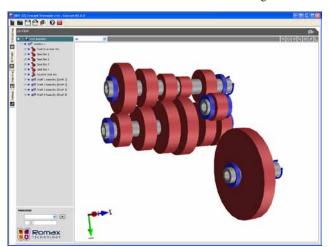
Romax Technology LAUNCHES GEARBOX AND DRIVELINE DESIGN SOFTWARE PACKAGE

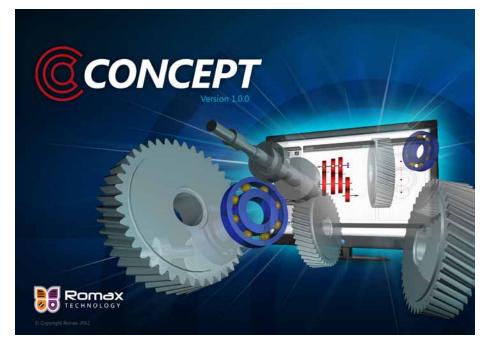
Romax Technology, the gearbox, bearing and driveline engineering specialist, has launched a new design software package that will increase speed, quality, creativity and innovation when designing gearboxes and drivelines. Called *Concept*, the new product delivers on the Romax vision of streamlining the end-to-end, planning-to-manufacture process with open, easy to use software solutions. It has been developed in close collaboration with engineers in the largest ground vehicle, wind energy and industrial equipment companies around the globe.

The result is a highly intuitive dragand-drop design environment enabling rapid creation of concept models. It provides semi-automated sizing, definition and rating of gears, shafts and bearings, with advanced 3-D visualization capability allowing evaluation and manipulation of key parameters. As a result, it promotes creativity as new design ideas can be evaluated rapidly.

Concept also utilizes Romax's analytical capabilities to enable initial NVH assessments, as well as preliminary mechanical design assessments of alternative concepts.

It is applicable for any gear, shaft and bearing system application, from power tools to mining equipment and from complex automotive planetary automatic transmissions to the largest wind turbine gearboxes. The new software not only enables creativity, effectiveness and efficiency, it also promotes a seamless workflow, either as a stand-alone solution or





used in conjunction with other CAD packages.

Its innovative, easy-to-learn interface allows new users to become productive extremely quickly, which means both graduate designers and experienced gearbox and driveline design teams can use it. Romax Technology product manager Dr. Jamie Pears, who is heading up the product launch, believes concept design is one of the most important aspects of the gearbox and driveline product development process.

"Early decisions can be crucial in shaping product performance, robustness and durability, as well as minimizing manufacturing and operating costs,"

> he said. "However, this stage of development can be expensive and time-consuming too, meaning that many engineered products fail to reach their full potential. This nextgeneration design package, which incorporates many of our advanced analytical algorithms,

helps users to pull forward new concepts into robust and highly optimized designs capable of subsequent, detailed development. It not only saves development time and cost but also improves the quality and robustness of the finished product."

Also supporting Romax's vision of streamlining end-to-end, planning-tomanufacture processes is another significant, new capability in the company's flagship product offerings for detailed design and analysis—*RomaxDesigner* and *RomaxWIND*. This enhanced capability for improved manufacturability of end-products includes a comprehensive suite of tools that enables the gear manufacturing process to be considered part of the gear design and analysis process. Romax announced *Concept* in October and will be shipping the software in December.

For more information:

Romax Technology Rutherford House Nottingham Science & Technology Park Nottingham NG7 2PZ Phone: + (44) (0) 115 951 8800 www.romaxtech.com

ITAMCO OFFERS INDUSTRIAL BLUETOOTH TRANSMITTER

Indiana Technology and Manufacturing Companies (ITAMCO) has released iBlue-the first handheld bluetooth transmitter that gathers crucial production data and sends it to bluetoothenabled smartphones, tablets and computers. iBlue replaces several tools, including hardness testers, micrometers and temperature readers. When iBlue is paired with a bluetooth-enabled device, it gathers, records and sends data through its three ports: a K-type thermocouple port-iBlue comes with a K-type thermocouple probe; a 3-pin metal hardness probe port; and a USB Human Interface Device (HID)-enabled port that connects with a wide range of non-proprietary tools including keyboards, micrometers, calipers and barcode scanners. No special software is required, and data from iBlue can be sent as a text email or placed into Microsoft Excel and Notepad. iBlue is compatible with the most common operating systems including Apple's iOS, Android, Blackberry, Windows and Linux.

