



## MANUFACTURER OF PRODUCTS

### *When Standard Answers Won't Work*

Mills Machine Company, Inc. is a leading manufacturer and distributor of a complete line of earth drilling tools, bits and related accessories for water well, environmental, geo-thermal and construction industries in both the U.S. and over 70 countries worldwide.

Backed by more than 100 years of experience, Mills has earned a reputation for quality customer service, superior products, competitive pricing and innovative solutions to customer needs.

We offer both a full line of standard products, available for immediate delivery, and custom designed products to meet specific customer applications. Based on years of service in multiple drilling industry sectors, Mills has developed the unique capacity to modify existing products from one industry for use in another, often resulting in cost savings to the customer.

## INNOVATION

### *When Standard Answers Won't Work*

At Mills Machine, custom solutions begin with the personalized service that allows us to understand the specific needs of our customers. Based on decades of experience in producing drilling products for multiple industries, we can help customers find the right tool within our extensive line of quality standard products, or in most cases we can modify an existing product for a specific drilling application. If a custom designed product or application is necessary, our customers know they are working with the leader in custom design and fabrication in the drilling industry. Our modifications can often be turned around in days and custom solutions, depending on specific requirements, can often be completed within a week.

At Mills, our job is to keep customers up and running with quality products, along with dedicated customer service and technical support. After 100 years in business - *more than ever* - Mills Machine is committed to providing customers with quality products that are durable, efficient and cost-effective. In doing this, we know the customer wins and so do we.



## COMMITMENT

For more information about Mills Machine Company, Inc. please visit our website at [millsmachine.com](http://millsmachine.com), send an email or call us directly. Our goal is to provide the best quality products and service to our customers and we always welcome the opportunity to prove it.

We are known by our customers as *"The Driller's Custom Job Shop."* Bring us your drilling problem and we'll deliver a solution. Give us a call at 405-273-4900 or 800-654-2703.



### **MILLS MACHINE COMPANY**

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# EXPERIENCE Since 1908



**Founded in 1908, Mills Machine Company is built on a line of strong people with a history of innovation in earth drilling tools and accessories.**

***It's estimated that only one-half of one percent of U.S. companies have survived 100 years.***

***Among the millions of U.S. family owned businesses, less than 1,200 are now 100 years old and still under the same family ownership and operation. Mills Machine Company is one of these companies and its customers understand why.***

**Founded in 1908**, in Shawnee, Oklahoma, Mills Machine Company is an internationally recognized manufacturer and distributor of earth drilling tools and accessories with standard products and custom solutions for a variety of industries in both domestic and international markets.

### 1900s - 1920s

From its very beginning, Mills Machine Company was founded on the concept of turning customer problems into solutions. W.H. Homer Mills recognized the need for a repair shop in Shawnee, Oklahoma, which at the turn of the 20th century was a railway crossroads with a growing industrial base. Mills opened his repair shop and the company grew as he developed a reputation for his mechanical ability (*in solving problems*) and his pride in customer service.



### 1930s - 1940s

During the Oklahoma oil boom of the 1930s, Homer and his sons, Oscar and David, found an opportunity to serve the growing seismic and oil industries and the company grew by repairing drilling rigs and bits for these industries. This opportunity also allowed Mills to transform its repair service into a true manufacturing operation and to begin soliciting larger contracts. In 1947, the company also completed the construction of the headquarters facility, which it still occupies.



### 1950s - 1960s

While the oil industry declined in early 50s, Mills recognized a growing need in the water well industry as regional farmers moved from "dry land" to "irrigation" farming. In helping farmers find a solution for their irrigation problem, Mills was able to make a major shift into this water well industry. As part of this industry transition, the company began to manufacture a larger array of drill bits and increase its service offering in drilling rig and mud pump repair.



### 1970s - 1980s

After David Mills acquired the company in the early 70s, Mills Machine soon achieved a new level of growth with larger corporate customers and contracts. The company also began its initial venture into international markets. In 1979, Chuck Mills joined the company and he acquired ownership from his father in 1981. Throughout the 80s Mills achieved still more growth, expanding into the directional drilling and blast hole mining markets both domestically and internationally.



