

# IMTS 2016 Booth Preview

## Mechanical Motion Front and Center at MDA, IANA and IMTS

IMTS has expanded its range of manufacturing services with the addition of Motion, Drive and Automation (MDA) and Industrial Automation North America (IANA). These co-located shows complement the metalworking solutions found at IMTS by bringing in key suppliers from around the world.

### Motion, Drive & Automation North America

This event will feature technologies and solutions for the power transmission, motion control and fluid technology sectors together. Meet face-to-face with key suppliers from around the world and see first-hand the best new technology available. Here are some highlights:

#### ComInTec

BOOTH E-5265



Originally founded in 1967 by Dante Cavalli, under the name OMC Snc, the company originally manufactured mechanical transmission components. Then, in 2010, the company changed its name to ComInTec and began exploiting its experience and know-how to offer high quality solutions through the specialized design and manufacture of: power transmission components, torque limiters, safety couplings, backlash free torque limiters, elastic couplings, disc couplings, backlash free couplings, variable speed pulleys, expanding pulleys, shaft collars and clamp collars. ComInTec manufactures special components that play a vital role in the production of automatic and mechanical transmission machines. These components create transmission connections, avoid accidental overloads, reduce machine stoppage times, increase productivity, and reduce maintenance and repair costs.

#### For more information:

ComInTec  
Phone: +39 051 780216  
[www.comintec.com](http://www.comintec.com)

### Framo Morat, Inc.

BOOTH: E-4647

Framo Morat, Inc. will be presenting its diverse product range at IMTS 2016 for the first time. Since the founding of Franz Morat GmbH in 1912, gear and drive engineering has been in a continuous state of development at the company's headquarters in Eisenbach, Germany. With subsidiaries in the United States, the Netherlands, Poland, Mexico and Turkey, as well as a worldwide network of sales partners, Framo Morat is a globally operating manufacturer of high-quality drive solutions for many industries. Framo Morat is among the leading manufacturers in Europe, particularly in the area of worm gear sets and its plastic group F. Morat in molding the material PEEK.



Framo Morat specializes in custom drive solutions with drives that are designed and developed specifically for the customer's requirements. With years of experience, Framo Morat is the ideal partner for every phase of a project, from developing specifications, through development and design, to prototype construction, testing, assembly and regular production. Currently, the company offers sales support and repair services at its Albuquerque, NM office.

In addition to its custom drive solutions for various industries, Framo Morat also focuses on numerous successfully implemented solutions like gears or plastic injection molded parts.

In addition, the company presents its two new planetary gearbox series, which are characterized by smooth operation, high torsional rigidity, long life, high power density, variety of gear ratios as well as quality "Made in Germany."

#### For more information:

Framo Morat Inc.  
Phone: (505) 359-2949  
[www.framo-morat.com](http://www.framo-morat.com)

