Manifold duct plates

- Ideal for a large number of pneumatic connections in an extremely compact space
- No tubing
- Compact
- Easy to service
- Not subject to malfunction

Manifold duct plates are used primarily in applications that demand a large number of pneumatic connections in a very small space.
Festo manifold duct plates made from polyurethane structural foam make conventional individual tubing completely superfluous. Instead, they route the air to the individual components using defined ducts.
The omission of the tubing means that components can be positioned in the smallest of spaces. This means that screws, mountings etc. remain easily accessible and ensures ease of service and maintenance.
The shape of the plate is freely selectable – depending on the space available. The interfaces can also be freely positioned.
With its sandwich construction, the entire block is extremely sturdy and completely sealed. It is the ideal solution for a high level of protection and is not subject to malfunction.

Technical data

- Shape of manifold duct plate freely selectable
- Combination of over 30,000 catalogue components, e.g. valves, regulators, filters, sensors etc.
- High connection density of components
- No tubing
- Variable positioning of mechanical, pneumatic and electrical interfaces
- Integration of customised components
- Compact
- Sturdy and not subject to malfunction
- Sealed and protected unit
- Easy to service
- Available with protective cover
- 100% tested
- Ready-to-install
- Complete documentation
- Implementation of safety functions

Ready-to-install – the benefits to you

Ordering
Just one order number for the entire solution.

Engineering
Complete engineering solution according to your application-specific requirements by Festo specialists.

Production & assembly
The entire production and assembly process is taken care of for you.

Testing & test run
The solution is fully tested.

Documentation
You receive detailed system documentation, which you can quickly and easily integrate into your overall documentation.

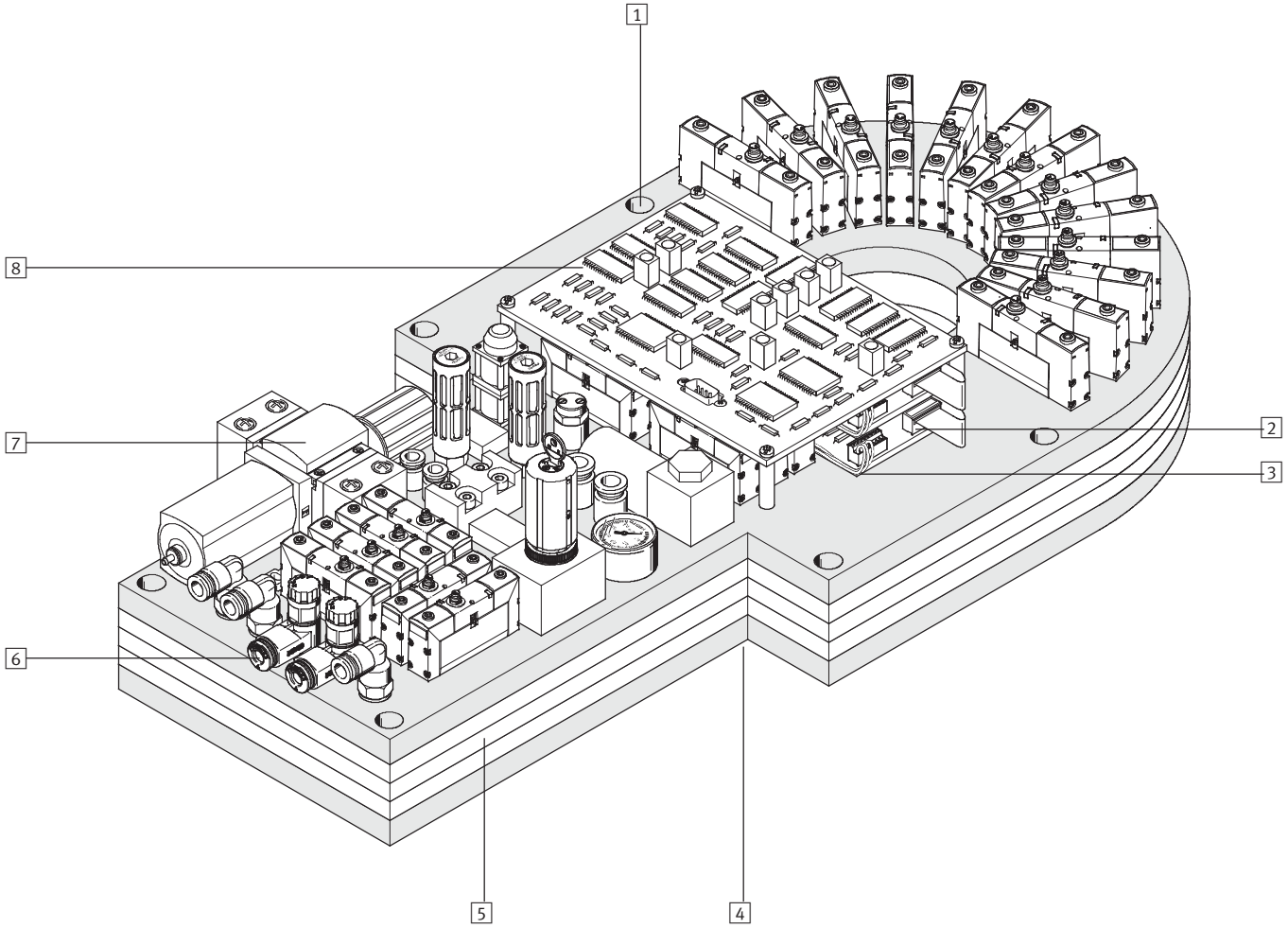
Interested in manifold duct plates?

