

## **Festo Showcases Its New Flexible Pipetting Solution at SLAS 2024**



News Release

**In a hands-on demonstration of flexibility, the same pipette dispenses from 20 microliters up to 20 milliliters.**

**ISLANDIA, NY, (date) — [Festo](#) offers SLAS 2024 attendees the opportunity of interacting with the latest life-science automation innovations, including the company's new wide-range flexible pipetting solution. (The Society for Laboratory Automation and Screening [SLAS] Festo Booth #1319, February 3-7, Boston Convention and Exhibition Center)**

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Visitors to the Festo booth will also find solutions for automated dispensing, dosing, sample handling, and decapping/gripping. Each of the four demonstrations at the booth combines Festo components into dynamic systems. These systems highlight scalable and flexible solutions designed for OEMs and integrators automating life-science research and screening processes.

### **New flexible pipetting solution**

In a demonstration of the new flexible pipetting solution, the pipetting system scales seamlessly from 20 µl up to 20 ml for bulk transfer. Attendees interact with the demo by changing pipetting volumes via a text-based HMI; in practice the system can be controlled by any automated system using standard Ethernet protocols. Featured

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components include the Festo [DHOE](#) open loop pipette head and the ultra-compact [PGVA](#) pipetting and dispensing controller.

The DHOE pipette head can transport extremely small volumes down to 1 µl with an outstanding precision. Thanks to its chemical resistance, the DHOE accommodates a wide range of liquids of varying viscosities. The solution shows how a single versatile system can serve many functions – a plus for laboratory and screening device manufacturers that look to deliver greater flexibility to their customers.

The PGVA pipetting and dispensing controller is a compact solution for environments without a central compressed air supply. A single PGVA can supply air pressure to multiple pipette or dispensing heads. The PGVA allows the pressure supply (positive or vacuum) to be centralized within the machine. It operates silently with precision thanks to its industry leading piezoelectric-based valves.

“The point of Festo’s 2024 active demonstrations and the overall Festo exhibit at SLAS is to not only simulate solutions vital to laboratory research and screening, but also present the breadth of Festo life-science components and application expertise. We work with OEMs and integrators to bring proven commercial technologies to labs around the globe” said Sam Stoney, LifeTech Industry Segment Manager.

“LifeTech is the fastest growing segment within Festo. We believe the reason for exceptional growth is that our product portfolio in high-speed



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sample and media handling is second to none, as is our Boston-based application engineering team. Festo supports its products globally and reduces risk through its robust and reliable supply chain.”



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### **Gantry robot with 3-axes of motion and 8 Z-axes**

Another must see at the Festo booth is a gantry robot demonstration featuring three axes of motion (X, Y, and Z) and eight independently controlled Z-axes. Multiple Z-axis increases the flexibility of the sample and media handling systems by fitting more workflow into less space.

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Featured components include the latest iteration of the Festo [EXCL](#) life-science optimized gantry robot, which customers receive as a kit that is easily assembled in hours. EXCL kits come complete with all key components, from power connector to energy chain, motors, and motion control. Festo assigns gantries unique part numbers for simplified reordering. The company developed an online configuration tool that makes specification fast and optimized to the needs of the application.

Other featured Festo components in this demo include the [CMXL](#) motion controller, PGVA pipetting and dispensing controller, DHOE pipettor, and DHAP pipette tips.

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### **Automated aspiration for dosing microwell plates**

In a liquid dosing demo, the system aspirates liquid droplets from two bulk wells and dispenses them into microwell plates. The system

adjusts volume to create a gradient, showing the flexibility of this automated aspiration system. Following filling, the liquids are aspirated away in a bulk transfer, and the pipette tip is automatically replaced. Key Festo life-science components include the [EXCM-30](#) bench-top gantry robot, [ELGC](#) linear actuator, CMXL motion controller, PGVA pipetting and dispensing controller, DHOP smart pipettor, DHAP pipette tips, [VAEM](#) valve controller, and [VTOI](#) dispense/aspirate head.



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### **Liquid dispensing via state-of-the-art media separated valve**

The fourth demonstration involves liquid dispensing. In this demo, small volumes of liquid are dispensed with the [VYKA](#) media separated valve. Using hit-and-hold current reduction circuits in a VAEM valve controller, valve opening time is quickly and precisely controlled, which reduces heat transfer to the media. Other featured Festo components include the VTOF dispensing head for the VYKA valve, VYKB media separated valve, [VAVN](#) dispense needles, and PGVA pipetting and dispensing controller.

For more information on Festo Life-Science solutions – dispensing liquids, controlling gases, and handling samples – email [life.sciences.nam@festo.com](mailto:life.sciences.nam@festo.com) and visit [Festo Laboratory Automation](#). Visit [www.festo.us](http://www.festo.us) for the full range of products.

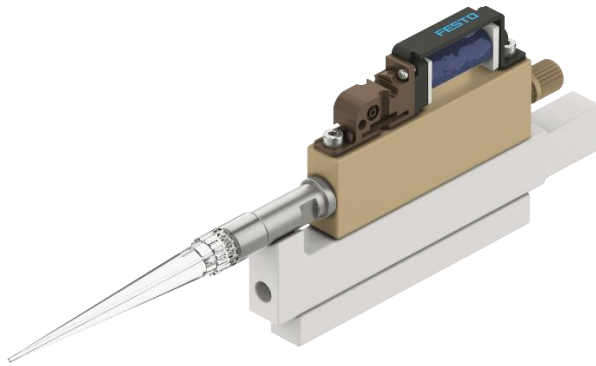
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Download images and video [here](#)

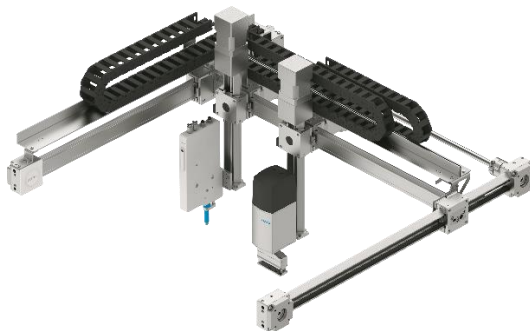
Video: DHOE Pipetting Solution Sample Preparation Animation



*The Festo DHOE pipetting head scales seamlessly from 20  $\mu$ l up to 20 ml for bulk transfer and the utmost in flexibility.*



*The Festo PGVA pipetting and dispensing controller allows the pressure supply to be centralized within the machine. A single PGVA can supply air pressure to multiple pipette heads.*



*This configuration of the EXCL gantry accommodates two independent Z-axes. On the left: a pipette system aspirates and dispenses; on the right: the EHMD rotary gripper for decapping and gripping.*

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## **About Festo U.S.A.**

Festo is a leading manufacturer of pneumatic and electromechanical systems, components, and controls for process and industrial automation. Celebrating 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.

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The logo for Festo, consisting of the word "FESTO" in a bold, blue, sans-serif font.

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