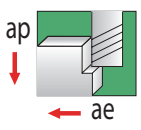
GARR TOOL Milling Guide for TMS / TMR
(HIGH EFFICIENCY MILLING)

NOTE - CHIP THINNING CALCULATION ALREADY APPLIED
CHIPLOAD PER TOOTH (Fz) AT 2% RADIAL ENGAGEMENT (USING PROGRAMMED CALCULATION - SEE PAGE 307)
SPINDLE INTERFACE MUST BE SCRUTINIZED WHEN USING 16mm DIAMETER AND LARGER END MILLS

ISO Material		M/Min. (Vc)	CHIPLOAD PER TOOTH (Fz)						
			6.0mm	8.0mm	10.0mm	12.0mm	16.0mm	20.0mm	25.0mm
S	**TITANIUM ALLOYS**								
	6Al-4V	98 - 157	.051 - .107	.076 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.132 - .363
	5553	59 - 98	.038 - .071	.046 - .089	.064 - .109	.076 - .140	.089 - .165	.107 - .203	.132 - .241
M	**STAINLESS STEELS**								
	Free Machining (303)	118 - 157	.051 - .107	.069 - 132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.132 - .363
	Austenitic (304 / 304L)	89 - 138	.043 - .089	.064 - .109	.076 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292
	Martensitic (17-4 / 416)	79 - 98	.038 - .071	.046 - .089	.064 - .109	.076 - .140	.089 - .165	.107 - .203	.132 - .241
P	**MEDIUM ALLOY TOOL STEELS**								
	8620	98 - 157	.043 - .089	.064 - .109	.076 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292
	4140, D2, S7	98 - 138	.038 - .071	.046 - .089	.064 - .109	.076 - .140	.089 - .165	.107 - .203	.132 - .241
	CARBON STEELS								
	1000 Series, A36, 12L14	118 - 197	.051 - .107	.069 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.203 - .363
	CAST STEELS								
	Steel	98 - 138	.051 - .107	.069 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.203 - .363
K	**CAST MATERIAL**								
	Ductile Iron	98 - 138	.051 - .107	.069 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.203 - .363
	Gray Iron	98 - 138	.051 - .107	.069 - .132	.089 - .165	.109 - .198	.132 - .241	.165 - .292	.203 - .363
N	**NON-FERROUS**								
	Aluminum (6061-T6)	90 - 150	.050 - .105	.075 - .130	.090 - .165	.105 - .200	.130 - .240	.165 - .292	.203 - .363
	Copper, Brass	60 - 110	.043 - .105	.064 - .130	.076 - .165	.089 - .200	.109 - .240	.132 - .292	.165 - .363



ap = full flute length
ae = 2%

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