### R+W Coupling Technology

BOOTH E-4894

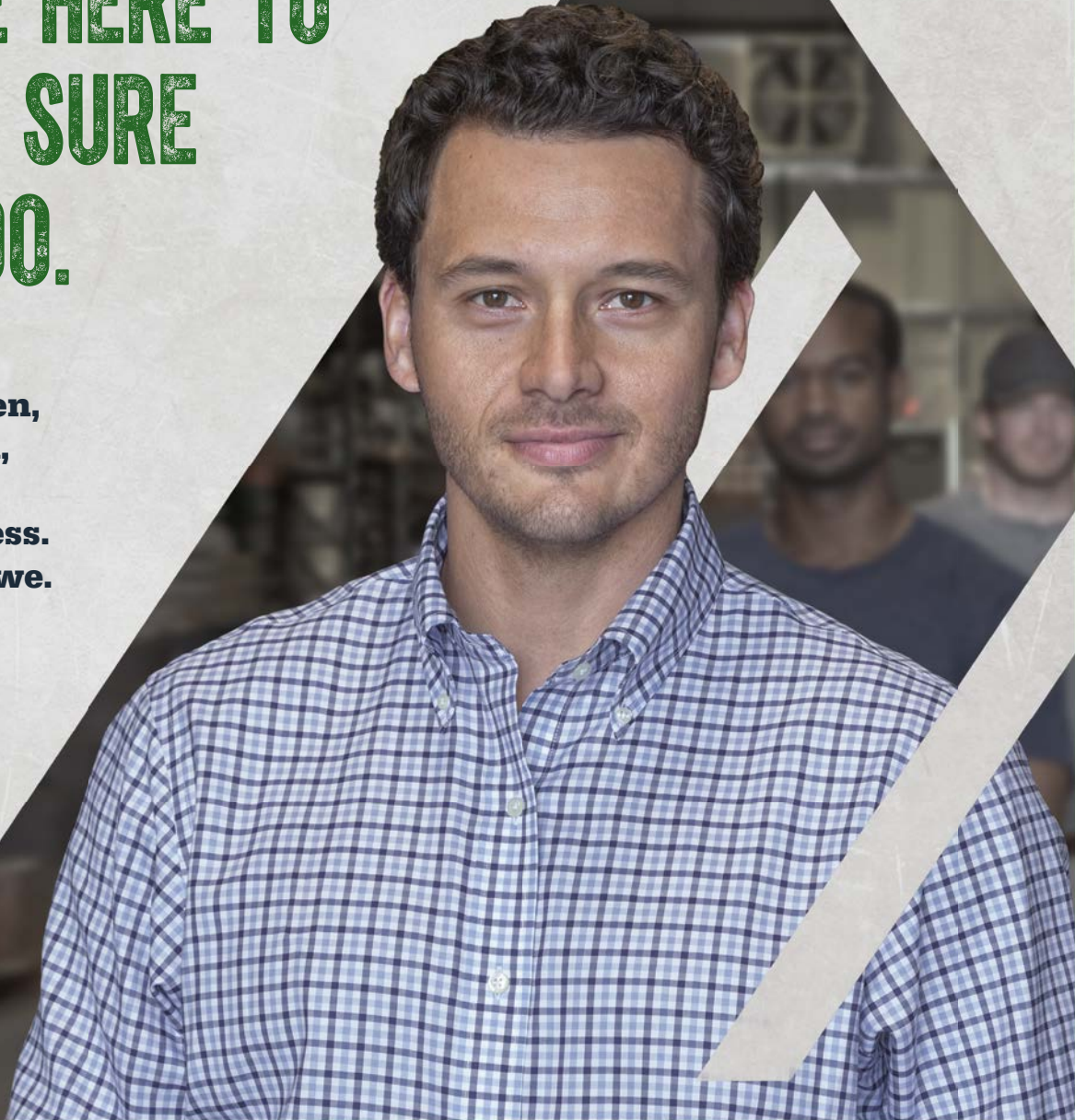


In an effort to address increased demand for its SERVOMAX elastomer couplings in high speed spindle applications, R+W Coupling Technology will be showcasing a new ultra-precision model, SP6, at this year's MDA pavilion at IMTS. Made with improved concentricity and perpendicularity, and higher grade materials, the hubs are capable of handling circumferential speeds of up to 80 m/s, and higher torque levels per size. The SP series also has an increased bore diameter capacity per body size, and adjustable positioning of the outer clamping ring, allowing users to fine tune the location during installation. With a choice of high strength aluminum or steel, the SP6 is available in 4 body sizes, with bore diameters ranging from 14 to 55 mm, torque ratings from 60 to 1350 Nm, and standard "off the shelf" speed

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#### For more information:

R+W America  
Phone: (630) 521-9911  
[www.rw-america.com](http://www.rw-america.com)

## Industrial Automation North America

IANA made its North American debut in 2012 co-located with IMTS. Featuring factory, process, and building automation, this event is distinguishing itself as the place to see the automation industry's most innovative solutions and technologies. Here are some highlights:

### ANCA Motion

BOOTH E-4263, N-7414

ANCA Motion's innovative LinX Linear Motor provides improved performance at lower cost with excellent efficiency when compared to ball screws and flatbed linear motors. The stand-alone thermal stability, high speed and acceleration, zero down forces and the ability to achieve IP69K protection make the LinX suitable for the machine tools and general automation industries.



Benefits over flatbed linear motors include standalone thermal stability (the LinX doesn't need a dedicated chiller which greatly reduces the machine size and power consumption as well as floor space required), higher efficiency thanks to its tubular design,

no cogging, IP67/IP69K protection for food packaging and pharma applications, and LinX's cylindrical form factor makes it ideal for retrofitting ballscrews and pneumatic and hydraulic cylinders. Benefits over ballscrews include direct drive, no wear, no loss of preload, easier alignment, higher acceleration and faster speed as well as an improved surface finish.

