

# ABB

## RELEASES ABILITY SMART SENSOR FOR BEARING MONITORING

ABB has launched the ABB Ability Smart Sensor for Dodge mounted bearings, part of the ABB Ability Digital Powertrain, that enables "health checks" for bearings. The smart sensor technology provides an early indicator of any potential problems by assessing the condition of bearings from vibration and temperature information. This helps to prevent downtime on applications such as bulk material handling conveyors typically found in the mining, aggregate and cement industries, as well as applications in the food and beverage and air handling sectors.

ABB Ability Smart Sensor for mounted bearings use the latest algorithms to assess, manage and ensure performance of components. Eighty percent of bearing failures are lubrication related and a bearing "running hot" can indicate that proper lubrication procedures are not in place. Monitoring a bearing's vibration can indicate potential system problems.

The smart sensor easily mounts to the bearing and communicates wirelessly via a smartphone or other device. This



capability keeps employees safe, enabling easy access to the health data of bearings in locations that may be difficult or dangerous to reach.

"Bearings are critical components in conveyor systems and are often the first indicator of a system problem," says Artur Rdzanek, product manager for sensor technologies, Dodge mechanical products at ABB. "The display of the health status of the bearing enables operators to quickly and safely identify a potential problem, which allows them to schedule maintenance and prevent unplanned downtime."

The ABB Ability Smart Sensor for mounted bearings is part of ABB Ability, which brings together all of ABB's digital solutions and services, each built from a unique combination of sector knowledge, technology leadership and digital expertise. As part of ABB Ability, customers are able to easily compare performance data of bearings across systems or plants.

### For more information:

ABB  
Phone: (800) 435-7365  
[www.abb.com](http://www.abb.com)

# Dunkermotoren

## OFFERS COMPACT MODULAR LINEAR MOTOR CONCEPT

With the SA/SC 38 series, Dunkermotoren presents a completely new modular concept for tubular linear direct drives. The highly dynamic three-phase linear motors deliver up to 3,690 N and accelerate at over 200 m/s<sup>2</sup>. The modular design is currently available as actuator version SA (with maintenance-free plain bearing system) and component version SC (for modules). If the linear motor should sweat during its efforts, the standard water connection ensures cooling and doubling of the continuous force. In addition to the integrated SIN/COS linear encoder, further motor feedback variants (SSI, BISS & TTL) will be available next year. Due to the encoder system (patent pending), commercially available servo controllers (up to 800 VDC link voltage) can position the compact linear motor quickly, precisely and reliably. One of the main applications of the SA/SC 3806, 3810 or 3814 will be high-speed applications in the food and packaging industry. Since Dunkermotoren has been a system supplier

in drive technology for decades, it will not remain just a solo motor. Pick & Place modules, complete linear axes and a version designed for the food industry will soon follow to facilitate system integration at the customer's site.



### For more information:

Dunkermotoren USA Inc.  
Phone: (773) 289-5555  
[www.dunkermotoren.com](http://www.dunkermotoren.com)



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## Cincinnati VR

TAPS LEROY-SOMER FOR VARIABLE SPEED MOTOR

Pursuing its constant innovation approach aimed at making its machines increasingly ergonomic and automated, Cincinnati VR has chosen to equip its new pillar drill-thread cutter with a new integrated variable speed motor, the Commander ID300 from Leroy-Somer. This drive solution enables adaptation of the spindle rotation speed according to the material being worked, for a better-quality machining result.

Cincinnati VR, the renowned drills specialist, is also an established player in machining center maintenance. Installed on its historic site of Chambost-Allières in the Beaujolais hills, the company has strong development potential for a widely-used product: the drill. Thanks to its innovation potential and its dynamism, the company enjoys undeniable success in this extremely competitive sector.

Conscious of the problems of duress linked to the use of conventional machine tools, the company focuses its efforts into research and development to design products that address this issue.

