

Festo Engineers a Hardened Linear Axis for Low-Temperature Logistics

The ELGA-TB actuator operates down to -30°C, removing the need for heated enclosures and oversized motors.

MASON, Ohio, July 28, 2026 — The primary point of failure in cold-chain automation is mechanical: standard handling and conveying systems seize and crack in sub-zero environments. To keep grocery supply chains moving, logistics engineers rely on costly, inefficient compromises – either wrapping electric axes and motors in insulated heating jackets or using high-torque drive systems to force components through frozen, stiffened grease.

The [Festo ELGA-TB electric axis](#) bypasses these mechanical workarounds entirely. Globally certified for deep-freeze environments, this linear actuator pairs a flexible chloroprene rubber belt with a low-viscosity lubricant to maintain high-speed handling dynamics inside sub-zero fulfillment zones.

ELGA-TB operational thresholds:

- Temperature range: Certified to a -30°C (-22°F) ambient operational baseline.
- Speed and force: Travel speeds up to 10 m/s driven by a 1,300 N peak feed force.
- Repeatability: Positional repeatability within ± 0.08 mm (0.003 in.) across a scalable 8.5-meter stroke.
- Lifecycle Endurance: A factory-rated maintenance interval spanning 10 million meters of travel.

The Unified Intralogistics Ecosystem

Intralogistics systems rely on a strategic mix of dual technologies: electric motion for precision, long-stroke handling, and pneumatic power for rapid sorting, clamping, and vacuum-driven picking. Historically, combining these distinct mechanical platforms has multiplied engineering overhead, requiring disparate vendor sourcing, separate control architectures, and fragmented commissioning software that drive up assembly time, cost, and the required engineering skill sets.

Festo resolves this operational divide by bridging its electric and pneumatic product lines under a single, seamless control architecture. This unified ecosystem allows machine builders and system integrators to pair high-speed electric gantries directly with pneumatic actuators, eliminating the programming friction of disparate software environments and split control logic.

This unified architecture synchronizes directly at the device level. Through multi-protocol communication and adaptable motor-mounting interfaces, Festo allows system integrators to standardize their control and mechanical architectures across an entire facility while communicating with the plant's existing master PLC environment.

28. July 2026

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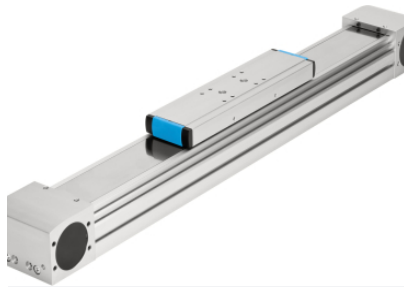
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Running parallel to this electric backbone is Festo's decentralized pneumatic architecture. Utilizing the CPX-AP remote I/O platform and multi-protocol network interfaces, this pneumatic infrastructure seamlessly blends into the same control loop as the electric motion systems. This allows high-speed valves and vacuum-driven picking modules to be mapped, commissioned, and monitored under a single, unified network topology.

Rather than managing disparate vendor pipelines, engineers can design, size, and commission this entire multi-technology footprint through the Festo Automation Suite. Backed by a standardized global supply chain, this ecosystem eliminates engineering friction from the initial conceptual design down to long-term facility maintenance and spare parts logistics.

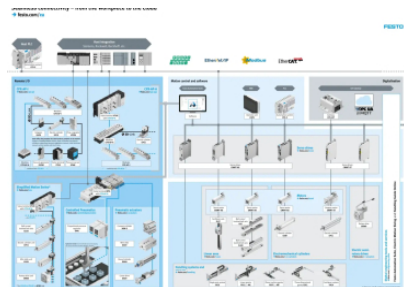
For additional information on the Festo ELGA-TB cold-rated electric axis, contact a Festo sales representative or distributor. For more information on the company's range of pneumatic and motion control and I/O solutions, visit www.festo.com.

Press Images



ELGA-TB

The Festo ELGA-TB electric axis runs high-speed mechanics natively inside sub-zero fulfillment zones, certified for deep-freeze environments down to -30°C (-22°F).



Seamless Connectivity - from the workplace to the cloud

Festo's unified architecture bridges electric motion and decentralized pneumatics under a single network topology, managed from initial design to device-level commissioning via the Festo Automation Suite.

About Festo US

Festo is a leading manufacturer of pneumatic and electromechanical systems, components, and controls for process and industrial automation. For 100 years with more than 50 in the U.S., Festo Corporation has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Through advanced technical and industrial education, Festo Didactic Learning Systems and its partners prepare workers for current and future manufacturing technologies.