



SLOTWORX® HP

HIGH PERFORMANCE CHIP REMOVAL RATES IN HARD MACHINING

SLOTRORX® HP is the new high-performance talent among Pokolm milling cutter bodies. And with a variety of positive characteristics, the new milling system for rough machining has earned the „high-performance“ commendation. High feed rates, high speeds, high hardness suitability - **SLOTRORX® HP**

willingly takes on any challenge; a clear advantage for your hard machining. That makes the innovative milling system predestined for use on HSC machines and machining centres and can even replace solid carbide tools in some areas.



Plain shank



Screw-on type



DuoPlug®

Connections

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

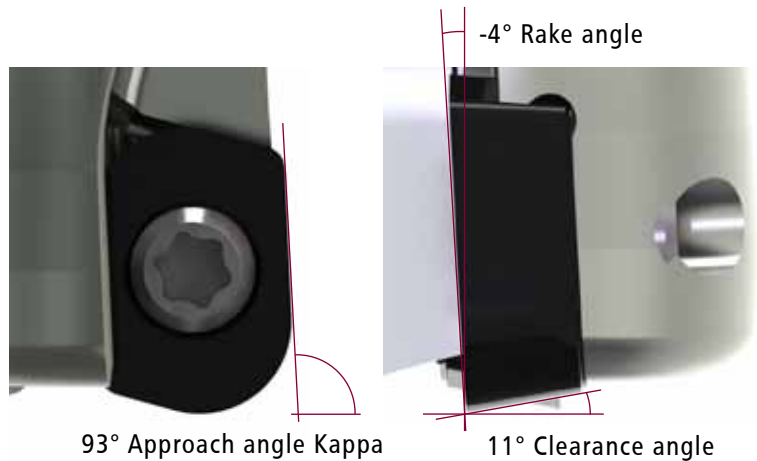
All cutters are manufactured with internal coolant supply for best process reliability.

SLOTWORX® HP FEATURES AT A GLANCE

- ⊕ High number of teeth on smallest tool diameter
- ⊕ Negative axial rake angle for max. cutter body stability
- ⊕ One insert carbide grade for soft and hard machining
- ⊕ High-precision ground indexable inserts
- ⊕ Real corner radius for true contour machining
- ⊕ Able to replace solid carbide tools in some areas

Indexable inserts – Pocket seat – Contact area:

- ⊕ real radius 2 mm, easy to program, easy to calculate stock material
- ⊕ no chip breaker, maximum stability
- ⊕ inserts embedded into cutter body
- ⊕ 11° effective clearance angle - optimum for rough machining of hardened materials
- ⊕ 93° approach angle Kappa - for machining forms and molds with 0° clearance without vibrations



Description Tool Order Number Key

Sample: **2 30 10 166 G**

- ⊕ No. of flutes ————
- ⊕ Working depth [l_3] ————
(only tools with plain shank)
- ⊕ Nominal diameter [d_1] ————
- ⊕ Connection ————
1 - Plain shank
2 - Screw-on type
3 - Shell type
0750 - Monoblock SK40
- ⊕ System key ————
66 - SLOTWORX® HP
- ⊕ Plain shank according to DIN ————
G - DIN 1835 A
- - DIN 1835 B
- ⊕ DuoPlug® Connection (SG) ————





SLOTWORX® HP

Size S

Excellent for use on small HSC machines and machining centers.

- due to high number of flutes very high feedrates are possible
- offers a real corner radius for close contour work

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

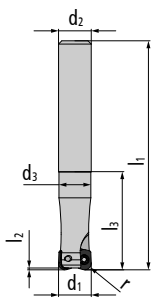
Screw-on type

	2 10 266 M6	10	6.2	2	22,5	0.7	-	M 6	9.75	2	A, B, C, D, E, F	
	3 12 266 M6	12	6.2	2	22,5	0.7	-	M 6	11.5	3	A, B, C, D, E, F	
	4 16 266	16	6.2	2	27,5	0.7	-	M 8	13.8	4	A, B, C, D, E, F	
	5 20 266	20	6.2	2	27,5	0.7	-	M 10	18	5	A, B, C, D, E, F	
	5 25 266	25	6.2	2	32	0.7	-	M 12	18	5	A, B, C, D, E, F	

