Pittman Motors BGE Series Servo Motor Controllers

OFFER FOUR-QUADRANT DIGITAL SPEED CONTROL FOR DC MOTORS

Pittman Motors recently introduced the BGE series of servo motor controllers, a family of compact four-quadrant positioning motion controllers with integral output stages to control Pittman brushless and brushed DC motors.

The motion controllers can be operated in stand-alone operation with digital or analog IO or as a slave in a CANopen network with device profile DSP 402, protocol DS 301. The family of motion controllers is rated from 12VDC to 60VDC input voltage and 4 amp to 20 amp continuous output current.

The BGE series controllers are suitable for use with Pittman brushless or brushed DC motors. Information about the motor's rotor position can be supplied to the positioning controller by an encoder or integrated Hall sensors contained within a brushless motor. The controls incorporate protection against over-voltage, low voltage and excessive temperature.

If four-quadrant digital speed control is desired, the control can be commanded to run in either direction, stop and hold with torque or stop without torque (coast) through digital inputs. Other inputs can switch between programmed speeds or allow for a variable analog speed reference.

Accel/decel ramps for the motor also can be programmed. The control offers the capability for a motor to function as a stand-alone or programmed servo, which interfaces to the rest of the machine via digital and analog IO.

The BGE series electronic controllers offer different modes of operation to choose from, such as analog or digital torque control, analog or digital speed control and digitally selectable position control (relative, absolute, and modulo). The controls incorporate protection against over-voltage, low voltage and excessive temperature.

Designed for volume OEM applications, BGE series electronic controllers offer a design alternative for restricted space applications where the additional length of an integral control motor may not be feasible. They also can be encapsulated to provide additional protection in extreme environmental conditions.

If only speed control is required for an application, the BGE 3004A, a cost-optimized one-quadrant controller, is available. BGE controllers are available from stock at the Pittman Express E-Commerce store.

For more information:
Phone: (267) 933-2105
www.pittman-motors.com

Stafford Staff-Lok Shaft Collar

COMES WITH COUNTERSINK DRILLED AND TAPPED HOLE, MOUNTING HOLES FOR SENSORS

Stafford Manufacturing Corp. recently introduced a new version of the Staff-Lok hinged shaft collar that incorporates a mounting flat with a countersink drilled and tapped hole and two mounting holes on the face for attaching sensors, cameras, and other devices.

The Staff-Lok shaft collar features an integral hinge with a conformal cam lever and a knurled screw that provides fully adjustable clamping by hand, making it ideal for use as a clamp, stop or spacer. Now offered featuring a mounting flat with a countersink drilled and tapped hole and two mounting holes on the face for attaching sensors, cameras and other devices, this new version is designed for breadboarding mechanical and optical systems.

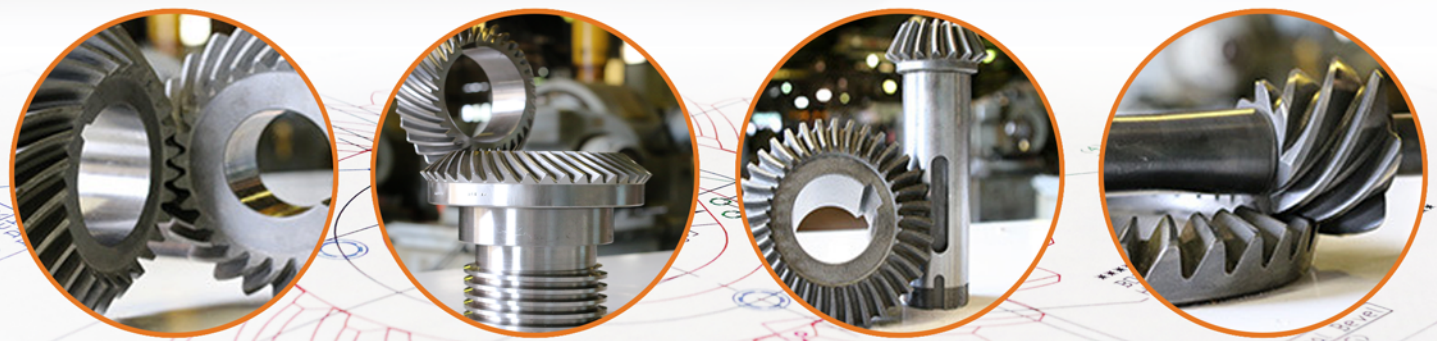
Providing easy setup and repositioning without tools, Staff-Lok shaft collars are designed for non-rotary applications requiring fast and secure clamping. Machined from steel with a black oxide finish, they are offered in ½" to 2½" I.D. sizes. Custom bore designs and a one-piece version are also available.