### 1990s - 2000s

Under Chuck Mills' leadership, Mills Machine became a multi-million dollar company. The Federal "Clean Water Act" and the growing need for monitoring wells fueled significant growth in the environmental and soil sampling industry. The company also moved into new industry sectors, including construction drilling and road boring. New product development, including hollow stem, solid flight and HexBor augers and the Mills patented Milclaw® bit, were important factors in corporate growth, along with the continuing expansion of custom product sales in numerous international markets.

### Since 2000

In 2008, Mills Machine celebrated its centennial anniversary. Today, the company continues to increase business opportunities in its primary sectors of the water well and environmental industries while targeting more opportunities in the geothermal and construction industries.

Now, after more than 100 years of experience in developing earth drilling tools and accessories, Mills Machine Company is still turning problems into solutions day by day. By listening to customers and responding to their needs with the right products at a competitive price, Mills Machine has established a reputation for its service excellence and long-term business relationships.

***That 100 year promise to customers continues to this day.***



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# WE HAVE CUSTOM SOLUTIONS FOR YOUR EARTH DRILLING PROBLEMS

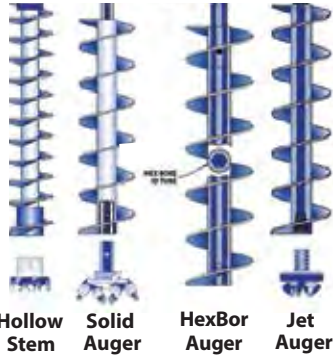
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## Earth Augers

Available in any size or length, and with the pitch or flighting thickness

Mills Machine Company is a custom manufacturer for all types of Earth Drilling

Augers, Bits, and related accessories. Auger types include Hollow Stem, Solid Flight or Construction Augers, HexBor and Threaded Drill Rod Jet Augers for vertical or horizontal drilling applications. A variety of heavy-duty cutter heads are available for soft to hard formations with replaceable carbide cutters and connections to match your individual requirements. *Other configurations available upon request.*



## NW6R Drag Bits

Finally, a lower-priced package featuring rugged, and easy-to-replace components.

The NW6R Drag Bit System features a variety of sizes of Drag Bits, Chevron Bits, Drag Reamers (*Holeopeners*) and Stabilizers to add versatility to your tool chest and flexibility to the driller!

- Adjustable to larger and smaller diameters and different blade types
- Reamers and Stabilizers available
- Sizes from 5 1/2" to 24" standard
- 4140 heat treated alloy Steel Connector
- Brazed Carbide Tips on blades
- Available in 3-Wing, 4-Wing or 6-Wing
- Regular or reverse circulation

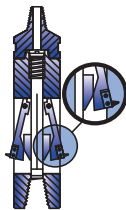


Your tool joint attaches to the 4140 steel connector. The connector can be used with a wide variety of step or Chevron Bits from 5 1/2" diameter to over 24" diameter. The drag bit head has blades with brazed carbide inserts.

## New! Mills Casing Cutter

Mills Casing Cutters feature a dual purpose option utilizing our Roller Cone body.

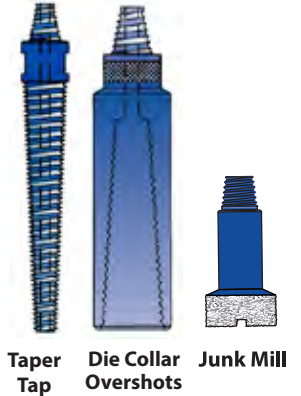
It's easy to swap out the roller cone arms for the casing cut off arms. The casing cutter arms incorporate heat-treated, field replaceable cutters and are activated pneumatically, or hydraulically. Primarily used to remove casing from the bore hole for well abandonment purposes.



## Fishing Tools!

Custom sizes, wall hooks and over size guides are available upon request.

Fishing tools are like insurance policies, no one wants to think about using them but, when you have a problem, you need it fixed right away. This is the reason why we stock heat-treated fishing tools specifically made to pick up the most common drill rod sizes. Custom Sizes, Wall Hooks and Over Size Guides available upon request.



Junk Mills have crushed, sintered tungsten carbide on their cutting surface and are for grinding up steel objects down the hole. They are available in any size and thread in Flat Face, Concave, Tapered, or Bladed Reamer style. Junk or Boot Baskets are available to catch large cuttings.

