

## Pneumatic valve VUWG

**FESTO**



## Characteristics

### At a glance

#### Innovative:

- Various connection sizes (M3, M5, M7, G1/8, G1/4)
- 10 bar maximum pressure
- 2x3/2-way valve in one valve housing

#### Flexible:

- Versatile valve functions
- In-line valves can be used as individual valves or manifold valves
- M5/ M7 in-line valves can be mixed on one manifold rail
- Identical sub-base valves for M5 or M7 manifold rail
- Manifolds with pressure zones
- Selectable quick connectors

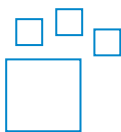
#### Operationally safe:

- Sturdy and durable metal components
- Service reliability thanks to valves that are quick and easy to replace

#### Easy to assemble:

- Solid wall mounting or H-rail mounting
- Easy to mount thanks to captive screws and seal

### Ordering data - modular system



#### Configurable product

This product and all its product options can be ordered online via the configurator.

### Valve function

[P53U] 5/3-way valve, mid-position pressurised

If there is no switching signal, the valve with 3 switching positions assumes the mid-position. In the exhausted mid-position, ports 2 and 4 are connected to ports 3 and 5. This means that the air flows from the working ports (2 and 4) to the exhaust ports (3 and 5).

[P53C] 5/3-way valve, mid-position closed

If there is no switching signal, the valve with 3 switching positions assumes the mid-position. With the mid-position closed, ports 2 and 4 are sealed and no air flows through the valve.

[P53E] 5/3-way valve, mid-position exhausted

If there is no switching signal, the valve with 3 switching positions assumes the mid-position. In the exhausted mid-position, ports 2 and 4 are connected to ports 3 and 5. This means that the air flows from the working ports (2 and 4) to the exhaust ports (3 and 5).

### Directional control valve type

[B] Sub-base valve

In the case of sub-base valves, the supply ports and working ports (2, 4) are pneumatically linked to the valve via (e.g. sub-base).

[S] Semi-inline valve

In the case of semi in-line valves, the supply ports are connected to the valve via pneumatic links (e.g. sub-base). The working connections (2, 4) are located on the valve.

[L] In-line valve

In-line valves are intended for use without pneumatic linkage. All pneumatic connections are on the valve and can be equipped with fittings/tubing.

## Characteristics

### Reset method for monostable/single solenoid valves

|                                                                                                                                                                                                                                                      |                                    |                                                                                                                                                                                                                                                                  |                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| [ ]                                                                                                                                                                                                                                                  | None                               | [A]                                                                                                                                                                                                                                                              | Pneumatic spring                             |
| If there is no switching signal, the valve is moved to its normal position by compressed air. Therefore compressed air has to be applied. The compressed air supply for the pneumatic reset comes from duct 14 of the manifold rail.                 |                                    | If there is no switching signal, the valve is moved to its normal position by compressed air. Therefore compressed air has to be applied. The compressed air supply for the pneumatic reset is branched off from duct 1.                                         |                                              |
| [E]                                                                                                                                                                                                                                                  | Pneumatic spring, external         | [M]                                                                                                                                                                                                                                                              | Mechanical spring                            |
| If there is no switching signal, the valve is moved to its normal position by compressed air. Therefore compressed air has to be applied. The compressed air supply for the pneumatic reset comes from duct 14 of the manifold rail.                 |                                    | If there is no switching signal, the valve is set to its normal position by compressed air and mechanical spring force. It is not necessary for compressed air to be applied.                                                                                    |                                              |
| [R]                                                                                                                                                                                                                                                  | Mixed, pneumatic/mechanical spring | [X]                                                                                                                                                                                                                                                              | Mixed, pneumatic/mechanical spring, external |
| If there is no switching signal, the valve is moved to its normal position by compressed air and mechanical spring force. Therefore compressed air has to be applied. The compressed air supply for the pneumatic reset is branched off from duct 1. |                                    | If there is no switching signal, the valve is moved to its normal position by compressed air and mechanical spring force. Therefore compressed air has to be applied. The compressed air supply for the pneumatic reset comes from duct 14 of the manifold rail. |                                              |

### Pneumatic connection

Configuration of pneumatic connections. The configured product is delivered fully assembled with the selected connection type. The following types are available:

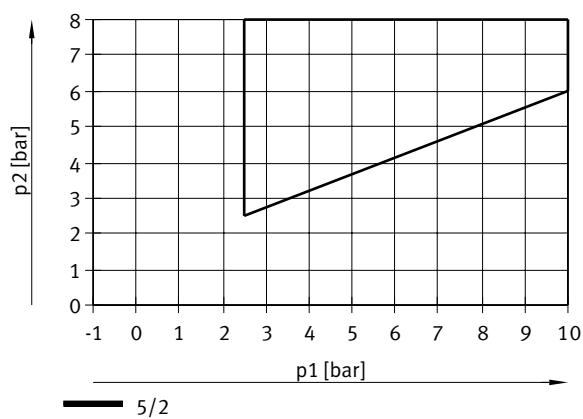
- Threaded connection (e.g. metric thread M5)
- Push-in connector for OD tubing (e.g. for tubing with O.D. 6 mm)

### Exhaust

Configuration of pneumatic connections 3 and 5. The configured product is delivered fully assembled with the selected connection type. The following types are available:

- without fitting (threaded connection with metric thread)
- with fitting (push-in connector for O.D. tubing)
- Silencer

### Operating pressure [bar]



This graph applies to the 2x3/2-way valves and 5/2-way monostable valves with pneumatic spring: T32CA, T32UA, T32A; M52A, M52R

Note: The compressed air for the pneumatic springs is supplied from port 1 (operating pressure). To ensure the valve switches reliably, the minimum pressure as per the graph must always be adhered to for the pilot pressure.

## Type code

|             |                 |  |
|-------------|-----------------|--|
| <b>001</b>  | <b>Series</b>   |  |
| <b>VUWG</b> | Pneumatic valve |  |

|            |                                       |  |
|------------|---------------------------------------|--|
| <b>002</b> | <b>Directional control valve type</b> |  |
| <b>L</b>   | In-line valve                         |  |
| <b>S</b>   | Semi-inline valve                     |  |
| <b>B</b>   | Sub-base valve                        |  |

|            |                         |  |
|------------|-------------------------|--|
| <b>003</b> | <b>Size</b>             |  |
| <b>10A</b> | Size 10, deviating flow |  |
| <b>10</b>  | Size 10                 |  |
| <b>14</b>  | Size 14                 |  |
| <b>18</b>  | Size 18                 |  |

|             |                                                       |  |
|-------------|-------------------------------------------------------|--|
| <b>004</b>  | <b>Valve function</b>                                 |  |
| <b>B52</b>  | 5/2-way valve, double solenoid/bistable               |  |
| <b>M52</b>  | 5/2-way valve, single solenoid/monostable             |  |
| <b>P53C</b> | 5/3-way valve, mid-position closed                    |  |
| <b>P53E</b> | 5/3-way valve, mid-position exhausted                 |  |
| <b>P53U</b> | 5/3-way valve, mid-position pressurised               |  |
| <b>T32C</b> | 2x3/2-way valve, normally closed                      |  |
| <b>T32H</b> | 2x3/2-way valve, 1x normally closed, 1x normally open |  |
| <b>T32U</b> | 2x3/2-way valve, normally open                        |  |

|            |                                                           |  |
|------------|-----------------------------------------------------------|--|
| <b>005</b> | <b>Reset method for monostable/single solenoid valves</b> |  |
|            | None                                                      |  |
| <b>A</b>   | Pneumatic spring                                          |  |
| <b>E</b>   | Pneumatic spring, external                                |  |
| <b>M</b>   | Mechanical spring                                         |  |
| <b>R</b>   | Mixed, pneumatic/mechanical spring                        |  |
| <b>X</b>   | Mixed, pneumatic/mechanical spring, external              |  |

|              |                                                   |  |
|--------------|---------------------------------------------------|--|
| <b>006</b>   | <b>Pneumatic connection</b>                       |  |
| <b>F</b>     | Flange/sub-base                                   |  |
| <b>G18</b>   | G1/8                                              |  |
| <b>G14</b>   | G1/4                                              |  |
| <b>M3</b>    | M3                                                |  |
| <b>M5</b>    | M5                                                |  |
| <b>M7</b>    | M7                                                |  |
| <b>Q3</b>    | Push-in connector, 3 mm                           |  |
| <b>Q4</b>    | Push-in connector 4 mm                            |  |
| <b>Q4H</b>   | Push-in connector 4 mm, with connecting thread M7 |  |
| <b>Q6</b>    | Push-in connector 6 mm                            |  |
| <b>Q6H</b>   | Push-in connector 6 mm, with connecting thread M7 |  |
| <b>Q8</b>    | Push-in connector 8 mm                            |  |
| <b>Q10</b>   | Push-in connector 10 mm                           |  |
| <b>T316</b>  | Push-in connector 3/16"                           |  |
| <b>T316H</b> | Push-in connector for 3/16", M7                   |  |
| <b>T38</b>   | Push-in connector 3/8"                            |  |
| <b>T18</b>   | Push-in connector 1/8"                            |  |
| <b>T14</b>   | Push-in connector 1/4"                            |  |
| <b>T14H</b>  | Push-in connector for 1/4", M7                    |  |
| <b>T532</b>  | Push-in connector 5/32"                           |  |
| <b>T516</b>  | Push-in connector 5/16"                           |  |

|            |                |  |
|------------|----------------|--|
| <b>007</b> | <b>Exhaust</b> |  |
|            | No fitting     |  |
| <b>QN</b>  | With fitting   |  |
| <b>U</b>   | Silencer       |  |

## Datasheet

**VUWG-L10A, in-line valves M3, general technical data**

|                                                       |                                        |                                     |                      |               |            |
|-------------------------------------------------------|----------------------------------------|-------------------------------------|----------------------|---------------|------------|
| Valve function                                        | 5/2-way, monostable                    |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Mechanical spring, Pneumatic spring | Mechanical spring    |               |            |
| Suitability for vacuum                                | yes                                    | no                                  | yes                  |               |            |
| Design                                                | Piston gate valve                      |                                     |                      |               |            |
| lap                                                   | Overlap                                |                                     | Indefinite overlap   |               | Overlap    |
| Sealing principle                                     | Soft                                   |                                     |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                                     |                      |               |            |
| Type of piloting                                      | Direct                                 |                                     |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions        | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                                     |                      |               |            |
| Type of mounting <sup>2)</sup>                        | Either., On PR rail, With through-hole |                                     |                      |               |            |
| Mounting position                                     | optional                               |                                     |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 80 l/min                               | 100 l/min                           | 90 l/min             |               |            |
| Switching time on                                     | 5 ms                                   |                                     | 7 ms                 |               |            |
| Switching time off                                    | 16 ms                                  | 11 ms                               | 19 ms                |               |            |
| Switching time reversal                               | –                                      |                                     | 9 ms                 |               |            |
| Pilot air port 12                                     | M5                                     |                                     |                      |               |            |
| Pilot air port 14                                     | M5                                     |                                     |                      |               |            |
| Product weight                                        | 34 g                                   | 37 g                                | 40 g                 |               |            |
| Corrosion resistance class CRC <sup>3)</sup>          | 2 - Moderate corrosion stress          |                                     |                      |               |            |

1) Reset method combined

2) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-L10A, in-line valves M3, operating and environmental conditions**

|                                    |                                                                                            |                     |                      |               |            |
|------------------------------------|--------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|------------|
| Valve function                     | 5/2 bistable                                                                               | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                     |                      |               |            |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |                     |                      |               |            |
| Operating pressure                 | -0.9 ... 10 bar                                                                            |                     |                      |               |            |
| Pilot pressure                     | 1.5 ... 10 bar                                                                             | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                | -5 ... 60°C                                                                                |                     |                      |               |            |
| Media temperature                  | -5 ... 50°C                                                                                |                     |                      |               |            |
| Cleanroom class                    | Class 5 according to ISO 14644-1                                                           |                     |                      |               |            |

**VUWG-L10A, in-line valves M3, materials**

|                   |                     |  |  |  |  |
|-------------------|---------------------|--|--|--|--|
| Material housing  | Aluminium, Anodised |  |  |  |  |
| Material seals    | HNBR, NBR           |  |  |  |  |
| Note on materials | RoHS-compliant      |  |  |  |  |

## Datasheet

**VUWG-L10 and VUWG-S10, in-line valves M5, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|-------------------------------------|-------------------|----------------------|---------------|------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable                 |                   | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring, Pneumatic spring | Mechanical spring |                      |               |            |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                | no                           | yes                                 |                   |                      |               |            |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              |                                     |                   | Indefinite overlap   |               | Overlap    |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions |                                     | Reversible        |                      |               |            |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Type of mounting <sup>2)</sup>                        | Either., On PR rail, With through-hole |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 135 l/min                              | 150 l/min                    | 125 l/min                   | 150 l/min                    | 125 l/min                          | 150 l/min                    | 220 l/min                           | 190 l/min         | 200 l/min            |               |            |
| Switching time on                                     | 6 ms                                   | 4 ms                         | 6 ms                        | 4 ms                         | 6 ms                               | 4 ms                         | 6 ms                                | 7 ms              | 8 ms                 |               |            |
| Switching time off                                    | 7 ms                                   | 9 ms                         | 7 ms                        | 9 ms                         | 7 ms                               | 9 ms                         | 12 ms                               | 16 ms             | 25 ms                |               |            |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                                     |                   | 11 ms                |               |            |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |
| Product weight                                        | 51 g                                   | 48 g                         | 51 g                        | 48 g                         | 51 g                               | 48 g                         | 45 g                                | 41 g              | 48 g                 |               |            |
| Corrosion resistance class CRC <sup>3)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                                     |                   |                      |               |            |

1) Reset method combined

2) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-L10 and VUWG-S10, M5 in-line valves, operating and environmental conditions**

|                                    |                                                                                            |                             |                                    |              |                     |                      |               |            |
|------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                     | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                 | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                     | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                  | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                    | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-L10 and VUWG-S10, in-line valves M5, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-L10 and VUWG-S10, in-line valves M7, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|---------------------|-------------------------------------|----------------------|---------------|------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring   | Mechanical spring, Pneumatic spring | Mechanical spring    |               |            |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                | no                           | yes                 | no                                  | yes                  |               |            |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              |                     |                                     | Indefinite overlap   |               | Overlap    |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions | Reversible          | Reversible with restrictions        | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of mounting <sup>2)</sup>                        | Either., On PR rail, With through-hole |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 150 l/min                              | 190 l/min                    | 140 l/min                   | 190 l/min                    | 140 l/min                          | 190 l/min                    | 320 l/min           | 380 l/min                           | 320 l/min            |               |            |
| Switching time on                                     | 6 ms                                   | 4 ms                         | 6 ms                        | 4 ms                         | 6 ms                               | 4 ms                         | 7 ms                | 6 ms                                | 8 ms                 |               |            |
| Switching time off                                    | 7 ms                                   | 9 ms                         | 7 ms                        | 9 ms                         | 7 ms                               | 9 ms                         | 16 ms               | 12 ms                               | 25 ms                |               |            |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                     |                                     | 11 ms                |               |            |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Product weight                                        | 51 g                                   | 48 g                         | 51 g                        | 48 g                         | 51 g                               | 48 g                         | 41 g                | 45 g                                | 48 g                 |               |            |
| Corrosion resistance class CRC <sup>3)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |

1) Reset method combined

2) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-L10 and VUWG-S10, M7 in-line valves, operating and environmental conditions**

| VOWS 110 and VOWS 310, in line with the operating and environmental conditions |                                                                                            |                             |                                    |              |                     |                      |               |            |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                                                                 | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                                                               | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium                                             | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                                                             | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                                                                 | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                                                            | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                                                              | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                                                                | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-L10 and VUWG-S10, in-line valves M7, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-L14 and VUWG-S14, in-line valves G1/8, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|---------------------|------------------------------|----------------------|---------------|------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable |                              | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset                                         | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring   | Pneumatic spring             | Mechanical spring    |               |            |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                | no                           | yes                 | no                           | yes                  |               |            |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions | Reversible          | Reversible with restrictions | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of mounting <sup>1)</sup>                        | Either:, On PR rail, With through-hole |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 430 l/min                              | 650 l/min                    | 410 l/min                   | 600 l/min                    | 410 l/min                          | 650 l/min                    | 780 l/min           |                              | 600 l/min            |               | 650 l/min  |
| Switching time on                                     | 9 ms                                   | 6 ms                         | 9 ms                        | 6 ms                         | 9 ms                               | 6 ms                         | 12 ms               |                              | 8 ms                 |               |            |
| Switching time off                                    | 13 ms                                  | 19 ms                        | 13 ms                       | 19 ms                        | 13 ms                              | 19 ms                        | 32 ms               | 22 ms                        | 30 ms                |               |            |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                     |                              | 16 ms                |               |            |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Product weight                                        | 77 g                                   | 81 g                         | 77 g                        | 81 g                         | 77 g                               | 81 g                         | 67 g                | 75 g                         | 81 g                 |               |            |
| Corrosion resistance class CRC <sup>2)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |

1) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers.