In line with this approach, some 10 years previously Cincinnati VR launched its N320 VDA pillar drill with the objective of eliminating repetitive strain injury by relieving the operator of repetitive and stressful gestures. Hence, the downward movement of the spindle is totally controlled by a digital shaft composed of a Leroy-Somer solution (Mb series servo-gearbox controlled by a DIGITAX servodrive) and a GUI for adjusting the movement settings and featuring various user-friendly aids for the operator. Available in several versions, this machine won a number of international awards at major industrial trade fairs.

With its brand-new generation P23V CTCE, Cincinnati VR proposes a smart drill that adapts its spindle speed according to the worked material, for both drilling and thread-cutting.

If needed, the tapping return can be made faster to optimize the cycle time. However, in certain materials that require very finely-pitched tapped threads, the tapping return can be executed more slowly, for a better-quality machining result.

Covering a range of 80 to 6,500 rpm, the spindle is equipped with electronic variation courtesy of the Commander ID300, the latest-generation integrated drive for the IMfinity motors from Leroy-Somer. A decentralized system, the speed drive assembly offers dynamic high performance and high efficiency.

Extremely robust, Commander ID300 guarantees ease of use, implementation and operation. Equipped



with advanced features, it offers a wide choice of options and adaptations for maximum flexibility.

"As well as these advantages, we were first struck by the extreme compactness of the Commander ID300 enabling perfect integration in our new drill," said Patrice Rivier, technical director at Cincinnati VR. "We were then won over by its peerless low-speed torque performance, its capacity to manage the on-board PLC programming in compliance with standard IEC 61131-3 motion, the Modbus RTU connection and its compatibility with the main GUI brands."

### For more information:

Nidec Corporation (Leroy-Somer)  
Phone: (314) 595-8940  
[www.nidecautomation.com](http://www.nidecautomation.com)

# ELEPHANT in the Room?

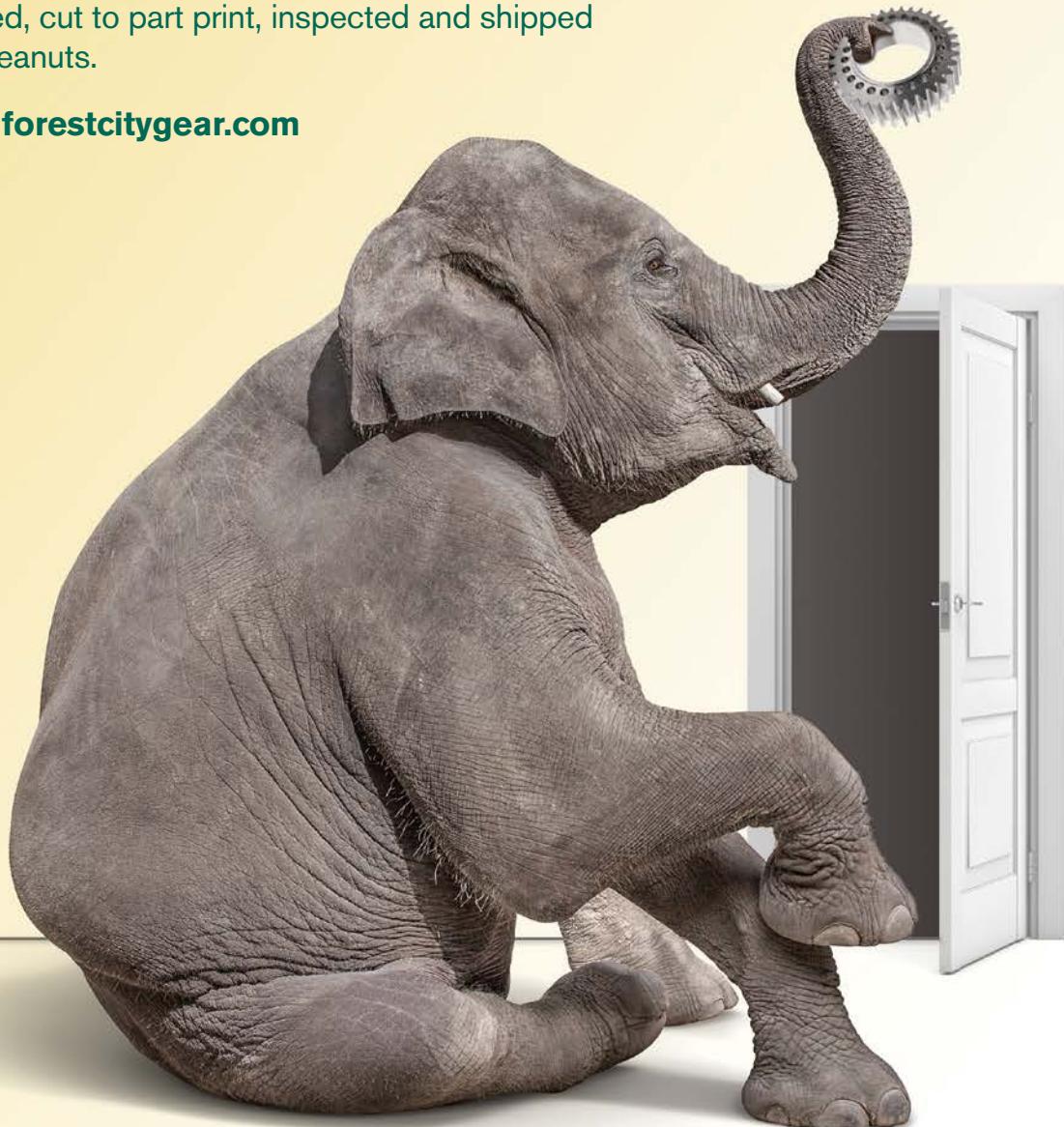
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## Miki Pulley

