

Gleason

ANNOUNCES HIGH-SPEED GEAR SHAPER

Gleason Corporation has announced the introduction of the 100S Gear Shaping Machine.

The 100S is designed for small-face width gears, including spur and helical gears, both internal and external, as well as automotive synchro rings and tapered gears. It is a compact and robust machine requiring significantly reduced floor space. The 100S is easily moved, quickly installed and powered up.

Some of the significant features of the 100S include high productivity, with stroke rates up to 3,000 per minute, a static and dynamically stiff machine concept, aided by a twin-bearing crankshaft design and a fast clamping and unclamping system HSK 63 for high repeatability and manual activation for minimized weight.

The 100S is offered with standard dry machining cycle and an optional automatic adjustment of stroke position after re-sharpening of the shaper cutting tool. Optional wet machining is also available.

For more information:

Gleason Corporation
Phone: (585) 473-1000
www.gleason.com



Koepfer America

INTRODUCES NEW 'H' SERIES HOBBING MACHINES

Koepfer America LLC introduced the CLC "H" series of heavy-duty horizontal gear hobbing machines to the North American gear manufacturing market. These machines offer a competitive and fully customizable solution for high-precision, CNC horizontal gear hobbing.

The CLC 260-H is rated at 7.874" (200 mm) diameter at 4 DP (module 6.0). Larger work pieces can be hobbled with a maxi-

mum swing of 20.472" (520 mm) diameter. The larger CLC 500-H is rated at 19.685" (500 mm) diameter at 0.847 DP (module 30.0) with a maximum swing diameter of 31.496" (800 mm).

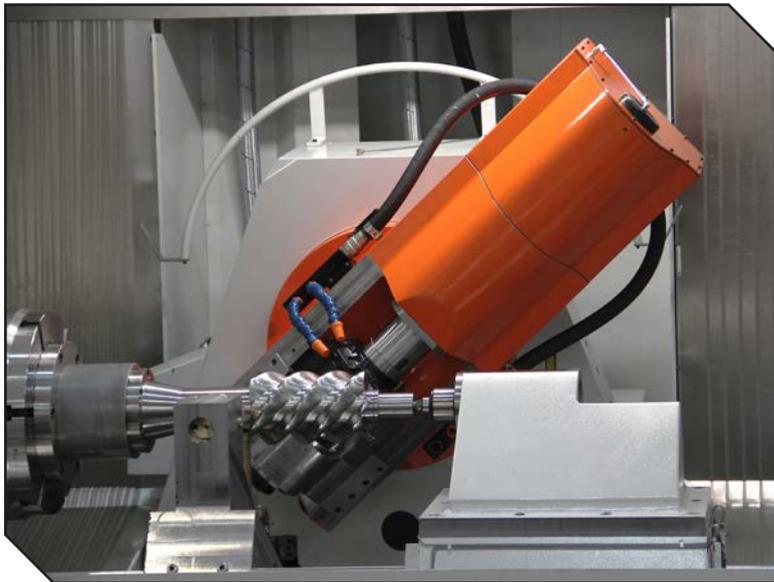
Both machines can be built with different bed lengths to provide axial travel up to 118" (3000 mm), making either machine a flexible solution for shafts and pinions. Additionally, these machines have unique features, such as a large through-hole in the work spindle for extra-long work pieces.

These machines also have standard features such as high-speed, direct-drive torque motors for both the work and cutter spindles, Fanuc 31i numeric control, and optional skiving (carbide re-hobbing) capability with an integrated electronic timing probe. They are also equipped with a high-speed hob head that swivels $\pm 45^\circ$. For high-helix worms or rotors, a special CLC 500-FR-H form milling machine is available.

The CLC "H" series provides North American gear manufacturers a new option for horizontal gear hobbing. These machines can be specially customized as needed to provide customers an optimal solution for their gear manufacturing needs.

For more information:

Koepfer America LLC
Phone: (847) 931-4121
www.koepferamerica.com



Mitsubishi Heavy Industries

DEVELOPS 'SUPER SKIVING SYSTEM' FOR HIGH-SPEED GEAR CUTTING

Mitsubishi Heavy Industries, Ltd. (MHI) has completed development of the "Mitsubishi Super Skiving System" for machining internal gears with high-speed precision.

This new system overcomes technical issues characteristic of conventional skiving by use of an MHI-developed, barrel-shaped, multiple cutting-edge rotary tool, enabling mass production of internal gears. In addition, longer tool life and shorter machining times will enable reductions in production costs. MHI is aiming to commence marketing of the new tool and skiving machine in April of 2015.

