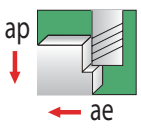
GARR TOOL High Performance Milling Guide for VRX-6
(HIGH EFFICIENCY MILLING)

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"
S	**COBALT BASE ALLOYS**								
	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"
M	**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"
P	**HIGH STRENGTH TOOL STEELS**								
	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"
K	**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.



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