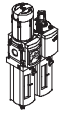
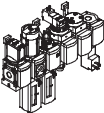




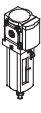


Service units MSB-FRC, MS series



Service units MSB-FRC, MS series

Product range overview – MS series service units

| Type | Size | Pneumatic connection in housing | Connecting plate | Pressure regulation range [bar] | | | | | | Grade of filtration [µm] | | | |
|--|------|---------------------------------|--------------------------------|---------------------------------|------|-----|-----|-----|-----|--------------------------|---|---|----|
| | | | | 0.05 | 0.05 | 0.1 | 0.3 | 0.1 | 0.5 | | | | |
| | | | | ... | ... | ... | ... | ... | ... | 0.01 | 1 | 5 | 40 |
| Code | | | AG... | D2 | D4 | D5 | D6 | D7 | D8 | A | B | C | E |
| Service units | | | | | | | | | | | | | |
| MSB-FRC  | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | ■ | ■ | - | - | - | ■ | ■ |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | ■ | ■ | - | - | - | ■ | ■ |
| | 9 | - | | | | | | | | | | | |
| | 12 | - | | | | | | | | | | | |
| Service unit combinations (further variants can be ordered using the configurator → Internet: msb4, msb6 or msb9) | | | | | | | | | | | | | |
| MSB  | 4 | G1/4 | G1/8, G1/4, G3/8 | - | - | - | ■ | ■ | - | - | - | ■ | ■ |
| | 6 | G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | ■ | ■ | - | - | - | ■ | ■ |
| | 9 | - | | | | | | | | | | | |
| | 12 | - | | | | | | | | | | | |
| Individual devices | | | | | | | | | | | | | |
| Filter regulators MS-LFR  | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | ■ | ■ | ■ | - | - | - | ■ | ■ |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | ■ | ■ | ■ | ■ | - | - | ■ | ■ |
| | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | ■ | ■ | ■ | ■ | - | - | ■ | ■ |
| | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | ■ | ■ | ■ | - | - | ■ | ■ |
| Filters MS-LF  | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - | ■ | ■ |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | ■ | ■ |
| | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - | ■ | ■ |
| | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | ■ | ■ |
| Fine and micro filters MS-LFM  | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | ■ | ■ | - | - |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | ■ | ■ | - | - |
| | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | ■ | ■ | - | - |
| | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | ■ | ■ | - | - |
| Activated carbon filters MS-LFX  | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - | - | - |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | - | - |
| | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | - | - |
| Water separators MS-LWS  | 4 | - | | | | | | | | | | | |
| | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | - | - |
| | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | | | | | | | | | | | |

Service units MSB-FRC, MS series

Product range overview – MS series service units

| Type | Size | Bowl guard | | Condensate drains | | | | Pressure indicator | | | | | Security | | Options | | → Page/ Internet |
|------------------------------------|------|--------------------------------------|------------|-------------------|----------------|-----------------|---------------------------------------|--------------------------------------|------------------------------|---|---|-----------------|---|----------------------------------|----------|-----------------------------------|---------------------|
| | | Plastic bowl with 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 plate for EN pressure gauge G 1/8 | Adapter plate for EN pressure gauge G 1/4 | Pressure sensor | Rotary knob with detent, lockable via accessories | Rotary knob with integrated lock | Silencer | Flow direction from right to left | |
| Code | | R | U | M | H | V | E... | VS | AG | A8 | A4 | AD... | AS | E11 | S | Z | |
| Service units | | | | | | | | | | | | | | | | | |
| MSB-FRC | 4 | ■ | - | ■ | - | ■ | - | - | ■ | - | - | - | ■ | - | - | ■ | 8 |
| | 6 | ■ | ■ | ■ | - | ■ | - | - | ■ | - | - | - | ■ | - | - | ■ | 8 |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Service unit combinations | | | | | | | | | | | | | | | | | |
| MSB | 4 | ■ | ■ | ■ | - | ■ | - | - | ■ | - | - | - | ■ | - | - | ■ | msb4 |
| | 6 | ■ | ■ | ■ | - | ■ | - | - | ■ | - | - | - | ■ | - | - | ■ | msb6 |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Individual devices | | | | | | | | | | | | | | | | | |
| Filter regulators MS-LFR | 4 | ■ | ■ | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | ms4-lfr |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | ms6-lfr |
| | 9 | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | ms9-lfr |
| | 12 | - | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | - | ■ | ■ | - | ■ | ms12-lfr |
| Filters MS-LF | 4 | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | ■ | ms4-lf |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms6-lf |
| | 9 | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms9-lf |
| | 12 | - | ■ | ■ | - | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms12-lf |
| Fine and micro filters MS-LFM | 4 | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | ■ | ms4-lfm |
| | 6 | ■ | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms6-lfm |
| | 9 | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms9-lfm |
| | 12 | - | ■ | ■ | - | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms12-lfm |
| Activated carbon filters MS-LFX | 4 | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ms4-lfx |
| | 6 | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ms6-lfx |
| | 9 | - | ■ | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ms9-lfx |
| | 12 | - | ■ | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ms12-lfx |
| Water separators MS-LWS | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | ■ | - | - | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms6-lws |
| | 9 | - | ■ | - | - | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms9-lws |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Service units MSB-FRC, MS series

