

# Key Products

**FESTO**

Key products for North America



## Solenoid valve VUVG-LK

The cost competitive **VUVG** is a compact inline valve program with pneumatic and solenoid actuated valves. Available to be mounted on a manifold for ease of installation.

Manual override for easy commissioning

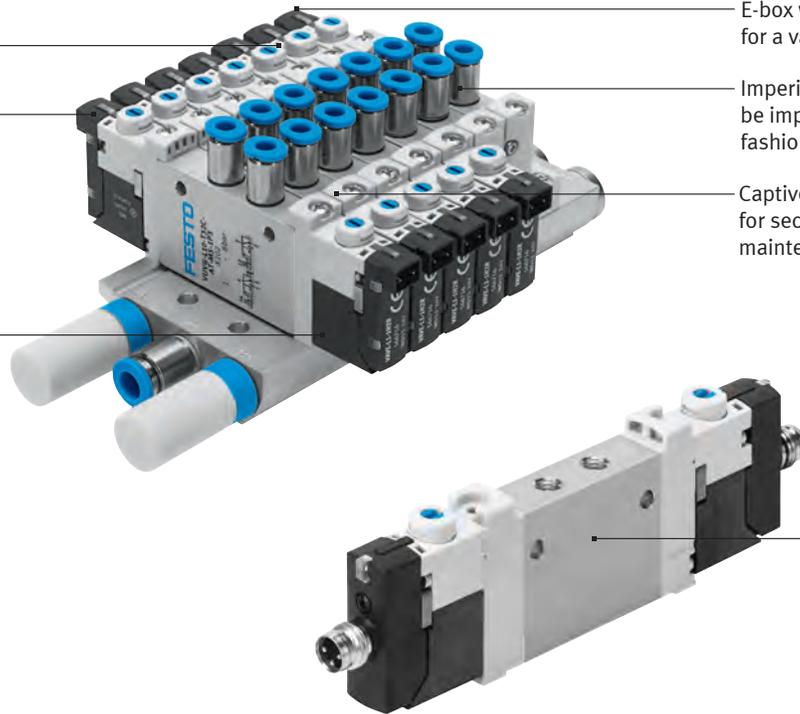
Integrated LED provides a 360° view convenient for a quick status review, as well as reduced downtime

Several pressure zones possible fast and easy with separators

E-box with patented contact system for a variety of connectors

Imperial connections (inch sizes) can be implemented in a trouble-free fashion with hybrid fittings

Captive screws with higher torque for secure mounting and ease of maintenance



Valves with most common features ideal for OEMs

- 5/2 single and double
- 2x 3/2 Normally closed
- 24 V DC

## Solenoid valve VUVS-LK

The **VUVS** is a robust inline valve program with pneumatic and solenoid actuated valves, numerous mounting options and easy operation at a great price.

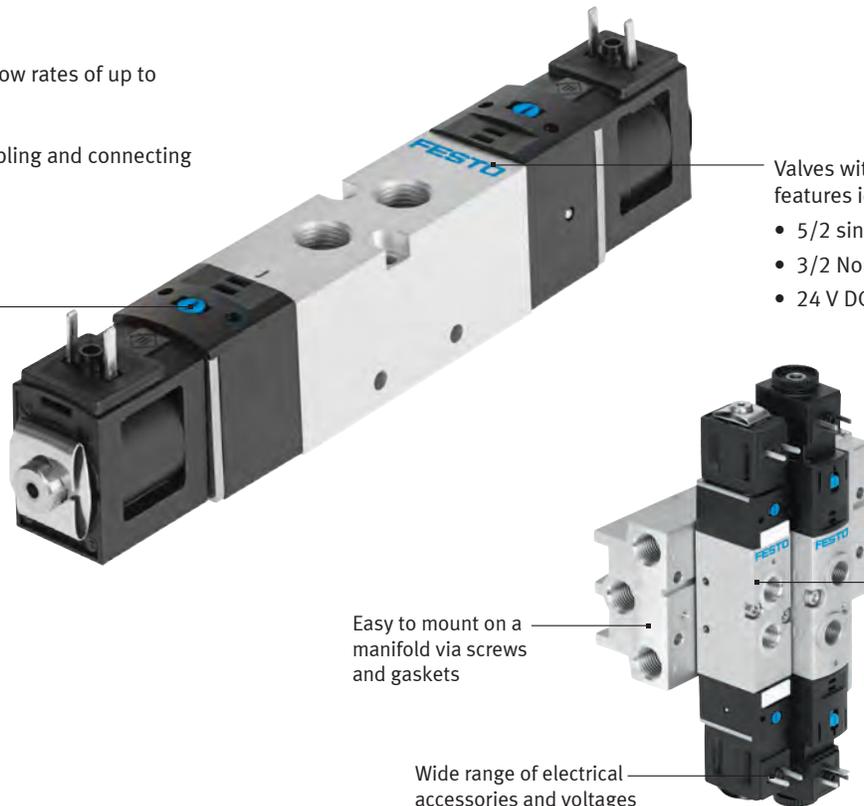
Three different sizes with flow rates of up to 2,300 l/min

Optimized for quick assembling and connecting

All valves have detent manual override (push and turn to lock)

Valves with most common features ideal for OEMs

- 5/2 single and double
- 3/2 Normally closed
- 24 V DC



Easy to mount on a manifold via screws and gaskets

Wide range of electrical accessories and voltages

Port sizes:

- 1/8
- 1/4
- 3/8

# Mechanically and manual actuated valves VHEF/VMEF

The price optimized manual or mechanical **VHEF/VMEF** valves are the most direct way to control a process.



## More options to actuate the valve:



Finger lever



Selector lever



Hand lever valve



Roller lever

# Valve terminal MPA-C

The **MPA-C** is a one of a kind valve terminal with the highest degree of immersion protection IP69K, resistant to chemicals, cleaning agents and ideal for any clean design environment.

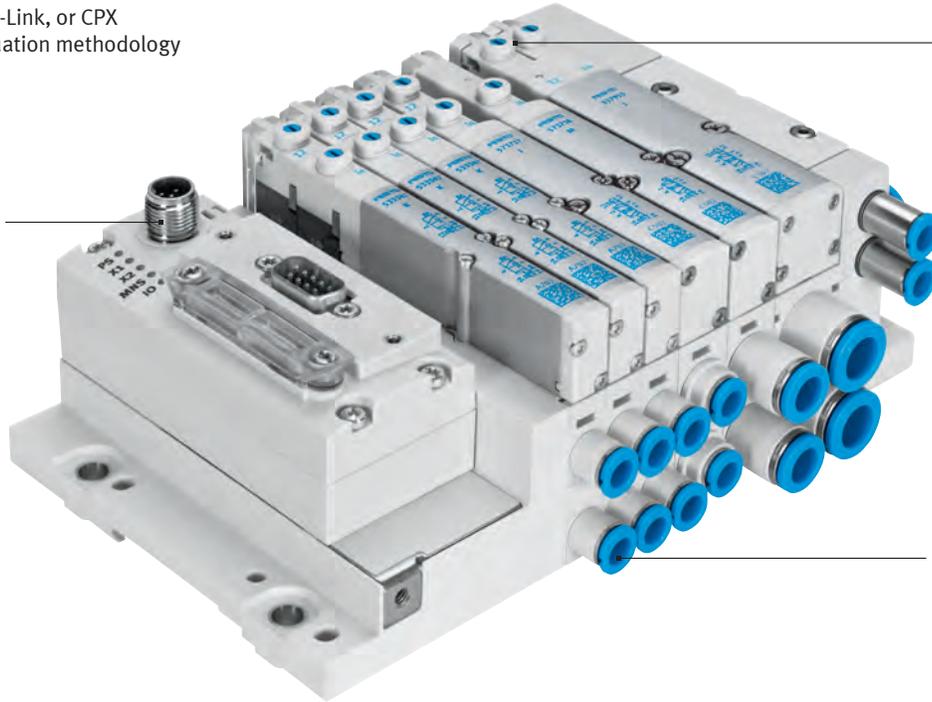


# Modular valve terminal MPA-L

The **MPA-L** is one of the most customizable valve terminals on the market providing maximum electronic flexibility with options like Multi-pin, IO-Link or CPX. With up to 32 stations, this powerhouse valve terminal can also accommodate a wide range of pneumatic accessories.

Electronic flexibility:  
Choose either Multi-pin, IO-Link, or CPX  
integration for desired actuation methodology

IO-Link interface allows for  
integration of Festo CTEU  
node style of choice or  
control by IO-Link master



Configurable with three  
different size valves,  
flexible enough to fit a  
wide range of applications;  
ability to use all standard  
MPA 10mm, 14mm and  
20mm valves

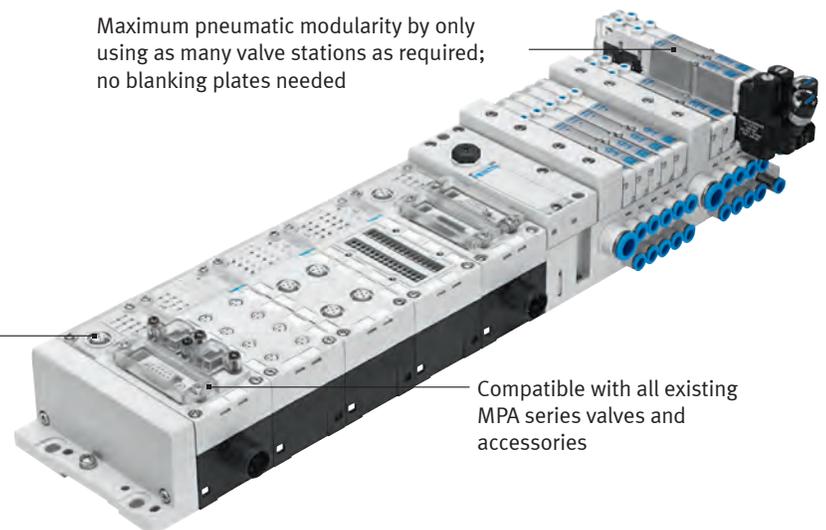
Availability of several inch  
and metric fitting sizes to  
mix and match to fully  
customize to your needs

New decentralized  
system CPX-AP-I  
available to ensure  
continuous communication  
from the workpiece  
to the cloud



Polymer valves and  
sub-bases reduce both  
weight and cost, ideal  
for end-of-arm tooling

Maximum pneumatic modularity by only  
using as many valve stations as required;  
no blanking plates needed