The "Super Skiving Cutter" was designed by applying skiving technology to MHI's barrel-shaped grinding wheel, developed for MHI's ZI20A gear-grinding machine, a machine designed for mass-production applications in 2009.

Skiving is a cutting technology whereby a pinion type cutter or other rotary tool is engaged with a workpiece at a crossed-axes angle, and synchronously rotated together.

At the points where the two contact, the effect of the crossed-axes angle generates a sliding velocity of the tool in the axial direction, resulting in high-speed machining. Use of a pinion cutter-type tool, however, typically makes the cutting (skiving) angle obtuse – a drawback that impedes improvements in cutting precision and also causes significant tool wear.

With MHI's newly developed tool, the adoption of a barrel shape averts interference with the workpiece and prevents the cutting angle from becoming obtuse. As a result, a large crossed-axes angle can be achieved, enabling the realization of cutting speeds and precision levels surpassing those of pinion-cutter type skiving.

The new MHI "Super Skiving System" was first exhibited at the 27th Japan International Machine Tool Fair (JIMTOF) held at Tokyo Big Sight from Oct. 30 through Nov. 4.

For more information:
Mitsubishi Heavy Industries, Ltd.
www.mhi-global.com



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KISSsoft AG

ADDS BEVELOID GEARS MODULE

Beveloid gears have their own new module in the KISSsoft system (module ZH1). Sizing and dimensioning of beveloid gears have been implemented based on cylindrical gear standards, which also makes it possible to consider load spectra.

The usual flank modifications, such as helix angle modification or negative

crowning, are still available to help optimize tooth contact in a 3D model.

Finally, the tooth contact can be verified using the graphical contact analysis method, and the models can be exported for various purposes, such as FE analysis, 5-axis milling, or output to a measurement grid.

For more information:

KISSsoft AG
Phone: +(41) 55 254 20 50
www.KISSsoft.AG

Oelheld

RELEASES CONTROXID 1642 RUST PROTECTION FLUID

ControXid 1642 is a ready-to-use rust protection fluid for coolant circuits based on synthetic, water-soluble corrosion inhibitors. It is low-foam and affords reliable protection against corrosion as well as high resistance to fungal and bacterial contamination.



ControXid 1642 can be used for temporary corrosion protection during hydraulic tests, corrosion protection in coolant circuits and as a coolant for machine tool spindles. It is not caustic, does not contain nitrites, chromates, heavy metals, phosphates, chlorine compounds or amines. It protects ferrous metals (steel, cast iron) against corrosion and has no effect on aluminum alloys, other nonferrous metals or mineral oil-based sealing materials.

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Ipsen

SHIPS TITAN FURNACE BY AIR

As the world evolves, so do the ways products travel to customers.

Ipsen recently hit a new milestone, shipping their first Titan vacuum furnace by air. This Titan H2 with 2-bar quench was shipped to a company located near Shanghai, China as part of a collaborative 3D printer-furnace package. This company is part of the continuous casting industry, and it will use the Titan furnace to process printed steel part prototypes and assist in furthering the company's new research and development projects.

This thermal processing vacuum furnace was purchased as part of Ipsen's partnership with a global provider of 3D printing machines and printed products. Since the partnership began, several 3D printer-furnace packages have been sold to companies throughout Europe and North America; however, this was the first combination to be sold to a company in China.

The Titan vacuum furnace's journey began at Ipsen's Cherry Valley, Illinois facility, where it was assembled. During that time, the customer visited Ipsen's facility to receive hands-on installation and operation training. The furnace was then shipped to Kentucky's CVG Airport. From there, its modular and compact size allowed it to be loaded upon a plane and shipped to China.

Even though this is the Chinese company's first 3D printer and first vacuum furnace, Ipsen's global presence – including an office located nearby in Shanghai – gives them immediate access to support whenever necessary. Customers can also take advantage of Ipsen's Global Support Team, which facilitates on-site installation, training and start-up assistance.

Ipsen's Titan line is a self-contained, skid-mounted system that installs in just one day. Designed for ease of use, the Titan is designed for first-time heat treaters and experts alike. Titan's standardized and simple control system operates in 20-plus languages, meets global industry standards, switches easily between units of measure and stores up to 1,000 recipes. The Titan is able to handle a number of different processes, including annealing, hardening, brazing, sintering, tempering and more.