Expanding Mobile Technology

iBlue isn't ITAMCO's first foray into mobile technology; the company has launched several free smartphone apps for industrial applications. Two of their apps, Hardness Tester and Convert Temperature, extend iBlue's capabilities. Hardness Tester calculates approximate hardness conversion numbers between popular Rockwell, Vickers and Knoop hardness scales for non-austenitic steels. The Hardness Tester smartphone app converts data acquired with iBlue and a hardness probe. (iBlue accepts D/ DC, D+15, E, C, DL and G hardness probes.) The Hardness Tester will graph results, and previous tests (Max, Min and Average) can be recalled with the touch of a button. The data can be sent to any compatible Air Print printer from the app. The app is in conformance with ASTM A956-06 and ASTM E140-07.

The Convert Temperature app converts different scales of temperature, such as Fahrenheit, Celsius and Kelvin. Temperature readings can be emailed, printed and graphed, the same as the Hardness Tester data. The app works seamlessly with iBlue and its K-type thermocouple probe (included). The apps are available for Apple, Android and Blackberry smartphones.

iBlue and the Technology-Driven Shop Floor

iBlue and smartphone apps are part of ITAMCO's overall initiative to bring technology to their own shop floor. Joel Neidig, an engineer at Indiana Gear (a division of ITAMCO) and one of iBlue's developers, said, "We're in the process of connecting our machine tools to a plant monitoring system, so it just made sense to have an electronic method of gathering and distributing the temperature, dimensions and hardness data of our gear products." iBlue is used by machine operators, engineers and quality control staff at Indiana Gear. "iBlue is saving me a lot of time on the shop floor because it's an all-in-one tool," said Michael



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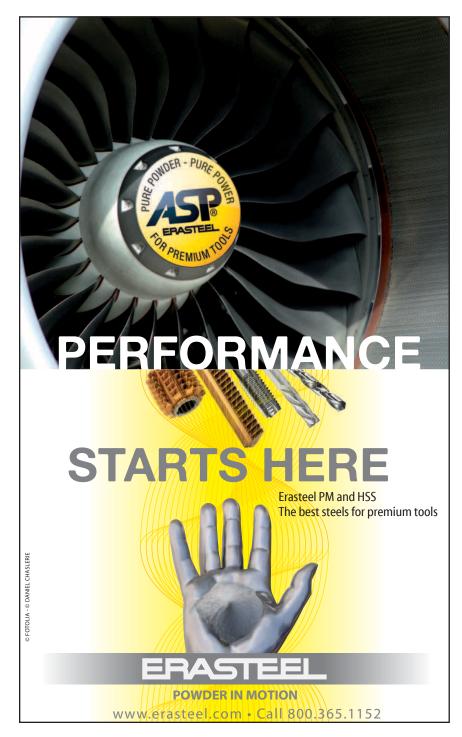
FORGING A CIRCLE OF TRUST TOIL Free: 800.727.6333

Phone: 803.684.3133 www.ajaxring.com Blum, one of Indiana Gear's quality control specialists. "It's easy to carry around and it's accurate. We're already using data gathered from iBlue to electronically track and analyze production processes." iBlue has worked so successfully at Indiana Gear that the ITAMCO staff decided to market it worldwide.

iBlue Is Bundled and Priced for Economy

iBlue comes with a USB charger cable, OtterBox belt clip and a K-type ther-

mocouple probe. The iBlue package is priced at \$499 and can be ordered online with Google wallet at *http://www. itamco.com/iBlue* or by calling ITAMCO at (574) 936-2112. The Hardness Tester and Convert Temperature smartphone apps can be downloaded from the Apple App Store, Google Play, Windows Marketplace and the Blackberry App World. Search "ITAMCO" to locate the apps. iBlue is easy to pair with bluetooth devices and simple to use. ITAMCO has



provided how-to videos and a FAQ page at their website below.