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

**VUWG-L14 and VUWG-S14, in-line valves G1/8, operating and environmental conditions**

|                                    |                                                                                            |                             |                                    |              |                     |                      |               |            |
|------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                     | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                 | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                     | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      |                      | 3 ... 10 bar  |            |
| Ambient temperature                | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                  | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                    | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-L14 and VUWG-S14, in-line valves G1/8, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-L18 and S18, in-line valves G1/4, general technical data**

|                                                       |                                        |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------------|------------------------------|---------------------|-------------------------------------|----------------------|---------------|-------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open, open/closed, monostable |                              | 5/2-way, monostable |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed  |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                        | Pneumatic spring             | Mechanical spring   | Mechanical spring, Pneumatic spring | Mechanical spring    |               |             |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                      | no                           | yes                 | no                                  | yes                  |               |             |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| lap                                                   | Overlap                                |                              |                             |                              |                                          |                              | Indefinite overlap  |                                     |                      | Overlap       |             |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                               | Reversible with restrictions | Reversible          | Reversible with restrictions        | Reversible           |               |             |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Type of mounting <sup>2)</sup>                        | Either., On PR rail, With through-hole |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Mounting position                                     | optional                               |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Standard nominal flow rate (standardised to DIN 1343) | 1,000 l/min                            |                              |                             |                              |                                          |                              | 1,300 l/min         |                                     | 1,000 l/min          |               | 1,200 l/min |
| Switching time on                                     | 17 ms                                  | 12 ms                        | 17 ms                       | 12 ms                        | 17 ms                                    | 12 ms                        | 16 ms               |                                     | 17 ms                |               |             |
| Switching time off                                    | 25 ms                                  | 36 ms                        | 25 ms                       | 36 ms                        | 25 ms                                    | 36 ms                        | 59 ms               | 40 ms                               | 69 ms                |               |             |
| Switching time reversal                               | –                                      |                              |                             |                              |                                          |                              |                     |                                     | 34 ms                |               |             |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |
| Product weight                                        | 160 g                                  |                              |                             |                              |                                          |                              | 152 g               |                                     |                      |               |             |
| Corrosion resistance class CRC <sup>3)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                          |                              |                     |                                     |                      |               |             |

1) Reset method combined

2) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-L18 and S18, in-line valves G1/4, operating and environmental conditions**

|                                                                                 |                                                                                            |                             |                                    |              |                     |                      |               |            |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valves 115 and 516, in the valves 517-1, operating and environmental conditions |                                                                                            |                             |                                    |              |                     |                      |               |            |
| Valve function                                                                  | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                                                                | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium                                              | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                                                              | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                                                                  | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                                                             | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                                                               | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                                                                 | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-L18 and S18, in-line valves G1/4, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-B10A, sub-base valves, general technical data**

|                                                       |                                        |                                     |                      |               |            |
|-------------------------------------------------------|----------------------------------------|-------------------------------------|----------------------|---------------|------------|
| Valve function                                        | 5/2-way, monostable                    |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Mechanical spring, Pneumatic spring | Mechanical spring    |               |            |
| Suitability for vacuum                                | yes                                    | no                                  | yes                  |               |            |
| Design                                                | Piston gate valve                      |                                     |                      |               |            |
| lap                                                   | Overlap                                |                                     | Indefinite overlap   |               | Overlap    |
| Sealing principle                                     | Soft                                   |                                     |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                                     |                      |               |            |
| Type of piloting                                      | Direct                                 |                                     |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions        | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                                     |                      |               |            |
| Type of mounting                                      | Either:, On PR rail, With through-hole |                                     |                      |               |            |
| Mounting position                                     | optional                               |                                     |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 80 l/min                               | 100 l/min                           | 90 l/min             |               |            |
| Switching time on                                     | 5 ms                                   |                                     | 7 ms                 |               |            |
| Switching time off                                    | 16 ms                                  | 11 ms                               | 19 ms                |               |            |
| Switching time reversal                               | –                                      |                                     | 9 ms                 |               |            |
| Pilot air port 12                                     | M5                                     |                                     |                      |               |            |
| Pilot air port 14                                     | M5                                     |                                     |                      |               |            |
| Product weight                                        | 34 g                                   | 37 g                                | 40 g                 |               |            |
| Corrosion resistance class CRC <sup>2)</sup>          | 2 - Moderate corrosion stress          |                                     |                      |               |            |

1) Reset method combined

2) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-B10A, Sub-base valves, operating and environmental conditions**

|                                    |                                                                                            |                     |                      |               |            |
|------------------------------------|--------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|------------|
| Valve function                     | 5/2 bistable                                                                               | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                     |                      |               |            |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |                     |                      |               |            |
| Operating pressure                 | -0.9 ... 10 bar                                                                            |                     |                      |               |            |
| Pilot pressure                     | 1.5 ... 10 bar                                                                             | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                | -5 ... 60°C                                                                                |                     |                      |               |            |
| Media temperature                  | -5 ... 50°C                                                                                |                     |                      |               |            |
| Cleanroom class                    | Class 5 according to ISO 14644-1                                                           |                     |                      |               |            |

**VUWG-B10A, sub-base valves, materials**

|                   |                     |  |  |  |  |
|-------------------|---------------------|--|--|--|--|
| Material housing  | Aluminium, Anodised |  |  |  |  |
| Material seals    | HNBR, NBR           |  |  |  |  |
| Note on materials | RoHS-compliant      |  |  |  |  |

## Datasheet

**VUWG-B10, Sub-base valves, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|---------------------|-------------------------------------|----------------------|---------------|------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring   | Mechanical spring, Pneumatic spring | Mechanical spring    |               |            |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              |                     |                                     | Indefinite overlap   |               | Overlap    |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions | Reversible          | Reversible with restrictions        | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Type of mounting                                      | Either:, On PR rail, With through-hole |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 135 ... 150 l/min                      | 150 ... 190 l/min            | 125 ... 140 l/min           | 150 ... 190 l/min            | 125 ... 140 l/min                  | 150 ... 190 l/min            | 190 ... 320 l/min   | 220 ... 380 l/min                   | 200 ... 320 l/min    |               |            |
| Switching time on                                     | 6 ms                                   | 4 ms                         | 6 ms                        | 4 ms                         | 6 ms                               | 4 ms                         | 7 ms                | 6 ms                                | 8 ms                 |               |            |
| Switching time off                                    | 7 ms                                   | 9 ms                         | 7 ms                        | 9 ms                         | 7 ms                               | 9 ms                         | 16 ms               | 12 ms                               | 25 ms                |               |            |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                     |                                     | 11 ms                |               |            |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |
| Product weight                                        | 51 g                                   | 48 g                         | 51 g                        | 48 g                         | 51 g                               | 48 g                         | 41 g                | 45 g                                | 48 g                 |               |            |
| Corrosion resistance class CRC <sup>2)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                     |                                     |                      |               |            |

1) Reset method combined

2) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-B10, sub-base valves, operating and environmental conditions**

| Table D10, Gas base valves, operating and environmental conditions |                                                                                            |                             |                                    |              |                     |                      |               |            |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                                                     | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                                                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium                                 | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                                                 | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                                                     | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                                                | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                                                  | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                                                    | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-B10, sub-base valves, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-B14, Sub-base valves, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|---------------------|------------------------------|----------------------|---------------|------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable |                              | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Type of reset                                         | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring   | Pneumatic spring             | Mechanical spring    |               |            |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                | no                           | yes                 | no                           | yes                  |               |            |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions | Reversible          | Reversible with restrictions | Reversible           |               |            |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Type of mounting                                      | Either:, On PR rail, With through-hole |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Standard nominal flow rate (standardised to DIN 1343) | 430 l/min                              | 650 l/min                    | 410 l/min                   | 600 l/min                    | 410 l/min                          | 650 l/min                    | 780 l/min           |                              | 600 l/min            |               | 650 l/min  |
| Switching time on                                     | 9 ms                                   | 6 ms                         | 9 ms                        | 6 ms                         | 9 ms                               | 6 ms                         | 12 ms               |                              | 8 ms                 |               |            |
| Switching time off                                    | 13 ms                                  | 19 ms                        | 13 ms                       | 19 ms                        | 13 ms                              | 19 ms                        | 32 ms               | 22 ms                        | 30 ms                |               |            |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                     |                              | 16 ms                |               |            |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |
| Product weight                                        | 77 g                                   | 81 g                         | 77 g                        | 81 g                         | 77 g                               | 81 g                         | 67 g                | 75 g                         | 81 g                 |               |            |
| Corrosion resistance class CRC <sup>1)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                     |                              |                      |               |            |

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-B14, sub-base valves, operating and environmental conditions**

|                                    |                                                                                            |                             |                                    |              |                     |                      |               |            |
|------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                     | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                 | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                     | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      |                      | 3 ... 10 bar  |            |
| Ambient temperature                | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                  | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                    | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-B14, sub-base valves, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

## Datasheet

**VUWG-B18, Sub-base valves, general technical data**

|                                                       |                                        |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
|-------------------------------------------------------|----------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|------------------------------|---------------------|-------------------------------------|----------------------|---------------|-------------|
| Valve function                                        | 2x3/2-way, monostable, closed          |                              | 2x3/2-way, open, monostable |                              | 2x3/2-way, open/closed, monostable |                              | 5/2-way, monostable |                                     | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed  |
| Type of reset <sup>1)</sup>                           | Mechanical spring                      | Pneumatic spring             | Mechanical spring           | Pneumatic spring             | Mechanical spring                  | Pneumatic spring             | Mechanical spring   | Mechanical spring, Pneumatic spring | Mechanical spring    |               |             |
| Suitability for vacuum                                | yes                                    | no                           | yes                         | no                           | yes                                | no                           | yes                 | no                                  | yes                  |               |             |
| Design                                                | Piston gate valve                      |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| lap                                                   | Overlap                                |                              |                             |                              |                                    |                              | Indefinite overlap  |                                     |                      | Overlap       |             |
| Sealing principle                                     | Soft                                   |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Type of actuation                                     | Pneumatic                              |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Type of piloting                                      | Direct                                 |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Flow direction                                        | Reversible                             | Reversible with restrictions | Reversible                  | Reversible with restrictions | Reversible                         | Reversible with restrictions | Reversible          | Reversible with restrictions        | Reversible           |               |             |
| Exhaust-air function                                  | With flow control option               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Type of mounting                                      | Either., On PR rail, With through-hole |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Mounting position                                     | optional                               |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Standard nominal flow rate (standardised to DIN 1343) | 1,000 l/min                            |                              |                             |                              |                                    |                              | 1,300 l/min         |                                     | 1,000 l/min          |               | 1,200 l/min |
| Switching time on                                     | 17 ms                                  | 12 ms                        | 17 ms                       | 12 ms                        | 17 ms                              | 12 ms                        | 16 ms               |                                     | 17 ms                |               |             |
| Switching time off                                    | 25 ms                                  | 36 ms                        | 25 ms                       | 36 ms                        | 25 ms                              | 36 ms                        | 59 ms               | 40 ms                               | 69 ms                |               |             |
| Switching time reversal                               | –                                      |                              |                             |                              |                                    |                              |                     |                                     | 34 ms                |               |             |
| Pilot air port 12                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Pilot air port 14                                     | M5                                     |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |
| Product weight                                        | 160 g                                  |                              |                             |                              |                                    |                              | 152 g               |                                     |                      |               |             |
| Corrosion resistance class CRC <sup>2)</sup>          | 2 - Moderate corrosion stress          |                              |                             |                              |                                    |                              |                     |                                     |                      |               |             |

1) Reset method combined

2) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)**VUWG-B18, sub-base valves, operating and environmental conditions**

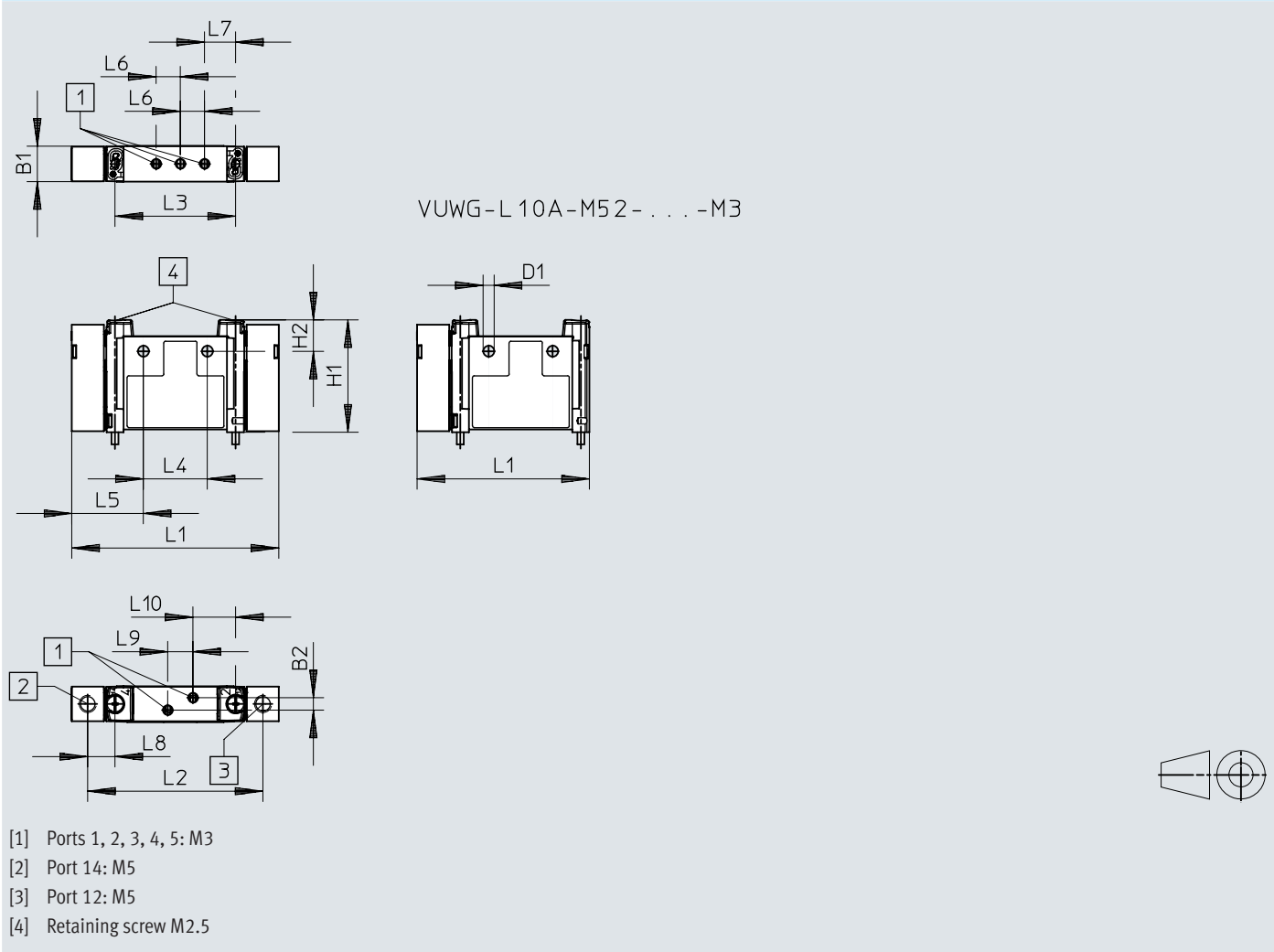
| Notes D18, sub-base valves, operating and environmental conditions |                                                                                            |                             |                                    |              |                     |                      |               |            |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|--------------|---------------------|----------------------|---------------|------------|
| Valve function                                                     | 2x3/2-way, monostable, closed                                                              | 2x3/2-way, open, monostable | 2x3/2-way, open/closed, monostable | 5/2 bistable | 5/2-way, monostable | 5/3-way, pressurised | 5/3 exhausted | 5/3 closed |
| Operating medium                                                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                  |                             |                                    |              |                     |                      |               |            |
| Note on operating and pilot medium                                 | Lubricated operation possible (in which case lubricated operation will always be required) |                             |                                    |              |                     |                      |               |            |
| Operating pressure                                                 | -0.9 ... 10 bar                                                                            |                             |                                    |              |                     |                      |               |            |
| Pilot pressure                                                     | 1.5 ... 10 bar                                                                             |                             |                                    |              | 2.5 ... 10 bar      | 3 ... 10 bar         |               |            |
| Ambient temperature                                                | -5 ... 60°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Media temperature                                                  | -5 ... 50°C                                                                                |                             |                                    |              |                     |                      |               |            |
| Cleanroom class                                                    | Class 5 according to ISO 14644-1                                                           |                             |                                    |              |                     |                      |               |            |

**VUWG-B18, sub-base valves, materials**

|                   |                     |
|-------------------|---------------------|
| Material housing  | Aluminium, Anodised |
| Material seals    | HNBR, NBR           |
| Note on materials | RoHS-compliant      |

Dimensions

Dimensions – VUWG-L10A, in-line valves M3, 5/2- and 5/3-way valve Download CAD data [www.festo.com](http://www.festo.com)

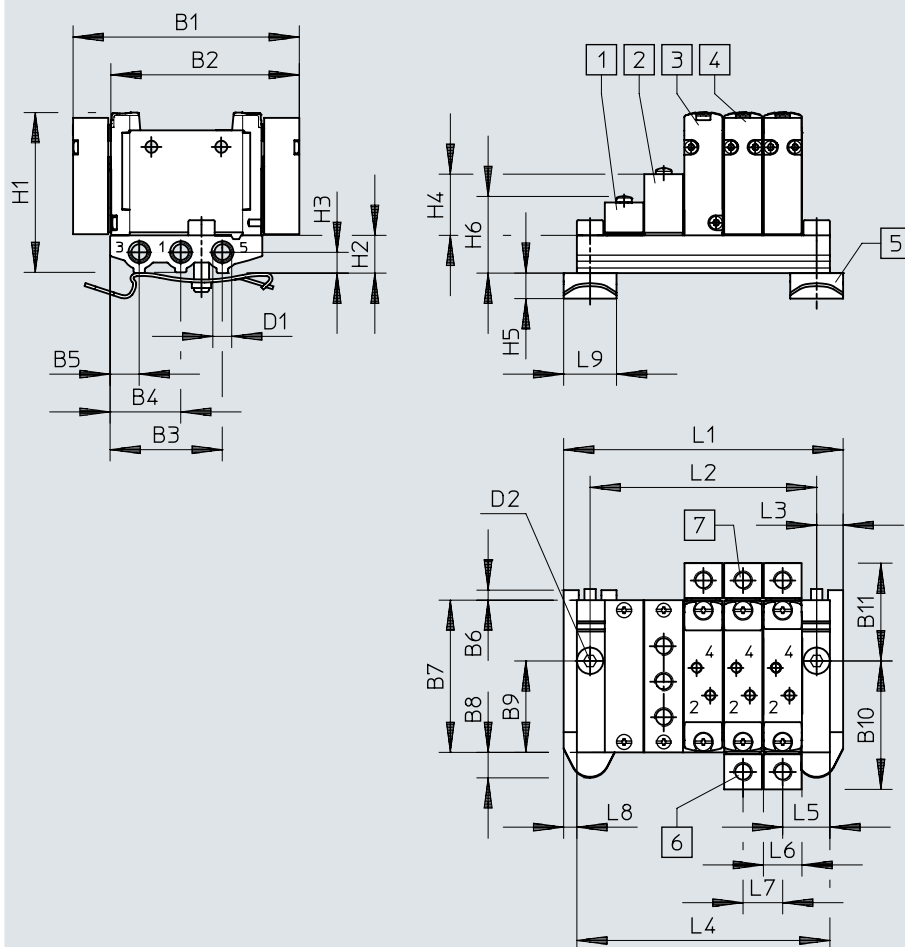


|                   | B1   | B2  | D1<br>Ø | H1   | H2  | L1   | L2   | L3   | L4   | L5   | L6 | L7 | L8  | L9  | L10  |
|-------------------|------|-----|---------|------|-----|------|------|------|------|------|----|----|-----|-----|------|
| VUWG-L10A-...     | 10,3 | 3,6 | 3,2     | 32,5 | 9,1 | 59,9 | 50,7 | 34,9 | 18,5 | 20,7 | 7  | 9  | 7,9 | 7,3 | 12,4 |
| VUWG-L10A-M52-... |      |     |         |      |     | 49,9 |      |      |      |      |    |    |     |     |      |

## Dimensions

Dimensions – VUWG-S10A, in-line valve M3 for battery assembly

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- [1] Cover plate VABB-L1-10A-S  
 [2] Supply plate VABF-L1-10A-P3A4-M5  
 [3] Pneumatic valve, monostable  
 [4] Pneumatic valve, bistable  
 [5] H-rail mounting (two M4x15 screws to DIN 912 are required for mounting)

|                 | B1   | B2   | B3   | B4   | B5  | B6   | B7   | B8   | B9   | B10 | B11  | D1 |
|-----------------|------|------|------|------|-----|------|------|------|------|-----|------|----|
| VABM-L1-10AS-M5 | 59,9 | 49,9 | 29,7 | 18,7 | 7,7 | 2,95 | 40,3 | 6,75 | 24,2 | 34  | 25,9 | M5 |

|                 | D2    | H1   | H2 | H3  | H4   | H5  | H6   | L3 | L5   | L6   | L7   | L8  | L9 |
|-----------------|-------|------|----|-----|------|-----|------|----|------|------|------|-----|----|
| VABM-L1-10AS-M5 | ø 4,5 | 42,5 | 10 | 5,5 | 16,2 | 6,8 | 20,3 | 7  | 12,5 | 10,3 | 10,5 | 3,5 | 14 |

