



# Milling Cutter Kit

*High velocity cutter with interchangeable inserts.*



# Nickel Plated High Velocity Cutters

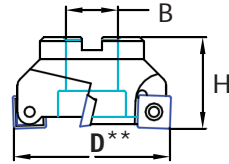
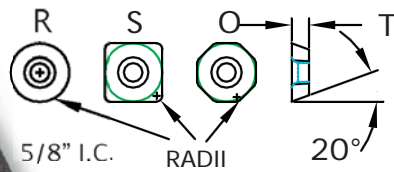
Part ID	Cutter Description	
MC-2000	2" Diameter 3 Insert Nickel Plated Insert Body (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round) <b>H: 1.725 B: .750</b>	
MC-3000	3" Diameter 5 Insert Nickel Plated Insert Body (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round) <b>H: 1.875 B: 1.000</b>	
MC-4000	4" Diameter 6 Insert Nickel Plated Insert Body (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round) <b>H: 1.875 B: 1.500</b>	
MC-SCREW	Screw Pack (10 pieces) for MTC5 Insert Bodies (Required)	
	<b>H=</b> Height of cutter body <b>B=</b> Bore of cutter	

## Cutter and Insert Kits Offered:

MC-2000-KIT	2" Diameter 3 Insert Nickel Plated Insert Body With 40 Inserts (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round)	
MC-3000-KIT	3" Diameter 5 Insert Nickel Plated Insert Body With 60 Inserts (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round)	
MC-4000-KIT	4" Diameter 6 Insert Nickel Plated Insert Body With 80 Inserts (Diameter when using Square Insert, subtract 3/8" for Octagon, and subtract 5/8" for Round)	

Part ID	Revision	Insert Style and Size Description	
<b>Face grind shape: Octagon</b>			
MC-0100-HS	Bright	Octagon .062 Radius High Shear Face Grind 10-Pack	
MC-0100-HS	PowerA	Octagon .062 Radius High Shear Face Grind, TiAlN 10-Pack	
MC-0100-HS	TiN	Octagon .062 Radius High Shear Face Grind, TiN 10-Pack	
MC-0100-NP	Bright	Octagon .062 Radius Neg/Pos Face Grind 10-Pack	
MC-0100-NP	PowerA	Octagon .062 Radius Neg/Pos Face Grind, TiAlN 10-Pack	
MC-0100-NP	TiN	Octagon .062 Radius Neg/Pos Face Grind, TiN 10-Pack	
<b>Face grind shape: Round</b>			
MC-0200-HS	Bright	Round .312 Radius High Shear Face Grind 10-Pack	
MC-0200-HS	PowerA	Round .312 Radius High Shear Face Grind, TiAlN 10-Pack	
MC-0200-HS	TiN	Round .312 Radius High Shear Face Grind, TiN 10-Pack	
MC-0200-NP	Bright	Round .312 Radius Neg/Pos Face Grind 10-Pack	
MC-0200-NP	PowerA	Round .312 Radius Neg/Pos Face Grind, TiAlN 10-Pack	
MC-0200-NP	TiN	Round .312 Radius Neg/Pos Face Grind, TiN 10-Pack	
<b>Face grind shape: Square</b>			
MC-0300-HS	Bright	Square .032 Radius High Shear Face Grind 10-Pack	
MC-0300-HS	PowerA	Square .032 Radius High Shear Face Grind, TiAlN 10-Pack	
MC-0300-HS	TiN	Square .032 Radius High Shear Face Grind, TiN 10-Pack	
MC-0301-HS	Bright	Square .062 Radius High Shear Face Grind 10-Pack	
MC-0301-HS	PowerA	Square .062 Radius High Shear Face Grind, TiAlN 10-Pack	
MC-0301-HS	TiN	Square .062 Radius High Shear Face Grind, TiN 10-Pack	
MC-0302-HS	Bright	Square .125 Radius High Shear Face Grind 10-Pack	
MC-0302-HS	PowerA	Square .125 Radius High Shear Face Grind, TiAlN 10-Pack	
MC-0302-HS	TiN	Square .125 Radius High Shear Face Grind, TiN 10-Pack	
MC-0303-NP	Bright	Square .062 Radius Neg/Pos Face Grind 10-Pack	
MC-0303-NP	PowerA	Square .062 Radius Neg/Pos Face Grind, TiAlN 10-Pack	
MC-0303-NP	TiN	Square .062 Radius Neg/Pos Face Grind, TiN 10-Pack	
MC-0304-NP	Bright	Square .125 Radius Neg/Pos Face Grind 10-Pack	
MC-0304-NP	PowerA	Square .125 Radius Neg/Pos Face Grind, TiAlN 10-Pack	
MC-0304-NP	TiN	Square .125 Radius Neg/Pos Face Grind, TiN 10-Pack	

# Cutters and Inserts



## Edge Styles

**HS**  
Hi Shear



**NP**  
Neg/Pos



\*\* D for octagons subtract 3/8"; D for rounds subtract 5/8"  
Other insert styles available for this system by special order.  
Other cutter sizes available for this system by special order

Cutter diameter is based on using a square insert. Octagon styles produce a slightly smaller effective diameter, but provide a 45° lead angle and 8 edges, making it and the round style inserts the most popular. Using .032 radius square inserts are not intended for roughing steels and other hard and tough materials, but work well in aluminum and plastics.