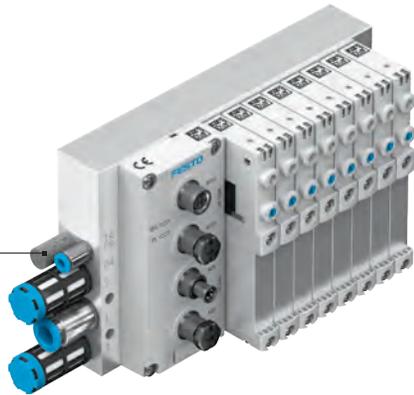
Fieldbus nodes can support  
EtherNet/IP CANopen,  
DeviceNet, CC-Link, Profibus,  
EtherCAT and all of the protocols  
associated with CPX modules

Compatible with all existing  
MPA series valves and  
accessories

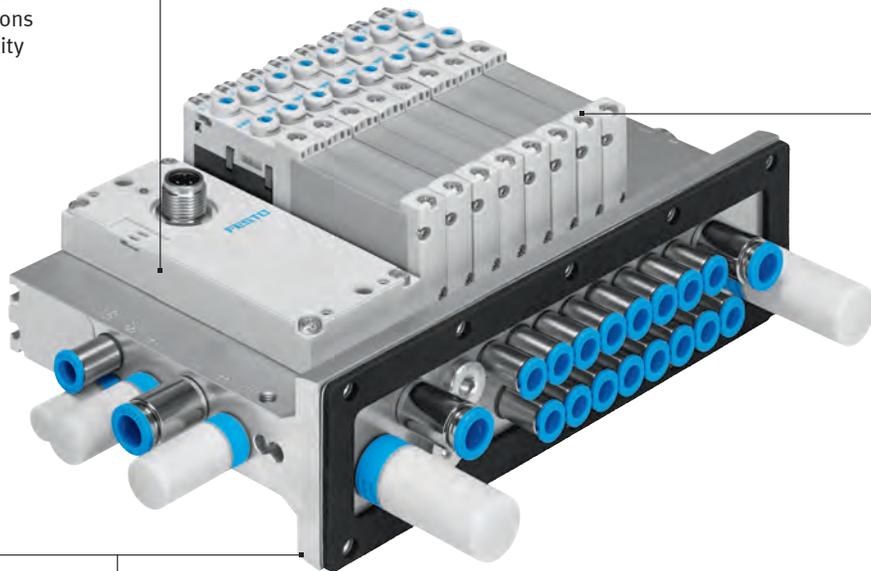
# Plug-in valve terminal VTUG

The **VTUG** is a compact valve terminal that provides an optimized footprint/flow ratio at a great price. Installation and maintenance are hassle-free with captive seals, screws and defined gasket compression.

New decentralized system CPX-AP-I available to ensure continuous communication from the workpiece to the cloud



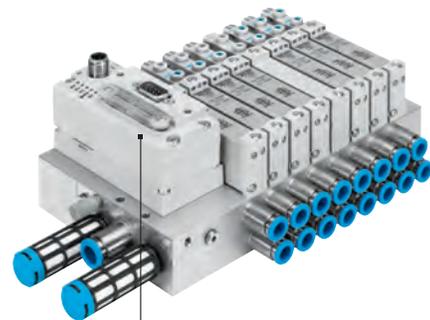
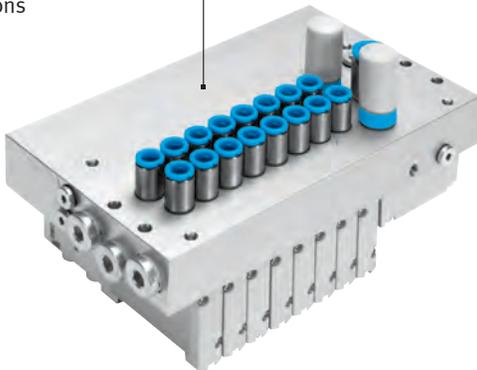
Modular electronic connection: Choose from Multi-pin, IO-Link interface for fieldbus solutions or CPX-AP-I with the flexibility to switch at any time



Available in either body ported or sub-base style valves for pneumatic flexibility

The patented cartridge seal design from Festo has a long life; non-overlapping seals for reverse flow and dual pressure operation

Bottom ported manifold solutions available as a standard product for control cabinet installations



Availability of IO-Link interface allows for integration of Festo CTEU node style of choice or control by IO-Link master

VTUG fieldbus nodes can support CANopen, DeviceNet, CC-Link, Profibus, EtherCAT and EtherNet/IP

# High flow valve terminal VTSA-F-CB with safety features

The **VTSA-F** valve manifold just took a jump into the future with the ability to control downstream valves and devices via a C-Bus back plane. Reducing the wiring and installation dramatically while giving you the ability to control valves with safe outputs and switched power zones.

CPX has a large selection of I/O modules that can be added to increase the flexibility and integration of control, including:

- Digital inputs and outputs
- Analog inputs and outputs
- IO-Link master
- ProfiSafe inputs and outputs
- I-Port master
- High speed counter
- Motion controller
- ... and more

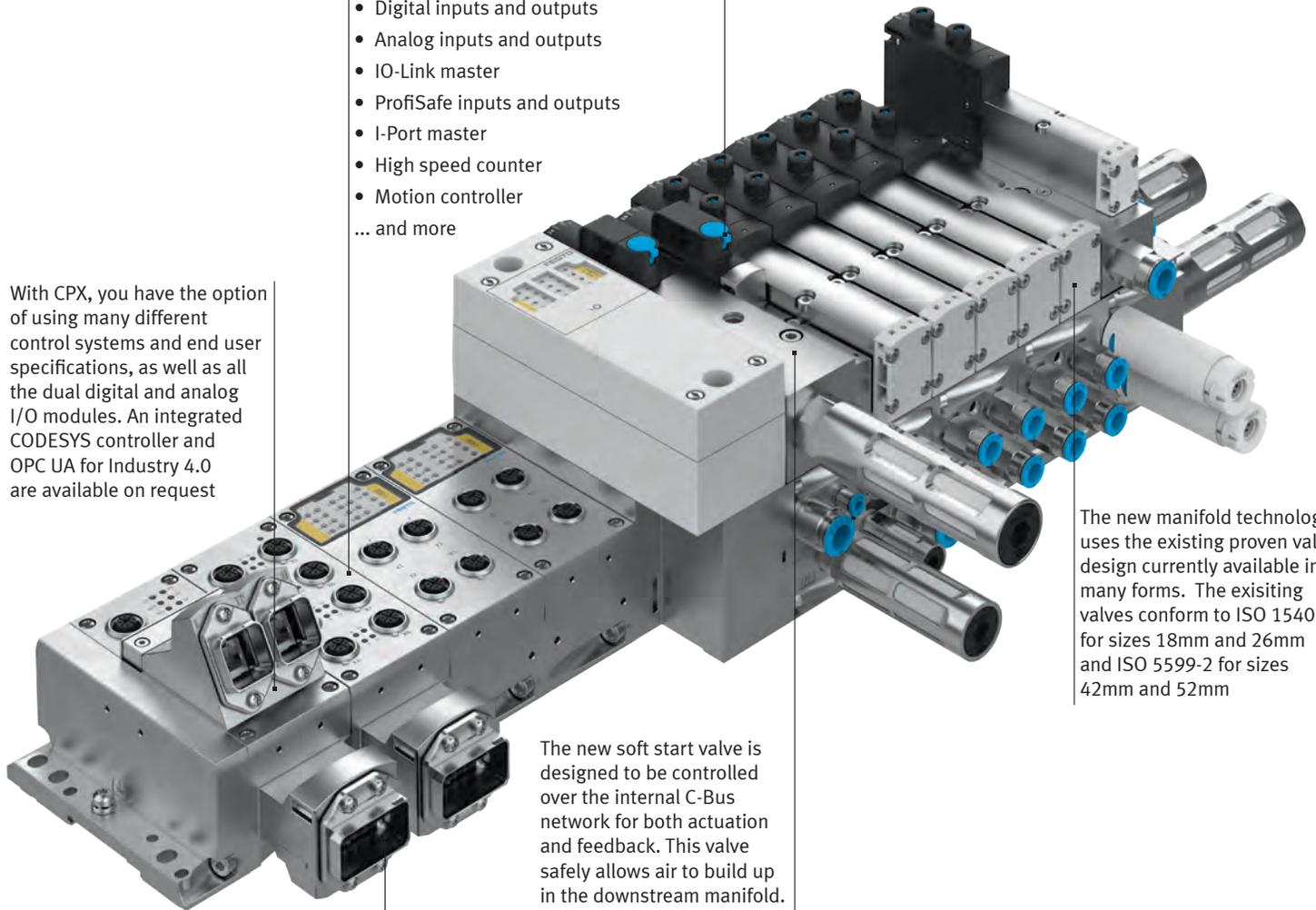
With CPX, you have the option of using many different control systems and end user specifications, as well as all the dual digital and analog I/O modules. An integrated CODESYS controller and OPC UA for Industry 4.0 are available on request

The new pilot control valve is designed to have the same reliable function as the existing valve but offer all the features of control over the internal C-Bus network for both actuation and feedback. This valve safely allows air to the pilots of the downstream valves and controls their ability to function. Combined with the soft start valve this can be used to comply with ISO 13849-1 or ANSI B11.26

The new manifold technology uses the existing proven valve design currently available in many forms. The existing valves conform to ISO 15407-2 for sizes 18mm and 26mm and ISO 5599-2 for sizes 42mm and 52mm

The new soft start valve is designed to be controlled over the internal C-Bus network for both actuation and feedback. This valve safely allows air to build up in the downstream manifold.

Festo can offer 4 options of interface to meet your safety and application needs. From Profisafe control to power zones that can be pulse tested in a CIP safe network



# Motion Terminal VTEM

Combining numerous functions with the same hardware - this can now be done for the first time ever with the **VTEM**. No modifications, no additional parts, no arduous installation. With the matching Motion App, you can change functions at the press of a button, whether for a simple change in the directional control valve functions, gentle travel in the end positions, energy-efficient movements or proportional characteristics of the motion profiles. That is how the Festo Motion Terminal combines the benefits of both electric and pneumatic automation.

When it comes to efficient parameterization the choice is yours: you can either use an intuitive WebConfig user interface via the PC's web browser or easily access the (PLC) machine control system as usual - without the need for additional configuration software.

Up to 16 analog or digital inputs for direct control applications such as Soft Stop. The necessary data is recorded and transmitted by sensors mounted directly on the actuator.

The app-controlled valve comprises four 2/2 diaphragm poppet valves, which are controlled by four piezo pilot valves. The integrated stroke and pressure sensors provide optimal control and transparent condition monitoring.