"ANCA Motion's patent pending thermal barrier technology ensures unprecedented stand-alone thermal stability performance which can greatly improve machine's performance and reduce power consumption and floor space," said Lucas Hale, global marketing manager. "One big problem with the flatbed linear motor is the heat source in contact with machine's bed which affects the accuracy of the machine. Machines using flatbed linear motors typically require a dedicated chiller to cool the motors which consumes more power and takes more space."

For the LinX Linear Motor on the other hand, there is no touch between its heat source (forcer) and machine bed. "With the LinX's unique thermal barrier technology specifically designed for fluid cooling, the heat can be completely removed from the machine. Therefore, the accuracy issue associated with a machine's thermal growth is eradicated, and due to its higher efficiency and mechanical form factor, the LinX can use a machine's existing cooling system which reduced power consumption and floor space," Hale added.

LinX motors have been used in ANCA's FX and MX grinding machines. After the launch of FX Linear and MX Linear machines, LinX powered machines have been installed at various regions all around the world. "We are bringing the inverted pendulum demonstration rig to IMTS to showcase the LinX Linear Motor's unique features and state-of-the-art technology. The pendulum is mounted on the cylindrical LinX motor which moves along a magnetic shaft, housed in a stainless steel tube. In order to maintain the pendulum's balance, the motor must respond promptly and precisely to the disturbances. The LinX Linear mo-

tor provides a perfect solution for this thanks to its high speed, high acceleration, zero-backlash and low cogging features, all of which are a result of the unique cylindrical design. Combined with ANCA Motion's control system, the LinX Linear Motor can significantly improve a machine's performance." Hale said.

#### For more information:

ANCA Motion  
Phone: +61 3 9751 8900  
[www.ancamotion.com](http://www.ancamotion.com)

### Balluff Inc.

BOOTH E-4057

Balluff has more than 50 years of sensor experience providing integration services, application support and training. During the IANA show at IMTS, Balluff will be displaying a variety of products and technologies including a new industrial automation network, power supplies, network weldblocks and an expanded inductive coupling family.

#### CC-Link IE Field Machine Mount I/O Blocks



Balluff's new family of network solutions is based on the industry's newest and fastest industrial Ethernet network - CC-Link IE Field. "CC-Link IE (a gigabit network for industrial automation) realizes the next generation of industrial applications that require large bandwidth for data without compro-



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### **Applications**



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missing deterministic performance. We are proud to be the first in the industry to offer CLPA conformance tested and approved CC-Link IE Field network I/O modules,” states Tom Rosenberg, director of marketing at Balluff Inc. “CC-Link IE Field modules enable our customers to utilize the benefits of distributed modular architecture in applications that were not possible before.”

Balluff’s CC-Link IE network portfolio consists of IP67 protection rated machine mount I/O devices and IO-Link masters. The distributed modular architecture utilizes IO-Link to enhance the controls architecture in a cost effective manner while integrating smart devices into the architecture. IO-Link is the first sensor-actuator communication standard specified in IEC61131-9 and utilizes standard M12 sensor cables for communication of process data, parameter data, and events on the same line. With the addition of CC-Link IE into Balluff’s networking suite, Balluff can now offer its customers the same architectural scalability with CC-Link IE that it has been offering for other networks including EtherNet/IP, PROFINET, EtherCAT, DeviceNet, PROFIBUS, and CC-Link.

### New IO-Link Power Supplies



Power supplies are key components in automation but can easily be overlooked or last on the agenda. When a power supply fails, the sensors, actuators and the controller all come to a halt to figure out which part of the system has failed. It is up to the controller to figure out which part caused the halt in production. The power supply is often replaced long before it is necessary to prevent the risk of automation com-

ponent failure, which ultimately leads to loss of productivity.

Balluff offers a full line of power supplies, which now includes IO-Link versions with the Heartbeat function. The Heartbeat function consists of a stress level indicator, load level indicator and life expectancy indicator, which lets the user visually know how the power supply is doing and when a power supply would need to be replaced. Ultimately this will allow the full life of the power supply, years longer than the standard replacement time.