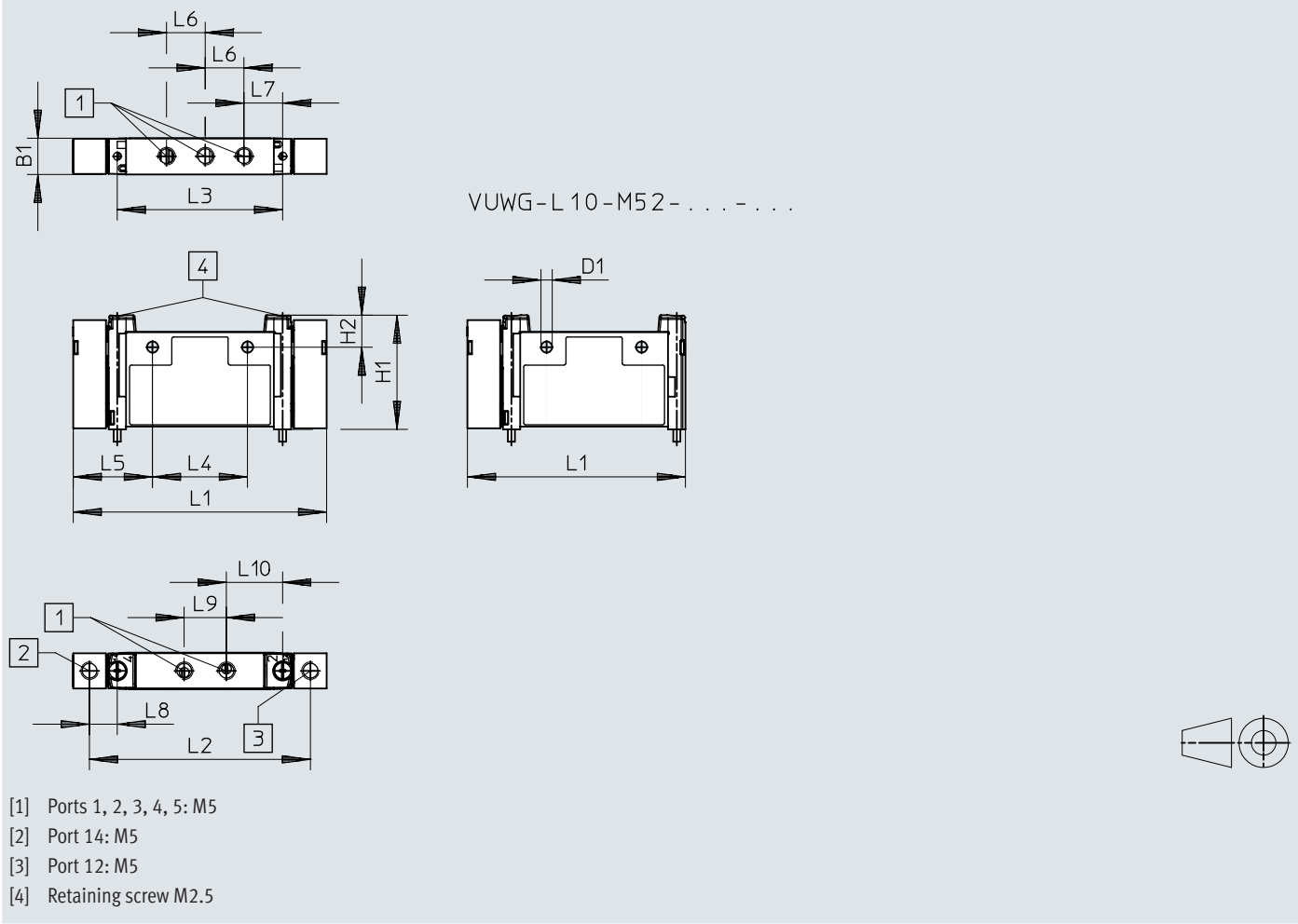
  

| 1) | 2    | 3  | 4    | 5  | 6    | 7  | 8     | 9   | 10    | 12    | 14    | 16    |
|----|------|----|------|----|------|----|-------|-----|-------|-------|-------|-------|
| L1 | 42,5 | 53 | 63,5 | 74 | 84,5 | 95 | 105,5 | 116 | 126,5 | 147,5 | 168,5 | 189,5 |
| L2 | 28,5 | 39 | 49,5 | 60 | 70,5 | 81 | 91,5  | 102 | 112,5 | 133,5 | 154,5 | 175,5 |
| L4 | 35,5 | 46 | 56,5 | 67 | 77,5 | 88 | 98,5  | 109 | 119,5 | 140,5 | 161,5 | 182,5 |

1) Valve positions

Dimensions

Dimensions – VUWG-L10 and VUWG-S10, 2x3/2-, in-line valves M5, 5/2- and 5/3-way valve Download CAD data [www.festo.com](http://www.festo.com)

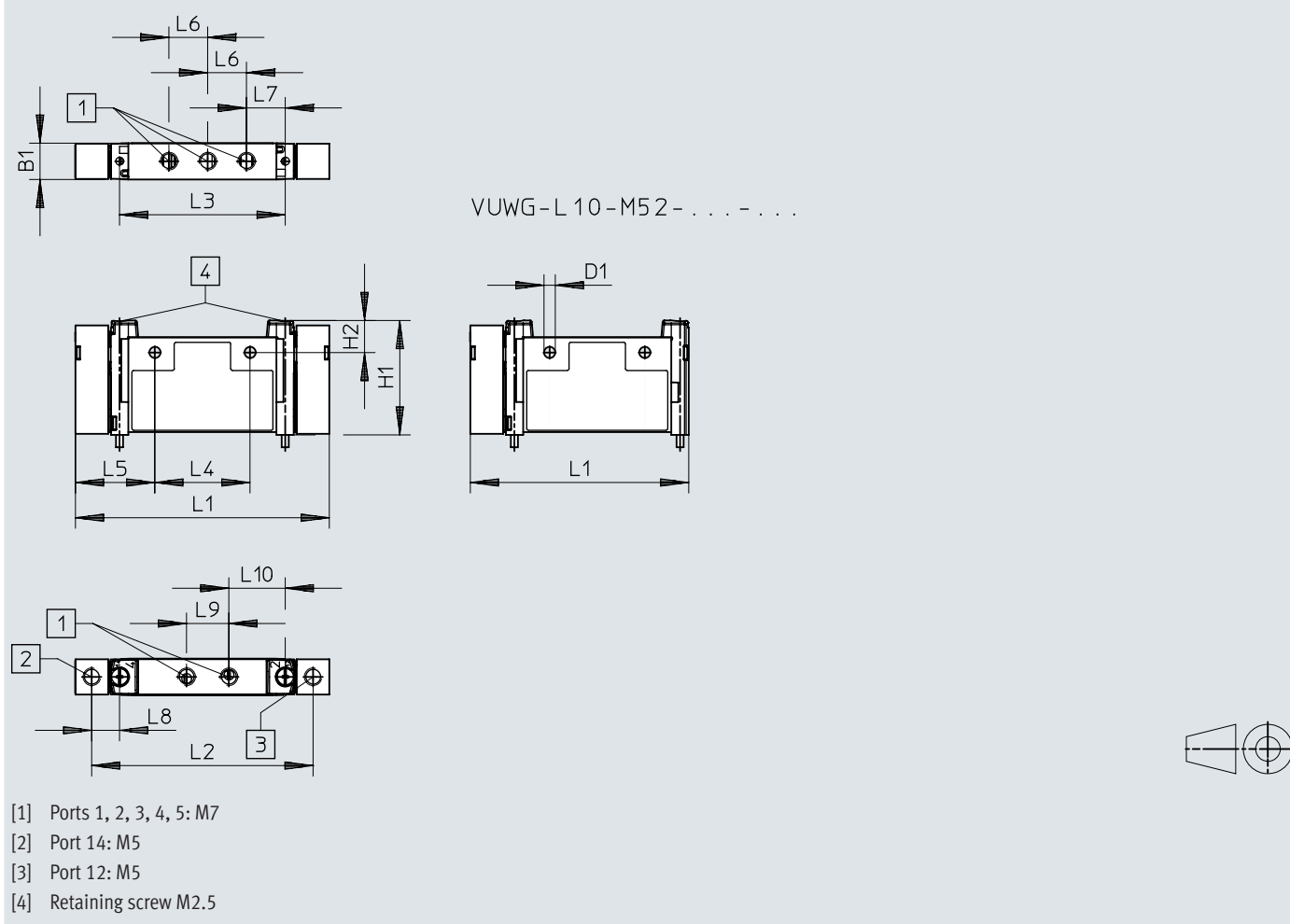


|                  | B1   | D1<br>Ø | H1   | H2  | L1 | L2   | L3 | L4 | L5   | L6 | L7 | L8  | L9 | L10 |
|------------------|------|---------|------|-----|----|------|----|----|------|----|----|-----|----|-----|
| VUWG-L10-...     | 10,2 | 3,2     | 32,5 | 9,1 | 72 | 62,8 | 47 | 27 | 22,5 | 11 | 11 | 7,9 | 12 | 16  |
| VUWG-L10-M52-... |      |         |      |     | 62 |      |    |    |      |    |    |     |    |     |

## Dimensions

Dimensions – VUWG-L10 and VUWG-S10, in-line valves M7 2x3/2, 5/2 and 5/3-way valve

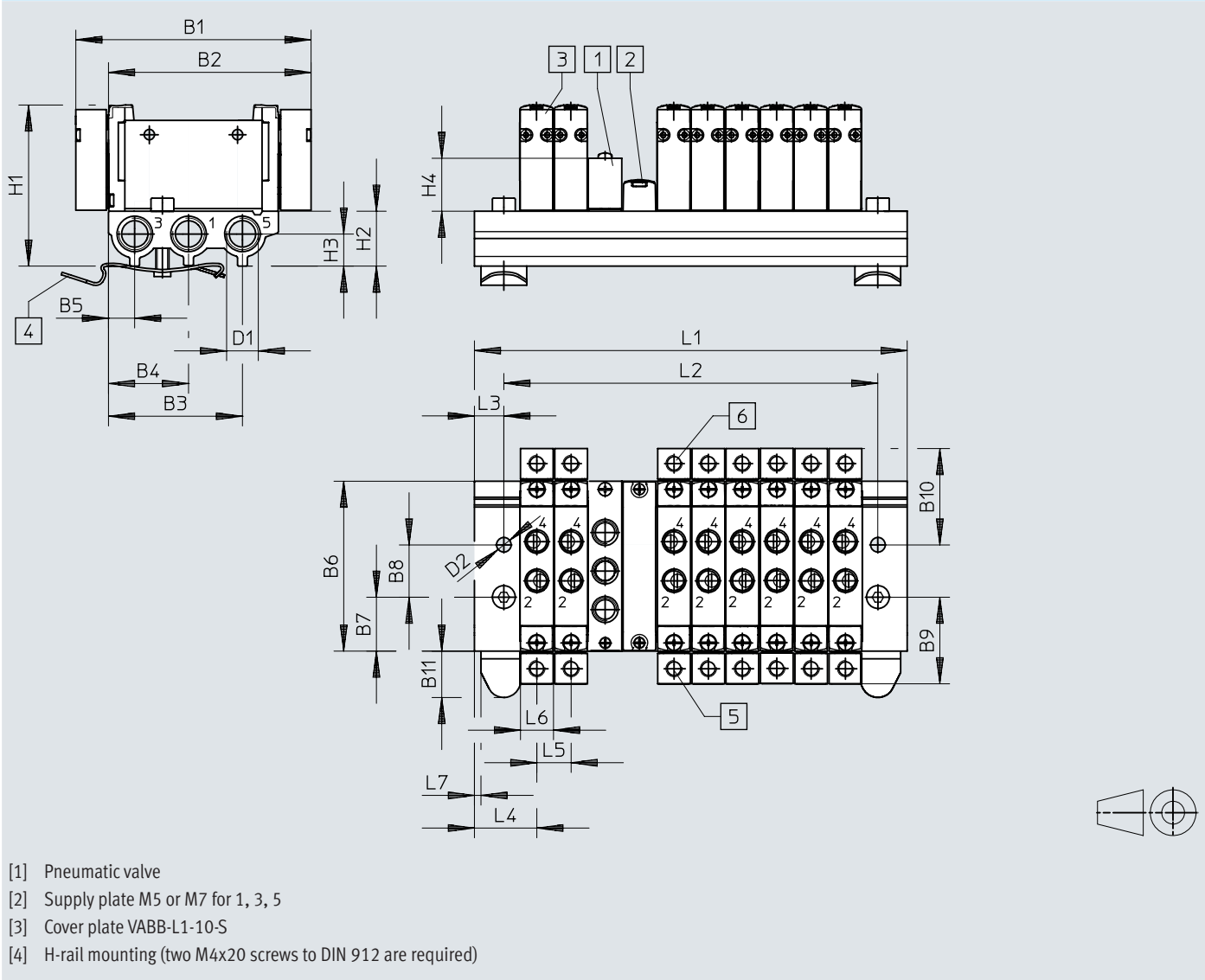
Download CAD data [www.festo.com](http://www.festo.com)



|                  | B1   | D1<br>Ø | H1   | H2  | L1 | L2   | L3 | L4 | L5   | L6 | L7 | L8  | L9 | L10 |
|------------------|------|---------|------|-----|----|------|----|----|------|----|----|-----|----|-----|
| VUWG-L10-...     | 10,2 | 3,2     | 32,5 | 9,1 | 72 | 62,8 | 47 | 27 | 22,5 | 11 | 11 | 7,9 | 12 | 16  |
| VUWG-L10-M52-... |      |         |      |     | 62 |      |    |    |      |    |    |     |    |     |

Dimensions

Dimensions – VUWG-S10, in-line valves M5/M7 for manifold assembly Download CAD data [www.festo.com](http://www.festo.com)



|                 | B1 | B2 | B3 | B4   | B5 | B6 | B7   | B8 | B9   | B10  | B11   |
|-----------------|----|----|----|------|----|----|------|----|------|------|-------|
| VABM-L1-10S-G18 | 72 | 62 | 41 | 24,5 | 8  | 52 | 16,5 | 16 | 26,5 | 29,5 | 14,45 |

|                 | D1   | D2  | H1   | H2   | H3 | H4   | H4   | L3 | L4 | L5   | L6   | L7 |
|-----------------|------|-----|------|------|----|------|------|----|----|------|------|----|
| VABM-L1-10S-G18 | G1/8 | 4,5 | 49,3 | 16,8 | 7  | 16,2 | 16,2 | 9  | 19 | 10,5 | 10,3 | 2  |

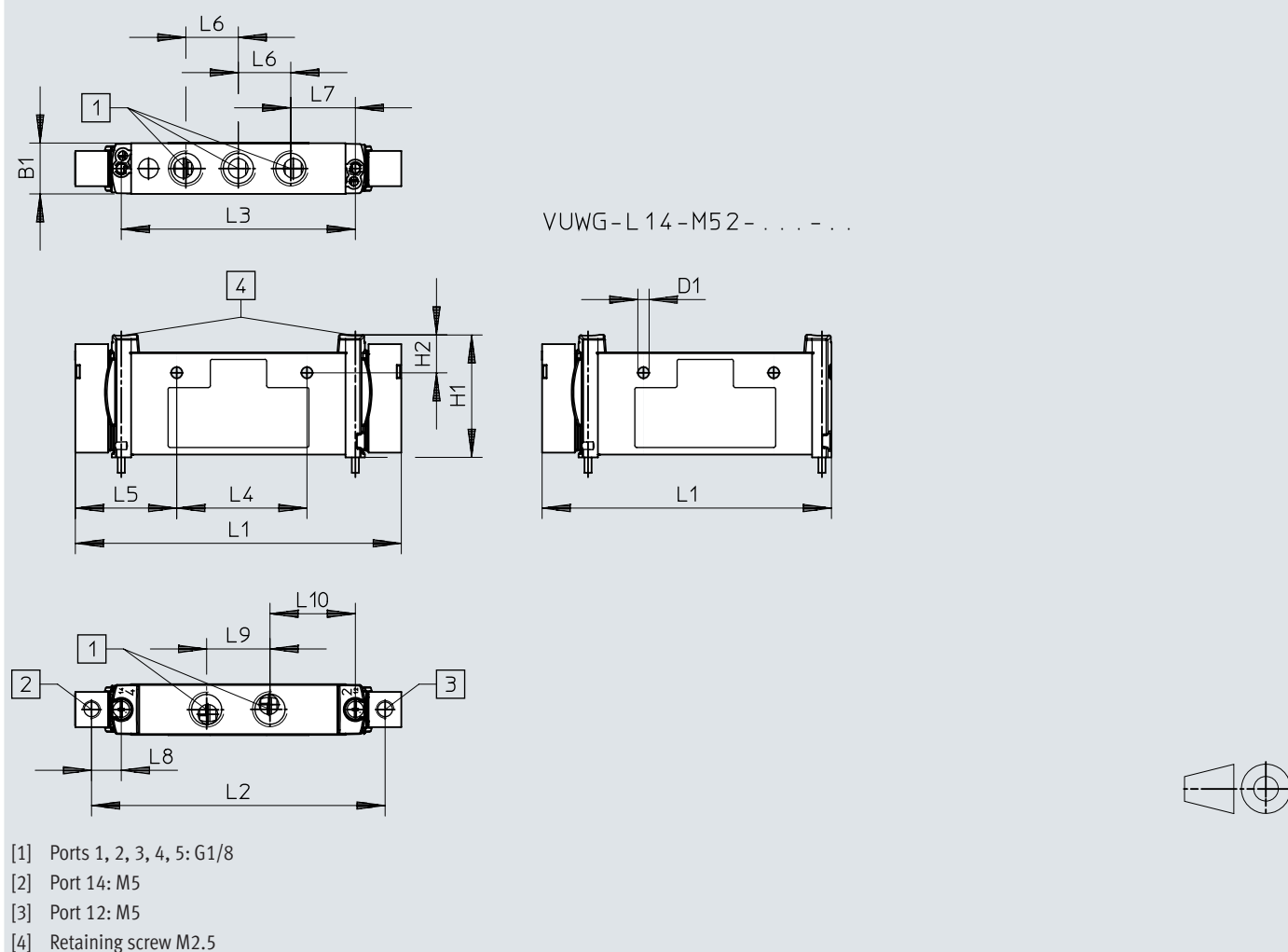
| 1) | 2    | 3  | 4    | 5  | 6    | 7   | 8     | 9   | 10    | 12    | 14    | 16    | 22    |
|----|------|----|------|----|------|-----|-------|-----|-------|-------|-------|-------|-------|
| L1 | 48,5 | 59 | 69,5 | 80 | 90,5 | 101 | 111,5 | 122 | 132,5 | 153,5 | 174,5 | 195,5 | 258,5 |
| L2 | 30,5 | 41 | 51,5 | 62 | 72,5 | 83  | 93,5  | 104 | 114,5 | 135,5 | 156,5 | 177,5 | 240,5 |

1) Valve positions

## Dimensions

Dimensions – VUWG-L14 and S14, in-line valves G1/8, 2x3/2, 5/2 and 5/3-way valves

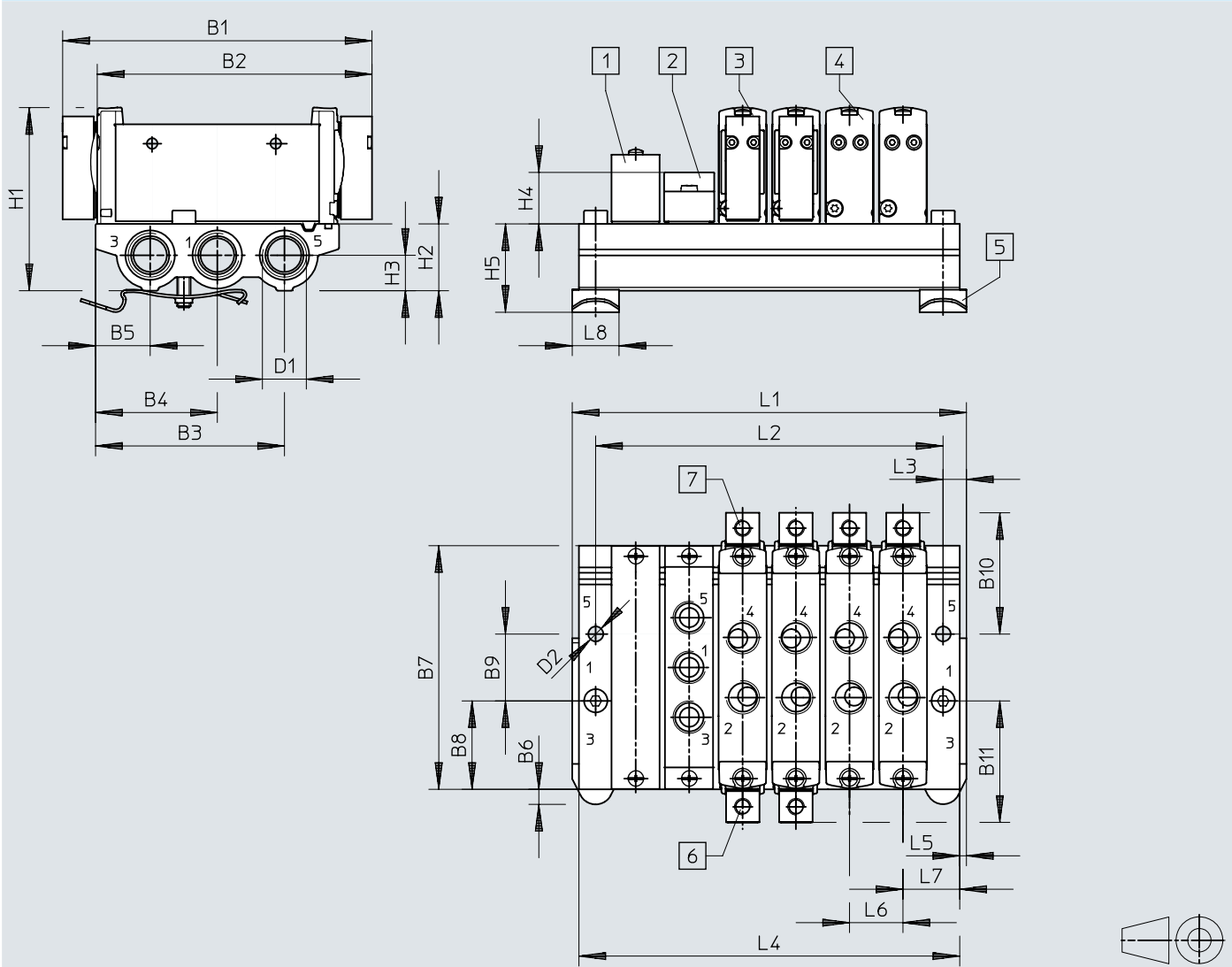
Download CAD data [www.festo.com](http://www.festo.com)



|                  | B1   | D1<br>ø | H1   | H2   | L1    | L2   | L3   | L4 | L5   | L6   | L7    | L8   | L9 | L10   |
|------------------|------|---------|------|------|-------|------|------|----|------|------|-------|------|----|-------|
| VUWG-L14-...     | 14,4 | 3,2     | 34,8 | 10,8 | 92,6  | 83,4 | 66,5 | 37 | 28,8 | 14,9 | 18,35 | 8,45 | 18 | 24,25 |
| VUWG-L14-M52-... |      |         |      |      | 82,25 |      |      |    |      |      |       |      |    |       |

