



- Sturdy and versatile metallic series
- 4 sizes: MICRO, MINI, MIDI and MAXI
- 10 connection sizes
- 2 pressure ranges: 7 and 12 bar
- Broad range of functions

The D series: Service units for the harshest operating conditions

FESTO



D for durability:

Even at first impression, the D series communicates maximum sturdiness and reliability. No wonder given the metal housing, the all-metal bowl guard and the sturdy fittings.

Cleanliness across the board:

A choice of four different sizes (D Micro to D Maxi) makes the D series suitable for many industries and all installation conditions. The variety of filters and micro filter functionalities from 40 μm to 5 μm and 1 μm right on down to 0.01 μm speaks for itself. Add to this the active carbon filter functionality and even contaminants and oil can be filtered with ease. The moisture content of the compressed air is reduced to the required level using the membrane dryer – maintenance-free!

D for desirable:

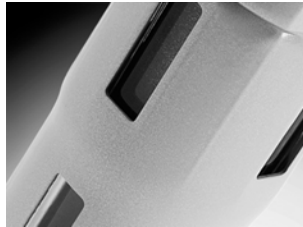
Extremely sturdy with high flow rates across all sizes. The perfect marriage of performance and reliability. The D series modules offer a broad range of flow characteristics from 450 l/min to 12,500 l/min.

The D series includes a range that facilitates peak flow values even in the cramped spaces normally encountered in the electronics and light assembly industries: the space-optimised D Micro service units.

D for direct ordering:

It goes without saying that you can order individual modules directly. But why not try the new alternative from Festo? 12 pre-assembled service units with various equipment variants. Over 400 in fact, available directly ex-stock.

Durable with high flow rates in all sizes from MICRO to MAXI



All-metal bowl guard



450 ... 12,500 l/min



Micro – Maxi: D series

Sturdy thanks to all-metal bowl guard and extremely sturdy fittings.

High flow rates across all sizes.

Service units to suit a wide spectrum of space requirements, even down to the smallest thanks to D Micro.

Advantages for designers

Advantages for purchasers

Wide range of functions across four sizes

- Wealth of options ensures the right solution for every task
- Suitable service units for a wide range of space requirements, even down to the smallest thanks to D Micro

- Cost savings through straightforward fulfilment of industry-specific requirements
- Low investment costs thanks to a precise product selection system based on compressed air requirement

High-quality and sturdy product, easy servicing and maintenance

- All compressed air qualities to DIN ISO 8573-1 at Festo
- Machine downtimes are reduced to a minimum

- Reduced maintenance overheads and easy servicing save time and money
- Follow-up costs are kept low thanks to the long service life

Developed by Festo's pneumatic specialists

- 'Everything from a single source' guarantees excellent selection options and high availability of the selected components (which have been designed to complement each other perfectly)

- Low investment costs and cost transparency increase the cost-effectiveness of the system

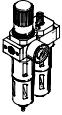
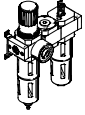
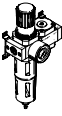
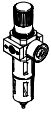
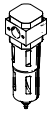
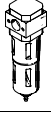
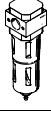
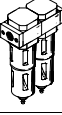
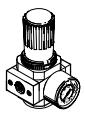
D series service units

Product range overview



D series service units

1.0

| Type | Size | Pneumatic connection | | | | | | | | | | Pressure regulation range [bar] | | | Grade of filtration [µm] | | | |
|--|-------|----------------------|----|----|----|----|----|----|----|-----|-----|---------------------------------|------------|------------|--------------------------|---|---|----|
| | | M5 | M7 | G½ | G¼ | G¾ | G½ | G¾ | G1 | QS4 | QS6 | 0.5 ... | 0.5 ... | 2.5 ... | 0.01 | 1 | 5 | 40 |
| Service units | | | | | | | | | | | | | | | | | | |
| FRC/FRCS  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | ■ | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | ■ | - | - | - | ■ | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | ■ | - | - | - | ■ | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | ■ | - | - | - | ■ | ■ |
| Service unit combinations | | | | | | | | | | | | | | | | | | |
| FRC-K FRCS-K  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Mini | - | - | ■ | ■ | - | - | - | - | - | - | - | ■ | ■ | - | - | - | ■ |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - | - | ■ |
| | Maxi | - | - | - | - | - | ■ | ■ | - | - | - | - | ■ | ■ | - | - | - | ■ |
| LFR-K LFRS-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 | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - |
| Active carbon filters LFX  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - |
| Filter combinations LFMBA  | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | ■ | ■ | - | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - | - | ■ | ■ | - | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - |
| Pressure regulators LR/LRS  | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - |
| | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - | - | - | - |
| | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | - | - | - | - |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | ■ | ■ | - | - | - | - | - |

D series service units

Product range overview



| Type | Size | Bowl guard | | Condensate drain | | | Pressure indication | | Actuator lock | | Supply voltage | | | Options | | | → Page |
|-------------------------------------|-------|------------------|--------------|------------------|----------------|-----------------|---------------------|------------------------|-------------------------|----------------------------------|----------------|----------|----------|---|--|---------------------------------|------------|
| | | Metal bowl guard | Plastic bowl | Manual rotary | Semi-automatic | Fully automatic | With pressure gauge | Without pressure gauge | Rotary knob with detent | 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 indicator | |
| Service units | | | | | | | | | | | | | | | | | |
| FRC/FRCS | Micro | - | ■ | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | - | - | 3 / 1.1-0 |
| | Mini | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | |
| Service unit combinations | | | | | | | | | | | | | | | | | |
| FRC-K FRCS-K | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.1-17 |
| | Mini | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | - | - | - | ■ | ■ | - | |
| LFR-K LFRS-K | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.1-40 |
| | Mini | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | - | ■ | ■ | ■ | - | - | ■ | ■ | - | |
| Individual devices | | | | | | | | | | | | | | | | | |
| Filter regulators LFR/LFRS | Micro | - | ■ | ■ | ■ | - | ■ | ■ | ■ | - | - | - | - | - | - | - | 3 / 1.2-1 |
| | Mini | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | |
| Filters LF | Micro | - | ■ | ■ | ■ | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.3-1 |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | - | |
| Fine and micro filters LFMA/LFMB | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.3-11 |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| Active carbon filters LFX | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.3-20 |
| | Mini | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Midi | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Filter combinations LFMBA | Micro | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.3-25 |
| | Mini | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Midi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| | Maxi | ■ | - | ■ | - | ■ | - | - | - | - | - | - | - | - | - | ■ | |
| Pressure regulators LR/LRS | Micro | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - | 3 / 1.4-0 |
| | Mini | - | - | - | - | - | ■ | ■ | ■ | ■ | - | - | - | ■ | - | - | |
| | Midi | - | - | - | - | - | ■ | ■ | ■ | ■ | - | - | - | ■ | - | - | |
| | Maxi | - | - | - | - | - | ■ | ■ | ■ | ■ | - | - | - | ■ | ■ | - | |

D series service units

Product range overview



D series service units

1.0

| 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 combinations LRB/LRBS-K | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | - | ■ | ■ | - | - | - | - | - | ■ | ■ |
| | | Midi | - | - | - | - | ■ | ■ | - | - | - | - | ■ | ■ |
| | | Maxi | - | | | | | | | | | | | |
| Lubricators LOE | | Micro | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | - | - |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| On-off valves HE | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| On-off valves, electrical HEE | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| On-off valves, pneumatic HEP | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| Soft-start valves HEL | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| Membrane dryers LDM | | Micro | - | | | | | | | | | | | |
| | | Mini | - | | | | | | | | | | | |
| | | Midi | - | | | | | | | | | | | |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| Branching modules FRM | | Micro | - | | | | | | | | | | | |
| | | Mini | - | - | ■ | ■ | ■ | - | - | - | - | - | - | - |
| | | Midi | - | - | - | ■ | ■ | ■ | ■ | - | - | - | - | - |
| | | Maxi | - | - | - | - | - | ■ | ■ | ■ | - | - | - | - |
| Distributor block FRZ | | Micro | - | | | | | | | | | | | |
| | | Mini | - | | | | | | | | | | | |
| | | Midi | - | | | | | | | | | | | |
| | | Maxi | - | | | | | | | | | | | |

D series service units

Product range overview



| Type | Size | Bowl guard | | Pressure indication | | Actuator lock | | Supply voltage | | | Options | | → Page |
|--|-------|------------------|--------------|---------------------|------------------------|-------------------------|----------------------------------|----------------|----------|----------|---------------------|-----------------|------------|
| | | Metal bowl guard | Plastic bowl | With pressure gauge | Without pressure gauge | Rotary knob with detent | Rotary knob with integrated lock | 24 V DC | 110 V AC | 230 V AC | Non-return function | Pressure switch | |
| Individual devices | | | | | | | | | | | | | |
| Pressure regulators LRB/LRBS | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.4-14 |
| | Mini | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Maxi | - | - | - | - | - | - | - | - | - | - | - | |
| Pressure regulator combinations LRB/LRBS-K | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.4-22 |
| | Mini | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | ■ | - | - | - | - | - | |
| | Maxi | - | - | - | - | - | - | - | - | - | - | - | |
| Lubricators LOE | Micro | - | ■ | - | ■ | - | - | - | - | - | - | - | 3 / 1.5-0 |
| | Mini | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| On-off valves HE | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.6-1 |
| | Mini | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | ■ | - | - | - | - | - | - | |
| On-off valves, electrical HEE | Micro | - | - | - | - | - | - | ■ | ■ | ■ | - | - | 3 / 1.6-7 |
| | Mini | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| | Midi | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| | Maxi | - | - | - | ■ | - | - | ■ | ■ | ■ | - | - | |
| On-off valves, pneumatic HEP | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.6-13 |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |
| Soft-start valves HEL | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.6-19 |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |
| Membrane dryers LDM | Micro | - | - | - | - | - | - | - | - | - | - | - | 3 / 1.7-1 |
| | Mini | - | - | - | - | - | - | - | - | - | - | - | |
| | Midi | - | - | - | - | - | - | - | - | - | - | - | |
| | Maxi | ■ | - | - | ■ | - | - | - | - | - | - | - | |
| Branching modules FRM | Micro | - | - | - | - | - | - | - | - | - | ■ | ■ | 3 / 1.8-0 |
| | Mini | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| | Midi | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | ■ | ■ | |
| Distributor block FRZ | Micro | - | - | - | ■ | - | - | - | - | - | - | - | 3 / 1.8-7 |
| | Mini | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Midi | - | - | - | ■ | - | - | - | - | - | - | - | |
| | Maxi | - | - | - | ■ | - | - | - | - | - | - | - | |

D series service units

1.0

Service units FRC/FRCS, D series

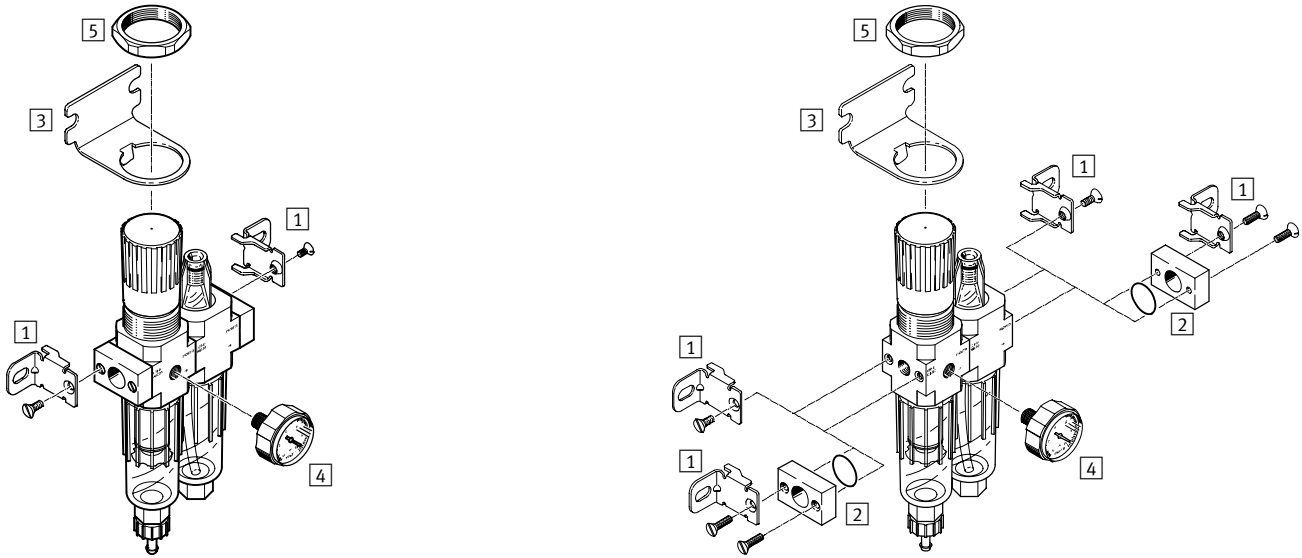
Peripherals overview



D series service units
Service units

1.1

Micro
 Service unit FRC with connection plates, connection size G $\frac{1}{8}$, QS4 or QS6
 Service unit FRC without connection plates, connection size M5 or M7 in housing



| Mounting attachments and accessories | | | |
|---|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | → Page |
| 1 Mounting bracket HFOE | ■ | ■ | 3 / 1.8-9 |
| 2 Connection plate kit PBL | - | ■ | 3 / 1.8-13 |
| 3 Mounting bracket HRS | ■ | ■ | 3 / 1.8-10 |
| 4 Pressure gauge MA-27 | ■ | ■ | 3 / 1.8-15 |
| 5 Hexagon nut (included in scope of delivery) HMR | ■ | ■ | - |

Service units FRC/FRCS, D series

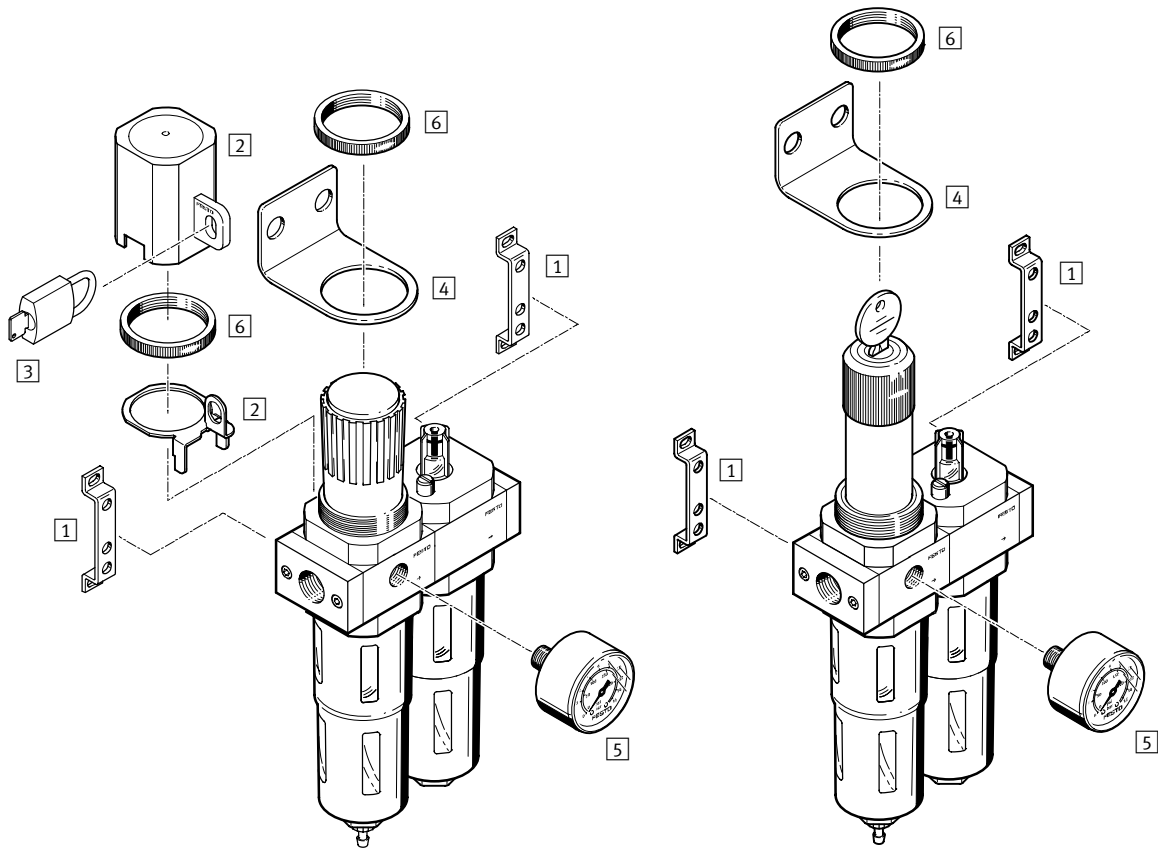
Peripherals overview

FESTO

Mini/Midi/Maxi

Service unit FRC

Service unit FRCS, lockable



Mounting attachments and accessories

| | Rotary knob with detent | Rotary knob, lockable | → Page |
|--|-------------------------|-----------------------|------------|
| 1 Mounting bracket HFOE | ■ | ■ | 3 / 1.8-9 |
| 2 Regulator lock LRVS | ■ | - | 3 / 1.8-14 |
| 3 Padlock LRVS-D | ■ | - | 3 / 1.8-14 |
| 4 Mounting bracket HR-D | ■ | ■ | 3 / 1.8-11 |
| 5 Pressure gauge MA | ■ | ■ | 3 / 1.8-15 |
| 6 Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

D series service units
Service units

1.1

Service units FRC/FRCS, D series

Type codes

D series service units
Service units

1.1

| | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|-----|---|-----|---|---|---|--|---|----|---|---|---|----|---|------|---|---|--|
| | | FRC | - | 3/4 | - | D | - | | - | 5M | - | 0 | - | DI | - | MAXI | - | A | |
| Basic function | | | | | | | | | | | | | | | | | | | |
| FRC | Service unit | | | | | | | | | | | | | | | | | | |
| FRCS | Service unit, lockable | | | | | | | | | | | | | | | | | | |
| Pneumatic connection | | | | | | | | | | | | | | | | | | | |
| M5 | Thread M5 | | | | | | | | | | | | | | | | | | |
| M7 | Thread M7 | | | | | | | | | | | | | | | | | | |
| QS4 | Push-in fitting QS4 | | | | | | | | | | | | | | | | | | |
| QS6 | Push-in fitting QS6 | | | | | | | | | | | | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | | | | | | | | | | | | | |
| 1/4 | Thread G1/4 | | | | | | | | | | | | | | | | | | |
| 3/8 | Thread G3/8 | | | | | | | | | | | | | | | | | | |
| 1/2 | Thread G1/2 | | | | | | | | | | | | | | | | | | |
| 3/4 | Thread G3/4 | | | | | | | | | | | | | | | | | | |
| 1 | Thread G1 | | | | | | | | | | | | | | | | | | |
| Series | | | | | | | | | | | | | | | | | | | |
| D | Series | | | | | | | | | | | | | | | | | | |
| Pressure regulation range | | | | | | | | | | | | | | | | | | | |
| | 0.5 ... 12 bar | | | | | | | | | | | | | | | | | | |
| 7 | 0.5 ... 7 bar | | | | | | | | | | | | | | | | | | |
| Grade of filtration | | | | | | | | | | | | | | | | | | | |
| | 40 µm | | | | | | | | | | | | | | | | | | |
| 5M | 5 µm | | | | | | | | | | | | | | | | | | |
| Pressure gauge | | | | | | | | | | | | | | | | | | | |
| | With pressure gauge | | | | | | | | | | | | | | | | | | |
| 0 | Without pressure gauge | | | | | | | | | | | | | | | | | | |
| Function (Maxi size only) | | | | | | | | | | | | | | | | | | | |
| DI | Directly actuated pressure regulator with integrated return flow function | | | | | | | | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | | | | | | |
| Condensate drain | | | | | | | | | | | | | | | | | | | |
| | Turned manually | | | | | | | | | | | | | | | | | | |
| H | Semi-automatic | | | | | | | | | | | | | | | | | | |
| A | Fully automatic | | | | | | | | | | | | | | | | | | |

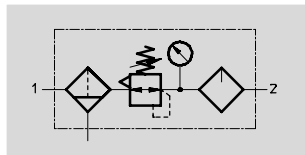
Service units FRC/FRCS, D series

Technical data

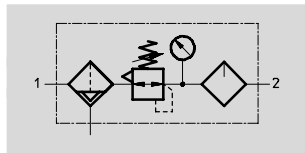
Function

FRC/FRCS-...-D-...

Condensate drain
turned manually

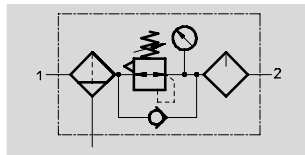


semi- or fully automatic

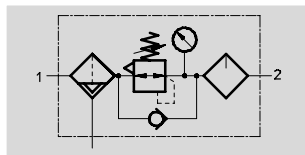





FRC/FRCS-...-D-DI-MAXI

Condensate drain
turned manually



fully automatic



-  - Flow rate
90 ... 8700 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
1 ... 16 bar



- Filter, regulator and lubricator functions 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: 0.5 ... 7 bar and 0.5 ... 12 bar
- Two pressure gauge connections for different fitting options
- Choice of filter cartridges: 5 µm or 40 µm
- With manual, semi-automatic or fully automatic condensate drain

| General technical data | | | | | | | | | | | | | | | | |
|---|---------------------------------------|----------|-------------------------------|-----|-----|--|-------------------------------|-------------------------------|--|-------------------------------|-------------------------------|-------------------------------|--|-------------------------------|-----|--|
| Size | Micro | | | | | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection | M5 | M7 | G ¹ / ₈ | QS4 | QS6 | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G ¹ / ₂ | G ³ / ₄ | G1 | |
| Operating medium | Compressed air | | | | | Compressed air | | | | | | | | | | |
| Design | Filter regulator | | | | | Filter regulator | | | | | | | | | | |
| | Proportional standard mist lubricator | | | | | Proportional standard mist lubricator | | | | | | | | | | |
| Type of mounting | Via accessories | | | | | Via accessories | | | | | | | | | | |
| | In-line installation | | | | | In-line installation | | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | Vertical ±5° | | | | | | | | | | |
| Grade of filtration [µm] | 5 | | | | | 5 or 40 | | | | | | | | | | |
| Max. hysteresis [bar] | 0.3 | | | | | 0.2 | | | | | | | | | 0.4 | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | | | 0.5 ... 7 | | | | | 0.5 ... 12 | | | | | |
| | | | | | | | | | | | | | | | | |
| Pressure indication | Via pressure gauge | | | | | Via pressure gauge | | | | | | | | | | |
| | M5 prepared | | | | | G ¹ / ₈ prepared | | | G ¹ / ₄ prepared | | | | G ¹ / ₄ prepared | | | |
| Max. condensate volume [cm ³] | 3 | | | | | 22 | | | 43 | | | | 80 ¹⁾ | | | |
| Input pressure [bar] | | | | | | | | | | | | | | | | |
| Condensate drain | turned manually | 1 ... 10 | | | | 1 ... 16 | | | | | | | | | | |
| | semi-automatic | 1 ... 10 | | | | - | | | | | | | | | | |
| | fully automatic | - | | | | 1.5 ... 12 | | | | | | | | | | |

1) The max. condensate volume for the FRC/FRCS-...-DI-MAXI is 43 cm³.

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

Service units FRC/FRCS, D series

FESTO

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|--|---------------|-----|------------------|-----|-----|
| Connection | Female thread | | Connecting plate | | |
| | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| FRC/FRCS | 90 | 170 | 140 | 100 | 140 |

- 1) Measured at p₁ = 10 bar, p₂ = 6 bar and Δp = 1 bar.
A minimum flow rate of 125 l/min is required for flawless functioning.

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|------|
| Connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ | G $\frac{3}{8}$ | G $\frac{1}{2}$ | G $\frac{3}{4}$ | G1 |
| Mini | | | | | | |
| FRC/FRCS-...-D-...(-A) | 700 | 1000 | 1200 | - | - | - |
| FRC/FRCS-...-D-7-...(-A) | 800 | 1300 | 1500 | - | - | - |
| FRC/FRCS-...-D-5M-...(-A) | 600 | 850 | 1050 | - | - | - |
| Midi | | | | | | |
| FRC/FRCS-...-D-...(-A) | - | 1500 | 2000 | 2600 | 2600 | - |
| FRC/FRCS-...-D-7-...(-A) | - | 1700 | 2000 | 2800 | 2800 | - |
| FRC/FRCS-...-D-5M-...(-A) | - | 1300 | 1700 | 1800 | 2100 | - |
| Maxi | | | | | | |
| FRC/FRCS-...-D-...(-A) | - | - | - | 7600 | 8300 | 8500 |
| FRC/FRCS-...-D-7-...(-A) | - | - | - | 7700 | 8500 | 8700 |
| FRC/FRCS-...-D-5M-...(-A) | - | - | - | 6800 | 7000 | 7200 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | | |
| FRC/FRCS-...-D-...(-A) | - | - | - | 2000 | 4100 | 2500 |
| FRC/FRCS-...-D-7-...(-A) | - | - | - | 5000 | 4600 | 4300 |
| FRC/FRCS-...-D-5M-...(-A) | - | - | - | 1900 | 3200 | 3500 |

- 1) Measured at p₁ = 10 bar, p₂ = 6 bar and Δp = 1 bar.
A minimum flow rate of 125 l/min is required for flawless functioning.

| Screw-in depth of connecting thread [mm] | | | | | |
|--|----|----|-----------------|-----|-----|
| Connection | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| In housing | 5 | 6 | - | - | - |
| In connecting plates | - | - | 8 | - | - |

| Ambient conditions | | | | |
|--|-------------|------|------|------|
| Size | Micro | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | | |
| Temperature of medium [°C] | -10 ... +60 | | | |
| Corrosion resistance class 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.

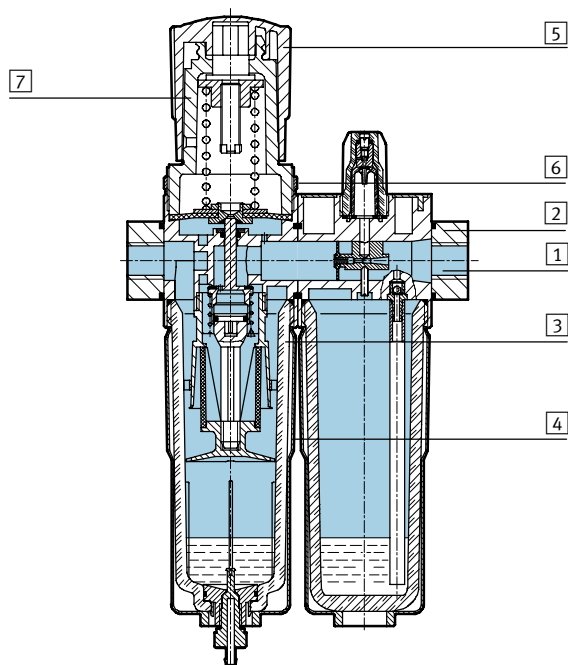
Service units FRC/FRCS, D series

Technical data

| Weight [g] | | | | | | |
|------------------------|---------------|------------------|------|------|-----------------------|---------------|
| Size | Micro | | Mini | Midi | Maxi | |
| | Female thread | Connecting plate | | | Connection G1/2, G3/4 | Connection G1 |
| With pressure gauge | | | | | | |
| FRC-... | 113 | 133 | 660 | 1440 | 2390 | 2520 |
| FRC-...-DI | - | - | - | - | 2670 | 2670 |
| FRCS-... | - | - | 760 | 1680 | 2490 | 2620 |
| FRCS-...-DI | - | - | - | - | 2950 | 2950 |
| Without pressure gauge | | | | | | |
| FRC-... | 103 | 123 | 600 | 1350 | 2280 | 2460 |
| FRC-...-DI | - | - | - | - | 2600 | 2600 |
| FRCS-... | - | - | 700 | 1590 | 2380 | 2560 |
| FRCS-...-DI | - | - | - | - | 2880 | 2880 |

Materials

Sectional view



| Service units | Micro | Mini/Midi/Maxi |
|---------------------|-------------------------|-------------------------|
| 1 Housing | Wrought aluminium alloy | Die-cast zinc |
| 2 Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 3 Bowl | Polycarbonate | Polycarbonate |
| 4 Metal bowl guard | - | Aluminium |
| 5 Regulating knob | Polyacetal | Polyacetal |
| 6 Knurled nut | Wrought aluminium alloy | Aluminium |
| 7 Support | Polycarbonate | - |
| - Seals | Nitrile rubber | Nitrile rubber |