For more information: ITAMCO 6100 Michigan Road Plymouth, Indiana 46563 Phone: (574) 936-2112 www.itamco.com

Polygon Solutions DESIGNS ROTARY BROACHING BRAKE

Rotary broaching can be utilized for making small forms like hexagons and squares in soft materials like aluminum, brass and mild steel. However, when it comes to aligning multiple holes using a rotary broaching tool, the operation becomes extremely challenging. Most rotary broach holders have a free-turning spindle which does not allow for alignment of the holes. The rotary broaching brake is a new mechanical solution for aligning broached forms in machined products.

Polygon Solutions Inc. designed the



broaching brake to be used as an attachment to its innovative GT Series rotary broach holder. The brake mounts to the tool holder using set screws. Additional screws are included at the opening of the brake to gently tighten against the spindle. The broach is fastened into the spindle, and must make contact and be aligned at the first hole.

When the broach is engaged with the part, the brake is loose enough to allow the spindle to turn without interfering with the broaching operation. Unlike typical rotary broaching operations, turning must stop before removing the broach. When the broach is removed the brake screws are tight enough to hold

From the Forest City Gear Family To You and Yours...Merry Christmas

During exceptionally busy years like this one we never truly stop thinking about our customers and their gear production challenges. Yet the holiday season reminds us of how blessed we are – for our family and team members, our industry and all our business associates.

From all of us at Forest City Gear: wishing you a very Merry Christmas and may your 2013 be a joyous and prosperous one.

LAAAN

FOREST CITY GEAR

11715 Main Street, Roscoe, IL 61073 815-623-2168

A little downtime over the holidays? Visit our new website at: www.forestcitygear.com. the broach's position until it makes contact with the part at the next hole.

The rotary broaching brake can be used to hold orientation for single or multiple parts. Tightening the screw to be loose enough to allow broaching, but tight enough to hold orientation, requires patience and a level of experience. Some trial-and-error can be expected and the broach orientation will need to be checked at regular intervals. The hardware consists of standard screws and nuts that can be replaced or reordered easily.

The rotary broaching brake was used recently at the 2012 IMTS show in the Hardinge booth. Hardinge's innovative Bridgeport GX 480 APC Vertical Machining Center held multiple broach holders by Polygon Solutions. However, the block was machined with square holes which were aligned to other features on the part. The squares were machined using a broach holder with Polygon's new rotary broaching brake.





The rotary broaching brake is a lightweight, low-profile tool and easily fits into the VMC's tool changer. It easily slides onto the head of the holder and does not require special tools for adjustment or assembly. The brake can also be easily removed for operations where it is not required.

For more information:

Polygon Solutions Inc. 16770 Link Court, Suite 106 Fort Myers, FL 33912 Phone: (239) 628-4800 www.polygonsolutions.com

Mitutoyo Releases Mach-3a CMM

Mitutoyo America Corporation announces the availability of the new MACH-3A CNC Coordinate Measuring Machine - a CMM that attains levels of accuracy and performance expected from Mitutoyo to in-line applications. Instead of the basic GO/NO GO judgments common to inline gaging, the MACH-3A CNC provides comprehensive measurements to enable statistical control utilizing numeric data. The MACH-3A is a clean slate design embodying



numerous features dedicated to functionality and high performance for inline applications.

The Mitutoyo MACH-3A CMM is a horizontal-arm-type machine with high speed and high acceleration (max. speed of 1,212 mm/s, max. acceleration of 11,882 mm/s2 - both in vector direction) that contributes to high throughput for greater productivity and lower total owning and operating costs.

The MACH-3A is compact, requiring only a minimal envelope which minimizes its impact on line layouts. This, plus high environmental resistance, make the MACH-3A easy to integrate into both upstream and downstream processes - even under demanding production floor conditions.

