M.A. FORD
High Performance Cutting Tools

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

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Company Overview

For 100 years, M.A. Ford® has been at the cutting edge of tooling design and manufacturing and has developed an enviable global reputation for performance and precision in advanced solid carbide tooling, serving over 60 countries world wide. Our innovative cutting geometries, materials and coating technologies are providing effective manufacturing solutions to an expanding and increasingly diverse range of industries.

Target Industries:
Aerospace
Medical
Firearms
Automotive
Heavy Machinery
Energy
Electronics
Agriculture

Competitors
Kyocera SGS
Seco
Imco
Fullerton
Mitsubishi
Sumitomo
Harvey Tool
Widia

Key Product Lines

- High Performance Solid Carbide End Mills
- High Performance Solid Carbide Drills
- Solid Carbide Reamers
- Solid Carbide Diamond Grind Routers
- Solid Carbide Custom Tools
- Solid Carbide and HSS Countersinks
- Solid Carbide General Purpose End Mills
- Solid Carbide General Purpose Drills
- Solid Carbide Burs
- Solid Carbide Micro Tools
- Re-Conditioning and Re-Coating

M.A. Ford Rapid Turnaround Program*

Coating
ALtima® 3 days No maximum quantity
Blaze, TiN, TiCN 3 days No maximum quantity

Range Reamers
270 Series 3 days 25 piece maximum

Shank Flats
End mills 3 days 50 piece maximum

Corner Radius
End mills – 6mm & above 3 days 12 piece maximum

Depth Setting Rings 3 days No maximum quantity

Coolant Slots 3 days 10 piece maximum

Micro-Stop Integral Pilot 3 days 10 piece maximum

*When base tool in stock

Custom Tool Division

M.A. Ford's Custom Tool Division offers application development, design and manufacturing expertise in the following product classifications in either solid or coolant thru configurations:

- High Performance Drills and Step Drills
- Rockbit Drills (Flat Bottom - 150°)
- G-Drills and Step G-Drills
- Step Reamers
- Reamers
- Coolant Thru Specials
- Firearms Reamers (Chamber-Barrel-Muzzle-Throat)
- Custom End Mills
- Custom Form Tools
- Re-conditioning and Re-Coating

ISO 9001:2015 Certified

Returns: No returns will be accepted without a prior written Return Materials Authorization (RMA) from M. A. Ford. Please contact our Customer Service department for an authorization number and shipping instructions. Merchandise that has been approved for return must be returned on a pre-paid basis in original packaging.

Miscellaneous Return Restocking Charges:

Miscellaneous returns are subject to the following restocking fees:

- Purchased within 30 days, 5%
- 31-180 days, 10%
- 6 months – 1 year, 15%
- No miscellaneous returns for materials purchased beyond 1 year (Contact Customer Service for Stock Rotation Option), except series 239. For series 239, no returns are accepted for materials purchased beyond 90 days.

All Returns Are Subject To The Following Conditions:

- Returned items must be current M.A. Ford products per the current price schedule.
- Standard products that are scheduled to be removed from the catalog and/or slow moving items are subject to review and may not be eligible for return.
- Damaged product packaging, marked/defaced labels and/or packages are not eligible for return.
- Products that have been altered or coated by a third-party are not eligible for return.
- Returned products must be properly packaged for shipment with the RMA number indicated on the shipment and noted on the return goods documentation. Any carrier damage is the responsibility of the Distributor.

To Request A Sample Tool

The Test Tool Request Form is available at maford.com/page/forms. Follow the instructions on the bottom of the form to fax or email to M.A. Ford Customer Service. Once approved, the tool will ship same day if in stock.

M.A. Ford® Direct Field Sales Staff

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Order Entry and Shipping Cutoff Times

Orders received by 5:00pm CST in stock ***shipped via UPS*** same day

For Fed Ex shipments:

- Cutoff time is 4:30pm CST for priority shipments
- Cutoff time 3:30pm CST for ground shipments

Test Tool Results Example

This test of the M.A. Ford series 277 was a big improvement for Company A as the current indexable tool would only produce 200 parts before chipping out. The M.A. Ford Tool ran 3,000 pcs between tool changes. The insert usage cost of $23,400.00 must be added for the special Iscar tool body usage of 52 pcs. annually. **Total savings $137,591.00.**

