



# SLOTWORX® - K90°

SLOTWORX® - Size M - diam. 16 - 52 mm

This range is the all-purpose solution for square shoulder face milling and slotting. Can be used with indexable inserts of the Slotworx®-M range up to a corner radius of 2 mm. Modified standard bodies for the use of indexable inserts with a corner radius  $\geq 3$  mm have additional R+ marking.

## Milling cutter bodies

Milling cutter bodies	Catalogue no.	Dimensions									Accessories	Features				
		$d_1$	$l$	$r$	$l_3$	$l_2$	$l_1$	$d_2$	$d_3$	$z$						
	2 16 267 SG	16	10	0.8-2	38	2.5	-	M 10	15	2	A, C, D, E, F	✓	✓	✓	✓	✓
	2 16 267 SG R+	16	10	3 4	38	2.5	-	M 10	15	2	A, C, D, E, F	✓	✓	✓	✓	✓
	2 20 267 SG	20	10	0.4-2	40	2.5	-	M 12	18.6	2	A, C, D, E, F	✓	✓	✓	✓	✓
	2 20 267 SG R+	20	10	3 4	40	2.5	-	M 12	18.6	2	A, C, D, E, F	✓	✓	✓	✓	✓
	3 25 267 SG	25	10	0.4-2	43	2.5	-	M 16	23.5	3	A, C, D, E, F	✓	✓	✓	✓	✓
	3 25 267 SG R+	25	10	3 4	43	2.5	-	M 16	23.5	3	A, C, D, E, F	✓	✓	✓	✓	✓

## Threaded shank end mill bodies

	2 16 267	16	10	0.4-2	29	2.5	-	M 8	13.8	2	A, C, D, E, F	✓	✓	✓	✓
	2 16 267 R+	16	10	3 4	29	2.5	-	M 8	13.8	2	A, C, D, E, F	✓	✓	✓	✓
	2 20 267	20	10	0.4-2	29	2.5	-	M 10	18	2	A, C, D, E, F	✓	✓	✓	✓
	2 20 267 R+	20	10	3 4	29	2.5	-	M 10	18	2	A, C, D, E, F	✓	✓	✓	✓
	3 20 267	20	10	0.4-2	29	2.5	-	M 10	18	3	A, C, D, E, F	✓	✓	✓	✓
	3 20 267 R+	20	10	3 4	29	2.5	-	M 10	18	3	A, C, D, E, F	✓	✓	✓	✓
	3 25 267	25	10	0.4-2	33	2.5	-	M 12	21	3	A, C, D, E, F	✓	✓	✓	✓
	3 25 267 R+	25	10	3 4	33	2.5	-	M 12	21	3	A, C, D, E, F	✓	✓	✓	✓
	4 25 267	25	10	0.4-2	33	2.5	-	M 12	21	4	A, C, D, E, F	✓	✓	✓	✓
	4 25 267 R+	25	10	3 4	33	2.5	-	M 12	21	4	A, C, D, E, F	✓	✓	✓	✓
	4 32 267	32	10	0.4-2	43	2.5	-	M 16	29	4	B, C, D, E, F	✓	✓	✓	✓
	4 32 267 R+	32	10	3 4	43	2.5	-	M 16	29	4	B, C, D, E, F	✓	✓	✓	✓
	5 32 267	32	10	0.4-2	43	2.5	-	M 16	29	5	B, C, D, E, F	✓	✓	✓	✓
	5 32 267 R+	32	10	3 4	43	2.5	-	M 16	29	5	B, C, D, E, F	✓	✓	✓	✓
5 42 267	42	10	0.4-2	43	2.5	-	M 16	29	5	B, C, D, E, F	✓	✓	✓	✓	
5 42 267 R+	42	10	3 4	43	2.5	-	M 16	29	5	B, C, D, E, F	✓	✓	✓	✓	

