



SLOTWORX® HP

High feed and square shoulder face milling cutters
for high performance chip removal rates in all materials



 **pokolm**
PREMIUMTOOLS. WE KNOW HOW.

HIGH-FEED AND SQUARE SHOULDER FACE MILLING CUTTER FOR HIGH PERFORMANCE WITH ANY MATERIAL

SLOTWORX® HP - that's the high-performance talent among POKOLM's insert cutters. A score of outstanding characteristics have rightfully earned the cutting system the 'high performance' attribute. Take, for example, the role as high-feed cutter delivering high feed rates, speeds and degrees of hardness - **SLOTWORX® HP** can take on any challenge and material. This predestines the groundbreaking milling system for use with HSC machines and smaller machining centres.



The novel, special-geometry r 0.8 inserts enable the system to be used as square shoulder face milling cutter, no matter whether the job is about soft materials or tempered steel grades.

Even high temperature alloys like Inconel and Titan can be machined without any limitations.

Its small dimensions make the milling system a superb alternative to solid carbide end mills in some applications.

Practical-Video
SLOTWORX® HP in
1.2379 - 60 HRC



Connections

The **SLOTWORX® HP**-range is available with plain shanks, threaded shanks and with our unique and patented **DUOPLUG®**-system for highest concentricity and maximum rigidity.

All cutters are manufactured with internal coolant supply for best process reliability.



DUOPLUG®



Threaded shank



Plain shank

SLOTWORX® HP features at a glance

- ⊕ High number of teeth on smallest tool diameter
- ⊕ Negative axial rake angle for max. cutter body stability
- ⊕ for use with different inserts as high-feed or square shoulder face milling cutter
- ⊕ One insert carbide grade for soft and hard machining
- ⊕ High-precision ground indexable inserts
- ⊕ Real corner radius for true contour machining
- ⊕ very well surface qualities in all machined materials
- ⊕ Square shoulder insert with high positive rake angle and helix for minimum deflection
- ⊕ Able to replace solid carbide tools in some areas

SLOTWORX® HP - IN DETAIL

Three insert geometries to take on any application

- ➔ maximum stability by geometry of insert and cutting edge
- ➔ inserts embedded into cutter body



➔ High-feed insert, r 2 mm

➔ High-feed insert, concave mould, r 2 mm

➔ Square shoulder face milling insert, r 0.8 mm

High-Feed Inserts 02 66 ... R20 ...

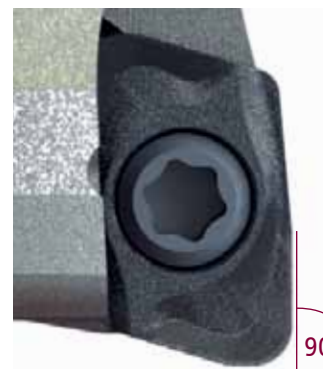


real radius 2 mm, easy to program, easy to calculate stock material

93°

approach angle Kappa 93°- for machining forms and molds with 0° clearance without vibrations

Square shoulder face milling inserts 02 66 835 R08 ...



0,8 mm real corner radius

90°

approach angle Kappa exactly 90° on 2,5 mm cutting edge length

Description Tool Order Number Key

Sample: **2 30 10 166 G**

- ➔ No. of flutes ———— 2
- ➔ Working depth [L₃] ———— 30
(only tools with plain shank)
- ➔ Nominal diameter [d₁] ———— 10
- ➔ Connection ———— 166
 - 1 - Plain shank
 - 2 - Threaded shank
 - 3 - Shell type
 - 0750 - Monoblock SK40
- ➔ System key ———— G
 - 66 - **SLOTWORX® HP**
- ➔ Plain shank according to DIN ———— G
 - G - DIN 1835 A
 - - DIN 1835 B
- ➔ **DUOPLUG®** Connection (SG) ————





SLOTWORX® HP - DIAM. 10 - 32 MM - for square shoulder face milling and high feed inserts

Outstandingly capable for using on high-speed milling machines and smaller machining centres.

- the increased no. of teeth allows for very large feed-rates

Milling cutter bodies		Catalogue no.										Accessories		Features
		d_1	l	r	l_3	l_2	l_1	d_2	d_3	z				

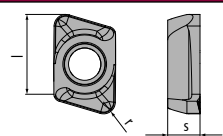
DuoPlug®													
	3 12 266 SG	12	6.2	0.8 2	28	0.7	-	M 7	10.8	3	A, B, C, D, E, F		
	4 16 266 SG	16	6.2	0.8 2	31	0.7	-	M 10	15	4	A, B, C, D, E, F		
	5 20 266 SG	20	6.2	0.8 2	33	0.7	-	M 12	18.6	5	A, B, C, D, E, F		
	5 25 266 SG	25	6.2	0.8 2	35	0.7	-	M 16	23.5	5	A, B, C, D, E, F		

