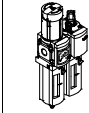
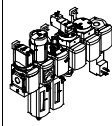
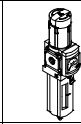
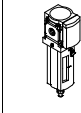
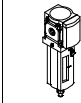
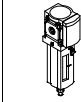
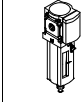


Service unit combinations MSB-FRC, MS series



Service unit combinations 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 unit combinations | | | | | | | | | | | | | |
| 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 | - | G1, G1 1/4, G1 1/2, G2 | - | - | - | - | - | - | - | - | - | - |

Service unit combinations 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 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 | M | H | V | E... | VS | AG | A8 | A4 | AD... | AS | E11 | S | Z | |
| Service unit combinations | | | | | | | | | | | | | | | | | |
| 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 | - | ■ | - | - | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ms12-lws |

Service unit combinations 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 ... 0.7 | 0.05 ... 2.5 | 0.1 ... 4 | 0.3 ... 7 | 0.1 ... 12 | 0.5 ... 16 | 24 V DC, connection pattern to EN 175301 | 24 V DC, connection M12 to IEC 61076-2-101 | 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 | - | - | - | - | - | - | - | - | - |
| On-off valves, manually actuated 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 | - | - | - | - | - | - | - | - | - |
| On-off valves, electrically actuated 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 | - | - | - | - | - | - | ■ | ■ | ■ |
| Soft-start valves, pneumatically actuated 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 | - | - | - | - | - | - | - | - | - |
| Soft-start valves, electrically actuated 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 | - | - | - | - | - | - | ■ | ■ | ■ |

Service unit combinations 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 |
| On-off valves, manually actuated MS-EM(1) | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | ■ | ■ | ms4-em1 |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-em1 |
| | 9 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms9-em |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms12-em |
| On-off valves, electrically actuated MS-EE | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | ■ | ■ | ms4-ee |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-ee |
| | 9 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms9-ee |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | ■ | ■ | ms12-ee |
| Soft-start valves, pneumatically actuated MS-DL | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ms4-dl |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms6-dl |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | - | ■ | ms12-dl |
| Soft-start valves, electrically actuated MS-DE | 4 | - | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ms4-de |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ms6-de |
| | 9 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 12 | - | - | ■ | ■ | - | ■ | - | - | - | - | ■ | ms12-de |

