

Klüber Lubrication

INTRODUCES LATEST LUBRICANTS

Klüber Lubrication, a worldwide manufacturer of specialty lubricants, has introduced Isoflex Topas NB 52 and Isoflex Topas NB 152, two rolling and plain bearing greases based on a synthetic hydrocarbon oil and a barium complex soap. The products are suited for amusement industry applications, such as roller coaster wheel bearings, in order to optimize operational reliability, cut servicing costs, conserve energy and extend maintenance intervals.

The special barium-soap thickener used in the Isoflex Topas NB 52 and 152 greases offers good load-carrying capacity, as well as resistance to water and ambient media. Both products protect against corrosion, as well as oxidation and ageing. Isoflex Topas NB 52 is suitable for temperatures ranging



from -60°F to 250°F and short peak temperatures up to 300°F depending on the application. Isoflex Topas NB 152 can be used in a wide service temperature range of -40°F to 300°F .

Isoflex Topas NB 52 is a versatile grease for many applications, including rolling and plain bearings subject to high speeds, high loads or low temperatures; tooth flanks in precision gears, such as bevel gears in milling machines and electro-mechanical actuators for valves; and for electric contacts and components to reduce insertion forces. Isoflex Topas NB 152 is compatible with many plastics and is used primarily for medium speed rolling and plain bearings, such as coaster wheels, wheel bearings in racing cars, fan bearings and pump bearings. The grease is also suitable for plastic/plastic or steel/plastic friction points.

“Using Isoflex Topas NB 52 and Isoflex Topas NB 152 greases leads to more consistent torque over a wide temperature range as well as longer component life when exposed to water or aqueous media,” said Stephen Mazzola, director of engineering and technical services for Klüber Lubrication North America L.P.

For more information:

Klüber Lubrication North America L.P.
Phone: (603) 647-4104
www.klueber.com

Gehring

INTRODUCES MODULAR HONING MACHINE LINE

Gehring has introduced a new line of modular honing machines for precision metal components. These modular standard machines offer a systematic approach that is advantageous in establishing a highly efficient manufacturing process. Integrating the technologies of the Gehring Group into these new modular product standards, the Lifhone and Powertrainhone made their debut at IMTS 2014 in Chicago.

Small bore diameters often place demands on the production technology different than large ones. Due to customer requests and feedback from the market, Gehring showcased the new Lifhone machine with market proven components in a modular design. This new machine with inner column construction combines modern design with optimized accessibility. The rotary table is placed around the inner column for a quick access to the process stations, a good overview and a quick and easy changeover.

Alternatively equipped with a six- or eight-sided inner column, users can fix up to seven honing spindles. With this, Gehring can assure short cycle times and multistep processes. Pre- and post-gauging stations are fixed on the opposite side to optimize the interior space the best way possible. The compact design offers a low space requirement. The Gehring Operator Panel can be led around the machine so that it is easily visible from any location, thus ensuring optimum flexibility and ease of use.

All of the Lifhone machines are characterized by ease of use and high performance. The Lifhone can be constructed as a multi-spindle transfer solution for mass production, or as a single-spindle design for small production batches as well. The Powertrainhone is also part of a new machine generation with a unique modular concept. The innovative modular design system is comprised of standardized functional components which can be combined with tailor-made honing centers. This configuration enables new freedom and flexibility in production compared to modern hone systems with a conventional layout.

For more information:

Gehring
Phone: (248) 427-3901
www.gehring.de

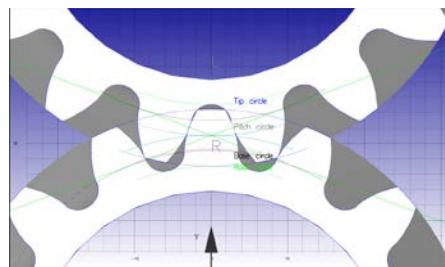
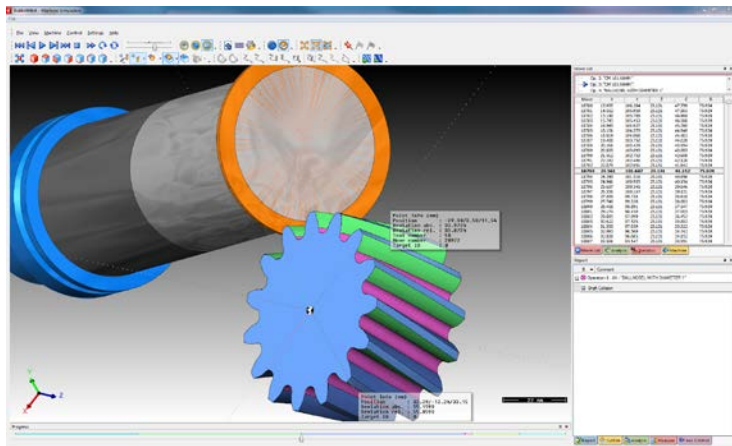