Dimensions

Dimensions – VUWG-S14, in-line valve G1/8 for manifold assembly Download CAD data [www.festo.com](http://www.festo.com)



- [1] Cover plate VABB-L1-14
- [2] Supply plate VABF-L1-14-P3A4-G18
- [3] Pneumatic valve, bistable
- [4] Pneumatic valve, monostable
- [5] H-rail mounting (2 M4x25 screws to DIN 912 are required for mounting)

|                 |      |      |      |      |      |     |      |       |    |      |      |      |
|-----------------|------|------|------|------|------|-----|------|-------|----|------|------|------|
|                 | B1   | B2   | B3   | B4   | B5   | B6  | B7   | B8    | B9 | B10  | B11  | D1   |
| VABM-L1-14S-G14 | 92,6 | 82,3 | 56,6 | 36,5 | 16,4 | 4,5 | 72,9 | 26,45 | 20 | 36,3 | 36,3 | G1/4 |

|                 |       |      |    |      |      |      |    |    |    |    |
|-----------------|-------|------|----|------|------|------|----|----|----|----|
|                 | D2    | H1   | H2 | H3   | H4   | H5   | L3 | L5 | L6 | L7 |
| VABM-L1-14S-G14 | ø 4,5 | 54,8 | 20 | 10,6 | 15,4 | 26,4 | 7  | 2  | 16 | 17 |

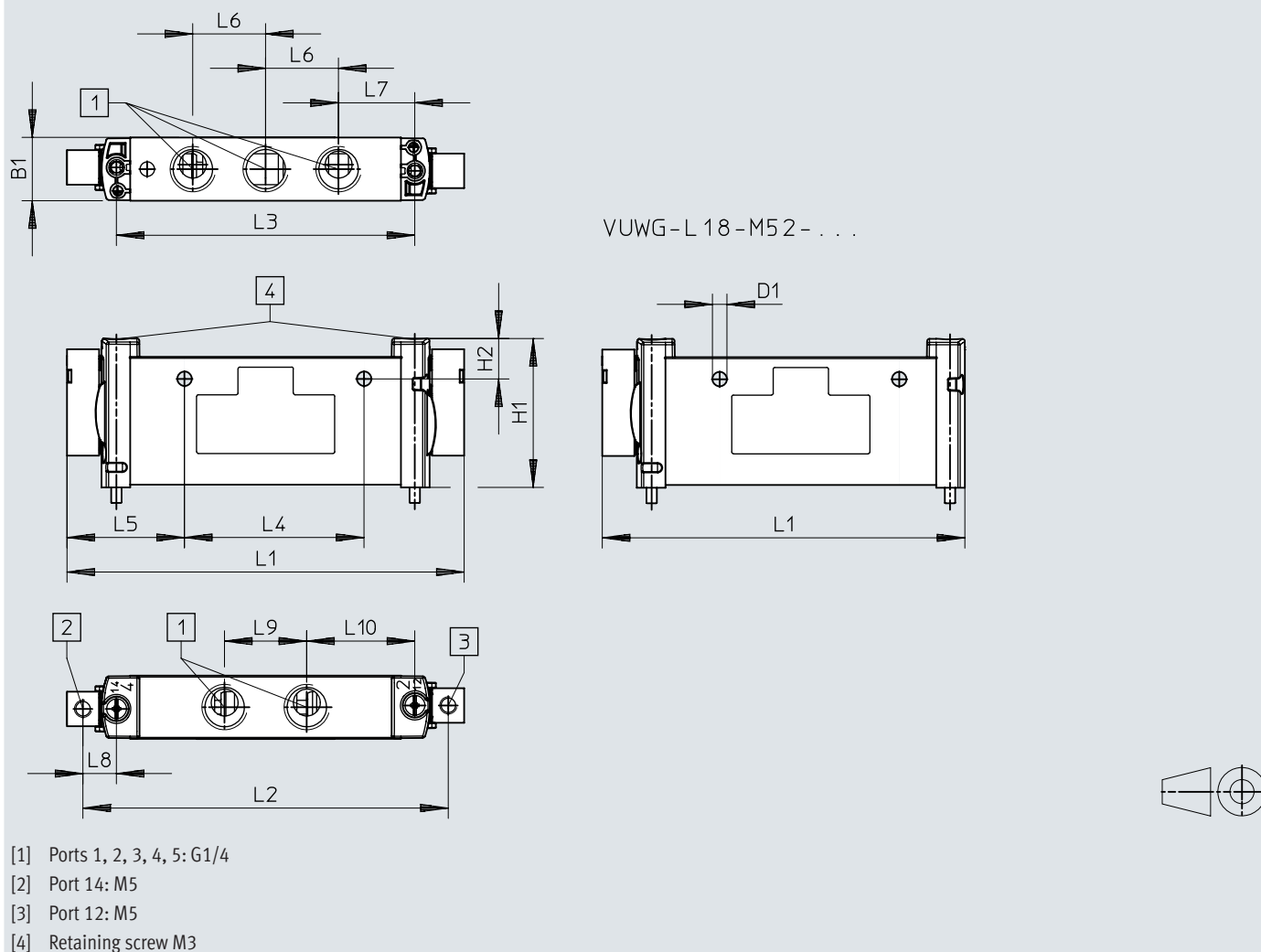
|    |    |    |    |    |     |     |     |     |     |     |     |     |
|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1) | 2  | 3  | 4  | 5  | 6   | 7   | 8   | 9   | 10  | 12  | 14  | 16  |
| L1 | 54 | 70 | 86 | 98 | 118 | 134 | 150 | 166 | 182 | 214 | 246 | 278 |
| L2 | 40 | 56 | 72 | 88 | 104 | 120 | 136 | 152 | 168 | 200 | 232 | 264 |
| L4 | 50 | 66 | 82 | 98 | 114 | 130 | 146 | 162 | 178 | 210 | 242 | 274 |

1) Valve positions

## Dimensions

Dimensions – VUWG-L18 and VUWG-S18, in-line valves G1/4, 2x3/2, 5/2 and 5/3-way valves

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

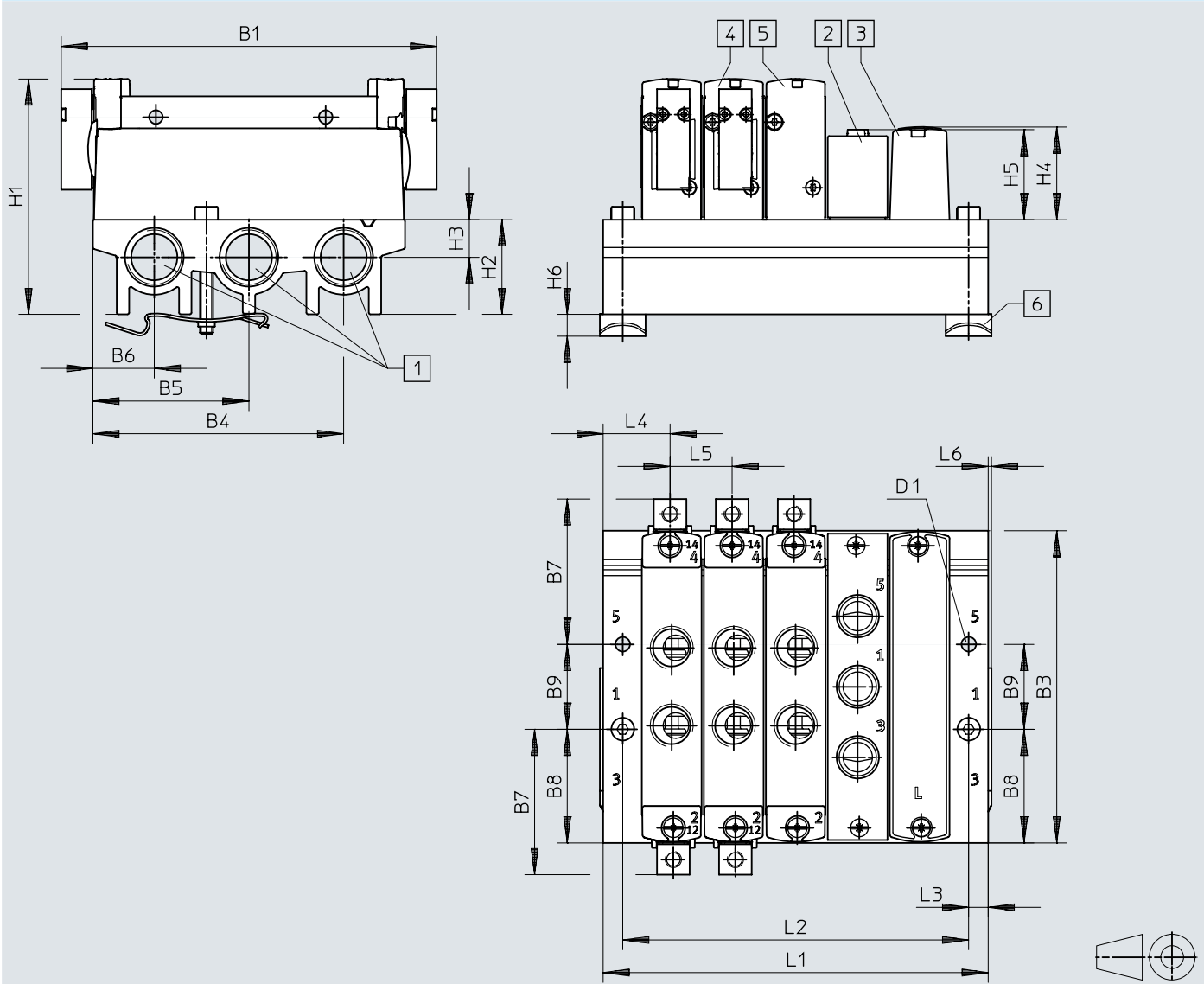


|                  | B1   | D1<br>Ø | H1   | H2  | L1  | L2   | L3   | L4 | L5 | L6   | L7   | L8  | L9   | L10  |
|------------------|------|---------|------|-----|-----|------|------|----|----|------|------|-----|------|------|
| VUWG-L18-...     | 18,3 | 4,2     | 43,1 | 6,4 | 115 | 96,1 | 86,4 | 52 | 34 | 21,1 | 22,1 | 9,7 | 23,8 | 31,3 |
| VUWG-L18-M52-... |      |         |      |     | 105 |      |      |    |    |      |      |     |      |      |

Dimensions

Dimensions – VUWG-S18, in-line valve G1/4 for manifold assembly

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- [1] Ports 1, 3 and 5: G3/8
- [2] Supply plate VABF-L1-18-P3A4-G14
- [3] Pneumatic valve, bistable
- [4] Pneumatic valve, monostable
- [5] H-rail mounting (two M4x35 screws to DIN 912 are required)

|                 | B1  | B3   | B4   | B5   | B6   | B7   | B8   | B9 | D1  | H1   | H2 |
|-----------------|-----|------|------|------|------|------|------|----|-----|------|----|
| VABM-L1-18S-G38 | 115 | 95,6 | 76,8 | 47,8 | 18,8 | 44,5 | 34,8 | 26 | 4,5 | 72,1 | 29 |

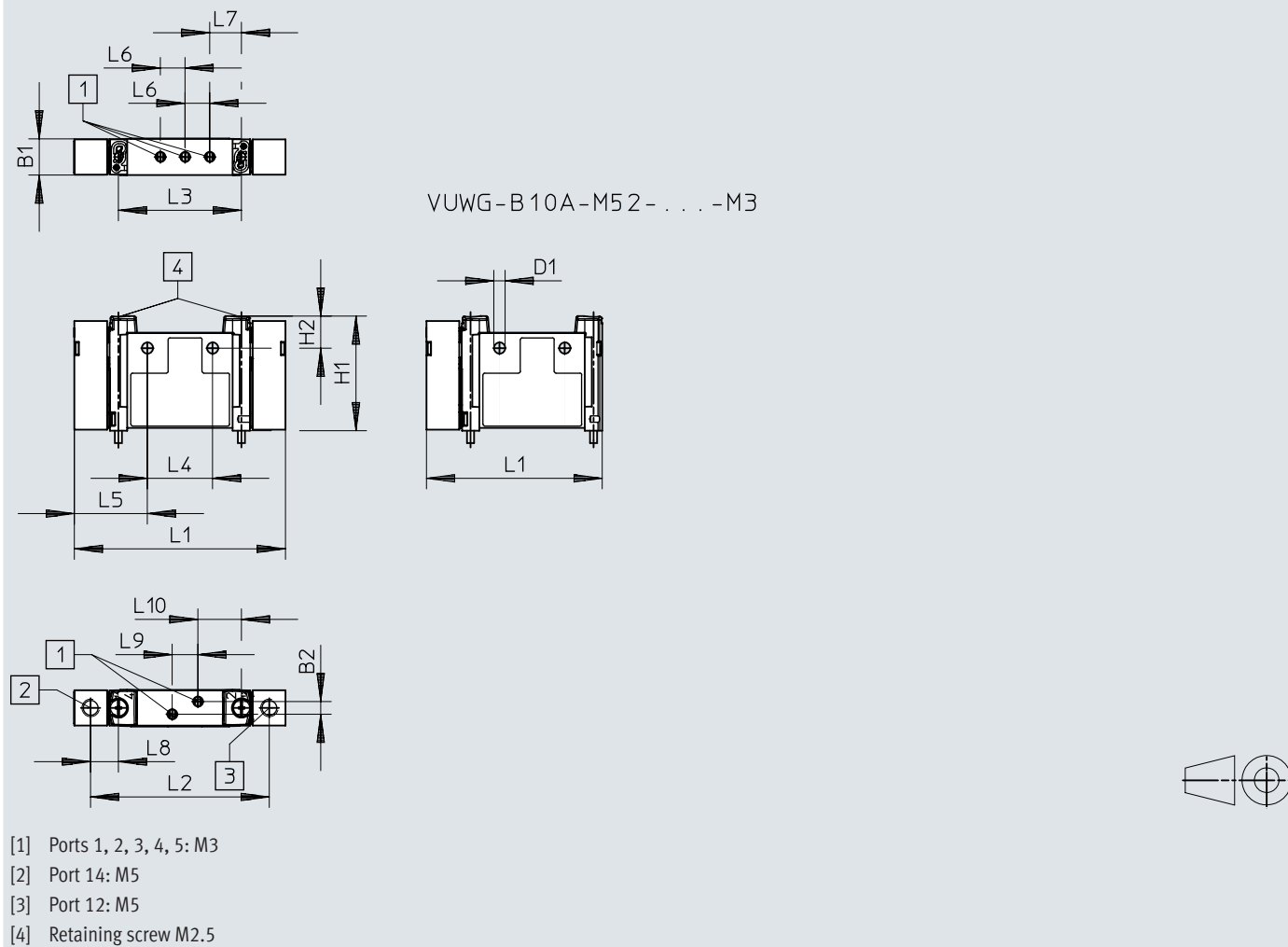
|                 | H3   | H4   | H5   | H6  | L3 | L4   | L5 | L6 |
|-----------------|------|------|------|-----|----|------|----|----|
| VABM-L1-18S-G38 | 11,5 | 28,4 | 27,6 | 6,5 | 6  | 20,5 | 19 | 1  |

| 1) | 2  | 3  | 4  | 5   | 6   | 7   | 8   | 9   | 10  | 12  | 14  | 16  |
|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1 | 61 | 80 | 99 | 118 | 137 | 156 | 175 | 194 | 213 | 251 | 289 | 327 |
| L2 | 49 | 68 | 87 | 106 | 125 | 144 | 163 | 182 | 201 | 239 | 277 | 315 |

1) Valve positions

## Dimensions

Dimensions – VUWG-B10, sub-base valves, 5/2- and 5/3-way valves

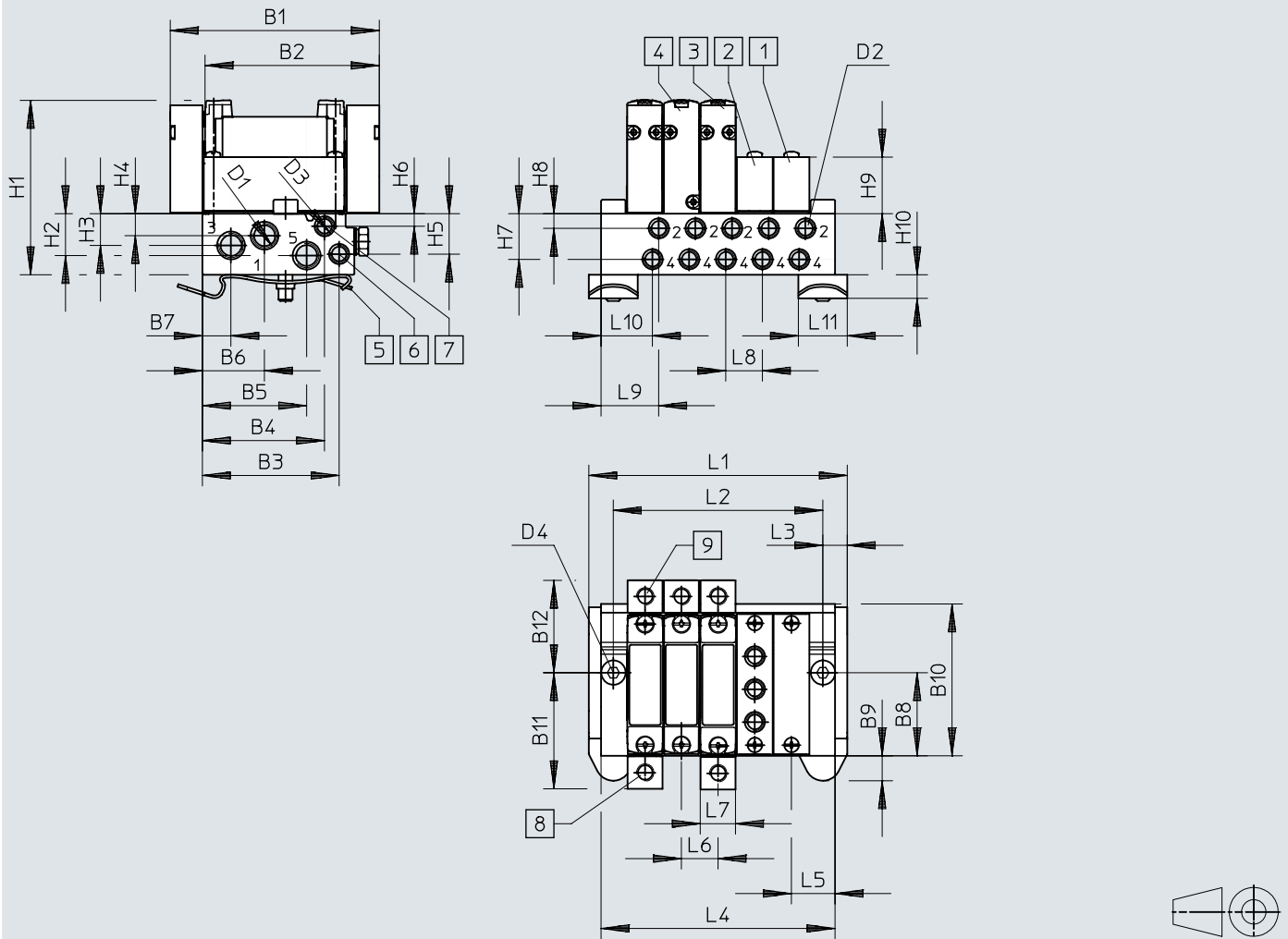
Download CAD data [www.festo.com](http://www.festo.com)

|                   | B1   | H1   | L1   | L2   | L3   | L8  |
|-------------------|------|------|------|------|------|-----|
| VUWG-B10A-...     | 10,3 | 32,5 | 59,9 | 50,7 | 34,9 | 7,9 |
| VUWG-B10A-M52-... |      |      | 49,9 |      |      |     |

