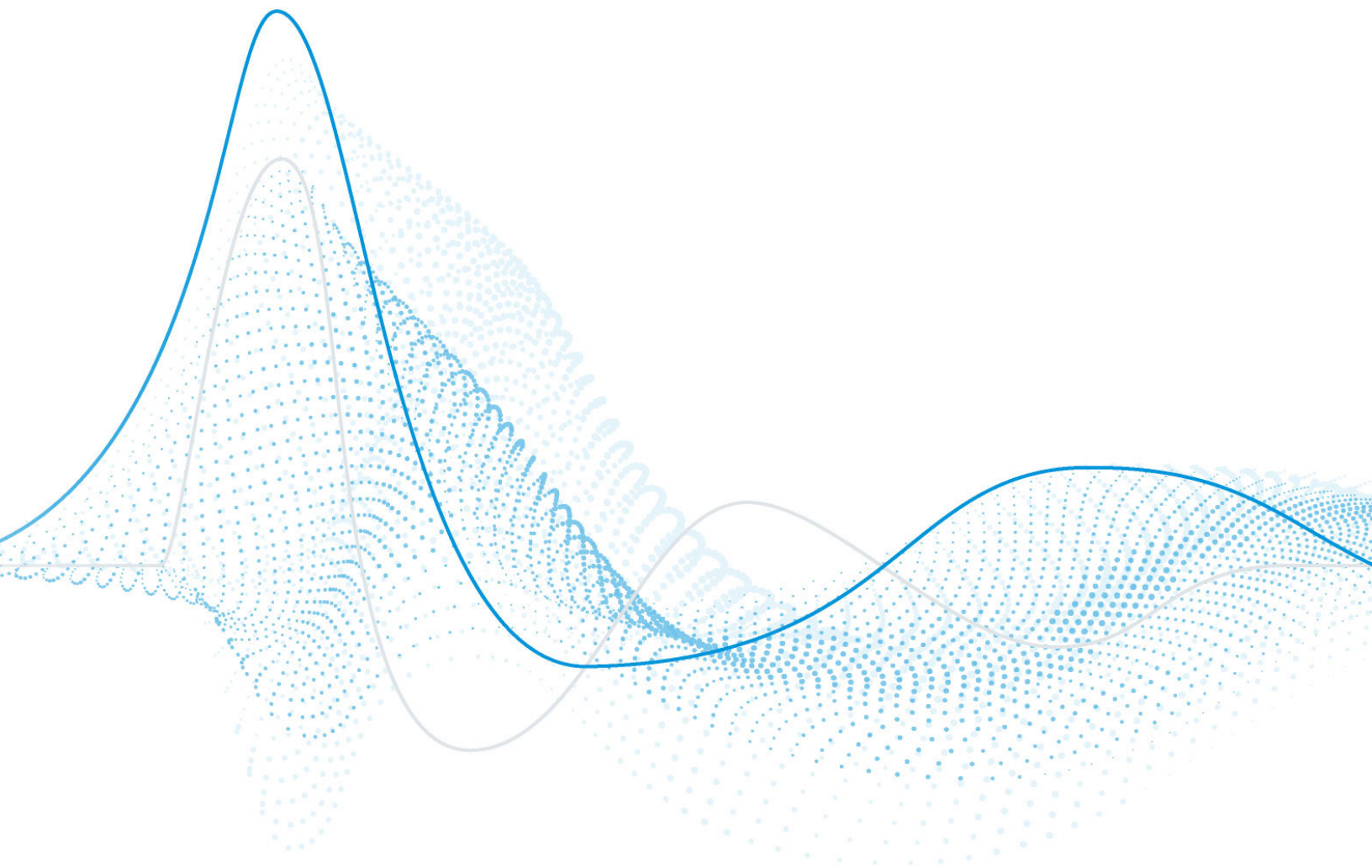
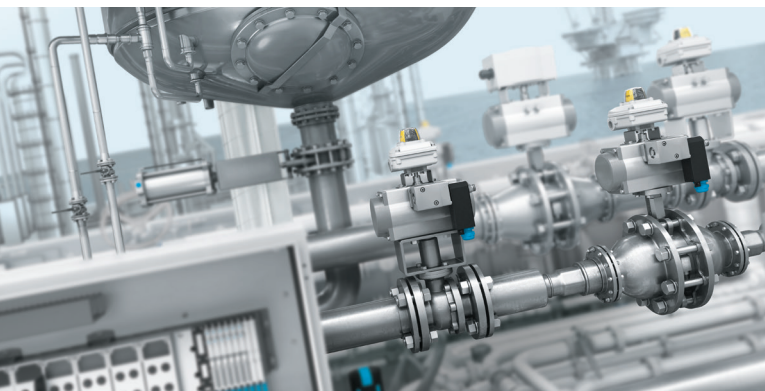
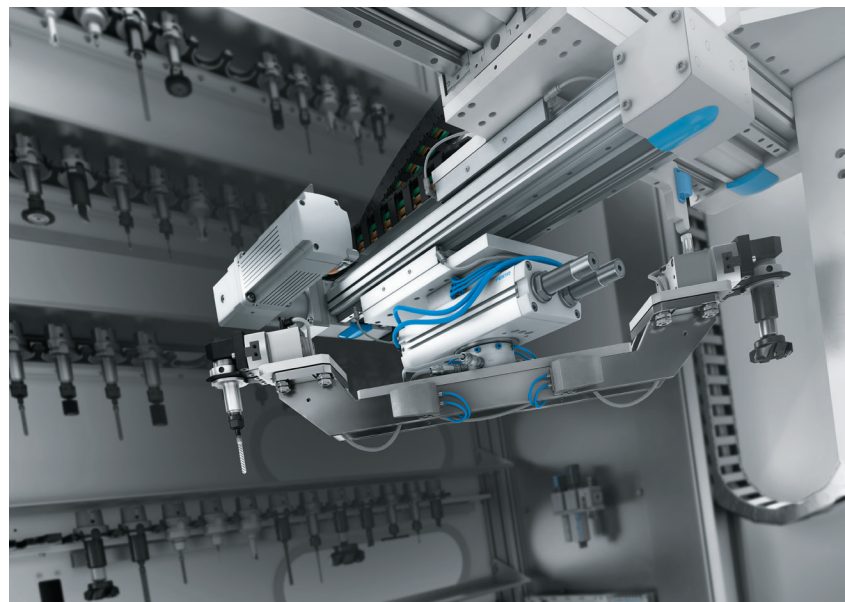


Automation Systems and Solutions

FESTO





Need more time to focus on your core expertise? Are you looking for subsystems to optimize your bottom line?

