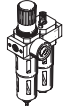
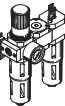

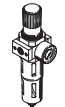
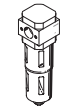
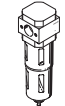
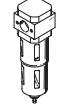
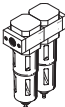
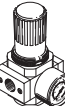


Service units FRC/FRCS, D series

FESTO



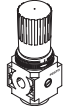
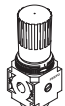
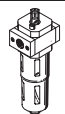
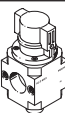

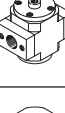

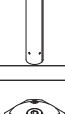
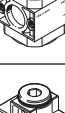

Product range overview – Service unit components, D series, metal

| Type | Size | Pneumatic connection | | | | | | | | | | Pressure regulation range [bar] | | | Grade of filtration [µm] | | | |
|--|-------|----------------------|----|------|------|------|------|------|----|-----|-----|---------------------------------|------------|------------|--------------------------|---|---|----|
| | | M5 | M7 | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 | QS4 | QS6 | 0.5 ... | 0.5 ... | 2.5 ... | 0.01 | 1 | 5 | 40 |
| Service units | | | | | | | | | | | | | | | | | | |
| FRC/FRCS  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | - | ■ | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | - | ■ | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | ■ | ■ |
| FRC-K  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Mini | - | - | ■ | ■ | - | - | - | - | - | - | ■ | ■ | - | - | - | - | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | - | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | - | - | - | ■ | ■ | - | - | - | - | ■ |
| LFR-K  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Mini | - | - | ■ | ■ | - | - | - | - | - | - | ■ | ■ | - | - | - | - | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | - | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | - | - | - | ■ | ■ | - | - | - | - | ■ |
| Individual devices | | | | | | | | | | | | | | | | | | |
| Filter regulators LFR/LFRS  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | - | ■ | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | - | ■ | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | ■ | ■ |
| Filters LF  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - | - | - | - | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - | ■ | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | ■ | ■ |
| Fine and micro filters LFMA/LFMB  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | ■ | ■ | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | ■ | ■ | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | ■ | ■ | - |
| Activated carbon filters LFX  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - |
| Filter combinations LFMBA  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ■ | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | ■ | ■ | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | ■ | ■ | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | ■ | ■ | - |
| Pressure regulators LR/LRS  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | - | - | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | - | - | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | - | - |

Product range overview – Service unit components, D series, metal

| Type | Size | Bowl guard | | Condensate drain | | | Pressure indicator | | Actuator lock | | Supply voltage | | | Options | | | → Page/ Internet |
|--|-------|------------------|--------------|------------------|----------------|-----------------|---------------------|------------------------|------------------------|----------------------------------|----------------|----------|----------|---|--|-------------------------------|---------------------|
| | | Metal bowl guard | Plastic bowl | Manual | Semi-automatic | Fully automatic | With pressure gauge | Without pressure gauge | Rotary knob with latch | Rotary knob with integrated lock | 24 V DC | 110 V AC | 230 V AC | Directly actuated pressure regulator with integrated return flow function | Pilot actuated pressure regulator with integrated return flow function | Differential pressure display | |
| Service units | | | | | | | | | | | | | | | | | |
| FRC/FRCS | Micro | - | ■ | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | - | - | 6 |
| | Mini | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | - | |
| FRC-K | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | frc | |
| | Mini | ■ | - | ■ | - | ■ | ■ | - | ■ | - | ■ | - | - | - | - | | - |
| | Midi | ■ | - | ■ | - | ■ | ■ | - | ■ | - | ■ | - | - | - | - | | - |
| | Maxi | ■ | - | ■ | - | ■ | ■ | - | ■ | - | ■ | - | - | ■ | ■ | | - |
| LFR-K | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | lfr | |
| | Mini | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | | - |
| | Midi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | | - |
| | Maxi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | ■ | ■ | | - |
| Individual devices | | | | | | | | | | | | | | | | | |
| Filter regulators LFR/LFRS | Micro | - | ■ | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | - | - | lfr |
| | Mini | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | - | |
| Filters LF | Micro | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | lf |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| Fine and micro filters LFMA/LFMB | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | lfma, lfmb |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| Activated carbon filters LFX | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | lfx |
| | Mini | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Midi | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Filter combinations LFMBA | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | lfmba |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| Pressure regulators LR/LRS | Micro | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | lrr |
| | Mini | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | - | - | |
| | Midi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | - | - | |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | ■ | - | |

Product range overview – Service unit components, D series, metal

| Type | Size | Pneumatic Connection | | | | | | | | | | Pressure regulation range [bar] | | |
|--|---|----------------------|----|------|------|------|------|------|----|-----|-----|---------------------------------|------------------|---|
| | | M5 | M7 | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 | QS4 | QS6 | 0.5 ... 7 | 0.5 ... 12 | |
| Individual devices | | | | | | | | | | | | | | |
| Pressure regulators LRB/LRBS |  | Micro | – | – | – | ■ | – | – | – | – | – | – | ■ | ■ |
| | | Mini | – | – | – | – | – | – | – | – | – | – | ■ | ■ |
| | | Midi | – | – | – | – | ■ | – | – | – | – | – | ■ | ■ |
| | | Maxi | – | – | – | – | – | – | – | – | – | – | – | – |
| Pressure regulator manifolds LRB-K |  | Micro | – | – | – | ■ | ■ | – | – | – | – | – | ■ | ■ |
| | | Mini | – | – | – | – | ■ | ■ | – | – | – | – | ■ | ■ |
| | | Midi | – | – | – | – | ■ | ■ | – | – | – | – | ■ | ■ |
| | | Maxi | – | – | – | – | – | – | – | – | – | – | – | – |
| Lubricators LOE |  | Micro | ■ | ■ | ■ | – | – | – | – | – | ■ | ■ | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| On/off valves HE |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| On/off valves HEE |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| On/off valves HEP |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| Soft-start valves HEL |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| Membrane air dryers LDM1 |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Midi | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| Branching modules FRM |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | ■ | ■ | ■ | – | – | – | – | – | – | – |
| | | Midi | – | – | – | ■ | ■ | ■ | ■ | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| Distributor block FRZ |  | Micro | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Mini | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Midi | – | – | – | – | – | – | – | – | – | – | – | – |
| | | Maxi | – | – | – | – | – | – | – | – | – | – | – | – |

Product range overview – Service unit components, D series, metal

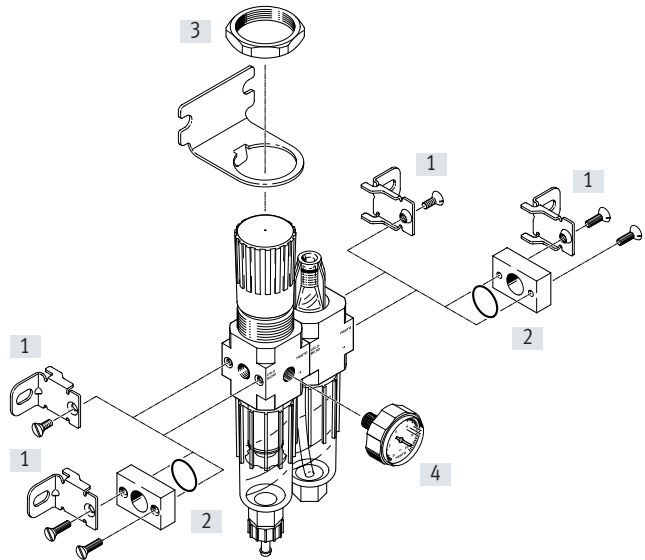
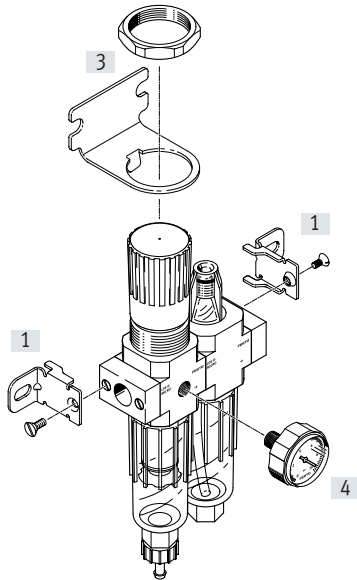
| Type | Size | Bowl guard | | Pressure indicator | | Actuator lock | | Supply voltage | | | Options | | → Page/ Internet |
|--|-------|------------------|--------------|---------------------|------------------------|------------------------|----------------------------------|----------------|----------|----------|--------------------------|-----------------|---------------------|
| | | Metal bowl guard | Plastic bowl | With pressure gauge | Without pressure gauge | Rotary knob with latch | Rotary knob with integrated lock | 24 V DC | 110 V AC | 230 V AC | With non-return function | Pressure switch | |
| Individual devices | | | | | | | | | | | | | |
| Pressure regulators LRB/LRBS | Micro | - | - | - | ■ | ■ | ■ | - | - | - | - | - | lrb |
| | Mini | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| Pressure regulator manifolds LRB-K | Micro | - | - | - | ■ | ■ | - | - | - | - | - | - | lrb |
| | Mini | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| Lubricators LOE | Micro | - | ■ | - | ■ | - | - | - | - | - | - | - | loe |
| | Mini | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| On/off valves HE | Micro | - | - | - | ■ | ■ | - | - | - | - | - | - | he |
| | Mini | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| On/off valves HEE | Micro | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | hee |
| | Mini | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| | Midi | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| | Maxi | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| On/off valves HEP | Micro | - | - | - | ■ | - | - | - | - | - | - | - | hep |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |
| Soft-start valves HEL | Micro | - | - | - | ■ | - | - | - | - | - | - | - | hel |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |
| Membrane air dryers LDM1 | Micro | - | - | - | ■ | - | - | - | - | - | - | - | ldm1 |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| Branching modules FRM | Micro | - | - | - | ■ | - | - | - | - | - | ■ | ■ | frm |
| | Mini | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| | Midi | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| Distributor block FRZ | Micro | - | - | - | ■ | - | - | - | - | - | - | - | frz |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |

Peripherals overview

Micro

Service unit FRC with connecting plates, connection size G1/8, QS-4 or QS-6

Service unit FRC without connecting plates, connecting thread M5 or M7 in the housing



Mounting attachments and accessories

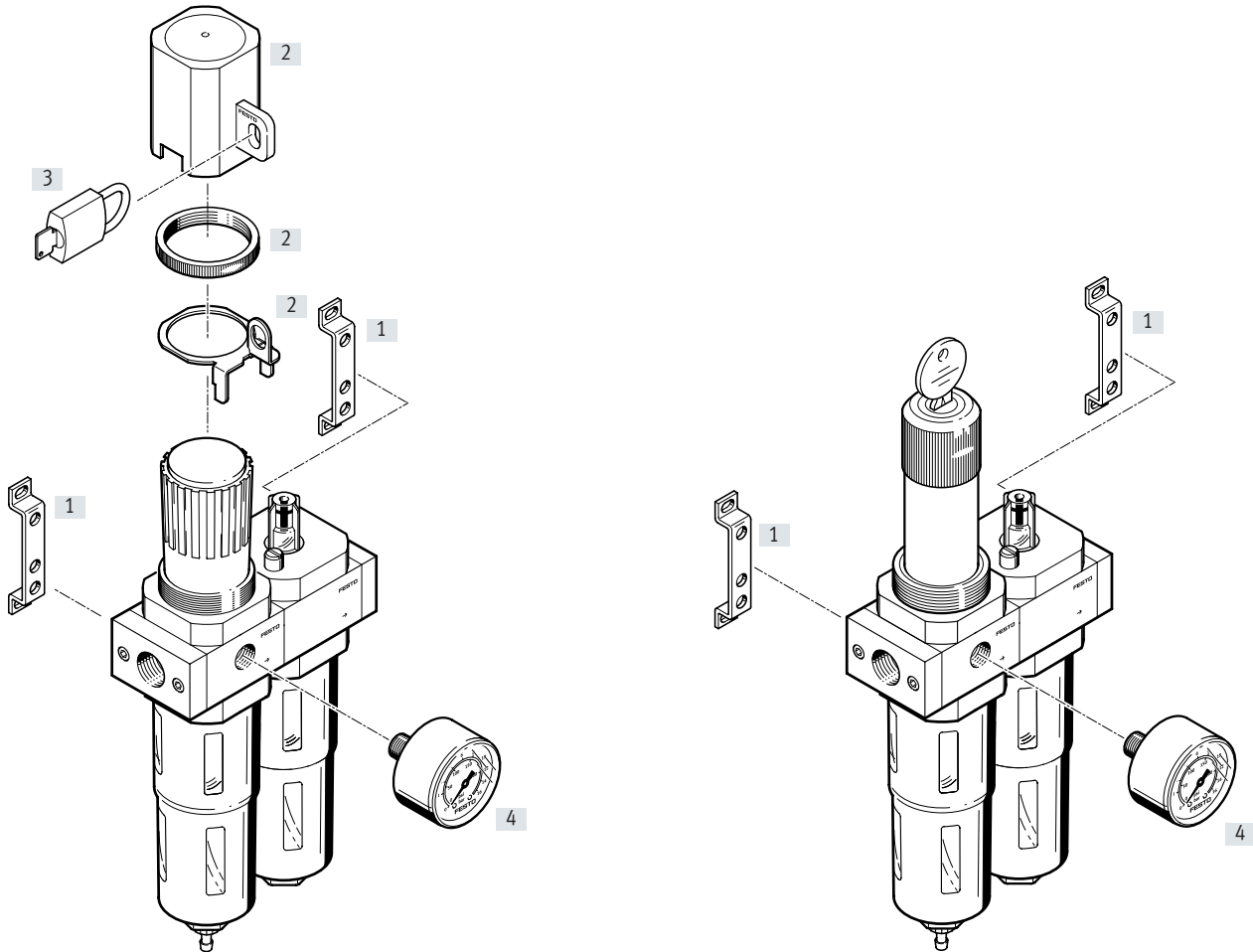
| | With connecting plates | Without connecting plates | → Page/Internet |
|---------------------------------------|------------------------|---------------------------|-----------------|
| [1] Mounting bracket HFOE | ■ | ■ | hfoe-d |
| [2] Connection set PBL | - | ■ | pbl |
| [3] Mounting bracket with hex nut HRS | ■ | ■ | hrs-d |
| [4] Pressure gauge MA-27 | ■ | ■ | 28 |

Peripherals overview

Mini/Midi/Maxi

Service unit FRC

Service unit FRCS, lockable



Mounting attachments and accessories

| | Rotary knob with latch | Rotary knob, lockable | → Page/Internet |
|------------------------------|------------------------|-----------------------|-----------------|
| [1] Mounting bracket HFOE | ■ | ■ | hfoe-d |
| [2] Regulator lock LRVS | ■ | - | lrvs-d |
| [3] Padlock LRVS-D | ■ | - | lrvs-d |
| [4] Pressure gauge MA | ■ | ■ | 28 |

Type codes

| 001 | Series |
|-------------|------------------------|
| FRC | Service unit |
| FRCS | Service unit, lockable |

| 002 | Pneumatic connection |
|------------|------------------------|
| M5 | Female thread M5 |
| M7 | Female thread M7 |
| QS4 | Push-in connector 4 mm |
| QS6 | Push-in connector 6 mm |
| 1/8 | Female thread G1/8 |
| 1/4 | Female thread G1/4 |
| 3/8 | Female thread G3/8 |
| 1/2 | Female thread G1/2 |
| 3/4 | Female thread G3/4 |
| 1 | Female thread G1 |

| 003 | Version |
|----------|-----------------|
| D | D series, metal |

| 004 | Pressure regulation range |
|----------|-----------------------------------|
| 7 | 0.5 ... 7 bar (0.05 ... 0.7 MPa) |
| | 0.5 ... 12 bar (0.05 ... 1.2 MPa) |

| 005 | Grade of filtration |
|-----------|---------------------|
| | 40 µm |
| 5M | 5 µm |

| 006 | Pressure gauge |
|----------|------------------------|
| | With pressure gauge |
| O | Without pressure gauge |

| 007 | Size |
|--------------|--|
| MICRO | Grid dimension 25 mm (without connecting plates) |
| MINI | Grid dimension 40 mm (without connecting plates) |
| MIDI | Grid dimension 55 mm (without connecting plates) |
| MAXI | Grid dimension 66 mm (without connecting plates) |

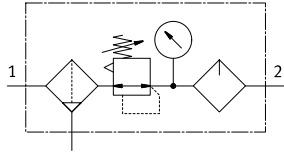
| 008 | Condensate drain |
|----------|-------------------|
| | Manually rotating |
| H | Semi-automatic |
| A | Fully automatic |

| 009 | Display unit |
|------------|-----------------|
| | Bar/psi/without |
| B | Bar |
| MPA | MPa |

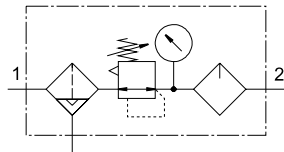
Datasheet





FRC/FRCS

Condensate drain, manual, with pressure gauge



Condensate drain, semi- or fully automatic, with pressure gauge



-  Flow rate
80 ... 8700 l/min
-  Temperature range
-10 ... +60°C
-  Operating pressure
1 ... 16 bar
-  www.festo.com

- Filter, regulator and lubricator functions in a single unit
- High flow rate and highly efficient in removing contaminants
- Good control characteristics with minimal pressure hysteresis
- Setting values are secured by latching the rotary knob
- Lockable rotary knob
- Two pressure regulation ranges: 0.5°... 7 bar and 0.5 ... 12 bar
- Two pressure gauge connections for different installation options
- Choice of manual, semi-automatic or fully automatic condensate drain
- Choice of filter inserts 5 µm or 40 µm
- New filter cartridges → page 27

- The following oils are recommended for Festo components:
Viscosity range to ISO 3448 class VG 32
32 mm²/s (cSt) at 40°C
- Festo special oil → page 28
 - ARAL Vitam GF 32
 - BP Energol HLP 32
 - Esso Nuto H 32
 - Mobil DTE 24
 - Shell Tellus Oil DO 32

| General technical data | | | | |
|---|---|---|----------------------------------|-------------------|
| Size | Micro | Mini | Midi | Maxi |
| Pneumatic connection 1, 2 ¹⁾ | M5 ²⁾ , M7 ²⁾ , G1/8, QS-4 ³⁾ , QS-6 ³⁾ | G1/8, G1/4, G3/8 | G1/4, G3/8, G1/2, G3/4 | G1/2, G3/4, G1 |
| Design | Filter regulator with/without pressure gauge Proportional standard mist lubricator | | | |
| Type of mounting | With accessories In-line installation | | | |
| Mounting position | Vertical ±5° | | | |
| Grade of filtration [µm] | 5 | 5 | | |
| | - | 40 | | |
| Air quality class at the output | Compressed air to ISO 8573-1:2010 [6:8:-] (grade of filtration 5 µm) | | | |
| | - | Compressed air to ISO 8573-1:2010 [7:8:-] (grade of filtration 40 µm) | | |
| | - | Inert gases | | |
| Bowl guard | - | Metal bowl guard | | |
| Condensate drain | Manual | | | |
| | Semi-automatic | | Fully automatic | |
| Actuator lock | Rotary knob with latch | | | |
| | - | | Rotary knob with integrated lock | |
| Pressure regulation range [bar] | 0.5 ... 7 | | 0.5 ... 7 | |
| | | | 0.5 ... 12 | |
| Max. pressure hysteresis [bar] | 0.3 | | 0.2 | |
| | | | 0.4 | |
| Pressure indicator | With pressure gauge | | | |
| | Prepared for M5 | | Prepared for G1/8 | Prepared for G1/4 |
| | | | | Prepared for G1/4 |
| Max. condensate volume [cm ³] | 3 | 22 | 43 | 80 ⁴⁾ |

