

New Twin Profile Rail Stage actuator from Tolomatic improves accuracy in XYZ motion systems

New electric linear actuator is built for rigidity and accuracy to deliver the required speed and force on multi-axis motion control systems.

The new **Twin profile Rail Stage (TRS)** actuator from Tolomatic improves accuracy and increases production uptime on XYZ linear motion systems. The machined, rigid design handles high moment loading while providing reliable stable positioning along the length of travel.

Able to carry loads up to 1350 lbf (6.0 kN), the TRS multi-axis system features an aluminum single-body frame for high rigidity to prevent deflection. The flat carriage design and sealed components ensure clean, smooth operation. The rodless screw-driven actuators can be used for applications requiring two- or three-axis configurations, such as machining centers, laser positioning, collaborative robot movement, drilling, cutting, pick-and-place, material handling and more. TRS actuators can also be mounted carrier-to-carrier with no additional mounting plates required.

“Tolomatic has a long history of superior design in band-sealing technology that dates back to our pneumatic rodless band cylinder roots in the 1980s,” said Andrew Zaske, vice president, Tolomatic. “This band technology has been incorporated on the TRS product line to create a much more robust sealing solution than competitors in the space, and ensure long, uninterrupted life.”

Depending on application demands, ball screws or roller screws are available:

- Roller nut for high accuracy and longer life: positional accuracy with roller screw is $\pm 0.0102\text{mm}/300\text{mm} \pm 0.0004\text{"/ft}$.
- Ball screw for cost efficiency: positional accuracy is $\pm 0.051\text{mm}/300\text{mm} \pm 0.002\text{"/ft}$.

Available in two frame sizes (widths of 100 mm and 165 mm), the TRS actuators are stroke configurable to allow designers the flexibility to get exactly what they need and minimize final machine footprint. Retained stainless-steel dust bands resist corrosion and fatigue, and protect the actuator interior from contamination. For extremely challenging environmental debris conditions, a positive-pressure purge port can be connected to a low pressure/low volume filtered air supply to further ensure that contaminants do not enter the interior of the actuator. Dowel pin holes on the base of the actuator and carriage are included, while optional toe clamps provide alignment and mounting flexibility.

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Available with in-line or reverse parallel motor mounting, Tolomatic's Your Motor Here™ program allows engineers to select their motor of choice. The actuator ships with the appropriate motor mounting features and couplers for quick and easy installation.

Tolomatic TRS actuators are built-to-order with Endurance TechnologySM, a Tolomatic design principle for maximum durability and extended service life.



The Tolomatic TRS twin profile rail stage actuators for multi-axis (XYZ) systems mounts carrier-to-carrier with no additional mounting plates. Rigid single-body aluminum to prevents deflection, and the flat carriage design and sealed components prevent contamination.

Photo: Tolomatic, Inc.

About Tolomatic

Since 1954, Tolomatic has been a leading supplier of robust and industrial electric linear actuators, pneumatic actuators and power transmission products for factory automation and motion control solutions. Tolomatic's electric and pneumatic linear actuators are used in a variety of industries, including automotive, material handling, medical, food processing, entertainment, defense, timber and general automation industries. For more information, contact Tolomatic, 3800 County Road 116, Minneapolis, MN 55340.

Phone: 763-478-8000 or 800-328-2174.

www.tolomatic.com



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