## Plain shank end mill bodies

	2 32 16 167 G	16	10	0.4-2	32	2.5	165	diam. 16	-	2	A, C, D, E, F	✓	✓	✓	✓
	2 32 16 167 G R+	16	10	3 4	32	2.5	165	diam. 16	-	2	A, C, D, E, F	✓	✓	✓	✓
	3 40 20 167 G	20	10	0.4-2	40	2.5	165	diam. 20	-	3	A, C, D, E, F	✓	✓	✓	✓
	3 40 20 167 G R+	20	10	3 4	40	2.5	165	diam. 20	-	3	A, C, D, E, F	✓	✓	✓	✓
	3 50 25 167 G	25	10	0.4-2	50	2.5	225	diam. 25	-	3	A, C, D, E, F	✓	✓	✓	✓
	3 50 25 167 G R+	25	10	3 4	50	2.5	225	diam. 25	-	3	A, C, D, E, F	✓	✓	✓	✓
	4 50 25 167 G	25	10	0.4-2	50	2.5	225	diam. 25	-	4	A, C, D, E, F	✓	✓	✓	✓
	4 50 25 167 G R+	25	10	3 4	50	2.5	225	diam. 25	-	4	A, C, D, E, F	✓	✓	✓	✓

NEW latest items!

⚠ available as long as stock lasts

❓ on request

✓ stock item, subject to confirmation

**Milling cutter bodies**

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

**Shell type milling cutter bodies**

	5 42 367	42	10	0.4-2	43	2.5	-	diam. 16	35	5	B, C, D, E, F	
	5 42 367 R+	42	10	3 4	43	2.5	-	diam. 16	35	5	B, C, D, E, F	
	6 52 367	52	10	0.4-2	53	2.5	-	diam. 22	40	6	B, C, D, E, F	
	6 52 367 R+	52	10	3 4	53	2.5	-	diam. 22	40	6	B, C, D, E, F	

**Accessories**

<p>25 505 KP Torx screw A &gt; Page 195</p>	<p>25 505 P Torx screw for Slotworx M B &gt; Page 195</p>	<p>08 500 P Torx-screwdriver (Torx-Plus) C &gt; Page 196</p>	<p>TV 08-2 Screwdriver torque Vario®-S with window scale, D &gt; Page 197</p>	<p>T8 500 P Torx interchangeable bit for Torque Vario® E &gt; Page 197</p>	<p>T8 502 P, Torx Magic-Spring compatible bit f. Torque Vario®, F &gt; Page 198</p>
---	---	--	---	--	---

**Indexable inserts**

Catalogue no.	DIN Specification	Carbide Grade	Coating	l	s	r	M
04 67 820 R04	XDHT 10T304 FR	K10	polished	10	3.58	0.4	M 2.5
04 67 820 R08	XDHT 10T308 FR	K10	polished	10	3.58	0.8	M 2.5
04 67 837 R08	XDMT 10T308 ER	HSC 05	PVFN	10	3.58	0.8	M 2.5
04 67 848 R08	XDMT 10T308 ER	P40	PVGO	10	3.58	0.8	M 2.5
04 67 896 R08	XDMT 10T308 ER	M40	PVST	10	3.58	0.8	M 2.5
04 67 8099 R08	XDMT 10T308 ER	M35	PCTC	10	3.58	0.8	M 2.5
04 67 820	XDHT 10T310 ER	K10	polished	10	3.58	1	M 2.5
04 67 837	XDMT 10T310 ER	HSC 05	PVFN	10	3.58	1	M 2.5
04 67 844	XDHT 10T310 ER	P40	PVGO	10	3.58	1	M 2.5
04 67 848	XDMT 10T310 ER	P40	PVGO	10	3.58	1	M 2.5
04 67 860	XDHT 10T310 ER	K10	PVTi	10	3.58	1	M 2.5
04 67 860 D	XDHT 10T310 ER	K10	PVDiaN	10	3.58	1	M 2.5
04 67 894	XDHT 10T310 ER	PCD	uncoated	10	3.58	1	M 2.5
04 67 896	XDMT 10T310 ER	M40	PVST	10	3.58	1	M 2.5
04 67 820 R20	XDHT 10T320 FR	K10	polished	10	3.58	2	M 2.5
04 67 896 R20	XDMT 10T320 ER	M40	PVST	10	3.58	2	M 2.5
04 67 820 R30	XDHT 10T330 FR	K10	polished	10	3.58	3	M 2.5
04 67 896 R30	XDMT 10T330 ER	M40	PVST	10	3.58	3	M 2.5
04 67 820 R40	XDHT 10T340 FR	K10	polished	10	3.58	4	M 2.5
04 67 896 R40	XDMT 10T340 ER	M40	PVST	10	3.58	4	M 2.5