Dimensions

Dimensions – VUWG-B10A, sub-base valves for battery assembly, M5 connection

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



- [1] Cover plate VABB-L1-10A
- [2] Supply plate VABF-L1-10A-P3A4-M5
- [3] Pneumatic valve, bistable
- [4] Pneumatic valve, monostable
- [5] H-rail mounting (2 M4x25 screws to DIN 912 are required for mounting)

|                 |      |      |      |    |      |      |     |    |      |      |       |       |
|-----------------|------|------|------|----|------|------|-----|----|------|------|-------|-------|
|                 | B1   | B2   | B3   | B4 | B5   | B6   | B7  | B8 | B9   | B10  | B11   | B12   |
| VABM-L1-10AW-M7 | 59,9 | 49,9 | 39,1 | 35 | 29,8 | 17,8 | 8,2 | 24 | 7,15 | 43,5 | 33,45 | 26,45 |

|                 |    |    |     |     |      |     |      |     |      |     |    |    |
|-----------------|----|----|-----|-----|------|-----|------|-----|------|-----|----|----|
|                 | H1 | H2 | H3  | H4  | H5   | H6  | H7   | H8  | H9   | H10 | D1 | D2 |
| VABM-L1-10AW-M7 | 50 | 12 | 9,1 | 6,3 | 11,6 | 3,6 | 13,1 | 4,2 | 16,2 | 6,8 | M7 | M5 |

|                 |    |       |    |      |      |      |      |      |      |     |
|-----------------|----|-------|----|------|------|------|------|------|------|-----|
|                 | D3 | D4    | L3 | L5   | L6   | L7   | L8   | L9   | L10  | L11 |
| VABM-L1-10AW-M7 | M5 | ø 4,5 | 7  | 12,5 | 10,5 | 10,2 | 10,5 | 16,5 | 14,7 | 11  |

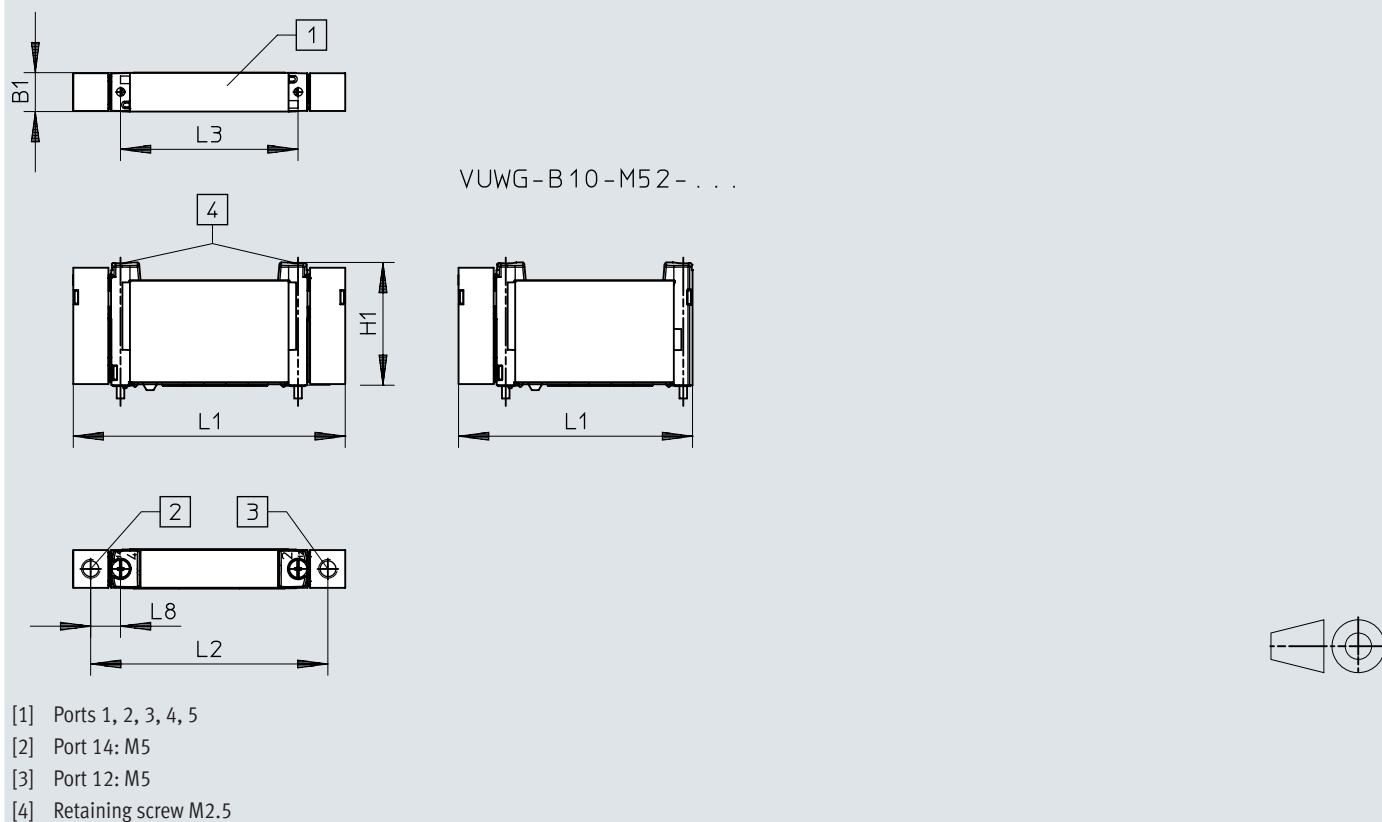
|    |      |    |      |    |      |    |       |     |       |       |       |       |
|----|------|----|------|----|------|----|-------|-----|-------|-------|-------|-------|
| 1) | 2    | 3  | 4    | 5  | 6    | 7  | 8     | 9   | 10    | 12    | 14    | 16    |
| L1 | 42,5 | 53 | 63,5 | 74 | 84,5 | 96 | 106,5 | 116 | 126,5 | 147,5 | 168,5 | 189,5 |
| L2 | 28,5 | 39 | 49,5 | 60 | 70,5 | 81 | 91,5  | 102 | 112,5 | 133,5 | 154,5 | 175,5 |
| L4 | 35,5 | 46 | 56,5 | 67 | 77,5 | 89 | 99,5  | 109 | 119,5 | 140,5 | 161,5 | 182,5 |

1) Valve positions

## Dimensions

Dimensions – VUWG-B10, sub-base valves 2x3/2, 5/2 and 5/3-way valve

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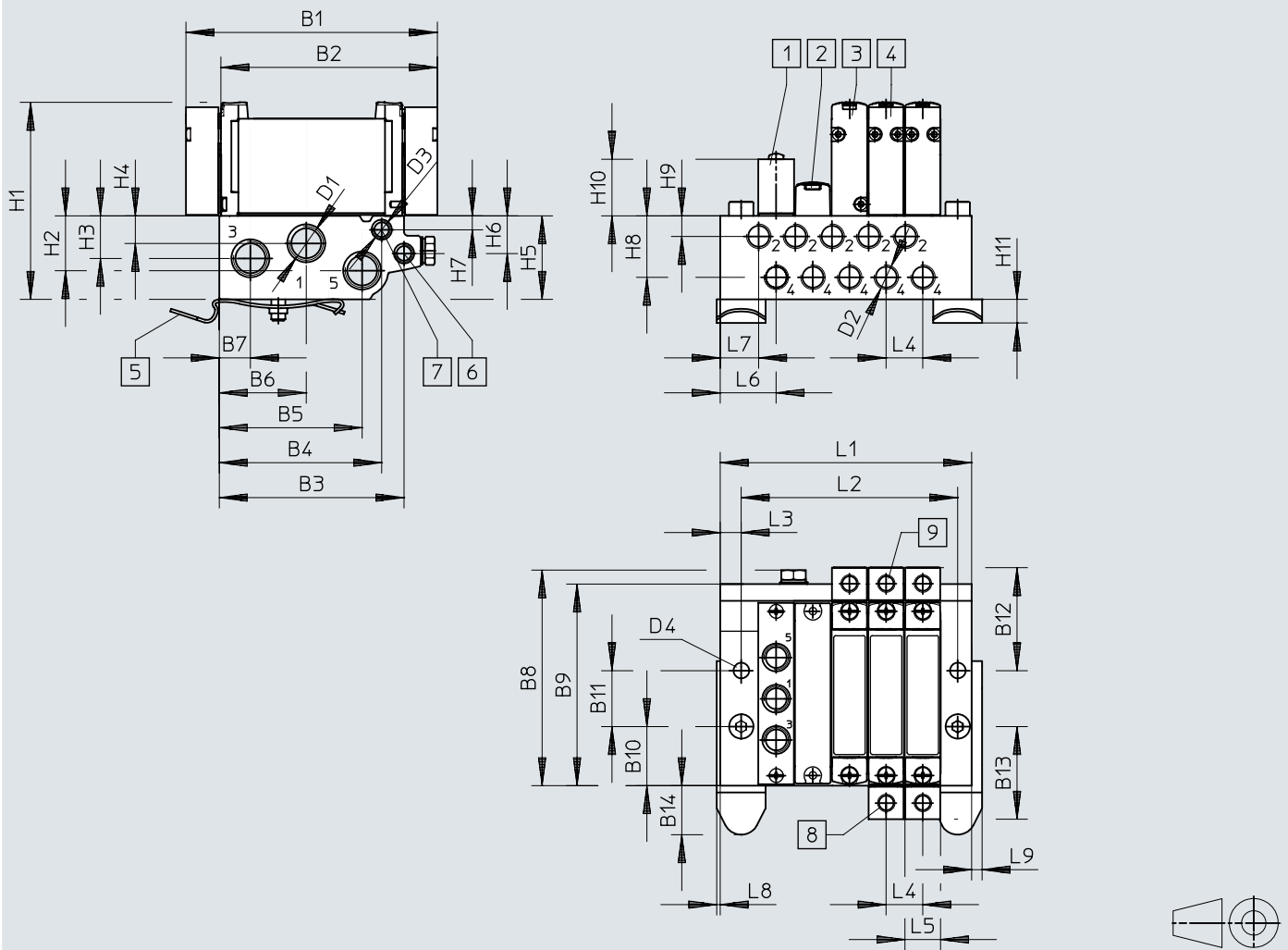


|                  | B1   | H1   | L1 | L2   | L3 | L8  |
|------------------|------|------|----|------|----|-----|
| VUWG-B10-...     | 10,3 | 32,5 | 72 | 62,8 | 47 | 7,9 |
| VUWG-B10-M52-... |      |      | 62 |      |    |     |

Dimensions

Dimensions – VUWG-B10, sub-base valves for manifold assembly, connection M5/M7

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- [1] Supply plate VABF-L1-10-P3A4-M5
- [2] VABB-L1-10-W
- [3] Pneumatic valve, monostable, VUWG-B10-M52
- [4] Pneumatic valve, bistable, VUWG-B10
- [5] H-rail mounting (2 M4x30 screws to DIN 912 are required)

|                |    |    |      |      |      |      |     |    |      |      |     |      |
|----------------|----|----|------|------|------|------|-----|----|------|------|-----|------|
|                | B1 | B2 | B3   | B4   | B5   | B6   | B7  | B8 | B9   | B10  | B11 | B12  |
| VABM-L1-...G18 | 72 | 62 | 52,9 | 46,5 | 40,9 | 24,9 | 8,9 | 62 | 57,7 | 16,9 | 16  | 29,5 |

|                |      |      |      |    |    |     |      |      |      |     |      |      |
|----------------|------|------|------|----|----|-----|------|------|------|-----|------|------|
|                | B13  | B14  | D1   | D2 | D3 | D4  | H1   | H2   | H3   | H4  | H5   | H6   |
| VABM-L1-...G18 | 26,5 | 14,1 | G1/8 | M5 | M5 | 4,5 | 56,4 | 15,7 | 12,2 | 7,9 | 23,9 | 10,8 |

|                |    |      |     |      |     |    |      |      |    |    |    |    |     |
|----------------|----|------|-----|------|-----|----|------|------|----|----|----|----|-----|
|                | H7 | H8   | H9  | H10  | H11 | L3 | L4   | L5   | L6 | L7 | L8 | L9 | L15 |
| VABM-L1-...G18 | 4  | 17,6 | 5,9 | 16,2 | 6,8 | 4  | 10,5 | 10,3 | 16 | 11 | 1  | 3  | 10  |

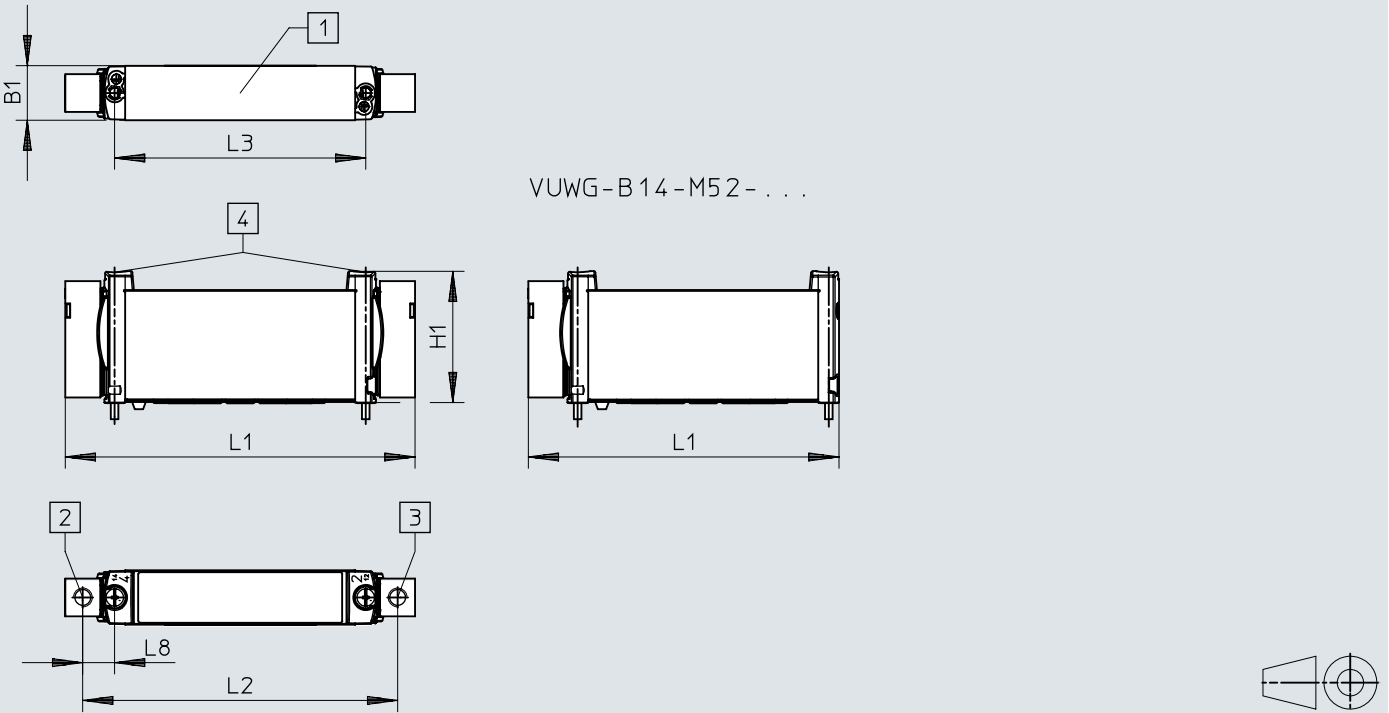
|    |      |    |      |    |      |     |       |     |       |       |       |       |       |
|----|------|----|------|----|------|-----|-------|-----|-------|-------|-------|-------|-------|
| 1) | 2    | 3  | 4    | 5  | 6    | 7   | 8     | 9   | 10    | 12    | 14    | 16    | 22    |
| L1 | 48,5 | 59 | 69,5 | 80 | 90,5 | 101 | 111,5 | 122 | 132,5 | 153,5 | 174,5 | 195,5 | 258,5 |
| L2 | 30,5 | 41 | 51,5 | 62 | 72,5 | 83  | 93,5  | 104 | 114,5 | 135,5 | 156,5 | 177,5 | 240,5 |