The Staff-Lok shaft collar is priced according to version, size, special requirements, and quantity. Price quotations are available upon request.

For more information:
Phone: (800) 695-5551
www.staffordmfg.com

Gearing your past to power your future.

Quality precision with every process.



Breakdown Services

We understand the urgency of meeting critical deadlines. We offer our customers expedited services without sacrificing quality.

Heat Treatment

Our in-house heat treat facility performs a full range of services that include annealing, carburizing, and thru hardening.

B&R MACHINE AND GEAR CORP

B&R Machine and Gear Corporation is a full service gear manufacturing facility driven to power your equipment with reliable and durable gears that are built to perform and last. Find the perfect mesh. No matter the gear, we've got you covered.

VISIT OUR WEBSITE BRGEAR.COM FOR MORE INFORMATION

Siemens Sinamics S120 Cabinet Module Drive Packages

NOW COMPLIANT WITH NORTH AMERICAN STANDARDS

Siemens recently announced a new version of its Sinamics S120 Cabinet Module (CM) drive packages compliant with North American standards, with optional UL listing. This module is designed to enable easy configuration of even complex common DC bus line-ups for multi-motor coordinated drive systems as well high horsepower (hp) stand-alone drives for a wide variety of industrial applications.

Pre-designed, fully type-tested modules, including line side components, line infeeds (bus supplies) and motor inverters, all with a broad range of standard options, are selected and configured from a catalog. Compared to the traditional approach of custom-engineered systems, this approach offers a reduction in engineering effort and manufacturing lead times which translates to reduced project costs and a compressed delivery schedule, while minimizing technical and commercial risk for even the most complex drive systems.

Individual cabinet modules have a standardized power and control interface, which allows them to be freely positioned in a line-up that best suits the particular application and makes them easy to install and connect. A range of standard options, such as the DC bus current rating and enclosure type, for example, is available to tailor the line-up to best meet site and environmental conditions. Despite standardization, the design offers a high degree of flexibility for both power and control circuits. For line side converters, there is a choice of non-regenerative Basic Line Module (diode rectifier) or fully regenerative Smart and Active Line Modules. Both of these are IGBT inverters, the Smart Line Module being a more basic six-pulse unit, whereas the Active Line Module offers low harmonics exceeding the demands of IEEE 519, unity or controllable power factor and DC bus voltage control that allows stable operation of motors even on poor power supply systems. Basic and Smart Line Modules can also be configured in 12-, 18- or 24-pulse systems for low harmonic operation. All of these configurations are now compliant with the National Electrical Code (NFPA 70) and Short Circuit Current Ratings per UL508A supplement SB of up to 100 kA.

The Sinamics S120 firmware, combined with Drive-CLiQ (the flexible backplane bus), allows users to assign control units multiple Line and Motor Modules and to mount the control units and associated I/O and sensor modules anywhere within the

RAVE GEARS & MACHINING

American Gear Manufacturers Association

AS9100 CERTIFIED
ISO 9001-2008 CERTIFIED

Rave Gears promises to deliver the highest quality gears & machined parts, on-time, at a fair price.

Our key advantage: Streamlined processes using state-of-the-art engineering & production systems that result in cost savings & fast delivery

Rave Gears is proud to be the best-equipped gear company in the USA.

Rave Gears has a strong team of talented engineering & production experts.

Current customers include Bell Helicopter, SpaceX, United Technologies, GE, Baker Hughes, Penske Racing.

RAVE GEARS

Rave Gears and Machining
425 Strempel St. Seguin, TX USA 78155
(855) RAV GEAR | 855-728-4327 | 830-421-3295
www.RAVEGEARS.com
sales@ravegears.com

line-up or even remotely in a centralized control cabinet or control room. Drive-CLiQ provides automatic electronic nameplate, real-time control data transfer, diagnostic and parameter value gathering and fault tolerant transfer protocols. For external control systems, high-speed industrial Ethernet communications can be parameterized for Ethernet/IP, Profinet or Sinamics Link (peer-to-peer), and programming can be done via a dedicated port or Ethernet TCP on the Ethernet network simultaneously with Profinet or Ethernet/IP.

Sinamics S120 Cabinet Modules were designed to address the need for a complete, ready-to-connect-and-run drive system that enables customers to configure an enclosed drive lineup with a central line infeed (rectifier) and common DC bus supplying power to multiple motor modules (inverters). Typical uses for such systems requiring multi-motor coordinated drive systems include paper machines, steel rolling mills, test stands, cranes, mixers, and oil and gas field equipment. Very high horsepower single drive applications also benefit from this system.

