDPX 0702 M0T	P25	PVGO	7	2.38	3.5	M 2.5

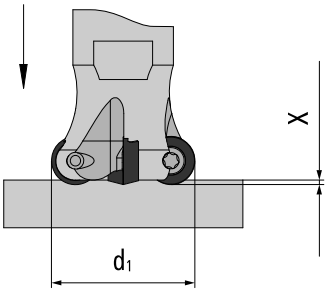
Feed per tooth (fz) | d.o.c. (ap)

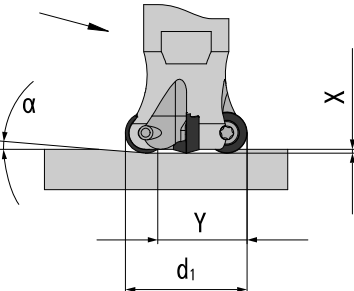
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,1-0,2 0,1-0,4	0,1 0,1	0,1-0,3 0,1-0,7	0,1-0,2 0,1-0,55	-	0,1-0,15 0,1-0,2
P40 PVTi	f _z (mm) a _p (mm)	0,2-0,5 0,1-0,75	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,2-0,5 0,1-0,75	-	0,1-0,3 0,1-0,7	-	-	0,1-0,15 0,1-0,2
P40 PCSR	f _z (mm) a _p (mm)	0,1-0,5 0,1-0,75	-	0,1-0,4 0,1-0,7	-	-	-
P40 PVML	f _z (mm) a _p (mm)	0,2-0,5 0,1-0,75	-	0,1-0,3 0,1-0,7	-	-	0,1-0,15 0,1-0,2
P40 PVGO	f _z (mm) a _p (mm)	0,2-0,5 0,1-0,75	-	-	-	-	-
P25 PVTi	f _z (mm) a _p (mm)	0,1-0,3 0,1-0,7	-	0,1-0,2 0,1-0,4	-	-	-
K10 PVTi	f _z (mm) a _p (mm)	0,1 0,1	0,1 0,1	0,1-0,3 0,1-0,7	-	0,1-0,15 0,1-0,42	0,1-0,15 0,1-0,2
CBN for steel uncoated	f _z (mm) a _p (mm)	-	-	-	-	-	0,1-0,2 0,1
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-1	-	-
K10 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-1	-	-
M40 PVST	f _z (mm) a _p (mm)	0,1-0,5 0,1-0,75	0,05-0,5 0,05-0,75	-	-	0,05-0,4 0,05-0,75	-
M35 PCTC	f _z (mm) a _p (mm)	-	0,05-0,5 0,05-0,75	-	-	0,05-0,4 0,05-0,75	-
P25 PVGO	f _z (mm) a _p (mm)	-	0,1-0,4 0,1-0,7	-	-	0,1-0,3 0,1-0,7	-

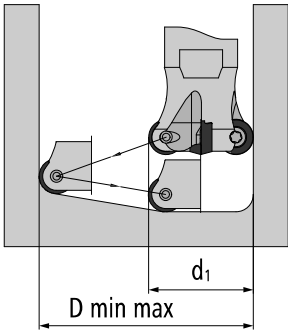
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽150 275 400	-	▽150 225 300	▽200 500 800	-	▽35 143 250
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800	-	▽35 143 250
P40 PVTi	roughing	▽100 160 220	-	-	-	-	-
	pre finishing	▽100 175 250	-	-	-	-	-
	finishing	-	-	-	-	-	-
P40 PVSR	roughing	▽100 200 300	-	▽160 190 220	-	-	-
	pre finishing	▽100 200 300	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
P40 PCSR	roughing	▽130 190 250	-	▽120 170 220	-	-	-
	pre finishing	▽150 225 300	-	▽150 200 250	-	-	-
	finishing	-	-	▽180 230 280	-	-	-
P40 PVML	roughing	▽100 200 300	-	▽140 215 290	-	-	-
	pre finishing	▽100 200 300	-	▽140 170 200	-	-	▽70 110 150
	finishing	-	-	-	-	-	-
P40 PVGO	roughing	▽100 150 200	-	-	-	-	-
	pre finishing	▽100 150 200	-	-	-	-	-
	finishing	-	-	-	-	-	-
P25 PVTi	roughing	▽100 200 300	-	-	-	-	-
	pre finishing	▽100 125 150	-	▽130 150 170	-	-	-
	finishing	▽150 250 350	-	▽150 200 250	-	-	-
K10 PVTi	roughing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-
	pre finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180
	finishing	▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-
CBN for steel uncoated	roughing	-	-	-	-	-	-
	pre finishing	-	-	-	-	-	▽400 700 1000
K10 polished	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
K10 PVDiaN	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
M40 PVST	roughing	▽80 140 200	▽80 130 180	-	-	▽30 55 80	-
	pre finishing	▽100 150 200	▽100 155 210	-	-	▽40 65 90	-
	finishing	▽110 180 250	▽120 185 250	-	-	▽60 90 120	-
M35 PCTC	roughing	-	▽110 155 200	-	-	▽30 65 100	-
	pre finishing	-	▽120 175 230	-	-	▽40 75 110	-
	finishing	-	▽160 220 280	-	-	▽60 100 140	-
P25 PVGO	roughing	-	▽80 140 200	-	-	▽20 65 110	-
	pre finishing	-	▽100 155 210	-	-	▽20 65 110	-
	finishing	-	▽120 175 230	-	-	▽30 70 110	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
15-42	1.2

Ramping		
		
Cutter diam. d1	α°	y
15	<26,5	2
16	<14,0	4
20	<8,5	8
25	<5,3	13
30	<3,8	18
35	<3,0	23
42	<2,3	30

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
15	17	30
16	20	32
20	28	40
25	38	50
30	48	60
35	58	70
42	72	84

CUTTERS FOR ROUND INSERTS - K0-90°

r5 - diam. 20 - 42 mm, neutral - 0° axial rake angle

The all-rounder:

Tools are applicable for a wide range of milling operations.



Milling cutter bodies

	Catalogue no.											Accessories	Features
		d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z			
	20 200 SG	20	10	5	35	-	-	M 12	18.6	2	A, B, C, D, E		
	3 25 200 SG	25	10	5	35	2.8	-	M 16	23.5	3	A, B, C, D, E		

Threaded shank end mill bodies

	20 200	20	10	5	29	-	-	M 10	18	2	A, B, C, D, E		
	2 25 200	25	10	5	33	2.8	-	M 12	21	2	A, B, C, D, E		
	3 25 200	25	10	5	33	2.8	-	M 12	21	3	A, B, C, D, E		
	4 25 200	25	10	5	33	2.8	-	M 12	21	4	A, B, C, D, E		
	4 30 201	30	10	5	33	2.8	-	M 12	21	4	A, B, C, D, E		
	4 30 200	30	10	5	43	2.8	-	M 16	29	4	A, B, C, D, E		
	5 35 200	35	10	5	43	2.8	-	M 16	29	5	A, B, C, D, E		
	N 5 42 200	42	10	5	43	2.8	-	M 16	29	5	A, B, C, D, E		
	6 42 200	42	10	5	43	2.8	-	M 16	29	6	A, B, C, D, E		

End mill bodies with plain shanks and flats

	40 20 100	20	10	5	40	-	23	diam. 20	-	2	A, B, C, D, E		
	60 20 100	20	10	5	60	-	23	diam. 20	-	2	A, B, C, D, E		
	80 20 100	20	10	5	80	-	23	diam. 25	-	2	A, B, C, D, E		
	100 20 100	20	10	5	100	-	23	diam. 25	-	2	A, B, C, D, E		
	120 20 100	20	10	5	120	-	23	diam. 25	-	2	A, B, C, D, E		

▼ major application ▼ minor application

▼ roughing

▼ pre-finishing

▼ finishing

Milling cutter bodies

Catalogue no.

d₁

d

r

l₃

l₂

l₁

d₂

d₃

z

Accessories

Features

Shell type milling cutter bodies

	6 42 310	42	10	5	43	2.8	-	diam. 16	35	6	A, B, C, D, E	✓	✗	✗	✗

Accessories

35 500 Torx screw A > Page 195	15 500 Torx-screwdriver B > Page 196	TV 2-8 Screwdriver torque Vario®-S with window scale, C > Page 197	T15 500 Torx interchangeable bit for Torque Vario® D > Page 197	T15 502 Torx MagicSpring compati- ble bit f. Torque Vario® E > Page 198	
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Indexable inserts

Catalogue no.

