# Service units, MS series

**Wide range of configuration options**
➔ **www.festo.com/en/engineering**

- **Three sizes:**
  **MS4 – grid**
  **dimension 40 mm**
  **MS6 – grid**
  **dimension 62 mm**
  **MS12 – grid**
  **dimension 124 mm**

- **Modular**

- **Easy to assemble**

- **Broad range of functions**

- **Compact with high flow rates**

- **Modern design**

- **Wide choice of variants**

- **Integrated safety functions**

**Specified types in accordance with ATEX directive for potentially explosive atmospheres**
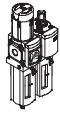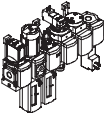➔ **www.festo.com/en/ex**

# MS series service units

Product range overview

**FESTO**

| Type | | Size | Pneumatic connection in housing | Connecting plate | Pressure regulation range [bar] | | | | | | Grade of filtration [µm] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0.05 ... 0.7 | 0.05 ... 2.5 | 0.1 ... 4 | 0.3 ... 7 | 0.1 ... 12 | 0.5 ... 16 | 0.01 | 1 | 5 | 40 |
| Code | | | | AG… | D2 | D4 | D5 | D6 | D7 | D8 | A | B | C | E |
| **Service units** | | | | | | | | | | | | | | |
| **MSB-FRC** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | ■ | ■ | – | – | – | ■ | ■ |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | ■ | ■ | – | – | – | ■ | ■ |
| | | 12 | – | | | | | | | | | | | |
| **Service unit combinations (further variants can be ordered using the configurator ➜ www.festo.com/en/engineering)** | | | | | | | | | | | | | | |
| **MSB** | | 4 | G¼ | G⅛, G¼, G⅜ | – | – | – | ■ | ■ | – | – | – | ■ | ■ |
| | | 6 | G½ | G¼, G⅜, G½, G¾ | – | – | – | ■ | ■ | – | – | – | ■ | ■ |
| | | 12 | – | | | | | | | | | | | |
| **Individual devices** | | | | | | | | | | | | | | |
| Filter regulators **MS-LFR** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | ■ | ■ | ■ | – | – | – | ■ | ■ |
| | | 6 | G¼ , G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | ■ | ■ | ■ | ■ | – | – | ■ | ■ |
| | | 12 | – | G1, G1¼, G1½, G2 | – | – | – | ■ | ■ | ■ | – | – | ■ | ■ |
| Filters **MS-LF** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – | ■ | ■ |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – | ■ | ■ |
| | | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – | ■ | ■ |
| Fine and micro filters **MS-LFM** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | ■ | ■ | – | – |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | ■ | ■ | – | – |
| | | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | ■ | ■ | – | – |
| Activated carbon filters **MS-LFX** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – | – | – |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – | – | – |
| | | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – | – | – |
| Pressure regulators **MS-LR** | | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | ■ | ■ | ■ | – | – | – | – | – |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | ■ | ■ | ■ | ■ | – | – | – | – |
| | | 12 | – | G1, G1¼, G1½, G2 | – | – | – | ■ | ■ | ■ | – | – | – | – |
| Pressure regulators **MS-LRB** | | 4 | G¼ | G⅛, G¼, G⅜ | – | – | ■ | ■ | ■ | – | – | – | – | – |
| | | 6 | G½ | G¼, G⅜, G½, G¾ | – | – | ■ | ■ | ■ | ■ | – | – | – | – |
| | | 12 | – | | | | | | | | | | | |
| Precision pressure regulators **MS-LRP** | | 4 | – | | | | | | | | | | | |
| | | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | ■ | ■ | ■ | – | ■ | – | – | – | – | – |
| | | 12 | – | | | | | | | | | | | |
| Precision pressure regulators **MS-LRPB** | | 4 | – | | | | | | | | | | | |
| | | 6 | G½ | G¼, G⅜, G½, G¾ | ■ | ■ | ■ | – | ■ | – | – | – | – | – |
| | | 12 | – | | | | | | | | | | | |

# MS series service units

Product range overview

**FESTO**

| Type | Size | Bowl guard | | Condensate drains | | | | Pressure indicator | | | | | Actuator lock | | Options | | → Page |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Plastic bowl guard | Metal bowl | Manual rotary | Semi-automatic | Fully automatic | External, fully-automatic, electrical | Cover plate (without pressure gauge) | Integrated MS pressure gauge | Adapter for EN pressure gauge G1/8 | Adapter for EN pressure gauge G1/4 | Pressure sensor with display | Rotary knob, lockable | Rotary knob, long | Silencer | Flow direction from right to left | |
| Code | | R | U | M | H | V | E... | VS | AG | A8 | A4 | AD... | AS | LD | S | Z | |
| **Service units** | | | | | | | | | | | | | | | | | |
| **MSB-FRC** | 4 | ■ | – | ■ | – | ■ | – | – | ■ | – | – | – | ■ | – | – | ■ | 2-2 |
| | 6 | ■ | ■ | ■ | – | ■ | – | – | ■ | – | – | – | ■ | – | – | ■ | |
| | 12 | – | | | | | | | | | | | | | | | |
| **Service unit combinations** | | | | | | | | | | | | | | | | | |
| **MSB** | 4 | ■ | ■ | ■ | – | ■ | – | – | ■ | – | – | – | ■ | – | – | ■ | 2-2 |
| | 6 | ■ | ■ | ■ | – | ■ | – | – | ■ | – | – | – | ■ | – | – | ■ | |
| | 12 | – | | | | | | | | | | | | | | | |
| **Individual devices** | | | | | | | | | | | | | | | | | |
| Filter regulators **MS-LFR** | 4 | ■ | ■ | ■ | ■ | ■ | – | ■ | ■ | ■ | ■ | ■ | ■ | ■ | – | ■ | 3-2 |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | – | ■ | ■ | ■ | ■ | – | ■ | |
| | 12 | – | ■ | ■ | – | ■ | ■ | ■ | ■ | – | ■ | – | ■ | ■ | – | ■ | 3-18 |
| Filters **MS-LF** | 4 | ■ | ■ | ■ | ■ | ■ | – | – | – | – | – | – | – | – | – | ■ | 4-2, 4-4 |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | – | – | – | – | – | – | – | – | ■ | |
| | 12 | – | ■ | ■ | – | ■ | ■ | – | – | – | – | – | – | – | – | ■ | 4-32, 4-34 |
| Fine and micro filters **MS-LFM** | 4 | ■ | ■ | ■ | ■ | ■ | – | – | – | – | – | – | – | – | – | ■ | 4-2, 4-12 |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | – | – | – | – | – | – | – | – | ■ | |
| | 12 | – | ■ | ■ | – | ■ | ■ | – | – | – | – | – | – | – | – | ■ | 4-32, 4-39 |
| Activated carbon filters **MS-LFX** | 4 | ■ | ■ | – | – | – | – | – | – | – | – | – | – | – | – | ■ | 4-2, 4-24 |
| | 6 | ■ | ■ | – | – | – | – | – | – | – | – | – | – | – | – | ■ | |
| | 12 | – | ■ | – | – | – | – | – | – | – | – | – | – | – | – | ■ | 4-32, 4-46 |
| Pressure regulators **MS-LR** | 4 | – | – | – | – | – | – | ■ | ■ | ■ | ■ | ■ | ■ | ■ | – | ■ | 5-2, 5-7 |
| | 6 | – | – | – | – | – | – | ■ | ■ | – | ■ | ■ | ■ | ■ | – | ■ | |
| | 12 | – | – | – | – | – | – | ■ | ■ | – | ■ | – | ■ | ■ | – | ■ | 5-58 |
| Pressure regulators **MS-LRB** | 4 | – | – | – | – | – | – | ■ | ■ | ■ | ■ | ■ | ■ | ■ | – | ■ | 5-2, 5-16 |
| | 6 | – | – | – | – | – | – | ■ | ■ | – | ■ | ■ | ■ | ■ | – | ■ | |
| | 12 | – | | | | | | | | | | | | | | | |
| Precision pressure regulators **MS-LRP** | 4 | – | | | | | | | | | | | | | | | 5-24, 5-29 |
| | 6 | – | – | – | – | – | – | ■ | – | ■ | ■ | ■ | ■ | ■ | – | ■ | |
| | 12 | – | | | | | | | | | | | | | | | |
| Precision pressure regulators **MS-LRPB** | 4 | – | | | | | | | | | | | | | | | 5-24, 5-38 |
| | 6 | – | – | – | – | – | – | ■ | – | ■ | ■ | ■ | ■ | ■ | – | ■ | |
| | 12 | – | | | | | | | | | | | | | | | |

# MS series service units

Product range overview

**FESTO**

| Type | Size | Pneumatic connection in housing | Connecting plate AG... | 0.3 ... 4 | 0.3 ... 7 | 0.5 ... 12 | 0.5 ... 16 | 24 V DC (connection pattern to EN 175301) | 24 V DC (connection pattern M12 to DESINA) | 110 V AC (connection pattern to EN 175301) | 230 V AC (connection pattern to EN 175301) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Code** | | | AG... | D5 | D6 | D7 | D8 | V24 | V24P | V110 | V230 |
| **Individual devices** | | | | | | | | | | | |
| Electrical pressure regulators **MS-LRE** | 4 | – | | | | | | | | | |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | ■ | ■ | ■ | ■ | – | – | – | – |
| | 12 | – | | | | | | | | | |
| Lubricators **MS-LOE** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – |
| On-off valves **MS-EM(1)** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – |
| On-off valves **MS-EE** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | ■ | – | ■ | ■ |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | ■ | – | ■ | ■ |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | ■ | ■ | ■ | ■ |
| Soft-start valves **MS-DL** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – |
| Soft-start valves **MS-DE** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | ■ | – | ■ | ■ |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | ■ | – | ■ | ■ |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | ■ | ■ | ■ | ■ |
| Membrane air dryers **MS-LDM1** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – |
| | 12 | – | | | | | | | | | |
| Branching modules **MS-FRM** | 4 | G⅛, G¼ | G⅛, G¼, G⅜ | – | – | – | – | – | – | – | – |
| | 6 | G¼, G⅜, G½ | G¼, G⅜, G½, G¾ | – | – | – | – | – | – | – | – |
| | 12 | – | G1, G1¼, G1½, G2 | – | – | – | – | – | – | – | – |
| Flow sensors **MS-SFE** | 4 | – | | | | | | | | | |
| | 6 | G½ | G½ | – | – | – | – | – | – | – | – |
| | 12 | – | | | | | | | | | |