Service unit combinations MSB-FRC, MS series



Product range overview – MS series service units

| Type | Size | Pneumatic connection in housing | Connecting plate | Performance Level | | | Supply voltage | | | | |
|---|------|---------------------------------|---|---|-----------------------|--|--|---|---|---|---|
| | | | | Category 1, 1-channel | Category 3, 2-channel | Category 4, 2-channel with self-monitoring | 24 V DC, connection pattern to EN 175301 | 24 V DC, connection M12 to IEC 61076-2-101/ to EN 60947-5-2 | 110 V AC, connection pattern to EN 175301 | 230 V AC, connection pattern to EN 175301 | |
| Code | | | AG... | C | D | E | V24 | V24P | V110 | V230 | |
| Individual devices | | | | | | | | | | | |
| Soft start and exhaust valves MS-SV-C | | 4 | – | | | | | | | | |
| | | 6 | G $\frac{1}{2}$ | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$ | ■ | – | – | ■ | ■ | ■ | ■ |
| | | 9 | G $\frac{3}{4}$, G1 | G $\frac{1}{2}$, G $\frac{3}{4}$, G1, G1 $\frac{1}{4}$, G1 $\frac{1}{2}$ | ■ | – | – | ■ | ■ | ■ | ■ |
| | | 12 | – | | | | | | | | |
| Soft start and exhaust valves MS-SV-D | | 4 | – | | | | | | | | |
| | | 6 | G $\frac{1}{2}$ | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$ | – | ■ | – | ■ | ■ | – | – |
| | | 9 | – | | | | | | | | |
| | | 12 | – | | | | | | | | |
| Soft start and exhaust valves MS-SV-E | | 4 | – | | | | | | | | |
| | | 6 | G $\frac{1}{2}$ | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$ | – | – | ■ | ■ | – | – | – |
| | | 9 | – | | | | | | | | |
| | | 12 | – | | | | | | | | |
| Membrane air dryers MS-LDM1 | | 4 | G $\frac{1}{8}$, G $\frac{1}{4}$ | G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$ | – | – | – | – | – | – | – |
| | | 6 | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$ | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$ | – | – | – | – | – | – | – |
| | | 9 | – | | | | | | | | |
| | | 12 | – | | | | | | | | |
| Branching modules MS-FRM | | 4 | G $\frac{1}{8}$, G $\frac{1}{4}$ | G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$ | – | – | – | – | – | – | – |
| | | 6 | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$ | G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$ | – | – | – | – | – | – | – |
| | | 9 | G $\frac{3}{4}$, G1 | G $\frac{1}{2}$, G $\frac{3}{4}$, G1, G1 $\frac{1}{4}$, G1 $\frac{1}{2}$ | – | – | – | – | – | – | – |
| | | 12 | – | G1, G1 $\frac{1}{4}$, G1 $\frac{1}{2}$, G2 | – | – | – | – | – | – | – |
| Distributor blocks MS-FRM-FRZ | | 4 | G $\frac{1}{4}$ | – | – | – | – | – | – | – | |
| | | 6 | G $\frac{1}{2}$ | – | – | – | – | – | – | – | |
| | | 9 | – | | | | | | | | |
| | | 12 | – | | | | | | | | |
| Flow sensors SFAM | | 4 | – | | | | | | | | |
| | | 6 | G $\frac{1}{2}$ | G $\frac{1}{2}$ | – | – | – | – | – | – | – |
| | | 9 | – | G1, G1 $\frac{1}{2}$ | – | – | – | – | – | – | – |
| | | 12 | – | | | | | | | | |

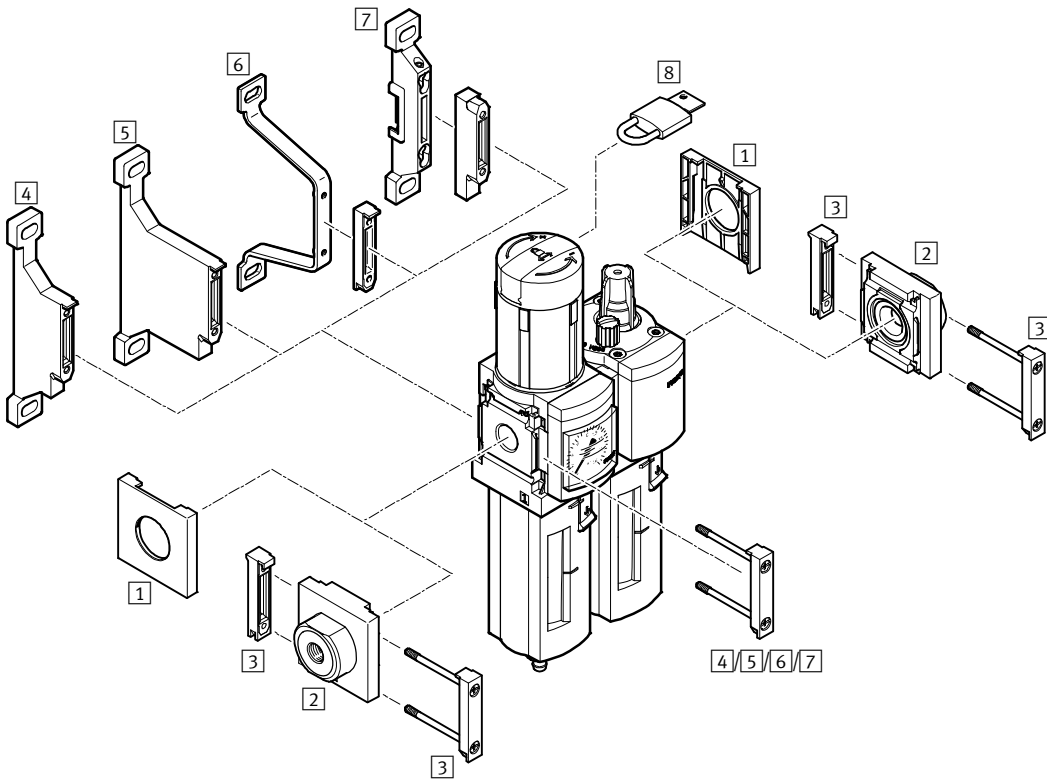
Service unit combinations MSB-FRC, MS series