These three indicators help operators to use the power supply within an optimal range. The IO-Link function enables getting information parameters to the control system in the least costly manner. The control system can then alert operators for counter actions to prolong the use of the power supply to the maximum possible life. In this manner, IO-Link assures continuous condition monitoring of the system.

### Network I/O Weldblocks

Balluff recently announced an entire new family of network I/O blocks optimized for extremely noisy electrical environments, such as welding. These new Balluff Weldblocks are constructed with fiberglass reinforced composite (polypropylene sulfide) that inherently resists weld spatter while effectively combats grounding loops and electromagnetic interference (EMI). “Balluff Weldblocks offer an ideal solution for our customers needing to fight the high electrical noise in their welding applications while keeping their controls cabinets lean,” said Rosenberg. “With IO-Link on board, Weldblock IO-Link masters and I/O hubs can build entire controls architecture around the weld cell that was previously a challenge.”

### Bi-Directional Inductive Coupler



Balluff has expanded its IO-Link enabled Inductive Coupling product family to include bi-directional IO-Link communication. The Balluff inductive coupling solution enables transfer of power and data over a small air gap - making it ideally suited in the industrial space, where getting I/O in hard to reach places or moving components is a challenge. The Balluff IO-Link inductive coupler, with its small compact IP67 housing (40 mm x 40 mm x 70 mm), is the industry’s first compact inductive coupler to offer 32 bytes of bi-directional data transfer over a standard 4-pole M12 sensor cable. It’s also rated for 500 mA at a five mm gap with 24 V power.

“IO-Link enabled inductive couplers uniquely combines two of Balluff’s product portfolios - the IO-Link family and the inductive coupling family - to tremendously simplify today’s complex automation needs in robotics applications, assembly line automation, turntable-based systems, and even press automation,” says Shishir Rege, marketing manager for networking products at Balluff Inc.

### For more information:

Balluff Inc.  
Phone: (800) 543-8390  
[www.balluff.com](http://www.balluff.com)

## B&R Industrial Automation Corp.

BOOTH E-4115

B&R Industrial Automation Corp. specializes in standards-based, scalable and modular control systems integrating CNC, logic, general motion, robotics, human-machine interface (HMI), safety, I/O and data acquisition in a unified software development environment.





## Benefits of integrated control

The efficiency of CNC machine control development and operation can be improved by replacing traditional systems with an integrated, multifunctional control platform. Traditional systems include logic, machine-specific technologies, point-to-point movement, path-based interpolated movement and visualization each requiring hardware interface and communication software to work together.

With B&R's integrated solutions, a single software development environment, Automation Studio, running under the same hard real-time operating system on a single processor over deterministic industrial Ethernet, unifies all these functionalities. The straightforward, standards-based design approach lets OEMs easily and independently implement machine processes on the controller without need for intervention by the control supplier. This benefits both machine builders and users by streamlining engineering, hardware, training and service costs while delivering uncompromising performance, flexibility and scalability. As a result, machine builders can respond to customers' needs more rapidly while maintaining the integrity of their intellectual property.

## Scalable CNC and robotic control

The solution is completely scalable with all motion control technology, including, but not limited to, hydraulics, steppers, servos, linear and rotary actuators, and pneumatics. It integrates seamlessly into the machine application, allowing it to be customized for the specific task at hand. The flexible design also makes it simple to integrate robotic control with CNC. Kinematics for various types of robotic control—such as SCARA, delta, articulated, portal and gantry—are supported. The onboard control also eliminates the need for additional PLCs to perform auxiliary functions such as infeeds, outfeeds, conveyance, stackers and de-stackers.



Some highlights at the IMTS B&R booth include:

The introduction of an advanced linear track conveyance system that complements B&R's automation competencies. The intelligent transport technology combines optimized productivity and flexibility with industrial-grade reliability to ensure maximum uptime.

IMTS attendees can also discover the world's first field device for OPC UA. The new X20 I/O system bus controller makes it possible to implement OPC UA communication from the sensor layer to the ERP layer without any interfaces whatsoever.

B&R has further expanded its portfolio of modular mapp software components. IMTS attendees will also be introduced to the new mapp RoboX and mapp Teach that make it faster and easier than ever to get robotic systems configured and ready for operation.