## 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.						
<b>r=0,4 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
<b>r=0,8 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
HSC 05 PVFN	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-5	-	0,05-0,25 0,1-4	-	-	0,08-0,25 0,1-5
P40 PVGO	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-6	0,05-0,25 0,1-3	0,05-0,25 0,1-6	-	0,05-0,25 0,1-3	-
M40 PVST	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-6	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-
M35 PCTC	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-
<b>r=1 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
HSC 05 PVFN	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-5	-	0,05-0,25 0,1-4	-	-	0,08-0,25 0,1-5
P40 PVGO	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-6	0,05-0,25 0,1-3	0,05-0,25 0,1-6	-	0,05-0,25 0,1-3	-
K10 PVTi	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	0,08-0,12 0,1-3	0,08-0,15 0,1-1
K10 PVDiaN	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
PCD uncoated	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,2 0,1-4	-	-
M40 PVST	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	0,05-0,25 0,1-6	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-
<b>r=2 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
M40 PVST	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-
<b>r=3 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
M40 PVST	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-
<b>r=4 mm</b>							
K10 polished	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	-	-	0,08-0,35 0,1-9	-	-
M40 PVST	f <sub>z</sub> (mm) a <sub>p</sub> (mm)	-	0,08-0,35 0,1-9	-	-	0,08-0,25 0,1-9	-

## Cutting speed (Vc in m/min)

Material		steel		stainless steel		cast iron		non-ferrous materials		high-temperature alloys		hardened steel	
Quality Coating	Application												
K10 polished	roughing pre finishing finishing	-	-	-	-	▽100 450 800 ▽100 450 800 ▽100 450 800	-	-	-	-	-	-	-
HSC 05 PVFN	roughing pre finishing finishing	▽120 160 200 ▽120 160 200 -	-	-	-	▽100 150 200 ▽100 150 200 -	-	-	-	-	-	▽80 150 220 ▽40 130 220 ▽40 130 220	-
P40 PVGO	roughing pre finishing finishing	▽100 150 200 ▽100 150 200 ▽160 205 250	▽90 110 130 ▽90 110 130 ▽110 135 160	-	-	▽110 130 150 ▽110 130 150 ▽120 150 180	-	-	-	▽60 80 100 ▽60 80 100 ▽80 100 120	-	-	-
M40 PVST	roughing pre finishing finishing	▽80 140 200 ▽100 150 200 -	▽80 130 180 ▽100 155 210 ▽120 185 250	-	-	-	-	-	-	▽30 55 80 ▽40 65 90 ▽60 90 120	-	-	-
M35 PCTC	roughing pre finishing finishing	-	▽110 155 200 ▽120 175 230 ▽160 220 280	-	-	-	-	-	-	▽30 65 100 ▽40 75 110 ▽60 100 140	-	-	-
K10 PVTi	roughing pre finishing finishing	-	-	-	-	▽100 450 800 ▽100 450 800 ▽100 450 800	-	-	-	▽35 68 100	▽35 143 250	-	-
K10 PVDiaN	roughing pre finishing finishing	-	-	-	-	▽100 450 800 ▽100 450 800 ▽100 450 800	-	-	-	-	-	-	-
PCD uncoated	roughing pre finishing finishing	-	-	-	-	▽200 400 600 ▽400 600 800 ▽600 800 1000	-	-	-	-	-	-	-

## Extended operation data

Plunging	
Cutter diam. d1	X <sub>max</sub>
16-52	2.5

Ramping		
Cutter diam. d1	α°	y
16	<24,5	5.3
20	<14,5	9.3
25	<8	14.3
32	<5	21.3
42	<3	31.3
52	<2,5	41.3

Helix		
Cutter diam. d1	D <sub>min</sub>	D <sub>max</sub>
16	21.3	32
20	29.3	40
25	39.3	50
32	53.3	64
42	73.3	84
52	93.3	104