



EVER SHARP TOOLS

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Founded in 1990, EST Tools Ltd. (Ever Sharp Tools) has been providing the machining industry with high quality custom products including cutting tools (broaches, forming racks, hobs, skives and shapers, profile milling cutters, custom drills and mills, annular cutters) and precision measuring gages (functional spline gages, variable gages, master gears) for over thirty years.

In 2016, EST Tools America, Inc. (dba Ever Sharp Tools) was formed and strategically located in Southeastern Michigan to serve customers throughout North America, supporting the sale of custom manufactured products from EST Tools along with offering local, state-of-the-art CNC tool sharpening and skilled technical services.

From internal spline broaches to shaping and skiving, from external broaching, cold forming, to hobbing and milling, and from standard functional go/no go gauges to specialty variable gauges – EST's highly experienced team designs custom precision gear and spline tools and inspection solutions, offering our customers both exceptional quality and value.

COMPANY TIMELINE

In 1990, the Guiyang Tools started industrial tool manufacturing in an abandoned factory in a small Haiyan town. Roughing end mills & straight-sided spline gages were the two product lines at the time. By 1995, the business expanded to include straight-sided broaches and hobs. In 1997, the business was rebranded to form EST Tools Ltd. "Ever Sharp Tools".



In 2007, EST added spline cold forming racks. The following year, an extra-large ring gear broach measuring 3000mm overall length and 230 mm diameter was successfully made and delivered to a heavy-duty truck transmission manufacturer. By 2013, EST designed and manufactured helical ring gear broaches for domestic automatic transmission manufacturers.



1990-1997

2007-2013

1998-2006

2014-2016

In 1998, EST expanded into involute spline cutting tools to serve the powertrain and transmission industry. In 2003, further growth required adding a new office building and implementation of an innovative ERP system. By 2006, the product series expanded from two to six, include custom precision drilling & milling cutters, turbine disk fir-tree broaches and involute spline variable gages.

In 2014, EST initiated Phase I expansion, including a new manufacturing plant in a 2nd location. In 2015, EST Tools was listed on SZSE (stock code 300458). In 2016, EST Tools America, Inc. was established in the United States to support sales and service in North America.



In 2017, EST acquired a well-known hob manufacturing company which became the 3rd manufacturing location. In 2018, in response to innovation and technology development, EST established a joint project with prestigious local university and key customer to carry out research on design and manufacturing of more efficient cutting tools for a specific application. In 2019, EST Tools America purchased a 25,000 sq. ft facility in Michigan, while Phase II of manufacturing expansion was completed in Haiyan, adding a new office building with a state-of-the-art showroom.



In 2020, EST celebrated its 30th Anniversary. In 2021, EST entered Phase III of construction, adding convention center, cafeteria, employee sports complex, and more manufacturing facilities, and renovation of the existing manufacturing plant.

2017-2019

2020-2023

2024 and beyond

Entering our 35th year of business, EST continues further research and development to constantly improve and lead the industry with innovation. We continue relentless pursuit of our vision to be the leader in our industry, shaping the future of manufacturing by creating tools that drive progress and efficiency.



BUSINESS LOCATIONS



■ Plant 1 - 68 Xinqiao East Rd., Haiyan



■ Plant 2 - 8 Hengfeng Rd., Haiyan

EST currently employs more than 800 people and has four global manufacturing operations:

- Plant 1 - Headquarters, engineering, R&D, main mfg. facilities
- Plant 2 - Custom Drills & Mills manufacturing
- Plant 3 - Gear cutting tools manufacturing & service
- Plant 4 - US facility - North American Sales & Service Center
- Austria Sales Office - European Sales & Customer Service



■ Plant 3 - 25 St. East Xinqu, Wenling



■ Plant 4 - 10138 Radiance Dr., Ira



■ Austria Sales Office

OUR PRODUCTS



Explore our comprehensive range of custom precision products, designed to meet the diverse needs of industries worldwide. Our commitment to quality, value and customer satisfaction sets us apart as an industry leader.



Internal Broaches



Internal Broaches include:

- Spline Broach
- Hard Broach
- Helical Ring Gear Broach
- Extra Large Ring Gear Broach
- Special Form Broach
- Keyway Broach

From serration, straight-sided spline to involute spline, from round-hole to a variety of internal shapes, broaching is one of the most productive and precise metal cutting operations.

All broaches are specially built for your machine, pull or push type, horizontal or vertical. Each broach is custom engineered based on the workpiece specs, conventional or spiral gullet, with or without minor sizing, and utilize our patented steel to achieve consistent quality and longer tool life.



Helical Ring Gear Broach



Hard Broach



Examples from Special Form Broaches

We also offer CNC broach sharpening, reconditioning, trouble-shooting and tool life management services. See page 21 for more information.

External Broaches



External Broaches include:

- Straddle Broach
- Slot Broach
- Form Broach
- Turbine Disk Dovetail/ Fir-Tree Broach
- Pot Broach
- Blind Spline Broaching Dies

We design broach tools and tool holders/fixtures as a package.



