M.A. FORD®
High Performance Cutting Tools

*Where **high performance** is the **standard**®*

NEW

Series 3HC and 5HC

High Performance Chamfer Mills

For deburring and heavy chamfering applications in a broad range of material groups.

MADE IN USA

www.maford.com

Series 3HC and 5HC
Features and Benefits

M.A. FORD®
High Performance Cutting Tools

Finish Options

Offered Uncoated and ALtima® Blaze coated for an extensive material range

Precision Tip Diameter

Allows for:
- Increased tip strength
- Easy programmability
- Excellent repeatability

Helical Flute Form

Allows for:
- Smooth cutting action
- Increased cutting conditions
- Excellent surface finish

MADE IN USA

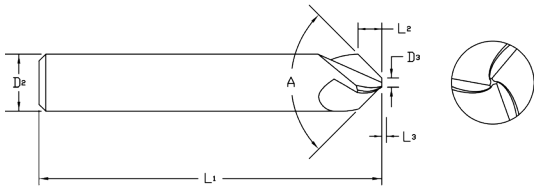
Safety Note

Always wear the appropriate personal protective equipment such as safety glasses and protective clothing when using solid carbide or HSS cutting tools. Machines should be fully guarded.

NEW

Chamfer Mills Series 3HC

Z3 | Helical | 60° 90° | Uncoated | ALtima® Blaze

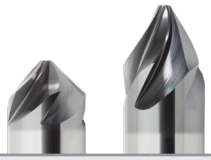


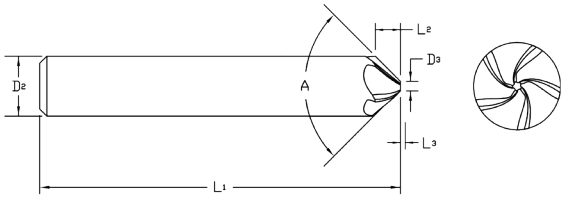
Uncoated		ALtima® Blaze		Included Angle	Shank Diameter	Flute Length	OAL	Theoretical Tip Length	Tip Diameter
Tool No.	EDP	Tool No.	EDP	A	D2 (h6)	L2	L1	L3	D3
3HC012501	35000	3HC012501B	35010	60	1/8	0.074	1-1/2	0.035	0.040
3HC018701	35001	3HC018701B	35011	60	3/16	0.119	2	0.043	0.050
3HC025001	35002	3HC025001B	35012	60	1/4	0.165	2-1/2	0.052	0.060
3HC037501	35003	3HC037501B	35013	60	3/8	0.264	2-1/2	0.061	0.070
3HC050001	35004	3HC050001B	35014	60	1/2	0.364	3	0.069	0.080
3HC012503	35005	3HC012503B	35015	90	1/8	0.043	1-1/2	0.020	0.040
3HC018703	35006	3HC018703B	35016	90	3/16	0.069	2	0.025	0.050
3HC025003	35007	3HC025003B	35017	90	1/4	0.095	2-1/2	0.030	0.060
3HC037503	35008	3HC037503B	35018	90	3/8	0.153	2-1/2	0.035	0.070
3HC050003	35009	3HC050003B	35019	90	1/2	0.210	3	0.040	0.080

NEW

Chamfer Mills Series 5HC

Z5 | Helical | 60° 90° | ALtima® Blaze





ALtima® Blaze		Included Angle	Shank Diameter	Flute Length	OAL	Theoretical Tip Length	Tip Diameter
Tool No.	EDP	A	D2 (h6)	L2	L1	L3 Ref.	D3
5HC025001B	35020	60	1/4	0.165	2-1/2	0.052	0.060
5HC037501B	35021	60	3/8	0.264	2-1/2	0.061	0.070
5HC050001B	35022	60	1/2	0.364	3	0.069	0.080
5HC025003B	35023	90	1/4	0.095	2-1/2	0.030	0.060
5HC037503B	35024	90	3/8	0.153	2-1/2	0.035	0.070
5HC050003B	35025	90	1/2	0.210	3	0.040	0.080

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Inch	
D3	Tolerance
1/8 - 1/2	± .002

Inch	
D2	Tolerance (h6)
1/8 - 3/16	+0/-.00031
1/4 - 3/8	+0/-.00035
1/2	+0/-.00043

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®
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MADE IN USA

ISO 9001:2015 Certified

⚠**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.