- 1) Connecting plates with threaded connection
 - 2) Without connecting plates, connection thread in the housing.
 - 3) Connecting plates with push-in connector
 - 4) The max. condensate volume for FRC/FRCS...-DI-MAXI is 43 cm³.
- † Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

| Standard nominal flow rate $q_{nN}^{1)}$ [l/min] | | | | | | |
|--|-------|-----|------|------|------|--|
| Size | Micro | | | | | |
| Pneumatic connection 1, 2 | M5 | M7 | G1/8 | QS-4 | QS-6 | |
| Pressure regulation range 0.5 ... 7 bar | 80 | 170 | 160 | 100 | 160 | |

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

† 125 l/min must be available for the semi-automatic condensate drain to close fully.

| Standard nominal flow rate $q_{nN}^{1)}$ [l/min] | | | | | | | | | | | |
|--|----------------------------|------|------|------|------|------|------|------|---------------------------|---------------------------|---------------------------|
| Size | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection 1, 2 | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Pressure regulation range, grade of filtration | 0.5 ... 7 bar, 40 μ m | 800 | 1300 | 1500 | 1700 | 2000 | 2800 | 2800 | 7700 (4500) ²⁾ | 8500 (5000) ²⁾ | 8700 (5200) ²⁾ |
| | 0.5 ... 12 bar, 5 μ m | 600 | 850 | 1050 | 1300 | 1700 | 1800 | 2100 | 6800 (3000) ²⁾ | 7000 (3600) ²⁾ | 7200 (3800) ²⁾ |
| | 0.5 ... 12 bar, 40 μ m | 700 | 1000 | 1200 | 1500 | 2000 | 2600 | 2600 | 7600 (3300) ²⁾ | 8300 (3800) ²⁾ | 8500 (4000) ²⁾ |

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

2) With FRC/FRCS-...-DI.

† 125 l/min must be available for the fully automatic condensate drain to close correctly.

| Operating and environmental conditions | | | | |
|--|---|--|--|--|
| Condensate drain | Manual | | Semi-automatic | Fully automatic |
| Size | Micro | | Micro | Mini/Midi/Maxi |
| Operating pressure [bar] | 1 ... 10 | | 1 ... 10 | 2 ... 12 |
| Operating medium | Compressed air to ISO 8573-1:2010 [-:-:-] | | Compressed air to ISO 8573-1:2010 [-:9:-] | Compressed air to ISO 8573-1:2010 [7:9:-] |
| | - | | Inert gases | Inert gases |
| Note on the operating/pilot medium | - | | Lubricated operation possible (in which case lubricated operation will always be required) | Lubricated operation possible (in which case lubricated operation will always be required) |
| Ambient temperature [°C] | -10 ... +60 | | | |
| Temperature of medium [°C] | -10 ... +60 | | | |
| Storage temperature [°C] | -10 ... +60 | | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | | |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

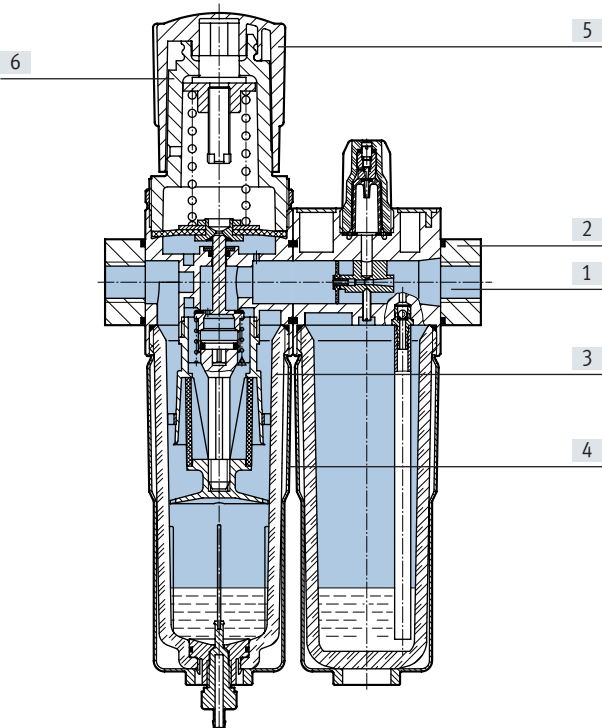
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

| Weight [g] | | | | | | |
|-------------------------------|-------------------|------------------|------|------|-----------------------|---------------|
| Size | Micro | | Mini | Midi | Maxi | |
| | Connecting thread | Connecting plate | | | Connection G1/2, G3/4 | Connection G1 |
| With pressure gauge | | | | | | |
| FRC-... | 113 | 149 | 660 | 1440 | 2390 | 2520 |
| FRCS-... | - | - | 760 | 1680 | 2490 | 2620 |
| Without pressure gauge | | | | | | |
| FRC-... | 103 | 139 | 600 | 1350 | 2280 | 2460 |
| FRCS-... | - | - | 700 | 1590 | 2380 | 2560 |

Datasheet

Materials

Sectional view

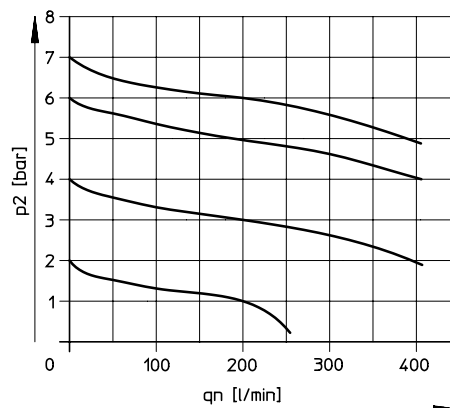
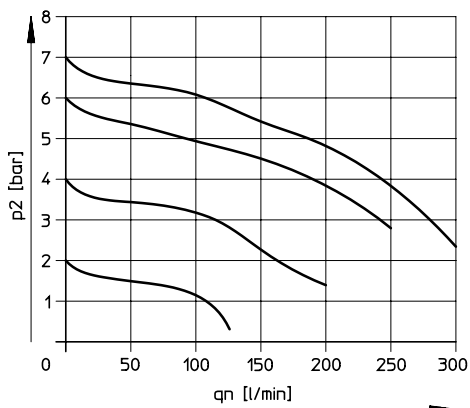


| Size | Micro | Mini/Midi/Maxi |
|-----------------------|-------------------------|-------------------------|
| [1] Housing | Wrought aluminium alloy | Die-cast zinc |
| [2] Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| [3] Bowl | PC | PC |
| [4] Metal bowl guard | - | Aluminium |
| [5] Rotary knob | POM | POM |
| [6] Support | PC | - |
| - Seals | NBR | NBR |
| Note on materials | - | RoHS-compliant |