Product range overview – MS series service units



| Type | Size | Pneumatic connection in housing | Connecting plate | Pressure regulation range [bar] | | | | | | Supply voltage | | | |
|---|------|---------------------------------|------------------|---------------------------------|------|-----|-----|-----|-----|--|---|---|---|
| | | | | 0.05 | 0.05 | 0.1 | 0.3 | 0.1 | 0.5 | 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... | D2 | D4 | D5 | D6 | D7 | D8 | V24 | V24P | V110 | V230 |
| Individual devices | | | | | | | | | | | | | |
| Pressure regulators MS-LR | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | ■ | ■ | ■ | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | ■ | ■ | ■ | ■ | - | - | - |
| | | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | ■ | ■ | ■ | ■ | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | ■ | ■ | ■ | - | - | - |
| Pressure regulators MS-LRB | | 4 | G1/4 | G1/8, G1/4, G3/8 | - | - | ■ | ■ | ■ | - | - | - | - |
| | | 6 | G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | ■ | ■ | ■ | ■ | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | - | - | - | - | - | - | - | - | - | - |
| Precision pressure regulators MS-LRP | | 4 | - | - | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | ■ | ■ | ■ | - | ■ | - | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | - | - | - | - | - | - | - | - | - | - |
| Precision pressure regulators MS-LRPB | | 4 | - | - | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/2 | G1/4, G3/8, G1/2, G3/4 | ■ | ■ | ■ | - | ■ | - | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | - | - | - | - | - | - | - | - | - | - |
| Electrical pressure regulators MS-LRE | | 4 | - | - | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | ■ | ■ | ■ | ■ | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | - | - | - | - | - | - | - | - | - | - |
| Lubricators MS-LOE | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | - |
| | | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | - |
| Electrical on-off valves MS-EM(1) | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | - |
| | | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | - |
| Electrical on-off valves MS-EE | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | ■ | - | ■ | ■ |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | ■ | - | ■ | ■ |
| | | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | ■ | ■ | ■ | ■ |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | ■ | ■ | ■ | ■ |
| Electrical soft-start valves MS-DL | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | - |
| Electrical soft-start valves MS-DE | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | ■ | - | ■ | ■ |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | ■ | - | ■ | ■ |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | ■ | ■ | ■ |
| Soft start and exhaust valves MS-SV | | 4 | - | - | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | ■ | - | - | - |
| | | 9 | - | - | - | - | - | - | - | - | - | - | - |
| | | 12 | - | - | - | - | - | - | - | - | - | - | - |

Service units MSB-FRC, MS series

Product range overview – MS series service units



| Type | Size | Bowl guard | | Pressure indicator | | | | Security | | Options | | → Page/ Internet | |
|---|------|--------------------------------------|------------|--------------------------------------|------------------------------|--|--|-----------------|---|----------------------------------|----------|---------------------|-----------------------------------|
| | | Plastic bowl with plastic bowl guard | Metal bowl | Cover plate (without pressure gauge) | Integrated MS pressure gauge | Adapter plate for EN pressure gauge G1/8 | Adapter plate for EN pressure gauge G1/4 | Pressure sensor | Rotary knob with detent, lockable via accessories | Rotary knob with integrated lock | Silencer | | Flow direction from right to left |
| Code | | R | U | VS | AG | A8 | A4 | AD... | AS | E11 | S | Z | |
| Individual devices | | | | | | | | | | | | | |
| Pressure regulators MS-LR | 4 | - | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | ms4-lr |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | ms6-lr |
| | 9 | - | - | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | ms9-lr |
| | 12 | - | - | ■ | ■ | - | ■ | - | ■ | ■ | - | ■ | ms12-lr |
| Pressure regulators MS-LRB | 4 | - | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | ms4-lrb |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | ■ | ■ | - | ■ | ms6-lrb |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Precision pressure regulators MS-LRP | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | ■ | ms6-lrp |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Precision pressure regulators MS-LRPB | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | ■ | ms6-lrpb |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Electrical pressure regulators MS-LRE | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | - | ■ | ■ | - | ■ | - | - | - | - | ■ | ms6-lre |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Lubricators MS-LOE | 4 | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms4-loe |
| | 6 | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms6-loe |
| | 9 | - | ■ | - | - | - | - | - | - | - | - | ■ | ms9-loe |
| | 12 | - | ■ | - | - | - | - | - | - | - | - | ■ | ms12-loe |
| Electrical on-off valves MS-EM(1) | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | ■ | ■ | ms4-em1 |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-em1 |
| | 9 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms9-em |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms12-em |
| Electrical on-off valves MS-EE | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | ■ | ■ | ms4-ee |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-ee |
| | 9 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms9-ee |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms12-ee |
| Electrical soft-start valves MS-DL | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ms4-dl |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms6-dl |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | - | ■ | ms12-dl |
| Electrical soft-start valves MS-DE | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ms4-de |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms6-de |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | - | ■ | ms12-de |
| Soft start and exhaust valves MS-SV | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-sv |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |

Service units MSB-FRC, MS series

Product range overview – MS series service units

| Type | Size | Pneumatic connection in housing | Connecting plate | Pressure regulation range [bar] | | | | Supply voltage | | | | |
|---|------|---------------------------------|------------------|---------------------------------|-----|-----|-----|--|---|---|---|---|
| | | | | 0.1 | 0.3 | 0.1 | 0.5 | 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 | | | | | | | | | | | | |
| Membrane air dryers MS-LDM1 | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - |
| | | 9 | - | | | | | | | | | |
| | | 12 | - | | | | | | | | | |
| Branching modules MS-FRM | | 4 | G1/8, G1/4 | G1/8, G1/4, G3/8 | - | - | - | - | - | - | - | - |
| | | 6 | G1/4, G3/8, G1/2 | G1/4, G3/8, G1/2, G3/4 | - | - | - | - | - | - | - | - |
| | | 9 | G3/4, G1 | G1/2, G3/4, G1, G1 1/4, G1 1/2 | - | - | - | - | - | - | - | - |
| | | 12 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - |
| Distributor blocks MS-FRM-FRZ | | 4 | G1/4 | - | - | - | - | - | - | - | - | - |
| | | 6 | G1/2 | - | - | - | - | - | - | - | - | - |
| | | 9 | - | | | | | | | | | |
| | | 12 | - | | | | | | | | | |
| Flow sensors SFAM | | 4 | - | | | | | | | | | |
| | | 6 | G1/2 | G1/2 | - | - | - | - | - | - | - | - |
| | | 9 | - | G1, G1 1/2 | - | - | - | - | - | - | - | - |
| | | 12 | - | | | | | | | | | |