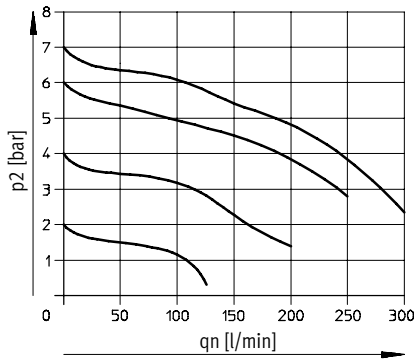
Service units FRC/FRCS, D series

Technical data

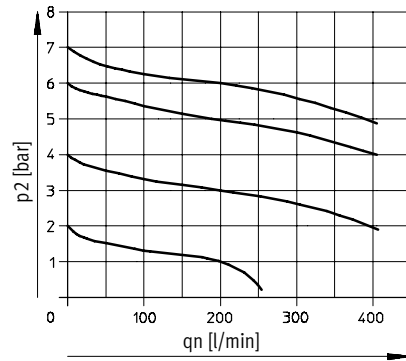


Standard flow rate q_n as a function of the output pressure p_2

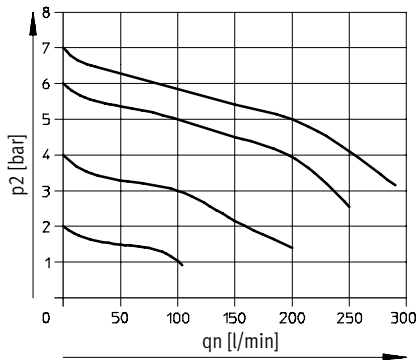
FRC-M5-...-MICRO



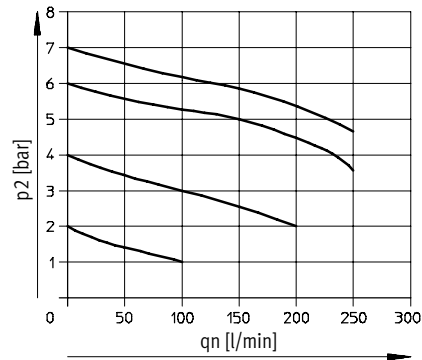
FRC-M7-...-MICRO B



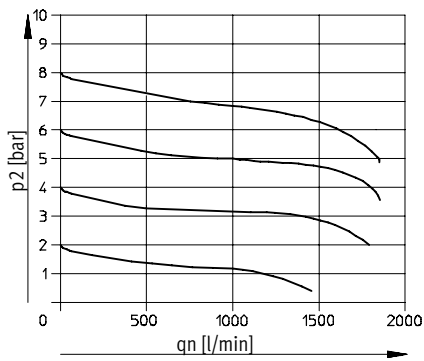
FRC-QS4-...-MICRO



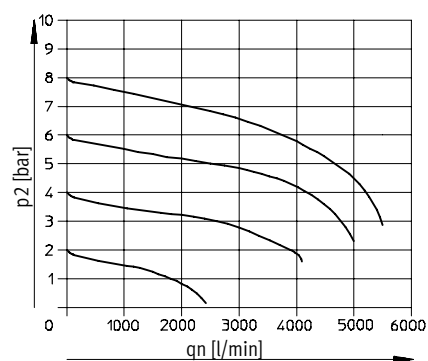
FRC-QS6-...-MICRO and FRC-1/8-...-MICRO



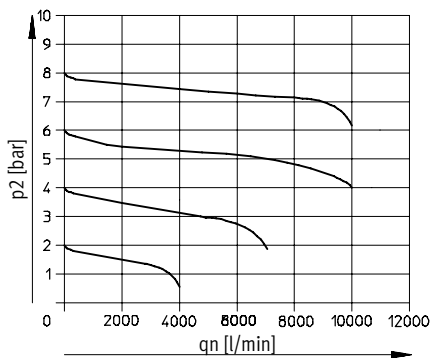
FRC/FRCS-1/4-D-MINI



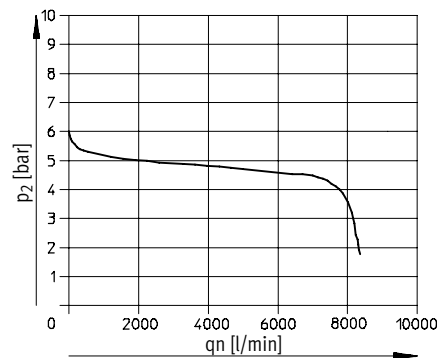
FRC/FRCS-1/2-D-MIDI



FRC/FRCS-1-D-MAXI



FRC/FRCS-1-D-DI-MAXI



Primary pressure $p_1 = 10$ bar

Service units FRC/FRCS, D series

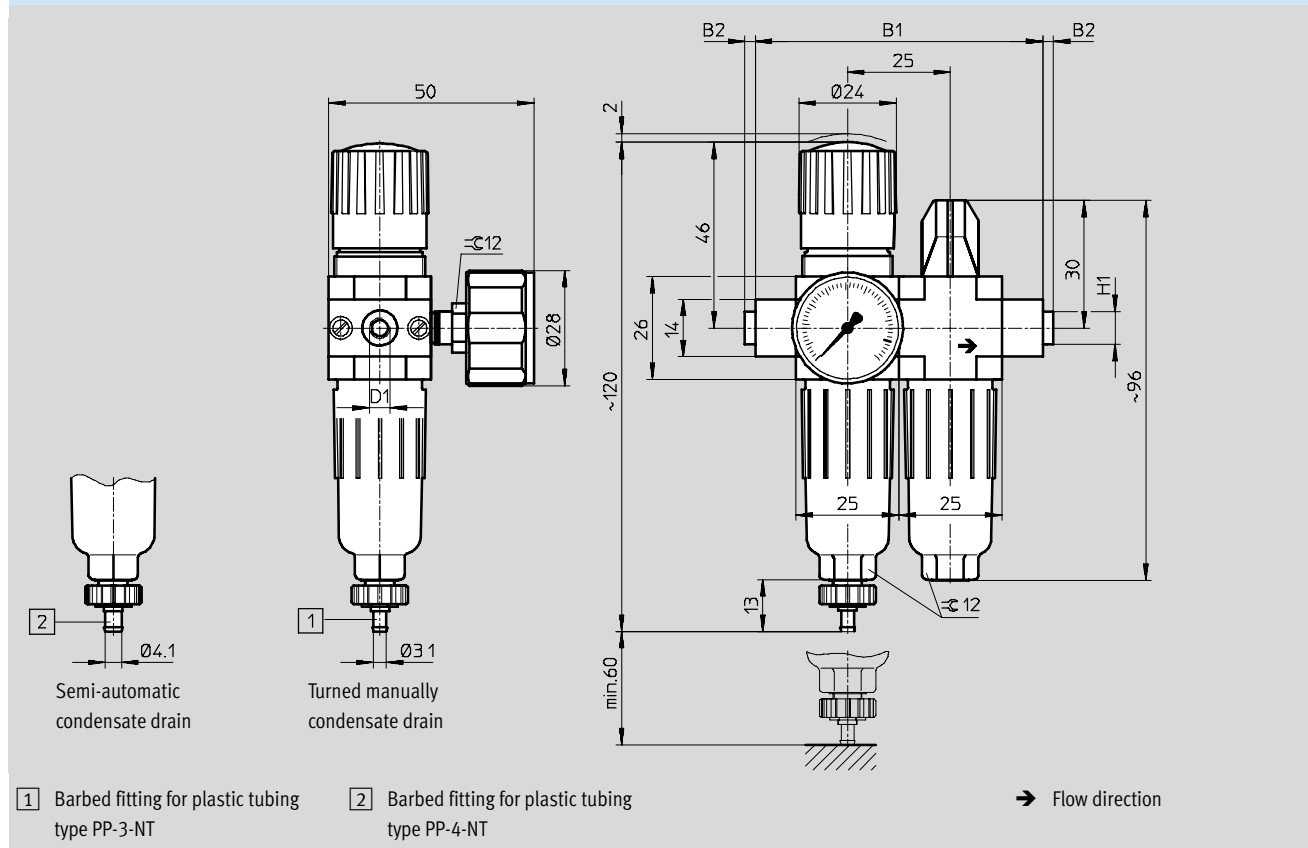
Technical data



Dimensions

Download CAD data → www.festo.com/en/engineering

Micro



| Type | B1 | B2 | D1 | H1 |
|---------------------------|----|------|------|----|
| FRC-M5-D-7-5M-MICRO (H) | 50 | - | M5 | - |
| FRC-M7-D-7-5M-MICRO (H) B | | | M7 | |
| FRC-1/8-D-7-5M-MICRO (H) | 70 | ~2.5 | G1/8 | ~8 |
| FRC-QS4-D-7-5M-MICRO (H) | | | QS4 | |
| FRC-QS6-D-7-5M-MICRO (H) | | | QS6 | |

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

Service units FRC/FRCS, D series

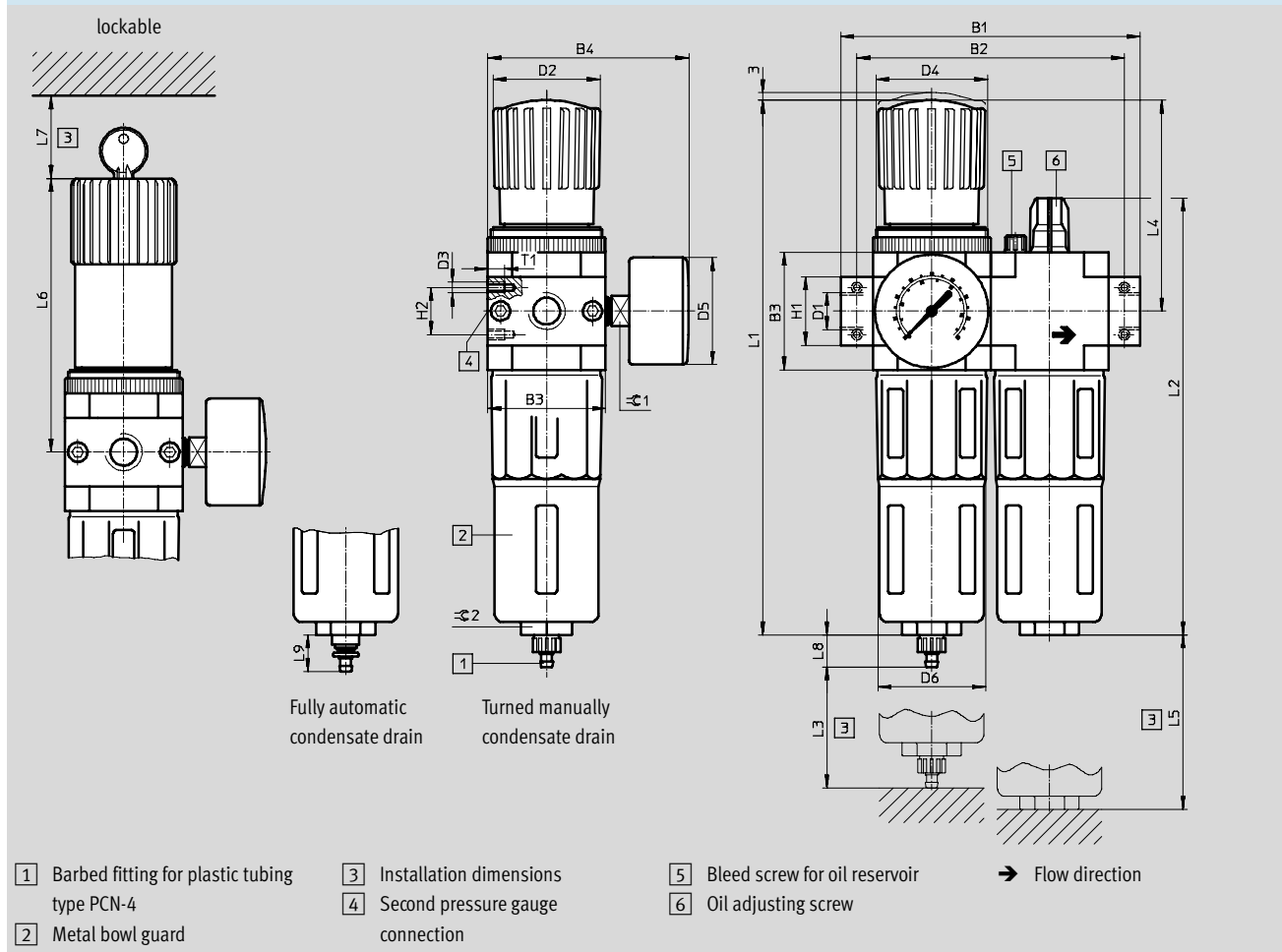
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi



| Type | B1 | B2 | B3 | B4 | D1 | D2 Ø | D3 | D4 | D5 Ø | D6 Ø |
|------------------------|-----|-----|----|-----|------|---------|---------|---------|---------|---------|
| Mini | | | | | | | | | | |
| FRC/FRCS-1/8-D-MINI | 104 | 92 | 40 | 76 | G1/8 | 31 | M4 | M36x1.5 | 41 | 38 |
| FRC/FRCS-1/4-D-MINI | | | | | G1/4 | | | | | |
| FRC/FRCS-3/8-D-MINI | 110 | | | | G3/8 | | | | | |
| Midi | | | | | | | | | | |
| FRC/FRCS-1/4-D-MIDI | 140 | 125 | 55 | 95 | G1/4 | 50 | M5 | M52x1.5 | 50 | 52 |
| FRC/FRCS-3/8-D-MIDI | | | | | G3/8 | | | | | |
| FRC/FRCS-1/2-D-MIDI | | | | | G1/2 | | | | | |
| FRC/FRCS-3/4-D-MIDI | | | | | G3/4 | | | | | |
| Maxi | | | | | | | | | | |
| FRC/FRCS-1/2-D-MAXI | 162 | 146 | 66 | 107 | G1/2 | 31 | M5 | M36x1.5 | 50 | 65 |
| FRC/FRCS-1/2-D-DI-MAXI | | | | | | 49 | | M52x1.5 | | |
| FRC/FRCS-3/4-D-MAXI | | | | | G3/4 | 31 | | M36x1.5 | | |
| FRC/FRCS-3/4-D-DI-MAXI | | | | | | 49 | | M52x1.5 | | |
| FRC/FRCS-1-D-MAXI | 182 | 157 | | | G1 | 31 | M36x1.5 | | | |
| FRC/FRCS-1-D-DI-MAXI | | | | | | 49 | M52x1.5 | | | |

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

Service units FRC/FRCS, D series



Technical data

| Type | H1 | H2 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | T1 | ≈ 1 | ≈ 2 |
|------------------------|----|----|-----|-----|----|-----|-----|-----|----|----|----|----|-----|-----|
| Mini | | | | | | | | | | | | | | |
| FRC/FRCS-1/8-D-MINI | 20 | 11 | 193 | 169 | 60 | 69 | 100 | 98 | 60 | 15 | 19 | 7 | 14 | 22 |
| FRC/FRCS-1/4-D-MINI | | | | | | | | | | | | | | |
| FRC/FRCS-3/8-D-MINI | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | |
| FRC/FRCS-1/4-D-MIDI | 32 | 22 | 250 | 204 | 80 | 99 | 120 | 130 | 60 | 15 | 19 | 8 | 14 | 24 |
| FRC/FRCS-3/8-D-MIDI | | | | | | | | | | | | | | |
| FRC/FRCS-1/2-D-MIDI | | | | | | | | | | | | | | |
| FRC/FRCS-3/4-D-MIDI | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | |
| FRC/FRCS-1/2-D-MAXI | 32 | 22 | 252 | 228 | 90 | 82 | 150 | 111 | 60 | 15 | 19 | 8 | 14 | 24 |
| FRC/FRCS-1/2-D-DI-MAXI | | | 275 | | | 105 | | 135 | | | | | | |
| FRC/FRCS-3/4-D-MAXI | | | 252 | | | 82 | | 111 | | | | | | |
| FRC/FRCS-3/4-D-DI-MAXI | | | 275 | | | 105 | | 135 | | | | | | |
| FRC/FRCS-1-D-MAXI | 40 | | 252 | | | 82 | | 111 | | | | | | |
| FRC/FRCS-1-D-DI-MAXI | | | 275 | | | 105 | | 135 | | | | | | |

Service units FRC/FRCS, D series

FESTO

Technical data


| Ordering data | | | |
|---|-------|--|--------------------------------------|
| Pressure regulation range 0.5 ... 7 bar | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm |
| | | | Part No. Type |
| With pressure gauge | | | |
| Turned manually | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 527 860 FRC-M5-D-7-5M-MICRO |
| | | M7 | 534 189 FRC-M7-D-7-5M-MICRO B |
| | | With threaded connecting plates | |
| | | G1/8 | 527 864 FRC-1/8-D-7-5M-MICRO |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 527 876 FRC-QS4-D-7-5M-MICRO |
| | QS6 | 527 880 FRC-QS6-D-7-5M-MICRO | |
| Semi-automatic | | | |
| Semi-automatic | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 527 861 FRC-M5-D-7-5M-MICRO-H |
| | | M7 | 534 190 FRC-M7-D-7-5M-MICRO-H B |
| | | With threaded connecting plates | |
| | | G1/8 | 527 865 FRC-1/8-D-7-5M-MICRO-H |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 527 877 FRC-QS4-D-7-5M-MICRO-H |
| | QS6 | 527 881 FRC-QS6-D-7-5M-MICRO-H | |
| Without pressure gauge | | | |
| Turned manually | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 527 862 FRC-M5-D-7-0-5M-MICRO |
| | | M7 | 534 191 FRC-M7-D-7-0-5M-MICRO B |
| | | With threaded connecting plates | |
| | | G1/8 | 527 866 FRC-1/8-D-7-0-5M-MICRO |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 527 878 FRC-QS4-D-7-0-5M-MICRO |
| | QS6 | 527 882 FRC-QS6-D-7-0-5M-MICRO | |
| Semi-automatic | | | |
| Semi-automatic | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 527 863 FRC-M5-D-7-0-5M-MICRO-H |
| | | M7 | 534 192 FRC-M7-D-7-0-5M-MICRO-H B |
| | | With threaded connecting plates | |
| | | G1/8 | 527 867 FRC-1/8-D-7-0-5M-MICRO-H |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 527 879 FRC-QS4-D-7-0-5M-MICRO-H |
| | QS6 | 527 883 FRC-QS6-D-7-0-5M-MICRO-H | |

Service units FRC/FRCS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|--|------|------------|--------------------------|-----------------------|---------------------------|--------------------|
| Pressure regulation range 0.5 ... 12 bar, metal bowl guard | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Mini | G1/8 | 162 770 | FRC-1/8-D-5M-MINI | 159 604 | FRC-1/8-D-MINI |
| | | G1/4 | 162 771 | FRC-1/4-D-5M-MINI | 159 605 | FRC-1/4-D-MINI |
| | | G3/8 | 162 772 | FRC-3/8-D-5M-MINI | 162 734 | FRC-3/8-D-MINI |
| | Midi | G1/4 | 186 499 | FRC-1/4-D-5M-MIDI | 186 497 | FRC-1/4-D-MIDI |
| | | G3/8 | 162 773 | FRC-3/8-D-5M-MIDI | 159 588 | FRC-3/8-D-MIDI |
| | | G1/2 | 162 774 | FRC-1/2-D-5M-MIDI | 159 590 | FRC-1/2-D-MIDI |
| | | G3/4 | 162 775 | FRC-3/4-D-5M-MIDI | 162 735 | FRC-3/4-D-MIDI |
| | Maxi | G1/2 | 186 507 | FRC-1/2-D-5M-MAXI | 186 505 | FRC-1/2-D-MAXI |
| | | G3/4 | 162 776 | FRC-3/4-D-5M-MAXI | 159 606 | FRC-3/4-D-MAXI |
| | | G1 | 162 777 | FRC-1-D-5M-MAXI | 159 607 | FRC-1-D-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G1/8 | 162 778 | FRC-1/8-D-5M-MINI-A | 159 608 | FRC-1/8-D-MINI-A |
| | | G1/4 | 162 779 | FRC-1/4-D-5M-MINI-A | 159 609 | FRC-1/4-D-MINI-A |
| | | G3/8 | 162 780 | FRC-3/8-D-5M-MINI-A | 162 736 | FRC-3/8-D-MINI-A |
| | Midi | G1/4 | 186 502 | FRC-1/4-D-5M-MIDI-A | 186 500 | FRC-1/4-D-MIDI-A |
| | | G3/8 | 162 781 | FRC-3/8-D-5M-MIDI-A | 159 589 | FRC-3/8-D-MIDI-A |
| | | G1/2 | 162 782 | FRC-1/2-D-5M-MIDI-A | 159 591 | FRC-1/2-D-MIDI-A |
| | | G3/4 | 162 783 | FRC-3/4-D-5M-MIDI-A | 162 737 | FRC-3/4-D-MIDI-A |
| | Maxi | G1/2 | 186 510 | FRC-1/2-D-5M-MAXI-A | 186 508 | FRC-1/2-D-MAXI-A |
| | | G3/4 | 162 784 | FRC-3/4-D-5M-MAXI-A | 159 610 | FRC-3/4-D-MAXI-A |
| | | G1 | 162 785 | FRC-1-D-5M-MAXI-A | 159 611 | FRC-1-D-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Mini | G1/8 | 192 650 | FRC-1/8-D-5M-O-MINI | 162 738 | FRC-1/8-D-O-MINI |
| | | G1/4 | 192 651 | FRC-1/4-D-5M-O-MINI | 162 739 | FRC-1/4-D-O-MINI |
| | | G3/8 | 192 652 | FRC-3/8-D-5M-O-MINI | 162 740 | FRC-3/8-D-O-MINI |
| | Midi | G1/4 | 192 653 | FRC-1/4-D-5M-O-MIDI | 186 498 | FRC-1/4-D-O-MIDI |
| | | G3/8 | 192 654 | FRC-3/8-D-5M-O-MIDI | 162 741 | FRC-3/8-D-O-MIDI |
| | | G1/2 | 192 655 | FRC-1/2-D-5M-O-MIDI | 162 742 | FRC-1/2-D-O-MIDI |
| | | G3/4 | 192 656 | FRC-3/4-D-5M-O-MIDI | 162 743 | FRC-3/4-D-O-MIDI |
| | Maxi | G1/2 | 192 657 | FRC-1/2-D-5M-O-MAXI | 186 506 | FRC-1/2-D-O-MAXI |
| | | G3/4 | 192 658 | FRC-3/4-D-5M-O-MAXI | 162 744 | FRC-3/4-D-O-MAXI |
| | | G1 | 192 659 | FRC-1-D-5M-O-MAXI | 162 745 | FRC-1-D-O-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G1/8 | 192 660 | FRC-1/8-D-5M-O-MINI-A | 162 746 | FRC-1/8-D-O-MINI-A |
| | | G1/4 | 192 661 | FRC-1/4-D-5M-O-MINI-A | 162 747 | FRC-1/4-D-O-MINI-A |
| | | G3/8 | 192 662 | FRC-3/8-D-5M-O-MINI-A | 162 748 | FRC-3/8-D-O-MINI-A |
| | Midi | G1/4 | 192 663 | FRC-1/4-D-5M-O-MIDI-A | 186 501 | FRC-1/4-D-O-MIDI-A |
| | | G3/8 | 192 664 | FRC-3/8-D-5M-O-MIDI-A | 162 749 | FRC-3/8-D-O-MIDI-A |
| | | G1/2 | 192 665 | FRC-1/2-D-5M-O-MIDI-A | 162 750 | FRC-1/2-D-O-MIDI-A |
| | | G3/4 | 192 666 | FRC-3/4-D-5M-O-MIDI-A | 162 751 | FRC-3/4-D-O-MIDI-A |
| | Maxi | G1/2 | 192 667 | FRC-1/2-D-5M-O-MAXI-A | 186 509 | FRC-1/2-D-O-MAXI-A |
| | | G3/4 | 192 668 | FRC-3/4-D-5M-O-MAXI-A | 162 752 | FRC-3/4-D-O-MAXI-A |
| | | G1 | 192 669 | FRC-1-D-5M-O-MAXI-A | 162 753 | FRC-1-D-O-MAXI-A |

 Core Range

Service units FRC/FRCS, D series



Technical data

| Ordering data | | | | |
|---|------|-----------------|---------------------------|----------------------------------|
| Pressure regulation range 0.5 ... 7 bar, metal bowl guard | | | | |
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part No. | Type |
| With pressure gauge | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 162 754 | FRC- $\frac{1}{8}$ -D-7-MINI |
| | | G $\frac{1}{4}$ | 162 755 | FRC- $\frac{1}{4}$ -D-7-MINI |
| | | G $\frac{3}{8}$ | 162 756 | FRC- $\frac{3}{8}$ -D-7-MINI |
| | Midi | G $\frac{1}{4}$ | 186 503 | FRC- $\frac{1}{4}$ -D-7-MIDI |
| | | G $\frac{3}{8}$ | 162 757 | FRC- $\frac{3}{8}$ -D-7-MIDI |
| | | G $\frac{1}{2}$ | 162 758 | FRC- $\frac{1}{2}$ -D-7-MIDI |
| | | G $\frac{3}{4}$ | 162 759 | FRC- $\frac{3}{4}$ -D-7-MIDI |
| | Maxi | G $\frac{1}{2}$ | 186 511 | FRC- $\frac{1}{2}$ -D-7-MAXI |
| | | G $\frac{3}{4}$ | 162 760 | FRC- $\frac{3}{4}$ -D-7-MAXI |
| G1 | | 162 761 | FRC-1-D-7-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 162 762 | FRC- $\frac{1}{8}$ -D-7-MINI-A |
| | | G $\frac{1}{4}$ | 162 763 | FRC- $\frac{1}{4}$ -D-7-MINI-A |
| | | G $\frac{3}{8}$ | 162 764 | FRC- $\frac{3}{8}$ -D-7-MINI-A |
| | Midi | G $\frac{1}{4}$ | 186 504 | FRC- $\frac{1}{4}$ -D-7-MIDI-A |
| | | G $\frac{3}{8}$ | 162 765 | FRC- $\frac{3}{8}$ -D-7-MIDI-A |
| | | G $\frac{1}{2}$ | 162 766 | FRC- $\frac{1}{2}$ -D-7-MIDI-A |
| | | G $\frac{3}{4}$ | 162 767 | FRC- $\frac{3}{4}$ -D-7-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 186 512 | FRC- $\frac{1}{2}$ -D-7-MAXI-A |
| | | G $\frac{3}{4}$ | 162 768 | FRC- $\frac{3}{4}$ -D-7-MAXI-A |
| G1 | | 162 769 | FRC-1-D-7-MAXI-A | |
| Without pressure gauge | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 192 630 | FRC- $\frac{1}{8}$ -D-7-O-MINI |
| | | G $\frac{1}{4}$ | 192 631 | FRC- $\frac{1}{4}$ -D-7-O-MINI |
| | | G $\frac{3}{8}$ | 192 632 | FRC- $\frac{3}{8}$ -D-7-O-MINI |
| | Midi | G $\frac{1}{4}$ | 192 633 | FRC- $\frac{1}{4}$ -D-7-O-MIDI |
| | | G $\frac{3}{8}$ | 192 634 | FRC- $\frac{3}{8}$ -D-7-O-MIDI |
| | | G $\frac{1}{2}$ | 192 635 | FRC- $\frac{1}{2}$ -D-7-O-MIDI |
| | | G $\frac{3}{4}$ | 192 636 | FRC- $\frac{3}{4}$ -D-7-O-MIDI |
| | Maxi | G $\frac{1}{2}$ | 192 637 | FRC- $\frac{1}{2}$ -D-7-O-MAXI |
| | | G $\frac{3}{4}$ | 192 638 | FRC- $\frac{3}{4}$ -D-7-O-MAXI |
| G1 | | 192 639 | FRC-1-D-7-O-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 192 640 | FRC- $\frac{1}{8}$ -D-7-O-MINI-A |
| | | G $\frac{1}{4}$ | 192 641 | FRC- $\frac{1}{4}$ -D-7-O-MINI-A |
| | | G $\frac{3}{8}$ | 192 642 | FRC- $\frac{3}{8}$ -D-7-O-MINI-A |
| | Midi | G $\frac{1}{4}$ | 192 643 | FRC- $\frac{1}{4}$ -D-7-O-MIDI-A |
| | | G $\frac{3}{8}$ | 192 644 | FRC- $\frac{3}{8}$ -D-7-O-MIDI-A |
| | | G $\frac{1}{2}$ | 192 645 | FRC- $\frac{1}{2}$ -D-7-O-MIDI-A |
| | | G $\frac{3}{4}$ | 192 646 | FRC- $\frac{3}{4}$ -D-7-O-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 192 647 | FRC- $\frac{1}{2}$ -D-7-O-MAXI-A |
| | | G $\frac{3}{4}$ | 192 648 | FRC- $\frac{3}{4}$ -D-7-O-MAXI-A |
| G1 | | 192 649 | FRC-1-D-7-O-MAXI-A | |

Service units FRC/FRCS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|---|------|------------|--------------------------|--------------------------|---------------------------|-----------------------|
| Pressure regulation range 0.5 ... 12 bar, directly actuated pressure regulator with integrated return flow function, metal bowl guard | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 192 406 | FRC-1/2-D-5M-DI-MAXI | 192 404 | FRC-1/2-D-DI-MAXI |
| | | G3/4 | 192 412 | FRC-3/4-D-5M-DI-MAXI | 192 410 | FRC-3/4-D-DI-MAXI |
| | | G1 | 192 418 | FRC-1-D-5M-DI-MAXI | 192 416 | FRC-1-D-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 192 424 | FRC-1/2-D-5M-DI-MAXI-A | 192 422 | FRC-1/2-D-DI-MAXI-A |
| | | G3/4 | 192 430 | FRC-3/4-D-5M-DI-MAXI-A | 192 428 | FRC-3/4-D-DI-MAXI-A |
| | | G1 | 192 436 | FRC-1-D-5M-DI-MAXI-A | 192 434 | FRC-1-D-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 192 407 | FRC-1/2-D-5M-O-DI-MAXI | 192 405 | FRC-1/2-D-O-DI-MAXI |
| | | G3/4 | 192 413 | FRC-3/4-D-5M-O-DI-MAXI | 192 411 | FRC-3/4-D-O-DI-MAXI |
| | | G1 | 192 419 | FRC-1-D-5M-O-DI-MAXI | 192 417 | FRC-1-D-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 192 425 | FRC-1/2-D-5M-O-DI-MAXI-A | 192 423 | FRC-1/2-D-O-DI-MAXI-A |
| | | G3/4 | 192 431 | FRC-3/4-D-5M-O-DI-MAXI-A | 192 429 | FRC-3/4-D-O-DI-MAXI-A |
| | | G1 | 192 437 | FRC-1-D-5M-O-DI-MAXI-A | 192 435 | FRC-1-D-O-DI-MAXI-A |

| Ordering data | | | | | | |
|--|------|------------|--------------------------|------|---------------------------|-------------------------|
| Pressure regulation range 0.5 ... 7 bar, directly actuated pressure regulator with integrated return flow function, metal bowl guard | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 192 408 | FRC-1/2-D-7-DI-MAXI |
| | | G3/4 | – | | 192 414 | FRC-3/4-D-7-DI-MAXI |
| | | G1 | – | | 192 420 | FRC-1-D-7-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 192 426 | FRC-1/2-D-7-DI-MAXI-A |
| | | G3/4 | – | | 192 432 | FRC-3/4-D-7-DI-MAXI-A |
| | | G1 | – | | 192 438 | FRC-1-D-7-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 192 409 | FRC-1/2-D-7-O-DI-MAXI |
| | | G3/4 | – | | 192 415 | FRC-3/4-D-7-O-DI-MAXI |
| | | G1 | – | | 192 421 | FRC-1-D-7-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 192 427 | FRC-1/2-D-7-O-DI-MAXI-A |
| | | G3/4 | – | | 192 433 | FRC-3/4-D-7-O-DI-MAXI-A |
| | | G1 | – | | 192 439 | FRC-1-D-7-O-DI-MAXI-A |

Service units FRC/FRCS, D series



Technical data

| Ordering data | | | | | | |
|--|------|-----------------|--------------------------|------------------------------------|---------------------------|---------------------------------|
| Pressure regulation range 0.5 ... 12 bar, metal bowl guard, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 194 860 | FRCS- $\frac{1}{8}$ -D-5M-MINI | 194 852 | FRCS- $\frac{1}{8}$ -D-MINI |
| | | G $\frac{1}{4}$ | 194 872 | FRCS- $\frac{1}{4}$ -D-5M-MINI | 194 864 | FRCS- $\frac{1}{4}$ -D-MINI |
| | | G $\frac{3}{8}$ | 194 884 | FRCS- $\frac{3}{8}$ -D-5M-MINI | 194 876 | FRCS- $\frac{3}{8}$ -D-MINI |
| | Midi | G $\frac{1}{4}$ | 194 896 | FRCS- $\frac{1}{4}$ -D-5M-MIDI | 194 888 | FRCS- $\frac{1}{4}$ -D-MIDI |
| | | G $\frac{3}{8}$ | 194 908 | FRCS- $\frac{3}{8}$ -D-5M-MIDI | 194 900 | FRCS- $\frac{3}{8}$ -D-MIDI |
| | | G $\frac{1}{2}$ | 194 920 | FRCS- $\frac{1}{2}$ -D-5M-MIDI | 194 912 | FRCS- $\frac{1}{2}$ -D-MIDI |
| | | G $\frac{3}{4}$ | 194 932 | FRCS- $\frac{3}{4}$ -D-5M-MIDI | 194 924 | FRCS- $\frac{3}{4}$ -D-MIDI |
| | Maxi | G $\frac{1}{2}$ | 194 944 | FRCS- $\frac{1}{2}$ -D-5M-MAXI | 194 936 | FRCS- $\frac{1}{2}$ -D-MAXI |
| | | G $\frac{3}{4}$ | 194 956 | FRCS- $\frac{3}{4}$ -D-5M-MAXI | 194 948 | FRCS- $\frac{3}{4}$ -D-MAXI |
| | | G1 | 194 968 | FRCS-1-D-5M-MAXI | 194 960 | FRCS-1-D-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 194 862 | FRCS- $\frac{1}{8}$ -D-5M-MINI-A | 194 853 | FRCS- $\frac{1}{8}$ -D-MINI-A |
| | | G $\frac{1}{4}$ | 194 874 | FRCS- $\frac{1}{4}$ -D-5M-MINI-A | 194 865 | FRCS- $\frac{1}{4}$ -D-MINI-A |
| | | G $\frac{3}{8}$ | 194 886 | FRCS- $\frac{3}{8}$ -D-5M-MINI-A | 194 877 | FRCS- $\frac{3}{8}$ -D-MINI-A |
| | Midi | G $\frac{1}{4}$ | 194 898 | FRCS- $\frac{1}{4}$ -D-5M-MIDI-A | 194 889 | FRCS- $\frac{1}{4}$ -D-MIDI-A |
| | | G $\frac{3}{8}$ | 194 910 | FRCS- $\frac{3}{8}$ -D-5M-MIDI-A | 194 901 | FRCS- $\frac{3}{8}$ -D-MIDI-A |
| | | G $\frac{1}{2}$ | 194 922 | FRCS- $\frac{1}{2}$ -D-5M-MIDI-A | 194 913 | FRCS- $\frac{1}{2}$ -D-MIDI-A |
| | | G $\frac{3}{4}$ | 194 934 | FRCS- $\frac{3}{4}$ -D-5M-MIDI-A | 194 925 | FRCS- $\frac{3}{4}$ -D-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 194 946 | FRCS- $\frac{1}{2}$ -D-5M-MAXI-A | 194 937 | FRCS- $\frac{1}{2}$ -D-MAXI-A |
| | | G $\frac{3}{4}$ | 194 958 | FRCS- $\frac{3}{4}$ -D-5M-MAXI-A | 194 949 | FRCS- $\frac{3}{4}$ -D-MAXI-A |
| | | G1 | 194 970 | FRCS-1-D-5M-MAXI-A | 194 961 | FRCS-1-D-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 194 861 | FRCS- $\frac{1}{8}$ -D-5M-O-MINI | 194 854 | FRCS- $\frac{1}{8}$ -D-O-MINI |
| | | G $\frac{1}{4}$ | 194 873 | FRCS- $\frac{1}{4}$ -D-5M-O-MINI | 194 866 | FRCS- $\frac{1}{4}$ -D-O-MINI |
| | | G $\frac{3}{8}$ | 194 885 | FRCS- $\frac{3}{8}$ -D-5M-O-MINI | 194 878 | FRCS- $\frac{3}{8}$ -D-O-MINI |
| | Midi | G $\frac{1}{4}$ | 194 897 | FRCS- $\frac{1}{4}$ -D-5M-O-MIDI | 194 890 | FRCS- $\frac{1}{4}$ -D-O-MIDI |
| | | G $\frac{3}{8}$ | 194 909 | FRCS- $\frac{3}{8}$ -D-5M-O-MIDI | 194 902 | FRCS- $\frac{3}{8}$ -D-O-MIDI |
| | | G $\frac{1}{2}$ | 194 921 | FRCS- $\frac{1}{2}$ -D-5M-O-MIDI | 194 914 | FRCS- $\frac{1}{2}$ -D-O-MIDI |
| | | G $\frac{3}{4}$ | 194 933 | FRCS- $\frac{3}{4}$ -D-5M-O-MIDI | 194 926 | FRCS- $\frac{3}{4}$ -D-O-MIDI |
| | Maxi | G $\frac{1}{2}$ | 194 945 | FRCS- $\frac{1}{2}$ -D-5M-O-MAXI | 194 938 | FRCS- $\frac{1}{2}$ -D-O-MAXI |
| | | G $\frac{3}{4}$ | 194 957 | FRCS- $\frac{3}{4}$ -D-5M-O-MAXI | 194 950 | FRCS- $\frac{3}{4}$ -D-O-MAXI |
| | | G1 | 194 969 | FRCS-1-D-5M-O-MAXI | 194 962 | FRCS-1-D-O-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 194 863 | FRCS- $\frac{1}{8}$ -D-5M-O-MINI-A | 194 855 | FRCS- $\frac{1}{8}$ -D-O-MINI-A |
| | | G $\frac{1}{4}$ | 194 875 | FRCS- $\frac{1}{4}$ -D-5M-O-MINI-A | 194 867 | FRCS- $\frac{1}{4}$ -D-O-MINI-A |
| | | G $\frac{3}{8}$ | 194 887 | FRCS- $\frac{3}{8}$ -D-5M-O-MINI-A | 194 879 | FRCS- $\frac{3}{8}$ -D-O-MINI-A |
| | Midi | G $\frac{1}{4}$ | 194 899 | FRCS- $\frac{1}{4}$ -D-5M-O-MIDI-A | 194 891 | FRCS- $\frac{1}{4}$ -D-O-MIDI-A |
| | | G $\frac{3}{8}$ | 194 911 | FRCS- $\frac{3}{8}$ -D-5M-O-MIDI-A | 194 903 | FRCS- $\frac{3}{8}$ -D-O-MIDI-A |
| | | G $\frac{1}{2}$ | 194 923 | FRCS- $\frac{1}{2}$ -D-5M-O-MIDI-A | 194 915 | FRCS- $\frac{1}{2}$ -D-O-MIDI-A |
| | | G $\frac{3}{4}$ | 194 935 | FRCS- $\frac{3}{4}$ -D-5M-O-MIDI-A | 194 927 | FRCS- $\frac{3}{4}$ -D-O-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 194 947 | FRCS- $\frac{1}{2}$ -D-5M-O-MAXI-A | 194 939 | FRCS- $\frac{1}{2}$ -D-O-MAXI-A |
| | | G $\frac{3}{4}$ | 194 959 | FRCS- $\frac{3}{4}$ -D-5M-O-MAXI-A | 194 951 | FRCS- $\frac{3}{4}$ -D-O-MAXI-A |
| | | G1 | 194 971 | FRCS-1-D-5M-O-MAXI-A | 194 963 | FRCS-1-D-O-MAXI-A |