Milling cutter bodies




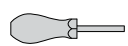


Catalogue no. d_1 l r l_3 l_2 l_1 d_2 d_3 z Accessories Features

Plain shank

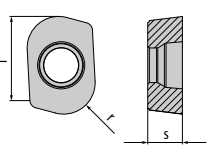


2 30 10 166 G	10	6.2	2	30	0.7	70	10	-	2	A, B, C, D, E, F	
3 36 12 166 G	12	6.2	2	36	0.7	81	12	-	3	A, B, C, D, E, F	
4 48 16 166 G	16	6.2	2	48	0.7	96	16	-	4	A, B, C, D, E, F	

Accessories

 21 500 P Torx screw A > Page 6	 06 500 P Torx Screwdriver (Torx-Plus) B > Page 6	 TV 04-1 Torque Vario® - S Screwdriver with scale, C > Page 6	 TV 500 Torque Vario® - SET- TER Setting tool D > Page 6	 T6 500 P Torx interchangeable bit for Torque Vario® E > Page 6	 T6 502 P Torx magic spring bit for Torque Vario® F > Page 6
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Inserts



Catalogue no.	ISO Standard	Carbide grade	Coating	l	s	r	M
02 66 835 R20	XCHW 062220 EN	HSC 05	PVTi	6.2	2.2	2	M 2
02 66 835 R20 D	XCHW 062220 EN	HSC 05	PVDiaN	6.2	2.2	2	M 2
02 66 836 R20	XCHW 062220 EN	HSC 05	PVTiH	6.2	2.2	2	M 2

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

Material	Carbide grade Coating	feed per tooth d.o.c.	Material					
			Steel	Stainless steel	Cast iron	Non ferrous materials	High temperature alloys	Hardened steel
HSC 05 PVTi		f_z (mm)	0.05-0.7	-	0.05-0.7	-	-	0.05-0.6
		a_p (mm)	0.05-0.4	-	0.05-0.4	-	-	0.05-0.4
HSC 05 PVDiaN		f_z (mm)	-	-	-	0.05-0.7	-	-
		a_p (mm)	-	-	-	0.05-1	-	-
HSC 05 PVTiH		f_z (mm)	0.05-0.7	-	0.05-0.7	-	-	0.05-0.6
		a_p (mm)	0.05-0.4	-	0.05-0.4	-	-	0.05-0.4

Cutting speed V_c in m/min

Material	Carbide grade Coating	Application	Material					
			Steel	Stainless steel	Cast iron	Non ferrous materials	High temperature alloys	Hardened steel
HSC 05 PVTi		Roughing	120 210 300	-	100 200 300	-	-	35 93 150
		Finishing	150 225 300	-	200 275 350	-	-	35 93 150
HSC 05 PVDiaN		Roughing	-	-	-	200 500 800	-	-
		Finishing	-	-	-	200 500 800	-	-
HSC 05 PVTiH		Roughing	120 210 300	-	100 200 300	-	-	35 93 150
		Finishing	150 225 300	-	200 275 350	-	-	35 93 150

Major application Minor application Roughing Pre-finishing Finishing

Technical data

Plunging	
Cutter diam. d1 (mm)	X _{max} mm
10-25	0.7

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

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

SLOTWORX® HP – Accessories

Accessories	Catalogue no.	Description	Dimensions			
	21 500 P	Torx screw M 2.0	M 2.0	L 4	T 6 IP	
	06 500 P	Torx screwdriver (Torx-Plus)	T 6 IP			
	TV 04-1	Torque Vario® S Torx Screwdriver with scale	from 0.4 Nm	up to 1.0 Nm	with scale	
	TV 500	Torque Vario® Setter setting tool				
	T6 500 P	Torx interchangeable bit for Torque Vario®	T 6 IP	L 175	max. 0,6 Nm	
	T6 502 P	Torx magic spring bit for Torque Vario®	T 6 IP	L 175	max. 0.6 Nm	

Starting torque for Torxscrews: M_s 0,43 Nm

FROM PRACTICE TO PRACTICE

JOB DESCRIPTION:

Stock material machining of a plastic injection mould and preparing for finishing with a constant depth of cut of 0.2 mm. The dimension created by the predecessor tool before hardening amounted to 3 mm.