1) Valve positions

Dimensions

Dimensions – VUWG-B14, sub-base valves 2x3/2, 5/2 and 5/3-way valve

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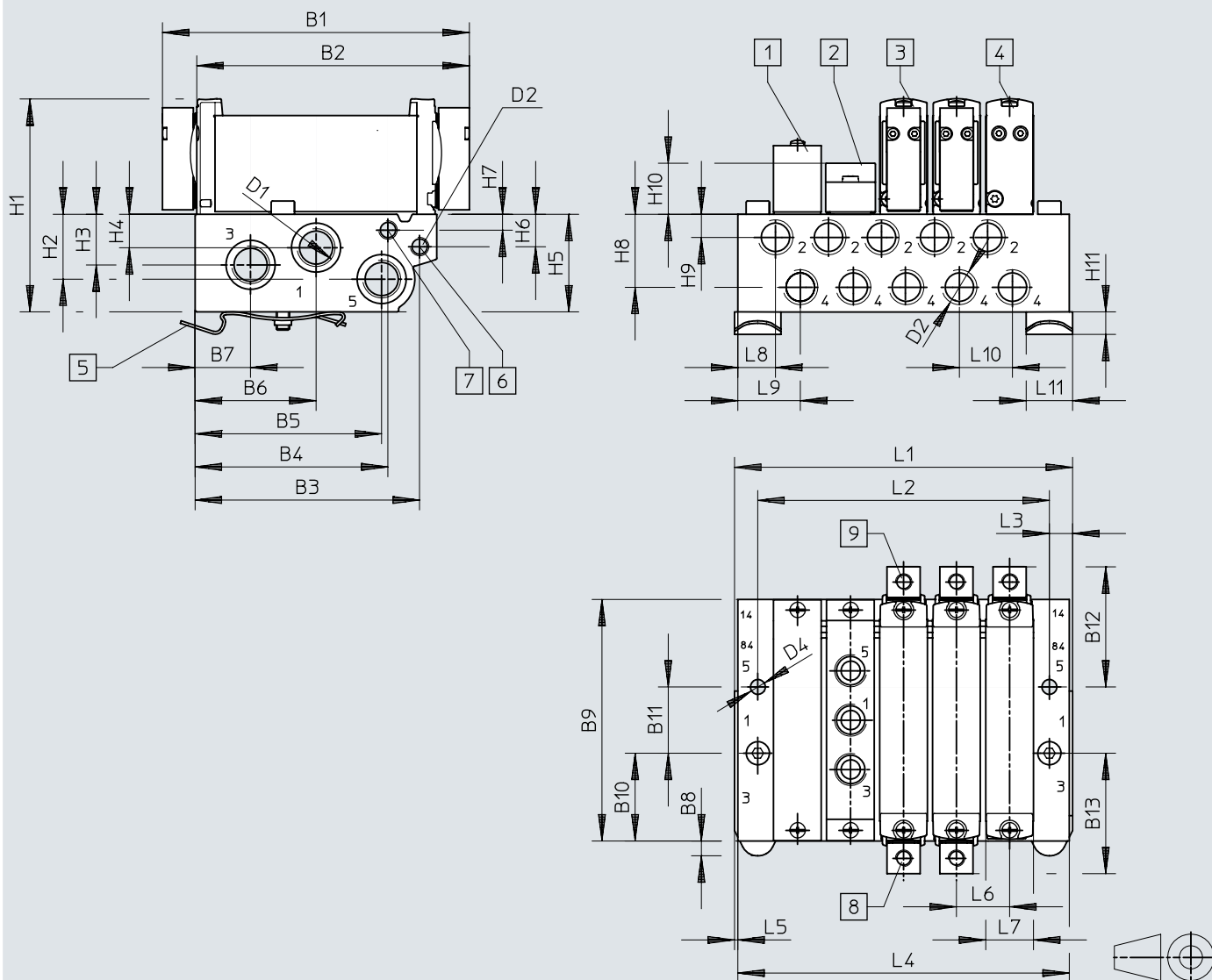
- [1] Ports 1, 2, 3, 4, 5
- [2] Port 14: M5
- [3] Port 12: M5
- [4] Retaining screw M2.5

|                  | B1   | H1   | L1   | L2   | L3   | L8  |
|------------------|------|------|------|------|------|-----|
| VUWG-B14-...     | 14,4 | 34,8 | 92,6 | 83,4 | 66,5 | 8,5 |
| VUWG-B14-M52-... |      |      | 82,3 |      |      |     |

## Dimensions

Dimensions – VUWG-B14, sub-base valves for manifold assembly, connection G1/8

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- [1] Cover plate VABB-L1-14
- [2] Supply plate VABF-L1-14-P3A4-G18
- [3] Pneumatic valve, bistable
- [4] Pneumatic valve, monostable
- [5] H-rail mounting (two M4x25 screws to DIN 912 are required)

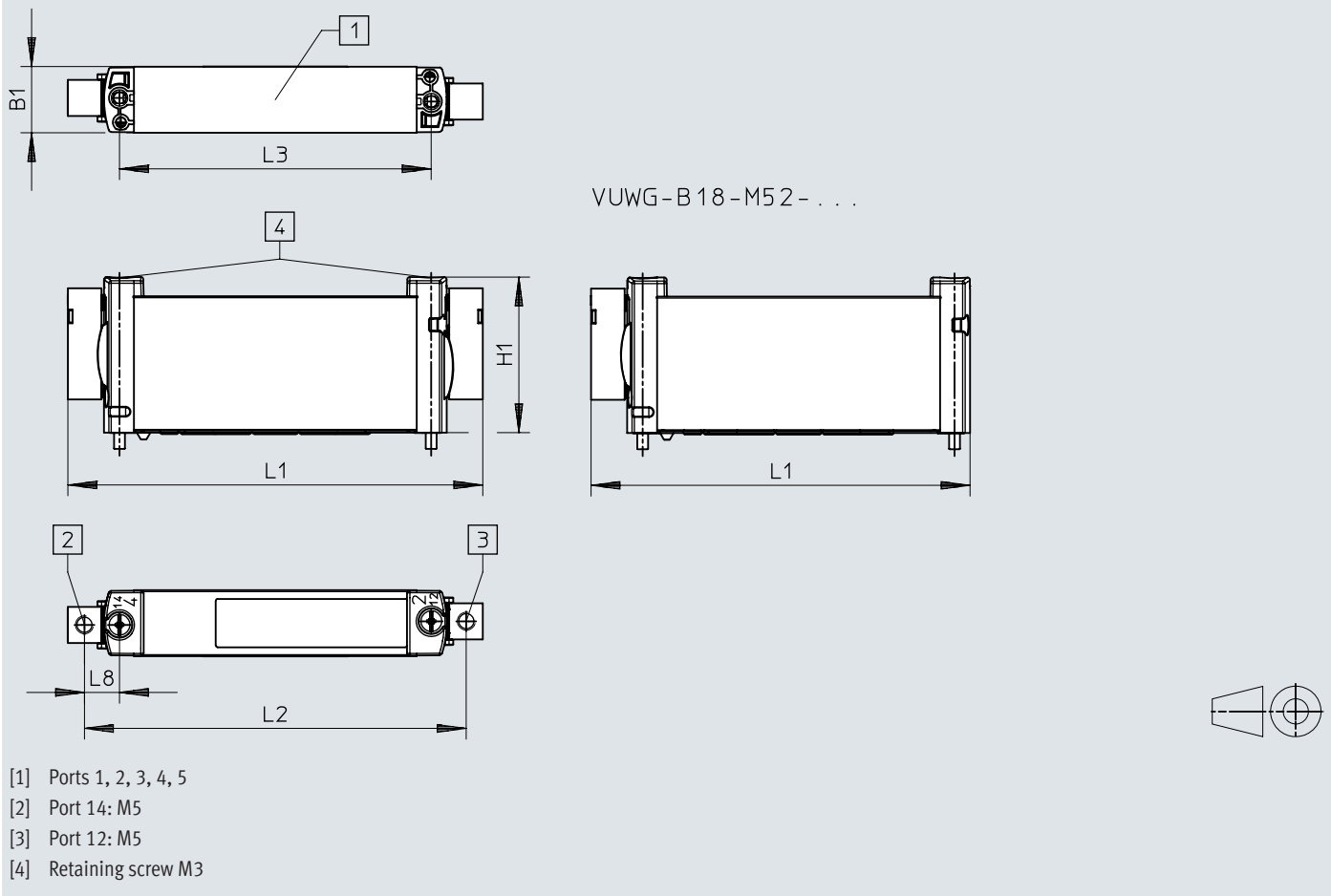
## Dimensions

|                      | B1   | B2   | B3   | B4    | B5    | B6    | B7    | B8    | B9    | B10   | B11   | B12   |
|----------------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VUWG-B14 -...-F- ... | 92,6 | 82,3 | 67,7 | 58,2  | 56,3  | 36,6  | 16,7  | 4,5   | 72,9  | 26,5  | 20    | 36,3  |
|                      | B13  | D1   | D2   | D3    | D4    | H1    | H2    | H3    | H4    | H5    | H6    | H7    |
| VUWG-B14 -...-F- ... | 36,3 | G1/4 | G1/8 | M5    | Ø 4,5 | 64,3  | 19,6  | 15,3  | 10,1  | 29,5  | 9,8   | 4,8   |
|                      | H8   | H9   | H10  | H11   | L3    | L5    | L6    | L7    | L8    | L9    | L10   | L11   |
| VUWG-B14 -...-F- ... | 22,1 | 7    | 15,4 | 6,8   | 6     | 1     | 16    | 14,4  | 11,3  | 18,5  | 16    | 14    |
| 1)                   | 2    | 3    | 4    | 5     | 6     | 7     | 8     | 9     | 10    | 12    | 14    | 16    |
| L1                   | 56,3 | 72,3 | 88,3 | 104,3 | 120,3 | 136,3 | 152,3 | 168,3 | 184,3 | 216,3 | 248,3 | 280,3 |
| L2                   | 40   | 56   | 72   | 88    | 104   | 120   | 136   | 152   | 168   | 200   | 232   | 264   |
| L4                   | 54,3 | 70,3 | 86,3 | 102,3 | 118,3 | 134,3 | 150,3 | 166,3 | 182,3 | 214,3 | 246,6 | 278,3 |

1) Valve positions

Dimensions

Dimensions – VUWG-B18, sub-base valves 2x3/2, 5/2 and 5/3-way valve Download CAD data [www.festo.com](http://www.festo.com)

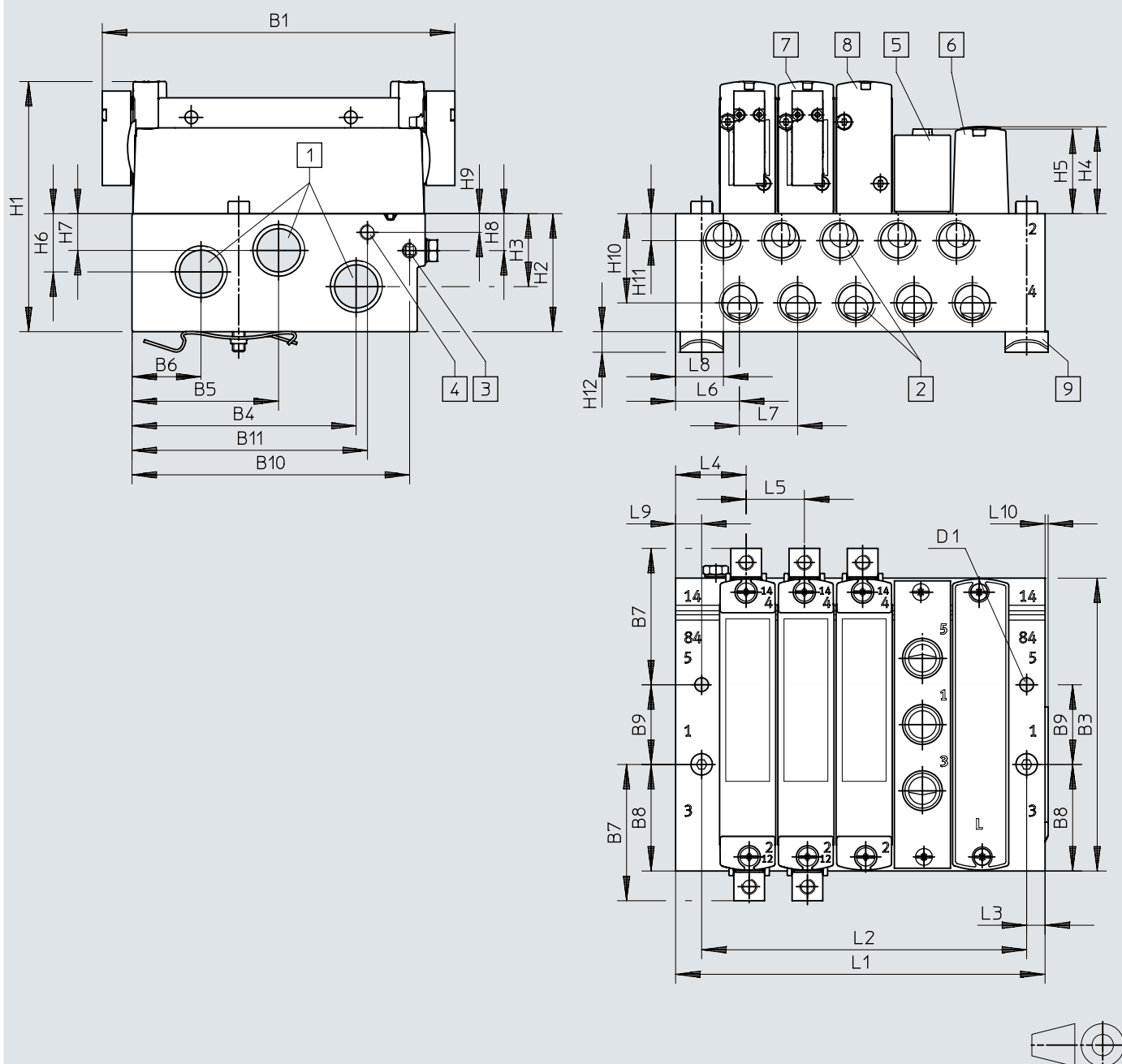


|                  | B1   | H1   | L1  | L2   | L3   | L8  |
|------------------|------|------|-----|------|------|-----|
| VUWG-B18-...     | 18,3 | 43,1 | 115 | 96,1 | 86,4 | 9,7 |
| VUWG-B18-M52-... |      |      | 105 |      |      |     |

## Dimensions

Dimensions – VUWG-B18, sub-base valves for manifold assembly, connection G1/8

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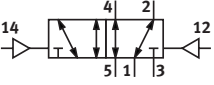
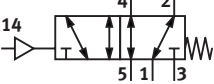
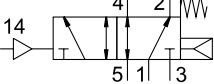
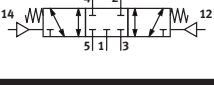
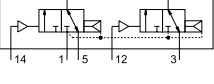
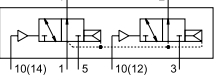
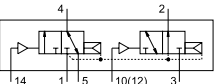
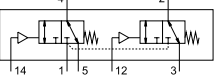
- [1] Ports 1, 3 and 5: G3/8 (at both ends)
- [2] Ports 2 and 4: G1/4
- [3] Port 1 2/14 for external pilot air: M5
- [4] Port 8 2/84 for external pilot air: M5
- [5] Supply plate VABF-L1-18-P3A4-G14
- [6] Cover plate VABB-L1-18
- [7] Pneumatic valve, bistable
- [8] Pneumatic valve, monostable
- [9] H-rail mounting (2 M4x40 screws to DIN 912 are required for mounting)

Dimensions

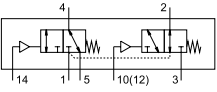
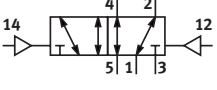
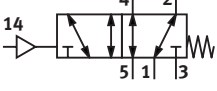
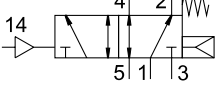
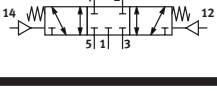
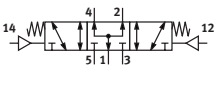
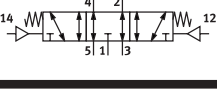
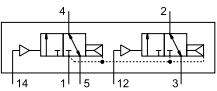
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|----------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | B1   | B3   | B4    | B5    | B6    | B7    | B8    | B9    | B10   | B11   | D1    |       |
| VUWG-B14 -...-F- ... | 115  | 95,6 | 73,1  | 47,8  | 22,5  | 51,7  | 34,8  | 26    | 90,6  | 76,8  | 4,5   |       |
|                      | H1   | H2   | H3    | H4    | H5    | H6    | H7    | H8    | H9    | H10   |       |       |
| VUWG-B14 -...-F- ... | 81,6 | 38,5 | 23,8  | 28,4  | 27,6  | 19    | 12    | 12,1  | 6,1   | 29,1  |       |       |
|                      | H11  | H12  | L3    | L4    | L5    | L6    | L7    | L8    | L9    | L10   |       |       |
| VUWG-B14 -...-F- ... | 8,8  | 6,5  | 6     | 23    | 19    | 20,8  | 19    | 15,6  | 8,5   | 1     |       |       |
| 1)                   | 2    | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 12    | 14    | 16    |
| L1                   | 63,5 | 82,5 | 101,5 | 120,5 | 139,5 | 158,5 | 177,5 | 196,5 | 215,5 | 253,5 | 291,5 | 329,5 |
| L2                   | 49   | 68   | 87    | 106   | 125   | 144   | 163   | 182   | 201   | 239   | 277   | 315   |

1) Valve positions

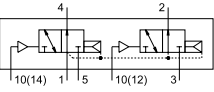
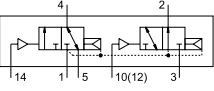
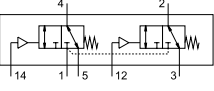
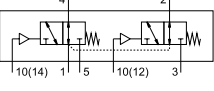
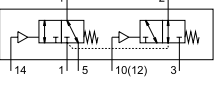
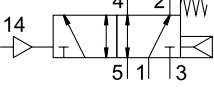
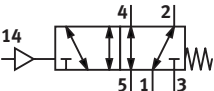
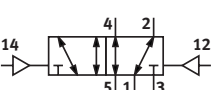
## Ordering data

| VUWG-L10A, in-line valve M3                                                         |                                    |                                     |          |                    |
|-------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|----------|--------------------|
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 5/2 bistable                       |                                     | 573796   | VUWG-L10A-B52-M3   |
| VUWG-L10A, in-line valve M3                                                         |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 5/2-way, monostable                | Mechanical spring                   | 574250   | VUWG-L10A-M52-M-M3 |
| VUWG-L10A, in-line valve M3                                                         |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 5/2-way, monostable                | Mechanical spring, Pneumatic spring | 573795   | VUWG-L10A-M52-R-M3 |
| VUWG-L10A, in-line valve M3                                                         |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/3 closed                         | Mechanical spring                   | 573797   | VUWG-L10A-P53C-M3  |
| VUWG-L10 and VUWG-S10, in-line M5                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, monostable, closed      | Pneumatic spring                    | 573805   | VUWG-L10-T32C-A-M5 |
| VUWG-L10 and VUWG-S10, in-line M5                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, open, monostable        | Pneumatic spring                    | 573806   | VUWG-L10-T32U-A-M5 |
| VUWG-L10 and VUWG-S10, in-line M5                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, open/closed, monostable | Pneumatic spring                    | 573807   | VUWG-L10-T32H-A-M5 |
| VUWG-L10 and VUWG-S10, in-line M5                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, monostable, closed      | Mechanical spring                   | 574251   | VUWG-L10-T32C-M-M5 |

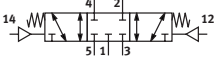
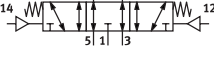
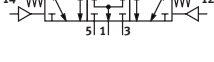
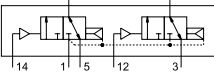
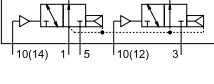
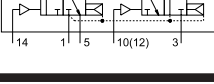
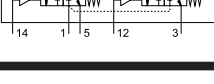
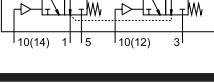
## Ordering data

| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|----------|--------------------|
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 2x3/2-way, open/closed, monostable | Mechanical spring                   | 574253   | VUWG-L10-T32H-M-M5 |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 5/2 bistable                       |                                     | 573809   | VUWG-L10-B52-M5    |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 5/2-way, monostable                | Mechanical spring                   | 574254   | VUWG-L10-M52-M-M5  |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/2-way, monostable                | Mechanical spring, Pneumatic spring | 573808   | VUWG-L10-M52-R-M5  |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/3 closed                         | Mechanical spring                   | 573810   | VUWG-L10-P53C-M5   |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/3-way, pressurised               | Mechanical spring                   | 573812   | VUWG-L10-P53U-M5   |
| VUWG-L10 and VUWG-S10, in-line M5                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/3 exhausted                      | Mechanical spring                   | 573811   | VUWG-L10-P53E-M5   |
| VUWG-L10 and VUWG-S10, in-line M7                                                  |                                    |                                     |          |                    |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, monostable, closed      | Pneumatic spring                    | 573821   | VUWG-L10-T32C-A-M7 |