### To calculate the feed rate

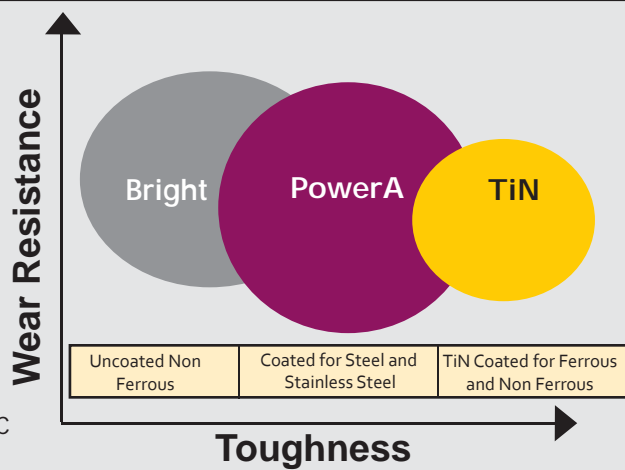
Feed per tooth (FPT) x number of teeth(inserts) in cutter x RPM equals feed in inches per minute. Start in the middle of figures provided. Feeds and speeds assume an octagon insert (reduce feed by 20% for square insert to start), also assumes a rigid setup, part properly held, basic knowledge and experience of cutting, etc. Depth of cut will be appropriate to the horsepower available. Always start with a light depth of cut (.015-.025) if the horsepower is low or unknown, increasing as power is available. Always use proper safety gear and procedures.

### To calculate RPM

SFPM (from chart) x 3.82 divided by the cutter diameter equals RPM.

## Applications

- TiN Coating**  
Enhances next generation ferrous and non-ferrous machining
- PowerA Coating**  
Coated Ultra dense carbide with multi-layer coating for machining stainless and other steels
- Bright**  
Uncoated 10% cobalt submicron WC for a variety of materials



### General Application Tips

1. Climb mill whenever possible.
2. Width of cut (WOC) should be 60%-70% diameter of cutter when soft milling; WOC for hard milling should be about 30%.
3. Always use the shortest reach toolholders possible for the application.
4. Use light depth of cut and higher feeds and speeds when finishing.

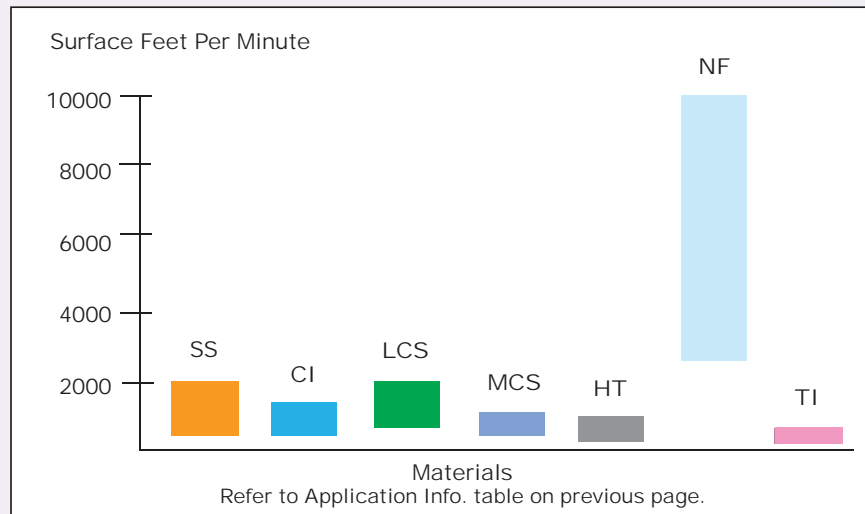
## Application Information

1st Choice	2nd Choice	MATERIAL CLASSIFICATION	SFPM	FEED PER TOOTH	
				HI-POS	NEG/POS
PowerA	Tin	STAINLESS STEEL	600-1800	.002" - .007"	.004" - .012"
Tin	PowerA	CAST IRON	350-1200	.003" - .007"	.004" - .016"
PowerA		LOW CARBON STEELS	500-1800	.003" - .008"	.004" - .012"
PowerA		MEDIUM TO HIGH CARBON STEELS	450-1200	.002" - .007"	.004" - .012"
Tin		HIGH NICKEL - HIGH TEMPERATURE	200-600	.001" - .004"	.002" - .009"
Tin	Bright	NON-FERROUS, ALUMINUM	2500-12000	.004" - .022"	N/R
Bright		TITANIUM	125-500	.001" - .004"	N/R



## NICKEL PLATED HIGH VELOCITY CUTTERS

- Machine a Wide Variety of Materials
- Interchangeable Insert Styles
- Change from High Shear to Neg/Pos
- Round, Octagon, Squares in the Same Pocket
- High Metal Removal Rates
- Inserts Fit Other Cutter Systems



*High shear cutting for high metal removal rates  
in low to high horsepower applications.*



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