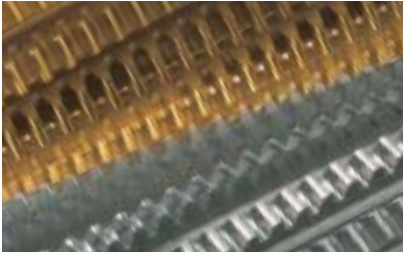


## Star-SU Gear Cutting Tools

# Gear cutting tools



## Hobs

Mod. (D.P.) range 0.5 - 17 mm (50 - 1.5)  
Diameter range 20 - 200 mm (0.75 - 8")

We manufacture the most comprehensive range of hobs in North America. When a hybrid hob or a completely new design is needed, Star-SU will supply the solution.

- HSS or carbide
- Bridge Hobs™ - HSS hobs for dry cutting
- bore- and shank-type
- single-/multi-thread
- involute spline
- worm gear and camshaft
- chamfering
- parallel or tapered key
- sprocket
- special forms and special drives
- Express Hobs™ for 3-weeks delivery



## Shaper cutters

Mod. (D.P.) range 0.5 - 8 mm (50 - 3.175)  
Min. pitch diameter 20 mm (0.787)  
Max. whole depth 19 mm (0.75")  
Max. diameter 250 mm (9.84")



- HSS
- spur and helical
- hub- and deep counterbore-type
- special cutters for chain sprockets, splines, timing gears and large module cutters.



## Grinding wheels and grinding worms

Wheel diameter 50 - 180 mm (1.96 - 7")  
Wheel thickness 14 - 30 mm (0.55 - 1.18")  
Wheel bore size 18 - 80 mm (1.41 - 3.14")  
Loc. face dia. 23,5 - 110 mm (1.08 - 4.33")

- electroplated CBN grinding wheels and worms
- diamond-plated profile grinding wheels and worms for various applications including special wheels for rotor grinding
- shave grinding (external honing) wheels



## Milling cutters

Latest technology gives us the ability to produce accurate form relief cutters in various designs.

- saw blade cutters
- rack cutters and blades
- Star sticks
- straight and spiral gash
- shank drive
- interlocking
- intermittent cutting



## Rack cutters

Length flat cutters 292 mm (11.5")  
Length raised teeth c. 277 mm (10.9")

- standard and helical
- HKR
- sprocket
- christmas tree for roughing
- one tooth cutter

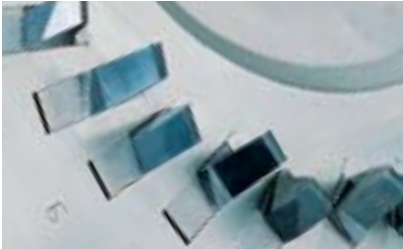


## Saw cutters

We are the number one for precision in pitch accuracy and tooth height. Cutters for hack, band and circular saw blades come in variable pitch.

- straight and interlocked sets
- standard and precision quality
- single piece circular
- intermittent continuous feed
- special tooth forms incl. chip breakers

# Gear cutting tools



## Bevel gear cutting tool systems

Star-SU provides you with sticks, cutter heads and cutter head repair services for face hobbing and face milling applications.

- roughing cutters
- finishing cutters
- HSS and carbide blades



## Shaving cutters

Mod. (D.P.) range 1 - 15 mm (25 - 1.6)  
Diameter range 70 - 400 mm (2 $\frac{3}{4}$  - 15 $\frac{3}{4}$ "")  
Face width 70 mm (2 $\frac{3}{4}$ "")  
No. of teeth 13 - 240 teeth

- plunge
- underpass
- diagonal
- conventional



## Chamfer-roller tools

Patented, highly economical solution combining chamfering and rolling in one tool.



## Chamfering tools

To chamfer the flank edges of spur and helical cylindrical gears. The chamfering operation prevents edge distortion during heat treatment and protects the tooth profile against any nicks that may occur during handling.



## Deburring tools

- standard tools for gears with parallel faces.
- serrated tools for gears with inclined faces.
- R-type tools for gears with root diameter close to test flange.

**NEW** - Deburring tools for sprocket wheels.



## Master gears

Star-SU master gears come in DIN 3962 class 3 to check standards and calibrate checking equipment. Our masters are supplied with a regrind diagram on request.