With engineering centers in 55 countries, R&D centers in 8 key markets and 1000+ engineering staff globally, Festo is ready to speed up your automation, from design to operations.

Festo is your partner in automation!

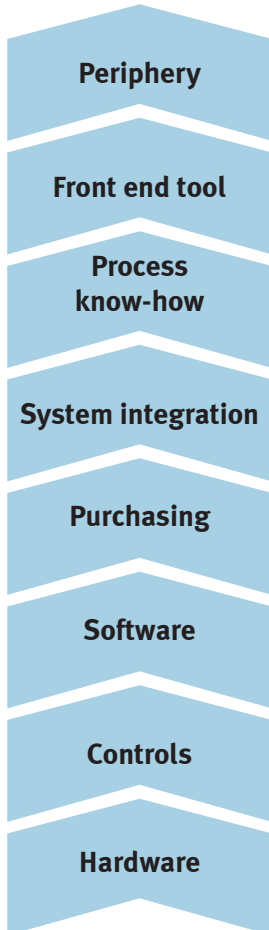
For nearly 100 years, Festo has been setting trends in automation. That's why when our customers need an out-of-the-box solution, something custom, to boost their productivity, they come to us.

Our Customer Solutions team is staffed with experts in design and engineering to help you turn your automation ideas into automation solutions. Our experienced team supports you through every step in creating your customized automation solution: from consultation through development, training, seminars and customized products. These end-to-end solutions ensure you meet your automation goals and boost productivity.

For more information:
www.festo.com/customersolutions

Mission: boost productivity and innovate

Customer Scope



We recognize our
Customer's expertise

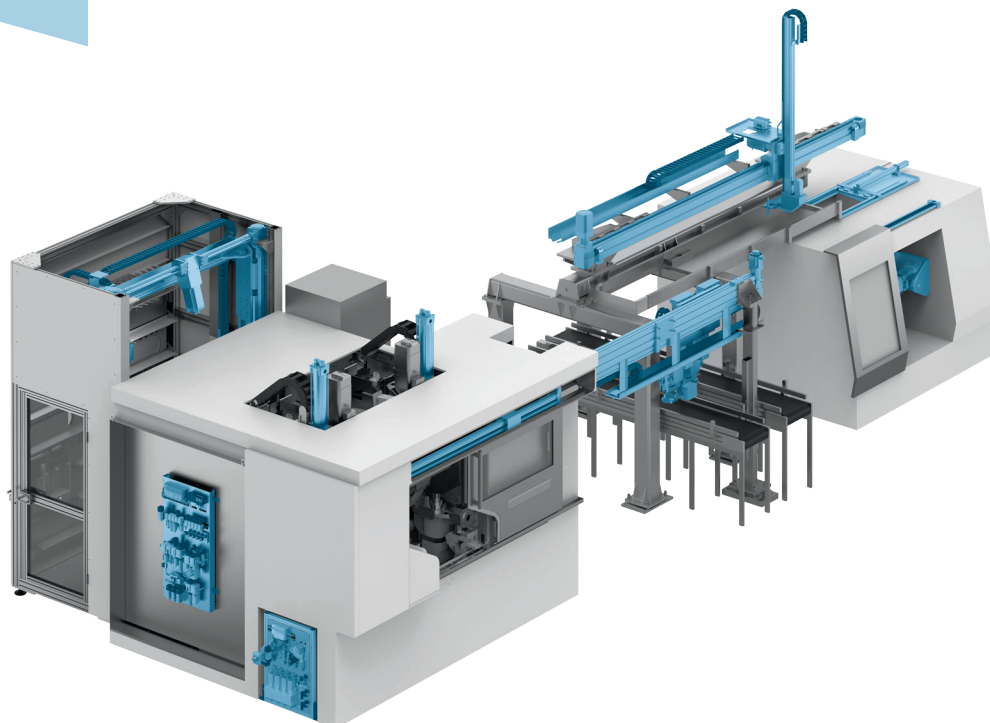
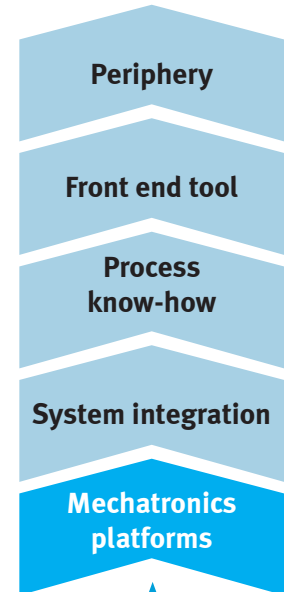
- End customer relationship
- Part/product knowledge
- Process know how
- Tooling design
- Machine design
- Serial production

and propose the
Customer Solutions advantage

Customer Solutions offers a true engineering partnership that optimize your product development cycle by providing

- Concept generation
- Prototype development
- Optimized product selection
- Prepackaged mechatronics design
- Assembled and tested solutions
- Streamlined procurement
- High volume build to print capability

Customer Scope with **Customer Solutions**



From conception to commissioning

Festo will take care of it for you

1. Consultation and design

2. Concepts and quotations

3. Engineering

4. Procurement and logistics

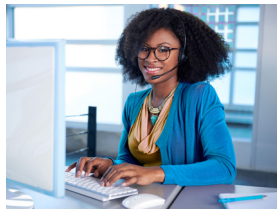
5. Programming

Make the most of it at every stage ...



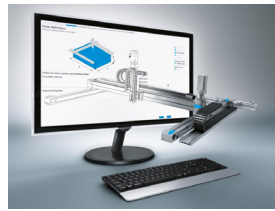
1. Consultation and design

- Mechatronics engineers with proven experience in established industries, focusing on emerging industries and ready to help from the start!