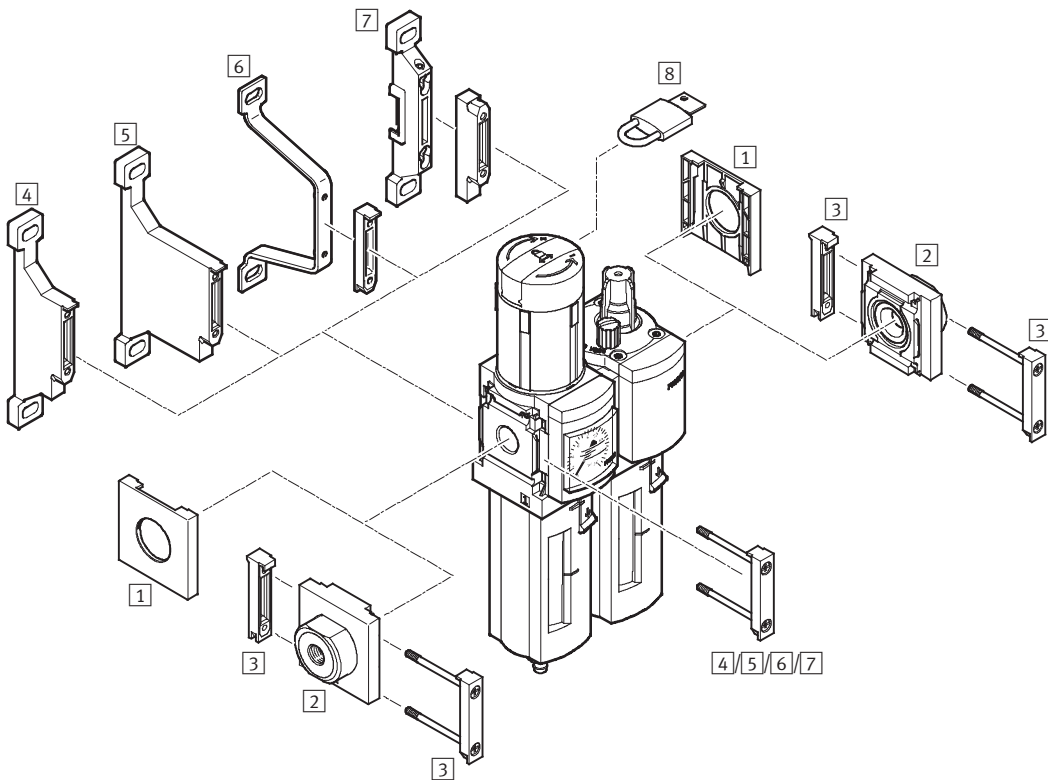
Service units MSB-FRC, MS series

Product range overview – MS series service units

| Type | Size | Bowl guard | | Pressure indicator | | | | | Switch output | | Options | | → Page/ Internet |
|---|------|--------------------------------------|------------|--------------------------------------|------------------------------|---|---|-----------------|--|---|----------|-----------------------------------|---------------------|
| | | Plastic bowl with plastic bowl guard | Metal bowl | Cover plate (without pressure gauge) | Integrated MS pressure gauge | Adapter plate for EN pressure gauge G 1/8 | Adapter plate for EN pressure gauge G 1/4 | Pressure sensor | 2x PNP or NPN, 1 analogue output 4 ... 20 mA | 2x PNP or NPN, 1 analogue output 0 ... 10 V | Silencer | Flow direction from right to left | |
| Code | | R | U | VS | AG | A8 | A4 | AD... | 2SA | 2SV | S | Z/R | |
| Individual devices | | | | | | | | | | | | | |
| Membrane air dryers MS-LDM1 | 4 | - | ■ | - | - | - | - | - | - | - | - | ■ | ms4-ldm1 |
| | 6 | - | ■ | - | - | - | - | - | - | - | - | ■ | ms6-ldm1 |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Branching modules MS-FRM | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ms4-frm |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms6-frm |
| | 9 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms9-frm |
| | 12 | - | - | ■ | - | - | - | - | - | - | - | - | ms12-frm |
| Distributor blocks MS-FRM-FRZ | 4 | - | - | - | - | - | - | - | - | - | - | ■ | ms4-frm |
| | 6 | - | - | - | - | - | - | - | - | - | - | ■ | ms6-frm |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| Flow sensors SFAM | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 6 | - | - | - | - | - | - | - | ■ | ■ | - | ■ | sfam-62 |
| | 9 | - | - | - | - | - | - | - | ■ | ■ | - | ■ | sfam-90 |
| | 12 | - | - | - | - | - | - | - | - | - | - | - | - |

Service units MSB4/MSB6-FRC, MS series

Peripherals overview



| Mounting attachments and accessories | | → Page/Internet |
|--------------------------------------|---------------------------------|---------------------|
| 1 | Cover cap MS4/6-END | ms4-end, ms6-end |
| 2 | Connecting plate MS4/6-AG... | ms4-ag, ms6-ag |
| 3 | Module connector MS4/6-MV | ms4-mv, ms6-mv |
| 4 | Mounting bracket MS4/6-WP | ms4-wp, ms6-wp |
| 5 | Mounting bracket MS4/6-WPB | ms4-wp, ms6-wp |
| 6 | Mounting bracket MS4/6-WPE | ms4-wp, ms6-wp |
| 7 | Mounting bracket MS4/6-WPM | ms4-wp, ms6-wp |
| 8 | Padlock LRVS-D | 17 |