RELEASES ZERO BACKLASH DESIGN  
FOR ELECTROMAGNETIC CLUTCHES

Miki Pulley CSZ Clutches function utilizing the magnetic force generated by the energized coil providing engagement of input and output members of the clutch. They feature an integrated bearing design making mounting fast and easy while ensuring application concentricity and excellent system runout. CSZ Clutches operate well in temperatures from +14°F to +104° (-10°C to +40°C).

Available in bores ranging from 10 mm to 15 mm, with brake torques ranging from 1.77 ft.lbs. to 7.376 ft.lbs. (2.4 Nm-10 Nm). The CSZ utilizes corrosion resistant materials, and is RoHS compliant like all other Miki products.

"Miki Pulley's CSZ Clutches are a great choice for high performance printing, paper processing, packaging, food processing and textile



manufacturing systems," reports Jon Davidson, Miki Pulley sales specialist. "They are proven performers in system applications around the world."

**For more information:**

Miki Pulley  
Phone: (800) 533-1731  
[www.mikipulley-us.com](http://www.mikipulley-us.com)

## Rolling Motion Industries

OFFERS SPEED REDUCERS WITH TRACTION DRIVE TECHNOLOGY

Rolling Motion Industries (RMI) has released for production the next two in its series of highly efficient speed reducers. These 3-to-1 speed reducers use "game changing" traction drive technology. The MAR-17-1-3.1 and the MAR-23-1-3.1 Speed Reducers feature 98 percent efficiency and with only 6 moving parts they typically out last conventional gearboxes and speed reducers by a factor of 3. The MAR17-1-3.1 Speed Reducer is designed for input speeds up to 3,600 rpm with 10 to 20 in/lbs of torque, and the MAR-23-1-3.1 Speed Reducer is also rated for speeds to 3,600 rpm but with an input of 20 to 30 in/lbs of torque. As the output speed is reduced by a factor of 3 the output torque increases by a factor of 3.

Using an engineered traction fluid with a coefficient of friction of just 0.1 to 0.12 that cools and lubricates the traction drive these high efficiency speed reducers generate up to 72% less heat even after days of continuous operation. There is no slippage or lost

motion between the input and output shafts even though there is no metal to metal contact as the traction fluid is continuously changing from liquid-to-solid-to-liquid as the driving and driven elements interface in the drive. Creating 38 percent lower dB at 3,000 rpm than conventional gearboxes these people-friendly speed reducers are ideal for use in medical equipment such as mobile hospital equipment and dialysis machines as well as pumps, blowers, fans, turbo and super chargers, conveyors, HVAC systems, and other power transmission and motion applications.