DIN Specification

Carbide Grade

Coating

d

s

r

M

	02 10 835	RDHX 1003 M0T	HSC 05	PVTi	10	3.18	5	M 3.5
	02 10 837	RDMX 1003 M0T	HSC 05	PVFN	10	3.18	5	M 3.5
	02 10 840	RDHX 1003 M0T	P40	PVTi	10	3.18	5	M 3.5
	02 10 842	RDEX 1003 M0T	P40	PVSR	10	3.18	5	M 3.5
	02 10 8042	RDEX 1003 M0T	P40	PCSR	10	3.18	5	M 3.5
	02 10 844	RDHX 1003 M0T	P40	PVML	10	3.18	5	M 3.5
	02 10 846	RDMX 1003 MOSN	P40	PVGO	10	3.18	5	M 3.5
	02 10 850	RDHX 1003 M0T	P25	PVTi	10	3.18	5	M 3.5
	02 10 852	RDEX 1003 M0T	P25	PVSR	10	3.18	5	M 3.5
	02 10 860	RDHX 1003 M0T	K10	PVTi	10	3.18	5	M 3.5
	02 10 892	RDHX 1003 M0T	CBN for steel	uncoated	10	3.18	5	M 3.5
	02 10 893	RDHX 1003 M0T	CBN for cast iron	uncoated	10	3.18	5	M 3.5
	02 10 831P	RDHX 1003 M0T	K10	polished	10	3.18	5	M 3.5
	02 10 848	RDMX 1003 M0T	P40	PVGO	10	3.18	5	M 3.5
	02 10 880	RDHX 1003 M0T	K10	PVTi	10	3.18	5	M 3.5
	02 10 880 D	RDHX 1003 M0T	K10	PVDiaN	10	3.18	5	M 3.5
	02 10 896	RDMT 1003 M0EN	M40	PVST	10	3.18	5	M 3.5
	02 10 897	RDPX 1003 M0T	P25	PVGO	10	3.18	5	M 3.5
	02 10 8099	RDMT 1003 M0EN	M35	PCTC	10	3.18	5	M 3.5

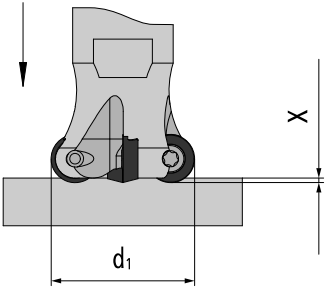
Feed per tooth (fz) | d.o.c. (ap)

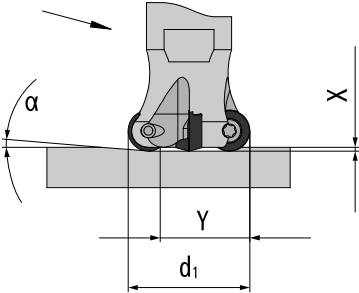
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f_z (mm) a_p (mm)	0,1-0,2 0,1-0,55	0,15 0,1	0,15-0,3 0,1-1	0,1-0,2 0,1-0,8	-	0,1-0,15 0,1-0,3
HSC 05 PVFN	f_z (mm) a_p (mm)	0,1-0,4 0,1-1	0,1-0,2 0,1-0,3	0,1-0,3 0,1-1	0,1-0,2 0,1-0,3	-	0,1-0,2 0,1-0,5
P40 PVTi	f_z (mm) a_p (mm)	0,2-0,6 0,1-1,5	-	-	-	-	-
P40 PVSR	f_z (mm) a_p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
P40 PCSR	f_z (mm) a_p (mm)	0,2-1 0,2-1,5	-	0,1-0,8 0,1-1,2	-	-	-
P40 PVML	f_z (mm) a_p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
P40 PVGO	f_z (mm) a_p (mm)	0,1-0,9 0,1-1,5	-	0,1-0,3 0,1-1	-	-	-
P25 PVTi	f_z (mm) a_p (mm)	0,15-0,3 0,1-1	-	0,15-0,22 0,1-0,55	-	-	-
P25 PVSR	f_z (mm) a_p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
K10 PVTi	f_z (mm) a_p (mm)	0,15 0,1	0,15 0,1	0,15-0,3 0,1-1	-	0,1-0,15 0,1-0,55	0,1-0,15 0,1-0,3
CBN for steel uncoated	f_z (mm) a_p (mm)	-	-	-	-	-	0,1-0,2 0,1
CBN for cast iron uncoated	f_z (mm) a_p (mm)	-	-	-	-	-	-
K10 polished	f_z (mm) a_p (mm)	-	-	-	0,1-0,3 0,1-1,5	-	-
K10 PVDiaN	f_z (mm) a_p (mm)	-	-	-	0,1-0,3 0,1-1,5	-	-
M40 PVST	f_z (mm) a_p (mm)	0,1-0,75 0,1-1	0,05-0,6 0,2-2	-	-	0,05-0,4 0,1-2	-
P25 PVGO	f_z (mm) a_p (mm)	-	0,15-0,6 0,2-1	-	-	0,1-0,4 0,1-1	-
M35 PCTC	f_z (mm) a_p (mm)	-	0,05-0,6 0,2-2	-	-	0,05-0,4 0,1-2	-

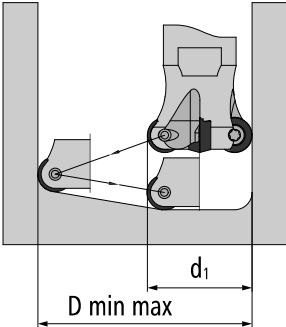
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽150 275 400	-	▽150 225 300	▽200 500 800	-	▽35 143 250
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800	-	▽35 143 250
HSC 05 PVFN	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽120 160 200	-	▽100 150 200	▽200 500 800	-	▽40 130 220
	finishing	▽150 250 350	▽100 150 200	▽200 275 350	▽200 500 800	-	▽40 130 220
P40 PVTi	roughing	▽100 160 220	-	-	-	-	-
	pre finishing	▽100 175 250	-	-	-	-	-
	finishing	-	-	-	-	-	-
P40 PVSR	roughing	▽100 200 300	-	▽160 190 220	-	-	-
	pre finishing	▽100 200 300	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
P40 PCSR	roughing	▽130 190 250	-	▽120 170 220	-	-	-
	pre finishing	▽150 225 300	-	▽150 200 250	-	-	-
	finishing	-	-	▽180 230 280	-	-	-
P40 PVML	roughing	▽100 200 300	-	▽140 215 290	-	-	-
	pre finishing	▽100 200 300	-	▽140 170 200	-	-	▽70 110 150
	finishing	-	-	-	-	-	-
P40 PVGO	roughing	▽100 150 200	-	▽110 130 150	-	-	-
	pre finishing	▽100 150 200	-	▽110 130 150	-	-	-
	finishing	-	-	-	-	-	-
P25 PVTi	roughing	▽100 200 300	-	-	-	-	-
	pre finishing	▽100 125 150	-	▽130 150 170	-	-	-
	finishing	▽150 250 350	-	▽150 200 250	-	-	-
P25 PVSR	roughing	▽100 160 220	-	▽140 180 220	-	-	-
	pre finishing	▽100 180 260	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
K10 PVTi	roughing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-
	pre finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180
	finishing	▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-
CBN for steel uncoated	roughing	-	-	-	-	-	-
	pre finishing	-	-	-	-	-	▽400 700 1000
	finishing	-	-	-	-	-	-
CBN for cast iron uncoated	roughing	-	-	-	-	-	-
	pre finishing	-	-	-	-	-	-
	finishing	-	-	-	-	-	-
K10 polished	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
K10 PVDiaN	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
M40 PVST	roughing	▽80 140 200	▽80 130 180	-	-	▽30 55 80	-
	pre finishing	▽100 150 200	▽100 155 210	-	-	▽40 65 90	-
	finishing	▽110 180 250	▽120 185 250	-	-	▽60 90 120	-
P25 PVGO	roughing	-	▽80 140 200	-	-	▽20 65 110	-
	pre finishing	-	▽100 155 210	-	-	▽20 65 110	-
	finishing	-	▽120 175 230	-	-	▽30 70 110	-
M35 PCTC	roughing	-	▽110 155 200	-	-	▽30 65 100	-
	pre finishing	-	▽120 175 230	-	-	▽40 75 110	-
	finishing	-	▽160 220 280	-	-	▽60 100 140	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
20-35	2.5
42	3.5

Ramping		
		
Cutter diam. d1	α°	y
20	-	-
25	<19,7	7
30	<11,7	12
35	<8,4	17
42	<5,9	24

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
20	22	40
25	32	50
30	42	60
35	52	70
42	66	84



CUTTERS FOR ROUND INSERTS - K0-90°

r5 - diam. 25 - 52 mm, 7° positive rake angle

The all-rounder:

Tools are applicable for a wide range of milling operations.