Standard flow rate q_n as a function of output pressure p_2

FRC-M5-...-MICRO

FRC-M7-...-MICRO B

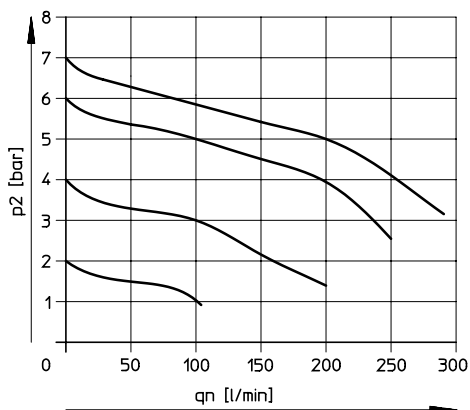


Primary pressure $p_1 = 10$ bar

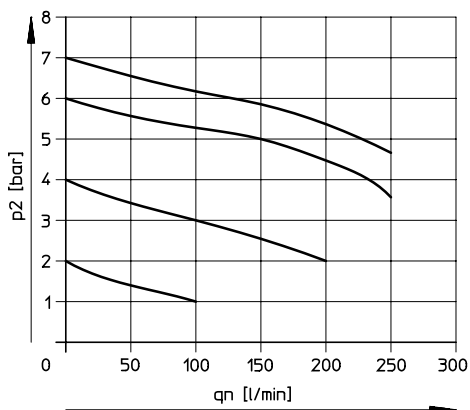
Datasheet

Standard flow rate q_n as a function of output pressure p_2

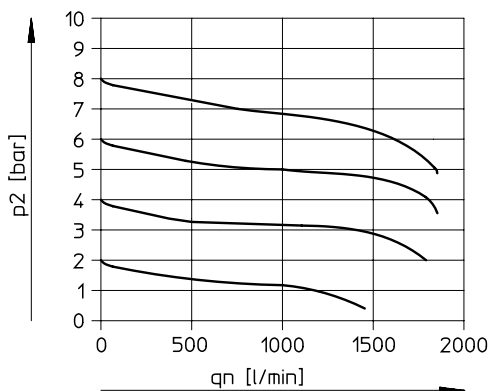
FRC-QS4-...-MICRO



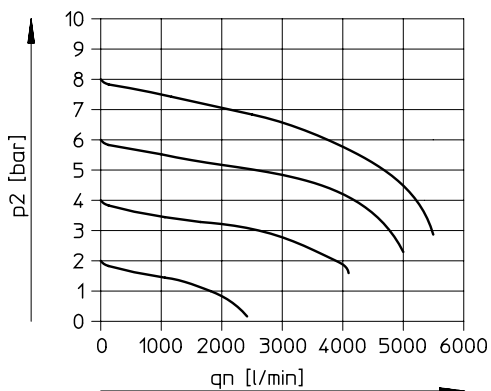
FRC-QS6-...-MICRO and FRC-1/8-...-MICRO



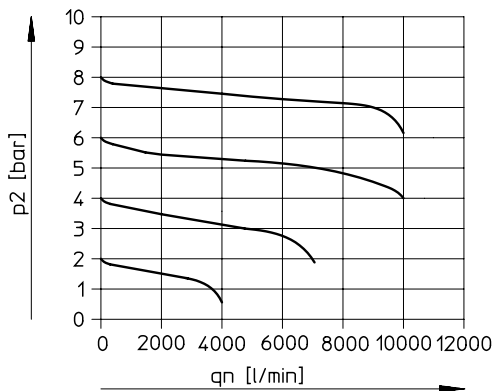
FRC/FRCS-1/4-D-MINI



FRC/FRCS-1/2-D-MIDI



FRC-1-D-MAXI



Primary pressure $p_1 = 10$ bar

Note

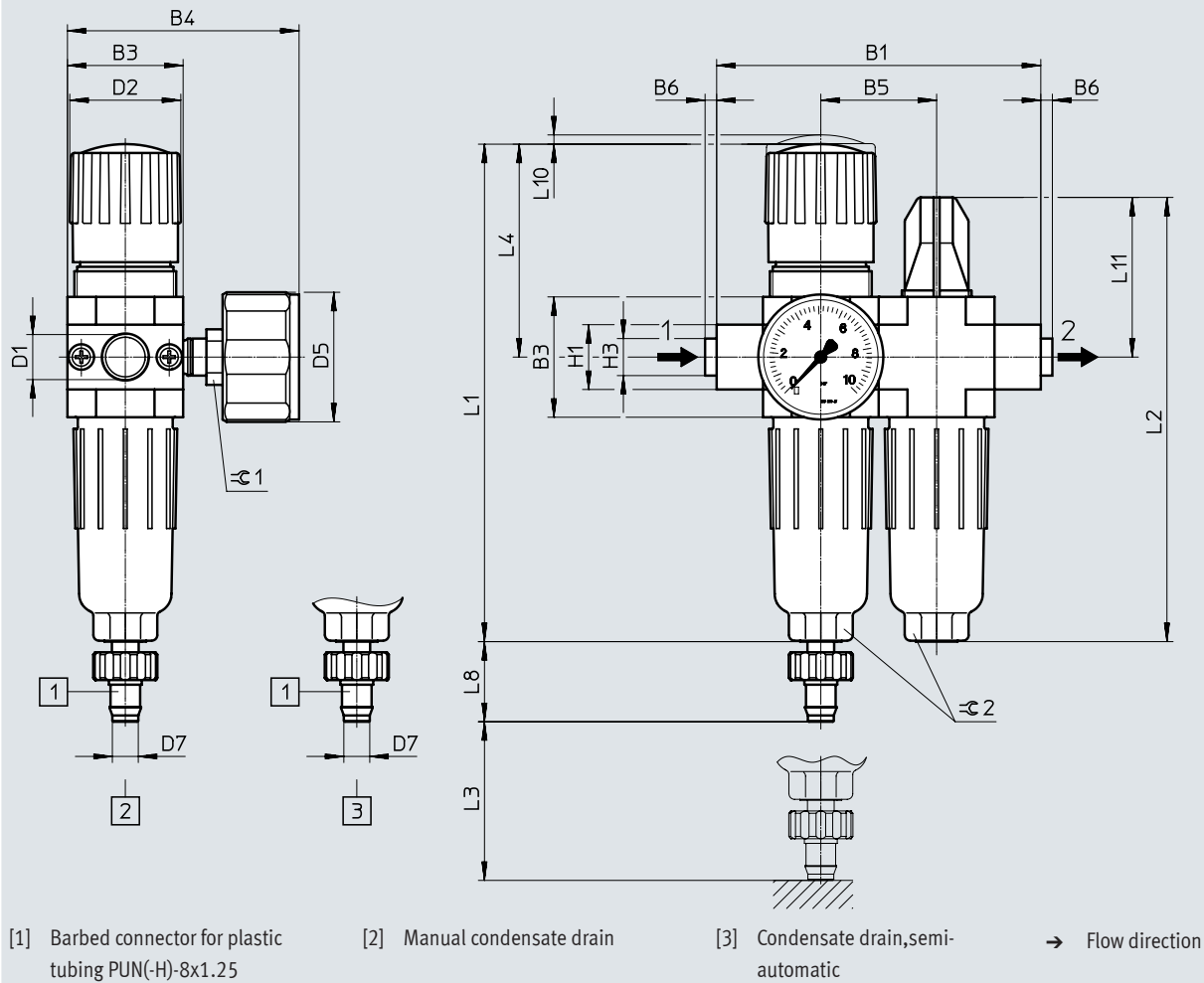
In order to improve the control performance, internal air consumption depending on the primary pressure is integrated into the design with the FRC/FRCS-...-MAXI.

Datasheet

Dimensions

Download CAD data → www.festo.com

Micro



[1] Barbed connector for plastic tubing PUN(-H)-8x1.25

[2] Manual condensate drain

[3] Condensate drain, semi-automatic

→ Flow direction

| Type | B1 | B3 | B4 | B5 | B6 | D1 | D2 ∅ | D5 ∅ | D7 ∅ | H1 | H3 |
|---------------------------|----|----|----|----|------|------|---------|---------|---------|----|-----|
| FRC-M5-D-7-5M-MICRO (H) | 50 | 25 | 50 | 25 | - | M5 | ~24 | 28 | 5.6 | 14 | - |
| FRC-M7-D-7-5M-MICRO (H) B | | | | | | M7 | | | | | |
| FRC-1/8-D-7-5M-MICRO (H) | 70 | 25 | 50 | 25 | ~2.5 | G1/8 | ~24 | 28 | 5.6 | 14 | ~8 |
| FRC-QS4-D-7-5M-MICRO (H) | | | | | | QS-4 | | | | | ~10 |
| FRC-QS6-D-7-5M-MICRO (H) | | | | | | QS-6 | | | | | |

| Type | L1 | L2 | L3 min. | L4 | L8 | L10 | L11 | ≈ 1 | ≈ 2 |
|---------------------------|--------|-----|------------|----|------|-----|-------|-------------|-------------|
| FRC-M5-D-7-5M-MICRO (H) | ~107.5 | ~96 | 60 | 46 | 17.3 | ~2 | ~34.5 | 12 | 12 |
| FRC-M7-D-7-5M-MICRO (H) B | | | | | | | | | |
| FRC-1/8-D-7-5M-MICRO (H) | | | | | | | | | |
| FRC-QS4-D-7-5M-MICRO (H) | | | | | | | | | |
| FRC-QS6-D-7-5M-MICRO (H) | | | | | | | | | |

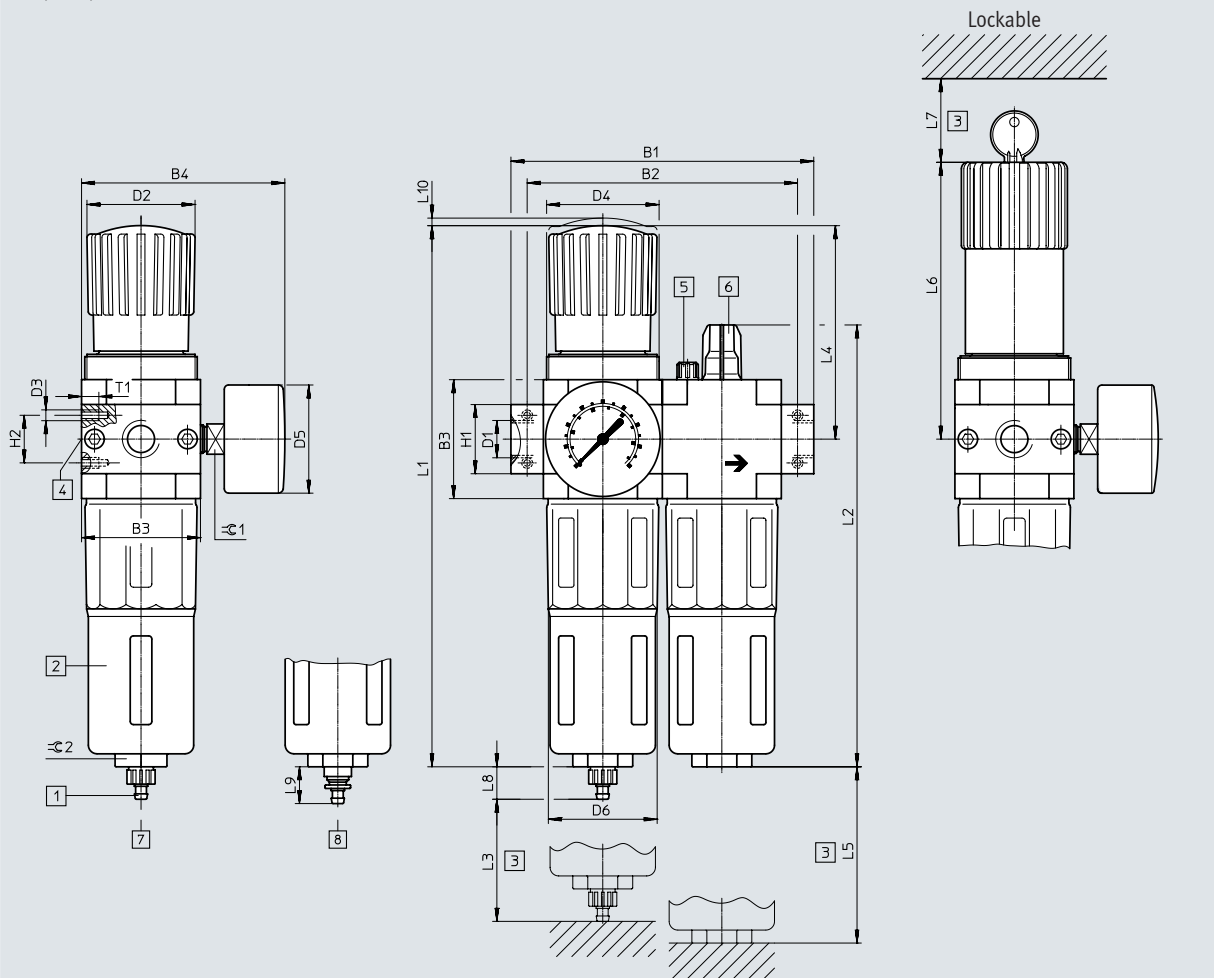
Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