# MS series service units

Product range overview

**FESTO**

| Type | Size | Bowl guard | | Pressure indicator | | | | | Switch output | | Options | | → Page |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Plastic bowl guard | Metal bowl | Cover plate (without pressure gauge) | Integrated MS pressure gauge | Adapter for EN pressure gauge G1/8 | Adapter for EN pressure gauge G1/4 | Pressure sensor with display | 2x PNP | 2x NPN | Silencer | Flow direction from right to left | |
| | | R | U | VS | AG | A8 | A4 | AD... | P2 | N2 | S | Z | |
| **Individual devices** | | | | | | | | | | | | | |
| Electrical pressure regulators **MS-LRE** | 4 | – | | | | | | | | | | | 5-46 |
| | 6 | – | – | ■ | ■ | – | ■ | – | – | – | – | ■ | |
| | 12 | – | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Lubricators **MS-LOE** | 4 | ■ | ■ | – | – | – | – | – | – | – | – | ■ | 6-2 |
| | 6 | ■ | ■ | – | – | – | – | – | – | – | – | ■ | |
| | 12 | – | ■ | – | – | – | – | – | – | – | – | ■ | 6-10 |
| | | | | | | | | | | | | | |
| On-off valves **MS-EM(1)** | 4 | – | – | ■ | ■ | ■ | ■ | ■ | – | – | ■ | ■ | 7-2, 7-5 |
| | 6 | – | – | ■ | ■ | – | ■ | ■ | – | – | ■ | ■ | |
| | 12 | – | – | ■ | ■ | – | ■ | – | – | – | ■ | ■ | 7-32, 7-35 |
| On-off valves **MS-EE** | 4 | – | – | ■ | ■ | ■ | ■ | ■ | – | – | ■ | ■ | 7-2, 7-10 |
| | 6 | – | – | ■ | ■ | – | ■ | ■ | – | – | ■ | ■ | |
| | 12 | – | – | ■ | ■ | – | ■ | – | – | – | ■ | ■ | 7-32, 7-39 |
| Soft-start valves **MS-DL** | 4 | – | – | ■ | ■ | ■ | ■ | ■ | – | – | – | ■ | 7-2, 7-18 |
| | 6 | – | – | ■ | ■ | – | ■ | ■ | – | – | – | ■ | |
| | 12 | – | – | ■ | ■ | – | ■ | – | – | – | – | ■ | 7-32, 7-43 |
| Soft-start valves **MS-DE** | 4 | – | – | ■ | ■ | ■ | ■ | ■ | – | – | – | ■ | 7-2, 7-23 |
| | 6 | – | – | ■ | ■ | – | ■ | ■ | – | – | – | ■ | |
| | 12 | – | – | ■ | ■ | – | ■ | – | – | – | – | ■ | 7-32, 7-47 |
| | | | | | | | | | | | | | |
| Membrane air dryers **MS-LDM1** | 4 | – | ■ | – | – | – | – | – | – | – | – | ■ | 8-2 |
| | 6 | – | ■ | – | – | – | – | – | – | – | – | ■ | |
| | 12 | – | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Branching modules **MS-FRM** | 4 | – | – | ■ | ■ | ■ | ■ | ■ | – | – | – | ■ | 9-2 |
| | 6 | – | – | ■ | ■ | – | ■ | ■ | – | – | – | ■ | |
| | 12 | – | – | ■ | – | – | – | – | – | – | – | – | 9-14 |
| | | | | | | | | | | | | | |
| Flow sensors **MS-SFE** | 4 | – | | | | | | | | | | | 10-2 |
| | 6 | – | – | – | – | – | – | – | ■ | ■ | – | ■1) | |
| | 12 | – | | | | | | | | | | | |

1) To be ordered via configurator software only → www.festo.com/en/engineering

# MS4/MS6 series service units

**Wide range of configuration options**
➔ **www.festo.com/en/engineering**
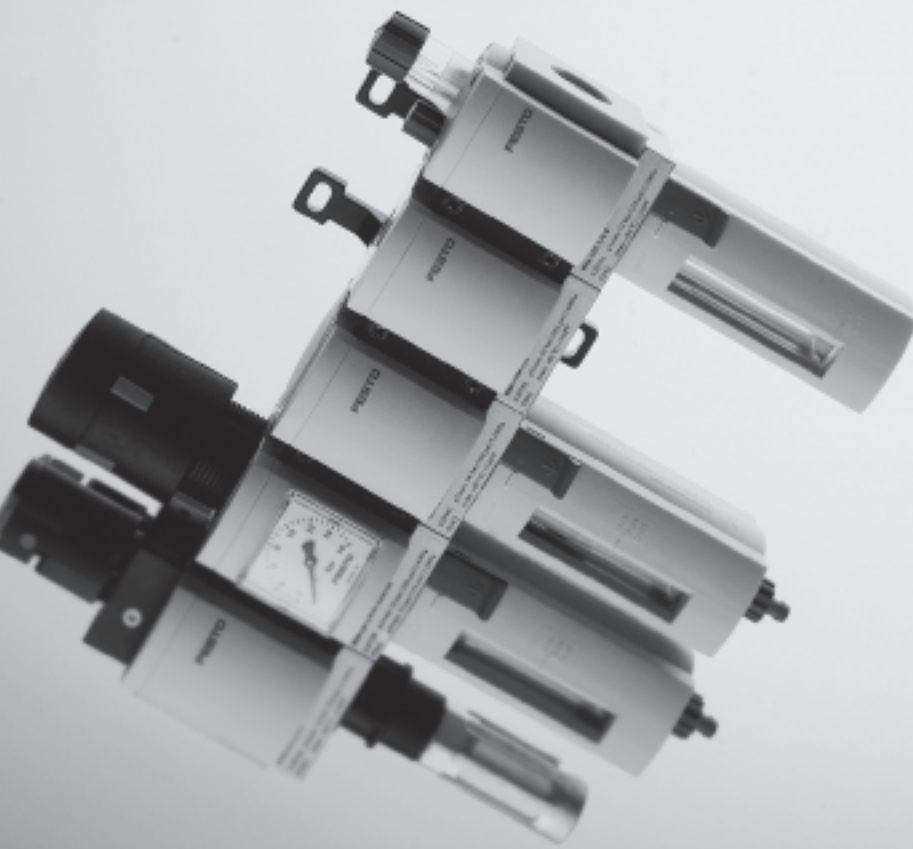
- **MS4 – grid
  dimension 40 mm
  MS6 – grid
  dimension 62 mm**

- **Modular**

- **Easy to assemble**

- **Broad range of functions**

- **Compact with high flow rates**

- **Modern design**

- **Wide choice of variants**

- **Integrated safety functions**

**Specified types in accordance with
ATEX directive for potentially
explosive atmospheres**
➔ **www.festo.com/en/ex**

# Service unit combinations MSB4/MSB6, MS series

Peripherals overview
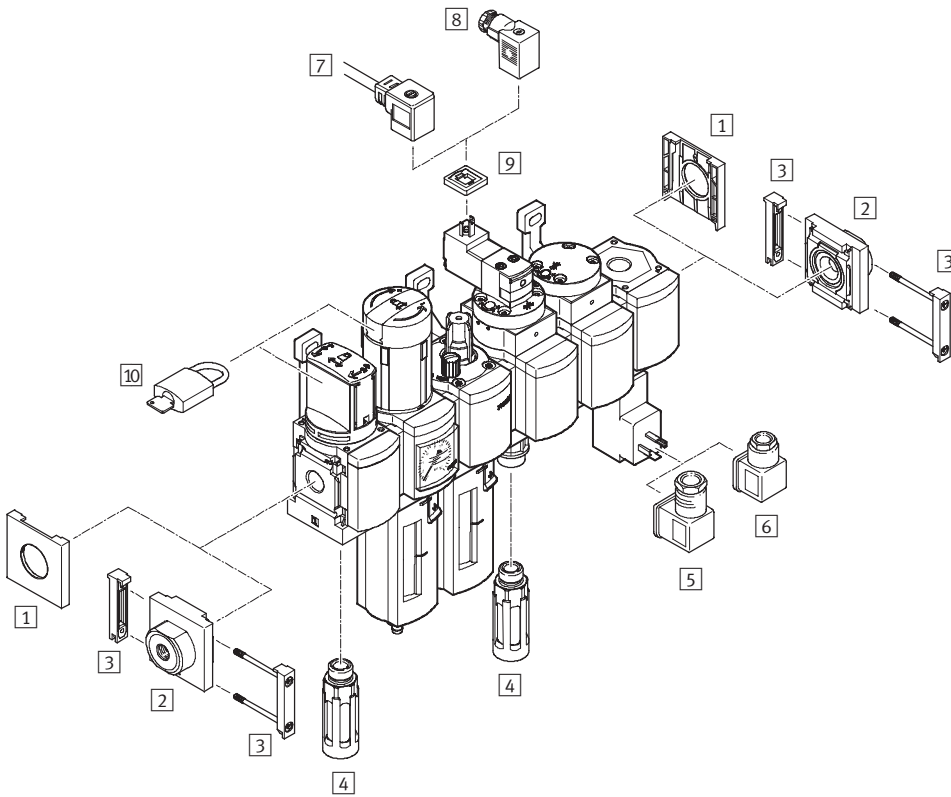
- ▊ - Note

The choice of accessories depends on the selected service unit combination.

