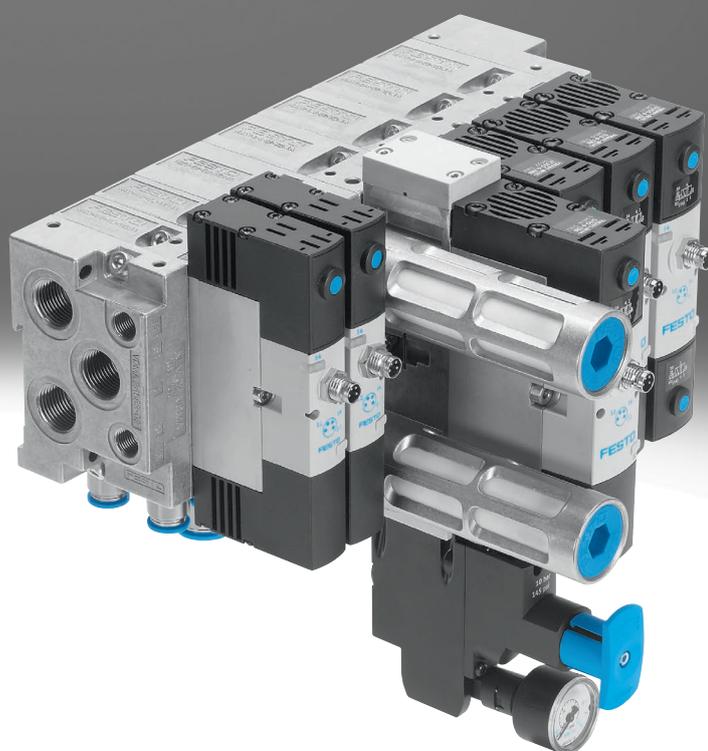
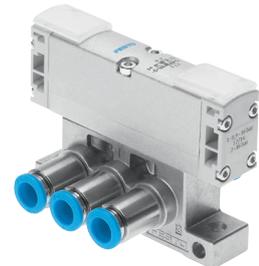
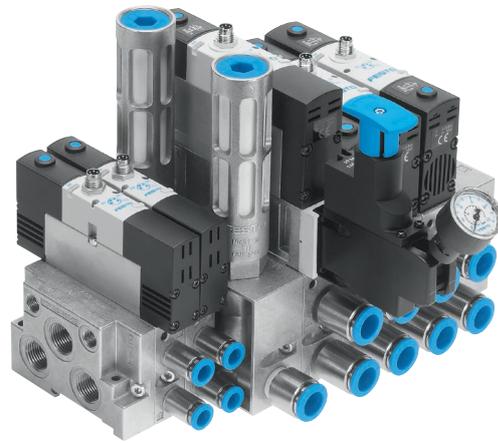
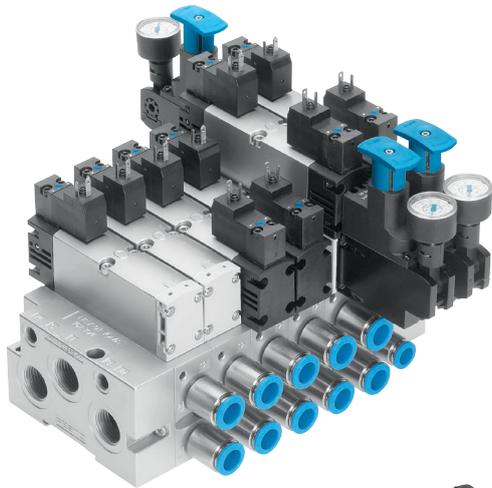


## Solenoid/pneumatic valves, ISO 15407-1

**FESTO**



## Key features



### Innovative

- High-performance valves in a sturdy metal housing
- Individual electrical connection via square or round plug sockets
- Valve replacement under pressure possible using vertical pressure shut-off plate
- Reverse operation
- Vacuum operation

### Versatile

- Modular system offering a range of configuration options
- Conversions and extensions are possible at any time
- Possible to integrate innovative function modules
  - Regulator plate
  - Throttle plate
  - Vertical pressure shut-off plate
  - Vertical supply plate
- Vertical supply plates permit a flexible air supply and variable pressure zones
- Wide range of valve functions
- Extensive operating voltage range from 12 V DC to 230 V AC

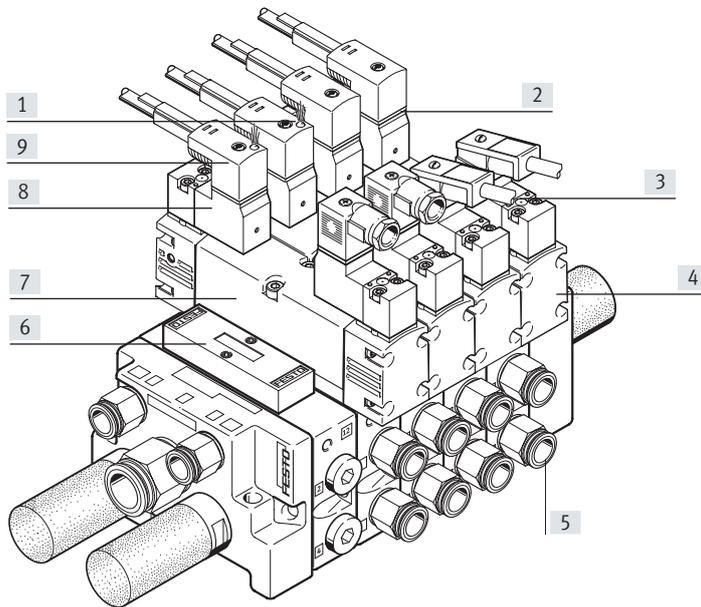
### Reliable

- Sturdy and durable metal components
  - Valves
  - Horizontally linked sub-bases
  - Vertically stacked sub-bases
- Fast troubleshooting thanks to LEDs:
  - in the plug socket, or
  - in the illuminating seal, or
  - in the valve
- Reliable servicing thanks to valves that can be replaced quickly and easily
- Manual override
- Durable thanks to tried-and-tested piston spool valves

### Easy to install

- Solid wall mounting or DIN rail mounting
- Combinations of manifold assemblies of valve size 18 mm and 26 mm
- Plug-in pressure gauges on the regulator plate

## Key features

Single valve manifold assembly  
VTIA

- [1] Signal status indication via LED
- [2] Signal status indication via illuminating seal
- [3] Manual override
- [4] One valve series for different flow rates
- [5] Fittings with external hex
- [6] Cover plate for vacant and expansion positions
- [7] Various valve functions
- [8] Various voltages
- [9] Pilot valve with pneumatic interface to ISO 15218

## Equipment options

## 5/2-way valve

- Single solenoid, pneumatic or spring return
- Double solenoid valve
- Double solenoid valve with dominance at 14

## 2x 3/2-way valve, single solenoid

- Normally open
- Normally open, reversible (on request)
- Normally closed
- Normally closed, reversible (on request)

- 1x normally open, 1x normally closed
- 1x normally open, 1x normally closed, reversible (on request)

## 5/3-way valve

- Mid-position valve
  - Normally open
  - Normally closed
  - Normally exhausted

## 2x 2/2-way valve, single solenoid

- Normally closed

## Special features

## Operation with external pilot air supply

- For vacuum applications
- For operating pressure of less than 0.3 MPa
- For significant pressure fluctuations in the power section. Power unit and pneumatic control unit are isolated
- For heavily lubricated air in the power unit
- For manifolds if the pressure zones are created via ducts 3 and 5 (not possible with 2x 3/2)
- For manifolds or pressure zones that are equipped with reversible 2x 3/2-way valves (valves on request)

## Operation with internal pilot air supply

- For small pressure fluctuations in the power section
- For using regulator plates with vertical stacking, also in reverse operation
- As a low-cost solution

## Reverse operation with compressed air supply via ducts 3 and 5

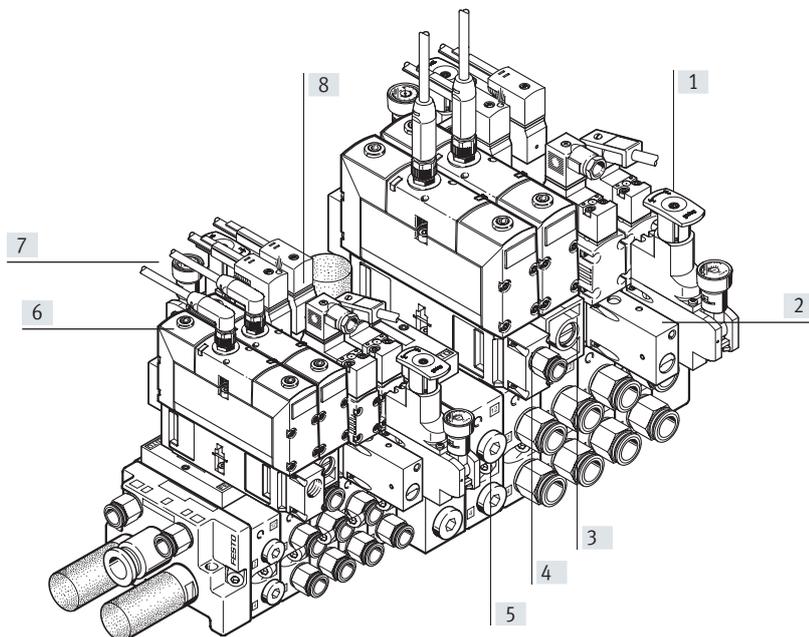
- Pressure zone separation via ducts 3 and 5
  - Example: duct 3 vacuum, duct 5 ejector pulse
  - Example: high pressure in duct 3 for advancing the piston rod of a double-acting cylinder. Low pressure in duct 5 for retracting the piston rod with low energy consumption
- 2x 3/2-way valves used as 5/4-way valve with controllable overlap and pressure zone separation with the reversible variant

## Reverse operation with a regulator plate, compressed air supply via duct 1

- Reversible pressure regulator combined with a reversible 2x 3/2-way valve regulates ports 2 and 4
  - AB regulator for each of ports 2 and 4
  - A regulator for port 4
  - B regulator for port 2
- Reversible pressure regulators are in the regulating position immediately after the power supply is switched on
  - Adjustment possible at any time
  - Dynamic response characteristics
  - Reduced regulator load because the supply pressure is maintained when the valve is switched
  - Not exhausted via the regulator

## Key features

### Valve manifold assembly VTIA with a combination of sizes and vertical stacking



- [1] Pressure regulator for adjusting the force of the actuated drive
- [2] Pressure shut-off plate for replacing valves during operation
- [3] Throttle plate for adjusting the speed of the drive
- [4] Supply plate for compressed air supply of a control chain as a separate pressure zone
- [5] Intermediate plate as interface between valve size 18 mm and 26 mm
- [6] Solenoid valve with central round plug
- [7] Valve size 18 mm and 26 mm in combination
- [8] Solenoid valve with individual pilot valves and pneumatic interface to ISO 15218, can be connected using square plug sockets or round plug

### Vertical stacking function

#### Pressure regulator

- Single variant to regulate the pressure at port 4(A) or 2(B) or at input 1(P)
- Dual variant to regulate the pressure at port 4(A) and 2(B) individually
- Reverse variant for the ports so that the regulator is in the control position
- With pressure gauge connection

#### Throttle plate

- Designed with two flow control valves for adjusting the exhaust air flow rate at exhausts 5 or 3. This allows the drive to start moving and the required speed to be set at the manifold using the manual override.

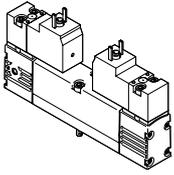
#### Vertical pressure shut-off plate

- This is equipped with a switch with which the compressed air supply can be shut off. A directional control valve or downstream vertical stacking plate can thus be replaced without switching off the overall air supply.
- If the control chain has a redundant design, the cycle can continue even with cyclical control.

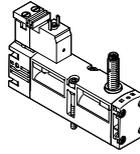
#### Vertical supply plate

- As additional air supply for a valve
- To supply a third pressure zone

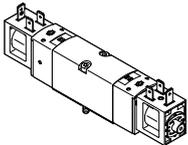
## Key features

**Individual connection with square plug, type C**

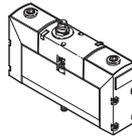
The directional control valve has a pilot control to ISO 15218 and a plug pattern to EN 175301-803, type C.

**Individual connection with square plug, with position sensing**

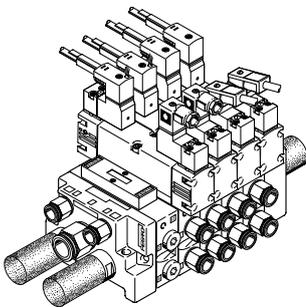
The directional control valve has a pilot control to ISO 15218, a plug pattern to EN 175301-803, type C and an inductive sensor.

**Individual connection with square plug, type B**

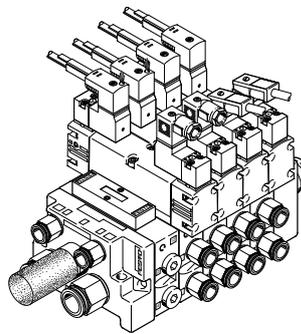
The electrical connection is established using a plug socket with plug pattern type B to industry standard.

**Individual connection with central round plug**

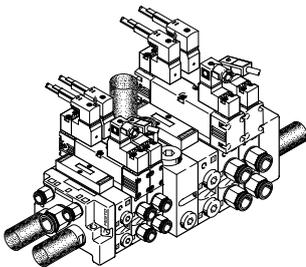
The electrical connection is established using a standardised M12 or M8 plug socket 24 V DC (EN 61076-2-101).

**Single valve manifold assembly VTIA, directional control valves with square plug, type C**

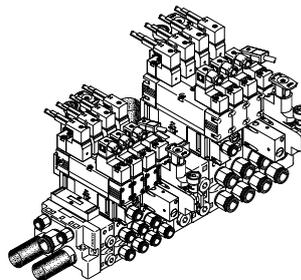
- Valve size 26 mm
- Spare position
- Compressed air supply via duct 1
- External pilot air supply
- With fittings
- Exhausting via silencer for ducts 3 and 5

**Single valve manifold assembly VTIA, pressure zones via duct 3 and 5**

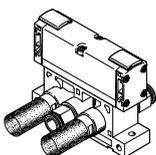
- Valve size 26 mm
- Spare position
- Compressed air supply via ducts 3 and 5
- External pilot air supply
- With fittings
- Exhausting via silencer

**Valve manifold assembly VTIA fitted with valve size 18 mm and 26 mm, directional control valves with square plug, type C**

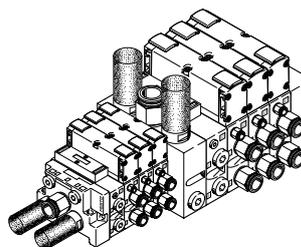
- Valve sizes 18 mm and 26 mm combined via intermediate plate
- Spare position
- Compressed air supply via duct 1
- External pilot air supply
- With fittings
- Exhausting via silencer for ducts 3 and 5 on the end plates and for duct 3 also on the intermediate plate

**Valve manifold assembly VTIA with maximum expansion using vertical stacking modules**

- Valve sizes 18 mm and 26 mm combined via intermediate plate
- Directional control valves with square plug
- Pressure regulators
- Throttle plates
- Shut-off plates
- Supply plates with spare position

**Pneumatically actuated directional control valve on individual sub-base**

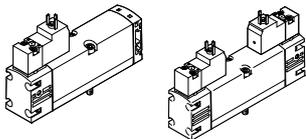
Directional control valves on an individual sub-base can be used for drives that are further away from a valve manifold assembly or when there is only one drive.

**Valve manifold assembly VTIA with valve size 18 mm and 26 mm, with pneumatically actuated directional control valves**

- Valve sizes 18 mm and 26 mm combined via intermediate plate
- Spare position
- Compressed air supply via duct 1
- With fittings
- Exhausting via silencer for ducts 3 and 5 on the end plates and for ducts 3 and 5 also on the intermediate plate

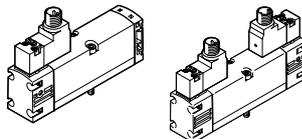
## Key features

### Solenoid valves with square plug, type C



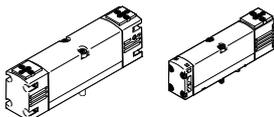
- Valve size 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- 2x 3/2-way valves for reverse operation
- Choice of internal or external pilot air supply
- 12, 24 V DC, 24, 110 or 220 V AC

### Solenoid valves with M12 round plug



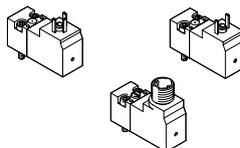
- Valve size 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- 2x 3/2-way valves for reverse operation
- Choice of internal or external pilot air supply
- 24 V DC

### Basic valves with interface to ISO 15218



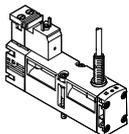
- Valve size 18 mm and 26 mm
- 2x 2/2-way, 2x 3/2-way, 5/2-way and 5/3-way valves
- Choice of internal or external pilot air supply

### Pilot valve with interface to ISO 15218



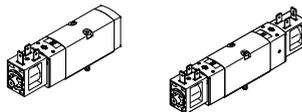
- With square plug, type C or round plug M12
- For 12, 24 V DC and 24 V AC without PE conductor
- For 110 and 220 V AC with PE conductor
- 3/2-way valve
- Non-detenting or non-detenting/detenting manual override

### Valve with position sensing



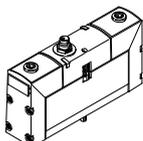
- Valve size 26 mm
- 5/2-way valves
- Choice of internal or external pilot air supply
- 24 V DC
- Inductive sensor for monitoring the normal position of the piston spool valve

### Solenoid valves with square plug, type B



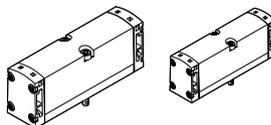
- Valve size 26 mm
- 5/2- and 5/3-way valves
- Internal pilot air supply
- 24 V DC

### Solenoid valves with central round plug



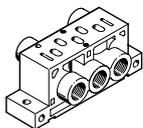
- Valve size 18 mm and 26 mm
- 2x 3/2-way, 5/2-way and 5/3-way valves
- Choice of internal or external pilot air supply
- 24 V DC

### Pneumatically actuated directional control valves



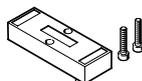
- Valve size 18 mm and 26 mm
- 2x 3/2-way, 5/2-way and 5/3-way valves
- Signal inputs 12 and 14 via the sub-base

### Individual sub-base



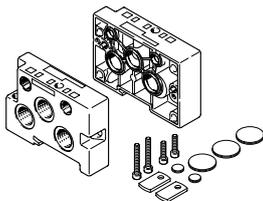
- Valve size 18 mm and 26 mm
- Ports 12 and 14 for external pilot air supply for solenoid valves and
- Ports signal inputs 12 and 14 for pneumatically actuated valves are the same

### Cover plate for vacant position



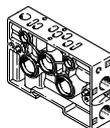
- Valve size 18 mm and 26 mm

### End plate kit



- Valve size 18 mm and 26 mm
- Ports 12 and 14 for external pilot air supply for solenoid valves
- The signal inputs for pneumatically actuated valves are only on suitable manifold sub-bases

### Manifold sub-base/series sub-base



- Valve size 18 mm and 26 mm
- For solenoid valves
- For pneumatically actuated valves with additional ports for the signal inputs

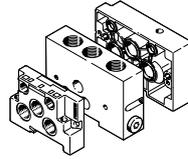
## Key features

## Intermediate plate



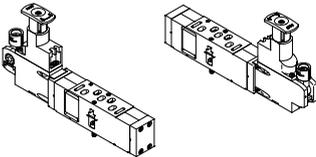
- Adapter between valve size 18 mm and 26 mm
- With additional air supply and exhaust ports

## Intermediate plate kit



- Intermediate plate as adapter between valve sizes 18 mm and 26 mm
- One 18 mm and one 26 mm end plate

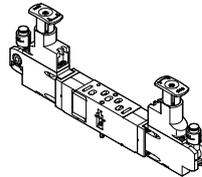
## Pressure regulator plate with one pressure regulator



## Variants

- Valve size 18 mm and 26 mm
- For pressure regulation at supply input 1 (P). The set pressure for ports 2 and 4 is the same
- For pressure regulation at working port 4 (A)
  - The pressure regulator for reverse operation is supplied via port 1 of the sub-base and supplies port 5 on the directional control valve
  - The directional control valve exhausts via port 1 to ports 3 and 5 of the sub-base
- For pressure regulation at working port 2 (B)
  - Input 3 is supplied here in reverse operation

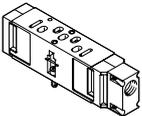
## Regulator plate with 2 pressure regulators



## Variants

- Valve size 18 mm and 26 mm
- For pressure regulation at working ports 4 (A) and 2 (B)
  - The pressure regulators for reverse operation are supplied via port 1 in the sub-base and feed inputs 5 and 3 on the directional control valve
  - The directional control valve exhausts via port 1 to ports 3 and 5 of the sub-base

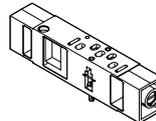
## Vertical supply plate



## Variants

- Valve size 18 mm and 26 mm
- As intermediate supply
  - For one valve
  - To supply a third pressure zone
- Can be equipped with a directional control valve

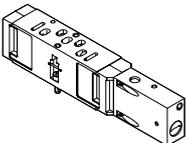
## Throttle plate



## Variants

- Valve size 18 mm and 26 mm
- Exhaust air restrictors in ducts 3 and 5
  - The flow control plates act as supply air flow control valves for pressure zones that are created via ducts 3 and 5

## Vertical pressure shut-off plate



## Variants

- Valve size 18 mm and 26 mm
- A switch activated with a slotted head screwdriver shuts off duct 1
  - The throttle plates, pressure regulator plates or directional control valves above it can be replaced
  - Other components of the control chain such as drives, for example, can be replaced once they have been exhausted via the directional control valve

## Pressure gauge

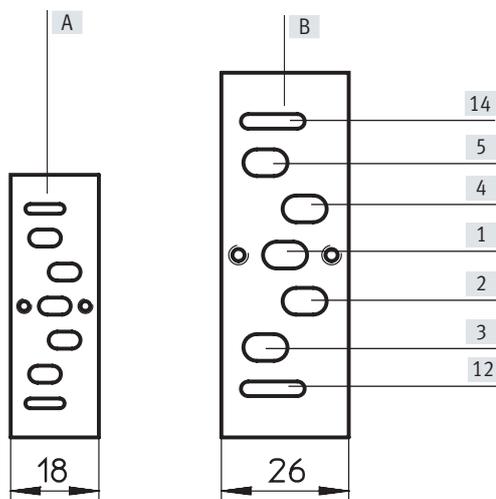


## Version

- Can be connected to the regulator plates

## Key features

### Port pattern on sub-base to ISO 15407-1



[A] Valve size 18 mm

[B] Valve size 26 mm

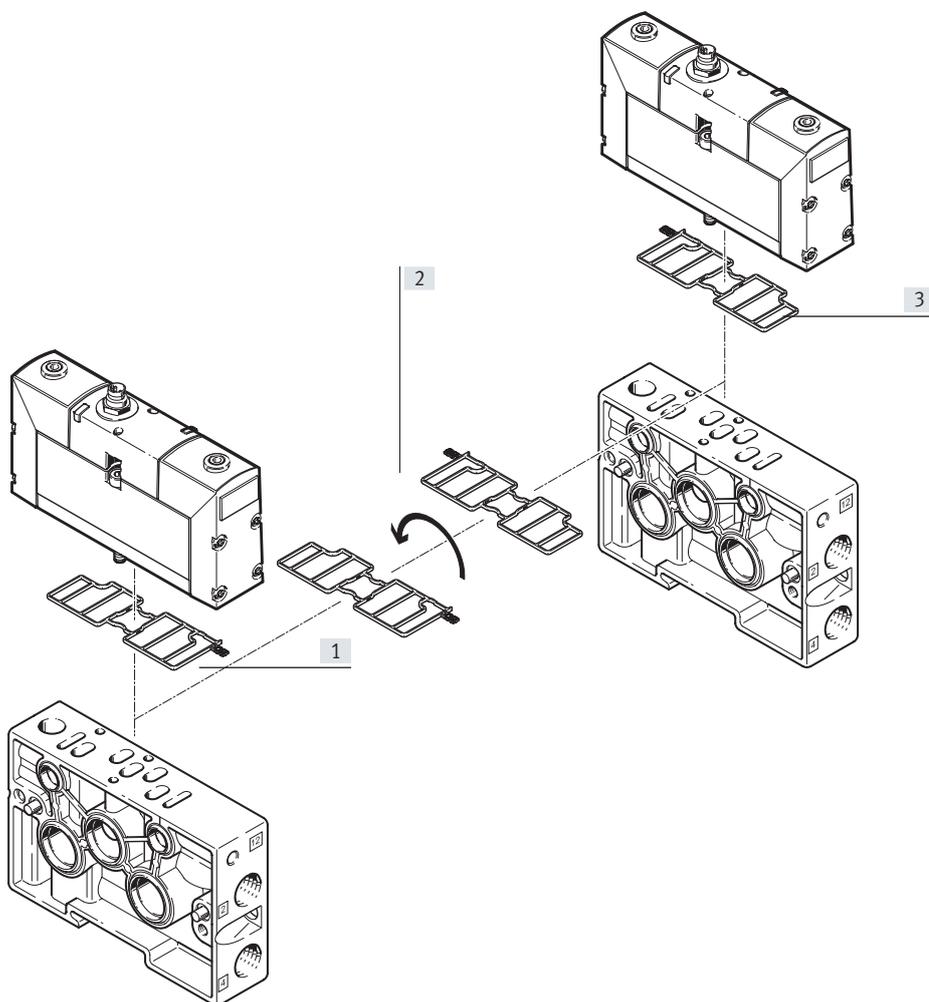
### VSVA

#### Conversion of pilot air exhaust

The valve manifold assembly VTIA is supplied with unducted pilot air exhaust. By turning the seal between the

valve and manifold block, exhaust air (pilot air) can be diverted to pilot duct

12 and can thus be ducted and silenced (see illustration).

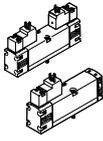
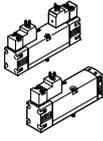
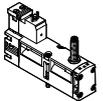


- [1] Ducted pilot air exhaust
- [2] Turning the seal 180°
- [3] Unducted pilot air exhaust (as supplied)

Key features

| Using 2x 3/2-way valve as 5/4-way valve |                |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
|---|----------------|---|---------------------------|----------|---|---|---|--|---|---|--|---|---|--|---|---|--|--|---|
| Code                                    | Circuit symbol | Table of values   | Equivalent circuit symbol | Function |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| K                                       |                | <table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table> | Y1                        | Y2       | A | 0 | 0 |  | 0 | 1 |  | 1 | 0 |  | 1 | 1 |  |  | <ul style="list-style-type: none"> <li>• Normally exhausted</li> <li>• The double-acting drive connected to ports 2 and 4 is unpressurised when the valve is in the normal position and can be moved by an external force</li> <li>• If there is a signal at Y1(14) and Y2(12), there is pressure at ports 2 and 4</li> </ul>   |
| Y1                                      | Y2             | A   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
|   |                | <table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table> | Y1                        | Y2       | A | 0 | 0 |  | 0 | 1 |  | 1 | 0 |  | 1 | 1 |  |  | <ul style="list-style-type: none"> <li>• Normally closed (by combining directional control valve code K and two piloted check valves)</li> <li>• The check valves with override function connected to ports 2 and 4 are unpressurised when the valve is in the normal position and the pressures in the drive close the check valves so it is leak-tight</li> <li>• The drive remains stationary when the forces are in equilibrium</li> <li>• Leakages can only occur via the drive seals</li> <li>• If there is a signal at Y1(14) and Y2(12), the same pressure is present at ports 2 and 4</li> </ul>   |
| Y1                                      | Y2             | A   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| N                                       |                | <table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table> | Y1                        | Y2       | A | 0 | 0 |  | 0 | 1 |  | 1 | 0 |  | 1 | 1 |  |  | <ul style="list-style-type: none"> <li>• Normally open</li> <li>• The double-acting drive connected to ports 2 and 4 is supplied with the same compressed air at both ends when the valve is in the normal position and stops when the forces are in equilibrium</li> <li>• If there is a signal at Y1(10) and Y2(10), ports 2 and 4 are exhausted, the drive is unpressurised and can be moved by an external force</li> </ul>   |
| Y1                                      | Y2             | A   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| H                                       |                | <table border="1"> <thead> <tr> <th>Y1</th> <th>Y2</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table> | Y1                        | Y2       | A | 0 | 0 |  | 0 | 1 |  | 1 | 0 |  | 1 | 1 |  |  | <ul style="list-style-type: none"> <li>• Normally open after port 2</li> <li>• The double-acting drive connected to ports 2 and 4 is supplied with compressed air via output 2 when the valve is in the normal position. Port 4 is exhausted. When the system is in its initial position, the drive is thus in a clearly defined position, as would also be the case with a 5/2-way single solenoid valve</li> <li>• If there is a signal at Y1(14) and Y2(10), port 2 is exhausted and there is pressure at port 4. The drive leaves the initial position</li> <li>• A closed circuit can be created with this 2x 3/2-way valve by combining it with piloted non-return valves. However, this is then selected by an active signal at Y2(10).</li> </ul> |
| Y1                                      | Y2             | A   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 0                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 0              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |
| 1                                       | 1              |   |                           |          |   |   |   |  |   |   |  |   |   |  |   |   |  |  |   |

Product range overview

| Function  | Type  | Valve function                                 | Flow rate<br>Valve<br>[l/min]     | Working port on the sub-<br>base |      | Operating voltage |    |        |     |     |   |
|---|---|--|-----------------------------------|----------------------------------|------|-------------------|----|--------|-----|-----|---|
|   |   |  |                                   | G1/8                             | G1/4 | [V DC]            |    | [V AC] |     |     |   |
|   |   |  |                                   |                                  |      | 12                | 24 | 24     | 110 | 230 |   |
| Valve size<br>18 mm   | <b>Valve with pilot interface to ISO 15218</b>                                    |  |                                   |                                  |      |                   |    |        |     |     |   |
|   |  | VSVA-B-T32...A2                                | 2x 2/2-way valve, single solenoid | 700                              | ■    | –                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-T32...A2                                | 2x 3/2-way valve, single solenoid | 600                              | ■    | –                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-M52...A2                                | 5/2-way valve, single solenoid    | 750                              | ■    | –                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-B52...A2                                | 5/2-way valve, double-solenoid    | 750                              | ■    | –                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-P53...A2                                | 5/3-way valve, mid-position valve | 650                              | ■    | –                 | ■  | ■      | ■   | ■   | ■ |
|   | <b>Valve with central plug</b>  |  |                                   |                                  |      |                   |    |        |     |     |   |
|   |  | VSVA-B-T32...A2                                | 2x 3/2-way valve, single solenoid | 600                              | ■    | –                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-M52...A2                                | 5/2-way valve, single solenoid    | 750                              | ■    | –                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-B52...A2                                | 5/2-way valve, double-solenoid    | 750                              | ■    | –                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-P53...A2                                | 5/3-way valve, mid-position valve | 650                              | ■    | –                 | –  | ■      | –   | –   | – |
|   | <b>Pneumatic valve</b>  |  |                                   |                                  |      |                   |    |        |     |     |   |
|   |  | VSPA-B-T32...A2                                | 2x 3/2-way valve, monostable      | 550                              | ■    | –                 | –  | –      | –   | –   | – |
|   |   | VSPA-B-M52...A2                                | 5/2-way valve, monostable         | 700                              | ■    | –                 | –  | –      | –   | –   | – |
|   |   | VSPA-B-B52...A2                                | 5/2-way valve, bistable           | 700                              | ■    | –                 | –  | –      | –   | –   | – |
|   |   | VSPA-B-P53...A2                                | 5/3-way valve, mid-position valve | 650                              | ■    | –                 | –  | –      | –   | –   | – |
|   | Valve size<br>26 mm   | <b>Valve with pilot interface to ISO 15218</b> |                                   |                                  |      |                   |    |        |     |     |   |
|   |   | VSVA-B-T32...A1                                | 2x 2/2-way valve, single solenoid | 1350                             | –    | ■                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-T32...A1                                | 2x 3/2-way valve, single solenoid | 1250                             | –    | ■                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-M52...A1                                | 5/2-way valve, single solenoid    | 1400                             | –    | ■                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-B52...A1                                | 5/2-way valve, double-solenoid    | 1400                             | –    | ■                 | ■  | ■      | ■   | ■   | ■ |
|   |   | VSVA-B-P53...A1                                | 5/3-way valve, mid-position valve | 1400                             | –    | ■                 | ■  | ■      | ■   | ■   | ■ |
| <b>Valve with pilot interface to ISO 15218, with position detection</b>             |   |  |                                   |                                  |      |                   |    |        |     |     |   |
|  |   | VSVA-B-M52...A1                                | 5/2-way valve, single solenoid    | 1400                             | –    | ■                 | –  | ■      | –   | –   | – |
| <b>Valve with square plug type B to industry standard</b>                           |   |  |                                   |                                  |      |                   |    |        |     |     |   |
|  |   | VSVA-B-M52...A1                                | 5/2-way valve, single solenoid    | 915                              | –    | ■                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-B52...A1                                | 5/2-way valve, double-solenoid    | 915                              | –    | ■                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-P53...A1                                | 5/3-way valve, mid-position valve | 924                              | –    | ■                 | –  | ■      | –   | –   | – |
| <b>Valve with central plug</b>  |   |  |                                   |                                  |      |                   |    |        |     |     |   |
|  |   | VSVA-B-T32...A1                                | 2x 3/2-way valve, single solenoid | 1250                             | –    | ■                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-M52...A1                                | 5/2-way valve, single solenoid    | 1400                             | –    | ■                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-B52...A1                                | 5/2-way valve, double-solenoid    | 1400                             | –    | ■                 | –  | ■      | –   | –   | – |
|   |   | VSVA-B-P53...A1                                | 5/3-way valve, mid-position valve | 1400                             | –    | ■                 | –  | ■      | –   | –   | – |
| <b>Pneumatic valve</b>  |   |  |                                   |                                  |      |                   |    |        |     |     |   |
|  | VSPA-B-T32...A1   | 2x 3/2-way valve, monostable                   | 1250                              | –                                | ■    | –                 | –  | –      | –   | –   |   |
|   | VSPA-B-M52...A1   | 5/2-way valve, monostable                      | 1400                              | –                                | ■    | –                 | –  | –      | –   | –   |   |
|   | VSPA-B-B52...A1   | 5/2-way valve, bistable                        | 1400                              | –                                | ■    | –                 | –  | –      | –   | –   |   |
|   | VSPA-B-P53...A1   | 5/3-way valve, mid-position valve              | 1400                              | –                                | ■    | –                 | –  | –      | –   | –   |   |

## Product range overview

| Plug  |        |            |       | Pilot air |          |   | → Page/Internet |
|---|--------|------------|-------|-----------|----------|---|-----------------|
| Square  |        | Round plug |       | Internal  | External |   |                 |
| Type C  | Type B | M8x1       | M12x1 |           |          |   |                 |
| <b>Valve with pilot interface to ISO 15218</b>                          |        |            |       |           |          |   |                 |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic spring return, normally closed                                      | 21              |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 21              |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 21              |
| ■   |        | –          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 21              |
| ■   |        | –          | ■     | ■         | ■        | Normally closed, exhausted, open  | 21              |
| <b>Valve with central plug</b>  |        |            |       |           |          |   |                 |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 49              |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 49              |
| –   |        | ■          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 49              |
| –   |        | ■          | ■     | ■         | ■        | Normally closed, exhausted, open  | 49              |
| <b>Pneumatic valve</b>  |        |            |       |           |          |   |                 |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 49              |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 49              |
| –   |        | ■          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 49              |
| –   |        | ■          | ■     | ■         | ■        | Normally closed, exhausted, open  | 49              |
| <b>Valve with pilot interface to ISO 15218</b>                          |        |            |       |           |          |   |                 |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic spring return, normally closed                                      | 31              |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 31              |
| ■   |        | –          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 31              |
| ■   |        | –          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 31              |
| ■   |        | –          | ■     | ■         | ■        | Normally closed, exhausted, open  | 31              |
| <b>Valve with pilot interface to ISO 15218, with position detection</b> |        |            |       |           |          |   |                 |
| ■   |        | –          | –     | –         | ■        | Inductive sensor for monitoring the normal position of the piston spool valve | 41              |
| <b>Valve with square plug type B to industry standard</b>               |        |            |       |           |          |   |                 |
| –   | ■      | –          | –     | ■         | –        | Pneumatic or mechanical spring return   | 45              |
| –   | ■      | –          | –     | ■         | –        | Double solenoid   | 45              |
| –   | ■      | –          | –     | ■         | –        | Normally exhausted  | 45              |
| <b>Valve with central plug</b>  |        |            |       |           |          |   |                 |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 54              |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 54              |
| –   |        | ■          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 54              |
| –   |        | ■          | ■     | ■         | ■        | Normally closed, exhausted, open  | 54              |
| <b>Pneumatic valve</b>  |        |            |       |           |          |   |                 |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic spring return, normally closed, open, 1x open/1x closed             | 63              |
| –   |        | ■          | ■     | ■         | ■        | Pneumatic or mechanical spring return   | 63              |
| –   |        | ■          | ■     | ■         | ■        | Dominance: 1st signal or at 14  | 63              |
| –   |        | ■          | ■     | ■         | ■        | Normally closed, exhausted, open  | 63              |

## Type codes

|             |   |  |
|-------------|---|--|
| <b>001</b>  | <b>Series</b>   |  |
| <b>VSVA</b> | Standards-based valve VSVA  |  |
| <b>002</b>  | <b>Directional control valve type</b>                             |  |
| <b>B</b>    | Sub-base valve  |  |
| <b>003</b>  | <b>Valve function</b>   |  |
| <b>T22C</b> | 2x2/2-way valve, normally closed                                  |  |
| <b>T32U</b> | 2x3/2-way valve, normally open                                    |  |
| <b>T32F</b> | 2x3/2-way valve, normally open, reversible                        |  |
| <b>T32C</b> | 2x3/2-way valve, normally closed                                  |  |
| <b>T32N</b> | 2x3/2-way valve, normally closed, reversible                      |  |
| <b>T32H</b> | 2x3/2-way valve, 1x normally closed, 1x normally open             |  |
| <b>T32W</b> | 2x3/2-way valve, 1x normally closed, 1x normally open, reversible |  |
| <b>B52</b>  | 5/2-way valve, double solenoid/bistable                           |  |
| <b>M52</b>  | 5/2-way valve, single solenoid/monostable                         |  |
| <b>D52</b>  | 5/2-way valve, double solenoid/bistable, dominant signal          |  |
| <b>P53U</b> | 5/3-way valve, mid-position pressurised                           |  |
| <b>P53E</b> | 5/3-way valve, mid-position exhausted                             |  |
| <b>P53C</b> | 5/3-way valve, mid-position closed                                |  |
| <b>004</b>  | <b>Reset method for monostable/single solenoid valves</b>         |  |
|             | None  |  |
| <b>A</b>    | Pneumatic spring  |  |
| <b>M</b>    | Mechanical spring   |  |

|            |                                  |  |
|------------|----------------------------------|--|
| <b>005</b> | <b>Pilot air</b>                 |  |
|            | Internal                         |  |
| <b>Z</b>   | External                         |  |
| <b>006</b> | <b>Manual override</b>           |  |
| <b>D</b>   | Non-detenting, detenting         |  |
| <b>H</b>   | Non-detenting                    |  |
| <b>007</b> | <b>Pneumatic connection</b>      |  |
| <b>A2</b>  | 18 mm (02) ISO 15407-1/-2        |  |
| <b>A1</b>  | 26 mm (01) ISO 15407-1/-2        |  |
| <b>D1</b>  | 42 mm (1) ISO 5599-1/-2          |  |
| <b>D2</b>  | 52 mm (2) ISO 5599-1/-2          |  |
| <b>008</b> | <b>Nominal operating voltage</b> |  |
| <b>1</b>   | 24 V DC                          |  |
| <b>009</b> | <b>Electrical connection</b>     |  |
| <b>R2</b>  | Central connector M8             |  |
| <b>R5</b>  | Central plug M12                 |  |
| <b>010</b> | <b>Display</b>                   |  |
| <b>L</b>   | LED                              |  |

