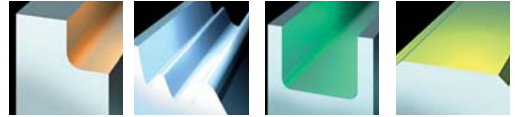


7702 VRD 10 Contour Milling Cutter



7702 VRD 10 Weldon Shank

EDP #	Part Number	Dimensions (mm)							Spares			
		D	L	I ₁	d ₃	a _{max.}	No. of Inserts	Linear Ramp Down	EDP#	EDP#	EDP#	
025697	7702VRD 10 WA020R70	20	120	70	20	5	2	17,5°	022056	F3507T	015240	T15
025698	7702VRD 10 WA020R120	20	176	120	25	5	2	17,5°	022056	F3507T	015240	T15
025699	7702VRD 10 WA025R70	25	126	70	25	5	2	10,7°	015269	F3508T	015240	T15
025700	7702VRD 10 WA025R120	25	176	120	25	5	2	10,7°	015269	F3508T	015240	T15
025701	7702VRD 10 WA032R70	32	130	70	32	5	3	14,0°	015269	F3508T	015240	T15
025702	7702VRD 10 WA032R120	32	180	120	32	5	3	14,0°	015269	F3508T	015240	T15



7702 VRD 10 Technical Advice

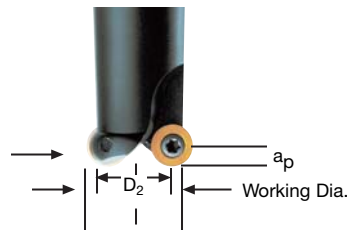
Milling Cutter Order Example: **7702VRD10WA025R120**
 Milling Insert Order Example: **RDHW1003M0T SP4036**
 For complete cutting conditions refer to page: **264**



Weldon Shank



Depth of Cut (a)



Working Diameter:

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

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

To find programmed feedrate:

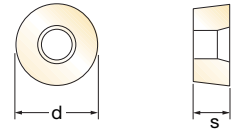
$$f_z = h_m \times \sqrt{\frac{D}{a_p}} \times \sqrt{\frac{D_w}{a_e}}$$

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:

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

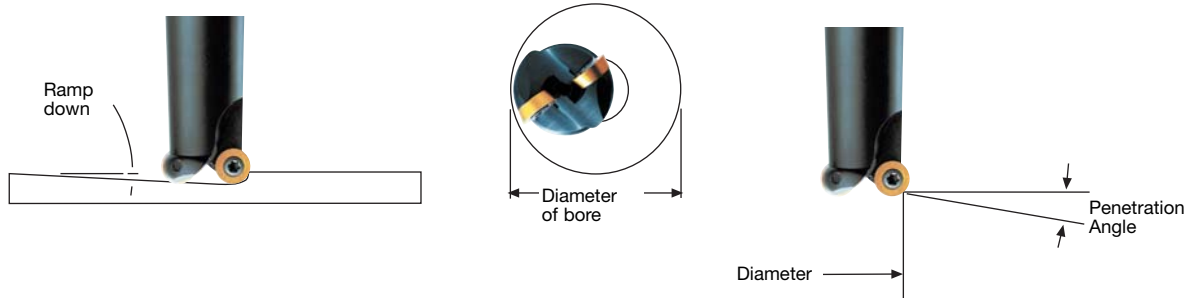
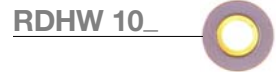
Inserts for 7702 VRD 10



EDP#	Part Number	Grade	Application & Material			Dimensions (mm)				
			Roughing	Semi-Finishing	Finishing	d	l	s	r	h _m min
025743	RDET 10 03M0E-701	SP4036	◆	◆◆◆	◆◆◆◆◆	10,0	-	3,18	5,0	0,05



025741	RDHW 10 03M0T	SP4036	◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆	10,0	-	3,18	5,0	0,15
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Part Number	Bore Dia. Max. (mm)	Bore Dia. Min. (mm)	Penetration Angle	Linear Ramp Down
7702VRD 10 WA020R70	40	22	12,2°	17,5°
7702VRD 10 WA020R120				
7702VRD 10 WA025R70	48	32	9,7°	10,7°
7702VRD 10 WA025R120				
7702VRD 10 WA032R70	62	46	7,1°	14,0°
7702VRD 10 WA032R120				

RD_10 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	0,12 - 0,25	2,5 - 5,0	220 - 260	0,10 - 0,20	0,8 - 2,5	220 - 300	0,08 - 0,14	0,1 - 0,8
◆ Alloyed Steels	70 - 110	0,10 - 0,22	2,5 - 4,0	100 - 150	0,08 - 0,18	0,8 - 2,5	100 - 195	0,08 - 0,12	0,1 - 0,8
◆ Stainless Steels	-	-	-	140 - 180	0,08 - 0,14	0,8 - 2,5	180 - 230	0,08 - 0,12	0,1 - 0,8
◆ PH Stainless	-	-	-	70 - 85	0,08 - 0,10	0,8 - 2,5	80 - 100	0,06 - 0,10	0,1 - 0,8
◆ Cast Irons	140 - 280	0,10 - 0,22	2,5 - 4,0	180 - 300	0,08 - 0,18	0,8 - 2,5	200 - 350	0,08 - 0,12	0,1 - 0,8
◆ Aluminium & Alloys	275 - 450	0,05 - 0,12	2,5 - 5,0	400 - 750	0,05 - 0,12	0,8 - 2,5	700 - 1000	0,05 - 0,12	0,1 - 0,8
◆ High Temp. Alloys	-	-	-	35 - 50	0,08 - 0,10	0,8 - 2,5	45 - 60	0,06 - 0,10	0,1 - 0,8
◆ Hard Steels (52-56 HRC)	-	-	-	50 - 85	0,05 - 0,08	0,5 - 1,0	50 - 100	0,03 - 0,05	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