

Water separators MS-LWS, MS series, NPT

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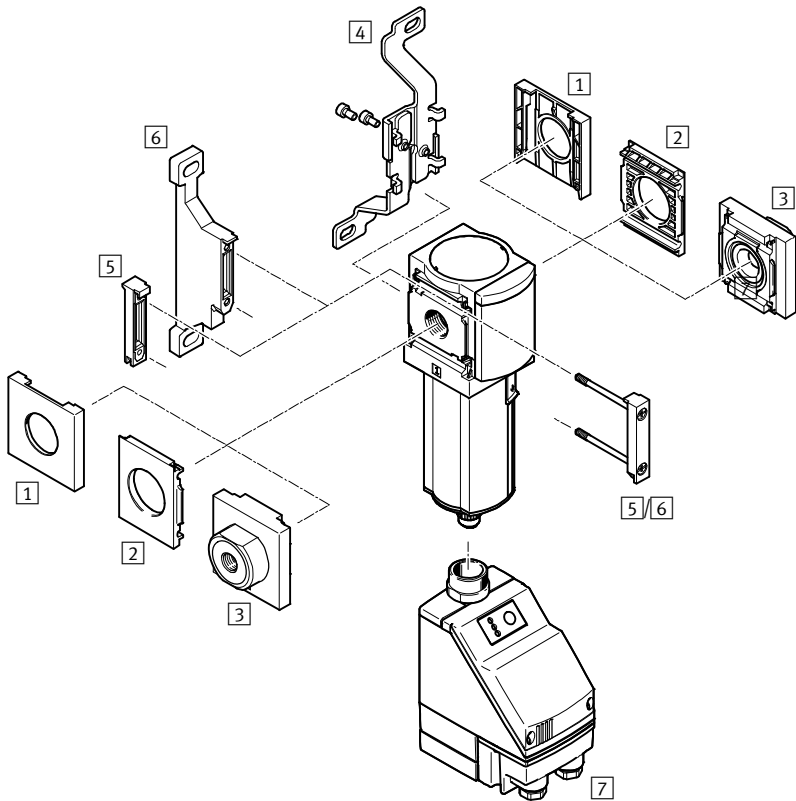


Water separators MS6N-LWS, MS series, NPT

Peripherals overview

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Water separator MS6N-LWS



Note

Additional accessories:

- Module connector for combination with size MS4/MS6 or size MS9 → Internet: amv, rmv, armv
- Adapter for mounting on profiles → Internet: ipm-80, ipm-40-80, ipm-80-80

Mounting attachments and accessories

| | | Individual device | | Combination | | → Page/Internet |
|---|---|--------------------------|-----------------------|--------------------------|-----------------------|-----------------|
| | | Without connecting plate | With connecting plate | Without connecting plate | With connecting plate | |
| 1 | Cover cap MS6-END | ■ | – | ■ | – | ms6-end |
| 2 | Mounting plate MS6-AEND | ■ ¹⁾ | – | ■ ¹⁾ | – | ms6-aend |
| 3 | Connecting plate-SET MS6N-AQ... | – | ■ ¹⁾ | – | ■ ¹⁾ | ms6n-aq |
| 4 | Mounting bracket MS6-WB | ■ | ■ | – | – | ms6-wb |
| 5 | Module connector MS6-MV | – | ■ | ■ | ■ | ms6-mv |
| 6 | Mounting bracket MS6-WP | ■ | ■ | ■ | ■ | ms6-wp |
| | Mounting bracket (not illustrated) MS6-WPB/WPE/WPM | ■ | ■ | ■ | ■ | ms6-wp |
| 7 | Fully automatic, electrically actuated condensate drain E2/E3/E4 | ■ | ■ | ■ | ■ | 8 |

1) Module connector MS6-MV [5] or mounting bracket MS6-WP/WPB/WPE/WPM [6] is required for mounting.