## Type codes

|      |                            |  |
|------|----------------------------|--|
| 001  | Series                     |  |
| VSVA | Standards-based valve VSVA |  |

|     |                                |  |
|-----|--------------------------------|--|
| 002 | Directional control valve type |  |
| B   | Sub-base valve                 |  |

|     |                                |  |
|-----|--------------------------------|--|
| 003 | Design principle               |  |
|     | Piston spool                   |  |
| K   | Piston spool with sealing ring |  |

|      |   |  |
|------|---|--|
| 004  | Valve function  |  |
| T22C | 2x2/2-way valve, normally closed                                  |  |
| T32U | 2x3/2-way valve, normally open                                    |  |
| T32F | 2x3/2-way valve, normally open, reversible                        |  |
| T32C | 2x3/2-way valve, normally closed                                  |  |
| T32N | 2x3/2-way valve, normally closed, reversible                      |  |
| T32H | 2x3/2-way valve, 1x normally closed, 1x normally open             |  |
| T32W | 2x3/2-way valve, 1x normally closed, 1x normally open, reversible |  |
| B52  | 5/2-way valve, double solenoid/bistable                           |  |
| M52  | 5/2-way valve, single solenoid/monostable                         |  |
| D52  | 5/2-way valve, double solenoid/bistable, dominant signal          |  |
| P53U | 5/3-way valve, mid-position pressurised                           |  |
| P53E | 5/3-way valve, mid-position exhausted                             |  |
| P53C | 5/3-way valve, mid-position closed                                |  |

|     |  |  |
|-----|--|--|
| 005 | Reset method for monostable/single solenoid valves |  |
|     | None   |  |
| A   | Pneumatic spring                                   |  |
| M   | Mechanical spring                                  |  |

|     |           |  |
|-----|-----------|--|
| 006 | Pilot air |  |
|     | Internal  |  |
| Z   | External  |  |

|     |                          |  |
|-----|--------------------------|--|
| 007 | Manual override          |  |
|     | None                     |  |
| D   | Non-detenting, detenting |  |
| H   | Non-detenting            |  |

|     |                           |  |
|-----|---------------------------|--|
| 008 | Pneumatic connection      |  |
| A2  | 18 mm (02) ISO 15407-1/-2 |  |
| A1  | 26 mm (01) ISO 15407-1/-2 |  |
| D1  | 42 mm (1) ISO 5599-1/-2   |  |

|     |                           |  |
|-----|---------------------------|--|
| 009 | Nominal operating voltage |  |
|     | None                      |  |
| 1   | 24 V DC                   |  |
| 1A  | 24 V AC/50-60 Hz          |  |
| 2A  | 110 V AC/50-60 Hz         |  |
| 3A  | 230 V AC/50-60 Hz         |  |
| 5   | 12 V DC                   |  |

|     |   |  |
|-----|---|--|
| 010 | Electrical connection                                     |  |
| B2  | Connection pattern type B, industry standard              |  |
| C1  | Plug pattern type C, to EN 175301-803                     |  |
| P1  | Interface for pilot valve size 15 mm to ISO 15218 (CNOMO) |  |
| R3  | Individual plug M12, to EN 61076-2-101                    |  |

|     |   |  |
|-----|---|--|
| 011 | Position sensing                              |  |
|     | None  |  |
| APC | Proximity sensor, PNP with open cable ends    |  |
| APP | Proximity sensor, PNP with M8 plug            |  |
| APX | Proximity sensor, PNP with cable and plug M12 |  |
| ANC | Proximity sensor, NPN with open cable end     |  |
| ANP | Proximity sensor, NPN with plug M8            |  |

## Type codes

|             |   |
|-------------|---|
| <b>001</b>  | <b>Series</b>                           |
| <b>VSPA</b> | Standards-based valve to ISO 15407-1/-2 |

|            |                                       |
|------------|---------------------------------------|
| <b>002</b> | <b>Directional control valve type</b> |
| <b>B</b>   | Sub-base valve                        |

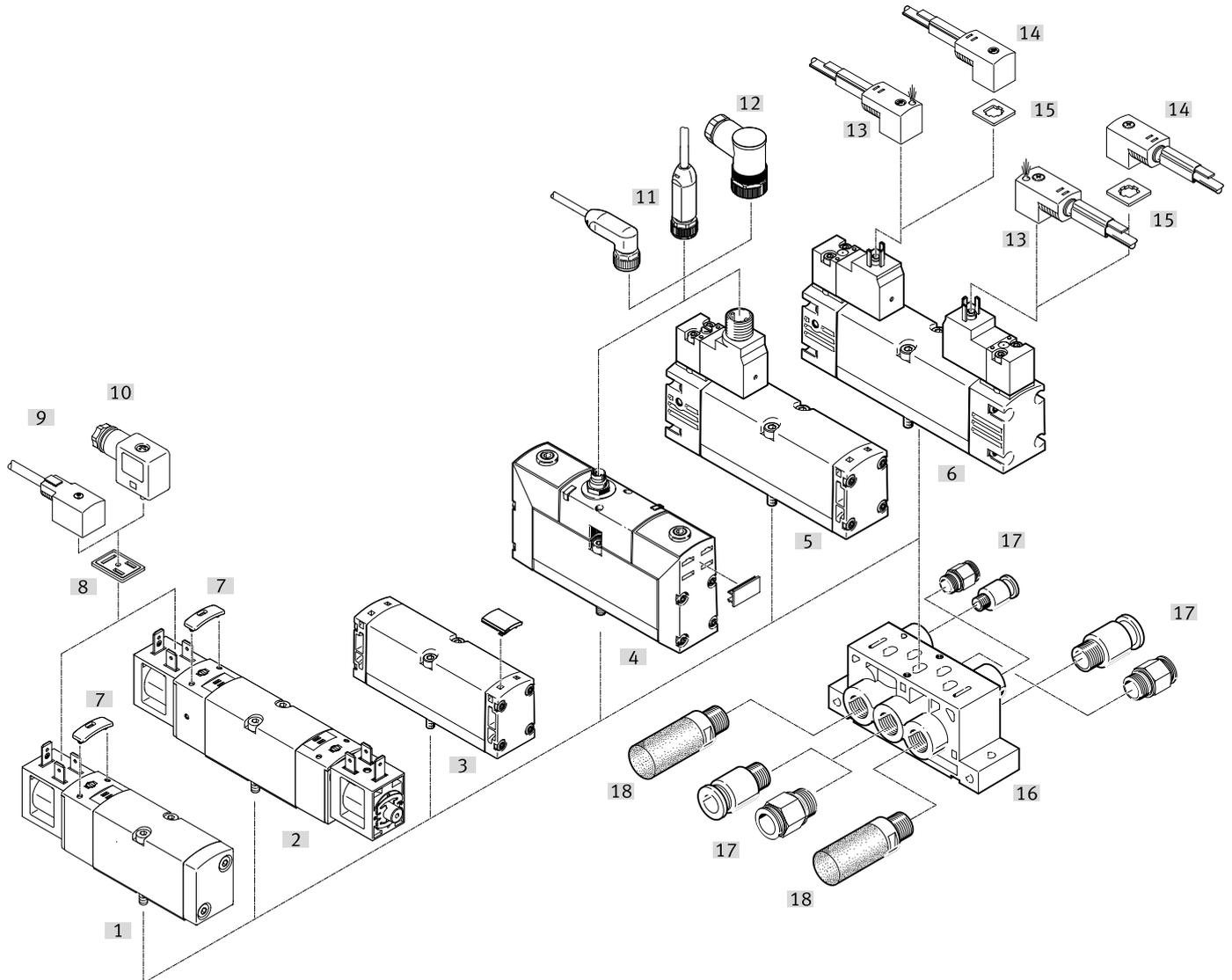
|             |  |
|-------------|--|
| <b>003</b>  | <b>Valve function</b>                                    |
| <b>T32U</b> | 2x3/2-way valve, normally open                           |
| <b>T32C</b> | 2x3/2-way valve, normally closed                         |
| <b>T32H</b> | 2x3/2-way valve, 1x normally closed, 1x normally open    |
| <b>M52</b>  | 5/2-way valve, single solenoid/monostable                |
| <b>B52</b>  | 5/2-way valve, double solenoid/bistable                  |
| <b>D52</b>  | 5/2-way valve, double solenoid/bistable, dominant signal |
| <b>P53U</b> | 5/3-way valve, mid-position pressurised                  |
| <b>P53E</b> | 5/3-way valve, mid-position exhausted                    |
| <b>P53C</b> | 5/3-way valve, mid-position closed                       |

|            |   |
|------------|---|
| <b>004</b> | <b>Reset method for monostable/single solenoid valves</b> |
|            | None  |
| <b>A</b>   | Pneumatic spring  |
| <b>M</b>   | Mechanical spring   |

|            |                             |
|------------|-----------------------------|
| <b>005</b> | <b>Pneumatic connection</b> |
| <b>A2</b>  | 18 mm (02) ISO 15407-1/-2   |
| <b>A1</b>  | 26 mm (01) ISO 15407-1/-2   |

## Peripherals overview

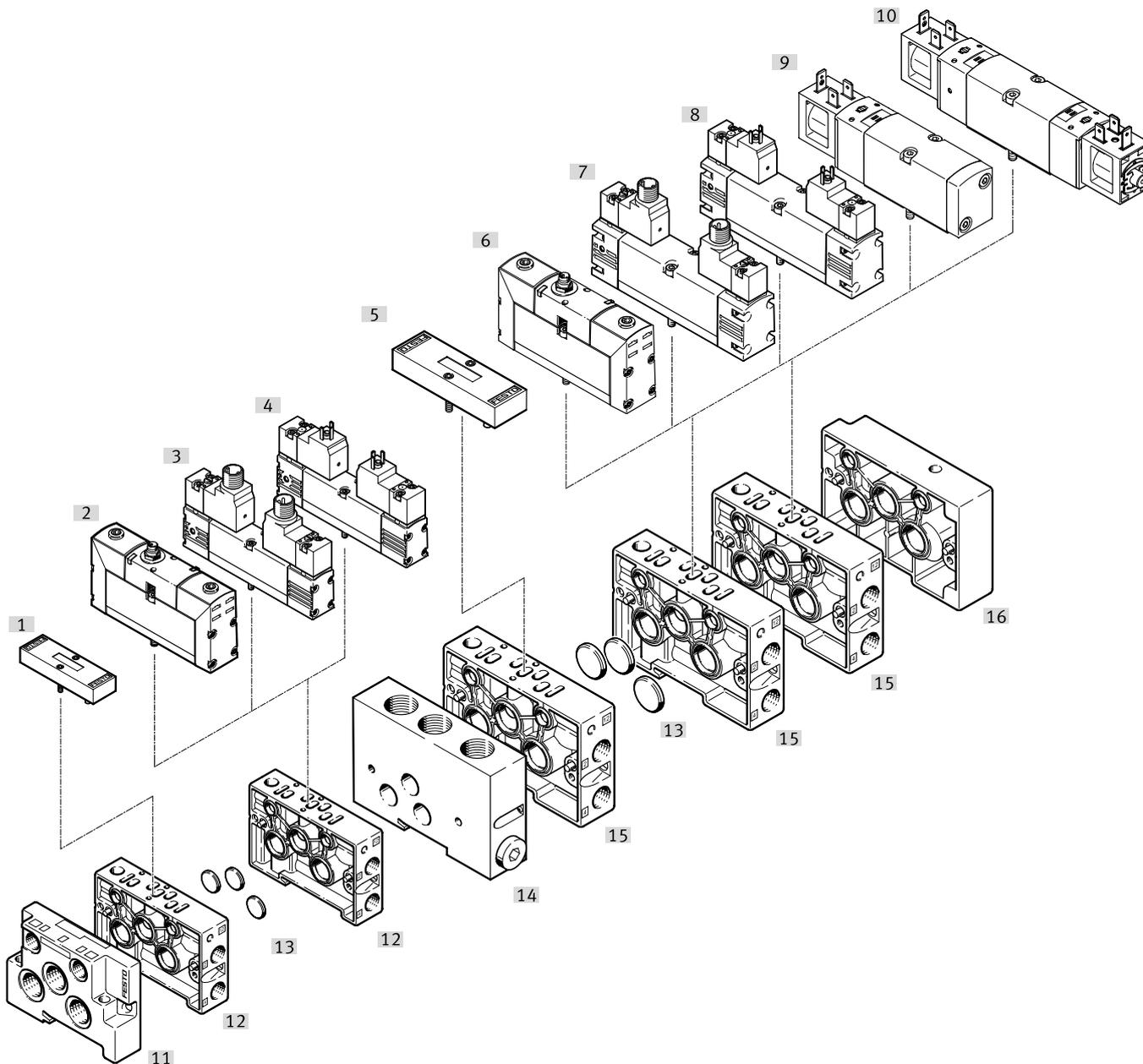
## Individual mounting



|      | Type                | Brief description | → Page/Internet  |     |
|------|---------------------|-------------------|--|-----|
| [1]  | Solenoid valve      | VSVA-BK...B2      | With square plug with plug pattern type B                  | 45  |
| [2]  | Solenoid valve      | VSVA-BK...B2      | With square plug with plug pattern type B                  | 45  |
| [3]  | Pneumatic valve     | VSPA              | Port pattern to ISO 15407-1                                | 60  |
| [4]  | Solenoid valve      | VSVA-...R         | With round plug  | 49  |
| [5]  | Solenoid valve      | VSVA-...R3        | With interface to ISO 15218 with round plug                | 21  |
| [6]  | Solenoid valve      | VSVA-...C         | With interface to ISO 15218 and plug pattern type C        | 21  |
| [7]  | Cover cap           | VAMC              | For manual override, non-detenting or covered              | 84  |
| [8]  | Illuminating seal   | MEB-LD            | For indicating the signal status, with plug pattern type B | 85  |
| [9]  | Connecting cable    | KMF-1...-LED      | With plug pattern type B                                   | 85  |
| [10] | Plug socket         | MSSD-F            | With plug pattern type B                                   | 85  |
| [11] | Connecting cable    | NEBA              | For valves with round plug                                 | 85  |
| [12] | Plug socket         | NECB              | Angled   | <?> |
| [13] | Connecting cable    | KMEB...-LED       | With plug pattern type C, with PVC casing and LED          | 85  |
| [14] | Connecting cable    | KMEB              | With plug pattern type C, with PVC casing                  | 85  |
| [15] | Illuminating seal   | MEB-LD            | For indicating the signal status, with plug pattern type C | 85  |
| [16] | Individual sub-base | NAS               | With lateral ports   | 72  |
| [17] | Push-in fitting     | QS                | For standard O.D. tubing                                   | 84  |
| [18] | Silencer            | U                 | For fitting in exhaust ports                               | 84  |

## Peripherals overview

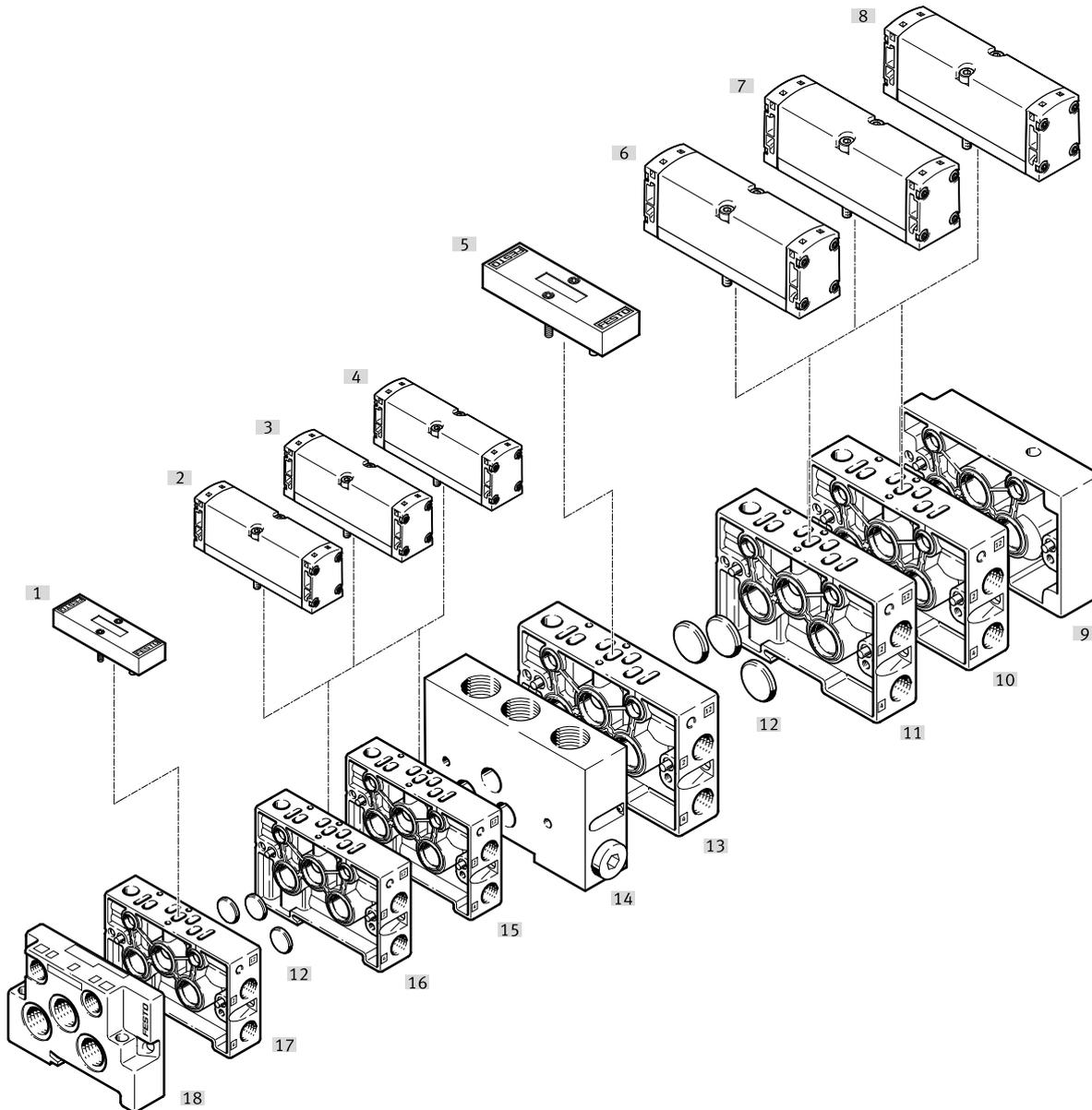
### Manifold assembly – Solenoid valves



|      | Type               | Brief description | → Page/Internet  |    |
|------|--------------------|-------------------|--|----|
| [1]  | Cover plate        | NDV-02-VDMA       | For valve size 18 mm, vacant or spare position                     | 82 |
| [2]  | Solenoid valve     | VSVA...A2...R     | Valve size 18 mm with round plug                                   | 49 |
| [3]  | Solenoid valve     | VSVA...A2...R3    | Valve size 18 mm, interface to ISO 15218 with round plug           | 21 |
| [4]  | Solenoid valve     | VSVA...A2...C     | Valve size 18 mm, interface to ISO 15218 with plug pattern type C  | 21 |
| [5]  | Cover plate        | NDV-01-VDMA       | For valve size 26 mm, vacant or spare position                     | 82 |
| [6]  | Solenoid valve     | VSVA...A1...R     | Valve size 26 mm with round plug                                   | 54 |
| [7]  | Solenoid valve     | VSVA...A1...R3    | Valve size 26 mm, interface to ISO 15218 with round plug           | 31 |
| [8]  | Solenoid valve     | VSVA...A1...C     | Valve size 26 mm, interface to ISO 15218 with plug pattern type C  | 31 |
| [9]  | Solenoid valve     | VSVA-BK...B2      | Valve size 26 mm, with square plug with plug pattern type B        | 45 |
| [10] | Solenoid valve     | VSVA-BK...B2      | Valve size 26 mm, with square plug with plug pattern type B        | 45 |
| [11] | End plate          | NEV               | For sealing the manifold sub-bases valve size 18 mm                | 73 |
| [12] | Manifold sub-base  | NAW-1/8-02-VDMA   | Valve size 18 mm with lateral ports 2 and 4                        | 73 |
| [13] | Isolating disc     | NSC               | For creating pressure zones or for sealing ports on the end plates | 82 |
| [14] | Intermediate plate | NZV-01/02-VDMA    | For connecting valve size 18 mm with valve size 26 mm              | 74 |
| [15] | Manifold sub-base  | NAW-1/4-01-VDMA   | Valve size 26 mm with lateral ports 2 and 4                        | 73 |
| [16] | End plate          | NEV               | For sealing the manifold sub-bases valve size 26 mm                | 73 |

## Peripherals overview

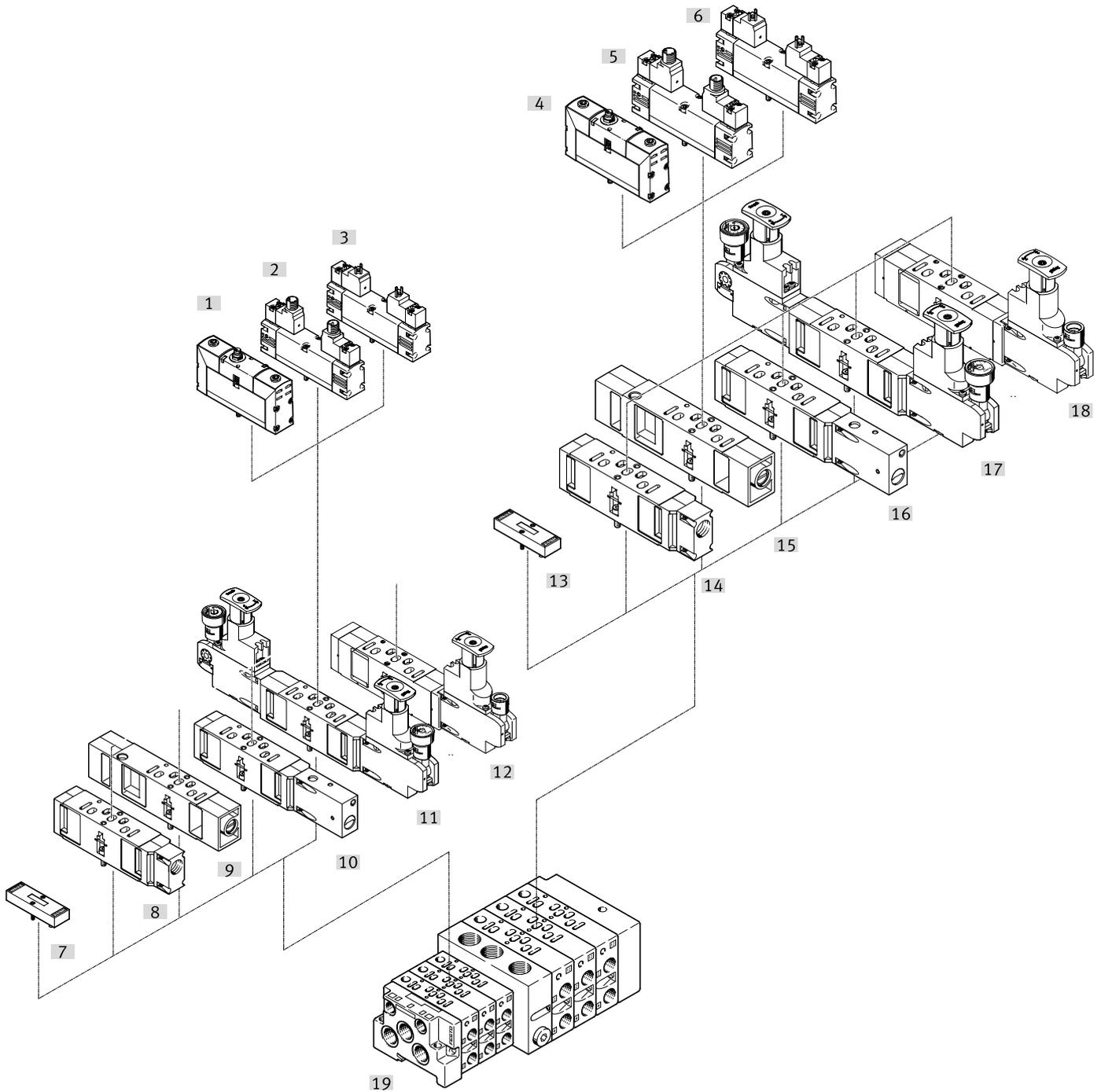
### Manifold assembly – Pneumatic valves



|      | Type               | Brief description | → Page/Internet  |    |
|------|--------------------|-------------------|--|----|
| [1]  | Cover plate        | NDV-02-VDMA       | For valve size 18, vacant or spare position                        | 82 |
| [2]  | Pneumatic valve    | VSPA...A2         | Valve size 18  | 60 |
| [3]  |                    |                   |  |    |
| [4]  |                    |                   |  |    |
| [5]  | Cover plate        | NDV-01-VDMA       | For valve size 26, vacant or spare position                        | 82 |
| [6]  | Pneumatic valve    | VSPA...A1         | Valve size 26  | 63 |
| [7]  |                    |                   |  |    |
| [8]  |                    |                   |  |    |
| [9]  | End plate          | NEV               | For sealing the manifold sub-bases valve size 26 mm                | 73 |
| [10] | Manifold sub-base  | NAW-1/4-01-VDMA   | Valve size 26 with lateral ports 2 and 4                           | 73 |
| [11] |                    |                   |  |    |
| [12] | Isolating disc     | NSC               | For creating pressure zones or for sealing ports on the end plates | 82 |
| [13] | Manifold sub-base  | NAW-1/4-01-VDMA   | Valve size 26 with lateral ports 2 and 4                           | 73 |
| [14] | Intermediate plate | NZV-01/02-VDMA    | For connecting valve size 18 mm with valve size 26 mm              | 74 |
| [15] | Manifold sub-base  | NAW-1/8-02-VDMA   | Valve size 18 with lateral ports 2 and 4                           | 73 |
| [16] |                    |                   |  |    |
| [17] |                    |                   |  |    |
| [18] | End plate          | NEV               | For sealing the manifold sub-bases valve size 18 mm                | 73 |

## Peripherals overview

### Manifold assembly with vertical stacking

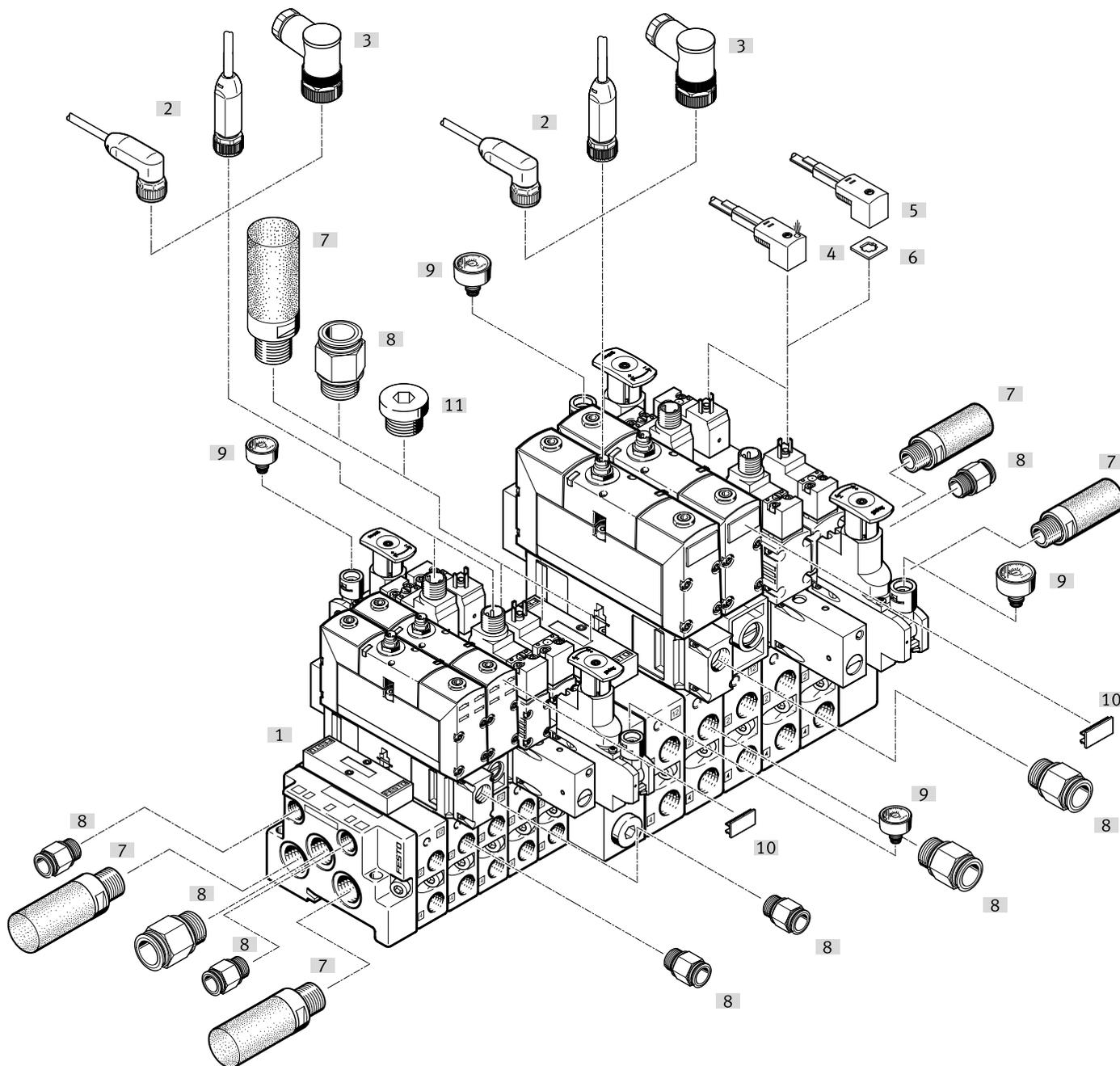


## Peripherals overview

|      | Type                             | Brief description | → Page/Internet  |    |
|------|----------------------------------|-------------------|--|----|
| [1]  | Solenoid valve                   | VSVA...A2...R     | Valve size 18 mm with round plug   | 49 |
| [2]  | Solenoid valve                   | VSVA...A2...R3    | Valve size 18 mm, interface to ISO 15218 with round plug                                 | 21 |
| [3]  | Solenoid valve                   | VSVA...A2...C     | Valve size 18 mm, interface to ISO 15218 with plug pattern type C                        | 21 |
| [4]  | Solenoid valve                   | VSVA...A1...R     | Valve size 26 mm with round plug   | 54 |
| [5]  | Solenoid valve                   | VSVA...A1...R3    | Valve size 26 mm, interface to ISO 15218 with round plug                                 | 31 |
| [6]  | Solenoid valve                   | VSVA...A1...C     | Valve size 26 mm, interface to ISO 15218 with plug pattern type C                        | 31 |
| [7]  | Cover plate                      | NDV               | As vacant or spare position, for valve size 18 mm  | 82 |
| [8]  | Vertical supply plate            | VABF...P1-A3      | For intermediate air supply, for valve size 18 mm  | 70 |
| [9]  | Throttle plate                   | VABF...F1-B1      | For flow control in ducts 3 and 5, for valve size 18 mm                                  | 69 |
| [10] | Vertical pressure shut-off plate | VABF...L1-D1      | With switch for manually shutting off duct 1, for valve size 18 mm                       | 71 |
| [11] | Regulator plate                  | VABF...R...-C2    | With 2 pressure regulators for working ports 2 and 4, for valve size 18 mm               | 67 |
| [12] | Regulator plate                  | VABF...R...-C2    | With one pressure regulator for working ports 2 or 4 or for duct 1, for valve size 18 mm | 67 |
| [13] | Cover plate                      | NDV               | As vacant or spare position, for valve size 26 mm  | 82 |
| [14] | Vertical supply plate            | VABF...P1-A3      | For intermediate air supply, for valve size 26 mm  | 70 |
| [15] | Throttle plate                   | VABF...F1-B1      | For flow control in ducts 3 and 5, for valve size 26 mm                                  | 69 |
| [16] | Vertical pressure shut-off plate | VABF...L1-D1      | With switch for manually shutting off duct 1, for valve size 26 mm                       | 71 |
| [17] | Regulator plate                  | VABF...R...-C2    | With 2 pressure regulators for working ports 2 and 4, for valve size 26 mm               | 67 |
| [18] | Regulator plate                  | VABF...R...-C2    | With one pressure regulator for working ports 2 or 4 or for duct 1, for valve size 26 mm | 67 |
| [19] | Valve manifold assembly          | VTIA              | Combination of manifold sub-bases, isolating disc, intermediate plate, end plates        | –  |

## Peripherals overview

### Manifold assembly

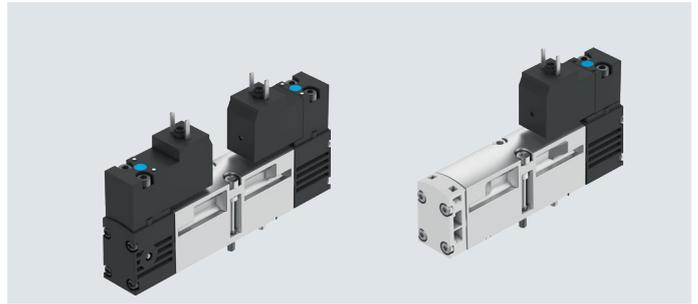


|      | Type                    | Brief description | → Page/Internet  |     |
|------|-------------------------|-------------------|--|-----|
| [1]  | Valve manifold assembly | VTIA              | Combination of manifold sub-bases, isolating disc, intermediate plate, end plates, valves, vertical interlinking | –   |
| [2]  | Connecting cable        | NEBA              | For valves with round plug   | 85  |
| [3]  | Plug socket             | NECB              | Angled   | <?> |
| [4]  | Connecting cable        | KMEB...-LED       | With PVC casing and LED  | 85  |
| [5]  | Connecting cable        | KMEB              | With PVC casing  | 85  |
| [6]  | Illuminating seal       | MEB-LD            | For displaying the signal status   | 85  |
| [7]  | Silencer                | U                 | For fitting in exhaust ports   | 84  |
| [8]  | Push-in fitting         | QS                | For standard O.D. tubing   | 84  |
| [9]  | Pressure gauge          | PAGN-26-10-P10    | Can be connected to the pressure regulator plate   | 84  |
| [10] | Inscription labels      | IBS-9x20          | For identifying the valves VSVA with round plug  | 84  |
| [11] | Blanking plug           | B                 | For sealing ports that are not required  | 84  |

## Datasheet – Valve size 18 mm

-  - Flow rate  
max. 750 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



| General technical data               |   | 2x 2/2-way valve  | 2x 3/2-way valve  | 5/2-way valve                             | 5/3-way valve |   |
|--------------------------------------|---|---|---|---|---------------|---|
| Valve function                       |   |   |   |   |               |   |
| Normal position                      |   | C <sup>1)</sup>   | C <sup>1)</sup> , U <sup>2)</sup> , H <sup>4)</sup> , N <sup>5)</sup> , F <sup>6)</sup> , W <sup>7)</sup> | –   | –             | C <sup>1)</sup> , U <sup>2)</sup> , E <sup>3)</sup> |
| Stable position                      |   | Monostable  | Monostable  | Monostable                                | Bistable      | Monostable  |
| Pneumatic spring return              |   | Yes   | Yes   | Yes                                       | –             | No  |
| Mechanical spring return             |   | No  | No  | Yes                                       | –             | Yes   |
| Design                               |   | Piston spool  |   |   |               |   |
| Overlap                              |   | Positive overlap  |   |   |               |   |
| Sealing principle                    |   | Soft  |   |   |               |   |
| Actuation type                       |   | Electrical  |   |   |               |   |
| Type of control                      |   | Piloted   |   |   |               |   |
| Pilot interface                      |   | To ISO 15218  |   |   |               |   |
| Pilot air supply                     |   | Internal or external  |   |   |               |   |
| Pilot air supply, exhaust air        |   | Not ducted as per standard, or ducted                           |   |   |               |   |
| Flow direction                       |   | Not reversible or reversible                                    | Not reversible or only reversible   | Reversible with external pilot air supply |               |   |
| Exhaust air function                 |   | Can be throttled  |   |   |               |   |
| Manual override                      |   | Non-detenting, non-detenting/detenting                          |   |   |               |   |
| Type of mounting                     |   | On sub-base   |   |   |               |   |
| Mounting position                    |   | Any   |   |   |               |   |
| Nominal width                        | [mm]  | 5   |   |   |               |   |
| Valve size                           | [mm]  | 18  |   |   |               |   |
| Ports on the sub-base                | 1, 2, 3, 4, 5<br>12, 14                       | G1/8<br>M5  |   |   |               |   |
| Tightening torque for valve mounting | [Nm]  | 0.9 ... 1.1   |   |   |               |   |
| Product weight                       | Without pilot valve [g]<br>Solenoid valve [g] | 98<br>174   | 98<br>174   | 89<br>127                                 | 98<br>174     | 98<br>174   |
| Noise level                          | [dB (A)]                                      | 85  |   |   |               |   |
| Conforms to standard                 |   | ISO 15407-1, VDMA 24563 and for pilot valve interface ISO 15218 |   |   |               |   |

- 1) C = Normally closed  
 2) U = Normally open  
 3) E = Normally exhausted  
 4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open  
 5) N=Normally closed, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1  
 6) F=Normally open, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1  
 7) W=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1

| Flow rates                                |         | 2x 2/2-way valve | 2x 3/2-way valve | 5/2-way valve | 5/3-way valve |
|---|---------|------------------|------------------|---------------|---------------|
| Valve function                            |         |                  |                  |               |               |
| Flow rate of valve                        | [l/min] | 700              | 600              | 750           | 650           |
| Flow rate of valve on individual sub-base | [l/min] | 450              | 450              | 550           | 500           |
| Flow rate of pneumatically linked valve   | [l/min] | 500              | 400              | 550           | 450           |
| Standard nominal flow rate                | [l/min] | 500              | 400              | 550           | 450           |