The use of a common DC bus configuration with these new drive packages allows for energy exchange between motors that are motoring and others that are regenerating power back to the AC system, which can save up to 80% of the energy consumed when using standard installations.

For more information:
Phone: (800) 743-6367
www.usa.siemens.com

Mitutoyo KA-200 Counter

UPDATED WITH ABSOLUTE AND INCREMENTAL MODES

Mitutoyo America Corporation recently announced the KA-200 Counter, a multiple feature, intuitive display unit for linear scales. The latest version of the KA-200 Counter has been updated with new features including absolute and incremental modes, non-linear error compensation, function lock, adjustable LED intensity, multiplier function and an option to output directly to spreadsheets using a USB card.

A large, crisp display allows the operator to read the numbers at a glance. In addition, an improved sub-display makes it easy to navigate through parameters. Switch between absolute and incremental modes with the push of a button. Each mode offers 10 presets. A function lock holds the settings and prevents accidental changes of settings. A calculator function allows operators to calculate angles, distances and other measurements.

For more information:
Phone: (630) 978-6483
www.mitutoyo.com

OES Sonata Series

SUPPORTS UP TO THREE AXES OF MOTION IN ANY COMBINATION OF STEPPERS

The Sonata series of motion control systems from Optimal Engineering Systems (OES) is a stand-alone, easy-to-use, plug-and-play, cost effective solution for motion control applications. The systems in this series support up to three axes of motion in any combination of steppers, DC servo and brushless servo motors, and voice coil motors.

Each system includes the power supplies, the motion controller, the micro-stepper and/or servo motor drivers. The operator interface terminal makes the system stand-alone and allows the operator to interact with the motion controller without needing an additional PC. The system can also be operated using an analog joystick or a trackball. The speed of the motor is proportional to the tilt angle of the joystick or the rotational speed of the trackball. Using the 4-line LCD and 32 button keypad, the user can enter motion parameters and select different modes of operation.

Power supply options include: 115 or 230 VAC (standard) and 12 VDC to 80 VDC (Optional). The power supply will be selected to meet the customer's requirements. The available wattages are 80 W, 160 W, 240W, 400 W and 500 W. Options available for these plug-and-play systems include motors, encoders, drivers and cabling. Measuring just 10.0 in. (265 mm) × 10.8 in. (265 mm) × 4.875 in. (124 mm), or in a 19 inch (482.6 mm) rack mount enclosure, the Sonata motion control systems are easy to install.

For more information:
Phone: (888) 777-1826
www.oesincorp.com

Haydon Kerk WGS Integrated Screw/Slide System

DESIGNED FOR STABILITY AND SPEED

Haydon Kerk Motion Solutions recently added the WGS (Wide Guide Screw) to its linear slide product line. Made from the same components used in the RGS Linear Rail Series, the WGS Linear Slide utilizes a screw-driven carriage designed to offer continuous linear speed while maintaining accurate positioning. The length and speed of the WGS are not limited by critical screw speed, allowing high rpm, linear speed and long stroke lengths.

The WGS slide has a compact profile meant to provide improved torsional stiffness and stability versus Haydon Kerk's existing RGS and RGW slide products. An integral mounting base can provide support over the entire length, which can extend up to 8 feet (2.4 meters). Longer lengths are available on a special order basis.

Standard leads include .100", .200", .500" and 1.00" (2.54, 5.08, 12.7 and 25.4 mm) travel per revolution. There are short leads for non-backdriving vertical applications as well as longer leads capable of speeds of more than 60 inches per second (1.5 meters per second).

The WGS utilizes sliding plane bearings on a low-profile aluminum guide rail that keeps the motion smooth throughout the travel distance. The lead-screw is precision made of high-quality stainless steel.

All moving surfaces include Kerkite high-performance polymers running on a Kerkote TFE coating. The slides come with wear-compensating, anti-backlash driven carriages. Additional driven or passive carriages can be added, along with application specific customization. Linear guides without the drive screw also are available.

For more information:
Phone: (800) 243-2715
www.haydonkerk.com

Voith Vorecon Variable Speed Planetary Gear with Dual Torque Converters

IMPROVES NATURAL GAS TRANSPORTATION

Voith's Vorecon recently expanded its footprint in the U.S. market, with five Vorecons equipped in compressor stations transporting natural gas from the Marcellus shale formation into markets in the mid-Atlantic and Southeast states. These Vorecons are increasing transport capacity by over 25 percent, and improving reliability and efficiency in the process. The Vorecon with dual torque converter is a variable speed planetary gear with two matched torque converters. It's built to deliver high efficiency, even into the lower speed range. It is up to two percent more efficient than variable frequency drives (VFD).