Dimensions

Download CAD data → www.festo.com

Mini/Midi/Maxi



- [1] Barbed connector for plastic tubing PUN(-H)-8x1.25
 - [2] Metal bowl guard
 - [3] Installation dimension
 - [4] Second pressure gauge connection
 - [5] Bleed screw for oil reservoir
 - [6] Oil adjusting screw
 - [7] Manual condensate drain
 - [8] Fully automatic condensate drain
- Flow direction

| Type | B1 | B2 | B3 | B4 | D1 | D2 ∅ | D3 | D4 | D5 ∅ | D6 ∅ |
|---------------------|-----|-----|-----|-----|------|---------|----|---------|---------|---------|
| Mini | | | | | | | | | | |
| FRC-1/8-D-MINI | 104 | 92 | 40 | 76 | G1/8 | 31 | M4 | M36x1.5 | 39 | 38 |
| FRC/FRCS-1/4-D-MINI | | | | | G1/4 | | | | | |
| FRC-3/8-D-MINI | | | | | G3/8 | | | | | |
| Midi | | | | | | | | | | |
| FRC/FRCS-1/4-D-MIDI | 140 | 125 | 55 | 95 | G1/4 | 50 | M5 | M52x1.5 | 39 | 52 |
| FRC-3/8-D-MIDI | | | | | G3/8 | | | | | |
| FRC/FRCS-1/2-D-MIDI | | | | | G1/2 | | | | | |
| FRC-3/4-D-MIDI | | | | | G3/4 | | | | | |
| Maxi | | | | | | | | | | |
| FRC/FRCS-1/2-D-MAXI | 162 | 146 | 66 | 106 | G1/2 | 31 | M5 | M36x1.5 | 39 | 65 |
| FRC-3/4-D-MAXI | | | | 106 | G3/4 | | | M36x1.5 | | |
| FRC-1-D-MAXI | 182 | 157 | 106 | G1 | 31 | M36x1.5 | | | | |

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

Datasheet

| Type | H1 | H2 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | T1 | ≅ 1 | ≅ 2 |
|---------------------|----|----|-----|-----|----|----|-----|-----|----|----|----|-----|----|-----|-----|
| Mini | | | | | | | | | | | | | | | |
| FRC-1/8-D-MINI | 20 | 11 | 193 | 169 | 60 | 69 | 100 | 98 | 60 | 15 | 19 | 3 | 7 | 14 | 22 |
| FRC/FRCS-1/4-D-MINI | | | | | | | | | | | | | | | |
| FRC-3/8-D-MINI | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | |
| FRC/FRCS-1/4-D-MIDI | 32 | 22 | 250 | 204 | 80 | 99 | 120 | 130 | 60 | 15 | 19 | 3 | 8 | 14 | 24 |
| FRC-3/8-D-MIDI | | | | | | | | | | | | | | | |
| FRC/FRCS-1/2-D-MIDI | | | | | | | | | | | | | | | |
| FRC-3/4-D-MIDI | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | |
| FRC/FRCS-1/2-D-MAXI | 32 | 22 | 252 | 228 | 90 | 82 | 150 | 111 | 60 | 15 | 19 | 3 | 8 | 14 | 24 |
| FRC-3/4-D-MAXI | 32 | | 252 | | | 82 | | 111 | | | | | | | |
| FRC-1-D-MAXI | 40 | | 252 | | | 82 | | 111 | | | | | | | |

Datasheet

| Ordering data | | | |
|---|----------------------------------|--|--------------------------------|
| Pressure regulation range 0.5 ... 7 bar | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm |
| | | | Part no. |
| With pressure gauge, outer scale in bar | | | |
| Manual | Micro | Without connecting plates, connection thread in the housing | |
| | | M5 | 527860 FRC-M5-D-7-5M-MICRO |
| | | M7 | 534189 FRC-M7-D-7-5M-MICRO-B |
| | | Connecting plates with threaded connection | |
| | | G1/8 | 527864 FRC-1/8-D-7-5M-MICRO |
| | | Connecting plates with push-in connector | |
| | | QS-4 | 527876 FRC-QS4-D-7-5M-MICRO |
| | | QS-6 | 527880 FRC-QS6-D-7-5M-MICRO |
| | | Semi-automatic | Micro |
| M5 | 527861 FRC-M5-D-7-5M-MICRO-H | | |
| M7 | 534190 FRC-M7-D-7-5M-MICRO-H-B | | |
| Connecting plates with threaded connection | | | |
| G1/8 | 527865 FRC-1/8-D-7-5M-MICRO-H | | |
| Connecting plates with push-in connector | | | |
| QS-4 | 527877 FRC-QS4-D-7-5M-MICRO-H | | |
| QS-6 | 527881 FRC-QS6-D-7-5M-MICRO-H | | |
| Without pressure gauge | | | |
| Manual | Micro | Without connecting plates, connection thread in the housing | |
| | | M5 | 527862 FRC-M5-D-7-0-5M-MICRO |
| | | M7 | 534191 FRC-M7-D-7-0-5M-MICRO-B |
| | | Connecting plates with threaded connection | |
| | | G1/8 | 527866 FRC-1/8-D-7-0-5M-MICRO |
| | | Connecting plates with push-in connector | |
| | | QS-4 | 527878 FRC-QS4-D-7-0-5M-MICRO |
| | | QS-6 | 527882 FRC-QS6-D-7-0-5M-MICRO |
| | | Semi-automatic | Micro |
| M5 | 527863 FRC-M5-D-7-0-5M-MICRO-H | | |
| M7 | 534192 FRC-M7-D-7-0-5M-MICRO-H-B | | |
| Connecting plates with threaded connection | | | |
| G1/8 | 527867 FRC-1/8-D-7-0-5M-MICRO-H | | |
| Connecting plates with push-in connector | | | |
| QS-4 | 527879 FRC-QS4-D-7-0-5M-MICRO-H | | |
| QS-6 | 527883 FRC-QS6-D-7-0-5M-MICRO-H | | |

Datasheet

Ordering data

Pressure regulation range 0.5 ... 12 bar, rotary knob with latch, connecting plates with threaded connection

| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | | |
|--|-----------------|------------|--------------------------|-----------------------|---------------------------|--------------------|--------------------|
| | | | Part no. | Type | Part no. | Type | |
| With pressure gauge, outer scale in bar, inner scale in psi | | | | | | | |
| Manual | Mini | G1/8 | 162770 | FRC-1/8-D-5M-MINI | 159604 | FRC-1/8-D-MINI | |
| | | G1/4 | 162771 | FRC-1/4-D-5M-MINI | 159605 | FRC-1/4-D-MINI | |
| | | G3/8 | 162772 | FRC-3/8-D-5M-MINI | 162734 | FRC-3/8-D-MINI | |
| | Midi | G1/4 | 186499 | FRC-1/4-D-5M-MIDI | 186497 | FRC-1/4-D-MIDI | |
| | | G3/8 | 162773 | FRC-3/8-D-5M-MIDI | 159588 | FRC-3/8-D-MIDI | |
| | | G1/2 | 162774 | FRC-1/2-D-5M-MIDI | 159590 | FRC-1/2-D-MIDI | |
| | | G3/4 | 162775 | FRC-3/4-D-5M-MIDI | 162735 | FRC-3/4-D-MIDI | |
| | Maxi | G1/2 | 186507 | FRC-1/2-D-5M-MAXI | 186505 | FRC-1/2-D-MAXI | |
| | | G3/4 | 162776 | FRC-3/4-D-5M-MAXI | 159606 | FRC-3/4-D-MAXI | |
| | | G1 | 162777 | FRC-1-D-5M-MAXI | 159607 | FRC-1-D-MAXI | |
| | Fully automatic | Mini | G1/8 | 162778 | FRC-1/8-D-5M-MINI-A | 159608 | FRC-1/8-D-MINI-A |
| | | | G1/4 | 162779 | FRC-1/4-D-5M-MINI-A | 159609 | FRC-1/4-D-MINI-A |
| | | | G3/8 | 162780 | FRC-3/8-D-5M-MINI-A | 162736 | FRC-3/8-D-MINI-A |
| | | Midi | G1/4 | 186502 | FRC-1/4-D-5M-MIDI-A | 186500 | FRC-1/4-D-MIDI-A |
| | | | G3/8 | 162781 | FRC-3/8-D-5M-MIDI-A | 159589 | FRC-3/8-D-MIDI-A |
| G1/2 | | | 162782 | FRC-1/2-D-5M-MIDI-A | 159591 | FRC-1/2-D-MIDI-A | |
| G3/4 | | | 162783 | FRC-3/4-D-5M-MIDI-A | 162737 | FRC-3/4-D-MIDI-A | |
| Maxi | | G1/2 | 186510 | FRC-1/2-D-5M-MAXI-A | 186508 | FRC-1/2-D-MAXI-A | |
| | | G3/4 | 162784 | FRC-3/4-D-5M-MAXI-A | 159610 | FRC-3/4-D-MAXI-A | |
| | | G1 | 162785 | FRC-1-D-5M-MAXI-A | 159611 | FRC-1-D-MAXI-A | |
| Without pressure gauge | | | | | | | |
| Manual | | Mini | G1/8 | 192650 | FRC-1/8-D-5M-O-MINI | 162738 | FRC-1/8-D-O-MINI |
| | | | G1/4 | 192651 | FRC-1/4-D-5M-O-MINI | 162739 | FRC-1/4-D-O-MINI |
| | | | G3/8 | 192652 | FRC-3/8-D-5M-O-MINI | 162740 | FRC-3/8-D-O-MINI |
| | | Midi | G1/4 | 192653 | FRC-1/4-D-5M-O-MIDI | 186498 | FRC-1/4-D-O-MIDI |
| | G3/8 | | 192654 | FRC-3/8-D-5M-O-MIDI | 162741 | FRC-3/8-D-O-MIDI | |
| | G1/2 | | 192655 | FRC-1/2-D-5M-O-MIDI | 162742 | FRC-1/2-D-O-MIDI | |
| | G3/4 | | 192656 | FRC-3/4-D-5M-O-MIDI | 162743 | FRC-3/4-D-O-MIDI | |
| | Maxi | G1/2 | 192657 | FRC-1/2-D-5M-O-MAXI | 186506 | FRC-1/2-D-O-MAXI | |
| | | G3/4 | 192658 | FRC-3/4-D-5M-O-MAXI | 162744 | FRC-3/4-D-O-MAXI | |
| | | G1 | 192659 | FRC-1-D-5M-O-MAXI | 162745 | FRC-1-D-O-MAXI | |
| | Fully automatic | Mini | G1/8 | 192660 | FRC-1/8-D-5M-O-MINI-A | 162746 | FRC-1/8-D-O-MINI-A |
| | | | G1/4 | 192661 | FRC-1/4-D-5M-O-MINI-A | 162747 | FRC-1/4-D-O-MINI-A |
| | | | G3/8 | 192662 | FRC-3/8-D-5M-O-MINI-A | 162748 | FRC-3/8-D-O-MINI-A |
| | | Midi | G1/4 | 192663 | FRC-1/4-D-5M-O-MIDI-A | 186501 | FRC-1/4-D-O-MIDI-A |
| | | | G3/8 | 192664 | FRC-3/8-D-5M-O-MIDI-A | 162749 | FRC-3/8-D-O-MIDI-A |
| G1/2 | | | 192665 | FRC-1/2-D-5M-O-MIDI-A | 162750 | FRC-1/2-D-O-MIDI-A | |
| G3/4 | | | 192666 | FRC-3/4-D-5M-O-MIDI-A | 162751 | FRC-3/4-D-O-MIDI-A | |
| Maxi | | G1/2 | 192667 | FRC-1/2-D-5M-O-MAXI-A | 186509 | FRC-1/2-D-O-MAXI-A | |
| | | G3/4 | 192668 | FRC-3/4-D-5M-O-MAXI-A | 162752 | FRC-3/4-D-O-MAXI-A | |
| | | G1 | 192669 | FRC-1-D-5M-O-MAXI-A | 162753 | FRC-1-D-O-MAXI-A | |

Datasheet

Ordering data

Pressure regulation range 0.5 ... 7 bar, rotary knob with latch, connecting plates with threaded connection

| | | | | |
|------------------|------|------------|---------------------------|------|
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part no. | Type |

With pressure gauge, outer scale in bar, inner scale in psi

| | | | | | |
|--------|-----------------|------|--------|--------------------|--------------------|
| Manual | Mini | G1/8 | 162754 | FRC-1/8-D-7-MINI | |
| | | G1/4 | 162755 | FRC-1/4-D-7-MINI | |
| | | G3/8 | 162756 | FRC-3/8-D-7-MINI | |
| | Midi | G1/4 | 186503 | FRC-1/4-D-7-MIDI | |
| | | G3/8 | 162757 | FRC-3/8-D-7-MIDI | |
| | | G1/2 | 162758 | FRC-1/2-D-7-MIDI | |
| | | G3/4 | 162759 | FRC-3/4-D-7-MIDI | |
| | Maxi | G1/2 | 186511 | FRC-1/2-D-7-MAXI | |
| | | G3/4 | 162760 | FRC-3/4-D-7-MAXI | |
| | | G1 | 162761 | FRC-1-D-7-MAXI | |
| | Fully automatic | Mini | G1/8 | 162762 | FRC-1/8-D-7-MINI-A |
| | | | G1/4 | 162763 | FRC-1/4-D-7-MINI-A |
| G3/8 | | | 162764 | FRC-3/8-D-7-MINI-A | |
| Midi | | G1/4 | 186504 | FRC-1/4-D-7-MIDI-A | |
| | | G3/8 | 162765 | FRC-3/8-D-7-MIDI-A | |
| | | G1/2 | 162766 | FRC-1/2-D-7-MIDI-A | |
| | | G3/4 | 162767 | FRC-3/4-D-7-MIDI-A | |
| Maxi | | G1/2 | 186512 | FRC-1/2-D-7-MAXI-A | |
| | | G3/4 | 162768 | FRC-3/4-D-7-MAXI-A | |
| | | G1 | 162769 | FRC-1-D-7-MAXI-A | |

Without pressure gauge

| | | | | | |
|--------|-----------------|------|--------|----------------------|----------------------|
| Manual | Mini | G1/8 | 192630 | FRC-1/8-D-7-O-MINI | |
| | | G1/4 | 192631 | FRC-1/4-D-7-O-MINI | |
| | | G3/8 | 192632 | FRC-3/8-D-7-O-MINI | |
| | Midi | G1/4 | 192633 | FRC-1/4-D-7-O-MIDI | |
| | | G3/8 | 192634 | FRC-3/8-D-7-O-MIDI | |
| | | G1/2 | 192635 | FRC-1/2-D-7-O-MIDI | |
| | | G3/4 | 192636 | FRC-3/4-D-7-O-MIDI | |
| | Maxi | G1/2 | 192637 | FRC-1/2-D-7-O-MAXI | |
| | | G3/4 | 192638 | FRC-3/4-D-7-O-MAXI | |
| | | G1 | 192639 | FRC-1-D-7-O-MAXI | |
| | Fully automatic | Mini | G1/8 | 192640 | FRC-1/8-D-7-O-MINI-A |
| | | | G1/4 | 192641 | FRC-1/4-D-7-O-MINI-A |
| G3/8 | | | 192642 | FRC-3/8-D-7-O-MINI-A | |
| Midi | | G1/4 | 192643 | FRC-1/4-D-7-O-MIDI-A | |
| | | G3/8 | 192644 | FRC-3/8-D-7-O-MIDI-A | |
| | | G1/2 | 192645 | FRC-1/2-D-7-O-MIDI-A | |
| | | G3/4 | 192646 | FRC-3/4-D-7-O-MIDI-A | |
| Maxi | | G1/2 | 192647 | FRC-1/2-D-7-O-MAXI-A | |
| | | G3/4 | 192648 | FRC-3/4-D-7-O-MAXI-A | |
| | | G1 | 192649 | FRC-1-D-7-O-MAXI-A | |

Datasheet

Ordering data

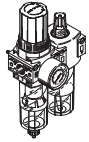
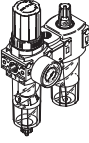
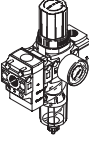
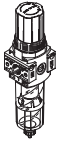

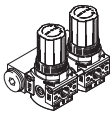

Pressure regulation range 0.5 ... 12 bar, rotary knob with integrated lock, connecting plates with threaded connection

| | | | | |
|------------------|------|------------|---------------------------|------|
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part no. | Type |

With pressure gauge, outer scale in bar, inner scale in psi

| | | | | |
|-----------------|------|------|---------------|--------------------------|
| Manual | Mini | G1/4 | 194864 | FRCS-1/4-D-MINI |
| | Midi | G1/4 | 194888 | FRCS-1/4-D-MIDI |
| | | G1/2 | 194912 | FRCS-1/2-D-MIDI |
| | Maxi | G1/2 | 194936 | FRCS-1/2-D-MAXI |
| Fully automatic | Midi | G1/2 | 194913 | FRCS-1/2-D-MIDI-A |
| | Maxi | G1/2 | 194937 | FRCS-1/2-D-MAXI-A |