For more information:

Ipsen, Inc.
Phone: (815) 332-2679
www.ipseusa.com



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Dillon Mfg.

WILL FEATURE ITS HARD JAWS AT HOUSTEX

Dillon Manufacturing, Inc. announced that its hard jaws will be featured in Houstex booth #127.

Hard jaws from Dillon Manufacturing, Inc. feature diamond-shaped serrations for increased pull-down effect, reducing part slippage and push back, especially when using a bar feeder.

Manufactured of 8620 steel, the jaws are case-hardened, surfaces ground and the jaws coated with black oxide for corrosion resistance.

They are available in different mounting configurations including serrated, T&G, Acme, and square serrated key types to fit all brands of chucks. Dillon chuck jaws have multiple radii for both inside and outside clamping.

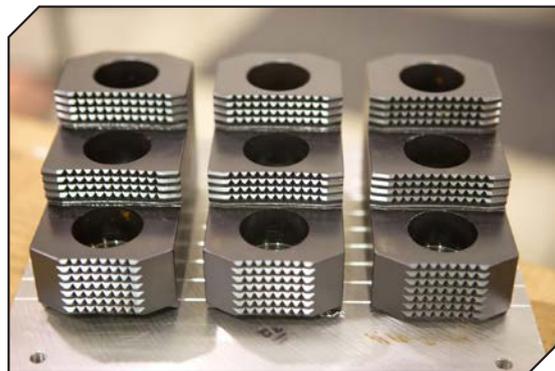
Dillon also produces rough and semi-finished jaws for machinists. Various processes help reduce the amount of machining required by parts makers.

For more information:

Dillon Manufacturing, Inc.

Phone: (800) 428-1133

www.dillonmfg.com



Emuge Corp.

DEBUTS NEW SPEEDSYNCHRO TOOL HOLDER

Emuge Corp.'s new Speedsynchro tool holding solution features an integrated transmission of 1:4.412 for optimizing thread production on CNC machines with synchronous spindles. The integrated transmission is combined with Softsynchro minimum-length compensation to efficiently work with high-cutting speeds and a relatively low synchronous machine tool speed, compensating for

synchronization errors during the threading process. The results are significant time and money savers, particularly in high-production tapping operations.

The new tool holder offers easy programming and up to 40 percent time savings due to significantly shortened thread production cycles resulting from the combined fast acceleration and cutting speeds facilitated by the integrated transmission. The time savings substantially increases the number of tapped holes achieved in a given operation and is especially effective in high-production tapping. Tool life and thread surface quality are both optimized.

Exact thread depths can be achieved with Speedsynchro, as it does not reverse the direction of rotation. Emuge Speedsynchro Tool Holder supports a maximum spindle speed of 2,000 RPM and a maximum tapping speed of 8,824 RPM. Cutting range is from M1 - M8, and an ER16 tool holder size is offered. Internal coolant capability is provided.

For more information:

Phone: (800) 323-3013

www.emuge.com



Seco Tools

TO SHOWCASE PRODUCTS AT TECMA 2015

At TECMA 2015, Seco Tools, LLC will showcase numerous cutting tool products that bring enhanced productivity to metalworking operations. Visitors to Seco stand 848 at the Expo Bancomer Santa Fé in Mexico City from March 3 to 6 will discover several new milling cutters, as well as the latest turning and threading solutions.

Seco will highlight several of its multi-edge cutters, which offer a lower cost per cutting edge. Featured will be the Square T4-08, Square 6 and R220.LN14 lines of square shoulder mills. Made for roughing and semi-finishing operations, Square T4-08 cutters feature four cutting edges and a tangential cutter design that brings surface finish to slotting, contouring and plunging applications. These cutters are available in the M08 and MD08 insert geometries as well as eight different grades.

Various mounting types include cylindrical, Weldon, arbor and Combimaster, and cutting diameters range from 15.875 millimeters to 63.5 millimeters, with a maximum cutting depth of 7.97 millimeters. Corner radii range from .406 millimeters to 1.6 millimeters. Square 6 cutters employ trigonal inserts with six indexable cutting edges, lowering cost per edge. These cutters are available in

two different insert sizes – Square 6-08 and Square 6-04 – to handle a wider range of cutting diameters and depths. All Square 6 inserts can be set to a true 90-degree cutting angle to create clean 90-degree walls and eliminate secondary operations. Inserts lock into place via a center screw placed in the same direction as cutting forces, and wiper flats optimize surface finishes.

