

# GARR TOOL End Mill Application Guide for Aircraft Grade Aluminum

## Fractional

Diameter	SLOTTING		SIDE MILLING
	Axial = .5xD	Axial = 1xD	Axial ≤ 1xD Radial ≤ .5xD
	SFM = 1500 - 2000	SFM = 750 - 1500	SFM = 1500 - 2000
	CPT = 1.5% - 3% of diameter	CPT = 1% - 2% of diameter	CPT = 2% - 3% of diameter
3/16" (.1875")	.0028" - .0056"	.0018" - .0037"	.0037" - .0056"
1/4" (.2500")	.0037" - .0074"	.0025" - .0050"	.0050" - .0075"
5/16" (.3125")	.0052" - .0104"	.0031" - .0062"	.0062" - .0094"
3/8" (.3750")	.0055" - .0110"	.0037" - .0074"	.0075" - .0112"
1/2" (.5000")	.0075" - .0150"	.0050" - .0100"	.0100" - .0150"
5/8" (.6250")	.0093" - .0186"	.0062" - .0125"	.0125" - .0187"
3/4" (.7500")	.0112" - .0224"	.0075" - .0150"	.0150" - .0225"
1" (1.000")	.0150" - .0300"	.0100" - .0200"	.0200" - .0300"

## Metric

Diameter	SLOTTING		SIDE MILLING
	Axial = 0,5xD	Axial = 1xD	Axial ≤ 1xD Radial ≤ 0,5xD
	M/Min. = 450 - 760	M/Min. = 225 - 450	M/Min. = 450 - 760
	CPT = 1.5% - 3% of diameter	CPT = 1% - 2% of diameter	CPT = 2% - 3% of diameter
4,0 (0,1575)	0,060 - 0,120	0,040 - 0,080	0,080 - 0,120
6,0 (0,2362)	0,090 - 0,180	0,060 - 0,120	0,120 - 0,180
8,0 (0,3150)	0,120 - 0,240	0,080 - 0,160	0,160 - 0,240
10,0 (0,3937)	0,150 - 0,300	0,100 - 0,200	0,200 - 0,300
12,0 (0,4724)	0,180 - 0,360	0,120 - 0,240	0,240 - 0,360
16,0 (0,6299)	0,240 - 0,480	0,160 - 0,320	0,320 - 0,480
20,0 (0,7874)	0,300 - 0,600	0,200 - 0,400	0,400 - 0,600
25,0 (0,9843)	0,375 - 0,750	0,250 - 0,500	0,500 - 0,750

CPT = Chipload per flute (Fz)

**END MILL NOTES:** Climb milling recommended for best finish  
 Figures shown are based on 6061 / 7075  
 CAT 50 Taper holders are recommended for 3/4" and 1" diameter end mills  
 In controlled slotting tests, 4000 SFM, 1% diameter Chipload Per Flute, and 50% of Dia. axial depth were obtained  
 In cases for tools with slower SFM (M/Min.), reference Series 242M/842M, page 86

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