2. Concepts and quotations

- Detailed quotations with engineering concepts, including:
 - 2D/3D CAD and schematics
 - Engineering calculations
 - Functional sequence



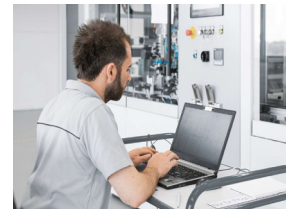
3. Engineering

- Complete engineered solution
- Optimal product selection
- Prepackaged design
- Compliance with industry standards: CSA, UL, CE, NEMA, ESA, IEC, cULus



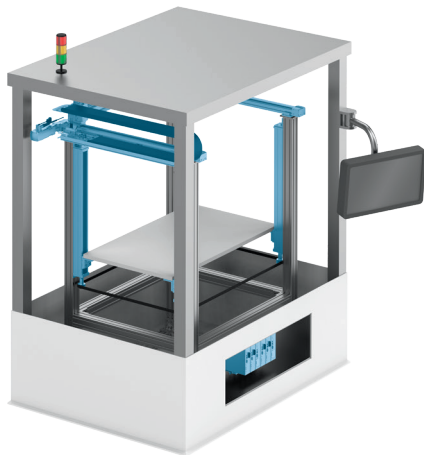
4. Procurement and logistics

- Order complete solution with one part number
- Receive one system
- Ready to install in machine

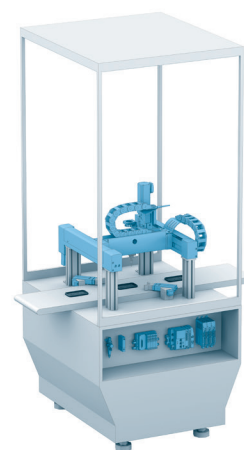


5. Programming

- Sequence creation
- HMI development
- Error handling
- Program testing
- Debugging



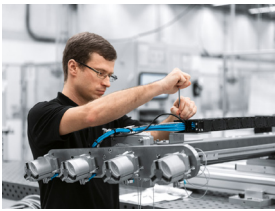
Festo is a leading global manufacturer of automation technology including systems, components, and controls for process control and factory automation solutions.



Working with designers and manufacturers to increase manufacturing productivity, we continue to advance the state of industrial automation with proven innovations, customized design solutions, and exceptional service worldwide

This allows you to significantly shorten your time to market

6. Production and assembly



6. Production and assembly

- Mechanical assembly
- Electrical assembly
- Subsystem integration

7. Testing and validation



7. Testing and validation

- Functional testing
- Factory acceptance test
- UL508A, ATEX certifications

8. Documentation



8. Documentation

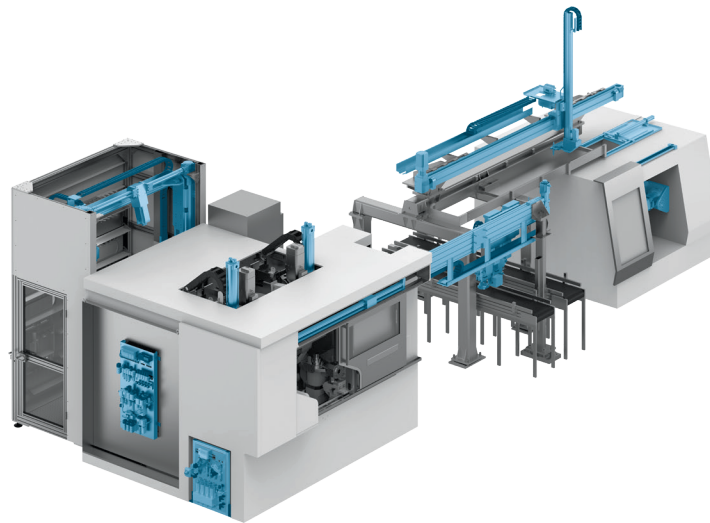
- Subsystem specific documentation:
 - Assembly drawings
 - CAD models
 - Electrical/pneumatic schematics
 - Spare part list

9. Delivery and commissioning



9. Delivery and commissioning

- Delivery of ready to install solutions
- Commissioning service on request
- Minimal assembly effort
- Ready to plug and work



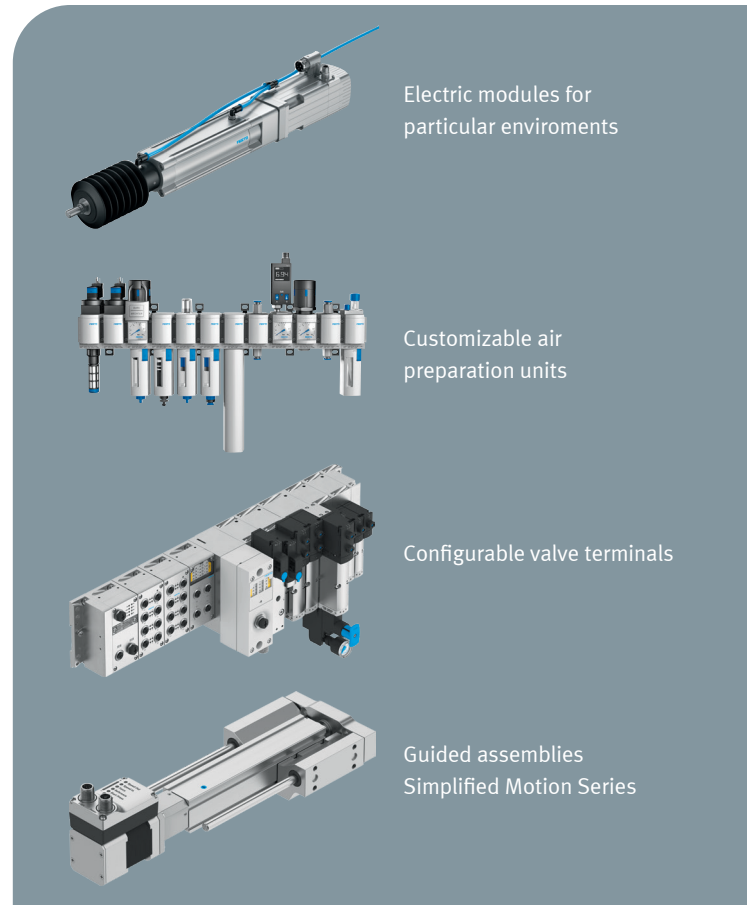
Saves you time and money allowing you to focus on your core expertise and delivering subsystems ready to integrate.

Festo can help support end to end product development or jump into any stage of the automation engineering process and deliver innovative systems ready to plug and work.

Pre-assembly and pre-pack (kit) solutions

Standard components can be combined or kitted for ease of use, logistics and to reduce your production time and costs.