Threaded shank end mill body													
	2 10 266 M6	10	6.2	0.8 2	22.5	0.7	-	M 6	9.75	2	A, B, C, D, E, F		
	3 12 266 M6	12	6.2	0.8 2	22.5	0.7	-	M 6	11.5	3	A, B, C, D, E, F		
	4 16 266	16	6.2	0.8 2	27.5	0.7	-	M 8	13.8	4	A, B, C, D, E, F		
	5 20 266	20	6.2	0.8 2	27.5	0.7	-	M 10	18	5	A, B, C, D, E, F		
	5 25 266	25	6.2	0.8 2	32	0.7	-	M 12	21	5	A, B, C, D, E, F		
	7 32 266	32	6.2	0.8 2	32	0.7	-	M 16	29	7	A, B, C, D, E, F		

Shank cutters													
	2 30 10 166 G	10	6.2	0.8 2	30	0.7	70	diam. 10	9.75	2	A, B, C, D, E, F		
	3 36 12 166 G	12	6.2	0.8 2	36	0.7	81	diam. 12	11.5	3	A, B, C, D, E, F		
	4 48 16 166 G	16	6.2	0.8 2	48	0.7	96	diam. 16	15.5	4	A, B, C, D, E, F		

Accessories					
<p>21 500 P Torx screw A > Page 7</p>	<p>POKOLM 06 500 P Torx screwdriver (Torx-Plus) B > Page 7</p>	<p>TV 04-1 Screwdriver torque Vario®-S with window scale, C > Page 7</p>	<p>TV 500 Torque Vario® setter adjusting tool D > Page 7</p>	<p>T6 500 P Torx interchangeable bit for Torque Vario® E > Page 7</p>	<p>T6 502 P, Torx Magic- Spring compatible bit f. Torque Vario® F > Page 7</p>

Inserts for square shoulder face milling

Indexable inserts	Catalogue no.	DIN Specification	Carbide Grade	Coating	l	s	r	M
		02 66 835 R08	XCHT 062208 SR	HSC 05	PVTi	6.2	2.2	0.8
	02 66 835 R08 D	XCHT 062208 SR	HSC 05	PVDiaN	6.2	2.2	0.8	M 2.0

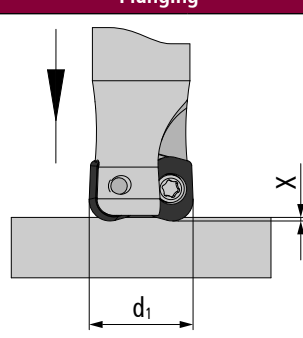
Feed per tooth (fz) | d.o.c. (ap)

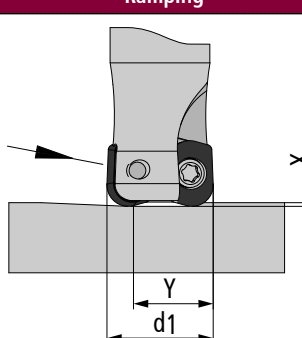
Material		steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
Quality Coating	Feed per tooth d.o.c.						
HSC 05 PVTi	f _z (mm) a _p (mm)	0.05-0.3 0.3-2	0.05-0.25 0.3-2	0.05-0.3 0.3-2	-	0.05-0.25 0.3-2	0.05-0.25 0.3-2
HSC 05 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0.05-0.3 0.3-2	-	-

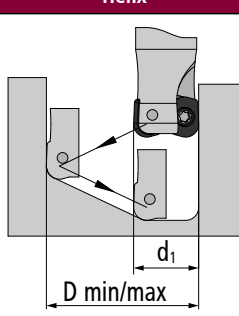
Cutting speed (Vc in m/min)

Material		steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
Quality Coating	Application						
HSC 05 PVTi	roughing pre finishing finishing	- ▽150 275 400	- ▽100 150 200	- ▽200 275 350	-	- ▽40 70 100	- ▽35 143 250
HSC 05 PVDiaN	roughing pre finishing finishing	-	-	-	▽200 500 800	-	-

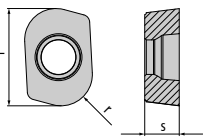
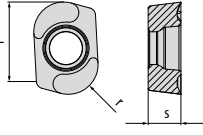
Extended operation data

Plunging	
	
Cutter diam. d1	X _{max}
10-32	0.7

Ramping		
		
Cutter diam. d1	α°	y
10	<2.5	4
12	<2	6
16	<1.6	10
20	<1.2	14
25	<1	19
32	<1	26

Helix		
		
Cutter diam. d1	D _{min}	D _{max}
10	13	20
12	17	24
16	25	32
20	33	39
25	43	49
32	57	63