Range of accessories
➔ Peripherals pages of the individual devices

| Mounting attachments and accessories | ➔ Page |
|---|---|
| 1 Cover cap<br>MS4/6-END | 11-3 |
| 2 Connecting plate<br>MS4/6-AG… | 11-2 |
| 3 Module connector<br>MS4/6-MV | 11-7 |
| 4 Silencer<br>U | 11-10 |
| 5 Angled socket<br>PEV-¼-WD-LED | 11-9 |
| 6 Plug socket<br>MSSD-C-4P | 11-9 |
| 7 Plug socket with cable<br>KMEB | 11-9 |
| 8 Plug socket<br>MSSD-EB | 11-9 |
| 9 Illuminating seal<br>MEB-LD | 11-9 |
| 10 Padlock<br>LRVS-D | 11-10 |
| – Mounting bracket (for service unit MSB-FRC)<br>MS4/6-WP/WPB/WPM | 11-5, 11-6 |

| | | MSB | 6 | – | ⅜ | – | FRC2:J6 | M1 |
|---|---|---|---|---|---|---|---|---|

| **Series** | |
|---|---|
| MSB | Service unit |

| **Size** | |
|---|---|
| 4 | Grid dimension 40 mm |
| 6 | Grid dimension 62 mm |

| **Pneumatic connection** | |
|---|---|
| ⅛ | Thread G⅛ |
| ¼ | Thread G¼ |
| ⅜ | Thread G⅜ |
| ½ | Thread G½ |

| **Service unit consisting of:** | |
|---|---|
| • **Filter regulator with pressure gauge, lockable standard type rotary knob** | |
| • **Lubricator** | |

| **Pressure regulation range 0.3 … 7 bar** | |
|---|---|
| Plastic bowl guard | |
| FRC3:J7 | Grade of filtration 5 µm, manual rotary condensate drain |
| FRC4:J8 | Grade of filtration 5 µm, fully automatic condensate drain |
| FRC1:J5 | Grade of filtration 40 µm, manual rotary condensate drain |
| FRC2:J6 | Grade of filtration 40 µm, fully automatic condensate drain |

| **Pressure regulation range 0.5 … 12 bar** | |
|---|---|
| Plastic bowl guard | |
| FRC7:J3 | Grade of filtration 5 µm, manual rotary condensate drain |
| FRC8:J4 | Grade of filtration 5 µm, fully automatic condensate drain |
| FRC5:J1 | Grade of filtration 40 µm, manual rotary condensate drain |
| FRC6:J2 | Grade of filtration 40 µm, fully automatic condensate drain |
| Metal bowl | |
| FRC11:J9 | Grade of filtration 5 µm, manual rotary condensate drain |
| FRC12:J10 | Grade of filtration 5 µm, fully automatic condensate drain |
| FRC9:J11 | Grade of filtration 40 µm, manual rotary condensate drain |
| FRC10:J12 | Grade of filtration 40 µm, fully automatic condensate drain |

| **Lubricators** | |
|---|---|
| M1 | Plastic bowl guard |
| M2 | Metal bowl |

MS series service units
Service units

**2**

# Service units MSB4/MSB6-FRC, MS series

Technical data

**FESTO**

Function
With condensate drain
manual rotary



- ▮▮ - Flow rate
800 ... 4,800 l/min
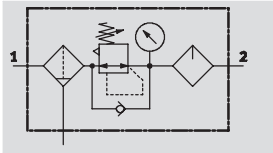
With condensate drain
fully automatic
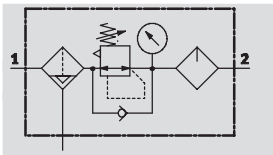


- ▮ - Temperature range
−10 ... +60 °C

-▬- Input pressure
1.5 ... 20 bar



- Filter, regulator and lubricator func-
tion in a single unit
- High flow rate and highly efficient
removal of contaminants
- Good regulating characteristics
with minimal pressure hysteresis
- Setting values are secured by lock-
ing the rotary knob

- Lockable rotary knob
- Two pressure regulation ranges:
0.3 ... 7 bar and 0.5 ... 12 bar
- Choice of filter cartridges: 5 μm or
40 μm
- With manual or integrated, fully au-
tomatic condensate drain

| General technical data | | | | | |
|---|---|---|---|---|---|
| Size | MSB4 | | MSB6 | | |
| Pneumatic connection 1, 2 | G⅛ | G¼ | G¼ | G⅜ | G½ |
| Design | Filter regulator with pressure gauge | | | | |
| | Proportional standard mist lubricator | | | | |
| Regulating function | With primary pressure compensation | | | | |
| | With secondary venting | | | | |
| | With return flow function | | | | |
| | Output pressure constant | | | | |
| Type of mounting | Via accessories | | | | |
| Assembly position | Vertical ±5° | | | | |
| Grade of filtration            [μm] | 5 (air purity class at the output 3.7.– to DIN ISO 8573-1) | | | | |
| | 40 (air purity class at the output 5.7.– to DIN ISO 8573-1) | | | | |
| Bowl guard | Plastic bowl guard | | Plastic bowl guard | | |
| | – | | Metal bowl guard | | |
| Condensate drains | Manual rotary | | | | |
| | Fully automatic | | | | |
| Actuator lock | Rotary knob with integrated lock | | | | |
| Pressure regulation range      [bar] | 0.3 ... 7 | | | | |
| | 0.5 ... 12 | | | | |
| Pressure indicator | With pressure gauge | | | | |

· ▮ · Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

# Service units MSB4/MSB6-FRC, MS series

Technical data

## Standard nominal flow rate qnN[1] [l/min]

| Size | | MSB4 | | MSB6 | | |
|---|---|---|---|---|---|---|
| Pneumatic connection | | G⅛ | G¼ | G¼ | G⅜ | G½ |
| **Pressure regulation range 0.3… 7 bar** | | | | | | |
| Grade of filtration | 5 µm | 900 | 1,300 | 2,000 | 4,400 | 4,600 |
| | 40 µm | 950 | 1,400 | 2,100 | 4,600 | 4,800 |
| | | | | | | |
| **Pressure regulation range 0.5… 12 bar** | | | | | | |
| Grade of filtration | 5 µm | 800 | 850 | 1,700 | 3,400 | 3,600 |
| | 40 µm | 850 | 900 | 1,900 | 3,500 | 3,700 |

1)    Measured at $p1 = 10$ bar and $p2 = 6$ bar, $\Delta p = 1$ bar.

## Operating and environmental conditions

| Condensate drains | | Manual rotary | | Fully automatic | |
|---|---|---|---|---|---|
| Size | | MSB4 | MSB6 | MSB4 | MSB6 |
| Supply pressure | [bar] | 1.5 … 14 | 1.5 … 20 | 1.5 … 12 | 1.5 … 12 |
| Operating medium | | Compressed air | | | |
| Ambient temperature | [°C] | −10 … +60 | | +5 … +60 | |
| Temperature of medium | [°C] | −10 … +60 | | +5 … +60 | |
| Storage temperature | [°C] | −10 … +60 | | −10 … +60 | |
| Corrosion resistance | CRC[1] | 2 | | | |

1)    Corrosion resistance class 2 according to Festo standard 940 070
       Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants
       or lubricating agents.

## Weights [g]

| Size | MSB4 | MSB6 |
|---|---|---|
| With plastic bowl guard | 500 | 1,495 |
| With metal bowl guard | – | 1,713 |

## Materials

Sectional view
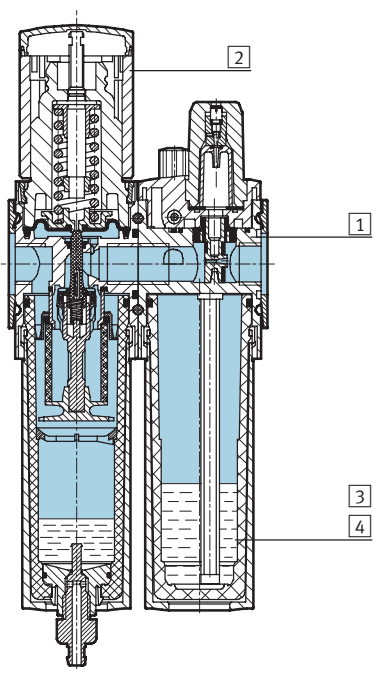


| Service unit | | |
|---|---|---|
| 1 | Body | Die-cast aluminium |
| 2 | Regulating knob | Polyamide/polyacetate |
| 3 | Plastic bowl guard | Polycarbonate |
| 4 | Metal bowl guard | Wrought aluminium alloy |
| – | Seals | Nitrile rubber |

# Service units MSB4/MSB6-FRC, MS series

Technical data

**FESTO**

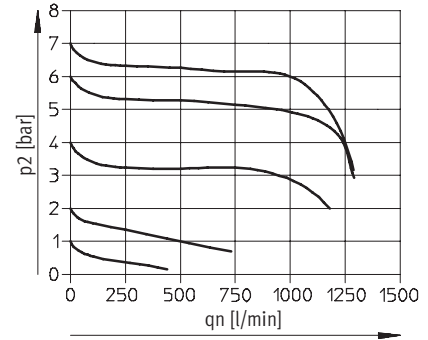| **Standard flow rate qn as a function of output pressure p2** | | |
|---|---|---|
| Pressure regulation range 0.3 … 7 bar<br>MSB4-⅛ | Grade of filtration 5 µm | Grade of filtration 40 µm |

