

7700 VR 10 Contour Milling Cutter



7700 VR 10 Weldon Shank

EDP #	Part Number	Dimensions (inch)								No. of Inserts	Spares		
		D ₁	D ₂	L/H	l ₂	l ₃	d ₁	a	EDP#		EDP#	EDP#	
014887	C7700VR10WA1.25R2.70	1.25	0.86	7.05	2.70	-	1.25	0.20	3	015260	D4008T	015240	T15

7700 VR 10 Morse Taper Shank

015418	C7700VR10M1.25R2.70	1.25	0.86	7.05	2.70	3.01	MT4	0.20	3	015260	D4008T	015240	T15
015419	C7700VR10M1.25R5.50	1.25	0.86	9.80	5.50	5.27	MT4	0.20	3	015260	D4008T	015240	T15



Weldon Shank



Morse Taper Shank

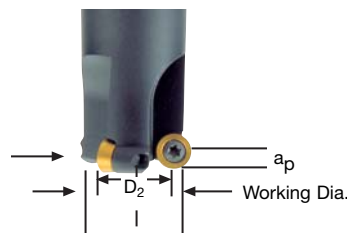


Depth of Cut (a)



7700 VR 10 Technical Advice

Milling Cutter Order Example: **C7700VR10M1.25R5.50**
 Milling Insert Order Example: **RPHT10T3M0E-421 X500**
 For complete cutting conditions refer to page: **208**



Working Diameter:

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

where:

DW = Working Diameter
D₂ = Diameter of cutter insert center to center
r = Insert radius
a_p = Axial Depth of Cut

To find programmed feedrate:

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

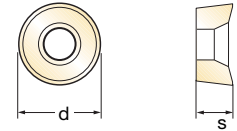
where:

f_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

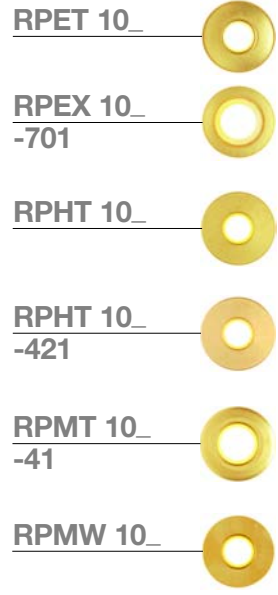
Average chip thickness:

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

Inserts for 7700 VR 10



EDP#	Part Number	Grade	Application & Material			Dimensions (inch)				
			Roughing ▼	Semi-Finishing ▼▼	Finishing ▼▼▼	d	l	s	r	h _m min
017679	RPET10T3M0E	SFZ			◆	0.394	-	0.156	0.197	0.0012
017678	RPET10T3M0E	X44			◆	0.394	-	0.156	0.197	0.0012
015215	RPEX10T3M0E-701	PFZ				0.394	-	0.156	0.197	0.0008
017688	RPEX10T3M0F-701	GH1	◆	◆	◆	0.394	-	0.156	0.197	0.0008
023317	RPEX10T3M0F-701	SFZ				0.394	-	0.156	0.197	0.0008
024082	RPHT10T3M0T	PFZ				0.394	-	0.156	0.197	0.0030
017690	RPHT10T3M0T	X500				0.394	-	0.156	0.197	0.0030
027726	RPHT10T3M0T	SP6564		◆◆◆		0.394	-	0.156	0.197	0.0030
023320	RPHT10T3M0E-421	MP91M		◆◆	◆◆	0.394	-	0.156	0.197	0.0016
015145	RPHT10T3M0E-421	X500		◆◆	◆◆	0.394	-	0.156	0.197	0.0016
027725	RPHT10T3M0E-421	SP6564		◆◆	◆◆	0.394	-	0.156	0.197	0.0016
023329	RPMT10T3M0E-41	MP91M	◆◆			0.394	-	0.156	0.197	0.0016
015221	RPMT10T3M0E-41	X500	◆◆			0.394	-	0.156	0.197	0.0016
027729	RPMT10T3M0E-41	SP6564	◆◆			0.394	-	0.156	0.197	0.0016
025839	RPMW10T3M0T	X500				0.394	-	0.156	0.197	0.0051



RP_10 Recommended Cutting Conditions

Material	▼ Roughing			▼▼ Semi-Finishing			▼▼▼ Finishing		
	Speed V _C (feet/min)	Feed h _m (inch)	D.O.C. a _p (inch)	Speed V _C (feet/min)	Feed h _m (inch)	D.O.C. a _p (inch)	Speed V _C (feet/min)	Feed h _m (inch)	D.O.C. a _p (inch)
◆ Unalloyed Steels	600 - 720	0.006 - 0.011	0.10 - 0.20	730 - 850	0.005 - 0.008	0.04 - 0.10	730 - 980	0.004 - 0.007	0.00 - 0.04
◆ Alloyed Steels	230 - 360	0.005 - 0.009	0.10 - 0.16	330 - 490	0.004 - 0.007	0.04 - 0.10	330 - 630	0.003 - 0.006	0.00 - 0.04
◆ Stainless Steels	400 - 450	0.004 - 0.006	0.10 - 0.16	460 - 590	0.003 - 0.006	0.04 - 0.10	600 - 750	0.003 - 0.004	0.00 - 0.04
◆ PH Stainless	190 - 220	0.003 - 0.006	0.10 - 0.16	230 - 270	0.003 - 0.005	0.04 - 0.10	270 - 320	0.003 - 0.004	0.00 - 0.04
◆ Cast Irons	460 - 910	0.005 - 0.009	0.10 - 0.16	600 - 980	0.004 - 0.007	0.04 - 0.10	660 - 1140	0.003 - 0.006	0.00 - 0.04
◆ Aluminum & Alloys	910 - 1470	0.002 - 0.005	0.10 - 0.20	1320 - 2460	0.002 - 0.004	0.04 - 0.10	2300 - 3280	0.002 - 0.003	0.00 - 0.04
◆ High Temp. Alloys	90 - 130	0.003 - 0.006	0.10 - 0.16	120 - 160	0.003 - 0.005	0.04 - 0.10	150 - 190	0.003 - 0.004	0.00 - 0.04
◆ Hard Steels (52-56 HRC)	-	-	-	-	-	-	170 - 320	0.001 - 0.002	0.00 - 0.02

h_m = 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	