



# 7700 VR 08 Contour Milling Cutter



## 7700 VR 08 Weldon Shank

EDP #	Part Number	Dimensions (mm)							Spares			
		D <sub>1</sub>	D <sub>2</sub>	L/H	l <sub>2</sub>	d <sub>1</sub>	a <sub>max.</sub>	No. of Inserts	EDP#	 EDP#	 EDP#	
021732	7700VR 08 WA025R070-M3	25	17	126	70	25	4	3	015062	F3006T	013214	T9
021733	7700VR 08 WA025R124-M3	25	17	180	124	25	4	3	015062	F3006T	013214	T9
021734	7700VR 08 WA025R154-M3	25	17	210	154	25	4	3	015062	F3006T	013214	T9



## 7700 VR 08 Technical Advice

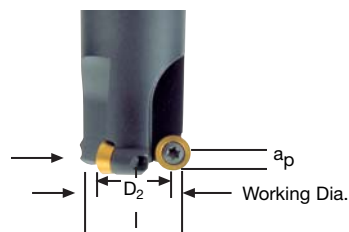
Milling Cutter Order Example: **7700VR 08 WA025R070-M3**  
 Milling Insert Order Example: **RPEX0803M3F-701 SFZ**  
 For complete cutting conditions refer to page: **264**



Weldon Shank



Depth of Cut (a)



### Working Diameter:

$$DW = D_2 + 2 \times \sqrt{r^2 - (r - a_p)^2}$$

where:

- DW = Working Diameter
- D<sub>2</sub> = Diameter of cutter insert centre to centre
- r = Insert radius
- a<sub>p</sub> = Axial Depth of Cut

### To find programmed feedrate:

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

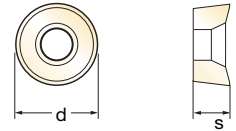
where:

- 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

### Average chip thickness:

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

## Inserts for 7700 VR 08



EDP#	Part Number	Grade	Application & Material			Dimensions (mm)						
			Roughing ▼	Semi-Finishing ▼▼	Finishing ▼▼▼	d	l	s	r	h <sub>m</sub> min		
024756	RPEW 08 03M3T	PFZ		◆◆		8,0	-	3,18	4,0	0,1	RPEW 08_	
024757	RPEX 08 03M3E	X44				8,0	-	3,18	3,0	0,02	RPEX 08_	
015214	RPEX 08 03M3E-701	PFZ		◆◆	◆◆◆◆	8,0	-	3,18	4,0	0,02	RPEX 08_	
024105	RPEX 08 03M3F-701	X44		◆	◆	8,0	-	3,18	4,0	0,02	RPEX 08_	
023315	RPEX 08 03M3F-701	GH1	◆	◆	◆	8,0	-	3,18	4,0	0,02	-701	
015213	RPEX 08 03M3F-701	SFZ		◆	◆◆	8,0	-	3,18	4,0	0,02		
017308	RPMT 08 03M3E-41	MP91M	◆◆			8,0	-	3,18	4,0	0,04	RPMT 08_	
024937	RPMT 08 03M3E-41	PFZ				8,0	-	3,18	4,0	0,04	-41	
015220	RPMT 08 03M3E-41	X500				8,0	-	3,18	4,0	0,04		
027728	RPMT 08 03M3E-41	SP6564	◆◆			8,0	-	3,18	4,0	0,04		

## RP\_08 Recommended Cutting Conditions

Material	▼ Roughing			▼▼ Semi-Finishing			▼▼▼ Finishing		
	Speed V <sub>C</sub> (m/min)	Feed h <sub>m</sub> (mm)	D.O.C. a <sub>p</sub> (mm)	Speed V <sub>C</sub> (m/min)	Feed h <sub>m</sub> (mm)	D.O.C. a <sub>p</sub> (mm)	Speed V <sub>C</sub> (m/min)	Feed h <sub>m</sub> (mm)	D.O.C. a <sub>p</sub> (mm)
◆ Unalloyed Steels	180 - 220	0,14 - 0,24	2,0 - 4,0	220 - 260	0,12 - 0,18	0,8 - 2,0	220 - 300	0,10 - 0,16	0,1 - 0,8
◆ Alloyed Steels	70 - 110	0,12 - 0,22	2,0 - 4,0	100 - 150	0,10 - 0,16	0,8 - 2,0	100 - 195	0,08 - 0,14	0,1 - 0,8
◆ Stainless Steels	120 - 140	0,10 - 0,15	2,0 - 4,0	140 - 180	0,08 - 0,12	0,8 - 2,0	180 - 230	0,08 - 0,10	0,1 - 0,8
◆ PH Stainless	-	-	-	70 - 85	0,08 - 0,10	0,8 - 2,0	80 - 100	0,08 - 0,10	0,1 - 0,8
◆ Cast Irons	140 - 280	0,12 - 0,22	2,0 - 4,0	180 - 300	0,10 - 0,16	0,8 - 2,0	200 - 350	0,08 - 0,14	0,1 - 0,8
◆ Aluminium & Alloys	275 - 450	0,05 - 0,10	2,0 - 4,0	400 - 750	0,04 - 0,08	0,8 - 2,0	700 - 1000	0,04 - 0,08	0,1 - 0,8
◆ High Temp. Alloys	-	-	-	35 - 50	0,08 - 0,10	0,8 - 2,0	45 - 60	0,08 - 0,10	0,1 - 0,8
◆ Hard Steels (52-56 HRC)	-	-	-	-	-	-	50 - 100	0,08 - 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>S</b> ◆ High Temp. Alloys	
	<b>P</b> ◆ Alloyed Steels	<b>M</b> ◆ PH Stainless	<b>N</b> ◆ Aluminium & Alloys	<b>H</b> ◆ Hard Materials	