Festo Features Multi-Axis Positioning Systems at Automate

Multiprotocol servo drives, simple positioning, distributed I/O, valve systems, and CIP safety are on display.

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Festo is showcasing at Automate 2025 its most innovative automation solutions, including multi-axis positioning systems. Festo positioning systems can be specified in minutes and, after delivery, installed and functioning in hours instead of weeks. (Festo Automate Booth #1619, May 12-15, Huntington Place, Detroit, Michigan)

This year, Festo celebrates the company's 100th anniversary and is emphasizing its leadership in automation. On Wednesday, May 14, at 2:30, Frank Latino, Festo Product Manager Electric Automation, will be a National Fluid Power Association (NFPA) featured speaker with the presentation, *"Pneumatic Operational Improvement via Digitalization."*

Positioning Systems at Festo Booth #1619

Festo features three different multi-axis handling solutions showing precise positioning with Festo electric tooth belt and ball screw axes in two-axis, three-axis, and cantilevered configurations. These demos showcase how Festo's diverse product lines – from pneumatic and electric powered grippers to motion controllers and PLCs – seamlessly integrate within handling solutions. In addition to viewing these systems at the Festo booth, attendees can also stop by the Siemens and CODESYS booths to see Festo handling systems in action.

New generation of actuators

At its booth, Festo highlights its next generation ELGD tooth belt and ball screw high moment and load capacity family of axes. These products feature precision, high speed and acceleration, and compact size for smaller footprint machines. The integrated bearing design of the ELGD family enabled Festo to develop a compact-profile ELGD for reduced force applications. The reduced profile ELGD is 30% lighter than larger units with similar rigidity and guide load capacity.

Engineering tools

Recognizing that machine builders require faster time to market through partnerships with application engineers, less engineering overhead, and lower inventory costs, Festo offers engineering and commissioning tools and the consulting services of over 40 applications engineers. Festo's online engineering tools, Electric Motion Sizing for single-axis applications and Handling Guide Online for up to three axes, enable machine builders to specify a complete positioning system in less than 30 minutes, including all components and accessories. These engineering tools immediately provide 2D and 3D CAD files, bills of materials, price, and estimated delivery. This information enables original equipment manufacturers (OEMs) to more rapidly quote jobs or continue machine design while the kit is being readied at Festo's North American manufacturing and distribution center in Mason, Ohio.

Festo Motion Control Package custom control cabinets

Festo customer solutions operations in Mason provide Festo Motion Control Package (FMCP) custom control cabinets with function block software that reduces startup time for multi-axis systems from weeks to hours. FMCP control cabinets are delivered fully assembled and ready to install. The OEM simply adds power, Ethernet connection, IO, and wiring to the motors.

No specialized or manufacturer specific programming knowledge is required. OEMs simply use function blocks to fill in key motion parameters for fast programming. Basic motion can be taught through a web server or IOS/Android app. The Festo Motion Control Package is also PLC independent, which means the OEM or end user can use their PLC of choice, eliminating any additional programming expertise or interface technology burden.

The demos at the show were designed using Handling Guide Online and feature an example of a FMCP custom cabinet. Booth staff will discuss with attendees these and other ways Festo lowers engineering time and speeds time to market, including the Festo Automation Suite software, which reduces commissioning time and lowers the risk of commissioning errors.

Other featured products, including CIP safety

Festo innovations go beyond handling systems. A demo in the Festo booth at Automate shows four different pneumatic safety set ups:

- One-safe zone controlled by a CIP safety module for Safe Switch-off up to CAT4, PL e, SIL 3
- The new CPX-AP-A remote I/O and the new VTUX valve terminal with negative overlap valves to assure air will not be trapped in the system
- Three-safe zones controlled by an external safety controller for Safe Switch-off up to CAT3, PL e, SIL 3
- Two-safe zones controlled by an external safety controller for Safe Switch-off up to CAT3, PL d, and SIL 2

Festo multiprotocol servo drives CMMT-AS and -ST are readily available and compatible with EtherNet/IP, EtherCAT, PROFINET, and Modbus TCP industrial Ethernet protocols. This multiprotocol capability lowers learning curves and inventory for those machine builders working with major PLC brands. Festo's Simplified Motion Series of electric actuators are as simple and easy to set up as pneumatic cylinders. Simplified Motion Series actuators have IO Link enabled intermediate positioning.

Distributed I/O and valve systems

The Festo integrated I/O solution CPX-AP-A, along with CPX-AP-I decentralized I/O, offers an unmatched range of automation solutions in North America in terms of performance, flexibility, cost savings, and engineering productivity. AP stands for Automation Platform and this backplane-based I/O system was in development for a decade.

CPX-AP-A terminals with I/O and valves, CPX-AP-I decentralized I/O and valves, and IO-Link masters and devices are all on display. Festo remote I/O modules, including IO-Link masters, are IP65/67 rated and can be mounted anywhere on the machine for higher performance and greater flexibility. Festo remote I/O supports all major fieldbuses. Machine builders simply apply the appropriate fieldbus module, and like multiprotocol drives, reduce inventory and their learning curve. Festo I/O integrates with third-party sensors and actuators, opening a world of possibilities for higher system performance and competitive advantage.

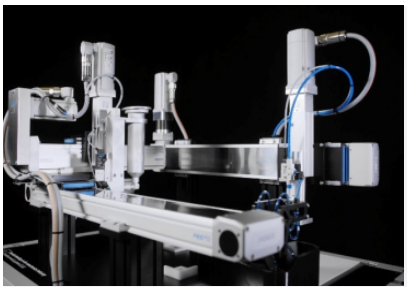
Fast delivery of the most popular pneumatic components

Festo showcases its new FAST program where the most frequently applied pneumatic cylinders, tubing, and air prep systems are on the shelf and ready to ship the next day from

Mason, Ohio.

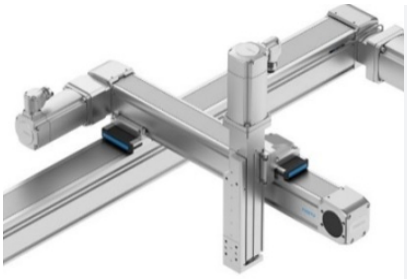
Visit the Electric Automation Highlight Products page on the Festo website for additional electric automation details. For more information on the advantages of working within the Festo ecosystem to leverage less engineering overhead, faster time to market, seamless connectivity, and high-quality components, visit www.festo.com.

Press Images



Electric light assembly demo at the Festo booth

Electric light assembly demo at the Festo booth features a Cartesian handling system, left, for gluing and a pick-and-place handling system, right. The ELGD axes are the centerpieces of this demo.



Festo ELGD

A cantilevered handling system utilizing the Festo ELGD axes. Festo ensures world-class quality, a robust and reliable supply chain for assured availability, and industry leading price/performance.

Festo USA - 50th (EN- GB)

Festo is a leading manufacturer of pneumatic and electromechanical systems, components, and controls for process and industrial automation. For more than 50 years 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.