Conventional CMMs typically require dust-controlled environments to maintain accuracy. But with a drive unit protected by covers, precision linear guide systems for each axis instead of air bearings, and with its controller and PC installed in a dust-proof housing, the Mitutoyo MACH-3A is highly-resistant to the effects of dust, mist and humidity. Additionally, the MACH-3A tolerates a wide range of operating temperatures - guaranteed to maintain accuracy between 5° and 40°C. Additional production-oriented features include a machine status indicator (signaling machine fault or abnormal measurement), an ergo-

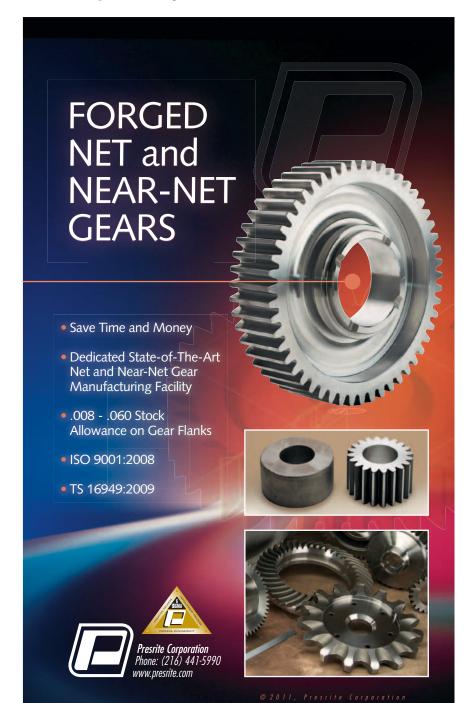


positioned touch-panel monitor with built-in compact keyboard, plus a builtin, industrial-grade controller and PC. It all means the MACH-3A CMM offers the functionality, durability and stability required for 24/7 in-line operation.

The MACH-3A CMM comes with standard with MCOSMOS (Mitutoyo Controlled Open System for Modular Operation Support) which supports virtually every CAD format while providing routines for in-line measurement, data feedback and process management. MACH-3A architecture, together with available Mitutoyo software packages, make it easy to integrate this machine with high-level network environments for true enterprise-wide functionality.

For more information:

Mitutoyo America Corporation 965 Corporate Blvd. Aurora, IL 60502 Phone: (630) 820-9666 www.mitutoyo.com







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Hainbuch DELIVERS OPTIMAL HOLDING POWER WITH QUADROK

In addition to the flexible QUADROKplus from Hainbuch, now there is a "slimmed-down" variant that concentrates completely on the essentials. The new QUADROK is a manually activated parallel vise with a compensating 4-sided clamping and a radial clamping force of 60 kN. Thanks to its pull-back effect against the end stop, extremely rigid clampings at minimum clamping lengths are possible - with a repeatability of < 0.02 mm in all axes. This does not only guarantee optimal holding power for crossmachining between the jaws, but also for 5-sided machining. The new QUADROK can be used at speeds up to 1,200 rpm, even under rotation. When a little more is required and diverse clamping possibilities are demanded, with the more flexible QUADROK-plus, a mandrel or chuck clamping are also available, thanks to a quick- change-over interface.

For more information: Hainbuch America Corp. 10541 N. Commerce St. Mequon, WI 53092 Phone: (414) 358-9550 www.hainbuch.com

Oelheid OFFERS COOLING AND CORROSION PROTECTION FLUID

ControXid 1642 is a ready-to-use rust protection fluid for coolant circuits based on synthetic, water-soluble corrosion inhibitors. It affords reliable protection against corrosion and offers high resistance to fungal and bacterial contamination. It is OEM recommended as coolant for machine tool spindles and corrosion protection in coolant circuits. ControXid 1642 is not caustic; it does not contain nitrites, chromates, heavy metals, phosphates, chlorine compounds or amines. ControXid 1642 protects ferrous metals (steel, cast iron) against corrosion and has no effect on aluminum alloys, other non-ferrous metals or mineral oil-based sealing materials.