Service units FRC/FRCS, D series

Technical data

| Ordering data | | | | |
|---|------|------------|---------------------------|-----------------------|
| Pressure regulation range 0.5 ... 7 bar, metal bowl guard, lockable | | | | |
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part No. | Type |
| With pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 194 856 | FRCS-1/8-D-7-MINI |
| | | G1/4 | 194 868 | FRCS-1/4-D-7-MINI |
| | | G3/8 | 194 880 | FRCS-3/8-D-7-MINI |
| | Midi | G1/4 | 194 892 | FRCS-1/4-D-7-MIDI |
| | | G3/8 | 194 904 | FRCS-3/8-D-7-MIDI |
| | | G1/2 | 194 916 | FRCS-1/2-D-7-MIDI |
| | | G3/4 | 194 928 | FRCS-3/4-D-7-MIDI |
| | Maxi | G1/2 | 194 940 | FRCS-1/2-D-7-MAXI |
| | | G3/4 | 194 952 | FRCS-3/4-D-7-MAXI |
| G1 | | 194 964 | FRCS-1-D-7-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 194 858 | FRCS-1/8-D-7-MINI-A |
| | | G1/4 | 194 870 | FRCS-1/4-D-7-MINI-A |
| | | G3/8 | 194 882 | FRCS-3/8-D-7-MINI-A |
| | Midi | G1/4 | 194 894 | FRCS-1/4-D-7-MIDI-A |
| | | G3/8 | 194 906 | FRCS-3/8-D-7-MIDI-A |
| | | G1/2 | 194 918 | FRCS-1/2-D-7-MIDI-A |
| | | G3/4 | 194 930 | FRCS-3/4-D-7-MIDI-A |
| | Maxi | G1/2 | 194 942 | FRCS-1/2-D-7-MAXI-A |
| | | G3/4 | 194 954 | FRCS-3/4-D-7-MAXI-A |
| G1 | | 194 966 | FRCS-1-D-7-MAXI-A | |
| Without pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 194 857 | FRCS-1/8-D-7-O-MINI |
| | | G1/4 | 194 869 | FRCS-1/4-D-7-O-MINI |
| | | G3/8 | 194 881 | FRCS-3/8-D-7-O-MINI |
| | Midi | G1/4 | 194 893 | FRCS-1/4-D-7-O-MIDI |
| | | G3/8 | 194 905 | FRCS-3/8-D-7-O-MIDI |
| | | G1/2 | 194 917 | FRCS-1/2-D-7-O-MIDI |
| | | G3/4 | 194 929 | FRCS-3/4-D-7-O-MIDI |
| | Maxi | G1/2 | 194 941 | FRCS-1/2-D-7-O-MAXI |
| | | G3/4 | 194 953 | FRCS-3/4-D-7-O-MAXI |
| G1 | | 194 965 | FRCS-1-D-7-O-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 194 859 | FRCS-1/8-D-7-O-MINI-A |
| | | G1/4 | 194 871 | FRCS-1/4-D-7-O-MINI-A |
| | | G3/8 | 194 883 | FRCS-3/8-D-7-O-MINI-A |
| | Midi | G1/4 | 194 895 | FRCS-1/4-D-7-O-MIDI-A |
| | | G3/8 | 194 907 | FRCS-3/8-D-7-O-MIDI-A |
| | | G1/2 | 194 919 | FRCS-1/2-D-7-O-MIDI-A |
| | | G3/4 | 194 931 | FRCS-3/4-D-7-O-MIDI-A |
| | Maxi | G1/2 | 194 943 | FRCS-1/2-D-7-O-MAXI-A |
| | | G3/4 | 194 955 | FRCS-3/4-D-7-O-MAXI-A |
| G1 | | 194 967 | FRCS-1-D-7-O-MAXI-A | |

Service units FRC/FRCS, D series

FESTO

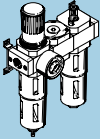
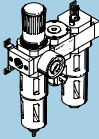
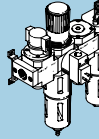
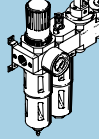
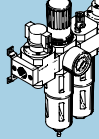
Technical data

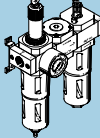
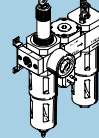
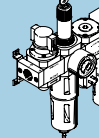
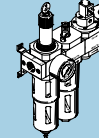
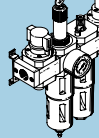
| Ordering data | | | | | | |
|---|------|------------|--------------------------|-------------------------|---------------------------|----------------------|
| Pressure regulation range 0.5 ... 12 bar, directly actuated pressure regulator with integrated return flow function, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G½ | 194 974 | FRCS-½-D-5M-DI-MAXI | 194 972 | FRCS-½-D-DI-MAXI |
| | | G¾ | 194 980 | FRCS-¾-D-5M-DI-MAXI | 194 978 | FRCS-¾-D-DI-MAXI |
| | | G1 | 194 986 | FRCS-1-D-5M-DI-MAXI | 194 984 | FRCS-1-D-DI-MAXI |
| Fully automatic | Maxi | G½ | 194 992 | FRCS-½-D-5M-DI-MAXI-A | 194 990 | FRCS-½-D-DI-MAXI-A |
| | | G¾ | 194 998 | FRCS-¾-D-5M-DI-MAXI-A | 194 996 | FRCS-¾-D-DI-MAXI-A |
| | | G1 | 195 004 | FRCS-1-D-5M-DI-MAXI-A | 195 002 | FRCS-1-D-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G½ | 194 975 | FRCS-½-D-5M-O-DI-MAXI | 194 973 | FRCS-½-D-O-DI-MAXI |
| | | G¾ | 194 981 | FRCS-¾-D-5M-O-DI-MAXI | 194 979 | FRCS-¾-D-O-DI-MAXI |
| | | G1 | 194 987 | FRCS-1-D-5M-O-DI-MAXI | 194 985 | FRCS-1-D-O-DI-MAXI |
| Fully automatic | Maxi | G½ | 194 993 | FRCS-½-D-5M-O-DI-MAXI-A | 194 991 | FRCS-½-D-O-DI-MAXI-A |
| | | G¾ | 194 999 | FRCS-¾-D-5M-O-DI-MAXI-A | 194 997 | FRCS-¾-D-O-DI-MAXI-A |
| | | G1 | 195 005 | FRCS-1-D-5M-O-DI-MAXI-A | 195 003 | FRCS-1-D-O-DI-MAXI-A |

| Ordering data | | | | | | |
|--|------|------------|--------------------------|------|---------------------------|------------------------|
| Pressure regulation range 0.5 ... 7 bar, directly actuated pressure regulator with integrated return flow function, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G½ | – | | 194 976 | FRCS-½-D-7-DI-MAXI |
| | | G¾ | – | | 194 982 | FRCS-¾-D-7-DI-MAXI |
| | | G1 | – | | 194 988 | FRCS-1-D-7-DI-MAXI |
| Fully automatic | Maxi | G½ | – | | 194 994 | FRCS-½-D-7-DI-MAXI-A |
| | | G¾ | – | | 195 000 | FRCS-¾-D-7-DI-MAXI-A |
| | | G1 | – | | 195 006 | FRCS-1-D-7-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G½ | – | | 194 977 | FRCS-½-D-7-O-DI-MAXI |
| | | G¾ | – | | 194 983 | FRCS-¾-D-7-O-DI-MAXI |
| | | G1 | – | | 194 989 | FRCS-1-D-7-O-DI-MAXI |
| Fully automatic | Maxi | G½ | – | | 194 995 | FRCS-½-D-7-O-DI-MAXI-A |
| | | G¾ | – | | 195 001 | FRCS-¾-D-7-O-DI-MAXI-A |
| | | G1 | – | | 195 007 | FRCS-1-D-7-O-DI-MAXI-A |

Service unit combinations FRC-K/FRCS-K, D series

Product range overview

| FRC Rotary knob with detent |  KA |  KB |  KC |  KE |  KF |
|--|--|--|--|--|--|
| Individual devices | | | | | |
| On-off valve, manual | - | - | ■ | - | ■ |
| Filter regulator with pressure gauge | ■ | ■ | ■ | ■ | ■ |
| Lubricator | - | - | - | ■ | ■ |
| On-off valve with solenoid coil 24 V DC | - | - | - | ■ | ■ |
| Soft-start valve | - | - | - | ■ | ■ |
| Branching module with pressure switch | - | - | - | - | ■ |
| Branching module with pressure switch and lubricator | - | ■ | ■ | - | - |
| Branching module and lubricator | ■ | - | - | - | - |
| Mounting bracket and metal bowl guard | ■ | ■ | ■ | ■ | ■ |
| → Page | 3 / 1.1-20 | 3 / 1.1-24 | 3 / 1.1-28 | 3 / 1.1-32 | 3 / 1.1-36 |

| FRCS Rotary knob with integrated lock |  KA |  KB |  KC |  KE |  KF |
|--|--|--|--|--|--|
| Individual devices | | | | | |
| On-off valve, manual | - | - | ■ | - | ■ |
| Filter regulator with pressure gauge | ■ | ■ | ■ | ■ | ■ |
| Lubricator | - | - | - | ■ | ■ |
| On-off valve with solenoid coil 24 V DC | - | - | - | ■ | ■ |
| Soft-start valve | - | - | - | ■ | ■ |
| Branching module with pressure switch | - | - | - | - | ■ |
| Branching module with pressure switch and lubricator | - | ■ | ■ | - | - |
| Branching module and lubricator | ■ | - | - | - | - |
| Mounting bracket and metal bowl guard | ■ | ■ | ■ | ■ | ■ |
| → Page | 3 / 1.1-20 | 3 / 1.1-24 | 3 / 1.1-28 | 3 / 1.1-32 | 3 / 1.1-36 |

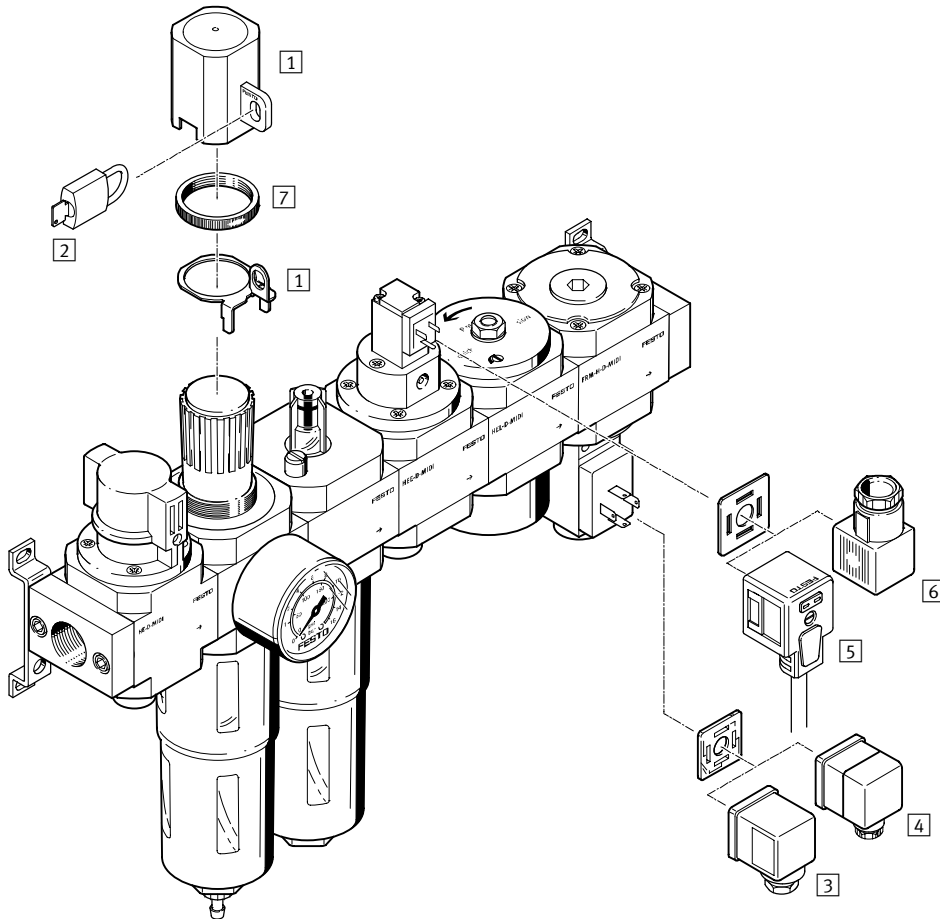
26. Service unit combinations FRC-K/FRCS-K, D series


Peripherals overview

FESTO

D series service units
Service units

1.1



-  - Note

The choice of accessories depends on the selected service unit combination. The example shows the service unit combination FRC-KF. This combination can also be obtained with a lockable rotary regulator as service unit combination FRCS-KF.

Range of accessories
→ Peripherals pages of the individual devices

| Mounting attachments and accessories | | → Page |
|--------------------------------------|--|------------|
| 1 | Regulator lock LRVS | 3 / 1.8-14 |
| 2 | Padlock LRVS | 3 / 1.8-14 |
| 3 | Plug socket MSSD-C | 3 / 1.8-20 |
| 4 | Angled plug socket PEV-...-WD-LED | 3 / 1.8-20 |
| 5 | Plug socket with cable KMEB-1 | 3 / 1.8-21 |
| 6 | Plug socket MSSD-EB | 3 / 1.8-21 |
| 7 | Knurled nut (included in scope of delivery) HMR | - |

Service unit combinations FRC-K/FRCS-K, D series

Type codes

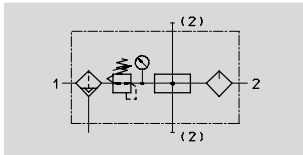
| | | | | | | | | | | | | |
|--|--|-----|---|---|---|----|---|------|---|----|---|---|
| FRC | – | 1/2 | – | D | – | DI | – | MAXI | – | KA | – | A |
| Basic function | | | | | | | | | | | | |
| FRC | Service unit combination | | | | | | | | | | | |
| FRCS | Service unit combination, lockable | | | | | | | | | | | |
| Pneumatic connection | | | | | | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | | | | | | |
| 1/4 | Thread G1/4 | | | | | | | | | | | |
| 3/8 | Thread G3/8 | | | | | | | | | | | |
| 1/2 | Thread G1/2 | | | | | | | | | | | |
| 3/4 | Thread G3/4 | | | | | | | | | | | |
| Series | | | | | | | | | | | | |
| D | Series | | | | | | | | | | | |
| Function (Maxi size only) | | | | | | | | | | | | |
| DI | Directly actuated pressure regulator with integrated return flow function | | | | | | | | | | | |
| Size | | | | | | | | | | | | |
| MINI | Grid dimension for individual device 40 mm (without connecting plates) | | | | | | | | | | | |
| MIDI | Grid dimension for individual device 55 mm (without connecting plates) | | | | | | | | | | | |
| MAXI | Grid dimension for individual device 66 mm (without connecting plates) | | | | | | | | | | | |
| Options for service unit combinations | | | | | | | | | | | | |
| KA | Filter regulator, branching module and lubricator | | | | | | | | | | | |
| KB | Filter regulator, branching module with pressure switch and lubricator | | | | | | | | | | | |
| KC | On-off valve, filter regulator, branching module with pressure switch and lubricator | | | | | | | | | | | |
| KE | Filter regulator, lubricator, on-off valve with solenoid coil 24 V DC, soft-start valve | | | | | | | | | | | |
| KF | On-off valve, filter regulator, lubricator, on-off valve with solenoid coil 24 V DC, soft-start valve, branching module with pressure switch | | | | | | | | | | | |
| Condensate drain | | | | | | | | | | | | |
| | Turned manually | | | | | | | | | | | |
| A | Fully automatic | | | | | | | | | | | |

Service unit combinations FRC-KA/FRCS-KA, D series



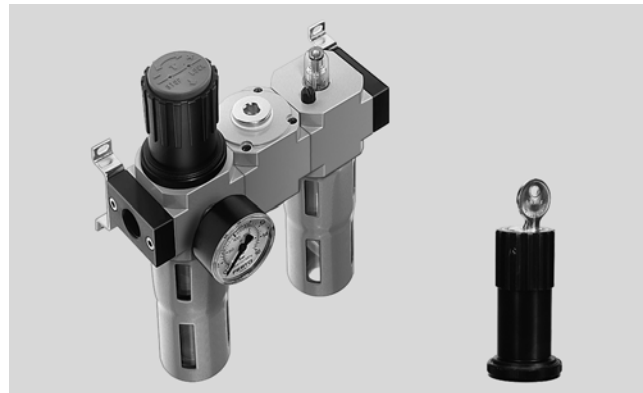
Technical data

Function



- - Flow rate
650 ... 8200 l/min
- - Temperature range
-10 ... +60 °C
- - Input pressure
1 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
- Lubricator LOE
 - metal bowl guard
- Mounting accessories



- For lubricated and unlubricated compressed air
- Two connections for unlubricated compressed air supply
- One connection for lubricated compressed air supply

| General technical data | | | | | | | |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G ¹ / ₈ | G ¹ / ₄ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ¹ / ₂ | G ³ / ₄ |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.25 | 0.2 | 0.25 | 0.35 | 0.3 | 0.1 | 0.2 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the FRC/FRCS-...-DI-MAXI-KA is 43 cm³.

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

Service unit combinations FRC-KA/FRCS-KA, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| FRC/FRCS-...-D-... | 650 | 980 | - | - | - |
| Midi | | | | | |
| FRC/FRCS-...-D-... | - | 1400 | 2100 | 2500 | - |
| Maxi | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 7500 | 8200 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 5200 | 5800 |

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

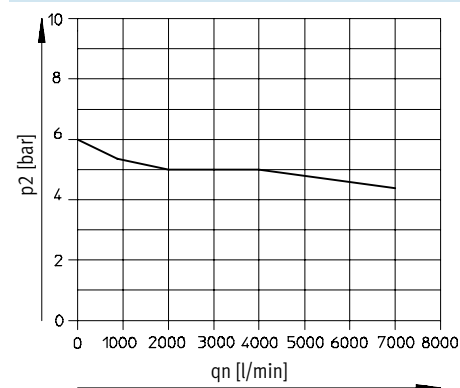
| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | |
| Temperature of medium [°C] | -10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| FRC | 1000 | 2400 | 3500 | 3700 |
| FRCS | 1100 | 2640 | 3600 | 3940 |

-  - Note
 Materials → Technical data of the individual devices

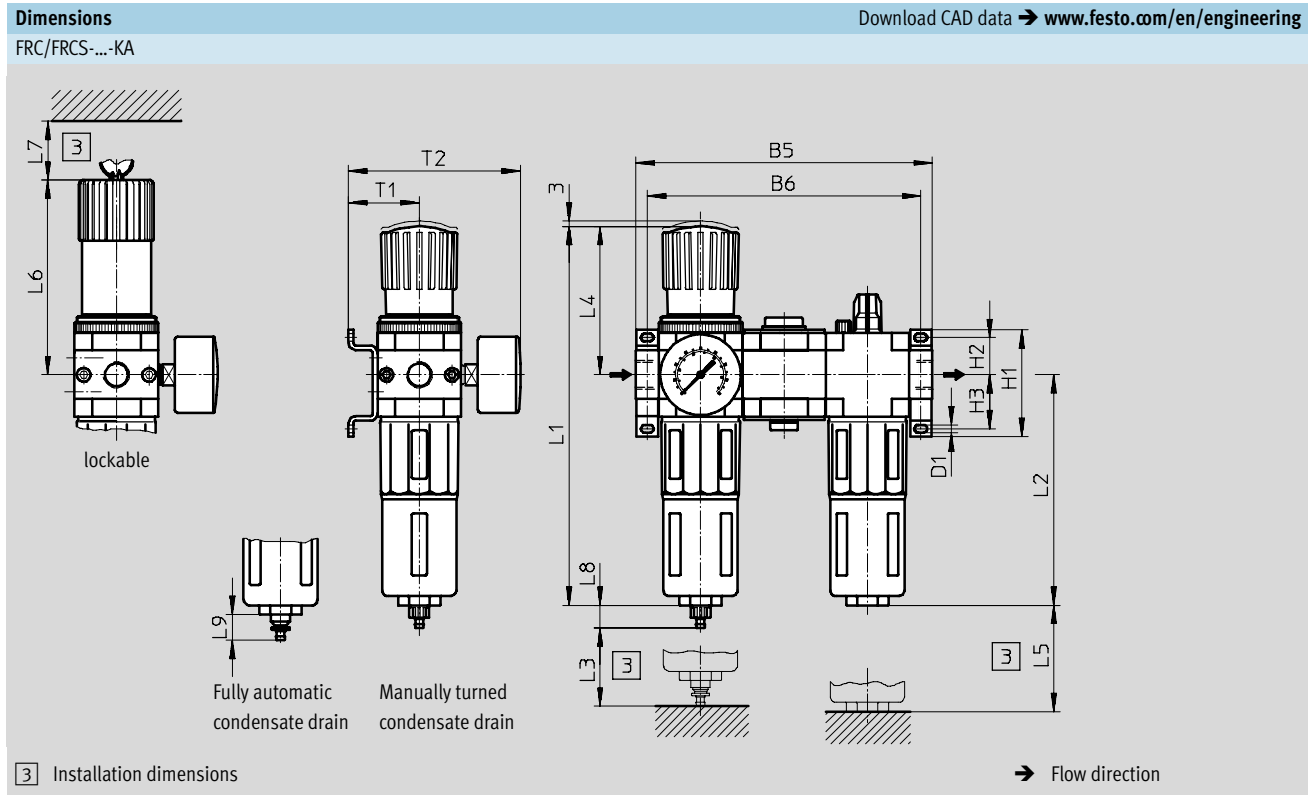
Standard flow rate qn as a function of the output pressure p2 FRC/FRCS-1/2-D-DI-MAXI-KA(-A)



Primary pressure p1 = 10 bar

Service unit combinations FRC-KA/FRCS-KA, D series

Technical data



| Type | B5 | B6 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | T1 | T2 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| FRC-...-D-MINI-KA (A) | 144 | 132 | 4.3 | 43 | 17.5 | 17.5 | 193 | 124 | 60 | 68 | 100 | 98 | 60 | 15 | 19 | 39 | 95 |
| FRCS-...-D-MINI-KA (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MIDI-KA (A) | 195 | 180 | 5.3 | 70 | 24.5 | 35.5 | 250 | 152 | 80 | 99 | 120 | 130 | 60 | 15 | 19 | 47 | 114 |
| FRCS-...-D-MIDI-KA (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MAXI-KA (A) | 228 | 212 | 5.3 | 70 | 24.5 | 35.5 | 252 | 171 | 90 | 82 | 150 | 111 | 60 | 15 | 19 | 53 | 126 |
| FRCS-...-D-MAXI-KA (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| FRC-...-D-DI-MAXI-KA (A) | | | | | | | | | | | | | | | | | |
| FRCS-...-D-DI-MAXI-KA (A) | | | | | | | | | | | | | | | | | |

Service unit combinations FRC-KA/FRCS-KA, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 185 791 | FRC- $\frac{1}{8}$ -D-MINI-KA | 185 792 | FRC- $\frac{1}{8}$ -D-MINI-KA-A |
| | G $\frac{1}{4}$ | 185 793 | FRC- $\frac{1}{4}$ -D-MINI-KA | 185 794 | FRC- $\frac{1}{4}$ -D-MINI-KA-A |
| Midi | G $\frac{1}{4}$ | 185 795 | FRC- $\frac{1}{4}$ -D-MIDI-KA | 185 796 | FRC- $\frac{1}{4}$ -D-MIDI-KA-A |
| | G $\frac{3}{8}$ | 185 797 | FRC- $\frac{3}{8}$ -D-MIDI-KA | 185 798 | FRC- $\frac{3}{8}$ -D-MIDI-KA-A |
| | G $\frac{1}{2}$ | 185 799 | FRC- $\frac{1}{2}$ -D-MIDI-KA | 185 800 | FRC- $\frac{1}{2}$ -D-MIDI-KA-A |
| Maxi | G $\frac{1}{2}$ | 186 053 | FRC- $\frac{1}{2}$ -D-MAXI-KA | 186 054 | FRC- $\frac{1}{2}$ -D-MAXI-KA-A |
| | G $\frac{3}{4}$ | 185 801 | FRC- $\frac{3}{4}$ -D-MAXI-KA | 185 802 | FRC- $\frac{3}{4}$ -D-MAXI-KA-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 468 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KA | 192 478 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KA-A |
| | G $\frac{3}{4}$ | 192 473 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KA | 192 483 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KA-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 195 106 | FRCS- $\frac{1}{8}$ -D-MINI-KA | 195 107 | FRCS- $\frac{1}{8}$ -D-MINI-KA-A |
| | G $\frac{1}{4}$ | 195 116 | FRCS- $\frac{1}{4}$ -D-MINI-KA | 195 117 | FRCS- $\frac{1}{4}$ -D-MINI-KA-A |
| Midi | G $\frac{1}{4}$ | 195 126 | FRCS- $\frac{1}{4}$ -D-MIDI-KA | 195 127 | FRCS- $\frac{1}{4}$ -D-MIDI-KA-A |
| | G $\frac{3}{8}$ | 195 136 | FRCS- $\frac{3}{8}$ -D-MIDI-KA | 195 137 | FRCS- $\frac{3}{8}$ -D-MIDI-KA-A |
| | G $\frac{1}{2}$ | 195 146 | FRCS- $\frac{1}{2}$ -D-MIDI-KA | 195 147 | FRCS- $\frac{1}{2}$ -D-MIDI-KA-A |
| Maxi | G $\frac{1}{2}$ | 195 156 | FRCS- $\frac{1}{2}$ -D-MAXI-KA | 195 157 | FRCS- $\frac{1}{2}$ -D-MAXI-KA-A |
| | G $\frac{3}{4}$ | 195 166 | FRCS- $\frac{3}{4}$ -D-MAXI-KA | 195 167 | FRCS- $\frac{3}{4}$ -D-MAXI-KA-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 204 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KA | 195 205 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KA-A |
| | G $\frac{3}{4}$ | 195 214 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KA | 195 215 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KA-A |

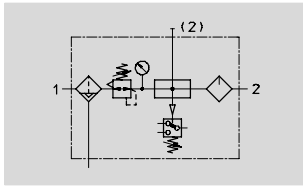
|| Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KB/FRCS-KB, D series



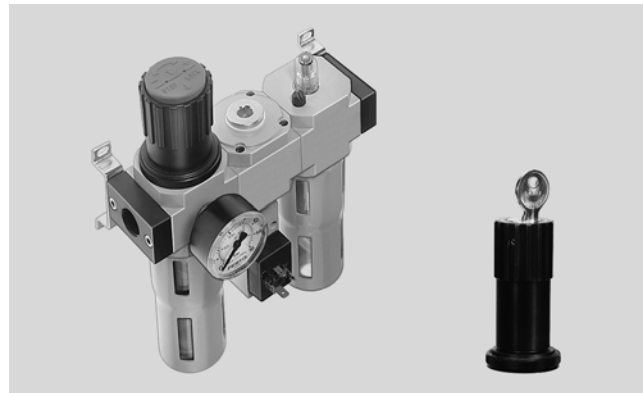
Technical data

Function



- Flow rate
650 ... 8200 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - Pressure switch without display
- Lubricator LOE
 - metal bowl guard
- Mounting accessories



- Electrical pressure monitoring with adjustable switching pressure
- For lubricated and unlubricated compressed air
- One connection for unlubricated compressed air supply
- One connection for lubricated compressed air supply

| General technical data | | | | | | | | |
|---------------------------|------------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----|
| Size | Mini | | Midi | | | Maxi | | |
| Pneumatic connection | G $\frac{3}{8}$ | G $\frac{1}{4}$ | G $\frac{1}{4}$ | G $\frac{3}{8}$ | G $\frac{1}{2}$ | G $\frac{1}{2}$ | G $\frac{3}{4}$ | |
| Operating medium | Compressed air | | | | | | | |
| Type of mounting | Via accessories | | | | | | | |
| | In-line installation | | | | | | | |
| Assembly position | Vertical $\pm 5^\circ$ | | | | | | | |
| Grade of filtration | [µm] | 40 | | | | | | |
| Max. hysteresis | [bar] | 0.25 | 0.2 | 0.25 | 0.35 | 0.35 | 0.1 | 0.2 |
| Pressure regulation range | [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | | |
| Max. condensate volume | [cm 3] | 22 | | 43 | | 80 ¹⁾ | | |
| Input pressure [bar] | | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | | |

1) The max. condensate volume for the FRC/FRCS...-DI-MAXI-KB is 43 cm 3 .