Milling cutter bodies

Catalogue no.

d₁

d

r

l₃

l₂

l₁

d₂

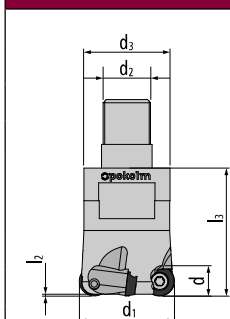
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Accessories

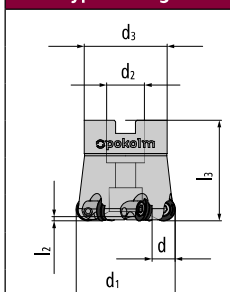
Features

Threaded shank end mill bodies



3 25 200/7	25	10	5	32.5	2.5	-	M 12	21	3	A, B, C, D, E	
5 35 200/7	35	10	5	43	2.5	-	M 16	29	5	A, B, C, D, E	
6 42 200/7	42	10	5	42.5	2.5	-	M 16	29	6	A, B, C, D, E	

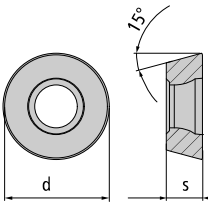
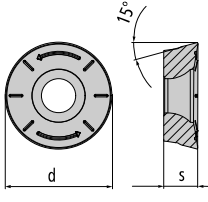
Shell type milling cutter bodies



6 42 310/7	42	10	5	42.5	3.5	-	diam. 16	35	6	A, B, C, D, E	
7 52 310/7	52	10	5	52.5	3.5	-	diam. 22	40	7	A, B, C, D, E	

Accessories

 35 500 Torx screw A > Page 195	 15 500 Torx-screwdriver B > Page 196	 TV 2-8 Screwdriver torque Vario®-S with window scale, C > Page 197	 T15 500 Torx interchangeable bit for Torque Vario® D > Page 197	 T15 502 Torx MagicSpring compati- ble bit f. Torque Vario® E > Page 198	
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Indexable inserts		Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
		02 10 835	RDHX 1003 M0T	HSC 05	PVTi	10	3.18	5	M 3.5
		02 10 837	RDMX 1003 M0T	HSC 05	PVFN	10	3.18	5	M 3.5
		02 10 840	RDHX 1003 M0T	P40	PVTi	10	3.18	5	M 3.5
		02 10 842	RDEX 1003 M0T	P40	PVSR	10	3.18	5	M 3.5
		02 10 8042	RDEX 1003 M0T	P40	PCSR	10	3.18	5	M 3.5
		02 10 844	RDHX 1003 M0T	P40	PVML	10	3.18	5	M 3.5
		02 10 846	RDMX 1003 MOSN	P40	PVGO	10	3.18	5	M 3.5
		02 10 850	RDHX 1003 M0T	P25	PVTi	10	3.18	5	M 3.5
		02 10 852	RDEX 1003 M0T	P25	PVSR	10	3.18	5	M 3.5
		02 10 860	RDHX 1003 M0T	K10	PVTi	10	3.18	5	M 3.5
		02 10 892	RDHX 1003 M0T	CBN for steel	uncoated	10	3.18	5	M 3.5
		02 10 893	RDHX 1003 M0T	CBN for cast iron	uncoated	10	3.18	5	M 3.5
		02 10 831P	RDHX 1003 M0T	K10	polished	10	3.18	5	M 3.5
		02 10 848	RDMX 1003 M0T	P40	PVGO	10	3.18	5	M 3.5
		02 10 880	RDHX 1003 M0T	K10	PVTi	10	3.18	5	M 3.5
		02 10 880 D	RDHX 1003 M0T	K10	PVDiaN	10	3.18	5	M 3.5
		02 10 896	RDMT 1003 M0EN	M40	PVST	10	3.18	5	M 3.5
		02 10 897	RDPX 1003 M0T	P25	PVGO	10	3.18	5	M 3.5
		02 10 8099	RDMT 1003 M0EN	M35	PCTC	10	3.18	5	M 3.5

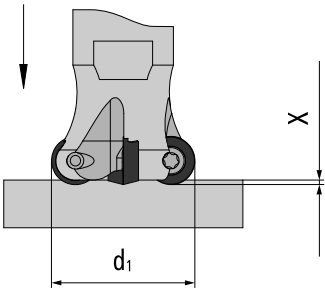
Feed per tooth (fz) | d.o.c. (ap)

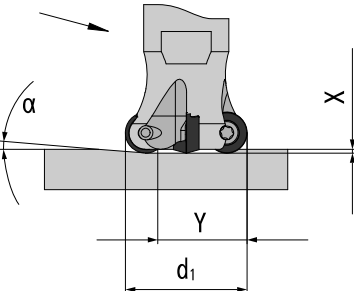
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,1-0,2 0,1-0,55	0,15 0,1	0,15-0,3 0,1-1	0,1-0,2 0,1-0,8	-	0,1-0,15 0,1-0,3
HSC 05 PVFN	f _z (mm) a _p (mm)	0,1-0,4 0,1-1	0,1-0,2 0,1-0,3	0,1-0,3 0,1-1	0,1-0,2 0,1-0,3	-	0,1-0,2 0,1-0,5
P40 PVTi	f _z (mm) a _p (mm)	0,2-0,6 0,1-1,5	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
P40 PCSR	f _z (mm) a _p (mm)	0,2-1 0,2-1,5	-	0,1-0,8 0,1-1,2	-	-	-
P40 PVML	f _z (mm) a _p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
P40 PVGO	f _z (mm) a _p (mm)	0,1-0,9 0,1-1,5	-	0,1-0,3 0,1-1	-	-	-
P25 PVTi	f _z (mm) a _p (mm)	0,15-0,3 0,1-1	-	0,15-0,22 0,1-0,55	-	-	-
P25 PVSR	f _z (mm) a _p (mm)	0,2-0,7 0,2-1,5	-	0,1-0,3 0,1-1	-	-	0,1-0,15 0,1-0,3
K10 PVTi	f _z (mm) a _p (mm)	0,15 0,1	0,15 0,1	0,15-0,3 0,1-1		0,1-0,15 0,1-0,55	0,1-0,15 0,1-0,3
CBN for steel uncoated	f _z (mm) a _p (mm)	-	-	-	-	-	0,1-0,2 0,1
CBN for cast iron uncoated	f _z (mm) a _p (mm)	-	-		-	-	-
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-1,5	-	-
K10 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0,1-0,3 0,1-1,5	-	-
M40 PVST	f _z (mm) a _p (mm)	0,1-0,75 0,1-1	0,05-0,6 0,2-2	-	-	0,05-0,4 0,1-2	-
P25 PVGO	f _z (mm) a _p (mm)	-	0,15-0,6 0,2-1	-	-	0,1-0,4 0,1-1	-
M35 PCTC	f _z (mm) a _p (mm)	-	0,05-0,6 0,2-2	-	-	0,05-0,4 0,1-2	-

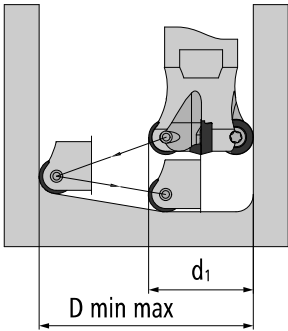
Cutting speed (Vc in m/min)

Material								
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel	
HSC 05 PVTi	roughing	-	-	▽100 150 200	-		-	
	pre finishing	▽150 275 400	-	▽150 225 300	▽200 500 800	-	▽35 143 250	
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800		▽35 143 250	
HSC 05 PVFN	roughing	-	-	▽100 150 200	-		-	
	pre finishing	▽120 160 200	-	▽100 150 200	▽200 500 800	-	▽40 130 220	
	finishing	▽150 250 350	▽100 150 200	▽200 275 350	▽200 500 800		▽40 130 220	
P40 PVTi	roughing	▽100 160 220		-	-	-	-	
	pre finishing	▽100 175 250	-					
	finishing	-						
P40 PVSR	roughing	▽100 200 300		▽160 190 220	-	-	-	
	pre finishing	▽100 200 300	-	▽160 190 220	-	-	▽70 110 150	
	finishing	-		▽160 190 220			-	
P40 PCSR	roughing	▽130 190 250		▽120 170 220	-	-	-	
	pre finishing	▽150 225 300	-	▽150 200 250	-	-	-	
	finishing	-		▽180 230 280				
P40 PVML	roughing	▽100 200 300		▽140 215 290	-	-	-	
	pre finishing	▽100 200 300	-	▽140 170 200	-	-	▽70 110 150	
	finishing	-		-			-	
P40 PVGO	roughing	▽100 150 200		▽110 130 150	-	-	-	
	pre finishing	▽100 150 200	-	▽110 130 150	-	-	-	
	finishing	-		-				
P25 PVTi	roughing	▽100 200 300		-	-	-	-	
	pre finishing	▽100 125 150	-	▽130 150 170	-	-	-	
	finishing	▽150 250 350		▽150 200 250				
P25 PVSR	roughing	▽100 160 220		▽140 180 220	-	-	-	
	pre finishing	▽100 180 260	-	▽160 190 220	-	-	▽70 110 150	
	finishing	-		▽160 190 220			-	
K10 PVTi	roughing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-	
	pre finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180	
	finishing	▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-	
CBN for steel uncoated	roughing	-	-	-	-	-	-	
	pre finishing						▽400 700 1000	
	finishing							
CBN for cast iron uncoated	roughing	-	-	-	-	-	-	
	pre finishing			-				
	finishing			-				
K10 polished	roughing	-	-	-	▽100 450 800	-	-	
	pre finishing				▽100 450 800			
	finishing				▽100 450 800			
K10 PVDiaN	roughing	-	-	-	▽100 450 800	-	-	
	pre finishing				▽100 450 800			
	finishing				▽100 450 800			
M40 PVST	roughing	▽80 140 200	▽80 130 180		-	▽30 55 80	-	
	pre finishing	▽100 150 200	▽100 155 210	-		▽40 65 90		
	finishing	▽110 180 250	▽120 185 250			▽60 90 120		
P25 PVGO	roughing	-	▽80 140 200		-	▽20 65 110	-	
	pre finishing		▽100 155 210	-		▽20 65 110		
	finishing		▽120 175 230			▽30 70 110		
M35 PCTC	roughing	-	▽110 155 200	-	-	▽30 65 100	-	
	pre finishing		▽120 175 230			▽40 75 110		
	finishing		▽160 220 280			▽60 100 140		

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
25-35	2,5
42-52	3,5

Ramping		
		
Cutter diam. d1	α°	y
25	<19,7	7
35	<8,4	17
42	<5,9	24
52	<4,2	34

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
25	32	50
35	52	70
42	66	84
52	86	104

CUTTERS FOR ROUND INSERTS - K0-90°

r5 - diam. 20 - 35 mm, CBN, neutral - 0° axial rake angle

Specially designed for high-speed super-finish milling of hardened steel.



