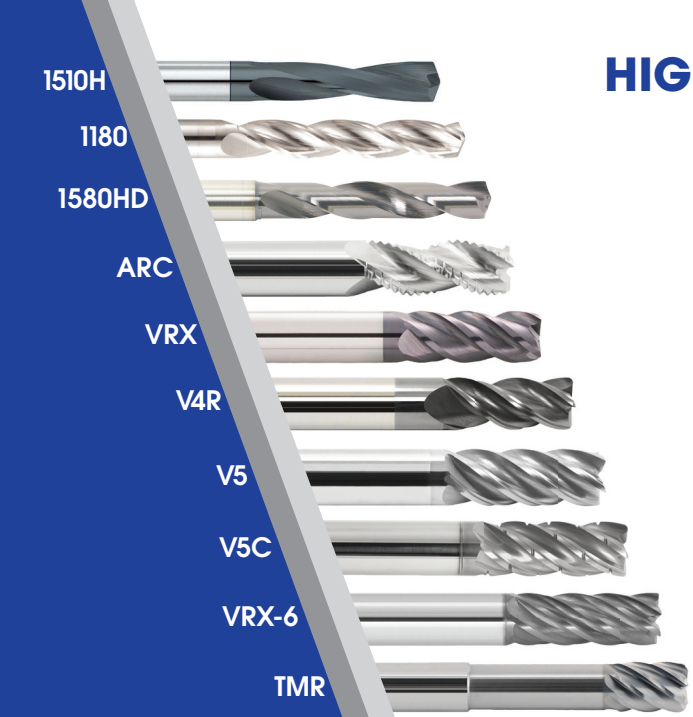
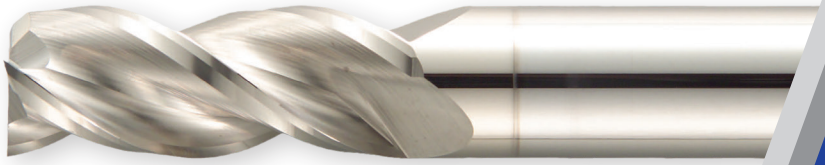
HIGH PERFORMANCE POCKET GUIDE

Select Tooling for Advanced Materials



GARR TOOL®
High Performance Solid Carbide

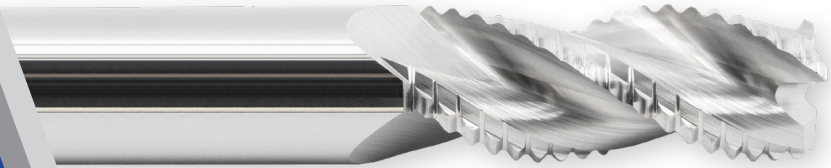
ALUMINUM



The 143 series of end mills are specifically designed for aircraft grade aluminum material. Featuring a cylindrical ground o.d. for better side wall finishes and Alumastar™ coating for wear resistance and non-stick properties. This series craves increased feed rates, due in part to the double flute face, making the 143 series the F-1 race car of endmills; if used properly, nothing goes around the track faster.

143M/143R

ALUMINUM



The ARC series roughing end mill solves problems with both harmonics and spindle load. The variable helix reduces the harmonics while the knuckle roughing style flutes allow the chip auger to keep up the metal removal rate. The style and polished finish of the flute allows for a reduction in chip size and a resistance to material adhesion.

ARC

ALUMINUM

The 142B series end mill features a 2-flute ball-nose for a continuous and seamless cutting edge. This provides for excellent finishes on your parts as well as more precise balance in high RPM applications. The Alumastar™ coating provides wear resistance and non-stick properties for maximum tool life and chip evacuation.

142B

ALUMINUM

The design of the 1180 series drill has no need for spot drilling. Having 3 flutes versus the traditional 2 flutes aids in near reamer finishes, true positioning, and the cylindricity of each hole with the added benefit of 20% faster feed rates over a 2 flute drill.

1180

ALUMINUM

The 1205H is the perfect high-production drill that offers consistent drilling without the use of an extra spot tool. The Hardlube coating offers a low-cost option to fight the built-up edges typically seen in aluminum applications. We also offer 3 length options: stub 1520H, jobber 1205H, and extra-long 1800H.

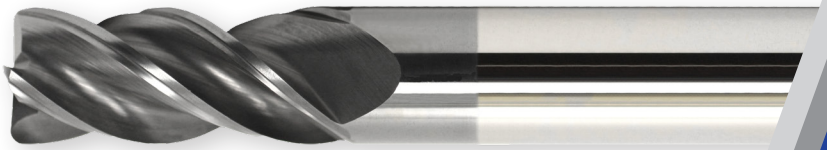
1205H

TITANIUM

Designed specifically for titanium, the TMR/TMS series of end mills are excellent for finishing using dynamic milling techniques up to 10% radial stepovers. The multi-flute design of this tool keeps your feed rates high, tool engagement low, and improved part integrity. The honed edge prep and AlCrN coating provide for a quiet first cut and longer tool life.

