

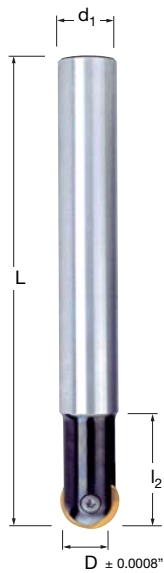
# 5500 V .375

## Contour Milling Cutter



### 5500 V .375 Cylindrical Shank

EDP #	Part Number	Dimensions (inch)						No. of Inserts	Spares		
		D	L	$l_2$	$d_1$	a	EDP#		EDP#	EDP#	
014858	C5500V.375CR	0.375	6	1.85	0.5	0.187	1	015250	55.672	018488	T7



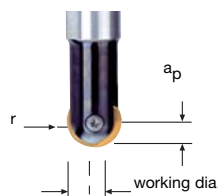
Cylindrical Shank



Depth of cut (a)

## 5500 V .375 Technical Advice

Milling Cutter Order Example: **C5500V.375CR**  
 Milling Insert Order Example: **RG.375 SP1032**  
 For complete cutting conditions refer to page: **208**

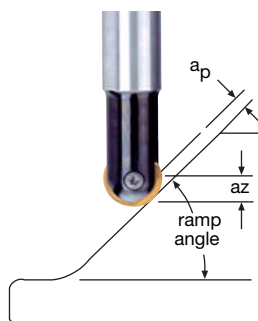


### Working Diameter:

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

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

## Ramp Milling Method

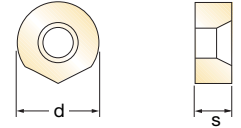


### Ramp-up Data

Cutter Diameter 0.375 in.		Ramp Angle
$a_p$ (in.)	$a_z$ (in.)	
0.140	0.181	15°
0.094	0.162	30°
0.055	0.133	45°
0.025	0.094	60°
0.006	0.049	75°
0.004	0.016	85°

Torque Limits 6 in. lbs.

# Inserts for 5500 V .375



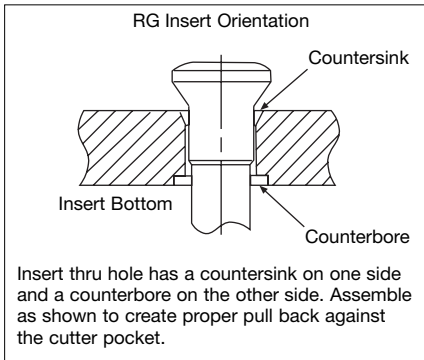
EDP#	Part Number	Grade	Application & Material			Dimensions (inch)				
			Roughing	Semi-Finishing	Finishing	d	l	s	r	h <sub>m</sub> min
017945	RG.375	SP1032			◆◆◆◆◆	0.375	-	0.787	0.188	0.0008

RG .375\_



027795	RG10S	SP1064			◆◆◆◆◆	0.394	-	0.787	0.197	0.0008
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RG 10S\_



## Insert Interchangeability\*

Metric		Inch	
Diameter	Insert Number	Diameter	Insert Number
10 mm	RG 10	.375 in.	RG .375

\*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\_.375 Recommended Cutting Conditions

Material	▼ Roughing			▼▼ Semi-Finishing			▼▼▼ Finishing		
	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)
◆ Unalloyed Steels	-	-	-	-	-	-	600 - 1180	0.004	<0.040
◆ Alloyed Steels	-	-	-	-	-	-	370 - 780	0.004	<0.040
◆ Stainless Steels	-	-	-	-	-	-	460 - 780	0.004	<0.040
◆ PH Stainless	-	-	-	-	-	-	400 - 620	0.003	<0.040
◆ Cast Irons	-	-	-	-	-	-	330 - 520	0.003	<0.040
◆ Aluminum & Alloys	-	-	-	-	-	-	1320 - 3280	0.004	<0.040
◆ High Temp. Alloys	-	-	-	-	-	-	150 - 190	0.003	<0.040
◆ Hard Steels (52-56 HRC)	-	-	-	-	-	-	170 - 320	0.002	<0.020

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

## Star Guide Key to Recommended Tools

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