Ask your Festo sales engineer, who will be happy to help.

Or visit your local website at www.festo.com,

where you will find further information on ready-to-install solutions.

Manifold duct plates



1 Mounting options
- For mounting in the system

2 Electrical installation
- Cabling
- PCBs

3 Sensors
- Pressure
- Flow rate
- Position

4 Customised shape
- For precise integration in the system

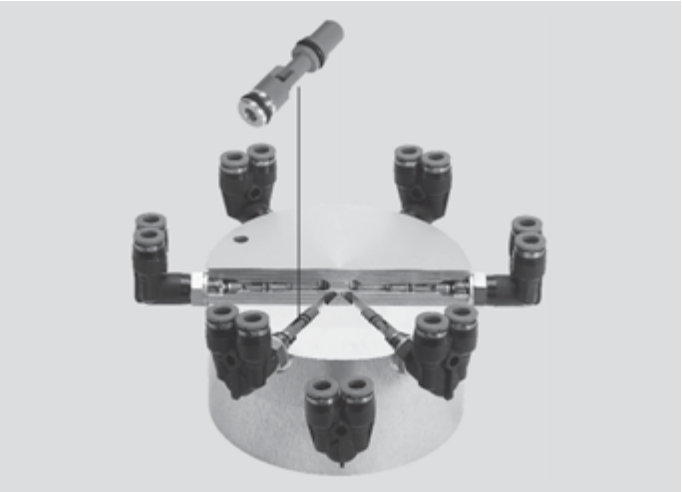
5 Manifold duct plates
- Made from polyurethane structural foam
- Number variable depending on the number of air ducts

6 Outputs
- Freely selectable positioning
- Pneumatic, electrical
- Multi-pin interfaces

7 Pneumatics
- Compressed air preparation
- Valves
- Valve terminals
- Pressure regulators
- Pressure gauges
- Third-party components

8 Electronics
- Customised
- Integrated or developed by Festo

Cartridge solutions



- Integration of various pneumatic functions in one component
- No need for single housings
- Ideal for applications that require a highly compact design

Cartridge solutions integrate one or more pneumatic functions in a closed unit. There is no need for a single housing, as the internal parts are housed in the component itself.
Festo cartridge solutions are used wherever an extremely compact design and component protection are required – with just a small number of pneumatic functions.
Functionality from standard technology, such as directional control valves or flow control valves, is fully integrated into the housing, thus reducing the required installation space.
The housing has a customised design based on specific application requirements, which means that the cartridge solution can be attached or installed just about anywhere on the machine.

Technical data

- Space-saving thanks to extremely compact design
- Pneumatic functions integrated in a single compact housing, e.g.:
  - Directional control valves
  - Flow control valves
  - Non-return valves
  - Vacuum generators
  - Pressure regulators
  - Pneumatic logic functions
- Housing available in different materials
- No tubing required
- Minimal cabling required
- Significant design freedom
- Variable integration options on and within the machine
- Sturdy design thanks to protected installed parts and smooth surfaces
- 100% tested
- Ready-to-install
- Complete documentation

Ready-to-install – the benefits to you

Engineering
Complete engineering solution according to your application-specific requirements by Festo specialists.