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

Service unit combinations FRC-KB/FRCS-KB, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| FRC/FRCS-...-D-... | 650 | 980 | - | - | - |
| Midi | | | | | |
| FRC/FRCS-...-D-... | - | 1400 | 2100 | 2500 | - |
| Maxi | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 7500 | 8200 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 5000 | 6000 |

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

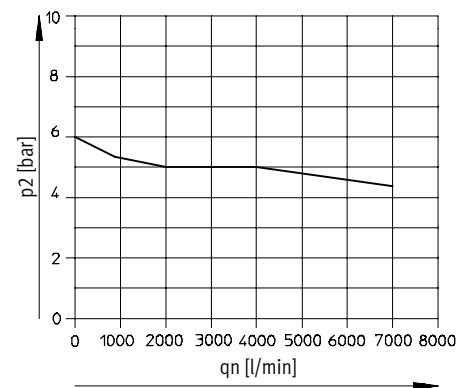
| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | |
| Temperature of medium [°C] | -10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| FRC | 1200 | 2600 | 3500 | 3700 |
| FRCS | 1300 | 2840 | 3600 | 3940 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2 FRC/FRCS-1/2-D-DI-MAXI-KB(-A)

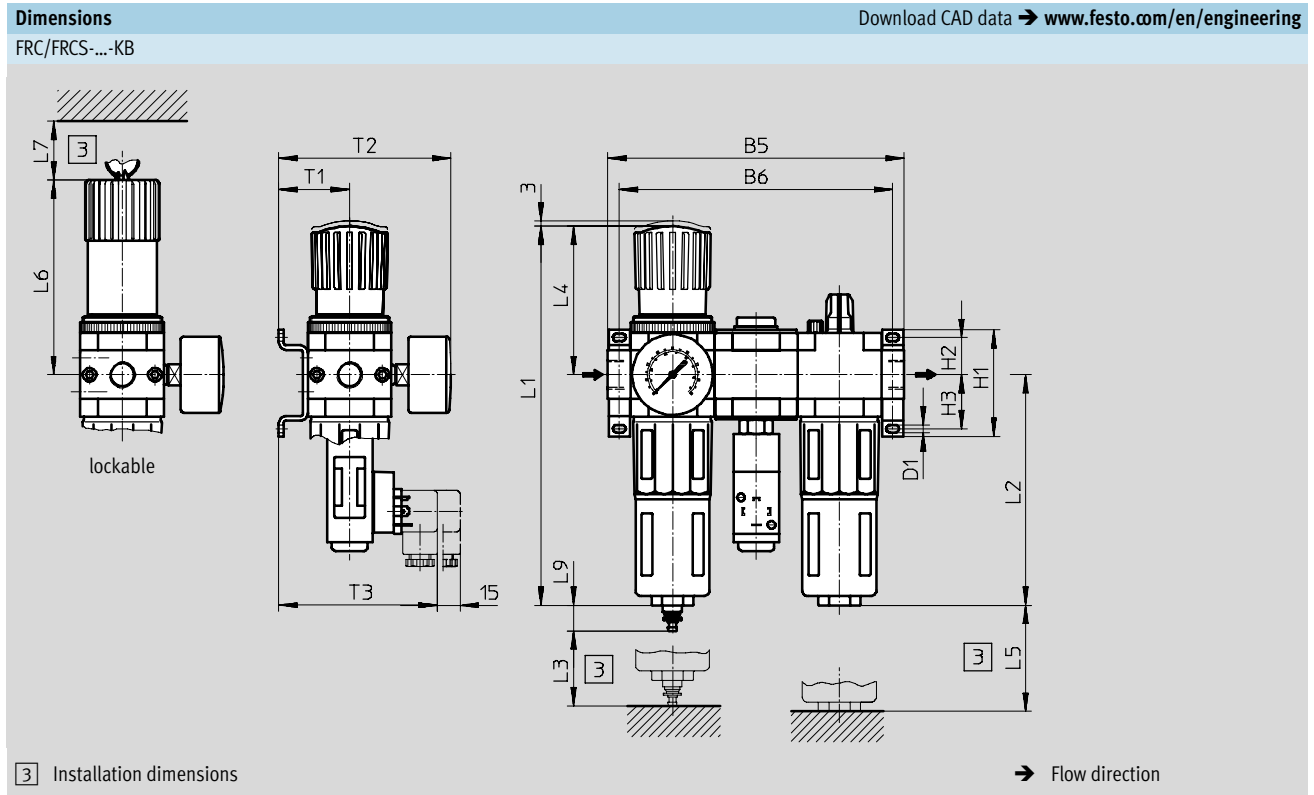


Primary pressure p1 = 10 bar

Service unit combinations FRC-KB/FRCS-KB, D series



Technical data



| Type | B5 | B6 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| FRC-...-D-MINI-KB (A) | 144 | 132 | 4.3 | 43 | 17.5 | 17.5 | 193 | 124 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 |
| FRCS-...-D-MINI-KB (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MIDI-KB (A) | 195 | 180 | 5.3 | 70 | 24.5 | 35.5 | 250 | 152 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 105 |
| FRCS-...-D-MIDI-KB (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MAXI-KB (A) | 228 | 212 | 5.3 | 70 | 24.5 | 35.5 | 252 | 171 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 |
| FRCS-...-D-MAXI-KB (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| FRC-...-D-DI-MAXI-KB (A) | | | | | | | | | | | | | | | | | |
| FRCS-...-D-DI-MAXI-KB (A) | | | | | | | | | | | | | | | | | |

Service unit combinations FRC-KB/FRCS-KB, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module with pressure switch without display, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 185 803 | FRC- $\frac{1}{8}$ -D-MINI-KB | 185 804 | FRC- $\frac{1}{8}$ -D-MINI-KB-A |
| | G $\frac{1}{4}$ | 185 805 | FRC- $\frac{1}{4}$ -D-MINI-KB | 185 806 | FRC- $\frac{1}{4}$ -D-MINI-KB-A |
| Midi | G $\frac{1}{4}$ | 185 807 | FRC- $\frac{1}{4}$ -D-MIDI-KB | 185 808 | FRC- $\frac{1}{4}$ -D-MIDI-KB-A |
| | G $\frac{3}{8}$ | 185 809 | FRC- $\frac{3}{8}$ -D-MIDI-KB | 185 810 | FRC- $\frac{3}{8}$ -D-MIDI-KB-A |
| | G $\frac{1}{2}$ | 185 811 | FRC- $\frac{1}{2}$ -D-MIDI-KB | 185 812 | FRC- $\frac{1}{2}$ -D-MIDI-KB-A |
| Maxi | G $\frac{1}{2}$ | 186 055 | FRC- $\frac{1}{2}$ -D-MAXI-KB | 186 056 | FRC- $\frac{1}{2}$ -D-MAXI-KB-A |
| | G $\frac{3}{4}$ | 185 813 | FRC- $\frac{3}{4}$ -D-MAXI-KB | 185 814 | FRC- $\frac{3}{4}$ -D-MAXI-KB-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 469 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KB | 192 479 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KB-A |
| | G $\frac{3}{4}$ | 192 474 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KB | 192 484 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KB-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module with pressure switch without display, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 195 108 | FRCS- $\frac{1}{8}$ -D-MINI-KB | 195 109 | FRCS- $\frac{1}{8}$ -D-MINI-KB-A |
| | G $\frac{1}{4}$ | 195 118 | FRCS- $\frac{1}{4}$ -D-MINI-KB | 195 119 | FRCS- $\frac{1}{4}$ -D-MINI-KB-A |
| Midi | G $\frac{1}{4}$ | 195 128 | FRCS- $\frac{1}{4}$ -D-MIDI-KB | 195 129 | FRCS- $\frac{1}{4}$ -D-MIDI-KB-A |
| | G $\frac{3}{8}$ | 195 138 | FRCS- $\frac{3}{8}$ -D-MIDI-KB | 195 139 | FRCS- $\frac{3}{8}$ -D-MIDI-KB-A |
| | G $\frac{1}{2}$ | 195 148 | FRCS- $\frac{1}{2}$ -D-MIDI-KB | 195 149 | FRCS- $\frac{1}{2}$ -D-MIDI-KB-A |
| Maxi | G $\frac{1}{2}$ | 195 158 | FRCS- $\frac{1}{2}$ -D-MAXI-KB | 195 159 | FRCS- $\frac{1}{2}$ -D-MAXI-KB-A |
| | G $\frac{3}{4}$ | 195 168 | FRCS- $\frac{3}{4}$ -D-MAXI-KB | 195 169 | FRCS- $\frac{3}{4}$ -D-MAXI-KB-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 206 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KB | 195 207 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KB-A |
| | G $\frac{3}{4}$ | 195 216 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KB | 195 217 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KB-A |

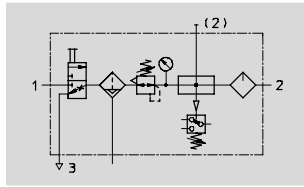
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KC/FRCS-KC, D series

FESTO

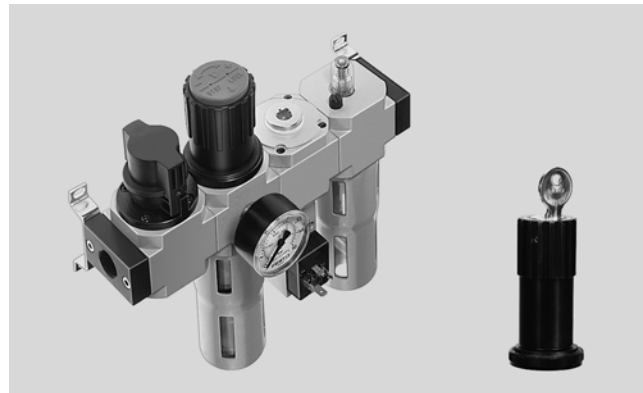
Technical data

Function



- Flow rate
640 ... 7800 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - pressure switch without display
- Lubricator LOE
 - metal bowl guard
- Mounting accessories



- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination
- Electrical pressure monitoring with adjustable switching pressure
- The system is vented when supply air is closed
- For lubricated and unlubricated compressed air
- One connection for unlubricated compressed air supply
- One connection for lubricated compressed air supply

| General technical data | | | | | | | |
|---|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.2 | 0.2 | 0.4 | 0.3 | 0.3 | 0.15 | 0.15 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the FRC/FRCS-...-DI-MAXI-KC is 43 cm³.

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

Service unit combinations FRC-KC/FRCS-KC, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| FRC/FRCS-...-D-... | 640 | 870 | - | - | - |
| Midi | | | | | |
| FRC/FRCS-...-D-... | - | 1320 | 1870 | 2400 | - |
| Maxi | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 6600 | 7800 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 4800 | 5400 |

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

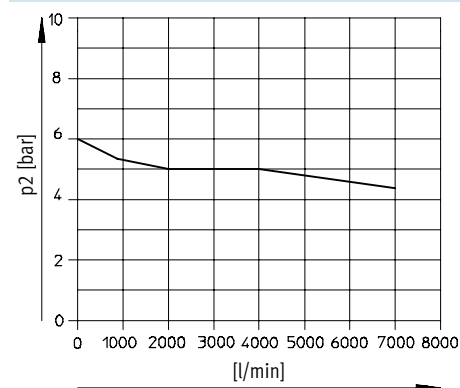
| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | |
| Temperature of medium [°C] | -10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| FRC | 1400 | 3000 | 4600 | 4800 |
| FRCS | 1500 | 3240 | 4700 | 5040 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2 FRC/FRCS-1/2-D-DI-MAXI-KC(-A)

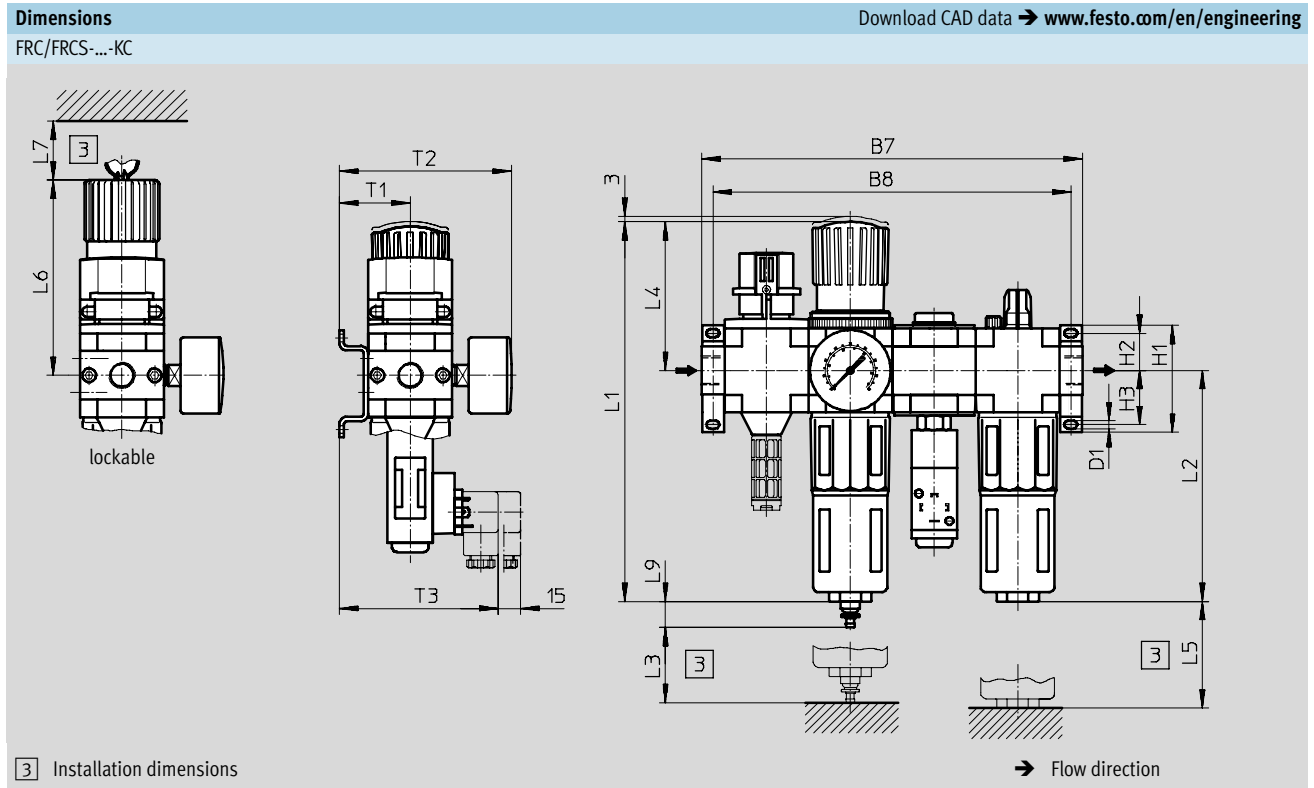


Primary pressure p1 = 10 bar

Service unit combinations FRC-KC/FRCS-KC, D series



Technical data



| Type | B7 | B8 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| FRC-...-D-MINI-KC (A) | 184 | 172 | 4.3 | 43 | 17.5 | 17.5 | 193 | 124 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 |
| FRCS-...-D-MINI-KC (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MIDI-KC (A) | 250 | 235 | 5.3 | 70 | 24.5 | 35.5 | 250 | 152 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 105 |
| FRCS-...-D-MIDI-KC (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MAXI-KC (A) | 294 | 278 | 5.3 | 70 | 24.5 | 35.5 | 252 | 171 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 |
| FRCS-...-D-MAXI-KC (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| FRC-...-D-DI-MAXI-KC (A) | | | | | | | | | | | | | | | | | |
| FRCS-...-D-DI-MAXI-KC (A) | | | | | | | | | | | | | | | | | |

Service unit combinations FRC-KC/FRCS-KC, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module with pressure switch without plug socket, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 185 815 | FRC- $\frac{1}{8}$ -D-MINI-KC | 185 816 | FRC- $\frac{1}{8}$ -D-MINI-KC-A |
| | G $\frac{1}{4}$ | 185 817 | FRC- $\frac{1}{4}$ -D-MINI-KC | 185 818 | FRC- $\frac{1}{4}$ -D-MINI-KC-A |
| Midi | G $\frac{1}{4}$ | 185 819 | FRC- $\frac{1}{4}$ -D-MIDI-KC | 185 820 | FRC- $\frac{1}{4}$ -D-MIDI-KC-A |
| | G $\frac{3}{8}$ | 185 821 | FRC- $\frac{3}{8}$ -D-MIDI-KC | 185 822 | FRC- $\frac{3}{8}$ -D-MIDI-KC-A |
| | G $\frac{1}{2}$ | 185 823 | FRC- $\frac{1}{2}$ -D-MIDI-KC | 185 824 | FRC- $\frac{1}{2}$ -D-MIDI-KC-A |
| Maxi | G $\frac{1}{2}$ | 186 057 | FRC- $\frac{1}{2}$ -D-MAXI-KC | 186 058 | FRC- $\frac{1}{2}$ -D-MAXI-KC-A |
| | G $\frac{3}{4}$ | 185 825 | FRC- $\frac{3}{4}$ -D-MAXI-KC | 185 826 | FRC- $\frac{3}{4}$ -D-MAXI-KC-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 470 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KC | 192 480 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KC-A |
| | G $\frac{3}{4}$ | 192 475 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KC | 192 485 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KC-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module with pressure switch without plug socket, lubricator | | | | | |
| Mini | G $\frac{1}{8}$ | 195 110 | FRCS- $\frac{1}{8}$ -D-MINI-KC | 195 111 | FRCS- $\frac{1}{8}$ -D-MINI-KC-A |
| | G $\frac{1}{4}$ | 195 120 | FRCS- $\frac{1}{4}$ -D-MINI-KC | 195 121 | FRCS- $\frac{1}{4}$ -D-MINI-KC-A |
| Midi | G $\frac{1}{4}$ | 195 130 | FRCS- $\frac{1}{4}$ -D-MIDI-KC | 195 131 | FRCS- $\frac{1}{4}$ -D-MIDI-KC-A |
| | G $\frac{3}{8}$ | 195 140 | FRCS- $\frac{3}{8}$ -D-MIDI-KC | 195 141 | FRCS- $\frac{3}{8}$ -D-MIDI-KC-A |
| | G $\frac{1}{2}$ | 195 150 | FRCS- $\frac{1}{2}$ -D-MIDI-KC | 195 151 | FRCS- $\frac{1}{2}$ -D-MIDI-KC-A |
| Maxi | G $\frac{1}{2}$ | 195 160 | FRCS- $\frac{1}{2}$ -D-MAXI-KC | 195 161 | FRCS- $\frac{1}{2}$ -D-MAXI-KC-A |
| | G $\frac{3}{4}$ | 195 170 | FRCS- $\frac{3}{4}$ -D-MAXI-KC | 195 171 | FRCS- $\frac{3}{4}$ -D-MAXI-KC-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 208 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KC | 195 209 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KC-A |
| | G $\frac{3}{4}$ | 195 218 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KC | 195 219 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KC-A |

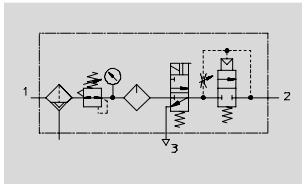
- | - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KE/FRCS-KE, D series

FESTO

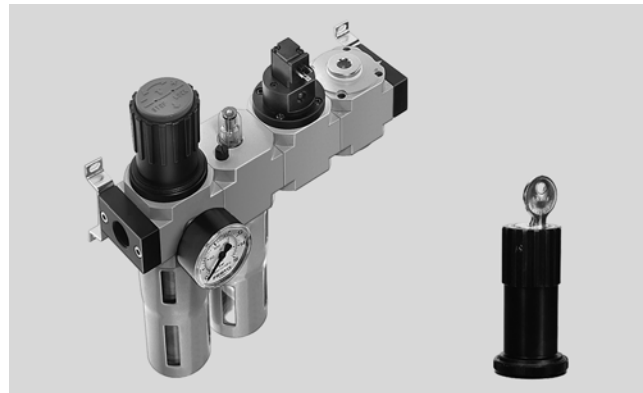
Technical data

Function



- Flow rate
550 ... 6000 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
3.5 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Lubricator LOE
 - metal bowl guard
- On-off valve HEE
 - solenoid actuated
 - 24 V DC
- Soft-start valve HEL
 - pneumatically actuated
- Mounting accessories



- Gradual pressure build-up prevents sudden, unpredictable movements
- For lubricated compressed air
- When supply pressure is closed, quick venting ensures rapid pressure reduction

| General technical data | | | | | | | |
|---|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.15 | 0.18 | 0.25 | 0.35 | 0.4 | 0.3 | 0.3 |
| Pressure regulation range [bar] | 2.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 3.5 ... 16 | | | | | |
| | fully automatic | 3.5 ... 12 | | | | | |

1) The max. condensate volume for the FRC/FRCS-...-DI-MAXI-KE is 43 cm³.
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KE/FRCS-KE, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| FRC/FRCS-...-D-... | 550 | 650 | - | - | - |
| Midi | | | | | |
| FRC/FRCS-...-D-... | - | 1100 | 1420 | 1590 | - |
| Maxi | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 3500 | 3800 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 5000 | 6000 |

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

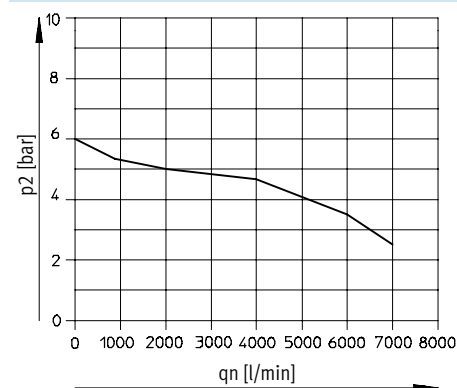
| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | |
| Temperature of medium [°C] | -10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| FRC | 1200 | 2800 | 4200 | 4400 |
| FRCS | 1300 | 3040 | 4300 | 4640 |

-  - Note
 Materials → Technical data of the individual devices

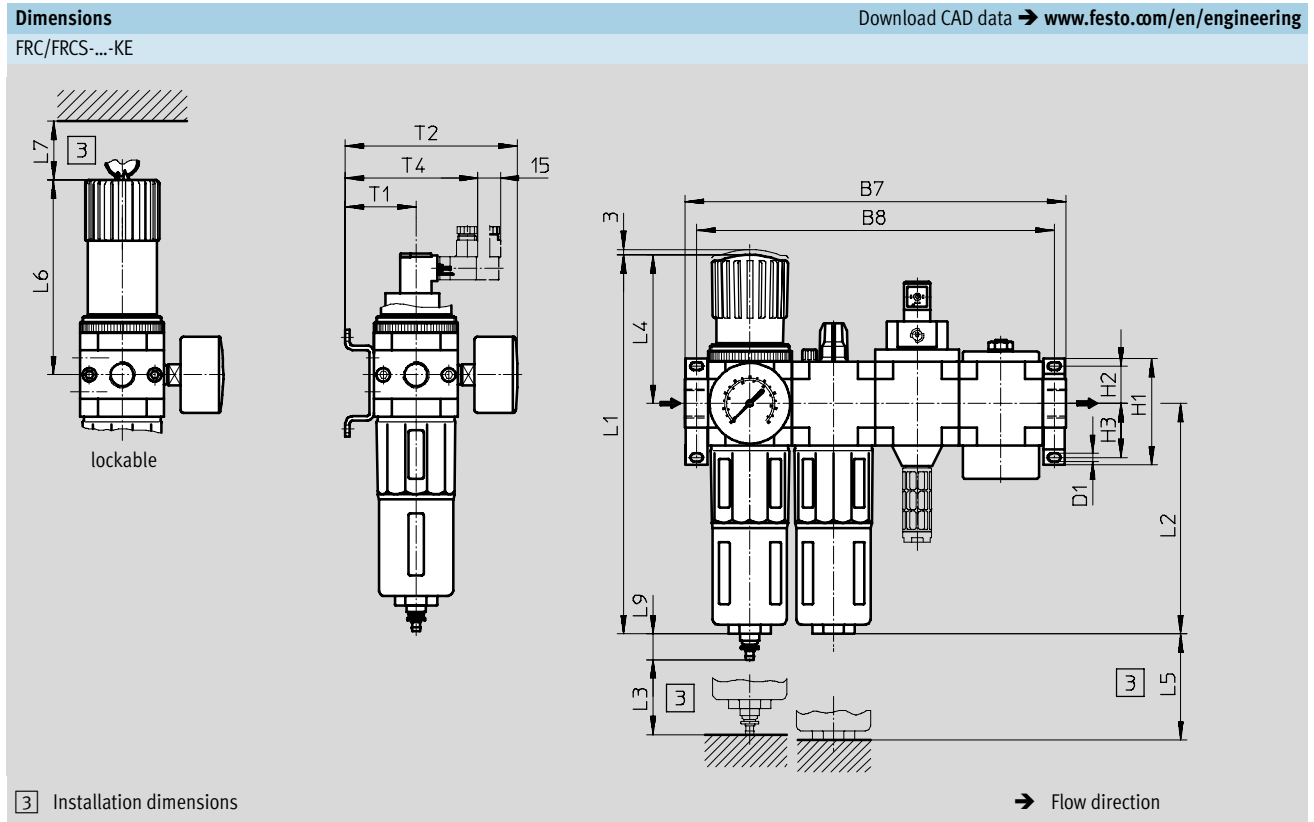
Standard flow rate qn as a function of the output pressure p2 FRC/FRCS-1/2-D-DI-MAXI-KE(-A)



Primary pressure p1 = 10 bar

Service unit combinations FRC-KE/FRCS-KE, D series

Technical data



| Type | B7 | B8 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T4 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|----|
| Mini | | | | | | | | | | | | | | | | | |
| FRC-...-D-MINI-KE (A) | 184 | 172 | 4.3 | 43 | 17.5 | 17.5 | 193 | 124 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 78 |
| FRCS-...-D-MINI-KE (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MIDI-KE (A) | 250 | 235 | 5.3 | 70 | 24.5 | 35.5 | 250 | 152 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 86 |
| FRCS-...-D-MIDI-KE (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| FRC-...-D-MAXI-KE (A) | 294 | 278 | 5.3 | 70 | 24.5 | 35.5 | 252 | 171 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 92 |
| FRCS-...-D-MAXI-KE (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| FRC-...-D-DI-MAXI-KE (A) | | | | | | | | | | | | | | | | | |
| FRCS-...-D-DI-MAXI-KE (A) | | | | | | | | | | | | | | | | | |

Service unit combinations FRC-KE/FRCS-KE, D series

FESTO

Technical data

| Ordering data | | | | | |
|---|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, lubricator, on-off valve with solenoid coil 24 V DC without plug socket, soft-start valve | | | | | |
| Mini | G $\frac{1}{8}$ | 185 827 | FRC- $\frac{1}{8}$ -D-MINI-KE | 185 828 | FRC- $\frac{1}{8}$ -D-MINI-KE-A |
| | G $\frac{1}{4}$ | 185 829 | FRC- $\frac{1}{4}$ -D-MINI-KE | 185 830 | FRC- $\frac{1}{4}$ -D-MINI-KE-A |
| Midi | G $\frac{1}{4}$ | 185 831 | FRC- $\frac{1}{4}$ -D-MIDI-KE | 185 832 | FRC- $\frac{1}{4}$ -D-MIDI-KE-A |
| | G $\frac{3}{8}$ | 185 833 | FRC- $\frac{3}{8}$ -D-MIDI-KE | 185 834 | FRC- $\frac{3}{8}$ -D-MIDI-KE-A |
| | G $\frac{1}{2}$ | 185 835 | FRC- $\frac{1}{2}$ -D-MIDI-KE | 185 836 | FRC- $\frac{1}{2}$ -D-MIDI-KE-A |
| Maxi | G $\frac{1}{2}$ | 186 059 | FRC- $\frac{1}{2}$ -D-MAXI-KE | 186 060 | FRC- $\frac{1}{2}$ -D-MAXI-KE-A |
| | G $\frac{3}{4}$ | 185 837 | FRC- $\frac{3}{4}$ -D-MAXI-KE | 185 838 | FRC- $\frac{3}{4}$ -D-MAXI-KE-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 471 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KE | 192 481 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KE-A |
| | G $\frac{3}{4}$ | 192 476 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KE | 192 486 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KE-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, lubricator, on-off valve with solenoid coil 24 V DC without plug socket, soft-start valve | | | | | |
| Mini | G $\frac{1}{8}$ | 195 112 | FRCS- $\frac{1}{8}$ -D-MINI-KE | 195 113 | FRCS- $\frac{1}{8}$ -D-MINI-KE-A |
| | G $\frac{1}{4}$ | 195 122 | FRCS- $\frac{1}{4}$ -D-MINI-KE | 195 123 | FRCS- $\frac{1}{4}$ -D-MINI-KE-A |
| Midi | G $\frac{1}{4}$ | 195 132 | FRCS- $\frac{1}{4}$ -D-MIDI-KE | 195 133 | FRCS- $\frac{1}{4}$ -D-MIDI-KE-A |
| | G $\frac{3}{8}$ | 195 142 | FRCS- $\frac{3}{8}$ -D-MIDI-KE | 195 143 | FRCS- $\frac{3}{8}$ -D-MIDI-KE-A |
| | G $\frac{1}{2}$ | 195 152 | FRCS- $\frac{1}{2}$ -D-MIDI-KE | 195 153 | FRCS- $\frac{1}{2}$ -D-MIDI-KE-A |
| Maxi | G $\frac{1}{2}$ | 195 162 | FRCS- $\frac{1}{2}$ -D-MAXI-KE | 195 163 | FRCS- $\frac{1}{2}$ -D-MAXI-KE-A |
| | G $\frac{3}{4}$ | 195 172 | FRCS- $\frac{3}{4}$ -D-MAXI-KE | 195 173 | FRCS- $\frac{3}{4}$ -D-MAXI-KE-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 210 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KE | 195 211 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KE-A |
| | G $\frac{3}{4}$ | 195 220 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KE | 195 221 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KE-A |

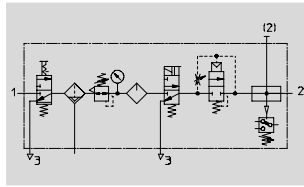
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KF/FRCS-KF, D series

FESTO

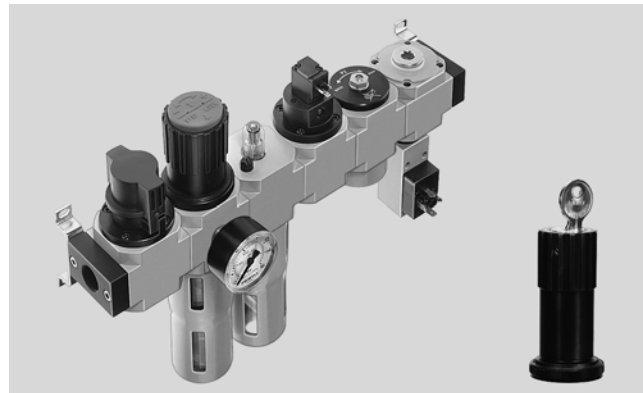
Technical data

Function



- Flow rate
530 ... 6000 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
3.5 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Lubricator LOE
 - metal bowl guard
- On-off valve HEE
 - solenoid actuated
 - 24 V DC
- Soft-start valve HEL
 - pneumatically actuated
- Branching module FRM
 - pressure switch without display
- Mounting accessories



- Gradual pressure build-up prevents sudden, unpredictable movements
- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination
- For lubricated compressed air
- Two branch connections are available
- Supply pressure can be opened and closed

| General technical data | | | | | | | |
|---|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.2 | 0.3 | 0.4 | 0.3 | 0.35 | 0.25 | 0.3 |
| Pressure regulation range [bar] | 2.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 3.5 ... 16 | | | | | |
| | fully automatic | 3.5 ... 12 | | | | | |

1) The max. condensate volume for the FRC/FRCS-...-DI-MAXI-KF is 43 cm³.
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations FRC-KF/FRCS-KF, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| FRC/FRCS-...-D-... | 530 | 620 | - | - | - |
| Midi | | | | | |
| FRC/FRCS-...-D-... | - | 1060 | 1150 | 1220 | - |
| Maxi | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 3400 | 3700 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| FRC/FRCS-...-D-... | - | - | - | 5000 | 6000 |

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

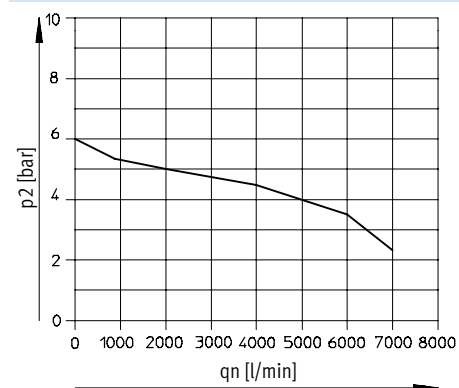
| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | |
| Temperature of medium [°C] | -10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| FRC | 1800 | 4000 | 6300 | 6500 |
| FRCS | 1900 | 4240 | 6400 | 6740 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2 FRC/FRCS-1/2-D-DI-MAXI-KF(-A)

