

Exlar GTX Series Product Brochure

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EXLAR®

Specifications

Drawings

Applications

And More...



GTX
Integrated Motor Actuator

Power | Precision | Proven

Integrated Motor Actuator

GTX Series

Product Description

The GTX Series integrated motor / actuator offers 15X longer life than the ordinary ball screw actuator with 3X the power density. Integrating our unique inverted roller screw and T-LAM brushless servo motor technologies delivers programmability and precision combined with high power density and rugged durability, all in one compact package.

Sealed for Long Life with Minimum Maintenance

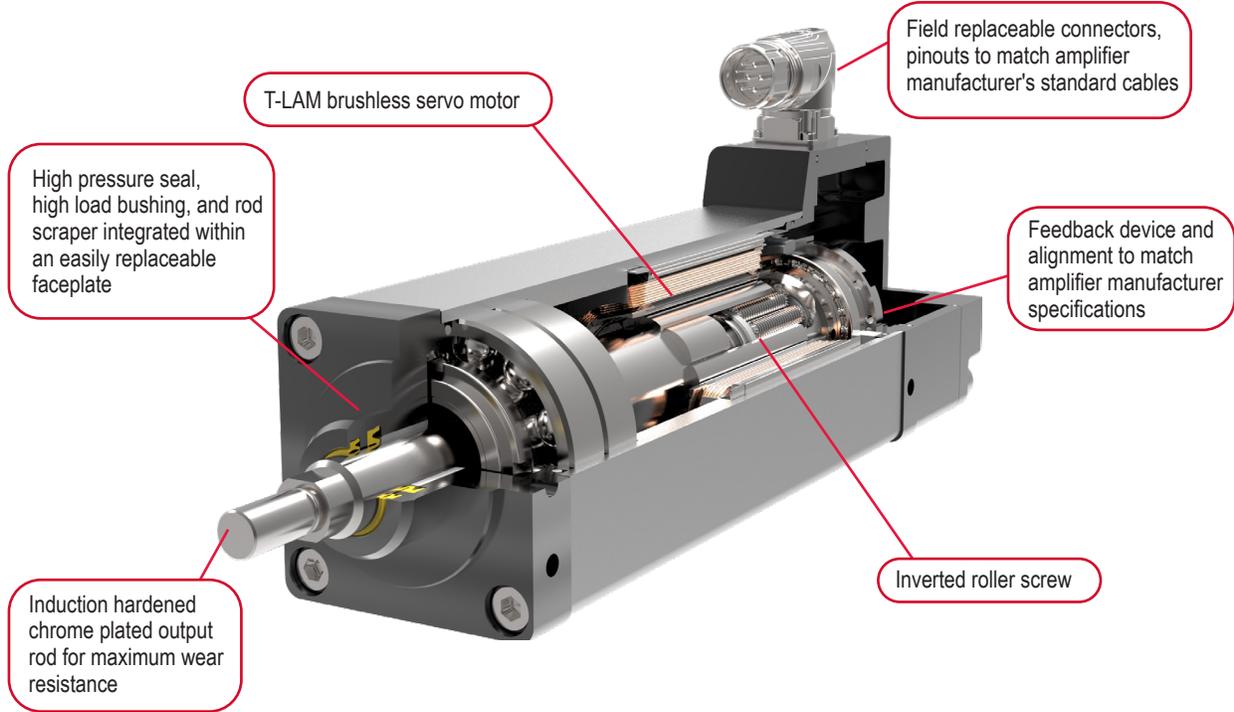
GTX Series actuators have strong advantages wherever outside contaminants are an issue. In most rotary-to-linear devices, critical mechanisms are exposed to the environment. Thus, these actuators must be frequently inspected, cleaned, and lubricated.

In contrast, the converting components in all Exlar GTX units are mounted within a sealed motor housing. With a simple bushing and seal on the smooth extending rod, abrasive particles or other contaminants are prevented from reaching the actuator's critical mechanisms. This assures trouble-free operation even in the most harsh environments. Although, if contaminants are not an issue and you need an internal anti-rotate, we do have a splined rod option available.

