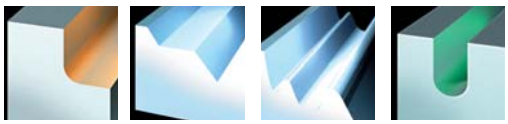
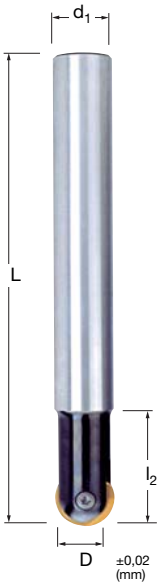
5500 V 16

Contour Milling Cutter





Cylindrical Shank

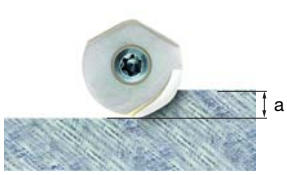
5500 V 16 Cylindrical Shank

EDP#	Part Number	Dimensions (mm) D	L	l_2	l_3	d_1	MT	a	No. of Inserts	Spares EDP#		EDP#	
021670	**5500V 16 CR**	16	200	40	-	16	-	8	1	022150	55.675	015240	T15

5500 V 16 Morse Taper Shank

021671	**5500V 16 MR**	16	139	70	75	-	MT2	8	1	022150	55.675	015240	T15

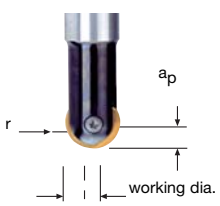
Morse Taper Shank



Depth of cut (a)

5500 V 16 Technical Advice

Milling Cutter Order Example: **5500V16CR**
Milling Insert Order Example: **RG16 SP1032**
For complete cutting conditions refer to page: **264**

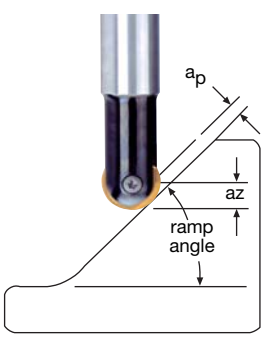


Working Diameter:

$$DW = 2 \times \sqrt{r^2 - (r - a_p)^2}$$

where:
DW = Working Diameter
r = Cutter radius
a_p = Axial Depth of Cut

Ramp Milling Method

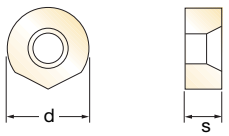


Ramp-up Data

Cutter Diameter 16,00 mm a_p (mm)	az (mm)	Ramp Angle
6,0	7,7	15°
4,0	6,9	30°
2,4	5,6	45°
1,1	4,0	60°
0,3	2,0	75°
0,1	0,7	85°

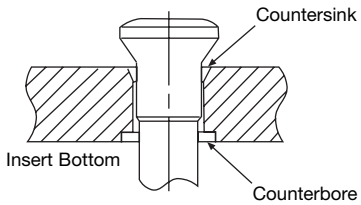
Torque Limits 2.6 Nm

Inserts for 5500 V 16



EDP#	Part Number	Grade	Application & Material ▼ Roughing	▼▼ Semi-Finishing	▼▼▼ Finishing	Dimensions (mm) d	l	s	r	h_m min	
024119	RG 16	SP1032				16,0	-	3,0	8,0	0,02	RG 16_ 
027797	RG 16S	SP1064				16,0	-	3,0	8,0	0,02	RG 16S_ 

RG Insert Orientation



Insert through hole has a countersink on one side and a counterbore on the other side. Assemble as shown to create proper pull back against the cutter pocket.

Insert Interchangeability*

Metric		Inch	
Diameter	Insert Number	Diameter	Insert Number
16 mm	RG 16	.625 in.	RG .625

*Insert interchangeability allows metric inserts to be used in inch cutters and vice-versa.

To find programmed feedrate:

$$f_z = h_m \times \sqrt{\frac{D}{a_p}} \times \sqrt{\frac{D_w}{a_e}}$$

where:
- f_z = Feed per tooth
- h_m = Average chip thickness
- **D** = Cutter diameter (outside)
- a_e = Radial Depth of Cut
- D_w = Working Diameter
- a_p = Axial Depth of Cut

Average chip thickness:

$$h_m = \frac{f_z}{\sqrt{\frac{D}{a_p}} \times \sqrt{\frac{D_w}{a_e}}}$$

RG_16 Recommended Cutting Conditions

Material	▼ Roughing Speed V_c (m/min)	Feed h_m (mm)	D.O.C. a_p (mm)	▼▼ Semi-Finishing Speed V_c (m/min)	Feed h_m (mm)	D.O.C. a_p (mm)	▼▼▼ Finishing Speed V_c (m/min)	Feed h_m (mm)	D.O.C. a_p (mm)
Unalloyed Steels	-	-	-	-	-	-	180 - 360	0,10 - 0,15	< 1,0
Alloyed Steels	-	-	-	-	-	-	110 - 240	0,10 - 0,15	< 1,0
Stainless Steels	-	-	-	-	-	-	140 - 240	0,10 - 0,15	< 1,0
PH Stainless	-	-	-	-	-	-	120 - 190	0,08 - 0,12	< 1,0
Cast Irons	-	-	-	-	-	-	100 - 160	0,08 - 0,12	< 1,0
Aluminium & Alloys	-	-	-	-	-	-	400 - 1000	0,10 - 0,15	< 1,0
High Temp. Alloys	-	-	-	-	-	-	45 - 60	0,08 - 0,12	< 1,0
Hard Steels (52-56 HRC)	-	-	-	-	-	-	50 - 100	0,03 - 0,06	< 0,5

h_m = average chip thickness

Star Guide Key to Recommended Tools

Material Designations							
P	Unalloyed Steels	M	Stainless Steels	K	Cast Irons	S	High Temp. Alloys
P	Alloyed Steels	M	PH Stainless	N	Aluminium & Alloys	H	Hard Materials

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