Production & assembly
The entire production and assembly process is taken care of for you.

Testing & test run
The solution is fully tested.

Documentation
You receive detailed system documentation, which you can quickly and easily integrate into your overall documentation.

Interested in cartridge solutions?

Ask your Festo sales engineer, who will be happy to help.

Or visit your local website at www.festo.com,

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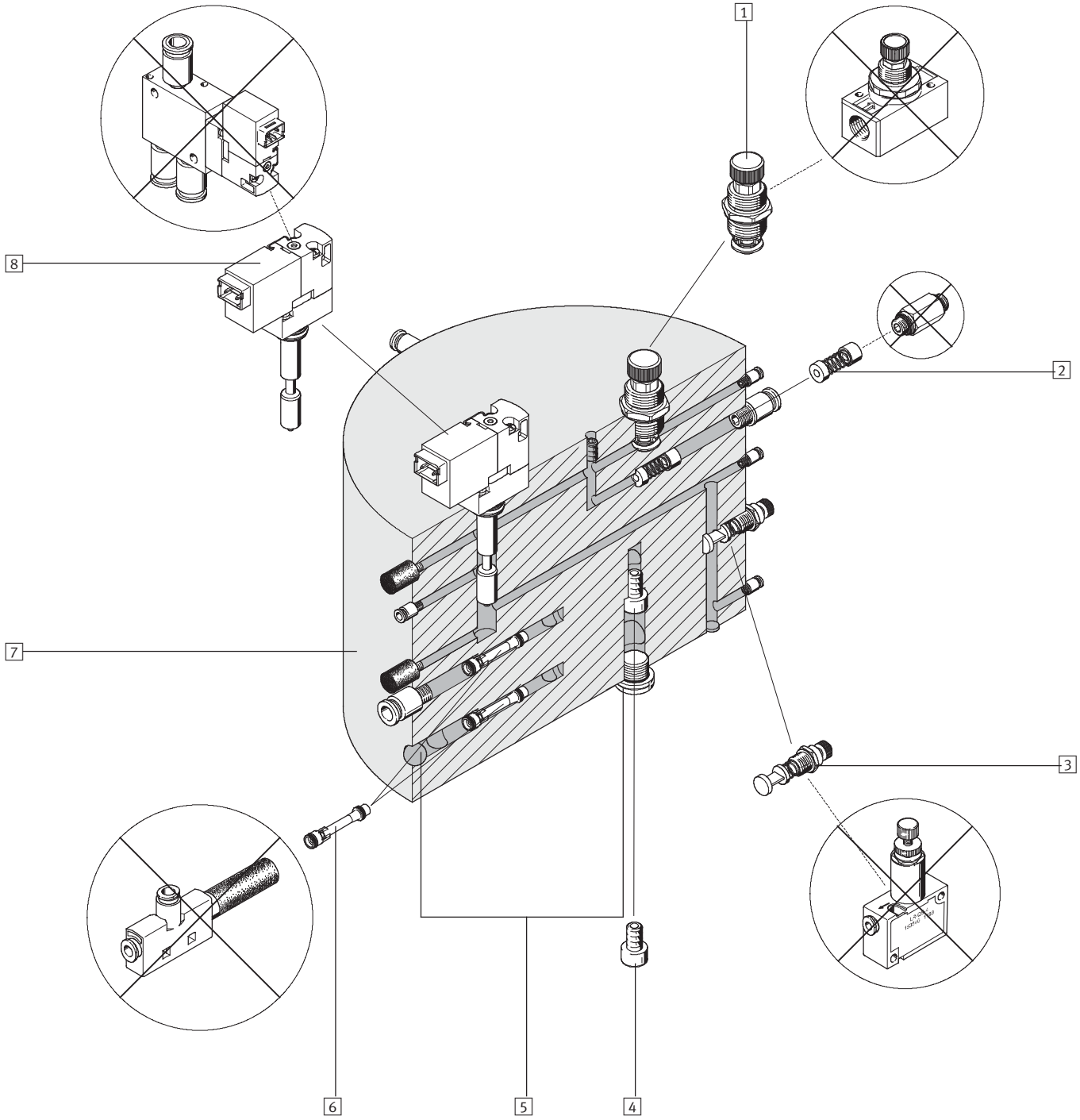
Cartridge solutions