Seco designed its new R220.LN14 line of square shoulder mills to bring increased value and performance to demanding applications that require large depths of cut. R220.LN14 provides four cutting edges with a 14 millimeter cutting edge length to reduce cost per edge. Negative rake, 7-millimeter thick inserts provide the robustness needed for heavy cuts up to 14 millimeter in

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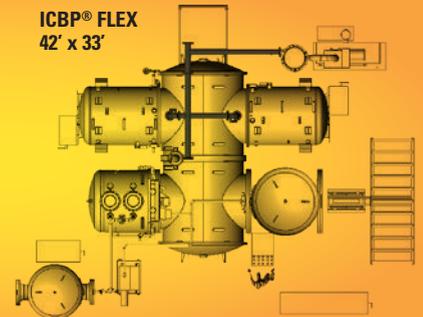
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difficult materials, long-reach applications and less stable setups. The tools are suited for medium to heavy-duty applications requiring a 90-degree wall, and inserts are available in six grades to handle a variety of materials.

Face Milling

Seco will also showcase its new Double Octomill High Feed face mill with 16 cutting edges. Designed to increase metal removal rates in steel and cast iron applications, this face mill brings versatility, productivity and economy to both roughing and finishing operations, and is available in diameters from 80 millimeters to 60 millimeters. Seco offers three insert geometries, four grades, and three different pitch versions – normal, normal+ and close – for use with the Double Octomill High Feed so it can be applied across a wide range of materials. Grind location grooves on these inserts ensure they align between the edge and seat of each cutter body pocket, which allows the cutter to achieve tight tolerances.

General End Milling

Also in Seco's TECMA stand, Niagara Cutter will spotlight its new NS240R solid carbide long-flute end mill for general machining in aluminum, stainless steel and titanium – and especially those applications requiring fine surface finishing. The NS240R end mill reduces machining cycle times in square shoulder milling operations through its one-pass finishing capabilities, and produces tight-tolerance straight walls when cutting deep pockets. As standard, the NS240R provides 5xD depths of cut and come in diameters ranging from 6.35 millimeters to 31.75 millimeters and with various radii, including those specifically for aerospace applications.

Turning

Seco has added turning bars to this patented line of damped tooling that brings increased productivity results to a wide variety of long overhang machining operations. Featuring the company's new, patented GL connection, the same



- Hobbing machine
- Shaving machine
- Deburring machine

Gear Cutting Technology



HARTECH

www.hartech.com.tw

Steadyline turning bar performs both rotating and static operations to increase versatility while helping to reduce overall tool costs. Available in 6xD, 8xD and 10xD, a range of types, including Seco-Capto C4, C5 and C6, and a broad selection of turning heads for CN, DN, WN, CC, DC, TC, TN and RN inserts as well as heads for Snap-Tap threading. Steadyline turning bars can handle a variety of applications and operations, including roughing, finishing, threading and grooving. In addition, these bars feature coolant supply channels for enhanced chip evacuation.

Threading

Seco will display its new Thread Chaser inserts that incorporate multitooth patterns to allow push and pull threading of O.D. and I.D. features with one or two passes. Through-coolant holes and chip formers direct high-pressure coolant to the cutting edge to optimize chip formation, provide efficient chip evacuation and extend tool life. These inserts provide value to manufacturers working with pipes and couplings made from a range of materials for the oil and gas industry.

For more information:

Seco Tools
Phone: +(46) 223 40000
www.secotools.com

Schunk

RELEASES EGS CLEANROOM GRIPPER

The EGS from Schunk is designed for the gripping of small- to medium-sized workpieces, with flexible force and high speed in clean environments, such as assembly, testing, laboratory and the pharmaceutical industry.

It is digitally activated by binary signals for easy start-up and integration in existing facilities and is quick to achieve the maximum number of cycles per minute. The EGS is sturdy, making it almost wear-free, while also supplying high-gripping forces for each cycle.

The EGS has autonomous gripping and swiveling, adjustable gripping force and freely adjustable angle of rotation. It is energy efficient due to the use of an electric powertrain, and is simple to use, with no programming costs.