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 G1/8 | Adapter plate for EN pressure gauge G1/4 | 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 | | | | | | | | | | | | | | |
| Soft start and exhaust valves MS-SV-C | 4 | - | | | | | | | | | | | - | |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-sv | |
| | 9 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms9-sv | |
| | 12 | - | | | | | | | | | | | - | |
| Soft start and exhaust valves MS-SV-D | 4 | - | | | | | | | | | | | - | |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-sv | |
| | 9 | - | | | | | | | | | | | - | |
| | 12 | - | | | | | | | | | | | - | |
| Soft start and exhaust valves MS-SV-E | 4 | - | | | | | | | | | | | - | |
| | 6 | - | - | ■ | ■ | - | ■ | ■ | - | - | ■ | ■ | ms6-sv | |
| | 9 | - | | | | | | | | | | | - | |
| | 12 | - | | | | | | | | | | | - | |
| 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 unit combinations 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-SET 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 | 16 |

Service unit combinations MSB4/MSB6-FRC, MS series

Type codes

| | | | | | | | |
|---|--|---|---|-----|---|---------|----|
| | MSB | 6 | - | 3/8 | - | FRC5:J1 | M1 |
| Series | | | | | | | |
| MSB | Service unit combination | | | | | | |
| 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 combination consisting of: | | | | | | | |
| <ul style="list-style-type: none"> • Filter regulator with pressure gauge, rotary knob with detent, lockable via accessories • Lubricator | | | | | | | |
| Pressure regulation range 0.3 ... 7 bar | | | | | | | |
| Plastic bowl guard | | | | | | | |
| FRC1:J5 | Grade of filtration 40 µm, manual rotary condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC13:J120 | Grade of filtration 40 µm, manual rotary condensate drain, pressure gauge with outer scale in MPa | | | | | | |
| Pressure regulation range 0.5 ... 12 bar | | | | | | | |
| Plastic bowl guard | | | | | | | |
| FRC7:J3 | Grade of filtration 5 µm, manual rotary condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC5:J1 | Grade of filtration 40 µm, manual rotary condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC6:J2 | Grade of filtration 40 µm, fully automatic condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| Metal bowl | | | | | | | |
| FRC11:J9 | Grade of filtration 5 µm, manual rotary condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC12:J10 | Grade of filtration 5 µm, fully automatic condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC9:J11 | Grade of filtration 40 µm, manual rotary condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| FRC10:J12 | Grade of filtration 40 µm, fully automatic condensate drain, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| Lubricators | | | | | | | |
| M1 | Plastic bowl guard | | | | | | |
| M2 | Metal bowl | | | | | | |

New
MSB4/6-...J120M1

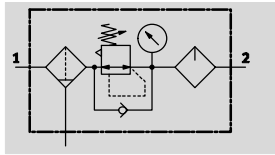
Service unit combinations MSB4/MSB6-FRC, MS series