Milling cutter bodies

	Catalogue no.											Accessories	Features
		d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z			
	2 20 294 SG	20	10	5	39.5	-	-	M 12	18.5	2	A, B, C, D, E		
	3 25 294 SG	25	10	5	41.5	2.5	-	M 16	23.5	3	A, B, C, D, E		

Threaded shank end mill bodies

	20 294	20	10	5	28.5	-	-	M 10	18	2	A, B, C, D, E		
	25 294	25	10	5	32.5	2.5	-	M 12	21	3	A, B, C, D, E		
	30 294	30	10	5	32.5	2.5	-	M 12	21	4	A, B, C, D, E		
	35 294	35	10	5	42.5	2.5	-	M 16	29	4	A, B, C, D, E		

Accessories

10 500 Torx-screwdriver A > Page 196	TV 2-8 Screwdriver torque Vario®-S with window scale, B > Page 197	T10 500 Torx interchangeable bit for Torque Vario® C > Page 197	T10 502 Torx MagicSpring compatible bit f. Torque Vario®, D > Page 198	10 514 clamping finger for CBN E > Page 198	
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Indexable inserts

	Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
	02 10 092	RPHN 1003 M0	CBN for steel	uncoated	10	3.18	5	
	02 10 093	RPHN 1003 M0	CBN for cast iron	uncoated	10	3.18	5	

▼ major application ▼ minor application

▼ roughing

▼ pre-finishing

▼ finishing

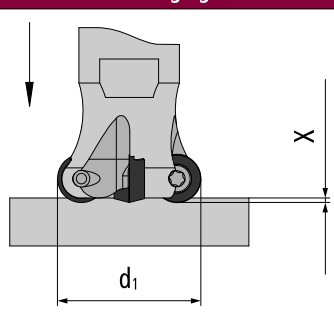
Feed per tooth (fz) | d.o.c. (ap)

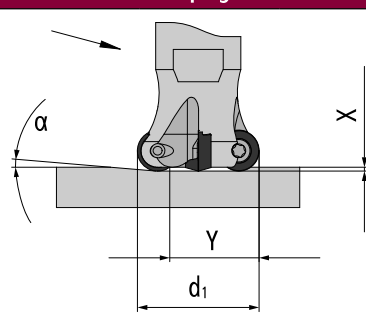
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
CBN for steel uncoated	f_z (mm) a_p (mm)	-	-	-	-	-	0,1-0,2 0,1-0,3
CBN for cast iron uncoated	f_z (mm) a_p (mm)	-	-	0,1-0,2 0,1-0,3	-	-	-

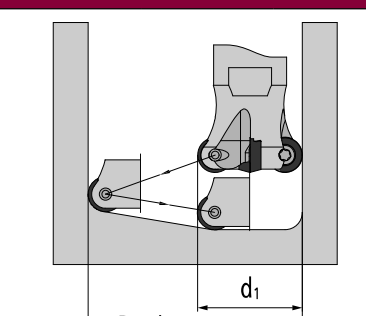
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
CBN for steel uncoated	roughing pre finishing finishing	-	-	-	-	-	- ▽400 700 1000 ▽400 700 1000
CBN for cast iron uncoated	roughing pre finishing finishing	-	-	- ▽500 750 1000 ▽500 750 1000	-	-	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
20-35	2.5

Ramping		
		
Cutter diam. d1	α°	y
20	-	-
25	<19,7	7
30	<11,7	12
35	<8,4	17

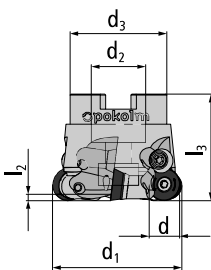
Helix		
		
Cutter diam. d1	D _{min}	D _{max}
20	22	40
25	32	50
30	42	60
35	52	70

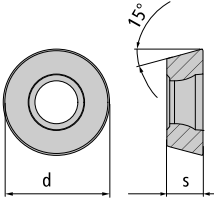
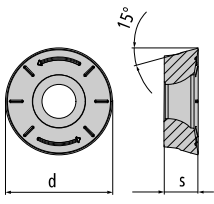
CUTTERS FOR ROUND INSERTS - K0-90°

r6 - diam. 42 - 80 mm, 7° positive rake angle, with shims

- increased reliability against fractures during machining
- optimum protection of milling cutter body by shim
- in case of insert fracture, shims, screws and threaded bushes can be replaced separately, it is not necessary to buy a new body



Milling cutter bodies												Accessories	Features
Catalogue no.			d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z		
Shell type milling cutter bodies													
	42 310/7 HL	42	12	6	42	3.5	-	diam. 16	35	4	A, B, C, D, E, F, G, H, I		
	52 310/7 HL	52	12	6	52.5	3.5	-	diam. 22	40	5	A, B, C, D, E, F, G, H, I		
	66 310/7 HL	66	12	6	52.5	3.5	-	diam. 27	48	6	A, B, C, D, E, F, G, H, I		
	80 310/7 HL	80	12	6	52.5	3.5	-	diam. 27	60	7	A, B, C, D, E, F, G, H, I		
Accessories													
 35 500 L Torx screw A > Page 195	 35 510 locking screw B > Page 195	 35 500 I threaded and tapped bush C > Page 196	 09 511 Shim for RDHX 12T3 D > Page 196	 15 500 Torx-screwdriver E > Page 196	INBUS 3,5 W Allen key 3,5 F > Page 197								
 TV 2-8 Screwdriver torque Vario®-S with window scale G > Page 197	 T15 500 Torx interchangeable bit for Torque Vario® H > Page 197	 T15 502 Torx MagicSpring compatible bit f. Torque Vario® I > Page 198											

Indexable inserts		Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
		03 12 835K	RDHX 12T3 M0T	HSC 05	PVTi	12	3.97	6	M 3.5
		03 12 837K	RDMX 12T3 M0T	HSC 05	PVFN	12	3.97	6	M 3.5
		03 12 840K	RDHX 12T3 M0T	P40	PVTi	12	3.97	6	M 3.5
		03 12 842K	RDEX 12T3 M0T	P40	PVSR	12	3.97	6	M 3.5
		03 12 8042K	RDEX 12T3 M0T	P40	PCSR	12	3.97	6	M 3.5
		03 12 844K	RDHX 12T3 M0T	P40	PVML	12	3.97	6	M 3.5
		03 12 846K	RDMX 12T3 M0T	P40	PVGO	12	3.97	6	M 3.5
		03 12 850K	RDHX 12T3 M0T	P25	PVTi	12	3.97	6	M 3.5
		03 12 852K	RDEX 12T3 M0T	P25	PVSR	12	3.97	6	M 3.5
		03 12 860K	RDHX 12T3 M0T	K10	PVTi	12	3.97	6	M 3.5
		03 12 831P	RDHX 12T3 M0T	K10	polished	12	3.97	6	M 3.5
		03 12 848K	RDMX 12T3 M0T	P40	PVGO	12	3.97	6	M 3.5
		03 12 880	RDHX 12T3 M0T	K10	PVTi	12	3.97	6	M 3.5
		03 12 880 D	RDHX 12T3 M0T	K10	PVDiaN	12	3.97	6	M 3.5
		03 12 896K	RDMT 12T3 M0EN	M40	PVST	12	3.97	6	M 3.5
		03 12 897K	RDPX 12T3 M0T	P25	PVGO	12	3.97	6	M 3.5
		03 12 8099K	RDMT 12T3 M0EN	M35	PCTC	12	3.97	6	M 3.5

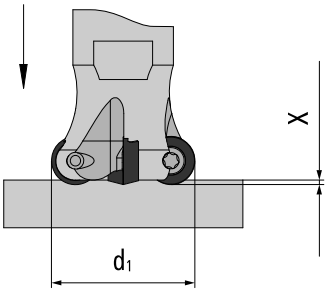
Feed per tooth (fz) | d.o.c. (ap)

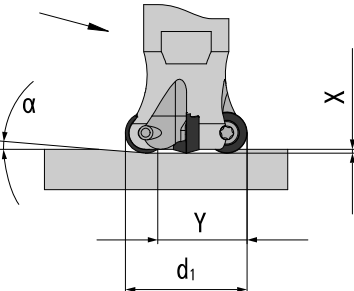
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,1-0,2 0,1-0,8	0,15 0,1	0,15-0,4 0,1-1,5	0,1-0,25 0,1-1,05	-	0,1-0,18 0,1-0,4
HSC 05 PVFN	f _z (mm) a _p (mm)	0,1-0,4 0,1-1,5	0,12-0,24 0,1-0,3	0,12-0,4 0,1-1,5	0,12-0,24 0,1-0,3	-	0,1-0,25 0,1-0,7
P40 PVTi	f _z (mm) a _p (mm)	0,2-0,7 0,2-2	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
P40 PCSR	f _z (mm) a _p (mm)	0,2-1 0,2-2	-	0,15-1 0,2-1,5	-	-	-
P40 PVML	f _z (mm) a _p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
P40 PVGO	f _z (mm) a _p (mm)	0,12-1 0,1-2	-	0,1-0,4 0,1-1,5	-	-	-
P25 PVTi	f _z (mm) a _p (mm)	0,15-0,4 0,1-1,5	-	0,15-0,28 0,1-0,8	-	-	-
P25 PVSR	f _z (mm) a _p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
K10 PVTi	f _z (mm) a _p (mm)	-	0,15 0,1	-	0,1-0,4 0,1-2	0,1-0,25 0,1-1	-
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,1-0,4 0,1-2	-	-
K10 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0,1-0,4 0,1-2	-	-
M40 PVST	f _z (mm) a _p (mm)	0,1-0,8 0,1-2	0,08-0,8 0,1-2,5	-	-	0,08-0,5 0,12-2,5	-
P25 PVGO	f _z (mm) a _p (mm)	-	0,2-0,8 0,25-2	-	-	0,12-0,5 0,12-1,5	-
M35 PCTC	f _z (mm) a _p (mm)	-	0,08-0,65 0,1-2,5	-	-	0,08-0,5 0,12-2,5	-