## Datasheet – Valve size 18 mm

| Switching times [ms]           |                   | Switching time on | Switching time off | Switching time changeover | Switching time changeover (dominant) |
|--------------------------------|-------------------|-------------------|--------------------|---------------------------|--------------------------------------|
| 2x 2/2-way valve               |                   | 13                | 21                 | –                         | –                                    |
| 2x 3/2-way valve               |                   | 13                | 21                 | –                         | –                                    |
| 2x 3/2-way valve, reversible   |                   | 21                | 13                 | –                         | –                                    |
| 5/2-way valve, single solenoid | Pneumatic spring  | 21                | 19                 | –                         | –                                    |
|                                | Mechanical spring | 17                | 35                 | –                         | –                                    |
| 5/2-way valve, double solenoid |                   | –                 | –                  | 18                        | 25                                   |
| 5/3-way valve                  |                   | 18                | 30                 | 20                        | –                                    |

| Safety characteristics                |      |  |             |                               |                                |
|---------------------------------------|------|--|-------------|-------------------------------|--------------------------------|
| Type                                  |      | VSVA-...-1C1   | VSVA-...-P1 | VSVA-...-5C1<br>VSVA-...-1AC1 | VSVA-...-2AC1<br>VSVA-...-3AC1 |
| Max. positive test pulse with logic 0 | [µs] | 1800   | –           | –                             | –                              |
| Max. negative test pulse with logic 1 | [µs] | 800  | –           | –                             | –                              |
| Shock resistance                      |      | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                |             |                               |                                |
| Vibration resistant                   |      | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6 |             |                               |                                |

| Operating and environmental conditions                     |      |  |                           |                               |                                |
|--|------|--|---------------------------|-------------------------------|--------------------------------|
| Type   |      | VSVA-...-1C1   | VSVA-...-P1               | VSVA-...-5C1<br>VSVA-...-1AC1 | VSVA-...-2AC1<br>VSVA-...-3AC1 |
| Operating medium   |      | Compressed air to ISO 8573-1:2010 [7:4:4]  |                           |                               |                                |
| Pilot medium   |      | Compressed air to ISO 8573-1:2010 [7:4:4]  |                           |                               |                                |
| Note on the operating/pilot medium                         |      | Lubricated operation possible (in which case lubricated operation will always be required) |                           |                               |                                |
| Ambient temperature  | [°C] | –5 ... +50   |                           |                               |                                |
| Temperature of medium                                      | [°C] | –5 ... +50   |                           |                               |                                |
| Relative humidity  | [%]  | 0 ... 90   |                           |                               |                                |
| CE marking (see declaration of conformity) <sup>1)</sup>   |      | –  | –                         | –                             | To EU Low Voltage Directive    |
| UKCA marking (see declaration of conformity) <sup>1)</sup> |      | –  | –                         | –                             | To UK EMC regulations          |
| Approval <sup>2)</sup>                                     |      | c UL us - Recognized (OL)  | c UL us - Recognized (OL) | –                             | –                              |

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

2) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Datasheet – Valve size 18 mm

| Operating and control pressure |                           |       | 2x 2/2-way valve | 2x 3/2-way valve | 2x 3/2-way valve, reverse operation |
|--------------------------------|---------------------------|-------|------------------|------------------|-------------------------------------|
| Valve function                 |                           |       |                  |                  |                                     |
| Operating pressure             | Internal pilot air supply | [MPa] | 0.2 ... 1        | 0.2 ... 1        | 0.2 ... 1                           |
|                                |                           | [bar] | 2 ... 10         | 2 ... 10         | 2 ... 10                            |
|                                | External pilot air supply | [MPa] | 0.2 ... 1        | 0.2 ... 1        | -0.09 ... 1                         |
|                                |                           | [bar] | 2 ... 10         | 2 ... 10         | -0.9 ... 10                         |
| Pilot pressure <sup>1)</sup>   |                           | [MPa] | 0.3 ... 1        | 0.3 ... 1        | 0.3 ... 1                           |
|                                |                           | [bar] | 3 ... 10         | 3 ... 10         | 3 ... 10                            |

1) Pilot pressure dependent on operating pressure → graph

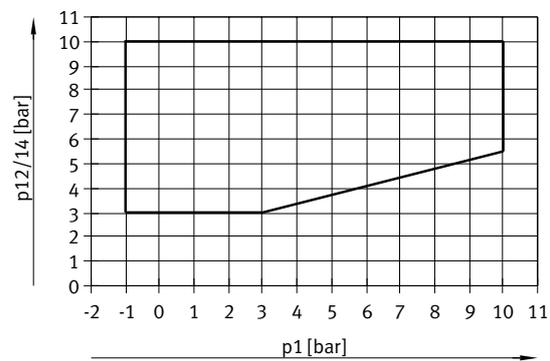
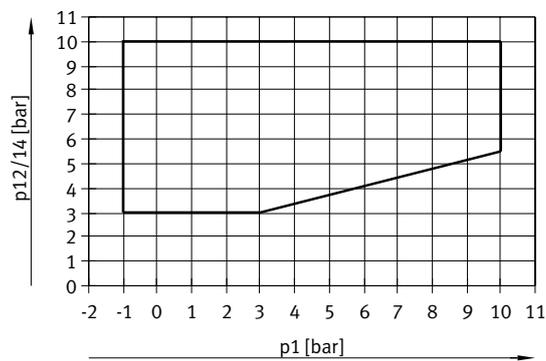
| Operating and control pressure |                           |       | 5/2-way valve    |                   | 5/3-way valve |
|--------------------------------|---------------------------|-------|------------------|-------------------|---------------|
| Valve function                 |                           |       | Pneumatic spring | Mechanical spring |               |
| Operating pressure             | Internal pilot air supply | [MPa] | 0.2 ... 1        | 0.3 ... 1         | 0.3 ... 1     |
|                                |                           | [bar] | 2 ... 10         | 3 ... 10          | 3 ... 10      |
|                                | External pilot air supply | [MPa] | -0.09 ... 1      | -0.09 ... 1       | -0.09 ... 1   |
|                                |                           | [bar] | -0.9 ... 10      | -0.9 ... 10       | -0.9 ... 10   |
| Pilot pressure <sup>1)</sup>   |                           | [MPa] | 0.3 ... 1        | 0.3 ... 1         | 0.3 ... 1     |
|                                |                           | [bar] | 3 ... 10         | 3 ... 10          | 3 ... 10      |

1) Pilot pressure dependent on operating pressure → graph

Minimum pilot pressure p<sub>12</sub>, p<sub>14</sub> as a function of operating pressure p<sub>1</sub> (external pilot air supply)

2x 3/2-way valve and 2/2-way valve

5/2-way valve and 5/3-way valve



## Electrical data

|                                  |  |        |  |
|----------------------------------|--|--------|--|
| Electrical connection            | Plug, square design to EN 175301-803, type C, 110 V/230 V AC with protective earth conductor |        | Plug M12, round design   |
| Operating voltage                | DC voltage   | [V DC] | 12, 24 +10%/-15%   |
|                                  | Alternating voltage  | [V AC] | 24, 110, 230 +10%/-15%   |
| Characteristic coil value        | DC voltage   | [W]    | 1.8  |
|                                  | Alternating voltage  | [VA]   | At 24 V AC:<br>• 3.1 pick-up power<br>• 2.3 holding power<br>At 110 V AC and 230 V AC:<br>• 2.9 pick-up power<br>• 2.1 holding power |
| Duty cycle                       | [%]  | 100    |  |
| Degree of protection to EN 60529 | IP65, Nema 4 (in combination with plug socket)   |        |  |

## Materials

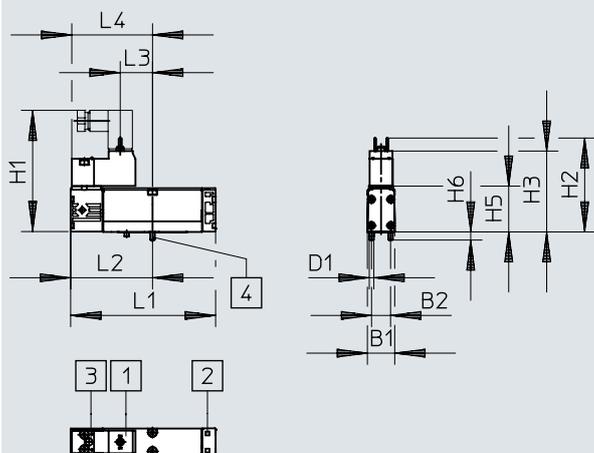
|                        |                    |
|------------------------|--------------------|
| Housing                | Die-cast aluminium |
| Seals                  | HNBR, NBR          |
| Screws                 | Galvanised steel   |
| Note on materials      | RoHs-compliant     |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L  |

## Datasheet – Valve size 18 mm

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way valve, single solenoid with plug type C



[1] Connection sizes and device plug to EN 175301-803, type C

[2] Slot for inscription label

[3] Manual override

[4] Captive retaining screws

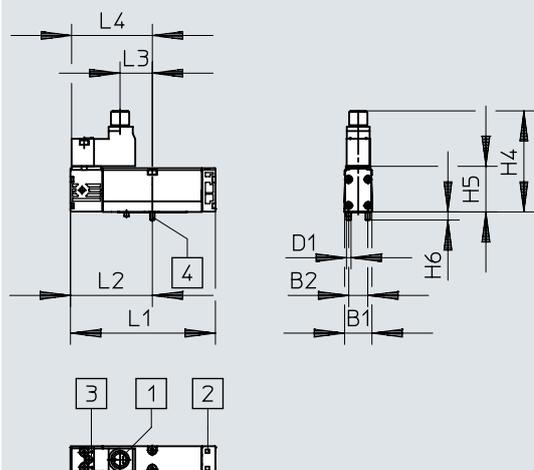


| Type            | B1 | B2   | D1 | H1   | H2   | H3   | H5   | H6  | L1   | L2   | L3   | L4   |
|-----------------|----|------|----|------|------|------|------|-----|------|------|------|------|
| VSVA-B-M52...C1 | 18 | 12.5 | M3 | 80.6 | 62.2 | 53.6 | 30.3 | 5.4 | 95.4 | 53.9 | 21.3 | 53.1 |

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way valve, single solenoid with M12 plug

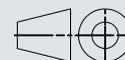


[1] Connection sizes and device plug, M12 plug

[2] Slot for inscription label

[3] Manual override

[4] Captive retaining screws



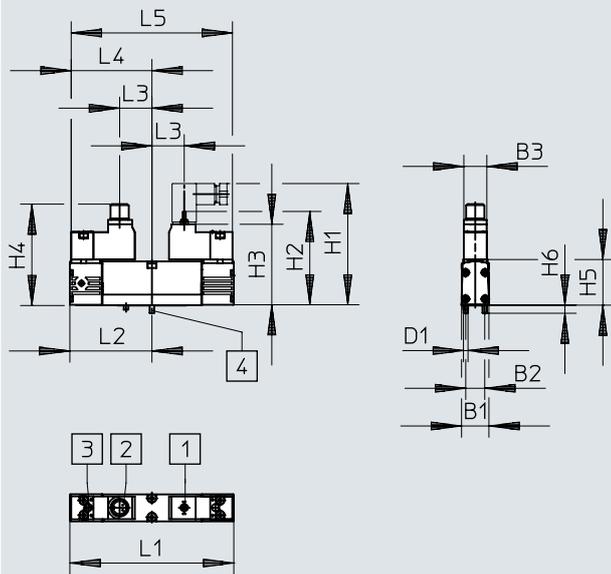
| Type            | B1 | B2   | D1 | H4 | H5   | H6  | L1   | L2   | L3   | L4   |
|-----------------|----|------|----|----|------|-----|------|------|------|------|
| VSVA-B-M52...R3 | 18 | 12.5 | M3 | 67 | 30.3 | 5.4 | 95.4 | 53.9 | 21.3 | 53.1 |

Datasheet – Valve size 18 mm

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

2x 2/2-way valve, 2x 3/2-way valve, 5/2-way valve double solenoid, 5/3-way valve



[1] Connection sizes and device plug to EN 175301-803, type C

[2] Connection sizes and connection for power supply, M12 plug

[3] Manual override

[4] Captive retaining screws

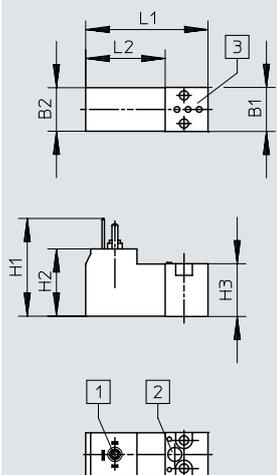
| Type        | B1 | B2   | B3   | D1 | H1   | H2   | H3   | H4 | H5   | H6  | L1    | L2   | L3   | L4   | L5    |
|-------------|----|------|------|----|------|------|------|----|------|-----|-------|------|------|------|-------|
| VSVA-B-T22C | 18 | 12.5 | 15.2 | M3 | 80.6 | 62.2 | 53.6 | 67 | 30.3 | 5.4 | 107.8 | 53.9 | 21.3 | 53.1 | 102.2 |
| VSVA-B-T32  |    |      |      |    |      |      |      |    |      |     |       |      |      |      |       |
| VSVA-B-B52  |    |      |      |    |      |      |      |    |      |     |       |      |      |      |       |
| VSVA-B-D52  |    |      |      |    |      |      |      |    |      |     |       |      |      |      |       |
| VSVA-B-P53  |    |      |      |    |      |      |      |    |      |     |       |      |      |      |       |

Datasheet – Valve size 18 mm

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

Pilot valve with plug type C, VSCS-...C1



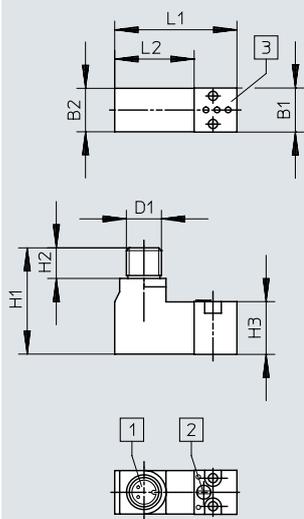
- [1] Connection sizes and device plug to EN 175301-803, type C
- [2] Manual override
- [3] Pneumatic connection pattern to ISO 15218

| Type       | B1   | B2 | D1 | H1   | H2   | H3   | L1   | L2   |
|------------|------|----|----|------|------|------|------|------|
| VSCS-...C1 | 15.2 | 15 | –  | 33.7 | 10.5 | 18.2 | 41.9 | 14.7 |

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

Pilot valve with M12 plug, VSCS-...R3



- [1] Connection sizes and device plug, M12 plug
- [2] Manual override
- [3] Pneumatic connection pattern to ISO 15218

| Type       | B1   | B2 | D1  | H1   | H2   | H3   | L1   | L2   |
|------------|------|----|-----|------|------|------|------|------|
| VSCS-...R3 | 15.2 | 15 | M12 | 36.7 | 10.6 | 18.2 | 41.9 | 27.2 |

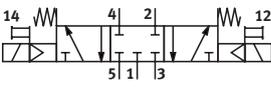
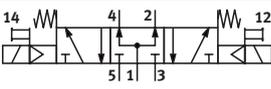
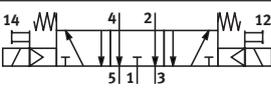
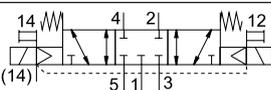
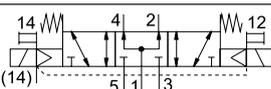
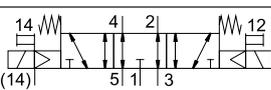
## Datasheet – Valve size 18 mm

| Ordering data – Pilot control fitted   |                |  |                           |          |        |                         |
|--|----------------|--|---------------------------|----------|--------|-------------------------|
| Code   | Circuit symbol |  | Part no.                  | Type     |        |                         |
| <b>2x 2/2-way solenoid valve</b>   |                |  |                           |          |        |                         |
| T22C   | –              | Order via online configurator                              | –                         | –        |        |                         |
| <b>2x 3/2-way solenoid valve, with pilot control with square plug, type C to EN 175301-803</b> |                |  |                           |          |        |                         |
| K  |                | Normal position:<br>2x normally closed                     | Internal pilot air supply | 24 V DC  | 546693 | VSVA-B-T32C-AH-A2-1C1   |
|  |                |  |                           | 12 V DC  | 547129 | VSVA-B-T32C-AH-A2-5C1   |
|  |                |  |                           | 230 V AC | 547209 | VSVA-B-T32C-AH-A2-3AC1  |
|  |                |  |                           | 110 V AC | 547169 | VSVA-B-T32C-AH-A2-2AC1  |
|  |                |  |                           | 24 V AC  | 547089 | VSVA-B-T32C-AH-A2-1AC1  |
| N  |                | Normal position:<br>2x normally open                       | Internal pilot air supply | 24 V DC  | 546695 | VSVA-B-T32U-AH-A2-1C1   |
|  |                |  |                           | 12 V DC  | 547131 | VSVA-B-T32U-AH-A2-5C1   |
|  |                |  |                           | 230 V AC | 547211 | VSVA-B-T32U-AH-A2-3AC1  |
|  |                |  |                           | 110 V AC | 547171 | VSVA-B-T32U-AH-A2-2AC1  |
|  |                |  |                           | 24 V AC  | 547091 | VSVA-B-T32U-AH-A2-1AC1  |
| H  |                | Normal position:<br>1x normally closed<br>1x normally open | Internal pilot air supply | 24 V DC  | 547067 | VSVA-B-T32H-AH-A2-1C1   |
|  |                |  |                           | 12 V DC  | 547133 | VSVA-B-T32H-AH-A2-5C1   |
|  |                |  |                           | 230 V AC | 547213 | VSVA-B-T32H-AH-A2-3AC1  |
|  |                |  |                           | 110 V AC | 547173 | VSVA-B-T32H-AH-A2-2AC1  |
|  |                |  |                           | 24 V AC  | 547093 | VSVA-B-T32H-AH-A2-1AC1  |
| K  |                | Normal position:<br>2x normally closed                     | External pilot air supply | 24 V DC  | 547069 | VSVA-B-T32C-AZH-A2-1C1  |
|  |                |  |                           | 12 V DC  | 547149 | VSVA-B-T32C-AZH-A2-5C1  |
|  |                |  |                           | 230 V AC | 547229 | VSVA-B-T32C-AZH-A2-3AC1 |
|  |                |  |                           | 110 V AC | 547189 | VSVA-B-T32C-AZH-A2-2AC1 |
|  |                |  |                           | 24 V AC  | 547109 | VSVA-B-T32C-AZH-A2-1AC1 |
| N  |                | Normal position:<br>2x normally open                       | External pilot air supply | 24 V DC  | 547071 | VSVA-B-T32U-AZH-A2-1C1  |
|  |                |  |                           | 12 V DC  | 547151 | VSVA-B-T32U-AZH-A2-5C1  |
|  |                |  |                           | 230 V AC | 547231 | VSVA-B-T32U-AZH-A2-3AC1 |
|  |                |  |                           | 110 V AC | 547191 | VSVA-B-T32U-AZH-A2-2AC1 |
|  |                |  |                           | 24 V AC  | 547111 | VSVA-B-T32U-AZH-A2-1AC1 |
| H  |                | Normal position:<br>1x normally closed<br>1x normally open | External pilot air supply | 24 V DC  | 547073 | VSVA-B-T32H-AZH-A2-1C1  |
|  |                |  |                           | 12 V DC  | 547153 | VSVA-B-T32H-AZH-A2-5C1  |
|  |                |  |                           | 230 V AC | 547233 | VSVA-B-T32H-AZH-A2-3AC1 |
|  |                |  |                           | 110 V AC | 547193 | VSVA-B-T32H-AZH-A2-2AC1 |
|  |                |  |                           | 24 V AC  | 547113 | VSVA-B-T32H-AZH-A2-1AC1 |

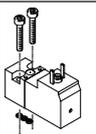
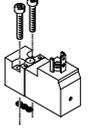
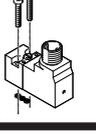
## Datasheet – Valve size 18 mm

| Ordering data – Pilot control fitted  |                |                     | Part no.                  | Type     |        |                        |
|---|----------------|---------------------|---------------------------|----------|--------|------------------------|
| Code  | Circuit symbol |                     |                           |          |        |                        |
| <b>5/2-way valve, single solenoid, with pilot control with square plug, type C to EN 175301-803</b> |                |                     |                           |          |        |                        |
| M   |                | Pneumatic spring    | Internal pilot air supply | 24 V DC  | 546701 | VSVA-B-M52-AH-A2-1C1   |
|   |                |                     |                           | 12 V DC  | 547139 | VSVA-B-M52-AH-A2-5C1   |
|   |                |                     |                           | 230 V AC | 547219 | VSVA-B-M52-AH-A2-3AC1  |
|   |                |                     |                           | 110 V AC | 547179 | VSVA-B-M52-AH-A2-2AC1  |
|   |                |                     |                           | 24 V AC  | 547099 | VSVA-B-M52-AH-A2-1AC1  |
| O   |                | Mechanical spring   | Internal pilot air supply | 24 V DC  | 546703 | VSVA-B-M52-MH-A2-1C1   |
|   |                |                     |                           | 12 V DC  | 547141 | VSVA-B-M52-MH-A2-5C1   |
|   |                |                     |                           | 230 V AC | 547221 | VSVA-B-M52-MH-A2-3AC1  |
|   |                |                     |                           | 110 V AC | 547181 | VSVA-B-M52-MH-A2-2AC1  |
|   |                |                     |                           | 24 V AC  | 547101 | VSVA-B-M52-MH-A2-1AC1  |
| M   |                | Pneumatic spring    | External pilot air supply | 24 V DC  | 547079 | VSVA-B-M52-AZH-A2-1C1  |
|   |                |                     |                           | 12 V DC  | 547159 | VSVA-B-M52-AZH-A2-5C1  |
|   |                |                     |                           | 230 V AC | 547239 | VSVA-B-M52-AZH-A2-3AC1 |
|   |                |                     |                           | 110 V AC | 547199 | VSVA-B-M52-AZH-A2-2AC1 |
|   |                |                     |                           | 24 V AC  | 547119 | VSVA-B-M52-AZH-A2-1AC1 |
| O   |                | Mechanical spring   | External pilot air supply | 24 V DC  | 547081 | VSVA-B-M52-MZH-A2-1C1  |
|   |                |                     |                           | 12 V DC  | 547161 | VSVA-B-M52-MZH-A2-5C1  |
|   |                |                     |                           | 230 V AC | 547241 | VSVA-B-M52-MZH-A2-3AC1 |
|   |                |                     |                           | 110 V AC | 547201 | VSVA-B-M52-MZH-A2-2AC1 |
|   |                |                     |                           | 24 V AC  | 547121 | VSVA-B-M52-MZH-A2-1AC1 |
| <b>5/2-way valve, double solenoid, with pilot control with square plug, type C to EN 175301-803</b> |                |                     |                           |          |        |                        |
| J   |                | Dominant 1st signal | Internal pilot air supply | 24 V DC  | 546697 | VSVA-B-B52-H-A2-1C1    |
|   |                |                     |                           | 12 V DC  | 547135 | VSVA-B-B52-H-A2-5C1    |
|   |                |                     |                           | 230 V AC | 547215 | VSVA-B-B52-H-A2-3AC1   |
|   |                |                     |                           | 110 V AC | 547175 | VSVA-B-B52-H-A2-2AC1   |
|   |                |                     |                           | 24 V AC  | 547095 | VSVA-B-B52-H-A2-1AC1   |
| D   |                | Dominant at 14      | Internal pilot air supply | 24 V DC  | 546699 | VSVA-B-D52-H-A2-1C1    |
|   |                |                     |                           | 12 V DC  | 547137 | VSVA-B-D52-H-A2-5C1    |
|   |                |                     |                           | 230 V AC | 547217 | VSVA-B-D52-H-A2-3AC1   |
|   |                |                     |                           | 110 V AC | 547177 | VSVA-B-D52-H-A2-2AC1   |
|   |                |                     |                           | 24 V AC  | 547097 | VSVA-B-D52-H-A2-1AC1   |
| J   |                | Dominant 1st signal | External pilot air supply | 24 V DC  | 547075 | VSVA-B-B52-ZH-A2-1C1   |
|   |                |                     |                           | 12 V DC  | 547155 | VSVA-B-B52-ZH-A2-5C1   |
|   |                |                     |                           | 230 V AC | 547235 | VSVA-B-B52-ZH-A2-3AC1  |
|   |                |                     |                           | 110 V AC | 547195 | VSVA-B-B52-ZH-A2-2AC1  |
|   |                |                     |                           | 24 V AC  | 547115 | VSVA-B-B52-ZH-A2-1AC1  |
| D   |                | Dominant at 14      | External pilot air supply | 24 V DC  | 547077 | VSVA-B-D52-ZH-A2-1C1   |
|   |                |                     |                           | 12 V DC  | 547157 | VSVA-B-D52-ZH-A2-5C1   |
|   |                |                     |                           | 230 V AC | 547237 | VSVA-B-D52-ZH-A2-3AC1  |
|   |                |                     |                           | 110 V AC | 547197 | VSVA-B-D52-ZH-A2-2AC1  |
|   |                |                     |                           | 24 V AC  | 547117 | VSVA-B-D52-ZH-A2-1AC1  |

## Datasheet – Valve size 18 mm

| Ordering data – Pilot control fitted  |   |                               |                           | Part no. | Type                                 |
|---|---|-------------------------------|---------------------------|----------|--------------------------------------|
| Code  | Circuit symbol  |                               |                           |          |                                      |
| <b>5/3-way solenoid valve, with pilot control with square plug, type C to EN 175301-803</b> |   |                               |                           |          |                                      |
| G   |    | Normal position:<br>Closed    | Internal pilot air supply | 24 V DC  | <b>546709</b> VSVA-B-P53C-H-A2-1C1   |
|   |   |                               |                           | 12 V DC  | <b>547147</b> VSVA-B-P53C-H-A2-5C1   |
|   |   |                               |                           | 230 V AC | <b>547227</b> VSVA-B-P53C-H-A2-3AC1  |
|   |   |                               |                           | 110 V AC | <b>547187</b> VSVA-B-P53C-H-A2-2AC1  |
|   |   |                               |                           | 24 V AC  | <b>547107</b> VSVA-B-P53C-H-A2-1AC1  |
| B   |    | Normal position:<br>Open      | Internal pilot air supply | 24 V DC  | <b>546705</b> VSVA-B-P53U-H-A2-1C1   |
|   |   |                               |                           | 12 V DC  | <b>547143</b> VSVA-B-P53U-H-A2-5C1   |
|   |   |                               |                           | 230 V AC | <b>547223</b> VSVA-B-P53U-H-A2-3AC1  |
|   |   |                               |                           | 110 V AC | <b>547183</b> VSVA-B-P53U-H-A2-2AC1  |
|   |   |                               |                           | 24 V AC  | <b>547103</b> VSVA-B-P53U-H-A2-1AC1  |
| E   |    | Normal position:<br>Exhausted | Internal pilot air supply | 24 V DC  | <b>546707</b> VSVA-B-P53E-H-A2-1C1   |
|   |   |                               |                           | 12 V DC  | <b>547145</b> VSVA-B-P53E-H-A2-5C1   |
|   |   |                               |                           | 230 V AC | <b>547225</b> VSVA-B-P53E-H-A2-3AC1  |
|   |   |                               |                           | 110 V AC | <b>547185</b> VSVA-B-P53E-H-A2-2AC1  |
|   |   |                               |                           | 24 V AC  | <b>547105</b> VSVA-B-P53E-H-A2-1AC1  |
| G   |    | Normal position:<br>Closed    | External pilot air supply | 24 V DC  | <b>547087</b> VSVA-B-P53C-ZH-A2-1C1  |
|   |   |                               |                           | 12 V DC  | <b>547167</b> VSVA-B-P53C-ZH-A2-5C1  |
|   |   |                               |                           | 230 V AC | <b>547247</b> VSVA-B-P53C-ZH-A2-3AC1 |
|   |   |                               |                           | 110 V AC | <b>547207</b> VSVA-B-P53C-ZH-A2-2AC1 |
|   |   |                               |                           | 24 V AC  | <b>547127</b> VSVA-B-P53C-ZH-A2-1AC1 |
| B   |   | Normal position:<br>Open      | External pilot air supply | 24 V DC  | <b>547083</b> VSVA-B-P53U-ZH-A2-1C1  |
|   |   |                               |                           | 12 V DC  | <b>547163</b> VSVA-B-P53U-ZH-A2-5C1  |
|   |   |                               |                           | 230 V AC | <b>547243</b> VSVA-B-P53U-ZH-A2-3AC1 |
|   |   |                               |                           | 110 V AC | <b>547203</b> VSVA-B-P53U-ZH-A2-2AC1 |
|   |   |                               |                           | 24 V AC  | <b>547123</b> VSVA-B-P53U-ZH-A2-1AC1 |
| E   |  | Normal position:<br>Exhausted | External pilot air supply | 24 V DC  | <b>547085</b> VSVA-B-P53E-ZH-A2-1C1  |
|   |   |                               |                           | 12 V DC  | <b>547165</b> VSVA-B-P53E-ZH-A2-5C1  |
|   |   |                               |                           | 230 V AC | <b>547245</b> VSVA-B-P53E-ZH-A2-3AC1 |
|   |   |                               |                           | 110 V AC | <b>547205</b> VSVA-B-P53E-ZH-A2-2AC1 |
|   |   |                               |                           | 24 V AC  | <b>547125</b> VSVA-B-P53E-ZH-A2-1AC1 |

## Datasheet – Valve size 18 mm

| Ordering data – Pilot control separate   |  |                     | Part no.                                | Type                |                       |
|--|--|---------------------|---|---------------------|-----------------------|
| <b>2x 3/2-way valve without pilot valves</b>                                       |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | 2x normally closed  | 546732                                  | VSVA-B-T32C-A-A2-P1 |                       |
|  |  | 2x normally open    | 546734                                  | VSVA-B-T32U-A-A2-P1 |                       |
| <b>5/2-way single solenoid valve without pilot valve</b>                           |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Pneumatic spring    | 546740                                  | VSVA-B-M52-A-A2-P1  |                       |
|  |  | Mechanical spring   | 546742                                  | VSVA-B-M52-M-A2-P1  |                       |
| <b>5/2-way double solenoid valve without pilot valve</b>                           |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Dominant 1st signal | 546736                                  | VSVA-B-B52-A2-P1    |                       |
|  |  | Dominant at 14      | 546738                                  | VSVA-B-D52-A2-P1    |                       |
| <b>5/3-way mid-position valve without pilot valves</b>                             |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Normally closed     | 546748                                  | VSVA-B-P53C-A2-P1   |                       |
|  |  | Normally open       | 546744                                  | VSVA-B-P53U-A2-P1   |                       |
|  |  | Normally exhausted  | 546746                                  | VSVA-B-P53E-A2-P1   |                       |
| <b>Pilot valve to ISO 15218</b>  |  |                     |   |                     |                       |
|   | Square plug, type C to EN 175301-803                       | 12 V DC             | Non-detenting manual override           | 546257              | VSCS-B-M32-MH-WA-5C1  |
|  |  |                     | Manual override non-detenting/detenting | 571062              | VSCS-B-M32-MD-WA-5C1  |
|  |  | 24 V DC             | Non-detenting manual override           | 546256              | VSCS-B-M32-MH-WA-1C1  |
|  |  |                     | Manual override non-detenting/detenting | 571061              | VSCS-B-M32-MD-WA-1C1  |
|  |  | 24 V AC             | Non-detenting manual override           | 546258              | VSCS-B-M32-MH-WA-1AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571063              | VSCS-B-M32-MD-WA-1AC1 |
|  | Square plug, type C to EN 175301-803,<br>With PE conductor | 110 V AC            | Non-detenting manual override           | 546259              | VSCS-B-M32-MH-WA-2AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571064              | VSCS-B-M32-MD-WA-2AC1 |
|  |  | 230 V AC            | Non-detenting manual override           | 546260              | VSCS-B-M32-MH-WA-3AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571065              | VSCS-B-M32-MD-WA-3AC1 |
|  | Round plug M12 to IEC 61076-2-101                          | 24 V DC             | Non-detenting manual override           | 573214              | VSCS-B-M32-MH-WA-1R3  |
|  |  |                     | Manual override non-detenting/detenting | 573215              | VSCS-B-M32-MD-WA-1R3  |

## Datasheet – Valve size 26 mm

-  - Flow rate  
max. 1400 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



| General technical data               |   | 2x 2/2-way valve  | 2x 3/2-way valve  | 5/2-way valve                             | 5/3-way valve |   |
|--------------------------------------|---|---|---|---|---------------|---|
| Valve function                       |   |   |   |   |               |   |
| Normal position                      |   | C <sup>1)</sup>   | C <sup>1)</sup> , U <sup>2)</sup> , H <sup>4)</sup> , N <sup>5)</sup> , F <sup>6)</sup> , W <sup>7)</sup> | –   | –             | C <sup>1)</sup> , U <sup>2)</sup> , E <sup>3)</sup> |
| Stable position                      |   | Monostable  | Monostable  | Monostable                                | Bistable      | Monostable  |
| Pneumatic spring return              |   | Yes   | Yes   | Yes                                       | –             | No  |
| Mechanical spring return             |   | No  | No  | Yes                                       | –             | Yes   |
| Design                               |   | Piston spool  |   |   |               |   |
| Overlap                              |   | Positive overlap  |   |   |               |   |
| Sealing principle                    |   | Soft  |   |   |               |   |
| Actuation type                       |   | Electrical  |   |   |               |   |
| Type of control                      |   | Piloted   |   |   |               |   |
| Pilot interface                      |   | To ISO 15218  |   |   |               |   |
| Pilot air supply                     |   | Internal or external  |   |   |               |   |
| Pilot air supply, exhaust air        |   | Not ducted as per standard, or ducted                           |   |   |               |   |
| Flow direction                       |   | Not reversible or reversible                                    | Not reversible or only reversible   | Reversible with external pilot air supply |               |   |
| Exhaust air function                 |   | Can be throttled  |   |   |               |   |
| Manual override                      |   | Non-detenting, non-detenting/detenting                          |   |   |               |   |
| Type of mounting                     |   | On sub-base   |   |   |               |   |
| Mounting position                    |   | Any   |   |   |               |   |
| Nominal width                        | [mm]  | 9   |   |   |               |   |
| Valve size                           | [mm]  | 26  |   |   |               |   |
| Ports on the sub-base                | 1, 2, 3, 4, 5<br>12, 14                       | G1/4<br>M5  |   |   |               |   |
| Tightening torque for valve mounting | [Nm]  | 1.8 ... 2.2   |   |   |               |   |
| Product weight                       | Without pilot valve [g]<br>Solenoid valve [g] | 229<br>305  | 229<br>305  | 142<br>180                                | 229<br>305    | 229<br>305  |
| Noise level                          | [dB (A)]                                      | 85  |   |   |               |   |
| Conforms to standard                 |   | ISO 15407-1, VDMA 24563 and for pilot valve interface ISO 15218 |   |   |               |   |

- 1) C = Normally closed  
 2) U = Normally open  
 3) E = Normally exhausted  
 4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open  
 5) N=Normally closed, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1  
 6) F=Normally open, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1  
 7) W=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open, reverse operation, i.e. the pressure supply ports are 3 and 5, exhausting is via port 1

| Flow rates                                |         | 2x 2/2-way valve | 2x 3/2-way valve | 5/2-way valve | 5/3-way valve |
|---|---------|------------------|------------------|---------------|---------------|
| Valve function                            |         |                  |                  |               |               |
| Flow rate of valve                        | [l/min] | 1350             | 1250             | 1400          | 1400          |
| Flow rate of valve on individual sub-base | [l/min] | 1000             | 1000             | 1100          | 1100          |
| Flow rate of pneumatically linked valve   | [l/min] | 1000             | 900              | 1100          | 1000          |
| Standard nominal flow rate                | [l/min] | 1000             | 900              | 1100          | 1000          |

## Datasheet – Valve size 26 mm

| Switching times [ms]           |                   | Switching time on | Switching time off | Switching time changeover | Switching time changeover (dominant) |
|--------------------------------|-------------------|-------------------|--------------------|---------------------------|--------------------------------------|
| 2x 2/2-way valve               |                   | 20                | 28                 | –                         | –                                    |
| 2x 3/2-way valve               |                   | 20                | 28                 | –                         | –                                    |
| 2x 3/2-way valve, reversible   |                   | 28                | 20                 | –                         | –                                    |
| 5/2-way valve, single solenoid | Pneumatic spring  | 35                | 43                 | –                         | –                                    |
|                                | Mechanical spring | 26                | 56                 | –                         | –                                    |
| 5/2-way valve, double solenoid |                   | –                 | –                  | 18                        | 18                                   |
| 5/3-way valve                  |                   | 23                | 58                 | 35                        | –                                    |

| Safety characteristics                |      |  |             |                               |                                |
|---------------------------------------|------|--|-------------|-------------------------------|--------------------------------|
| Type                                  |      | VSVA-...-1C1   | VSVA-...-P1 | VSVA-...-5C1<br>VSVA-...-1AC1 | VSVA-...-2AC1<br>VSVA-...-3AC1 |
| Max. positive test pulse with logic 0 | [µs] | 1800   | –           | –                             | –                              |
| Max. negative test pulse with logic 1 | [µs] | 800  | –           | –                             | –                              |
| Shock resistance                      |      | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                |             |                               |                                |
| Vibration resistant                   |      | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6 |             |                               |                                |

| Operating and environmental conditions                     |      |  |                           |                               |                                |
|--|------|--|---------------------------|-------------------------------|--------------------------------|
| Type   |      | VSVA-...-1C1   | VSVA-...-P1               | VSVA-...-5C1<br>VSVA-...-1AC1 | VSVA-...-2AC1<br>VSVA-...-3AC1 |
| Operating medium   |      | Compressed air to ISO 8573-1:2010 [7:4:4]  |                           |                               |                                |
| Pilot medium   |      | Compressed air to ISO 8573-1:2010 [7:4:4]  |                           |                               |                                |
| Note on the operating/pilot medium                         |      | Lubricated operation possible (in which case lubricated operation will always be required) |                           |                               |                                |
| Ambient temperature  | [°C] | –5 ... +50   |                           |                               |                                |
| Temperature of medium                                      | [°C] | –5 ... +50   |                           |                               |                                |
| Relative humidity  | [%]  | 0 ... 90   |                           |                               |                                |
| CE marking (see declaration of conformity) <sup>1)</sup>   |      | –  | –                         | –                             | To EU Low Voltage Directive    |
| UKCA marking (see declaration of conformity) <sup>1)</sup> |      | –  | –                         | –                             | To UK EMC regulations          |
| Approval <sup>2)</sup>                                     |      | c UL us - Recognized (OL)  | c UL us - Recognized (OL) | –                             | –                              |