Inserts for high feed milling

Indexable inserts	Catalogue no.	DIN Specification	Carbide Grade	Coating	l	s	r	M
	02 66 835 R20	XCHW 062220 EN	HSC 05	PVTi	6.2	2.2	2	M 2.0
	02 66 835 R20 D	XCHW 062220 EN	HSC 05	PVDiaN	6.2	2.2	2	M 2.0
	02 66 836 R20	XCHW 062220 EN	HSC 05	PVTiH	6.2	2.2	2	M 2.0
	02 66 820 R20	XCHT 062220 FN	K10	polished	6.2	2.2	2	M 2.0
	02 66 860 R20	XCHT 062220 FN	K10	PVTi	6.2	2.2	2	M 2.0
	02 66 890 R20	XCHT 062220 EN	M40	PVST	6.2	2.2	2	M 2.0

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.						
HSC 05 PVTi	f _z (mm) a _p (mm)	0.05-0.7 0.05-0.4	-	0.05-0.7 0.05-0.4	-	-	0.05-0.6 0.05-0.4
HSC 05 PVDiaN	f _z (mm) a _p (mm)	-	-	-	0.05-0.7 0.05-1	-	-
HSC 05 PVTiH	f _z (mm) a _p (mm)	0.05-0.7 0.05-0.4	-	0.05-0.7 0.05-0.4	-	-	0.05-0.6 0.05-0.4
K10 polished	f _z (mm) a _p (mm)	-	-	-	0.02-1 0.05-1	-	-
K10 PVTi	f _z (mm) a _p (mm)	-	0.02-0.4 0.02-0.3	-	0.02-1 0.05-1	0.02-0.1 0.02-0.15	-
M40 PVST	f _z (mm) a _p (mm)	-	0.03-0.6 0.05-1	-	-	0.03-0.6 0.05-1	-

Cutting speed (Vc in m/min)

Material		steel	stainless steel	cast iron	non-ferrous materials	high-temperature alloys	hardened steel
Quality Coating	Application						
HSC 05 PVTi	roughing	▽120 185 250	-	▽100 150 200	-	-	▽35 143 250
	pre finishing	▽150 275 400	-	▽150 225 300	-	-	▽35 143 250
	finishing	▽150 275 400	-	▽200 275 350	-	-	▽35 143 250
HSC 05 PVDiaN	roughing	-	-	-	▽200 500 800	-	-
	pre finishing	-	-	-	▽200 500 800	-	-
	finishing	-	-	-	▽200 500 800	-	-
HSC 05 PVTiH	roughing	▽120 185 250	-	▽100 150 200	-	-	▽35 143 250
	pre finishing	▽150 275 400	-	▽150 225 300	-	-	▽35 143 250
	finishing	▽150 275 400	-	▽200 275 350	-	-	▽35 143 250
K10 polished	roughing	-	-	-	▽100 450 800	-	-
	pre finishing	-	-	-	▽100 450 800	-	-
	finishing	-	-	-	▽100 450 800	-	-
K10 PVTi	roughing	-	▽90 120 150	-	▽100 450 800	-	-
	pre finishing	-	▽120 150 180	-	▽100 450 800	▽35 68 100	-
	finishing	-	-	-	▽100 450 800	-	-
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	X _{max}
10-32	0.7

Ramping		
Cutter diam. d1	α°	y
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32	<1	26

Helix		
Cutter diam. d1	D _{min}	D _{max}
10	13	20
12	17	24
16	25	32
20	33	40
25	43	50
32	57	64

Accessories

Accessories	Catalogue no.	Description				
Torx@screws Torx@screws						
	21 500 P	Torx screw M 2.0 L 4 T 6 Plus 0.5 Nm	M 2.0	L 4	T 6 Plus	0.5 Nm
Spanners / screwdrivers Torx-screwdriver						
	06 500 P	Torx screwdriver (Torx-Plus) T 6 IP	T 6 IP			
Torque screwdrivers and accessories Torque screwdrivers						
	TV 04-1	Screwdriver torque Vario®-S with window scale from Nm 0.4 up to 1,0 Nm with scale, inc setter	from Nm 0.4	up to 1,0 Nm		
Torque screwdrivers and accessories Torque Vario® setter adjusting tool						
	TV 500	Torque Vario® setter adjusting tool				
Torque screwdrivers and accessories Torx bits, standard						
	T6 500 P	Torx interchangeable bit for Torque Vario® T 6 IP L 175 max. 0.6 Nm	T 6 IP	L 175	max. 0.6 Nm	
Torque screwdrivers and accessories Torx bits with retaining spring						
	T6 502 P	Torx MagicSpring compatible bit f. Torque Vario® T 6 IP L 175 max. 0.6 Nm	T 6 IP	L 175	max. 0.6 Nm	



Pokolm
Frästechnik GmbH & Co. KG

Adam-Opel-Straße 5
33428 Harsewinkel
Germany

Fon: +49 5247 9361-0
Fax: +49 5247 9361-99

info@pokolm.com
www.pokolm.com



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