Primary pressure p1 = 10 bar
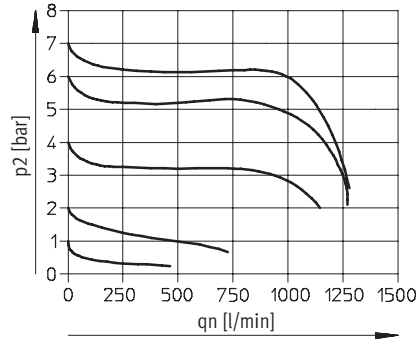


| MSB4-¼ | | |
|---|---|---|

Primary pressure p1 = 10 bar



| Pressure regulation range 0.5 … 12 bar<br>MSB4-⅛ | Grade of filtration 5 µm | Grade of filtration 40 µm |
|---|---|---|

Primary pressure p1 = 10 bar



| MSB4-¼ | | |
|---|---|---|

Primary pressure p1 = 10 bar

# Service units MSB4/MSB6-FRC, MS series

Technical data

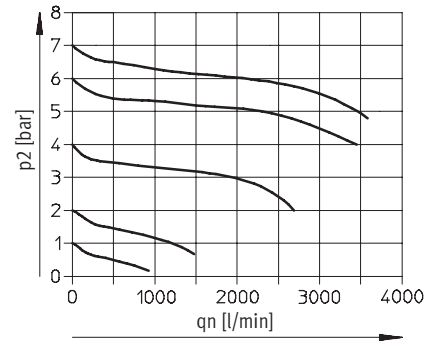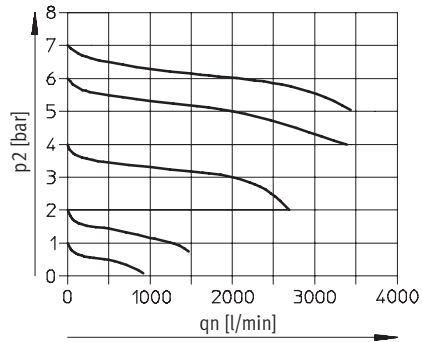| Standard flow rate qn as a function of output pressure p2 | | |
|---|---|---|
| Pressure regulation range 0.3 … 7 bar | Grade of filtration 5 μm | Grade of filtration 40 μm |
| MSB6-¼ | | |

Primary pressure p1 = 10 bar
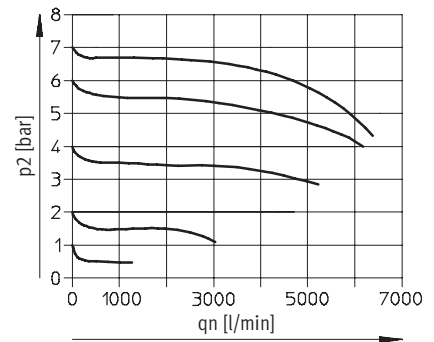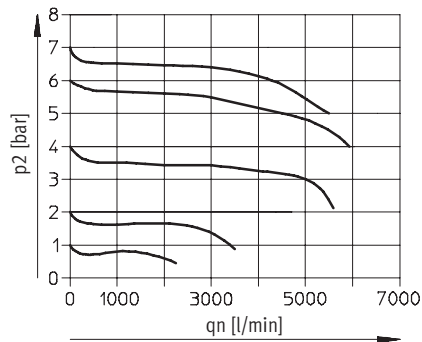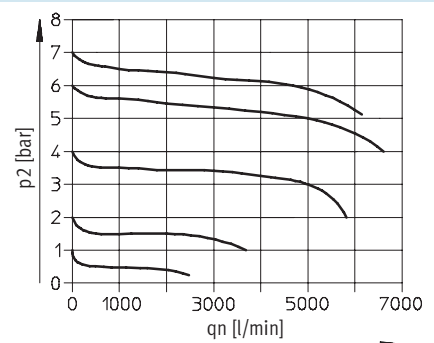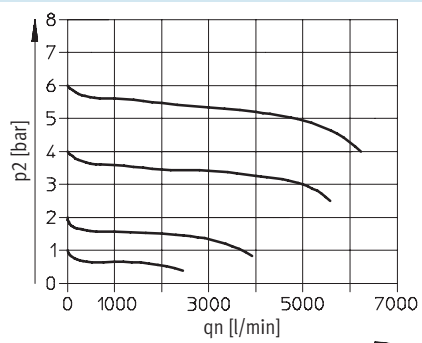


MSB6-⅜

Primary pressure p1 = 10 bar



MSB6-½

Primary pressure p1 = 10 bar

# Service units MSB4/MSB6-FRC, MS series

Technical data

**FESTO**

| Standard flow rate qn as a function of output pressure p2 | | |
|---|---|---|
| Pressure regulation range 0.5 … 12 bar | Grade of filtration 5 µm | Grade of filtration 40 µm |
| MSB6-¼ | | |

Primary pressure p1 = 10 bar



MSB6-⅜

Primary pressure p1 = 10 bar



MSB6-½

Primary pressure p1 = 10 bar

# Service units MSB4/MSB6-FRC, MS series

Technical data

## Dimensions

Download CAD data ➔ www.festo.com/en/engineering
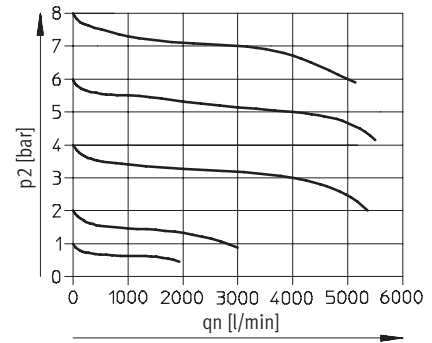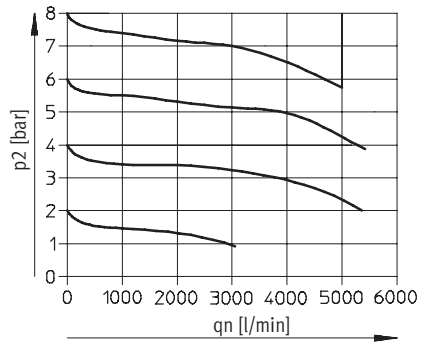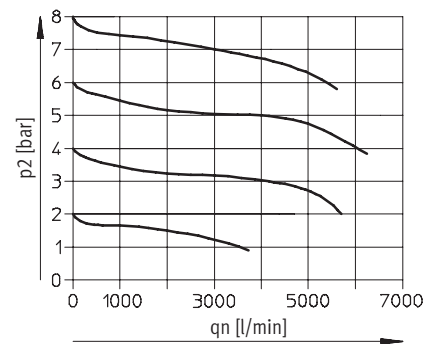
With pressure gauge, display unit [bar]



1 Installation dimensions     ➔ Flow direction
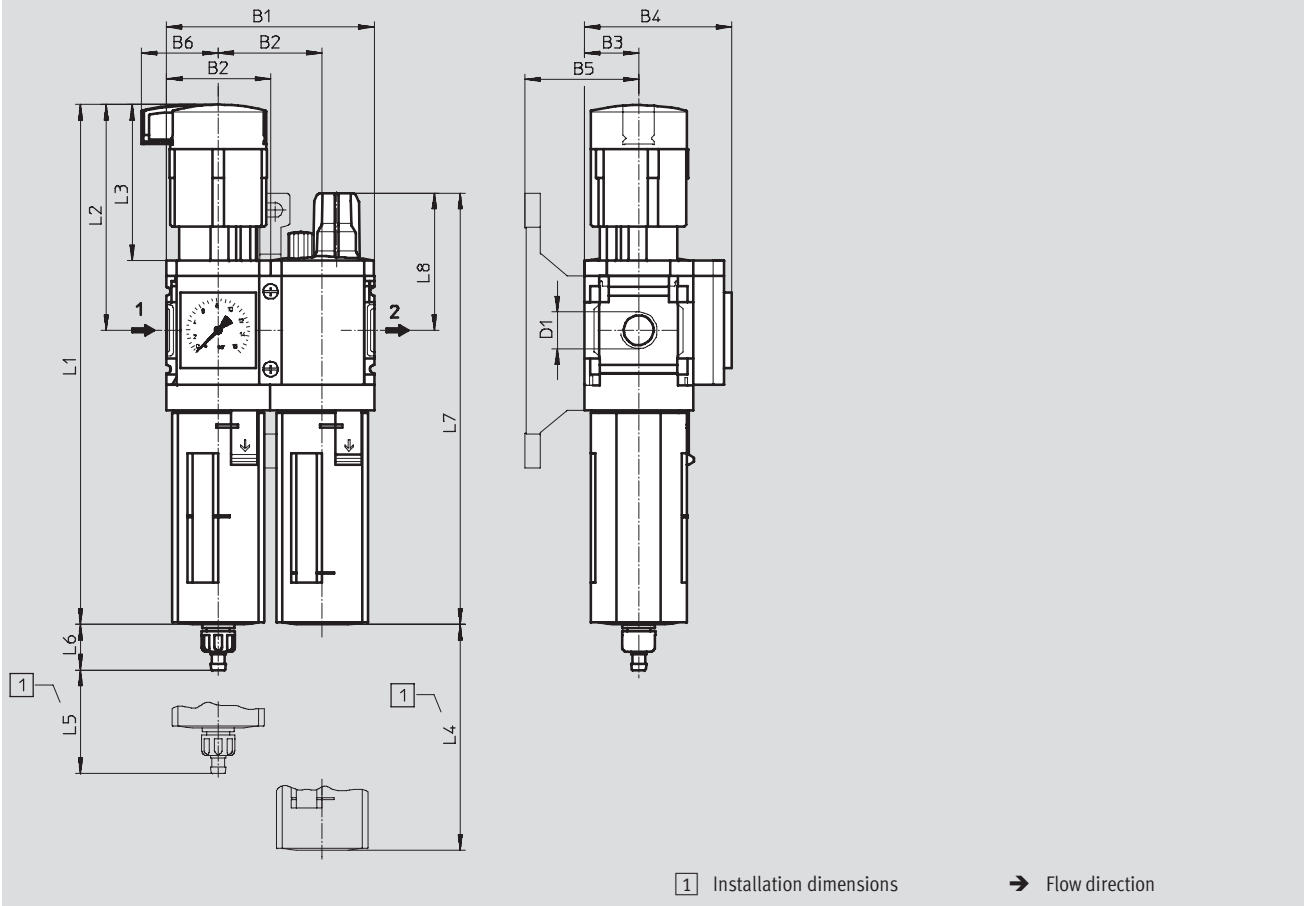
| Type | B1 | B2 | B3 | B4 | B5 | B6 | D1 | L1 | L2 | L3 | L4 | L5 | L6 Condensate drain | | L7 | L8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | manual rotary | fully auto-matic | | |
| MSB4-⅛ | 80.4 | 40.2 | 21 | 57 | 44 | 29.7 | G⅛ | 201 | 87 | 60 | 80 | 25 | 17.7 | 20.4 | 167 | 53 |
| MSB4-¼ | | | | | | | G¼ | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| MSB6-¼ | 124 | 62 | 31 | 77 | 54 | 38.8 | G¼ | 284.8 | 134.5 | 95.5 | 130 | 68 | 15.8 | 18.5 | 215.3 | 65.6 |
| MSB6-⅜ | | | | | | | G⅜ | | | | | | | | | |
| MSB6-½ | | | | | | | G½ | | | | | | | | | |

