Hannover Messe USA 2022 Booth Previews

A Walk-through of the East Building

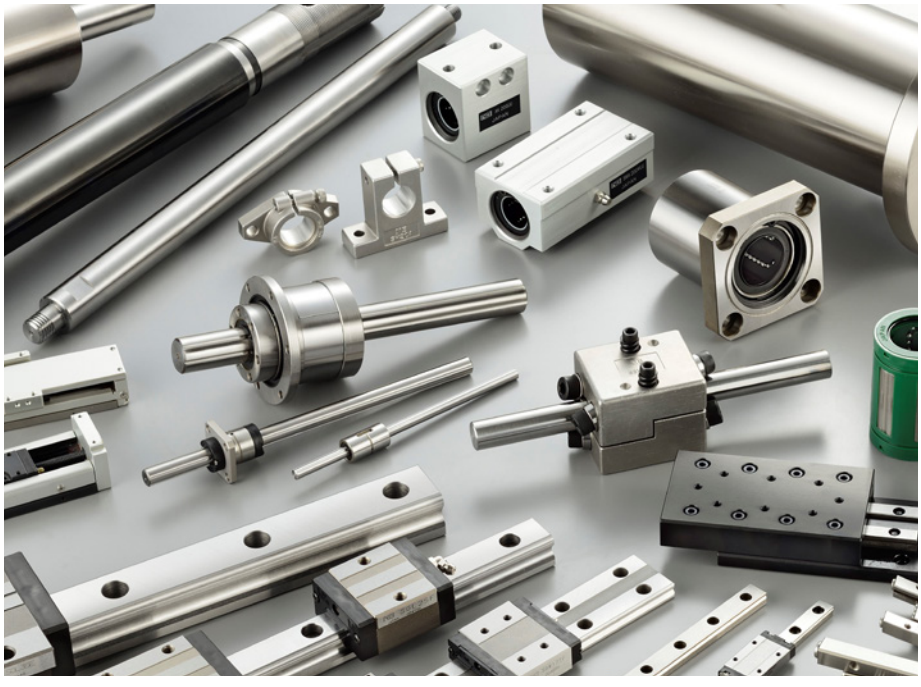
Aaron Fagan, Senior Editor

Since 2012, Hannover Messe USA has colocated with IMTS, bringing new industrial technology together at a single venue and establishing the ideal platform for change. These two events connect world-leading suppliers and forward-thinking manufacturers to unlock new efficiencies. Today, with a focus on sustainability, efficiency, and cost-effectiveness, Hannover Messe USA is accelerating the future of automation.

As the largest gathering of industrial manufacturers in North America, this comprehensive automation-focused event attracts proven decision-makers looking to develop relationships and strengthen partnerships. It presents the world-leading technologies these leaders need to win amid the industry disruption and transformation of Industry 4.0. And it continues to adapt in 2022 to meet attendee and exhibitor needs in a unique way. Here we gather a few offerings from the East Building.

NB Corporation of America—#134829

NB Linear Systems are linear motion mechanisms using the recirculating movement of ball or roller elements to provide smooth and accurate linear travel. All products are designed to minimize size and weight while providing superior performance in high-precision equipment. NB's products are characterized by low friction and low noise and are available as total systems or as individual components.



Visit the website for downloadable CAD drawings of all slide guides, ball splines, round shaft products such as Topball, slide shafts, slide way products including tables, gonio ways, Studroller, slide tables, actuators, slide rotary bush products, as well as many flanged products, mounted units, and mounting accessories.

nbcorporation.com

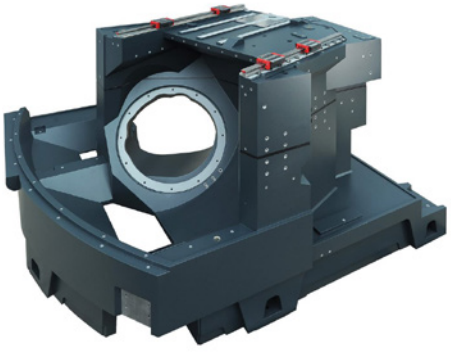
Schneeberger—#134837

Schneeberger Linear Technology will spotlight its mineral cast machine structures, precision positioning and motion systems, Minirail miniature guideways, linear ball guideways, Monorail AMS distance measuring system, gear racks, ball screws, and more at Hannover Messe USA.

