



Carbide Drills & Reamers

*solid carbide step drills, multi diameter form tools, reamers
solid carbide core drills, SRT reamers, valve guide reamers & BlueZone cryogenic cutting tools*



Solid Carbide Step Drills

Specially designed, solid carbide drills are available in a diameter range starting from 1.5mm and greater.

Styles available

- Straight or helical drills
- Single or multiple diameters
- Single or multiple-flute design

Solid Carbide Drills

Multi Diameter Form Tools

Star SU has perfected a line of hydraulic cavity/porting tools that will allow cuts from either a solid or cast core. In many cases, these multi-step tools will allow cavity machining in one pass. Our latest engineered designs hold extremely tight tolerances and superior surface finish.



Multi Diameter Form Drills

Reamers

Star SU special designed reamers are manufactured with precision tolerances to achieve your part print requirements.

Styles available

- Single and multi-diameter
- Straight flute, and right hand or left hand spiral
- Single or multiple-flute design
- Super Round Tool (SRT) technology



Reamers Family

Solid Carbide Core Drills

Custom built and designed core drills are ideal for machining aluminum, ductile, nodular, and compacted graphite irons (CGI). Our special engineered designs allow our solid carbide drills to machine either in solid or cored casting conditions. These core drills reduce cycle times, provide consistency in the overall life of the product. In addition, solid carbide core drills can be re-sharpened many times, keeping the cost per hole competitive. They are available as three or four fluted core drills.



Solid Carbide Core Drill

Super Round Tool (SRT) Reamers

The design of the SRT Reamer offers a unique geometry that combines multiple straight flutes, and helical flutes to ensure roundness and finish.

Advantages

- Roundness and straightness within microns
- Lowest cost per hole
- Increase in throughput by reducing cycle times
- Diameters starting at 0.1875" (4.76mm)
- Custom built to your application



SRT Reamer side view (left),
top view (right)

Patent # 7,207,752

Valve Guide Reamers

Star SU valve guide reamers utilize pressurized coolant to produce ultra-smooth, precise holes.

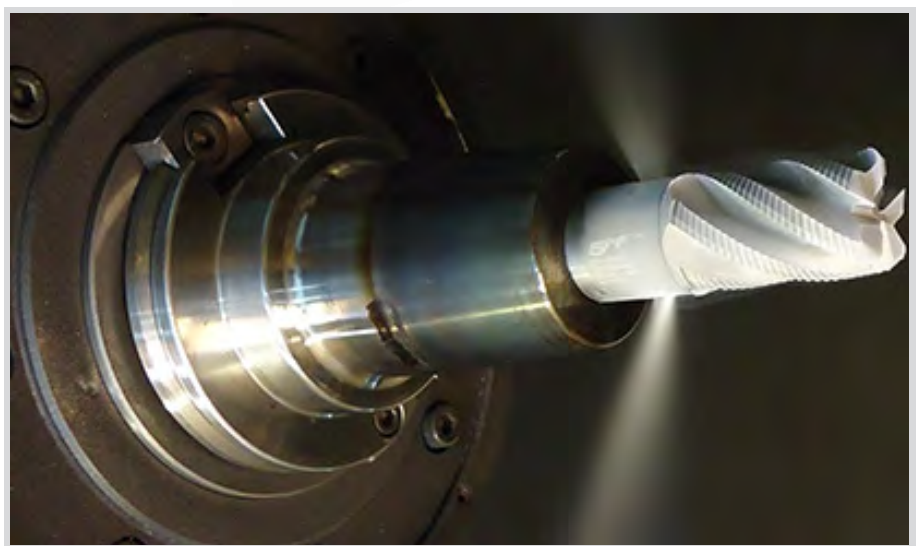
- Produces holes to tolerance of 0.0005" (0.13mm) and less in powder metal, cast iron, iron, aluminum, bronze, and exotic materials
- Valve Guide Reamers start at 0.1875" (4.76mm)
- Produces bores with excellent roundness/straightness and finish



Valve Guide Reamer

Cryogenic Machining

Star SU utilizes 5ME®'s patented breakthrough technology to deliver liquid nitrogen (at -321° F) directly to the cutting edge of the tools, which enables substantially faster processing speeds and increased tool life compared to conventional cooling methods.



Cryogenic Machining Process

Advantages

- Increased processing speed for titanium alloys
- Decreased tool wear
- Surface integrity and part quality
- Green manufacturing
 - No hazardous coolants
 - Lower overhead
 - Sustainable manufacturing

Cryogenic Cutting Tools

Tool types available

- Endmills
- Taper ball end mills
- Drills
- Reamers
- Threadmills

Diameter restrictions apply



Cryogenic Cutting Tool - Endmill



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