

Sensorless Brushless Gearmotors Eliminate Position Sensors and Wiring

In response to OEMs seeking higher energy efficiency and power density as well as simpler assembly and increased design life for their equipment, gearmotor and electric motor manufacturer, Bison Gear & Engineering Corp. introduces its new line of sensorless brushless DC (SBLDC) parallel shaft gearmotors with powers up to 1/6 hp (124 watts). The new 34 frame AUTONOmotor gearmotors are powered by totally enclosed, nonventilated (TENV) brushless motors that are sensorless to reduce cost, size, and wiring complexity while offering improved reliability and noise immunity compared to brushless motors with shaft mounted rotor position sensors.

Employing modern DSP technology which facilitates implementation of sensorless control algorithms and eliminates the need for position sensors (and associated wiring) required in conventional BLDC motor-control systems, Bison's new low voltage AUTONOmotor parallel shaft gearmotors are offered in eleven standard versions with gear ratios from 5:1 to 215.6:1 and rated output speeds from 470 to 11 RPM with a 10:1 speed range. Speed can be adjusted with either a supplied potentiometer or a 0-5V DC signal. Continuous output torques range from 19 to 300 in-lbs (2.1 to 33.9 N-m). The gearmotors employ all-steel gearing, and oil bath lubrication for optimum design lifetimes.

Ideally suited for foodservice equipment, factory automation, packaging equipment, alternative energy systems, stationary agricultural equipment, and other specialty machinery applications, the eleven new AUTONOmotor brushless DC parallel shaft gearmotors are part of Bison Gear's comprehensive In-Stock, Instant-Ship (ISIS) program that supports Bison's distribution partners and offers same day shipment for orders received before noon (Central Time).

"The National Science Foundation grant awarded to Bison in 2005 for research on higher efficiency electric motors paved the way for this innovative new brushless dc development," said Matt Hanson, vice president, portfolio management at Bison Gear. "With this being Bison's 50th anniversary year, we're proud to introduce the AUTONOmotor sensorless brushless development as the second offering in the exciting lineup of new products coming from Bison in 2010."

The new AUTONOmotor brushless DC parallel shaft gearmotors are American-made to Bison's high quality standards in its suburban Chicago facility in order to ensure reliable, long-life operation and a short supply chain for North American customers. In addition, Bison's Innopreneurial application and design engineering capabilities to customize the standard models to meet specific OEM needs are readily available.

About Bison Gear & Engineering Corp.

Celebrating its 50th Anniversary, Bison Gear & Engineering Corp. designs and manufactures fractional horsepower electric motors, gearmotors and gear reducers

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used in industrial and commercial OEM applications worldwide. Bison's strong engineering tradition, based on Robusticity™ principles, offers products with up to twice as much torque in the same package size as competitors. Bison's St. Charles, Illinois integrated production facility manufactures gearmotors and reducers in parallel shaft and right angle configurations, as well as AC and DC electric motors, for applications where dependability and long lifetimes are important.

www.BisonGear.com

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