Schneeberger mineral casting technology, as well as the company's 30 years of experience in manufacturing precision systems, the most comprehensive range of solution capabilities, and the broadest line of components, will be on display.

Highlights include:

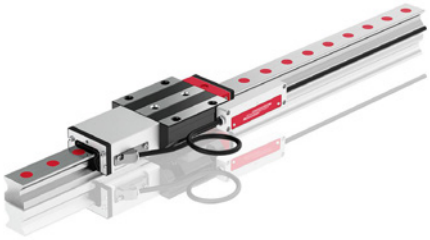
- Mineral Casting takes center stage as George Blaha presents "Mineral Casting: The 'Organic' Solution for Eliminating Vibration in Production Machinery for Greater Speed, Precision and Environmental Protection," Tuesday, Sept. 13, at 3:15 p.m. in the McCormick Place West Building—W193-A. Blaha will detail mineral casting technology as the organic solution to use in production machinery bases and foundations as a strategy to achieve exceptional vibration damping, chemical resistance, and environmental sustainability. Applications include metal



This mineral cast was produced for a 5-axis milling machine for a large machine tool manufacturer.

grinding machines as well as the solar, electronics, packaging, and medical device sectors. Blaha is general manager, Schneeberger Mineralgusstechnik s.r.o., and Executive Board Member, Schneeberger Group.

- Schneeberger's Precision Positioning and Motion Systems engineering expertise is spotlighted in the form of a fully functioning demonstration of a complete linear motion technology system featuring the company's leading and most innovative linear motion components. When linear technology components are designed as a system to work together to create the most effective solution for machine movement, OEMs are enabled to accelerate design and manufacturing speed, reduce assembly time and labor—and achieve a lower total cost of ownership.
- Minirail miniature guideways provide high precision, robustness, reliability, and versatility. As a result, Minirail guideways are ideal for medical equipment, additive manufacturing, and other applications when space is at a premium and where high acceleration and/or extreme load values are involved.
- Monorail AMS integrates a measuring head and scale onto Monorail profiled linear guideways for distance measurement when space constraints and performance.



Monorail AMS solutions boast a 25-year track record as a proven technology, are machine-compatible, and are ready to install to reduce the lifetime costs of mechanical engineering and automation applications.

- Monorail BM profiled linear guideways (with balls) deliver maximum precision and increased service life—with minimal maintenance. All carriages feature longitudinal cross wipers for efficient sealing against dirt and debris.
- Monorail MR profiled linear roller guideways feature high precision, high rigidity, great dynamic and static load carrying capacity, outstanding running smoothness, and total enclosure of the carriage as required for use worldwide in many machine tool applications. The results: Higher machining rates and enhanced geometrical accuracy and surface quality for workpieces, and improved vibration behavior and smaller vibration amplitudes for extended tool life.
- Gear racks enable linear movements over almost limitless stretches. They are well-suited to use in large machines and systems as an economical solution when machine components with large axial forces require long linear movement with consistent stiffness over the rack length. Dirty working environments are no problem, and there are cost-efficient solutions for all applications.
- SBS ball screws efficiently deliver high precision positioning and repeat accuracy, operate smoothly, and hold constant torque due to their precision-ground and hardened ball contact

surfaces. Equally suitable for use at high and low speeds, as well as oscillating short stroke movements, SBS ball screws are ideal for demanding applications such as machine tools and measuring and testing equipment.

- SLA Actuators meet the demands of any precision linear motion control application with unique high-performance linear positioning and quality engineering in a compact design. SLA Actuators utilize recirculating ball linear guides that ensure smooth motion and high load capacity—all at an economical price.