· ∎ · Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

# Service units MSB4/MSB6-FRC, MS series

Technical data

| **Ordering data** | | | | | | |
|---|---|---|---|---|---|---|
| Pressure regulation range 0.3 … 7 bar | | | | | | |
| Size | Condensate drain | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| Plastic bowl guard | | | | | | |
| MSB4 | manual rotary | G⅛ | 531 129 | MSB4-⅛-FRC3:J7M1 | 531 125 | MSB4-⅛-FRC1:J5M1 |
| | | G¼ | 531 113 | MSB4-¼-FRC3:J7M1 | 531 109 | MSB4-¼-FRC1:J5M1 |
| | fully automatic | G⅛ | 531 131 | MSB4-⅛-FRC4:J8M1 | 531 127 | MSB4-⅛-FRC2:J6M1 |
| | | G¼ | 531 115 | MSB4-¼-FRC4:J8M1 | 531 111 | MSB4-¼-FRC2:J6M1 |
| MSB6 | manual rotary | G¼ | 530 264 | MSB6-¼-FRC3:J7M1 | 530 254 | MSB6-¼-FRC1:J5M1 |
| | | G⅜ | 530 288 | MSB6-⅜-FRC3:J7M1 | 530 278 | MSB6-⅜-FRC1:J5M1 |
| | | G½ | 530 240 | MSB6-½-FRC3:J7M1 | 530 230 | MSB6-½-FRC1:J5M1 |
| | fully automatic | G¼ | 530 266 | MSB6-¼-FRC4:J8M1 | 530 262 | MSB6-¼-FRC2:J6M1 |
| | | G⅜ | 530 290 | MSB6-⅜-FRC4:J8M1 | 530 286 | MSB6-⅜-FRC2:J6M1 |
| | | G½ | 530 242 | MSB6-½-FRC4:J8M1 | 530 238 | MSB6-½-FRC2:J6M1 |

| **Ordering data** | | | | | | |
|---|---|---|---|---|---|---|
| Pressure regulation range 0.5 … 12 bar | | | | | | |
| Size | Condensate drain | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| Plastic bowl guard | | | | | | |
| MSB4 | manual rotary | G⅛ | 531 137 | MSB4-⅛-FRC7:J3M1 | 531 133 | MSB4-⅛-FRC5:J1M1 |
| | | G¼ | 531 121 | MSB4-¼-FRC7:J3M1 | 531 117 | MSB4-¼-FRC5:J1M1 |
| | fully automatic | G⅛ | 531 139 | MSB4-⅛-FRC8:J4M1 | 531 135 | MSB4-⅛-FRC6:J2M1 |
| | | G¼ | 531 123 | MSB4-¼-FRC8:J4M1 | 531 119 | MSB4-¼-FRC6:J2M1 |
| MSB6 | manual rotary | G¼ | 530 272 | MSB6-¼-FRC7:J3M1 | 530 268 | MSB6-¼-FRC5:J1M1 |
| | | G⅜ | 530 296 | MSB6-⅜-FRC7:J3M1 | 530 292 | MSB6-⅜-FRC5:J1M1 |
| | | G½ | 530 248 | MSB6-½-FRC7:J3M1 | 530 244 | MSB6-½-FRC5:J1M1 |
| | fully automatic | G¼ | 530 274 | MSB6-¼-FRC8:J4M1 | 530 270 | MSB6-¼-FRC6:J2M1 |
| | | G⅜ | 530 298 | MSB6-⅜-FRC8:J4M1 | 530 294 | MSB6-⅜-FRC6:J2M1 |
| | | G½ | 530 250 | MSB6-½-FRC8:J4M1 | 530 246 | MSB6-½-FRC6:J2M1 |
| Metal bowl | | | | | | |
| MSB6 | manual rotary | G¼ | 530 258 | MSB6-¼-FRC11:J9M2 | 530 276 | MSB6-¼-FRC9:J11M2 |
| | | G⅜ | 530 282 | MSB6-⅜-FRC11:J9M2 | 530 300 | MSB6-⅜-FRC9:J11M2 |
| | | G½ | 530 234 | MSB6-½-FRC11:J9M2 | 530 252 | MSB6-½-FRC9:J11M2 |
| | fully automatic | G¼ | 530 260 | MSB6-¼-FRC12:J10M2 | 530 256 | MSB6-¼-FRC10:J12M2 |
| | | G⅜ | 530 284 | MSB6-⅜-FRC12:J10M2 | 530 280 | MSB6-⅜-FRC10:J12M2 |
| | | G½ | 530 236 | MSB6-½-FRC12:J10M2 | 530 232 | MSB6-½-FRC10:J12M2 |

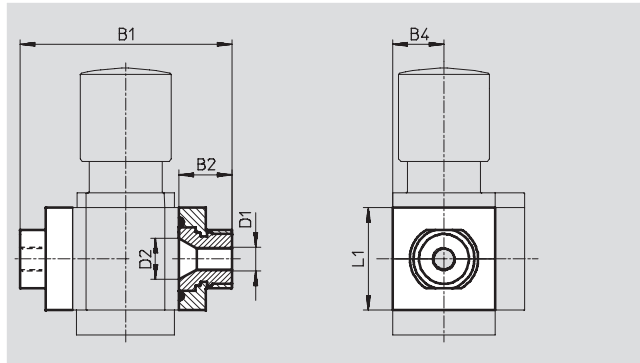# MS series service units

# MS series service units

Accessories

**Connecting plate MS4/6-AG...**

(order code: AG...)

• Adapter for pneumatic connection
• MS6-AGE for implementing
  threaded connection G¾

Material:
Aluminium



| Dimensions and ordering data | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B4 | D1 | D2 | L1 | Weight [g] | Part No. | Type |
| MS4 | 83.5 | 21.5 | 21 | G⅛ | 16.8 | 42 | 128 | **526 068** | **MS4-AGA** |
| | | | | G¼ | | | | **526 069** | **MS4-AGB** |
| | | | | G⅜ | | | | **526 070** | **MS4-AGC** |
| MS6 | 115 | 26.5 | 31 | G¼ | 24 | 62 | 300 | **526 080** | **MS6-AGB** |
| | | | | G⅜ | | | | **526 081** | **MS6-AGC** |
| | | | | G½ | | | | **526 082** | **MS6-AGD** |
| | | | | G¾ | | | | **526 083** | **MS6-AGE** |

-❘- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

**Connecting plate MS12-AG...**

(order code: AG...)

• Adapter for pneumatic connection

Material:
Die-cast aluminium
Free of copper and PTFE
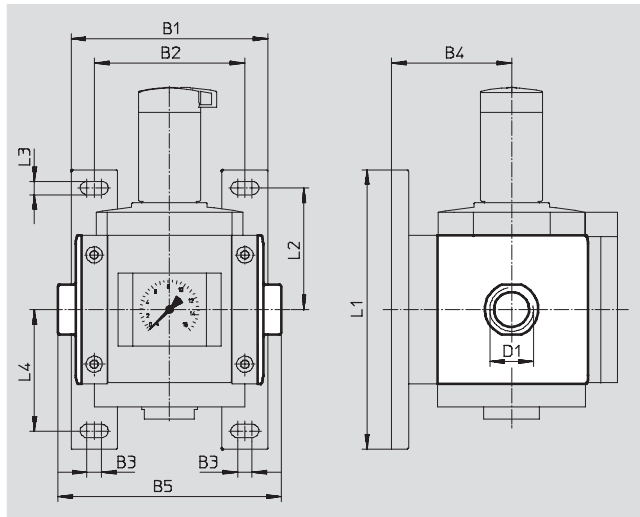


| Dimensions and ordering data | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B3 | B4 | B5 | D1 | L1 | L2 | L3 | L4 | Weight [g] | Part No. | Type |
| MS12 | 162 | 124 | 12 | 99 | 184 | G1 | 230 | 100 | 11 | 100 | 1,300 | **537 135** | **MS12-AGF** |
| | | | | | 184 | G1¼ | | | | | | **537 136** | **MS12-AGG** |
| | | | | | 184 | G1½ | | | | | | **537 137** | **MS12-AGH** |
| | | | | | 196 | G2 | | | | | | **537 138** | **MS12-AGI** |

-❘- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

# MS series service units

Accessories

**FESTO**

### Cover cap MS4/6-END

- Can be used to cover the body sides of the first and last module if connecting plates are not used.

