



Mitsubishi Heavy Industries America

Booth N-6837



Mitsubishi will display two gear cutting machines at IMTS 2010: the ST25CNC gear shaping machine and an automated GE20A gear hobbing machine.

The ST25CNC shaper is one of Mitsubishi's "programmable lead guide" shaping machines. Mitsubishi was the originator of this technology in the middle 1980s. They have developed the ST25CNC as an entry-level machine for shaping gears up to 250 mm diameter and helix angles up to +/- 35 degrees.

The GE20A hobber is one of many machines Mitsubishi maintains in stock. This model offers wet and dry hobbing capabilities. The GE20A on

display will be equipped with a precise positioning ring loader for fast, efficient loading and unloading of workpieces up to 200 mm diameter.

Both machines will be available for customer delivery directly after the show.

For more information:

Mitsubishi Gear Technology Center
46992 Liberty Drive
Wixom, MI 48393
Phone: (248) 669-6136
Fax: (248) 669-0614
www.mitsubishigearcenter.com

American Broach & Machine (including American Gear Tools and QC American)

Booth N-7027



American Broach will feature two of its new Table Top (TT) models—the Model TT-2-24 and Model TT-SP-2-24. Both models were invented and patented in 2009.

The TT machines are equipped with electromechanical dual-screw drive systems that eliminate the cadence (pounding) associated with hydraulic broaching machines. The twin-screw drive system is designed to provide smooth and steady power, increased tool life and part quality and reduced perishable tooling cost per part.

American Broach's design features a simple, flat table-top broaching area with crossing T-slots to accommodate fast, accurate setup. This one-piece, solid table top has been designed to attach to a fabricated main box assembly, which is mounted on top of a coolant sump box base.

The modular design keeps the cost of build and maintenance service low, while maintaining structurally robust physical attributes by design, without the traditional girth used by broaching machines.

The Table Top Broaching Machine also features an unguided pull bridge powered by two spindles (roller or planetary); they are mounted under the table in a compact design to eliminate the need for guide rods or bearing ways that will not tolerate being mounted in areas with chips and coolant under the table. These spindles are fully enclosed by slide covers to prevent chip interference and coolant damage.

The spindles are powered by a tooth belt by way of oversized tooth drive pulleys; this over sizing allows a single motor to drive both spindles simultaneously and with extreme accuracy without positioning the drive belt in line in the space where the cutting tool travels. Tool location is monitored through motor rotation position tracking by a simple encoder, and the drive system is enclosed and sealed into the hollow bottom under the broaching table.

Mike Casto, American's Sales Manager will also be there touting American Broach's expanded CNC broach tool resharpener ser-

vices. Casto will be sharing methods for “reducing the cost of broaching by using better broach tools and CNC resharpener” and “putting a price on the hassle factor that often accompanies the lowest price tooling and resharpener.”

American Gear Tools is a newly launched division of American Broach, which will be displaying gear cutting tools in the same booth. American Gear Tools designs and delivers all types of gear cutting tools including hobs, shaper cutters, shaving cutters, milling cutters, straight and spiral bevel cutters, rack type cutters and spline rolling racks.

For more information:

American Broach & Machine Company
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Fax: (734) 961-9999
www.americanbroach.com



MAG Americas

Booth S-8519

Stop by the MAG booth to see gear grinding and hobbing integrated on a vertical turning center. The VTC 2500 will be equipped with a new automatically changed grinding attachment. Combined with built-in gear hobbing capability, this setup is designed to dramatically increase the multi-processing capabilities of MAG's vertical turning centers. The VTC is designed to produce large bearings, gearboxes and gears needed in heavy machinery applications. The show machine features machine vibration monitoring system (MVM), two-axis programmable rail height and a live spindle, C-axis right-angle attachment.



For more information:

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Erlanger, KY 41018
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Fax: (859) 669-1897
www.mag-ias.com



Emuge Corp.

Booth W-1536

Emuge Corp. will showcase its line of clamping solutions. Emuge's work-

holding division specializes in providing solutions for applications from low-volume job shops to high-volume automotive production environments. In addition, acting as exclusive North American agent for The Hohenstein Company, Emuge will also offer high-quality, special purpose workpiece



clamping fixtures.

"Our workholding group stays close to our customers to learn about their unique challenges and production environments. Doing so helps us develop the best solutions for their applications," says David Jones, precision workholding manager at Emuge Corp.

The precision workholding line-up will include Emuge's System SG, which is used in many machining operations such as hobbing, shaping, and shaving for gear production, as well as milling and inspection. The System SG's large surface area contact with the workpiece provides a clamping solution which is very rigid, accurate and repeatable.