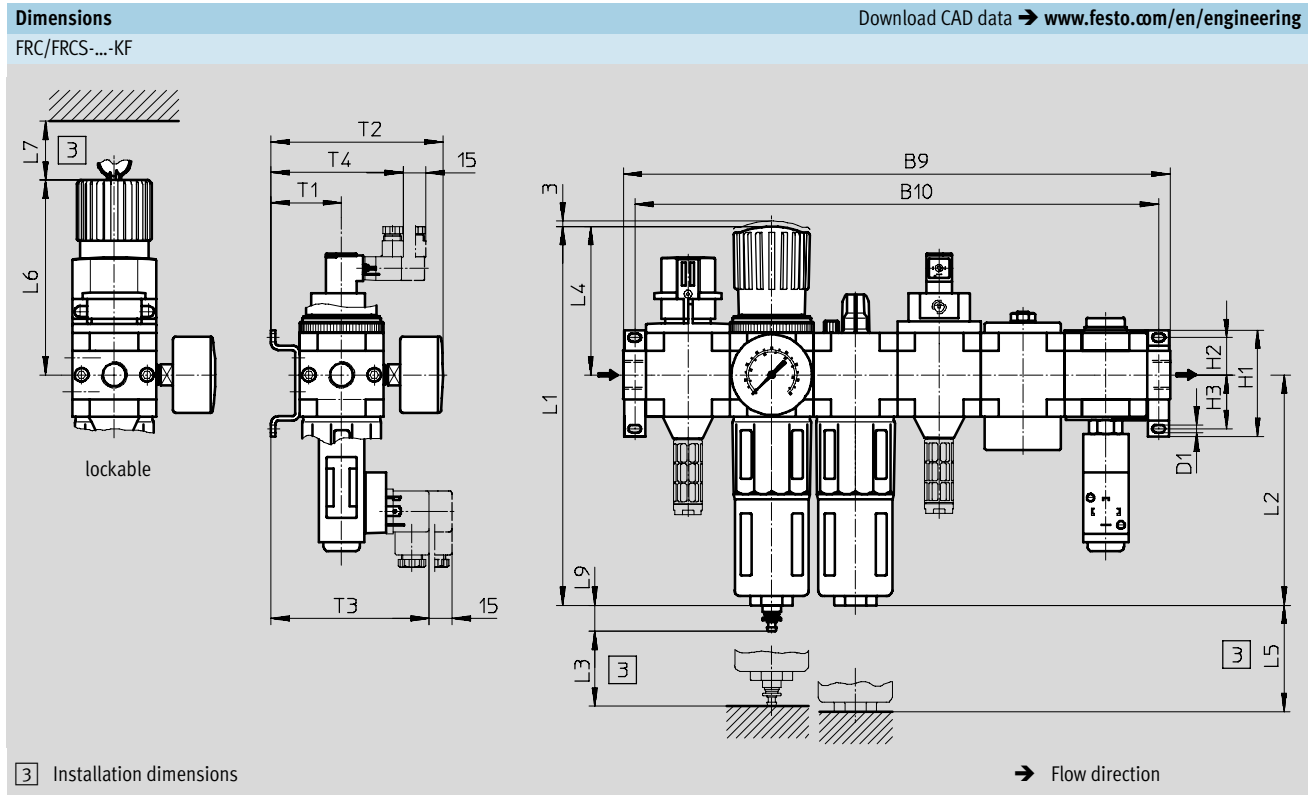


Primary pressure p1 = 10 bar

Service unit combinations FRC-KF/FRCS-KF, D series



Technical data



| Type | B9 | B10 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 | T4 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|----|
| Mini | | | | | | | | | | | | | | | | | | |
| FRC-...-D-MINI-KF (A) | 264 | 252 | 4.3 | 43 | 17.5 | 17.5 | 193 | 124 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 | 78 |
| FRCS-...-D-MINI-KF (A) | | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | |
| FRC-...-D-MIDI-KF (A) | 360 | 344 | 5.3 | 70 | 24.5 | 35.5 | 250 | 152 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 105 | 86 |
| FRCS-...-D-MIDI-KF (A) | | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | | |
| FRC-...-D-MAXI-KF (A) | 426 | 410 | 5.3 | 70 | 24.5 | 35.5 | 252 | 171 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 | 92 |
| FRCS-...-D-MAXI-KF (A) | | | | | | | 275 | | | 105 | | 135 | | | | | | |
| FRC-...-D-DI-MAXI-KF (A) | | | | | | | | | | | | | | | | | | |
| FRCS-...-D-DI-MAXI-KF (A) | | | | | | | | | | | | | | | | | | |

Service unit combinations FRC-KF/FRCS-KF, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, lubricator, on-off valve with solenoid coil 24 V DC without plug socket, soft-start valve, branching module with pressure switch without display | | | | | |
| Mini | G $\frac{1}{8}$ | 185 839 | FRC- $\frac{1}{8}$ -D-MINI-KF | 185 840 | FRC- $\frac{1}{8}$ -D-MINI-KF-A |
| | G $\frac{1}{4}$ | 185 841 | FRC- $\frac{1}{4}$ -D-MINI-KF | 185 842 | FRC- $\frac{1}{4}$ -D-MINI-KF-A |
| Midi | G $\frac{1}{4}$ | 185 843 | FRC- $\frac{1}{4}$ -D-MIDI-KF | 185 844 | FRC- $\frac{1}{4}$ -D-MIDI-KF-A |
| | G $\frac{3}{8}$ | 185 845 | FRC- $\frac{3}{8}$ -D-MIDI-KF | 185 846 | FRC- $\frac{3}{8}$ -D-MIDI-KF-A |
| | G $\frac{1}{2}$ | 185 847 | FRC- $\frac{1}{2}$ -D-MIDI-KF | 185 848 | FRC- $\frac{1}{2}$ -D-MIDI-KF-A |
| Maxi | G $\frac{1}{2}$ | 186 061 | FRC- $\frac{1}{2}$ -D-MAXI-KF | 186 062 | FRC- $\frac{1}{2}$ -D-MAXI-KF-A |
| | G $\frac{3}{4}$ | 185 849 | FRC- $\frac{3}{4}$ -D-MAXI-KF | 185 850 | FRC- $\frac{3}{4}$ -D-MAXI-KF-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 472 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KF | 192 482 | FRC- $\frac{1}{2}$ -D-DI-MAXI-KF-A |
| | G $\frac{3}{4}$ | 192 477 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KF | 192 487 | FRC- $\frac{3}{4}$ -D-DI-MAXI-KF-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, lubricator, on-off valve with solenoid coil 24 V DC without plug socket, soft-start valve, branching module with pressure switch without display | | | | | |
| Mini | G $\frac{1}{8}$ | 195 114 | FRCS- $\frac{1}{8}$ -D-MINI-KF | 195 115 | FRCS- $\frac{1}{8}$ -D-MINI-KF-A |
| | G $\frac{1}{4}$ | 195 124 | FRCS- $\frac{1}{4}$ -D-MINI-KF | 195 125 | FRCS- $\frac{1}{4}$ -D-MINI-KF-A |
| Midi | G $\frac{1}{4}$ | 195 134 | FRCS- $\frac{1}{4}$ -D-MIDI-KF | 195 135 | FRCS- $\frac{1}{4}$ -D-MIDI-KF-A |
| | G $\frac{3}{8}$ | 195 144 | FRCS- $\frac{3}{8}$ -D-MIDI-KF | 195 145 | FRCS- $\frac{3}{8}$ -D-MIDI-KF-A |
| | G $\frac{1}{2}$ | 195 154 | FRCS- $\frac{1}{2}$ -D-MIDI-KF | 195 155 | FRCS- $\frac{1}{2}$ -D-MIDI-KF-A |
| Maxi | G $\frac{1}{2}$ | 195 164 | FRCS- $\frac{1}{2}$ -D-MAXI-KF | 195 165 | FRCS- $\frac{1}{2}$ -D-MAXI-KF-A |
| | G $\frac{3}{4}$ | 195 174 | FRCS- $\frac{3}{4}$ -D-MAXI-KF | 195 175 | FRCS- $\frac{3}{4}$ -D-MAXI-KF-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 212 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KF | 195 213 | FRCS- $\frac{1}{2}$ -D-DI-MAXI-KF-A |
| | G $\frac{3}{4}$ | 195 222 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KF | 195 223 | FRCS- $\frac{3}{4}$ -D-DI-MAXI-KF-A |

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

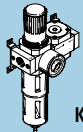
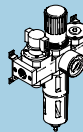
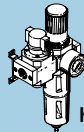
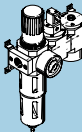
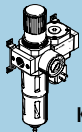
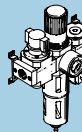
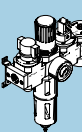
Service unit combinations LFR-K/LFRS-K, D series

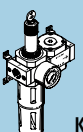
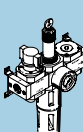
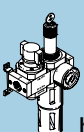
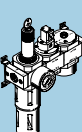
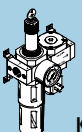
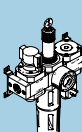
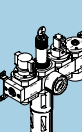


Product range overview

D series service units
Service units

1.1

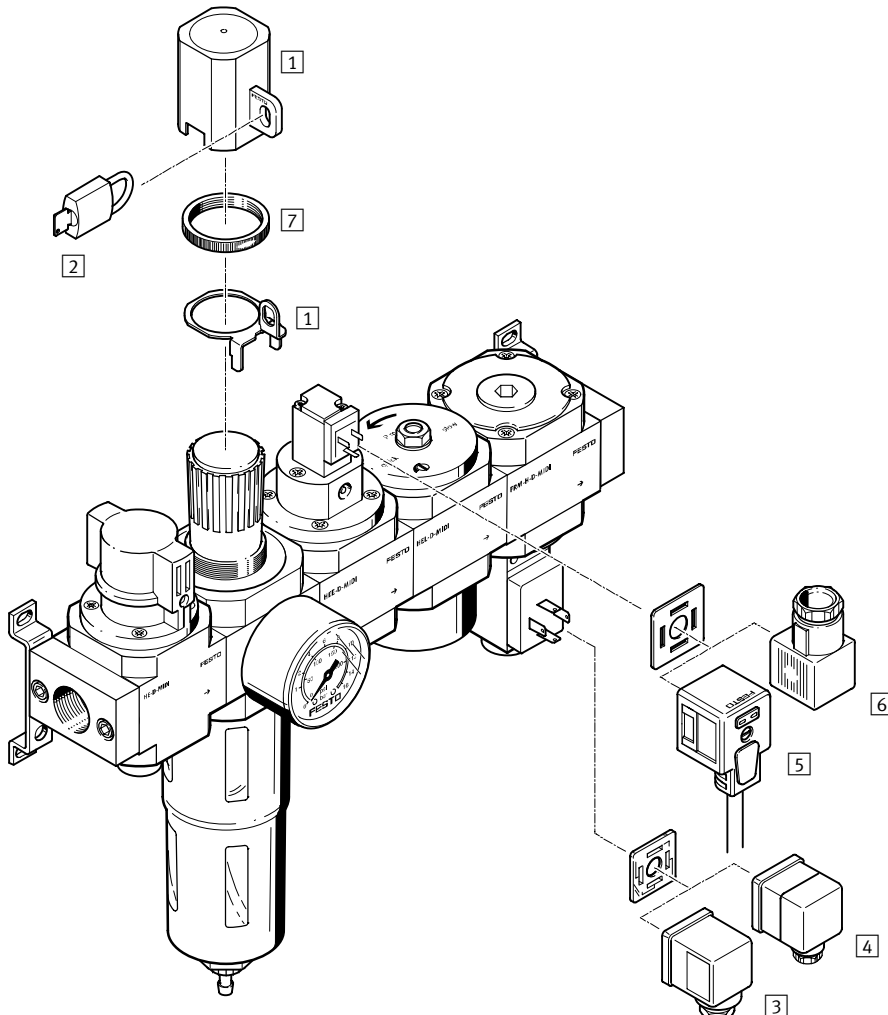
| | | | | | | | |
|---|--|--|--|--|--|--|--|
| LFR Rotary knob with detent |  KA |  KB |  KC |  KD |  KE |  KF |  KG |
| Individual devices | | | | | | | |
| On-off valve, manual | - | ■ | ■ | - | - | ■ | ■ |
| Filter regulator with pressure gauge | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Branching module | ■ | ■ | - | - | - | - | - |
| On-off valve with solenoid coil 24 V DC | - | - | - | ■ | - | - | ■ |
| Soft-start valve | - | - | - | ■ | - | - | ■ |
| Branching module with pressure switch | - | - | - | - | ■ | ■ | ■ |
| Mounting bracket and metal bowl guard | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| → Page | 3 / 1.1-43 | 3 / 1.1-47 | 3 / 1.1-51 | 3 / 1.1-55 | 3 / 1.1-59 | 3 / 1.1-63 | 3 / 1.1-67 |

| | | | | | | | |
|---|--|--|--|--|--|--|--|
| LFRS Rotary knob with integrated lock |  KA |  KB |  KC |  KD |  KE |  KF |  KG |
| Individual devices | | | | | | | |
| On-off valve, manual | - | ■ | ■ | - | - | ■ | ■ |
| Filter regulator with pressure gauge | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Branching module | ■ | ■ | - | - | - | - | - |
| On-off valve with solenoid coil 24 V DC | - | - | - | ■ | - | - | ■ |
| Soft-start valve | - | - | - | ■ | - | - | ■ |
| Branching module with pressure switch | - | - | - | - | ■ | ■ | ■ |
| Mounting bracket and metal bowl guard | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| → Page | 3 / 1.1-43 | 3 / 1.1-47 | 3 / 1.1-51 | 3 / 1.1-55 | 3 / 1.1-59 | 3 / 1.1-63 | 3 / 1.1-67 |

49. Service unit combinations LFR-K/LFRS-K, D series

Peripherals overview

FESTO



-  - Note

The choice of accessories depends on the selected service unit combination. The example shows the service unit combination LFR-KG. This combination can also be obtained with a lockable rotary regulator as service unit combination LFRS-KG.

Range of accessories

➔ Peripherals pages of the individual devices

D series service units
Service units

1.1

| Mounting attachments and accessories | | ➔ Page |
|--------------------------------------|--|------------|
| 1 | Regulator lock LRVS | 3 / 1.8-14 |
| 2 | Padlock LRVS | 3 / 1.8-14 |
| 3 | Plug socket MSSD-C | 3 / 1.8-20 |
| 4 | Angled plug socket PEV-...-WD-LED | 3 / 1.8-20 |
| 5 | Plug socket with cable KMEB-1 | 3 / 1.8-21 |
| 6 | Plug socket MSSD-EB | 3 / 1.8-21 |
| 7 | Knurled nut (included in scope of delivery) HMR | - |

Service unit combinations LFR-K/LFRS-K, D series

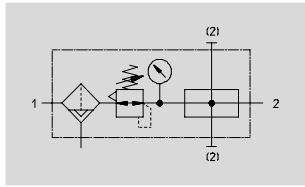
Type codes

| | | | | | | | | | | | | | |
|--|--|---|-----|---|---|---|----|---|------|---|----|---|---|
| | LFR | - | 1/2 | - | D | - | DI | - | MAXI | - | KA | - | A |
| Basic function | | | | | | | | | | | | | |
| LFR | Service unit combination | | | | | | | | | | | | |
| LFRS | Service unit combination, lockable | | | | | | | | | | | | |
| Pneumatic connection | | | | | | | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | | | | | | | |
| 1/4 | Thread G1/4 | | | | | | | | | | | | |
| 3/8 | Thread G3/8 | | | | | | | | | | | | |
| 1/2 | Thread G1/2 | | | | | | | | | | | | |
| 3/4 | Thread G3/4 | | | | | | | | | | | | |
| Series | | | | | | | | | | | | | |
| D | Series | | | | | | | | | | | | |
| Function (Maxi size only) | | | | | | | | | | | | | |
| DI | Directly actuated pressure regulator with integrated return flow function | | | | | | | | | | | | |
| Size | | | | | | | | | | | | | |
| MINI | Grid dimension for individual device 40 mm (without connecting plates) | | | | | | | | | | | | |
| MIDI | Grid dimension for individual device 55 mm (without connecting plates) | | | | | | | | | | | | |
| MAXI | Grid dimension for individual device 66 mm (without connecting plates) | | | | | | | | | | | | |
| Options for service unit combinations | | | | | | | | | | | | | |
| KA | Filter regulator, branching module | | | | | | | | | | | | |
| KB | On-off valve, filter regulator, branching module | | | | | | | | | | | | |
| KC | On-off valve, filter regulator | | | | | | | | | | | | |
| KD | Filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve | | | | | | | | | | | | |
| KE | Filter regulator, branching module with pressure switch | | | | | | | | | | | | |
| KF | On-off valve, filter regulator, branching module with pressure switch | | | | | | | | | | | | |
| KG | On-off valve, filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve, branching module with pressure switch | | | | | | | | | | | | |
| Condensate drain | | | | | | | | | | | | | |
| | Turned manually | | | | | | | | | | | | |
| A | Fully automatic | | | | | | | | | | | | |

Service unit combinations LFR-KA/LFRS-KA, D series

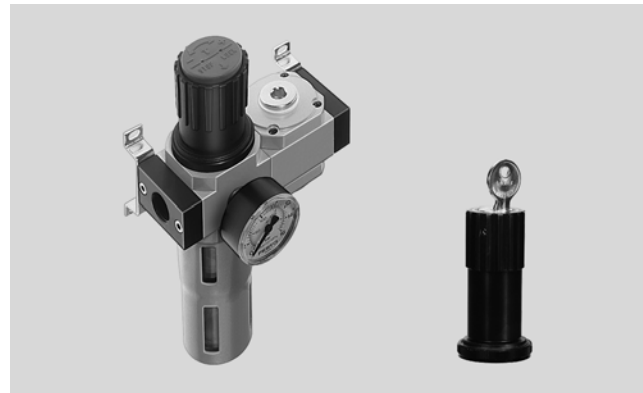
Technical data

Function



- - Flow rate
720 ... 9400 l/min
- - Temperature range
-10 ... +60 °C
- - Input pressure
1 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - Pressure switch without display
- Mounting accessories



■ For unlubricated compressed air supply

■ Three branch connections are available

| General technical data | | | | | | | |
|---------------------------------|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.15 | 0.15 | 0.25 | 0.2 | 0.2 | 0.2 | 0.3 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS-...-DI-MAXI-KA is 43 cm³.

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

Service unit combinations LFR-KA/LFRS-KA, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 720 | 1140 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1850 | 2620 | 3050 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 9200 | 9400 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 5200 | 5800 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

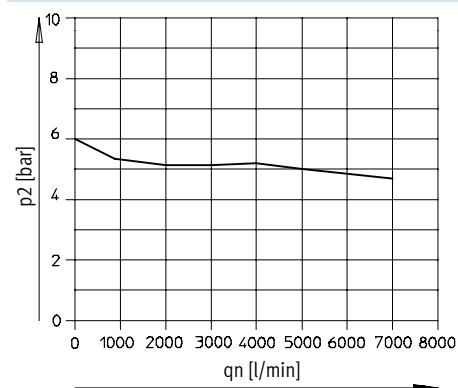
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 800 | 1800 | 2400 | 2600 |
| LFRS | 900 | 2040 | 2500 | 2840 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KA(-A)



Primary pressure p1 = 10 bar

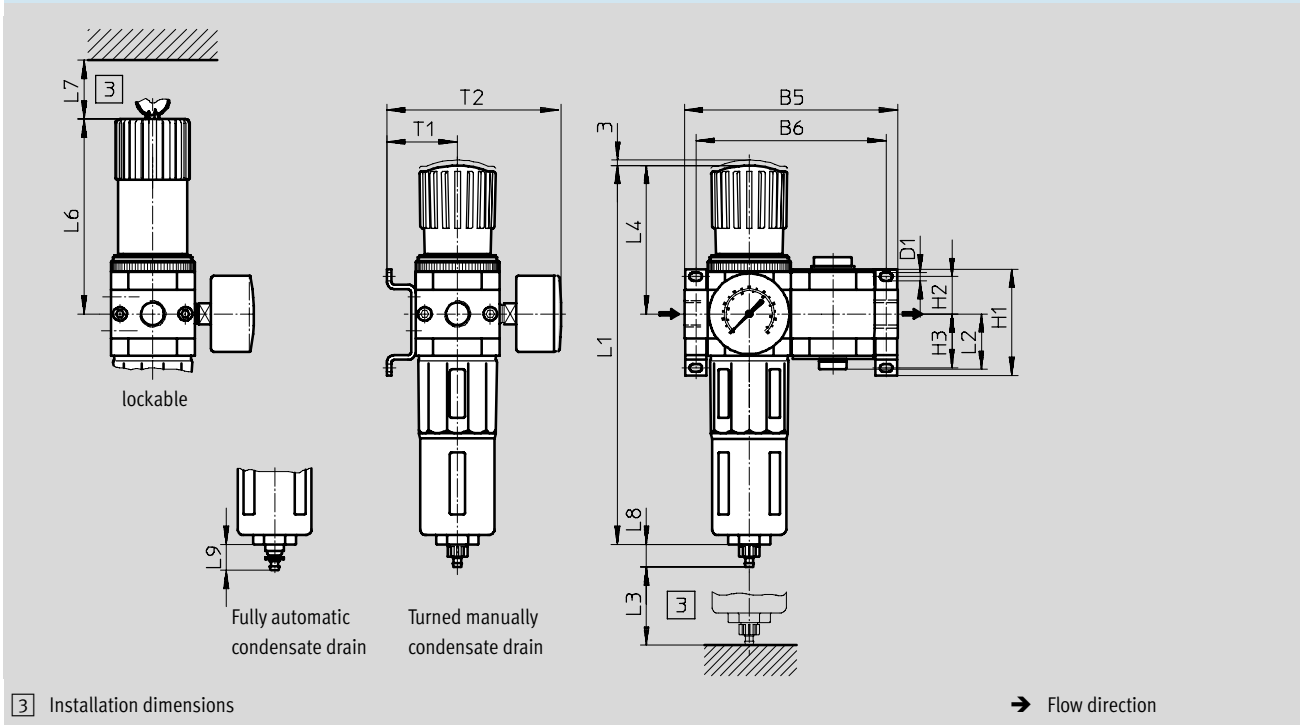
Service unit combinations LFR-KA/LFRS-KA, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KA



| Type | B5 | B6 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | T1 | T2 | |
|---------------------------|-----|-----|-----|----|------|------|-----|------|----|-----|-----|-----|----|----|----|----|-----|--|
| Mini | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KA (A) | 104 | 92 | 4.3 | 43 | 17.5 | 17.5 | 193 | 28 | 60 | 68 | 100 | 98 | 60 | 15 | 19 | 39 | 95 | |
| LFRS-...-D-MINI-KA (A) | | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KA (A) | 140 | 125 | 5.3 | 70 | 24.5 | 35.5 | 250 | 36.5 | 80 | 99 | 120 | 130 | 60 | 15 | 19 | 47 | 114 | |
| LFRS-...-D-MIDI-KA (A) | | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KA (A) | 162 | 146 | 5.3 | 70 | 24.5 | 35.5 | 252 | 42 | 90 | 82 | 150 | 111 | 60 | 15 | 19 | 53 | 126 | |
| LFRS-...-D-MAXI-KA (A) | | | | | | | 275 | | | 105 | | 135 | | | | | | |
| LFR-...-D-DI-MAXI-KA (A) | | | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KA (A) | | | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KA/LFRS-KA, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module | | | | | |
| Mini | G $\frac{1}{8}$ | 185 707 | LFR- $\frac{1}{8}$ -D-MINI-KA | 185 708 | LFR- $\frac{1}{8}$ -D-MINI-KA-A |
| | G $\frac{1}{4}$ | 185 709 | LFR- $\frac{1}{4}$ -D-MINI-KA | 185 710 | LFR- $\frac{1}{4}$ -D-MINI-KA-A |
| Midi | G $\frac{1}{4}$ | 185 711 | LFR- $\frac{1}{4}$ -D-MIDI-KA | 185 712 | LFR- $\frac{1}{4}$ -D-MIDI-KA-A |
| | G $\frac{3}{8}$ | 185 713 | LFR- $\frac{3}{8}$ -D-MIDI-KA | 185 714 | LFR- $\frac{3}{8}$ -D-MIDI-KA-A |
| | G $\frac{1}{2}$ | 185 715 | LFR- $\frac{1}{2}$ -D-MIDI-KA | 185 716 | LFR- $\frac{1}{2}$ -D-MIDI-KA-A |
| Maxi | G $\frac{1}{2}$ | 186 039 | LFR- $\frac{1}{2}$ -D-MAXI-KA | 186 040 | LFR- $\frac{1}{2}$ -D-MAXI-KA-A |
| | G $\frac{3}{4}$ | 185 717 | LFR- $\frac{3}{4}$ -D-MAXI-KA | 185 718 | LFR- $\frac{3}{4}$ -D-MAXI-KA-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 440 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KA | 192 454 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KA-A |
| | G $\frac{3}{4}$ | 192 447 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KA | 192 461 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KA-A |

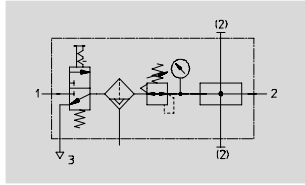
| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module | | | | | |
| Mini | G $\frac{1}{8}$ | 195 008 | LFRS- $\frac{1}{8}$ -D-MINI-KA | 195 009 | LFRS- $\frac{1}{8}$ -D-MINI-KA-A |
| | G $\frac{1}{4}$ | 195 022 | LFRS- $\frac{1}{4}$ -D-MINI-KA | 195 023 | LFRS- $\frac{1}{4}$ -D-MINI-KA-A |
| Midi | G $\frac{1}{4}$ | 195 036 | LFRS- $\frac{1}{4}$ -D-MIDI-KA | 195 037 | LFRS- $\frac{1}{4}$ -D-MIDI-KA-A |
| | G $\frac{3}{8}$ | 195 050 | LFRS- $\frac{3}{8}$ -D-MIDI-KA | 195 051 | LFRS- $\frac{3}{8}$ -D-MIDI-KA-A |
| | G $\frac{1}{2}$ | 195 064 | LFRS- $\frac{1}{2}$ -D-MIDI-KA | 195 065 | LFRS- $\frac{1}{2}$ -D-MIDI-KA-A |
| Maxi | G $\frac{1}{2}$ | 195 078 | LFRS- $\frac{1}{2}$ -D-MAXI-KA | 195 079 | LFRS- $\frac{1}{2}$ -D-MAXI-KA-A |
| | G $\frac{3}{4}$ | 195 092 | LFRS- $\frac{3}{4}$ -D-MAXI-KA | 195 093 | LFRS- $\frac{3}{4}$ -D-MAXI-KA-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 176 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KA | 195 177 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KA-A |
| | G $\frac{3}{4}$ | 195 190 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KA | 195 191 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KA-A |

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

Service unit combinations LFR-KB/LFRS-KB, D series

Technical data

Function



- Flow rate
700 ... 8400 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - Pressure switch without display
- Mounting accessories



- For unlubricated compressed air supply
- Supply pressure can be opened and closed
- Three branch connections are available
- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination

| General technical data | | | | | | | |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G ¹ / ₈ | G ¹ / ₄ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ¹ / ₂ | G ³ / ₄ |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.2 | 0.2 | 0.25 | 0.3 | 0.25 | 0.2 | 0.2 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS...-DI-MAXI-KB is 43 cm³.

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

Service unit combinations LFR-KB/LFRS-KB, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 700 | 1050 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1720 | 2420 | 2920 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 8000 | 8400 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 5400 | 7000 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

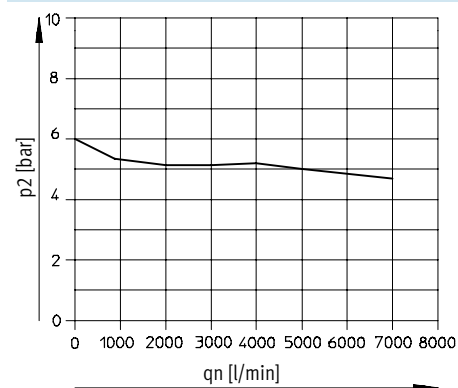
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 1000 | 2200 | 3300 | 3500 |
| LFRS | 1100 | 2440 | 3400 | 3740 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KB(-A)



Primary pressure p1 = 10 bar

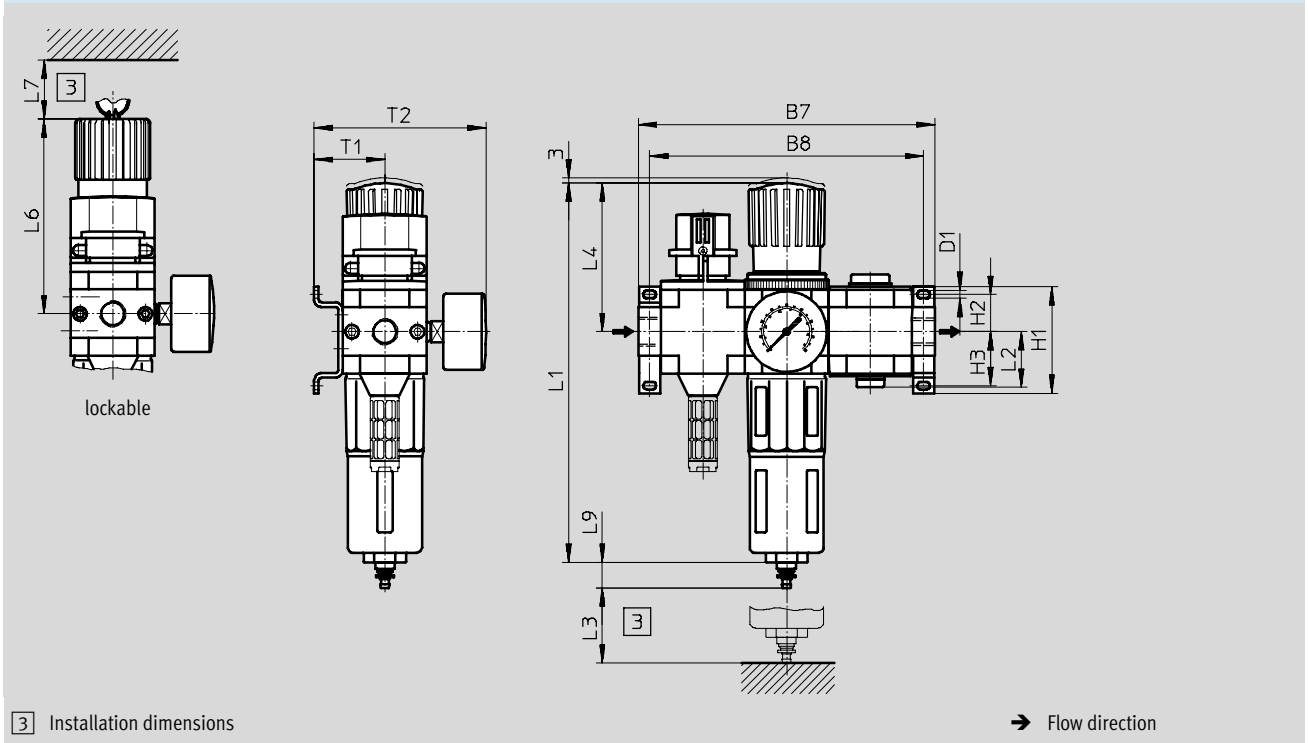
Service unit combinations LFR-KB/LFRS-KB, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KB



| Type | B7 | B8 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 |
|---------------------------|-----|-----|-----|----|------|------|-----|------|----|-----|-----|-----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KB (A) | 144 | 132 | 4.3 | 43 | 17.5 | 17.5 | 193 | 28 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 |
| LFRS-...-D-MINI-KB (A) | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KB (A) | 195 | 180 | 5.3 | 70 | 24.5 | 35.5 | 250 | 36.5 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 |
| LFRS-...-D-MIDI-KB (A) | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KB (A) | 228 | 212 | 5.3 | 70 | 24.5 | 35.5 | 252 | 42 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 |
| LFRS-...-D-MAXI-KB (A) | | | | | | | 275 | | | 105 | | 135 | | | | |
| LFR-...-D-DI-MAXI-KB (A) | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KB (A) | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KB/LFRS-KB, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module | | | | | |
| Mini | G $\frac{1}{8}$ | 185 719 | LFR- $\frac{1}{8}$ -D-MINI-KB | 185 720 | LFR- $\frac{1}{8}$ -D-MINI-KB-A |
| | G $\frac{1}{4}$ | 185 721 | LFR- $\frac{1}{4}$ -D-MINI-KB | 185 722 | LFR- $\frac{1}{4}$ -D-MINI-KB-A |
| Midi | G $\frac{1}{4}$ | 185 723 | LFR- $\frac{1}{4}$ -D-MIDI-KB | 185 724 | LFR- $\frac{1}{4}$ -D-MIDI-KB-A |
| | G $\frac{3}{8}$ | 185 725 | LFR- $\frac{3}{8}$ -D-MIDI-KB | 185 726 | LFR- $\frac{3}{8}$ -D-MIDI-KB-A |
| | G $\frac{1}{2}$ | 185 727 | LFR- $\frac{1}{2}$ -D-MIDI-KB | 185 728 | LFR- $\frac{1}{2}$ -D-MIDI-KB-A |
| Maxi | G $\frac{1}{2}$ | 186 041 | LFR- $\frac{1}{2}$ -D-MAXI-KB | 186 042 | LFR- $\frac{1}{2}$ -D-MAXI-KB-A |
| | G $\frac{3}{4}$ | 185 729 | LFR- $\frac{3}{4}$ -D-MAXI-KB | 185 730 | LFR- $\frac{3}{4}$ -D-MAXI-KB-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 441 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KB | 192 455 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KB-A |
| | G $\frac{3}{4}$ | 192 448 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KB | 192 462 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KB-A |

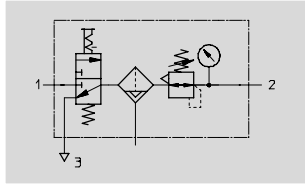
| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module | | | | | |
| Mini | G $\frac{1}{8}$ | 195 010 | LFRS- $\frac{1}{8}$ -D-MINI-KB | 195 011 | LFRS- $\frac{1}{8}$ -D-MINI-KB-A |
| | G $\frac{1}{4}$ | 195 024 | LFRS- $\frac{1}{4}$ -D-MINI-KB | 195 025 | LFRS- $\frac{1}{4}$ -D-MINI-KB-A |
| Midi | G $\frac{1}{4}$ | 195 038 | LFRS- $\frac{1}{4}$ -D-MIDI-KB | 195 039 | LFRS- $\frac{1}{4}$ -D-MIDI-KB-A |
| | G $\frac{3}{8}$ | 195 052 | LFRS- $\frac{3}{8}$ -D-MIDI-KB | 195 053 | LFRS- $\frac{3}{8}$ -D-MIDI-KB-A |
| | G $\frac{1}{2}$ | 195 066 | LFRS- $\frac{1}{2}$ -D-MIDI-KB | 195 067 | LFRS- $\frac{1}{2}$ -D-MIDI-KB-A |
| Maxi | G $\frac{1}{2}$ | 195 080 | LFRS- $\frac{1}{2}$ -D-MAXI-KB | 195 081 | LFRS- $\frac{1}{2}$ -D-MAXI-KB-A |
| | G $\frac{3}{4}$ | 195 094 | LFRS- $\frac{3}{4}$ -D-MAXI-KB | 195 095 | LFRS- $\frac{3}{4}$ -D-MAXI-KB-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 178 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KB | 195 179 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KB-A |
| | G $\frac{3}{4}$ | 195 192 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KB | 195 193 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KB-A |

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

Service unit combinations LFR-KC/LFRS-KC, D series

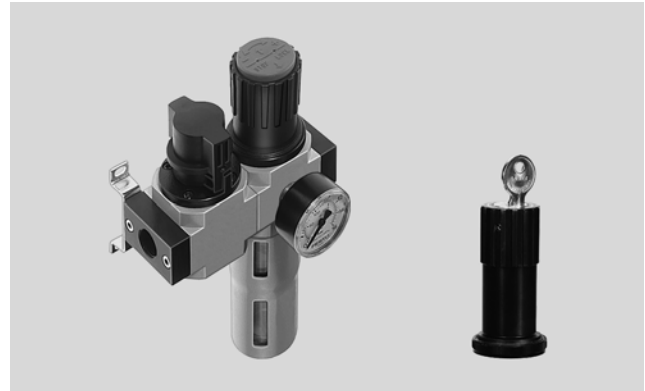
Technical data

Function



- Flow rate
750 ... 8400 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Mounting accessories



- For unlubricated compressed air
- Supply pressure can be opened and closed
- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination

| General technical data | | | | | | | |
|---------------------------------|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS-...-DI-MAXI-KC is 43 cm³.