## Underreamers

Mills Underreamers are used to enlarge the diameter of the bore hole casing by lowering the tool to the desired location and pumping fluid or air pressure through the drill rod to open the cutter arms. Typical uses include straightening a dogleg in the hole, enlarging the bottom of a hole, tie back holes, or any bore hole enlargement. *Larger and smaller sizes are available upon request.*



## Roller Type Underreamers

Available with steel tooth or tungsten carbide insert roller cones. Simple design for easy maintenance and parts replacement. Casing cutoff arm option available.

## Blade Type Underreamers

Available with standard "Cutrite" crushed tungsten carbide chips or carbide inserts. Field replaceable. Sizes are adjustable by adding a longer or shorter blade.



## Hoist Plugs

Mills customized pin or Box Thread Hoist Plugs.

Mills Machine can custom manufacture any pin or box connection that you require for your system. We have over 600 different thread gauges in stock. Our Hoist plugs are manufactured from 4142 heat Treated Alloy Steel and can be customized to meet your individual requirements.



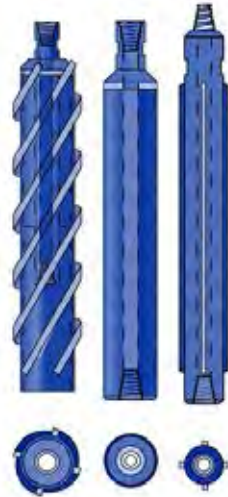
## Stabilizers

**Keep your hole straight with a custom stabilizer from the down hole experts.**

Mills Machine Company has been manufacturing drill string and bottom hole stabilizers for over 60 years and offers a multitude of styles and combinations!

- Smooth
- Flow through
- Straight Ribbed
- Spiral Ribbed
- Over Hammer
- Spiral/Straight Ribbed Combo

Options include any outside or inside diameter, length or thread configuration with breakout flats or lugs, float valve bore or cast carbide ribs. Stabilizers are made to exacting standards with the highest quality alloy steel and tungsten carbide coating.



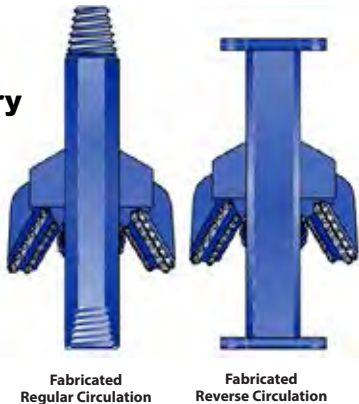
## Holeopeners

**Mills Machine doesn't charge a penny to design a custom Rotary Holeopener to meet your special needs.**

There are a multitude of options and designs available:

- TCI or Steel Tooth Rollers, Drag and Bullet Cutters
- Any Thread or Flange Connection
- Regular or Reverse Air or Fluid Circulation
- Fabricated, Fixed Cutter or Bolt on Designs
- One, Two or Multiple Stages

We have been building Rotary Holeopeners for over 60 years for Vertical, Horizontal Raise Bore, and Directional Drilling. So don't buy a hole-opener built in someone's garage. Call Mills Machine Company, the Holeopener professionals.



## Claw Bits

**These bits offer inexpensive, rugged, carbide-tipped, field replaceable cutters and pilot bit.**

Mills Machine Company offers **The MilClaw®** and **KenClaw®** patented rotary drilling bits for the Water Well, Blasthole Mining, Construction, and Shallow Oil Drilling Industries.

The **GeoClaw®**, for the Groundwater Heat Pump Industry is suited for any type of earth-drilling applications, sizes range from 3 3/4" and larger.

Standard configuration has smaller blocks, and bullets. The heavy-duty design features a crossed-bullet pilot for harder formations.



## Rotary Subs

**Not sure what threads you have or how to connect what you have to what you need?**

Let the Drilling Tool Experts at Mills Machine solve your thread connection problems! We also stock a large assortment of rotary subs to connect most common drill rod threads to rock bit threads and can custom manufacture any other thread combination.

Some options are:

- Breakout Flats
- Breakout Lugs
- Bored for Float Valve
- Bottle Neck Style
- Hour Glass Style

We have over 600 different thread gauges in stock and if we don't have your thread, we can make it with your sample!



## Mills Rapid Response

Mills has an extensive stock of standard products on the shelf and a large inventory of bit bodies and semi-finished stock that can be turned into custom products for quick shipment.



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