Having low vibration, and no torque losses from 10 to 3,000 rpm, these speed reducers featuring traction drive technology lets a motor operate at peak

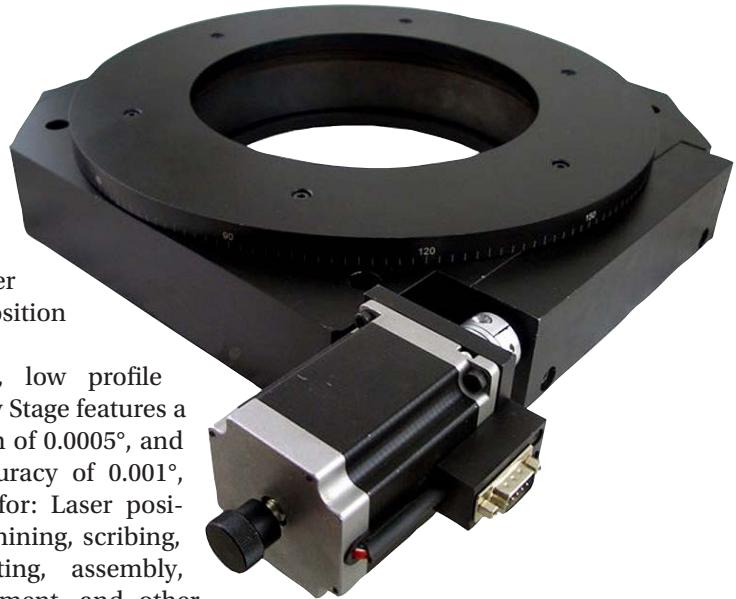


The new AY110-300 Motorized Rotary Stage from Optimal Engineering Systems, Inc. (OES) features a large 180 mm (7.087 in.) open aperture. This precision, large open aperture (hollow core), low profile rotary stage is just 65 mm (2.559 in.) high and it's footprint is only 303 mm by 319 mm (11.929 in. by 12.559 in.) not including the motor. The rotary table of the stage has a precise pattern of threaded holes for mounting custom tooling and fixtures, and holes in the base for easy integration into new and existing applications. The diameter of the rotary table is 300 mm (11.811 in.) and the range of travel is a full 360°, and it is capable of continuous rotation.

The AY110-300 Rotary Stage is also available with a servomotor and optical encoder. The standard model is equipped with stepper motor and a

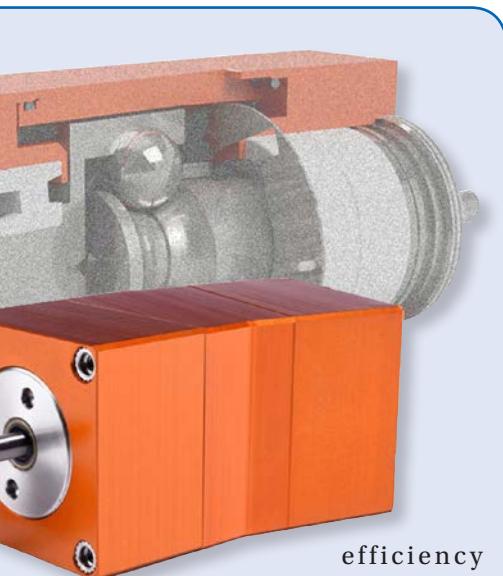
knob for manual adjustment which can be replaced with an optical encoder for precision position verification.

The low cost, low profile AY110-300 Rotary Stage features a very low backlash of 0.0005°, and a positional accuracy of 0.001°, making it ideal for: Laser positioning and machining, scribing, microscopy, testing, assembly, inspection, alignment, and other critical applications. This black anodized stage has a load capacity of 65Kg (143lbs.) and there is an indicator scale for visual sighting of the angle of rotation. The stage can be ordered with Plug-and-Play with a fully compatible controller from OES.