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Type codes

| | | | | | | | | | | | | |
|-----------------------------|---------------------------------|----|---|---|---|-----|---|-----|---|---|---|---|
| | | MS | 6 | N | - | LWS | - | 1/4 | - | U | - | V |
| Series | | | | | | | | | | | | |
| MS | Standard service unit | | | | | | | | | | | |
| Size | | | | | | | | | | | | |
| 6 | Grid dimension 62 mm | | | | | | | | | | | |
| Thread | | | | | | | | | | | | |
| N | NPT thread | | | | | | | | | | | |
| Service function | | | | | | | | | | | | |
| LWS | Water separator | | | | | | | | | | | |
| Pneumatic connection | | | | | | | | | | | | |
| 1/4 | Female thread NPT $\frac{1}{4}$ | | | | | | | | | | | |
| 3/8 | Female thread NPT $\frac{3}{8}$ | | | | | | | | | | | |
| 1/2 | Female thread NPT $\frac{1}{2}$ | | | | | | | | | | | |
| Bowl guard | | | | | | | | | | | | |
| U | Integrated as metal bowl | | | | | | | | | | | |
| Condensate drain | | | | | | | | | | | | |
| V | Fully automatic | | | | | | | | | | | |

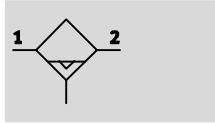
Further variants can be ordered using the modular system → 8

- Pneumatic connection
- Condensate drain
- Type of mounting
- Flow direction

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Technical data

Condensate drain,
fully automatic



- - Flow rate
2,400 ... 3,800 l/min
- - Temperature range
+1 ... +60 °C
- - Supply pressure
0.8 ... 16 bar



The maintenance-free water separator removes condensate from the compressed air.

- Constantly high condensate separation (99%) up to the maximum flow rate
- Available with fully automatic or fully automatic, electrically actuated condensate drain
- Metal bowl

| General technical data | | |
|-------------------------------------|--|--|
| Size | MS6 | |
| Pneumatic connection 1, 2 | Female thread | NPT $\frac{1}{4}$, NPT $\frac{3}{8}$ or NPT $\frac{1}{2}$ |
| | Connecting plate AQ... | NPT $\frac{1}{4}$, NPT $\frac{3}{8}$, NPT $\frac{1}{2}$ or NPT $\frac{3}{4}$ |
| Constructional design | Centrifugal separator | |
| Type of mounting | Via accessories | |
| | In-line installation | |
| Mounting position | Vertical $\pm 5^\circ$ | |
| Air purity class at the output | Compressed air in accordance with ISO 8573-1:2010 [7:7:4] (with variant E2, E3 or E4: [-:7:4]) | |
| Bowl guard | Integrated as metal bowl | |
| Condensate drain | Fully automatic | |
| | Fully automatic, electrically actuated | |
| Degree of condensate separation [%] | 99 | |
| Max. condensate volume [ml] | 38 | |

| Standard nominal flow rate $q_{nN}^{1)}$ | | | |
|--|-------------------|-------------------|-------------------|
| Size | MS6 | | |
| Pneumatic connection | NPT $\frac{1}{4}$ | NPT $\frac{3}{8}$ | NPT $\frac{1}{2}$ |
| q_{nN} [l/min] | 2,400 | 3,500 | 3,800 |

1) Measured at $p_1 = 6$ bar and $\Delta p = 1$ bar

| Operating and environmental conditions | | |
|--|--|--|
| Condensate drain | Fully automatic V | Fully automatic, electrical E2/E3/E4 |
| Size | MS6 | |
| Operating pressure [bar] | 2 ... 12 | 0.8 ... 16 |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [7:--:-] | Compressed air in accordance with ISO 8573-1:2010 [-:--:-] |
| | Inert gases | |
| Ambient temperature [°C] | +5 ... +60 | +1 ... +60 |
| Temperature of medium [°C] | +5 ... +60 | +1 ... +60 |
| Storage temperature [°C] | -10 ... +60 | +1 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 2 | |
| Food-safe ²⁾ | See supplementary material information | - |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Additional information www.festo.com/sp → Certificates.