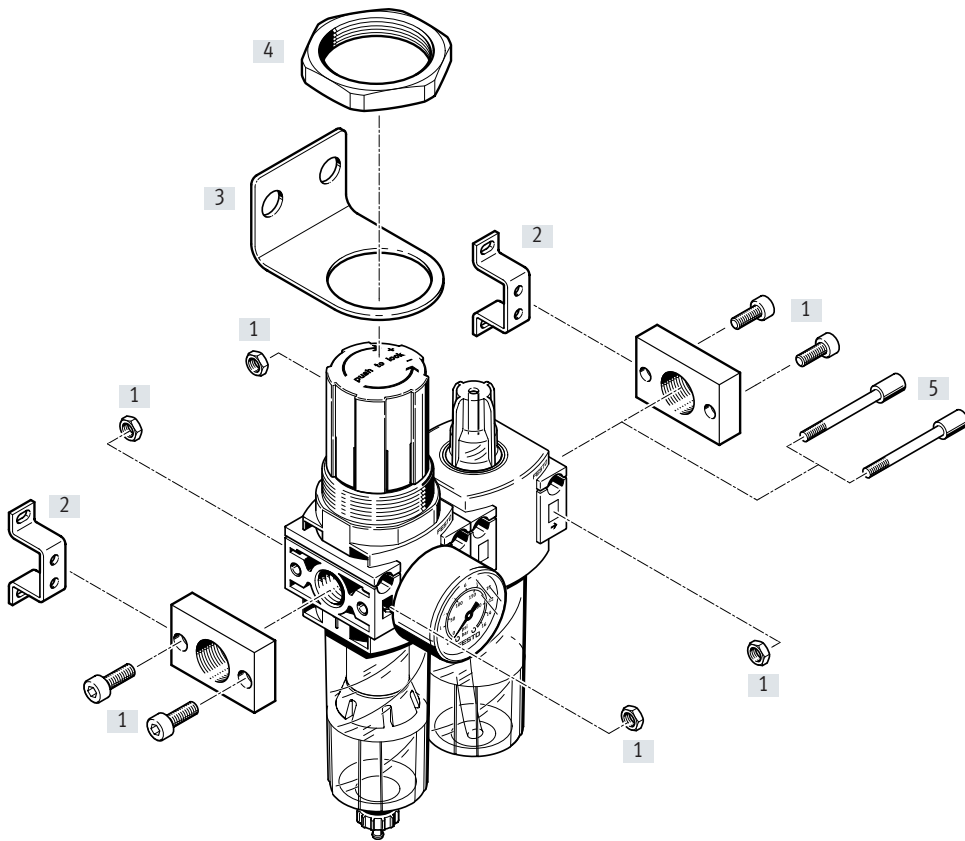
Product range overview – Service unit components, D series, polymer

| Type | Size | Pneumatic connection | | Pressure regulation range [bar] | Grade of filtration [µm] | | |
|--|---|----------------------|------|---------------------------------|--------------------------|----|---|
| | | G1/4 | G1/2 | | 5 | 40 | |
| Service units | | | | | | | |
| FRC |  | Mini | ■ | - | ■ | ■ | ■ |
| Service unit combinations | | | | | | | |
| FRC-K |  | Mini | ■ | - | ■ | - | ■ |
| LFR-K |  | Mini | ■ | - | ■ | - | ■ |
| Individual devices | | | | | | | |
| Filter regulators LFR |  | Mini | ■ | - | ■ | ■ | ■ |
| Pressure regulators LR |  | Mini | ■ | - | ■ | - | - |
| Pressure regulator manifolds LRB-K |  | Mini | - | ■ | ■ | - | - |
| On/off valves HE |  | Mini | ■ | - | - | - | - |

Product range overview – Service unit components, D series, polymer

| Type | Size | Condensate drain | | Pressure indicator | | Actuator lock | Regulating functions | | → Page/ Internet |
|--|------|------------------|----------------|---------------------|------------------------|---------------|------------------------|---------------------------|---------------------|
| | | Manual | Semi-automatic | With pressure gauge | Without pressure gauge | | Rotary knob with latch | With secondary exhausting | |
| Service units | | | | | | | | | |
| FRC | Mini | ■ | ■ | ■ | - | ■ | ■ | ■ | 22 |
| Service unit combinations | | | | | | | | | |
| FRC-K | Mini | ■ | - | ■ | - | ■ | ■ | ■ | frc |
| LFR-K | Mini | ■ | - | ■ | - | ■ | ■ | ■ | lfr |
| Individual devices | | | | | | | | | |
| Filter regulators LFR | Mini | ■ | ■ | ■ | ■ | ■ | ■ | ■ | lfr |
| Pressure regulators LR | Mini | - | - | ■ | ■ | ■ | ■ | ■ | lr |
| Pressure regulator manifolds LRB-K | Mini | - | - | - | ■ | ■ | ■ | ■ | lrb |
| On/off valves HE | Mini | - | - | - | ■ | - | - | - | he |

Peripherals overview



Mounting attachments and accessories

| | | → Page/Internet |
|-----|--------------------------|-----------------|
| [1] | Connection set PBL | pbl |
| [2] | Mounting bracket HFOE | hfoe-d |
| [3] | Mounting bracket HR-D | hr-d |
| [4] | Hex nut HMR | hmr-d |
| [5] | Threaded bolt FRB | frb-db |

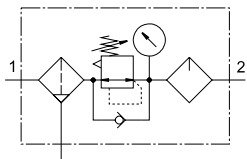
Type codes

| 001 | Series |
|------------|----------------------------------|
| FRC | Service unit |
| 002 | Pneumatic connection |
| 1/4 | Female thread G1/4 |
| 003 | Version |
| DB | D series, polymer |
| 004 | Pressure regulation range |
| 7 | 0.5 ... 7 bar (0.05 ... 0.7 MPa) |

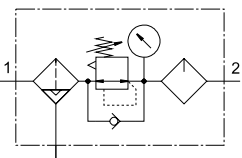
| 005 | Grade of filtration |
|-------------|--|
| | 40 µm |
| 5M | 5 µm |
| 006 | Size |
| MINI | Grid dimension 40 mm (without connecting plates) |
| 007 | Condensate drain |
| | Manually rotating |
| H | Semi-automatic |





Datasheet

Condensate drain, manual



Condensate drain, semi-automatic



-  Flow rate
400 ... 650 l/min
-  Temperature range
-5 ... +50°C
-  Operating pressure
1.5 ... 10 bar
-  www.festo.com



- Filter, regulator and lubricator functions in a single unit
 - High flow rate and highly efficient in removing contaminants
 - Good control characteristics with minimal pressure hysteresis
 - Setting values are locked by the rotary knob with latch
 - Choice of manual or semi-automatic condensate drain
 - New filter cartridges → page 27
- The following oils are recommended for Festo components:
Viscosity range to ISO 3448 class VG 32
32 mm²/s (cSt) at 40°C
- Festo special oil → page 28
 - ARAL Vitam GF 32
 - BP Energol HLP 32
 - Esso Nuto H 32
 - Mobil DTE 24
 - Shell Tellus Oil DO 32

| General technical data | |
|---------------------------------|--|
| Size | Mini |
| Pneumatic connection 1, 2 | G1/4 |
| Design | Filter regulators/lubricators |
| Regulator function | With return flow function, with secondary exhaust |
| Type of mounting | In-line installation Via through-hole With mounting bracket |
| Mounting position | Vertical ±5° |
| Grade of filtration [µm] | 5 40 |
| Air quality class at the output | Compressed air to ISO 8573-1:2010 [6:8:-] (grade of filtration 5 µm) Compressed air to ISO 8573-1:2010 [7:8:-] (grade of filtration 40 µm) Inert gases |
| Condensate drain | Manual Semi-automatic |
| Actuator lock | Rotary knob with latch |
| Pressure regulation range [bar] | 0.5 ... 7 |
| Max. pressure hysteresis [bar] | 0.5 |
| Pressure indicator | With pressure gauge |
| Pressure gauge connection | G1/8 |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | |
|--|-------|-------|
| Size | Mini | |
| Grade of filtration | 5 µm | ≥ 550 |
| | 40 µm | ≥ 650 |

1) Measured at p₁ = 10 bar, p₂ = 6 bar and Δp = 1 bar.

† 125 l/min must be available for the semi-automatic condensate drain to close fully.

Datasheet

Operating and environmental conditions

| | |
|--|--|
| Size | Mini |
| Operating pressure [bar] | 1.5 ... 10 |
| Operating medium | Compressed air to ISO 8573-1:2010 [---:-] Inert gases |
| Ambient temperature [°C] | -5 ... +50 |
| Temperature of medium [°C] | -5 ... +50 |
| Storage temperature [°C] | -5 ... +50 |
| Corrosion resistance class CRC ¹⁾ | 1 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

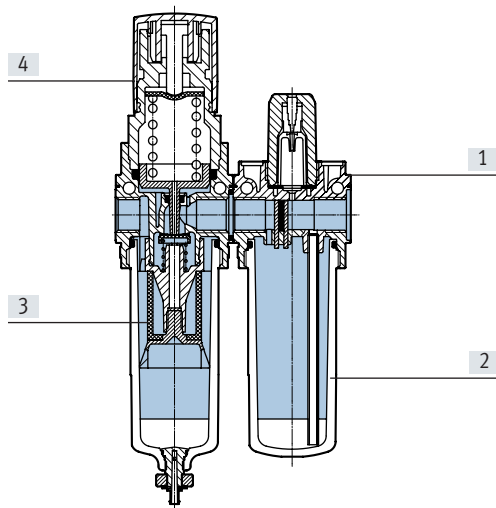
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Weight [g]