"Vorecons with dual torque converters are quickly expanding their presence in markets across the United States," said Jim Kosalek, vice president of Voith Turbo's Power, Oil & Gas Division in North America. "From Marcellus to Eagle Ford, customers are turning to the latest in Voith's cutting edge technology to improve efficiency, reliability, and power in their operating systems. Given the advantages the Vorecon with dual torque converters provides, we expect demand will continue to mirror the tremendous growth of the oil and natural gas sectors in the U.S."

The Vorecon with dual torque converter is marketed for operating points that frequently fall within 60 to 90 percent of maximum speed, and still provides high torque at low speeds – up to 42 percent higher than VFDs. The mean time between failures for the Vorecon is 48 years.

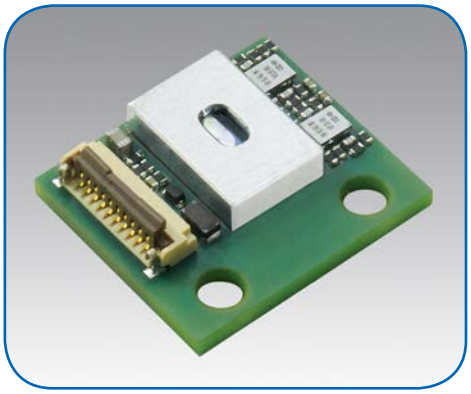
For more information:
Phone: +49 (7321) 37-8497
www.voith.com

Celera Motion MicroE Optira Encoders

FEATURE HIGH RESOLUTION AND EASY SETUP

Celera Motion recently introduced its MicroE Optira series encoders. They are the only encoders in their class to provide a resolution of up to 5nm with all automatic gain control (AGC), interpolation, and signal processing carried out in the sensor head. Furthermore, wide alignment tolerances and PurePrecision optical technology make Optira's miniature sensor head easy to setup.

The Optira sensor head comes with two mounting options and a standard FFC connector. In addition, the Optira consumes low power, and a 3.3 VDC version is available for use in precision instruments powered by batteries. The Optira sensor head measures 11.4 × 13 × 3.7 mm.



No additional PCBs, adapters, or dongles are necessary for the full functionality and resolution of the sensors. Optira sensors can also be universally applied with MicroE linear glass scales (to ±1 µm/m accuracy), linear metal tape scales (to ±5 µm/m for Optira), and rotary scales (to ±2 arc-seconds). The interface's options are A-quad-B or 1Vpp sin/cos.

PurePrecision technology has enabled designers of precision motion control systems in medical, semiconductor, advanced industrial and scientific applications to design smaller, lighter and more energy efficient machines and instruments. PurePrecision technology is designed primarily for use in controlled environments that require compact sensor size, a small overall footprint and high accuracy.

For more information:
Phone: (781) 266-5700
www.celeramotion.com

Timken Revolvo Split Cylindrical Roller Bearing

ACCOMMODATES MISALIGNMENT UP TO ±1.5 DEGREES

The Timken Company recently introduced its full Revolvo split cylindrical roller bearing housed unit line to the North American marketplace. Timken added the Revolvo line to its bearing and power transmission product lineup when it acquired the assets of Revolvo Ltd. late last year.

Revolvo split cylindrical roller bearing housed units are used by mining, power generation, food and beverage, pulp and paper, metals, cement, marine and waste-water end users. The units and components are fully interchangeable with most split cylindrical bearing configurations in the market today.

Revolvo housed units can reduce installation time particularly in tight spaces and trapped locations commonly encountered in such applications as fans, conveyors, long shafts, crushers, kiln drives and marine propulsion shafts. The product's design accommodates misalignment up to ± 1.5 degrees and is available in a number of housing configurations including special pillow blocks, flanged, take-up and hanger assemblies.

The Revolvo line of split-to-the-shaft cylindrical roller bearing housed units can be installed without requiring access to the shaft ends. The split design allows the bearing to be assembled around the shaft, which reduces downtime because drive components can remain in place during installation or for maintenance. Revolvo units help extend up-time, reduce maintenance costs and typically increase plant efficiency and profitability.

"With the addition of the Revolvo split cylindrical roller bearing housed units, Timken continues to expand its housed unit offering," said Hans Landin, vice president of power transmission and engineering systems for Timken, "and today, we're proud to offer one of the broadest lines of housed units in the industry that can address a wide range of specific customer needs."

For more information:
Phone: (234) 262-3000
www. timken.com