Material:
Reinforced polyamide
Free of copper and PTFE



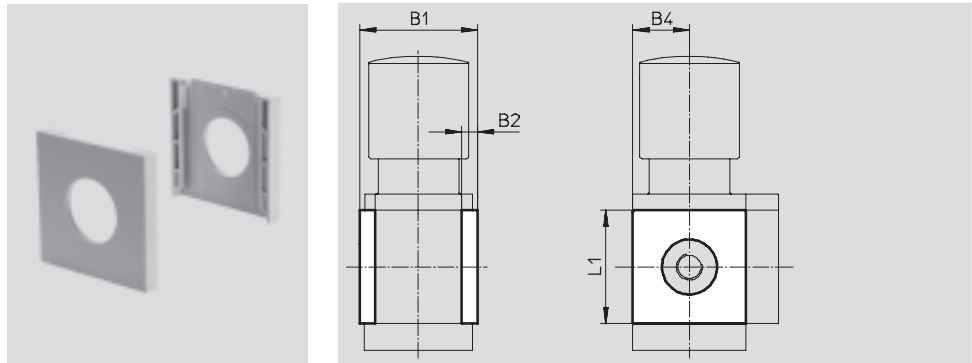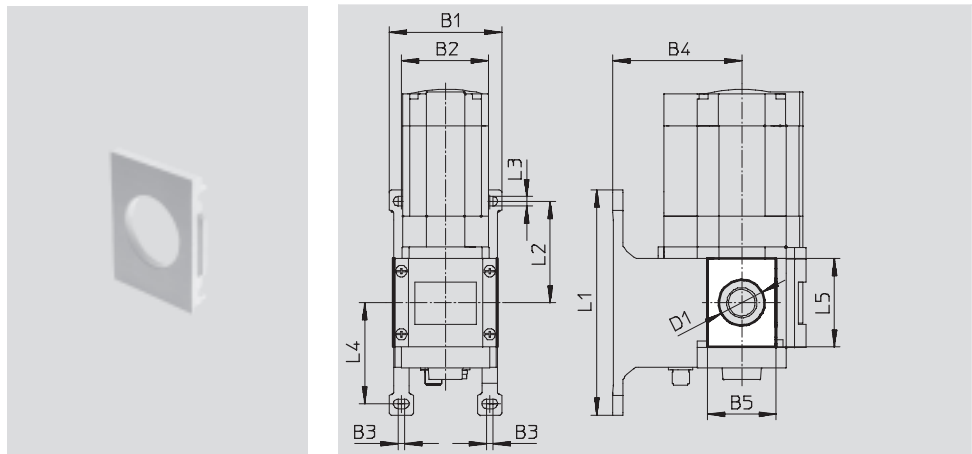| Dimensions and ordering data | | | | | | |
|---|---|---|---|---|---|---|
| Size | B1 | B2 | B4 | L1 | Part No. | Type |
| MS4 | 43.6 | 6 | 21 | 42 | **538 779** | **MS4-END** |
| MS6 | 67 | 8 | 31 | 62 | **538 780** | **MS6-END** |

-❙- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

### Mounting plate MS4/6-AEND

(order code: WBE; scope of delivery includes wall mounting plate MS6-WPB)

- In combination with wall mounting plate MS-WP or MS-WPB for mounting an individual unit on a wall with direct thread

Material:
Reinforced polyamide
Conforms to RoHS
Free of copper and PTFE



| Dimensions and ordering data | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B3 | B4 | | B5 | D1 | L1 | L2 | L3 | L4 | L5 | CRC[1] | Weight | Part No. | Type |
| | | | | WP | WPB | | $\varnothing$ | | | | | | | [g] | | |
| MS4 | 55.2 | 40.2 | 4 | 44 | 66 | 30.4 | 20.3 | 106 | 46.5 | 5.6 | 46.7 | 42 | 2 | 4 | **542 966** | **MS4-AEND** -◐- New |
| MS6 | 79 | 62 | 4.5 | 54 | 90.5 | 48.4 | 32 | 158 | 71 | 6.6 | 71 | 62 | 2 | 17 | **535 408** | **MS6-AEND** |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# MS series service units
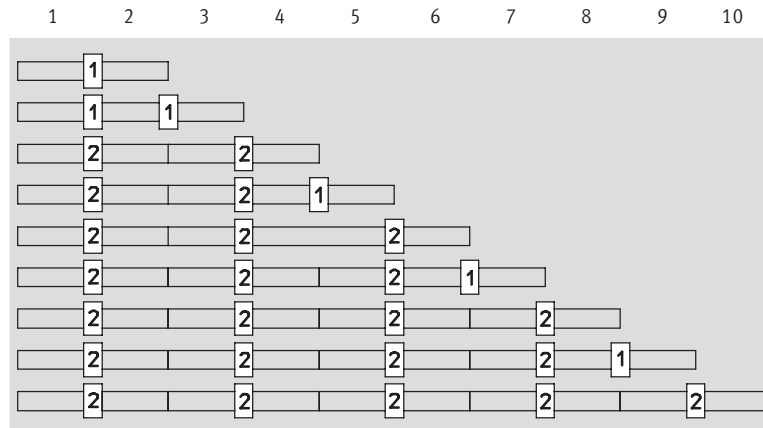
Accessories

## Mounting bracket MS4/6-WP…
Clearances for mounting service unit combinations

| 1 unit | | Number of units |
|---|---|---|
| MS4-…: 40 mm | | |
| MS6-…: 62 mm | | |

1 2 3 4 5 6 7 8 9 10

2 units

MS4-…: 80 mm

MS6-…: 124 mm with WP, WPB

138 mm with WPM-2D



1 Mounting bracket WP, WPB or WPM-D

2 Mounting bracket WP, WPB or WPM-2D

### Mounting dimensions
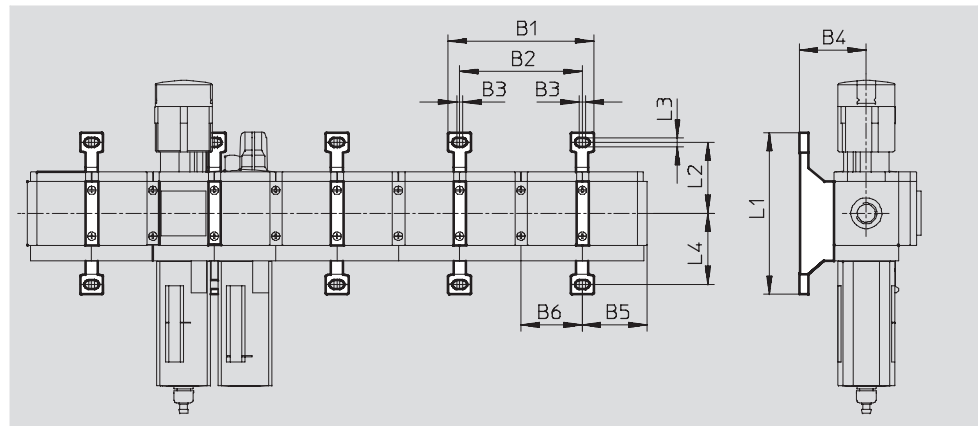


| Type | B1 | B2 | B3 | B4 | B5 | B6 | L1 | L2 | L3 | L4 |
|---|---|---|---|---|---|---|---|---|---|---|
| **MS4-WP** | | | | 44 | | | 106 | 46.5 | | 46.7 |
| **MS4-WPB** | 95.2 | 80 | 4 | 66 | 41.9 | 40 | 106 | 46.5 | 5.6 | 46.7 |
| **MS4-WPM-…D** | | | | 44 | | | 92.8 | 34.8 | | 40 |
| | | | | | | | | | | |
| **MS6-WP** | 141 | 124 | 4.5 | 54 | 64.5 | 62 | 158 | 71 | 6.6 | 71 |
| **MS6-WPB** | 141 | 124 | 4.5 | 90.5 | 64.5 | 62 | 158 | 71 | 6.6 | 71 |
| **MS6-WPM-…D** | 168 | 138 | 17.5 | 54 | 65.5 | 69 | 98.6 | 41.3 | | 41.3 |

# MS series service units

**FESTO**

**Mounting bracket MS4/6-WP**

(order code: WP)
- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- For pressure regulator LRB with angled outlet block B... at rear