1 Flow control valve
- Integrated

2 Non-return valve
- Integrated

3 Pressure regulator
- Integrated

4 Fixed restrictor
- Screw-in

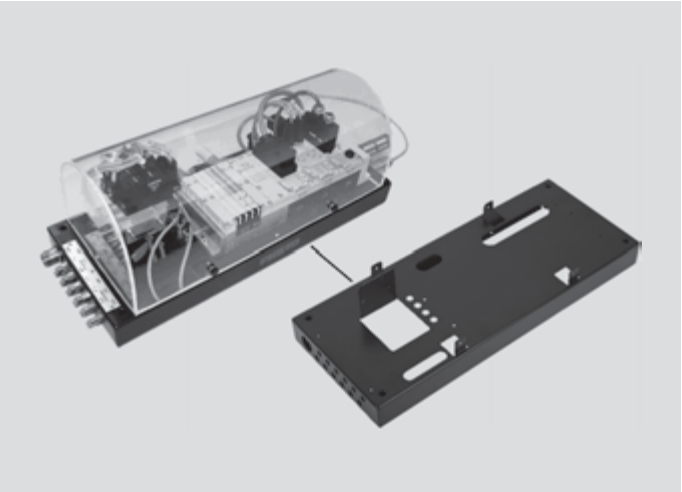
5 Sealing of holes

6 Vacuum generator
- Integrated
- Various sizes

7 Housing
- Aluminium
- Brass
- Steel
- POM
- PEEK
- PA
- etc.

8 Valve
- Integrated

Sheet-metal constructions and special housings



- Reduced weight thanks to optimal material utilisation with sheet-metal construction
- Protection against environmental influences and unauthorised access
- Ideally combined as a control cabinet directly in the system

A sheet-metal construction acts as a support for pneumatic and electrical components. The well thought-out design makes it possible to get the most out of the material used. Erected steel parts perform the function of mounting brackets in this case. This means fewer components and reduced weight, making the entire system into a compact unit. Special housings protect electrical and pneumatic components against environmental influences and unauthorised access. They also lend applications a more attractive appearance. They are developed for specific applications in a space-saving design.
When combined, sheet-steel constructions and special housings produce a small control cabinet, which can be fitted directly in or on the application. The short tubing and cable lengths achieved result in significantly reduced switching times.

Technical data

- Sheet-metal constructions
  - Customised shape and size
  - Reduced weight and number of assembly parts
- Special housing
  - Customised shape (flat, curved, rectangular etc.)
  - Customised dimensions
  - Different materials (metal, aluminium, plastic etc.)
  - Compact, space-saving format
  - Protection against environmental influences and unauthorised access
- In combination
  - Alternative to conventional control cabinets
  - Variable integration options on and within the machine
  - Short tubing and cable lengths
  - Attractive design

Ready-to-install – the benefits to you

Engineering
Complete engineering solution according to your application-specific requirements by Festo specialists.

Production & assembly
The entire production and assembly process is taken care of for you.

Testing & test run
The solution is fully tested.

Documentation
You receive detailed system documentation, which you can quickly and easily integrate into your overall documentation.