FESTO

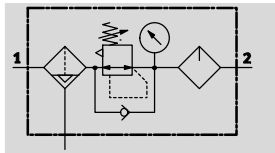
Technical data




Function

With condensate drain
manual rotary



With condensate drain
fully automatic



-  - Flow rate
850 ... 4,800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating 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 → 16, Festo special oil → 16

| General technical data | | |
|---------------------------------|---|-------------------------------|
| Size | MSB4 | MSB6 |
| Pneumatic connection 1, 2 | G ¹ / ₈ | - |
| | G ¹ / ₄ | G ¹ / ₄ |
| | - | G ³ / ₈ |
| | - | G ¹ / ₂ |
| Design | Filter regulator with pressure gauge | |
| | Proportional standard mist lubricator | |
| Regulating function | Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting | |
| Type of mounting | Via accessories | |
| Assembly position | Vertical ±5° | |
| Grade of filtration [µm] | 5 | |
| | 40 | |
| Air purity class at the output | Compressed air in accordance with ISO 8573-1:2010 [6:4:-] (grade of filtration 5 µm) | |
| | Compressed air in accordance with ISO 8573-1:2010 [7:4:-] (grade of filtration 40 µm) | |
| 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 to ISO 228-1

Service unit combinations MSB4/MSB6-FRC, MS series

FESTO

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 | 40 μ m | - | 1,400 | - | - | 4,800 |
| Pressure regulation range 0.5... 12 bar | | | | | | |
| Grade of filtration | 5 μ m | - | 850 | - | - | 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.

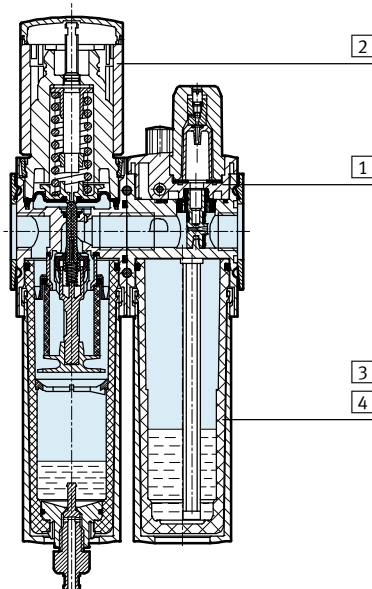
| Operating and environmental conditions | | | | |
|--|--|------------|---|-----------------|
| Condensate drains | Manual rotary | | | Fully automatic |
| Size | MSB4 | MSB6 | MSB4 | MSB6 |
| Operating pressure [bar] | 1.5 ... 14 | 1.5 ... 20 | 2 ... 12 | 2 ... 12 |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [-:4:-] | | Compressed air in accordance with ISO 8573-1:2010 [7:4:-] | |
| | Inert gases | | | |
| Note on operating/pilot medium | Operation with lubricated medium possible (in which case lubricated operation will always be required) | | | |
| 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 | PA/POM |
| 3 | Plastic bowl guard | PC |
| 4 | Metal bowl | Wrought aluminium alloy |
| - | Seals | NBR |

