

trends in automation

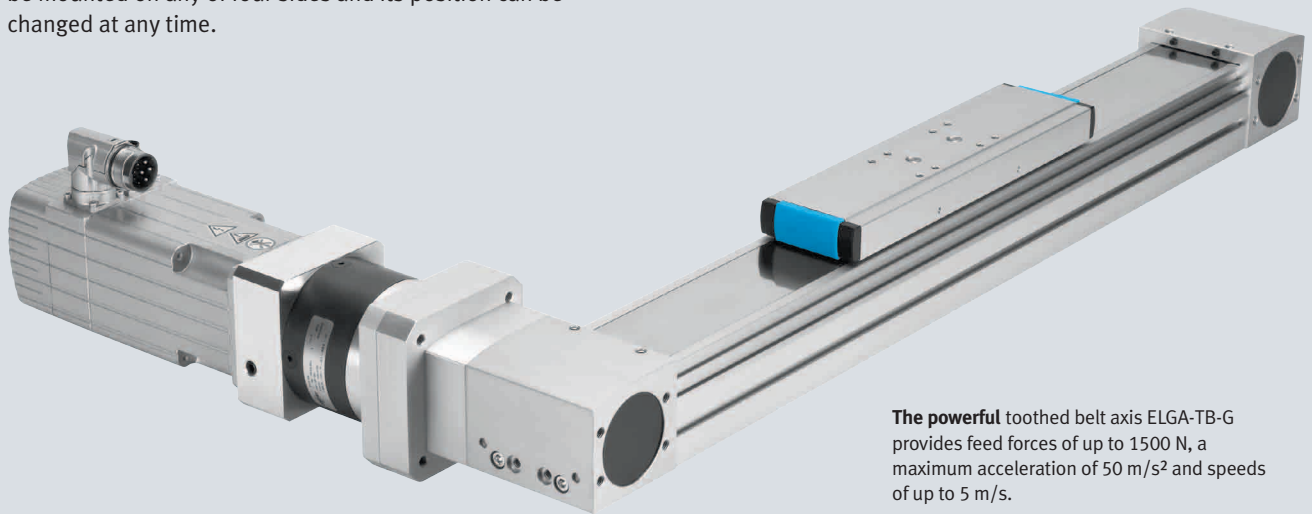


Electric Drives

Powerful axis

If you need to feed loads externally or if a simple plain-bearing guide with a rigid profile will do the trick, then the electric toothed belt axis ELGA-TB-G is the right tool for the job. It works with the entire range of standard stepper and servo motors and has a flexible motor attachment. The motor can be mounted on any of four sides and its position can be changed at any time.

The Festo Configuration Tool FCT ensures convenient and easy commissioning. The PositioningDrives sizing software helps you reliably select the suitable axis. The toothed belt axis ELGA-TB-G with plain-bearing guide is available in three sizes and provides a maximum working stroke of up to 8500 mm.



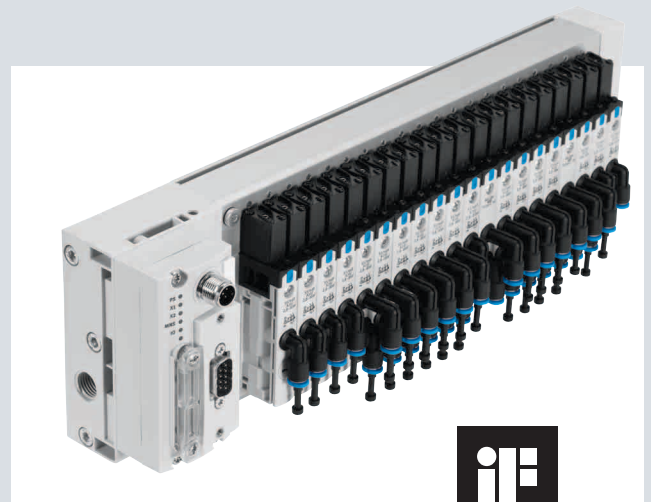
The powerful toothed belt axis ELGA-TB-G provides feed forces of up to 1500 N, a maximum acceleration of 50 m/s² and speeds of up to 5 m/s.

Valve Terminals

Effectively networked

Combining the bus node module CTEU and the valve terminal VTUB opens up the wide world of fieldbus protocols, making it more cost-effective and enabling complex diagnostic functions. This includes detecting undervoltage and short circuits. The changeover from multi-pin to fieldbus cuts installation and engineering costs.

The bus node module CTEU can be combined with all valve terminals that have the Festo-specific "I-port" interface. The high protection class IP65/IP67 enables use even in harsh environmental conditions.