| | |
|--------------|------|
| Size | Mini |
| Service unit | 300 |

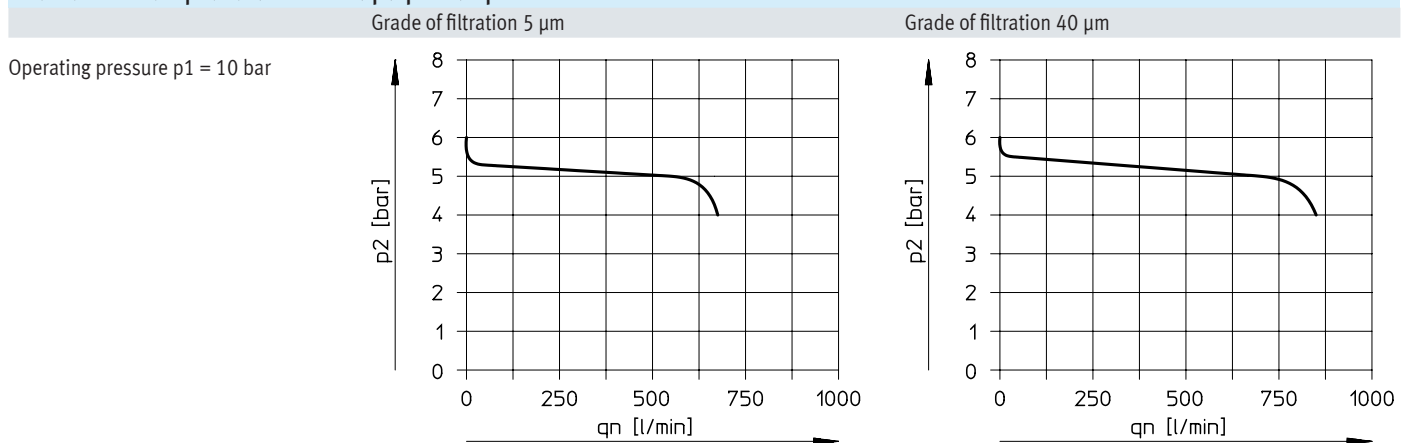
Materials

Sectional view



| Size | Mini |
|-----------------|---------------|
| [1] Housing | Reinforced PA |
| [2] Bowl | PC |
| [3] Filter | PE |
| [4] Rotary knob | POM |
| - Seals | NBR |

Standard flow rate q_n as a function of output pressure p_2



Note

Minor leakage at the output is intended by design. It improves the control behaviour of the regulator which is not compensated for input pressure.

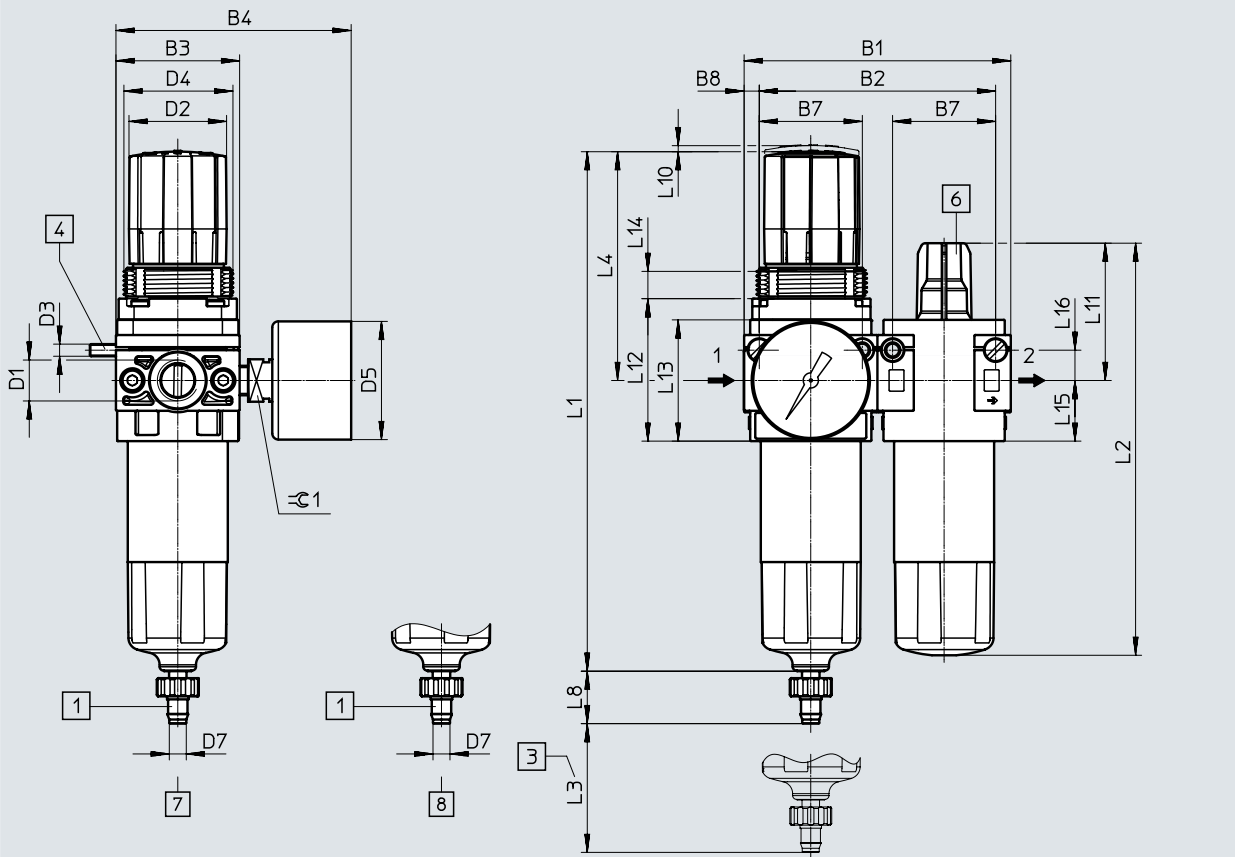
In rare cases, however, the leakage can sporadically be up to 500 l/h.

Datasheet

Dimensions

Download CAD data → www.festo.com

Mini



- [1] Barbed connector for plastic tubing PUN(-H)-8x1.25
 - [2] Socket head screw for wall mounting (2 included in the scope of delivery)
 - [3] Installation dimension
 - [4] Oil adjusting screw
 - [5] Manual condensate drain
 - [6] Semi-automatic condensate drain
 - [7] Manual condensate drain
 - [8] Semi-automatic condensate drain
- Flow direction

| Type | B1 | B2 | B3 | B4 | B7 | B8 | D1 | D2 ∅ | D3 | D4 | D5 ∅ | D7 ∅ |
|------------|----|----|----|----|----|----|------|---------|----|---------|---------|---------|
| FRC-1/4-DB | 88 | 78 | 41 | 78 | 34 | 5 | G1/4 | 32 | M4 | M36x1.5 | 39 | 5.6 |

| Type | L1 | L2 | L3 min. | L4 | L8 | L10 | L11 | L12 | L13 | L14 | L15 | L16 | ≈± 1 |
|------------|-------|-----|------------|----|------|-----|-----|-----|-----|-----|-----|-----|------|
| FRC-1/4-DB | 171.7 | 136 | 12 | 76 | 17.3 | 2 | 45 | 47 | 40 | 9 | 20 | 10 | 14 |

Ordering data

Pressure regulation range 0.5 ... 7 bar

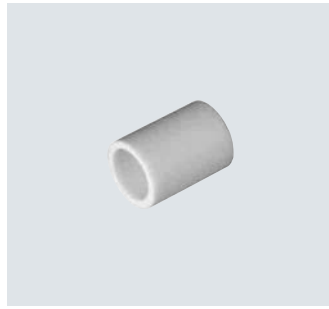
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
|------------------|------|------------|--------------------------|------|---------------------------|------|
| | | | Part no. | Type | Part no. | Type |

With pressure gauge, outer scale in bar, inner scale in psi

| | | | | | | |
|----------------|------|------|--------|------------------------|--------|---------------------|
| Manual | Mini | G1/4 | 537658 | FRC-1/4-DB-7-5M-MINI | 537654 | FRC-1/4-DB-7-MINI |
| Semi-automatic | Mini | G1/4 | 537660 | FRC-1/4-DB-7-5M-MINI-H | 537656 | FRC-1/4-DB-7-MINI-H |

Accessories

Filter cartridges, D series, metal



Ordering data

| Size | Grade of filtration [μm] | Part no. | Type |
|-------|-----------------------------|----------|--------------------|
| Micro | 5 | 526818 | MS2/LFP-D-MICRO-5M |
| Mini | 5 (colour: blue) | 159640 | LFP-D-MINI-5M |
| | 40 (colour: white) | 363665 | LFP-D-MINI-40M |
| Midi | 5 (colour: blue) | 159594 | LFP-D-MIDI-5M |
| | 40 (colour: white) | 363667 | LFP-D-MIDI-40M |
| Maxi | 5 (colour: blue) | 159641 | LFP-D-MAXI-5M |
| | 40 (colour: white) | 363664 | LFP-D-MAXI-40M |

Filter cartridges, D series, polymer



Ordering data

| Size | Grade of filtration [μm] | Part no. | Type |
|------|-----------------------------|----------|----------------|
| Mini | 5 | 547957 | LFP-DB-MINI-5M |
| | 40 | 534502 | MS4-LFP-E |

Accessories


Special oil



Ordering data

| Scope of delivery | Part no. | Type |
|-------------------|----------|---------|
| 1 litre | 152811 | OFSW-32 |

Ordering data – Pressure gauge MA

| | Nominal size | Pneumatic connection | Display range | | Part no. | Type |
|--|--------------------------|----------------------|---------------|-----------|----------|---------------------------|
| | | | [bar] | [psi] | | |
|  | Pressure gauge MA | | | | | Datasheets → Internet: ma |
| | 27 | M5 | 0 ... 10 | – | 526323 | MA-27-10-M5 |
| | 40 | G1/8 | 0 ... 10 | 0 ... 145 | 359874 | MA-40-10-1/8 |
| | | | 0 ... 16 | 0 ... 232 | 345395 | MA-40-16-1/8 |
| | 50 | G1/4 | 0 ... 10 | 0 ... 145 | 359873 | MA-50-10-1/4 |
| | | | 0 ... 16 | 0 ... 232 | 356759 | MA-50-16-1/4 |

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