Service units MSB4/MSB6-FRC, MS series

Type codes

MSB 6 - 3/8 - FRC2:J6 M1

Series

| | |
|-----|--------------|
| MSB | Service unit |
|-----|--------------|

Size

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

Pneumatic connection

| | |
|------|-------------|
| MSB4 | |
| 1/8 | Thread G1/8 |
| 1/4 | Thread G1/4 |
| MSB6 | |
| 1/4 | Thread G1/4 |
| 3/8 | Thread G3/8 |
| 1/2 | Thread G1/2 |

Service unit consisting of:

- Filter regulator with pressure gauge, rotary knob with detent, lockable via accessories
- 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

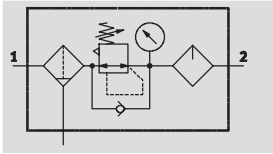
| | |
|----|--------------------|
| M1 | Plastic bowl guard |
| M2 | Metal bowl |

Service units MSB4/MSB6-FRC, MS series

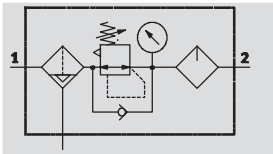
Technical data

Function

With condensate drain
manual rotary



With condensate drain
fully automatic



Flow rate

800 ... 4,800 l/min

Temperature range

-10 ... +60 °C

Pressure

1.5 ... 20 bar



- Filter, regulator and lubricator function 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 locking the rotary knob
- Lockable rotary knob
- Two pressure regulation ranges: 0.3 ... 7 bar and 0.5 ... 12 bar
- With manual or integrated, fully automatic condensate drain
- Choice of filter cartridges: 5 µm or 40 µm
- New filter cartridges → 17, Festo special oil → 17

| General technical data | | | | | |
|---------------------------------|---|------|--------------------------|------|------|
| Size | MSB4 | | MSB6 | | |
| Pneumatic connection 1, 2 | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 |
| 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 | | |
| | - | | Integrated as metal bowl | | |
| Condensate drains | Manual rotary | | | | |
| | Fully automatic | | | | |
| Actuator lock | Rotary knob with detent, lockable via accessories | | | | |
| Pressure regulation range [bar] | 0.3 ... 7 | | | | |
| | 0.5 ... 12 | | | | |
| Pressure indicator | With pressure gauge | | | | |

Note: This product conforms to ISO 1179-1 and ISO 228-1

Service units MSB4/MSB6-FRC, MS series

Technical data

| Standard nominal flow rate $q_{nN}^{1)}$ [l/min] | | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| Size | MSB4 | | | MSB6 | | |
| Pneumatic connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ | G $\frac{1}{4}$ | G $\frac{3}{8}$ | G $\frac{1}{2}$ | |
| Pressure regulation range 0.3... 7 bar | | | | | | |
| Grade of filtration | 5 μ m | 900 | 1,300 | 2,000 | 4,400 | 4,600 |
| | 40 μ m | 950 | 1,400 | 2,100 | 4,600 | 4,800 |
| Pressure regulation range 0.5... 12 bar | | | | | | |
| Grade of filtration | 5 μ m | 800 | 850 | 1,700 | 3,400 | 3,600 |
| | 40 μ m | 850 | 900 | 1,900 | 3,500 | 3,700 |

1) Measured at $p_1 = 10$ bar and $p_2 = 6$ bar, $\Delta p = 1$ bar.

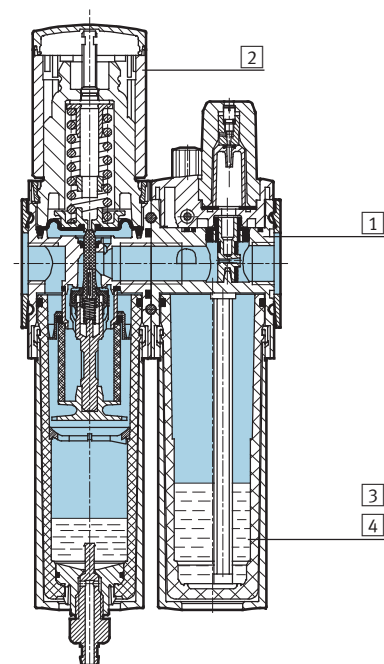
| Operating and environmental conditions | | | | |
|--|-------------------|---------------|-------------|-----------------|
| Condensate drains | | Manual rotary | | Fully automatic |
| Size | MSB4 | MSB6 | MSB4 | MSB6 |
| Supply pressure [bar] | 1.5 ... 14 | 1.5 ... 20 | 1.5 ... 12 | 1.5 ... 12 |
| 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 | - | 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 | Wrought aluminium alloy |
| - | Seals | Nitrile rubber |

Service units MSB4/MSB6-FRC, MS series

Technical data

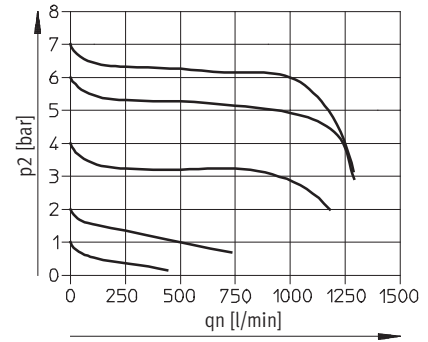
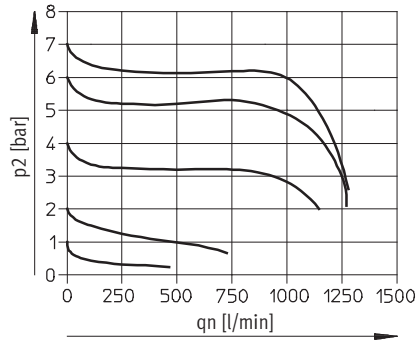
Standard flow rate q_n as a function of output pressure p_2

