

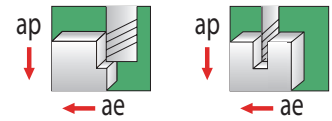
GARR TOOL Milling Guide for V5 Series End Mills

(CHIP THINNING CALCULATION ALREADY APPLIED)

Metric

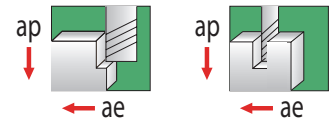
	Material Group S	Material Group M	Material Group S	Material Group P	Material Group K
	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome	Invar, 400, 316, pH Series	6Al4V	1000 Series	
	SMM = 20 - 40	SMM = 45 - 90	SMM = 45 - 75	SMM = 90 - 150	SMM = 80 - 130
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
6.0 - 8.0	.010 - .020	.020 - .030	.020 - .030	.025 - .030	.025 - .030
8.0 - 10.0	.013 - .025	.025 - .045	.025 - .040	.035 - .070	.035 - .070
10.0 - 12.0	.018 - .030	.030 - .050	.030 - .045	.045 - .080	.045 - .080
12.0 - 14.0	.020 - .040	.035 - .055	.030 - .050	.050 - .090	.050 - .090
14.0 - 16.0	.025 - .045	.045 - .075	.035 - .060	.075 - .105	.075 - .105
16.0 - 18.0	.030 - .050	.050 - .080	.045 - .075	.085 - .110	.085 - .110
18.0 - 20.0	.035 - .055	.055 - .095	.050 - .080	.095 - .115	.095 - .115
22.0 - 25.0	.045 - .065	.065 - .105	.060 - .090	.105 - .125	.105 - .125

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ap)	1xD	50% of Dia.
Radial (ae)	50% of Dia.	1xD



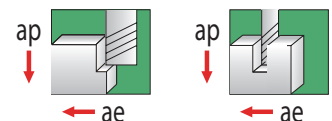
	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	SMM = 30 - 60	SMM = 75 - 120	SMM = 90 - 150	SMM = 130 - 180	SMM = 100 - 150
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
6.0 - 8.0	.017 - .027	.027 - .037	.027 - .037	.040 - .065	.040 - .065
8.0 - 10.0	.020 - .032	.037 - .052	.032 - .052	.045 - .070	.045 - .070
10.0 - 12.0	.027 - .042	.052 - .067	.042 - .062	.050 - .090	.050 - .090
12.0 - 14.0	.032 - .047	.057 - .077	.052 - .067	.075 - .105	.075 - .105
14.0 - 16.0	.037 - .052	.062 - .082	.057 - .082	.085 - .110	.085 - .110
16.0 - 18.0	.042 - .062	.072 - .092	.062 - .087	.095 - .115	.095 - .115
18.0 - 20.0	.047 - .072	.077 - .097	.067 - .092	.105 - .125	.105 - .125
22.0 - 25.0	.052 - .082	.087 - .107	.072 - .097	.120 - .150	.120 - .150

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ap)	1xD	20% of Dia.
Radial (ae)	20% of Dia.	1xD



	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	SMM = 45 - 75	SMM = 90 - 150	SMM = 120 - 210	SMM = 150 - 210	SMM = 140 - 180
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
6.0 - 8.0	.035 - .045	.050 - .070	.045 - .065	.065 - .085	.065 - .085
8.0 - 10.0	.038 - .050	.065 - .085	.065 - .080	.075 - .105	.075 - .105
10.0 - 12.0	.045 - .065	.075 - .095	.075 - .085	.085 - .110	.085 - .110
12.0 - 14.0	.050 - .070	.080 - .100	.080 - .090	.095 - .115	.095 - .115
14.0 - 16.0	.055 - .075	.090 - .110	.085 - .100	.105 - .125	.105 - .125
16.0 - 18.0	.060 - .085	.105 - .125	.095 - .115	.120 - .150	.120 - .150
18.0 - 20.0	.065 - .095	.115 - .135	.110 - .125	.130 - .160	.130 - .160
22.0 - 25.0	.070 - .105	.120 - .145	.115 - .135	.140 - .170	.140 - .170

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ap)	1xD	5% of Dia.
Radial (ae)	5% of Dia.	1xD



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