Star-SU master gears are produced on the latest Samputensili machine tools. Depending on material and design master gears can be reground - ask us for regrinds of your master gears.

# Gear cutting tools - related services



## From the idea to the tool

Our customers do not have to worry about the complexity of certain tool types. Specify what you need in a particular gear, spline or tooth form and our team of application and design engineers will do the rest: from quoting the product, designing the tool drawing, creating the roll-out to the final manufacturing of the tool. Our expert staff will work closely with you to make sure you are able to meet your requirements.

- hobs
- shaper cutters
- shaving cutters



## Resharpener services

Our service centers in Michigan, Indiana and Illinois provide you with what you really need: fast turnaround of high-precision sharpenings. In some areas pickup and delivery services are available.

- hobs
- milling cutters
- shaper cutters
- shaving cutters



## Coating/stripping/recoating services

Our Gold-Star coatings will improve abrasion, corrosion resistance and can increase life up to 5-10 times in certain applications.

- HSS and carbide tools
- molds and dies
- special tools
- machined parts and other applications

- 
- TiN
  - StarForce TiN/Ti(C,N)
  - AdvantaStar (Ti/Al)N
  - AdvantaStar 'Plus' (Ti/Al)N
  - **NEW** - PerformaStar
  - **NEW** - AlumaStar



## Stripping and replating services

- electroplated CBN grinding wheels
- worm-type CBN grinding tools

## CMS

(Commodity Management Supplier)

Star-SU is an experienced partner of medium and large companies and supplies a complete product cycle management service for gear cutting tools and other gear-related services.



# The complete source for gear cutting tools



Combining two success stories.

A strong and healthy background.



Star Cutter Company was founded in 1927 in Detroit, Michigan. From this small beginning, Star Cutter Company has developed into a world leader in the cutting tool industry with nine manufacturing facilities and four divisions which produce seven product lines.

The new Star-SU joint venture with SU America will combine all sales and service activities for gear cutting tools and machine products in one source for gear technology.

Star Cutter Company will continue to offer its large line of gun drills and pressure coolant reamers, drills, special solid carbide tools and reamers.



Samputensili S.p.A., offers a comprehensive line of machine tools for a wide range of gear cutting applications.

Founded in 1949 in Bologna/Italy, Samputensili has grown from a small tool shop into a worldwide operating company with 640 employees worldwide.

As a part of the Maccaferri Industrial group which is engaged in different industrial activities from the refinery of sugar, soil erosion technology, road construction, real estate and machine tools, we are able to provide constant support in the best interest of our customers.

A comprehensive product line.

Combined resources.

Investments in the future.

Certified quality

Anywhere in North America

In our comprehensive gear cutting tool line you will find almost everything for your gear cutting needs including patented solutions you will find only at Star-SU.

The combined resources of Star-SU enable you to benefit from over 128 years of combined experience in the field of gear manufacturing.

20% of our annual sales is invested into new technologies and production capabilities.

Our cutting tool operations worldwide are quality-certified and have received several quality awards

Star-SU is offering many patented tool technologies with several active, established trademarks.



SU AMERICA INC.

SAMPUTENSILI S.p.A.



Given the combined sales and service network we are close to you in the US, Canada and Mexico.



# System technology from one source



Cylindrical gear hobbing  
 Bevel gear cutting  
 Profile grinding  
 Continuous generating grinding  
 Shave grinding  
 Shaving cutter grinding  
 Hob and milling cutter sharpening  
 Hypoid cutter sharpening  
 Chamfering and deburring



HSS and carbide hobs  
 HSS and carbide shaper cutters  
 Milling cutters  
 Rack cutters  
 Saw blade cutters  
 Shaving cutters  
 Grinding wheels and grinding worms  
 Master gears  
 Chamfering and deburring tools  
 Bevel gear cutting tools



Regrinding of hobs, shaper cutters, milling cutters and shaving cutters  
 Coating of cutting tools, dies, stamps, mechanical parts, punching dies/tools  
 Replating of grinding wheels and grinding worms  
 Grinding of compressor rotors, rotors for hydraulic pumps, gears of special design, worms and cams

Your source for gear cutting tools and machine technology in North America



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