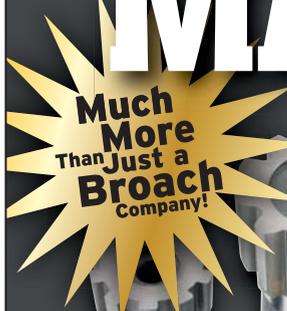
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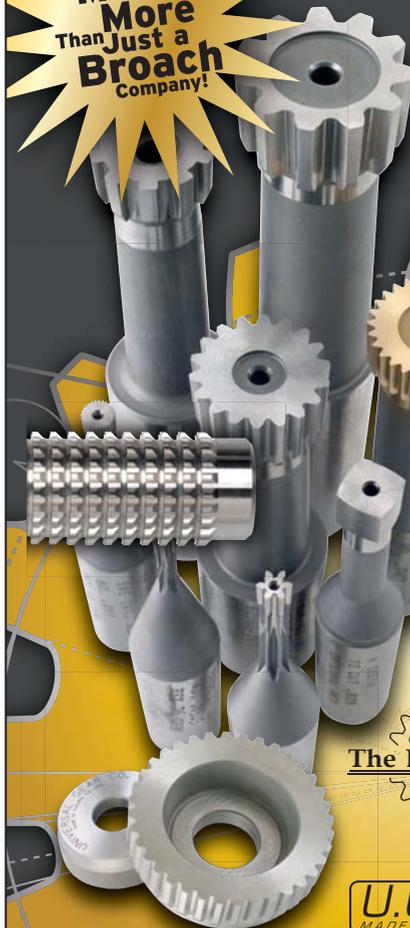
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Ransohoff

INTRODUCES THE NEW GENERATION LEAN-JET RB-FLEX+ PARTS WASHER

Ransohoff, a division of Cleaning Technologies Group LLC, recently introduced its new generation Lean-Jet RB-Flex+ immersion cleaning system.



The Lean-Jet RB-Flex+ is a flexible and scalable platform that can be configured for a variety of parts and capacities from camshafts to locomotive engine blocks weighing over 20,000 pounds. The washer cleans using a triple-action batch cleaning process, which includes a washing and rinsing process of agitation, spray impingement, hydraulic purging through immersion and rotation and heated blow-off drying. Options such as clamp and flush, precision probes and manifolds or ultrasonics can be added if even more focused cleaning is required.

The Lean-Jet RB-Flex+ parts washer also features the latest Siemens programmable controller and operator interface screen. This controls platform boosts system flexibility for automation integration, process control and data logging while offering an intuitive user interface.

As with all of the Ransohoff Lean-Jet products, customer specific basket designs are available to accommodate larger parts.

For more information:

Cleaning Technologies Group, LLC
 Phone: (513) 870-0100
www.ctgclean.com

Grieve

NO. 814 CABINET OVEN SUITED TO PLASTIC OR METAL

No. 814 is a 500 degree, electrically-heated cabinet oven from Grieve, currently used for various plastic and metal part heat treating operations at the customer's facility.

Workspace dimensions of the oven measure 22" W x 21" D x 85" H. 18 kW Nichrome wire tubular elements heat the oven chamber, while a 750 CFM, 3/4-HP recirculating blower provides a vertical downward airflow to the workload.

This Grieve cabinet oven features 4-inch insulated walls, aluminized steel exterior and interior, three integral metal shelves, plus all safety equipment required by NFPA Standard 86 for handling flammable solvents, including a powered forced exhauster, airflow safety switch and purge timer.

Other controls on No. 814 include a fused disconnect switch, digital temperature controller and manual reset excess temperature controller.

For more information:

The Grieve Corporation
 Phone: (847) 546-8225
www.grievcorp.com



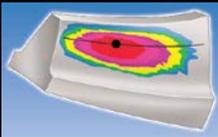
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Liebherr

DEVELOPS MULTI-CUT STRATEGY GEAR HOBBING MACHINE

Liebherr has developed a gear hobbing machine that applies a multi-cut strategy including press deburring. Continual loading and press deburring occur in parallel during machining time.

Separate machine operations take place on two machine tables, each easily accessible and able to swivel 180 degrees. After the blank is locked in and tight-

ened, it is swiveled and the first cut of the gear takes place on the first table, while on the second table the chamfer is produced by pressing. After another swivel, finishing takes place in order to eliminate the bulging that occurs as a result of pressing.

The finishing process is essential to this cycle; it is a stand-alone process not



subject to crossover impacts generated by a parallel process on the neighboring table.

“We chose this strategy, since external mechanical encumbrances should be excluded during machining, especially during the precision finishing process,” said Dr.-Ing. Hansjörg Geiser. “The quality of the components, of the flanks in particular, and the reliability of the process as a whole benefit from this.”

For more information:

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