Products for power generation
and power station construction
50 years of experience in automation
This is the solid base on which our range of products for the process industry is built. Over 13,500 employees across the globe contribute to progress in factory and process automation as well as in basic and further training in industry.

With Festo’s portfolio of solutions and services you’re always on the safe side. Everything is designed to meet stringent safety and reliability requirements. Furthermore, our components, systems and service packages fulfil all the criteria for maximum efficiency.
Sophisticated process reliability thanks to safe product design
In power stations and power generation plants, maximum availability and safety for personnel and the environment are the top priorities. Festo offers automation components which have been tried and tested in operation, and have all the appropriate approvals and certifications.

Our services
Explosion protection
• SIL – Safety Integrity Level (IEC61508/61511)
• IP protection
• Corrosion resistance
• Extended temperature ranges
• Outdoor use
Quarter-turn actuator
Type DAPS

First choice for high breakaway torques in process valves: DAPS, the low-cost scotch yoke quarter-turn actuator for butterfly valves and ball valves.

- Scotch yoke principle
- Torques of 8 ... 8,000 Nm at 6 bar
- Double and single-acting
- Interfaces to ISO 5211 and VDI/VDE 3845 (Namur)
- Stainless steel shaft, with octagon at the bottom
- Approved in accordance with directive 94/9/EC (ATEX)
- Suitable for use in safety systems in line with IEC 61508 to SIL 2

Quarter-turn actuator
Type DFPB

The DFPB series is the next logical step after the DRD/DRE series. The result is a cost-optimised series with innovative, detailed solutions.

- Swivel angle and adjustment up to 94°
- Anodised aluminium drive shaft
- High corrosion resistance (CRC class 3)
- End-position adjustment for all dimensions with external and internal sealed and encased lock nuts
- Auto-lubrication and optimum emergency running properties thanks to carbon-injected PTFE (30% carbon) slip bands
- Octagonal connection to process valve
- Anti-clockwise or clockwise rotation without conversion
- ATEX II 2 GD
- Suitable for use in safety systems in line with IEC 61508 to SIL 3

Regulated linear actuator
Type DFPI

A regulated drive for all linear actuated process valves! Its all-in-one design and technology makes it ideal for controlling knife gate valves and penstock valves with regulated strokes: integrated displacement encoder, valve manifold, positioner and an extremely sturdy connection.

- Diameter 100 ... 320 mm
- X lengths up to 990 mm; special designs on request.
- Protection class IP65/68
- High corrosion resistance (CRC class 3)
- Setpoint signal 4 ... 20 mA for precise process control when integrated into existing control architecture via PLC
Linear actuator
Type DLP

If in doubt, choose pneumatic components. Such as this linear actuator DLP with explosion protection for knife gate valves and penstock valves.

- Force up to 80,000 N at 10 bar
- Piston diameter 80 ... 320 mm
- Stroke length 40 ... 2,000 mm
- Namur interface
- Internal air supply
- Direct installation of sensors

Sensor boxes
Type DAPZ

Systematic safety in process automation with safe, overload-proof and durable end-position sensing for process valve control. Also suitable for ATEX zones.

- Inductive, pneumatic or electric (micro switch)
- Large optical display
- Flexible mounting on quarter-turn actuators
- AS-interface version available
- Also suitable for 3-way ball valves
- ATEX II 2 GD
- Suitable for use in safety systems in line with IEC 61508 to SIL 2
Solenoid valves
Type VSNB
Conforming to the NAMUR port pattern in accordance with VDE/VI 3845. Explosion-proof versions complying with ATEX directives available.
- Flow rate 950 l/min
- Convertible from 3/2 to 5/2-way function
- Corrosion-resistant
- Explosion protection for ATEX zone 1
- Ignition protection classes: EExm and EExia
- Piloted version
- Modular pilot system
- Suitable for use in safety systems in line with IEC 61508 to SIL 2
- Temperature range from -25 °C to +60 °C
- Simple combination of the desired coil with the corresponding valve
- Solenoids in ignition protection classes: EEx emb, EEx d and EEx ia
- Global explosion protection for zone 1 (ATEX, Nepsi, IEC, etc.)
- Suitable for use in safety systems in line with IEC 61508 to SIL 4
- Piloted version
- Version for high flow rates
- ESD = Emergency Shut Down

Solenoid valves
Type VOFC
Thanks to their robust, solid design and high corrosion resistance, VOFC and VOFD valves are very well suited for use in power stations.
- 3/2 and 5/2-way valve with NAMUR flange hole pattern or threaded connection
- Sturdy and highly corrosion-resistant thanks to tough enamel surface
- Tried and tested in operation in process automation means product durability, reliability and safety, e.g. for ESD applications*
- Temperature range from -25 °C to +60 °C
- Simple combination of the desired coil with the corresponding valve
- Solenoids in ignition protection classes: EEx emb, EEx d and EEx ia
- Global explosion protection for zone 1 (ATEX, Nepsi, IEC, etc.)
- Suitable for use in safety systems in line with IEC 61508 to SIL 4
- Piloted version
- Version for high flow rates
- ESD = Emergency Shut Down

Solenoid valves
Type NVF3
Conforming to the NAMUR port pattern in accordance with VDE/VI 3845. Ideal for process automation applications. Includes explosion protection complying with ATEX directives.
- Flow rate 400 ... 1,000 l/min
- Convertible from 3/2 to 5/2-way function
- Corrosion-resistant
- Ignition protection classes: EExm and EExia
- 12, 24, 42, 48 V DC
- 24, 42, 48, 110, 230, 240 V AC
Solenoid valves
Type Tiger 2000

The all-rounder of valves. Used and trusted all over the world and comes in a comprehensive range.