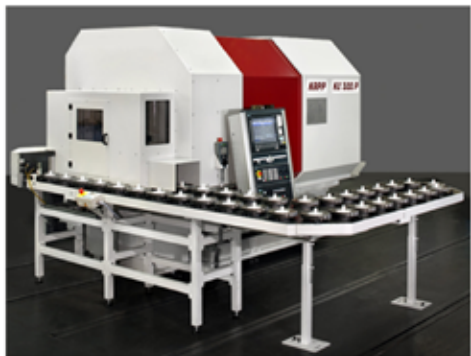
When the eccentricity between pitch circle and seating bore is very small, System SM diaphragm clamping can be used. It allows clamping of the gear wheel at the pitch circle for machining the seating bore. The gear wheel is clamped in both axial and radial directions.

For more information:

Emuge Corporation
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West Boylston, MA 01583-2121
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ITW Rocol

Booth W-2135

Rustlick PowerCool Green and PowerCool Green CF coolants from ITW Rocol are new, long-lasting

water-soluble oils made from naturally derived, vegetable-based oils. These premium coolants are specially formulated to be operator-friendly and to give maximum lubricity and biostability in heavy-duty cutting and grinding applications.

PowerCool Green and PowerCool Green CF deliver extended tool life and physical lubricity in tough operations. The advanced technology used to formulate these plant-based coolants ensures the highest fluid performance, dramatically increases sump life, and decreases overall fluid use, according to the company's press release. PowerCool Green coolants are safe for all metals, including ferrous/nonferrous metals, aluminum, brass, bronze and copper.

These products can be used for a range of light- to heavy-duty applications, including machining, cutting, grinding, milling, drilling, broaching, turning, threading and tapping.

PowerCool Green is available in two versions, chlorinated and chlorine free. PowerCool Green contains chlorinated EP additives; PowerCool Green CF contains non-chlorinated EP additives and is also recommended for use on titanium. PowerCool Green and PowerCool Green CF are available in five- or 55-Gallon containers.

Accu-Lube Gel Paste is a natural-based, environmentally safe lubricant, which is made from renewable resources. This lubricant is well suited to horizontal applications because it won't run or drip. The gel texture of this non-toxic product makes it easy to apply to small and large tools with a soft brush without risk of damaging the tool.

Accu-Lube Gel Paste is designed to eliminate the mess and waste causes by other lubricants. No cleaning is required before heat treating and it is great for short-run machining, reaming, tapping and drilling. This dark blue gel is a neutral product that does not cause



contamination or discoloration of products and is safe for use on all metals. Since it is biodegradable and non-hazardous, no special disposal is required.

Accu-Lube Gel Paste is supplied ready to use and is available in 8 oz. jars and 5 gal. pails.

For more information:

ITW Rocol North America
3624 West Lake Avenue
Glenview, IL 60026
Phone: (847) 657-5343
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Mahr Federal

Booth E-5048

The MarForm MMQ 200 Formtester, which provides measurement of surface finish parameters according to accepted

ISO, ASME and JIS standards, is offered with a combined hardware/software option. The new option package allows operators to reduce setup time and measurement cycle time, as well as reduced cost by requiring a single piece of equipment for both form and surface measurements.

The MarSurf UD 120 can generate



both surface and contour measurements in a single pass. The system is designed for economy for high accuracy over a large measuring range in nanometer resolutions. Both automated motorized operation and joy-stick control are included in the MarSurf UD 120, along with a patented magnetic probe mounting feature that prevents probe damage and allows probe changes quickly, without additional tools.

The Digimar 816 CL Height Gage provides accurate measurements without complicated procedures. A robust design and user-friendly operation combine with advanced features and functionality to improve dimensional measurement on the shop floor or in the lab.

The Precimar Linear 100 is a universal, user-friendly length measuring instrument for quick, precise internal and external measurements up to 100 mm, directly in the manufacturing environment. The unit includes the SarCheck Display, which makes it simple to transfer measured data to PCs.

The 800 EW Digital Test Indicator is shockproof, anti-magnetic, protected against coolants and lubricants to IP65, offers data output via USB or OPTO or RS 232C and battery life up to two years.

A full range of other handheld gauges and other dimensional metrology products will be on display.

For more information:

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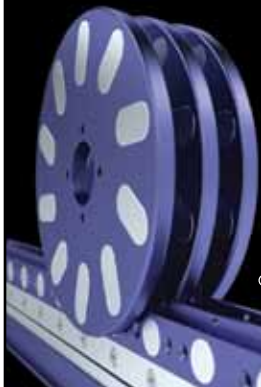
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Supertec Machinery

Booth N-6945



The PG-400CNC gear profile grinding machine marks Supertec Machinery's first foray into the U.S. gear grinding market.

