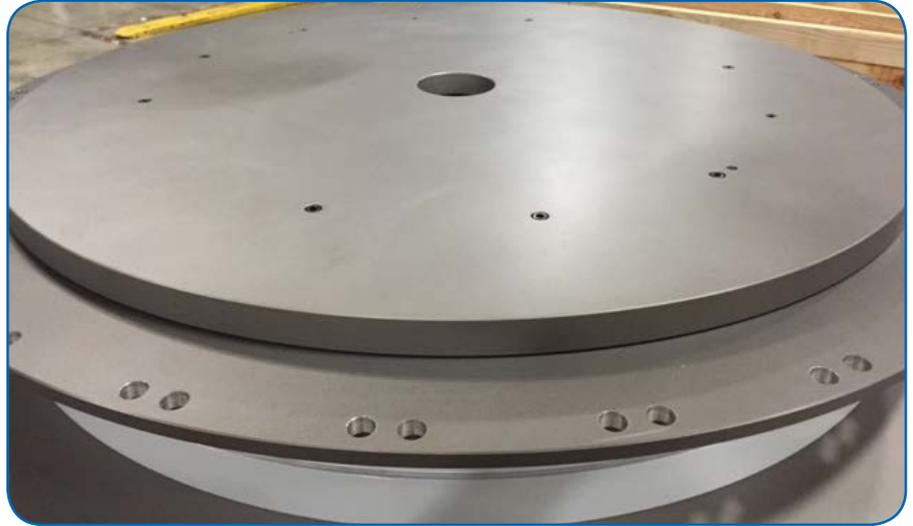


# Weiss North America

PROVIDES ONE-STOP SOLUTION FOR MEDICAL PARTS MANUFACTURER

Weiss (Buchen, Germany) and its subsidiary Weiss North America, Inc. (Willoughby, OH), recently completed three, turnkey TR1100, ring-style chassis systems for a leading west-coast medical parts manufacturer. Their client's diverse medical product line provides patients and caregivers safe, innovative, life-enhancing medical devices that help improve patient outcomes by minimizing bacterial ingress that can cause bloodstream infections, and preventing exposure to infectious diseases or hazardous drugs. Their most recent manufacturing challenge was for a closed female luer valve that would require a robust system featuring 24 install stations for a 3-5 piece assembly production process.

Whereas the medical parts client had only a small build shop, they sought out Weiss to provide a one-stop solution that would allow them to maximize efficiencies, while granting them more time to focus on multiple projects. They also desired a quiet, smooth running system for their clean room application.



The key to the Weiss solution involved their TR1100 ring style chassis featuring a ring indexer, stationary plates, and riser. These were all housed in a unique octagon-shaped frame design that is enclosed with a guarding system on the lower half for protective access to controls and mounting automation. Weiss engineers faced the task

of building a base machine chassis that can accommodate 24 install stations for a 3-to-5 piece multiple size medical valve assembly process that included: loading, pressing, ultrasonic welding, leak testing, inspection, ejecting, etc. The combination of robust construction of the TR1100 Series System and octagon frame design provided more than enough scope for coupling with the multiple processing stations.

At the heart of the system, the TR1100 Series rotary indexing rings feature a very large central opening (up to 1750 mm possible), extremely flat design, and a high level of parts accuracy. The ring-shaped design allows extra free design space, and the rotating aluminum ring can be adjusted to client's specifications in terms of diameter and thickness.

The TR1100 modified chassis design was based on the client's request for the octagon shaped frame beneath the top plate. This fully enclosed guarding undercarriage system is comprised of a combination of aluminum extrusion and sheet metal fabrications that included six bolt-on panels and two swinging door panels for access to controls. The entire frame was powder coated.