- Flow rate 750 ... 2,600 l/min.
- 5/2 and 5/3-way
- V solenoid coil: low power consumption
- F solenoid coil: explosion protection in compliance with ATEX directives, free choice of voltage
- Pneumatic valves
- Side and front mounting
- Manifold sub-base available

Solenoid valves
Type Tiger Classic

The classic valve with sturdy poppet valve and optimised response times with patented U-ring.
Manifold assembly on PAL or PRS rails.

- Flow rate 500 ... 7,500 l/min
- 3/2 and 5/2-way
- Pneumatic valves
- Voltage 12 to 48 V DC, 24 ... 240 V AC
- Explosion protection in compliance with ATEX directives
## ISO valve terminal

**Type VTSA**

Unique in the world and the champion of all valve terminals. Together with the electrical terminal CPX in metal design, it opens up new perspectives for tough applications and for function and system integration.

- New: vacuum generation with integrated pressure sensor, voltage input with galvanic isolation
- 4 valve sizes integrated on one valve terminal – with no adapters
- High flow rate up to 3,000 l/min for ISO size 2 (52 mm)
- ISO 15407-2 and ISO 5599-2
- Multi-pin plug connection with pre-assembled cables
- Complete vertical stacking range in all 4 sizes
- Complete installation solution
- Comprehensive diagnostic concept
- Hot swap available
- Two-channel electric and pneumatic switch-off up to performance level d (Cat. 3)
- Safety function: pressurising machine components
- Suitable for safety systems complying with IEC 61508 up to SIL 2

## Valve terminal

**Type MPA1/MPA2**

Fieldbus terminal, multi-pin terminal or individual valve in IP65 – solid-metal valve body and manifold block.

- Diagnostic messages via fieldbus
- Flexible pressure supply, variable pressure zones, additional power supply at any position
- Up to 64 valve positions or 128 solenoid coils
- Pressure range -0.9 ... 10 bar
- Flow rate 360 ... 700 l/min
- 2 x 2/2, 2 x 3/2, 5/2, 5/2-way double solenoid valves, 5/3-way, 1 x 3/2-way with external power supply
- Electrical I/O and fieldbus connection using modular electrical terminal type CPX
- For ATEX Zone 2/22

## Valve terminals

**Type CPV and CPV EExi**

Maximum performance in the smallest of spaces. Direct integration of all current bus interfaces. CPV: compact and sturdy in a fixed grid.

- Widths 10, 14, 18 mm
- Flow rate 400, 800 and 1,600 l/min
- 2 x 2/2, 2 x 3/2, 5/2, 5/2-way double solenoid, 5/3-way
  + Special functions
  + Additional functions
- 8 valve positions (16 coils)
- Optimised for control cabinet installation
- Extensive range of valve and additional functions
- Individual wiring, multi-pin or bus connection
- Explosion protection in compliance with ATEX directives
- Intrinsically safe for ATEX zone 1
- Suitable for use in safety systems complying with IEC 61508 to SIL 2
Modular electrical terminal
Type CPX

Open to all common fieldbus standards and all electrical installation standards.
Actuation of the entire pneumatic control system using a fieldbus connection.
- Profibus-DP, Interbus, CANopen, DeviceNet, CC-Link, Ethernet
- M12 5-pin, M8 3-pin, M8 4-pin, CageClamp, Harax, D-Sub, M12 8-pin and M12 Speedcon
- Stand-alone as remote I/O up to 512 I/O
- Integrated diagnostic concept
- Reliable modular power supply M18 or 7/8”
- Protection class: IP20/IP65/IP67 depending on the connection technology
- Optional front end controller CPX-FEC and web server
- Plain text diagnostics using handheld terminal CPX-MMI

Accessories

Very economical since the right solutions are always available. Different materials with diverse resistances and properties make almost anything possible. From flame-retardant to antistatic, from food industry compatibility to welding spatter resistance.
Service units
Type series MS – MS4, MS6, MS9, MS12

Whether in terms of product range, functionality of components or variety of services, with its MS series Festo provides a comprehensive concept for application-specific compressed air preparation solutions. The new integrated functions, such as flow sensors and remotely adjustable pressure regulators, open up new dimensions in trouble-free operation of your systems with a flow range of up to 12,000 l/min.

- Connection sizes 1/8 to 2"
- Quick assembly and dismantling thanks to systematic modularity
- Includes CAD models and configurator for convenient selection of individual devices and combinations (MSB4 & MSB6)
- Size adaptations allow an efficient mix from MS4 to MS9

Stainless steel control cabinets

Control cabinets from Festo for use in explosive environments meet the ATEX requirements for zone 2 or zone 1.

Relevant components can be supplied in various explosion-proof designs on request, e.g. intrinsically safe or with pressure-proof encapsulation.
For example with our engineering software tools and our service packages for every stage of the value creation chain. Whether for advanced logistics services, pre-assembly, optimisation of production plants or reducing power consumption, Festo always offers the most suitable range of services. The results: minimised expenses, shorter processes, lasting quality, compatible products, reduced warehousing. Festo services pay off – throughout the entire value creation process.

Services with a difference.

The service of the future must be low-cost, quick and highly efficient. Festo is already meeting these criteria.

The perfect solution!
Festo – everything from a single source

One partner for all the tasks currently required for automation with pneumatic and electrical components. That has its advantages.

Innovative: 2,800 patents, 80 new products per year, 1 goal – ensuring your success.

Systematic: systematically open for individual solutions from a single source.

Worldwide: available in person and online. 58 companies in 176 countries.

Productive: when it comes to installation, logistics and service. 30,000 products with long service life as standard.

See for yourself at www.festo.com