Especially on inner radii and narrow grooves, the proportion of full cuts is a critical point.

This can lead to significantly increased wear on indexable inserts.

Major requirement/archivement: secure machining of the complete part without machine down time.

MACHINE	MATERIAL	PROGRAMMING SYSTEM
Millstar LMV 1200	1.2344 52 HRC	Heidenhain iTNC 530

APPLICATION PARAMETERS:

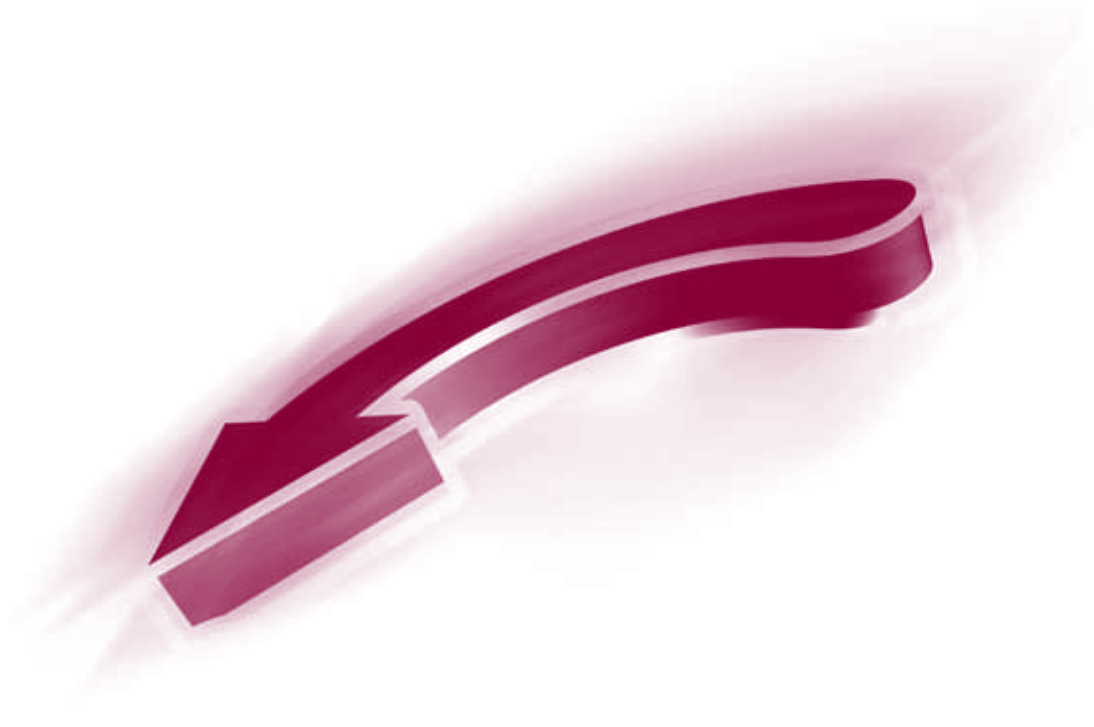
component:	Injection moulding tool
material:	1.2344 52 HRC
arbor:	75 08 754
cutter body:	SLOTWORX® HP 4 16 266
insert:	02 66 835 R20
coating:	PVTi
V_c (speed):	140 m/min
V_f (feed rate):	5,000 mm/min
S (revolutions):	2,700 1/min
d1 (nominal diameter) :	16 mm
f_z (feed per tooth):	0.46 mm
a_p (depth of cut):	0.3 mm
a_e (width of cut):	up to 16 mm
tool life:	> 110 min
life length:	> 550 m



RESULT:

Outstanding smooth running, high surface quality and hardly any noticeable wear on the indexable insert in conjunction with the highest contour accuracy, ensured perfect preparation of the mould for the following finishing process.

SLOTWORX® HP has proven to be the ideal solution for this task. The extremely low insert wear also increases the cost efficiency of this milling system.



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