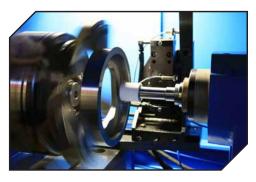
For more information:

Oelheld U.S., Inc. 1760 Britannia Drive Unit 1 Elgin, IL 60124 Phone: (847) 531-8501 www.oelheld.com



Acculube DISTRIBUTES NEW BIO-BASED LUBRICANTS

Acculube, distributor for Castrol, Exxon Mobil and other leading global brands of industrial fluids, has been appointed one of just a few distributors nationwide who are authorized to sell and service Castrol's new Performance Biolubes product line. The Performance Biolubes technology platform adds a range of biobased (vegetable) lubricants and metalworking fluids to Acculube's extensive existing line of lubricants for the aviation, metalworking and clean energy markets. The line includes neat cutting



and grinding oils, specialty oils, maintenance oils and forming fluids. Acculube is a leading distributor of Castrol products and specializes in helping companies identify fluids that will extend tool life, streamline cycle times for parts production, minimize equipment downtime and reduce disposal expense. Castrol Industrial is a leader in the development of environmentally responsible products, and was one of the first suppliers to voluntarily remove chlorinated paraffins from its products. Castrol also supplies products which are free of boron and secondary amines.

For more information:

Accurate Lubricants and Metalworking Fluids, Inc. 403 Homestead Avenue Dayton, OH 45417 Phone: (937) 461-9906 www.acculube.com

Emuge INTRODUCESTAP HOLDERS

Emuge Corp. has introduced the KSN5 and KSN6 Softsynchro Tap Holders. The holders are designed for tapping operations in components used in oil, power generation and wind turbine applications and in the production of large diesel, locomotive and ship engines. "We are seeing an increased need for larger tapping applications such as in the energy sector," said Mark Hatch, product director of Taps and Threads Mills at Emuge Corp. "The new KSN5 and KSN6 Softsynchro Series are ideal for work in energy and other large component applications."

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RIVERSIDE SPLINE & GEAR INC. P.O. BOX 340 • MARINE CITY, MI 48039 PH: (810) 765-8302 • FAX: (810) 765-9595 deniset@splineandgear.com Riverside Spline & Gear is your complete manufacturing facility, specializing in open gearing for many industries including machine tool, mining, forestry and oil and gas.

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The KSN5 series is for tap sizes M16 to M56 and ANSI sizes to 1¾". The KSN5 series uses the ER50GB collet and is available in both DIN and ANSI tap sizes. Tension and compression of 2 mm is used in machines with rigid tapping cycles. Coolant-through capability is available up to 50 bar and the KSN5 series is also available with an integral shank CAT50 or HSK100A.

The KSN6 series is for sizes M24 to M76 and uses Emuge HE2 large QC Tap Adapters used currently on Emuge HF20 tap holders. Emuge HE2-IKZZ adapters

are available in both DIN and ANSI tap sizes 1" through 2½". The KSN6 has 2 mm of tension and 2 mm of compression for rigid tapping cycles. The tool is coolant-through capable, to a maximum of 50 bar.

Emuge KSN Series Tool Holders are designed, engineered and manufactured with the utmost precision and quality and provide excellent concentric-



ity, rigidity and safe tool clamping in machines with synchronous spindles. Axial forces that occur in the threading process are minimized by the use of an integrated minimum length compensation on tension and compression.

For more information:

Emuge Corp. 1800 Century Drive West Boylston, MA 01583 Phone: (800) 323-3013 www.emuge.com

Seco Tools DISPLAYS LATEST MACHINING SOLUTIONS

At the JEC Americas 2012 Composites Show that took place Nov. 7-9 in Boston, Seco Tools spotlighted advanced solutions for efficiently machining composite parts including products from its Jabro and Feedmax lines. Developed to meet the rise in composite machining applications, the new Jabro JC800 family of solid carbide milling cutters - JC840, JC 850, JC860, JC870, JC 871 and JC 880 - eliminates fiber breakout and delamination as well as provides improved edge finish. Each cutter employs a high degree of specialization to meet the diverse requirements of composite materials and features a CVD Diamond coating with low surface roughness and high substrate adhesion characteristics.