New
MSB4/6-...J120M1

Service unit combinations MSB4/MSB6-FRC, MS series



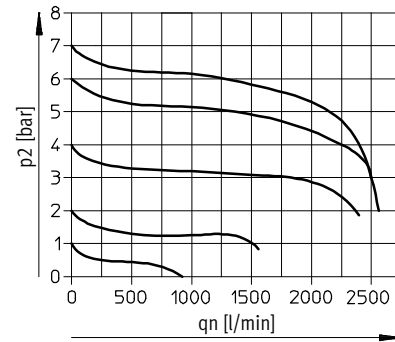
Technical data

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
MSB4-1/4

Grade of filtration 40 μm

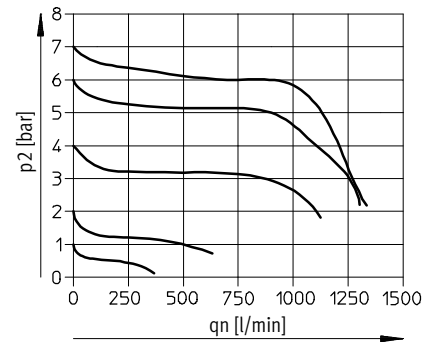
Primary pressure $p_1 = 10$ bar



Pressure regulation range 0.5 ... 12 bar Grade of filtration 5 μm
MSB4-1/8

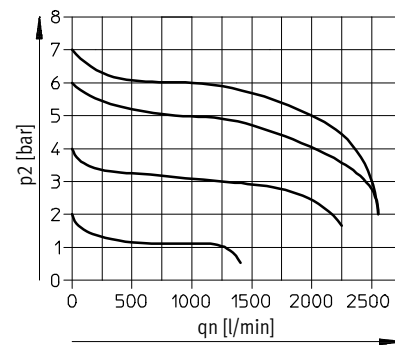
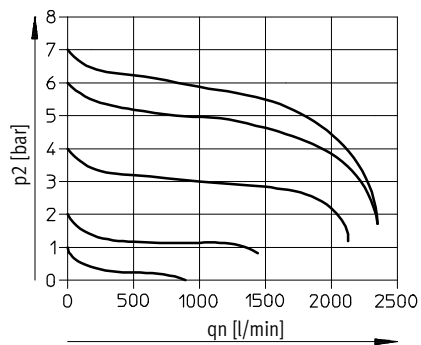
Grade of filtration 40 μm

Primary pressure $p_1 = 10$ bar



MSB4-1/4

Primary pressure $p_1 = 10$ bar



Service unit combinations MSB4/MSB6-FRC, MS series

Technical data

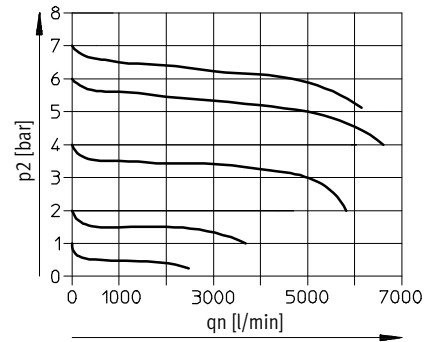
Standard flow rate q_n as a function of output pressure p_2