The frame extrusion also needed to be flush with both the top plate and the mount enclosure doors. The index table has a 2" thick aluminum riser,





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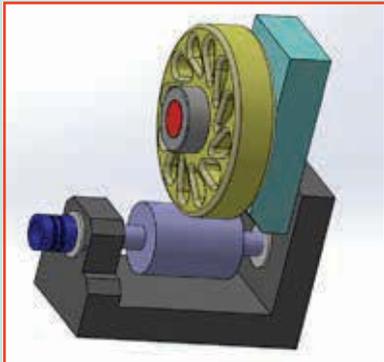
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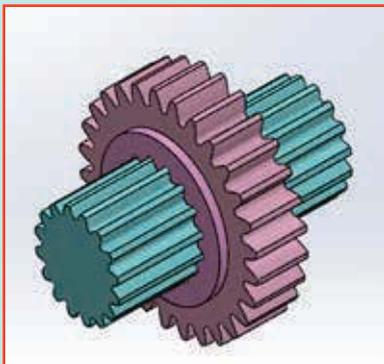
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the octagon table top is 63" across flats and 1.25" thick. The 48" diameter aluminum dial plate is 1.00" thick and the 44" diameter stationary tool plate is 1.25" thick. All chassis system plates featured a hard coat anodized finish that is essential in providing superior durability.

For mounting automation inside the guarding frame, the medical parts client also requested Weiss to rigidly mount some of their HP70 Pick-and-Place direct-drive components—designed for the application of multiple picks requiring speed and accuracy. The HP70s delivered 70mm of vertical stroke with 225mm of horizontal stroke.

The HP70 Pick-and-Place direct-drive component is thinner (60mm wide) than any linear motor or pneumatic module on the market today. Despite its unique compact design, it surpasses all previous Pick-and-Place units when it comes to speed—achieving over 100 cycles per minute with repeat accuracy of 0.01mm.

Key to the HP70's design, is a new drive concept that works with two lin-

ear motor axes that feature a unique 'knuckle' design on the y/z axis—virtually eliminating the need for another linear motor for the z axis.

The collaboration with Weiss on their 24-station medical luer valve system provided the client with a turn-key solution that exceeded performance goals, while freeing up their time for ongoing multiple production project management. The Weiss engineering group provided a one-source medical parts assembly solution—delivering a 1.25 second index cycle time with an indexing table speed of .33 seconds—from station to station. According to Peter Fiouzi, director of sales-western region at Weiss, "We've completed one chassis so far and have two more currently in production for the client. The two new ones are nearly identical to the first but just a bit larger in configuration scope."

**For more information:**

Weiss North America, Inc.  
Phone: (440) 269-8031  
[www.weissna.com](http://www.weissna.com)

## Hansford Sensors

PROVIDES FLEXIBLE CABLE ASSEMBLIES

Hansford Sensors has launched two new cable and connector sets for use with its existing range of vibration sensors. The new HS-AC334 and HS-AC335 cable assemblies have been developed for use in applications where IP67 sealing is required, or where vibration sensors have to be used in extreme operating temperatures.

The new cable assemblies are rated for use between -80 and +200 degrees Celsius and are manufactured from FEB (Fluorinated ethylene propylene). This is flexible, robust and provides excellent dielectric strength, making it ideal for a wide range of industrial and process duties.