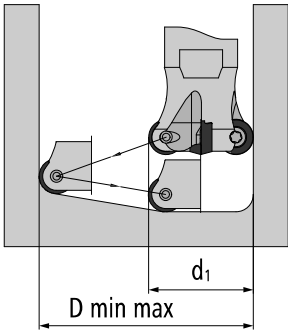
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing pre finishing finishing	- ▽150 275 400 ▽150 275 400	- - ▽100 150 200	▽100 150 200 ▽150 225 300 ▽200 275 350	- ▽200 500 800 ▽100 450 800	-	- ▽35 143 250 ▽35 143 250
HSC 05 PVFN	roughing pre finishing finishing	- ▽120 160 200 ▽150 250 350	- - ▽100 150 200	▽100 150 200 ▽100 150 200 ▽200 275 350	- ▽200 500 800 ▽200 500 800	-	- ▽40 130 220 ▽40 130 220
P40 PVTi	roughing pre finishing finishing	▽100 160 220 ▽100 175 250 -	-	-	-	-	-
P40 PVSR	roughing pre finishing finishing	▽100 200 300 ▽100 200 300 -	-	▽160 190 220 ▽160 190 220 ▽160 190 220	-	-	- ▽70 110 150 -
P40 PCSR	roughing pre finishing finishing	▽130 190 250 ▽150 225 300 -	-	▽120 170 220 ▽150 200 250 ▽180 230 280	-	-	-
P40 PVML	roughing pre finishing finishing	▽100 200 300 ▽100 200 300 -	-	▽140 215 290 ▽140 170 200 -	-	-	- ▽70 110 150 -
P40 PVGO	roughing pre finishing finishing	▽100 150 200 ▽100 150 200 -	-	▽110 130 150 ▽110 130 150 -	-	-	-
P25 PVTi	roughing pre finishing finishing	▽100 200 300 ▽100 125 150 ▽150 250 350	-	- ▽130 150 170 ▽150 200 250	- - -	-	-
P25 PVSR	roughing pre finishing finishing	▽100 160 220 ▽100 180 260 -	-	▽140 180 220 ▽160 190 220 ▽160 190 220	-	-	- ▽70 110 150 -
K10 PVTi	roughing pre finishing finishing	- - ▽140 220 300	- - ▽120 150 180	▽150 175 200 ▽150 175 200 ▽150 200 250	▽100 450 800 ▽100 450 800 ▽100 450 800	▽35 43 50 ▽35 43 50 ▽35 43 50	- ▽35 108 180 -
K10 polished	roughing pre finishing finishing	-	-	-	▽100 450 800 ▽100 450 800 ▽100 450 800	-	-
K10 PVDiaN	roughing pre finishing finishing	-	-	-	▽100 450 800 ▽100 450 800 ▽100 450 800	-	-
M40 PVST	roughing pre finishing finishing	▽80 140 200 ▽100 150 200 ▽110 180 250	▽80 130 180 ▽100 155 210 ▽120 185 250	-	-	▽30 55 80 ▽40 65 90 ▽60 90 120	-
P25 PVGO	roughing pre finishing finishing	-	▽80 140 200 ▽100 155 210 ▽120 175 230	-	-	▽20 65 110 ▽20 65 110 ▽30 70 110	-
M35 PCTC	roughing pre finishing finishing	-	▽110 155 200 ▽120 175 230 ▽160 220 280	-	-	▽30 65 100 ▽40 75 110 ▽60 100 140	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
42-80	3

Ramping		
		
Cutter diam. d1	α°	y
42	<6,5	20
52	<5,7	30
66	<3,9	44
80	<3,0	58

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
42	62	84
52	82	104
66	110	132
80	136	160

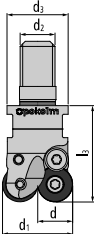
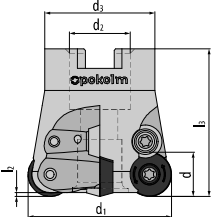
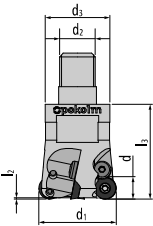
CUTTERS FOR ROUND INSERTS - K0-90°

r6 - diam. 24 - 80 mm, neutral or 7° positive rake angle

The allrounder:

- for high-speed-machining centres
- 7° only for roughing-operations
- 0° for roughing- and finishing-operations



Milling cutter bodies												Accessories	Features				
Catalogue no.		d ₁	d	r	l ₃	l ₂	l ₁	d ₂	d ₃	z							
Threaded shank end mill bodies 0° axial rake angle																	
	24 200	24	12	6	33	-	-	M 12	21	2	A, B, C, D, E, F	✓	✗	✗	✗	✗	
	35 200	35	12	6	43	3	-	M 16	29	3	A, B, C, D, E, F	✓	✗	✗	✗	✗	
	4 35 200	35	12	6	43	3	-	M 16	29	4	A, C, D, E, F	✓	✗	✗	✗	✗	
	42 200	42	12	6	43	3	-	M 16	29	4	A, B, D, E, F	✓	✗	✗	✗	✗	
	5 42 200	42	12	6	43	3	-	M 16	29	5	A, C, D, E, F	✓	✗	✗	✗	✗	
Shell tp. mill. cutt. bodies 0° axial rake angle																	
	4 42 310	42	12	6	43	3	-	diam. 16	35	4	A, B, C, D, E, F	✓	✗	✗	✗	✗	
	5 42 310	42	12	6	43	3	-	diam. 16	35	5	A, C, D, E, F	✓	✗	✗	✗	✗	
	52 310	52	12	6	53	3.5	-	diam. 22	40	5	A, B, C, D, E, F	✓	✗	✗	✗	✗	
Thr. sh. end mill bodies 7° pos. rake angle																	
	3 35 200/7	35	12	6	42.5	3	-	M 16	29	3	A, B, C, D, E, F	✓	✗	✗	✗	✗	7°
	4 35 200/7	35	12	6	42.5	3	-	M 16	29	4	A, C, D, E, F	✓	✗	✗	✗	✗	7°

Milling cutter bodies

Catalogue no.

d₁

d

r

l₃

l₂

l₁

d₂

d₃

z

Accessories

Features

Shell tp. mill. cutt. bodies | 7° pos. rake angle

	5 42 310/7	42	12	6	42.6	3.8	-	diam. 16	35	5	A, B, C, D, E, F	
	52 310/7	52	12	6	52.5	3.5	-	diam. 22	40	5	A, B, C, D, E, F	
	66 310/7	66	12	6	52.5	3.5	-	diam. 27	48	6	A, B, D, E, F	
	80 310/7	80	12	6	52.5	3.5	-	diam. 27	60	7	A, B, D, E, F	

Accessories

 35 500 Torx screw A > Page 195	 35 510 locking screw B > Page 195	 15 500 Torx-screwdriver C > Page 196	 TV 2-8 Screwdriver torque Vario®-S with window scale, D > Page 197	 T15 500 Torx interchangeable bit for Torque Vario® E > Page 197	 T15 502 , Torx Magic-Spring compatible bit f. Torque Vario® F > Page 198
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Indexable inserts

Catalogue no.