### For more information:

Optimal Engineering Systems, Inc. (OES)  
Phone: (888) 777-1826  
[www.oesincorp.com](http://www.oesincorp.com)

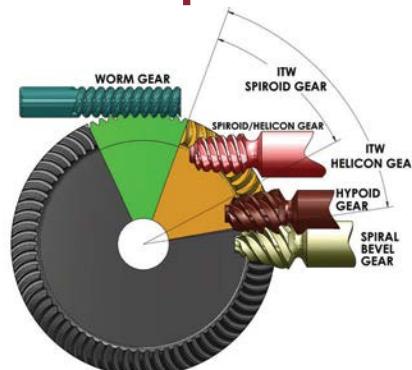


efficiency while having a damping effect on a motor's torque ripple. These speed reducers are available with an optional overriding clutch. Incorporating standard NEMA mounting dimensions, these speed reducers can be easily integrated into new and existing applications.

**For more information:**  
Rolling Motion Industries (RMI)  
Phone: (860) 846-0530  
[www.rmidrive.com](http://www.rmidrive.com)

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# Timken

## EXPANDS SPHERICAL ROLLER BEARING UNITS WITH DOUBLE-NUT DESIGN

The Timken Company is expanding its line of mounted bearings with spherical roller bearing solid-block housed units that allow for even easier installation and removal for a multitude of applications.

"Timken spherical roller bearing solid-block housed units with double-nut adapters are designed for tough conditions without being hard to use," said Cory Shaw, Timken general manager—housed unit bearings. "Not only are our mounted units stronger on the outside, but they are also smarter on the inside. We design our units to provide high performance, real world maintenance solutions in a wide range of sizes and styles."

Timken spherical roller bearing solid-block housed units now come in sizes up to 15 inches (380 mm), including the new TAA Series units, with added conveniences for customers. Inside each TAA Series unit is a double-nut, tapered adapter sleeve that simplifies bearing replacements in challenging environments.

Timken modified its standard



adapter sleeve (with front lock nut) to include a mechanical withdrawal nut on the back end that is factory set for nominal shaft sizes and, if necessary, can be easily adjusted in the field to accommodate actual (under/over) shaft size.

The front locking nut is tightened until the back nut stops against the face of the inner ring, indicating that proper bearing clearance and mounting force has been achieved. This eliminates the need for difficult and often inaccurate in-process measurements of radial

internal clearance, helping MRO pros reduce time on the job and improve consistency. (Note: the adapter sleeve can also accept hydraulic nuts.)

For quick dismounting, the front nut is loosened so the back nut can be tightened to unseat the sleeve from the tapered bearing bore, assisting in bearing removal.

### For more information:

The Timken Company  
Phone: (234) 262-3000  
[www.timken.com](http://www.timken.com)

# Klüber Lubrication

## OFFERS HIGH-PERFORMANCE GREASE FOR BALL AND CONSTANT-VELOCITY JOINTS

Klüber Lubrication recently introduced Klübersynth J 87-20002 KR, a high-performance automotive grease for ball joints, and Klüberlub HE 71-281, a low-friction grease designed for constant-velocity (CV) joints.

### Klüberlub HE 71-281

Friction in an automobile's CV joints can lower efficiency as well as cause excessive heat, vibration, and noise. The special low-friction additives in Klüberlub HE 71-281 minimize this friction resistance and boost CV joint efficiency.

This special CV grease also lowers the temperature in the joint because of reduced friction. The high thermal resistance of synthetic components in the formulation enables the joint to operate reliably at elevated

temperatures. Joints can even achieve short-term peaks up to 160°C. The Klüberlub HE 71-281 also has the added benefit of being compatible with normal CV joint boot elastomers, which is a problem that plagues other CV joint grease alternatives.