Material:
Die-cast aluminium

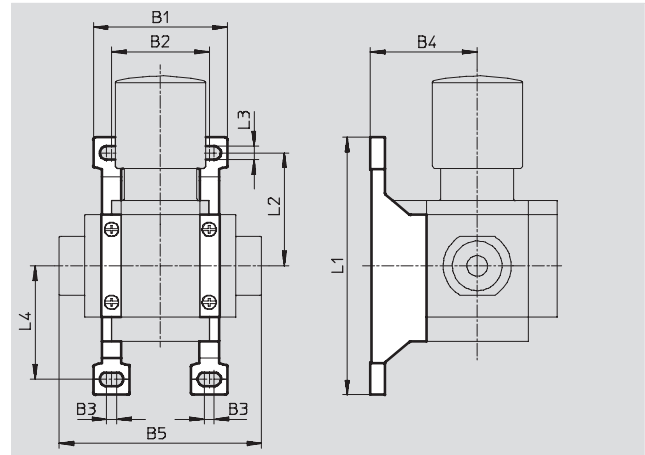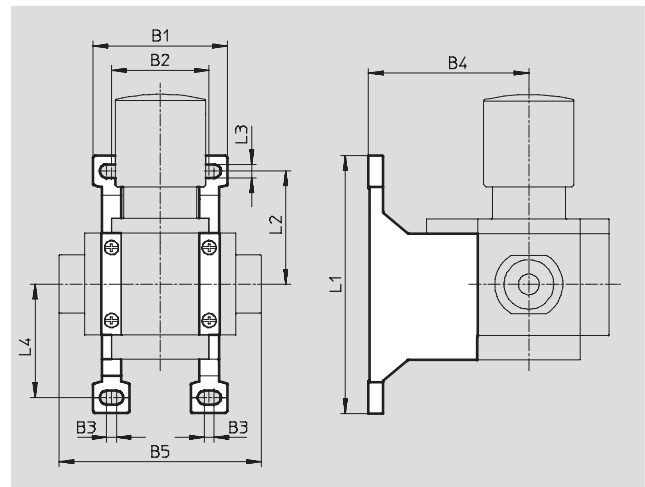| Dimensions and ordering data | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B3 | B4 | B5 | L1 | L2 | L3 | L4 | Weight [g] | Part No. | Type |
| MS4 | 55.2 | 40.2 | 4 | 44 | 83.4 | 106 | 46.5 | 5.6 | 46.7 | 39 | **532 184** | **MS4-WP** |
| MS6 | 79 | 62 | 4.5 | 54 | 115 | 158 | 71 | 6.6 | 71 | 76 | **532 195** | **MS6-WP** |

**Mounting bracket MS4/6-WPB**

(order code: WPB)
- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- Provides large wall gap for pressure regulator

Material:
Die-cast aluminium

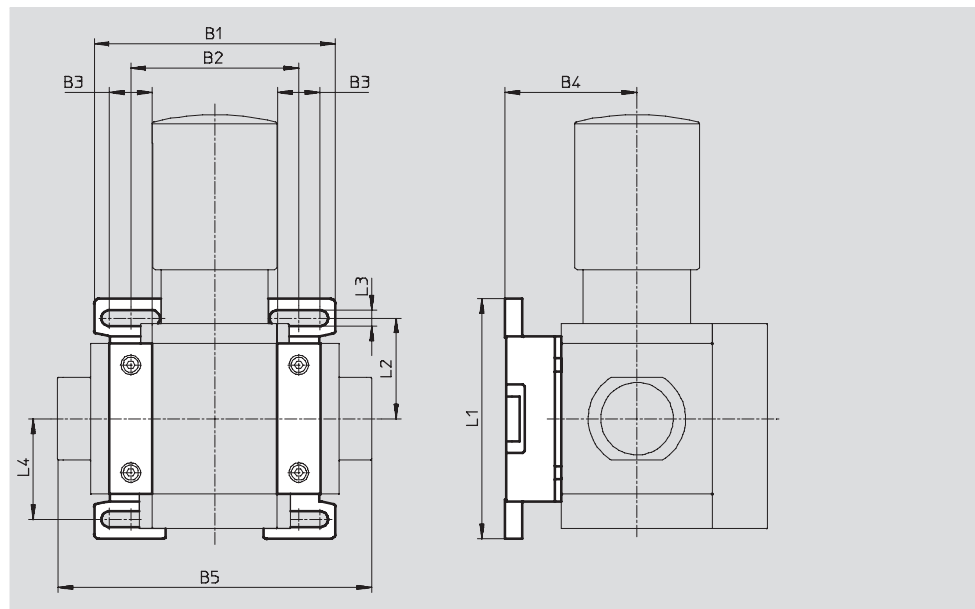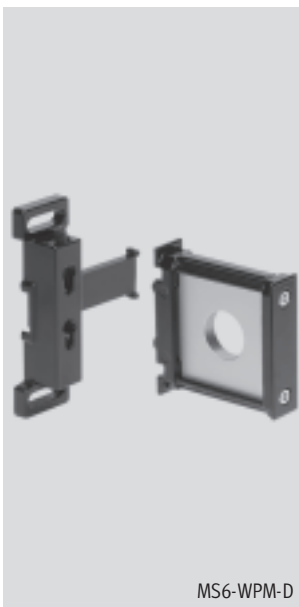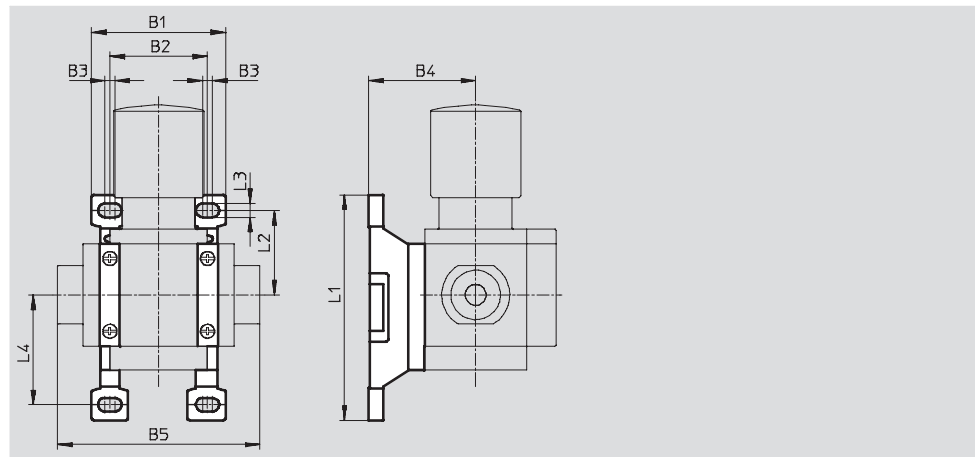| Dimensions and ordering data | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B3 | B4 | B5 | L1 | L2 | L3 | L4 | Weight [g] | Part No. | Type |
| MS4 | 55.2 | 40.2 | 4 | 66 | 83.4 | 106 | 46.5 | 5.6 | 46.7 | 55 | **526 063** | **MS4-WPB** |
| MS6 | 79 | 62 | 4.5 | 90.5 | 115 | 158 | 71 | 6.6 | 71 | 115 | **526 074** | **MS6-WPB** |

# MS series service units

Accessories

FESTO

**Mounting bracket MS4/6-WPM**
(order code: WPM)

- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

The distance piece D or 2D (designated in the type code) is included in the scope of delivery and ensures the correct clearance

Material:
Die-cast aluminium



MS4-WPM-D



MS6-WPM-D

| Dimensions and ordering data | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | B1 | B2 | B3 | B4 | B5 | L1 | L2 | L3 | L4 | Clearance | Weight [g] | Part No. | Type |
| MS4 | 55.2 | 40 | 4 | 44 | 83.4 | 92.8 | 34.8 | 5.6 | 45.2 | 40 | 45 | **526 060** | **MS4-WPM-D** |
| | 95.2 | 80 | | | 123.4 | | | | | 80 | 55 | **526 061** | **MS4-WPM-2D** |
| MS6 | 99 | 69 | 17.5 | 54 | 129 | 98.6 | 41.3 | 6.6 | 41.3 | 62 | 144 | **526 073** | **MS6-WPM-D** |
| | 168 | 138 | | | 198 | | | | | 124 | 154 | **532 186** | **MS6-WPM-2D** |

MS series service units
Accessories

**11**

11-6

Products 2007 – Subject to change – 2007/03

# MS series service units
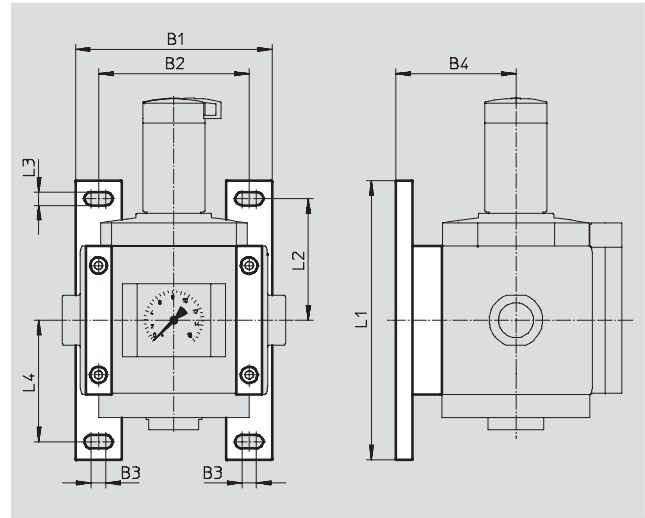
Accessories

**Wall mounting plate MS12-WP**

(order code: WP)

- For connecting the modules for wall mounting
- In combination with a connecting plate for mounting an individual unit on a wall

Material:
Die-cast aluminium
Free of copper and PTFE

| Dimensions and ordering data | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|----------|---------|
| Size | B1 | B2 | B3 | B4 | L1 | L2 | L3 | L4 | Weight [g] | Part No. | Type |
| MS12 | 162 | 124 | 12 | 99 | 230 | 100 | 11 | 100 | 700 | **537 133** | **MS12-WP** |