TMR/TMS

TITANIUM



Vibration control is paramount when milling titanium, and with the infinitely variable helix design of the V4, you can eliminate that concern. Heat dissipation is managed with the specially engineered honed and polished cutting edge, which reduces friction. The edge preparation improves geometric stability, eliminating the need to chase "off sets" on the tool. With a true variable helix geometry and the AlCrN coating, V4 series tools deliver in high performance applications.
Also available in ball-end.

V4

TITANIUM

An aerospace sector proven V5 design with the added convenience of chip control, the V5C is designed for use with modern CAM programs. This series is capable of trochoidal (dynamic, volumill, profit) milling titanium at large depths of cut with moderate step over that still gives a good surface finish. The V5C chip splitter design is a sure winner in dry machining with air blast applications, assisting with chip evacuation to avoid the re-cutting of metal chips.

V5C

TITANIUM

Introduced in 2004, the VRX is the most versatile end mill in the GARR TOOL lineup. The unique flute design and specific offset pitch allow this tool to work extremely well in a wide variety of materials (up to 62 Rockwell), applications, and machine capabilities. With the eccentric / radial grind and strong core available in nearly 500 sizes going all the way down to 1.5mm (1/16"), the VRX is a wise investment for all around productivity.

VRX

TITANIUM

Our 1280KH coolant-through drill is designed for top performance in titanium. GARR TOOL offers many diameters in this series that are not available from other manufacturers, so you can find just the right tool for the job. You also won't need a spot drill with our 140° high performance point geometry. Designed for aggressive machining parameters with an extremely affordable price point, the 1280KH can deliver high performance at a fraction of the cost. Also available in stub and extra-length versions, 1580KH & 1880KH.

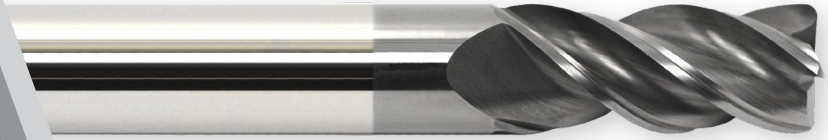
1280KH

TITANIUM

With its high-performance drill point and advanced TiAlN coating, the 1250H is a perfect non-coolant small diameter drill for titanium. This drill has just the right amount of back taper so the titanium will not close back in on the drill while engaged. The 1250H can also run at higher speeds and feeds while maintaining a longer tool life. Comes in 3 flavors, 3xD (1550H), 5xD (1250H, shown), and 12xD (1850H).

1250H

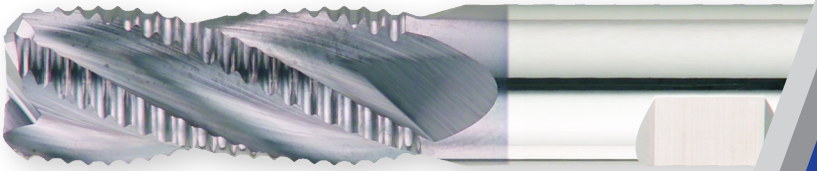
STAINLESS STEEL



The V4 geometry makes this end mill an easy choice for cutting in stainless steel. The progressive rake, variable pitch, and variable helix create more chip speed to evacuate material in tight spaces and faster programs. Exceptional tool life is built into this design with its polish carbide treatment and AlCrN coating. The combination of these two elements help extend tool life and leave a cleaner cut for a great finished product.

V4

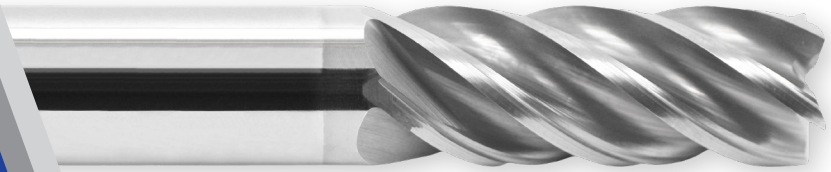
STAINLESS STEEL



Tool pressure. Chip management. Low torque machines. These are the very problems the VHM series end mills solve. The knuckle rougher design is based off of the design of our tried and true VRX series. You can expect a high metal removal rate with lower tool pressure on both the part and spindle with the VHM series end mill.