• The JC840, a double-helix end mill for machining laminated materials, ensures cutting forces are directed inward and toward the component filler material.

All The Gear Cutting Tools You Will Ever Need Are Right Here DTR is one of the world's largest producers.

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Headquarters 36B-11L, Namdong Industrial Complex, Namdong-Gu, Incheon, Korea PHONE: +82.32.814.1540 FAX: +82.32.814.5381

- The JC850, a four-flute ball nose cutter with low helix, is ideal for 3-D machining operations in carbon fiber and peek materials.
- The JC860 is a router for cutting nonferrous honeycomb materials with carbon and/or glass top layers, such as those used to produce aircraft cabin walls and floor panels for the aerospace industry.
- The JC870 diamond cut router is a multi-flute design with two frontal teeth. It is capable of side milling, slotting and plunging in all types of composite materials.
- The JC871 diamond cut router is a multi-flute design with two different frontal tip configurations. It is capable of side milling, slot milling (open) and slotting in all types of composite materials.
- The JC880 low-helix end mill with a four-flute design effectively performs slotting and side milling operations in carbon fiber reinforced polymer and glass reinforced plastic materials

As the latest additions to Seco's series of Feedmax solid carbide drills, the Feedmax-C1 and Feedmax-C2 prevent delamination upon entry or exit when working in carbon fiber reinforced polymer materials. The-C1 geometry features sharp optimized double points, while the-C2 geometry is specifically designed to drill stacked CFRP materials with aluminum or titanium outer layers.



To combat the abrasive properties of carbon fiber reinforced polymer, the Feedmax –C1 and –C2 incorporate a polycrystalline diamond coating, which also provides good dimensional tolerance. The drills are 5xD with diameters ranging from 0.1260" – 0.5". All –C1 and –C2 drills also feature through-coolant holes.

Further advancements have also been made with the addition of solid PCD dome tip technology that makes it possible to grind geometries, such as the -C1 and -C2, into a solid PCD tip that is brazed onto a solid carbide drill. The edge sharpness that can be achieved with solid PCD further reduces delamination, uncut fibers, and improves performance.

For more information:

Seco Tools Inc. 2805 Bellingham Drive Troy, MI 48085 Phone: (248) 528-5200 www.secotools.com



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Cimcool **OFFERS HYBRID FLUID TECHNOLOGY FOR** AUTOMOTIVE INDUSTRY

Cimcool Fluid Technology has announced the release of a new lubricant technology for machining and grinding of hard metals. These new Cimtech synthetic fluids feature synergistic lubricant blends that provide huge increases in productivity without the use of chlorine or other high levels of extreme pressure additives. Cimcool delivers significant cost reductions from the higher production rates these fluids can provide. More production and lower cost per part coupled with environmentally responsible fluids provide significant advantages to customers concerned with being competitive. With unique hybrid blends, including patented Milacron lubricants, only Cimcool can provide customers with these innovative fluids. Customers with heavy duty performance requirements looking to eliminate chlorine from their operations now have options never before available. "We

have developed something that is completely new and unique to the industry," said Tina Hunter, automotive product manager. "These fluids work best when really pushed to the limit. The tougher the operation, the better results we see. The performance of these fluids is significantly better. They have outperformed some popular heavy duty, sulfo-chlorinated oils by up to 300 percent. This is a huge jump in technology." Products include Cimtech 627 (a synthetic fluid used in heavy duty machining and grinding), Cimtech 609-E, (a water-based fluid used for hard metal valve grinding), Cimtech 610, (a unique Milacron Synthetic Lubricant blend for titanium and other hard metals), and Cimtech 612NF (a water-based synthetic for machining high-silicon aluminum alloys).

For more information:

Cimcool Fluid Technology 3000 Disney Street Cincinnati, OH 45209 Phone: (888) 246-2665 www.cimcool.com



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