



QUADWORX®

Size M

- four cutting edges per insert for extremely efficient operations
- very big metal removal rates and extremely easy cutting
- as a standard, every tool has our patent protected incorporated insert seats and internal coolant supply
- allows extremely high feed rates per tooth up to $f_z = 2.2 \text{ mm}$

Milling cutter bodies

Catalogue no.	d_1	l	r_p^*	l_3	l_2	l_1	d_2	d_3	z	Accessories	Features	
DuoPlug®												
	2 22 248 SG	22	9	1.5*	35.5	1.5	-	M 12	18.5	2	A, B, C, D, E	
	3 25 248 SG	25	9	1.5*	40	1.5	-	M 16	23.5	3	A, B, C, D, E	

Threaded shank end mill bodies

	2 22 248	22	9	1.5*	29	1.5	-	M 10	18	2	A, B, C, D, E	
	3 25 248	25	9	1.5*	33	1.5	-	M 12	21	3	A, B, C, D, E	
	4 30 248	30	9	1.5*	42	1.5	-	M 16	29	4	A, B, C, D, E	
	4 32 248	32	9	1.5*	42	1.5	-	M 16	29	4	A, B, C, D, E	
	4 35 248	35	9	1.5*	42	1.5	-	M 16	29	4	A, B, C, D, E	
	5 35 248	35	9	1.5*	42	1.5	-	M 16	29	5	A, B, C, D, E	
	5 42 248	42	9	1.5*	42	1.5	-	M 16	29	5	A, B, C, D, E	

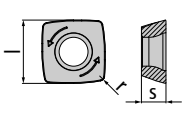
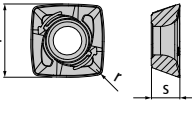
Shell type milling cutter bodies

	5 42 348	42	9	1.5*	42.5	1.5	-	diam. 16	35	5	A, B, C, D, E	
	6 52 348	52	9	1.5*	52.5	1.5	-	diam. 22	40	6	A, B, C, D, E	

Accessories

* corner radius to be programmed

<p>30 500 Torx screw A > Page 195</p>	<p>10 500 Torx-screwdriver B > Page 196</p>	<p>TV 1-5 Screwdriver torque Vario@-S with window scale, C > Page 197</p>	<p>T10 500 Torx interchangeable bit for Torque Vario® D > Page 197</p>	<p>T10 502 Torx MagicSpring compatible bit f. Torque Vario® E > Page 198</p>
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Indexable inserts	Catalogue no.	DIN Specification	Carbide Grade	Coating	l	s	r	M
	03 48 842	SDMX 09T307 SN	P40	PVTi	9	3.5	0.7	M 3.0
	03 48 846	SDMX 09T307 SN	P40	PVGO	9	3.5	0.7	M 3.0
	03 48 850	SDHX 09T307 SN	P25	PVTi	9	3.5	0.7	
	03 48 852	SDMX 09T307 SN	P25	PVTi	9	3.5	0.7	M 3.0
	03 48 860	SDHX 09T307 SN	K10	PVTi	9	3.5	0.7	M 3.0
	03 48 848	SDMT 09T307 SN	P40	PVGO	9	3.5	0.7	M 3.0
	03 48 896	SDMT 09T307 SN	M40	PVST	9	3.5	0.7	M 3.0
	04 48 896	SDMT 09T307 SN	M40	PVST	9	3.5	0.7	M 3.0

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

Material		steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
Quality Coating	Feed per tooth d.o.c.						
P40 PVTi	f _z (mm) a _p (mm)	0,5-2 0,3-1	-	-	-	-	-
P40 PVGO	f _z (mm) a _p (mm)	0,5-2 0,3-1	-	-	-	-	-
P25 PVTi	f _z (mm) a _p (mm)	0,5-2 0,3-1	-	-	-	-	-
K10 PVTi	f _z (mm) a _p (mm)	-	-	0,5-2,2 0,3-1,2	-	-	0,1-1,2 0,1-0,5
M40 PVST	f _z (mm) a _p (mm)	-	0,2-1,2 0,2-0,9	-	-	0,25-0,9 0,2-0,7	-

Cutting speed (Vc in m/min)

Material		steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
Quality Coating	Application						
P40 PVTi	roughing	▽100 160 220	-	-	-	-	-
	pre finishing	▽100 175 250	-	-	-	-	-
	finishing	-	-	-	-	-	-
P40 PVGO	roughing	▽100 150 200	-	-	-	-	-
	pre finishing	▽100 150 200	-	-	-	-	-
	finishing	-	-	-	-	-	-
P25 PVTi	roughing	▽100 200 300	-	-	-	-	-
	pre finishing	▽100 125 150	-	-	-	-	-
	finishing	-	-	-	-	-	-
K10 PVTi	roughing	-	-	▽150 175 200	-	-	▽100 175 250
	pre finishing	-	-	▽150 175 200	-	-	▽35 108 180
	finishing	-	-	-	-	-	-
M40 PVST	roughing	-	▽80 130 180	-	-	▽30 55 80	-
	pre finishing	-	▽100 155 210	-	-	▽40 65 90	-
	finishing	-	▽120 185 250	-	-	▽60 90 120	-

Extended operation data

Plunging		
Cutter diam. d1	D_p	X_{max}
22	7.1	1.5
25	9.8	1.5
30	14.7	1.5
32	16.7	1.5
35	19.7	1.5
42	26.5	1.5
52	36.5	1.5

Ramping		
Cutter diam. d1	α°	y
22	<13,7	6
25	<9,2	9
30	<5,8	14
32	<4,9	16
35	<4,3	19
42	<3,1	26
52	<2,1	36

Helix		
Cutter diam. d1	D_{min}	D_{max}
22	28.5	44
25	34.5	50
30	44.5	60
32	48.5	64
35	54.5	70
42	68.5	84
52	88.5	104

Technical information

For the CAD/CAM set-up please program 1.5 mm corner radius (r_p).
 The remainder of the material is theoretically 0.65 mm (t).
 Please use „ d_p “ for tool length measurement.