Schneeberger Linear Technology has been offering precision innovative linear motion solutions since 1923. Headquartered in Switzerland with its US base in Woburn, Mass., the group operates worldwide as an established OEM supplier in several sectors. Its high-quality standard and customized offerings include linear bearings, profiled guideways, measuring systems, gear racks, ball screws, positioning systems, and mineral casting. All Schneeberger solutions featured at Hannover Messe USA 2022 are immediately available.

schneeberger.com

Neugart USA Corp.—#134639

Axially space-saving, economical, IP65-compliant, and designed for high radial and axial forces at the output: The new WPLHE combines all the advantages of the successful PLHE, the world's first combination of the economy and precision gearboxes, as a right-angle variant.

The WPLHE features both the gearing of a proven economy gearbox and a high-performance output bearing with preloaded tapered roller bearings, which are otherwise commonly used in precision gearboxes (such as the PLN and the PSN). This means that the new right-angle gearbox tolerates high radial and axial forces of up to 8,000 N at the output. For example, pulley drives with high radial loads can also be implemented in right-angle designs.

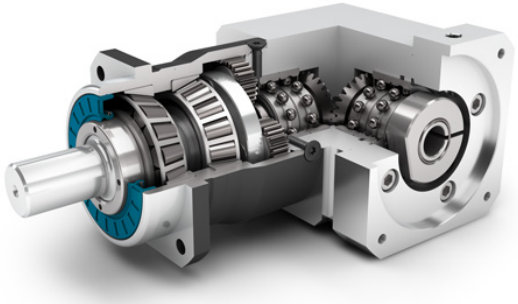
Compared to the coaxial PLHE the motor is rotated by 90° in this case, the WPLHE offers the ideal solution in confined spaces, for example in packaging and other special machines. It is the only economy right-angle gearbox to be offered with a premounted pinion as an option. This makes it particularly suitable for space- and cost-sensitive rack-and-pinion drives. There are 13 different pinions from which to choose: with a choice of straight-cut or helical-cut teeth, from module 2 to 3, with numbers of teeth from 15 to 27.

Thanks to the output geometry with square output flange and long centering flange that has become established on the market, the WPLHE is easy to implement. Several different output shaft variants - smooth, keyed, splined, or with premounted pinion—mean that the right-angle gearbox can be used in a wide range of applications. It is also the only economy right-angle gearbox with IP65 protection class, making it suitable for harsh, dusty, and dirty environments. Food-grade and low-temperature lubricants are also available for the lifetime lubrication commonly provided by Neugart.

The new WPLHE is now available in three sizes 060 / 080 / 120, either as a single-stage version (in the ratio range of 3 to 10) or as a two-stage version (ratios 9 to 100). Thanks to an efficient supply chain, Neugart can continue to guarantee attractive delivery times for quantities starting at one.

Neugart is extending its portfolio of planetary gearboxes, especially for rack-and-pinion drives, with an additional option for a mounted pinion from its in-house production.

Two specific types of pinion are available: the PK1 pinion is mounted to the splined output shaft of the gearbox, whereby the secure connection that is required is provided by internal teeth in accordance with DIN 5480. The PM1 pinion, on the other hand, is designed for gearboxes with a flange output shaft, and is equipped with a mechanical interface which is standardized in accordance with EN



ISO 9409-1. Both types are available with a helical cut, and the PK1 is also available with a straight cut. The pinions are also available in four different modules and with different numbers of teeth.

The pinion option can also be combined with a total of eight gearbox series: including a coaxial planetary gearbox with an output shaft (PLHE) and an output flange (PFHE) from the Economy Line, which include durable and powerful standard gearboxes with an outstanding price/performance ratio. Two coaxial planetary gearboxes with an output shaft (PSN and PLN) or output flange (PSFN and PLFN) and right-angle planetary gearboxes (WPLN and WPSFN) are available in the Precision Line, which represents the outstanding accuracy of precision gearboxes.