- Individual pneumatic and electric components pre-assembled in one module or pre-packed
- In accordance with your application-specific requirements
- For direct installation in your system
- Commonly used combinations:
 - Electric actuation modules / valve combinations
 - Valve manifolds
 - Components for compressed air preparation combined with valves
- Common pre-pack solutions:
 - Fittings and tubings
 - Configured valve manifolds, air preparation module in one convenient package
 - Special packing containers



Custom component solutions

Electro-mechanical and pneumatic custom components designed and built to your specifications. Options include components for:

Various environments

- High and/or low temperatures
- Vacuum
- Clean room
- Wash down
- Hazardous location and/or corrosion resistance

Special functions and/or configurations

- Low friction cylinders
- High speed cylinders and valves
- Cylinder/valve combinations
- Motor mounting kits

Size and/or weight reduction

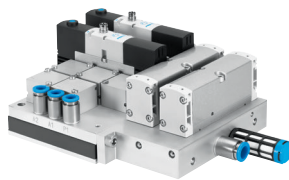
- Cut down on weight and increase performance with new materials
- Compact solutions
- Integrated solutions

Labeling

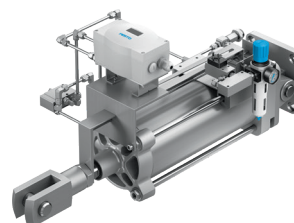
- Customer logos
- Laser etching
- Customer part numbers
- Engraving



Motor mounting kits



Custom manifolds



Integrated solutions



Cylinder-valve combination

Cylinder solutions

Pneumatic cylinders built to your specifications.

- Rod and rod thread extensions/reductions
- Rod thread changes (inch and metric / male and female)
- Port orientation changes
- High tolerance strokes (+/- 0.2mm)
- Variety of seal option (High temp, low friction, food grade and more)
- Hard chrome plated piston rod

Cylinder types



Standard ISO (extrusion)

Perfect cushioning due to self adjusting cushioning PPS



Non-rotating (elliptical piston)

Optimized for environments with high contents of dry, dusty media



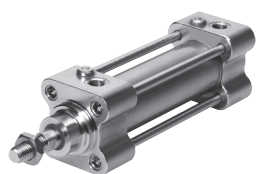
Standard ISO (tie rod)

Large-diameter cylinder with tie rods



Mini slide

Shortest mini slide on the market, versatile mounting options, battery manufacturing variants available



Standard ISO and NFPA (inch)

Clean design corrosion resistant rod-lock assembly



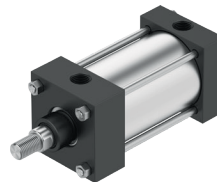
Compact

Self adjusting cushioning for maximum productivity in confined spaces



Standard ISO and NFPA (inch)

Fast adaptation for optimum cushioning - without adjusting screw
Drop in replacements available



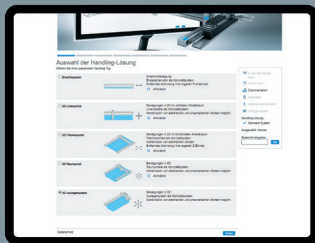
NFPA (inch)

Large diameter cylinder with tie rods, cast and machined end caps available
Numerous mounting options
Drop in replacements available

Handling systems

The Handling Guide Online will allow you to find the right standard handling system quickly and easily in three steps.

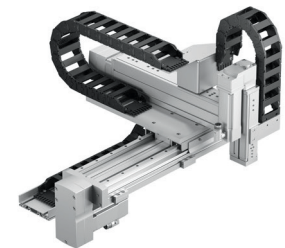
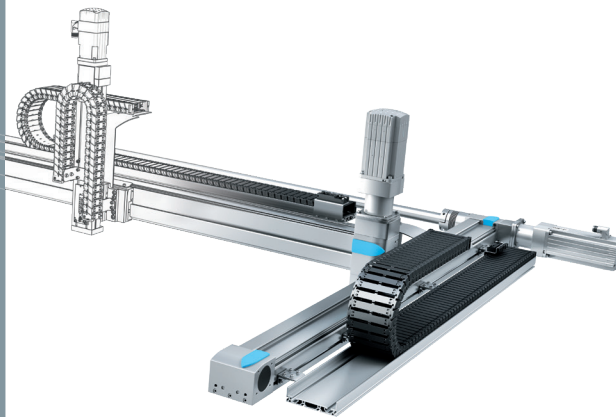
There really is no quicker or easier way: the Handling Guide Online considerably increases your engineering efficiency and gives you the certainty that your system is correctly sized. From design to delivery and installation only takes around 3 weeks.



- The right handling system, including CAD model and commissioning file, in 20 minutes
- Intuitive to use, with minimal engineering time and effort
- Calculates and gives a system price
- Shorter time to market, now even with highly dynamic and compact handling systems



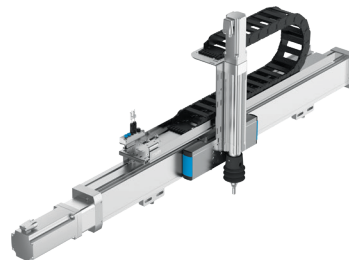
Using a combination of different technologies such as electrical, pneumatics and servopneumatics, Festo can offer a full range of diverse solutions in 2D and 3D designed to your application requirements with guaranteed performance.