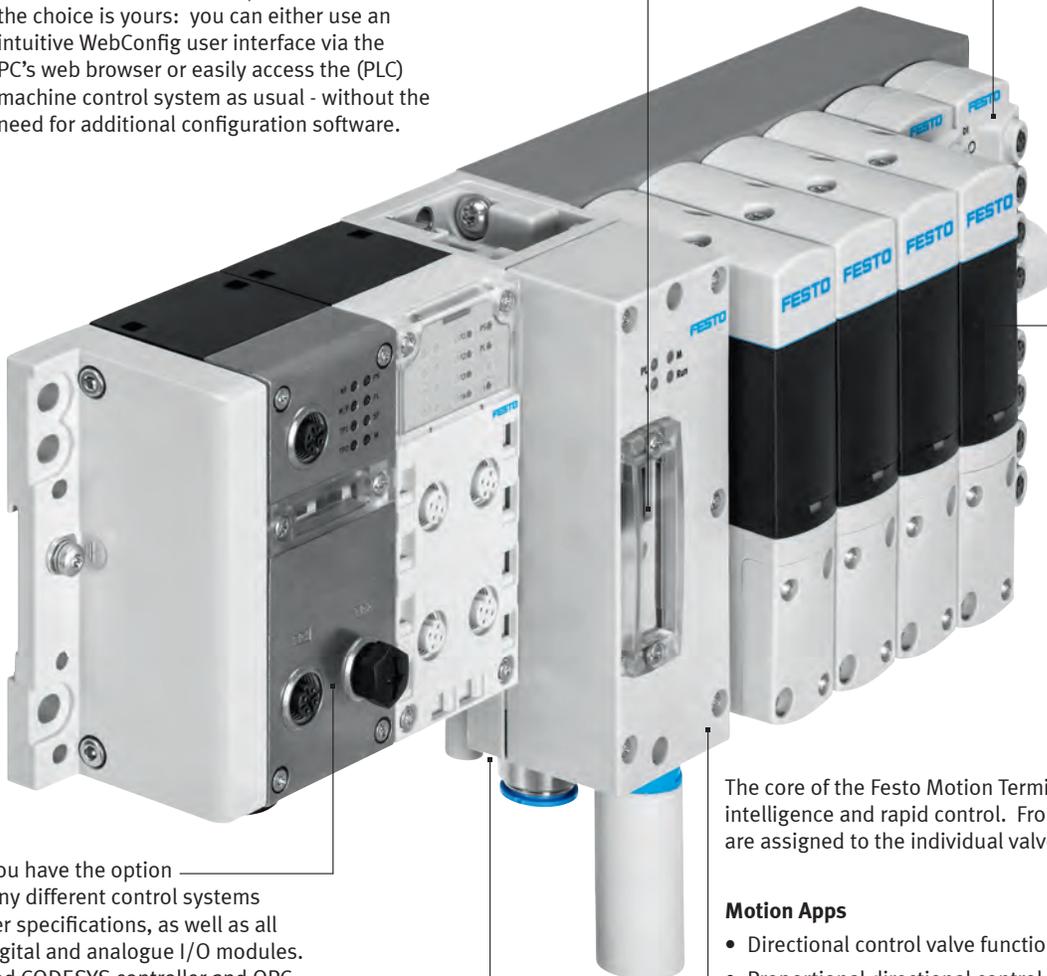
The core of the Festo Motion Terminal offers decentralized intelligence and rapid control. From here, the motion apps are assigned to the individual valves.

With CPX, you have the option of using many different control systems and end user specifications, as well as all the usual digital and analogue I/O modules. An integrated CODESYS controller and OPC UA for Industry 4.0 are available on request.

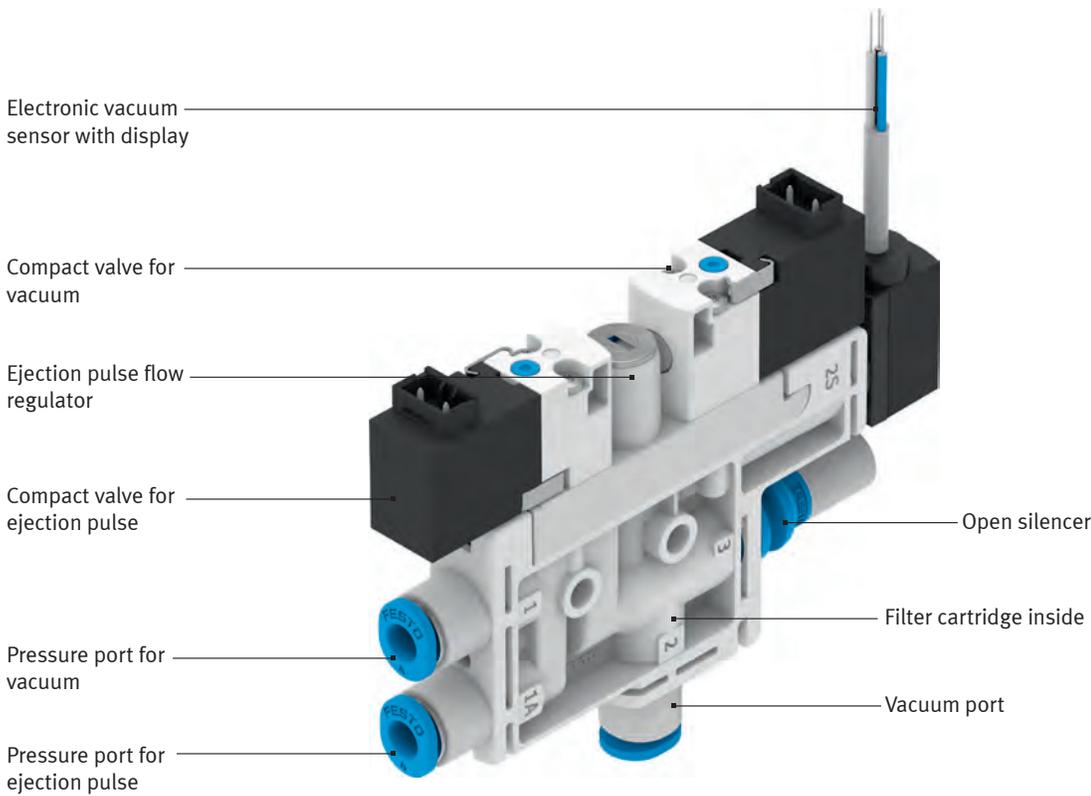
With the CPX-CTEL the installation system allows you to integrate up to 4 standard valve terminals cost-effectively as no extra bus nodes are required, this makes combining different technologies effortless.

## Motion Apps

- Directional control valve functions
- Proportional directional control valve
- Soft Stop
- Proportional pressure regulation
- Model-based proportional pressure regulation
- ECO drive
- Selectable pressure level
- Leakage diagnostics
- Supply and exhaust air flow control
- Presetting of travel time



## Vacuum generator OVEL



### Highlights

- Very lightweight, useful for direct applications
- Compact and ideal for small machines and devices
- Integral functionality, all basic vacuum functions are included in a compact size
- Maximum space savings with the vacuum generators manifold version
- Four output signal options, even IO-link
- Multiple connection options with the possibility to change the vacuum and supply air ports
- Low air consumption, can operate with only 4 bars

## Guided slide DGST

The **DGST** is the most compact slide in the market

Sizes: 6mm to 25mm

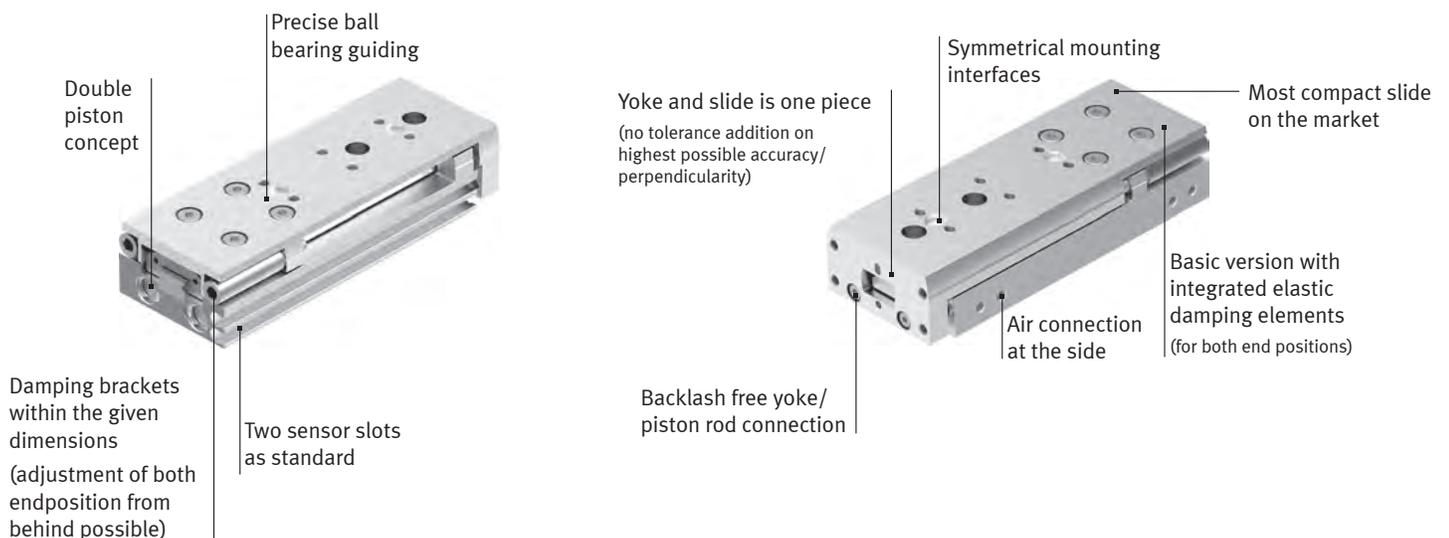
Strokes: 10mm to 200mm

Damping variants:

- E1: integrated rubber bumpers, no stroke adjustment
- P: rubber bumpers, with stroke adjustment
- Y12: hydraulic shock absorber, with stroke adjustment

**Precise:** the robust recirculating ball bearing guide and the combination of the yoke and slide in one part ensure high accuracy.

**Compact:** the damping components fit within the dimensions of the DGST housing, where competitors mount them onto the side of the housing. DGST can fit into more confined spaces.



# Guided drive DFM

The **DFM** guided drive has the highest load capacity in the market.

