



FESTO

Your Automotive Industry
Automation Partner

Automation Solutions for the Automotive Industry

Festo... 100% Service /100% Partnership

At Festo, our objective is to build a successful long-term relationship with you by offering products and services that will enhance your business.

Festo establishes special program management groups for each individual automotive program, which are comprised of experienced experts from Festo offices worldwide. These teams provide an open channel of communication, answering questions and handling any issues that may arise.

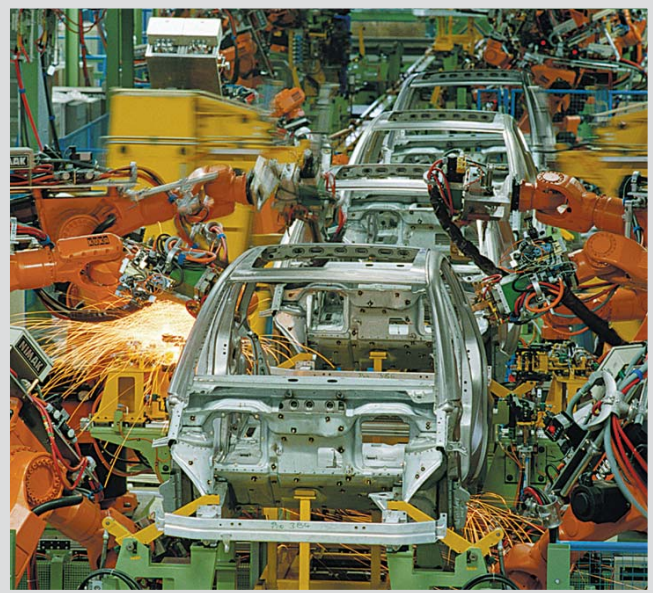
As a global manufacturer of pneumatic components and systems, Festo has the resources and application experience necessary to work with you as a technical partner, providing cost-effective automation solutions for the Automotive Industry.



Festo and the Automotive Industry

For over 50 years, we have developed pneumatic components and complete solutions for challenging automotive applications. Festo's automation solutions include systems and components that feature:

- Precision solutions
- Economic and secure handling
- Flexibility for the production line
- Fast assembly and increased product life cycles
- Optimized space, weight and performance
- Customized solutions with global standardization
- Partnerships for single-source projects and standards programs
- ISO/VDMA/CE specifications, NEMA 4 and IP65/67 ratings



Your Partner For Automotive Solutions

Global Engineering and Design

With over 5,000 engineers in 180 countries worldwide, Festo provides answers to technical application and product questions for more than 16,000 product groups. Festo maintains a dedicated U.S. Automotive Center that offers customer service, engineering project support and training programs.



Engineering Resources

- Digital catalogs, software tools/CAD models
- Complete system design and documentation
- Customized product solutions (SA's)
- Local application support



Supply Chain

- Purchase on-line through the Festo Shop
- Global logistics network
- On-site stock review
- Consignment and special terms



Assembly and Commissioning Services

- Pre-packaged components and sub-assemblies
- Complete systems
- Clean room assembly and related services
- Fitting and tubing service program

Operation

- Production facilities, sales offices and technical support in 52 countries worldwide
- Quality components
- Training programs
- Engineering and manufacturing excellence



Body Shop Applications

Sheet Metal Presses... A Precision Solution

Innovative pneumatics offer a wide range of press applications in the automotive industry. Festo provides solutions that meet the needs of press and body work shaping applications.

Festo delivers the necessary precision, from workpiece handling to secure gripping, feeding, sorting, centering and holding.



Holding Workpieces In Place

Festo supplies tailor-made solutions to meet individual requirements in automotive production. For lifting sheet metal workpieces, Festo offers a special pneumatic flat cylinder with a non-rotating piston rod designed to save valuable space and maintain a vacuum for the duration of the operation.

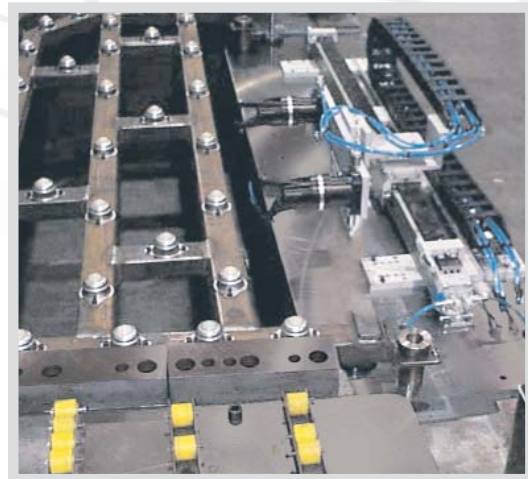


Sheet Metal Transfer Systems

Moving a “blank” is an important part of any stamping operation; with fast and accurate blank extractors this task can be made more reliable with increased production. Festo offers a complete automated solution.

Advantages:

- Fully-adjustable gripping heads
- Completely pre-assembled and tested parts/systems
- Integrated shock absorbers
- Cost-saving design
- Standard assemblies



Automotive Production Applications

Components for Higher Efficiency

Pneumatic components from Festo ensure economic operation on large press lines.