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

2) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

| Operating and control pressure |                           |           |                  |                  |                                     |
|--------------------------------|---------------------------|-----------|------------------|------------------|-------------------------------------|
| Valve function                 |                           |           | 2x 2/2-way valve | 2x 3/2-way valve | 2x 3/2-way valve, reverse operation |
| Operating pressure             | Internal pilot air supply | [MPa]     | 0.2 ... 1        | 0.2 ... 1        | 0.2 ... 1                           |
|                                |                           | [bar]     | 2 ... 10         | 2 ... 10         | 2 ... 10                            |
|                                | External pilot air supply | [MPa]     | 0.2 ... 1        | 0.2 ... 1        | –0.09 ... 1                         |
|                                |                           | [bar]     | 2 ... 10         | 2 ... 10         | –0.9 ... 10                         |
| Pilot pressure <sup>1)</sup>   | [MPa]                     | 0.3 ... 1 | 0.3 ... 1        | 0.3 ... 1        |                                     |
|                                | [bar]                     | 3 ... 10  | 3 ... 10         | 3 ... 10         |                                     |

1) Pilot pressure dependent on operating pressure → graph

## Datasheet – Valve size 26 mm

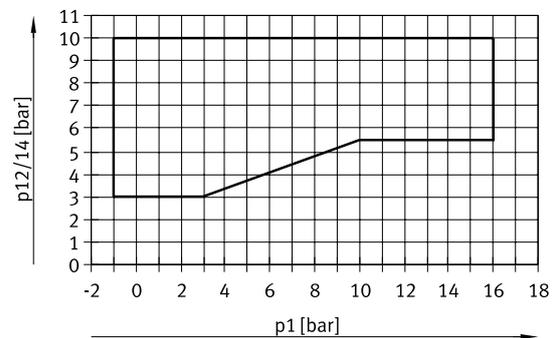
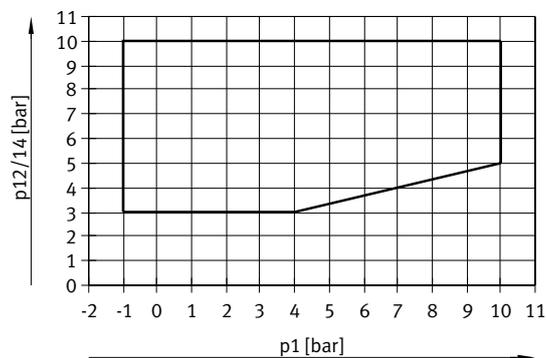
| Operating and control pressure |                           |       | 5/2-way valve    |                   | 5/3-way valve |
|--------------------------------|---------------------------|-------|------------------|-------------------|---------------|
|                                |                           |       | Pneumatic spring | Mechanical spring |               |
| Valve function                 | Internal pilot air supply | [MPa] | 0.2 ... 1        | 0.3 ... 1         | 0.3 ... 1     |
|                                |                           | [bar] | 2 ... 10         | 3 ... 10          | 3 ... 10      |
| Operating pressure             | External pilot air supply | [MPa] | -0.09 ... 1.6    | -0.09 ... 1.6     | -0.09 ... 1.6 |
|                                |                           | [bar] | -0.9 ... 16      | -0.9 ... 16       | -0.9 ... 16   |
| Pilot pressure <sup>1)</sup>   |                           | [MPa] | 0.3 ... 1        | 0.3 ... 1         | 0.3 ... 1     |
|                                |                           | [bar] | 3 ... 10         | 3 ... 10          | 3 ... 10      |

1) Pilot pressure dependent on operating pressure → graph

### Minimum pilot pressure p<sub>12</sub>, p<sub>14</sub> as a function of operating pressure p<sub>1</sub> (external pilot air supply)

2x 3/2-way solenoid valve and 2/2-way solenoid valve

5/2-way solenoid valve and 5/3-way solenoid valve



### Electrical data

|                                  |  |        |   |
|----------------------------------|--|--------|---|
| Electrical connection            | Plug, square design to EN 175301-803, type C, 110 V/230 V AC with protective earth conductor |        | Plug M12, round design                                    |
| Operating voltage                | DC voltage   | [V DC] | 12, 24 +10%/-15%  |
|                                  | Alternating voltage  | [V AC] | 24, 110, 230 +10%/-15%                                    |
| Characteristic coil value        | DC voltage   | [W]    | 1.8   |
|                                  | Alternating voltage  | [VA]   | At 24 V AC:<br>• 3.1 pick-up power<br>• 2.3 holding power |
| Duty cycle                       | [%]  | 100    |   |
| Degree of protection to EN 60529 | IP65, Nema 4 (in combination with plug socket)   |        |   |

### Materials

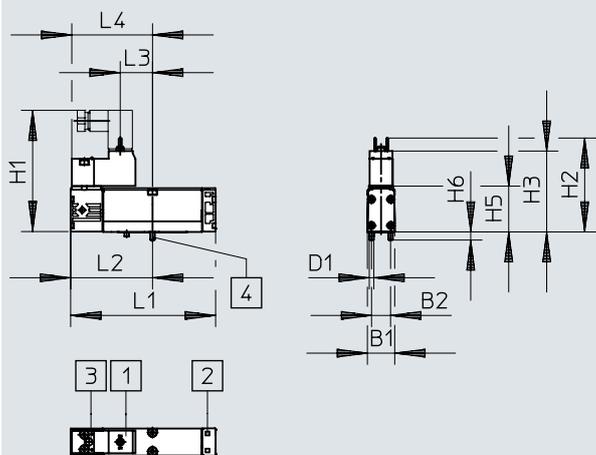
|                        |                    |
|------------------------|--------------------|
| Housing                | Die-cast aluminium |
| Seals                  | HNBR, NBR          |
| Screws                 | Galvanised steel   |
| Note on materials      | RoHS-compliant     |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L  |

Datasheet – Valve size 26 mm

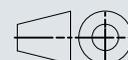
**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way valve, single solenoid with plug type C



- [1] Connection sizes and device plug to EN 175301-803, type C
- [2] Slot for inscription label
- [3] Manual override
- [4] Captive retaining screws

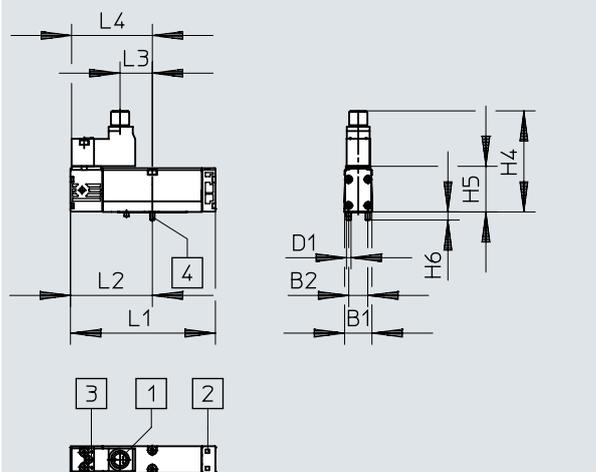


| Type            | B1   | B2 | D1 | H1   | H2   | H3   | H5   | H6 | L1    | L2   | L3   | L4   |
|-----------------|------|----|----|------|------|------|------|----|-------|------|------|------|
| VSVA-B-M52...C1 | 26.3 | 19 | M4 | 89.2 | 71.2 | 62.6 | 39.3 | 7  | 113.1 | 63.1 | 29.8 | 61.6 |

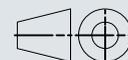
**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way valve, single solenoid with M12 plug



- [1] Connection sizes and device plug, M12 plug
- [2] Slot for inscription label
- [3] Manual override
- [4] Captive retaining screws



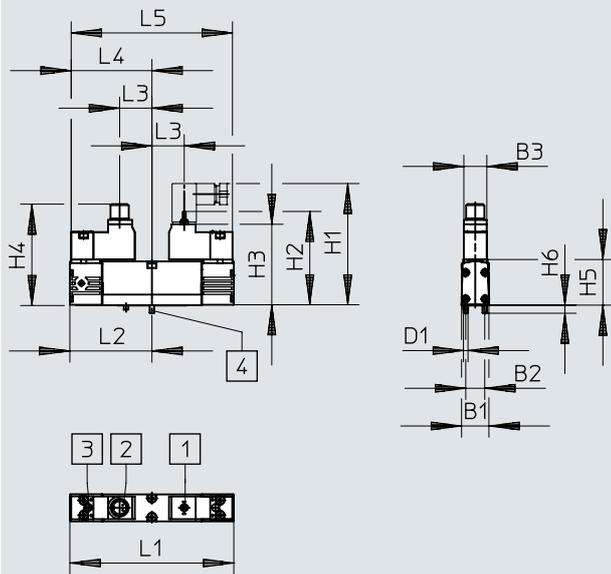
| Type            | B1   | B2 | D1 | H4   | H5   | H6 | L1    | L2   | L3   | L4   |
|-----------------|------|----|----|------|------|----|-------|------|------|------|
| VSVA-B-M52...R3 | 26.3 | 19 | M4 | 76.1 | 39.3 | 7  | 113.1 | 63.1 | 29.8 | 61.6 |

Datasheet – Valve size 26 mm

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

2x 2/2-way valve, 2x 3/2-way valve, 5/2-way valve double solenoid, 5/3-way valve



[1] Connection sizes and device plug to EN 175301-803, type C

[2] Connection sizes and connection for power supply, M12 plug

[3] Manual override

[4] Captive retaining screws

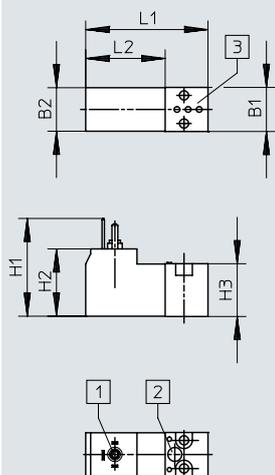
| Type        | B1   | B2 | B3   | D1 | H1   | H2   | H3   | H4   | H5   | H6 | L1    | L2   | L3   | L4   | L5    |
|-------------|------|----|------|----|------|------|------|------|------|----|-------|------|------|------|-------|
| VSVA-B-T22C | 26.3 | 19 | 15.2 | M4 | 89.2 | 71.2 | 62.6 | 76.1 | 39.3 | 7  | 126.2 | 63.1 | 29.8 | 61.6 | 123.2 |
| VSVA-B-T32  |      |    |      |    |      |      |      |      |      |    |       |      |      |      |       |
| VSVA-B-B52  |      |    |      |    |      |      |      |      |      |    |       |      |      |      |       |
| VSVA-B-D52  |      |    |      |    |      |      |      |      |      |    |       |      |      |      |       |
| VSVA-B-P53  |      |    |      |    |      |      |      |      |      |    |       |      |      |      |       |

## Datasheet – Valve size 26 mm

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Pilot valve with plug type C, VSCS-...C1



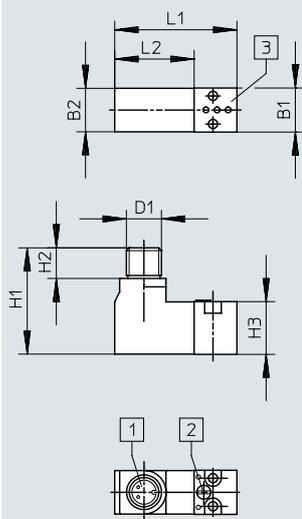
- [1] Connection sizes and device plug to EN 175301-803, type C
- [2] Manual override
- [3] Pneumatic connection pattern to ISO 15218

| Type       | B1   | B2 | D1 | H1   | H2   | H3   | L1   | L2   |
|------------|------|----|----|------|------|------|------|------|
| VSCS-...C1 | 15.2 | 15 | –  | 33.7 | 10.5 | 18.2 | 41.9 | 14.7 |

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

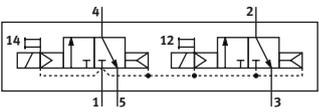
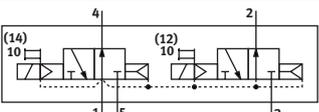
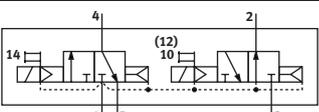
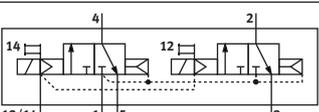
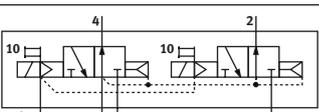
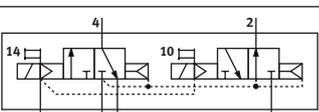
Pilot valve with M12 plug, VSCS-...R3



- [1] Connection sizes and device plug, M12 plug
- [2] Manual override
- [3] Pneumatic connection pattern to ISO 15218

| Type       | B1   | B2 | D1  | H1   | H2   | H3   | L1   | L2   |
|------------|------|----|-----|------|------|------|------|------|
| VSCS-...R3 | 15.2 | 15 | M12 | 36.7 | 10.6 | 18.2 | 41.9 | 27.2 |

## Datasheet – Valve size 26 mm

| Ordering data – Pilot control fitted   |   |  |                           |          |        |                         |
|--|---|--|---------------------------|----------|--------|-------------------------|
| Code   | Circuit symbol  |  | Part no.                  | Type     |        |                         |
| <b>2x 2/2-way solenoid valve</b>   |   |  |                           |          |        |                         |
| T22C   | –   | Order via online configurator                              | –                         | –        |        |                         |
| <b>2x 3/2-way solenoid valve, with pilot control with square plug, type C to EN 175301-803</b> |   |  |                           |          |        |                         |
| K  |    | Normal position:<br>2x closed                              | Internal pilot air supply | 24 V DC  | 546692 | VSVA-B-T32C-AH-A1-1C1   |
|  |   |  |                           | 12 V DC  | 547128 | VSVA-B-T32C-AH-A1-5C1   |
|  |   |  |                           | 230 V AC | 547208 | VSVA-B-T32C-AH-A1-3AC1  |
|  |   |  |                           | 110 V AC | 547168 | VSVA-B-T32C-AH-A1-2AC1  |
|  |   |  |                           | 24 V AC  | 547088 | VSVA-B-T32C-AH-A1-1AC1  |
| N  |    | Normal position:<br>2x normally open                       | Internal pilot air supply | 24 V DC  | 546694 | VSVA-B-T32U-AH-A1-1C1   |
|  |   |  |                           | 12 V DC  | 547130 | VSVA-B-T32U-AH-A1-5C1   |
|  |   |  |                           | 230 V AC | 547210 | VSVA-B-T32U-AH-A1-3AC1  |
|  |   |  |                           | 110 V AC | 547170 | VSVA-B-T32U-AH-A1-2AC1  |
|  |   |  |                           | 24 V AC  | 547090 | VSVA-B-T32U-AH-A1-1AC1  |
| H  |    | Normal position:<br>1x normally closed<br>1x normally open | Internal pilot air supply | 24 V DC  | 547066 | VSVA-B-T32H-AH-A1-1C1   |
|  |   |  |                           | 12 V DC  | 547132 | VSVA-B-T32H-AH-A1-5C1   |
|  |   |  |                           | 230 V AC | 547212 | VSVA-B-T32H-AH-A1-3AC1  |
|  |   |  |                           | 110 V AC | 547172 | VSVA-B-T32H-AH-A1-2AC1  |
|  |   |  |                           | 24 V AC  | 547092 | VSVA-B-T32H-AH-A1-1AC1  |
| K  |    | Normal position:<br>2x normally closed                     | External pilot air supply | 24 V DC  | 547068 | VSVA-B-T32C-AZH-A1-1C1  |
|  |   |  |                           | 12 V DC  | 547148 | VSVA-B-T32C-AZH-A1-5C1  |
|  |   |  |                           | 230 V AC | 547228 | VSVA-B-T32C-AZH-A1-3AC1 |
|  |   |  |                           | 110 V AC | 547188 | VSVA-B-T32C-AZH-A1-2AC1 |
|  |   |  |                           | 24 V AC  | 547108 | VSVA-B-T32C-AZH-A1-1AC1 |
| N  |  | Normal position:<br>2x normally open                       | External pilot air supply | 24 V DC  | 547070 | VSVA-B-T32U-AZH-A1-1C1  |
|  |   |  |                           | 12 V DC  | 547150 | VSVA-B-T32U-AZH-A1-5C1  |
|  |   |  |                           | 230 V AC | 547230 | VSVA-B-T32U-AZH-A1-3AC1 |
|  |   |  |                           | 110 V AC | 547190 | VSVA-B-T32U-AZH-A1-2AC1 |
|  |   |  |                           | 24 V AC  | 547110 | VSVA-B-T32U-AZH-A1-1AC1 |
| H  |  | Normal position:<br>1x normally closed<br>1x normally open | External pilot air supply | 24 V DC  | 547072 | VSVA-B-T32H-AZH-A1-1C1  |
|  |   |  |                           | 12 V AC  | 547152 | VSVA-B-T32H-AZH-A1-5C1  |
|  |   |  |                           | 230 V AC | 547232 | VSVA-B-T32H-AZH-A1-3AC1 |
|  |   |  |                           | 110 V AC | 547192 | VSVA-B-T32H-AZH-A1-2AC1 |
|  |   |  |                           | 24 V AC  | 547112 | VSVA-B-T32H-AZH-A1-1AC1 |

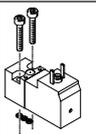
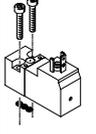
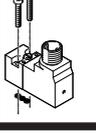
## Datasheet – Valve size 26 mm

| Ordering data – Pilot control fitted   |                | Part no.            | Type                      |          |        |                        |
|--|----------------|---------------------|---------------------------|----------|--------|------------------------|
| Code   | Circuit symbol |                     |                           |          |        |                        |
| <b>5/2-way valve, single solenoid, with pilot control with square plug, type C to EN 175301-803</b>    |                |                     |                           |          |        |                        |
| M  |                | Pneumatic spring    | Internal pilot air supply | 24 V DC  | 546700 | VSVA-B-M52-AH-A1-1C1   |
|  |                |                     |                           | 12 V DC  | 547138 | VSVA-B-M52-AH-A1-5C1   |
|  |                |                     |                           | 230 V AC | 547218 | VSVA-B-M52-AH-A1-3AC1  |
|  |                |                     |                           | 110 V AC | 547178 | VSVA-B-M52-AH-A1-2AC1  |
|  |                |                     |                           | 24 V AC  | 547098 | VSVA-B-M52-AH-A1-1AC1  |
| O  |                | Mechanical spring   | Internal pilot air supply | 24 V DC  | 546702 | VSVA-B-M52-MH-A1-1C1   |
|  |                |                     |                           | 12 V DC  | 547140 | VSVA-B-M52-MH-A1-5C1   |
|  |                |                     |                           | 230 V AC | 547220 | VSVA-B-M52-MH-A1-3AC1  |
|  |                |                     |                           | 110 V AC | 547180 | VSVA-B-M52-MH-A1-2AC1  |
|  |                |                     |                           | 24 V AC  | 547100 | VSVA-B-M52-MH-A1-1AC1  |
| M  |                | Pneumatic spring    | External pilot air supply | 24 V DC  | 547078 | VSVA-B-M52-AZH-A1-1C1  |
|  |                |                     |                           | 12 V DC  | 547158 | VSVA-B-M52-AZH-A1-5C1  |
|  |                |                     |                           | 230 V AC | 547238 | VSVA-B-M52-AZH-A1-3AC1 |
|  |                |                     |                           | 110 V AC | 547198 | VSVA-B-M52-AZH-A1-2AC1 |
|  |                |                     |                           | 24 V AC  | 547118 | VSVA-B-M52-AZH-A1-1AC1 |
| O  |                | Mechanical spring   | External pilot air supply | 24 V DC  | 547080 | VSVA-B-M52-MZH-A1-1C1  |
|  |                |                     |                           | 12 V DC  | 547160 | VSVA-B-M52-MZH-A1-5C1  |
|  |                |                     |                           | 230 V AC | 547240 | VSVA-B-M52-MZH-A1-3AC1 |
|  |                |                     |                           | 110 V AC | 547200 | VSVA-B-M52-MZH-A1-2AC1 |
|  |                |                     |                           | 24 V AC  | 547120 | VSVA-B-M52-MZH-A1-1AC1 |
| <b>5/2-way valve, double pilot valve, with pilot control with square plug, type C to EN 175301-803</b> |                |                     |                           |          |        |                        |
| J  |                | Dominant 1st signal | Internal pilot air supply | 24 V DC  | 546696 | VSVA-B-B52-H-A1-1C1    |
|  |                |                     |                           | 12 V DC  | 547134 | VSVA-B-B52-H-A1-5C1    |
|  |                |                     |                           | 230 V AC | 547214 | VSVA-B-B52-H-A1-3AC1   |
|  |                |                     |                           | 110 V AC | 547174 | VSVA-B-B52-H-A1-2AC1   |
|  |                |                     |                           | 24 V AC  | 547094 | VSVA-B-B52-H-A1-1AC1   |
| D  |                | Dominant at 14      | Internal pilot air supply | 24 V DC  | 546698 | VSVA-B-D52-H-A1-1C1    |
|  |                |                     |                           | 12 V DC  | 547136 | VSVA-B-D52-H-A1-5C1    |
|  |                |                     |                           | 230 V AC | 547216 | VSVA-B-D52-H-A1-3AC1   |
|  |                |                     |                           | 110 V AC | 547176 | VSVA-B-D52-H-A1-2AC1   |
|  |                |                     |                           | 24 V AC  | 547096 | VSVA-B-D52-H-A1-1AC1   |
| J  |                | Dominant 1st signal | External pilot air supply | 24 V DC  | 547074 | VSVA-B-B52-ZH-A1-1C1   |
|  |                |                     |                           | 12 V DC  | 547154 | VSVA-B-B52-ZH-A1-5C1   |
|  |                |                     |                           | 230 V AC | 547234 | VSVA-B-B52-ZH-A1-3AC1  |
|  |                |                     |                           | 110 V AC | 547194 | VSVA-B-B52-ZH-A1-2AC1  |
|  |                |                     |                           | 24 V AC  | 547114 | VSVA-B-B52-ZH-A1-1AC1  |
| D  |                | Dominant at 14      | External pilot air supply | 24 V DC  | 547076 | VSVA-B-D52-ZH-A1-1C1   |
|  |                |                     |                           | 12 V DC  | 547156 | VSVA-B-D52-ZH-A1-5C1   |
|  |                |                     |                           | 230 V AC | 547236 | VSVA-B-D52-ZH-A1-3AC1  |
|  |                |                     |                           | 110 V AC | 547196 | VSVA-B-D52-ZH-A1-2AC1  |
|  |                |                     |                           | 24 V AC  | 547116 | VSVA-B-D52-ZH-A1-1AC1  |

## Datasheet – Valve size 26 mm

| Ordering data – Pilot control fitted  |                |                               |                           | Part no. | Type                          |
|---|----------------|-------------------------------|---------------------------|----------|-------------------------------|
| Code  | Circuit symbol |                               |                           |          |                               |
| <b>5/3-way solenoid valve, with pilot control with square plug, type C to EN 175301-803</b> |                |                               |                           |          |                               |
| G   |                | Normal position:<br>Closed    | Internal pilot air supply | 24 V DC  | 546708 VSVA-B-P53C-H-A1-1C1   |
|   |                |                               |                           | 12 V DC  | 547146 VSVA-B-P53C-H-A1-5C1   |
|   |                |                               |                           | 230 V AC | 547226 VSVA-B-P53C-H-A1-3AC1  |
|   |                |                               |                           | 110 V AC | 547186 VSVA-B-P53C-H-A1-2AC1  |
|   |                |                               |                           | 24 V AC  | 547106 VSVA-B-P53C-H-A1-1AC1  |
| B   |                | Normal position:<br>Open      | Internal pilot air supply | 24 V DC  | 546704 VSVA-B-P53U-H-A1-1C1   |
|   |                |                               |                           | 12 V DC  | 547142 VSVA-B-P53U-H-A1-5C1   |
|   |                |                               |                           | 230 V AC | 547222 VSVA-B-P53U-H-A1-3AC1  |
|   |                |                               |                           | 110 V AC | 547182 VSVA-B-P53U-H-A1-2AC1  |
|   |                |                               |                           | 24 V AC  | 547102 VSVA-B-P53U-H-A1-1AC1  |
| E   |                | Normal position:<br>Exhausted | Internal pilot air supply | 24 V DC  | 546706 VSVA-B-P53E-H-A1-1C1   |
|   |                |                               |                           | 12 V DC  | 547144 VSVA-B-P53E-H-A1-5C1   |
|   |                |                               |                           | 230 V AC | 547224 VSVA-B-P53E-H-A1-3AC1  |
|   |                |                               |                           | 110 V AC | 547184 VSVA-B-P53E-H-A1-2AC1  |
|   |                |                               |                           | 24 V AC  | 547104 VSVA-B-P53E-H-A1-1AC1  |
| G   |                | Normal position:<br>Closed    | External pilot air supply | 24 V DC  | 547086 VSVA-B-P53C-ZH-A1-1C1  |
|   |                |                               |                           | 12 V DC  | 547166 VSVA-B-P53C-ZH-A1-5C1  |
|   |                |                               |                           | 230 V AC | 547246 VSVA-B-P53C-ZH-A1-3AC1 |
|   |                |                               |                           | 110 V AC | 547206 VSVA-B-P53C-ZH-A1-2AC1 |
|   |                |                               |                           | 24 V AC  | 547126 VSVA-B-P53C-ZH-A1-1AC1 |
| B   |                | Normal position:<br>Open      | External pilot air supply | 24 V DC  | 547082 VSVA-B-P53U-ZH-A1-1C1  |
|   |                |                               |                           | 12 V DC  | 547162 VSVA-B-P53U-ZH-A1-5C1  |
|   |                |                               |                           | 230 V AC | 547242 VSVA-B-P53U-ZH-A1-3AC1 |
|   |                |                               |                           | 110 V AC | 547202 VSVA-B-P53U-ZH-A1-2AC1 |
|   |                |                               |                           | 24 V AC  | 547122 VSVA-B-P53U-ZH-A1-1AC1 |
| E   |                | Normal position:<br>Exhausted | External pilot air supply | 24 V DC  | 547084 VSVA-B-P53E-ZH-A1-1C1  |
|   |                |                               |                           | 12 V DC  | 547164 VSVA-B-P53E-ZH-A1-5C1  |
|   |                |                               |                           | 230 V AC | 547244 VSVA-B-P53E-ZH-A1-3AC1 |
|   |                |                               |                           | 110 V AC | 547204 VSVA-B-P53E-ZH-A1-2AC1 |
|   |                |                               |                           | 24 V AC  | 547124 VSVA-B-P53E-ZH-A1-1AC1 |

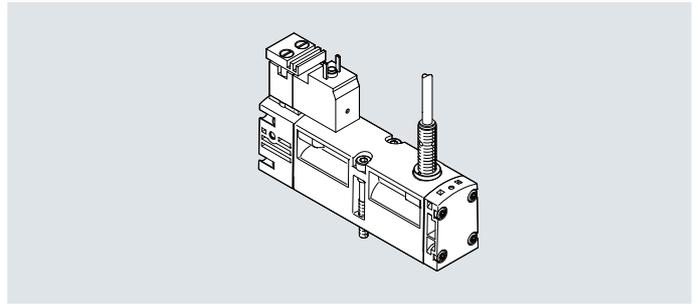
## Datasheet – Valve size 26 mm

| Ordering data – Pilot control separate   |  |                     |   | Part no.            | Type                  |
|--|--|---------------------|---|---------------------|-----------------------|
| <b>2x 3/2-way valve without pilot valves</b>                                       |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | 2x normally closed  | 546731                                  | VSVA-B-T32C-A-A1-P1 |                       |
|  |  | 2x normally open    | 546733                                  | VSVA-B-T32U-A-A1-P1 |                       |
| <b>5/2-way single solenoid valve without pilot valve</b>                           |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Pneumatic           | 546739                                  | VSVA-B-M52-A-A1-P1  |                       |
|  |  | Mechanical spring   | 546741                                  | VSVA-B-M52-M-A1-P1  |                       |
| <b>5/2-way double solenoid valve without pilot valve</b>                           |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Dominant 1st signal | 546735                                  | VSVA-B-B52-A1-P1    |                       |
|  |  | Dominant at 14      | 546737                                  | VSVA-B-D52-A1-P1    |                       |
| <b>5/3-way mid-position valve without pilot valves</b>                             |  |                     |   |                     |                       |
|    | Internal pilot air supply                                  | Normally closed     | 546747                                  | VSVA-B-P53C-A1-P1   |                       |
|  |  | Normally open       | 546743                                  | VSVA-B-P53U-A1-P1   |                       |
|  |  | Normally exhausted  | 546745                                  | VSVA-B-P53E-A1-P1   |                       |
| <b>Pilot valve to ISO 15218</b>  |  |                     |   |                     |                       |
|   | Square plug, type C to EN 175301-803                       | 12 V DC             | Non-detenting manual override           | 546257              | VSCS-B-M32-MH-WA-5C1  |
|  |  |                     | Manual override non-detenting/detenting | 571062              | VSCS-B-M32-MD-WA-5C1  |
|  |  | 24 V DC             | Non-detenting manual override           | 546256              | VSCS-B-M32-MH-WA-1C1  |
|  |  |                     | Manual override non-detenting/detenting | 571061              | VSCS-B-M32-MD-WA-1C1  |
|  |  | 24 V AC             | Non-detenting manual override           | 546258              | VSCS-B-M32-MH-WA-1AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571063              | VSCS-B-M32-MD-WA-1AC1 |
|  | Square plug, type C to EN 175301-803,<br>With PE conductor | 110 V AC            | Non-detenting manual override           | 546259              | VSCS-B-M32-MH-WA-2AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571064              | VSCS-B-M32-MD-WA-2AC1 |
|  |  | 230 V AC            | Non-detenting manual override           | 546260              | VSCS-B-M32-MH-WA-3AC1 |
|  |  |                     | Manual override non-detenting/detenting | 571065              | VSCS-B-M32-MD-WA-3AC1 |
|  | Round plug M12 to IEC 61076-2-101                          | 24 V DC             | Non-detenting manual override           | 573214              | VSCS-B-M32-MH-WA-1R3  |
|  |  |                     | Manual override non-detenting/detenting | 573215              | VSCS-B-M32-MD-WA-1R3  |

## Datasheet – Valve size 26 mm, valve with position sensing

-  - Flow rate  
max. 1400 l/min

-  - Voltage  
24 V DC



## ISO valves with switching position sensing for safety-related pneumatic components

The 5/2-way single solenoid valve with spring return has an inductive sensor that monitors the normal position of the piston spool valve.

This valve is not a safety device to the Machinery Directive 2006/42/EC.

For use in higher categories, the sensor signal from the valve must be evaluated by a control unit.

This valve is suitable for use in safety-related parts of control systems to EN ISO 13849-1. This valve is designed for installation in machines and automation systems and must only be used in industrial applications (high-demand mode).

The circuit diagram represents a valve with a proximity switch with a N/O switching output signal. In accordance with ISO 1219-1, this symbol is used both for normally open contacts and for normally closed contacts. The switching element function of the sensors used here is designed as an N/C contact.

## General technical data

|                                      |   |   |
|--------------------------------------|---|---|
| Valve function                       |   | 5/2   |
| Piston position sensing              |   | Normal position with sensor                                   |
| Stable position                      |   | Monostable  |
| Reset method                         |   | Mechanical spring   |
| Design                               |   | Piston spool  |
| Overlap                              |   | Positive overlap  |
| Sealing principle                    |   | Soft  |
| Actuation type                       |   | Electrical  |
| Type of control                      |   | Piloted   |
| Pilot interface                      |   | To ISO 15218  |
| Pilot air supply                     |   | External  |
| Pilot air supply, exhaust air        |   | Optionally ducted/not ducted                                  |
| Flow direction                       |   | Any   |
| Exhaust air function                 |   | Can be throttled, via throttle plate, via individual sub-base |
| Manual override                      |   | Concealed   |
| Type of mounting                     |   | On sub-base   |
| Mounting position                    |   | Any   |
| Nominal width                        | [mm]  | 9   |
| Valve size                           | [mm]  | 26  |
| Ports on the sub-base                | 1, 2, 3, 4, 5<br>12, 14                       | G1/4<br>M5  |
| Tightening torque for valve mounting | [Nm]  | 1.8 ... 2.2   |
| Product weight                       | With plug M8x1 [g]<br>With open cable end [g] | 289<br>332  |
| Noise level                          | [dB (A)]                                      | 85  |
| Conforms to standard                 |   | ISO 15407-1, VDMA 24563                                       |

## Flow rates

|   |         |      |
|---|---------|------|
| Flow rate of valve                        | [l/min] | 1400 |
| Flow rate of valve on individual sub-base | [l/min] | 1100 |
| Flow rate of pneumatically linked valve   | [l/min] | 1100 |
| Standard nominal flow rate                | [l/min] | 1100 |

## Datasheet – Valve size 26 mm, valve with position sensing

| Switching times [ms]           |                   | Switching time on | Switching time off |
|--------------------------------|-------------------|-------------------|--------------------|
| 5/2-way valve, single solenoid | Mechanical spring | 21                | 41                 |

| Safety characteristics                                     |  |
|--|--|
| CE marking (see declaration of conformity)                 | To EU EMC Directive <sup>1)</sup>  |
| UKCA marking (see declaration of conformity) <sup>1)</sup> | To UK EMC regulations  |
| KC marking   | KC EMC   |
| Max. positive test pulse with logic 0                      | [µs] 1000  |
| Max. negative test pulse with logic 1                      | [µs] 800   |
| Shock resistance   | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                |
| Vibration resistant  | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6 |

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| Operating and environmental conditions |  |
|--|--|
| Operating medium                       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure                     | [MPa] -0.09 ... 1.6<br>[bar] -0.9 ... 16   |
| Pilot pressure                         | [MPa] 0.3 ... 1<br>[bar] 3 ... 10  |
| Ambient temperature                    | [°C] -5 ... +50  |
| Temperature of medium                  | [°C] -5 ... +50  |
| Relative humidity                      | [%] 0 ... 90   |
| Certification                          | c UL us - Recognized (OL)<br>C-Tick  |
| Certificate-issuing authority          | UL MH19482   |

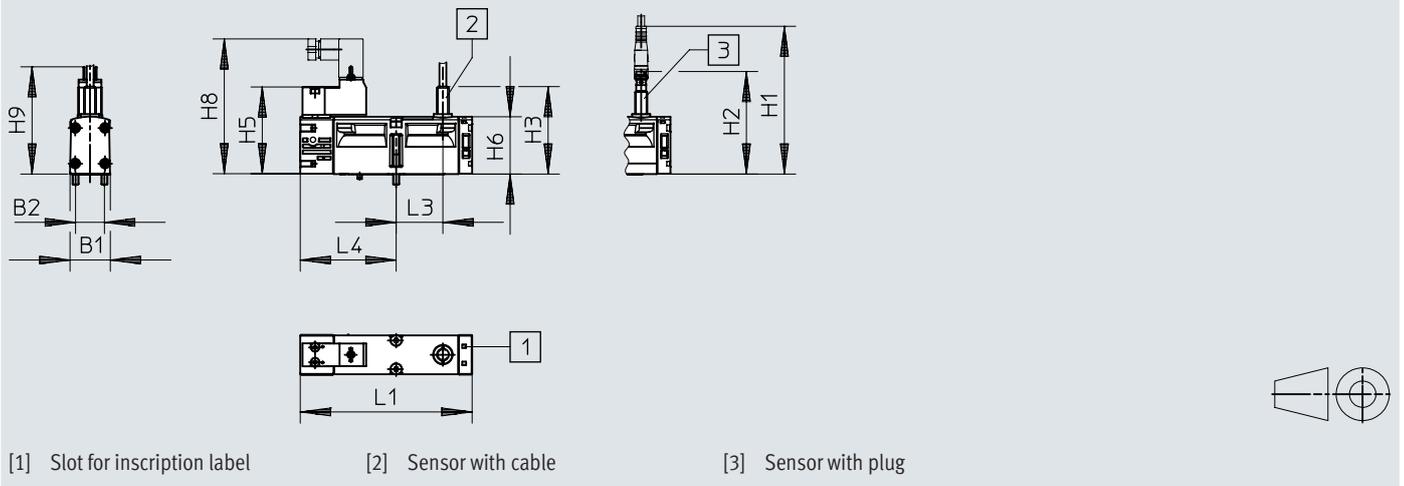
| Electrical data                  |  |
|----------------------------------|--|
| Electrical connection            | Plug, square design to EN 175301-803, type C, without PE conductor |
| Operating voltage                | [V DC] 24 +10%/-15%  |
| Characteristic coil value        | [W] 1.8  |
| Duty cycle                       | [%] 100  |
| Signal status indication         | With accessories   |
| Degree of protection to EN 60529 | IP65, Nema 4 (in combination with plug socket)                     |

## Datasheet – Valve size 26 mm, valve with position sensing

| Electrical data – Sensor           |        | VSVA-B-...P                    | VSVA-B-...C                    |
|------------------------------------|--------|--------------------------------|--------------------------------|
| Type                               |        | Plug, M8x1, 3-pin              | Open cable end, 2.5 m          |
| Operating voltage                  | [V DC] | 10 ... 30                      | 10 ... 30                      |
| Switching element function         |        | N/C                            | N/C                            |
| Measuring principle                |        | Inductive                      | Inductive                      |
| Sensor switching status indication |        | LED                            | LED                            |
| Reverse polarity protection        |        | For all electrical connections | For all electrical connections |
| Short circuit current rating       |        | Pulsed                         | Pulsed                         |
| No-load current                    | [mA]   | Max. 10                        | Max. 10                        |
| Output current                     | [mA]   | Max. 200                       | Max. 200                       |
| Switching frequency                | [kHz]  | Max. 5                         | Max. 5                         |
| Residual ripple                    | [%]    | ±10                            | ±10                            |
| Voltage drop                       | [V]    | Max. 2                         | Max. 2                         |
| Valve – Sensor switching time      | On     | 60                             | 60                             |
|                                    | Off    | 11                             | 11                             |

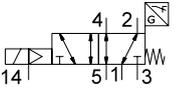
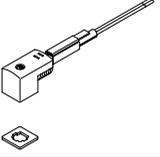
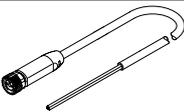
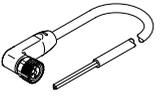
| Materials              |                        |
|------------------------|------------------------|
| Housing                | Die-cast aluminium, PA |
| Seals                  | FPM, NBR               |
| Screws                 | Galvanised steel       |
| Note on materials      | RoHs-compliant         |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L      |

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

|                           | B1   | B2 | H1 | H2   | H3 | H5   | H6 | H8   | H9   | L1    | L3   | L4   |
|---------------------------|------|----|----|------|----|------|----|------|------|-------|------|------|
| VSVA-B-M52-MZ-A1-1C1-A... | 26.2 | 19 | 98 | 68.2 | 58 | 57.8 | 38 | 89.6 | 71.2 | 113.1 | 30.7 | 63.1 |