VHM

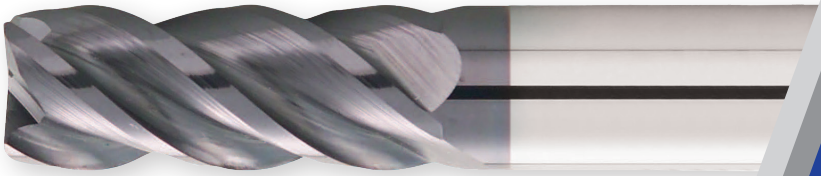
STAINLESS STEEL



The eccentric grind on the V5 series peels material with ease, and the honed edge provides excellent results in stainless steel. The progressive helix and rake stabilizes the cutting process. The V5 series is right at home in high speed machining applications, utilizing the AlCrN coating to resist the abrasiveness of stainless.

V5

STAINLESS STEEL



Introduced in 2004, the VRX is the most versatile end mill in the GARR TOOL lineup. The unique flute design and specific offset pitch allow this tool to work extremely well in a wide variety of materials (up to 62 Rockwell), applications, and machine capabilities. With the eccentric / radial grind and strong core available in nearly 500 sizes going all the way down to 1.5mm (1/16"), the VRX is a wise investment for all around productivity.

VRX

STAINLESS STEEL

With the TiAlN-based coating and honed edge, the 1280KH series drill is a sure winner in stainless steel material. If you need a great performer in production runs this series is your first choice. Available in many diameters you won't find from other manufacturers, and at a price point suited for production. Available in 3 lengths, stub (1580KH), jobber (1280KH) and extra-long (1880KH). You can get just the right tool for the job at a fraction of the cost.

1280KH

STAINLESS STEEL

Chip removal can be problematic in steels that are soft and gummy, such as 304 stainless. That is where our 1180 series drill shines, evacuating chips with ease with the help of the Alumastar™ coating. The 1180 is capable of drilling straight, near ream finish holes with the high performance point geometry and unique flute design, making for shortened cycle times and increased productivity.

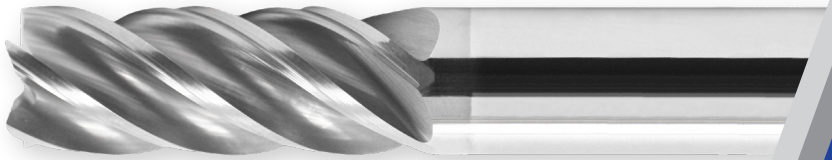
1180

HIGH TEMP ALLOYS

The V4 series has been engineered with dynamic tool paths in mind! Harmonics and the additional heat generated in high temp alloys are managed exceptionally well with our V4 end mill due to the variable pitch, helix, and rake geometry. Longer tool life is achieved with the surface treatment, edge preparation, and AlCrN coating.

V4

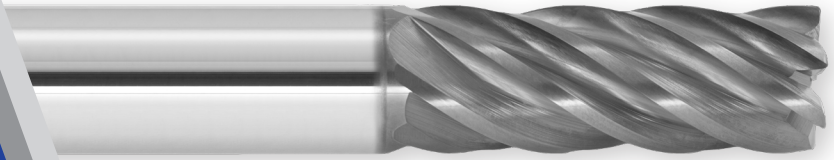
HIGH TEMP ALLOYS



The eccentric grind on the V5 series peels material with ease, and the honed edge provides excellent results in a variety of high temp alloys. The progressive helix and rake stabilizes the cutting process. The V5 series is right at home in dynamic milling processes. The AlCrN coating resists the abrasion of materials like inconel and helps increase both tool life and the quality of finished parts.

V5

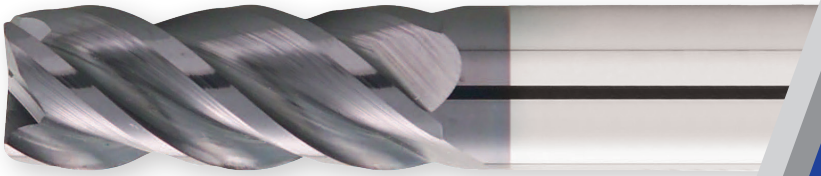
HIGH TEMP ALLOYS



High performance. Low cost. The VRX-6 is the next generation of our popular 4-flute VRX series. Carrying over the unique flute design and specific offset pitch, the VRX-6 was specifically designed for finishing / semi-finishing of high temp alloys. It is an excellent choice for trochoidal milling processes. The unique end design also provides exceptional floor finishes.

VRX-6

HIGH TEMP ALLOYS



Introduced in 2004, the VRX is the most versatile end mill in the GARR TOOL lineup. The unique flute design and specific offset pitch allow this tool to work extremely well in a wide variety of materials (up to 62 Rockwell), applications, and machine capabilities. With the eccentric / radial grind and strong core available in nearly 500 sizes going all the way down to 1.5mm (1/16"), the VRX is a wise investment for all around productivity.