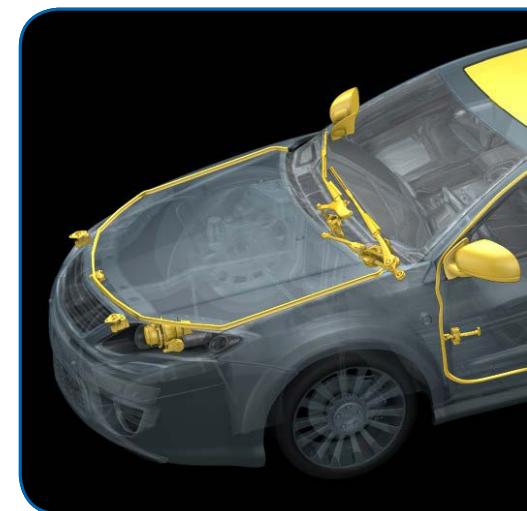
The improved wear behavior of Klüberlub HE 71-281 was formulated to ensure long component life. This paired with low-friction resistance makes Klüberlub HE 71-281 an automotive grease that optimizes CV joint efficiency for the long term.

### Klübersynth J 87-20002 KR

A major problem with ball joints in suspension and steering systems is a high static torque, particularly when joints experience long periods of rest. The

friction from high static torque produces noise and a coarse operating feel.

Using high viscosity silicone oil and PTFE as a base oil, Klübersynth J



# Moticont

LINEAR VOICE COIL MOTOR OFFERS HIGH SPEED AND RELIABILITY

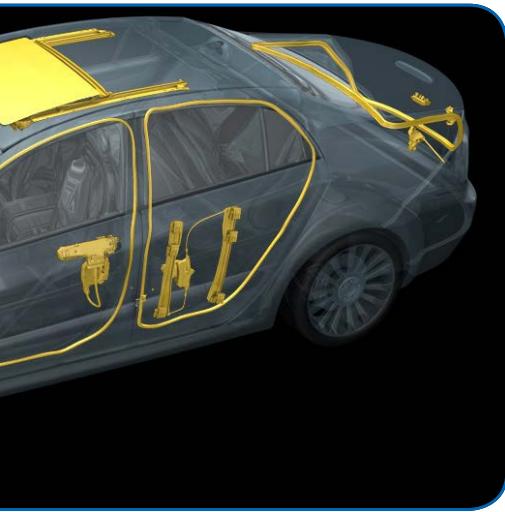
87-20002 KR is designed to have ultra-low static and dynamic torques in both low-temperature and high-temperature environments. This low torque minimizes stick-slip tendency, micro friction noise and provides a smoother driving experience.

Klübersynth J 87-20002 KR is a ball joint grease that offers reliability. Its good friction properties, adhesion and spreadability at sliding friction parts provide excellent wear protection. Its outstanding water resistance and oxidation stability prevents corrosion. With the exception of silicone rubber, this automotive grease is compatible with a wide range of boot materials, including elastomers and plastics. Its operating temperature ranges from -50 to 180°C, which enables reliable ball joint performance in any climate.

Klübersynth J 87-20002 KR is currently being used in several automotive platforms with new platforms being added daily. It's a high-performance grease that delivers what automobiles need: excellent ball joint wear, noise-free operation, compatibility and low-temperature torque.

#### For more information:

Klüber Lubrication  
Phone: (603) 647-4104  
[www.klubersolutions.com](http://www.klubersolutions.com)



Moticont's GVCM-051-025-01 Linear Voice Coil Motor features: High acceleration/deceleration, high speed, high reliability, zero backlash, high accuracy, high repeatability, and a 0.5 inch (12.7 mm) stroke length. Also referred to as an *Electric Cylinder*, this linear actuator is an ideal low cost, high accuracy replacement for hydraulic and pneumatic linear actuators. This

clean, compact, voice coil motor has a high force to size ratio with 5.3lbs. (23.5N) continuous force and 16.7lbs. (74.4N) of peak force at 10% duty cycle with a housing measuring just 2.00 in. (50.8 mm) dia. x 1.00 in. (25.4 mm) long.