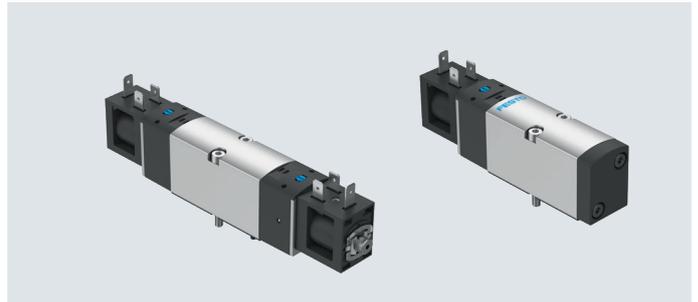
## Datasheet – Valve size 26 mm, valve with position sensing

| Ordering data – Pilot control fitted  |   |   |                                  |                               |                          |                       |
|---|---|---|----------------------------------|-------------------------------|--------------------------|-----------------------|
| Code  | Circuit symbol  |   | Electrical connection for sensor | Part no.                      | Type                     |                       |
| <b>5/2-way valve, single solenoid, with pilot control with square plug, type C to EN 175301-803</b> |   |   |                                  |                               |                          |                       |
| SO  |    | Inductive sensor with PNP output                    | Plug, M8x1, 3-pin                | 560726                        | VSVA-B-M52-MZ-A1-1C1-APP |                       |
| –   |   |   | Open cable end, 2.5 m            | 560725                        | VSVA-B-M52-MZ-A1-1C1-APC |                       |
| SQ  |   | Inductive sensor with NPN output                    | Plug, M8x1, 3-pin                | 560745                        | VSVA-B-M52-MZ-A1-1C1-ANP |                       |
| –   |   |   | Open cable end, 2.5 m            | 560744                        | VSVA-B-M52-MZ-A1-1C1-ANC |                       |
| <b>Ordering data – Accessories</b>  |   |   |                                  |                               |                          |                       |
| Code  |   | Description   |                                  | Part no.                      | Type                     |                       |
| <b>Plug socket for plug pattern to EN 175301-803, type C</b>  |   |   |                                  |                               |                          |                       |
| –   |    | Angled socket, type C, 3-pin, screw terminal        | Cable fitting PG7                | 151687                        | MSSD-EB                  |                       |
|   |   |   | Cable connector M12              | 539712                        | MSSD-EB-M12              |                       |
| <b>Illuminating seal for connection pattern to EN 175301-803, type C</b>                            |   |   |                                  | Datasheets → Internet: meb-ld |                          |                       |
| –   |    | For plug socket MSSD, 12 ... 24 V DC                |                                  | 151717                        | MEB-LD-12-24DC           |                       |
| <b>Connecting cable for plug pattern to EN 175301-803, type C</b>                                   |   |   |                                  |                               |                          |                       |
| GG  |   | Angled socket, type C, with LED<br>Open end, 3-core | 3-pin, cable sheath PVC          | 2.5 m                         | 151688                   | KMEB-1-24-2.5-LED     |
| GH  |   |   |                                  | 5 m                           | 151689                   | KMEB-1-24-5-LED       |
| GJ  |   |   |                                  | 10 m                          | 193457                   | KMEB-1-24-10-LED      |
| <b>Connecting cable for electrical connection of the position detection sensor</b>                  |   |   |                                  |                               |                          |                       |
| GM  |  | Straight socket, M8x1, 3-pin<br>Open end, 3-core    |                                  | 2.5 m                         | 8078223                  | NEBA-M8G3-U-2.5-N-LE3 |
| GN  |   |   |                                  | 5 m                           | 8078224                  | NEBA-M8G3-U-5-N-LE3   |
| GO  |  | Angled socket, M8x1, 3-pin<br>Open end, 3-core      |                                  | 2.5 m                         | 8078230                  | NEBA-M8W3-U-2.5-N-LE3 |
| GP  |   |   |                                  | 5 m                           | 8078231                  | NEBA-M8W3-U-5-N-LE3   |

## Datasheet – Valve size 26 mm

-  - Flow rate  
max. 924 l/min

-  - Voltage  
24 V DC

**General technical data**

|                                      |               |                                    |                          |                    |                   |
|--------------------------------------|---------------|------------------------------------|--------------------------|--------------------|-------------------|
| Valve function                       |               | 5/2-way, single solenoid           | 5/2-way, double solenoid | 5/3-way, exhausted |                   |
| Reset method                         |               | Pneumatic spring                   | Mechanical spring        | –                  | Mechanical spring |
| Design                               |               | Piston spool with sealing ring     |                          |                    |                   |
| Overlap                              |               | Negative overlap                   |                          |                    |                   |
| Sealing principle                    |               | Soft                               |                          |                    |                   |
| Actuation type                       |               | Electrical                         |                          |                    |                   |
| Type of control                      |               | Piloted                            |                          |                    |                   |
| Pilot air supply                     |               | Internal                           |                          |                    |                   |
| Flow direction                       |               | Not reversible                     |                          |                    |                   |
| Exhaust air function                 |               | Can be throttled                   |                          |                    |                   |
| Manual override                      |               | Non-detenting; detenting           |                          |                    |                   |
| Type of mounting                     |               | On sub-base                        |                          |                    |                   |
| Mounting position                    |               | Any                                |                          |                    |                   |
| Nominal width                        | [mm]          | 6.4                                |                          |                    |                   |
| Valve size                           | [mm]          | 26                                 |                          |                    |                   |
| Pneumatic port                       | 1, 2, 3, 4, 5 | Sub-base size 26 mm to ISO 15407-1 |                          |                    |                   |
| Connection for venting hole          |               | Not ducted                         |                          |                    |                   |
| b value                              |               | 0.29                               | 0.29                     | 0.3                | 0.29              |
| C value                              | [l/sbar]      | 3.94                               | 3.98                     | 3.92               | 3.99              |
| Tightening torque for valve mounting | [Nm]          | 2.4                                |                          |                    |                   |
| Product weight                       | [g]           | 240                                | 242                      | 319                | 320               |
| Conforms to standard                 |               | ISO 15407-1                        |                          |                    |                   |

**Flow rates**

|   |         |                          |                          |                    |                   |
|---|---------|--------------------------|--------------------------|--------------------|-------------------|
| Valve function                            |         | 5/2-way, single solenoid | 5/2-way, double solenoid | 5/3-way, exhausted |                   |
| Reset method                              |         | Pneumatic spring         | Mechanical spring        | –                  | Mechanical spring |
| Flow rate of valve                        | [l/min] | 915                      | 915                      | 915                | 924               |
| Flow rate of valve on individual sub-base | [l/min] | 915                      | 915                      | 915                | 924               |
| Flow rate of pneumatically linked valve   | [l/min] | 880                      | 880                      | 880                | 885               |
| Standard nominal flow rate                | [l/min] | 900                      | 900                      | 900                | 900               |

**Switching times**

|                           |      |                          |                          |                    |                   |
|---------------------------|------|--------------------------|--------------------------|--------------------|-------------------|
| Valve function            |      | 5/2-way, single solenoid | 5/2-way, double solenoid | 5/3-way, exhausted |                   |
| Reset method              |      | Pneumatic spring         | Mechanical spring        | –                  | Mechanical spring |
| Switching time on         | [ms] | 14.3                     | 16.2                     | –                  | 11.9              |
| Switching time off        | [ms] | 25.2                     | 22.8                     | –                  | 36.2              |
| Switching time changeover | [ms] | –                        | –                        | 10.8               | 18.9              |

## Datasheet – Valve size 26 mm

| Safety characteristics                       |       |  |
|--|-------|--|
| Max. positive test pulse with 0 signal       | [μs]  | 2500   |
| Max. negative test pulse with logic 1        | [μs]  | 1100   |
| Shock resistance                             |       | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                          |
| Vibration resistant                          |       | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6           |
| Operating and environmental conditions       |       |  |
| Operating medium                             |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Pilot medium                                 |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium           |       | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure                           | [MPa] | 0.3 ... 0.8  |
|  | [bar] | 3 ... 8  |
| Ambient temperature                          | [°C]  | -5 ... +50   |
| Temperature of medium                        | [°C]  | -5 ... +50   |
| Corrosion resistance class CRC <sup>1)</sup> |       | 1 - Low corrosion stress   |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

| Electrical data                  |        |                              |
|----------------------------------|--------|------------------------------|
| Electrical connection            |        | Type B                       |
|                                  |        | To industry standard (11 mm) |
| Nominal operating voltage        | [V DC] | 24                           |
| Characteristic coil value        |        | 24 V DC: 3.3 W               |
| Permissible voltage fluctuations | [%]    | ±10                          |
| Duty cycle                       | [%]    | 100                          |
| Degree of protection             |        | IP65                         |
|                                  |        | With plug socket             |
|                                  |        | To IEC 60529                 |
| Signal status indication         |        | With accessories             |

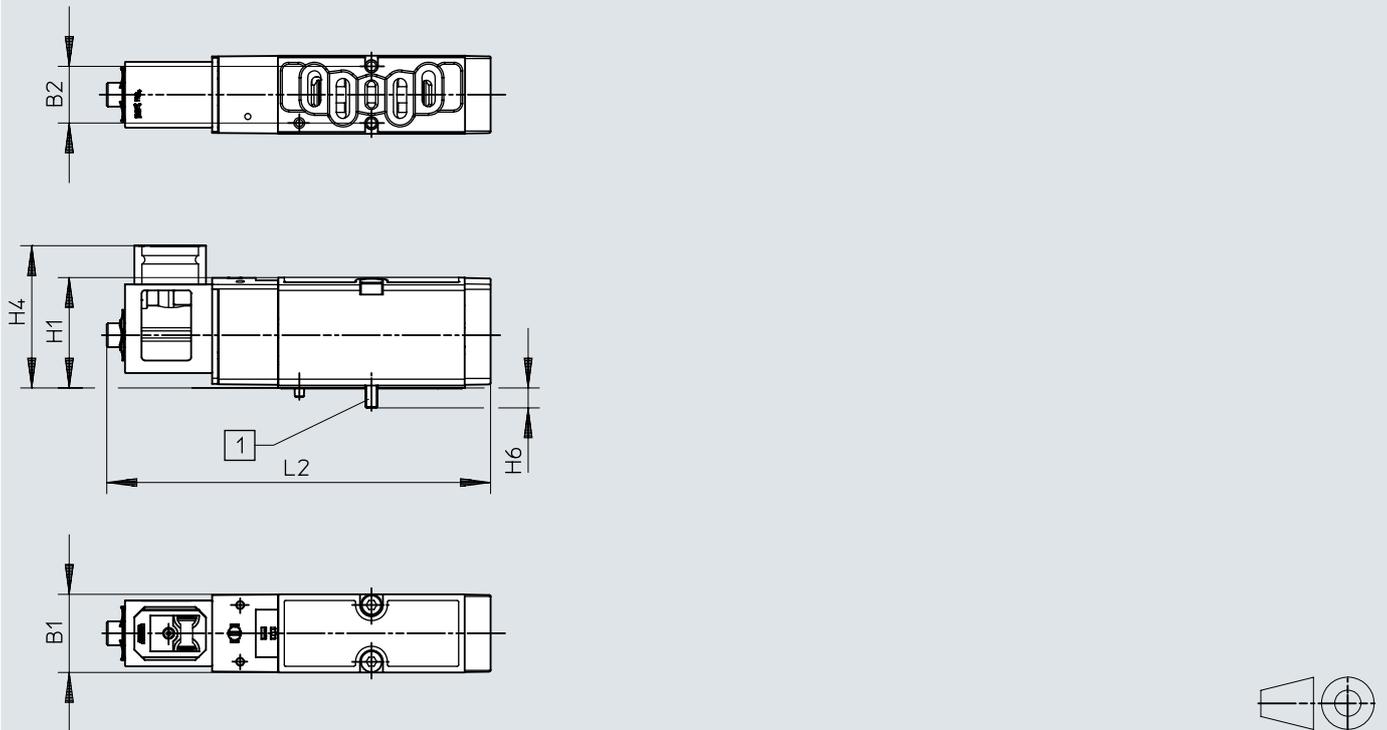
| Materials              |                         |
|------------------------|-------------------------|
| Housing                | Wrought aluminium alloy |
| Seals                  | NBR, HNBR               |
| Piston spool           | Wrought aluminium alloy |
| Screws                 | Galvanised steel        |
| Note on materials      | RoHS-compliant          |
| LABS (PWIS) conformity | VDMA24364-Zone III      |

Datasheet – Valve size 26 mm

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way valve, single solenoid



[1] Retaining screws M4

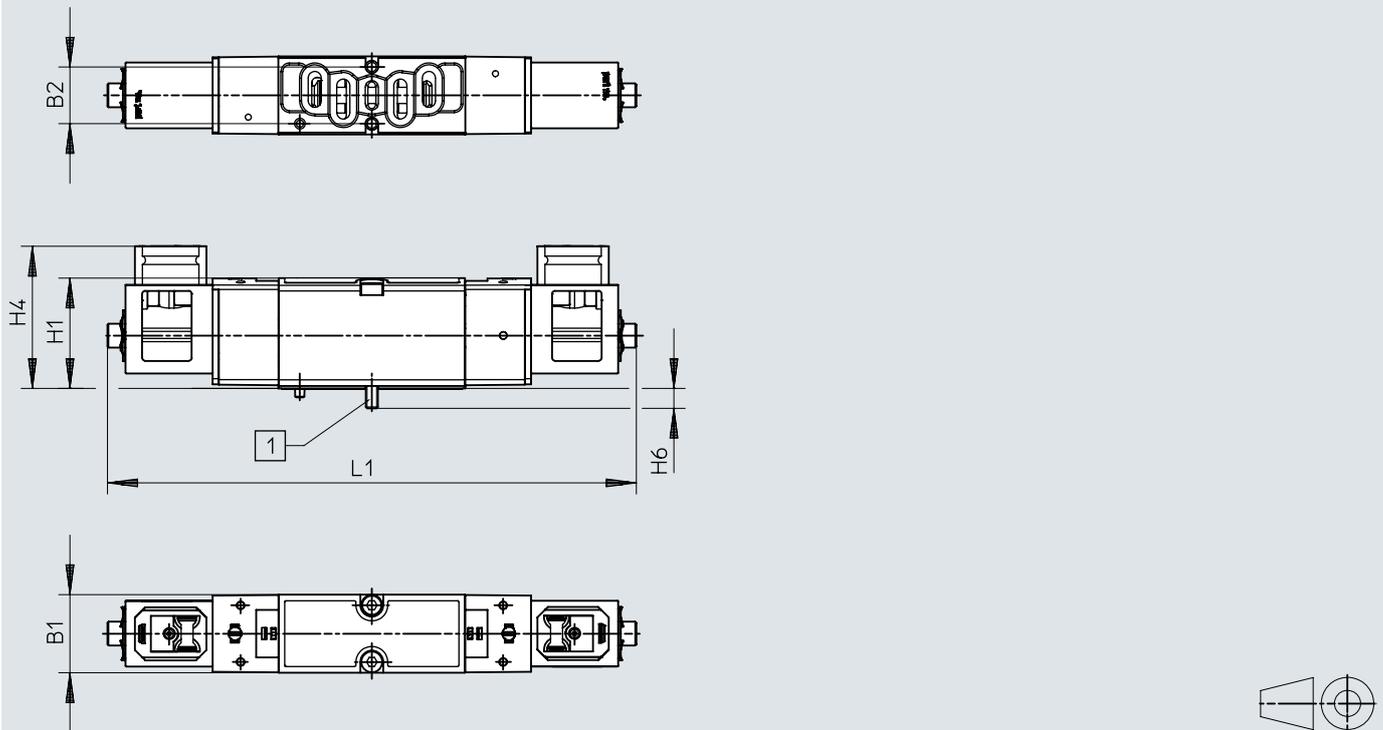
| Type           | B1   | B2 | H1 | H4   | H6  | L1    |
|----------------|------|----|----|------|-----|-------|
| VSVA-BK-M52... | 26.2 | 19 | 37 | 47.7 | 6.7 | 127.7 |

Datasheet – Valve size 26 mm

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

5/2-way double solenoid valve and 5/3-way solenoid valve



[1] Retaining screws M4

| Type           | B1   | B2 | H1 | H4   | H6  | L1    |
|----------------|------|----|----|------|-----|-------|
| VSVA-BK-B52... | 26.1 | 19 | 37 | 47.7 | 6.7 | 176.1 |
| VSVA-BK-P53... |      |    |    |      |     |       |

Ordering data

| Code                                  | Circuit symbol |                    | Part no.                  | Type                                 |
|---------------------------------------|----------------|--------------------|---------------------------|--------------------------------------|
| <b>5/2-way valve, single solenoid</b> |                |                    |                           |                                      |
| -                                     |                | Mechanical spring  | Internal pilot air supply | <b>8150869</b> VSVA-BK-M52-MD-A1-1B2 |
| -                                     |                | Pneumatic spring   | Internal pilot air supply | <b>8150870</b> VSVA-BK-M52-AD-A1-1B2 |
| <b>5/2-way valve, double solenoid</b> |                |                    |                           |                                      |
| -                                     |                | -                  | Internal pilot air supply | <b>8150871</b> VSVA-BK-B52-D-A1-1B2  |
| <b>5/3-way solenoid valve</b>         |                |                    |                           |                                      |
| -                                     |                | Normally exhausted | Internal pilot air supply | <b>8150872</b> VSVA-BK-P53E-D-A1-1B2 |

## Datasheet – Valve size 18 mm

-  - Flow rate  
max. 750 l/min

-  - Voltage  
24 V DC

**General technical data**

| Valve function                            | 2x 3/2-way valve                                    | 5/2-way valve                             | 5/3-way valve |   |
|---|---|---|---------------|---|
| Normal position                           | C <sup>1)</sup> , U <sup>2)</sup> , H <sup>4)</sup> | –   | –             | C <sup>1)</sup> , U <sup>2)</sup> , E <sup>3)</sup> |
| Stable position                           | Monostable  |   | Bistable      | Monostable  |
| Pneumatic spring return                   | Yes   | Yes                                       | –             | No  |
| Mechanical spring return                  | No  | Yes                                       | –             | Yes   |
| Design                                    | Piston spool  |   |               |   |
| Overlap                                   | Positive overlap                                    |   |               |   |
| Sealing principle                         | Soft  |   |               |   |
| Actuation type                            | Electrical  |   |               |   |
| Type of control                           | Piloted   |   |               |   |
| Pilot air supply                          | Internal or external                                |   |               |   |
| Flow direction                            | Not reversible                                      | Reversible with external pilot air supply |               |   |
| Exhaust air function                      | Can be throttled                                    |   |               |   |
| Manual override                           | Non-detenting                                       |   |               |   |
| Type of mounting                          | On sub-base   |   |               |   |
| Mounting position                         | Any   |   |               |   |
| Nominal width [mm]                        | 5   |   |               |   |
| Valve size [mm]                           | 18  |   |               |   |
| Ports on the sub-base                     | 1, 2, 3, 4, 5<br>12, 14                             | G1/8<br>M5                                |               |   |
| Tightening torque for valve mounting [Nm] | 0.9 ... 1.1   |   |               |   |
| Product weight [g]                        | 140   |   |               |   |
| Noise level [dB (A)]                      | 85  |   |               |   |
| Conforms to standard                      | ISO 15407-1, VDMA 24563                             |   |               |   |

1) C = Normally closed

2) U = Normally open

3) E = Normally exhausted

4) H = 2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

**Flow rates**

| Valve function                                    | 2x 3/2-way valve | 5/2-way valve | 5/3-way valve |
|---|------------------|---------------|---------------|
| Flow rate of valve [l/min]                        | 600              | 750           | 650           |
| Flow rate of valve on individual sub-base [l/min] | 450              | 550           | 500           |
| Flow rate of pneumatically linked valve [l/min]   | 400              | 550           | 450           |
| Standard nominal flow rate [l/min]                | 400              | 550           | 450           |

**Switching times [ms]**

|                                | Switching time on | Switching time off | Switching time changeover | Switching time changeover (dominant) |
|--------------------------------|-------------------|--------------------|---------------------------|--------------------------------------|
| 2x 3/2-way valve               | 10                | 22                 | –                         | –                                    |
| 5/2-way valve, single solenoid | Pneumatic spring  | 20                 | 25                        | –                                    |
|                                | Mechanical spring | 12                 | 34                        | –                                    |
| 5/2-way valve, double solenoid | –                 | –                  | 10                        | 10                                   |
| 5/3-way valve                  | 15                | 36                 | –                         | –                                    |

## Datasheet – Valve size 18 mm

| Safety characteristics                                     |  |   |
|--|--|---|
| Type   | VSVA-B-...-A2-1R...  | VSVA-B-T32C-AZH-A2-1R2L<br>VSVA-B-T32U-AZH-A2-1R2L<br>VSVA-B-T32H-AZH-A2-1R2L<br>VSVA-B-T32U-AH-A2-1R5L |
| CE marking (see declaration of conformity)                 | To EU EMC Directive <sup>1)</sup>  | To EU EMC Directive <sup>1)</sup>   |
| UKCA marking (see declaration of conformity) <sup>1)</sup> | To UK EMC regulations  | –   |
|  | To UK RoHS regulations   | –   |
| Max. positive test pulse with logic 0                      | [µs] 500   | 500   |
| Max. negative test pulse with logic 1                      | [µs] 500   | 500   |
| Shock resistance   | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                                       |
| Vibration resistant  | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6 | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6                        |

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| Operating and environmental conditions       |                           |  |               |               |             |
|--|---------------------------|--|---------------|---------------|-------------|
| Valve function                               |                           | 2x 3/2-way valve   | 5/2-way valve | 5/3-way valve |             |
| Operating medium                             |                           | Compressed air to ISO 8573-1:2010 [7:4:4]  |               |               |             |
| Note on the operating/pilot medium           |                           | Lubricated operation possible (in which case lubricated operation will always be required) |               |               |             |
| Operating pressure                           | Internal pilot air supply | [MPa]  | 0.3 ... 0.8   | 0.3 ... 0.8   | 0.3 ... 0.8 |
|  |                           | [bar]  | 3 ... 8       | 3 ... 8       | 3 ... 8     |
|  | External pilot air supply | [MPa]  | 0.3 ... 1     | –0.09 ... 1   | –0.09 ... 1 |
|  |                           | [bar]  | 3 ... 10      | –0.9 ... 10   | –0.9 ... 10 |
| Pilot pressure                               | [MPa]                     | 0.3 ... 0.8  | 0.3 ... 0.8   | 0.3 ... 0.8   |             |
|  | [bar]                     | 3 ... 8  | 3 ... 8       | 3 ... 8       |             |
| Ambient temperature                          | [°C]                      | –5 ... +50   |               |               |             |
| Temperature of medium                        | [°C]                      | –5 ... +50   |               |               |             |
| Relative humidity                            | [%]                       | 0 ... 90   |               |               |             |
| Corrosion resistance class CRC <sup>1)</sup> |                           | 2  |               |               |             |
| Certification                                |                           | c UL us - Recognized (OL)  |               |               |             |
|  |                           | C-Tick   |               |               |             |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

| Electrical data                                |         |   |
|--|---------|---|
| Electrical connection                          |         | Central plug, round design, M8x1 4-pin or M12x1 3-pin |
| Characteristic coil value                      | Voltage | [V DC] 24±10% = 21.6 ... 26.4                         |
|  | Power   | [W] High-current phase: 2.4<br>Low-current phase: 11) |
| Duty cycle                                     | [%]     | 100   |
| Degree of protection to EN 60529               |         | IP65 (in combination with plug socket)                |
| Signal status indication                       |         | LED   |
| Reverse polarity protection                    |         | For all electrical connections                        |
| Additional functions                           |         | Holding current reduction<br>Safety shut-off          |
| Protection against direct and indirect contact |         | PELV  |

1) Controlled by integrated current reduction

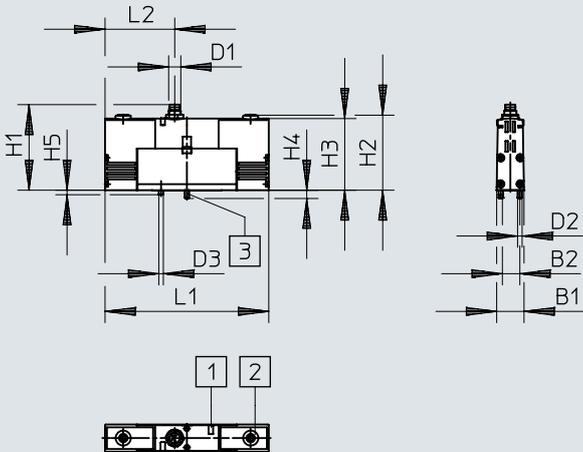
| Materials              |                         |
|------------------------|-------------------------|
| Housing                | Die-cast aluminium, POM |
| Seals                  | NBR                     |
| Note on materials      | RoHS-compliant          |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L       |

Datasheet – Valve size 18 mm

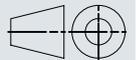
Dimensions

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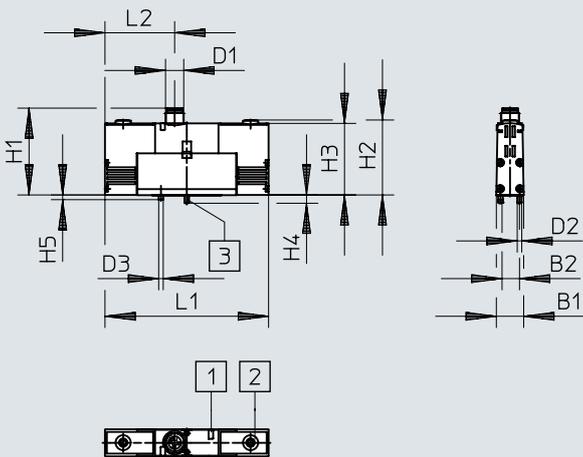
Valve with central plug M8x1, VSVA-B-...-1R2L



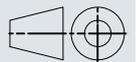
- [1] Light emitting diode
- [2] Manual override
- [3] Captive retaining screws



Valve with central plug M12x1, VSVA-B-...-1R5L



- [1] Light emitting diode
- [2] Manual override
- [3] Captive retaining screws

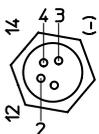


| Type            | B1 | B2   | D1    | D2 | D3 | H1   | H2   | H3   | H4  | H5 | L1    | L2   |
|-----------------|----|------|-------|----|----|------|------|------|-----|----|-------|------|
| VSVA-B-...-1R2L | 18 | 12.5 | M8x1  | M3 | 3  | 54.4 | 49.8 | 47.6 | 5.4 | 3  | 107.8 | 46.9 |
| VSVA-B-...-1R5L |    |      | M12x1 |    |    | 58.2 |      |      |     |    |       |      |

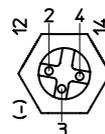
Terminal assignment

M8x1

M12x1



- 1 Not assigned
- 2 Signal (+) solenoid 12/10
- 3 com (-)
- 4 Signal (+) solenoid 14/10

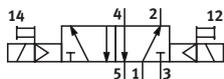
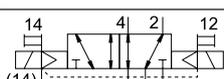
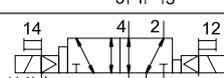
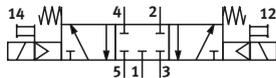
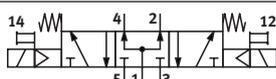
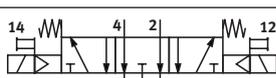
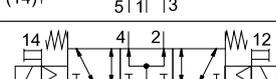


- 2 Signal (+) Solenoid 12
- 3 com (-)
- 4 Signal (+) Solenoid 14

Datasheet – Valve size 18 mm

| Ordering data                         |                |  |                           | Part no. | Type   |                         |
|---------------------------------------|----------------|--|---------------------------|----------|--------|-------------------------|
| Code                                  | Circuit symbol |  |                           |          |        |                         |
| <b>2x 3/2-way solenoid valve</b>      |                |  |                           |          |        |                         |
| K                                     |                | Normal position:<br>2x normally closed                     | Internal pilot air supply | M8x1     | 534771 | VSVA-B-T32C-AH-A2-1R2L  |
|                                       |                |  |                           | M12x1    | 546764 | VSVA-B-T32C-AH-A2-1R5L  |
| N                                     |                | Normal position:<br>2x normally open                       | Internal pilot air supply | M8x1     | 534772 | VSVA-B-T32U-AH-A2-1R2L  |
|                                       |                |  |                           | M12x1    | 546765 | VSVA-B-T32U-AH-A2-1R5L  |
| H                                     |                | Normal position:<br>1x normally closed<br>1x normally open | Internal pilot air supply | M8x1     | 534773 | VSVA-B-T32H-AH-A2-1R2L  |
|                                       |                |  |                           | M12x1    | 546766 | VSVA-B-T32H-AH-A2-1R5L  |
| K                                     |                | Normal position:<br>2x normally closed                     | External pilot air supply | M8x1     | 534781 | VSVA-B-T32C-AZH-A2-1R2L |
|                                       |                |  |                           | M12x1    | 546774 | VSVA-B-T32C-AZH-A2-1R5L |
| N                                     |                | Normal position:<br>2x normally open                       | External pilot air supply | M8x1     | 534782 | VSVA-B-T32U-AZH-A2-1R2L |
|                                       |                |  |                           | M12x1    | 546775 | VSVA-B-T32U-AZH-A2-1R5L |
| H                                     |                | Normal position:<br>1x normally closed<br>1x normally open | External pilot air supply | M8x1     | 534783 | VSVA-B-T32H-AZH-A2-1R2L |
|                                       |                |  |                           | M12x1    | 546776 | VSVA-B-T32H-AZH-A2-1R5L |
| <b>5/2-way valve, single solenoid</b> |                |  |                           |          |        |                         |
| M                                     |                | Pneumatic spring   | Internal pilot air supply | M8x1     | 534774 | VSVA-B-M52-AH-A2-1R2L   |
|                                       |                |  |                           | M12x1    | 546767 | VSVA-B-M52-AH-A2-1R5L   |
| O                                     |                | Mechanical spring  | Internal pilot air supply | M8x1     | 534775 | VSVA-B-M52-MH-A2-1R2L   |
|                                       |                |  |                           | M12x1    | 546768 | VSVA-B-M52-MH-A2-1R5L   |
| M                                     |                | Pneumatic spring   | External pilot air supply | M8x1     | 534784 | VSVA-B-M52-AZH-A2-1R2L  |
|                                       |                |  |                           | M12x1    | 546777 | VSVA-B-M52-AZH-A2-1R5L  |
| O                                     |                | Mechanical spring  | External pilot air supply | M8x1     | 534785 | VSVA-B-M52-MZH-A2-1R2L  |
|                                       |                |  |                           | M12x1    | 546778 | VSVA-B-M52-MZH-A2-1R5L  |

## Datasheet – Valve size 18 mm

| Ordering data                      |   |                     |                           | Part no. | Type                          |
|------------------------------------|---|---------------------|---------------------------|----------|-------------------------------|
| Code                               | Circuit symbol  |                     |                           |          |                               |
| <b>5/2-way valve, double pilot</b> |   |                     |                           |          |                               |
| J                                  |    | Dominant 1st signal | Internal pilot air supply | M8x1     | 534776 VSVA-B-B52-H-A2-1R2L   |
|                                    |   |                     |                           | M12x1    | 546769 VSVA-B-B52-H-A2-1R5L   |
| D                                  |    | Dominant at 14      | Internal pilot air supply | M8x1     | 534777 VSVA-B-D52-H-A2-1R2L   |
|                                    |   |                     |                           | M12x1    | 546770 VSVA-B-D52-H-A2-1R5L   |
| J                                  |    | Dominant 1st signal | External pilot air supply | M8x1     | 534786 VSVA-B-B52-ZH-A2-1R2L  |
|                                    |   |                     |                           | M12x1    | 546779 VSVA-B-B52-ZH-A2-1R5L  |
| D                                  |    | Dominant at 14      | External pilot air supply | M8x1     | 534787 VSVA-B-D52-ZH-A2-1R2L  |
|                                    |   |                     |                           | M12x1    | 546780 VSVA-B-D52-ZH-A2-1R5L  |
| <b>5/3-way solenoid valve</b>      |   |                     |                           |          |                               |
| G                                  |    | Normally closed     | Internal pilot air supply | M8x1     | 534778 VSVA-B-P53C-H-A2-1R2L  |
|                                    |   |                     |                           | M12x1    | 546771 VSVA-B-P53C-H-A2-1R5L  |
| B                                  |    | Normally open       | Internal pilot air supply | M8x1     | 534780 VSVA-B-P53U-H-A2-1R2L  |
|                                    |   |                     |                           | M12x1    | 546773 VSVA-B-P53U-H-A2-1R5L  |
| E                                  |   | Normally exhausted  | Internal pilot air supply | M8x1     | 534779 VSVA-B-P53E-H-A2-1R2L  |
|                                    |   |                     |                           | M12x1    | 546772 VSVA-B-P53E-H-A2-1R5L  |
| G                                  |  | Normally closed     | External pilot air supply | M8x1     | 534788 VSVA-B-P53C-ZH-A2-1R2L |
|                                    |   |                     |                           | M12x1    | 546781 VSVA-B-P53C-ZH-A2-1R5L |
| B                                  |  | Normally open       | External pilot air supply | M8x1     | 534790 VSVA-B-P53U-ZH-A2-1R2L |
|                                    |   |                     |                           | M12x1    | 546783 VSVA-B-P53U-ZH-A2-1R5L |
| E                                  |  | Normally exhausted  | External pilot air supply | M8x1     | 534789 VSVA-B-P53E-ZH-A2-1R2L |
|                                    |   |                     |                           | M12x1    | 546782 VSVA-B-P53E-ZH-A2-1R5L |

Datasheet – Valve size 26 mm

-  - Flow rate  
max. 1400 l/min

-  - Voltage  
24 V DC



**General technical data**

| Valve function                            | 2x 3/2-way valve  |                 |                 | 5/2-way valve                             |          | 5/3-way valve   |                 |                 |
|---|---|-----------------|-----------------|---|----------|-----------------|-----------------|-----------------|
|   | C <sup>1)</sup>   | U <sup>2)</sup> | H <sup>4)</sup> | –   | –        | C <sup>1)</sup> | U <sup>2)</sup> | E <sup>3)</sup> |
| Normal position                           | C <sup>1)</sup>   | U <sup>2)</sup> | H <sup>4)</sup> | –   | –        | C <sup>1)</sup> | U <sup>2)</sup> | E <sup>3)</sup> |
| Stable position                           | Monostable  |                 |                 | Monostable                                | Bistable | Monostable      |                 |                 |
| Pneumatic spring return                   | Yes   |                 |                 | Yes                                       | –        | No              |                 |                 |
| Mechanical spring return                  | No  |                 |                 | Yes                                       | –        | Yes             |                 |                 |
| Design                                    | Piston spool  |                 |                 |   |          |                 |                 |                 |
| Overlap                                   | Positive overlap  |                 |                 |   |          |                 |                 |                 |
| Sealing principle                         | Soft  |                 |                 |   |          |                 |                 |                 |
| Actuation type                            | Electrical  |                 |                 |   |          |                 |                 |                 |
| Type of control                           | Piloted   |                 |                 |   |          |                 |                 |                 |
| Pilot air supply                          | Internal or external  |                 |                 |   |          |                 |                 |                 |
| Flow direction                            | Not reversible  |                 |                 | Reversible with external pilot air supply |          |                 |                 |                 |
| Exhaust air function                      | Can be throttled, via throttle plate, via individual sub-base |                 |                 |   |          |                 |                 |                 |
| Manual override                           | Non-detenting   |                 |                 |   |          |                 |                 |                 |
| Type of mounting                          | On sub-base   |                 |                 |   |          |                 |                 |                 |
| Mounting position                         | Any   |                 |                 |   |          |                 |                 |                 |
| Nominal width [mm]                        | 9   |                 |                 |   |          |                 |                 |                 |
| Valve size [mm]                           | 26  |                 |                 |   |          |                 |                 |                 |
| Ports on the sub-base                     | 1, 2, 3, 4, 5<br>12, 14                                       |                 |                 | G1/4<br>M5                                |          |                 |                 |                 |
| b value                                   | 0.25  | –               | –               | 0.25                                      | –        | 0.24            | –               | 0.3             |
| c value [l/sbar]                          | 4   | –               | –               | 4.5                                       | –        | 4.35            | –               | 2.9             |
| Tightening torque for valve mounting [Nm] | 1.8 ... 2.2   |                 |                 |   |          |                 |                 |                 |
| Product weight [g]                        | 270   |                 |                 |   |          |                 |                 |                 |
| Conforms to standard                      | ISO 15407-1   |                 |                 |   |          |                 |                 |                 |

- 1) C = Normally closed
- 2) U = Normally open
- 3) E = Normally exhausted
- 4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

**Flow rates**

| Valve function                                    | 2x 3/2-way valve | 5/2-way valve | 5/3-way valve |
|---|------------------|---------------|---------------|
| Flow rate of valve [l/min]                        | 1250             | 1400          | 1400          |
| Flow rate of valve on individual sub-base [l/min] | 1000             | 1100          | 1100          |
| Flow rate of pneumatically linked valve [l/min]   | 900              | 1100          | 1000          |
| Standard nominal flow rate [l/min]                | 900              | 1100          | 1000          |

**Switching times [ms]**

|                                | Switching time on | Switching time off | Switching time changeover | Switching time changeover (dominant) |
|--------------------------------|-------------------|--------------------|---------------------------|--------------------------------------|
| 2x 3/2-way valve               | 20                | 33                 | –                         | –                                    |
| 5/2-way valve, single solenoid | Pneumatic spring  | 25                 | 40                        | –                                    |
|                                | Mechanical spring | 20                 | 52                        | –                                    |
| 5/2-way valve, double solenoid | –                 | –                  | 15                        | 25                                   |
| 5/3-way valve                  | 20                | 52                 | –                         | –                                    |

## Datasheet – Valve size 26 mm

| Safety characteristics                                     |            |  |
|--|------------|--|
| CE marking (see declaration of conformity)                 |            | To EU EMC Directive <sup>1)</sup>  |
| UKCA marking (see declaration of conformity) <sup>1)</sup> |            | To UK EMC regulations<br>To UK RoHS regulations                                  |
| Max. positive test pulse with logic 0                      | [ $\mu$ s] | 400  |
| Max. negative test pulse with logic 1                      | [ $\mu$ s] | 100  |
| Shock resistance   |            | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                |
| Vibration resistant  |            | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6 |

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| Operating and environmental conditions       |                           |       | 2x 3/2-way valve   | 5/2-way valve | 5/3-way valve |
|--|---------------------------|-------|--|---------------|---------------|
| Valve function                               |                           |       |  |               |               |
| Operating medium                             |                           |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |               |               |
| Pilot medium                                 |                           |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |               |               |
| Note on the operating/pilot medium           |                           |       | Lubricated operation possible (in which case lubricated operation will always be required) |               |               |
| Operating pressure                           | Internal pilot air supply | [MPa] | 0.3 ... 0.8  | 0.3 ... 0.8   | 0.3 ... 0.8   |
|  |                           | [bar] | 3 ... 8  | 3 ... 8       | 3 ... 8       |
|  | External pilot air supply | [MPa] | 0.3 ... 1  | -0.09 ... 1.6 | -0.09 ... 1.6 |
|  |                           | [bar] | 3 ... 10   | -0.9 ... 16   | -0.9 ... 16   |
| Pilot pressure <sup>1)</sup>                 |                           | [MPa] | 0.3 ... 0.8  | 0.3 ... 0.8   | 0.3 ... 0.8   |
|  |                           | [bar] | 3 ... 8  | 3 ... 8       | 3 ... 8       |
| Ambient temperature                          |                           | [°C]  | -5 ... +50   |               |               |
| Temperature of medium                        |                           | [°C]  | -5 ... +50   |               |               |
| Relative humidity                            |                           | [%]   | 0 ... 90   |               |               |
| Corrosion resistance class CRC <sup>2)</sup> |                           |       | 2  |               |               |
| Certification                                |                           |       | c UL us - Recognized (OL)<br>RCM   |               |               |