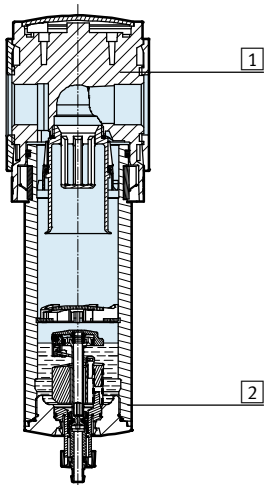
Water separators MS6N-LWS, MS series, NPT

Technical data

| Weight [g] | |
|---|-------|
| Size | MS6 |
| Water separator | 820 |
| Water separator with fully automatic, electrically actuated condensate drain E2/E3/E4 | 1,800 |

Materials

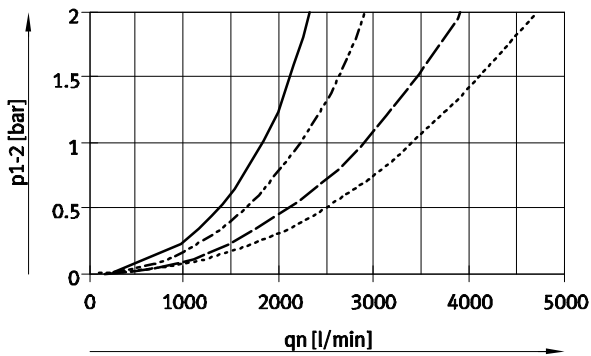
Sectional view



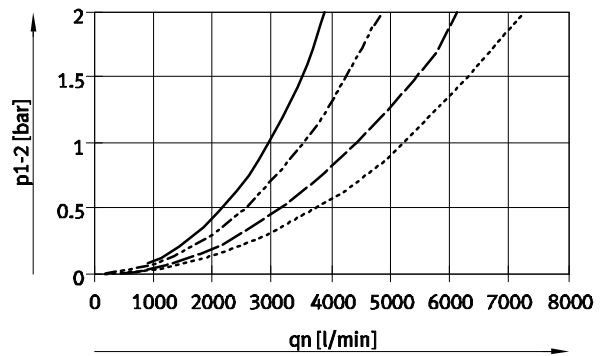
| Water separator | | |
|-------------------|-------------------|-------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Bowl | Wrought aluminium alloy |
| | Inspection window | PA |
| - | Seals | NBR |
| Note on materials | | RoHS-compliant |
| | | Free of copper and PTFE |