IMTS attendees will also learn about HTML5 based HMI development using the new mapp View. For the first time, automation engineers have all the tools they need to create powerful and intuitive web-based HMI solutions – without the need to learn HTML5, CSS and JavaScript.

IMTS attendees will also learn more about the *SafeDESIGNER* library for press applications. B&R is one of the first manufacturers to offer a complete set of the function blocks specified in PLC open part 4. As a result, users working with safety-critical press applications will have a much easier time setting up the necessary safety functions.

### For more information:

B&R Industrial Automation Corp.  
Phone: (770) 772-0400  
[www.br-automation.com](http://www.br-automation.com)

# Mitsubishi Electric Automation

BOOTH E-4102

The Mitsubishi Electric Automation booth will feature the M8 Series CNC Controls, with gesture smartphone-like features, and e-F@ctory enterprise connectivity solutions. The M8 Series control platform is designed to address the need for a fast, precise and affordable computerized numerical control (CNC) system for complex machining applications. The M800 is a high-grade CNC designed for high-speed, high-accuracy machining and multi-axis, multi-part system control and features the industry's fastest CNC, while the M80 provides high productivity and easy operability. Both offer a 19" capacitive touch screens with icon-based navigation for easy, intuitive, smartphone-like operation, with the ability to add screen customization.



With e-F@ctory, all business stakeholders, from the factory floor and operations to the C-Level, have access to the data they need to make smart business decisions. This provides connectivity to manufacturing assets by leveraging open Ethernet protocols such as CC-Link IE, and open communication standards such as MTConnect and OPC. This connectivity allows broad access to Mitsubishi Electric controls used in operational technology applications such as MC Works64 visualization, AX Facility, and AX Energy analytics to improve operational efficiencies. This facilitates IT application integration supporting on-premises

and cloud-connected infrastructures.

The company's product portfolio of programmable logic controllers (PLC), human machine interfaces (HMI), inverters (VFD), servo amplifiers and motors, control software, computerized numerical control (CNC), circuit breakers, robots, motion controllers, and power monitoring and energy management products, provide a complete solution for customers.

#### For more information:

Mitsubishi Electric Automation, Inc.  
Phone: (847) 478-2100  
<http://us.mitsubishielectric.com/fa/en>

## IMTS

The following booths will be of interest to Power Transmission Engineering readers that are not part of the MDA or IANA co-located programs:

## Bosch Rexroth

BOOTH E-4854

Rexroth is bringing their latest advancements to the Windy City. The automation engineering leader will showcase its new IMS-A integrated measuring system and the latest version of their IndraMotion MTX CNC solution at the International Manufacturing Technology Show in Chicago. Both innovations help to continue paving the way for Industry 4.0 integration in the medical industry.



**IMS-A: A glass-accurate guide and measuring system in one:** The new IMS-A integrated measuring system blends accurate measurement with robust performance in machining, 3-D printing and medical manufacturing of tubing, surgical and dental tools, electronics and implants. It detects the absolute position of the axis to  $\pm 4$  micrometers. What's more, the measuring system is immune to contamina-

tion, vibrations, shocks and magnetic interference, and needs no buffer batteries in the event of a power failure. Thanks to the complete integration of the sensor and evaluation electronics in the ball and roller runner blocks, design engineers can avoid external measurement and air purge systems.

**Always 'On' point:** Turning machines back on again following a power failure can result in a critical situation. That's because the controller in many applications needs to know the position of each axis immediately. Purely incremental measuring systems need to first complete a reference run for this, which extends the ramp-up time and, in a loaded state, can result in damage to the workpieces and tools. The new integrated IMS-A measuring system from Rexroth immediately recognizes the absolute position of the axis with a high degree of precision when the machine is switched on and reports them to the controller without carrying out a reference run. This also eliminates the need for buffer batteries that have to be replaced.

**Inductive and wear free:** Thanks to the inductive measuring principle, the IMS-A operates without physical contact and is therefore a wear-free assembly. The measuring scale cannot be interfered with or destroyed by external magnetic fields. The IMS-A is not sensitive to vibrations up to 10 G and shocks up to 50 G. The sensors and evaluation electronics are located in the protective housing on the end face of the runner block. Even in working spaces with coolants, dust, shavings and other contaminants, the IMS-A does not require elaborate energy-eating, high-maintenance air purge systems. Even electrical and magnetic interference fields do not affect the measurement results.

