QUADWORX® XL

XL-sized high-feed talent for enormous chip removal rates

pokolm

PREMIUMTOOLS. WE KNOW HOW.

ECONOMIC SIZE IN XL: HIGH-FEED-MILLING WITH ENORMOUS CHIP REMOVAL RATES

QUADWORX®, the modern and proven high-feed talent is even higher performance in the new XL-format.

In large diameters up to 100 mm, the milling system enables enormously fast feed rates with simultaneously extremely large cutting depths.

The indexable inserts with four-each cutting edges, typical for the system, are adapted to the XL-dimension of the tool holder. They're right in their element during the roughing and pre-finishing of steel, stainless steel and cast iron as well as high-temperature alloys.

A special macrogeometry combining a large radius and plane cutting edge ensure universal applications in 2, 2½ and 3d processing.

The microgeometry with a polished tool face helps minimise the temperature in the cutting material and ensures uniform chip removal.

In practical application, the user profits from the new XL format with more efficient processing, which adds up to higher machine capacity.

XL MILLING CUTTER BODY

XL INDEXABLE INSERT

Inserts without chip groove

For efficient machining of steel and cast iron, inserts of quality P25 and K10 with a PVTi-coating are available.

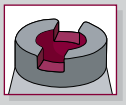
Inserts with chip groove

For efficient machining of steel, stainless steel, cast iron as well as high-temperature alloys, inserts of quality P40, P25, K10 and M40, coated with PVGO and PVST are the best choice.

YOUR BENEFIT FROM A SUMMARY OF ADVANTAGES:

- 4 cutting edges per insert for extreme economic applications
- highest chip removal rates through enormously fast feed rates with extremely large cutting depth
- wiper edge and large corner radius generate high accuracy sufaces, already in roughing operations
- XL-size milling cutter bodies Ø 40 - 100 mm
- lower costs per unit, higher manufacturing capacity
- maximum process reliability specially in interrupted cutting applications thanks to the ablsolutely safe inserts positio-ning

Connection
The **QUADWORX® XL** cutters are available as shell mill version from stock.
All cutters are manufactured with internal coolant supply for best process reliability.

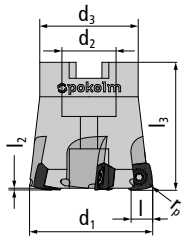


QUADWORX XL

Size XL

- four cutting edges per insert for extremely efficient operations
- very big metal removal rates and extremely easy cutting
- as a standard, every tool has internal coolant supply
- allows extremely high feed rates per tooth up to fz = 2.8 mm

Shell type milling cutter bodies



Catalogue no.	d_1	l	r_p*	l_3	l_2	l_1	d_2	d_3	z	Accessories	Features
4 40 351	40	13	3.3*	42.5	2.5	-	diam. 16	35	4	A, C, D, E, F, G	
4 42 351	42	13	3.3*	42.5	2.5	-	diam. 16	35	4	A, C, D, E, F, G	
4 50 351	50	13	3.3*	50	2.5	-	diam. 22	40	4	A, D, E, F, G	
5 50 351	50	13	3.3*	50	2.5	-	diam. 22	40	5	A, D, E, F, G	
4 52 351	52	13	3.3*	50	2.5	-	diam. 22	48	4	A, D, E, F, G	
5 52 351	52	13	3.3*	50	2.5	-	diam. 22	48	5	A, D, E, F, G	
6 63 351	63	13	3.3*	53	2.5	-	diam. 27	48	6	A, D, E, F, G	
6 66 351	66	13	3.3*	53	2.5	-	diam. 27	48	6	A, D, E, F, G	
6 80 351	80	13	3.3*	53	2.5	-	diam. 27	60	6	A, D, E, F, G	
8 80 351	80	13	3.3*	53	2.5	-	diam. 27	60	8	A, D, E, F, G	
7 100 351	100	13	3.3*	53	2.5	-	diam. 32	70	7	A, B, D, E, F, G	
9 100 351	100	13	3.3*	53	2.5	-	diam. 32	70	9	A, B, D, E, F, G	

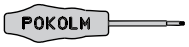
* corner radius to be programmed

Accessories

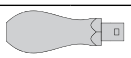
40 505 K
Torx screw
A > Page 7

M16X35
screw
B > Page 7

GWSTPS8ISK
hexagon socket set screw
C > Page 7



15 500 P
Torx-screwdriver (Torx-Plus)
D > Page 7

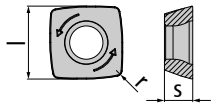
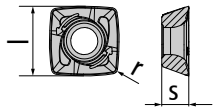


TV 2-8
Screwdriver torque Vario®-S with window scale, E > Page 7

T15 500 P
Torx interchangeable bit for Torque Vario®
F > Page 7

T15 502 P
Torx MagicSpring compatible bit f. Torque Vario®
G > Page 7

NEW latest items! ⚠ available as long as stock lasts ? on request ✔ stock item, subject to confirmation

Indexable inserts	Catalogue no.	DIN Specification	Carbide Grade	Coating	l	s	r	M
	05 51 852 HF	SDMW 135020 SN	P25	PVTi	13	5	2	M 4.0
	05 51 862 HF	SDMW 135020 SN	K10	PVTi	13	5	2	M 4.0
	05 51 848 HF	SDMT 135020 SN	P40	PVGO	13	5	2	M 4.0
	05 51 858 HF	SDMT 135020 SN	P25	PVGO	13	5	2	M 4.0
	05 51 868 HF	SDMT 135020 SN	K10	PVGO	13	5	2	M 4.0
	05 51 896 HF	SDMT 135020 EN	M40	PVST	13	5	2	M 4.0

