

# *EXLAR Corporation*

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## NEWS

**Editors – For additional information****contact:**

Bev Odegaard

Exlar Corporation

952-368-3434 ext 221 Fax 952-368-4877

email: [bodegaard@exlar.com](mailto:bodegaard@exlar.com)

### INTEGRATED ACTUATOR ELIMINATES NEED FOR A SYSTEMS APPROACH

**Chanhassen, MN – October, 2000 --** The GS40 is the latest introduction to the unique GS series of inverted roller screw actuators. A 4 inch frame size unit, the GS40 offers users a range of strokes from 6 to 18 inches, continuous force ratings up to 1800 lbs, and linear velocities to 25 in/sec. The brushless servo design of the GS series linear actuators allows them to be used in state-of-the art closed loop servo systems, where electronic control of positioning and velocity is required. In these systems position feedback can be provided in a number of different forms to match customer specifications, including resolvers, encoders or custom rotary feedback devices. Exlar can configure GS Series actuators to be compatible with nearly any brand of servo amplifier.

The GS series actuators employ an inverted roller screw mechanism to convert the rotary motion of the brushless motor into high speed, high thrust linear motion. This mechanism has a lead accuracy of 0.001 in/ft for high precision operation and can also be supplied with zero backlash.

The large contact area of the roller screw - this due to rollers rather than ball bearings - allows high force characteristics while guaranteeing long life - 15 times the life of comparably sized ball screws is common - even in the most demanding repetitive applications. In addition, the planetary design of the roller screw allows it to be accelerated and rotated faster (up to 5,000 rpm) than comparably sized ball screws. Designed to be lubricated with either grease or recirculated oil, they can be run for up to 10,000 hours between re-greasings.

GS series actuators offer additional benefits in the form of contamination protection. In conventional rotary to linear devices the critical mechanisms are exposed to the environment and therefore require frequent inspection, cleaning and lubrication. In contrast, all converting components in the GS series actuator are mounted within the sealed motor housing which is IP65 rated, (IP67 upon request). The smooth extending rod allows the use of a bushing and seal arrangement, which prevents abrasive particles and other forms of contamination from entering the actuator's critical mechanisms. This assures trouble-free operation even in the most severe environments.

The GS actuators are available in a wide variety of stroke lengths, sizes, speeds and mounting configurations. Stroke lengths range from 3 to 18 inches, forces to 16,000 pounds and speeds to 40 inches per second. The capabilities of the GS

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**GS40 Actuator**

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range are extended by a wide range of optional features including; internal end switches, electric brakes, linear positioning sensors, backlash free followers and multiple mounting and rod end configurations.

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EXLAR Corporation designs, manufactures and sells linear and rotary motion products world-wide. For general information visit our website at [www.exlar.com](http://www.exlar.com) or email [info@exlar.com](mailto:info@exlar.com).