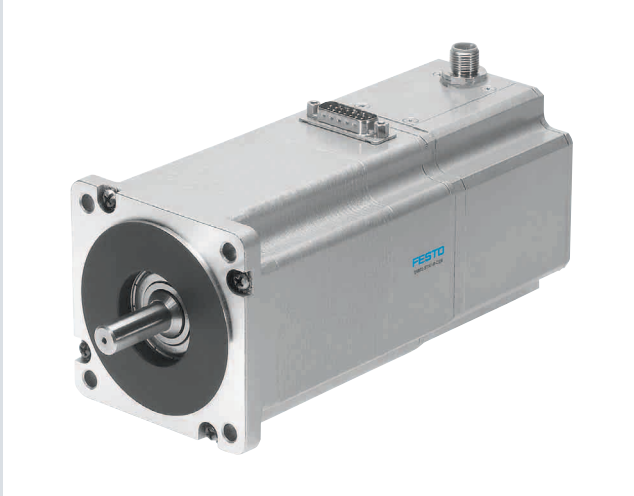
Automatic detection of the number of valves by the bus node module CTEU-AS.



2011



Now with UL certification

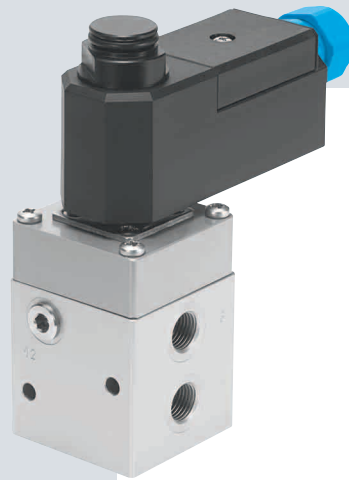


Strong performance by the stepper motor series EMMS-ST as it combines a long service life with complete positioning functionality.

The second generation of the stepper motor series EMMS-ST is UL and CSA-approved. Especially machine manufacturers who export their systems to the U.S. and Canada benefit from these approvals. The main difference between this generation and the previous series is the improved design and high-quality housing of the new EMMS-ST. Reducing the number of edges and omitting visible screws keeps the housing cleaner than in previous versions.

Extremely reliable

The pilot valve VOFC is ideally suited for tough conditions in chemical and petrochemical systems, thanks to its robust design and the highest level 4 Safety Integrity Level (SIL). Equipped with a Namur flange pattern, the solenoid valve reliably performs its duties with quarter-turn actuators. The integrated spring chamber venting protects quarter-turn actuators with spring return against contaminated ambient air and weather influences. Thanks to its robust design and high corrosion resistance, the pilot valve VOFC is also ideal for use outdoors.



The robust and corrosion-resistant pilot valve VOFC also works under difficult ambient conditions.

Well connected

Two promising items: the fittings series NPQM and QS-F are now available in 14 mm diameter. Their features are tried and tested. Due to its robust design, the automotive industry particularly appreciates the low-cost NPQM in metal. It can be used at temperatures ranging from -20°C up to $+70^{\circ}\text{C}$. With its antistatic properties, the fittings series QS-F meets the demands of the electronics industry. The flame-retardant variant can be used at temperatures ranging from 0°C up to 150°C .



For compressed air and vacuum: NPQM metal fittings with male threads G 1/8 to G 1/2 and push-in connectors 4 to 14 mm.

Electric Drives

Just switch it on

The ready-to-install system, consisting of an electric short-stroke cylinder ADNE-LAS and a controller CMFL, makes commissioning easier. You do not need any expertise in programming; simply choose one of the four movement cycles, give the start signal, and you're done. Thanks to the IP65 protection class, you can install the drive directly in the application. Screening of strong magnetic fields keeps out iron parts and chips.

The ready-to-install system is especially suited to applications requiring dynamic movement without positioning, for example ejecting parts or blocking movements. The ADNE-LAS is an effective alternative to solenoid actuators or pneumatic cylinders of the ADN type. Two sizes are available with strokes of up to 45 mm.



Maximum precision: The electric short-stroke cylinder ADNE-LAS provides a high degree of repetition accuracy and constant force across the entire stroke range.

Valves

Manual or mechanical?

The new valve series VMEM/VHEM is available in two variants. The mechanically actuated version VMEM is especially suited as a signal valve and reports, among other things, "end position reached" to the control system. Available versions are the stem actuated valve, ball actuated valve or roller actuated valve. The manually operated VHEM can be activated by pressing, turning, or tilting. This variant takes over simple functions like clamping workpieces or closing safety doors.



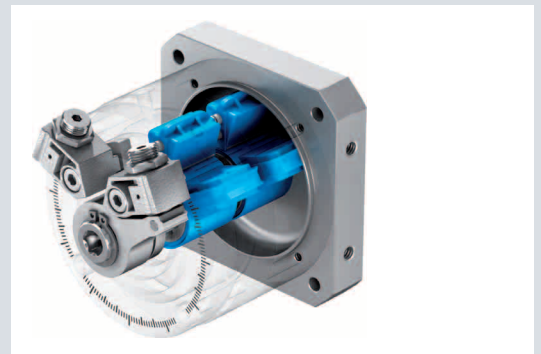
product
design
award

2010

Durable and with high flow rates: The directional control valves series VMEM/VHEM.