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
P25 PVTi	f_z (mm) a_p (mm)	0,6-2,8 0,5-2	-	0,6-2,5 0,6-2,2	-	-	-
K10 PVTi	f_z (mm) a_p (mm)	0,6-2,8 0,5-2	-	0,6-2,5 0,6-2,2	-	-	-
P40 PVGO	f_z (mm) a_p (mm)	0,5-2,5 0,4-2	-	0,6-2,5 0,5-2,2	-	-	-
P25 PVGO	f_z (mm) a_p (mm)	0,5-2,5 0,4-2	-	0,6-2,5 0,5-2,2	-	-	-
K10 PVGO	f_z (mm) a_p (mm)	0,5-2,5 0,4-2	-	0,6-2,5 0,5-2,2	-	-	-
M40 PVST	f_z (mm) a_p (mm)	-	0,3-1,7 0,5-1,5	-	-	0,3-1,2 0,4-1,5	-

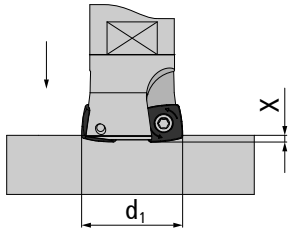
Cutting speed (Vc in m/min)

Material Quality Coating	Application	steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
P25 PVTi	roughing finishing	100 **200** 300 -	-	100 **140** 180 -	-	-	-
K10 PVTi	roughing finishing	130 **175** 220 -	-	150 **185** 220 -	-	-	-
P40 PVGO	roughing finishing	100 **150** 200 -	-	110 **130** 150 -	-	-	-
P25 PVGO	roughing finishing	110 **180** 250 -	-	120 **145** 170 -	-	-	-
K10 PVGO	roughing finishing	130 **175** 220 -	-	150 **185** 220 -	-	-	-
M40 PVST	roughing finishing	-	80 **145** 210 -	-	-	30 **60** 90 -	-

major application *minor application* roughing pre-finishing finishing

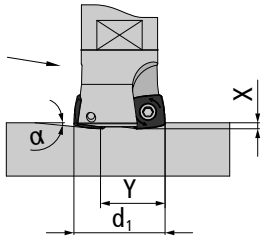
Extended operation data

Plunging



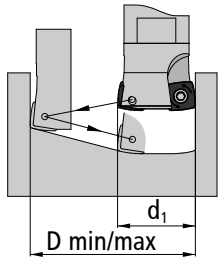
Cutter diam. d1	d_p	X_{max}
40	19.8	2.5
42	21.8	2.5
50	29.8	2.5
52	31.8	2.5
63	42.8	2.5
66	45.8	2.5
80	59.8	2.5
100	79.8	2.5

Ramping



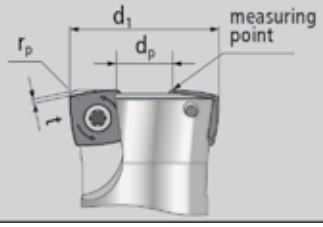
Cutter diam. d1	α°	y
40	<6,5	16.8
42	<5,8	18.8
50	<4,1	26.8
52	<3,7	28.8
63	<2,6	39.8
66	<2,4	42.8
80	<1,8	56.8
100	<1,2	72.8

Helix

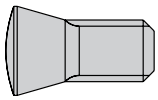
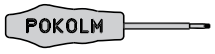
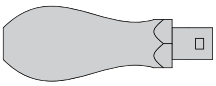
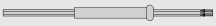


Cutter diam. d1	D_{min}	D_{max}
40	56.8	78
42	60.8	82
50	76.8	98
52	80.8	102
63	102.8	124
66	108.8	130
80	136.8	158
100	176.8	198

Technical information



For the **CAD/CAM set-up** please program **3.3 mm** corner radius (r_p).
The **remainder of the material** is theoretically **0.86 mm** (t).
Please use „d_p" for **tool length measurement**.

Accessories	Catalogue no.	Description				
Torx®screws | Torx®screws						
	40 505 K	Torx screw M 4.0 | L 9.35 | T 15 Plus	M 4.0	L 9.35	T 15 Plus	
Cylindrical screws with hexagon socket | for shell-type and threaded shank adapters						
	M16X35	screw M 16 | L 35 | DIN 7984 | 12.9	M 16	L 35	DIN 7984	12.9
Additional screws and washers | hexagon socket set screw						
	GWSTPS8ISK	hexagon socket set screw M 8x1.25 | M8x0.75 | hexa. size 4	M 8x1.25	M8x0.75	hexa. size 4	
Spanners / screwdrivers | Torx-screwdriver						
	15 500 P	Torx-screwdriver (Torx-Plus) T 15 Plus	T 15 Plus			
Torque screwdrivers and accessories | Torque screwdrivers						
	TV 2-8	Screwdriver torque Vario®-S with window scale from Nm 2.0 | up to 8,0 Nm | with scale	from Nm 2.0	up to 8,0 Nm	with scale	
Torque screwdrivers and accessories | Torx bits, standard						
	T15 500 P	Torx interchangeable bit for Torque Vario® T 15 IP | L 175 | max. 5.5 Nm	T 15 IP	L 175	max. 5.5 Nm	
Torque screwdrivers and accessories | Torx bits with retaining spring						
	T15 502 P	Torx MagicSpring compatible bit f. Torque Vario® T 15 IP | L 175 | max. 5.5 Nm	T 15 IP	L 175	max. 5.5 Nm	

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