Cantilever gantry



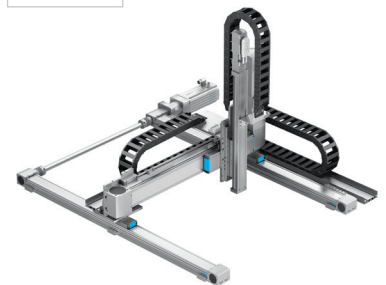
Explore in 3D/AR



2-axis gantry



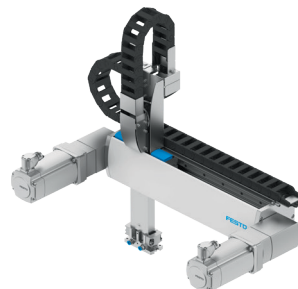
Explore in 3D/AR



3-axis gantry



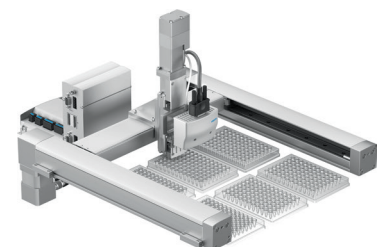
Explore in 3D/AR



T-gantry



Explore in 3D/AR



H-gantry

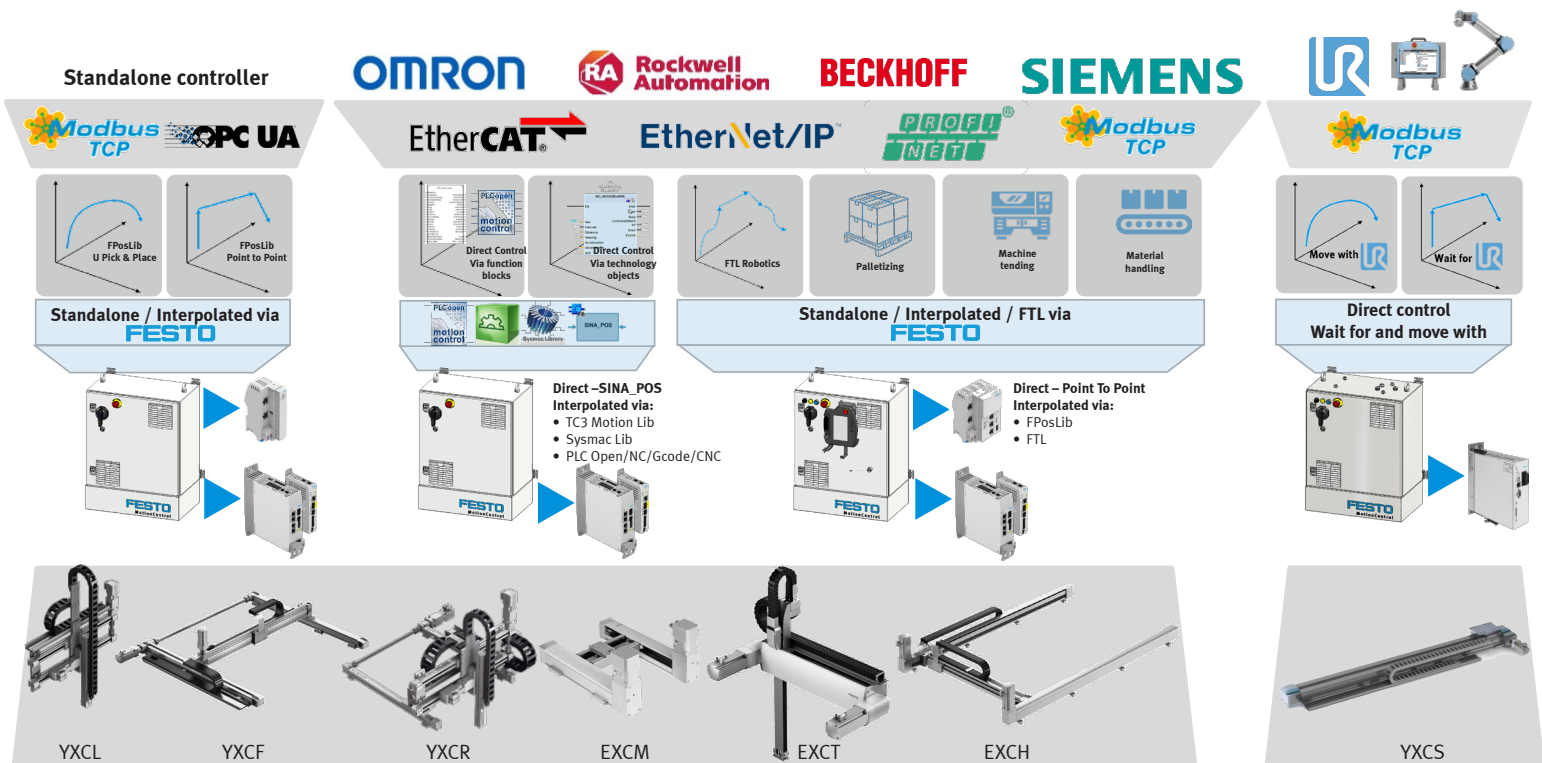


Explore in 3D/AR

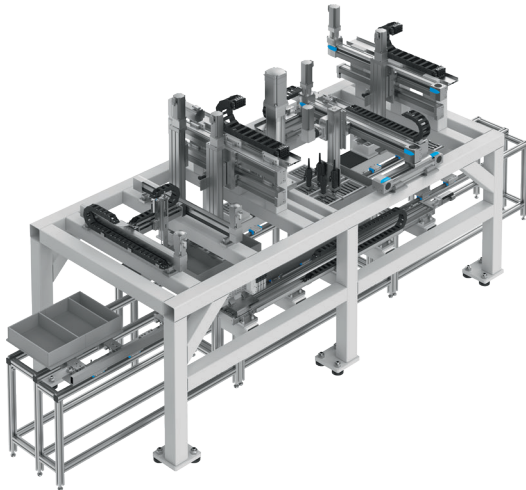
Festo Motion Control Package (FMCP)

Pre-programmed gantry solutions for 1D, 2D, 3D, T and H configurations with standardized function blocks which simplifies your main PLC/controller architecture and saves you significant programming effort.

- Fully integrated handling application interface for multi-axis control with interpolated motion and fieldbus integration capabilities
- One handling function block; no configuration needed
- Advanced kinematic pre-programmed motion controller for Festo gantries with multikinematic capabilities
- Multiple gantries can be commanded from a single Festo kinematic controller
- Complete control over EthernetIP via add on instructions or via ProfiNET using function blocks
- Prewired channels for STO, safety status and IO signals



Your design



If you have specialized technical requirements, you can send the application data directly from the Handling Guide Online to our experts with the click of a button and receive a customized offer.