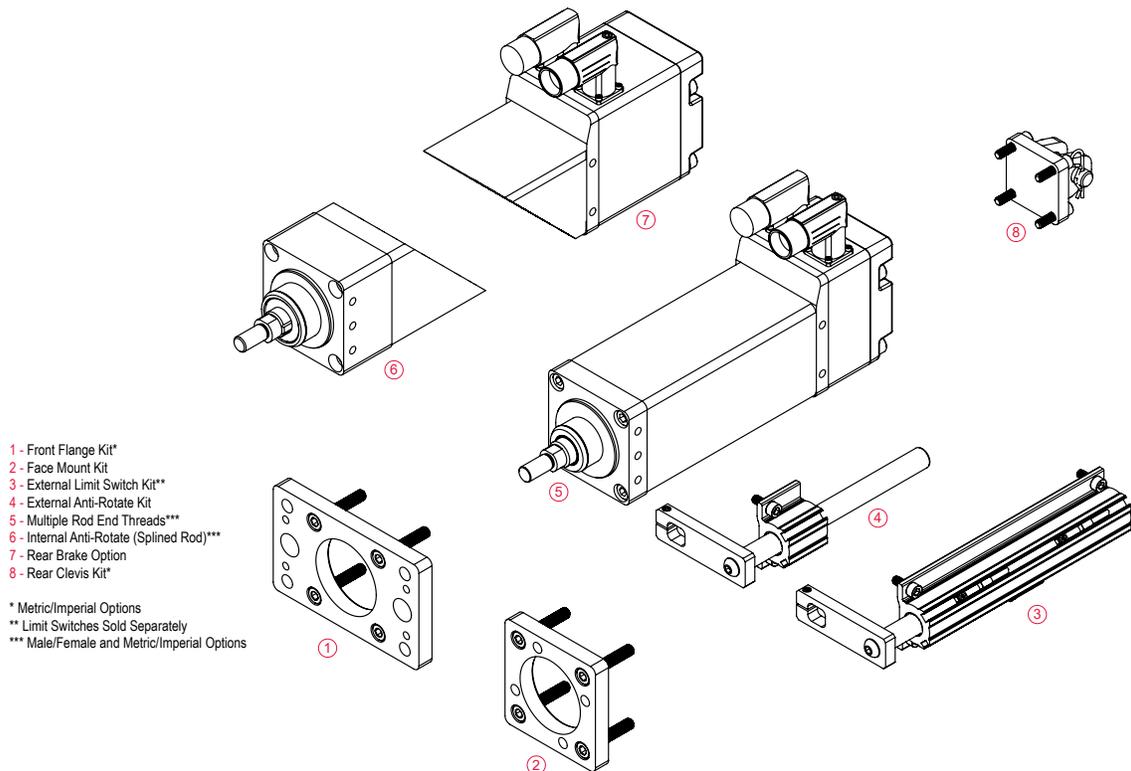


Product Basics				
Model	Frame Size mm (in)	Stroke mm (in)	Continuous Force N (lbf)	Max Velocity mm/sec (in/sec)
GTX060	60 (2.36)	80 (3), 150 (6) 300 (12)	AC-2,668 (600) DC-2,668 (600)	AC-1,270 (50) DC-847 (33.3)
GTX080	80 (3.15)	100 (4), 150 (6), 300 (12)	AC-8,365 (1,881) DC-7,101 (1,596)	AC-1,270 (50.0) DC-508 (20)
GTX100	100 (3.94)	150 (6), 300 (12)	AC-15,392 (3,460)	AC-953 (37.5)
IP Rating	IP66S			

Product Features



Numerous Configuration Options to Meet Nearly Any Application Requirements!



Industries & Applications

Successful applications for our GTX Series integrated motor / actuators include dispensing, positioning, and cutting. Our representatives can provide guidance to optimize system performance, eliminate premature wear, increase production, improve quality, and ultimately reduce costs. Give one of our representatives a call today to go over your application.

Automotive

- Dispensing
- Welding
- Pressing
- Riveting / Fastening / Joining

Food Processing

- Sealing
- Dispensing
- Forming
- Pick and Place Systems
- Fillers
- Cutting / Slicing / Cubing