[www.geartechnology.com]

Sandvik Coromant

INTRODUCES INVOMILLING 1.0

Sandvik Coromant introduced InvoMilling 1.0, a system for the flexible manufacturing of gears and splines on universal five-axis machining centers, during IMTS in Chicago. The InvoMilling solution consists of software supported by dedicated milling cutters as well as expertise from the Sandvik Coromant gear application team. With the CAM software InvoMilling 1.0, the CNC program is generated to produce different gear profiles with a limited range of standard-stocked precision tools. The solution has



proven to be effective for manufacturing of gears and splines with great flexibility and high quality.

The InvoMilling software is user friendly with excellent graphics, milling path generation and simulation functionality. It is developed by Sandvik Coromant and Euklid, a company with expert competence in gears and advanced CAD/CAM solutions. Combined with the dedicated InvoMilling cutters CoroMill 161 and CoroMill 162, the new software offers exceptionally short lead-times for production of a very wide variety of gears and splines. InvoMilling is a suitable solution when machining small- and medium-sized batches and when short lead times are a priority.

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Hexagon Metrology

OFFERS HP-O NON-CONTACT SCANNING PROBE

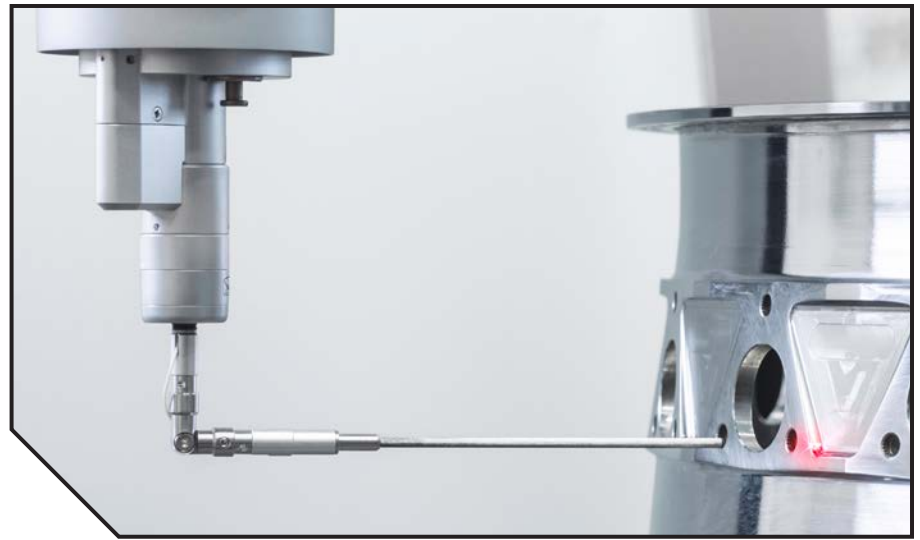
Hexagon Metrology has announced the release of the HP-O non-contact scanning probe for high accuracy measurement and inspection applications. The non-contact probe is an alternative to conventional tactile analog measurement and scanning probes. The device exerts no physical impact on a part, delivering force-free measurement of blisks, blades, gear profiles and flank lines, and other potentially deformable parts, without a loss of accuracy. The HP-O probe's 3 mm diameter and measurement range of up to 20 mm provide access to points that are not accessible to tactile probes. Optical measurements can be captured in single point or scanning mode.