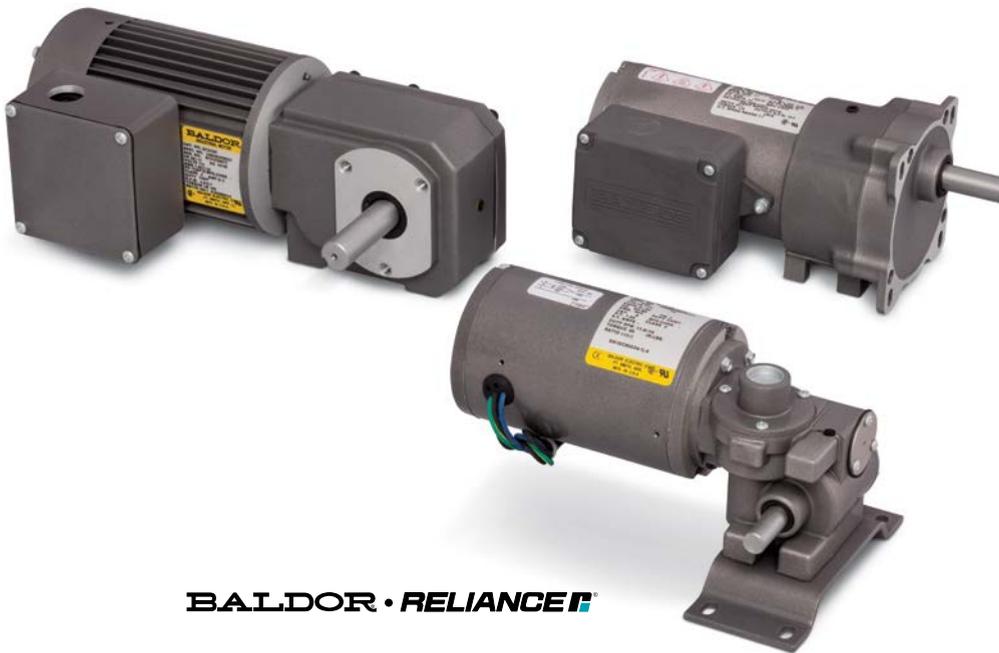
The HS-AC334 and 335 can be supplied with straight or right-angle two-pin MS connectors, or with three-pin connectors for use with dual output sensors, and are available in a variety of standard or custom built lengths. The new cables are designed for use with most of Hansford Sensors' industrial accelerometers, including the AC, 4-20mA and dual output vibration and temperature sensors.

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# PI (Physik Instrumente)

RELEASES COMPACT MICRO-TRANSLATION STAGE

PI (Physik Instrumente), a provider of precision motion control and positioning solutions for more than four decades, has released a low-profile motorized positioning stage—the M-122—with a very small footprint of 60×86mm and a travel range of



25 mm, best suiting it for research and industrial applications including fiber alignment, metrology, quality assurance testing, photonics packaging, test equipment, and micromachining.

The compact closed-loop positioning stage can handle payloads to 11 lbs., with velocity to 20mm/sec. The optical linear encoder provides 100 nanometers resolution and better linearity and repeatability compared to rotary encoder or stepper motor equipped positioners. Long service life and excellent guiding accuracy with minimal backlash are guaranteed by the preloaded ball-screw drive and precision crossed roller bearings with anti-creep cage assist.

M-122 stages can be combined to create very compact XY and XYZ systems. Combined with the networkable low-cost C-863 Mercury servo motor controller, M-122 stages offer high performance at a competitive price.

To protect equipment, non-contact Hall-effect limit and reference switches are installed. The direction-sensing reference switch supports advanced automation applications with high precision.

**For more information:**  
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# Steinmeyer

RELEASES XI-PLUS LINE OF BALL SCREWS

Steinmeyer, a global manufacturer of precision ground ball screws, introduces a new ball screw line called Xi-Plus. These screws feature a smooth raceway surface that achieves significantly quieter operation with reduced vibration for every application.

Xi-Plus precision ball screws are manufactured in Germany like all Steinmeyer products. The ball screws undergo a proprietary finishing process that removes micron-sized defects on the shaft raceway. These defects are responsible for high pitched “whistling” and rough running characteristics.

