FOR USE ON TITANIUM ALLOYS

VARIABLE FLUTE
7 & 9 FLUTE- SQUARE, RADIUS, OR CHAMFER
Series: VXMG7 & VXMG9

- For chatter less, universal machining in multiple types of operations on Titanium Alloys, Stainless Steel, Alloyed Steel, & All Ferrous Materials
- VXMG7- Additional flutes enable more metal removal in fewer passes
- VXMG7 & VXMG9- Provides over 40% higher metal removal rate than even a 5 flute tool
- VXMG9- Ideal for finishing tight tolerance walls - when trying to hold tight perpendicularity tolerances on your wall, this is the perfect choice to finish the part FAST and keep the straightness
- VXMG9- Takes a radial depth of cut of 5% of diameter at full flute length

VARIABLE FLUTE - TITANIUM CUTTING END MILLS
4 & 5 FLUTE
Series: VXMG4T & VXMG5T

- Specifically designed for aggressive machining in Titanium Alloys
- Eccentric relief form provides an exceptionally strong cutting edge. Melin’s additional “Feather Edge” Grind Technology substantially increases tool life at elevated speeds & feeds
- Unique nACRo coating assists in achieving maximum metal removal rates & extreme production gains
- Available from 1/8” to 1-1/4” with choices of radii in stub, regular, medium, long and extended neck lengths
- Thru-hole coolant style, available upon request

ROUGHER-FINISHER - TITANIUM CUTTING END MILLS
MULTI FLUTE
Series: CCRFT

- Full eccentric relief with chip breaker designed for heavy removal titanium cutting. Capable of deep slotting and ramping even with 6 FL series
- Geometry designed to reduce cutting pressure and at the same time produce a chip large enough not to recut in deeper pockets
- Available from 1/2” to 2” with choices of radii in stub, regular, medium, long and extended neck lengths
- Thru-hole coolant style, available upon request

AERO-CUT SERIES ROUGHING END MILLS
MULTI FLUTE
Series: CCAC4 or CCAC6

- Designed for high volume removal of Titanium Alloy materials
- Unique sinusoidal wave along flute provides ideal chip evacuation
- Enables heavy cuts at high feed rates while eliminating tendency of chip nesting
- Made from M42 Cobalt and provides outstanding tool life
- Available from 3/4” to 2” diameter in standard, long and extra-long lengths

FINISHER - TITANIUM CUTTING END MILLS
MULTI FLUTE
Series: CC35

- Titanium focused geometry, increased rake and cutting edge clearance allow for reduced cutting pressure compared to conventional 30° end mills
- Enhanced heat treatment process reduces premature chipping in Gantry cutting situations
- Compliant with NAS 986 T46 & T66 specifications
- Variable flute technology reduces chatter and allows for heavier chip loads in any machining process

PHONE 216/362-4200 • 800/521-1078 • FAX 216/362-4230 • 800/521-1558
FOR USE ON ALUMINUM ALLOYS

ALUMINUM CUTTING END MILLS
2 FLUTE- 45° HELIX
Series: AXMG45

> For aggressive machining on lighter duty CNC machines with 5-20 HP
> Produces superior surface finishes on both walls and floor
> Geometry enables aggressive slotting capability
> Geometry optimizes chip evacuation and eliminates chip nesting
> Available from 1/8” to 1-1/4” with choices of radii in stub, regular, medium, long, and extended neck lengths
> Recommended coatings are ZrN and TiCN

ALUMINUM CUTTING END MILLS
2 FLUTE - FOR HIGH VELOCITY MACHINING
Series: HVMG2

> For aggressive machining on high power, high velocity CNC machines with >35 HP
> Reduces cutting pressure and vibration when running at exceptionally high feed rates
> Highly polished OD and flute face, prevents material from sticking to cutting edges
> Provides maximum metal removal rates
> Available from 1/8” to 1-1/4” with choices of radii in stub, regular, medium, long, and extended neck lengths
> Recommended coatings are ZrN and TiCN

ALUMINUM CUTTING END MILLS
3 FLUTE - FOR HIGH VELOCITY MACHINING
Series: HVMG3

> For aggressive machining on high power, high velocity CNC machines with >35 HP
> Reduces cutting pressure and vibration when running at exceptionally high feed rates
> Highly polished OD and flute face, prevents material from sticking to cutting edges
> Provides maximum metal removal rates
> Available from 1/8” to 1-1/4” with choices of radii in stub, regular, medium, long, and extended neck lengths
> Recommended coatings are ZrN and TiCN

ALUMINUM CUTTING END MILLS
5 FLUTE - FOR ROUGHING AND FINISHING
Series: GXMG5

> Designed for maximum metal removal rates when machining aluminum alloys
> Designed for roughing using trichoidal toolpathing. Excels at finishing operations requiring high feed rates while still maintaining very good finishes
> Used for profiling operations only...slotting is not recommended
> Wiper flat insures excellent floor finishes. Edge prep for reduced chatter and longer tool life
> Recommended coatings ZrN, TiCN and nACRo

PM COBALT ROUGHER-FINISHER FOR HEAVY CUTS
3 FLUTE
Series: ERFPM

> Powder metal roughing tool designed for aggressive roughing in aluminum, while still providing a good finish
> Highly polished cutting geometry eliminates material from sticking to cutting edges
> Truncated, ground profile enables optimum chip evacuation
> Unique geometry enables heavy cuts at high feed rates while eliminating tendency of chip nesting
> Recommended coatings are ZrN and TiCN
COATING INFORMATION

**TiCN** - Our unique Titanium Carbonitride coating has an exceptional high hardness and low coefficient of friction coating which provides excellent wear resistance. TiCN performs well cutting alloy steels, stainless steels, and in high speed cutting where moderate temperatures are generated at the cutting edge. The high lubricity of TiCN facilitates chip flow, prevents build up and reduces cutting forces and temperature. Provides an excellent surface quality on machined components. Also, excellent in applications which require high feed and speed rates.

**nACR®** - Our unique Aluminum Chrome Nitride + Silicon Nitride coating is an excellent coating for high abrasive wear and heat resistance. A top layer with high hardness and toughness. Heat resistance of up to 1100°C before it starts to oxidize and break down. It has a wide application range and is good in super alloys applications. It has a very low coefficient of friction for less resistance (0.35). Best in very tough operations. Up to (1-7) μm thickness in coating layers. A premium coating for those difficult applications. This coating is currently available as a special. Call customer service or send your request to specials@melintool.com

**ZrN** - Our unique Zirconium Nitride coating is the next generation of coating developed specifically for machining aluminum yet excellent when machining all non-ferrous materials. ZrN is also highly recommended for machining fiberglass, nylon and most polymer materials. The Maximum working temperature – 600°C/1110°F. It has a coating thickness of 1 to 2 microns. The coefficient of friction against steel (dry) is 0.35 and the micro hardness (HV 0.05) is equal to 3000.

Maximize your Melin Experience Anywhere!

Connect with Melin today to get the latest product development information.

On Your Tablet: Melin offers an interactive catalog for use on your tablet

At Your Desk: Order our full line catalog for your office.

Melin Outperforms
The very best & welcome testing to prove it!

Contact your local distributor
Ask for a Guaranteed Satisfaction Test:
216-362-4200

On Your Phone: Check stock, price, & more at melinmobile.com