Cold Forming Tools



Cold Forming Tools include:

- Spline Forming Racks
- Spline Rolling Dies
- Thread Forming Racks
- Thread Rolling Dies
- Worm Shaft Forming racks
- Worm Shaft Rolling Dies
- Oil Groove Forming Racks
- Carbide-insert External Spline Swaging Die
- Solid Carbide Internal Spline Swaging Die

Spline & Gear Measuring Tools



Spline and Gear Measuring Tools include:

- Functional Spline Go/ No-Go Gauges
- Expanding Spline Mandrel
- Concentricity Locking Ring
- Variable (indicating) Dimension Over/Between Balls Gage
- Variable (indicating) Circular Tooth Thickness/Space Width Gage
- Setting Master for Variable Gage
- Custom Variable Gage for Spline Related Specs
- Master Gear

- Variable Gage: handheld styles (up to 50 mm pitch diameter); tabletop style (up to 300 mm pitch diameter)
- Data transmittable indicator available
- Spline design per ANSI, DIN, JIS, ISO standards or custom spline specs
- Wear resistant material and treatment available upon request



Ring Gauges



Plug Gauges



Variable Gauges



Expanding Spline Mandrel



Master Gears

All gages are inspected in our ISO10012 certified lab.
ISO 17025 certified inspection reports available upon request.

Gear Cutting Tools



Gear Cutting Tools Include:

- Hobs: shank or bore type
- Shaper Cutters: shank, deep-counterbore, or disk type
- Skiving / Scudding Cutters
- Rack Milling Cutters
- Chamfering/Deburring Tools

All gear cutting tools are custom designed and made utilizing optimized material and coating to achieve high performance and long tool life in wet or dry cutting applications.
Accuracy grade: DIN A, AA & AAA



Hobs



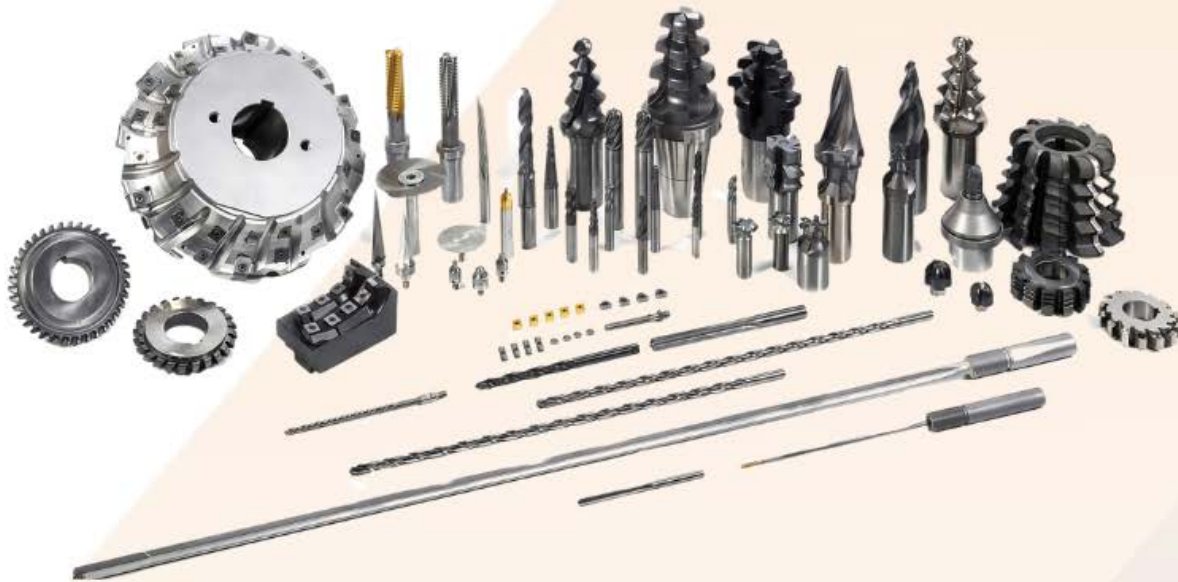
Hobs, Shapers, Skives



Shapers & Skiving Cutters

We also offer CNC hob sharpening services!

Custom Drilling & Milling Cutters



Custom Drills & Mills Include:

- Solid Carbide Drill with Coolant Holes
- Deep Hole Drill
- Gun Drill With Inserts
- Spline Milling Cutter
- Fir-tree Groove Milling Cutter
- Dovetail Milling Cutter with Inserts
- Rail Milling Cutter with Inserts
- Gear Milling Cutter with Inserts

Each tool is precisely made using advanced grinding and inspection equipment.



Annular Cutters



Annular Cutters Include:

- Tungsten Carbide Tipped (T.C.T.) Core Drill for Thick Steel Plate
- HSS Core Drill with 1", 2" or Custom Cutting Depth
- HSS or T.C.T. Rail Core Drill
- T.C.T. Hole Saw for sheet metal
- Accessories: adapters, pins, etc.
- BTA drill

The high-efficiency annular cutters are adaptable to all portable magnetic drill machine brands.