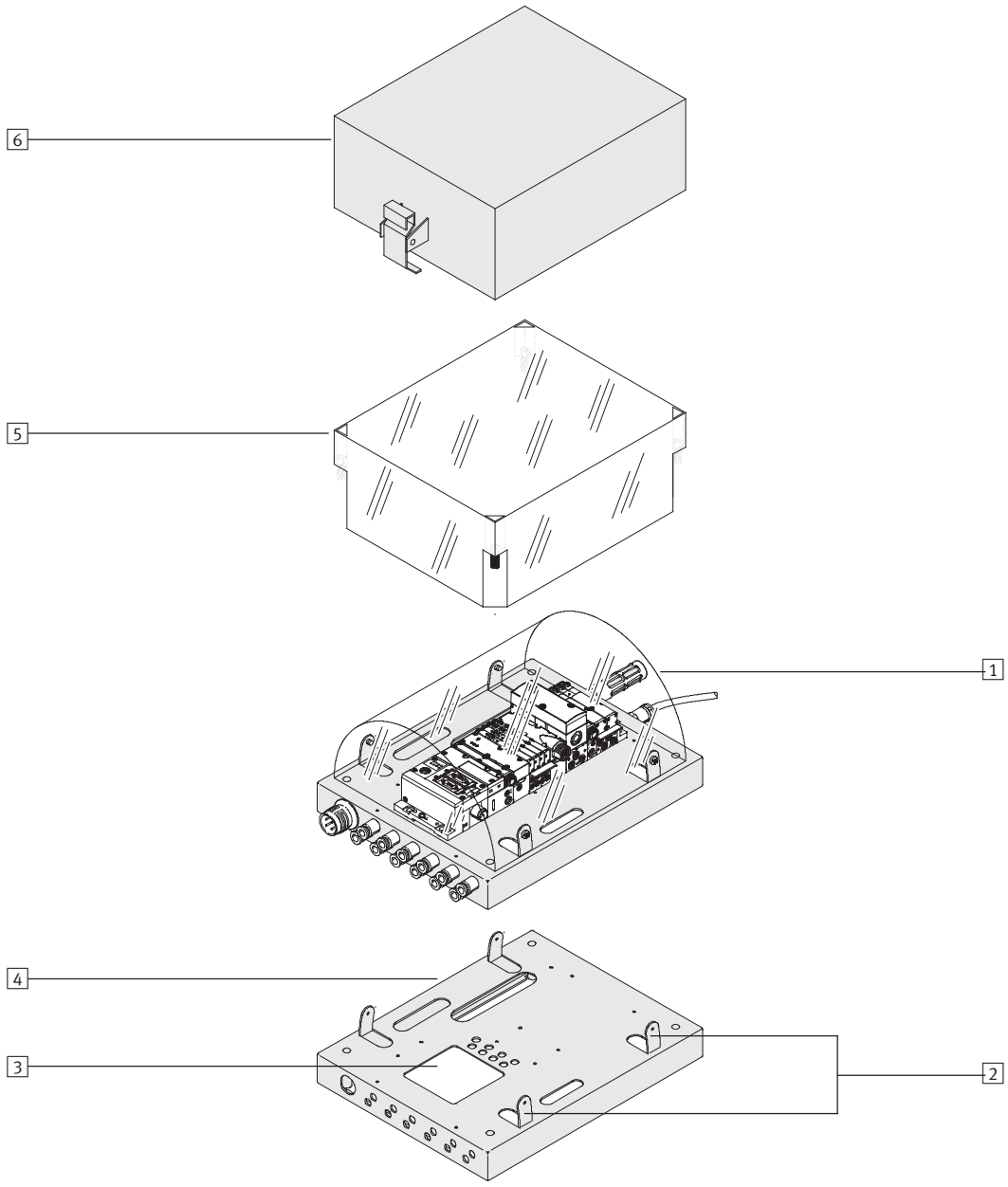
Interested in sheet-metal constructions and special housings?

Ask your Festo sales engineer, who will be happy to help.

Or visit your local website at www.festo.com,

where you will find further information on ready-to-install solutions.

Sheet-metal constructions and special housings



1 One basic solution
- Small control cabinet

2 Erected steel parts
- As mounting bracket

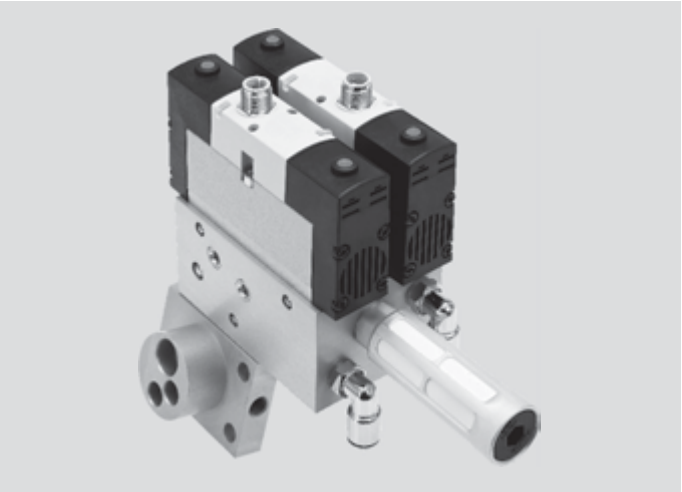
3 Cut-outs
- For tubing
- For connections
- etc.