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

Service unit combinations LFR-KC/LFRS-KC, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 750 | 1150 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1900 | 2700 | 3150 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 8100 | 8400 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 4800 | 5400 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

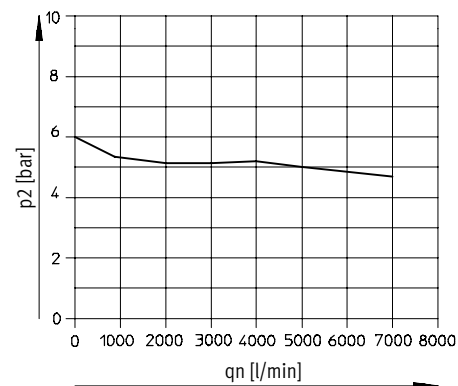
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 700 | 1600 | 2300 | 2600 |
| LFRS | 1000 | 1840 | 2400 | 2840 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KC(-A)



Primary pressure p1 = 10 bar

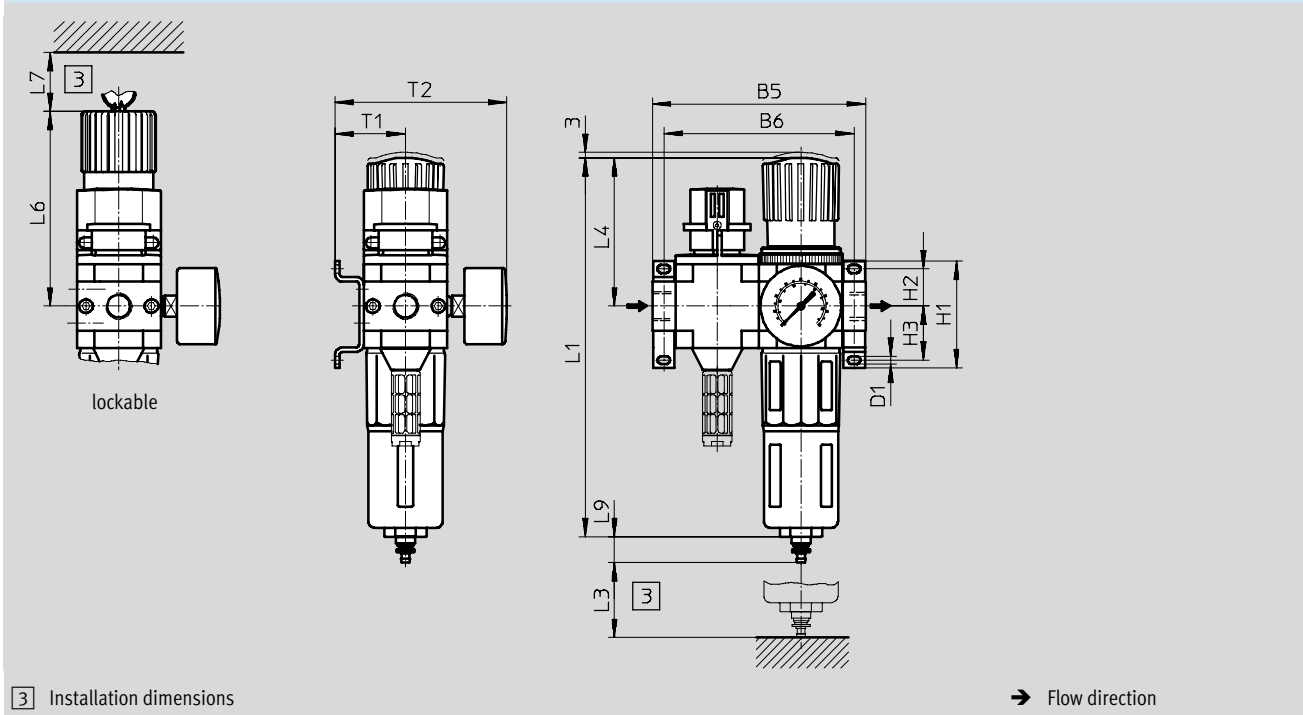
Service unit combinations LFR-KC/LFRS-KC, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KC



| Type | B5 | B6 | D1 | H1 | H2 | H3 | L1 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 |
|---------------------------|-----|-----|-----|----|------|------|-----|----|-----|-----|-----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KC (A) | 104 | 92 | 4.3 | 43 | 17.5 | 17.5 | 193 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 |
| LFRS-...-D-MINI-KC (A) | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KC (A) | 140 | 125 | 5.3 | 70 | 24.5 | 35.5 | 250 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 |
| LFRS-...-D-MIDI-KC (A) | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KC (A) | 162 | 146 | 5.3 | 70 | 24.5 | 35.5 | 252 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 |
| LFRS-...-D-MAXI-KC (A) | | | | | | | 275 | | 105 | | 135 | | | | |
| LFR-...-D-DI-MAXI-KC (A) | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KC (A) | | | | | | | | | | | | | | | |

Service unit combinations LFR-KC/LFRS-KC, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator | | | | | |
| Mini | G $\frac{1}{8}$ | 185 731 | LFR- $\frac{1}{8}$ -D-MINI-KC | 185 732 | LFR- $\frac{1}{8}$ -D-MINI-KC-A |
| | G $\frac{1}{4}$ | 185 733 | LFR- $\frac{1}{4}$ -D-MINI-KC | 185 734 | LFR- $\frac{1}{4}$ -D-MINI-KC-A |
| Midi | G $\frac{1}{4}$ | 185 735 | LFR- $\frac{1}{4}$ -D-MIDI-KC | 185 736 | LFR- $\frac{1}{4}$ -D-MIDI-KC-A |
| | G $\frac{3}{8}$ | 185 737 | LFR- $\frac{3}{8}$ -D-MIDI-KC | 185 738 | LFR- $\frac{3}{8}$ -D-MIDI-KC-A |
| | G $\frac{1}{2}$ | 185 739 | LFR- $\frac{1}{2}$ -D-MIDI-KC | 185 740 | LFR- $\frac{1}{2}$ -D-MIDI-KC-A |
| Maxi | G $\frac{1}{2}$ | 186 043 | LFR- $\frac{1}{2}$ -D-MAXI-KC | 186 044 | LFR- $\frac{1}{2}$ -D-MAXI-KC-A |
| | G $\frac{3}{4}$ | 185 741 | LFR- $\frac{3}{4}$ -D-MAXI-KC | 185 742 | LFR- $\frac{3}{4}$ -D-MAXI-KC-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 442 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KC | 192 456 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KC-A |
| | G $\frac{3}{4}$ | 192 449 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KC | 192 463 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KC-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator | | | | | |
| Mini | G $\frac{1}{8}$ | 195 012 | LFRS- $\frac{1}{8}$ -D-MINI-KC | 195 013 | LFRS- $\frac{1}{8}$ -D-MINI-KC-A |
| | G $\frac{1}{4}$ | 195 026 | LFRS- $\frac{1}{4}$ -D-MINI-KC | 195 027 | LFRS- $\frac{1}{4}$ -D-MINI-KC-A |
| Midi | G $\frac{1}{4}$ | 195 040 | LFRS- $\frac{1}{4}$ -D-MIDI-KC | 195 041 | LFRS- $\frac{1}{4}$ -D-MIDI-KC-A |
| | G $\frac{3}{8}$ | 195 054 | LFRS- $\frac{3}{8}$ -D-MIDI-KC | 195 055 | LFRS- $\frac{3}{8}$ -D-MIDI-KC-A |
| | G $\frac{1}{2}$ | 195 068 | LFRS- $\frac{1}{2}$ -D-MIDI-KC | 195 069 | LFRS- $\frac{1}{2}$ -D-MIDI-KC-A |
| Maxi | G $\frac{1}{2}$ | 195 082 | LFRS- $\frac{1}{2}$ -D-MAXI-KC | 195 083 | LFRS- $\frac{1}{2}$ -D-MAXI-KC-A |
| | G $\frac{3}{4}$ | 195 096 | LFRS- $\frac{3}{4}$ -D-MAXI-KC | 195 097 | LFRS- $\frac{3}{4}$ -D-MAXI-KC-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 180 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KC | 195 181 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KC-A |
| | G $\frac{3}{4}$ | 195 194 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KC | 195 195 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KC-A |

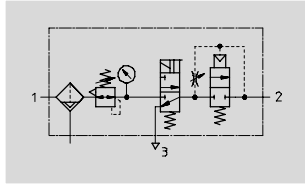
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

 Core Range

Service unit combinations LFR-KD/LFRS-KD, D series

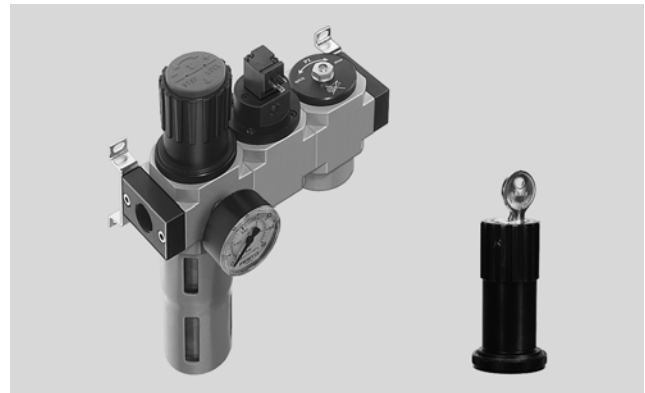
Technical data

Function



- Flow rate
595 ... 5000 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
3.5 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- On-off valve HEE
 - solenoid actuated
 - 24 V DC
- Soft-start valve HEL
 - pneumatically actuated
- Mounting accessories



- For unlubricated compressed air
- When supply pressure is closed, quick venting ensures rapid pressure reduction
- Gradual pressure build-up prevents sudden, unpredictable movements

| General technical data | | | | | | | |
|---|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.15 | 0.15 | 0.25 | 0.25 | 0.25 | 0.3 | 0.2 |
| Pressure regulation range [bar] | 2.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 3.5 ... 16 | | | | | |
| | fully automatic | 3.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS-...-DI-MAXI-KD is 43 cm³.
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations LFR-KD/LFRS-KD, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 595 | 730 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1440 | 1890 | 2000 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 4300 | 5000 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 3000 | 2800 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

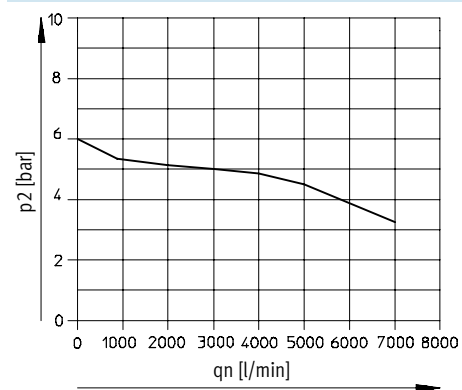
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 900 | 2100 | 3100 | 3300 |
| LFRS | 1000 | 2340 | 3200 | 3540 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KD(-A)



Primary pressure p1 = 10 bar

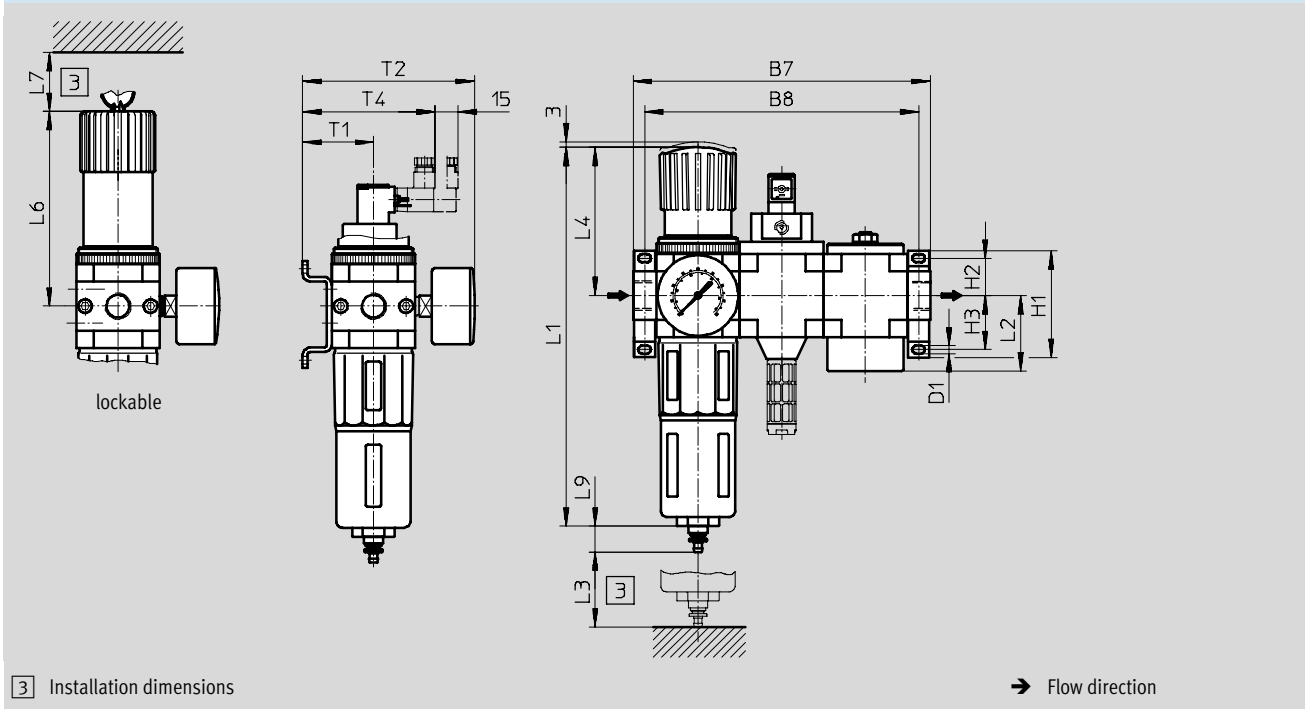
Service unit combinations LFR-KD/LFRS-KD, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KD



| Type | B7 | B8 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T4 |
|---------------------------|-----|-----|-----|----|------|------|-----|------|----|-----|-----|-----|----|----|----|-----|----|
| Mini | | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KD (A) | 144 | 132 | 4.3 | 43 | 17.5 | 17.5 | 193 | 36 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 78 |
| LFRS-...-D-MINI-KD (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KD (A) | 195 | 180 | 5.3 | 70 | 24.5 | 35.5 | 250 | 49.5 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 86 |
| LFRS-...-D-MIDI-KD (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KD (A) | 228 | 212 | 5.3 | 70 | 24.5 | 35.5 | 252 | 56.4 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 92 |
| LFRS-...-D-MAXI-KD (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| LFR-...-D-DI-MAXI-KD (A) | | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KD (A) | | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KD/LFRS-KD, D series


FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve | | | | | |
| Mini | G $\frac{1}{8}$ | 185 743 | LFR- $\frac{1}{8}$ -D-MINI-KD | 185 744 | LFR- $\frac{1}{8}$ -D-MINI-KD-A |
| | G $\frac{1}{4}$ | 185 745 | LFR- $\frac{1}{4}$ -D-MINI-KD | 185 746 | LFR- $\frac{1}{4}$ -D-MINI-KD-A |
| Midi | G $\frac{1}{4}$ | 185 747 | LFR- $\frac{1}{4}$ -D-MIDI-KD | 185 748 | LFR- $\frac{1}{4}$ -D-MIDI-KD-A |
| | G $\frac{3}{8}$ | 185 749 | LFR- $\frac{3}{8}$ -D-MIDI-KD | 185 750 | LFR- $\frac{3}{8}$ -D-MIDI-KD-A |
| | G $\frac{1}{2}$ | 185 751 | LFR- $\frac{1}{2}$ -D-MIDI-KD | 185 752 | LFR- $\frac{1}{2}$ -D-MIDI-KD-A |
| Maxi | G $\frac{1}{2}$ | 186 045 | LFR- $\frac{1}{2}$ -D-MAXI-KD | 186 046 | LFR- $\frac{1}{2}$ -D-MAXI-KD-A |
| | G $\frac{3}{4}$ | 185 753 | LFR- $\frac{3}{4}$ -D-MAXI-KD | 185 754 | LFR- $\frac{3}{4}$ -D-MAXI-KD-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 443 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KD | 192 457 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KD-A |
| | G $\frac{3}{4}$ | 192 450 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KD | 192 464 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KD-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve | | | | | |
| Mini | G $\frac{1}{8}$ | 195 014 | LFRS- $\frac{1}{8}$ -D-MINI-KD | 195 015 | LFRS- $\frac{1}{8}$ -D-MINI-KD-A |
| | G $\frac{1}{4}$ | 195 028 | LFRS- $\frac{1}{4}$ -D-MINI-KD | 195 029 | LFRS- $\frac{1}{4}$ -D-MINI-KD-A |
| Midi | G $\frac{1}{4}$ | 195 042 | LFRS- $\frac{1}{4}$ -D-MIDI-KD | 195 043 | LFRS- $\frac{1}{4}$ -D-MIDI-KD-A |
| | G $\frac{3}{8}$ | 195 056 | LFRS- $\frac{3}{8}$ -D-MIDI-KD | 195 057 | LFRS- $\frac{3}{8}$ -D-MIDI-KD-A |
| | G $\frac{1}{2}$ | 195 070 | LFRS- $\frac{1}{2}$ -D-MIDI-KD | 195 071 | LFRS- $\frac{1}{2}$ -D-MIDI-KD-A |
| Maxi | G $\frac{1}{2}$ | 195 084 | LFRS- $\frac{1}{2}$ -D-MAXI-KD | 195 085 | LFRS- $\frac{1}{2}$ -D-MAXI-KD-A |
| | G $\frac{3}{4}$ | 195 098 | LFRS- $\frac{3}{4}$ -D-MAXI-KD | 195 099 | LFRS- $\frac{3}{4}$ -D-MAXI-KD-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 182 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KD | 195 183 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KD-A |
| | G $\frac{3}{4}$ | 195 196 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KD | 195 197 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KD-A |

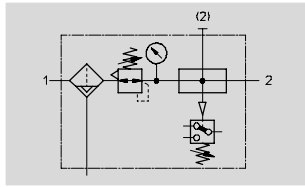
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

 Core Range

Service unit combinations LFR-KE/LFRS-KE, D series

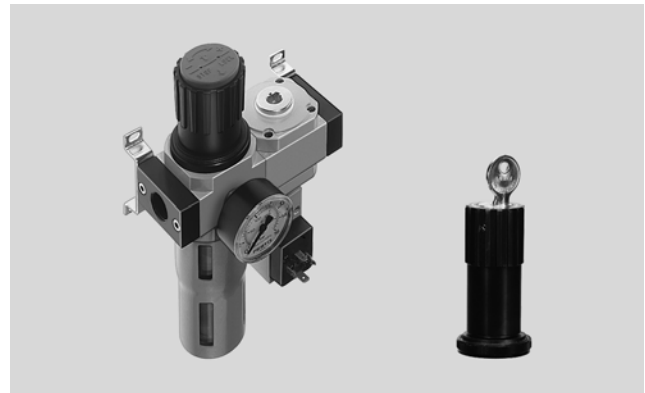
Technical data

Function



- Flow rate
720 ... 9400 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - pressure switch without display
- Mounting accessories



- For unlubricated compressed air
- Two branch connections are available
- Electrical pressure monitoring with adjustable switching pressure

| General technical data | | | | | | | |
|---------------------------------|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.15 | 0.15 | 0.25 | 0.2 | 0.2 | 0.2 | 0.3 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS-...-DI-MAXI-KE is 43 cm³.

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

Service unit combinations LFR-KE/LFRS-KE, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 720 | 1140 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1850 | 2620 | 3050 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 9200 | 9400 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 5000 | 6000 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

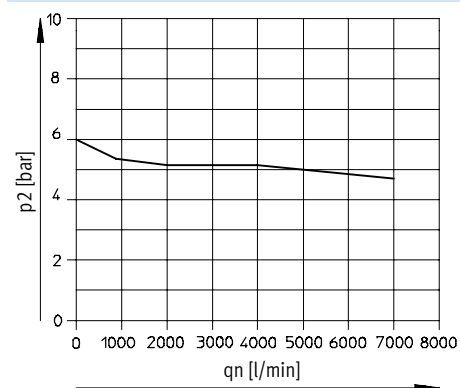
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 1000 | 2000 | 2400 | 2600 |
| LFRS | 1100 | 2240 | 2500 | 2840 |

 Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KE(-A)



Primary pressure p1 = 10 bar

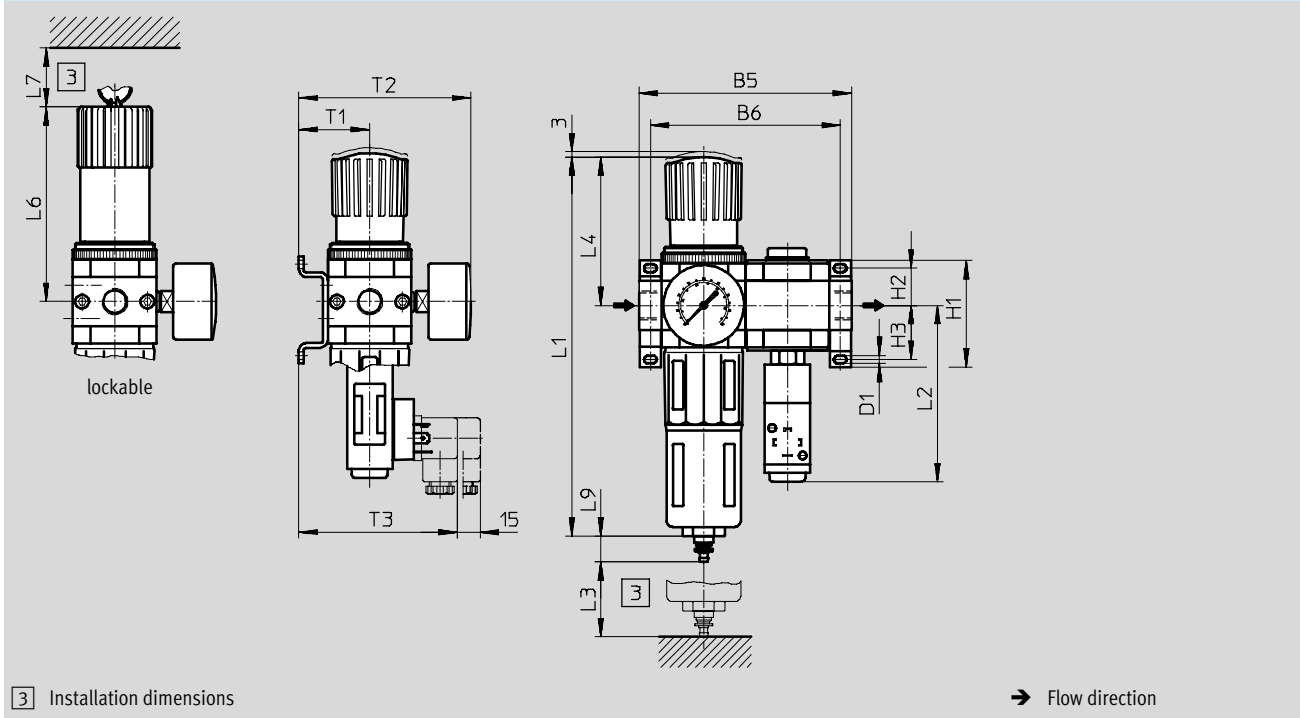
Service unit combinations LFR-KE/LFRS-KE, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KE



| Type | B5 | B6 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KE (A) | 104 | 92 | 4.3 | 43 | 17.5 | 17.5 | 193 | 108 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 |
| LFRS-...-D-MINI-KE (A) | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KE (A) | 140 | 125 | 5.3 | 70 | 24.5 | 35.5 | 250 | 117 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 109 |
| LFRS-...-D-MIDI-KE (A) | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KE (A) | 162 | 146 | 5.3 | 70 | 24.5 | 35.5 | 252 | 122 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 |
| LFRS-...-D-MAXI-KE (A) | | | | | | | 275 | | | 105 | | 135 | | | | | |
| LFR-...-D-DI-MAXI-KE (A) | | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KE (A) | | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KE/LFRS-KE, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 185 755 | LFR- $\frac{1}{8}$ -D-MINI-KE | 185 756 | LFR- $\frac{1}{8}$ -D-MINI-KE-A |
| | G $\frac{1}{4}$ | 185 757 | LFR- $\frac{1}{4}$ -D-MINI-KE | 185 758 | LFR- $\frac{1}{4}$ -D-MINI-KE-A |
| Midi | G $\frac{1}{4}$ | 185 759 | LFR- $\frac{1}{4}$ -D-MIDI-KE | 185 760 | LFR- $\frac{1}{4}$ -D-MIDI-KE-A |
| | G $\frac{3}{8}$ | 185 761 | LFR- $\frac{3}{8}$ -D-MIDI-KE | 185 762 | LFR- $\frac{3}{8}$ -D-MIDI-KE-A |
| | G $\frac{1}{2}$ | 185 763 | LFR- $\frac{1}{2}$ -D-MIDI-KE | 185 764 | LFR- $\frac{1}{2}$ -D-MIDI-KE-A |
| Maxi | G $\frac{1}{2}$ | 186 047 | LFR- $\frac{1}{2}$ -D-MAXI-KE | 186 048 | LFR- $\frac{1}{2}$ -D-MAXI-KE-A |
| | G $\frac{3}{4}$ | 185 765 | LFR- $\frac{3}{4}$ -D-MAXI-KE | 185 766 | LFR- $\frac{3}{4}$ -D-MAXI-KE-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 444 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KE | 192 458 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KE-A |
| | G $\frac{3}{4}$ | 192 451 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KE | 192 465 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KE-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Filter regulator, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 195 016 | LFRS- $\frac{1}{8}$ -D-MINI-KE | 195 017 | LFRS- $\frac{1}{8}$ -D-MINI-KE-A |
| | G $\frac{1}{4}$ | 195 030 | LFRS- $\frac{1}{4}$ -D-MINI-KE | 195 031 | LFRS- $\frac{1}{4}$ -D-MINI-KE-A |
| Midi | G $\frac{1}{4}$ | 195 044 | LFRS- $\frac{1}{4}$ -D-MIDI-KE | 195 045 | LFRS- $\frac{1}{4}$ -D-MIDI-KE-A |
| | G $\frac{3}{8}$ | 195 058 | LFRS- $\frac{3}{8}$ -D-MIDI-KE | 195 059 | LFRS- $\frac{3}{8}$ -D-MIDI-KE-A |
| | G $\frac{1}{2}$ | 195 072 | LFRS- $\frac{1}{2}$ -D-MIDI-KE | 195 073 | LFRS- $\frac{1}{2}$ -D-MIDI-KE-A |
| Maxi | G $\frac{1}{2}$ | 195 086 | LFRS- $\frac{1}{2}$ -D-MAXI-KE | 195 087 | LFRS- $\frac{1}{2}$ -D-MAXI-KE-A |
| | G $\frac{3}{4}$ | 195 100 | LFRS- $\frac{3}{4}$ -D-MAXI-KE | 195 101 | LFRS- $\frac{3}{4}$ -D-MAXI-KE-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 184 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KE | 195 185 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KE-A |
| | G $\frac{3}{4}$ | 195 198 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KE | 195 199 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KE-A |

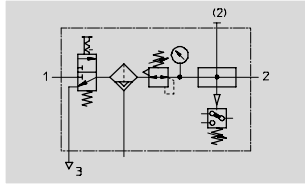
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations LFR-KF/LFRS-KF, D series



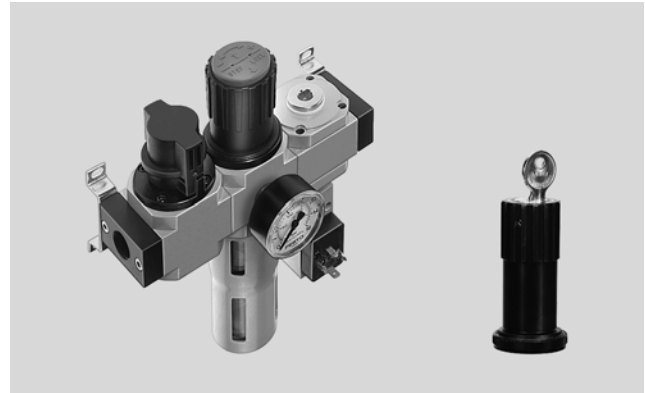
Technical data

Function



- Flow rate
700 ... 8400 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
1 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- Branching module FRM
 - pressure switch without display
- Mounting accessories



- For unlubricated compressed air
- Supply pressure can be opened and closed
- Two branch connections are available
- Electrical pressure monitoring with adjustable switching pressure
- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination

| General technical data | | | | | | | |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G ¹ / ₈ | G ¹ / ₄ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ¹ / ₂ | G ³ / ₄ |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.2 | 0.2 | 0.25 | 0.3 | 0.25 | 0.2 | 0.2 |
| Pressure regulation range [bar] | 0.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS...-DI-MAXI-KF is 43 cm³.