Thread Tools & Gauges

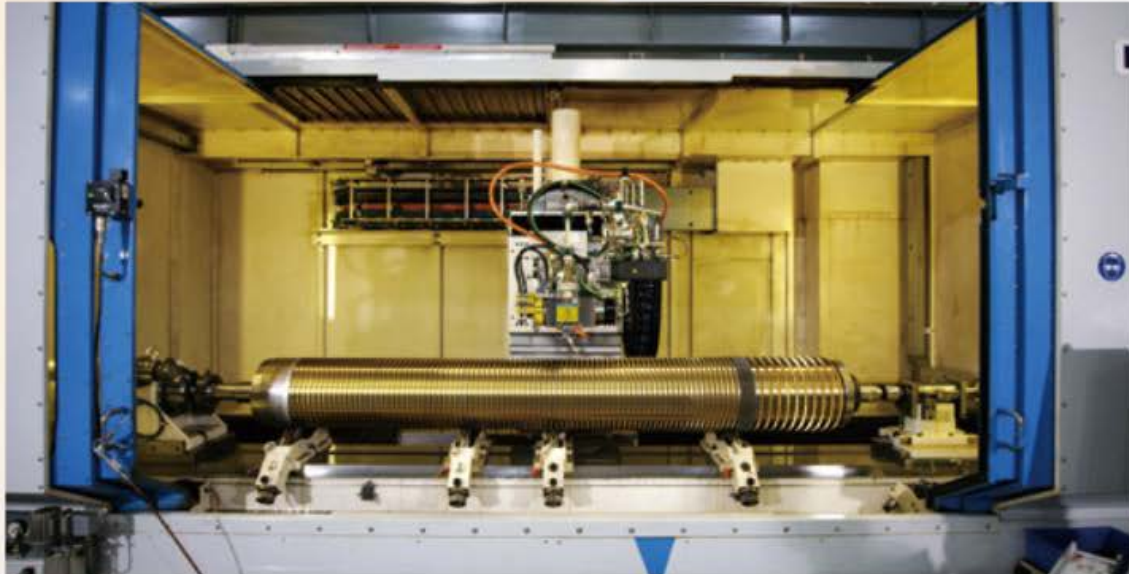


Thread Tools & Gauges include:

- Straight-Groove Tap with or without Internal Coolant Holes: for processing short-chip materials
- Spiral-Groove Tap with or without Internal Coolant Holes: chips discharge upward along groove, common for processing blind holes
- Spiral-Tip Tap: chips discharge downward for through-holes and leaves excellent surface finish
- Extrusion Tap: a new chipless processing technology, suitable for copper alloys, aluminum alloys, stainless steel, low carbon steel, with low strength and high plasticity
- Nut Tap: for machining high volume thread nuts
- Thread Milling Cutter with or without Internal Coolant Holes
- Functional Thread Go / No Go Gauges
- Custom Designed Thread Gauge



Custom Engineered Solutions



EST provides a variety of custom solutions and services, performed by experienced and skilled technicians, located at our Michigan service center.

- Broach maintenance and repair: tool inspection; troubleshooting; damage assessment and repair; broach reconditioning; CNC sharpening; flat tool sharpening and shimming
- Hob sharpening: tool inspection; CNC sharpening; Gear analyzer report
- Custom design of precision cutting & measuring tools: internal and external spline processing and measurement solutions; gear processing solutions; thread processing solutions
- Reverse engineering: provide us with your existing cutting or measuring tool and our team of experts will assess and evaluate the appropriate options for a new and improved product.
- On site support: our team of highly skilled professionals are available to assist in the assessment of tool-related challenges in order to determine steps needed to correct and resume effective operations.



Quality Management System



Laboratory Accreditation



Environmental Management System



Occupational Health & Safety Management

EST is proud to maintain the following ISO certifications:

- Quality Management System per ISO-9001:2015
- Laboratory Accreditation per ISO-17025:2017
- Environmental Management System per ISO-14001:2015
- Occupational Health & Safety Management System per ISO-45001:2018



EST holds 98 patents, including 23 invention and 75 utility patents.



As we look to the future, EST envisions a dynamic evolution that embraces innovation, quality and customer-focused solutions. Our commitment to excellence will continue to drive us to achieve industry leadership and operational excellence.

EST will shape our future growth by continue focusing on the following:

- Invest in Innovative Technologies & Processes
- Dedicate to Quality Assurance and Compliance
- Provide Solutions with a Customer-Focused Approach
- Foster the development of a Skilled Workforce

Moving forward, our vision is to be the world's leader in our industry, known for our technological innovation, exceptional quality and unwavering dedication to our customers. Together, we will shape the future of manufacturing, creating tools that drive progress and efficiency in various industries.

We look forward to our customers joining us on this exciting journey as we forge a brighter, more innovative and productive future.



EVER SHARP TOOLS

- **Broach Tools**
- **Hobs, Shapers & Skives**
- **Spline Gauges**
- **Cold Forming Tools**
- **Custom Mills & Drills**
- **Thread Tools & Gauges**

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