

# GARR TOOL HTD 12 High Performance Drilling Guide

	ISO Material	HRC	SFM (Vc)	CHIPLOAD PER TOOTH (Fz)		
				1/8" - 1/4"	1/4" - 3/8"	3/8" - 1/2"
S	<b>COBALT BASE ALLOYS</b>					
	Haynes 25/188, Stellite 21, Cobalt Chrome	< 40 > 40	110 70	.0006" - .0016" .0004" - .0012"	.0016" - .0022" .0012" - .0018"	.0022" - .0035" .0018" - .0031"
	<b>NICKEL BASE ALLOYS</b>					
	Inconel-625/718, Waspaloy, Invar, Rene, Hastelloy, Monel	< 40 > 40	120 80	.0006" - .0016" .0004" - .0012"	.0016" - .0022" .0012" - .0018"	.0022" - .0035" .0018" - .0031"
	<b>IRON BASE ALLOYS</b>					
	A286, Discaloy, Haynes 556, Carpenter 22, Greek Ascology	< 40 > 40	120 80	.0006" - .0016" .0004" - .0012"	.0016" - .0022" .0012" - .0018"	.0022" - .0035" .0018" - .0031"
	<b>TITANIUM ALLOYS</b>					
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		170	.0006" - .0026"	.0026" - .0040"	.0040" - .0055"	
5553 / Beta Titanium		120	.0005" - .0023"	.0023" - .0034"	.0034" - .0047"	
M	<b>STAINLESS STEELS</b>					
	13/8, 15/5, 17-4, pH Types	< 40 > 40	150 105	.0006" - .0018" .0005" - .0013"	.0018" - .0035" .0013" - .0030"	.0035" - .0049" .0030" - .0043"
	300 Series, 304L, Nitronic 50, Duplex, Super-Austenitic	< 40 > 40	150 105	.0006" - .0018" .0005" - .0013"	.0018" - .0035" .0013" - .0030"	.0035" - .0049" .0030" - .0043"
	400 Series - 403, 405, 420, 455	< 40 > 40	160 105	.0006" - .0018" .0005" - .0013"	.0018" - .0035" .0013" - .0030"	.0035" - .0049" .0030" - .0043"
	<b>HIGH STRENGTH TOOL STEELS</b>					
A2, D2, P20, H13, S7, O1	< 40 > 40	170 105	.0008" - .0026" .0006" - .0020"	.0026" - .0038" .0020" - .0032"	.0038" - .0050" .0032" - .0043"	
P	<b>MEDIUM ALLOY TOOL STEELS</b>					
	4140, 4340, 52100, 6150, 8620	< 40 > 40	260 110	.0008" - .0026" .0006" - .0020"	.0026" - .0038" .0020" - .0032"	.0038" - .0050" .0032" - .0043"
	<b>CARBON STEELS</b>					
1000's - 1018, 1020, 12L14	< 40	320	.0008" - .0029"	.0030" - .0045"	.0045" - .0060"	
K	<b>CAST MATERIAL</b>					
	Ductile Iron		340	.0008" - .0029"	.0029" - .0045"	.0045" - .0060"
Gray Iron		350	.0008" - .0029"	.0029" - .0045"	.0045" - .0060"	
N	<b>NON-FERROUS</b>					
	Aluminum 2014, 2024, 6061-(T1-T6), 7075		400	.0016" - .0030"	.0030" - .0046"	.0046" - .0062"
	Aluminum Die Cast		375	.0014" - .0027"	.0027" - .0040"	.0040" - .0054"
	Magnesium		275	.0014" - .0026"	.0026" - .0037"	.0037" - .0049"
	Copper		250	.0013" - .0024"	.0024" - .0031"	.0031" - .0044"
	Brass		360	.0016" - .0030"	.0030" - .0044"	.0044" - .0060"
Bronze		260	.0013" - .0024"	.0024" - .0031"	.0031" - .0044"	

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