Standard flow rate q_n as a function of differential pressure p_{1-2}

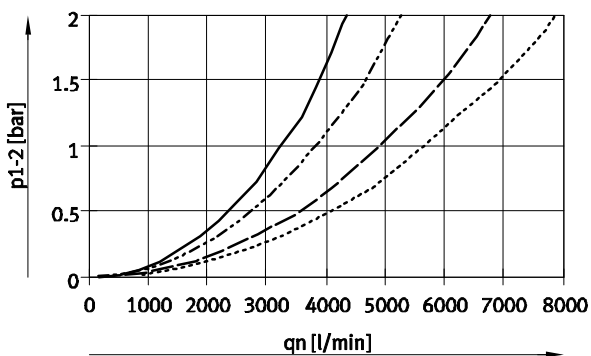
Pneumatic connection NPT $\frac{1}{4}$



Pneumatic connection NPT $\frac{3}{8}$



Pneumatic connection NPT $\frac{1}{2}$



- 4 bar
- - - 6 bar
- · - · 10 bar
- · · · 14 bar

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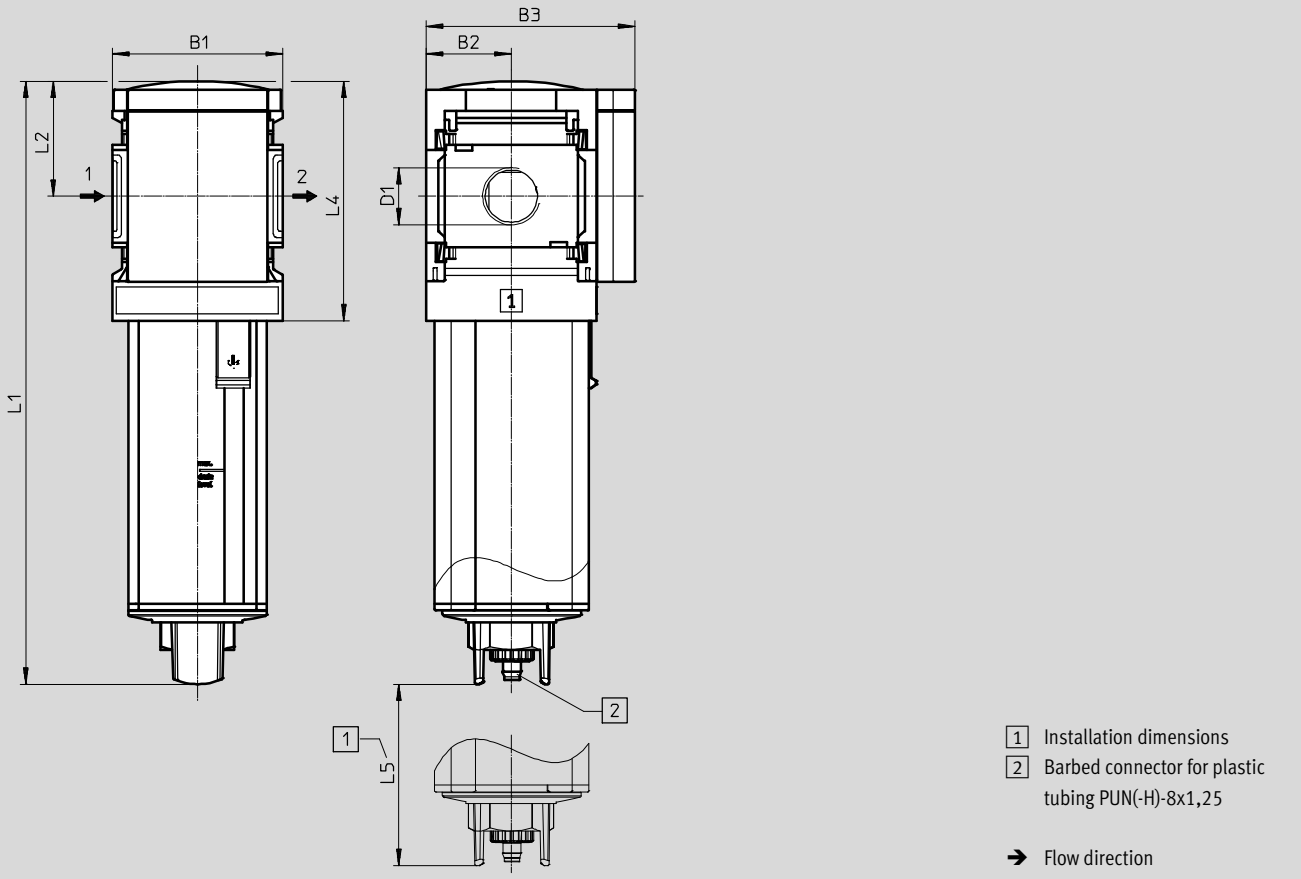
Technical data

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Dimensions – Standard

Download CAD data → www.festo.com

Fully automatic condensate drain V



| Type | B1 | B2 | B3 | D1 | L1 | L2 | L4 | L5 |
|--------------------|----|----|----|-----------------------|-----|----|----|----|
| MS6N-LWS-1/4-...-V | 62 | 31 | 76 | NPT $\frac{1}{4}$ -18 | 220 | 42 | 88 | 64 |
| MS6N-LWS-3/8-...-V | | | | NPT $\frac{3}{8}$ -18 | | | | |
| MS6N-LWS-1/2-...-V | | | | NPT $\frac{1}{2}$ -14 | | | | |