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

MSB6-1/2

Primary pressure $p_1 = 10$ bar

Grade of filtration 40 μm

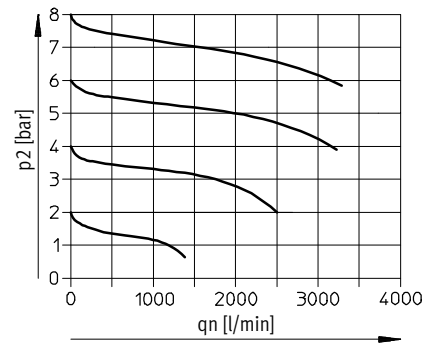


Pressure regulation range 0.5 ... 12 bar Grade of filtration 5 μm

MSB6-1/4

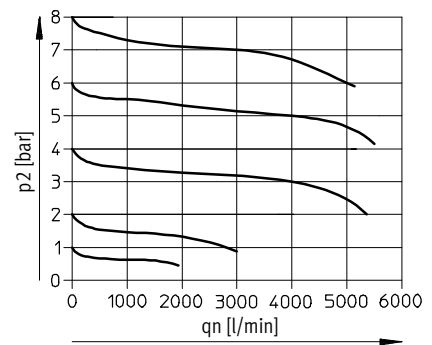
Primary pressure $p_1 = 10$ bar

Grade of filtration 40 μm



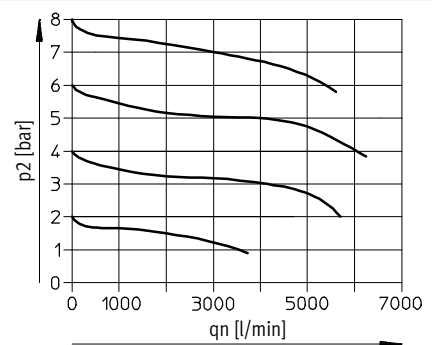
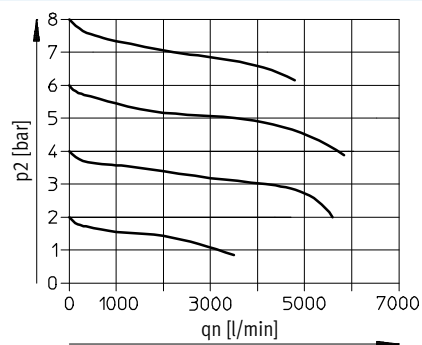
MSB6-3/8

