## GARR TOOL High Performance Milling Guide for VRX-6 (HIGH EFFICIENCY MILLING)

## NOTE - DATA DOES NOT REFLECT CHIP THINNING.

## SPINDLE INTERFACE MUST BE SCRUTINIZED WHEN USING 5/8" DIAMETER AND LARGER END MILLS

ISO Material		HRC	SFM (Vc)	CHIPLOAD PER TOOTH (Fz)						
				1/4"	3/8"	1/2"	5/8"	3/4"	1"	
	COBALT BASE ALLOY	S								
S	Haynes 25/188, Stellite 21, Cobalt Chrome	< 40 > 40	115 - 230 95 - 190	.0006"0012" .0004"0010"	.0006"0014" .0005"0013"	.0011"0023" .0008"0020"	.0011"0023" .0009"0021"	.0012"0028" .0010"0026"	.0022"0046" .0016"0040"	
	NICKEL BASE ALLOYS									
	Inconel-625/718, Waspaloy, Invar, Rene, Hastelloy, Monel	< 40 > 40	115 - 230 95 - 190	.0006"0013" .0003"0007"	.0008"0016" .0007"0015"	.0012"0024" .0008"0020"	.0012"0025" .0011"0022"	.0016"0032" .0014"0030"	.0024"0048" .0016"0040"	
	IRON BASE ALLOYS									
	A286, Discaloy, Haynes 556, Carpenter 22, Greek Ascolloy	< 40 > 40	115 - 230 95 - 190	.0006"0012" .0003"0007"	.0008"0014" .0005"0013"	.0011"0023" .0007"0019"	.0012"0024" .0010"0022"	.0016"0028" .0010"0026"	.0022"0046" .0014"0038"	
	TITANIUM ALLOYS									
	Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		250 - 470	.0010"0015"	.0015"0025"	.0020"0030"	.0025"0035"	.0030"0050"	.0040"0060"	
	5553 / Beta Titanium		185 - 350	.0008"0014"	.0012"0022"	.0016"0028"	.0023"0034"	.0024"0044"	.0032"0056"	
м	STAINLESS STEELS									
	13/8, 15/5, 17-4, pH Types	< 40 > 40	280 - 470 215 - 345	.0008"0015" .0006"0013"	.0010"0017" .0009"0016"	.0016"0030" .0012"0026"	.0018"0031" .0013"0028"	.0020"0034" .0018"0032"	.0032"0060" .0024"0052"	
	300 Series, 304L, Nitronic 50, Duplex, Super-Austenitic	< 40 > 40	310 - 500 215 - 345	.0008"0015" .0006"0013"	.0010"0017" .0008"0015"	.0016"0030" .0012"0026"	.0017"0028" .0014"0024"	.0020"0034" .0016"0030"	.0032"0060" .0022"0038"	
	400 Series - 403, 405, 420, 455	< 40 > 40	280 - 530 215 - 405	.0008"0016" .0006"0014"	.0010"0018" .0009"0017"	.0016"0032" .0012"0028"	.0020"0035" .0013"0030"	.0020"0036" .0018"0034"	.0032"0064" .0024"0056"	
	HIGH STRENGTH TOOL STEELS									
Ρ	A2, D2, P20, H13, S7, O1	< 40 > 40	280 - 500 185 - 410	.0008"0015" .0006"0013"	.0013"0023" .0012"0020"	.0018"0029" .0014"0022"	.0024"0034" .0020"0028"	.0034"0044" .0024"0032"	.0036"0048" .0030"0040"	
	MEDIUM ALLOY TOOL STEELS									
	4140, 4340, 52100, 6150, 8620	< 40 > 40	435 - 625 310 - 470	.0010"0016" .0007"0012"	.0013"0024" .0012"0020"	.0018"0029" .0014"0022"	.0024"0034" .0020"0028"	.0034"0044" .0024"0032"	.0036"0048" .0030"0040"	
	CARBON STEELS									
	1000's - 1018, 1020, 12L14	< 40	465 - 750	.0010"0017"	.0013"0025"	.0018"0029"	.0024"0034"	.0034"0044"	.0036"0048"	
К	CAST MATERIAL									
	Ductile Iron		435 - 660	.0012"0019"	.0015"0026"	.0024"0038"	.0026"0050"	.0030"0052"	.0048"0076"	
	Gray Iron		560 - 740	.0013"0021"	.0016"0027"	.0026"0042"	.0028"0052"	.0032"0064"	.0052"0084"	

	Profile/Trochoidal Milling
Axial (ap)	up to 2xD
Radial (ae)	5% - 15% of Dia.



GARR TOOL®

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.