The HP-O probe delivers superior repeatability of under 0.3 μm when used with the Leitz PMM-C coordinate measuring machine (CMM) from Hexagon Metrology. Utilized for ultra-high accuracy inspections, HP-O's scanning technology can be used to inspect metallic or sensitive part surfaces with mirror-like or polished finishes, eliminating the need to spray a part's surface. With an

Sunnen

OFFERS HTA SERIES TUBE HONE

The HTA Series tube hone offers increased part capacity and stoker torque for bore resurfacing of hydraulic actuators, extruder barrels and die casting shot tubes, or manufacture of gas flow meter tubes. Standard models are available for parts from 6.5 ft. (2 m) to 32.8 ft. (10 m) in length, sized in 6.5 ft. (2 m) length increments. All models handle parts with bore ID of 2.5 to 21 inches (63.5-533 mm), maximum OD of 24 inches (610 mm), and weights to 8,000 pounds (3628.7 kg). The HTA can also be custom-configured for part lengths up to 65.6 ft. (20 m), or with a powered section only for unhindered part lengths. Stroker torque capability has been increased by 35 percent over the previous HTA model



acceptance angle of ± 30 degrees, the probe can measure difficult-to-access features at a scanning speed of 1,000 points per second for rapid throughput.

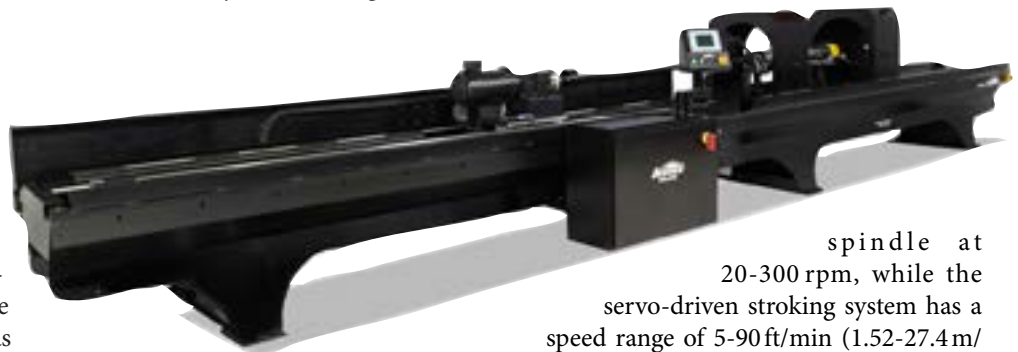
"The accuracy and reliability of the new optical measurement solution are comparable to tactile scanning probes without their drawbacks," said Ingo Lindner, product line manager at Hexagon Metrology. "The HP-O probe is compatible with existing part programs and has flexible configurations to facilitate inspections of even the most complex parts."

The HP-O's scanning technology is not affected by ambient light, and is

based on frequency-modulated, interferometric optical distance measurement. The probe's dense data acquisition does not suffer from degradation at higher speeds. The HP-O's high throughput capability renders it ideal for scanning large parts and parts that are rotationally symmetric. It is multi-sensor compatible in a single part program using a standard tool changer.

For more information:

Hexagon Metrology
Phone: (847) 931-0100
www.hexagonmetrology.us



via a heavy-duty stoker drive gearbox. Width of the steel-impregnated polyurethane belt has been increased from 0.9 inches to 1.9 inches (22 mm to 50 mm), providing a 20:1 safety factor.

The HTA hone is suited for resurfacing and repair work where light-duty stock removal up to 0.030 inches (0.76 mm) is needed to oversize deeply scratched bores.

An electronically controlled, 3-hp (2.24 kW), AC gear motor powers the

spindle at 20-300 rpm, while the servo-driven stroking system has a speed range of 5-90 ft/min (1.52-27.4 m/min). The all-electric machine eliminates the noise, leaks, valve adjustments and performance variability inherent to hydraulic systems.

The HTA Series includes high-end features, such as Siemens drives and PLC-control with touch-screen HMI for setting all machine parameters.

For more information:

Sunnen Products Company
Phone: (314) 781-2100
www.sunnen.com

Mitutoyo

INTRODUCES QM-HEIGHT DIGITAL GAGES

Mitutoyo's next generation QM-Height digital height gage line offers accuracy of 4.5 μm and significant improvements in design and capability to previous generation QM-Height gages. High accuracy/high resolution Mitutoyo Absolute linear encoders for position detection ensure precision and dependability. A large stationary display panel with user friendly icon control keys and GO/NG LED indicator improve user operability.

