

# 3HC and 5HC Series Recommended Cutting Data - Inch

Material Group	ISO	Hardness	Vc - SFM		fz - in/tooth by Cutter Diameter				
			Uncoated	ALtima® Blaze	1/8	3/16	1/4	3/8	1/2
Low Carbon Steels 12L14, 1018, A36	P	≤ 28 HRC	805	1150	.0015	.0023	.0030	.0045	.0060
Medium Carbon & High Carbon Steels 1045, 1050, 1070		≤ 38 HRC	630	900	.0010	.0015	.0020	.0030	.0040
Alloy Steels 4130, 4140, 4340			590	840	.0010	.0015	.0020	.0030	.0040
Die / Tool Steels A2, D2, H13, P20		≤ 45 HRC	510	725	.0009	.0013	.0018	.0026	.0035
Stainless Steel - Easy to Machine 303, 400 Series	M	≤ 28 HRC	380	545	.0009	.0013	.0018	.0026	.0035
Stainless Steel - Austenitic 304, 316			300	430	.0008	.0011	.0015	.0023	.0030
Stainless Steel - Difficult to Machine A286, Duplex, Nitronics, Cobalt-Chrome		≤ 45 HRC	140	200	.0006	.0009	.0013	.0019	.0025
PH Stainless Steel 15-5, 17-4			300	430	.0008	.0011	.0015	.0023	.0030
High Temp Alloys Inconel, Hastelloy, Monel	S	≤ 42 HRC	105	150	.0006	.0009	.0013	.0019	.0025
Titanium Alloys 6AL-4V			245	350	.0008	.0011	.0015	.0023	.0030
Cast Irons - Gray	K	≤ 240 HB	910	1300	.0018	.0026	.0035	.0053	.0070
Cast Irons - Ductile & Malleable		> 240 HB	380	540	.0013	.0019	.0025	.0038	.0050
Wrought Aluminum Alloys 6061, 7050, 7075	N	-	2000	2500	.0020	.0030	.0040	.0060	.0080
Cast Aluminum Alloys		-	1500	2000	.0015	.0023	.0030	.0045	.0060
Brass & Copper Alloys		-	900	1200	.0011	.0017	.0023	.0034	.0045

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.  
 Decreased feeds and/or finish pass may be necessary to reach desired surface finish requirements.  
 Decreased speeds and feeds may be necessary for slotting/heavy duty cutting.  
 Cutting speed (Vc) should be calculated off of the **Effective** cutting diameter.

**Effective Cutting Diameter = 2 x Chosen "Z" depth x tan (Included Angle/2) + Tip Diameter**

Example: Tool - 5HC050003B  
 Included Angle = 90°  
 Tip Diameter = .080"  
 Length of Cut = .210  
 Chosen "Z" Depth = .180"

Calculation: 2 x .180" x tan(90°/2) + .080"  
 Effective Cutting Diameter = .440"



M.A. Ford® Mfg. Co., Inc.  
 7737 Northwest Blvd.  
 Davenport, IA 52806 USA  
 Ph: 563-391-6220 / 800-553-8024  
 sales@maford.com



**ISO 9001:2015 Certified**

WBHC2020

**⚠ WARNING:** This product can expose you to chemicals including nickel, cobalt, and lead, which are known to the State of California to cause cancer, and chemicals including lead which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).