TOOL PERFORMANCE EVALUATOR

	Select Machining Type	Solid Milling	◉ Color On ○ Color Off	Test Date	03/24/17
	Select Data Entry Units	◉ Inch ○ Metric	Output Units	○ Inch ◉ Metric	
INITIAL DATA	Company		Test Objective	Tool Life	
	Contact		Part	1/4" Ratchet lever bore	
	Salesman		Material	1187 steel	
	Distributor		Hardness (HrC)	<250 BHN	
	Evaluator	RUSS MESSER	Surface Condition	Milled	
	Machine	Mazak Nexus 400011	Solid Mill Material Factor	1.28	
	Machine #	E-2602			
	Rated Power(HP)	30	Mill type: climb	Interpolation	
	Tool Number	22	Existing	Test 1	Test 2
TOOL DATA	Tool Brand Name		Iscar	MA Ford 277375128	
	Endmill Description		AOMT040204-900DT	3/8" X 7/8"X 2.5" .015	
			IC 908		
	# EffectiveTeeth		2	4	
PARAMETERS	Tool Diameter (in)		0.375	0.375	
	RPM (at max RPM)		5240	5240	
	Speed (sfm)		514	514	
	Feed (ipt)		0.0005	0.0030	
	Feed (mm/min)		5.03	62.88	
	Width of Cut (in.)		0.020	0.020	
	Depth of Cut (in.)		0.3	0.3	
	Length of Cut (in.)		0.95	0.95	
	# of Passes Per Part		1	1	
	Type of Chip Produced ?		Segmented	Tubular	
	Coolant		SYNTHETIC	SYNTHETIC	SYNTHETIC
	Power @ Spindle (KW)		0.02	0.22	
TOOL LIFE	# of Parts Per Mill Chg.		66	3000	
	# of Parts Per Regrind		0	0	
	Mill Chg.Time (Seconds)		1800	120	
	Linear Distance /Mill Chg.(mm.)		2,100	7,647	
	Reason for Indexing		CHIPPING	NORMAL WEAR	
	Tool Life Increase			4445%	
OUTPUT & PRODUCTIVITY	Annual Part Production		150,000		
	Cycle Time per part (sec)		21.00	0.90	
	Cut Time per part (sec)		287.81	23.02	
	Removal Rate (mm3 /min)		494.60	6182.51	
	Productivity Increase			1150%	
	Annual Machine Time Savings (hours)			11032.7	
COST EVALUATION (rounded to the nearest cent)	Burden Rate (hour)		$45.00	Not Required	Not Required
	Cutter Cost		$12.00	$31.16	
	RegrindCost (For Grindable)		$0.00	$0.00	
	Number of Regrinds Per Tool		0	0	
	Tool Chng.Cost Per Tool Chng.		$22.50	$1.50	
	Tooling Cost Per Mill Change				
	Est. Annual Mill Usage		2250	50	
	Estimated Annual Mill Cost		$27,000.00	$1,558.00	
	See Line Headers →		$ Per Part	$ Per Part Savings (Yr)	$ Per Part Savings (Yr)
	Tooling Cost --		$0.180	$0.010 $25,442	
	Tool Change Cost		$0.341	$0.001 $51,061	
	Cutting Time Cost		$3.598	$0.288 $496,472	
	Other Cycle Time Costs		-$3.335	-$0.277 ($458,785)	
	Costing Summary		$0.78	$0.02 $114,191	
Assessments	Objective Attained?	◉ Yes ○ No		Retest?	◉ No ○ Yes

This test was a big improvement for end user as the current Indexable tool would only produce @ 200 parts before chipping out. The MA Ford Tool will run 3000 pcs betweeen tool changes. The numbers on this Report are more accurate in calculating the overall savings with the actual annual production adjusted to the correct poduction of 1/4" Lever ratchets produced. The other reports were skewed on Part production as the number of inserts used annually with a 200 pc. production rate per tool change had to be considered. Due to the chipping and Failure of the Iscar tool this is a more accuate report with the burden Rate as the actual insert usage is 66 per tool change for this production. 23,400.00 must be added for the special Iscar tool body usage of 52 pcs. annually. Total savings 137,591.00

M.A. Ford Test Winners To Try:

239 Series Diamond Grd/Diamond Coated Router for Composites

278 Series 5 FL HP End Mill for Titanium, Inconel and similar materials

180 Series 7 FL HP End Mill for Titanium, Inconel, Nickel Alloys and similar materials

CDA Series HP Drill for Aluminum and similar materials

CXD Series HP Drill for Titanium and similar materials