Sawmill/Forestry

- Saw Positioning
- Fence Positioning
- Ventilation Control Systems

Machining

- Material Cutting
- Broaching
- Metal Forming
- Tube Bending
- Stamping

Entertainment / Simulation

- Animatronics
- Training Simulators
- Ride Automation

Medical Equipment

- Volumetric Pumps
- Patient Positioning

Plastics

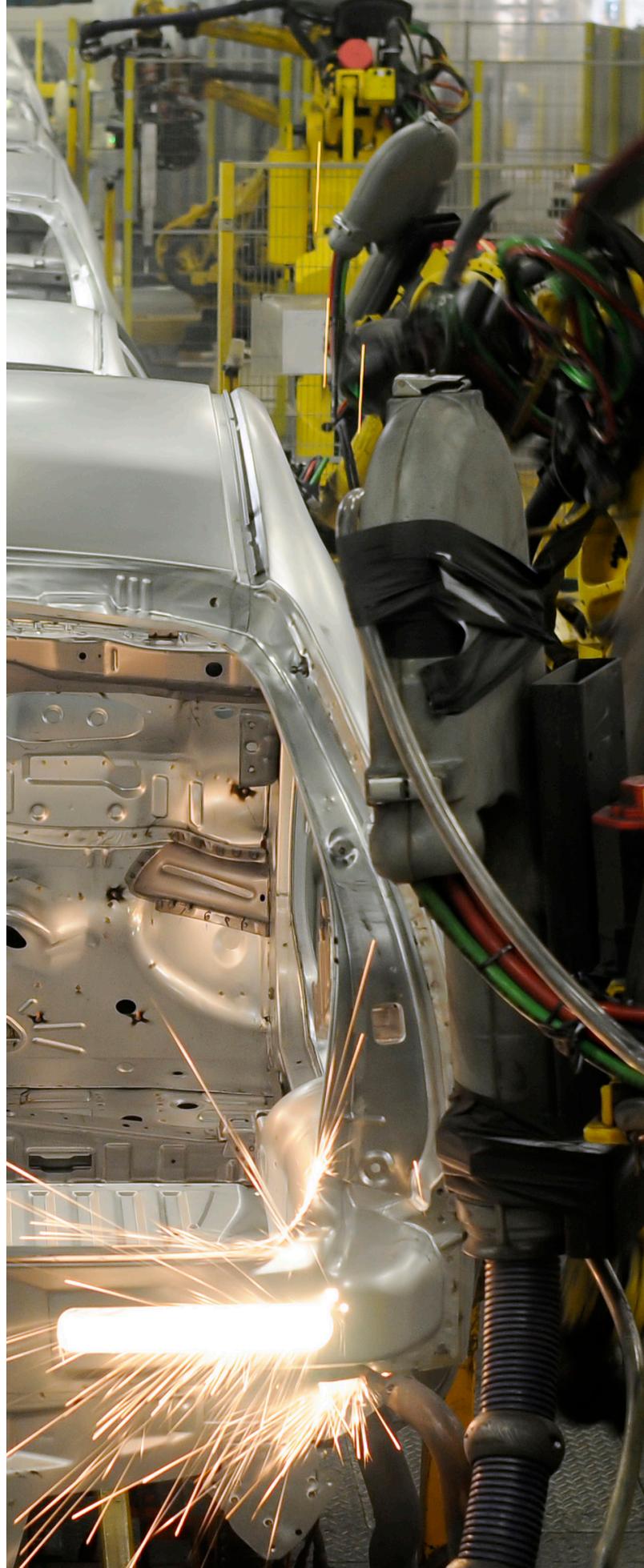
- Die Cutters
- Part Eject
- Core Pull
- Injection Molding
- Formers

Material Handling

- Nip Roll Positioning
- Tension Control
- Web Guidance
- Wire Winding

Test

- Fatigue Testing
- Load Simulation Testing





Application Example

Hot Runner System OEM Increases Accuracy and Control

CUSTOMER

Utilizing GTX Series actuators, an innovative German machine designer producing hot runner solutions for the injection molding industry, was able to eliminate energy waste and increase accuracy and control.

APPLICATION

Needle valves control the flow of liquid plastic as it is injected into a mold. Hydraulic cylinders were pushing the needle valves open and closed but produced inconsistent results and posed fire risks.

CUSTOMER CHALLENGE

The customer was looking to improve the control, accuracy, and cleanliness of their hot runner system so it could be applied in food processing and clean room applications. Inevitable oil leaks from existing hydraulic cylinders needed to be eliminated as well.

SOLUTION

The Exlar® GTX integrated motor / actuators were the only solution considered that met all of the application requirements including speed, force, package size, efficiency, adjustability, programmability, accuracy, system stiffness, and cleanliness.

RESULTS

Exlar's integrated electromechanical motor / actuator solution provided significantly more control and higher accuracy resulting in a reduction in scrap and an increase in overall system efficiency. In addition, converting to an electric actuator solution completely eliminated the risk of fire from hydraulic oil.

Application Example

Automated Dispensing Manufacturer Improves Product Performance

CUSTOMER

Recognized as a leader in automated liquid dispensing and coating systems, the company designs and manufactures a full line of equipment globally. They provide equipment to the automotive industry as well as the medical, process, and packaging industries. They are able to deliver precision, consistency, and flexibility to their customers in small, lightweight dispensing systems.

APPLICATION

In this application, electromechanical ball screw actuators were being used to control the stroke of a pump and force liquid through a nozzle. They needed to displace the same amount of fluids each time. Consistency during the process regardless of surface changes became critical to the effectiveness of the device and the current ball screw actuators weren't able to provide that.

CUSTOMER CHALLENGE

The customer was struggling with performance problems on their internally designed positive displacement device. The product had a long history in the market but wasn't producing a constant flow rate. Without consistent and controlled dispensing, the end products failed quality control tests.

SOLUTION

Previous positive experiences with Exlar products on other dispensing machines offered them a compelling alternative. When they factored in the quality issues of their existing system and the improvements they would gain, they realized using Exlar's GTX actuators was the right choice. The GTX offered a smaller profile with less weight and lower maintenance than that of the current ball screw actuator solution.



RESULTS

They were able to save substantially on weight and space by converting to an Exlar actuator, making their product more appealing to their customers. They also improved the quality and life of that product delivering precise control and minimizing waste. Overall, the GTX was able to give them the repeatability and precision their customers expected.

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