4 Sheet-metal construction
- Customised dimensions
- Customised shapes

5 Material
- Metal
- Plastic
- etc.

6 Special housing
- Customised dimensions
- Customised shapes (flat, curved etc.)

Functional blocks



- Compressed air supply for pneumatic components via drilled ducts
- Ideal for small number of pneumatic components and variable connection options
- Compact and easy to service

For applications that require the installation of only a small number of pneumatic components in a compact space, Festo functional blocks with drilled ducts represent a practical alternative to manifold duct plates. The position of the connections must be variable and not subject to any special requirements.

In the functional block, the air supply connections are established using intersecting ducts – individual sub-bases are no longer required. The components are mounted directly on the functional block, which means that no tubing is required.

Technical data

- No tubing required thanks to drilled ducts
- Housing available in different materials:
  - Aluminium
  - Brass
  - Steel
  - POM
  - PEEK
  - PA
  - etc.
- Customised design of the pneumatic interfaces for the system
- Ideal for a small number of components and variable connection options
- Extremely economical, even for small quantities

Ready-to-install – the benefits to you

Engineering
Complete engineering solution according to your application-specific requirements by Festo specialists.

Production & assembly
The entire production and assembly process is taken care of for you.

Testing & test run
The solution is fully tested.

Documentation
You receive detailed system documentation, which you can quickly and easily integrate into your overall documentation.

Interested in functional blocks?

Ask your Festo sales engineer, who will be happy to help.

Or visit your local website at www.festo.com,

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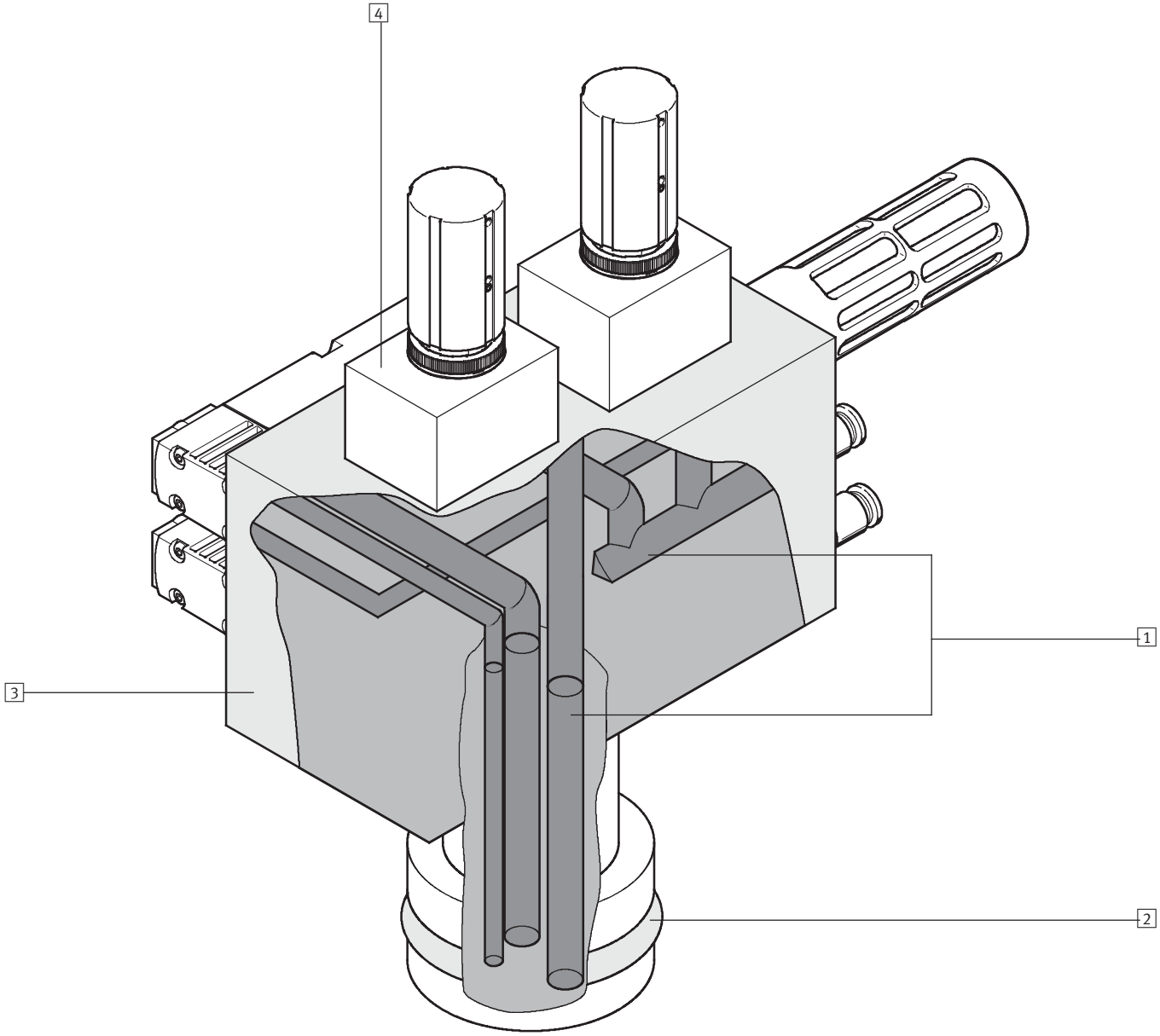
Functional blocks