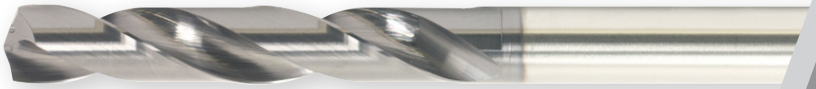
VRX

HIGH TEMP ALLOYS

The 1510H series drill is a workhorse in high temp alloys, especially inconel 625 & 718, which are usually machined in the upper 30's to low 40's Rockwell. The point geometry and slow helix makes this drill a strong choice for any high temp alloy application where strength is needed to quickly displace material and get the job done. This sturdy drill is ideal for the shallow holes in many aerospace parts and adds great value per hole.

1510H

HIGH TEMP ALLOYS



Useful in high temp alloys for production runs, the 1280KD has all the great features of other coolant-through high performance drills, with the added benefit of common shank diameters. This is especially important for hydraulic and shrink fit holders. These drills come in a wide variety of metric sizes and 2 length options; 3xD (1580KD) or 5xD (1280KD). The drill diameters are an m7 tolerance and the shanks are h6 tolerance.

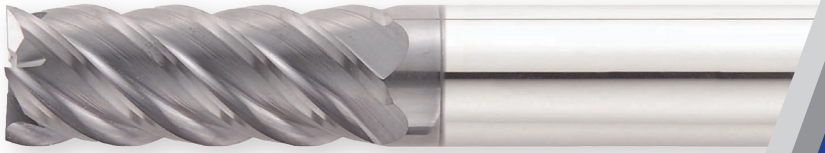
1280KD

HARDENED TOOL STEELS

GARR TOOL's version of a high-feed end mill, our H-45 series offers a unique quality: the capability to cut both axially AND radially by utilizing a conventional corner radius and a 1xD flute length. When the machining application requires sizing that indexable cutters are too large for, our size range gives you plenty of options. Best in hardened tool steels from 42-62 Rockwell, the H-45 series has 4 flutes and AlTiN coating and can be made as a special diameter or length within 3 weeks.

H-45

HARDENED TOOL STEELS



The 545 series is a great value end mill that is versatile in applications ranging from 42-68HRc with the ability to handle high speed machining parameters. Designed specifically for finishing high Rockwell materials, the 545 series can also be used for trochoidal milling of larger slots utilizing chip thinning theories. This series can also be used for alterations after the part has already been heat treated.

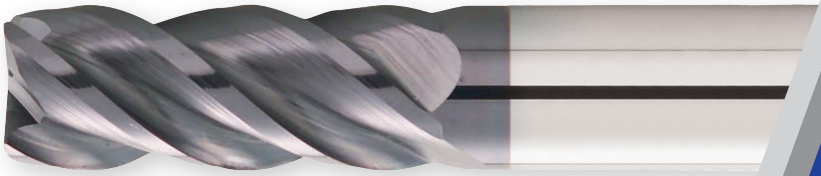
545MA/545RA/545BA

HARDENED TOOL STEELS

The perfect tool for "lights out" milling operations, the 350MX offers very predictable tool life. This series features a tighter tolerance ball form designed for greater profile accuracy in 5-axis machining applications. The AlTiN coating offers high resistance to crater wear and oxidization, making the 350MX suitable for dry machining die mold tool steels.

350MX/950MX

HARDENED TOOL STEELS



Introduced in 2004, the VRX is the most versatile end mill in the GARR TOOL lineup. The unique flute design and specific offset pitch allow this tool to work extremely well in a wide variety of materials (up to 62 Rockwell), applications, and machine capabilities. With the eccentric / radial grind and strong core available in nearly 500 sizes going all the way down to 1.5mm (1/16"), the VRX is a wise investment for all around productivity.

VRX

HARDENED TOOL STEELS

The longevity and performance of the 1510H drill series far outshines that of a standard 135° split point at only a marginal bump in price. The rigidity of this series at screw machine length provides for great metal removal in a wide range of steels. Without a doubt this is the go-to drill for shallow holes.

1510H

HARDENED TOOL STEELS

The 1500H straight flute drill geometry is designed to handle the increased tool pressure that you get when drilling high Rockwell tool steels. This drill series is incredibly rigid and holds cylindricity while the Hardlube coating resists the potential heat buildup. Excellent in Rockwells from 42-70 HRc. It can also be used to remove broken taps.

1500H

GARR TOOL Headquarters and Manufacturing Facility.
Alma, Michigan, USA

GARR TOOL®

High Performance Solid Carbide

7800 N Alger Road
Alma, Michigan 48801
(800) 248-9003
(989) 463-6171
Fax: (989) 463-3609

www.garrtool.com

AVU REGISTRATIONS

ISO 9001:2015 Certified

IMTS2018