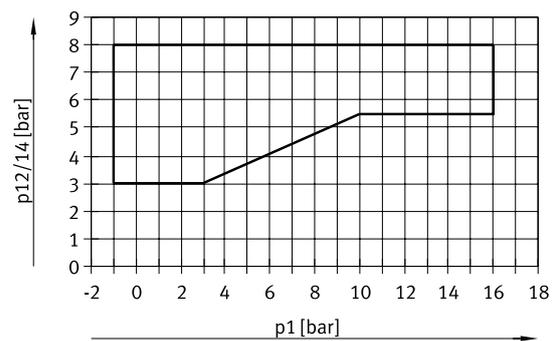
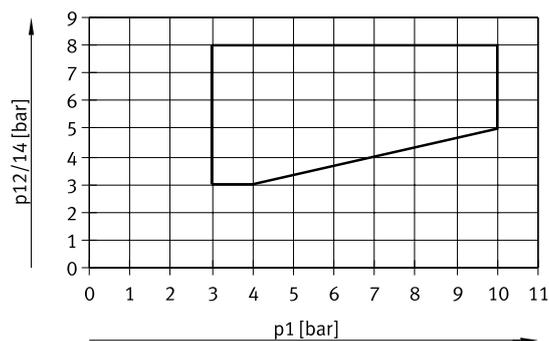
1) Pilot pressure dependent on operating pressure → graph

2) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

### Minimum pilot pressure p<sub>12</sub>, p<sub>14</sub> as a function of operating pressure p<sub>1</sub> (external pilot air supply)

2x 3/2-way valve

5/2-way valve and 5/3-way valve



## Datasheet – Valve size 26 mm

| Electrical data                                |         |   |   |
|--|---------|---|---|
| Electrical connection                          |         | Central plug, round design, M8x1 4-pin or M12x1 3-pin |   |
| Characteristic coil value                      | Voltage | [V DC]  | 24±10% = 21.6 ... 26.4                            |
|  | Power   | [W]   | High-current phase: 2.4<br>Low-current phase: 11) |
| Nominal pick-up current per solenoid coil      |         | [mA]  | 110 to 20 ms                                      |
| Nominal current with current reduction         |         | [mA]  | 30 after 20 ms                                    |
| Duty cycle                                     |         | %   | 100   |
| Degree of protection to EN 60529               |         | IP65, Nema 4 (in combination with plug socket)        |   |
| Signal status indication                       |         | LED   |   |
| Reverse polarity protection                    |         | For all electrical connections                        |   |
| Additional functions                           |         | Holding current reduction<br>Safety shut-off          |   |
| Protection against direct and indirect contact |         | PELV  |   |

1) Controlled by integrated current reduction

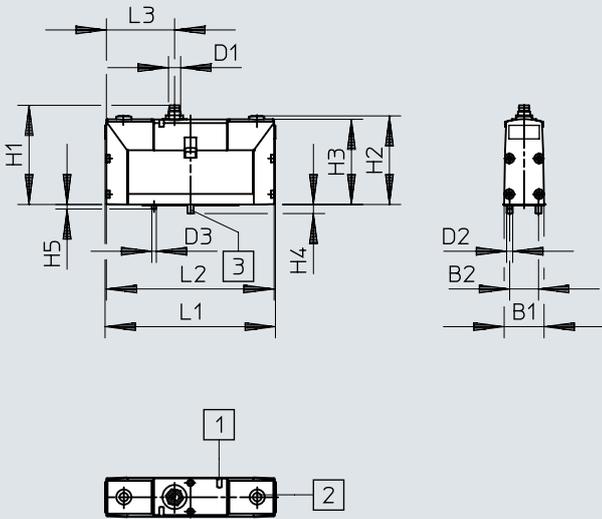
| Materials              |                         |
|------------------------|-------------------------|
| Housing                | Die-cast aluminium, POM |
| Seals                  | HNBR, NBR, FPM          |
| Note on materials      | RoHs-compliant          |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L       |

Datasheet – Valve size 26 mm

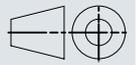
Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

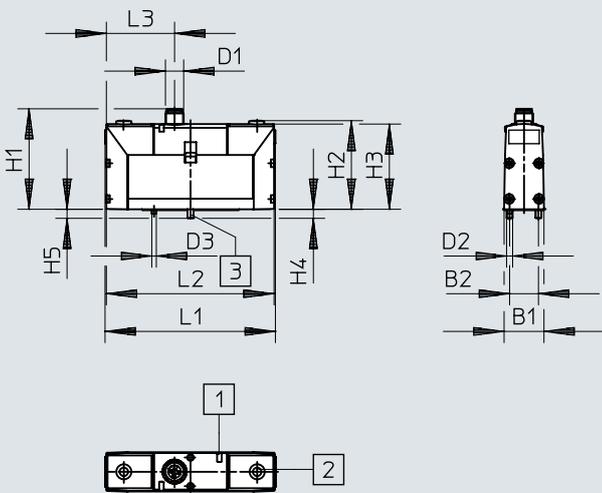
Valve with central plug M8x1, VSVA-B-...-1R2L



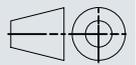
- [1] Light emitting diode
- [2] Manual override
- [3] Captive retaining screws



Valve with central plug M12x1, VSVA-B-...-1R5L



- [1] Light emitting diode
- [2] Manual override
- [3] Captive retaining screws

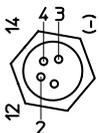


| Type            | B1   | B2 | D1    | D2 | D3 | H1   | H2   | H3   | H4 | H5 | L1    | L2    | L3   |
|-----------------|------|----|-------|----|----|------|------|------|----|----|-------|-------|------|
| VSVA-B-...-1R2L | 26.3 | 19 | M8x1  | M4 | 3  | 63.3 | 59.2 | 56.6 | 6  | 3  | 112.5 | 110.7 | 46.5 |
| VSVA-B-...-1R5L |      |    | M12x1 |    |    | 66.6 |      |      |    |    |       |       |      |

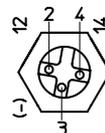
Terminal assignment

M8x1

M12x1



- 1 Not assigned
- 2 Signal (+) solenoid 12/10
- 3 com (-)
- 4 Signal (+) solenoid 14/10

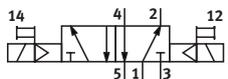
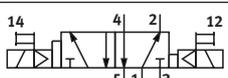
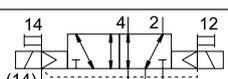
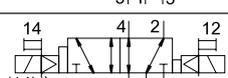
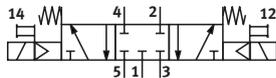
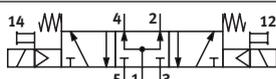
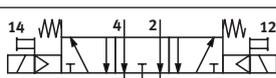
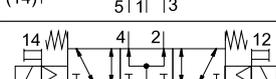


- 2 Signal (+) Solenoid 12
- 3 com (-)
- 4 Signal (+) Solenoid 14

Datasheet – Valve size 26 mm

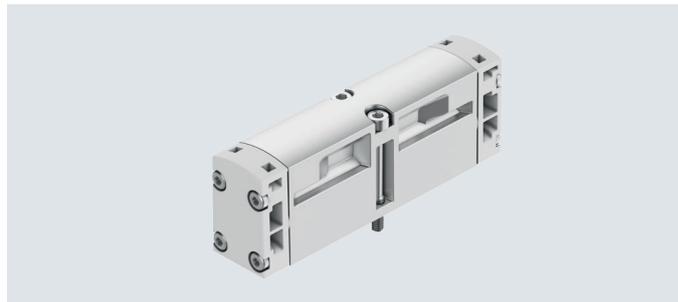
| Ordering data                         |                |  |                           | Part no. | Type                           |
|---------------------------------------|----------------|--|---------------------------|----------|--------------------------------|
| Code                                  | Circuit symbol |  |                           |          |                                |
| <b>2x 3/2-way solenoid valve</b>      |                |  |                           |          |                                |
| K                                     |                | Normal position:<br>2x normally closed                     | Internal pilot air supply | M8x1     | 534532 VSVA-B-T32C-AH-A1-1R2L  |
|                                       |                |  |                           | M12x1    | 534552 VSVA-B-T32C-AH-A1-1R5L  |
| N                                     |                | Normal position:<br>2x normally open                       | Internal pilot air supply | M8x1     | 534533 VSVA-B-T32U-AH-A1-1R2L  |
|                                       |                |  |                           | M12x1    | 534553 VSVA-B-T32U-AH-A1-1R5L  |
| H                                     |                | Normal position:<br>1x normally closed<br>1x normally open | Internal pilot air supply | M8x1     | 534534 VSVA-B-T32H-AH-A1-1R2L  |
|                                       |                |  |                           | M12x1    | 534554 VSVA-B-T32H-AH-A1-1R5L  |
| K                                     |                | Normal position:<br>2x normally closed                     | External pilot air supply | M8x1     | 534522 VSVA-B-T32C-AZH-A1-1R2L |
|                                       |                |  |                           | M12x1    | 534542 VSVA-B-T32C-AZH-A1-1R5L |
| N                                     |                | Normal position:<br>2x normally open                       | External pilot air supply | M8x1     | 534523 VSVA-B-T32U-AZH-A1-1R2L |
|                                       |                |  |                           | M12x1    | 534543 VSVA-B-T32U-AZH-A1-1R5L |
| H                                     |                | Normal position:<br>1x normally closed<br>1x normally open | External pilot air supply | M8x1     | 534524 VSVA-B-T32H-AZH-A1-1R2L |
|                                       |                |  |                           | M12x1    | 534544 VSVA-B-T32H-AZH-A1-1R5L |
| <b>5/2-way valve, single solenoid</b> |                |  |                           |          |                                |
| M                                     |                | Pneumatic spring   | Internal pilot air supply | M8x1     | 534535 VSVA-B-M52-AH-A1-1R2L   |
|                                       |                |  |                           | M12x1    | 534555 VSVA-B-M52-AH-A1-1R5L   |
| O                                     |                | Mechanical spring  | Internal pilot air supply | M8x1     | 534536 VSVA-B-M52-MH-A1-1R2L   |
|                                       |                |  |                           | M12x1    | 534556 VSVA-B-M52-MH-A1-1R5L   |
| M                                     |                | Pneumatic spring   | External pilot air supply | M8x1     | 534525 VSVA-B-M52-AZH-A1-1R2L  |
|                                       |                |  |                           | M12x1    | 534545 VSVA-B-M52-AZH-A1-1R5L  |
| O                                     |                | Mechanical spring  | External pilot air supply | M8x1     | 534526 VSVA-B-M52-MZH-A1-1R2L  |
|                                       |                |  |                           | M12x1    | 534546 VSVA-B-M52-MZH-A1-1R5L  |

## Datasheet – Valve size 26 mm

| Ordering data                      |   |                     |                           | Part no. | Type                          |
|------------------------------------|---|---------------------|---------------------------|----------|-------------------------------|
| Code                               | Circuit symbol  |                     |                           |          |                               |
| <b>5/2-way valve, double pilot</b> |   |                     |                           |          |                               |
| J                                  |    | Dominant 1st signal | Internal pilot air supply | M8x1     | 534537 VSVA-B-B52-H-A1-1R2L   |
|                                    |   |                     |                           | M12x1    | 534557 VSVA-B-B52-H-A1-1R5L   |
| D                                  |    | Dominant at 14      | Internal pilot air supply | M8x1     | 534538 VSVA-B-D52-H-A1-1R2L   |
|                                    |   |                     |                           | M12x1    | 534558 VSVA-B-D52-H-A1-1R5L   |
| J                                  |    | Dominant 1st signal | External pilot air supply | M8x1     | 534527 VSVA-B-B52-ZH-A1-1R2L  |
|                                    |   |                     |                           | M12x1    | 534547 VSVA-B-B52-ZH-A1-1R5L  |
| D                                  |    | Dominant at 14      | External pilot air supply | M8x1     | 534528 VSVA-B-D52-ZH-A1-1R2L  |
|                                    |   |                     |                           | M12x1    | 534548 VSVA-B-D52-ZH-A1-1R5L  |
| <b>5/3-way solenoid valve</b>      |   |                     |                           |          |                               |
| G                                  |    | Normally closed     | Internal pilot air supply | M8x1     | 534539 VSVA-B-P53C-H-A1-1R2L  |
|                                    |   |                     |                           | M12x1    | 534559 VSVA-B-P53C-H-A1-1R5L  |
| B                                  |    | Normally open       | Internal pilot air supply | M8x1     | 534541 VSVA-B-P53U-H-A1-1R2L  |
|                                    |   |                     |                           | M12x1    | 534561 VSVA-B-P53U-H-A1-1R5L  |
| E                                  |   | Normally exhausted  | Internal pilot air supply | M8x1     | 534540 VSVA-B-P53E-H-A1-1R2L  |
|                                    |   |                     |                           | M12x1    | 534560 VSVA-B-P53E-H-A1-1R5L  |
| G                                  |  | Normally closed     | External pilot air supply | M8x1     | 534529 VSVA-B-P53C-ZH-A1-1R2L |
|                                    |   |                     |                           | M12x1    | 534549 VSVA-B-P53C-ZH-A1-1R5L |
| B                                  |  | Normally open       | External pilot air supply | M8x1     | 534531 VSVA-B-P53U-ZH-A1-1R2L |
|                                    |   |                     |                           | M12x1    | 534551 VSVA-B-P53U-ZH-A1-1R5L |
| E                                  |  | Normally exhausted  | External pilot air supply | M8x1     | 534530 VSVA-B-P53E-ZH-A1-1R2L |
|                                    |   |                     |                           | M12x1    | 534550 VSVA-B-P53E-ZH-A1-1R5L |

Datasheet – Valve size 18 mm

-  - Flow rate  
550 ... 750 l/min



| General technical data                    |   |            |               |            |   |
|---|---|------------|---------------|------------|---|
| Valve function                            | 2x 3/2-way valve                                    |            | 5/2-way valve |            | 5/3-way valve                                       |
| Normal position                           | C <sup>1)</sup> , U <sup>2)</sup> , H <sup>4)</sup> |            | –             |            | C <sup>1)</sup> , U <sup>2)</sup> , E <sup>3)</sup> |
| Stable position                           | Monostable  |            | Monostable    | Bistable   | Monostable  |
| Pneumatic spring return                   | Yes   |            | Yes           | –          | No  |
| Mechanical spring return                  | No  |            | Yes           | –          | Yes   |
| Design                                    | Piston spool  |            |               |            |   |
| Overlap                                   | Positive overlap                                    |            |               |            |   |
| Sealing principle                         | Soft  |            |               |            |   |
| Actuation type                            | Pneumatic   |            |               |            |   |
| Type of control                           | Direct  |            |               |            |   |
| Flow direction                            | Not reversible                                      | Reversible | Reversible    | Reversible | Reversible  |
| Exhaust air function                      | Can be throttled                                    |            |               |            |   |
| Type of mounting                          | On sub-base   |            |               |            |   |
| Mounting position                         | Any   |            |               |            |   |
| Nominal width [mm]                        | 5   |            |               |            |   |
| Valve size [mm]                           | 18  |            |               |            |   |
| Ports on the sub-base                     | 1, 2, 3, 4, 5<br>12, 14                             |            | G1/8<br>M5    |            |   |
| Tightening torque for valve mounting [Nm] | 0.9 ... 1.1   |            |               |            |   |
| Product weight [g]                        | 80  |            |               |            |   |
| Conforms to standard                      | ISO 15407-1, VDMA 24563                             |            |               |            |   |

- 1) C = Normally closed
- 2) U = Normally open
- 3) E = Normally exhausted
- 4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

| Flow rates                                |         |                  |               |          |               |
|---|---------|------------------|---------------|----------|---------------|
| Valve function                            |         | 2x 3/2-way valve | 5/2-way valve |          | 5/3-way valve |
|   |         |                  | Monostable    | Bistable |               |
| Flow rate of valve                        | [l/min] | 600              | 750           | 750      | 650           |
| Flow rate of valve on individual sub-base | [l/min] | 450              | 550           | 550      | 500           |
| Flow rate of pneumatically linked valve   | [l/min] | 400              | 550           | 550      | 450           |
| Standard nominal flow rate                | [l/min] | 400              | 550           | 550      | 450           |

| Switching times [ms]      |                   |                   |                    |                           |                                      |
|---------------------------|-------------------|-------------------|--------------------|---------------------------|--------------------------------------|
|                           |                   | Switching time on | Switching time off | Switching time changeover | Switching time changeover (dominant) |
| 2x 3/2-way valve          |                   | 10                | 15                 | –                         | –                                    |
| 5/2-way valve, monostable | Pneumatic spring  | 11                | 20                 | –                         | –                                    |
|                           | Mechanical spring | 8                 | 18                 | –                         | –                                    |
| 5/2-way valve, bistable   |                   | –                 | –                  | 6                         | 6                                    |
| 5/3-way valve             |                   | 9                 | 18                 | –                         | –                                    |

## Datasheet – Valve size 18 mm

| Operating and environmental conditions |                        |       | 2x 3/2-way valve   | 5/2-way valve<br>Monostable | 5/2-way valve<br>Bistable | 5/3-way valve |
|--|------------------------|-------|--|-----------------------------|---------------------------|---------------|
| Valve function                         |                        |       |  |                             |                           |               |
| Operating medium                       |                        |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |                             |                           |               |
| Pilot medium                           |                        |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |                             |                           |               |
| Note on the operating/pilot medium     |                        |       | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                           |               |
| Operating pressure                     | With pneumatic spring  | [bar] | 2 ... 10   | 2 ... 10                    | -0.9 ... 10               | -             |
|  | With mechanical spring | [bar] | -  | -0.9 ... 10                 | -                         | -0.9 ... 10   |
| Pilot pressure                         | With pneumatic spring  | [bar] | 2 ... 10   | 2 ... 10                    | 2 ... 10                  | -             |
|  | With mechanical spring | [bar] | -  | 3 ... 10                    | -                         | 3 ... 10      |
| Ambient temperature                    |                        | [°C]  | -10 ... +60  |                             |                           |               |
| Temperature of medium                  |                        | [°C]  | -10 ... +60  |                             |                           |               |
| Relative humidity                      |                        | [%]   | 0 ... 90   |                             |                           |               |

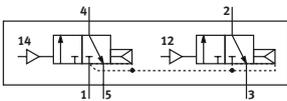
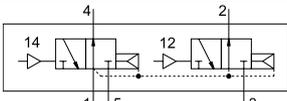
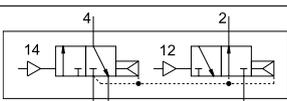
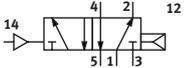
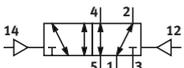
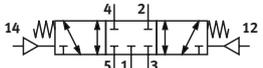
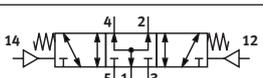
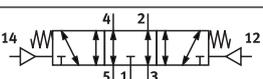
| Materials              |                    |
|------------------------|--------------------|
| Housing                | Die-cast aluminium |
| Seals                  | NBR                |
| Screws                 | Galvanised steel   |
| Note on materials      | RoHS-compliant     |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L  |

## Dimensions

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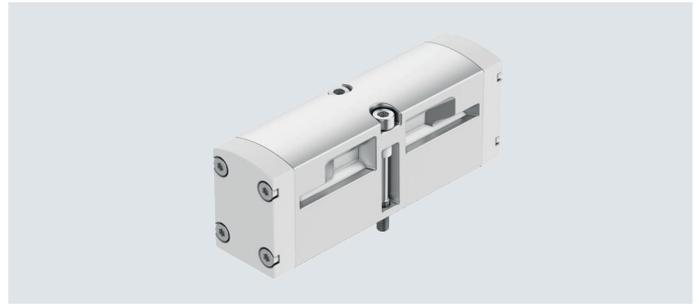
| Type   | B1 | B2   | D1 | H1 | H2  | L1 | L2   |
|--------|----|------|----|----|-----|----|------|
| VSPA-B | 18 | 12.5 | M3 | 29 | 5.4 | 83 | 41.5 |

Datasheet – Valve size 18 mm

| Ordering data                              |   | Part no.   | Type                   |
|--|---|--|------------------------|
| Code                                       | Circuit symbol  |  |                        |
| <b>2x 3/2-way pneumatic valve</b>          |   |  |                        |
| K  |    | 2x normally closed   | 546721 VSPA-B-T32C-A2  |
| N  |    | 2x normally open   | 546722 VSPA-B-T32U-A2  |
| H  |    | Normal position:<br>1x normally closed<br>1x normally open | 546723 VSPA-B-T32H-A2  |
| <b>5/2-way pneumatic valve, monostable</b> |   |  |                        |
| M  |    | Pneumatic spring   | 546726 VSPA-B-M52-A-A2 |
| O  |    | Mechanical spring  | 546727 VSPA-B-M52-M-A2 |
| <b>5/2-way pneumatic valve, bistable</b>   |   |  |                        |
| J  |   | Dominant 1st signal  | 546724 VSPA-B-B52-A2   |
| D  |  | Dominant at 14   | 546725 VSPA-B-D52-A2   |
| <b>5/3-way pneumatic valve</b>             |   |  |                        |
| G  |  | Normally closed  | 546730 VSPA-B-P53C-A2  |
| B  |  | Normally open  | 546728 VSPA-B-P53U-A2  |
| E  |  | Normally exhausted   | 546729 VSPA-B-P53E-A2  |

## Datasheet – Valve size 26 mm

-  - Flow rate  
1250 ... 1400 l/min



| General technical data               |      | 2x 3/2-way valve                                    |  | 5/2-way valve |  | 5/3-way valve                                       |  |
|--------------------------------------|------|---|--|---------------|--|---|--|
| Valve function                       |      |   |  |               |  |   |  |
| Normal position                      |      | C <sup>1)</sup> , U <sup>2)</sup> , H <sup>4)</sup> |  | –             |  | C <sup>1)</sup> , U <sup>2)</sup> , E <sup>3)</sup> |  |
| Stable position                      |      | Monostable  |  | Monostable    |  | Bistable  |  |
| Pneumatic spring return              |      | Yes   |  | Yes           |  | –   |  |
| Mechanical spring return             |      | No  |  | Yes           |  | –   |  |
| Design                               |      | Piston spool  |  |               |  |   |  |
| Overlap                              |      | Positive overlap                                    |  |               |  |   |  |
| Sealing principle                    |      | Soft  |  |               |  |   |  |
| Actuation type                       |      | Pneumatic   |  |               |  |   |  |
| Type of control                      |      | Direct  |  |               |  |   |  |
| Flow direction                       |      | Not reversible                                      |  | Reversible    |  | Reversible  |  |
| Exhaust air function                 |      | Can be throttled                                    |  |               |  |   |  |
| Type of mounting                     |      | On sub-base   |  |               |  |   |  |
| Mounting position                    |      | Any   |  |               |  |   |  |
| Nominal width                        | [mm] | 9   |  |               |  |   |  |
| Valve size                           | [mm] | 26  |  |               |  |   |  |
| Ports on the sub-base                |      | 1, 2, 3, 4, 5                                       |  | G1/4          |  |   |  |
|                                      |      | 12, 14  |  | M5            |  |   |  |
| Tightening torque for valve mounting | [Nm] | 1.8 ... 2.2   |  |               |  |   |  |
| Product weight                       | [g]  | 180   |  |               |  |   |  |
| Conforms to standard                 |      | ISO 15407-1, VDMA 24563                             |  |               |  |   |  |

- 1) C = Normally closed  
 2) U = Normally open  
 3) E = Normally exhausted  
 4) H = 2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

| Flow rates                                |         | 2x 3/2-way valve |  | 5/2-way valve |  | 5/3-way valve |  |
|---|---------|------------------|--|---------------|--|---------------|--|
| Valve function                            |         |                  |  | Monostable    |  | Bistable      |  |
| Flow rate of valve                        | [l/min] | 1250             |  | 1400          |  | 1400          |  |
| Flow rate of valve on individual sub-base | [l/min] | 1000             |  | 1100          |  | 1100          |  |
| Flow rate of pneumatically linked valve   | [l/min] | 900              |  | 1100          |  | 1100          |  |
| Standard nominal flow rate                | [l/min] | 900              |  | 1100          |  | 1100          |  |

| Switching times [ms]      |  | 2x 3/2-way valve  |  | 5/2-way valve      |  | 5/3-way valve                        |  |
|---------------------------|--|-------------------|--|--------------------|--|--------------------------------------|--|
|                           |  | Switching time on |  | Switching time off |  | Switching time changeover            |  |
|                           |  |                   |  |                    |  | Switching time changeover (dominant) |  |
| 2x 3/2-way valve          |  | 15                |  | 28                 |  | –                                    |  |
| 5/2-way valve, monostable |  | Pneumatic spring  |  | 18                 |  | 30                                   |  |
|                           |  | Mechanical spring |  | 10                 |  | 35                                   |  |
| 5/2-way valve, bistable   |  | –                 |  | –                  |  | 10                                   |  |
| 5/3-way valve             |  | 13                |  | 32                 |  | –                                    |  |

## Datasheet – Valve size 26 mm

| Operating and environmental conditions |                        | 2x 3/2-way valve   | 5/2-way valve<br>Monostable | 5/2-way valve<br>Bistable | 5/3-way valve |             |
|--|------------------------|--|-----------------------------|---------------------------|---------------|-------------|
| Valve function                         |                        |  |                             |                           |               |             |
| Operating medium                       |                        | Compressed air to ISO 8573-1:2010 [7:4:4]  |                             |                           |               |             |
| Pilot medium                           |                        | Compressed air to ISO 8573-1:2010 [7:4:4]  |                             |                           |               |             |
| Note on the operating/pilot medium     |                        | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                           |               |             |
| Operating pressure                     | With pneumatic spring  | [bar]  | 2 ... 10                    | 2 ... 10                  | -0.9 ... 16   | -           |
|  | With mechanical spring | [bar]  | -                           | -0.9 ... 16               | -             | -0.9 ... 16 |
| Pilot pressure                         | With pneumatic spring  | [bar]  | 2 ... 10                    | 2 ... 10                  | 2 ... 10      | -           |
|  | With mechanical spring | [bar]  | -                           | 3 ... 10                  | -             | 3 ... 10    |
| Ambient temperature                    |                        | [°C]   | -10 ... +60                 |                           |               |             |
| Temperature of medium                  |                        | [°C]   | -10 ... +60                 |                           |               |             |
| Relative humidity                      |                        | [%]  | 0 ... 90                    |                           |               |             |

| Materials              |                    |
|------------------------|--------------------|
| Housing                | Die-cast aluminium |
| Seals                  | NBR                |
| Screws                 | Galvanised steel   |
| Note on materials      | RoHS-compliant     |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L  |

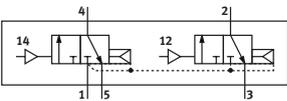
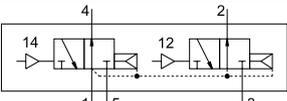
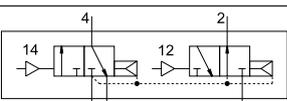
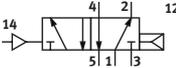
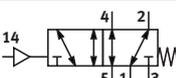
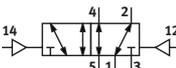
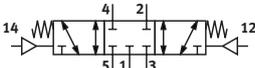
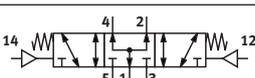
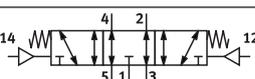
### Dimensions

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|        | B1   | B2 | D1 | H1 | H2 | L1  | L2 |
|--------|------|----|----|----|----|-----|----|
| VSPA-B | 26.2 | 19 | M4 | 38 | 7  | 100 | 50 |

## Datasheet – Valve size 26 mm

| Ordering data                              |   | Part no.   | Type                   |
|--|---|--|------------------------|
| Code                                       | Circuit symbol  |  |                        |
| <b>2x 3/2-way pneumatic valve</b>          |   |  |                        |
| K  |    | 2x normally closed   | 546711 VSPA-B-T32C-A1  |
| N  |    | 2x normally open   | 546712 VSPA-B-T32U-A1  |
| H  |    | Normal position:<br>1x normally closed<br>1x normally open | 546713 VSPA-B-T32H-A1  |
| <b>5/2-way pneumatic valve, monostable</b> |   |  |                        |
| M  |    | Pneumatic spring   | 546716 VSPA-B-M52-A-A1 |
| O  |    | Mechanical spring  | 546717 VSPA-B-M52-M-A1 |
| <b>5/2-way pneumatic valve, bistable</b>   |   |  |                        |
| J  |   | Dominant 1st signal  | 546714 VSPA-B-B52-A1   |
| D  |  | Dominant at 14   | 546715 VSPA-B-D52-A1   |
| <b>5/3-way pneumatic valve</b>             |   |  |                        |
| G  |  | Normally closed  | 546720 VSPA-B-P53C-A1  |
| B  |  | Normally open  | 546718 VSPA-B-P53U-A1  |
| E  |  | Normally exhausted   | 546719 VSPA-B-P53E-A1  |

## Vertical stacking

### Regulator plate

VABF-S3-2-R

VABF-S3-1-R

 Temperature range  
-5 ... +50 °C

 Input pressure  
0.5 ... 10 bar

Pressure regulation ranges:

- 0.05 ... 0.6 MPa
- 0.05 ... 0.85 MPa
- 0.2 ... 0.6 MPa
- 0.2 ... 0.85 MPa

Output pressure constant with secondary venting

Material:

Housing: Die-cast aluminium

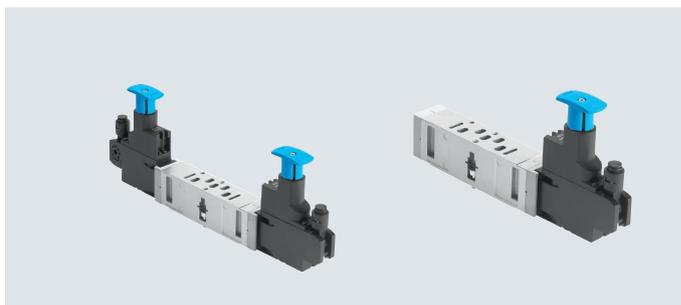
Control section: PA

Note on materials:

RoHS-compliant

LABS (PWIS) conformity:

VDMA24364-B1/B2-L



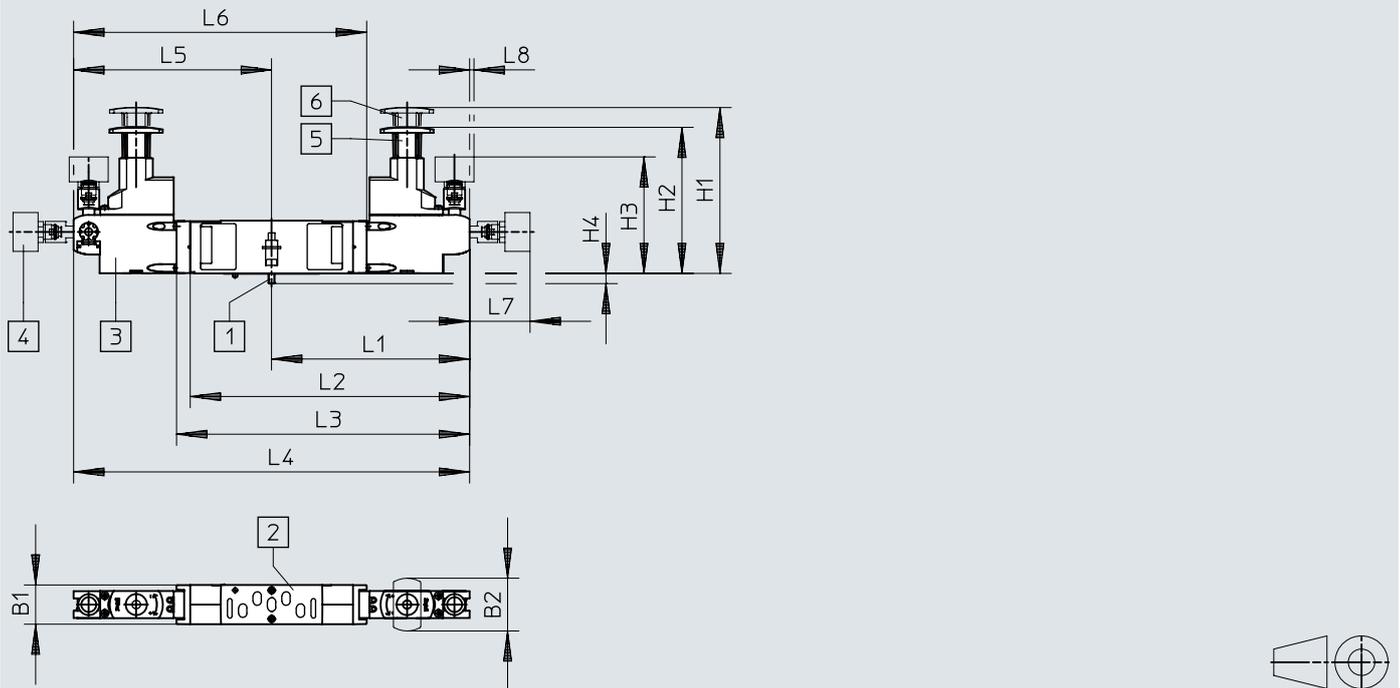
| General technical data                 |  |
|--|--|
| Based on standard                      | ISO 15407-1  |
| Mounting position                      | Any  |
| Regulator function                     | Output pressure constant<br>With secondary exhausting                                      |
| Type of mounting for vertical stacking | On manifold sub-base<br>On individual sub-base   |
| Optional pressure gauge                | possible   |
| Pressure gauge connection              | With retaining clamp   |
| Input pressure 1                       | [bar] 0.5 ... 10   |
| Operating and environmental conditions |  |
| Operating medium                       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |
| Ambient temperature                    | [°C] -5 ... +50  |
| Corrosion resistance class CRC1)       | 0 - no corrosion stress  |
| Degree of protection                   | IP65<br>NEMA 4   |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Vertical stacking

### Dimensions

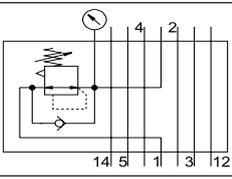
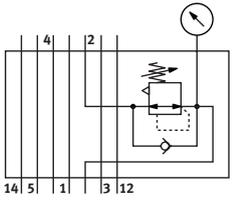
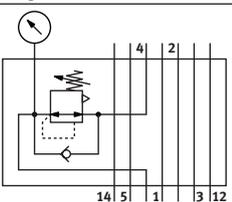
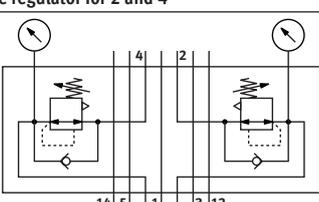
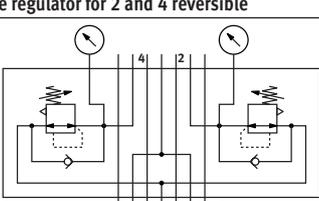
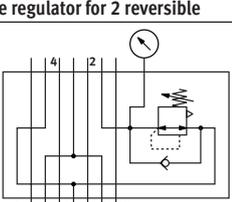
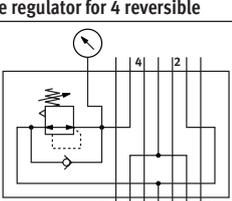
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- [1] Captive screws
  - [2] Port pattern to ISO 15407-1
  - [3] Regulator
  - [4] Pressure gauge
  - [5] Regulator head, locked
  - [6] Regulator head for adjusting the pressure
- Dimensions when mounted → 78

| Type         | B1 | B2 | H1  | H2 | H3   | H4  | L1    | L2    | L3    | L4    | L5    | L6    | L7   | L8  |   |
|--------------|----|----|-----|----|------|-----|-------|-------|-------|-------|-------|-------|------|-----|---|
| VABF-S3-2-R1 | 18 | 35 | 110 | 97 | 77.3 | 5.6 | 126.7 | 180.6 | –     | –     | –     | –     | 39.8 | 2.9 |   |
| VABF-S3-2-R2 |    |    |     |    |      |     | 126.7 | –     | 187.7 | –     | –     | –     |      |     |   |
| VABF-S3-2-R3 |    |    |     |    |      |     | –     | –     | –     | –     | 126.7 | 187.7 |      |     | – |
| VABF-S3-2-R4 |    |    |     |    |      |     | 126.7 | –     | –     | 253.4 | –     | –     |      |     | – |
| VABF-S3-2-R5 |    |    |     |    |      |     | 126.7 | –     | –     | 253.4 | –     | –     |      |     | – |
| VABF-S3-2-R6 |    |    |     |    |      |     | 126.7 | –     | 187.7 | –     | –     | –     |      |     | – |
| VABF-S3-2-R7 |    |    |     |    |      |     | –     | –     | –     | –     | 126.7 | 187.7 |      |     | – |
| VABF-S3-1-R1 | 26 | 35 | 110 | 97 | 77.3 | 5.6 | 130.4 | 183.9 | 183.9 | –     | –     | –     | 39.8 | 2.9 |   |
| VABF-S3-1-R2 |    |    |     |    |      |     | 130.4 | –     | 192.9 | –     | –     | –     |      |     |   |
| VABF-S3-1-R3 |    |    |     |    |      |     | –     | –     | –     | –     | 130.4 | 192.9 |      |     | – |
| VABF-S3-1-R4 |    |    |     |    |      |     | 130.4 | –     | –     | 260.7 | –     | –     |      |     | – |
| VABF-S3-1-R5 |    |    |     |    |      |     | 130.4 | –     | –     | 260.7 | –     | –     |      |     | – |
| VABF-S3-1-R6 |    |    |     |    |      |     | 130.4 | 195   | 195   | –     | –     | –     |      |     | – |
| VABF-S3-1-R7 |    |    |     |    |      |     | –     | –     | –     | –     | 130.4 | 192.9 |      |     | – |