**Integrated Functions:** The functional integration of guiding and measuring in an assembly minimizes installation times. No adjustment of the measuring system is necessary. With the IMS-A, engineers can use several runner blocks on an up to 4,500 mm long profile rail independently and without any accuracy limitations. All components, are replaceable in the event of servicing, which reduces costs. The interchangeable construction of-

fered by Rexroth ensures even less effort. All runner blocks of the same size fit onto the profile rails of the respective size without any restrictions. The measuring system transmits the data via HIPERFACE interfaces, as well as via SSI/1Vp-p to the intelligent drives or controller, DRIVE-CLIQ and FANUC interfaces are to follow.

**Prepared for Industry 4.0:** The integration of additional temperature and motion sensors makes this measuring system prepared for the future requirements of Industry 4.0. The additional sensors allow machine designers, for example, to read out the temperature and the actual dynamics. The sensor data also forms the basis for future approaches to predictive maintenance. The user can record and evaluate operating states online. If the accelerometers detect changes, such as increasing vibrations, then this is an indication of wear or other problems. Scheduled maintenance can then intervene before the machine needs to be shut down.

**IndraMotion MTX: Full power from compact to 250 axes:** With the latest versions of the IndraMotion MTX CNC system family, Bosch Rexroth offers significant increases in performance and, thanks to additional software functions, productivity. These versions also shorten cycle times across the whole spectrum of machine tools. In the highest configuration, IndraMotion MTX now controls up to 250 axes in 60 independent NC channels using one control hardware. The system solutions are already designed for the requirements of industry 4.0 with open interfaces to the IT world, multi-touch operating devices and simulation programs.

**Automate complicated systems economically:** By means of a multi-core processor, the system solution achieves minimal cycle times even with a maximum number of axes and replaces additional controls that were previously necessary in complex rotary transfer machines. Thanks to this, machine manufacturers can also economically automate complicated systems, especially since a PLC in accordance with IEC 61131-3 is integrated for automation in all variants. With

pre-defined technology functions for turning, milling, drilling, grinding, punching and jet cutting, the system solution is suitable for universal use and has been proven for medical applications such as making dental brace components.

#### **Simulation for shorter cycle times:**

With its scalable simulation software, Rexroth provides the opportunity to test and optimize NC programs at different complexity levels, both online and offline. This software monitors collisions and offers extensive opportunities to optimize NC programs in order to reduce cycle times with higher cutting force and shorter downtimes.

**Ready for Industry 4.0:** The IndraMotion MTX system family already fulfills all of the prerequisites for horizontal and vertical networking with an integrated OPC UA webserver and the Open Core Interface technology.

#### **For more information:**

Bosch Rexroth  
Phone: (800) 739-7684  
[www.boschrexroth-us.com](http://www.boschrexroth-us.com)

## Heidenhain Corp.

BOOTH E-5226

Heidenhain will present its precision measurement components and systems at IMTS 2016 as well as highlights from two of its many internationally-owned entities: ETEL and Acu-Rite brands. Heidenhain North America represents and distributes seven precision measurement component company brands.



This year's 50×60-foot IMTS Heidenhain booth will be host to many of the industry's very latest motion control options including a brand new Quadra-Chek 3000 digital readout, Heidenhain encoders (including the RCN 6000 angle encoder and LC 100 linear scale) and unique TNC control/capabilities. ETEL's TMB+ torque motors, as well as the Acu-Rite MILLPWRG2 CNC control with enhanced features will also be shown.

Heidenhain's new Quadra-Chek 3000 is designed for measuring 2D geometrical features quickly and easily, utilizing technology that, up to this point, has only been available on PC systems. ETEL's new TMB+ torque motors improves upon the well-known TMB series with even greater material quality, new size additions (62 sizes up from 50), higher force density and more winding options. These motors can achieve peak torque values up to 44,000 Nm.

Acu-Rite's MILLPWRG2 CNC Control is for vertical knee and bed mills. It is available with an optional AMI (auxiliary machine interface) and spindle control console offering users the ability to use common interfaces as well as control its host machine tool's spindle.

A presentation on advanced TNC control capabilities by Heidenhain is also in development for delivery at the booth. More information on this and other product information will be released at show time.