Enhanced measurement and memory capabilities in the new QM-Height allow the capture of complex dimensional data. Measurement capabilities include; height, as well as step, inside/outside widths, inside/outside diameters and circle pitch (height components), free-form surface maximum/minimum heights and displacement by scanning measurement. The QM-Height remembers the preceding measurement (height component) and can display the difference (pitch) between results below the measurement.

Two new models in the QM-Height line offer a pneumatic flotation system and an ergonomic positioning grip allowing the base of the gage to rise and smoothly move along surface plate for easy positioning.

All new QM-Height models offer long battery life with standard AA batteries (4) — Up to 300 hours (80 hours with regular use of pneumatic flotation function). QM-Height packages include an AC power adapter for uninterrupted use. All new models are fully compatible with existing Mitutoyo Digimatic peripherals. Output options include Mitutoyo

Digimatic and USB. Wireless output is also possible using Mitutoyo's U-WAVE wireless communication system.

For more information:
Mitutoyo America Corporation
Phone: (888) 648-8869
www.mitutoyo.com

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Cimcool Fluid Technology

INTRODUCES INSOL LUBRICATION

Cimcool Fluid Technology is pleased to introduce InSol lubrication. This new technology coupled with unique surfactants and inhibitors provides excellent multi-metal performance without the use of extreme pressure additives. Productivity gains up to 20% have been observed when compared to chlorinated lubricants, and the technology works on

both machining and grinding operations.

“InSol Technology puts lubricant at the cut zone-tooling interface so the lubricant and cooling are optimized. Since InSol Technology works though controlled water solubility, this great performance lasts longer



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due to low depletion rates. Best of all, InSol Technology can help out on tough to process alloys without using materials that can drive waste hauling costs up,” states Bruce Koehler, product manager, Cimcool Fluid Technology. “When you couple that with process savings, lower tooling usage and more productivity output, this is what manufacturers need to help control costs and improve efficiency.”

What is InSol Technology? The performance is dependent upon blends of raw materials that have solubility ranges from limited to complete. By carefully optimizing the selected materials, that puts nearly 100% lubricant at the cut zone where it counts. But because the material is mostly water soluble, it virtually never depletes when regular makeup concentrate is added. “The reason these new products are so special is that we have seen grinding ratios increase by 50% and cutting forces decrease by 30% or more; both of which drive productivity and cost savings for our customers. Imagine using a fluid that virtually looks like water that can increase your productivity so significantly. We are using this technology in our new high-performance fluids for aerospace and medical device applications as well as high-performance parts made from hard metal alloys including titanium. This technology will be available in our Cimtech 300 series as well as our new Cimtech 600 series which combines our MSL (Milacron Synthetic Lubricant) patented lubricants and InSol Technology for even more performance,” said Koehler.

For more information:

Cimcool Fluid Technology
Phone: (888) 246-2665
www.cimcool.com

Birchwood Technologies

RELEASES SAFE SCRUB ST

Safe Scrub ST Heavy-Duty Cleaner easily removes oil and surface soils on metal parts. Safe Scrub ST is an effective biodegradable liquid cleaner that can be used on metal parts before or after processing. This liquid cleaner is used to emulsify oil from iron and steel parts, and then hold the oil residues in solution to prevent them from re-depositing on the parts.

Safe Scrub ST is an environmentally friendly choice because it contains biodegradable surfactants and no EPA regulated metals. Safe Scrub ST effectively removes these types of fluids: mineral oil, grinding coolant, drawing/stamping lubes, and hydraulic oils, as well as water soluble/synthetic fluids.

Supplied as a liquid concentrate, it can be used as stand-alone cleaner after metalworking operations or as a pre-cleaner prior to metal finishing operations such as black oxide coating or phosphating. Safe Scrub ST mixes easily with water and is designed for medium to heavy-duty soak tank cleaning of iron and steel parts. It operates at temperatures of 120 to 180°F, effectively lifting oil residues from the metal surface and holding them in suspension. When the solution is allowed to cool, much of the emulsified oil will float to the surface, allowing removal of the oil with an oil skimmer or coalescing filter and maximizing the working life of the Safe Scrub ST cleaning solution.