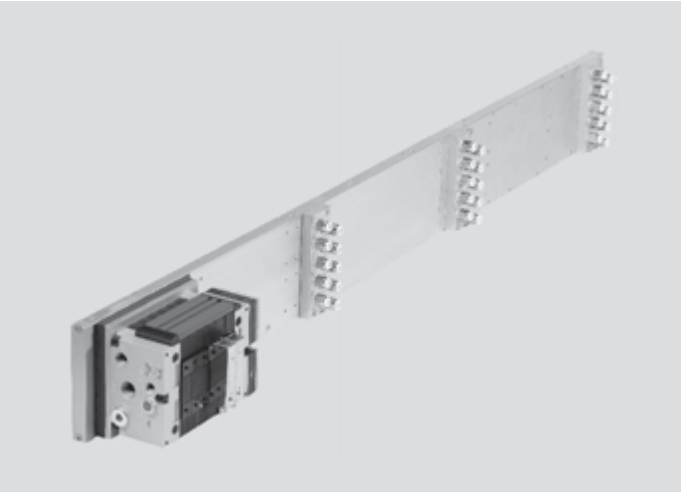
1 Drilled ducts
- For the air supply

2 Pneumatic interfaces for the machine
- Customised

3 Housing
- Aluminium
- Brass
- Steel
- POM
- PEEK
- PA
- etc.

4 Pneumatics
- Compressed air preparation
- Valves
- Valve terminals
- Pressure regulators
- Pressure gauges
- Third-party components
- Connections

Profile solutions



- Extruded profiles in combination with valves as a valve terminal
- For the distribution of compressed air in the machine concept
- Customised profile cross sections available

Profile solutions enable valve terminal concepts to be adapted to the machine design. Space optimisation, high performance in a small space and optimal distribution of compressed air within the system are just some of the main advantages.
The compressed air flows into integrated ducts. Exhaust air and supply air can thus be combined over long distances without any tubing. The compressed air is then provided at different locations according to specific requirements.
Festo profiles have different cross sections and lengths depending on application requirements. The valves and valve terminals can be mounted on the profile in a freely definable grid.

Technical data

- Profiles in customised cross sections and lengths
- Integrated ducts for straight-line routing of the compressed air
- Common air supply for multiple valves or valve terminals via a single duct
- Combination of exhaust air and supply air without tubing, even over long distances
- Supply of compressed air at different locations
- No tubing required
- Significantly reduced cabling
- Modular structure easy to achieve
- Optional: profile as mechanical mounting for other components or as a supporting part of the machine frame

Ready-to-install – the benefits to you

Engineering
Complete engineering solution according to your application-specific requirements by Festo specialists.

Production & assembly
The entire production and assembly process is taken care of for you.

Testing & test run
The solution is fully tested.

Documentation
You receive detailed system documentation, which you can quickly and easily integrate into your overall documentation.

Interested in profile solutions?