## Vertical stacking

| Ordering data                                    |   |                     |                 |            |          |                     |
|--|---|---------------------|-----------------|------------|----------|---------------------|
| Code   | Circuit symbol  | Control range       | Valve size [mm] | Weight [g] | Part no. | Type                |
| <b>Pressure regulator for 1</b>                  |   |                     |                 |            |          |                     |
| ZA   |    | 0.05 ... 0.85 MPa   | 18              | 370        | 543526   | VABF-S3-2-R1C2-C-10 |
|  |   | 0.5 ... 8.5 bar     | 26              | 305        | 543527   | VABF-S3-1-R1C2-C-10 |
|  |   | 7.25 ... 123.25 psi |                 |            |          |                     |
| ZF   |   | 0.05 ... 0.6 MPa    | 18              | 370        | 543524   | VABF-S3-2-R1C2-C-6  |
|  |   | 0.5 ... 6 bar       | 26              | 305        | 543525   | VABF-S3-1-R1C2-C-6  |
|  |   | 7.25 ... 87 psi     |                 |            |          |                     |
| <b>Pressure regulator for 2</b>                  |   |                     |                 |            |          |                     |
| ZC   |    | 0.2 ... 0.85 MPa    | 18              | 245        | 543534   | VABF-S3-2-R2C2-C-10 |
|  |   | 2 ... 8.5 bar       | 26              | 305        | 543535   | VABF-S3-1-R2C2-C-10 |
|  |   | 29 ... 123.25 psi   |                 |            |          |                     |
| ZH   |   | 0.2 ... 0.6 MPa     | 18              | 245        | 543532   | VABF-S3-2-R2C2-C-6  |
|  |   | 2 ... 6 bar         | 26              | 305        | 543533   | VABF-S3-1-R2C2-C-6  |
|  |   | 29 ... 87 psi       |                 |            |          |                     |
| <b>Pressure regulator for 4</b>                  |   |                     |                 |            |          |                     |
| ZB   |   | 0.2 ... 0.85 MPa    | 18              | 245        | 543530   | VABF-S3-2-R3C2-C-10 |
|  |   | 2 ... 8.5 bar       | 26              | 305        | 543531   | VABF-S3-1-R3C2-C-10 |
|  |   | 29 ... 123.25 psi   |                 |            |          |                     |
| ZG   |   | 0.2 ... 0.6 MPa     | 18              | 245        | 543528   | VABF-S3-2-R3C2-C-6  |
|  |   | 2 ... 6 bar         | 26              | 305        | 543529   | VABF-S3-1-R3C2-C-6  |
|  |   | 29 ... 87 psi       |                 |            |          |                     |
| <b>Pressure regulator for 2 and 4</b>            |   |                     |                 |            |          |                     |
| ZD   |  | 0.2 ... 0.85 MPa    | 18              | 370        | 543538   | VABF-S3-2-R4C2-C-10 |
|  |   | 2 ... 8.5 bar       | 26              | 430        | 543539   | VABF-S3-1-R4C2-C-10 |
|  |   | 29 ... 123.25 psi   |                 |            |          |                     |
| ZI   |   | 0.2 ... 0.6 MPa     | 18              | 370        | 543536   | VABF-S3-2-R4C2-C-6  |
|  |   | 2 ... 6 bar         | 26              | 430        | 543537   | VABF-S3-1-R4C2-C-6  |
|  |   | 29 ... 87 psi       |                 |            |          |                     |
| <b>Pressure regulator for 2 and 4 reversible</b> |   |                     |                 |            |          |                     |
| ZE   |  | 0.05 ... 0.85 MPa   | 18              | 245        | 543542   | VABF-S3-2-R5C2-C-10 |
|  |   | 0.5 ... 8.5 bar     | 26              | 430        | 543543   | VABF-S3-1-R5C2-C-10 |
|  |   | 7.25 ... 123.25 psi |                 |            |          |                     |
| ZJ   |   | 0.05 ... 0.6 MPa    | 18              | 245        | 543540   | VABF-S3-2-R5C2-C-6  |
|  |   | 0.5 ... 6 bar       | 26              | 430        | 543541   | VABF-S3-1-R5C2-C-6  |
|  |   | 7.25 ... 87 psi     |                 |            |          |                     |
| <b>Pressure regulator for 2 reversible</b>       |   |                     |                 |            |          |                     |
| ZL   |  | 0.05 ... 0.85 MPa   | 18              | 245        | 546788   | VABF-S3-2-R6C2-C-10 |
|  |   | 0.5 ... 8.5 bar     | 26              | 305        | 546789   | VABF-S3-1-R6C2-C-10 |
|  |   | 7.25 ... 123.25 psi |                 |            |          |                     |
| ZN   |   | 0.05 ... 0.6 MPa    | 18              | 245        | 546786   | VABF-S3-2-R6C2-C-6  |
|  |   | 0.5 ... 6 bar       | 26              | 305        | 546787   | VABF-S3-1-R6C2-C-6  |
|  |   | 7.25 ... 87 psi     |                 |            |          |                     |
| <b>Pressure regulator for 4 reversible</b>       |   |                     |                 |            |          |                     |
| ZK   |  | 0.05 ... 0.85 MPa   | 18              | 245        | 546792   | VABF-S3-2-R7C2-C-10 |
|  |   | 0.5 ... 8.5 bar     | 26              | 305        | 546793   | VABF-S3-1-R7C2-C-10 |
|  |   | 7.25 ... 123.25 psi |                 |            |          |                     |
| ZM   |   | 0.05 ... 0.6 MPa    | 18              | 245        | 546790   | VABF-S3-2-R7C2-C-6  |
|  |   | 0.5 ... 6 bar       | 26              | 305        | 546791   | VABF-S3-1-R7C2-C-6  |
|  |   | 7.25 ... 87 psi     |                 |            |          |                     |

## Vertical stacking

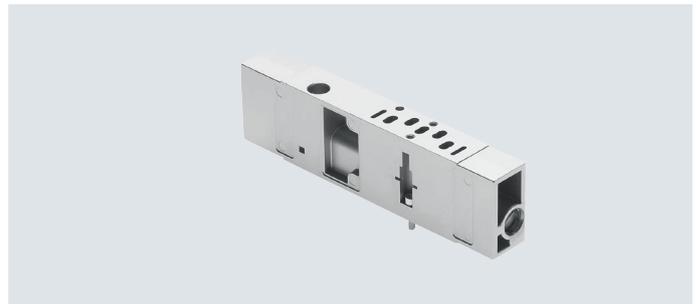
**Throttle plate**  
**VABF-S3-2-F**  
**VABF-S3-1-F**

**Material:**  
 Housing: Die-cast aluminium

**Note on materials:**  
 RoHS-compliant

**LABS (PWIS) conformity:**  
 VDMA24364-B1/B2-L

-  Temperature range  
-5 ... +50 °C
-  Operating pressure  
-0.9 ... 10 bar



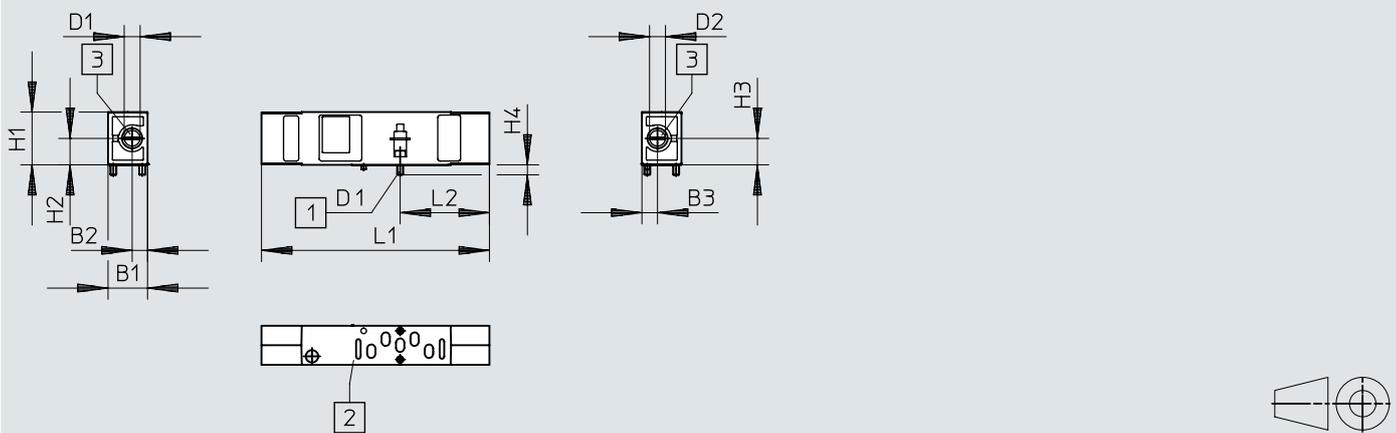
| General technical data                 |  |
|--|--|
| Based on standard                      | ISO 15407-1                                    |
| Mounting position                      | Any  |
| Pneumatic vertical stacking            | Throttle plate, exhaust air flow control       |
| Type of mounting for vertical stacking | On manifold sub-base<br>On individual sub-base |

| Operating and environmental conditions |  |
|--|--|
| Operating medium                       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure [bar]               | -0.9 ... 10  |
| Ambient temperature [°C]               | -5 ... +50   |
| Corrosion resistance class CRC1)       | 0 - no corrosion stress  |
| Degree of protection                   | IP65<br>NEMA 4   |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



[1] Captive screws

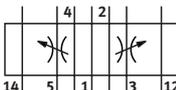
[2] Port pattern to ISO 15407-1

[3] Adjusting screws

Dimensions when mounted → 79

| Type             | B1 | B2   | B3   | D1   | D2   | D3     | H1 | H2   | H3   | H4  | L1  | L2   |
|------------------|----|------|------|------|------|--------|----|------|------|-----|-----|------|
| VABF-S3-2-F1B1-C | 18 | 6.5  | 6.5  | 9.3  | 9.3  | M3x 12 | 35 | 12   | 12   | 5.6 | 130 | 43.3 |
| VABF-S3-1-F1B1-C | 26 | 10.2 | 10.2 | 11.2 | 11.2 | M4x 12 | 35 | 17.5 | 17.5 | 6.7 | 150 | 58.8 |

### Ordering data

| Code | Circuit symbol  | Description  | Valve size [mm] | Weight [g] | Part no.                       | Type   |
|------|---|--|-----------------|------------|--------------------------------|--|
| X    |  | For exhaust air flow control in ducts 3 and 5 on the valve | 18<br>26        | 228<br>320 | <b>543603</b><br><b>543604</b> | <b>VABF-S3-2-F1B1-C</b><br><b>VABF-S3-1-F1B1-C</b> |

## Vertical stacking

### Vertical supply plate

VABF-S3-2-P

VABF-S3-1-P

Material:  
Housing: Die-cast aluminium

Note on materials:  
RoHS-compliant

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L



-  Temperature range  
-5 ... +50 °C
-  Operating pressure  
-0.9 ... +10 bar

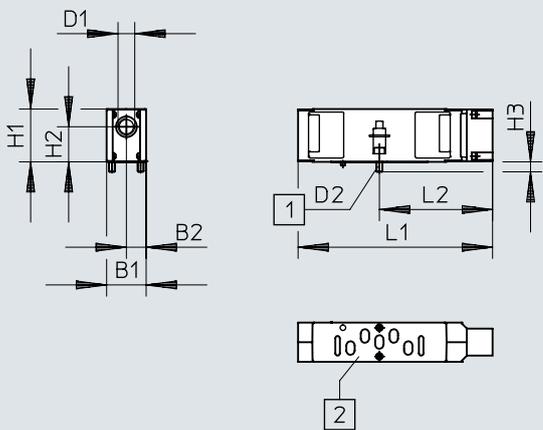
| General technical data                 |  |
|--|--|
| Based on standard                      | ISO 15407-1                                    |
| Mounting position                      | Any  |
| Pneumatic vertical stacking            | Alternative compressed air supply for 1        |
| Type of mounting for vertical stacking | On manifold sub-base<br>On individual sub-base |

| Operating and environmental conditions |  |
|--|--|
| Operating medium                       | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure [bar]               | -0.9 ... 10  |
| Ambient temperature [°C]               | -5 ... +50   |
| Corrosion resistance class CRC1        | 0 - no corrosion stress  |
| Degree of protection                   | IP65<br>NEMA 4   |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

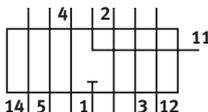


[1] Captive screws

[2] Port pattern to ISO 15407-1

Dimensions when mounted → 80

| Type               | B1 | B2 | D1   | D2     | H1 | H2   | H3  | L1    | L2   |
|--------------------|----|----|------|--------|----|------|-----|-------|------|
| VABF-S3-2-P1A3-G18 | 18 | 9  | G1/8 | M3x 12 | 35 | 23.4 | 5.6 | 121.6 | 67.7 |
| VABF-S3-1-P1A3-G14 | 26 | 13 | G1/4 | M4x 12 | 35 | 23.2 | 6.7 | 128.1 | 74.6 |

| Ordering data |   |                                       |                 |                   |            |          |                    |  |
|---------------|---|---------------------------------------|-----------------|-------------------|------------|----------|--------------------|--|
| Code          | Circuit symbol  | Description                           | Valve size [mm] | Flow rate [l/min] | Weight [g] | Part no. | Type               |  |
| ZU            |  | For the independent supply of a valve | 18              | 500               | 146        | 544435   | VABF-S3-2-P1A3-G18 |  |
|               |   |                                       | 26              | 1000              | 201        | 544434   | VABF-S3-1-P1A3-G14 |  |

## Vertical stacking

**Vertical pressure shut-off plate**  
**VABF-S3-2-L**  
**VABF-S3-1-L**

Material:  
 Housing: Die-cast aluminium

Note on materials:  
 RoHS-compliant

LABS (PWIS) conformity:  
 VDMA24364-B1/B2-L

-  Temperature range  
 -5 ... +50 °C
-  Input pressure  
 -0.9 ... +10 bar



### General technical data

|  |  |
|--|--|
| Based on standard                      | ISO 15407-1                                    |
| Mounting position                      | Any  |
| Pneumatic vertical stacking            | Shut-off for 1                                 |
| Type of mounting for vertical stacking | On manifold sub-base<br>On individual sub-base |

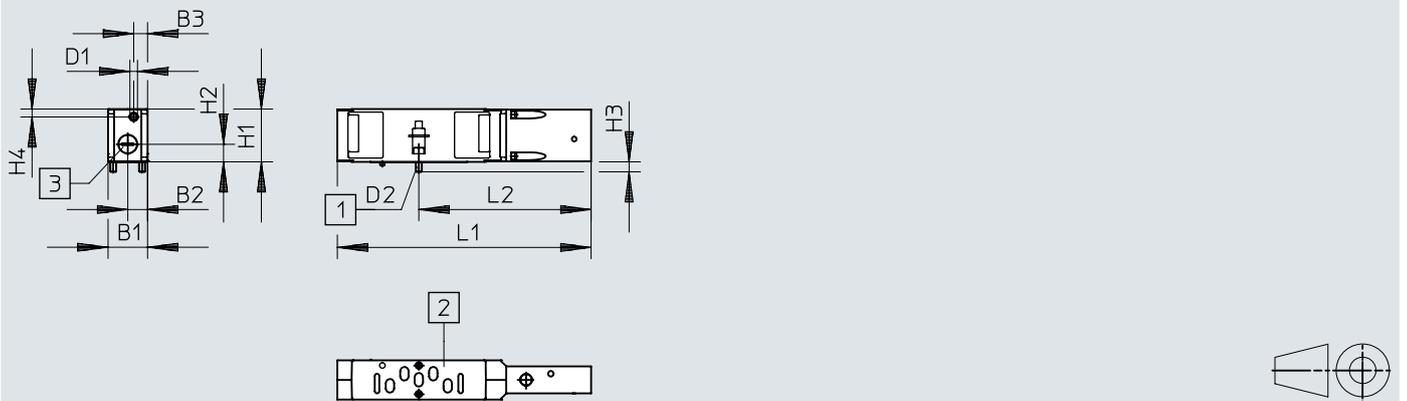
### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure [bar]           | -0.9 ... 10  |
| Ambient temperature [°C]           | -5 ... +50   |
| Corrosion resistance class CRC1)   | 0 - no corrosion stress  |
| Degree of protection               | IP65<br>NEMA 4   |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

### Dimensions

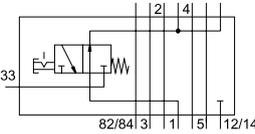
Download CAD data → [www.festo.com](http://www.festo.com)



[1] Captive screws      [2] Port pattern to ISO 15407-1      [3] Plug screw      Dimensions when mounted → 81

| Type             | B1 | B2 | B3  | D1 | D2     | H1 | H2   | H3  | H4  | L1    | L2    |
|------------------|----|----|-----|----|--------|----|------|-----|-----|-------|-------|
| VABF-S3-2-L1D1-C | 18 | 9  | 5.1 | M5 | M3x 12 | 35 | 11.7 | 5.6 | 5.3 | 163.7 | 109.8 |
| VABF-S3-1-L1D1-C | 26 | 13 | 9.1 | M5 | M4x 12 | 35 | 11.6 | 6.7 | 5.3 | 167   | 113.4 |

### Ordering data

| Code | Circuit symbol  | Description                                       | Valve size [mm] | Flow rate [l/min] | Weight [g] | Part no.                       | Type   |
|------|---|---|-----------------|-------------------|------------|--------------------------------|--|
| ZT   |  | For shutting off a valve from the supply pressure | 18<br>26        | 400<br>800        | 212<br>286 | <b>543601</b><br><b>543602</b> | <b>VABF-S3-2-L1D1-C</b><br><b>VABF-S3-1-L1D1-C</b> |

## Individual linking

### Individual sub-base NAS

Materials:  
Die-cast aluminium

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L

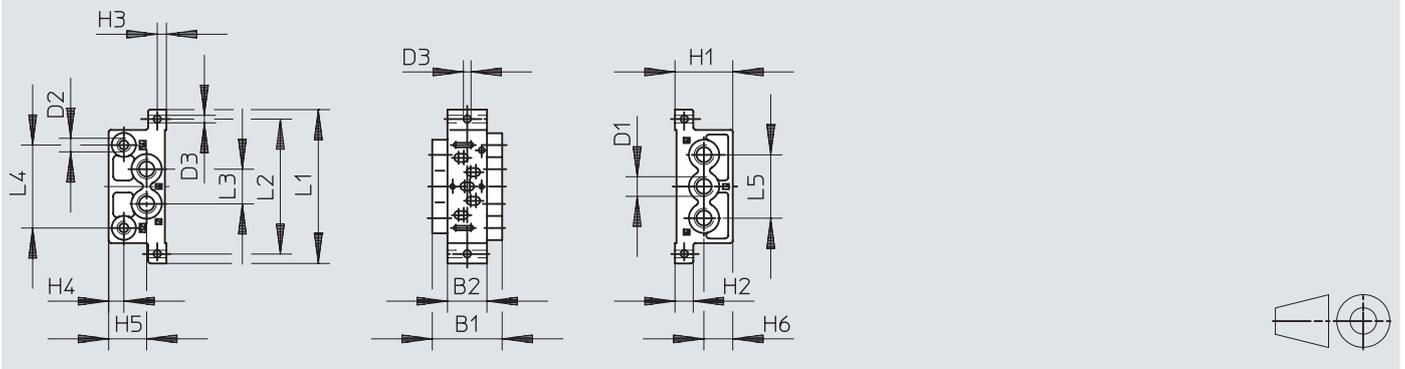


#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

#### Dimensions

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| Type            | B1   | B2 | D1   | D2   | D3  | H1 | H2 | H3 | H4 | H5 | H6   | L1  | L2   | L3 | L4 | L5 |
|-----------------|------|----|------|------|-----|----|----|----|----|----|------|-----|------|----|----|----|
| NAS-1/8-02-VDMA | 28.5 | 18 | G1/8 | M5   | 5.5 | 31 | 10 | 5  | 7  | 20 | 14.5 | 79  | 66.5 | 17 | 40 | 32 |
| NAS-1/4-01-VDMA | 46   | 26 | G1/4 | G1/8 | 5   | 38 | 12 | 6  | 10 | 25 | 19   | 102 | 89.4 | 23 | 55 | 42 |

#### Ordering data

| Type of mounting                 | Valve size<br>[mm] | Pneumatic port |        | Weight<br>[g] | Part no.      | Type                   |
|----------------------------------|--------------------|----------------|--------|---------------|---------------|------------------------|
|                                  |                    | 1, 2, 3, 4, 5  | 12, 14 |               |               |                        |
| Two through-holes in the housing | 18                 | G1/8           | M5     | 67            | <b>161115</b> | <b>NAS-1/8-02-VDMA</b> |
|                                  | 26                 | G1/4           | G1/8   | 160           | <b>161109</b> | <b>NAS-1/4-01-VDMA</b> |

## Horizontal stacking

### Manifold sub-base NAW

Materials:  
Die-cast aluminium

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L



#### General technical data

|                   |             |
|-------------------|-------------|
| Based on standard | ISO 15407-1 |
|-------------------|-------------|

#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

#### Ordering data

| Manifold sub-base    | Valve size<br>[mm] | Pneumatic port |        | Weight<br>[g] | Part no.      | Type                      |
|----------------------|--------------------|----------------|--------|---------------|---------------|---------------------------|
|                      |                    | 2, 4           | 12, 14 |               |               |                           |
| For solenoid valves  | 18                 | G1/8           | –      | 130           | <b>161110</b> | <b>NAW-1/8-02-VDMA</b>    |
|                      | 26                 | G1/4           | –      | 225           | <b>161102</b> | <b>NAW-1/4-01-VDMA</b>    |
| For pneumatic valves | 18                 | G1/8           | M5     | 130           | <b>161111</b> | <b>NAW-1/8-02-VDMA-VL</b> |
|                      | 26                 | G1/4           | M5     | 225           | <b>161103</b> | <b>NAW-1/4-01-VDMA-VL</b> |

Dimensions → 75

### End plate kit NEV

Materials:  
Die-cast aluminium

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L



#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

#### Ordering data

| Scope of delivery   | Valve size<br>[mm] | Pneumatic port |        | Weight<br>[g] | Part no.      | Type                  |
|---|--------------------|----------------|--------|---------------|---------------|-----------------------|
|   |                    | 1, 3, 5        | 12, 14 |               |               |                       |
| End plate left and right, screws, DIN rail mounting, one isolating disc each for ports 1, 3, 5, 12 and 14 | 18                 | G3/8           | G1/8   | 280           | <b>161112</b> | <b>NEV-02-VDMA</b>    |
|   | 26                 | G1/2           | G1/8   | 445           | <b>161104</b> | <b>NEV-01-VDMA</b>    |
| End plate left 18 mm and right 26 mm, screws, DIN rail mounting   | 18, 26             | G3/8, G1/2     | G1/8   | 372           | <b>191405</b> | <b>NEV-02-01-VDMA</b> |

Dimensions → 75

## Horizontal stacking

### Intermediate plate NZV

For combining manifold with valve sizes 18 mm and 26 mm

Materials:  
Die-cast aluminium

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L

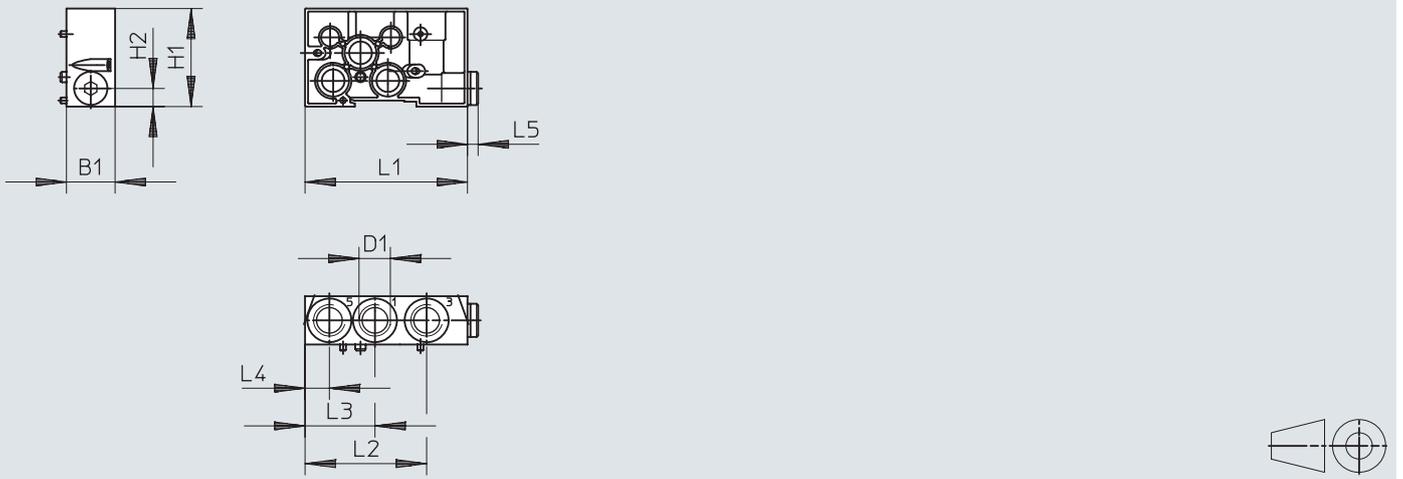


#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

#### Dimensions

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| Type            | B1 | D1   | H1 | H2 | L1  | L2 | L3 | L4 | L5 |
|-----------------|----|------|----|----|-----|----|----|----|----|
| NZV-0 1/02-VDMA | 32 | G1/2 | 65 | 12 | 107 | 80 | 46 | 16 | 7  |

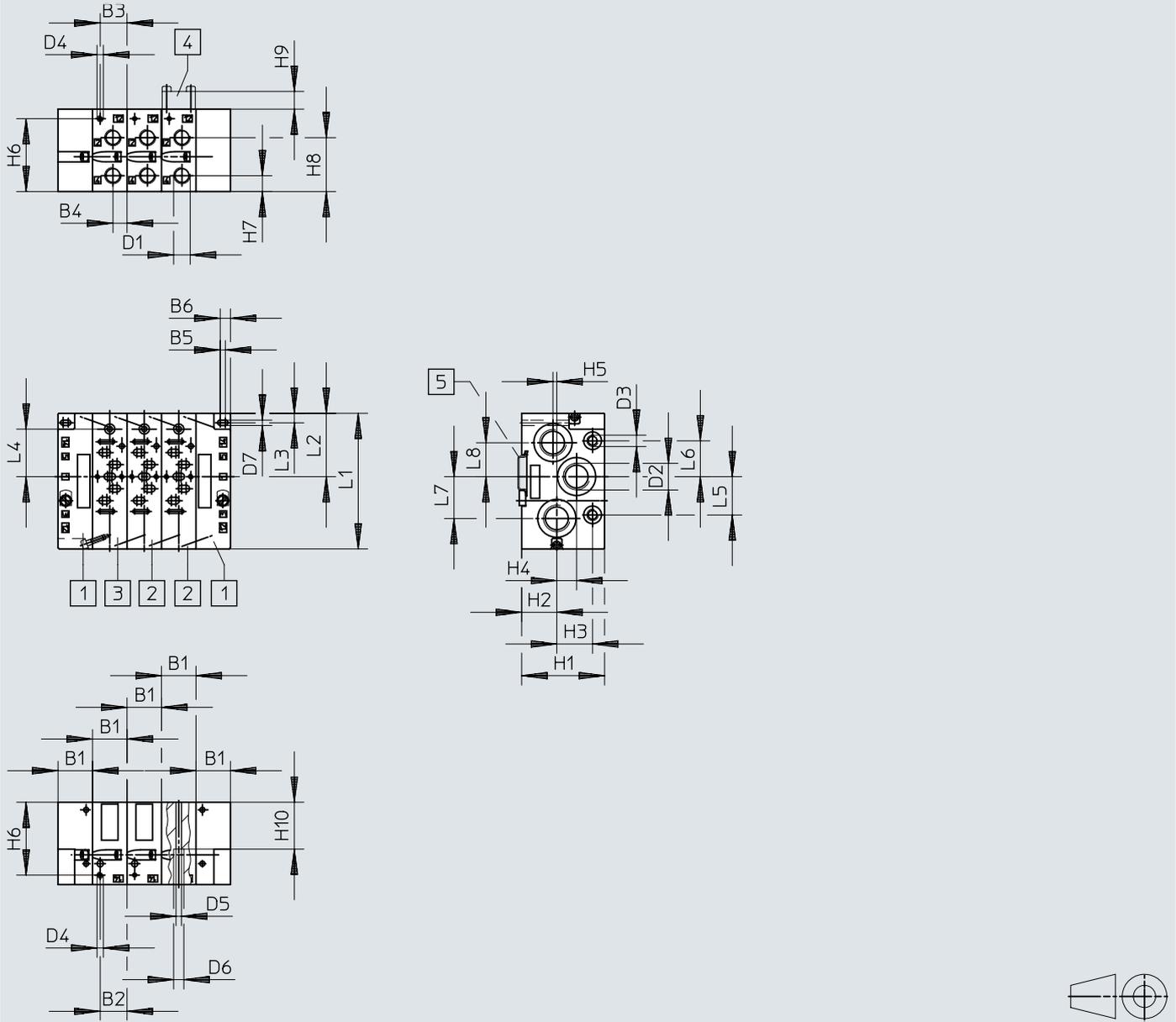
#### Ordering data

| Description  | Valve size<br>[mm] | Pneumatic port |        | Weight<br>[g] | Part no.      | Type                  |
|--|--------------------|----------------|--------|---------------|---------------|-----------------------|
|  |                    | 1, 3, 5        | 12, 14 |               |               |                       |
| Intermediate plate to combine manifold sub-bases of valve size 18 mm and 26 mm | 18 and 26          | G1/2           | –      | 270           | <b>161108</b> | <b>NZV-01/02-VDMA</b> |

Datasheet

Dimensions – Manifold sub-bases without valves

Download CAD data → [www.festo.com](http://www.festo.com)



- [1] End plate kit  
NEV-...VDMA  
→ 73
- [2] Manifold sub-base  
NAW-...VDMA  
→ 73
- [3] Manifold sub-base  
NAW-...VDMA-VL  
→ 73
- [4] Cover plate  
NDV-...VDMA  
→ 82
- [5] DIN mounting rail  
NRH-35-2000  
→ [www.festo.com](http://www.festo.com)

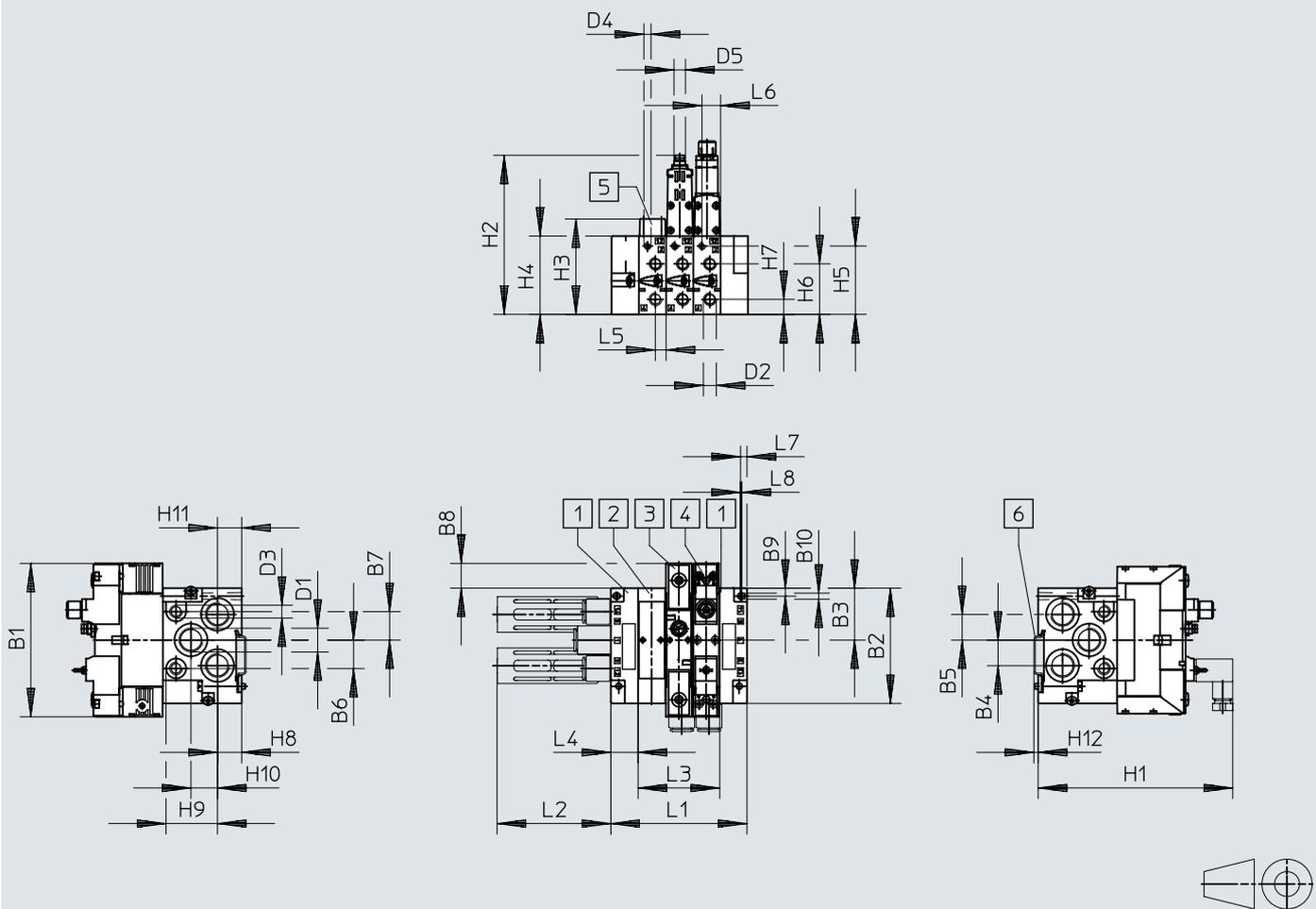
| Valve size [mm] | B1 | B2 | B3 | B4  | B5 | B6  | D1   | D2   | D3   | D4 | D5  | D6  | D7  |
|-----------------|----|----|----|-----|----|-----|------|------|------|----|-----|-----|-----|
| 18              | 19 | 6  | 13 | 7.5 | 1  | 4.5 | G1/8 | G3/8 | G1/8 | M5 | 3.3 | 6.3 | 4.3 |
| 26              | 27 | 21 | 21 | 11  | 4  | 8   | G1/4 | G1/2 | G1/8 | M5 | 4.2 | 8   | 4.2 |

| Valve size [mm] | H1 | H2   | H3   | H4   | H5 | H6   | H7   | H8   | H9 | H10 | L1  | L2   | L3  | L4   | L5   | L6   | L7 | L8   |
|-----------------|----|------|------|------|----|------|------|------|----|-----|-----|------|-----|------|------|------|----|------|
| 18              | 55 | 17   | 28.8 | 18.5 | –  | 48   | 10.5 | 35.5 | 12 | 40  | 81  | 36.5 | 5.6 | 30.9 | 20   | 20   | 18 | 18   |
| 26              | 65 | 27.5 | 28   | 15.5 | 3  | 57.5 | 12.5 | 42.5 | 14 | 37  | 107 | 50   | 7.5 | 37.5 | 30.3 | 28.3 | 33 | 26.8 |

Datasheet

Dimensions – Manifold assembly, valve size 18 mm

Download CAD data → [www.festo.com](http://www.festo.com)



- [1] End plate kit type NEV-02-VDMA
- [2] Manifold sub-bases type NAW-1/8-02-VDMA
- [3] Solenoid valve with central plug
- [4] Solenoid valve with pilot interface to ISO 15218
- [5] Cover plate NDV-02-VDMA
- [6] DIN mounting rail NRH-35-2000

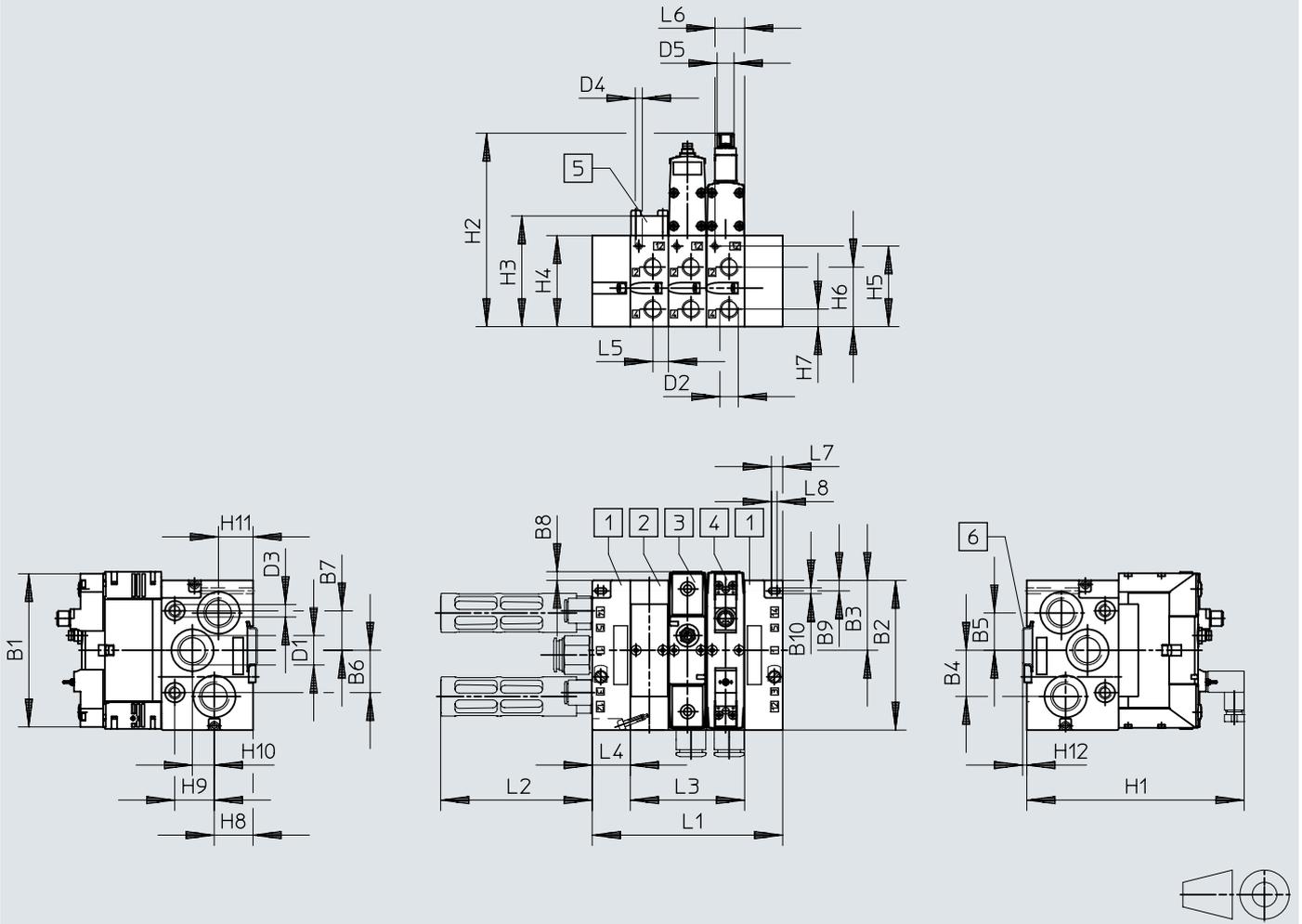
| Type             | B1    | B2 | B3   | B4 | B5 | B6 | B7 | B8   | B9  | B10 | D1   | D2   | D3   | D4 | D5  | H1    | H2    | H3 |
|------------------|-------|----|------|----|----|----|----|------|-----|-----|------|------|------|----|-----|-------|-------|----|
| VSVA-B-...A2     | 107.8 | 81 | 36.5 | 18 | 18 | 20 | 20 | 17.4 | 5.6 | 4.3 | G3/8 | G1/8 | G1/8 | M5 | –   | 135.6 | 55    | 67 |
| VSVA-B-M52-...A2 | 95.4  | 81 | 36.5 | 18 | 18 | 20 | 20 | 5    | 5.6 | 4.3 | G3/8 | G1/8 | G1/8 | M5 | –   | 135.6 | 55    | 67 |
| VSVA-B-...A2-R2L | 107.8 | 81 | 36.5 | 18 | 18 | 20 | 20 | 17.4 | 5.6 | 4.3 | G3/8 | G1/8 | G1/8 | M5 | M8  | 121.8 | 111.8 | 67 |
| VSVA-B-...A2-R5L | 107.8 | 81 | 36.5 | 18 | 18 | 20 | 20 | 17.4 | 5.6 | 4.3 | G3/8 | G1/8 | G1/8 | M5 | M12 | 121.8 | 111.8 | 67 |

| Type             | H4 | H5 | H6   | H7   | H8 | H9   | H10  | H11 | H12 | L1         | L2   | L3    | L4 | L5  | L6 | L7  | L8 |
|------------------|----|----|------|------|----|------|------|-----|-----|------------|------|-------|----|-----|----|-----|----|
| VSVA-B-...A2     | 55 | 48 | 35.5 | 10.5 | 17 | 35.9 | 18.5 | 17  | 3.5 | 38 + nx 19 | 79.1 | nx 19 | 19 | 7.5 | 13 | 4.5 | 1  |
| VSVA-B-M52-...A2 | 55 | 48 | 35.5 | 10.5 | 17 | 35.9 | 18.5 | 17  | 3.5 | 38 + nx 19 | 79.1 | nx 19 | 19 | 7.5 | 13 | 4.5 | 1  |
| VSVA-B-...A2-R2L | 55 | 48 | 35.5 | 10.5 | 17 | 35.8 | 18.5 | 17  | 3.5 | 38 + nx 19 | 79.1 | nx 19 | 19 | 7.5 | 13 | 4.5 | 1  |
| VSVA-B-...A2-R5L | 55 | 48 | 35.5 | 10.5 | 17 | 35.8 | 18.5 | 17  | 3.5 | 38 + nx 19 | 79.1 | nx 19 | 19 | 7.5 | 13 | 4.5 | 1  |