ISO & NFPA Standard Cylinders

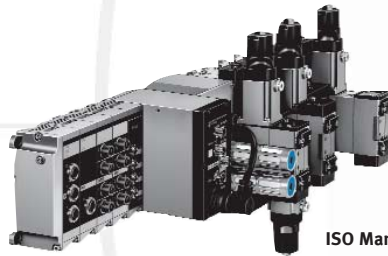
- Double acting
- Rod-clamping option
- Non-protruding limit sensors
- Extruded barrel design
- Wide variety of options



Cylinders

ISO Valve Terminals

- ISO size 1, 2 & 3
- Flow rates up to 4.5 Cv
- Up to 26 valve coils per manifold
- 5/2-way and/or 5/3-way valve functions
- Integrated digital and analog inputs and outputs



ISO Manifolds,
Type 04B

Handling Sheet Metal-Vacuum Products

- Vacuum generators create up to 28.5 in Hg with shop air
- Integrated air-saving circuit in a compact design
- Wide variety of suction cup diameters
- Standard round, oval and bellows suction cup material designed for sheet metal handling



Vacuum
Generators



Suction
Cups

Solutions For Welding

Three-Position Cylinder for “C” Weld Guns

- Reinforced piston rod with female threads
- Service life of more than 10 million double strokes
- Reinforced piston-rod bearings to absorb transverse loads



D-...-PV2-SA Cylinders



RPJD-5/2-1/8-B-SA



D-32-35-P-SA26704



DZF Cylinder

Welding Specific Components

- Welding field immune sensors
- Compensating packages
- Low-profile cylinders
- Welding splatter-resistant piston rods
- Flexible tubing, fittings and connectors

Painting & Spraying Applications

Festo Pneumatics in Paint Shops

Today's processes have been conceived with tomorrow in mind — for example, by requiring water-based paints to reduce atmospheric pollution. Festo makes major contributions to this goal by providing pneumatic components that deliver top-quality results in paint shops, like our air preparation units, which eliminate water condensation, dirt and oil contamination.

Festo also supplies “LABS” free components to prevent paint-wetting impairment substances from interfering with the painting process.



Air Preparation

- Available with standard or micro filters, carbon filters and membrane dryers
- Lockable on/off valves can be added to provide total safety
- Provides filtration and drying
- Removes oil and other contaminants



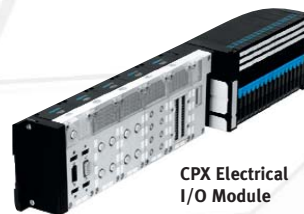
Air Preparation,
Type D-Series



Pressure and Vacuum
Sensors, Type SDE1

Valve Technology

- Compact Performance Valves (CPV)
- Innovative I/O modules
- Sophisticated diagnostics
- Flexible modularity



CPX Electrical
I/O Module



CPV
Valves

Proportional Technology

- Festo offers high performance valves such as the S-series with directly controlled 1/8-inch valves
- Booster versions and a variety of pressure ranges are available



Proportional
Valves

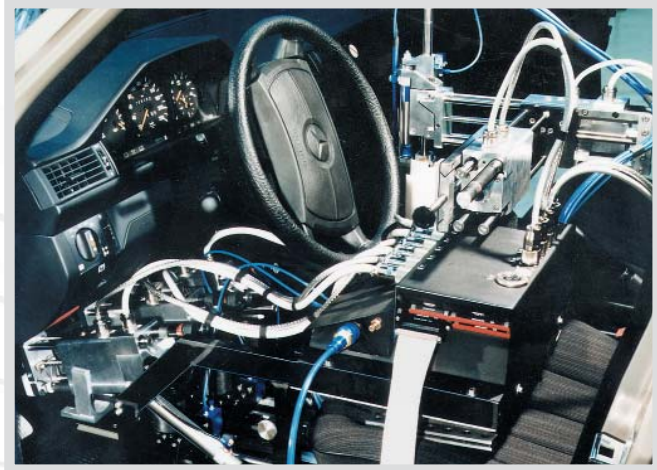
Assembly and Testing Applications

Product Testing Ensures Quality

Automotive components, such as control pedals, are subject to high loads and must undergo a comprehensive program of long-term tests. Festo supplies complete pneumatic test units for fully-automatic control and evaluation of key products.

Balancers For Ergonomic Systems

Balancers are used both in final assembly and other production operations, such as door fitting and cockpit assembly. The use of ergonomic balancers reduces the amount of physical effort required, particularly when transporting heavy loads. Festo offers a wide selection of quality products which can be used throughout the assembly process.



Handling Technology

- High-precision standard pre-engineered and custom systems
- Easy programming using a common PDA
- High-quality components

Low-Friction Cylinders

- Maintenance-free, lubricated for life
- Low-friction/low breakaway, perfect for balancers
- Durable, long-life construction

Guide Units

- Lower cost, easy installation and long service life
- Maintenance-free, lubricated for life
- Perfect for stopping, lifting, pushing, feeding, press-fitting and removal of workpiece/parts applications



Handling Systems



Linear & Rotary Cylinders



Guided Cylinders

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