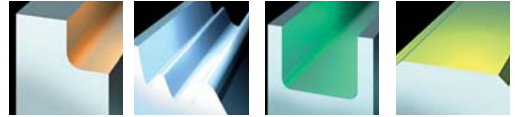




7702 VRD 12 Contour Milling Cutter



7702 VRD 12 Weldon Shank

EDP #	Part Number	Dimensions (mm)						No. of Inserts	Linear Ramp Down	Spares			
		D	L	l_1	d_3	a_{max}	EDP#				EDP#		
025703	7702VRD 12 WA025R70	25	126	70	25	6	2	16,5°	015269	F3508T	015240	T15	
025704	7702VRD 12 WA025R120	25	180	120	32	6	2	16,5°	015269	F3508T	015240	T15	
025705	7702VRD 12 WA032R70	32	130	70	32	6	3	12,0°	015269	F3508T	015240	T15	
025706	7702VRD 12 WA032R120	32	180	120	32	6	3	12,0°	015269	F3508T	015240	T15	
025707	7702VRD 12 WA040R70	40	140	70	40	6	3	13,0°	015269	F3508T	015240	T15	
025708	7702VRD 12 WA040R120	40	190	120	40	6	3	13,0°	015269	F3508T	015240	T15	



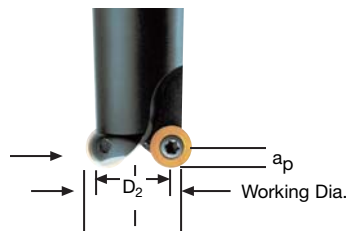
Weldon Shank



Depth of Cut (a)

7702 VRD 12 Technical Advice

Milling Cutter Order Example: **7702VRD12WA040R120**
 Milling Insert Order Example: **RDHW12T3M0T SP4036**
 For complete cutting conditions refer to page: **264**



Working Diameter:

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

where:

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

To find programmed feedrate:

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

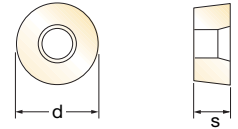
where:

- 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

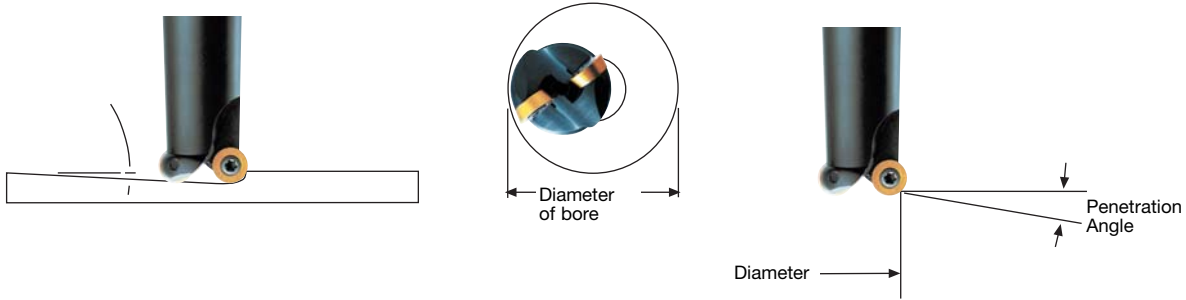
Average chip thickness:

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

Inserts for 7702 VRD 12



EDP#	Part Number	Grade	Application & Material			Dimensions (mm)				
			Roughing	Semi-Finishing	Finishing	d	l	s	r	h _m min
025747	RDET 12 T3M0E-701	SP4036	▼	▼▼	▼▼▼	12,0	-	3,97	6,0	0,05
027477	RDHW 12 T3M0T -20	SP4036	◆◆◆	◆◆◆◆		12,0	-	3,97	6,0	0,15
025745	RDHW 12 T3M0T	SP4036		◆◆◆◆	◆	12,0	-	3,97	6,0	0,15



Part Number	Bore Dia. Max. (mm)	Bore Dia. Min. (mm)	Penetration Angle	Linear Ramp Down
7702VRD 12 WA025R70	48	28	11,3°	16,5°
7702VRD 12 WA025R120				
7702VRD 12 WA032R70	62	42	8,1°	12,0°
7702VRD 12 WA032R120				
7702VRD 12 WA040R70	78	58	6,22°	13,0°
7702VRD 12 WA040R120				

RD_12 Recommended Cutting Conditions

Material	▼ Roughing			▼▼ Semi-Finishing			▼▼▼ Finishing		
	Speed V _C (m/min)	Feed h _m (mm)	D.O.C. a _p (mm)	Speed V _C (m/min)	Feed h _m (mm)	D.O.C. a _p (mm)	Speed V _C (m/min)	Feed h _m (mm)	D.O.C. a _p (mm)
◆ Unalloyed Steels	180 - 220	0,25 - 0,40	3,0 - 6,0	220 - 260	0,22 - 0,32	0,8 - 3,0	220 - 300	0,10 - 0,18	0,1 - 0,8
◆ Alloyed Steels	70 - 110	0,22 - 0,35	3,0 - 6,0	100 - 150	0,20 - 0,30	0,8 - 3,0	100 - 195	0,10 - 0,16	0,1 - 0,8
◆ Stainless Steels	-	-	-	140 - 180	0,08 - 0,16	0,8 - 3,0	180 - 230	0,08 - 0,12	0,1 - 0,8
◆ PH Stainless	-	-	-	70 - 85	0,08 - 0,14	0,8 - 3,0	80 - 100	0,08 - 0,12	0,1 - 0,8
◆ Cast Irons	140 - 280	0,22 - 0,35	3,0 - 6,0	180 - 300	0,20 - 0,30	0,8 - 3,0	200 - 350	0,10 - 0,16	0,1 - 0,8
◆ Aluminium & Alloys	275 - 450	0,06 - 0,12	3,0 - 6,0	400 - 750	0,06 - 0,12	0,8 - 3,0	700 - 1000	0,06 - 0,12	0,1 - 0,8
◆ High Temp. Alloys	-	-	-	35 - 50	0,08 - 0,14	0,8 - 3,0	45 - 60	0,08 - 0,12	0,1 - 0,8
◆ Hard Steels (52-56 HRC)	-	-	-	50 - 85	0,05 - 0,10	0,5 - 1,5	50 - 100	0,03 - 0,06	0,1 - 0,5

h_m = average chip thickness

Star Guide Key to Recommended Tools

Material Designations	
◆ Unalloyed Steels	◆ Stainless Steels
◆ Alloyed Steels	◆ PH Stainless
◆ Cast Irons	◆ Aluminium & Alloys
◆ High Temp. Alloys	◆ Hard Materials