#### **For more information:**

Heidenhain Corporation  
Phone: (847) 490-1191  
[www.heidenhain.us](http://www.heidenhain.us)

## J.W. Winco, Inc.

BOOTH N-6586



J.W. Winco, Inc., a supplier of standard industrial machine components, will feature the GN 810 Vertical Acting Toggle Clamp with Universal Fit Horizontal Base that accommodates inch/metric mounting hole patterns during IMTS 2016. The RoHS-compliant toggle clamp, with a hold-down bar and handle that move in the same direction, is made from case-hardened sheet metal (C10 steel), zinc plated, with a blue passivated finish. The bearing pins are tempered, the hand grip is high quality, oil resistant red plastic, and all moving parts are lubricated with special grease. The neoprene spindle assembly has a threaded stud made from steel, zinc plated, blue passivated finish, while the spindle tip is black neoprene rubber, 85° shore A and vulcanized.

The vertical acting toggle clamps in the U-bar version have two flanged washers that can accommodate an application specific clamping screw. The Type E version can either be utilized by welding the clasp, which can then accommodate an application specific hold-down fastener component, or by utilizing the bar in conjunction with Winco's GN 809 Clamp Mounts to hold the workpiece in place.

#### **For more information:**

J.W. Winco, Inc.  
Phone: (800) 877-8351  
[www.jwwinco.com](http://www.jwwinco.com)



## SKF USA Inc.

BOOTH NC-220

The new SKF Shaft Alignment Tool TKSA 51 performs with a dedicated and easily downloaded app to enable precise alignment of shafts in rotating machinery across industries. The tool – the first instrument of its kind designed for intuitive shaft alignments using tablets and smartphones – makes it quick and easy to set up motors, drives, fans, gearboxes, pulleys and couplings, regardless of an operator's level of experience.



The TKSA 51 consists of two compact and lightweight laser measuring units and shaft brackets to mount the tool, whether on small machines with limited space or on larger equipment using supplied extension chains and magnetic holders.

With the tool mounted, the wirelessly connected TKSA 51 app uses real-time data to provide a live 3D view of the measuring units, allowing operators to rotate the virtual machine at will and in all directions to achieve a highly intuitive alignment process. Measurements at any angle can be made by a touch of a button or by using the system's hands-free automatic measurement function, which only requires the shaft to be rotated to the next measurement position. Among other user-friendly features, notification and helpful guidance menus are displayed to assist operators during setup and use.

Upon completion of an alignment check or correction, a comprehensive report is created for customizing, emailing, or uploading for future reference or trending. The SKF Shaft Alignment Tool TKSA 51 serves as a comprehensive system for all alignment tasks and joins a growing

portfolio of unique SKF technology solutions to promote optimized machinery health, reliability, and productivity.

In addition, SKF will be discussing SKF Enlight, a mobile and cloud-based system that helps operators document and manage wind turbine operation and maintenance tasks. With SKF Enlight, operators use the DataCollect app by SKF to collect turbine inspection data with any smart device, and then upload it to the SKF Cloud for 24/7 access and analysis. By helping operators improve inspections, make better maintenance decisions and cut costs, SKF Enlight supports SKF Life Cycle Management, a proven approach that can add value throughout the turbine life cycle.

### For more information:

SKF Industry Inc.  
Phone: (800) 440-4753  
[www.skfusa.com](http://www.skfusa.com)

## Siemens Industry, Inc.

BOOTH E-4502

Here's what's happening at Siemens booth during IMTS: The new SINUMERIK 808D/828D/840D has been updated and features new CNC multi-touch panel hardware along with new software functions that bring machine tool users a greater return on CNC. Siemens Smart Operation presents a future-oriented portfolio for efficient working processes on the SINUMERIK CNC control. By using smart operation, shop floor-oriented companies can make the first steps towards digitalization and increase their productivity. The booth will also include demonstrations of a machining application controlled by the SINUMERIK 840D sl CNC. In addition, the Siemens Life-long Educational Advantage Program gives tech school graduates a career-enabling machine tool foundation for the manufacturing jobs of tomorrow.



Product Highlights at the Siemens booth include the company's Generation II Simotics 1FK7 servomotors and its Sinamics S120 drive system.