Pressure regulation range 0.3 ... 7 bar Grade of filtration 5 μm

Grade of filtration 40 μm

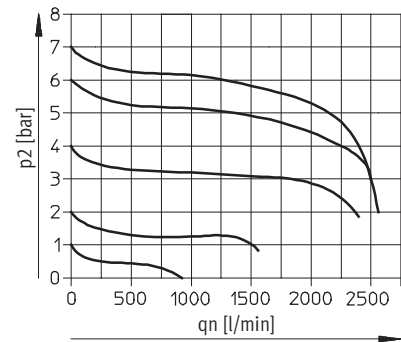
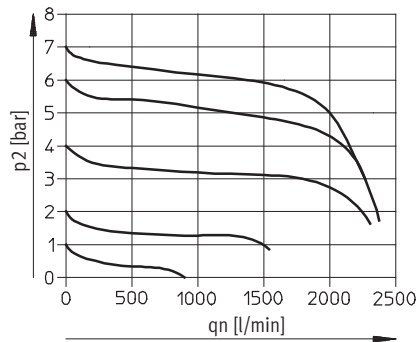
MSB4-1/8

Primary pressure $p_1 = 10$ bar



MSB4-1/4

Primary pressure $p_1 = 10$ bar

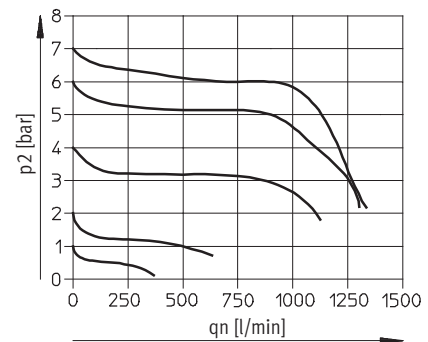
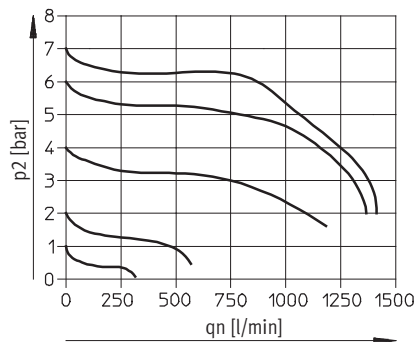


Pressure regulation range 0.5 ... 12 bar Grade of filtration 5 μm

Grade of filtration 40 μm

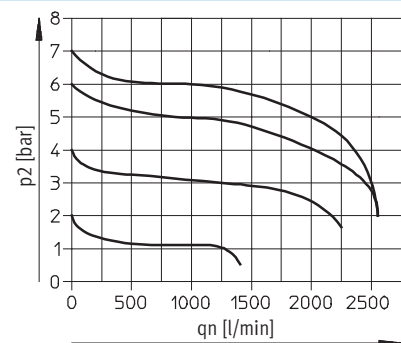
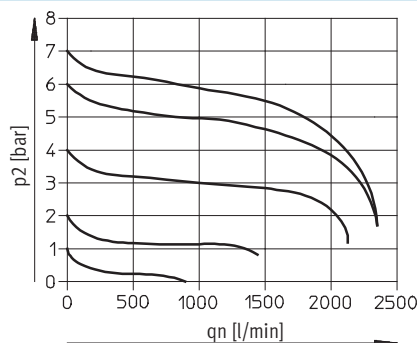
MSB4-1/8

Primary pressure $p_1 = 10$ bar



MSB4-1/4

Primary pressure $p_1 = 10$ bar



Service units MSB4/MSB6-FRC, MS series

Technical data

Standard flow rate q_n as a function of output pressure p_2

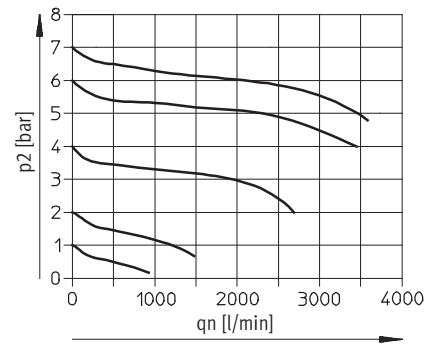
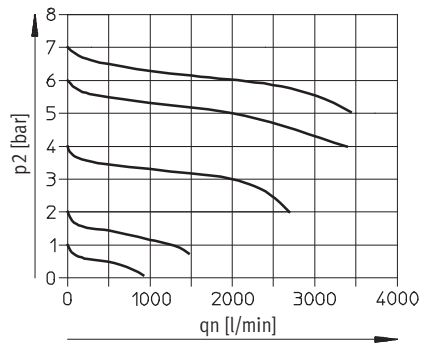
Pressure regulation range 0.3 ... 7 bar