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

Service unit combinations LFR-KF/LFRS-KF, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 700 | 1050 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1720 | 2420 | 2920 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 8000 | 8400 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 5000 | 6000 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

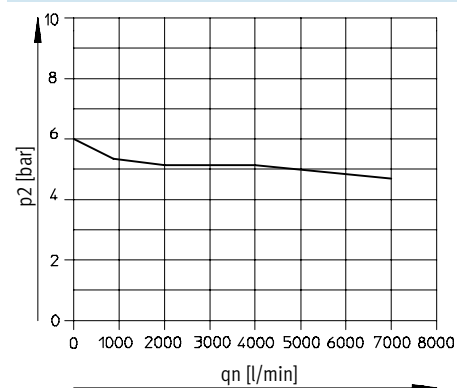
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 1200 | 2400 | 3300 | 3500 |
| LFRS | 1300 | 2640 | 3400 | 3740 |

 Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KF(-A)



Primary pressure p1 = 10 bar

Service unit combinations LFR-KF/LFRS-KF, D series

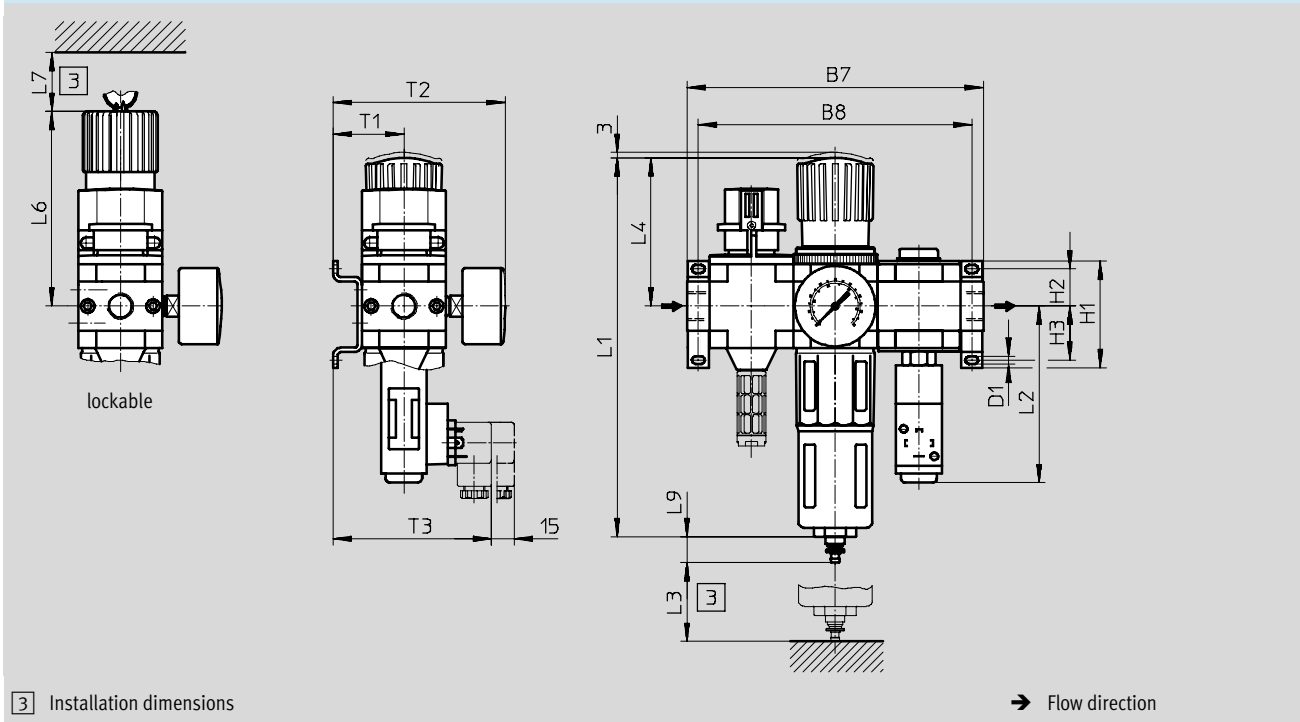


Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KF



| Type | B7 | B8 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 | |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|--|
| Mini | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KF (A) | 144 | 132 | 4.3 | 43 | 17.5 | 17.5 | 193 | 108 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 | |
| LFRS-...-D-MINI-KF (A) | | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KF (A) | 195 | 180 | 5.3 | 70 | 24.5 | 35.5 | 250 | 117 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 105 | |
| LFRS-...-D-MIDI-KF (A) | | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KF (A) | 228 | 212 | 5.3 | 70 | 24.5 | 35.5 | 252 | 122 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 | |
| LFRS-...-D-MAXI-KF (A) | | | | | | | 275 | | | 105 | | 135 | | | | | | |
| LFR-...-D-DI-MAXI-KF (A) | | | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KF (A) | | | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KF/LFRS-KF, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 185 767 | LFR- $\frac{1}{8}$ -D-MINI-KF | 185 768 | LFR- $\frac{1}{8}$ -D-MINI-KF-A |
| | G $\frac{1}{4}$ | 185 769 | LFR- $\frac{1}{4}$ -D-MINI-KF | 185 770 | LFR- $\frac{1}{4}$ -D-MINI-KF-A |
| Midi | G $\frac{1}{4}$ | 185 771 | LFR- $\frac{1}{4}$ -D-MIDI-KF | 185 772 | LFR- $\frac{1}{4}$ -D-MIDI-KF-A |
| | G $\frac{3}{8}$ | 185 773 | LFR- $\frac{3}{8}$ -D-MIDI-KF | 185 774 | LFR- $\frac{3}{8}$ -D-MIDI-KF-A |
| | G $\frac{1}{2}$ | 185 775 | LFR- $\frac{1}{2}$ -D-MIDI-KF | 185 776 | LFR- $\frac{1}{2}$ -D-MIDI-KF-A |
| Maxi | G $\frac{1}{2}$ | 186 049 | LFR- $\frac{1}{2}$ -D-MAXI-KF | 186 050 | LFR- $\frac{1}{2}$ -D-MAXI-KF-A |
| | G $\frac{3}{4}$ | 185 777 | LFR- $\frac{3}{4}$ -D-MAXI-KF | 185 778 | LFR- $\frac{3}{4}$ -D-MAXI-KF-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 445 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KF | 192 459 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KF-A |
| | G $\frac{3}{4}$ | 192 452 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KF | 192 466 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KF-A |

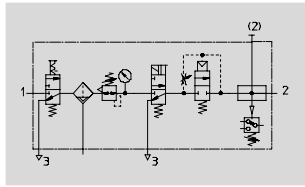
| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 0.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 195 018 | LFRS- $\frac{1}{8}$ -D-MINI-KF | 195 019 | LFRS- $\frac{1}{8}$ -D-MINI-KF-A |
| | G $\frac{1}{4}$ | 195 032 | LFRS- $\frac{1}{4}$ -D-MINI-KF | 195 033 | LFRS- $\frac{1}{4}$ -D-MINI-KF-A |
| Midi | G $\frac{1}{4}$ | 195 046 | LFRS- $\frac{1}{4}$ -D-MIDI-KF | 195 047 | LFRS- $\frac{1}{4}$ -D-MIDI-KF-A |
| | G $\frac{3}{8}$ | 195 060 | LFRS- $\frac{3}{8}$ -D-MIDI-KF | 195 061 | LFRS- $\frac{3}{8}$ -D-MIDI-KF-A |
| | G $\frac{1}{2}$ | 195 074 | LFRS- $\frac{1}{2}$ -D-MIDI-KF | 195 075 | LFRS- $\frac{1}{2}$ -D-MIDI-KF-A |
| Maxi | G $\frac{1}{2}$ | 195 088 | LFRS- $\frac{1}{2}$ -D-MAXI-KF | 195 089 | LFRS- $\frac{1}{2}$ -D-MAXI-KF-A |
| | G $\frac{3}{4}$ | 195 102 | LFRS- $\frac{3}{4}$ -D-MAXI-KF | 195 103 | LFRS- $\frac{3}{4}$ -D-MAXI-KF-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 186 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KF | 195 187 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KF-A |
| | G $\frac{3}{4}$ | 195 200 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KF | 195 201 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KF-A |

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

Service unit combinations LFR-KG/LFRS-KG, D series

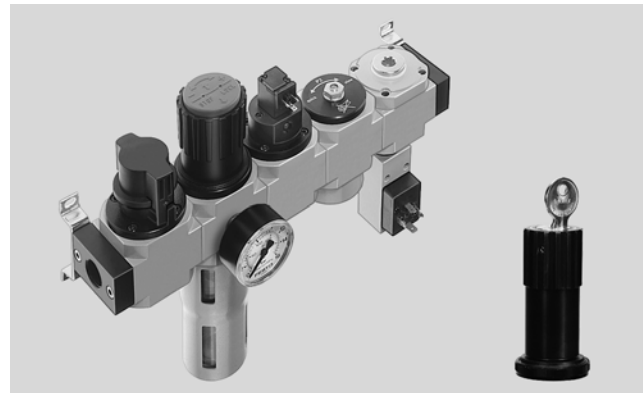
Technical data

Function



- Flow rate
575 ... 4900 l/min
- Temperature range
-10 ... +60 °C
- Input pressure
3.5 ... 16 bar

- On-off valve HE
 - manually actuated
- Filter regulator LFR/LFRS
 - grade of filtration 40 µm
 - metal bowl guard
 - condensate drain, turned manually or fully automatic
 - rotary knob with detent or lockable rotary knob
 - pressure gauge
- On-off valve HEE
 - solenoid actuated
 - 24 V DC
- Soft-start valve HEL
 - pneumatically actuated
- Branching module FRM
 - pressure switch without display
- Mounting accessories



- For unlubricated compressed air
- To ensure safe venting of the system, an additional quick exhaust valve is necessary at the output of the service unit combination
- Two branch connections are available
- Gradual pressure build-up prevents sudden, unpredictable movements
- Electrical pressure monitoring with adjustable switching pressure

| General technical data | | | | | | | |
|---|----------------------|------------|------|------|------|------------------|------|
| Size | Mini | | Midi | | | Maxi | |
| Pneumatic connection | G1/8 | G1/4 | G1/4 | G3/8 | G1/2 | G1/2 | G3/4 |
| Operating medium | Compressed air | | | | | | |
| Type of mounting | Via accessories | | | | | | |
| | In-line installation | | | | | | |
| Assembly position | Vertical ±5° | | | | | | |
| Grade of filtration [µm] | 40 | | | | | | |
| Max. hysteresis [bar] | 0.15 | 0.15 | 0.25 | 0.2 | 0.2 | 0.25 | 0.25 |
| Pressure regulation range [bar] | 2.5 ... 12 | | | | | | |
| Pressure indication | Via pressure gauge | | | | | | |
| Max. condensate volume [cm ³] | 22 | | 43 | | | 80 ¹⁾ | |
| Input pressure [bar] | | | | | | | |
| Condensate drain | turned manually | 3.5 ... 16 | | | | | |
| | fully automatic | 3.5 ... 12 | | | | | |

1) The max. condensate volume for the LFR/LFRS...-DI-MAXI-KG is 43 cm³.
 -||- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Service unit combinations LFR-KG/LFRS-KG, D series

Technical data


| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|---|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 |
| Mini | | | | | |
| LFR/LFRS-...-D-... | 575 | 715 | - | - | - |
| Midi | | | | | |
| LFR/LFRS-...-D-... | - | 1370 | 1680 | 1740 | - |
| Maxi | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 4200 | 4900 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 2500 | 3000 |

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

| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

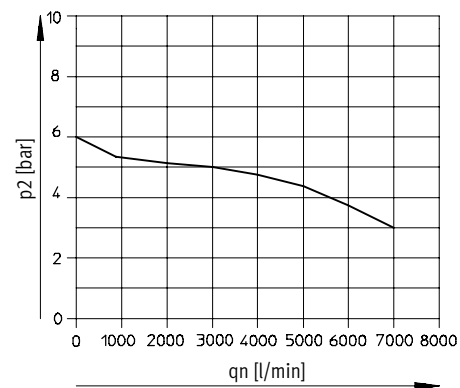
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Weight [g] | | | | |
|------------|------|------|------|------|
| Size | Mini | Midi | Maxi | |
| | | | D | D-DI |
| LFR | 1500 | 3400 | 5200 | 5400 |
| LFRS | 1600 | 3640 | 5300 | 5640 |

-  - Note
 Materials → Technical data of the individual devices

Standard flow rate qn as a function of the output pressure p2

LFR/LFRS-1/2-D-DI-MAXI-KG(-A)



Primary pressure p1 = 10 bar

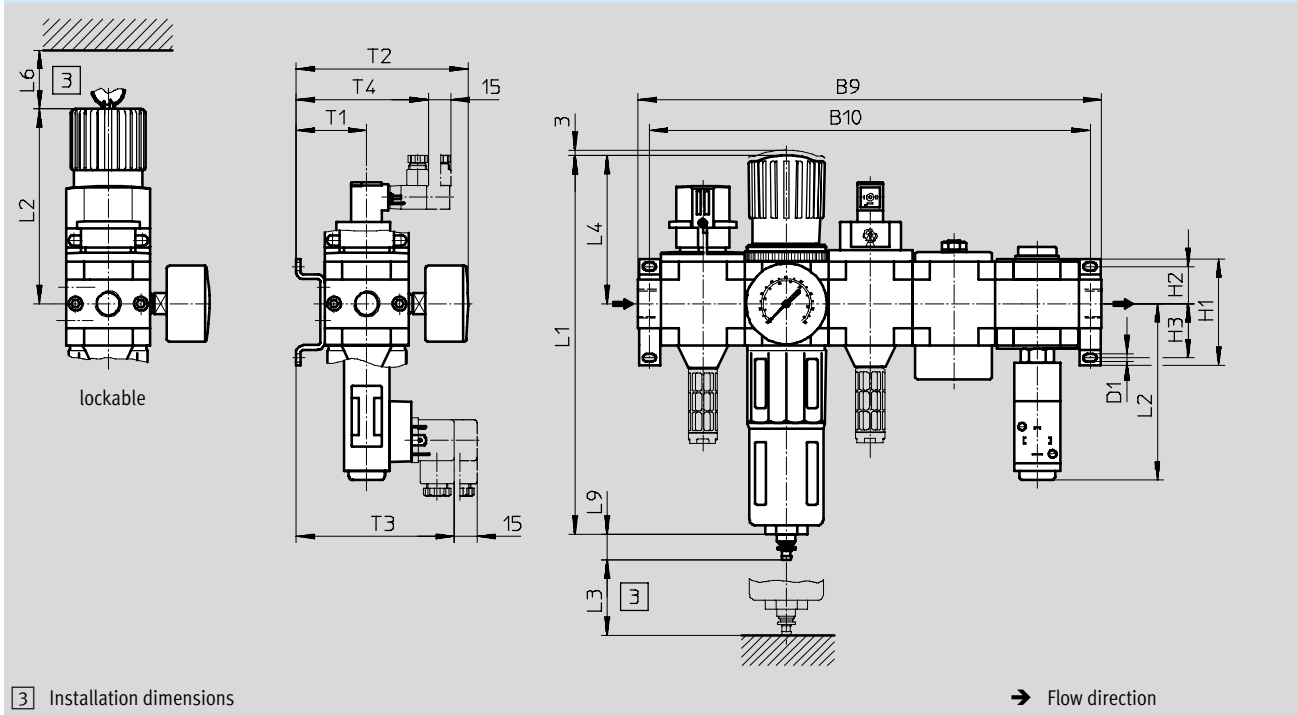
Service unit combinations LFR-KG/LFRS-KG, D series

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

LFR/LFRS-...-KG



| Type | B9 | B10 | D1 | H1 | H2 | H3 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L9 | T1 | T2 | T3 | T4 |
|---------------------------|-----|-----|-----|----|------|------|-----|-----|----|-----|-----|-----|----|----|----|-----|-----|----|
| Mini | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MINI-KG (A) | 244 | 212 | 4.3 | 43 | 17.5 | 17.5 | 193 | 108 | 60 | 68 | 100 | 98 | 60 | 19 | 39 | 95 | 97 | 78 |
| LFRS-...-D-MINI-KG (A) | | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MIDI-KG (A) | 305 | 290 | 5.3 | 70 | 24.5 | 35.5 | 250 | 117 | 80 | 99 | 120 | 130 | 60 | 19 | 47 | 114 | 105 | 86 |
| LFRS-...-D-MIDI-KG (A) | | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | | |
| LFR-...-D-MAXI-KG (A) | 360 | 344 | 5.3 | 70 | 24.5 | 35.5 | 252 | 122 | 90 | 82 | 150 | 111 | 60 | 19 | 53 | 126 | 111 | 92 |
| LFRS-...-D-MAXI-KG (A) | | | | | | | 275 | | | 105 | | 135 | | | | | | |
| LFR-...-D-DI-MAXI-KG (A) | | | | | | | | | | | | | | | | | | |
| LFRS-...-D-DI-MAXI-KG (A) | | | | | | | | | | | | | | | | | | |

Service unit combinations LFR-KG/LFRS-KG, D series

FESTO

Technical data

| Ordering data | | | | | |
|--|-----------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 185 779 | LFR- $\frac{1}{8}$ -D-MINI-KG | 185 780 | LFR- $\frac{1}{8}$ -D-MINI-KG-A |
| | G $\frac{1}{4}$ | 185 781 | LFR- $\frac{1}{4}$ -D-MINI-KG | 185 782 | LFR- $\frac{1}{4}$ -D-MINI-KG-A |
| Midi | G $\frac{1}{4}$ | 185 783 | LFR- $\frac{1}{4}$ -D-MIDI-KG | 185 784 | LFR- $\frac{1}{4}$ -D-MIDI-KG-A |
| | G $\frac{3}{8}$ | 185 785 | LFR- $\frac{3}{8}$ -D-MIDI-KG | 185 786 | LFR- $\frac{3}{8}$ -D-MIDI-KG-A |
| | G $\frac{1}{2}$ | 185 787 | LFR- $\frac{1}{2}$ -D-MIDI-KG | 185 788 | LFR- $\frac{1}{2}$ -D-MIDI-KG-A |
| Maxi | G $\frac{1}{2}$ | 186 051 | LFR- $\frac{1}{2}$ -D-MAXI-KG | 186 052 | LFR- $\frac{1}{2}$ -D-MAXI-KG-A |
| | G $\frac{3}{4}$ | 185 789 | LFR- $\frac{3}{4}$ -D-MAXI-KG | 185 790 | LFR- $\frac{3}{4}$ -D-MAXI-KG-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 192 446 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KG | 192 460 | LFR- $\frac{1}{2}$ -D-DI-MAXI-KG-A |
| | G $\frac{3}{4}$ | 192 453 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KG | 192 467 | LFR- $\frac{3}{4}$ -D-DI-MAXI-KG-A |

| Ordering data | | | | | |
|--|-----------------|----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Pressure regulation range 2.5 ... 12 bar, grade of filtration 40 µm, mounting bracket and metal bowl guard, lockable | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| On-off valve, filter regulator, on-off valve with solenoid coil 24 V DC, soft-start valve, branching module with pressure switch | | | | | |
| Mini | G $\frac{1}{8}$ | 195 020 | LFRS- $\frac{1}{8}$ -D-MINI-KG | 195 021 | LFRS- $\frac{1}{8}$ -D-MINI-KG-A |
| | G $\frac{1}{4}$ | 195 034 | LFRS- $\frac{1}{4}$ -D-MINI-KG | 195 035 | LFRS- $\frac{1}{4}$ -D-MINI-KG-A |
| Midi | G $\frac{1}{4}$ | 195 048 | LFRS- $\frac{1}{4}$ -D-MIDI-KG | 195 049 | LFRS- $\frac{1}{4}$ -D-MIDI-KG-A |
| | G $\frac{3}{8}$ | 195 062 | LFRS- $\frac{3}{8}$ -D-MIDI-KG | 195 063 | LFRS- $\frac{3}{8}$ -D-MIDI-KG-A |
| | G $\frac{1}{2}$ | 195 076 | LFRS- $\frac{1}{2}$ -D-MIDI-KG | 195 077 | LFRS- $\frac{1}{2}$ -D-MIDI-KG-A |
| Maxi | G $\frac{1}{2}$ | 195 090 | LFRS- $\frac{1}{2}$ -D-MAXI-KG | 195 091 | LFRS- $\frac{1}{2}$ -D-MAXI-KG-A |
| | G $\frac{3}{4}$ | 195 104 | LFRS- $\frac{3}{4}$ -D-MAXI-KG | 195 105 | LFRS- $\frac{3}{4}$ -D-MAXI-KG-A |
| Directly actuated pressure regulator with integrated return flow function | | | | | |
| Maxi | G $\frac{1}{2}$ | 195 188 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KG | 195 189 | LFRS- $\frac{1}{2}$ -D-DI-MAXI-KG-A |
| | G $\frac{3}{4}$ | 195 202 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KG | 195 203 | LFRS- $\frac{3}{4}$ -D-DI-MAXI-KG-A |

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

Filter regulators LFR/LFRS, D series

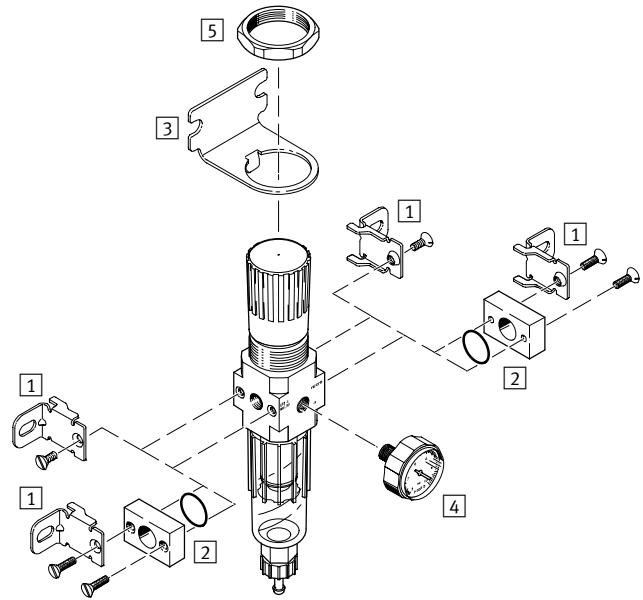
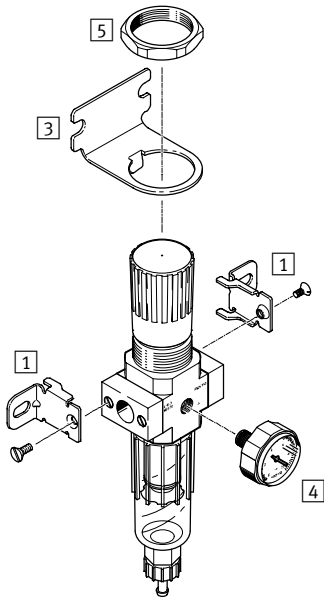
Peripherals overview



Micro

Individual unit with connection plates,
connection size G $\frac{1}{8}$, QS4 or QS6

Individual unit without connection plates, for service unit combination
connection size M5 or M7 in housing



D series service units
Filter regulators

1.2

Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|---|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | ■ | ■ | ■ | 3 / 1.8-9 |
| 2 Connection plate kit PBL | - | ■ | - | ■ | 3 / 1.8-13 |
| 3 Mounting bracket HRS | ■ | ■ | ■ | ■ | 3 / 1.8-10 |
| 4 Pressure gauge MA-27 | ■ | ■ | ■ | ■ | 3 / 1.8-15 |
| 5 Hexagon nut (included in scope of delivery) HMR | ■ | ■ | ■ | ■ | - |

Filter regulators LFR/LFRS, D series

Peripherals overview

FESTO

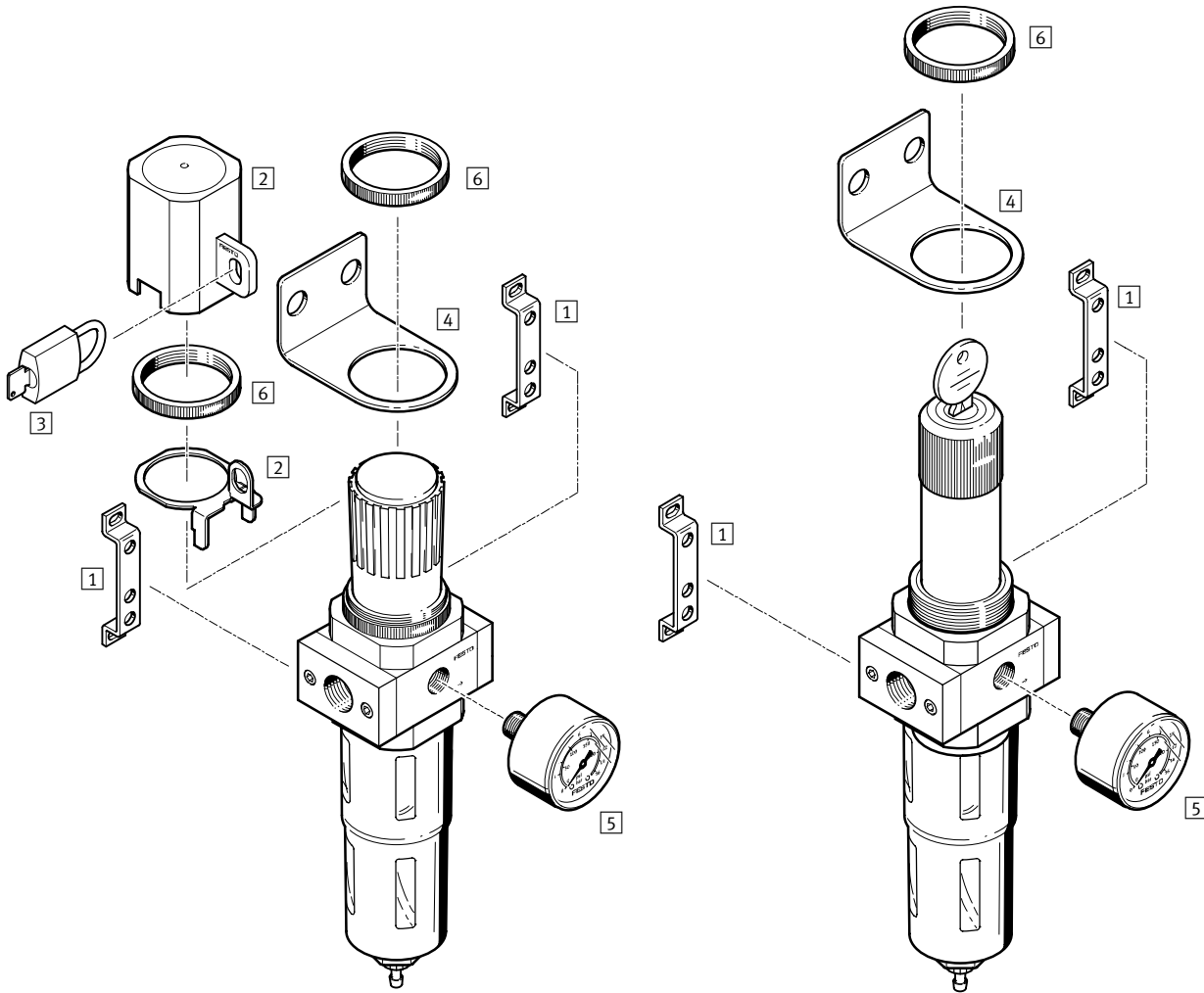
D series service units
Filter regulators

1.2

Mini/Midi/Maxi

Filter regulator LFR

Filter regulator LFRS, lockable

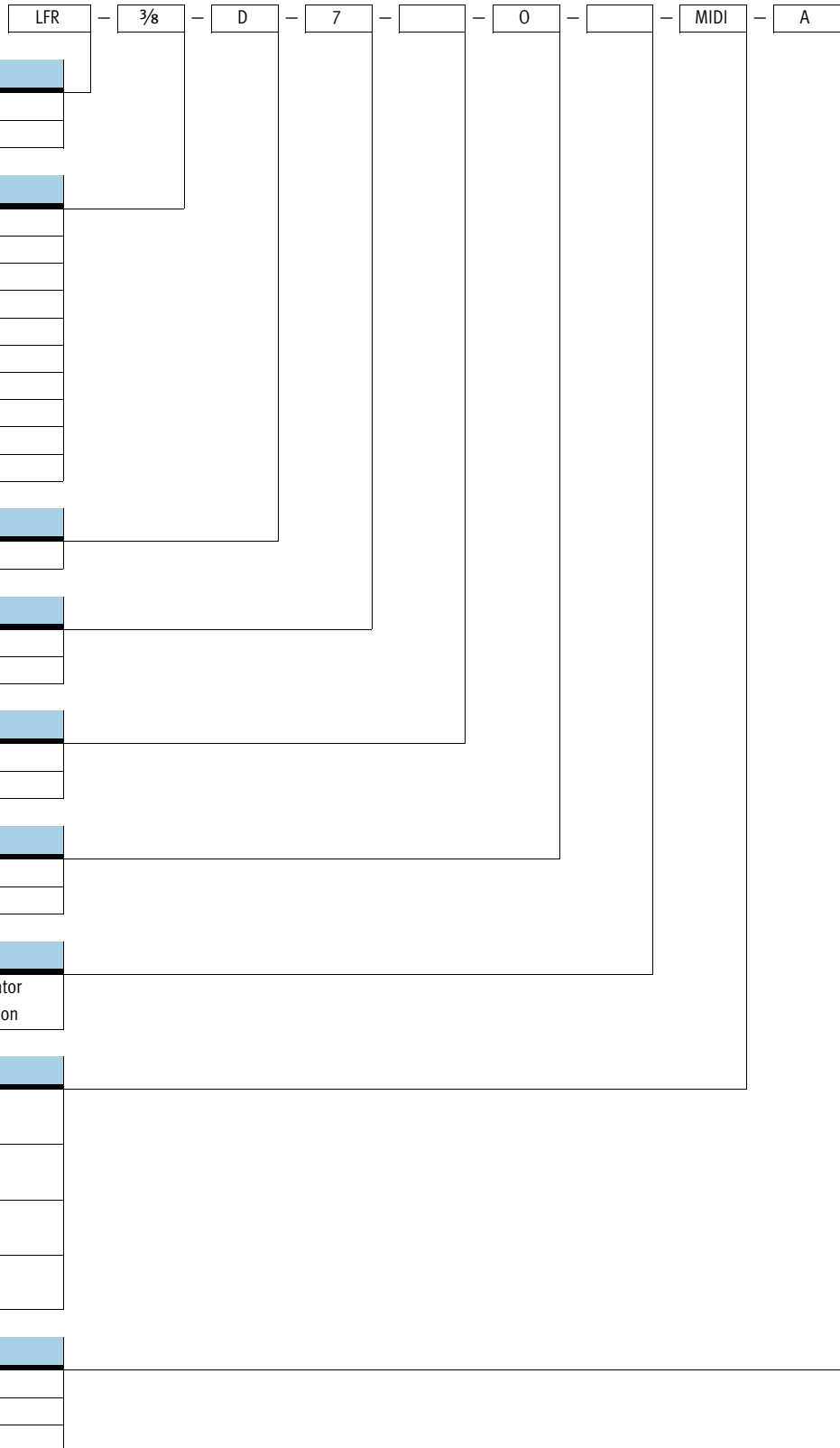


Mounting attachments and accessories

| | Rotary knob with detent | Rotary knob, lockable | → Page |
|--|-------------------------|-----------------------|------------|
| 1 Mounting bracket HFOE | ■ | ■ | 3 / 1.8-9 |
| 2 Regulator lock LRVS | ■ | - | 3 / 1.8-14 |
| 3 Padlock LRVS-D | ■ | - | 3 / 1.8-14 |
| 4 Mounting bracket HR-D | ■ | ■ | 3 / 1.8-11 |
| 5 Pressure gauge MA | ■ | ■ | 3 / 1.8-15 |
| 6 Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

81.Filter regulators LFR/LFRS, D series

Type codes



Basic function

| | |
|------|----------------------------|
| LFR | Filter regulator |
| LFRS | Filter regulator, lockable |

Pneumatic connection

| | |
|-----|---------------------|
| M5 | Thread M5 |
| M7 | Thread M7 |
| QS4 | Push-in fitting QS4 |
| QS6 | Push-in fitting QS6 |
| 1/8 | Thread G1/8 |
| 1/4 | Thread G1/4 |
| 3/8 | Thread G3/8 |
| 1/2 | Thread G1/2 |
| 3/4 | Thread G3/4 |
| 1 | Thread G1 |

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Pressure regulation range

| | |
|---|----------------|
| | 0.5 ... 12 bar |
| 7 | 0.5 ... 7 bar |

Grade of filtration

| | |
|----|-------|
| | 40 µm |
| 5M | 5 µm |

Pressure gauge

| | |
|---|------------------------|
| | With pressure gauge |
| 0 | Without pressure gauge |

Function (Maxi size only)

| | |
|----|---|
| DI | Directly actuated pressure regulator with integrated return flow function |
|----|---|

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) |

Condensate drain

| | |
|---|-----------------|
| | Turned manually |
| H | Semi-automatic |
| A | Fully automatic |

D series service units
Filter regulators
1.2

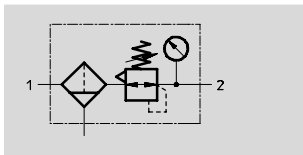
Filter regulators LFR/LFRS, D series

Technical data

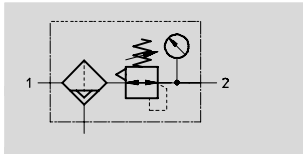
Function

LFR/LFRS-...-D-...