**Module connector MS…-MV**

- For connecting modules

Material:
MS4/6: Stainless steel/polyacetate

MS12: Die-cast aluminium,
free of copper and PTFE

MS4/6

MS12

| Ordering data | | | |
|------|------------|----------|---------|
| Size | Weight [g] | Part No. | Type |
| MS4 | 36 | **532 798** | **MS4-MV** |
| MS6 | 54 | **532 799** | **MS6-MV** |
| MS12 | 500 | **537 134** | **MS12-MV** |

**Module connector MS4/6-MVM**

- For installation of modules with regulating knob pointing downwards

Material:
Die-cast aluminium
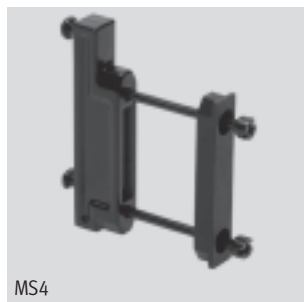
MS4

MS6

| Ordering data | | |
|------|----------|---------|
| Size | Part No. | Type |
| MS4 | **532 800** | **MS4-MVM** |
| MS6 | **532 801** | **MS6-MVM** |

# MS series service units
Accessories

**FESTO**

**Filter cartridge MS4/6-LF...**



MS...-LFM



MS...-LFP



MS...-LFX

| Ordering data | | | | |
|---|---|---|---|---|
| Size | | Grade of filtration [µm] | Part No. | Type |
| MS4 | Micro-filter cartridge | 0.01 | **162 674** | **MS4/D-MINI-LFM-A** |
| | Fine-filter cartridge | 1 | **162 677** | **MS4/D-MINI-LFM-B** |
| | Filter cartridge | 5 | **534 501** | **MS4-LFP-C** |
| | Filter cartridge | 40 | **534 502** | **MS4-LFP-E** |
| | Active carbon filter cartridge | – | **532 912** | **MS4/D-MINI-LFX** |
| | | | | |
| MS6 | Micro-filter cartridge | 0.01 | **532 909** | **MS6-LFM-A** |
| | Micro-filter cartridge (for variant HF, high flow rate) | 0.01 | **552 093** | **MS6-LFM-A-HF** -◉- |
| | Fine-filter cartridge | 1 | **532 910** | **MS6-LFM-B** |
| | Fine-filter cartridge (for variant HF, high flow rate) | 1 | **552 092** | **MS6-LFM-B-HF** -◉- |
| | Filter cartridge | 5 | **534 499** | **MS6-LFP-C** |
| | Filter cartridge | 40 | **534 500** | **MS6-LFP-E** |
| | Active carbon filter cartridge | – | **532 911** | **MS6-LFX** |
| | Active carbon filter cartridge (for variant HF, high flow rate) | – | **552 094** | **MS6-LFX-HF** -◉- |

**Filter cartridge MS12-LF...**



MS12-LFM-B
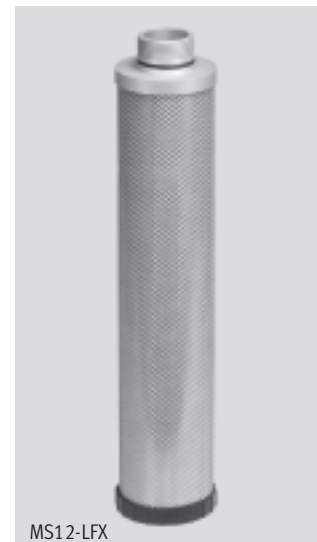


MS12-LFM-A



MS12-LFX

| Ordering data | | | | |
|---|---|---|---|---|
| Size | | Grade of filtration [µm] | Part No. | Type |
| MS12 | Micro-filter cartridge | 0.01 | **537 146** | **MS12-LFM-A** |
| | Fine-filter cartridge | 1 | **537 145** | **MS12-LFM-B** |
| | Filter cartridge | 5 | **537 143** | **MS12-LFP-C** |
| | Filter cartridge | 40 | **537 144** | **MS12-LFP-E** |
| | Active carbon filter cartridge | – | **537 147** | **MS12-LFX** |
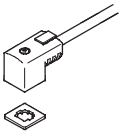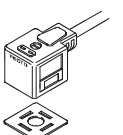
# MS series service units

**FESTO**

Accessories

| Ordering data – Angled socket PEV | | | | | | Technical data → www.festo.com |
|---|---|---|---|---|---|---|
| | Description | Operating voltage range | Electrical connection | Switching status display | Part No. | Type |
| | for PEV-¼-…-OD | 15 …. 30 V DC | 4-pin | Yellow LED | **164 274** | **PEV-¼-WD-LED-24** |
| | | ≤ 230 V AC ≤ 180 V DC | 4-pin | Yellow LED | **164 275** | **PEV-¼-WD-LED-230** |

| Ordering data – Plug socket MSSD | | | | | | Technical data → www.festo.com |
|---|---|---|---|---|---|---|
| | Description | Operating voltage range | Electrical connection | Type of mounting cable connection | Part No. | Type |
| | for PEV-¼-…-OD | ≤ 250 V AC/DC | 3-pin | Clamping screws | **171 157** | **MSSD-C-4P** |
| | for MS4/6-EE/DE | ≤ 250 V AC/DC | 3-pin | Clamping screws | **151 687** | **MSSD-EB** |
| | | | 4-pin | Insulation displacement technology | **192 745** | **MSSD-EB-S-M14** |
| | for MS12-EE/DE | ≤ 250 V AC/DC | 3-pin | Clamping screws | **34 583** | **MSSD-C** |
| | | | 4-pin | Insulation displacement technology | **192 748** | **MSSD-C-S-M16** |

| Ordering data – Plug socket with cable KMEB/KMC | | | | | | | Technical data → www.festo.com |
|---|---|---|---|---|---|---|---|
| | Description | Operating voltage range | Electrical connection | Switching status display | Cable length [m] | Part No. | Type |
| | for MS4/6-EE/DE | 24 V DC | 2-pin | LED | 2.5 | **547 268** | **KMEB-3-24-2,5-LED** |
| | | | | | 5 | **547 269** | **KMEB-3-24-5-LED** |
| | | | | – | 2.5 | **547 270** | **KMEB-3-24-2,5** |
| | | | | | 5 | **547 271** | **KMEB-3-24-5** |
| | | | 3-pin | LED | 2.5 | **151 688** | **KMEB-1-24-2,5-LED** |
| | | | | | 5 | **151 689** | **KMEB-1-24-5-LED** |
| | | | | | 10 | **193 457** | **KMEB-1-24-10-LED** |
| | | 230 V AC | 3-pin | – | 2.5 | **151 690** | **KMEB-1-230AC-2,5** |
| | | | | | 5 | **151 691** | **KMEB-1-230AC-5** |
| | for MS12-EE/DE | 24 V DC | 3-pin | LED | 2.5 | **30 931** | **KMC-1-24DC-2,5-LED** |
| | | | | | 5 | **30 933** | **KMC-1-24DC-5-LED** |
| | | | | | 10 | **193 459** | **KMC-1-24-10-LED** |
| | | 230 V AC | 3-pin | – | 2.5 | **30 932** | **KMC-1-230AC-2,5** |
| | | | | | 5 | **30 934** | **KMC-1-230AC-5** |

| Ordering data – Illuminating seal MEB-LD/MC-LD | | | | Technical data → www.festo.com |
|---|---|---|---|---|
| | Description | Operating voltage range | Part No. | Type |
| | for plug socket with cable KMEB and plug socket MSSD-EB | 12 … 24 V DC | **151 717** | **MEB-LD-12-24DC** |
| | | 230 V DC/AC ±10% | **151 718** | **MEB-LD-230AC** |
| | for plug socket with cable KMC and plug socket MSSD-C | 12 … 24 V DC | **19 145** | **MC-LD-12-24DC** |
| | | 230 V DC/AC ±10% | **19 146** | **MC-LD-230AC** |

| Ordering data – Locking clip CPV18-HV | | | | Technical data → www.festo.com | |
|---|---|---|---|---|---|
| | Description | | Part No. | Type | PU[1] |
| | for MS4/6-EE/DE-…-V24 | Cover for manual override, the clip prevents actuation | **530 056** | **CPV18-HV** | **10** |

1) Packaging unit quantity

**MS series service units**
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# MS series service units

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## Ordering data – Silencer U

Technical data ➔ www.festo.com

|  | Description | Pneumatic connection | Part No. | Type |
|---|---|---|---|---|
| | for MS4-EM1/EE | G¼ | **6 842** | **U-¼-B** |
|  | for MS6-EM1/EE | G½ | **6 844** | **U-½-B** |
|  | for MS12-EM/EE | G1 | **151 990** | **U-1-B** |

## Ordering data – Double nipple ESK

|  | Description | Pneumatic connection | | Part No. | Type |
|---|---|---|---|---|---|
| | Adjustable for angular compensation<br>• For retro-fitting pressure switch PEV or pressure sensor SDE1 to branching module MS-FRM | R⅛ | R¼ | **534 151** | **ESK-⅛-¼** |
|  |  | R¼ | R¼ | **151 521** | **ESK-¼-¼** |
|  |  |  | R½ | **534 153** | **ESK-¼-½** |

## Ordering data – Padlock LRVS-D

|  | Description | Weight [g] | Part No. | Type |
|---|---|---|---|---|
| | for filter or pressure regulators | 120 | **193 786** | **LRVS-D** |

## Ordering data – Special oil OFSW

|  | Description | Scope of delivery | Part No. | Type |
|---|---|---|---|---|
| | for lubricators | 1 litre | **152 811** | **OFSW-32** |

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