Other machines Supertec Machinery will have on display in the grinding pavilion include the G25P-50CNC cylindrical grinder with conversational language control; the G25A-35CNC anglehead cylindrical grinder, which offers a small footprint

without sacrificing the machine's travel of 10 x 14 inches; the Grindmaster GM-45CNC ID/OD grinder delivers versatility to operators with two X-axis slideways that can be set up in various configurations, such as one OD and one ID wheel or two ID wheels—one for roughing and one for finish grinding; the Master-818CNC surface grinder is an inexpensive, entry-level CNC

continued



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surface grinder in both two-axis (slicing) and three-axis (contour) grinding capability; the G15I-CNC ID grinder; the STC-2008NC single-axis automatic centerless grinder; and an operational scale model of a two-axis CNC vertical surface grinder.

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Globetec International

Booth S-9453



The GHO-500 is a 5-axis gear hobbing machine manufactured by S&T Dynamics (formerly Tongil) of Korea. The machine is capable of cutting spur and helical gears up to 19.6" diameter with modules up to 12.

The machine can accommodate hobs up to 11.8" length and 11.8" diameter. It comes equipped with a 30 hp spindle motor, capable of hob speeds up to 400 rpm. It also comes with conversational programming via either FANUC or Siemens controls.

For more information:

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Fax: (847) 608-9301
staff@globetec.com



Riten Industries

Booth W-1336

A specialist in workholding products for more than 75 years, Riten Industries has a number of new products on display.

Sprint 4 and 5 Morse Taper live

centers are completely redesigned with $\pm .00004$ " accuracy and the highest bearing capacity in their class. These live centers are designed for extended service life, with rigidity to handle workpieces up to 5,000 lbs. with speeds up to 6,000 rpm.

C4T live centers include all the benefits of the new Sprint design with an exclusive labyrinth seal for permanent bearing protection. C4T live centers are especially suited for operations requiring high pressure and flood coolants.

Riten will display a broad selection of spring-loaded linear compensating live centers that self-adjust for

thermal expansion and significantly reduce setup time. The company will also show bell head live and dead centers with interchangeable heads up to 13.5" diameter.

Finally, visitors can come to the Riten booth with their workholding questions to "Ask the Colonel." Riten's senior design engineers will be present to answer technical questions regarding products and services for maintaining or restoring lathes and grinders to centerline. A free brochure will be available describing solutions to actual customer problems, addressing both application and machinery repair issues.

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**Euro-Tech
Corporation**

Booth W-2453

Euro-Tech Corporation will feature INO System Spline Gauges by Frenco of Germany. The spline gage product line provides a quick method of inspecting involute splines, serration splines and straight sided splines to ensure interchangeability of parts even between different manufacturers. Frenco's INO system is an internal standard for the external dimensional measurement of spline gages developed based on national and international standards, making it suitable for even the most highly sensitive and complex components and systems. Frenco spline gages are constructed of extremely wear-resistant high alloy powder steel called HX. Chromium and vanadium alloy content, as well as the hardness of the material, determines the wear resistance of the spline gage. Use can determine the appropriate time intervals between wear inspections depending on this wear resistance. For example, highly wear resistant materials allow the inspection intervals to be significantly extended.

Along with more advanced diagnosis than the currently applicable standards, Frenco spline gages offer traceability to PTB-certified parts, ensuring reliable measuring results. The Frenco calibration laboratory is a DKD calibration station for helix and profile

parts. Certification for runout, pitch and dimensions over measuring circles is under development.

The quoted price for Frenco spline gages always includes comprehensive gage drawings (also available in electronic form) as well as "new" certification from the Frenco laboratory. All spline gages are clearly and permanently labeled with profile data, user identification numbers, manufacturer's drawing and drawing number, material, serial number and date of manufacture. Spline gages are reusable and worn gages can be rebuilt.

Special steels are available for added durability, reduction of test equipment monitoring costs, reduced manufacturing or wear tolerances. These have a higher alloy content and hardness. Special delivery is offered for emergency situations.

In addition, Euro-Tech will display Mytec-Hydraclamp expansion arbors and chucks, which feature unusually high clamping forces achieved through high internal pressures. Extremely high torque values are possible due to the absolute friction grip and centered tension. This torque rating can be up to three times greater with a special hard coating at the clamping sleeve. Hydra expansion elements from Mytec-Hydraclamp can be expanded with-

out a workpiece because the expansion elements are permanently adjusted within the maximum expansion of 0.3 percent. Over-expansion is not possible due to an integrated stroke limiter. A closed expansion system, which is absolutely impervious to dirt and chips, combined with high wear resistance, guarantees a long service life. If space permits, Hydra expansion elements from Mytec-Hydraclamp are generally equipped with an adjustment piston. This makes it possible to set expansion for fine clamping, particularly in the case of thin-walled workpieces.

Tools have a hardness of 56 HRC with a center hardness of 64 HRC. An optional highly wear-resistant coating may be applied, which will result in a surface hardness of 80 HRC. Mytec-Hydraclamp guarantees a minimum of 50,000 expansion cycles for its expansion tools and 12 months of function.

For more information:

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Menomonee Falls, WI 53051
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