DIN Specification

Carbide Grade

Coating

d

s

r

M

	03 12 835K	RDHX 12T3 M0T	HSC 05	PVTi	12	3.97	6	M 3.5
	03 12 837K	RDMX 12T3 M0T	HSC 05	PVFN	12	3.97	6	M 3.5
	03 12 840K	RDHX 12T3 M0T	P40	PVTi	12	3.97	6	M 3.5
	03 12 842K	RDEX 12T3 M0T	P40	PVSR	12	3.97	6	M 3.5
	03 12 8042K	RDEX 12T3 M0T	P40	PCSR	12	3.97	6	M 3.5
	03 12 844K	RDHX 12T3 M0T	P40	PVML	12	3.97	6	M 3.5
	03 12 846K	RDMX 12T3 M0T	P40	PVGO	12	3.97	6	M 3.5
	03 12 850K	RDHX 12T3 M0T	P25	PVTi	12	3.97	6	M 3.5
	03 12 852K	RDEX 12T3 M0T	P25	PVSR	12	3.97	6	M 3.5
	03 12 860K	RDHX 12T3 M0T	K10	PVTi	12	3.97	6	M 3.5
	03 12 831P	RDHX 12T3 M0T	K10	polished	12	3.97	6	M 3.5
	03 12 848K	RDMX 12T3 M0T	P40	PVGO	12	3.97	6	M 3.5
	03 12 880	RDHX 12T3 M0T	K10	PVTi	12	3.97	6	M 3.5
	03 12 880 D	RDHX 12T3 M0T	K10	PVDiaN	12	3.97	6	M 3.5
	03 12 896K	RDMT 12T3 M0EN	M40	PVST	12	3.97	6	M 3.5
	03 12 897K	RDPX 12T3 M0T	P25	PVGO	12	3.97	6	M 3.5
	03 12 8099K	RDMT 12T3 M0EN	M35	PCTC	12	3.97	6	M 3.5

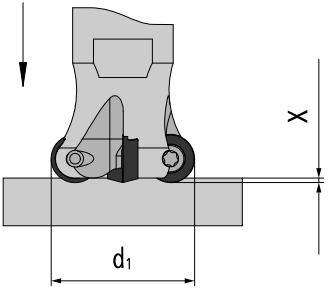
Feed per tooth (fz) | d.o.c. (ap)

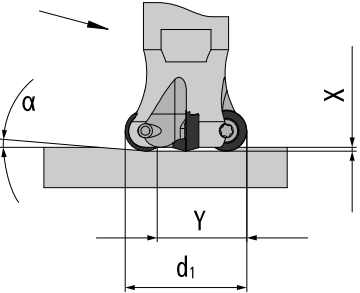
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f_z (mm) a_p (mm)	0,1-0,2 0,1-0,8	0,15 0,1	0,15-0,4 0,1-1,5	0,1-0,25 0,1-1,05	-	0,1-0,18 0,1-0,4
HSC 05 PVFN	f_z (mm) a_p (mm)	0,1-0,4 0,1-1,5	0,12-0,24 0,1-0,3	0,12-0,4 0,1-1,5	0,12-0,24 0,1-0,3	-	0,1-0,25 0,1-0,7
P40 PVTi	f_z (mm) a_p (mm)	0,2-0,7 0,2-2	-	-	-	-	-
P40 PVSR	f_z (mm) a_p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
P40 PCSR	f_z (mm) a_p (mm)	0,2-1 0,2-2	-	0,15-1 0,2-1,5	-	-	-
P40 PVML	f_z (mm) a_p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
P40 PVGO	f_z (mm) a_p (mm)	0,12-1 0,1-2	-	0,1-0,4 0,1-1,5	-	-	-
P25 PVTi	f_z (mm) a_p (mm)	0,15-0,4 0,1-1,5	-	0,15-0,28 0,1-0,8	-	-	-
P25 PVSR	f_z (mm) a_p (mm)	0,2-0,8 0,2-2	-	0,1-0,4 0,1-1,5	-	-	0,1-0,18 0,1-0,4
K10 PVTi	f_z (mm) a_p (mm)	-	0,15 0,1	-	0,1-0,4 0,1-2	0,1-0,25 0,1-1	-
K10 polished	f_z (mm) a_p (mm)	-	-	-	0,1-0,4 0,1-2	-	-
K10 PVDiaN	f_z (mm) a_p (mm)	-	-	-	0,1-0,4 0,1-2	-	-
M40 PVST	f_z (mm) a_p (mm)	0,1-0,8 0,1-2	0,08-0,8 0,1-2,5	-	-	0,08-0,5 0,12-2,5	-
P25 PVGO	f_z (mm) a_p (mm)	-	0,2-0,8 0,25-2	-	-	0,12-0,5 0,12-1,5	-
M35 PCTC	f_z (mm) a_p (mm)	-	0,08-0,65 0,1-2,5	-	-	0,08-0,5 0,12-2,5	-

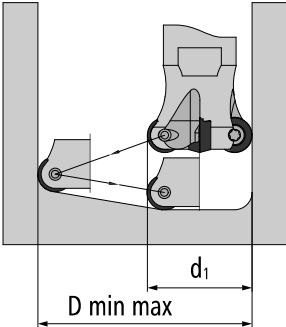
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽150 275 400	-	▽150 225 300	▽200 500 800	-	▽35 143 250
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800	-	▽35 143 250
HSC 05 PVFN	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽120 160 200	-	▽100 150 200	▽200 500 800	-	▽40 130 220
	finishing	▽150 250 350	▽100 150 200	▽200 275 350	▽200 500 800	-	▽40 130 220
P40 PVTi	roughing	▽100 160 220	-	-	-	-	-
	pre finishing	▽100 175 250	-	-	-	-	-
	finishing	-	-	-	-	-	-
P40 PVSR	roughing	▽100 200 300	-	▽160 190 220	-	-	-
	pre finishing	▽100 200 300	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
P40 PCSR	roughing	▽130 190 250	-	▽120 170 220	-	-	-
	pre finishing	▽150 225 300	-	▽150 200 250	-	-	-
	finishing	-	-	▽180 230 280	-	-	-
P40 PVML	roughing	▽100 200 300	-	▽140 215 290	-	-	-
	pre finishing	▽100 200 300	-	▽140 170 200	-	-	▽70 110 150
	finishing	-	-	-	-	-	-
P40 PVGO	roughing	▽100 150 200	-	▽110 130 150	-	-	-
	pre finishing	▽100 150 200	-	▽110 130 150	-	-	-
	finishing	-	-	-	-	-	-
P25 PVTi	roughing	▽100 200 300	-	-	-	-	-
	pre finishing	▽100 125 150	-	▽130 150 170	-	-	-
	finishing	▽150 250 350	-	▽150 200 250	-	-	-
P25 PVSR	roughing	▽100 160 220	-	▽140 180 220	-	-	-
	pre finishing	▽100 180 260	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
K10 PVTi	roughing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-
	pre finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180
	finishing	▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-
K10 polished	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
K10 PVDiaN	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
M40 PVST	roughing	▽80 140 200	▽80 130 180	-	-	▽30 55 80	-
	pre finishing	▽100 150 200	▽100 155 210	-	-	▽40 65 90	-
	finishing	▽110 180 250	▽120 185 250	-	-	▽60 90 120	-
P25 PVGO	roughing	-	▽80 140 200	-	-	▽20 65 110	-
	pre finishing	-	▽100 155 210	-	-	▽20 65 110	-
	finishing	-	▽120 175 230	-	-	▽30 70 110	-
M35 PCTC	roughing	-	▽110 155 200	-	-	▽30 65 100	-
	pre finishing	-	▽120 175 230	-	-	▽40 75 110	-
	finishing	-	▽160 220 280	-	-	▽60 100 140	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
24-80	3

Ramping		
		
Cutter diam. d1	α°	y
24	-	-
35	<13,0	13
42	<6,5	20
52	<5,7	30
66	<3,9	44
80	<3,0	58

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
24	26	48
35	46	70
42	62	84
52	82	104
66	110	132
80	136	160



CUTTERS FOR ROUND INSERTS - K0-90°

r8 - diam. 52 - 100 mm, 7° positive rake angle, with shims

- increased reliability against fractures during machining
- optimum protection of milling cutter body by shim
- in case of insert fracture, shims, screws and threaded bushes can be replaced separately, it is not necessary to buy a new body

Milling cutter bodies

Catalogue no.

d₁

d

r

l₃

l₂

l₁

d₂

d₃

z

Accessories

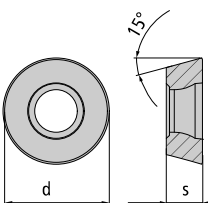
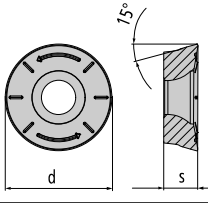
Features

Shell type milling cutter bodies

	52 300/7 HL	52	16	8	53	4.1	-	diam. 22	40	4	A, B, C, D, E, F, G, H, I, J	✓	7°
	66 300/7 HL	66	16	8	53	4.1	-	diam. 27	48	5	A, B, C, D, E, F, G, H, I, J	✓	7°
	80 300/7 HL	80	16	8	53	4.1	-	diam. 27	60	6	A, B, C, D, E, F, G, H, I, J	✓	7°
	100 300/7 HL	100	16	8	53	4.1	-	diam. 32	70	7	A, B, C, D, E, F, G, H, I, J	✓	7°

Accessories

45 500 Torx screw A > Page 195	45 500 L Torx screw B > Page 195	45 500 I threaded and tapped bush C > Page 196	10 510 locking washer D > Page 196	10 511 Shim for RDHX 1604 E > Page 196	20 500 Torx-screwdriver F > Page 196
INBUS 4,5 W Allen Key 4,5 G > Page 197	TV 2-8 Screwdriver torque Vario®-S with window scale, H > Page 197	T20 500 Torx interchangeable bit for Torque Vario® I > Page 197	T20 502 Torx MagicSpring compatible bit f. Torque Vario®, J > Page 198		