Safe Scrub ST's unique blend of detergents makes it free-rinsing in cold water, giving it the ability to produce water break-free surfaces that are receptive to subsequent coating and finishing operations. Safe Scrub ST is suitable for metal part cleaning and maintains a high level of cleaning power while minimizing the amount of product to do the job effectively.

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SMT

RELEASES MASTA SUITE 6

SMT (Smart Manufacturing Technology Ltd.) has released the latest edition of its drivetrain design and analysis software, *MASTA Suite 6*. Since its first release over 10 years ago, *MASTA* has been used to facilitate development and manufacture of transmission and driveline technologies.

MASTA Suite is package of drivetrain design, analysis and manufacturing simulation tools. With integrations to CAD, Gleason's *CAGE* and other third-party tools, it is designed to help engineers cut costs and time-to-market while enabling innovation.

This latest edition of the software was developed based on feedback from users over the years, and one of the primary goals was to give users greater control and a more ergonomic workflow. To accomplish this, the new version adds new zooming tools, scaling legends and additional tabs to make navigating and understanding the system easier. In addition, a customizable editor makes Load

Case and Duty Cycle configuration precise and even faster

SMT has built the development of *MASTA Suite 6* around what the company refers to as its four Cs. Their goal is for the software to be comprehensive, concise, customizable and compatible.

Comprehensive – *MASTA Suite 6* includes access to a complete set of gear, shaft and bearing development and analysis tools.

Concise – With the software, engineers can accurately and rapidly calculate industry ratings based on full system inputs. Improvements to the user interface and workflow ensure that *MASTA* fits the engineer. This not only allows new users to learn the software quickly but seasoned users will also find efficiency enhancements to their development cycle.



Customizable – Results reporting is fully customizable in a report builder, allowing it to be flexibly tailored to the needs and brand of the client, including the creation and saving of templates to use again and share with others. The



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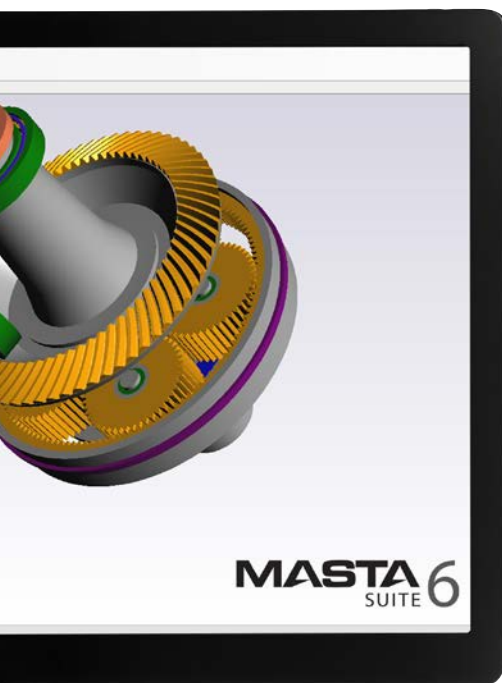
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software package is also more modular in design, allowing you to tailor your installation to your business's needs.

Compatible – *Masta Suite 6* is designed for ease in importing and converting from various 3D model file formats. Seamless integration with Gleason's *CAGE* software closes the development cycle for bevel gears, allowing designers to work within the constraints of machine calibrations. Furthermore, *MASTA Suite 6* is supported from Windows XP onwards and certified compatible for Windows 7, 8 and 8.1, allowing anyone with a license to share the same professional experience between different operating systems.

In addition, *MASTA Suite 6* introduces a number of new modules. Two new fluid film bearing modules allow for development of tilting pad thrust bearings and tilting pad journal bearings. Also, additional modules have been added for gear shaving. These include a new plunge shaver micro geometry analysis module and a module for simulating conventional shaver dynamics to ensure consistent shaving quality throughout the cutter's life.

The software's customizable reports have also been enhanced with additional features, including a style editor and custom templates that can be shared across an organization.

"*MASTA Suite 6* represents a great milestone for the company and is a testament to its success in markets worldwide," says Euan Woolley, technical director at SMT. "We've had phenomenal feedback from our users, so when working on this edition we really wanted to demonstrate they lay at the heart of its development."