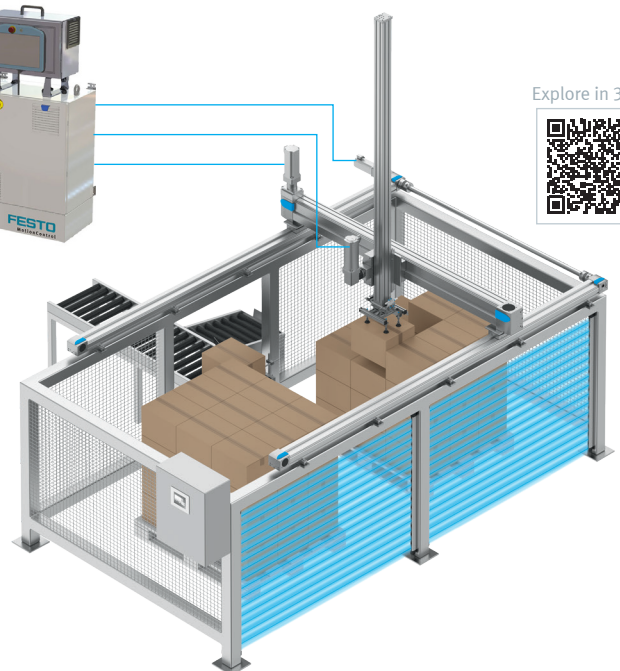
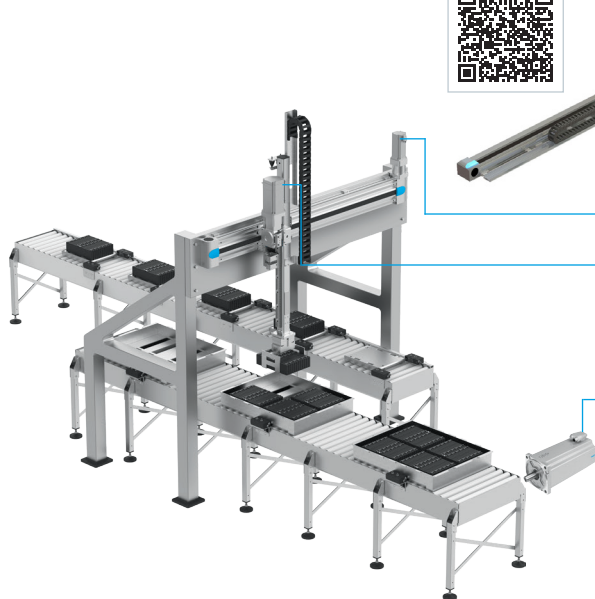
For additional subsystems including kits, assemblies, preconfigured hardware and customized solutions ready to plug and work, please contact us.



Our solutions

Application modules and system kits

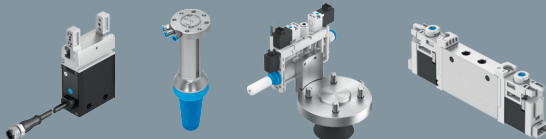
Explore in 3D/AR



Explore in 3D/AR



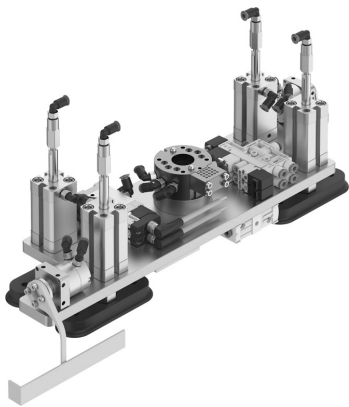
End of arm tooling



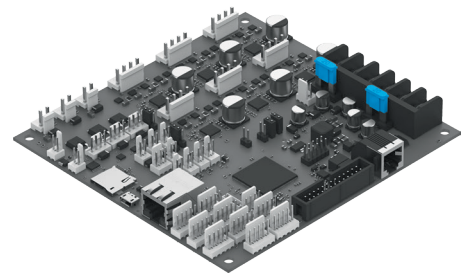
Engineering services

Festo can provide engineering services at any stage of the project: from presales consulting, product/process application development (End of arm tooling, PCB and programming), to commissioning services of Festo products and integration to mast control system PLC.

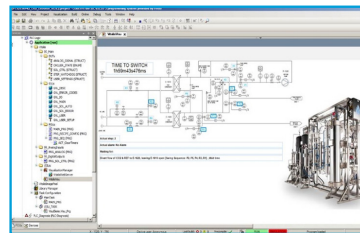
End of arm tooling (EOAT)



Customized PCB

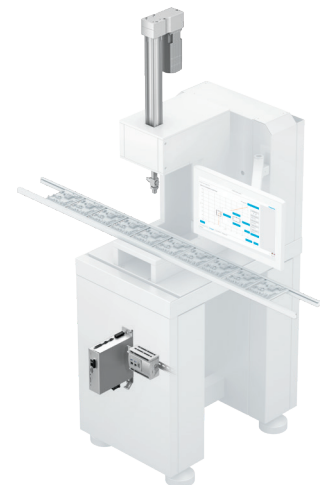
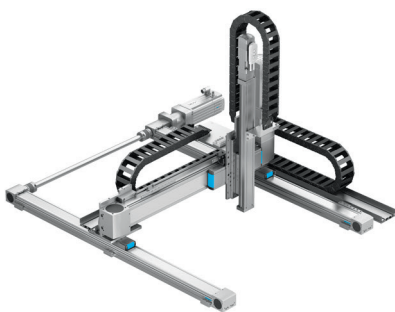


Application software development



- HMI development and process control sequences
- Seamless handover to process engineers
- Codesys training and support
- Vision systems setup

Commissioning support

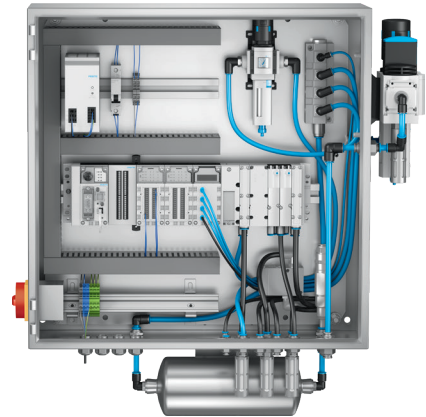


- Festo products installation, wiring and configuration check
- System test and tuning for optimal performance
- Function block training for higher level control system PLC