The precision ground 0.1572 (3.993 mm) diameter shaft has an internal thread, and the housing has threaded mounting holes on each end



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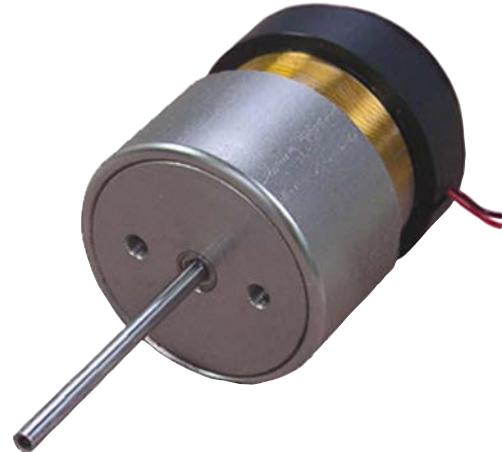
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for easy integration into current and future applications. This clean, quiet, efficient, low inertia, brushless actuator featuring an internal shaft and recirculating ball bearing is suitable for medical devices, antenna positioning, testing, sorting, assembly equipment, workholding and clamping, scanners and laser beam steering and filtering, laser machining and drilling, wafer handling, optical focusing, and dynamic vibration absorption. The Moticon's GVCM-051-025-01 linear voice coil motor can also be ordered as a complete plug-and-play system including a position sensor, and controller. Is there a need for a smaller or larger diameter motor, one with longer stroke, or more force?

There are currently seven series of Moticon's GVCM motors based on



diameter of the motor, and models based on length of stroke and/or force to select from with additional motors being added to select from.

### For more information:

Moticon  
Phone: (888) 785-1804  
[www.moticon.com](http://www.moticon.com)

## Stafford

### SHAFT COLLARS OFFER CHOICES FOR FACE MOUNTING COMPONENTS

A full line of off-the-shelf products for face mounting components on a shaft, depending upon specific user design requirements, is available from Stafford Manufacturing Corp. of Wilmington, Massachusetts.

Stafford Mounting Shaft Collars include Flange Mounts with six mounting holes and a keyway plus the Accu-Clamp non-marring and perfectly square clamping feature for mounting a shaft, tube, or pipe to a flat surface or for attaching components to them. Additional solutions include Accu-Mount collars with precision locating hubs and predrilled and tapped holes, and conventional Face Mount Clamp collars with predrilled and tapped holes.

Providing non-marring clamping for various face mounting applications, Stafford

Mounting Shaft Collars are available made from aluminum, steel, and stainless steel in 0.25" to 3" I.D. sizes, depending upon the part. The Accu-Clamp Shaft Collars feature an integral clamp on one side while leaving the other flat and perpendicular within 0.001" TIR.

### For more information:

Stafford Manufacturing Corp.  
Phone: (800) 695-5551  
[www.staffordmfg.com](http://www.staffordmfg.com)



# Minarik Drives

OFFERS CONTROLS FOR BRUSHLESS DC MOTOR

Minarik Drives has introduced the MDBL Series, a new family of versatile, feature-rich, configurable controls for brushless DC motors. MDBL drives control motors ranging from 90 to 280 VDC, up to 5 amps/1.5 HP, using either 115 VAC or 230 VAC line sources. On-board trim pots allow operators to quickly set minimum/maximum speeds, acceleration/deceleration rates, motoring and regen current limits, as well as the proportional and integral feedback gains.

An onboard microprocessor allows for custom programming the MDBL Series—for tasks as simple as changing the purpose of a jumper or trim pot, or as complex as programming an entire application-specific routine. The MDBL also seamlessly integrates PLC-like functionality into operations, eliminating the need for a separate PLC altogether or enhancing systems without PLCs. These controls are positioning-application capable, with feedback sampling rates of 16 KHz. Each drive is designed for feedback from 120° hall effect sensors and can be commanded with a wide range of analog inputs with Minarik Drives' built-in isolation.

## For more information:

Minarik Drives  
Phone: (815) 624-6933  
[www.minarikdrives.com](http://www.minarikdrives.com)



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