Pneumatic Drives

Twice the torque



Universal series with tandem vanes: The swivel module DSM-T-B in six sizes from 12 to 63 mm.

Thanks to the tandem vane, the new swivel module DSM-T-B now has more than twice the torque. At a pressure of 6 bar, up to 80 Nm are available; the mass moment of inertia reaches 160 kg cm². Thus, for swivel angles of up to 270° you can now swivel significantly greater loads than before; smaller swivel angles are infinitely adjustable. The new swivel module DSM-T-B flexibly adapts to the respective application.

The adjustable cushioning with fixed stop ensures precise repetition accuracy of 0.1° and absorbs the energy in the end position. This results in a long service life of more than 10 million swivel cycles. The end-position sensing is compact, easy to release and can be economically implemented with various proximity sensors.

Control Technology

Extremely communicative



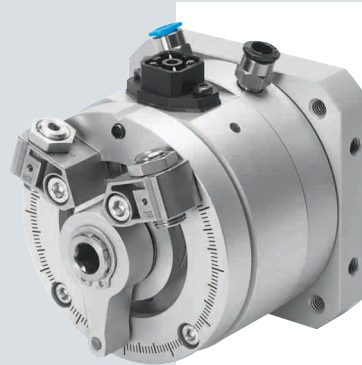
With touch screen display between 3.8" and 15": display and control unit series FED 301 to FED 5000.

The human-machine interfaces FED are ideally suited for the simple control of a wide range of automation tasks. FED 301 to FED 5000 can be quickly networked via Ethernet with Festo controllers. Serial coupling between the human-machine interface and the PLC is also possible. The optional CoDeSys controller FED-CECCAN extends the respective display and control unit into a fully-fledged and space-saving control system. The touch-sensitive TFT monitor ensures operation is convenient. The high-resolution wide-screen format displays graphics perfectly.

Pneumatic Drives

Highly accurate

The servopneumatic swivel module DSM provides highly precise positioning and complete flexibility in the motion profile. When it comes to speed, acceleration, and repetition accuracy, it gets top marks – and it is now available in size 63 as well as sizes 24 and 40. Compared to purely pneumatic swivel modules, the DSM with shock absorbers opens up a whole new range of applications. This compact, robust, and swift drive module smoothly swivels up to 270° into the end positions. The fixed stops, which are adjustable over the entire stroke, are compactly integrated. In size 63, the swivel module DSMI has a mass moment of inertia of 6000 kg cm².



The servopneumatic swivel module DSMI takes less than a second to reach a swivel angle of 270°.

Software

Engineering made simple

Whether you need to carry out simulations, selections, or configurations, the improved software tools from Festo accelerate engineering processes and make them more reliable. In the design phase, Festo provides support with data for CAD systems, while macros for Festo products optimise the electrical engineering phase with ePLAN. Designing hardware is facilitated by CAD data in 2D and 3D from over 25,000 products in 45 different formats.

Design engineers work even more efficiently with Festo FluidDraw P5, the software for quickly creating pneumatic and electrical circuit diagrams. FluidDraw P5 provides drawing and dimensioning functions as well as simple expansion options with separate symbols and libraries.

You can get to the required product quickly using the product configurator. Coloured markings and symbols support selection; product graphics dynamically adapt to the configuration selected. The system also automatically displays relevant product information like CAD data, accessories and documentation.

The Support Portal provides extended functionality at www.festo.de/support, even for products that are no longer available. Information on product life cycle and references to alternative products complete the after-sales support. You can call up data on a specific product simply using the Festo product key.

Luftverbrauch von Zylindern

Funktionselektroventil (doppeltwirkend) Anzahl Zyklen: 60
 Größe: 32 mm Hub/Länge: 200 mm
 ANMERKUNG: Für die Berechnung wird ein Kolbenstangendurchmesser von 12 mm verwendet.

| Ausgewählte Zylinder und ihr Luftverbrauch | | | | Druck: | Zyklus: | Luftverbrauch pro Zyklus | Luftverbrauch pro Minute |
|--|-----------|------------------------|--------------|----------|------------|--------------------------|--------------------------|
| Begröße | Hub/Länge | Funktionselektroventil | Kolbenstange | | | | |
| 32 mm | 200 mm | doppelt | standard | 6,20 bar | 60,000/min | 2,200 l | 125,4 l |
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Auslastung: Arbeitsdruck: 6 bar, Betriebsstunden pro Tag: 8 h
 Luftverbrauch: Luftverbrauch pro Minute: 0,277 m³, Luftverbrauch pro Tag: 180,9 m³

Fast and reliable engineering tools from Festo simplify and accelerate engineering processes.