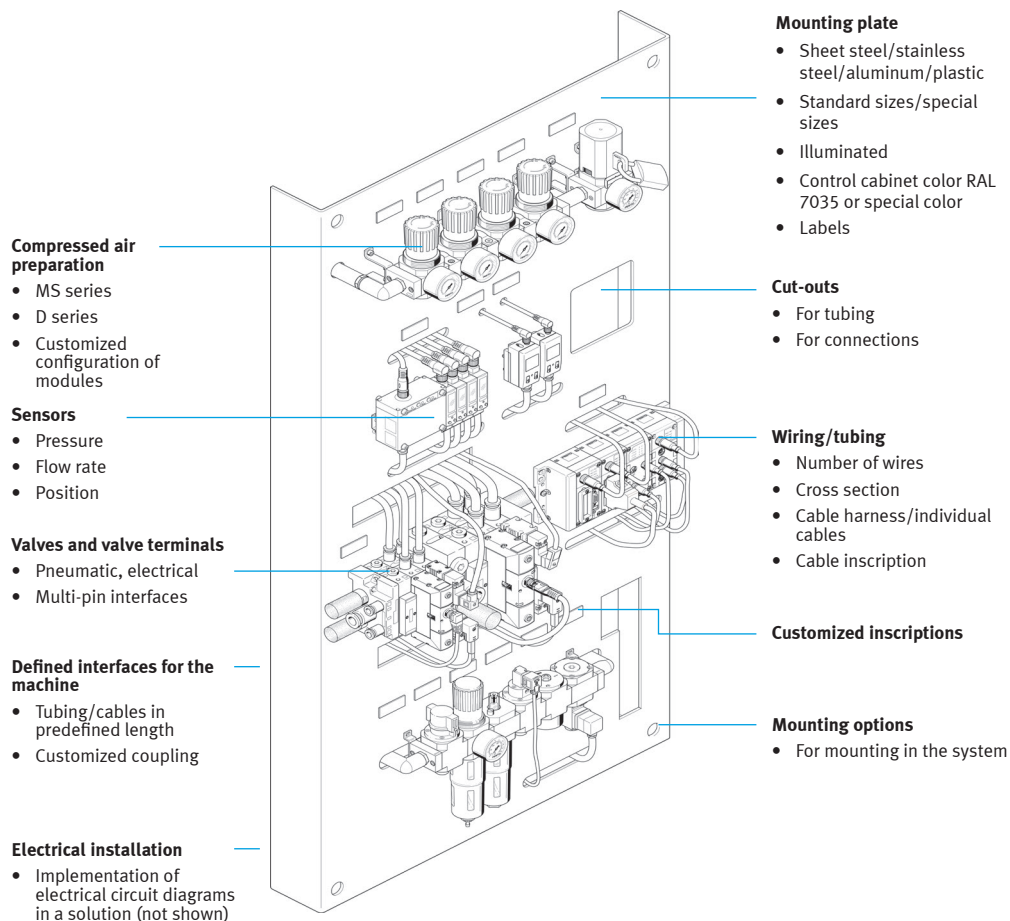
Control panels

Festo offers control panels pre-assembled on a flat plate or custom designed mounting structure to facilitate pneumatic and electric components from both Festo and third party manufacturers. The assemblies are function specific based on customer's requirements, and require minimum effort to integrate the complete assembly into the customer's system.

- Pre-assembled solution to mount directly into customer's machine
- Flat mounting panel or custom designed structure to fit available footprint
- Pre-wired and pneumatically connected
- Easy integration including interconnect documentation
- A single part number for simple ordering and vendor reduction



Your application determines your solution



Control cabinets

Festo produces a wide range of control cabinets suitable for factory automation, process automation and handling systems (cabinets for control systems).

Tailored to suit your individual application:

- Mix of technologies: pneumatic, electric and combined
- Includes the latest products and technologies
- Designed and built to your application
- Incorporates safety standards

Design compliant with:

- UL-508A
- UL-698
- NEC 70
- NFPA 79
- Hazardous locations

Range of different bus technologies:



EtherCAT



Your application determines your solution

Housing

- Sheet steel/stainless steel/aluminum/plastic
- Standard sizes/Special sizes
- Illuminated
- Control cabinet color RAL 7035 or special color
- Labels

Cooling/heating

- Active
- Passive

Power supply unit

- Converts AC voltage/frequency
- Speed regulation

Outputs

- Pneumatic
- Electrical
- Multi-pin interfaces

Design

- Pneumatic
- Electric
- Combined

Fuses

- Fuse
- Circuit-breaker

Power supply unit

- Converts AC voltage/frequency
- Speed regulation

Control systems

- CPX-E automation system
- Robot control systems
- Third-party control systems
- Multiple axis and kinematic
- Safety relay

Operator units

- Festo teach pendant
- Integration on control cabinet: emergency shut-off, key actuator, control elements

Wiring/tubing

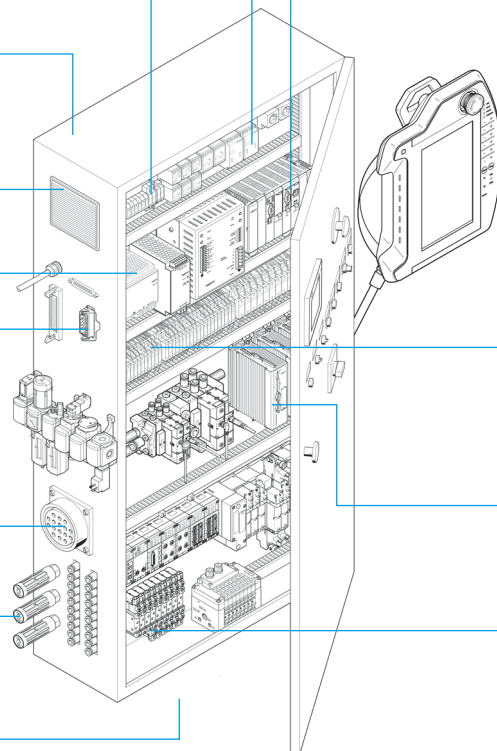
- Number of wires
- Cross section
- Cable harness/individual cables
- Cable inscription
- Tubing diameter
- Tube color/material
- Tube designation

Controller

- Servo motor
- Stepper motor
- DC motor

Pneumatics

- Valves/valve terminals
- Compressed air preparation
- Pressure regulators
- Sensors
- Servo pneumatics

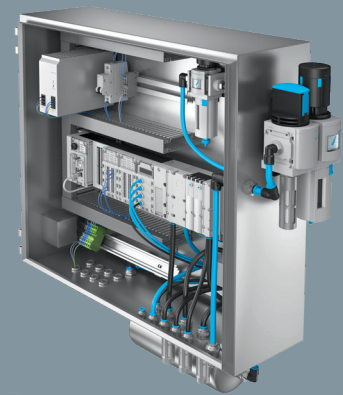


Control cabinets for process automation



Advantages of Festo solution

- Knowledge of industry standards and documentation
- Team dedicated to efficient and compact design
- Control cabinet standardization simplifies validation, training, operation, and maintenance
- Centralized process control reduces initial facility capital investment and long term operation costs
- Multiple design centers and UL508A customers in the US, Canada and Mexico