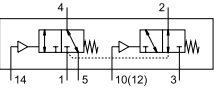
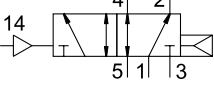
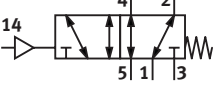
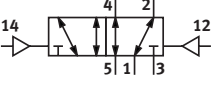
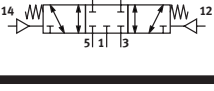
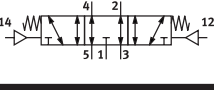
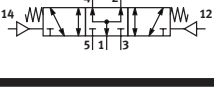
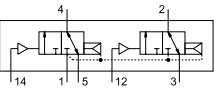
## Ordering data

| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|-------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|----------|--------------------|
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 2x3/2-way, open, monostable        | Pneumatic spring                    | 573822   | VUWG-L10-T32U-A-M7 |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 2x3/2-way, open/closed, monostable | Pneumatic spring                    | 573823   | VUWG-L10-T32H-A-M7 |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|    | 2x3/2-way, monostable, closed      | Mechanical spring                   | 574255   | VUWG-L10-T32C-M-M7 |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, open, monostable        | Mechanical spring                   | 574256   | VUWG-L10-T32U-M-M7 |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 2x3/2-way, open/closed, monostable | Mechanical spring                   | 574257   | VUWG-L10-T32H-M-M7 |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/2-way, monostable                | Mechanical spring, Pneumatic spring | 573824   | VUWG-L10-M52-R-M7  |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/2-way, monostable                | Mechanical spring                   | 574258   | VUWG-L10-M52-M-M7  |
| VUWG-L10 and VUWG-S10, in-line M7                                                   |                                    |                                     |          |                    |
|                                                                                     | Valve function                     | Type of reset                       | Part no. | Type               |
|  | 5/2 bistable                       |                                     | 573825   | VUWG-L10-B52-M7    |

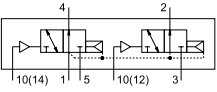
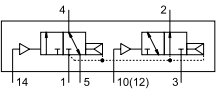
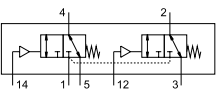
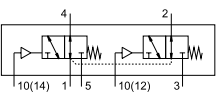
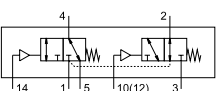
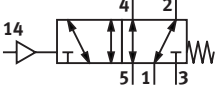
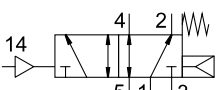
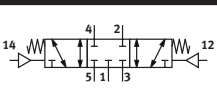
## Ordering data

| VUWG-L10 and VUWG-S10, in-line M7                                                  |                                    |                   |          |                     |
|------------------------------------------------------------------------------------|------------------------------------|-------------------|----------|---------------------|
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|    | 5/3 closed                         | Mechanical spring | 573826   | VUWG-L10-P53C-M7    |
| VUWG-L10 and VUWG-S10, in-line M7                                                  |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|    | 5/3 exhausted                      | Mechanical spring | 573827   | VUWG-L10-P53E-M7    |
| VUWG-L10 and VUWG-S10, in-line M7                                                  |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|    | 5/3-way, pressurised               | Mechanical spring | 573828   | VUWG-L10-P53U-M7    |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                         |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, monostable, closed      | Pneumatic spring  | 573829   | VUWG-L14-T32C-A-G18 |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                         |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, open, monostable        | Pneumatic spring  | 573830   | VUWG-L14-T32U-A-G18 |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                         |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, open/closed, monostable | Pneumatic spring  | 573831   | VUWG-L14-T32H-A-G18 |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                         |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, monostable, closed      | Mechanical spring | 574259   | VUWG-L14-T32C-M-G18 |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                         |                                    |                   |          |                     |
|                                                                                    | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, open, monostable        | Mechanical spring | 574260   | VUWG-L14-T32U-M-G18 |

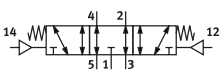
## Ordering data

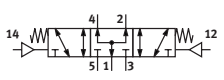
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|-------------------------------------------------------------------------------------|------------------------------------|-------------------|----------|---------------------|
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|    | 2x3/2-way, open/closed, monostable | Mechanical spring | 574261   | VUWG-L14-T32H-M-G18 |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|    | 5/2-way, monostable                | Pneumatic spring  | 573832   | VUWG-L14-M52-A-G18  |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|    | 5/2-way, monostable                | Mechanical spring | 574262   | VUWG-L14-M52-M-G18  |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|  | 5/2 bistable                       |                   | 573833   | VUWG-L14-B52-G18    |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|  | 5/3 closed                         | Mechanical spring | 573834   | VUWG-L14-P53C-G18   |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|  | 5/3 exhausted                      | Mechanical spring | 573835   | VUWG-L14-P53E-G18   |
| VUWG-L14 and VUWG-S14, in-line valves G1/8                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|  | 5/3-way, pressurised               | Mechanical spring | 573836   | VUWG-L14-P53U-G18   |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                          |                                    |                   |          |                     |
|                                                                                     | Valve function                     | Type of reset     | Part no. | Type                |
|  | 2x3/2-way, monostable, closed      | Pneumatic spring  | 574263   | VUWG-L18-T32C-A-G14 |

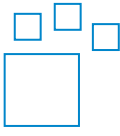
## Ordering data

| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|----------|---------------------|
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|    | 2x3/2-way, open, monostable        | Pneumatic spring                    | 574264   | VUWG-L18-T32U-A-G14 |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|    | 2x3/2-way, open/closed, monostable | Pneumatic spring                    | 574265   | VUWG-L18-T32H-A-G14 |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|    | 2x3/2-way, monostable, closed      | Mechanical spring                   | 574266   | VUWG-L18-T32C-M-G14 |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|  | 2x3/2-way, open, monostable        | Mechanical spring                   | 574267   | VUWG-L18-T32U-M-G14 |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|  | 2x3/2-way, open/closed, monostable | Mechanical spring                   | 574268   | VUWG-L18-T32H-M-G14 |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|  | 5/2-way, monostable                | Mechanical spring                   | 574270   | VUWG-L18-M52-M-G14  |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|  | 5/2-way, monostable                | Mechanical spring, Pneumatic spring | 574269   | VUWG-L18-M52-R-G14  |
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                         |                                    |                                     |          |                     |
|                                                                                    | Valve function                     | Type of reset                       | Part no. | Type                |
|  | 5/3 closed                         | Mechanical spring                   | 574272   | VUWG-L18-P53C-G14   |

## Ordering data

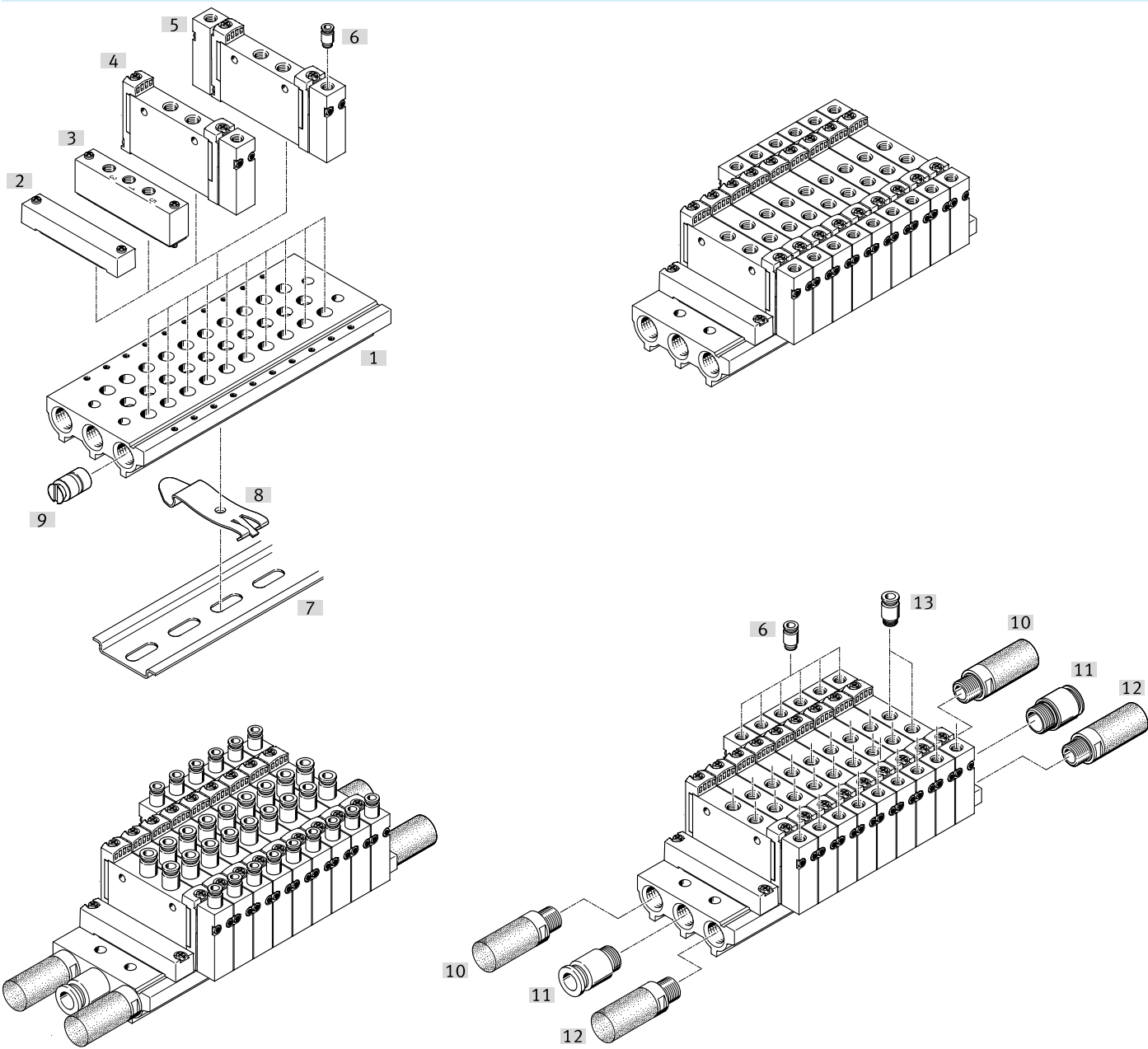
| VUWG-L18 and VUWG-S18, in-line valves G1/4                                        |                |                   |          |                   |
|-----------------------------------------------------------------------------------|----------------|-------------------|----------|-------------------|
|                                                                                   | Valve function | Type of reset     | Part no. | Type              |
|  | 5/3 exhausted  | Mechanical spring | 574273   | VUWG-L18-P53E-G14 |

| VUWG-L18 and VUWG-S18, in-line valves G1/4                                        |                      |                   |          |                   |
|-----------------------------------------------------------------------------------|----------------------|-------------------|----------|-------------------|
|                                                                                   | Valve function       | Type of reset     | Part no. | Type              |
|  | 5/3-way, pressurised | Mechanical spring | 574274   | VUWG-L18-P53U-G14 |

| Modular product system                                                            |                                                                                                                                                                                                |                     |          |      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|------|
|                                                                                   | Valve function                                                                                                                                                                                 | Valve size          | Part no. | Type |
|  | 2x3/2-way, monostable, closed,<br>2x3/2-way, open, monostable,<br>2x3/2-way, open/closed, monostable,<br>5/2 bistable, 5/2-way, monostable,<br>5/3-way, pressurised, 5/3 exhausted, 5/3 closed | 10 mm, 14 mm, 18 mm | 571755   | VUWG |

Peripherals

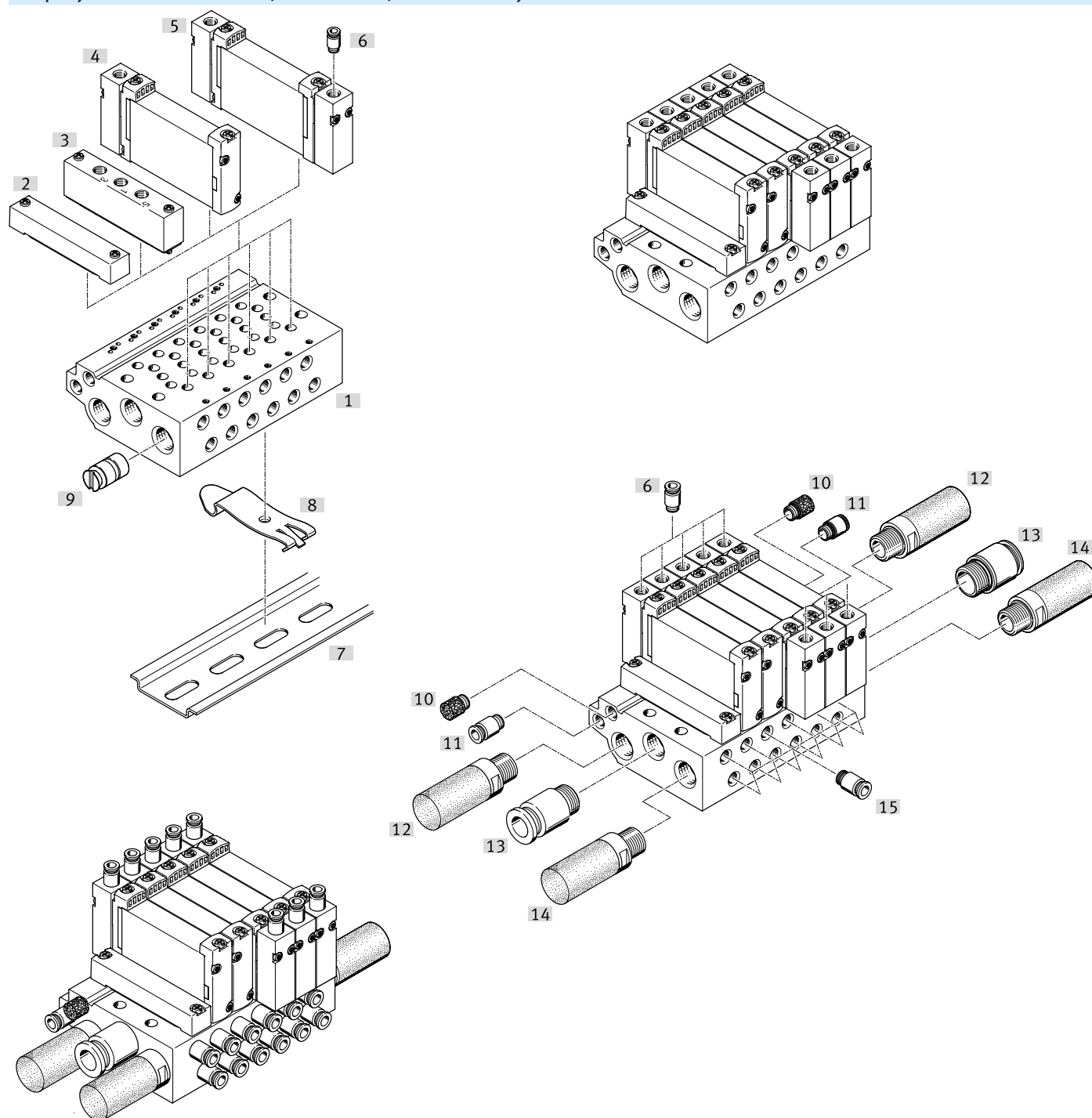
Sample system overview – VUWG-L10 and VUWG-S10, in-line valves M5/M7, manifold assembly



| Accessories                       |                                                         |  | → Link               |
|-----------------------------------|---------------------------------------------------------|--|----------------------|
| Type/order code                   | Description                                             |  |                      |
| [1] Manifold rail VABM-L1-10S-G18 | For 2 to 10, 12, 14 and 16 valve positions              |  | <a href="#">43</a>   |
| [2] Cover plate VABB-L1-10-S      | To cover a vacant position                              |  | <a href="#">44</a>   |
| [3] Supply plate VABF-L1-10-P3A4  | For air supply port 1 and port 3 and 5                  |  | <a href="#">47</a>   |
| [4] Pneumatic valve VUWG          | Pneumatic valve, monostable                             |  | <a href="#">vuwg</a> |
| [5] Pneumatic valve VUWG          | Pneumatic valve, bistable                               |  | <a href="#">vuwg</a> |
| [6] Push-in fitting QS            | For adapter plate connection 12 or 14                   |  | <a href="#">qs</a>   |
| [7] H-rail NRH-35-2000            | For mounting the valve manifold assembly                |  | <a href="#">49</a>   |
| [8] H-rail mounting VAME-T-M4     | 2 pieces for attaching the valve manifold to the H-rail |  | <a href="#">49</a>   |
| [9] Separator VABD-8-B            | For creating pressure zones                             |  | <a href="#">44</a>   |
| [10] Silencer U                   | For port 3                                              |  | <a href="#">48</a>   |
| [11] Push-in fitting QS           | For port 1                                              |  | <a href="#">qs</a>   |
| [12] Silencer U                   | For port 5                                              |  | <a href="#">48</a>   |
| [13] Push-in fitting QS           | For ports 2 and 4                                       |  | <a href="#">qs</a>   |

## Peripherals

### Sample system overview – VUWG-B10, sub-base valves, manifold assembly

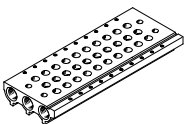


| Accessories                         |                                                         | → Link               |
|-------------------------------------|---------------------------------------------------------|----------------------|
| Type/order code                     | Description                                             |                      |
| [1] Manifold rail VABM-L1-10W-G18   | For 2 to 10, 12, 14 and 16 valve positions              | <a href="#">43</a>   |
| [2] Cover plate VABB-L1-10-W        | To cover a vacant position                              | <a href="#">47</a>   |
| [3] Supply plate VABF-L1-10-P3A4-M5 | For air supply port 1 and port 3 and 5                  | <a href="#">46</a>   |
| [4] Pneumatic valve VUWG            | Pneumatic valve, monostable                             | <a href="#">vuwg</a> |
| [5] Pneumatic valve VUWG            | Pneumatic valve, bistable                               | <a href="#">vuwg</a> |
| [6] Push-in fitting QS              | For adapter plate connection 12 or 14                   | <a href="#">qs</a>   |
| [7] H-rail NRH-35-2000              | For mounting the valve manifold assembly                | <a href="#">49</a>   |
| [8] H-rail mounting VAME-T-M4       | 2 pieces for attaching the valve manifold to the H-rail | <a href="#">49</a>   |
| [9] Separator VABD-6-B              | For creating pressure zones                             | <a href="#">48</a>   |
| [10] Silencer U                     | For port 84                                             | <a href="#">48</a>   |

Peripherals

| Accessories             |                   | → Link               |
|-------------------------|-------------------|----------------------|
| Type/order code         | Description       |                      |
| [11] Push-in fitting QS | For port 14       | <a href="#">↗ qs</a> |
| [12] Silencer U         | For port 5        | <a href="#">48</a>   |
| [13] Push-in fitting QS | For port 1        | <a href="#">↗ qs</a> |
| [14] Silencer U         | For port 3        | <a href="#">48</a>   |
| [15] Push-in fitting QS | For ports 2 and 4 | <a href="#">↗ qs</a> |

## Accessories

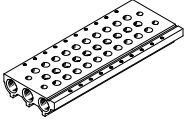
| Manifold rail for in-line valve (manifold assembly), for valve size M3            |                    |                                        |                                           |                                      |          |                    |
|-----------------------------------------------------------------------------------|--------------------|----------------------------------------|-------------------------------------------|--------------------------------------|----------|--------------------|
|                                                                                   | Operating pressure | Max. tightening torque H-rail mounting | Max. tightening torque for valve mounting | Max. tightening torque wall mounting | Part no. | Type               |
|  | -0.09 ... 1 MPa    | 1.5 Nm                                 | 0.45 Nm                                   | 3 Nm                                 | 566527   | VABM-L1-10AS-M5-7  |
|                                                                                   |                    |                                        |                                           |                                      | 566532   | VABM-L1-10AS-M5-14 |
|                                                                                   |                    |                                        |                                           |                                      | 566533   | VABM-L1-10AS-M5-16 |
|                                                                                   |                    |                                        |                                           |                                      | 566530   | VABM-L1-10AS-M5-10 |
|                                                                                   |                    |                                        |                                           |                                      | 566524   | VABM-L1-10AS-M5-4  |
|                                                                                   |                    |                                        |                                           |                                      | 566531   | VABM-L1-10AS-M5-12 |
|                                                                                   |                    |                                        |                                           |                                      | 566529   | VABM-L1-10AS-M5-9  |
|                                                                                   |                    |                                        |                                           |                                      | 566522   | VABM-L1-10AS-M5-2  |
|                                                                                   |                    |                                        |                                           |                                      | 566523   | VABM-L1-10AS-M5-3  |
|                                                                                   |                    |                                        |                                           |                                      | 566525   | VABM-L1-10AS-M5-5  |
|                                                                                   |                    |                                        |                                           |                                      | 566528   | VABM-L1-10AS-M5-8  |
|                                                                                   |                    |                                        |                                           |                                      | 566526   | VABM-L1-10AS-M5-6  |

| Cover plate, for manifold rail M3 in-line valves, incl. screws and gasket         |                |          |             |
|-----------------------------------------------------------------------------------|----------------|----------|-------------|
|                                                                                   | Product weight | Part no. | Type        |
|  | 9.4 g          | 569986   | VABB-L1-10A |

| Separator, for manifold M3 in-line valves, separator for pressure zones             |                |          |            |
|-------------------------------------------------------------------------------------|----------------|----------|------------|
|                                                                                     | Product weight | Part no. | Type       |
|  | 6 g            | 570872   | VABD-4.2-B |