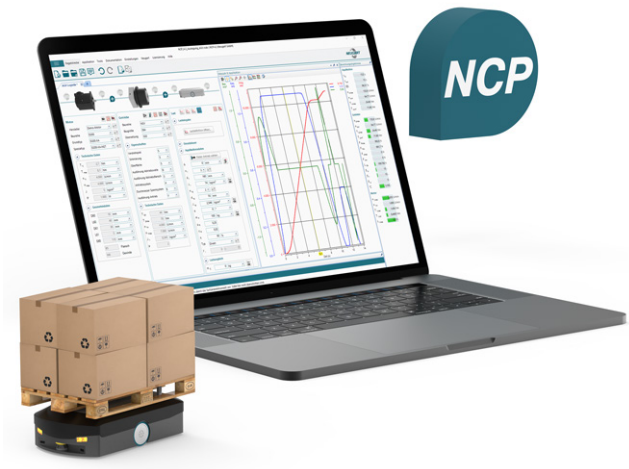
These numerous pinion/planetary gearbox type combination options ensure that not only can a solution be found for a wide range of applications, but usually several, meaning that the torsional stiffness of the flanged gearboxes is greater than that of gearboxes with an output shaft. If the construction space situation is the decisive criterion, the constructor can use the short gearbox with the output flange or the right-angle precision gearboxes. If precision is the decisive factor, the constructor can opt for the greater accuracy and torsional stiffness of the precision gearboxes. On the other hand, economy gearboxes are a solution that is financially more attractive for standard applications.

Complex load trends in the drivetrain can be calculated in the NCP, and the optimum application-specific motor/gearbox combination is determined on this basis. With the update, it is now also possible for propulsion drives in Automated Guided Vehicles (AGVs) and the new NGV gearbox range that is tailored to these vehicles. Existing projects from current or older NCP versions can now also be loaded for newly designed controlled systems and compared with them.

As well as these new functions, Neugart has simplified the operation of the tool with version 4.2 and improved user-friendliness: conversions are no longer required when importing read-out motor data, for example. Users of popular CAD programs can now also use the familiar full stop as a separator as well as the comma. Calculations can also be carried out in the input fields. And the gearbox documentation has also been optimized, meaning that the user detects whether the selected gearbox is suitable on the basis of utilization bars.

And finally, NCP 4.2 has an example for every application, which makes it easy to learn how to use the tool.

neugartusa.com



Hiwin—#134514

Torque Motor Rotary Tables (TMRT) are ideally suited to high-accuracy machine tool manufacturing where multiple axis operations must take place simultaneously. Hiwin offers several styles including RAB Series, widely used in 3+2 axis, 4+1 axis positioning processing, or 5-axis simultaneous processing.

Datorker strain wave gearing systems allow higher gear reduction ratios than other types in a more compact space. Widely used in robots, automation equipment, semiconductor equipment, machine tools, and other industries, Hiwin has developed

various specifications and reduction ratios to provide customers with a wide range of choices. Hiwin can provide customized services to meet customers' various designs and requirements.

hiwin.us

Hexagon—#135202

Hexagon's Manufacturing Intelligence division will feature its recently released 6D laser tracking system—the Leica Absolute Tracker AT500—in Booth 135202 in the Quality Assurance Pavilion. The AT500 platform delivers improved performance to both reflector and probing measurement, as well as plug-and-play setup times. Its new, customer-centric design includes several significant features including a battery-powered, integrated controller, full IP54-rated environmental protection, minimized cabling, and an expanded operating temperature range. Users no longer need to level the tracker or initialize a reflector before measurement begins. These enhancements and more translate to the most portable and robust laser tracker in Hexagon's metrology portfolio.

Overall, the AT500 is built to provide exceptional user productivity and reduced time-to-results workflow. The laser tracker's expanded operating temperature range of -15°C to 50°C provides accurate results for challenging measurement environments from mountaintops to foundries. With a measurement volume up to 320 meters and IP54-rated ingress protection, the AT500 stands alone in its field as the go-to technology for large-scale inspection applications on the factory floor, a tarmac, a solar farm, or a shipyard. **PTE**

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