Datasheet

Dimensions – Manifold assembly, valve size 26 mm

Download CAD data → [www.festo.com](http://www.festo.com)



- [1] End plate kit type NEV-01-VDMA
- [2] Manifold sub-bases type NAW-1/4-01-VDMA
- [3] Solenoid valve with central plug
- [4] Solenoid valve with pilot interface to ISO 15218
- [5] Cover plate NDV-01-VDMA
- [6] DIN mounting rail NRH-35-2000

| Type             | B1    | B2  | B3 | B4 | B5   | B6   | B7   | B8   | B9  | B10 | D1   | D2   | D3   | D4 | D5     | H1    | H2    |
|------------------|-------|-----|----|----|------|------|------|------|-----|-----|------|------|------|----|--------|-------|-------|
| VSVA-B-...A1     | 113.1 | 107 | 50 | 33 | 26.8 | 30.3 | 28.3 | 13.1 | 7.5 | 4.2 | G1/2 | G1/4 | G1/8 | M5 | -      | 154.2 | 65    |
| VSVA-B-M52-...A1 | 126.2 | 107 | 50 | 33 | 26.8 | 30.3 | 28.3 | 13.1 | 7.5 | 4.2 | G1/2 | G1/4 | G1/8 | M5 | -      | 154.2 | 65    |
| VSVA-B-...A1-R2L | 112.5 | 107 | 50 | 33 | 26.8 | 30.3 | 28.3 | 6.3  | 7.5 | 4.2 | G1/2 | G1/4 | G1/8 | M5 | M8x 1  | 157   | 128.3 |
| VSVA-B-...A1-R5L | 112.5 | 107 | 50 | 33 | 26.8 | 30.3 | 28.3 | 6.3  | 7.5 | 4.2 | G1/2 | G1/4 | G1/8 | M5 | M12x 1 | 157   | 131.6 |

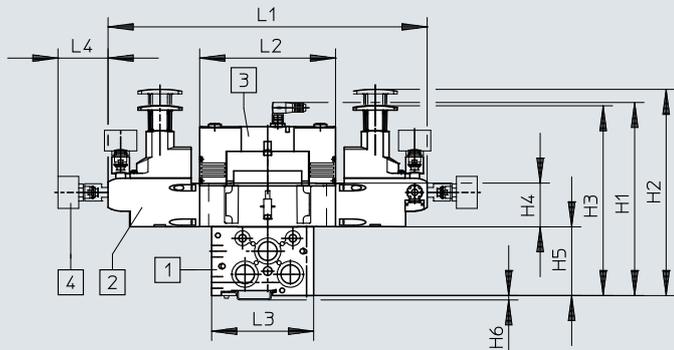
| Type             | H3 | H4 | H5   | H6   | H7   | H8   | H9 | H10  | H11  | H12 | L1         | L2    | L3    | L4 | L5 | L6 | L7 | L8 |
|------------------|----|----|------|------|------|------|----|------|------|-----|------------|-------|-------|----|----|----|----|----|
| VSVA-B-...A1     | 79 | 65 | 57.5 | 42.5 | 12.5 | 27.5 | 28 | 15.5 | 24.5 | 3.5 | 54 + nx 27 | 107.5 | nx 27 | 27 | 11 | 21 | 8  | 4  |
| VSVA-B-M52-...A1 | 79 | 65 | 57.5 | 42.5 | 12.5 | 27.5 | 28 | 15.5 | 24.5 | 3.5 | 54 + nx 27 | 107.5 | nx 27 | 27 | 11 | 21 | 8  | 4  |
| VSVA-B-...A1-R2L | 79 | 65 | 57.5 | 42.5 | 12.5 | 27.5 | 28 | 15.5 | 24.5 | 3.5 | 54 + nx 27 | 107.5 | nx 27 | 27 | 11 | 21 | 8  | 4  |
| VSVA-B-...A1-R5L | 79 | 65 | 57.5 | 42.5 | 12.5 | 27.5 | 28 | 15.5 | 24.5 | 3.5 | 54 + nx 27 | 107.5 | nx 27 | 27 | 11 | 21 | 8  | 4  |

Datasheet

Dimensions - Pressure regulator

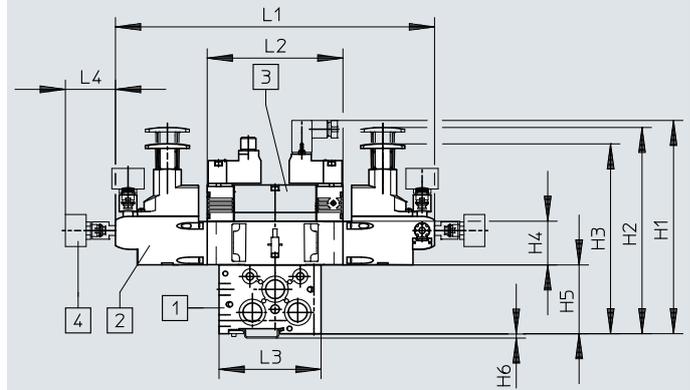
Download CAD data → [www.festo.com](http://www.festo.com)

Valve size 18 mm with manifold sub-base and solenoid valve with central plug



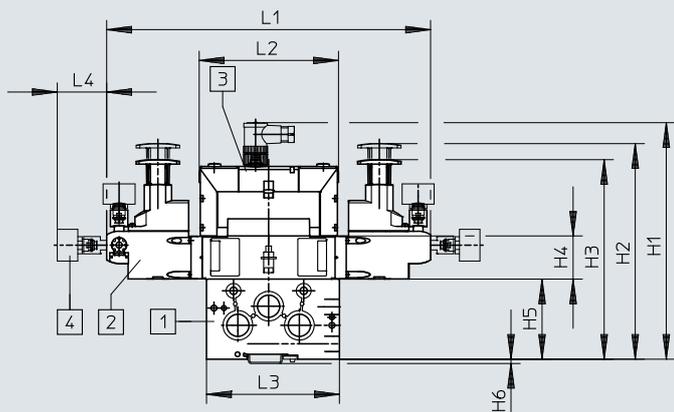
- [1] Manifold sub-base NAW
- [2] Regulator plate
- [3] Solenoid valve VSVA
- [4] Pressure gauge, freely positionable

Valve size 18 mm with manifold sub-base and solenoid valve with central plug to ISO 15218



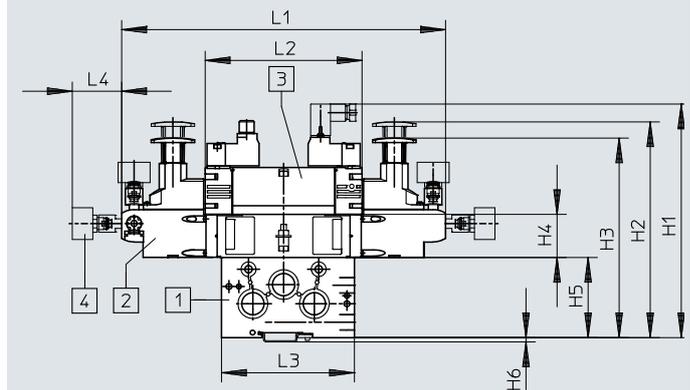
- [1] Manifold sub-base NAW
- [2] Regulator plate
- [3] Solenoid valve VSVA
- [4] Pressure gauge, freely positionable

Valve size 26 mm with manifold sub-base and solenoid valve with central plug



- [1] Manifold sub-base NAW
- [2] Regulator plate
- [3] Solenoid valve VSVA
- [4] Pressure gauge, freely positionable

Valve size 26 mm with manifold sub-base and solenoid valve with central plug to ISO 15218



- [1] Manifold sub-base NAW
- [2] Regulator plate
- [3] Solenoid valve VSVA
- [4] Pressure gauge, freely positionable

| Valve size [mm] | Solenoid valve                    | H1    | H2  | H3  | H4 | H5 | H6  | L1    | L2    | L3  | L4   |
|-----------------|-----------------------------------|-------|-----|-----|----|----|-----|-------|-------|-----|------|
| 18              | With central plug                 | 156.8 | 165 | 152 | 35 | 55 | 3.5 | 253.4 | 107.8 | 81  | 39.8 |
|                 | With pilot interface to ISO 15218 | 170.6 |     |     |    |    |     |       |       |     |      |
| 26              | With central plug                 | 192   | 175 | 162 | 35 | 65 | 3.5 | 260.7 | 112.5 | 107 | 39.8 |
|                 | With pilot interface to ISO 15218 | 189.6 |     |     |    |    |     |       | 126.2 |     |      |

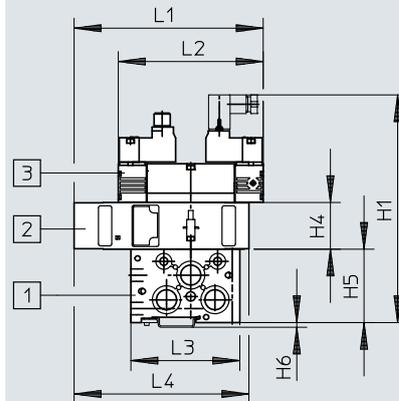
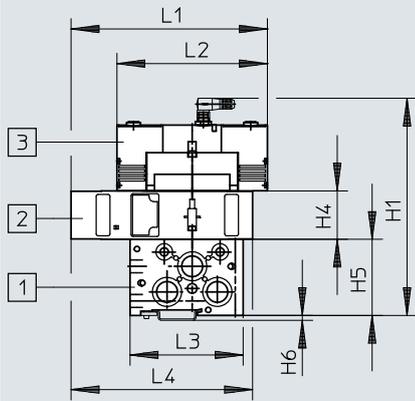
Datasheet

Dimensions – Throttle plate

Download CAD data → [www.festo.com](http://www.festo.com)

Valve size 18 mm with manifold sub-base and solenoid valve with central plug

Valve size 18 mm with manifold sub-base and solenoid valve with central plug to ISO 15218

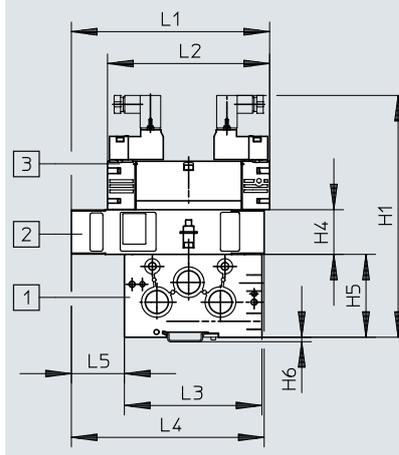
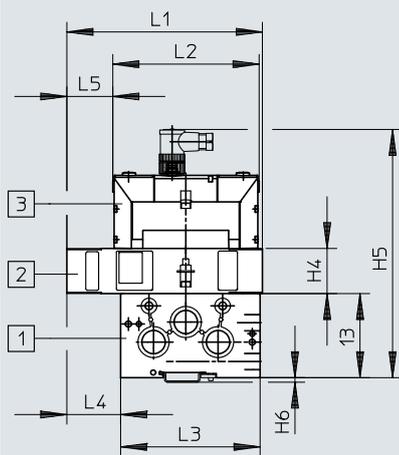


[1] Manifold sub-base NAW  
[2] Throttle plate  
[3] Solenoid valve VSVA

[1] Manifold sub-base NAW  
[2] Throttle plate  
[3] Solenoid valve VSVA

Valve size 26 mm with manifold sub-base and solenoid valve with central plug

Valve size 26 mm with manifold sub-base and solenoid valve with central plug to ISO 15218



[1] Manifold sub-base NAW  
[2] Throttle plate  
[3] Solenoid valve VSVA

[1] Manifold sub-base NAW  
[2] Throttle plate  
[3] Solenoid valve VSVA

| Valve size [mm] | Solenoid valve                    | H1    | H4 | H5 | H6  | L1    | L2    | L3  | L4   | L5   |
|-----------------|-----------------------------------|-------|----|----|-----|-------|-------|-----|------|------|
| 18              | With central plug                 | 156.8 | 35 | 55 | 3.5 | 140.8 | 107.8 | 81  | 130  | -    |
|                 | With pilot interface to ISO 15218 | 170.6 |    |    |     |       |       |     |      |      |
| 26              | With central plug                 | 192   | 35 | 65 | 3.5 | 150   | 112.5 | 107 | 41.3 | 35   |
|                 | With pilot interface to ISO 15218 | 189.6 |    |    |     |       |       |     | 150  | 41.3 |

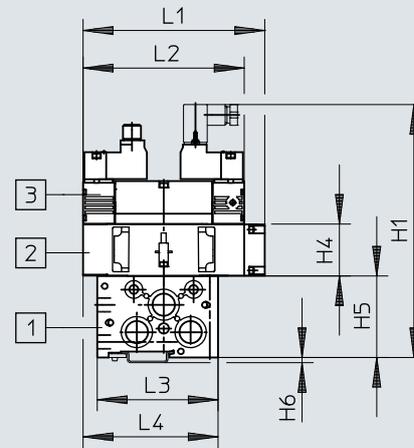
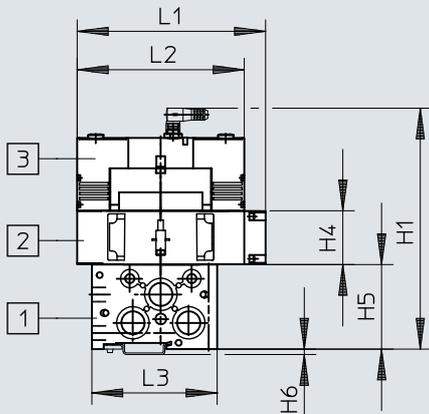
Datasheet

Dimensions – Vertical supply plate

Download CAD data → [www.festo.com](http://www.festo.com)

Valve size 18 mm with manifold sub-base and solenoid valve with central plug

Valve size 18 mm with manifold sub-base and solenoid valve with central plug to ISO 15218

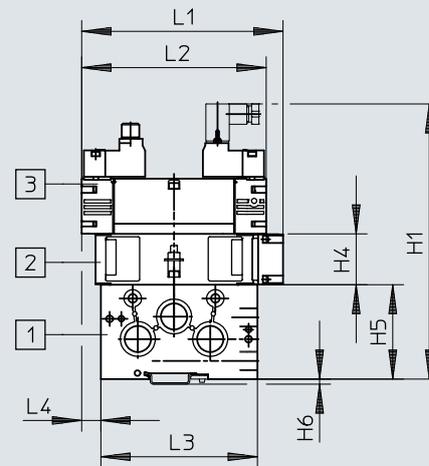
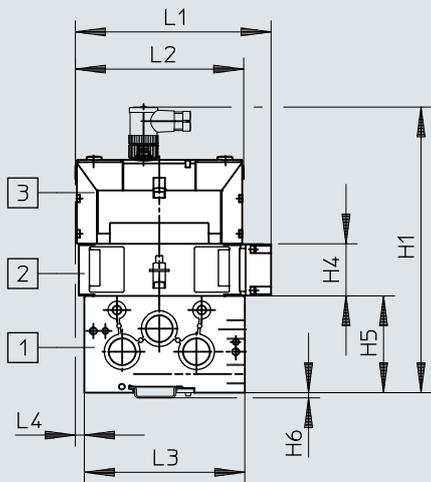


[1] Manifold sub-base NAW  
[2] Vertical supply plate  
[3] Solenoid valve VSVA

[1] Manifold sub-base NAW  
[2] Vertical supply plate  
[3] Solenoid valve VSVA

Valve size 26 mm with manifold sub-base and solenoid valve with central plug

Valve size 26 mm with manifold sub-base and solenoid valve with central plug to ISO 15218



[1] Manifold sub-base NAW  
[2] Vertical supply plate  
[3] Solenoid valve VSVA

[1] Manifold sub-base NAW  
[2] Vertical supply plate  
[3] Solenoid valve VSVA

| Valve size [mm] | Solenoid valve                    | H1    | H4 | H5 | H6  | L1     | L2    | L3  | L4    |
|-----------------|-----------------------------------|-------|----|----|-----|--------|-------|-----|-------|
| 18              | With central plug                 | 156.8 | 35 | 55 | 3.5 | 121.55 | 107.8 | 81  | 90.4  |
|                 | With pilot interface to ISO 15218 | 170.6 |    |    |     |        |       |     |       |
| 26              | With central plug                 | 192   | 35 | 65 | 3.5 | 130.8  | 112.5 | 107 | 6.3   |
|                 | With pilot interface to ISO 15218 | 189.6 |    |    |     | 137.7  |       |     | 126.2 |

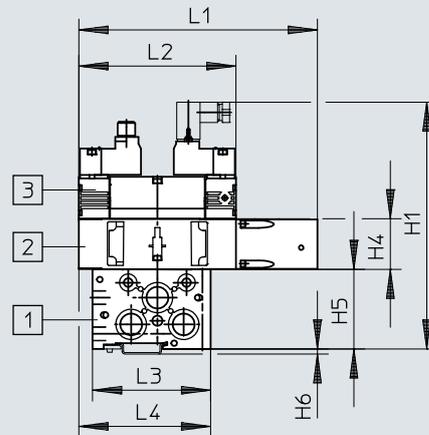
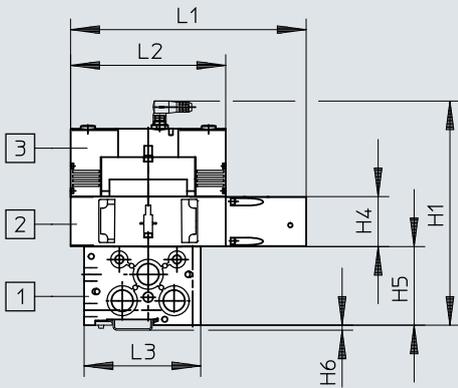
Datasheet

**Dimensions – Vertical pressure shut-off plate**

Download CAD data → [www.festo.com](http://www.festo.com)

Valve size 18 mm with manifold sub-base and solenoid valve with central plug

Valve size 18 mm with manifold sub-base and solenoid valve with central plug to ISO 15218

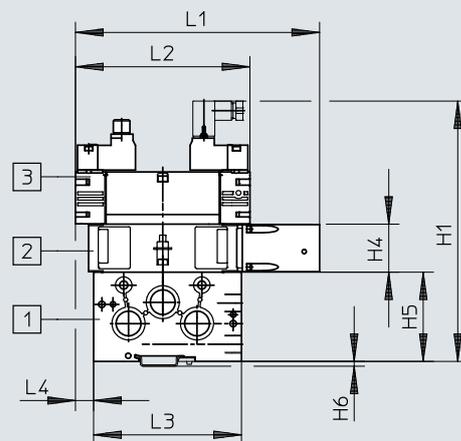
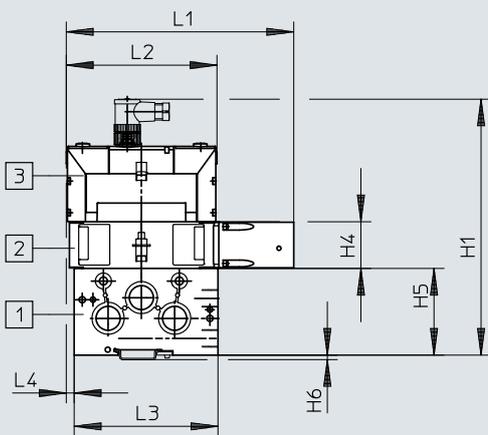


- [1] Manifold sub-base NAW
- [2] Vertical pressure shut-off plate
- [3] Solenoid valve VSVA

- [1] Manifold sub-base NAW
- [2] Vertical pressure shut-off plate
- [3] Solenoid valve VSVA

Valve size 26 mm with manifold sub-base and solenoid valve with central plug

Valve size 26 mm with manifold sub-base and solenoid valve with central plug to ISO 15218



- [1] Manifold sub-base NAW
- [2] Vertical pressure shut-off plate
- [3] Solenoid valve VSVA

- [1] Manifold sub-base NAW
- [2] Vertical pressure shut-off plate
- [3] Solenoid valve VSVA

| Valve size [mm] | Solenoid valve                    | H1    | H4 | H5 | H6  | L1    | L2    | L3  | L4   |
|-----------------|-----------------------------------|-------|----|----|-----|-------|-------|-----|------|
| 18              | With central plug                 | 156.8 | 35 | 55 | 3.5 | 163.8 | 107.8 | 81  | 90.4 |
|                 | With pilot interface to ISO 15218 | 170.6 |    |    |     |       |       |     |      |
| 26              | With central plug                 | 192   | 35 | 65 | 3.5 | 169.7 | 112.5 | 107 | 6.3  |
|                 | With pilot interface to ISO 15218 | 189.6 |    |    |     |       |       |     |      |

## Accessories

### Isolating disc NSC

Materials:  
Aluminium

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L



#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

#### Ordering data

| Description  | Valve size<br>[mm] | Weight<br>[g] | Part no. | Type            |
|--|--------------------|---------------|----------|-----------------|
| Isolating disc for ports 1, 3, 5 (solenoid/pneumatic valves) | 18                 | 2             | 161113   | NSC-3/8-02-VDMA |
|  | 26                 | 2             | 161105   | NSC-1/2-01-VDMA |
| Isolating disc for ports 12, 14 (pneumatic valves)           | 18                 | 2             | 161106   | NSC-1/8-01-VDMA |
|  | 26                 | 2             | 161106   | NSC-1/8-01-VDMA |

### Cover plate NDV

Materials:  
POM

LABS (PWIS) conformity:  
VDMA24364-B1/B2-L



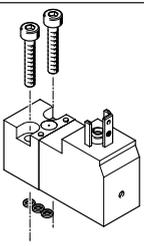
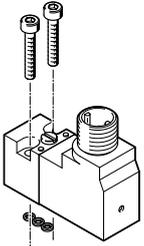
#### Operating and environmental conditions

|                                    |  |
|------------------------------------|--|
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |

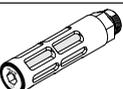
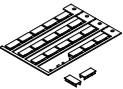
#### Ordering data

| Description   | Valve size<br>[mm] | Weight<br>[g] | Part no. | Type        |
|---|--------------------|---------------|----------|-------------|
| Cover plate to seal spare or vacant valve positions | 18                 | 22            | 161114   | NDV-02-VDMA |
|   | 26                 | 36            | 161107   | NDV-01-VDMA |

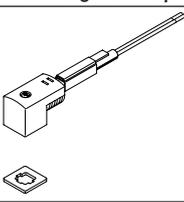
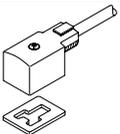
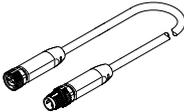
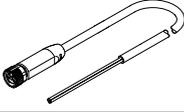
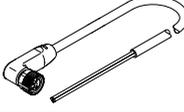
## Accessories

| Ordering data – Pilot valve to ISO 15218  |  | Power |         | Voltage |        | Part no. | Type                  |
|---|--|-------|---------|---------|--------|----------|-----------------------|
|   |  | [W]   | [VA]    | [V DC]  | [V AC] |          |                       |
| <b>Square plug, type C EN 175301-803</b>  |  |       |         |         |        |          |                       |
|    | Non-detenting manual override                                  | 1.8   | –       | 12      | –      | 546257   | VSCS-B-M32-MH-WA-5C1  |
|   |  |       |         | 24      |        | 546256   | VSCS-B-M32-MH-WA-1C1  |
|   |  | –     | 3.1/2.3 | –       | 24     | 546258   | VSCS-B-M32-MH-WA-1AC1 |
|   |  |       |         |         | 110    | 546259   | VSCS-B-M32-MH-WA-2AC1 |
|   |  |       |         |         | 230    | 546260   | VSCS-B-M32-MH-WA-3AC1 |
|   | Manual override non-detenting/detenting                        | 1.8   | –       | 12      | –      | 571062   | VSCS-B-M32-MD-WA-5C1  |
|   |  |       |         | 24      |        | 571061   | VSCS-B-M32-MD-WA-1C1  |
|   |  | –     | 3.1/2.3 | –       | 24     | 571063   | VSCS-B-M32-MD-WA-1AC1 |
|   |  |       |         |         | 230    | 571065   | VSCS-B-M32-MD-WA-3AC1 |
|   |  |       |         |         | 110    | 571064   | VSCS-B-M32-MD-WA-2AC1 |
| <b>Plug M12 IEC 61076-2-101</b>   |  |       |         |         |        |          |                       |
|    | Manual override non-detenting/detenting                        | 1.8   | –       | 24      | –      | 573215   | VSCS-B-M32-MD-WA-1R3  |
|   | Manual override, detenting                                     | 1.8   | –       | 24      | –      | 573214   | VSCS-B-M32-MH-WA-1R3  |
| <b>Tool for manual override</b>   |  |       |         |         |        |          |                       |
|  | For manual override, detenting, with pilot valve VSCS-B-M32-MT |       |         |         |        | 157601   | AHB-MEB               |

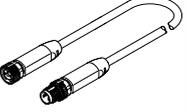
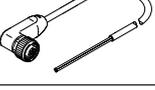
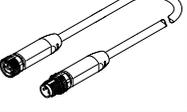
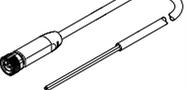
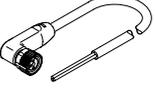
## Accessories

| Ordering data  |   |                 | Part no.                    | Type                    |                          |
|--|---|-----------------|-----------------------------|-------------------------|--------------------------|
| <b>Pressure gauge</b>  |   |                 | Datasheets → Internet: pagn |                         |                          |
|    | With cartridge connection for regulator                                   | 0 ... 1 MPa     | <b>563736</b>               | <b>PAGN-26-1M-P10</b>   |                          |
|  |   | 0 ... 1.6 MPa   | <b>563735</b>               | <b>PAGN-26-1.6M-P10</b> |                          |
|  |   | 0 ... 10 bar    | <b>543488</b>               | <b>PAGN-26-10-P10</b>   |                          |
|  |   | 0 ... 16 bar    | <b>543487</b>               | <b>PAGN-26-16-P10</b>   |                          |
|  |   | 0 ... 145 psi   | <b>563732</b>               | <b>PAGN-26-145P-P10</b> |                          |
|  |   | 0 ... 232 psi   | <b>563731</b>               | <b>PAGN-26-232P-P10</b> |                          |
| <b>Cartridge for regulator plate</b>   |   |                 |                             |                         |                          |
|    | For tubing O.D.   | 4 mm            | Pack of 10                  | <b>172972</b>           | <b>QSP10-4</b>           |
| <b>Push-in fitting</b>   |   |                 |                             |                         |                          |
| Datasheets → Internet: qs  |   |                 |                             |                         |                          |
|    | Connecting thread M5 for tubing O.D.                                      | 4 mm            | Pack of 10                  | <b>153315</b>           | <b>QSM-M5-4-1</b>        |
|  |   | 6 mm            | Pack of 10                  | <b>153317</b>           | <b>QSM-M5-6-1</b>        |
|  | Connecting thread G1/8 for tubing O.D.                                    | 6 mm            | Pack of 10                  | <b>186096</b>           | <b>QS-G1/8-6</b>         |
|  |   | 8 mm            | Pack of 10                  | <b>186098</b>           | <b>QS-G1/8-8</b>         |
|  | Connecting thread G1/4 for tubing O.D.                                    | 8 mm            | Pack of 10                  | <b>186099</b>           | <b>QS-G1/4-8</b>         |
|  |   | 10 mm           | Pack of 10                  | <b>186101</b>           | <b>QS-G1/4-10</b>        |
|  | Connecting thread G3/8 for tubing O.D.                                    | 12 mm           | Pack of 10                  | <b>186103</b>           | <b>QS-G3/8-12</b>        |
|  |   | 16 mm           | Pack of 1                   | <b>186347</b>           | <b>QS-G3/8-16</b>        |
|  | Connecting thread G1/2 for tubing O.D.                                    | 12 mm           | Pack of 1                   | <b>186104</b>           | <b>QS-G1/2-12</b>        |
|  |   | 16 mm           | Pack of 1                   | <b>186105</b>           | <b>QS-G1/2-16</b>        |
|  | <b>Blanking plug</b>  |                 |                             |                         |                          |
|  | Datasheets → Internet: b  |                 |                             |                         |                          |
|  | For sealing ports that are not required                                   | For thread M5   | Pack of 10                  | <b>3843</b>             | <b>B-M5</b>              |
|  |   | For thread G1/8 | Pack of 10                  | <b>3568</b>             | <b>B-1/8</b>             |
|  |   | For thread G1/4 | Pack of 10                  | <b>3569</b>             | <b>B-1/4</b>             |
|  |   | For thread G3/8 | Pack of 10                  | <b>3570</b>             | <b>B-3/8</b>             |
|  |   | For thread G1/2 | Pack of 10                  | <b>3571</b>             | <b>B-1/2</b>             |
| <b>Silencer</b>  |   |                 |                             |                         |                          |
| Datasheets → Internet: u   |   |                 |                             |                         |                          |
|  | For reducing noise at exhaust ports                                       | For thread G1/8 |                             | <b>6841</b>             | <b>U-1/8-B</b>           |
|  |   | For thread G1/4 |                             | <b>6842</b>             | <b>U-1/4-B</b>           |
|  |   | For thread G3/8 |                             | <b>6843</b>             | <b>U-3/8-B</b>           |
|  |   | For thread G1/2 |                             | <b>6844</b>             | <b>U-1/2-B</b>           |
| <b>Inscription label</b>   |   |                 |                             |                         |                          |
| Datasheets → Internet: ibs   |   |                 |                             |                         |                          |
|  | Inscription label, 9x20 mm, for valves                                    | In frames       | Pack of 24                  | <b>18182</b>            | <b>IBS-9x20</b>          |
| <b>Inscription label holder</b>  |   |                 |                             |                         |                          |
| Datasheets → Internet: ascf  |   |                 |                             |                         |                          |
|  | Clip-on inscription label holder for valve cap, for pneumatic valves VSPA |                 | Pack of 5                   | <b>540888</b>           | <b>ASCF-T-S6</b>         |
| <b>Cover cap</b>   |   |                 |                             |                         |                          |
|  | For manual override, non-detenting or covered                             |                 |                             | <b>8049538</b>          | <b>VAMC-B10-20-CH2-S</b> |

## Accessories

| Ordering data   |   | Part no.                      | Type  |  |
|---|---|-------------------------------|---|--|
| <b>Plug socket for plug pattern to EN 175301-803, type C</b>                        |   | Datasheets → Internet: mssd   |   |  |
|    | Via screw terminals   | Cable fitting Pg7             | <b>151687</b> <b>MSSD-EB</b>                |  |
|   |   | Cable connector M12           | <b>539712</b> <b>MSSD-EB-M12</b>            |  |
| <b>Plug socket for connection pattern type B, industry standard</b>                 |   |                               |   |  |
|    | Via screw terminals   | Cable connector M16           | <b>539710</b> <b>MSSD-F-M16</b>             |  |
|   |   | Cable fitting Pg9             | <b>34431</b> <b>MSSD-F</b>                  |  |
| <b>Connecting cable for plug pattern to EN 175301-803, type C</b>                   |   | Datasheets → Internet: kmeb   |   |  |
|    | With LED signal status indication   | 24 V DC                       | 2.5 m                                       | <b>151688</b> <b>KMEB-1-24-2.5-LED</b> |
|   |   | 24 V DC                       | 5 m   | <b>151689</b> <b>KMEB-1-24-5-LED</b>   |
|   |   | 24 V DC                       | 10 m  | <b>193457</b> <b>KMEB-1-24-10-LED</b>  |
|   | Without signal status indication  | Up to 240 V                   | 2.5 m                                       | <b>151690</b> <b>KMEB-1-230AC-2.5</b>  |
|   |   | Up to 240 V                   | 5 m   | <b>151691</b> <b>KMEB-1-230AC-5</b>    |
| <b>Connecting cable for plug pattern type B, industry standard</b>                  |   |                               |   |  |
|   | With LED signal status indication   | 24 V DC                       | 2.5 m                                       | <b>30935</b> <b>KMF-1-24DC-2.5-LED</b> |
|   |   |                               | 5 m   | <b>30937</b> <b>KMF-1-24DC-5-LED</b>   |
|   |   |                               | 10 m  | <b>193458</b> <b>KMF-1-24-10-LED</b>   |
| <b>Illuminating seal</b>  |   | Datasheets → Internet: meb-ld |   |  |
|  | Plug pattern to EN 175301-803, type C   | 12 ... 24 V DC                | <b>151717</b> <b>MEB-LD-12-24DC</b>         |  |
|   |   | 230 V AC                      | <b>151718</b> <b>MEB-LD-230AC</b>           |  |
|   | Plug pattern type B to industry standard  | 24 V DC                       | <b>19143</b> <b>MF-LD-12-24DC</b>           |  |
| <b>Plug sockets for valves, round plug M12x1</b>                                    |   | Datasheets → Internet: necb   |   |  |
|  | Angled socket, M12x1 A-coded according to EN 61076-2-101, 4-pin, screw terminal | <b>8162292</b>                | <b>NECB-M12W4-C2</b>                        |  |
| <b>Connecting cable for valves with round plug M8x1</b>                             |   | Datasheets → Internet: neba   |   |  |
|  | Modular system for a choice of connecting cables<br>→ Internet: neba            | 0.1 ... 20 m                  | <b>8078221</b> <b>NEBA-...</b>              |  |
|   |   |                               |   |  |
|  | Straight socket, M8x1, 4-pin<br>Open end, 4-core                                | 2.5 m                         | <b>8078227</b> <b>NEBA-M8G4-U-2.5-N-LE4</b> |  |
|   |   | 5 m                           | <b>8078228</b> <b>NEBA-M8G4-U-5-N-LE4</b>   |  |
|  | Angled socket, M8x1, 4-pin<br>Open end, 4-core                                  | 2.5 m                         | <b>8078233</b> <b>NEBA-M8W4-U-2.5-N-LE4</b> |  |
|   |   | 5 m                           | <b>8078234</b> <b>NEBA-M8W4-U-5-N-LE4</b>   |  |

## Accessories

| Ordering data   |  | Part no.     | Type                                  |
|---|--|--------------|---------------------------------------|
| <b>Connecting cable for valves with round plug M12x1</b>                            |  |              | Datasheets → Internet: neba           |
|     | Modular system for a choice of connecting cables<br>→ Internet: neba | 0.1 ... 20 m | <b>8078221</b> NEBA-...               |
|     | Straight socket, M12x1, 5-pin<br>Open end, 4-core                    | 2.5 m        | <b>8078239</b> NEBA-M12G5-U-2.5-N-LE4 |
|   |  | 5 m          | <b>8078240</b> NEBA-M12G5-U-5-N-LE4   |
|     | Angled socket, M12x1, 5-pin,<br>Open end, 4-core                     | 2.5 m        | <b>8078248</b> NEBA-M12W5-U-2.5-N-LE4 |
|   |  | 5 m          | <b>8078249</b> NEBA-M12W5-U-5-N-LE4   |
| <b>Connecting cable for electrical connection of the switching status sensor</b>    |  |              |                                       |
|     | Modular system for a choice of connecting cables<br>→ Internet: neba | 0.1 ... 20 m | <b>8078221</b> NEBA-...               |
|     | Straight socket, M8x1, 3-pin<br>Open end, 3-core                     | 2.5 m        | <b>8078223</b> NEBA-M8G3-U-2.5-N-LE3  |
|   |  | 5 m          | <b>8078224</b> NEBA-M8G3-U-5-N-LE3    |
|   | Angled socket, M8x1, 3-pin<br>Open end, 3-core                       | 2.5 m        | <b>8078230</b> NEBA-M8W3-U-2.5-N-LE3  |
|   |  | 5 m          | <b>8078231</b> NEBA-M8W3-U-5-N-LE3    |
| <b>DIN rail mounting</b>  |  |              |                                       |
|  | For end plate, valve size 18 mm                                      | Pack of 2    | <b>553996</b> VAME-S3-2-H             |
|   | For end plate, valve size 26 mm                                      | Pack of 2    | <b>553995</b> VAME-S3-1-H             |
| <b>User documentation</b>   |  |              |                                       |
|   | Valve manifold assembly VTIA   | German       | <b>538928</b> P.BE-VTIA-DE            |
|   |  | English      | <b>538929</b> P.BE-VTIA-EN            |
|   |  | French       | <b>538931</b> P.BE-VTIA-FR            |
|   |  | Spanish      | <b>538930</b> P.BE-VTIA-ES            |
|   |  | Italian      | <b>538932</b> P.BE-VTIA-IT            |