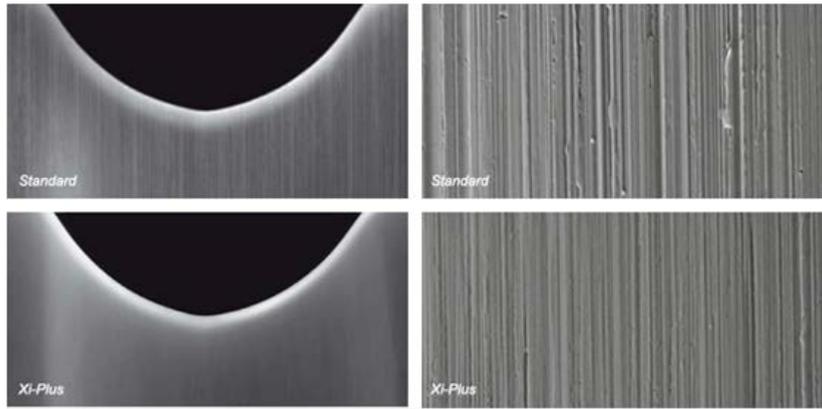


“Steinmeyer has a long history of delivering linear motion innovations that improve the performance of our customers’ systems,” stated Bruce Gretz, executive vice president of Steinmeyer, Inc. “Xi-Plus precision ball screws are an outstanding solution for applications that require smooth and quiet operation.”

Like all Steinmeyer products, Xi-Plus precision ball screws offer dynamic delivery of linear motion at high standards of precision and longevity. The screws feature shaft diameter between 16–125 mm and all nut styles are available.

#### For more information:

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



Before and after scanning electron micrograph (SEM) photographs show the effects of Xi-Plus technology. Left:50X magnification, Right: 1,000X magnification.

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# Primatics, Inc.

RELEASES HIGH ACCURACY POSITIONING TABLES AND NANO PRECISION STAGES

High accuracy positioning tables and nano precision stages, from Primatics, Inc., are used in applications where high accuracy and repeatability and/or smoothness are critical. All sub-assembly components are machined to very tight tolerances in order to achieve the required accuracy and repeatability. Typical precision for these types of stages are measured in the sub-micron or nanometer range.

Precision ground acme screws, precision ground ball screws, or brushless linear motors are typically used as the driving mechanisms for these stages. Precision ground cross roller bearings, ultra-high accuracy square rail bearings, or air bearings are mainly used for the linear bearing system. Granite or a precision machined steel plate is commonly used for the table mounting surface. A temperature controlled

environment, machine shock absorbers, and high resolution linear encoders are also usually required in order to obtain and maintain the system accuracy and repeatability over the life



of the product. Primatics custom engineered solutions are ideal for assembly & inspection applications, vacuum environments, clean room environments and metrology applications for precision testing and measurement. The family of linear stages include: PCL50 and PCL65 Linear Stages, PCR32/43 Series Positioning Stages, PLG Stages, PO Series, PXL Stages and more.

**For more information:**

Primatics  
Phone: (541) 791-9678  
[www.primatics.com](http://www.primatics.com)

## Cortec Corporation

DEVELOPS SUPER BARRIER VERSION OF ITS ECOSHIELD VPCI-144

Cortec Corporation has developed a new Super Barrier version of its EcoShield VpCI-144 paper for protecting metal parts from corrosion. EcoShield VpCI-144 Super Barrier combines the corrosion protection of VpCI paper coating with a high gloss water-based barrier coating that prevents moisture from reaching metal parts wrapped inside the paper. The enhanced moisture barrier of EcoShield VpCI-144 is an excellent environmentally friendly alternative to polyethylene and waxed papers. Under recent ASTM E-96 testing, EcoShield VpCI-144 Super Barrier exhibited a water vapor transfer rate (WVTR) highly comparable to that of polycoated paper.

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Past testing has also shown EcoShield VpCI-144 Super Barrier to rival the moisture barrier properties of poly-coated paper and commercial waxed paper. This is an important advantage since poly and wax coatings are not recyclable through normal channels and therefore create an environmental problem. In contrast, EcoShield VpCI-144 is environmentally safe and fully recyclable into other types of paper products such as boxes, cardboard, and other corrugated materials.

EcoShield VpCI-144 Super Barrier combines corrosion protection, moisture barrier properties, and oil and grease resistivity into one material to protect both ferrous and non-ferrous metals. This eliminates the need to inventory multiple types of papers for different types of metal. Protected metals include carbon steel, stainless steel, galvanized steel, cast iron, aluminum alloys, copper, brass and solder.

VpCIs on the inside face of the EcoShield VpCI-144 Super Barrier paper vaporize and condense on metal surfaces to form a thin protective film that doesn't influence physical properties of most sensitive electrical and electronic components, including conductivity and resistivity. The protective film does not need to be removed prior to further surface finishing or coating application, and protected parts can be painted, welded, or soldered.