For more information:

SMT—Smart Manufacturing Technology
Chartwell House,
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Mazak

ADD TURNING TO MACHINING CENTER FOR PROCESS INTEGRATION

Mazak introduced turning capabilities into its VariAxis Series of multiple-surface, simultaneous five-axis machining centers with the VariAxis i-700T. An 18,000-rpm, 40-hp 40-taper spindle on the VariAxis i-700T features a compact nose design for better part access during side machining operations, where pallet

interference might otherwise be a problem. A 30-tool automatic tool changer adds part processing flexibility and contributes to continuous non-interrupted machining operations.

With a Y-axis travel of 43.30" and X-axis of 23.62", the VariAxis i-700T easily accommodates workpieces measuring

up to 28.74" in diameter and 19.69" high. Its roller gear cam-driven rotary/tilt table, with 360 degrees of rotation in the C-axis and +30 degrees through -120 degrees of tilt in the A-axis, is supported at both ends and provides stable high-accuracy five-axis machining.

The VariAxis i-700T sports the new Mazatrol SmoothX CNC that is a key element — along with new machine hardware and servo systems — of Mazak's Smooth Technology.


At IMTS, Mazak paired the VariAxis i-700T with an optional two-pallet changer to demonstrate how easy it is to achieve continuous part processing. This simple and efficient automation feature enhances productivity by allowing operators to load, unload and inspect a part on one pallet, while the machine continues to work on a part fixtured on the other pallet.

For more information:

Mazak Corporation
Phone: (847) 885-8311
www.mazakusa.com

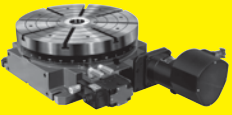


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Astro Guidance Test Platform

References the north star three axis (Ultradex) index system. System accuracy 0.3 arc second band, PC based control, IEEE-488 interface.




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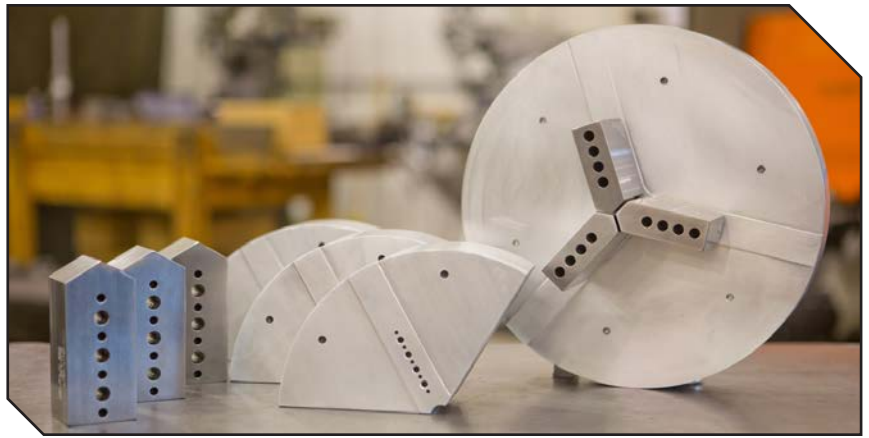
AIR CHUCKS PROVIDE MAXIMUM GRIPPING SURFACE

Dillon pin-location top jaws hold small and delicate parts—such as those often machined using air chucks - firmly without damaging or marring their surface. The jaws are milled with very close tolerances to correctly fit the chuck.

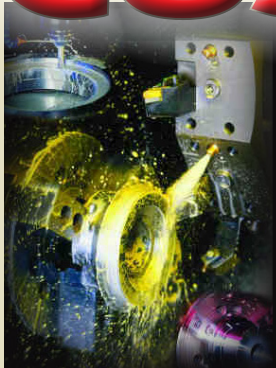
The jaws can be customized per customers' requests. Two types of jaws are offered, blank or (blocks) top jaws in 1018 steel or 6061 aluminum, or full circled or (pie shaped) top jaws in A356 aluminum, 6061 aluminum or 1018 steel as standard materials. Other materials per customer specification can also be used. They are ideal for all types of air chucks, including Northfield, Microcentric and more. Typically available with production lead times of 3 days or less

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