

# GARR TOOL Reaming Guide

Type	Rc Hardness	Recommended SFM	Chipload Per Flute (Fz)			
		Series 4100	.0590" - .1250" (1.499 - 3.175mm)	.1251" - .2500" (3.178 - 6.350mm)	.2501" - .3750" (6.353 - 9.525mm)	.3751" - .5020" (9.528 - 12.750mm)
<b>COBALT BASE ALLOYS</b>						
Powdered Metal, Stellite, Hs-21, Haynes 25/188, X-40, L-605	< 35 > 35	80-120 60-80	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
<b>NICKEL BASE ALLOYS</b>						
Invar, Kovar, Inconel-625/718, Waspalloy, Rene, Hastalloy, A286	< 35 > 35	100-125 80-110	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
<b>IRON BASE ALLOYS</b>						
Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	< 35 > 35	150-175 120-150	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
<b>MONEL</b>						
Monel - 65% Nickel		75-110	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
<b>TITANIUM ALLOYS</b>						
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		120-150	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
<b>STAINLESS STEELS</b>						
(Precipitation) 13/8, 15/5, 17-4, pH Types	< 35 > 35	100-125 80-110	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
(Austenitic) Inox, 200 Series, 300 Series	< 35 > 35	100-125 80-110	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
(Austenitic) 304L, 316L, Nitronic 50, Inox	< 35 > 35	80-100 60-80	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
(Martensitic) 400 Series	< 35 > 35	100-125 80-110	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
<b>HIGH STRENGTH TOOL STEELS</b>						
4140, 4340, 6150, 5210, A2, D2, P20, H11, H13, S2, O1	< 35 > 35	100-125 80-110	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
<b>MEDIUM ALLOY TOOL STEELS</b>						
200, 250, 300, 8620	< 35 > 35	100-125 80-110	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
<b>CARBON STEELS</b>						
Platinum, A36, 12L14, 1000's, 1100's, 1300's	< 35 > 35	100-125 80-110	.0004"-.0009"	.0006"-.0012"	.0009"-.0013"	.0010"-.0017"
<b>CAST MATERIAL</b>						
Steel		125-150	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"
Ductile Iron		150-225	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
Gray Iron		125-200	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
Aluminum		150-225	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
<b>ALUMINUM</b>						
Aircraft Grade (6061, 7075)		225	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
<b>MAGNESIUM</b>						
		225	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
<b>COPPER</b>						
Copper Alloys		225	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
<b>BRASS, BRONZE</b>						
Brass, Aluminum/Bronze, Low Silicon Bronze		125-200	.0005"-.0010"	.0007"-.0012"	.0010"-.0015"	.0010"-.0018"
<b>COMPOSITE MATERIAL</b>						
Glass Epoxy, Fiberglass, Plastics, Graphite, G10		150	.0003"-.0008"	.0005"-.0010"	.0008"-.0012"	.0010"-.0015"

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