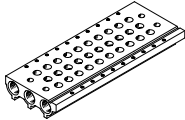
| Supply plate, for manifold rail M3 in-line valves, incl. screws and seal            |                |          |                     |
|-------------------------------------------------------------------------------------|----------------|----------|---------------------|
|                                                                                     | Product weight | Part no. | Type                |
|  | 16.5 g         | 569990   | VABF-L1-10A-P3A4-M5 |

| Seals for in-line valves, M3, delivery unit: 10 sets (2 screws and 1 seal each)     |                |          |                   |
|-------------------------------------------------------------------------------------|----------------|----------|-------------------|
|                                                                                     | Material seals | Part no. | Type              |
|  | NBR            | 566670   | VABD-L1-10AX-S-M3 |

| Manifold rail for in-line valves (battery assembly), for valve size M5/M7           |                    |                                           |                                        |                                      |          |                    |
|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|--------------------|
|                                                                                     | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type               |
|  | -0.09 ... 1 MPa    | 0.45 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 566559   | VABM-L1-10S-G18-3  |
|                                                                                     |                    |                                           |                                        |                                      | 566560   | VABM-L1-10S-G18-4  |
|                                                                                     |                    |                                           |                                        |                                      | 566561   | VABM-L1-10S-G18-5  |
|                                                                                     |                    |                                           |                                        |                                      | 566569   | VABM-L1-10S-G18-16 |
|                                                                                     |                    |                                           |                                        |                                      | 566563   | VABM-L1-10S-G18-7  |
|                                                                                     |                    |                                           |                                        |                                      | 566566   | VABM-L1-10S-G18-10 |
|                                                                                     |                    |                                           |                                        |                                      | 566568   | VABM-L1-10S-G18-14 |
|                                                                                     |                    |                                           |                                        |                                      | 566558   | VABM-L1-10S-G18-2  |
|                                                                                     |                    |                                           |                                        |                                      | 566564   | VABM-L1-10S-G18-8  |

## Accessories

## Manifold rail for in-line valves (battery assembly), for valve size M5/M7

|                                                                                  | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type               |
|----------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|--------------------|
|  | -0.09 ... 1 MPa    | 0.45 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 566562   | VABM-L1-10S-G18-6  |
|                                                                                  |                    |                                           |                                        |                                      | 566567   | VABM-L1-10S-G18-12 |
|                                                                                  |                    |                                           |                                        |                                      | 566565   | VABM-L1-10S-G18-9  |

## Cover plate, for manifold rail M5/M7 in-line valves, incl. screws and gasket

|                                                                                  | Product weight | Part no. | Type         |
|----------------------------------------------------------------------------------|----------------|----------|--------------|
|  | 10 g           | 566462   | VABB-L1-10-S |

## Separator, for terminal strip M5/M7 in-line valves

|                                                                                  | Product weight | Part no. | Type     |
|----------------------------------------------------------------------------------|----------------|----------|----------|
|  | 8 g            | 569995   | VABD-8-B |

## Supply plate, for manifold rail M5 in-line valves

|                                                                                    | Product weight | Part no. | Type               |
|------------------------------------------------------------------------------------|----------------|----------|--------------------|
|  | 21.4 g         | 569991   | VABF-L1-10-P3A4-M5 |

## Supply plate, for manifold rail M7 in-line valves

|                                                                                    | Product weight | Part no. | Type               |
|------------------------------------------------------------------------------------|----------------|----------|--------------------|
|  | 19 g           | 569992   | VABF-L1-10-P3A4-M7 |

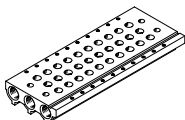
## Seals for in-line valves, M5, delivery unit: 10 sets (2 screws and 1 seal each)

|                                                                                    | Material seals | Part no. | Type             |
|------------------------------------------------------------------------------------|----------------|----------|------------------|
|  | NBR            | 566672   | VABD-L1-10X-S-M5 |

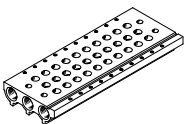
## Seals for in-line valves, M7, delivery unit: 10 sets (2 screws and 1 seal each)

|                                                                                    | Material seals | Part no. | Type             |
|------------------------------------------------------------------------------------|----------------|----------|------------------|
|  | NBR            | 566673   | VABD-L1-10X-S-M7 |

## Manifold rail for in-line valves (manifold assembly), for valve size G1/8

|                                                                                    | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type              |
|------------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|-------------------|
|  | -0.09 ... 1 MPa    | 0.65 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 566623   | VABM-L1-14S-G14-7 |

## Accessories

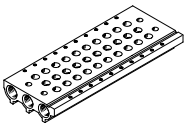
| Manifold rail for in-line valves (manifold assembly), for valve size G1/8         |                    |                                           |                                        |                                      |          |                    |
|-----------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|--------------------|
|                                                                                   | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type               |
|  | -0.09 ... 1 MPa    | 0.65 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 566627   | VABM-L1-14S-G14-12 |
|                                                                                   |                    |                                           |                                        |                                      | 566620   | VABM-L1-14S-G14-4  |
|                                                                                   |                    |                                           |                                        |                                      | 566626   | VABM-L1-14S-G14-10 |
|                                                                                   |                    |                                           |                                        |                                      | 566629   | VABM-L1-14S-G14-16 |
|                                                                                   |                    |                                           |                                        |                                      | 566624   | VABM-L1-14S-G14-8  |
|                                                                                   |                    |                                           |                                        |                                      | 566625   | VABM-L1-14S-G14-9  |
|                                                                                   |                    |                                           |                                        |                                      | 566621   | VABM-L1-14S-G14-5  |
|                                                                                   |                    |                                           |                                        |                                      | 566618   | VABM-L1-14S-G14-2  |
|                                                                                   |                    |                                           |                                        |                                      | 566622   | VABM-L1-14S-G14-6  |
|                                                                                   |                    |                                           |                                        |                                      | 566628   | VABM-L1-14S-G14-14 |
|                                                                                   |                    |                                           |                                        |                                      | 566619   | VABM-L1-14S-G14-3  |

| Cover plate, for manifold rail G1/8 in-line valves, incl. screws and seal         |                |          |            |
|-----------------------------------------------------------------------------------|----------------|----------|------------|
|                                                                                   | Product weight | Part no. | Type       |
|  | 23.9 g         | 569989   | VABB-L1-14 |

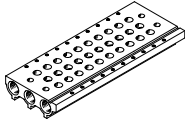
| Separator, for manifold G1/8 in-line valves                                         |                |          |           |
|-------------------------------------------------------------------------------------|----------------|----------|-----------|
|                                                                                     | Product weight | Part no. | Type      |
|  | 10 g           | 569996   | VABD-10-B |

| Supply plate, for manifold rail G1/8 in-line valves                                 |                |          |                     |
|-------------------------------------------------------------------------------------|----------------|----------|---------------------|
|                                                                                     | Product weight | Part no. | Type                |
|  | 25 g           | 569993   | VABF-L1-14-P3A4-G18 |

| Seals for in-line valves, G1/8, delivery quantity: 10 sets (2 screws and 1 seal each) |                |          |                   |
|---------------------------------------------------------------------------------------|----------------|----------|-------------------|
|                                                                                       | Material seals | Part no. | Type              |
|    | NBR            | 566675   | VABD-L1-14X-S-G18 |

| Manifold rail for in-line valves (manifold assembly), for valve size G1/4           |                    |                                           |                                        |                                      |          |                    |
|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|--------------------|
|                                                                                     | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type               |
|  | -0.09 ... 1 MPa    | 1.18 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 574465   | VABM-L1-18S-G38-14 |
|                                                                                     |                    |                                           |                                        |                                      | 574456   | VABM-L1-18S-G38-3  |
|                                                                                     |                    |                                           |                                        |                                      | 574461   | VABM-L1-18S-G38-8  |
|                                                                                     |                    |                                           |                                        |                                      | 574459   | VABM-L1-18S-G38-6  |
|                                                                                     |                    |                                           |                                        |                                      | 574457   | VABM-L1-18S-G38-4  |
|                                                                                     |                    |                                           |                                        |                                      | 574460   | VABM-L1-18S-G38-7  |
|                                                                                     |                    |                                           |                                        |                                      | 574458   | VABM-L1-18S-G38-5  |
|                                                                                     |                    |                                           |                                        |                                      | 574463   | VABM-L1-18S-G38-10 |
|                                                                                     |                    |                                           |                                        |                                      | 574462   | VABM-L1-18S-G38-9  |
|                                                                                     |                    |                                           |                                        |                                      | 574466   | VABM-L1-18S-G38-16 |
|                                                                                     |                    |                                           |                                        |                                      | 574455   | VABM-L1-18S-G38-2  |

## Accessories

| Manifold rail for in-line valves (manifold assembly), for valve size G1/4        |                    |                                           |                                        |                                      |          |                    |
|----------------------------------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------|--------------------------------------|----------|--------------------|
|                                                                                  | Operating pressure | Max. tightening torque for valve mounting | Max. tightening torque H-rail mounting | Max. tightening torque wall mounting | Part no. | Type               |
|  | -0.09 ... 1 MPa    | 1.18 Nm                                   | 1.5 Nm                                 | 3 Nm                                 | 574464   | VABM-L1-18S-G38-12 |

| Cover plate, for manifold rail G1/4 in-line valves, incl. screws and seal        |                |          |            |
|----------------------------------------------------------------------------------|----------------|----------|------------|
|                                                                                  | Product weight | Part no. | Type       |
|  | 50 g           | 574482   | VABB-L1-18 |

| Separator, for manifold G1/4 in-line valves                                      |                |          |           |
|----------------------------------------------------------------------------------|----------------|----------|-----------|
|                                                                                  | Product weight | Part no. | Type      |
|  | 16 g           | 574483   | VABD-14-B |

| Supply plate, for manifold rail G1/4 in-line valves                                |                         |          |                     |
|------------------------------------------------------------------------------------|-------------------------|----------|---------------------|
|                                                                                    | Material supply plate   | Part no. | Type                |
|  | Wrought aluminium alloy | 574481   | VABF-L1-18-P3A4-G14 |

| Seals for in-line valves, G1/4, delivery quantity: 10 sets (2 screws and 1 seal each) |                |          |                   |
|---------------------------------------------------------------------------------------|----------------|----------|-------------------|
|                                                                                       | Material seals | Part no. | Type              |
|     | NBR            | 574479   | VABD-L1-18X-S-G14 |

| Cover plate, for manifold rail 10AW, incl. screws and seal                         |                |          |             |
|------------------------------------------------------------------------------------|----------------|----------|-------------|
|                                                                                    | Product weight | Part no. | Type        |
|  | 9.4 g          | 569986   | VABB-L1-10A |

| Separator, for manifold rail 10AW, separator for pressure zones                    |                |          |            |
|------------------------------------------------------------------------------------|----------------|----------|------------|
|                                                                                    | Product weight | Part no. | Type       |
|  | 6 g            | 570872   | VABD-4.2-B |

| Supply plate, for manifold rail 10AW, incl. screws and seal                        |                |          |                     |
|------------------------------------------------------------------------------------|----------------|----------|---------------------|
|                                                                                    | Product weight | Part no. | Type                |
|  | 16.5 g         | 569990   | VABF-L1-10A-P3A4-M5 |

## Accessories

|                                                                                     |                |          |                     |
|-------------------------------------------------------------------------------------|----------------|----------|---------------------|
| Seals, for sub-base valves B10A, delivery unit: 10 sets (2 screws and 1 seal each)  |                |          |                     |
|                                                                                     | Material seals | Part no. | Type                |
|    | NBR            | 566671   | VABD-L1-10AB-S-M3   |
| Cover plate, for manifold rail 10W/10HW, incl. screws and seal                      |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|    | 24 g           | 566495   | VABB-L1-10-W        |
| Separator, for manifold rail 10W/10HW, separator for pressure zones                 |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|    | 7 g            | 569994   | VABD-6-B            |
| Supply plate, for manifold rail 10W, incl. screws and seal                          |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|   | 21.4 g         | 569991   | VABF-L1-10-P3A4-M5  |
| Supply plate, for manifold rail 10HW, incl. screws and seal                         |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|  | 19 g           | 569992   | VABF-L1-10-P3A4-M7  |
| Seals, for sub-base valves B10, delivery unit: 10 sets (2 screws and 1 seal each)   |                |          |                     |
|                                                                                     | Material seals | Part no. | Type                |
|  | NBR            | 566674   | VABD-L1-10B-S-M7    |
| Cover plate, for manifold rail 14W, sub-base valves, incl. screws and gasket        |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|  | 23.9 g         | 569989   | VABB-L1-14          |
| Separator, for manifold rail 14W, subplate valves, separator for pressure zones     |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|  | 10 g           | 569996   | VABD-10-B           |
| Supply plate, for manifold rail 14W, incl. screws and seal                          |                |          |                     |
|                                                                                     | Product weight | Part no. | Type                |
|  | 25 g           | 569993   | VABF-L1-14-P3A4-G18 |

## Accessories

## Seals, for sub-base valves B14, delivery unit: 10 sets (2 screws and 1 seal each)

|                                                                                  | Material seals | Part no. | Type              |
|----------------------------------------------------------------------------------|----------------|----------|-------------------|
|  | NBR            | 566676   | VABD-L1-14B-S-G18 |

## Cover plate, for manifold rail 18W, sub-base valves, incl. screws and gasket

|                                                                                  | Product weight | Part no. | Type       |
|----------------------------------------------------------------------------------|----------------|----------|------------|
|  | 50 g           | 574482   | VABB-L1-18 |

## Separator, for manifold rail 18W, subplate valves, separator for pressure zones

|                                                                                  | Product weight | Part no. | Type      |
|----------------------------------------------------------------------------------|----------------|----------|-----------|
|  | 16 g           | 574483   | VABD-14-B |

## Supply plate, for manifold rail 18W, incl. screws and seal

|                                                                                   | Material supply plate   | Part no. | Type                |
|-----------------------------------------------------------------------------------|-------------------------|----------|---------------------|
|  | Wrought aluminium alloy | 574481   | VABF-L1-18-P3A4-G14 |

## Seals, for sub-base valves B18, delivery unit: 10 sets (2 screws and 1 seal each)

|                                                                                    | Material seals | Part no. | Type              |
|------------------------------------------------------------------------------------|----------------|----------|-------------------|
|  | NBR            | 574480   | VABD-L1-18B-S-G14 |

## Silencer

|                                                                                    | Pneumatic connection | Size of pack | Part no. | Type      |
|------------------------------------------------------------------------------------|----------------------|--------------|----------|-----------|
|  | M5                   | 1            | 165003   | UC-M5     |
|                                                                                    | M7                   |              | 161418   | UC-M7     |
|                                                                                    | G1/8                 |              | 161419   | UC-1/8    |
|                                                                                    |                      | 50           | 534222   | U-1/8-50  |
|                                                                                    | G1/4                 | 20           | 534220   | UC-1/4-20 |
|                                                                                    |                      |              | 534223   | U-1/4-20  |

## Fittings

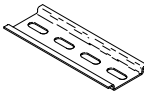
| Part no. | Type         |
|----------|--------------|
| 153331   | QSML-M5-3    |
| 133003   | QSM-M5-3-I-R |
| 130838   | QSMLL-M5-3   |
| 153313   | QSM-M5-3-I   |
| 186352   | QSML-M7-4    |
| 153339   | QSMLL-M5-4   |
| 153333   | QSML-M5-4    |
| 133004   | QSM-M5-4-I-R |
| 186354   | QSMLL-M7-4   |
| 153319   | QSM-M7-4-I   |
| 186106   | QS-G1/8-4-I  |
| 153315   | QSM-M5-4-I   |
| 133005   | QSM-M5-6-I-R |
| 186107   | QS-G1/8-6-I  |
| 186117   | QSL-G1/8-6   |

## Accessories

| Fittings                                                                          |                                     |              |          |              |
|-----------------------------------------------------------------------------------|-------------------------------------|--------------|----------|--------------|
|                                                                                   | Pneumatic connection, port 2        | Size of pack | Part no. | Type         |
|  | For tubing outside diameter of 6 mm | 10           | 133007   | QSM-M7-6-I-R |
|                                                                                   |                                     |              | 186128   | QSL-G1/8-6   |
|                                                                                   | For tubing outside diameter of 8 mm |              | 186109   | QS-G1/8-8-I  |
|                                                                                   |                                     |              | 186130   | QSL-G1/8-8   |
|                                                                                   |                                     |              | 186119   | QSL-G1/8-8   |

| Blanking plug                                                                     |                              |              |          |              |
|-----------------------------------------------------------------------------------|------------------------------|--------------|----------|--------------|
|                                                                                   | Pneumatic connection, port 1 | Size of pack | Part no. | Type         |
|  | Male thread M5               | 10           | 174308   | B-M5-B       |
|                                                                                   | Male thread M7               |              | 174309   | B-M7         |
|                                                                                   |                              |              | 133007   | QSM-M7-6-I-R |
|                                                                                   | Male thread G1/8             |              | 3568     | B-1/8        |
|                                                                                   | Male thread G1/4             |              | 3569     | B-1/4        |

| Compact blanking plug, for valve, for shutting off a connection (valve requires blanking plug with small screw-in depth) |                              |              |          |                 |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------|----------|-----------------|
|                                                                                                                          | Pneumatic connection, port 1 | Size of pack | Part no. | Type            |
|                                         | Male thread G1/8             | 10           | 578406   | NPQH-BK-G18-P10 |
|                                                                                                                          | Male thread G1/4             |              | 578407   | NPQH-BK-G14-P10 |

| H-rail to EN 60715                                                                  |                        |          |             |
|-------------------------------------------------------------------------------------|------------------------|----------|-------------|
|                                                                                     | LABS (PWIS) conformity | Part no. | Type        |
|  | VDMA24364-B2-L         | 35430    | NRH-35-2000 |

| H-rail mounting, 2 pieces                                                           |                        |          |           |
|-------------------------------------------------------------------------------------|------------------------|----------|-----------|
|                                                                                     | LABS (PWIS) conformity | Part no. | Type      |
|  | VDMA24364-B2-L         | 569998   | VAME-T-M4 |

| Restrictor, for M5 valves to adjust the flow when pressurising and exhausting (10 pieces) |                                                      |         |             |          |              |
|-------------------------------------------------------------------------------------------|------------------------------------------------------|---------|-------------|----------|--------------|
|                                                                                           | Standard nominal flow rate in flow control direction | b value | C value     | Part no. | Type         |
|        | 9.6 l/min                                            | 0.5     | 0.04 l/sbar | 8025709  | VFFG-T-M5-5  |
|                                                                                           | 14.6 l/min                                           |         | 0.05 l/sbar | 8025710  | VFFG-T-M5-6  |
|                                                                                           | 19.1 l/min                                           |         | 0.07 l/sbar | 8025711  | VFFG-T-M5-7  |
|                                                                                           | 26.1 l/min                                           |         | 0.1 l/sbar  | 8025712  | VFFG-T-M5-8  |
|                                                                                           | 40.8 l/min                                           |         | 0.14 l/sbar | 8025713  | VFFG-T-M5-10 |
|                                                                                           | 45.4 l/min                                           |         | 0.16 l/sbar | 8025714  | VFFG-T-M5-12 |
|                                                                                           | 67.4 l/min                                           |         | 0.25 l/sbar | 8025715  | VFFG-T-M5-15 |
|                                                                                           |                                                      |         |             |          |              |