**Areas of application**

- Stopping
- Clamping
- Pushing/Lifting

**DFM-B offers:**

- Strokes up to 400mm
- PPV air cushion
- Hydraulic shocks
- High temperature (120°C)
- NPT ports



**Flexible:** Choice of mounting holes on multiple surfaces, multiple air port locations

**Sturdy:** High force and torque load capacity due to the size of the guide rods, bearings and yoke plate

**Compact:** The combination of linear drive and powerful guide unit means that the DFM can reliably move high loads, even in tight spaces

**Overview of sizes and strokes** (GF plain-bearing guide, and KF ball bearing guide)

Strokes	10mm	20mm	25mm	30mm	40mm	50mm	80mm	100mm	125mm	160mm	200mm
DFM-12	★	★	★	★	★	★	★	★			
DFM-16	★	★	★	★	★	★	★	★			
DFM-20		★	★	★	★	★	★	★			
DFM-25		★	★	★	★	★	★	★			
DFM-32		★	★	★	★	★	★	★	★	★	★
DFM-40			★			★	★	★	★	★	★
DFM-50			★			★	★	★	★	★	★
DFM-63			★			★	★	★	★	★	★
DFM-80											
DFM-100											

# Flat rodless drive DLGF

The space-saving, extremely flat and rodless **DLGF** is ideal not only for the electronics industry and small parts assembly, but wherever installation space is very limited.

**Types:**

DLGF-G: without external guide

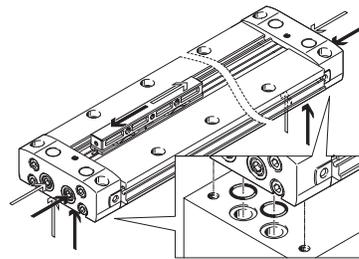
DLGF-KF: with recirculating ball bearing guide

Sizes: 20mm to 40mm

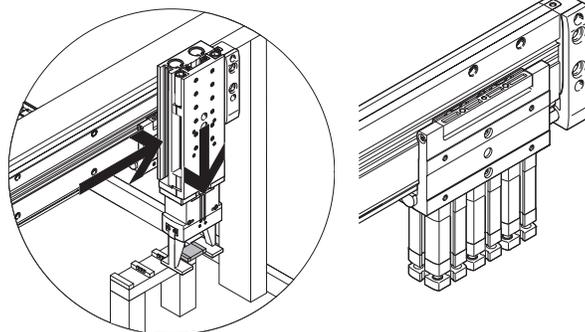
Strokes: 50mm to 1,000mm (in 50mm increments)

**Unique benefits**

- PPS self-adjusting air cushioning is always optimally adjusted, saving time and providing reliable performance.
- Flexible air connections with pneumatic ports enables control from one side, two sides or from underneath.



- Integrated interfaces in the carriage to mount a slide (DGST or DGSL), or up to three cylinders (ADN/ADNGF). It's simple and fast to create handling systems, no adapter plates required.



## Compact, pancake cylinder DPCA

The **DPCA** is a compact, inch pneumatic cylinder designed for short stroke applications which require a solution to fit in the tightest of spaces. It's robust construction from solid aluminum bar stock enables reliable operation, even in tough applications.



Manually adjustable stroke version (pinch-free design)



### Additional options include:

- Magnet for position sensing
- Bumpers, special seals and wipers
- ...and more custom options available upon request

## Compact, interchange cylinder DPCB

The **DPCB** is a compact, short stroke actuator with corrosion resistant design and low friction operation enabling long, reliable operation for applications in which installation space is limited. It is designed interchange with other inch dimension compact actuators, but with improvements in its construction and components materials.



### Additional options include:

- Magnet for position sensing
- Bumpers, special seals and wipers
- ...and more custom options available upon request

## Round inch cylinder DPRA

The **DPRA** is a direct interchange round-body pneumatic cylinder. This product is manufactured to meet the specific requirements to suit almost any general purpose automation application: readily available with consistently short lead times, cost optimized design and the flexibility to be modified for special application requirements.



### Additional options include:

- Magnet for position sensing
  - Adjustable air cushions (PPV)
  - Seals for low and high temperature operations
  - Bumpers
- ...and more custom options available upon request



## NFPA interchangeable cylinder DSNA

The **DSNA** is a cost optimized tie-rod style pneumatic actuator that is interchangeable as per NFPA specification. This actuator's construction incorporates corrosion resistant design characteristics and includes several other cost saving features as standard.



### Flexibility to fit most applications:

- Variety of NFPA interchange mounting option as per ANSI NFPA specification
- Single or double rod with several rod end thread variants
- Optional viton seals suitable for high temperatures and chemical resistance



## Pressure sensor SPAU

The sensor **SPAU** for pressure measurement, pressure monitoring and pressure sensing keeps pressure levels permanently under control, ensuring more productivity and process reliability. As well as quicker system commissioning.

- Suitable for monitoring compressed air
- Non-corrosive gases

The variant with display offers the option of reading the pressure and setting values on-site.

The pressure value is transmitted to the connected control system as a switching signal, as an analog signal or via **IO-link**.



The pressure sensor without display transmits the pressure value to the connected control system as an analog signal or via **IO-Link**.

The pressure sensor can be parameterized using **IO-Link** as a tamper-proof pressure switch without display with up to two switching outputs.



### Areas of application

- Network monitoring (pressure present)
- Regulator monitoring (pressure in the target area)
- Vacuum (partial suction)
- Air-pressure test (pressure drop over time)
- Object detection (back pressure present)

## Pressure sensor SPAN

The attractively priced pressure sensor **SPAN** is amazingly flexible thanks to switchable electrical outputs and a very wide range of options for pressure measurement ranges and pneumatic connections. The compact design of just 30 x 30 mm, the range of variants and the user-friendly menu navigation make the sensor suitable for every kind of application.

### Convenient design

- Compact design 30x30mm
- Degree of protection IP40

### Universal pressure measurement

- Pressure and vacuum
- 13 pressure measuring ranges
- All common pressure units
- Optional inspection report

### Quick installation

- L1 plug connector for fast commissioning
- M8 electrical adapters enable maximum flexibility
- Wide range of mounting options
- QS4 quick connector



### Easy operation

- Clear 2-line display
- Configurable, red perimeter of entire display
- Intuitive menu navigation

### Switchable electrical outputs

- Various switching functions
- Switching outputs (PNP/NPN, NO/NC)
- Analog outputs (0...10V, 1...5V, 4...20mA)



# Flow sensor SFAH

The **SFAH** monitors the flow of compressed air and non-corrosive gases. It is ideal for many industry sectors thanks to its compact design, a range of installation options and the space-saving adjustable QS elbow connections. The bypass construction of the SFAH means that it is less susceptible to particles and moisture. The flow value is transmitted to the connected controller as a digital switching signal, an analogue signal or via IO-Link.



## Areas of application

- Process monitoring
- Handling of extremely small parts
- Monitoring of compressed air consumption
- Leak test
- Monitoring of forming gas
- Pneumatic object detection via air-gap measurement

# Air preparation MS Series/MS2

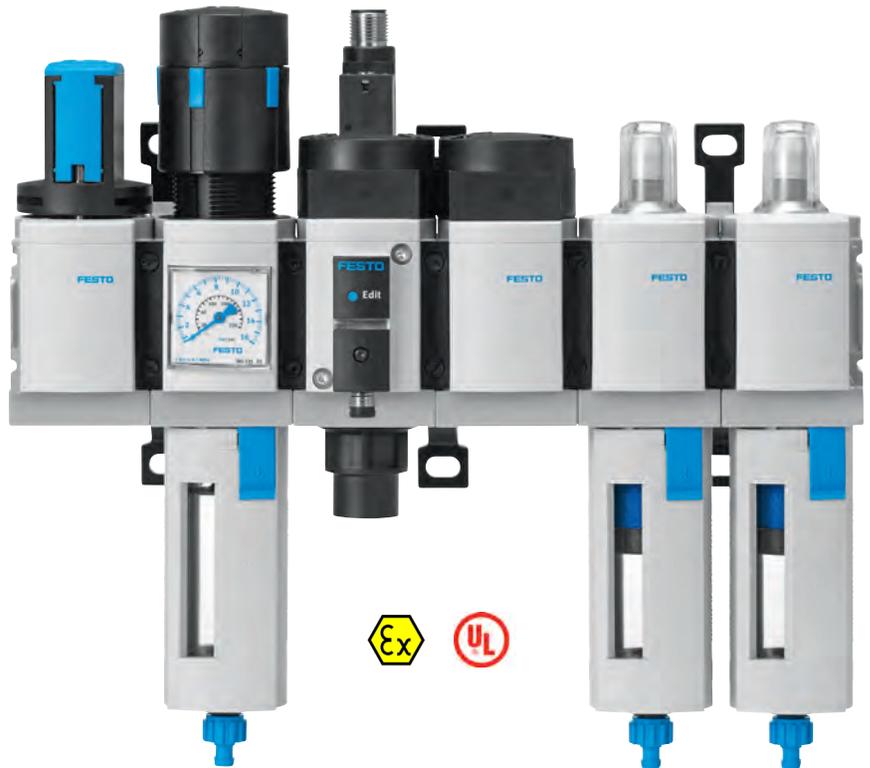
With its large product range, highly functional components and a wide choice of services, the **MS Series** from Festo offers a complete concept for compressed air preparation. For simple standard applications as well as application-specific solutions with the highest quality requirements. The option to mix sizes for maximum energy efficiency is included as standard.

## Highlights

- High flow rates in a small footprint
- Ability to customize individual components or complete assemblies
- Integrated pressure and flow sensors
- Designed with integrated safety functionality
- Ability to mix sizes in a single configuration

## Intelligent mixing of sizes:

- Maintain optimal flow while combining 18% smaller components
- Save up to 30% with cost-optimized component combinations



## MS2 regulator and filter/reg newest member to the MS series



High-end polymer material light-weight and robust, ideal for end of arm tooling



Easy to read lightweight polymer gauge

QS6 or M5 connection requires less space to install where real estate is a premium



Transparent filter bowl provides 360° visibility of condensation

## Integrated sensors:

- Pressure and flow sensors with clear display
- Integrable or as stand-alone version
- Convenience and simplicity with M8/M12 plug in connectors



Type	MS2	★ MS4	★★ MS6	★★ MS9	MS12
Grid dimension [mm]	25	40	62	90	124
Permissible primary pressure [bar]	8 [QS6], 10 [M5 Thd]	Max. 14	Max. 20	Max. 20	Max. 20
Operating temperature [°C]	-5...+50	-10...+60			
Flow rate of filter/regulator qnN [l/min.]	350 [QS6]	1,700	6,200	20,000	28,000
Connection sizes (G & NPT)	M5, QS6	1/8, 1/4, 3/8	1/4, 3/8, 1/2, 3/4	1/2, 3/4, 1, 1 1/4, 1 1/2	1, 1 1/4, 1 1/2, 2

# Energy efficiency module MSE6

Today end users are wanting more intelligence and energy savings built into their manufacturing processes. This means they want automation equipment that utilizes smart devices capable of collecting real time data from their processes and turning that into saving both time and money. The **MSE6** was designed to save energy by automatically shutting off the supply of air to a machine that has been sitting idle. This eliminates the continuous consumption of air due to system leakage resulting in significant energy savings.