Primary pressure $p_1 = 10$ bar



MSB6-1/2

Primary pressure $p_1 = 10$ bar



New
MSB4/6-...J120M1

Service unit combinations MSB4/MSB6-FRC, MS series

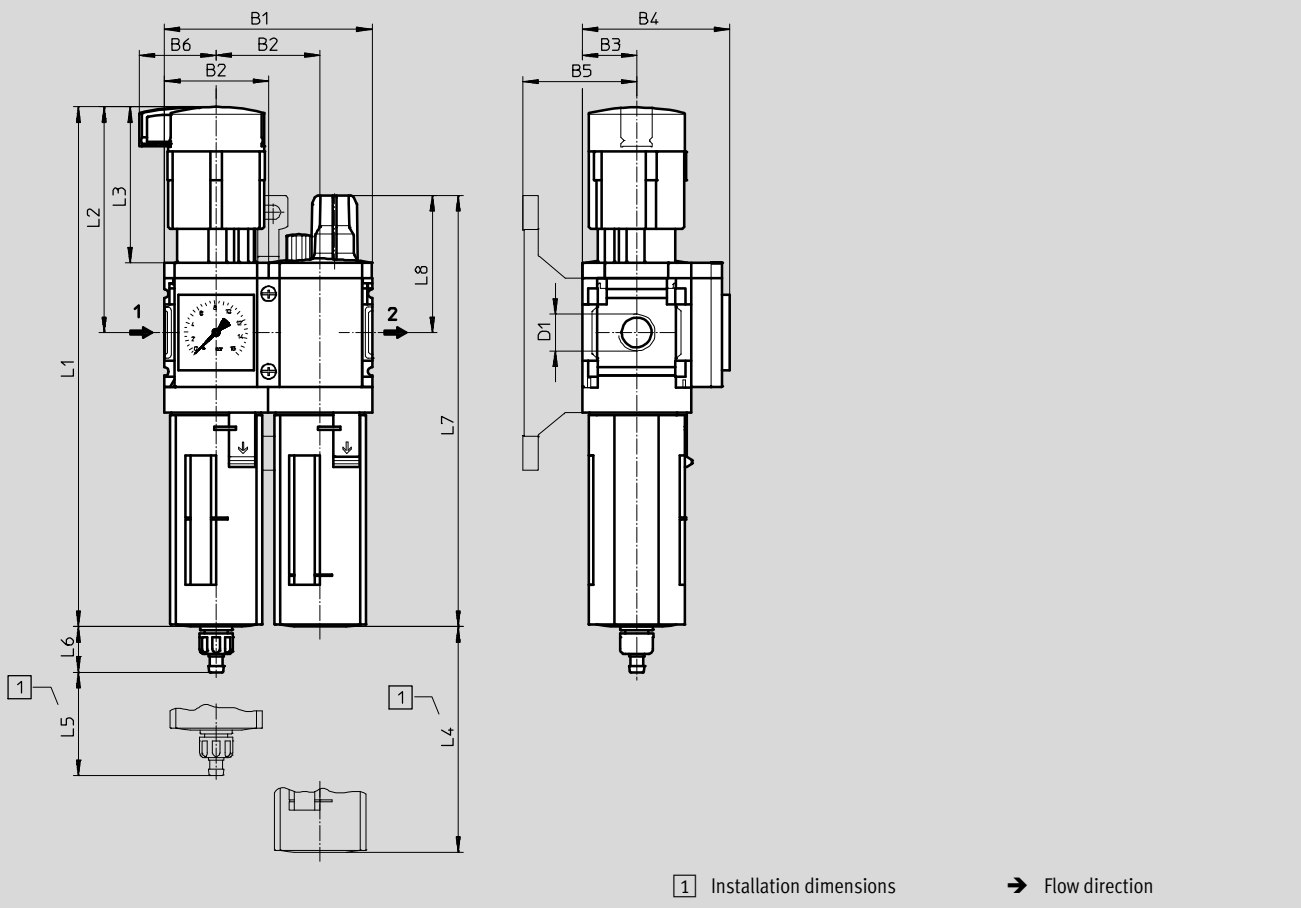


Technical data

Dimensions

Download CAD data → www.festo.com

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 auto- matic | | |
| 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 | | | | | | | G1/4 | | | | | | | | | |
| 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 to ISO 228-1

Service unit combinations 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, pressure gauge with outer scale in MPa | | | | | | |
| MSB4 | manual rotary | G $\frac{1}{4}$ | - | - | 8042669 | MSB4-$\frac{1}{4}$-FRC13:J120M1  |
| MSB6 | manual rotary | G $\frac{1}{2}$ | - | - | 8042673 | MSB6-$\frac{1}{2}$-FRC13:J120M1  |
| Plastic bowl guard, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| MSB4 | manual rotary | G $\frac{1}{4}$ | - | - | 531109 | MSB4-$\frac{1}{4}$-FRC1:J5M1 |
| MSB6 | manual rotary | G $\frac{1}{2}$ | - | - | 530230 | MSB6-$\frac{1}{2}$-FRC1:J5M1 |

| 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, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| MSB4 | manual rotary | G $\frac{1}{8}$ | - | - | 531133 | MSB4-$\frac{1}{8}$-FRC5:J1M1 |
| | | G $\frac{1}{4}$ | 531121 | MSB4-$\frac{1}{4}$-FRC7:J3M1 | 531117 | MSB4-$\frac{1}{4}$-FRC5:J1M1 |
| | fully automatic | G $\frac{1}{4}$ | - | - | 531119 | MSB4-$\frac{1}{4}$-FRC6:J2M1 |
| MSB6 | manual rotary | G $\frac{1}{4}$ | - | - | 530268 | MSB6-$\frac{1}{4}$-FRC5:J1M1 |
| | | G $\frac{3}{8}$ | - | - | 530292 | MSB6-$\frac{3}{8}$-FRC5:J1M1 |
| | | G $\frac{1}{2}$ | 530248 | MSB6-$\frac{1}{2}$-FRC7:J3M1 | 530244 | MSB6-$\frac{1}{2}$-FRC5:J1M1 |
| | fully automatic | G $\frac{1}{2}$ | - | - | 530246 | MSB6-$\frac{1}{2}$-FRC6:J2M1 |
| Metal bowl, pressure gauge with outer scale in bar and inner scale in psi | | | | | | |
| MSB6 | manual rotary | G $\frac{1}{2}$ | 530234 | MSB6-$\frac{1}{2}$-FRC11:J9M2 | 530252 | MSB6-$\frac{1}{2}$-FRC9:J11M2 |
| | | G $\frac{1}{2}$ | 530236 | MSB6-$\frac{1}{2}$-FRC12:J10M2 | 530232 | MSB6-$\frac{1}{2}$-FRC10:J12M2 |

Service unit combinations MSB-FRC, MS series

FESTO

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 | OFSW-32 |

| Ordering data – Padlock LRV5-D | | | |
|---|------------|----------|--------|
| | Weight [g] | Part No. | Type |
|  | 120 | 193786 | LRV5-D |