Grade of filtration 5 μm

Grade of filtration 40 μm

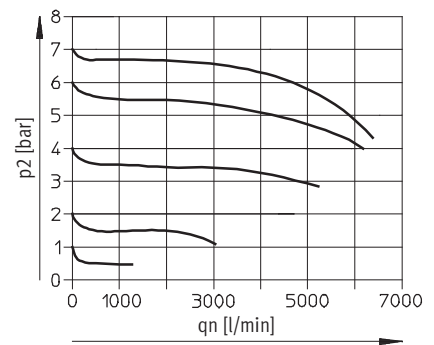
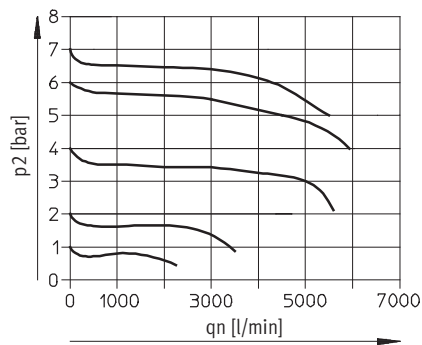
MSB6-1/4

Primary pressure $p_1 = 10$ bar



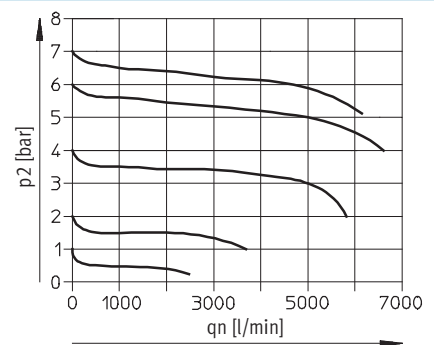
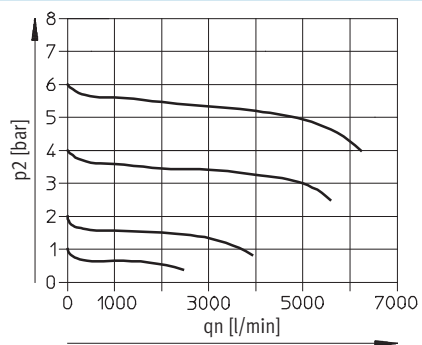
MSB6-3/8

Primary pressure $p_1 = 10$ bar



MSB6-1/2

Primary pressure $p_1 = 10$ bar



Service units MSB4/MSB6-FRC, MS series

Technical data

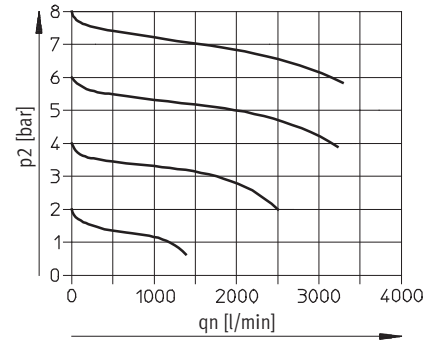
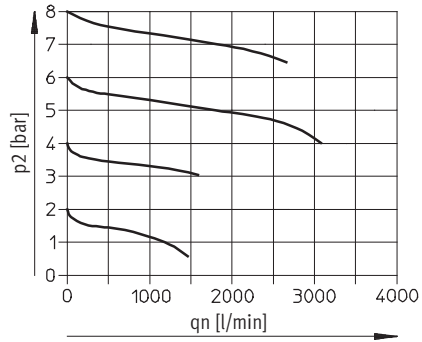
Standard flow rate q_n as a function of output pressure p_2

Pressure regulation range 0.5 ... 12 bar Grade of filtration 5 μm

Grade of filtration 40 μm

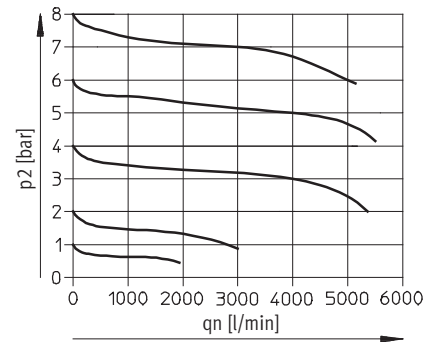
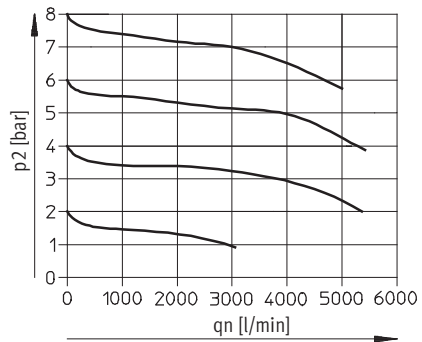
MSB6-1/4

Primary pressure $p_1 = 10$ bar



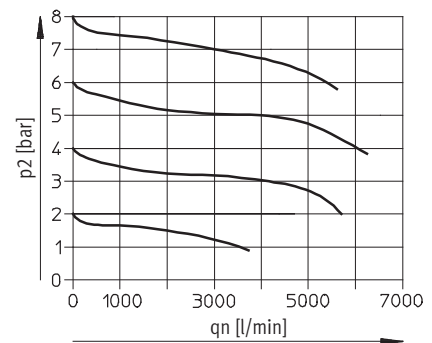
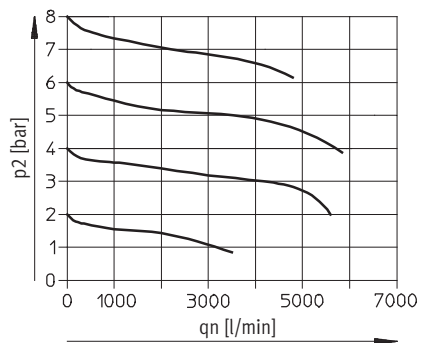
MSB6-3/8