Additionally, the MSE6 can monitor the machines performance by collecting data on pressure, flow and air consumption assuring the machine is operating at peak efficiency.



## MSE6-E2M

- Detects when the machine has been idle for a set period of time and automatically shuts off the flow of air - saves energy by eliminating continuous air consumption due to system leakage
- Automated leak detection during machine standby - saves energy
- Collects data through continuous process monitoring of flow, pressure, air consumption and machine cycles helping prevent costly unplanned maintenance and assuring optimal performance



## MSE6-C2M

- The automated stand-by pressure regulation keeps the machine slightly pressurized to prevent vertical drives from retracting during idle periods, then enables a more trouble free restart when production resumes
- Air consumption during, pressure regulated, stand-by mode is greatly reduced thus, saving energy
- Automated leak detection during machine stand by - saves energy
- Collects data through continuous process monitoring of flow, pressure, air consumption and machine cycles helping prevent costly unplanned maintenance and assuring optimal performance
- Connection to external components via fieldbus electrical inputs and outputs



## MSE6-D2M

- Provides cost effective means of monitoring a secondary line by connecting it to the fieldbus node of MSE6-C2M or the Festo CPX manifold
- The D2M function like the E2M and offers the same benefits

## MS-Series Integration

- The MSE6 Energy Efficiency products can cleanly be integrated into the MS6 service units



# Ball and butterfly assemblies KVZB/KVZA

Automation of ball valves and butterfly valves often require a wide variety of products. Festo proudly offers a comprehensive range of accessories to cover applications ranging from general purpose to sanitary to hazardous locations.

Obtaining fully automated ball and butterfly valves from a single source makes planning, procurement and commissioning significantly easier and more cost effective. It eliminates a considerable amount of product configuration, reduces warehousing costs for inventory and spare parts and speeds up service and maintenance.

- **KVZB:** online configurator for ball valve assemblies
- **KVZA:** online configurator for butterfly valve assemblies

Pneumatic quarter turn actuator for automation of ball valves and butterfly valves. End adjustments provide flexibility at both open and close positions. Available with NAMUR interface for local piloting, as well as NPT or G threads for remote pilot applications

- **DFPD:** for general purpose applications
- **DFPD-...-R3-EP:** for washdown applications

**Seal options**

- NBR (Standard)
- FKM (High temp. up to 150°C)
- FVMQ (Low temp. down to -50°C)

**NAMUR and threaded**  
NPT or G Threads

**Corrosion-resistant variant**  
Epoxy coated housing with stainless steel stem

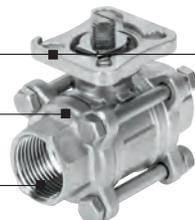
**Adjustable springs**  
Flexibility for end stops at both open and closed positions

**End adjustments**  
Flexibility for end stops at both open and closed positions

Ball valves for on/off and proportional control of liquids and gases. Capable of handling media up to 1,000 psi or 392°F

- **VZBE:** NPT connections for 2-way and 3-way (L or T bore)
- **VZBD:** Sanitary connections (tri-clamp and weld) with cavity filler and 3A approval
- **VZBF:** ANSI 150# flanged ball valve with API607 fire-safe rating

ISO5211 direct mount pad  
316 stainless steel construction  
PTFE seats



**VZBE**



**VZBD**

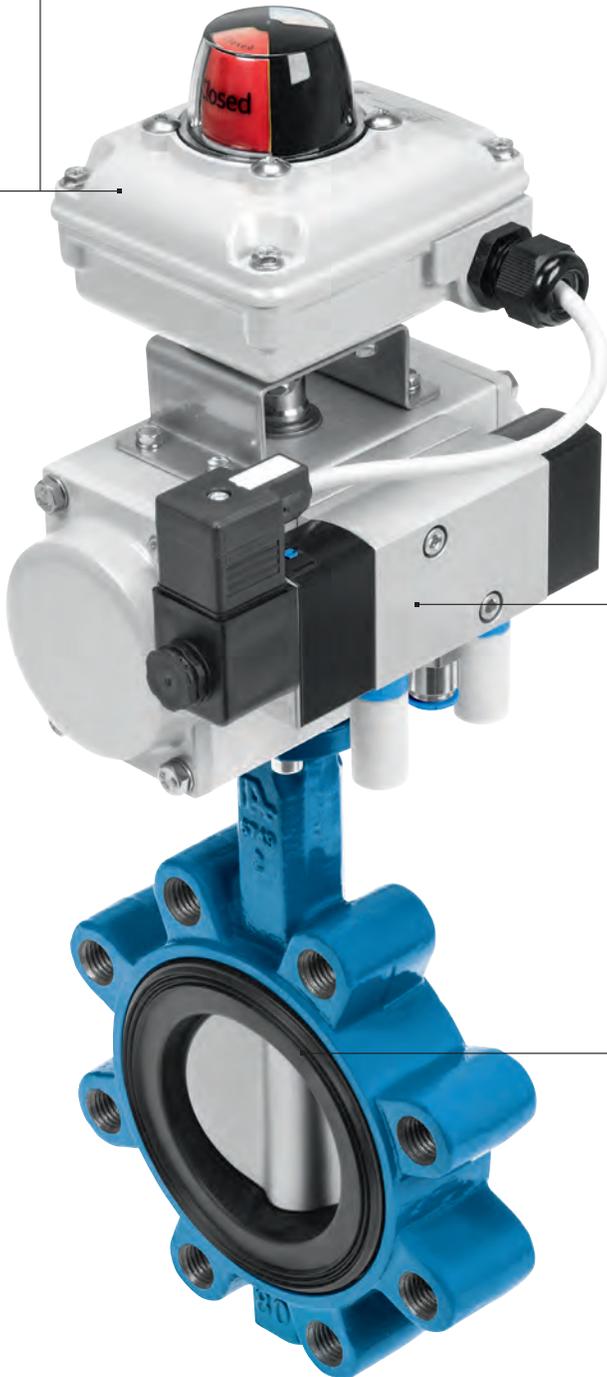


**VZBF**

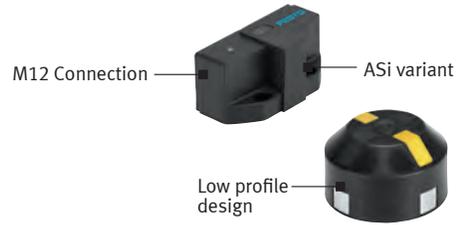


Sensors for visual and electrical feedback of valve position. Available with mechanical, inductive or magnetic reed switches

- **SRBC:** for general purpose applications
- **SRBE:** for explosion proof environments (NEC500, ATEX, IECEx)
- **SRBG:** for compact applications



**SRBG**



**SRBC**



**SRBE**



Namur valves for local pneumatic piloting of actuators. Available with coil voltages from 12-48 V DC and 24-230 V AC

- **VSNC-...-F8:** for general purpose applications
- **VSNC-...-FN:** for hazardous locations (NEC500, ATEX, IECEx)



Butterfly valves for on/off and proportional control of liquids and gases. With a standard body material of epoxy-coated cast iron, these valves are available with a wide range of seats, including EPDM for drinking water with NSF61 certification



# Angle seat valve VZXA

The **VZXA** is a high-end angle seat valve designed and produced by Festo. This product is being introduced with full stainless steel construction and PTFE seats. Currently available with NPT or G threads; a sanitary version and a brass version will be released in 2020.

Aside from standard variants noted below, the VZXA has a unique design where the actuator can be removed from the valve without exposing the contents of the pipeline. This vastly improves serviceability as well as ease of use in manifold projects.



Manifold designs available through Customer Solutions

**Available as:**

- Normally closed (NC)
- Normally open (NO)
- Double acting

Actuator has its own sealing system and can be decoupled from seat stem without exposing media

Actuator sizes: 46mm, 75mm, 90mm\*  
\*Diaphragm style

Above or below the seat flow paths



# Pinch valve VZQA

The **VZQA** is a very low-profile pinch valve intended for low pressure applications. Its creative design allows for full flow when open and the ability to handle a variety of media, including viscous liquids and granular solids. The resilient diaphragm or sleeve used to control the media can be easily removed and replaced on-site, making preventative maintenance simple and affordable.

Normally open versions are available in 1/4", 1/2" and 1" sizes. Available diaphragms are NBR, EPDM and silicone

Normally closed versions are available in 1/4" and 1/2" sizes. Available diaphragm is EPDM and silicone



Custom tandem pinch valve solution available through Customer Solutions. This product is patented.

**Normally open (NO)**

**Normally closed (NC)**

Low profile

Full flow path

Removable sleeve cartridges for easy serviceability

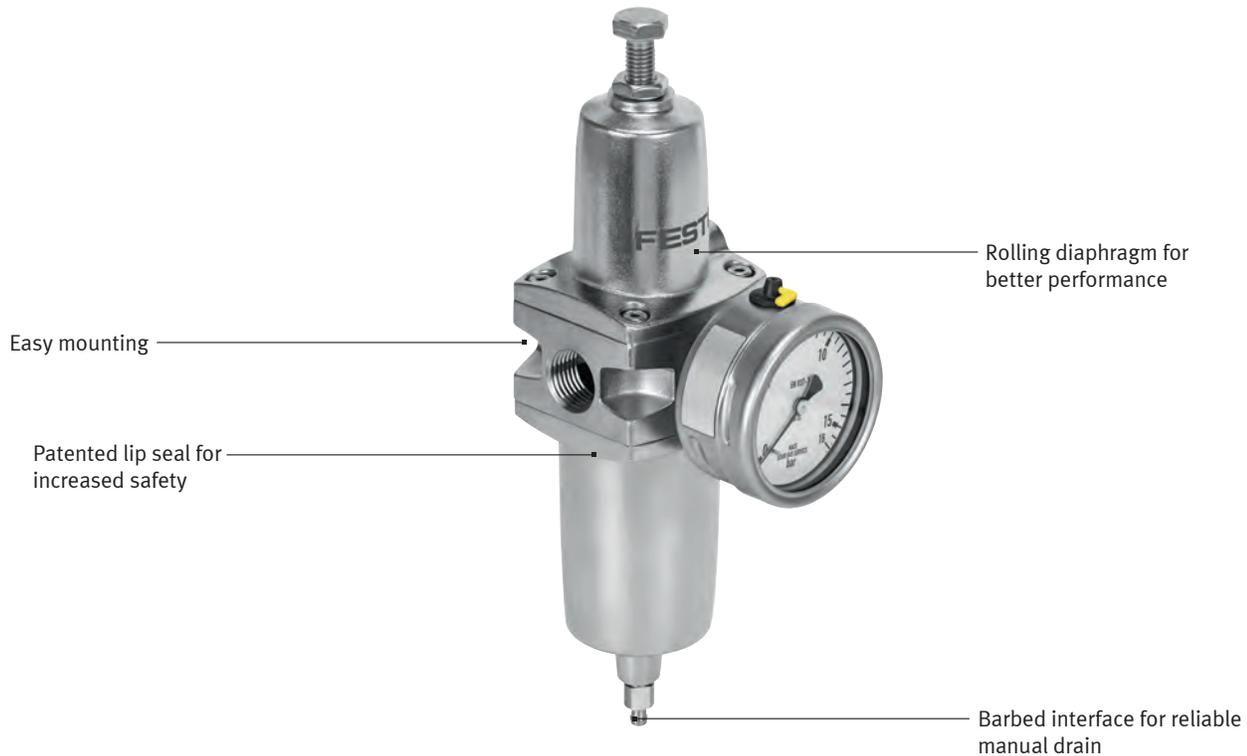


Sensor slots available for aluminum housing (NC only)