Indexable inserts		Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
		04 16 835	RDHX 1604 M0T	HSC 05	PVTi	16	4.76	8	M 4.5
		04 16 840	RDHX 1604 M0T	P40	PVTi	16	4.76	8	M 4.5
		04 16 842	RDEX 1604 M0T	P40	PVSR	16	4.76	8	M 4.5
		04 16 8042	RDEX 1604 M0T	P40	PCSR	16	4.76	8	M 4.5
		04 16 844	RDHX 1604 M0T	P40	PVML	16	4.76	8	M 4.5
		04 16 850	RDHX 1604 M0T	P25	PVTi	16	4.76	8	M 4.5
		04 16 852	RDEX 1604 M0T	P25	PVSR	16	4.76	8	M 4.5
		04 16 860	RDHX 1604 M0T	K10	PVTi	16	4.76	8	M 4.5
		04 16 831P	RDHX 1604 M0T	K10	polished	16	4.76	8	M 4.5
		04 16 848	RDMX 1604 M0T	P40	PVGO	16	4.76	8	M 4.5
		04 16 880	RDHX 1604 M0T	K10	PVTi	16	4.76	8	M 4.5
		04 16 896	RDMT 1604 M0EN	M40	PVST	16	4.76	8	M 4.5
		04 16 8099	RDMT 1604 M0EN	M35	PCTC	16	4.76	8	M 4.5
		04 16 897	RDPX 1604 M0T	P25	PVGO	16	4.76	8	M 4.5

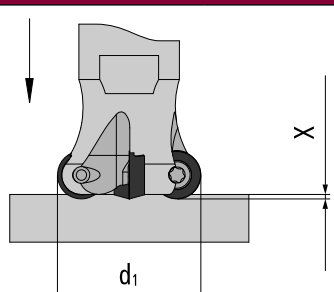
Feed per tooth (fz) | d.o.c. (ap)

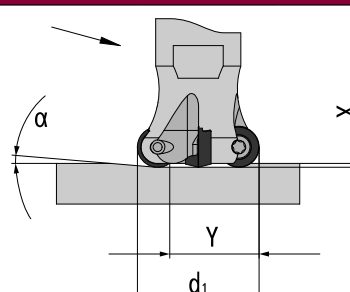
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,2-0,25 0,2-0,85	0,15 0,1	0,2-0,5 0,2-3	0,2-0,35 0,2-2,1	-	0,15-0,22 0,2-0,85
P40 PVTi	f _z (mm) a _p (mm)	0,2-0,9 0,2-4	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
P40 PCSR	f _z (mm) a _p (mm)	0,25-1 0,25-3	-	0,25-1 0,25-3	-	-	-
P40 PVML	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
P25 PVTi	f _z (mm) a _p (mm)	0,2-0,5 0,2-3	-	0,2-0,35 0,2-1,6	-	-	-
P25 PVSR	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
K10 PVTi	f _z (mm) a _p (mm)	0,2 0,2	0,15 0,1	0,2-0,5 0,2-3		0,15-0,22 0,2-1,35	0,15-0,22 0,2-0,85
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,2-0,5 0,2-4	-	-
P40 PVGO	f _z (mm) a _p (mm)	0,16-1,2 0,1-3	-	0,16-0,5 0,1-2	-	-	-
M40 PVST	f _z (mm) a _p (mm)	0,08-1,2 0,1-3	0,08-0,7 0,1-3	-	-	0,08-0,5 0,1-2	-
M35 PCTC	f _z (mm) a _p (mm)	-	0,08-0,7 0,1-3	-	-	0,08-0,5 0,12-3	-
P25 PVGO	f _z (mm) a _p (mm)	-	0,3-1 0,3-3	-	-	0,15-0,5 0,15-2	-

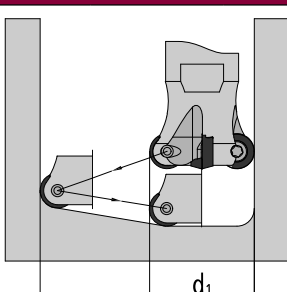
Cutting speed (Vc in m/min)

Material											
Quality Coating	Application	steel		stainless steel		cast iron		non-ferrous materials		high-temperature alloys	
HSC 05 PVTi	roughing	-	-	-	-	▽100 150 200	▽100 150 200	-	-	-	-
	pre finishing	▽150 275 400	▽150 275 400	▽100 150 200	▽150 225 300	▽200 275 350	▽200 275 350	▽200 500 800	▽100 450 800	-	▽35 143 250
P40 PVTi	roughing	▽100 160 220	▽100 160 220	-	-	-	-	-	-	-	-
	pre finishing	▽100 175 250	▽100 175 250	-	-	-	-	-	-	-	-
P40 PVSR	roughing	▽100 200 300	▽100 200 300	-	▽160 190 220	▽160 190 220	▽160 190 220	-	-	-	-
	pre finishing	▽100 200 300	▽100 200 300	-	▽160 190 220	▽160 190 220	▽160 190 220	-	-	-	▽70 110 150
P40 PCSR	roughing	▽130 190 250	▽130 190 250	-	▽120 170 220	▽120 170 220	▽120 170 220	-	-	-	-
	pre finishing	▽150 225 300	▽150 225 300	-	▽150 200 250	▽150 200 250	▽150 200 250	-	-	-	-
P40 PVML	roughing	▽100 200 300	▽100 200 300	-	▽140 215 290	▽140 215 290	▽140 215 290	-	-	-	-
	pre finishing	▽100 200 300	▽100 200 300	-	▽140 170 200	▽140 170 200	▽140 170 200	-	-	-	▽70 110 150
P25 PVTi	roughing	▽100 200 300	▽100 200 300	-	-	-	-	-	-	-	-
	pre finishing	▽100 125 150	▽100 125 150	-	▽130 150 170	▽130 150 170	▽130 150 170	-	-	-	-
P25 PVSR	roughing	▽100 160 220	▽100 160 220	-	▽140 180 220	▽140 180 220	▽140 180 220	-	-	-	-
	pre finishing	▽100 180 260	▽100 180 260	-	▽160 190 220	▽160 190 220	▽160 190 220	-	-	-	▽70 110 150
K10 PVTi	roughing	-	-	-	▽150 175 200	▽150 175 200	▽150 175 200	▽100 450 800	▽35 43 50	▽35 43 50	-
	pre finishing	▽140 220 300	▽140 220 300	▽120 150 180	▽150 175 200	▽150 175 200	▽150 175 200	▽100 450 800	▽35 43 50	▽35 43 50	▽35 108 180
K10 polished	roughing	-	-	-	-	-	-	▽100 450 800	-	-	-
	pre finishing	-	-	-	-	-	-	▽100 450 800	-	-	-
P40 PVGO	roughing	▽100 150 200	▽100 150 200	-	▽110 130 150	▽110 130 150	▽110 130 150	-	-	-	-
	pre finishing	▽100 150 200	▽100 150 200	-	▽110 130 150	▽110 130 150	▽110 130 150	-	-	-	-
M40 PVST	roughing	▽80 140 200	▽80 140 200	▽80 130 180	-	-	-	▽30 55 80	-	-	-
	pre finishing	▽100 150 200	▽100 150 200	▽100 155 210	-	-	-	▽40 65 90	-	-	-
M35 PCTC	roughing	▽110 180 250	▽110 180 250	▽120 185 250	-	-	-	▽60 90 120	-	-	-
	pre finishing	-	-	▽110 155 200	-	-	-	▽30 65 100	-	-	-
P25 PVGO	roughing	-	-	▽120 175 230	-	-	-	▽40 75 110	-	-	-
	pre finishing	-	-	▽160 220 280	-	-	-	▽60 100 140	-	-	-
P25 PVGO	roughing	-	-	▽80 140 200	-	-	-	▽20 65 110	-	-	-
	pre finishing	-	-	▽100 155 210	-	-	-	▽20 65 110	-	-	-
P25 PVGO	roughing	-	-	▽120 175 230	-	-	-	▽30 70 110	-	-	-
	pre finishing	-	-	▽120 175 230	-	-	-	▽30 70 110	-	-	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
52-100	4

Ramping		
		
Cutter diam. d1	α°	y
52	<10,3	22
66	<6,4	36
80	<4,6	50
100	<3,3	70

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
52	74	104
66	102	132
80	130	160
100	170	200

NEW latest items!

△ available as long as stock lasts

? on request

✓ stock item, subject to confirmation

CUTTERS FOR ROUND INSERTS - K0-90°

r8 - diam. 32 - 160 mm, neutral, 7° positive

The first choice when using SK 50 machines for medium and heavy milling. Tools with a 7° rake angle are characterized by its low energy consumption.