Primary pressure $p_1 = 10$ bar



MSB6-1/2

Primary pressure $p_1 = 10$ bar



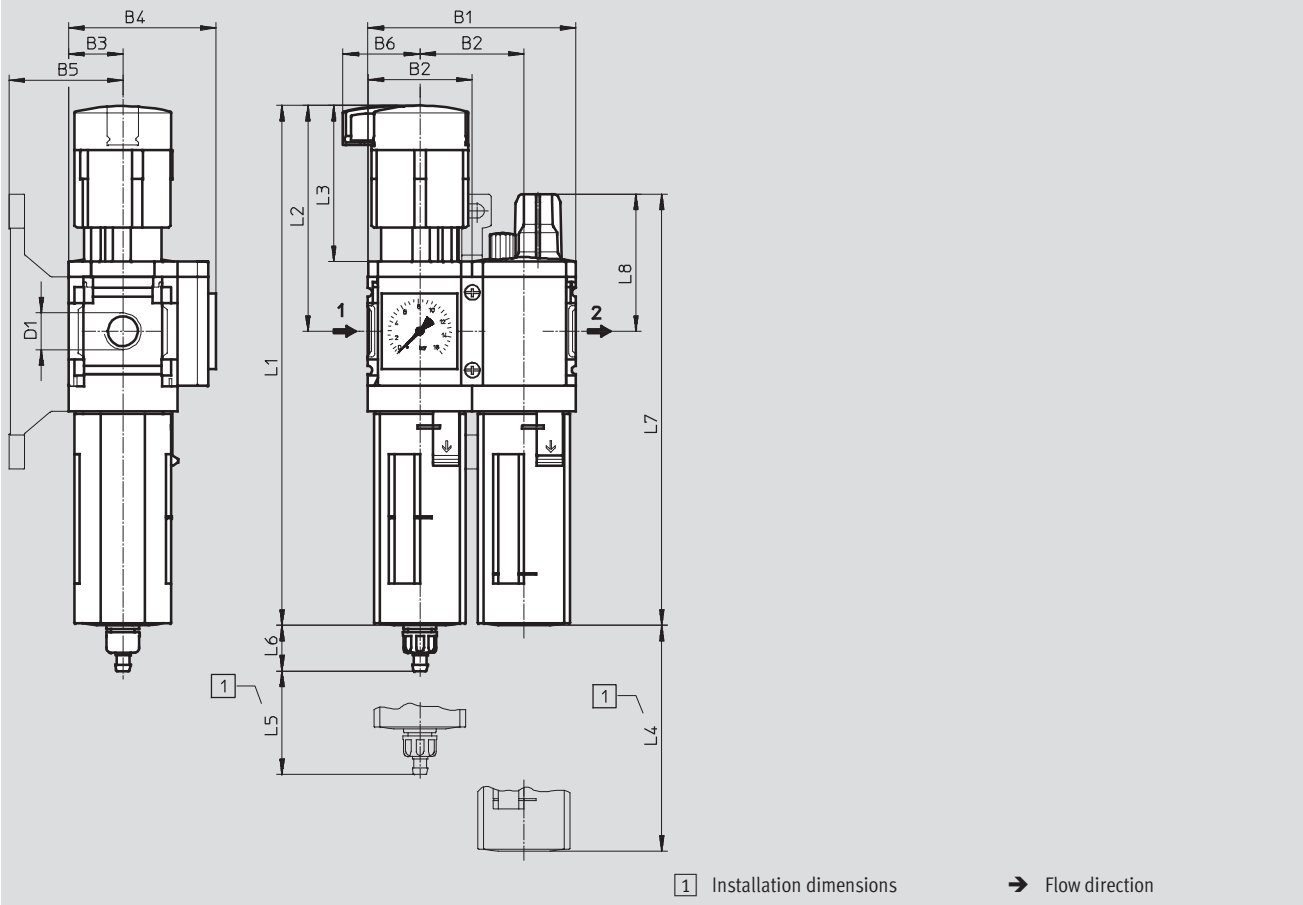
Service units MSB4/MSB6-FRC, MS series

Technical data

Dimensions

Download CAD Data → www.festo.com/us/cad

With pressure gauge, display unit [bar]



| Type | B1 | B2 | B3 | B4 | B5 | B6 | D1 | L1 | L2 | L3 | L4 | L5 | L6 | | L7 | L8 |
|----------|------|------|----|----|----|------|------|-------|-------|------|-----|----|--------------------------------------|--|-------|------|
| | | | | | | | | | | | | | Condensate drain manual rotary | Condensate drain fully automatic | | |
| MSB4-1/8 | 80.4 | 40.2 | 21 | 57 | 44 | 29.7 | G1/8 | 201 | 87 | 60 | 80 | 25 | 17.7 | 20.4 | 167 | 53 |
| MSB4-1/4 | | | | | | | G3/4 | | | | | | | | | |
| MSB6-1/4 | 124 | 62 | 31 | 77 | 54 | 38.8 | G1/4 | 284.8 | 134.5 | 95.5 | 130 | 68 | 15.8 | 18.5 | 215.3 | 65.6 |
| MSB6-3/8 | | | | | | | G3/8 | | | | | | | | | |
| MSB6-1/2 | | | | | | | G1/2 | | | | | | | | | |