Threaded or sanitary clamp connection

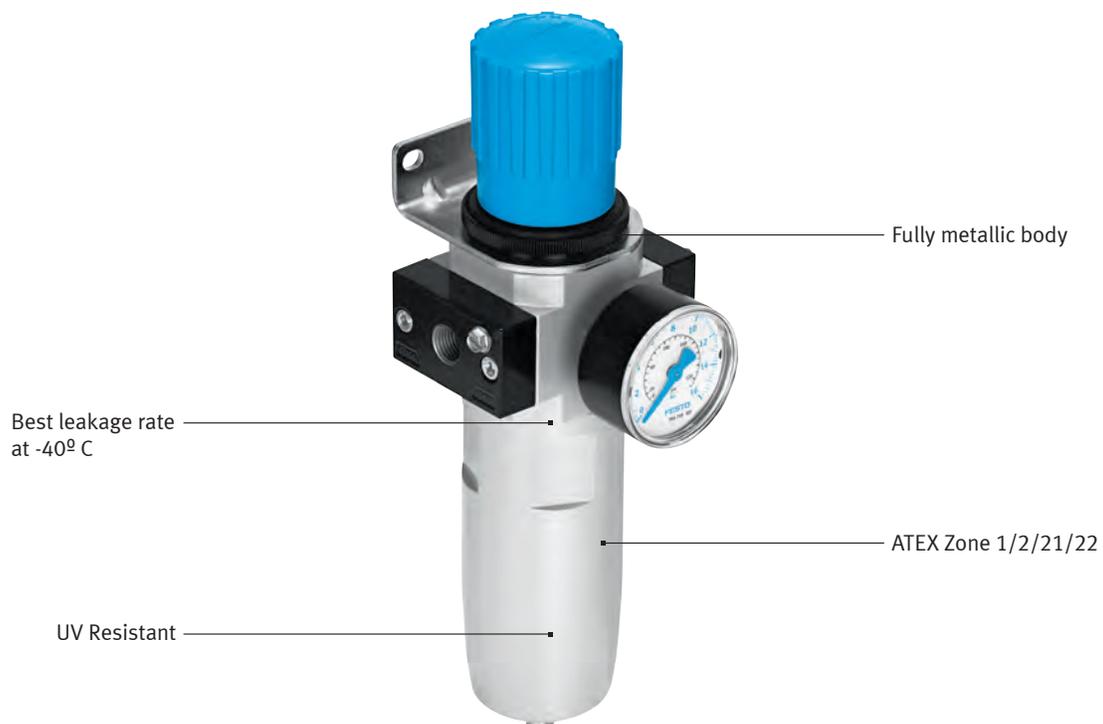
## Stainless steel filter regulator PCRP

The **PCRP** has a complete stainless steel design, including filter cartridge and pressure gauge (excluding sight glass). This product is ideal for outdoor applications due to its generous temperature range (-60° to 80°C) and UV resistance. It's also suitable for hazardous environments requiring a high level of corrosion resistance.



## Filter regulator LFR-EX4

The **LFR-EX4** is an extension of our existing D-series, designed to be a cost effective alternative to a full stainless steel filter regulator. This product is composed of coated zinc and aluminum, allowing it to be used where corrosion resistance is needed. It is also capable of withstanding low temperatures for outdoor applications.



# Compact, low-cost actuators ELGC, ELFC and EGSC for modular systems



Toothed belt axes **ELGC-TB** can be used for dynamic, longer stroke applications



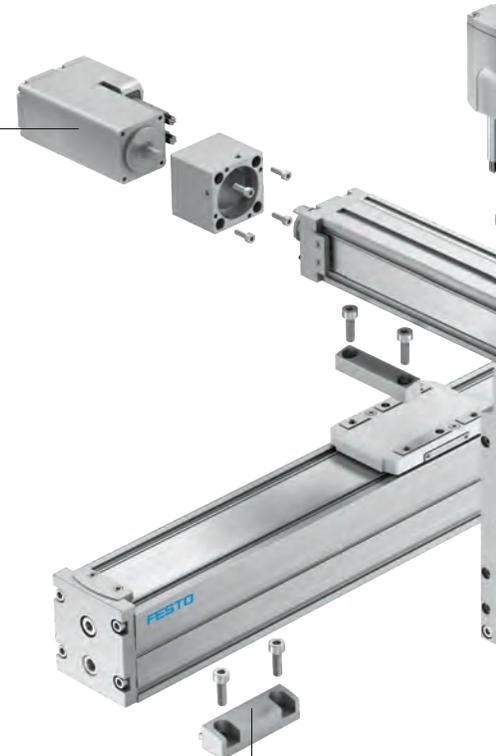
Ball screw axes **ELGC-BS** can be used for precision applications



Passive guide axes **ELFC** to increase torsional resistance in multi-axis systems



Mini slides **EGSC** commonly used as a Z-axis in multi-axis systems



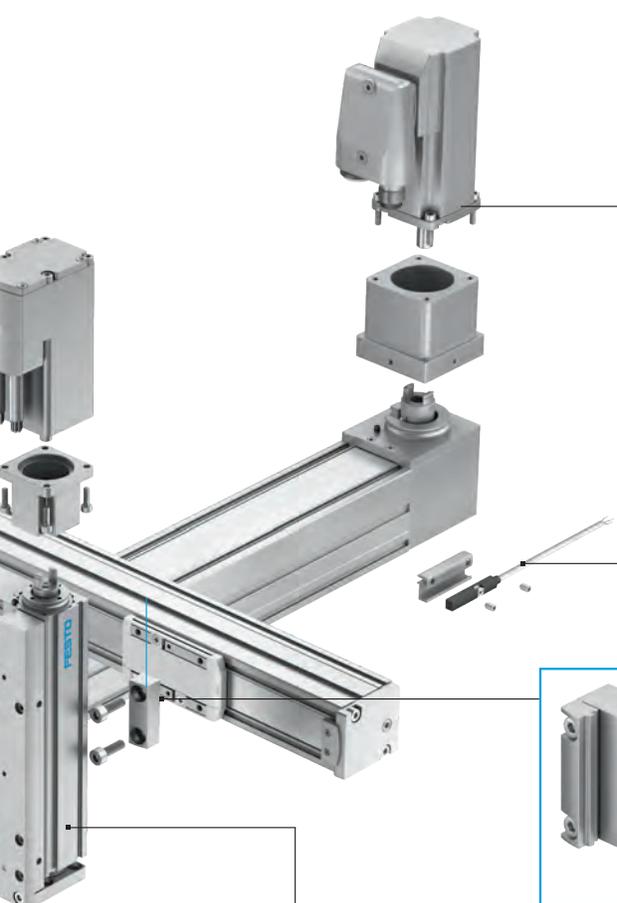
## Flexible motor mounting for ball screw axes and mini slide

- Modify motor position and orientation at any time
- Axial kit provides 4x 90° motor orientations
- Parallel kit provides 3x 90° mounting directions and 3x 90° motor orientations



## Universal mounting accessories

- Same mounting accessories for ball screw and toothed belt ELGC and mini slide EGSC, simplifying machine design and inventory requirements
- Mount anywhere along the actuator profile



**Flexible motor mounting for toothed belt axes ELGC-TB**

- Modify motor position and orientation at any time
- Axial kit provides 4x 90° motor orientations

**Low-cost sensor brackets and sensors**

- Use for homing routine
- Use as limit switches to prevent overtravel
- Sensors are triggered by magnets built into the axes



**Angle kit**

- Sturdy bracket for direct mounting of vertical axes
- Combine base axis with next smallest size axis as Z-axis
- Supports as Z-axes linear axes ELGC, passive guide ELFC and mini slide EGSC



**Yoke plate on mini slide EGSC**

Standardized interface for electric rotary actuator **ERMO** means no adapter plate is required

- Reduced cost and assembly time
- Minimized installation space

**Compact 2-axis and 3-axis handling systems**

- Optimized design provides very space-efficient solutions
- Maximized workspaces, especially with motor mounted in parallel configuration



Mini H gantry EXCM-30 for XY movements with mini slide EGSC



Precision pick, rotate and place with mini slide EGSC (x2) and electric rotary actuator ERMO



Passive guide ELFC significantly increases the load-carrying capacity of the X-axis

# Linear actuator EGC

The **EGC** uses an exceptionally stiff profile to provide high moment handling and excellent repeatability.