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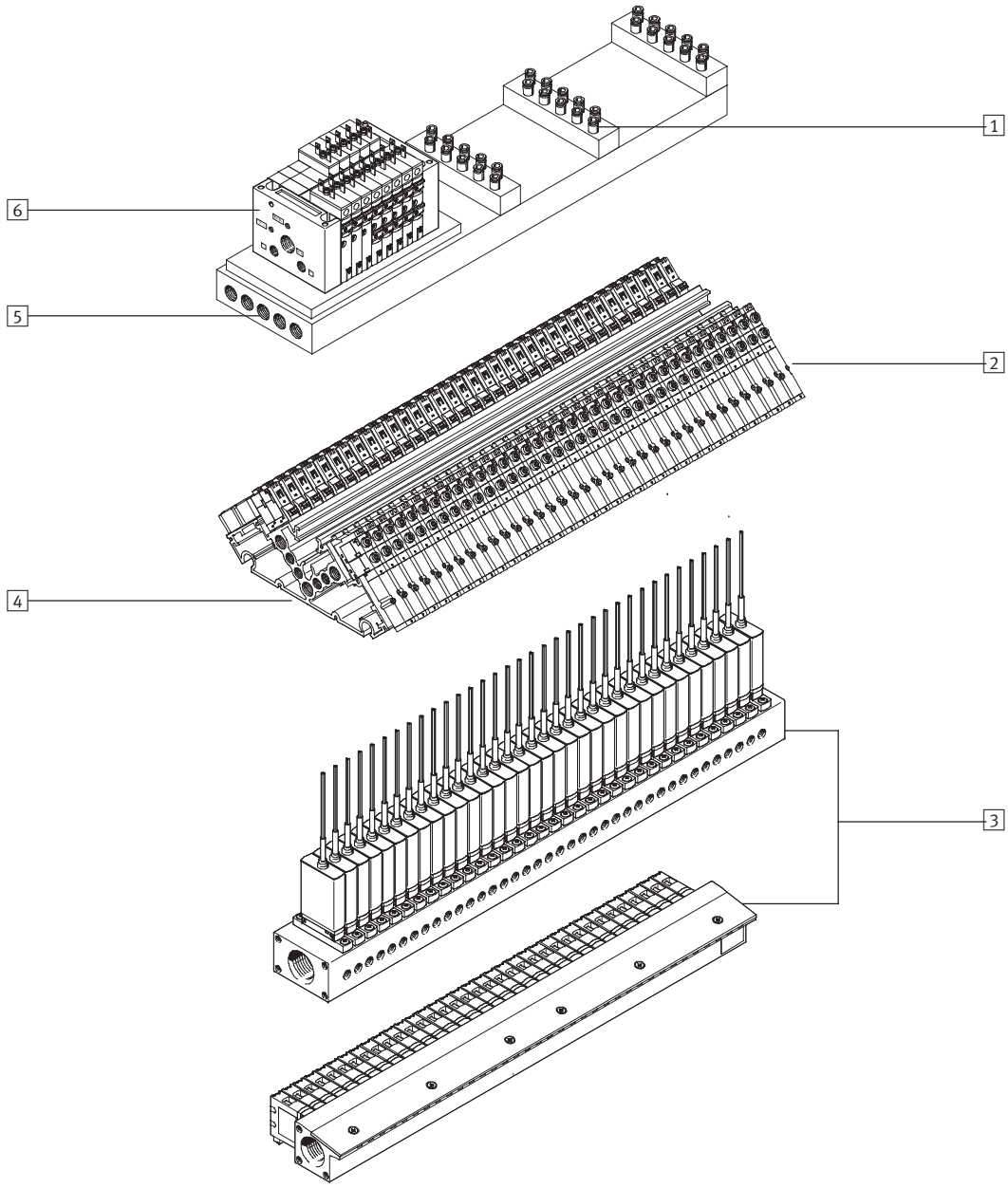
where you will find further information on ready-to-install solutions.

Profile solutions



1 Air ducts
- Supply of compressed air at different locations

2 Valves and valve terminals
- Freely definable grid
- Freely definable number

3 Customised pneumatic connection
- Optimised for the machine concept

4 Aluminium extruded profile
- Customised shape (round, square, trapezoidal etc.)
- Customised profile cross sections
- Freely definable lengths

5 Air ducts
- For the distribution of compressed air in the system

6 Valve terminals