Customized control cabinet solutions

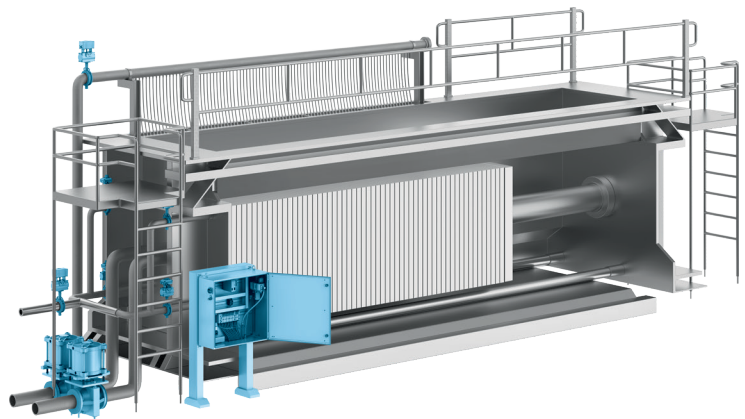
Festo offers design, engineering and fabrication services of control cabinets tailored to the facility specifications.

Control cabinets located inside or out of a cleanroom make a large contribution to validation efficiency and long term process reliability. Choosing the right partner ensures the lowest total cost of ownership.



Control cabinets and process valve assemblies for use in hazardous locations:

- Class I Div 1 and Class I Div 2 hazardous locations
- Intrinsically safe circuit extensions



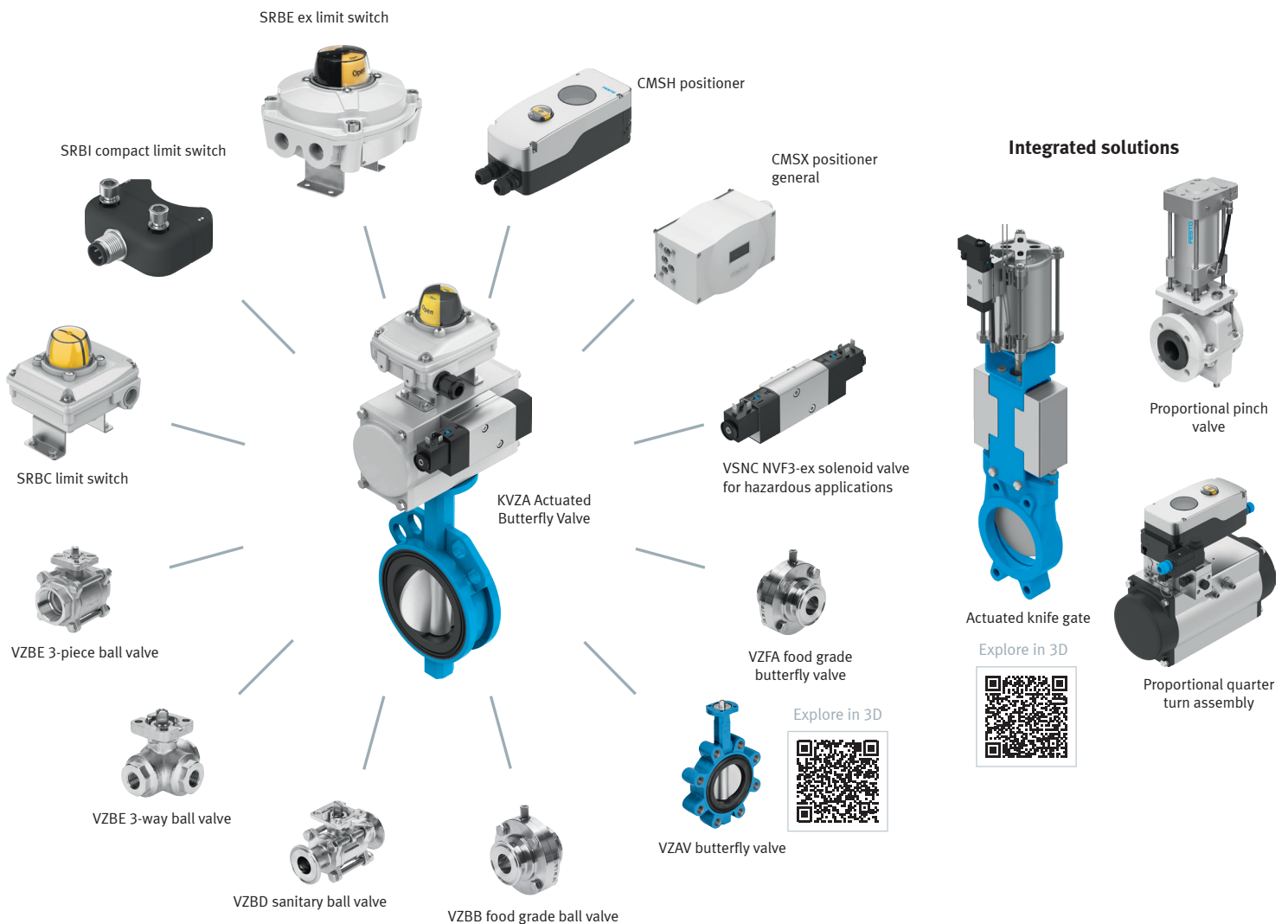
Process valve assemblies

Consult with Festo process valve engineers about custom valves and assemblies optimized to a specific application.

- Complete valve assemblies are pre-engineered and fully tested at Festo
- Custom assemblies for hazardous or washdown environments, caustic media, and extreme temperatures
- Pneumatic or analog positioning possible
- One part number for simple ordering and vendor reduction

Custom designed and built process valve assemblies for:

- Special dosing and mixing applications
- Assemblies that minimize purge volumes
- Solutions to quick product change-overs
- Special materials



Try the PA online configurators today:

Media resistance



KVZA



KVZB



KDFP-DFPD



Your partner in automation



1

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2

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Col. Tequesquínahuac
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Estado de México

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ventas.mexico@festo.com



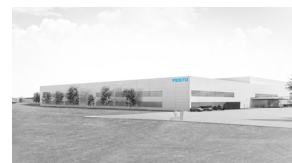
3

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1 800 963 3786
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4

Festo Regional Service Center

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USA