### Options:

- Linear encoder
  - Improve repeatability
  - Use for safety
- Clamping unit available with 1 or 2 channels for safety applications
- Protected guides improve the service life of the actuators in dirty environments
- Additional carriages and extended carriages can be used to handle high moments in the most dynamic applications



**EGC-TB** toothed-belt actuators for dynamic applications. For high speeds, high loads and long strokes.

- Max. speed: 5 m/s
- Max. acceleration: 50 m/s<sup>2</sup>
- Max. stroke: 8.5 m for standard axis



**EGC-BS** ball-screw actuators provide excellent repeatability. For precision and high loads.

- Max. speed: 2 m/s
- Repetition accuracy: 20 μm
- Max. stroke: 3 m for standard axis



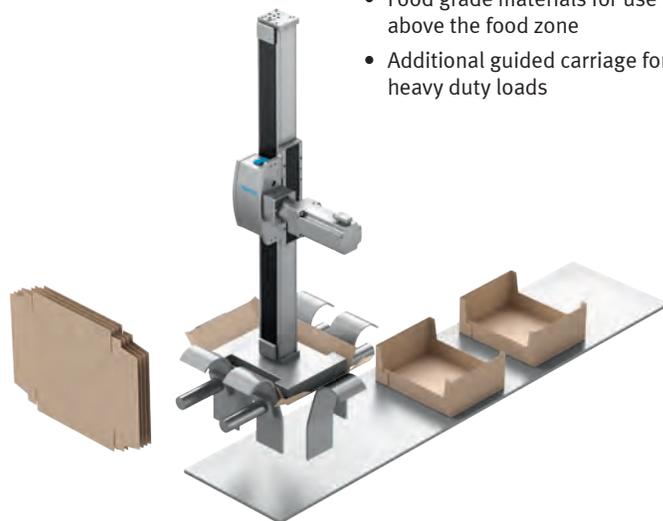
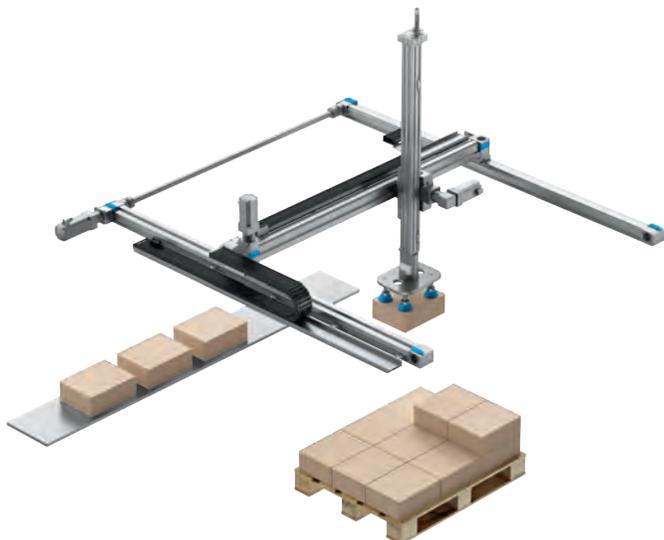
**EGC-FA** following axes for multi-axes systems.

- Max. speed: 5 m/s
- Max. acceleration: 50 m/s<sup>2</sup>
- Max. stroke: 8.5 m

# Dynamic cantilever actuator ELCC

Available in 4 sizes and up to 2 m long, the **ELCC** can tackle a wide range of applications

The heavy duty toothed belt and ball bearing guide make it possible to move loads up to 100 kg



### Options:

The variety of options makes the ELCC a versatile actuator:

- Linear encoder and clamping module for safety applications
- Food grade materials for use above the food zone
- Additional guided carriage for heavy duty loads

### Applications

With speeds up to 5 m/s, the ELCC is well suited for dynamic applications like palletizing and carton erecting

# Electric cylinder ESBF

The **ESBF** is available in a wide range of sizes and strokes to best fit your application requirements.

In its largest size, the ESBF is capable of an impressive 17kN of feed force, making it an excellent choice for high-force applications

The **EAGF** optional external guiding is easily installed to provide reliable moment handling



Additional options include:

- IP65 rating
- Food-grade grease
- Corrosion resistance
- Wide range of mounting accessories

The **EAMM-A** axial kit and **EAMM-U** reverse parallel kit offer a variety of convenient motor mounting options to meet the space constraints of the application

The **EADB** optional bellows kit offers robust protection against the ingress of particles such as chips, dust and oil. This guarantees increased service life of the actuator in difficult environments

# Low-cost electric cylinder EPCC

Four actuator sizes with strokes from 25mm to 500mm for a wide range of applications

High quality, low-friction ball screw for very smooth movements

### Flexible motor mounting

- Modify motor position and orientation at any time
- Compact parallel kit provides 4x 90° mounting directions and 3x 90° motor orientations
- Axial kit provides 4x 90° motor orientations



### Breathing port

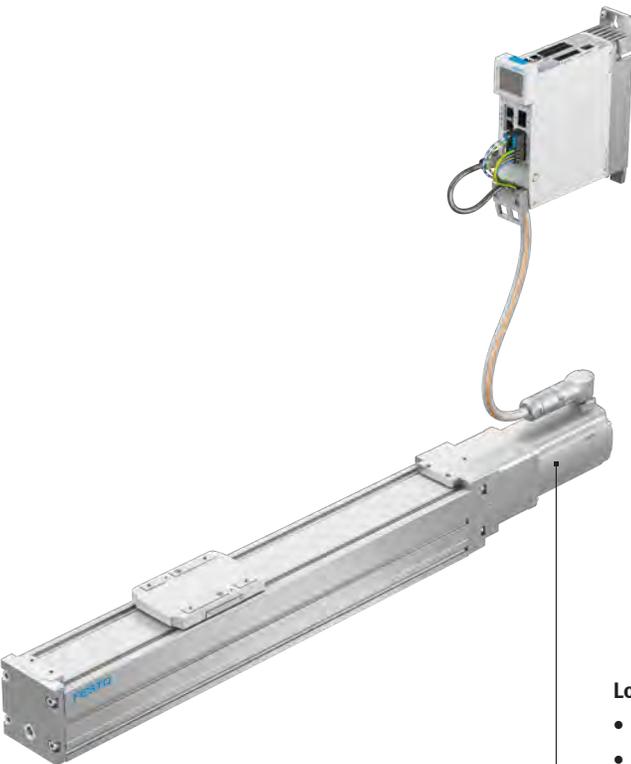
- Standard: sintered plate screwed in port
- Optional: connect a standard fitting and apply pressurized air to keep dirt out or apply vacuum for use in cleanrooms



# New compact servo drive CMMT

## High performance servo drives CMMT-AS

- Power range from 350 W to 2.5 kW
- Available in single-phase and 3-phase
- Control via industrial Ethernet protocols, EtherNet/IP, PROFINET, EtherCAT or Modbus TCP
- Easy to program using standard function blocks for 3rd party controllers (Add-on-Instruction, PROFIdrive, PLCopen)
- Compact design makes it one of the smallest servo drives on the market
- Built-in record table makes it easy to perform sophisticated sequencing between position, speed and torque movements
- Supports point-to-point movements or interpolated motion with PROFIdrive (PROFINET) or CiA 402 (EtherCAT)
- Touchscreen operator unit makes it easy to duplicate drive parameters during commissioning or backup drive parameters in the event of a drive failure
- Master/slave functionality between drives makes it easy to implement electronic gearing or flying saw applications
- Integrated Safe Torque Off (STO) to Category 4, PLe
- Safety function SS1 and SBC



## AC servo motors EMMT-AS

- One cable plug (OCP) which requires less installation effort
- Cable lengths up to 100 m
- 3 sizes 60/80/100 with up to 2.6 kW/9.8 Nm
- IP67 on housing and connection technology
- Easy integration with Festo actuators with wide range of axial and parallel motor mounting kits

## Low-voltage servo drives CMMT-ST

- Power up to 300 W, with 24...48 V DC
- 50% more compact than CMMT-AS
- Many of the same functions as the CMMT-AS:
  - Built-in record table
  - Control via industrial Ethernet protocols
  - Easy to program using standard function blocks
  - Supports point-to-point movements or interpolated motion
- Integrated Safe Torque Off (STO) to Category 3, PLe

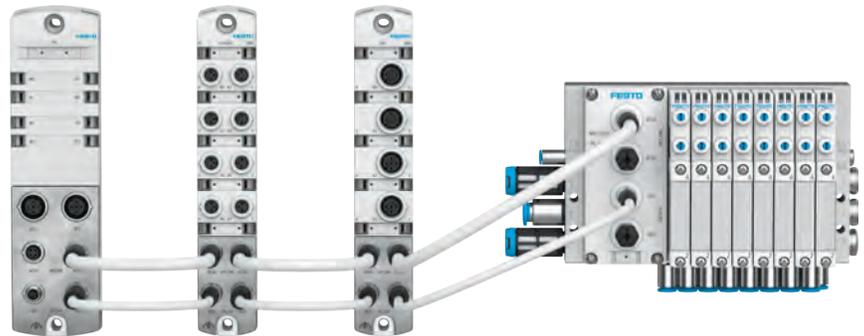


# CPX-AP-I

The new I/O system in IP65/IP67 enables powerful I/O modules and existing valve terminal interfaces to be integrated in the most important host systems. Based on the innovative AP system communication from Festo, **CPX-AP-I** ensures continuous communication from the workpiece to the cloud – tailored to your needs!

## Powerful distributed I/O system for pneumatic and electric components

- Up to 500 I/O modules including IO-Link masters
- 50 m cables between modules
- Short bus cycle times up to 250  $\mu$ s
- Automatic identification of modules
- Simplified integration using L5X export/import on Rockwell systems
- Ability to create power zones
- IP65/67 protection class
- Compact and lightweight modules
- M8 and M12 connections available
- Available modules:
  - Digital inputs
  - Digital inputs and outputs
  - Analog inputs
  - Valve interfaces
  - IO-Link master



## Low-cost, end-to-end actuators Simplified Motion Series

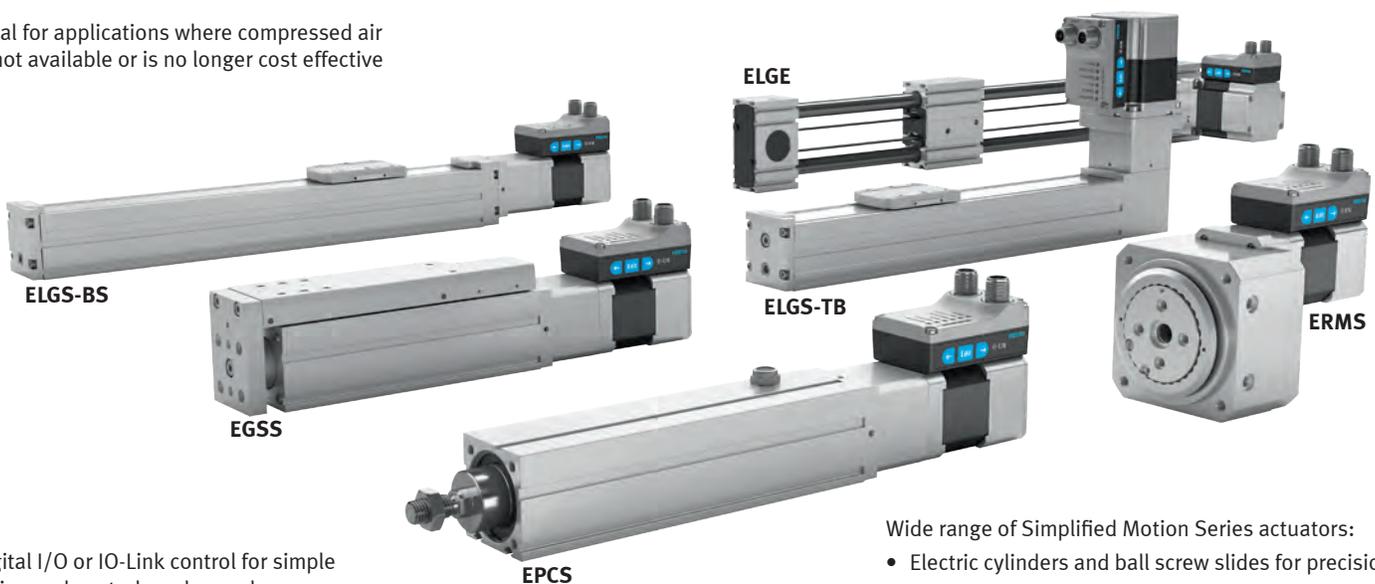
The **Simplified Motion Series** offers electromechanical actuators with simple operation:

- End-to-end positioning
- Clamping/pressing

Ideal for applications where compressed air is not available or is no longer cost effective

Easy commissioning via buttons on the integrated motor – no software required

Integrated motor reduces cabinet space and installation time



Digital I/O or IO-Link control for simple wiring and control, such as valve

Wide range of Simplified Motion Series actuators:

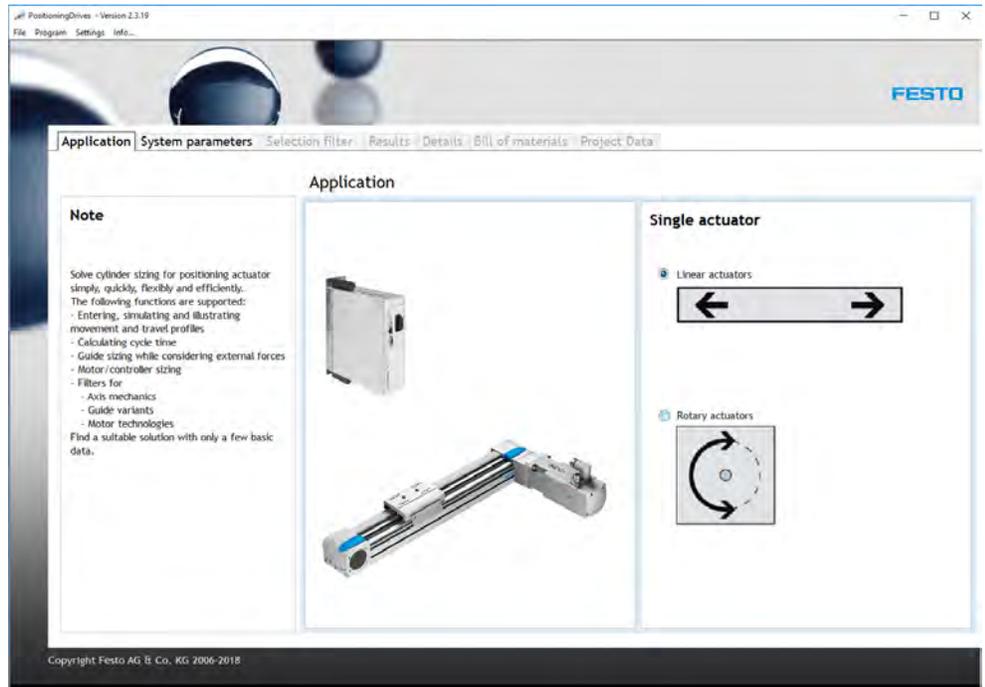
- Electric cylinders and ball screw slides for precision
- Toothed belt actuators for speeds up to 1.3 m/s and stroke lengths up to 2 m
- Rotary actuators for 90° and 180° rotations



# PositioningDrives

PositioningDrives software for easy sizing and selection of Festo actuators, motors and drives.

- Input your application requirements and PositioningDrives provides optimized combinations of actuators, motors and drives to meet your needs
- Properly size axes to minimize costs
- Save time when selecting electromechanical axes
- Create a bill of materials effortlessly, including: actuators, motors, drives, mounting accessories, sensors, cables and more
- Export the bill of materials to your Online Shop basket for easy ordering



→ <https://www.festo.com/positioningdrives/>

## Handling Guide Online (HGO)

Overview of different handling systems

Single-axis system



Linear gantry



Planar surface gantry



Highly dynamic planar surface gantry



Compact three-dimensional gantry



Highly dynamic linear gantry



Web-based sizing and selection tool for Cartesian robot solutions



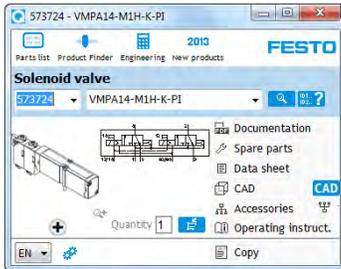
→ [www.festo.us/hgo](http://www.festo.us/hgo)

- Convenient, reliable and easy to use
- Facilitates the fast integration of Cartesian robots into machines at the design phase
- Get pricing immediately by using your Online Shop account
- Download CAD models and commissioning files in a matter of minutes

# Online support tool

Our goal is to increase your productivity. Our software tools play an integral part in achieving this goal and are constantly being refined. They help you tap into productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernization of your machine, you will come across a number of different tools which will be of use to you.

## Quick Search Plus Application



The Quick Search Plus Application is a must have for your desktop. It helps you find the right product and gives you quick access to the online catalog.

### It's time to take advantage of the tools that save you valuable time

- ✓ Find the right products easily with built in type code search
- ✓ Select multiple products for comparison of data
- ✓ Direct connection to engineering tools and online shop
- ✓ Add products to basket or create your own parts list to export
- ✓ Direct connection to selection and dimensioning tools
- ✓ Easy to find suitable accessories and even spare part products

→ [www.festo.com/quicksearch](http://www.festo.com/quicksearch)

## Online Shop 24h



Online is the most convenient way to purchase products. Our Online Shop is faster than ever before, more reliable and allows customers to select from a vast range of over 30,000 products.

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- ✓ Quick and easy selection of products
- ✓ Create, save and share product baskets and parts lists
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- ✓ Import parts lists using copy and paste functions

→ [www.festo.com/ols](http://www.festo.com/ols)

## Stars of Automation



The "Stars of Automation" offers thousands of products including valves, cylinders, service units, sensors and accessories. In our Online catalog, the Stars of Automation are noted with a solid blue star to quickly see what products are available to be shipped within 24 hours.

### It's time to enjoy Festo quality for a great value

- ✓ Ready for delivery in 24 hours from Festo stock
- ✓ Globally in 13 Regional Service Centers in stock
- ✓ 4,000 part numbers
- ✓ Festo quality at an attractive price

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## Process Automation Configurator



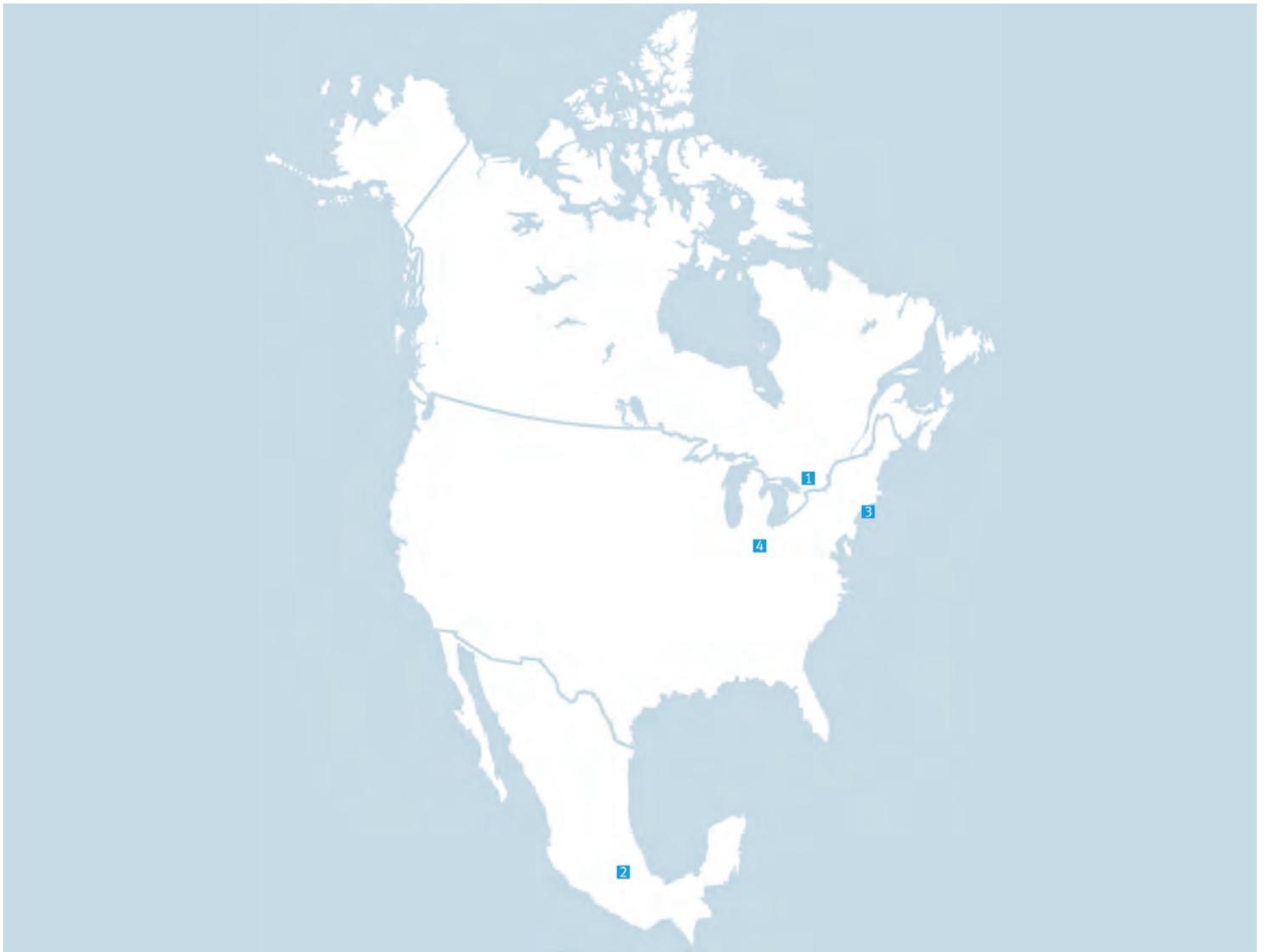
Configure your individual process valve unit: Fast, easy, reliable and your way. The configurator for process valve units will help you find the right solution in record time. Product search, configuration, sizing, documentation, ordering and delivery, whether for manually actuated or fully automated valves, can all be done using just one tool.

### Configure your media control quickly and easily!

- ✓ Tailored and ready-to-install solutions
- ✓ Increased reliability for your specific application
- ✓ CAD data for configuration and documentation for download direct
- ✓ The system ID can also be used for subsequent orders
- ✓ Reliable planning with immediate price and delivery time information

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