Note: This product conforms to ISO 1179-1 and ISO 228-1

Service units MSB4/MSB6-FRC, MS series

FESTO

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 | G ¹ / ₈ | 531129 | MSB4- ¹ / ₈ -FRC3:J7M1 | 531125 | MSB4- ¹ / ₈ -FRC1:J5M1 |
| | | G ¹ / ₄ | 531113 | MSB4- ¹ / ₄ -FRC3:J7M1 | 531109 | MSB4- ¹ / ₄ -FRC1:J5M1 |
| | fully automatic | G ¹ / ₈ | 531131 | MSB4- ¹ / ₈ -FRC4:J8M1 | 531127 | MSB4- ¹ / ₈ -FRC2:J6M1 |
| | | G ¹ / ₄ | 531115 | MSB4- ¹ / ₄ -FRC4:J8M1 | 531111 | MSB4- ¹ / ₄ -FRC2:J6M1 |
| MSB6 | manual rotary | G ¹ / ₄ | 530264 | MSB6- ¹ / ₄ -FRC3:J7M1 | 530254 | MSB6- ¹ / ₄ -FRC1:J5M1 |
| | | G ³ / ₈ | 530288 | MSB6- ³ / ₈ -FRC3:J7M1 | 530278 | MSB6- ³ / ₈ -FRC1:J5M1 |
| | | G ¹ / ₂ | 530240 | MSB6- ¹ / ₂ -FRC3:J7M1 | 530230 | MSB6- ¹ / ₂ -FRC1:J5M1 |
| | fully automatic | G ¹ / ₄ | 530266 | MSB6- ¹ / ₄ -FRC4:J8M1 | 530262 | MSB6- ¹ / ₄ -FRC2:J6M1 |
| | | G ³ / ₈ | 530290 | MSB6- ³ / ₈ -FRC4:J8M1 | 530286 | MSB6- ³ / ₈ -FRC2:J6M1 |
| | | G ¹ / ₂ | 530242 | MSB6- ¹ / ₂ -FRC4:J8M1 | 530238 | MSB6- ¹ / ₂ -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 | G ¹ / ₈ | 531137 | MSB4- ¹ / ₈ -FRC7:J3M1 | 531133 | MSB4- ¹ / ₈ -FRC5:J1M1 |
| | | G ¹ / ₄ | 531121 | MSB4- ¹ / ₄ -FRC7:J3M1 | 531117 | MSB4- ¹ / ₄ -FRC5:J1M1 |
| | fully automatic | G ¹ / ₈ | 531139 | MSB4- ¹ / ₈ -FRC8:J4M1 | 531135 | MSB4- ¹ / ₈ -FRC6:J2M1 |
| | | G ¹ / ₄ | 531123 | MSB4- ¹ / ₄ -FRC8:J4M1 | 531119 | MSB4- ¹ / ₄ -FRC6:J2M1 |
| MSB6 | manual rotary | G ¹ / ₄ | 530272 | MSB6- ¹ / ₄ -FRC7:J3M1 | 530268 | MSB6- ¹ / ₄ -FRC5:J1M1 |
| | | G ³ / ₈ | 530296 | MSB6- ³ / ₈ -FRC7:J3M1 | 530292 | MSB6- ³ / ₈ -FRC5:J1M1 |
| | | G ¹ / ₂ | 530248 | MSB6- ¹ / ₂ -FRC7:J3M1 | 530244 | MSB6- ¹ / ₂ -FRC5:J1M1 |
| | fully automatic | G ¹ / ₄ | 530274 | MSB6- ¹ / ₄ -FRC8:J4M1 | 530270 | MSB6- ¹ / ₄ -FRC6:J2M1 |
| | | G ³ / ₈ | 530298 | MSB6- ³ / ₈ -FRC8:J4M1 | 530294 | MSB6- ³ / ₈ -FRC6:J2M1 |
| | | G ¹ / ₂ | 530250 | MSB6- ¹ / ₂ -FRC8:J4M1 | 530246 | MSB6- ¹ / ₂ -FRC6:J2M1 |
| Metal bowl | | | | | | |
| MSB6 | manual rotary | G ¹ / ₄ | 530258 | MSB6- ¹ / ₄ -FRC11:J9M2 | 530276 | MSB6- ¹ / ₄ -FRC9:J11M2 |
| | | G ³ / ₈ | 530282 | MSB6- ³ / ₈ -FRC11:J9M2 | 530300 | MSB6- ³ / ₈ -FRC9:J11M2 |
| | | G ¹ / ₂ | 530234 | MSB6- ¹ / ₂ -FRC11:J9M2 | 530252 | MSB6- ¹ / ₂ -FRC9:J11M2 |
| | fully automatic | G ¹ / ₄ | 530260 | MSB6- ¹ / ₄ -FRC12:J10M2 | 530256 | MSB6- ¹ / ₄ -FRC10:J12M2 |
| | | G ³ / ₈ | 530284 | MSB6- ³ / ₈ -FRC12:J10M2 | 530280 | MSB6- ³ / ₈ -FRC10:J12M2 |
| | | G ¹ / ₂ | 530236 | MSB6- ¹ / ₂ -FRC12:J10M2 | 530232 | MSB6- ¹ / ₂ -FRC10:J12M2 |

Service units MSB-FRC, MS series

Accessories

Filter cartridges




| Ordering data | | | |
|---------------|-----------------------------|----------|-----------|
| Size | Grade of filtration [µm] | Part No. | Type |
| MS4 | 5 (colour: blue) | 534501 | MS4-LFP-C |
| | 40 (colour: white) | 534502 | MS4-LFP-E |
| MS6 | 5 (colour: blue) | 534499 | MS6-LFP-C |
| | 40 (colour: white) | 534500 | MS6-LFP-E |

Special oil



| Ordering data | | | |
|-------------------|--|----------|---------|
| Scope of delivery | | Part No. | Type |
| 1 litre | | 152811 | 0FSW-32 |

| Ordering data – Padlock LRVS-D | | | |
|---|------------|----------|--------|
| | Weight [g] | Part No. | Type |
|  | 120 | 193786 | LRVS-D |

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,

Call: 1.800.99.FESTO (1.800.993.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO (1.866.463.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: product.support@us.festo.com

Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)

Fax: 1.877.FX.FESTO (1.877.393.3786)

Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton

North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York

395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: info@festo-usa.com

www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: festo.canada@ca.festo.com

www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,
54020 Tlalneantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: festo.mexico@mx.festo.com

www.festo.com/mx

Central USA

Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480



Western USA

Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia
Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com