Highly-configurable to suit a wide variety of applications, the Generation II Simotics 1FK7 servomotors features seven shaft heights, a Quick-Connect power connector and high-accuracy 20- and 24-bit field replaceable encoders in 10 styles.

The Generation II servomotor offers three inertia versions — standard, high-dynamic for rapid acceleration jobs, and high-inertia for maximum smooth running. These motors are designed for operation without external cooling and the heat is dissipated through the motor surface.

With 10 styles of field-replaceable encoders, the 1FK7 Generation II servomotors provide easy maintenance in the field, with reduced downtime and operating cost savings. Further, a 10 percent improvement in continuous (S-1) power is achieved since the encoders are mechanically and thermally decoupled from the motor. The mechanical decoupling also means the encoder is more resistant to vibration conditions on the machine. In addition, there is no need for battery back-up on the absolute encoders.

The Sinamics S120 drive system now offers an integrated web server to facilitate more efficient diagnostic and maintenance functionality for end-users, integrators and system designers alike. With this drive improvement, a user may access the Sinamics S120 with any PC with a browser capable of internet connectivity through a standard Ethernet interface to execute a variety of functions. If a wireless LAN (WLAN) router is networked, web pages can be viewed using other web-capable devices such as tablets and smart phones.

Among the functions possible with this integrated web server on Sinamics S120 drive systems is the ability to download a plant configuration, commission a drive from anywhere, perform firmware updates, access an immediate status overview on the drive, check and assess all alarm and fault messages.



In addition, users can monitor and adapt all process or line parameter settings, archive machine documentation including all notes taken, create customized server pages, set-up user administration and access level for operator and service personnel, plus perform virtually all drive diagnostics and remote maintenance actions. This combination of service possibilities results in significant reductions in machine or line downtimes, due to faster, more efficient diagnostic and maintenance procedures.

**For more information:**

Siemens Industry, Inc.  
Phone: (847) 640-1595  
[www.usa.siemens.com](http://www.usa.siemens.com)

## Steinmeyer Inc.

BOOTH NC-467



Steinmeyer, a manufacturer of precision ground ball screws, announces its participation in the 2016 International Manufacturing Technology Show, Booth NC-467 at McCormick Place in Chicago, from September

12-17. Company executives and engineers will be on-hand to discuss Steinmeyer's large portfolio of ball screws, including: miniature ball screws, precision ball screws, ultra-thrust ball screws and rotating nuts. If attendees have a specific design project that they would like to discuss with Steinmeyer engineers, contact the company below to book a personal appointment.

**For more information:**

Steinmeyer Inc.  
Phone: (781) 273-6220  
[www.steinmeyer.com](http://www.steinmeyer.com)

## Yaskawa America, Inc.

BOOTH E-4154, NC-533, N-6600

Yaskawa and Clearpath have partnered to develop a mobile machine tending and material movement solution ideal for shop floor environments. This fully integrated solution will feature a Motoman MH12 robot equipped with end-of-arm tool and vision system, mounted on Clearpath's OTTO 1500 self-driving vehicle. This project is currently under development and supported under the advanced research division of Clearpath.

"Our partnership with Clearpath will provide industry with a robust, tightly integrated solution for moving robots to the work in a very flexible and dynamic way," said Roger Christian, divisional leader, new product development at Yaskawa Motoman. "This autonomous modular solution provides users an alternative to arranging the work to a fixed robot station."

The MH12 robot features a 12 kg payload capacity, hollow wrist for reliable EOAT cable management and a 1,440 mm horizontal reach. Its versatile design provides higher speed, longer reach and increased payload over current mobile manipulator products offered by competitors.

The OTTO 1500 offers a payload capacity of 3,300 lbs. and is built with industrial grade components to withstand the rigors of industrial environments. It is designed to increase throughput, reduce operating costs and remain flexible with the changing

needs of material flow processes.

"We're really excited to partner with Yaskawa to develop the future of mobile manipulation and collaborative robots," said Matt Rendall, chief executive officer at Clearpath. "Combining our cutting-edge self-driving industrial vehicles with Yaskawa's industry-leading robot arms will enable a new category of automation for machine tending."

Yaskawa will have information on low and medium voltage AC inverter drives, servo drives, machine controllers and industrial robots during IMTS 2016.

**For more information:**

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