Milling cutter bodies

Catalogue no.

d₁ d r l₃ l₂ l₁ d₂ d₃ z

Accessories

Features

Threaded shank end mill bodies

	32 200	32	16	8	43,5	-	-	M 16	29	2	A, C, D, E, F	✓	✓	✓	✓	✓
	35 201	35	16	8	43,5	4	-	M 16	29	3	A, C, D, E, F	✓	✓	✓	✓	✓

Shell tp. mill. cutt. bodies | 0° axial rake angle

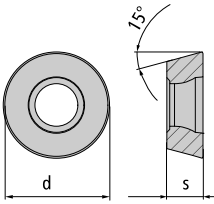
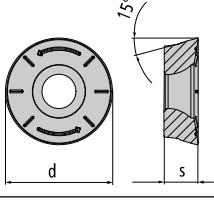
	52 300	52	16	8	53,5	4,7	-	diam. 22	40	4	A, B, C, D, E, F	✓	✓	✓	✓	✓
	66 300	66	16	8	53,5	5,1	-	diam. 27	48	5	A, B, C, D, E, F	✓	✓	✓	✓	✓
	80 300	80	16	8	53,5	5,8	-	diam. 27	60	6	A, B, C, D, E, F	✓	✓	✓	✓	✓
	100 300	100	16	8	53,5	5,8	-	diam. 32	70	7	A, B, C, D, E, F	✓	✓	✓	✓	✓

Shell tp. mill. cutt. bodies | 7° pos. rake angle

	5 52 300/7	52	16	8	53	4,1	-	diam. 22	40	5	A, C, D, E, F	✓	✓	✓	✓	7°
	66 300/7	66	16	8	53	4,6	-	diam. 27	48	5	A, B, C, D, E, F	✓	✓	✓	✓	7°
	6 66 300/7	66	16	8	53	5,1	-	diam. 27	48	6	A, C, D, E, F	✓	✓	✓	✓	7°
	80 300/7	80	16	8	53	5,1	-	diam. 27	60	6	A, B, C, D, E, F	✓	✓	✓	✓	7°
	100 300/7	100	16	8	53	5,1	-	diam. 32	70	7	A, B, C, D, E, F	✓	✓	✓	✓	7°
	125 300/7	125	16	8	53	5,1	-	diam. 40	90	8	A, B, C, D, E, F	✓	✓	✓	✓	7°
	160 300/7	160	16	8	53	5,1	-	diam. 40	120	9	A, B, C, D, E, F	✓	✓	✓	✓	7°

Accessories

45 500 Torx screw A > Page 195	10 510 locking washer B > Page 196	20 500 Torx-screwdriver C > Page 196	TV 2-8 Screwdriver torque Vario®-S with window scale, D > Page 197	T20 500 Torx interchangeable bit for Torque Vario® E > Page 197	T20 502, Torx Magic- Spring compatible bit f. Torque Vario® F > Page 198
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Indexable inserts		Catalogue no.	DIN Specification	Carbide Grade	Coating	d	s	r	M
		04 16 835	RDHX 1604 M0T	HSC 05	PVTi	16	4.76	8	M 4.5
		04 16 840	RDHX 1604 M0T	P40	PVTi	16	4.76	8	M 4.5
		04 16 842	RDEX 1604 M0T	P40	PVSR	16	4.76	8	M 4.5
		04 16 8042	RDEX 1604 M0T	P40	PCSR	16	4.76	8	M 4.5
		04 16 844	RDHX 1604 M0T	P40	PVML	16	4.76	8	M 4.5
		04 16 850	RDHX 1604 M0T	P25	PVTi	16	4.76	8	M 4.5
		04 16 852	RDEX 1604 M0T	P25	PVSR	16	4.76	8	M 4.5
		04 16 860	RDHX 1604 M0T	K10	PVTi	16	4.76	8	M 4.5
		04 16 831P	RDHX 1604 M0T	K10	polished	16	4.76	8	M 4.5
		04 16 848	RDMX 1604 M0T	P40	PVGO	16	4.76	8	M 4.5
		04 16 880	RDHX 1604 M0T	K10	PVTi	16	4.76	8	M 4.5
		04 16 896	RDMT 1604 M0EN	M40	PVST	16	4.76	8	M 4.5
		04 16 8099	RDMT 1604 M0EN	M35	PCTC	16	4.76	8	M 4.5
		04 16 897	RDPX 1604 M0T	P25	PVGO	16	4.76	8	M 4.5

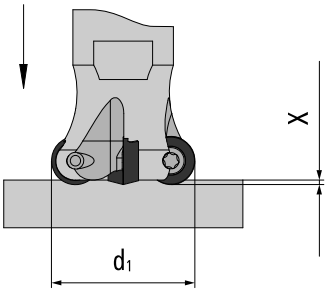
Feed per tooth (fz) | d.o.c. (ap)

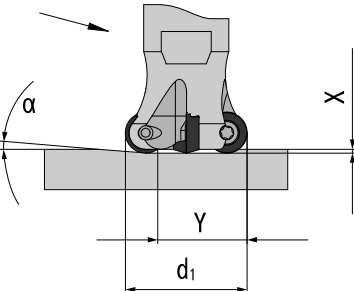
Material							
Quality Coating	Feed per tooth d.o.c.	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	f _z (mm) a _p (mm)	0,2-0,25 0,2-0,85	0,15 0,1	0,2-0,5 0,2-3	0,2-0,35 0,2-2,1	-	0,15-0,22 0,2-0,85
P40 PVTi	f _z (mm) a _p (mm)	0,2-0,9 0,2-4	-	-	-	-	-
P40 PVSR	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
P40 PCSR	f _z (mm) a _p (mm)	0,25-1 0,25-3	-	0,25-1 0,25-3	-	-	-
P40 PVML	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
P25 PVTi	f _z (mm) a _p (mm)	0,2-0,5 0,2-3	-	0,2-0,35 0,2-1,6	-	-	-
P25 PVSR	f _z (mm) a _p (mm)	0,25-1 0,2-3	-	0,2-0,5 0,2-3	-	-	0,15-0,22 0,2-0,85
K10 PVTi	f _z (mm) a _p (mm)	0,2 0,2	0,15 0,1	0,2-0,5 0,2-3		0,15-0,22 0,2-1,35	0,15-0,22 0,2-0,85
K10 polished	f _z (mm) a _p (mm)	-	-	-	0,2-0,5 0,2-4	-	-
P40 PVGO	f _z (mm) a _p (mm)	0,16-1,2 0,1-3	-	0,16-0,5 0,1-2	-	-	-
M40 PVST	f _z (mm) a _p (mm)	0,08-1,2 0,1-3	0,08-0,7 0,1-3	-	-	0,08-0,5 0,1-2	-
M35 PCTC	f _z (mm) a _p (mm)	-	0,08-0,7 0,1-3	-	-	0,08-0,5 0,12-3	-
P25 PVGO	f _z (mm) a _p (mm)	-	0,3-1 0,3-3	-	-	0,15-0,5 0,15-2	-

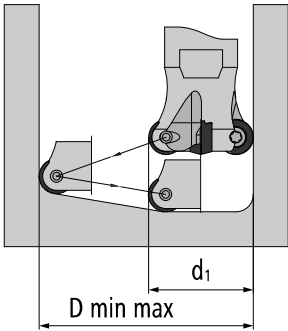
Cutting speed (Vc in m/min)

Material							
Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
HSC 05 PVTi	roughing	-	-	▽100 150 200	-	-	-
	pre finishing	▽150 275 400	-	▽150 225 300	▽200 500 800	-	▽35 143 250
	finishing	▽150 275 400	▽100 150 200	▽200 275 350	▽100 450 800	-	▽35 143 250
P40 PVTi	roughing	▽100 160 220	-	-	-	-	-
	pre finishing	▽100 175 250	-	-	-	-	-
	finishing	-	-	-	-	-	-
P40 PVSR	roughing	▽100 200 300	-	▽160 190 220	-	-	-
	pre finishing	▽100 200 300	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
P40 PCSR	roughing	▽130 190 250	-	▽120 170 220	-	-	-
	pre finishing	▽150 225 300	-	▽150 200 250	-	-	-
	finishing	-	-	▽180 230 280	-	-	-
P40 PVML	roughing	▽100 200 300	-	▽140 215 290	-	-	-
	pre finishing	▽100 200 300	-	▽140 170 200	-	-	▽70 110 150
	finishing	-	-	-	-	-	-
P25 PVTi	roughing	▽100 200 300	-	-	-	-	-
	pre finishing	▽100 125 150	-	▽130 150 170	-	-	-
	finishing	▽150 250 350	-	▽150 200 250	-	-	-
P25 PVSR	roughing	▽100 160 220	-	▽140 180 220	-	-	-
	pre finishing	▽100 180 260	-	▽160 190 220	-	-	▽70 110 150
	finishing	-	-	▽160 190 220	-	-	-
K10 PVTi	roughing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	-
	pre finishing	-	-	▽150 175 200	▽100 450 800	▽35 43 50	▽35 108 180
	finishing	▽140 220 300	▽120 150 180	▽150 200 250	▽100 450 800	▽35 43 50	-
K10 polished	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
P40 PVGO	roughing	▽100 150 200	-	▽110 130 150	-	-	-
	pre finishing	▽100 150 200	-	▽110 130 150	-	-	-
	finishing	-	-	-	-	-	-
M40 PVST	roughing	▽80 140 200	▽80 130 180	-	-	▽30 55 80	-
	pre finishing	▽100 150 200	▽100 155 210	-	-	▽40 65 90	-
	finishing	▽110 180 250	▽120 185 250	-	-	▽60 90 120	-
M35 PCTC	roughing	-	▽110 155 200	-	-	▽30 65 100	-
	pre finishing	-	▽120 175 230	-	-	▽40 75 110	-
	finishing	-	▽160 220 280	-	-	▽60 100 140	-
P25 PVGO	roughing	-	▽80 140 200	-	-	▽20 65 110	-
	pre finishing	-	▽100 155 210	-	-	▽20 65 110	-
	finishing	-	▽120 175 230	-	-	▽30 70 110	-

Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
32-160	4

Ramping		
		
Cutter diam. d1	α°	y
32	-	-
35	<38,7	5
52	<10,3	22
66	<6,4	36
80	<4,6	50
100	<3,3	70
125	<2,4	95
160	<1,5	130

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
32	34	64
35	40	70
52	74	104
66	102	132
80	130	160
100	170	200
125	220	250
160	290	320