EcoShield VpCI-144 is useful in a variety of different applications including metal production, metal forging and die casting, metalworking, finished products and electrical and electronic products.

**Martin**

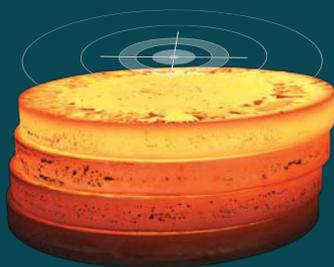
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## Zero-Max

CD COUPLINGS OFFER HIGH POWER DENSITY

The quest for smaller machine footprints continues as designers seek new ways to reduce machine size while increasing output. The Zero-Max CD coupling pictured provides precise and reliable shaft connections in less space than other couplings. It operates without fatigue for reliable 24/7 operation required in the latest machine designs.

Key to this CD coupling design is the composite flex element. It provides high torsional stiffness, yet allows for misalignment in high stress applications. In addition, these zero-backlash CD couplings provide smooth operation at high speeds. The coupling's high performance material is configured in a compact design like that pictured surpassing the performance of much longer couplings. The resulting space savings enables machine designers to reduce the foot print saving valuable floor space.

Designed around Zero-Max's unique composite center disc, Compact CD couplings perform at peak torques in the most hostile operating

environments — from extreme cold to hot weather conditions  $-70^{\circ}\text{F}$  ( $-57^{\circ}\text{C}$ ) to  $+250^{\circ}\text{F}$  ( $+121^{\circ}\text{C}$ ). Time-proven applications include drive trains, gear boxes and generators providing trouble-free operation in sea water and abrasive desert sand conditions.

### For more information:

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## Nye Lubricants

DEVELOPS RHEOLUBE 460 SERIES

Nye Lubricants is developing the next generation of synthetic hydrocarbon greases thickened with lithium soap. These new greases are the Rheolube 460 series, an improved version of Nye's 360 series. The greases demonstrate improved load carrying ability and anti-wear performance. They have excellent oxidative stability and superior corrosion resistance.

The first grease in the series has been formulated and commercialized as Rheolube 462. The new grease improves on our current Rheolube 362HT product successfully used for many years in the automotive industry. Rheolube

462 has been designed for low-temperature applications exceeding the OEM requirement of  $-40^{\circ}\text{C}$ . The grease has a long service life due to its resistance to ageing and oxidation. It provides improved wear protection, outstanding

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# Moticont Servo Motors

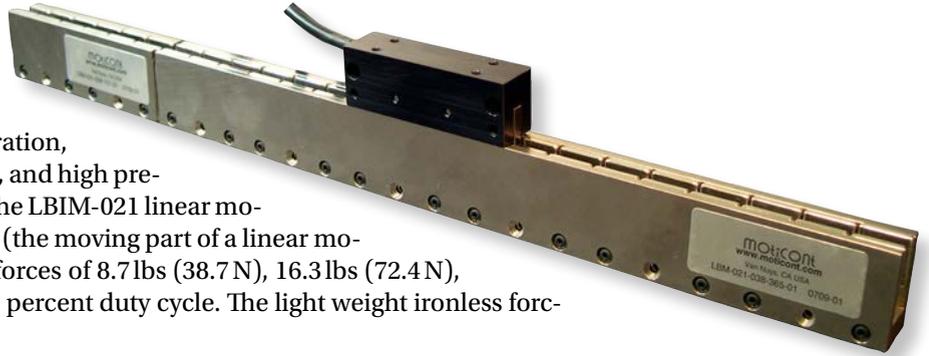
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corrosion protection in salt water, and excellent water resistance. The product contains a UV indicator that allows quality checking.

This advanced Nye technology offers advantages in applications such as rolling bearings for small motors, sliding surfaces, geartrains, switch gears, and electrical components such as window lifters, sun roofs, seats and fan flaps. The grease can also be used on many plastic/plastic gears or plastic/metal combinations.