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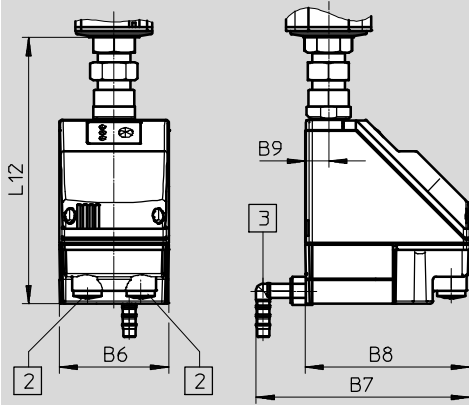
Technical data

Dimensions – Condensate drain

Fully automatic, electrically actuated E2/E3/E4

Download CAD data → www.festo.com

Technical data → Internet: pwea



Condensate drain PWEA:

- 2 Electrical connection: Screw terminal PG9
- 3 Connection 360° rotatable for plastic tubing PUN-H-12x2

| Type | B6 | B7 | B8 | B9 | L12 |
|-----------------------|----|-----|-----|----|-------|
| MS6N-LWS-...-E2/E3/E4 | 72 | 140 | 108 | 15 | 174.5 |

Ordering data

| Size | Condensate drain | Connection | Part No. | Type |
|--------------------------|------------------|-------------------|----------|------------------|
| Integrated as metal bowl | | | | |
| MS6 | Fully automatic | NPT $\frac{1}{4}$ | 564871 | MS6N-LWS-1/4-U-V |
| | | NPT $\frac{3}{8}$ | 564872 | MS6N-LWS-3/8-U-V |
| | | NPT $\frac{1}{2}$ | 564873 | MS6N-LWS-1/2-U-V |

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Ordering data – Modular products

| Ordering table | | Grid dimension | [mm] | 62 | Condi- tions | Code | Enter code |
|----------------|----------------------|---|--------------------------------------|----|-----------------|-------------|---------------|
| M | Module No. | 564898 | | | | | |
| | Series | Standard | | | | MS | MS |
| | Size | 6 | | | | 6 | 6 |
| | Thread | NPT thread | | | | N | N |
| | Function | Water separator | | | | -LWS | -LWS |
| | Pneumatic connection | Female thread NPT $\frac{1}{4}$ | | | | -1/4 | |
| | | Female thread NPT $\frac{3}{8}$ | | | | -3/8 | |
| | | Female thread NPT $\frac{1}{2}$ | | | | -1/2 | |
| | | Connecting plate NPT $\frac{1}{4}$ | | | | -AQN | |
| | | Connecting plate NPT $\frac{3}{8}$ | | | | -AQP | |
| | | Connecting plate NPT $\frac{1}{2}$ | | | | -AQR | |
| | | Connecting plate NPT $\frac{3}{4}$ | | | | -AQS | |
| | Bowl guard | Metal bowl | | | | -U | -U |
| | Condensate drain | Fully automatic (P1 max. 12 bar) | | | | -V | |
| | | External, fully automatic, electric | 115 V AC, terminals (P1 max. 16 bar) | | | -E2 | |
| | | | 230 V AC, terminals (P1 max. 16 bar) | | | -E3 | |
| | | | 24 V DC, terminals (P1 max. 16 bar) | | | -E4 | |
| O | Type of mounting | Mounting bracket standard design | | | 1 | -WP | |
| | | Mounting bracket for attaching the service units | | | 1 | -WPM | |
| | | Mounting bracket centrally at rear (wall mounting top and bottom), connecting plates not required | | | | -WB | |
| | Flow direction | Flow direction from right to left | | | | -Z | |

1 WP, WPM Only with connecting plate AQN, AQP, AQR or AQS

M Mandatory data

O Options

Transfer order code

564898 MS 6 N - LWS - U - - -