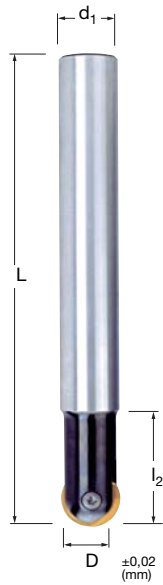
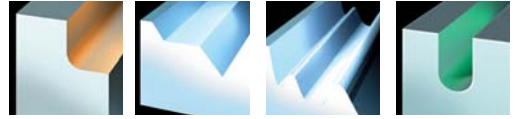


# 5500 V 20

## Contour Milling Cutter



Cylindrical Shank

### 5500 V 20 Cylindrical Shank

EDP#	Part Number	Dimensions (mm)							No. of Inserts	Spares			
		D	L	l <sub>2</sub>	l <sub>3</sub>	d <sub>1</sub>	MT	a		EDP#	EDP#	EDP#	
021672	5500V 20 CR	20	200	50	-	20	-	10	1	015252	55.676	015241	T20

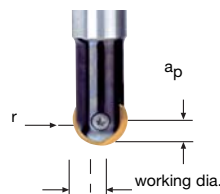
### 5500 V 20 Morse Taper Shank

021673	5500V 20 MR	20	154	85	90	-	MT2	10	1	015252	55.676	015241	T20
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## 5500 V 20 Technical Advice

Milling Cutter Order Example: **5500V20CR**  
 Milling Insert Order Example: **RG20 SP1032**  
 For complete cutting conditions refer to page: **264**

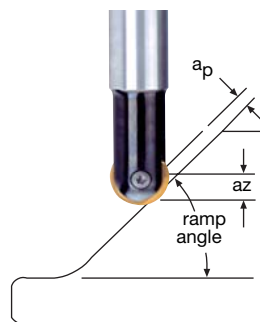


#### Working Diameter:

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

where: **DW** = Working Diameter  
**r** = Cutter radius  
**a<sub>p</sub>** = Axial Depth of Cut

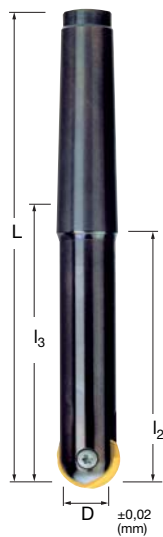
## Ramp Milling Method



#### Ramp-up Data

Cutter Diameter 20,00 mm		Ramp Angle
ap (mm)	az (mm)	
7,4	9,6	15°
5,0	8,6	30°
3,0	7,1	45°
1,3	5,0	60°
0,35	2,9	75°
0,1	0,9	85°

Torque Limits 5.1 Nm



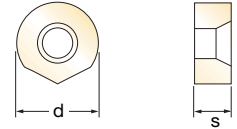
Morse Taper Shank



Depth of cut (a)

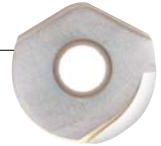


# Inserts for 5500 V 20



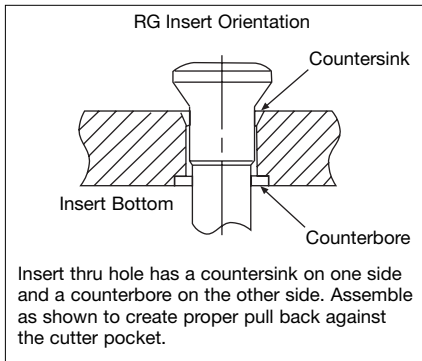
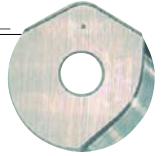
EDP#	Part Number	Grade	Application & Material			Dimensions (mm)				
			Roughing	Semi-Finishing	Finishing	d	l	s	r	h <sub>m</sub> min
022151	RG 20	SP1032	▼	▼▼	▼▼▼	20,0	-	3,5	10,0	0,02

RG 20\_



027798	RG 20S	SP1064				20,0	-	3,5	10,0	0,02
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RG 20S\_



**Insert Interchangeability\***

Metric		Inch	
Diameter	Insert Number	Diameter	Insert Number
20 mm	RG 20	.75 in.	RG .750

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

**To find programmed feedrate:**

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

**Average chip thickness:**

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

where:

- f<sub>z</sub> = Feed per tooth
- h<sub>m</sub> = Average chip thickness
- D = Cutter diameter (outside)
- a<sub>e</sub> = Radial Depth of Cut
- D<sub>w</sub> = Working Diameter
- a<sub>p</sub> = Axial Depth of Cut

## RG\_20 Recommended Cutting Conditions

Material	Speed	▼ Roughing	D.O.C.	Speed	▼▼ Semi-Finishing	D.O.C.	Speed	▼▼▼ Finishing	D.O.C.
	V <sub>C</sub> (m/min)	Feed h <sub>m</sub> (mm)		a <sub>p</sub> (mm)	V <sub>C</sub> (m/min)		Feed h <sub>m</sub> (mm)	a <sub>p</sub> (mm)	
◆ Unalloyed Steels	-	-	-	-	-	-	180 - 360	0,1 - 0,25	< 1,5
◆ Alloyed Steels	-	-	-	-	-	-	110 - 240	0,1 - 0,25	< 1,5
◆ Stainless Steels	-	-	-	-	-	-	140 - 240	0,1 - 0,2	< 1,5
◆ PH Stainless	-	-	-	-	-	-	120 - 190	0,1 - 0,2	< 1,5
◆ Cast Irons	-	-	-	-	-	-	100 - 160	0,1 - 0,2	< 1,5
◆ Aluminium & Alloys	-	-	-	-	-	-	400 - 1000	0,1 - 0,25	< 1,5
◆ High Temp. Alloys	-	-	-	-	-	-	45 - 60	0,1 - 0,2	< 1,5
◆ Hard Steels (52-56 HRC)	-	-	-	-	-	-	50 - 100	0,03 - 0,06	< 0,5

h<sub>m</sub> = average chip thickness

### Star Guide Key to Recommended Tools

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