## For more information:

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# ETEL

PRESENTS TMB+ SERIES IN NORTH AMERICA

ETEL unveiled the newest advancement of their torque motor family, the TMB+ during IMTS 2016. In order to keep up with the high demands of the machine tool market, ETEL has taken its existing TMB line of torque motors and redefined it to increase its overall torque, size selection, and winding options to expand upon an already extensive and well renowned series of direct drive motors.

The TMB+ is fully pin-to-pin compatible with the TMB series but offers an increased performance of up to 22 percent continuous torque and up to 4 percent on top of its already high peak torque. Also the TMB+ has reduced power losses, four different winding options per size and a new 200 mm active length for each diameter, increasing its overall size selection from the TMB. These options help propel ETEL torque motors beyond the competition and pushes towards the goal of making direct drive technology as accessible as possible.

The TMB+ series comes in 62 standard model sizes with four different windings each, allowing the user to get maximum performance depending on how much torque, current, and speed needs is required. TMB+ motors can achieve a peak torque of up to 42,900 Nm and utilize flux weakening to increase its speed capabilities. It also has the option of coming with ETEL's IMTHP thermal module

which, when coupled with ETEL's torque motors, enables users to reduce their amount of safety margins while receiving precise and reliable temperature monitoring. ETEL torque motors are compatible with most CNC controllers.

The TMB+ series is designed specifically for direct-drive applications and offers the following advantages over transmission-based devices: fewer parts, requiring lower overall costs; maintenance-free operation; no backlash, allowing for better accuracy and repeatability; smooth, precise and efficient motions; and compact design.



**For more information:**

ETEL Motion Technology (Heidenhain)  
Phone: (847) 755-5569  
[www.etelusa.com](http://www.etelusa.com)



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SKF has centralized the production of bearings with Solid Oil to promote timely delivery throughout North America and has introduced enhanced formulas to benefit more applications across industries. These bearings are filled with an oil-saturated polymer matrix, which creates a consistent lubricant supply able to withstand very cold temperatures (down to  $-65^{\circ}\text{F}$  and  $-53^{\circ}\text{C}$ ), aggressive chemicals, contaminants, and high centrifugal forces. The polymer matrix contains two- to four-times more lubricating oil than standard grease-filled bearings and the bearings never have to be re-lubricated. As a result, maintenance lubrication challenges are eliminated, especially benefiting applications where the accessibility to manually lubricate bearings is unsafe, impractical, and/or impossible.



SKF manufacturing capabilities for bearings with Solid Oil have been newly housed at the strategically located SKF Solution Factory in Cleveland, OH, resulting in advanced production and quicker delivery timelines anywhere in the USA and Canada. Virtually any standard SKF bearing type (including stainless steel) can be equipped with Solid Oil, which both provides required lubricant to a bearing and acts as an extremely effective seal by completely filling a bearing's cavity. Seals for lubricant retention become unnecessary.

The enhanced portfolio of Solid Oil formulas expands bearing solutions for the most critical and formidable applications. These include food processing

equipment (with two NSF H1 registered compounds available), cranes, machinery, and conveyors where manual greasing would raise safety issues, and any application subjected to dirt or humidity, aggressive chemicals, extreme contamination and/or other adverse conditions that could jeopardize conventional lubricant.

A variety of additives, such as rust inhibitors, can be specified into the mix for increased protection and customized product solutions can be developed to meet especially demanding requirements.

**For more information:**

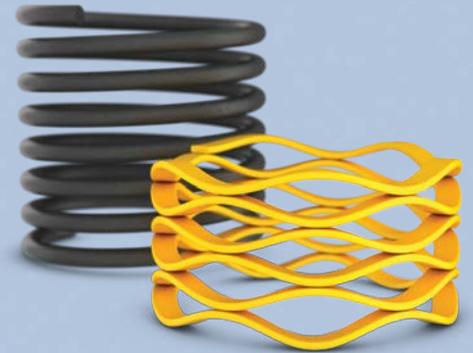
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