Condensate drain turned manually

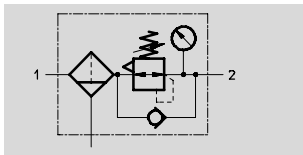


semi- or fully automatic

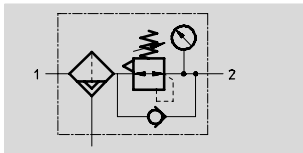


LFR/LFRS-...-D-DI-MAXI

Condensate drain turned manually



fully automatic



- - Flow rate
110 ... 11000 l/min
- - Temperature range
-10 ... +60 °C
- - Input pressure
1 ... 16 bar



- Two pressure regulation ranges:
0.5 ... 7 bar and 0.5 ... 12 bar
- Two pressure gauge connections for flexible installation
- Choice of filter cartridges: 5 µm or 40 µm
- With manual, semi-automatic or fully automatic condensate drain
- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate
- Good regulating characteristics with minimal hysteresis
- Setting values are secured by locking the rotary knob
- Pressure sensor (optional)
→ 3 / 1.8-16

| General technical data | | | | | | | | | | | | | | | | | |
|---|---------------------------------------|----|------|-----|-----|---------------------------------------|------|------|---------------|------------|------|------|------------------|---------------------------------------|----|-----|--|
| Size | Micro | | | | | Mini | | | Midi | | | | Maxi | | | | |
| Pneumatic connection | M5 | M7 | G1/8 | QS4 | QS6 | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | | |
| Operating medium | Compressed air | | | | | Compressed air | | | | | | | | | | | |
| Design | Directly actuated diaphragm regulator | | | | | Directly actuated diaphragm regulator | | | | | | | | Pilot actuated piston regulator | | | |
| | | | | | | | | | | | | | | Directly actuated diaphragm regulator | | | |
| Type of mounting | Via accessories | | | | | Via accessories | | | | | | | | | | | |
| | In-line installation | | | | | In-line installation | | | | | | | | | | | |
| | Front panel mounting | | | | | Front panel mounting | | | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | Vertical ±5° | | | | | | | | | | | |
| Grade of filtration [µm] | 5 | | | | | 5 or 40 | | | | | | | | | | | |
| Max. hysteresis [bar] | 0.3 | | | | | 0.2 | | | | | | | | | | 0.4 | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | | | 0.5 ... 7 | | | | 0.5 ... 12 | | | | | | | |
| Pressure indication | Via pressure gauge | | | | | Via pressure gauge | | | | | | | | | | | |
| | M5 prepared | | | | | G1/8 prepared | | | G1/4 prepared | | | | G1/4 prepared | | | | |
| Max. condensate volume [cm ³] | 3 | | | | | 22 | | | 43 | | | | 80 ¹⁾ | | | | |
| Input pressure [bar] | | | | | | | | | | | | | | | | | |
| Condensate drain | turned manually | | | | | | | | | | | | | | | | |
| | 1 ... 10 | | | | | 1 ... 16 | | | | | | | | | | | |
| | semi-automatic | | | | | - | | | | | | | | | | | |
| | fully automatic | | | | | 1.5 ... 12 | | | | | | | | | | | |

1) The max. condensate volume for the LFR/LFRS-...-DI-MAXI is 43 cm³.

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

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|--|---------------|-----|------------------|-----|-----|
| Connection | Female thread | | Connecting plate | | |
| | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| LFR | 110 | 280 | 410 | 150 | 410 |

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

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| Connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ | G $\frac{3}{8}$ | G $\frac{1}{2}$ | G $\frac{3}{4}$ | G1 |
| Mini | | | | | | |
| LFR/LFRS-...-D-... | 750 | 1400 | 1600 | - | - | - |
| LFR/LFRS-...-D-7-... | 900 | 1500 | 1700 | - | - | - |
| LFR/LFRS-...-D-5M-... | 650 | 1200 | 1350 | - | - | - |
| Midi | | | | | | |
| LFR/LFRS-...-D-... | - | 2000 | 3100 | 3400 | 3400 | - |
| LFR/LFRS-...-D-7-... | - | 2100 | 3200 | 3900 | 4000 | - |
| LFR/LFRS-...-D-5M-... | - | 1600 | 2400 | 2600 | 2600 | - |
| Maxi | | | | | | |
| LFR/LFRS-...-D-... | - | - | - | 9400 | 9700 | 10000 |
| LFR/LFRS-...-D-7-... | - | - | - | 9500 | 10000 | 11000 |
| LFR/LFRS-...-D-5M-... | - | - | - | 7500 | 7600 | 8000 |
| Maxi – Directly actuated diaphragm regulator with integrated return flow function | | | | | | |
| LFR/LFRS-...-D-...-DI | - | - | - | 4500 | 6800 | 7000 |
| LFR/LFRS-...-D-7-...-DI | - | - | - | 7600 | 7700 | 7800 |
| LFR/LFRS-...-D-5M-...-DI | - | - | - | 4000 | 5800 | 6000 |

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

| Screw-in depth of connecting thread [mm] | | | | | |
|--|----|----|-----------------|-----|-----|
| Connection | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| In housing | 5 | 6 | - | - | - |
| In connecting plates | - | - | 8 | - | - |

| Ambient conditions | | | | |
|--|-------------|------|------|------|
| Size | Micro | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 | | | |
| Temperature of medium [°C] | -10 ... +60 | | | |
| Corrosion resistance class 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.

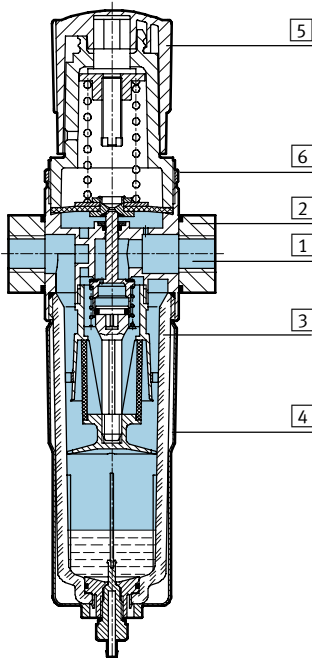
Filter regulators LFR/LFRS, D series

Technical data

| Weight [g] | | | | | | |
|------------------------|---------------|------------------|------|------|-------------------|---------------|
| Size | Micro | | Mini | Midi | Maxi | |
| | Female thread | Connecting plate | | | Connection G½, G¾ | Connection G1 |
| With pressure gauge | | | | | | |
| LFR-... | 74 | 94 | 460 | 920 | 1370 | 1470 |
| LFR-...-DI | - | - | - | - | 1670 | 1670 |
| LFRS-... | - | - | 560 | 1160 | 1470 | 1570 |
| LFRS-...-DI | - | - | - | - | 1950 | 1950 |
| Without pressure gauge | | | | | | |
| LFR-... | 64 | 84 | 410 | 830 | 1300 | 1400 |
| LFR-...-DI | - | - | - | - | 1600 | 1600 |
| LFRS-... | - | - | 510 | 1070 | 1400 | 1500 |
| LFRS-...-DI | - | - | - | - | 1880 | 1880 |

Materials

Sectional view



| Filter regulator | Micro | Mini/Midi/Maxi |
|---------------------|-------------------------|---|
| 1 Housing | Wrought aluminium alloy | Die-cast zinc |
| 2 Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 3 Bowl | Polycarbonate | Polycarbonate |
| 4 Metal bowl guard | - | Aluminium |
| 5 Regulating knob | Polyacetal | Polyacetal |
| 6 Knurled nut | Wrought aluminium alloy | Aluminium |
| - Seals | Nitrile rubber | Nitrile rubber |
| Note on materials | - | Designs free of copper and PTFE → Ordering data |

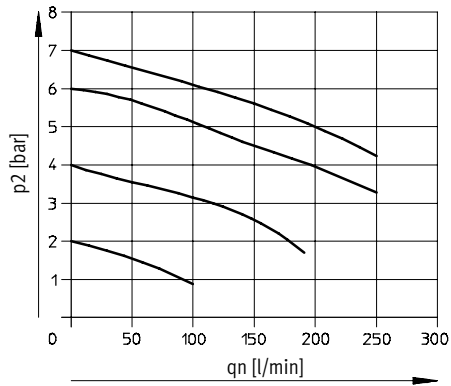
Filter regulators LFR/LFRS, D series

Technical data

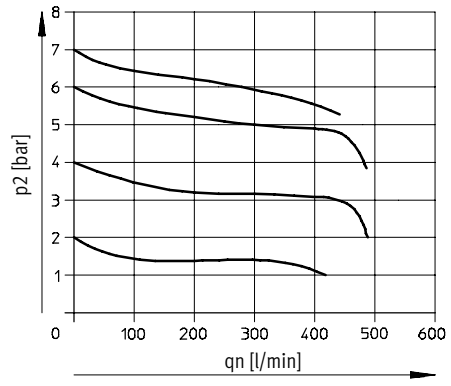


Standard flow rate q_n as a function of the output pressure p_2

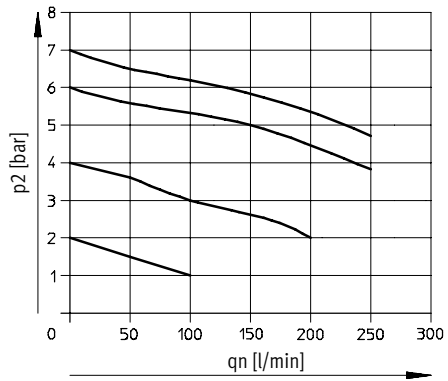
LFR-M5-...-MICRO



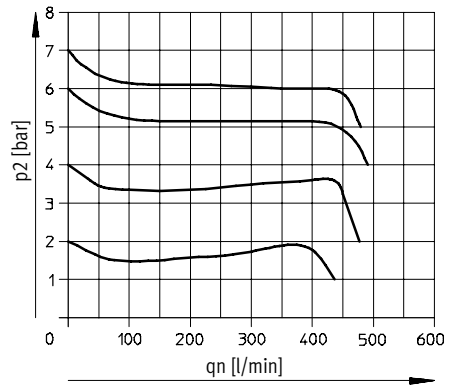
LFR-M7-...-MICRO B



LFR-QS4-...-MICRO



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



Primary pressure $p_1 = 10$ bar

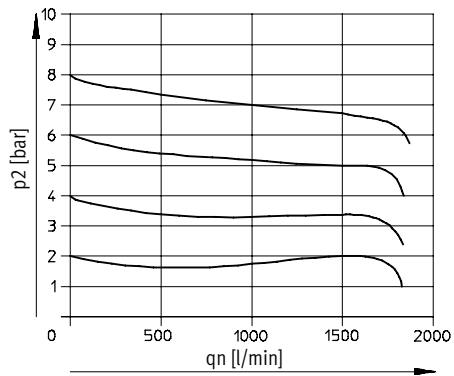
Filter regulators LFR/LFRS, D series

Technical data

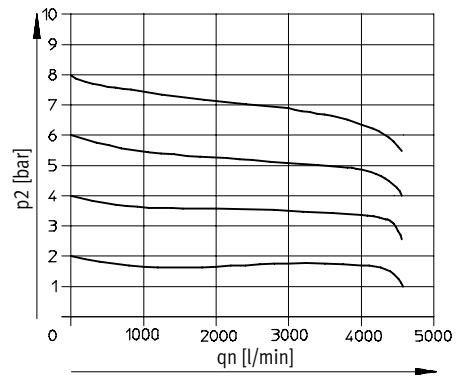


Standard flow rate q_n as a function of the output pressure p_2

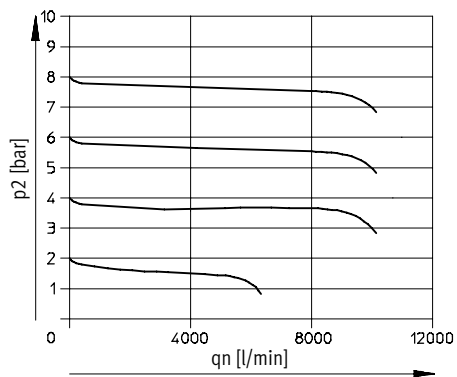
LFR/LFRS-1/4-D-MINI



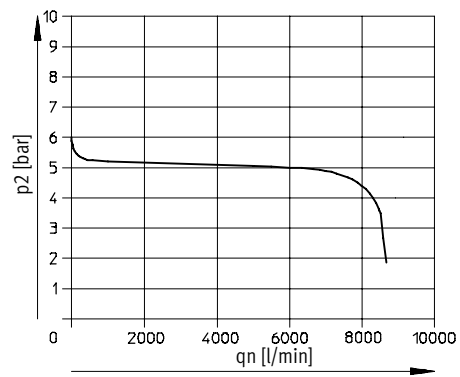
LFR/LFRS-1/2-D-MIDI



LFR/LFRS-1-D-MAXI



LFR/LFRS-1-D-DI-MAXI



Primary pressure $p_1 = 10$ bar

Filter regulators LFR/LFRS, D series

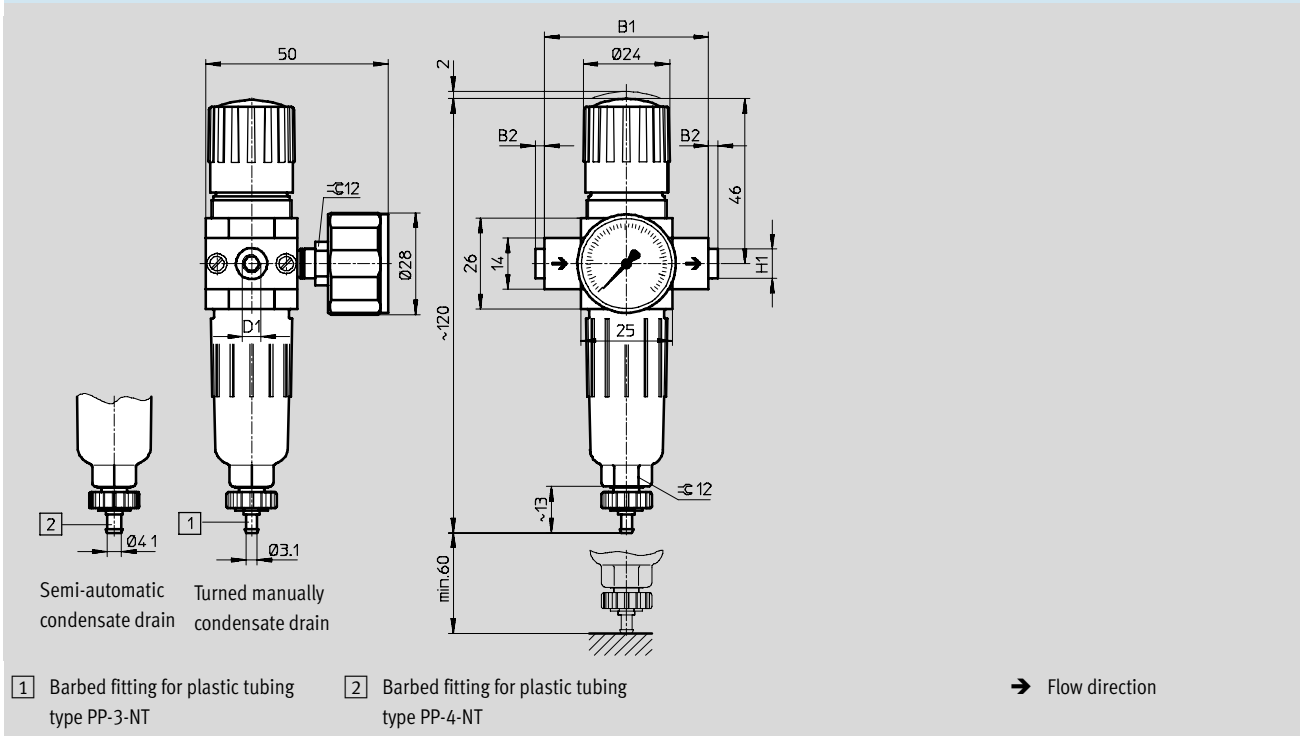
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Micro



| Type | B1 | B2 | D1 | H1 |
|------------------------|----|------|------|-----|
| LFR-M5-...-MICRO (H) | 25 | - | M5 | - |
| LFR-M7-...-MICRO (H) B | | | M7 | |
| LFR-1/8-...-MICRO (H) | | | G1/8 | |
| LFR-QS4-...-MICRO (H) | 45 | ~2.5 | QS4 | ~8 |
| LFR-QS6-...-MICRO (H) | | | QS6 | ~10 |

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

Filter regulators LFR/LFRS, D series

Technical data

FESTO

Dimensions Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

lockable

1 Barbed fitting for plastic tubing type PCN-4

2 Metal bowl guard

3 Installation dimensions

4 Second pressure gauge connection

→ Flow direction

| Type | B1 | B2 | B3 | B4 | D1 | D2 Ø | D3 | D4 | D5 Ø | D6 Ø |
|----------------------------|----|----|----|-----|------|---------|----|---------|---------|---------|
| Mini | | | | | | | | | | |
| LFR/LFRS-1/8-D-MINI (A) | 64 | 52 | 40 | 76 | G1/8 | 31 | M4 | M36x1.5 | 41 | 38 |
| LFR/LFRS-1/4-D-MINI (A) | | | | | G1/4 | | | | | |
| LFR/LFRS-3/8-D-MINI (A) | | | | | G3/8 | | | | | |
| Midi | | | | | | | | | | |
| LFR/LFRS-1/4-D-MIDI (A) | 85 | 70 | 55 | 95 | G1/4 | 50 | M5 | M52x1.5 | 50 | 52 |
| LFR/LFRS-3/8-D-MIDI (A) | | | | | G3/8 | | | | | |
| LFR/LFRS-1/2-D-MIDI (A) | | | | | G1/2 | | | | | |
| LFR/LFRS-3/4-D-MIDI (A) | | | | | G3/4 | | | | | |
| Maxi | | | | | | | | | | |
| LFR/LFRS-1/2-D-MAXI (A) | 96 | 80 | 66 | 107 | G1/2 | 31 | M5 | M36x1.5 | 50 | 65 |
| LFR/LFRS-1/2-D-DI-MAXI (A) | | | | | | 49 | | M52x1.5 | | |
| LFR/LFRS-3/4-D-MAXI (A) | | | | | G3/4 | 31 | | M36x1.5 | | |
| LFR/LFRS-3/4-D-DI-MAXI (A) | | | | | | 49 | | M52x1.5 | | |
| LFR/LFRS-1-D-MAXI (A) | | | | | G1 | 31 | | M36x1.5 | | |
| LFR/LFRS-1-D-DI-MAXI (A) | | | | | | 49 | | M52x1.5 | | |

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

Filter regulators LFR/LFRS, D series



Technical data

| Type | H1 | H2 | L1 | L3 | L4 | L5 max. | L6 | L7 | L8 | L9 | T1 | ≅ 1 | ≅ 2 |
|----------------------------|----|----|-----|----|-----|------------|-----|----|----|----|----|-----|-----|
| Mini | | | | | | | | | | | | | |
| LFR/LFRS-1/8-D-MINI (A) | 20 | 11 | 193 | 60 | 68 | 3 | 98 | 60 | 15 | 19 | 7 | 14 | 22 |
| LFR/LFRS-1/4-D-MINI (A) | | | | | | | | | | | | | |
| LFR/LFRS-3/8-D-MINI (A) | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | |
| LFR/LFRS-1/4-D-MIDI (A) | 32 | 22 | 250 | 80 | 99 | 5 | 130 | 60 | 15 | 19 | 8 | 14 | 24 |
| LFR/LFRS-3/8-D-MIDI (A) | | | | | | | | | | | | | |
| LFR/LFRS-1/2-D-MIDI (A) | | | | | | | | | | | | | |
| LFR/LFRS-3/4-D-MIDI (A) | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | |
| LFR/LFRS-1/2-D-MAXI (A) | 32 | 22 | 252 | 90 | 82 | 4 | 111 | 60 | 15 | 19 | 8 | 14 | 24 |
| LFR/LFRS-1/2-D-DI-MAXI (A) | | | 275 | | 105 | | 135 | | | | | | |
| LFR/LFRS-3/4-D-MAXI (A) | | | 252 | | 82 | | 111 | | | | | | |
| LFR/LFRS-3/4-D-DI-MAXI (A) | | | 275 | | 105 | | 135 | | | | | | |
| LFR/LFRS-1-D-MAXI (A) | 40 | | 252 | | 82 | | 111 | | | | | | |
| LFR/LFRS-1-D-DI-MAXI (A) | | | 275 | | 105 | | 135 | | | | | | |

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | |
|---|-------|--|--------------------------------------|
| Pressure regulation range 0.5 ... 7 bar | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm |
| | | | Part No. Type |
| With pressure gauge | | | |
| Turned manually | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 273 LFR-M5-D-7-5M-MICRO |
| | | M7 | 534 184 LFR-M7-D-7-5M-MICRO B |
| | | With threaded connecting plates | |
| | | G1/8 | 526 277 LFR-1/8-D-7-5M-MICRO |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 289 LFR-QS4-D-7-5M-MICRO |
| | | QS6 | 526 293 LFR-QS6-D-7-5M-MICRO |
| Semi-automatic | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 274 LFR-M5-D-7-5M-MICRO-H |
| | | M7 | 534 185 LFR-M7-D-7-5M-MICRO-H B |
| | | With threaded connecting plates | |
| | | G1/8 | 526 278 LFR-1/8-D-7-5M-MICRO-H |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 290 LFR-QS4-D-7-5M-MICRO-H |
| | | QS6 | 526 294 LFR-QS6-D-7-5M-MICRO-H |
| Without pressure gauge | | | |
| Turned manually | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 275 LFR-M5-D-7-0-5M-MICRO |
| | | M7 | 534 186 LFR-M7-D-7-0-5M-MICRO B |
| | | With threaded connecting plates | |
| | | G1/8 | 526 279 LFR-1/8-D-7-0-5M-MICRO |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 291 LFR-QS4-D-7-0-5M-MICRO |
| | | QS6 | 526 295 LFR-QS6-D-7-0-5M-MICRO |
| Semi-automatic | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 276 LFR-M5-D-7-0-5M-MICRO-H |
| | | M7 | 534 187 LFR-M7-D-7-0-5M-MICRO-H B |
| | | With threaded connecting plates | |
| | | G1/8 | 526 280 LFR-1/8-D-7-0-5M-MICRO-H |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 292 LFR-QS4-D-7-0-5M-MICRO-H |
| | | QS6 | 526 296 LFR-QS6-D-7-0-5M-MICRO-H |

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|--|------|------------|--------------------------|-------------------------------------|---------------------------|----------------------------------|
| Pressure regulation range 0.5 ... 12 bar, metal bowl guard | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Mini | G1/8 | 162 718 | LFR-1/8-D-5M-MINI | 159 630 | LFR-1/8-D-MINI |
| | | G1/4 | 162 719 | LFR-1/4-D-5M-MINI | 159 631 | LFR-1/4-D-MINI |
| | | G3/8 | 162 720 | LFR-3/8-D-5M-MINI | 162 682 | LFR-3/8-D-MINI |
| | Midi | G1/4 | 186 483 | LFR-1/4-D-5M-MIDI | 186 481 | LFR-1/4-D-MIDI |
| | | G3/8 | 162 721 | LFR-3/8-D-5M-MIDI | 159 582 | LFR-3/8-D-MIDI |
| | | G1/2 | 162 722 | LFR-1/2-D-5M-MIDI | 159 584 | LFR-1/2-D-MIDI |
| | | G3/4 | 162 723 | LFR-3/4-D-5M-MIDI | 162 683 | LFR-3/4-D-MIDI |
| | Maxi | G1/2 | 186 491 | LFR-1/2-D-5M-MAXI | 186 489 | LFR-1/2-D-MAXI |
| | | G3/4 | 162 724 | LFR-3/4-D-5M-MAXI | 159 632 | LFR-3/4-D-MAXI |
| | | G1 | 162 725 | LFR-1-D-5M-MAXI | 159 633 | LFR-1-D-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G1/8 | 162 726 | LFR-1/8-D-5M-MINI-A | 159 634 | LFR-1/8-D-MINI-A |
| | | G1/4 | 162 727 | LFR-1/4-D-5M-MINI-A | 159 635 | LFR-1/4-D-MINI-A |
| | | G3/8 | 162 728 | LFR-3/8-D-5M-MINI-A | 162 684 | LFR-3/8-D-MINI-A |
| | Midi | G1/4 | 186 486 | LFR-1/4-D-5M-MIDI-A | 186 484 | LFR-1/4-D-MIDI-A |
| | | G3/8 | 162 729 | LFR-3/8-D-5M-MIDI-A | 159 583 | LFR-3/8-D-MIDI-A |
| | | G1/2 | 162 730 | LFR-1/2-D-5M-MIDI-A | 159 585 | LFR-1/2-D-MIDI-A |
| | | G3/4 | 162 731 | LFR-3/4-D-5M-MIDI-A | 162 685 | LFR-3/4-D-MIDI-A |
| | Maxi | G1/2 | 186 494 | LFR-1/2-D-5M-MAXI-A | 186 492 | LFR-1/2-D-MAXI-A |
| | | G3/4 | 162 732 | LFR-3/4-D-5M-MAXI-A | 159 636 | LFR-3/4-D-MAXI-A |
| | | G1 | 162 733 | LFR-1-D-5M-MAXI-A | 159 637 | LFR-1-D-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Mini | G1/8 | 192 610 | LFR-1/8-D-5M-O-MINI ¹⁾ | 162 686 | LFR-1/8-D-O-MINI ¹⁾ |
| | | G1/4 | 192 611 | LFR-1/4-D-5M-O-MINI ¹⁾ | 162 687 | LFR-1/4-D-O-MINI ¹⁾ |
| | | G3/8 | 192 612 | LFR-3/8-D-5M-O-MINI ¹⁾ | 162 688 | LFR-3/8-D-O-MINI ¹⁾ |
| | Midi | G1/4 | 192 613 | LFR-1/4-D-5M-O-MIDI ¹⁾ | 186 482 | LFR-1/4-D-O-MIDI ¹⁾ |
| | | G3/8 | 192 614 | LFR-3/8-D-5M-O-MIDI ¹⁾ | 162 689 | LFR-3/8-D-O-MIDI ¹⁾ |
| | | G1/2 | 192 615 | LFR-1/2-D-5M-O-MIDI ¹⁾ | 162 690 | LFR-1/2-D-O-MIDI ¹⁾ |
| | | G3/4 | 192 616 | LFR-3/4-D-5M-O-MIDI ¹⁾ | 162 691 | LFR-3/4-D-O-MIDI ¹⁾ |
| | Maxi | G1/2 | 192 617 | LFR-1/2-D-5M-O-MAXI ¹⁾ | 186 490 | LFR-1/2-D-O-MAXI ¹⁾ |
| | | G3/4 | 192 618 | LFR-3/4-D-5M-O-MAXI ¹⁾ | 162 692 | LFR-3/4-D-O-MAXI ¹⁾ |
| | | G1 | 192 619 | LFR-1-D-5M-O-MAXI ¹⁾ | 162 693 | LFR-1-D-O-MAXI ¹⁾ |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G1/8 | 192 620 | LFR-1/8-D-5M-O-MINI-A ¹⁾ | 162 694 | LFR-1/8-D-O-MINI-A ¹⁾ |
| | | G1/4 | 192 621 | LFR-1/4-D-5M-O-MINI-A ¹⁾ | 162 695 | LFR-1/4-D-O-MINI-A ¹⁾ |
| | | G3/8 | 192 622 | LFR-3/8-D-5M-O-MINI-A ¹⁾ | 162 696 | LFR-3/8-D-O-MINI-A ¹⁾ |
| | Midi | G1/4 | 192 623 | LFR-1/4-D-5M-O-MIDI-A ¹⁾ | 186 485 | LFR-1/4-D-O-MIDI-A ¹⁾ |
| | | G3/8 | 192 624 | LFR-3/8-D-5M-O-MIDI-A ¹⁾ | 162 697 | LFR-3/8-D-O-MIDI-A ¹⁾ |
| | | G1/2 | 192 625 | LFR-1/2-D-5M-O-MIDI-A ¹⁾ | 162 698 | LFR-1/2-D-O-MIDI-A ¹⁾ |
| | | G3/4 | 192 626 | LFR-3/4-D-5M-O-MIDI-A ¹⁾ | 162 699 | LFR-3/4-D-O-MIDI-A ¹⁾ |
| | Maxi | G1/2 | 192 627 | LFR-1/2-D-5M-O-MAXI-A ¹⁾ | 186 493 | LFR-1/2-D-O-MAXI-A ¹⁾ |
| | | G3/4 | 192 628 | LFR-3/4-D-5M-O-MAXI-A ¹⁾ | 162 700 | LFR-3/4-D-O-MAXI-A ¹⁾ |
| | | G1 | 192 629 | LFR-1-D-5M-O-MAXI-A ¹⁾ | 162 701 | LFR-1-D-O-MAXI-A ¹⁾ |

1) Free of copper and PTFE

 Core Range

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | |
|---|------|------------|----------------------------------|------------------------------------|
| Pressure regulation range 0.5 ... 7 bar, metal bowl guard | | | | |
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part No. | Type |
| With pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 162 702 | LFR-1/8-D-7-MINI |
| | | G1/4 | 162 703 | LFR-1/4-D-7-MINI |
| | | G3/8 | 162 704 | LFR-3/8-D-7-MINI |
| | Midi | G1/4 | 186 487 | LFR-1/4-D-7-MIDI |
| | | G3/8 | 162 705 | LFR-3/8-D-7-MIDI |
| | | G1/2 | 162 706 | LFR-1/2-D-7-MIDI |
| | | G3/4 | 162 707 | LFR-3/4-D-7-MIDI |
| | Maxi | G1/2 | 186 495 | LFR-1/2-D-7-MAXI |
| | | G3/4 | 162 708 | LFR-3/4-D-7-MAXI |
| G1 | | 162 709 | LFR-1-D-7-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 162 710 | LFR-1/8-D-7-MINI-A |
| | | G1/4 | 162 711 | LFR-1/4-D-7-MINI-A |
| | | G3/8 | 162 712 | LFR-3/8-D-7-MINI-A |
| | Midi | G1/4 | 186 488 | LFR-1/4-D-7-MIDI-A |
| | | G3/8 | 162 713 | LFR-3/8-D-7-MIDI-A |
| | | G1/2 | 162 714 | LFR-1/2-D-7-MIDI-A |
| | | G3/4 | 162 715 | LFR-3/4-D-7-MIDI-A |
| | Maxi | G1/2 | 186 496 | LFR-1/2-D-7-MAXI-A |
| | | G3/4 | 162 716 | LFR-3/4-D-7-MAXI-A |
| G1 | | 162 717 | LFR-1-D-7-MAXI-A | |
| Without pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 192 590 | LFR-1/8-D-7-O-MINI ¹⁾ |
| | | G1/4 | 192 591 | LFR-1/4-D-7-O-MINI ¹⁾ |
| | | G3/8 | 192 592 | LFR-3/8-D-7-O-MINI ¹⁾ |
| | Midi | G1/4 | 192 593 | LFR-1/4-D-7-O-MIDI ¹⁾ |
| | | G3/8 | 192 594 | LFR-3/8-D-7-O-MIDI ¹⁾ |
| | | G1/2 | 192 595 | LFR-1/2-D-7-O-MIDI ¹⁾ |
| | | G3/4 | 192 596 | LFR-3/4-D-7-O-MIDI ¹⁾ |
| | Maxi | G1/2 | 192 597 | LFR-1/2-D-7-O-MAXI ¹⁾ |
| | | G3/4 | 192 598 | LFR-3/4-D-7-O-MAXI ¹⁾ |
| G1 | | 192 599 | LFR-1-D-7-O-MAXI ¹⁾ | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 192 600 | LFR-1/8-D-7-O-MINI-A ¹⁾ |
| | | G1/4 | 192 601 | LFR-1/4-D-7-O-MINI-A ¹⁾ |
| | | G3/8 | 192 602 | LFR-3/8-D-7-O-MINI-A ¹⁾ |
| | Midi | G1/4 | 192 603 | LFR-1/4-D-7-O-MIDI-A ¹⁾ |
| | | G3/8 | 192 604 | LFR-3/8-D-7-O-MIDI-A ¹⁾ |
| | | G1/2 | 192 605 | LFR-1/2-D-7-O-MIDI-A ¹⁾ |
| | | G3/4 | 192 606 | LFR-3/4-D-7-O-MIDI-A ¹⁾ |
| | Maxi | G1/2 | 192 607 | LFR-1/2-D-7-O-MAXI-A ¹⁾ |
| | | G3/4 | 192 608 | LFR-3/4-D-7-O-MAXI-A ¹⁾ |
| G1 | | 192 609 | LFR-1-D-7-O-MAXI-A ¹⁾ | |

1) Free of copper and PTFE

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|--|------|------------|--------------------------|--------------------------|---------------------------|-----------------------|
| Pressure regulation range 0.5 ... 12 bar, directly actuated diaphragm regulator with integrated return flow function | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 192 370 | LFR-1/2-D-5M-DI-MAXI | 192 368 | LFR-1/2-D-DI-MAXI |
| | | G3/4 | 192 376 | LFR-3/4-D-5M-DI-MAXI | 192 374 | LFR-3/4-D-DI-MAXI |
| | | G1 | 192 382 | LFR-1-D-5M-DI-MAXI | 192 380 | LFR-1-D-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 192 388 | LFR-1/2-D-5M-DI-MAXI-A | 192 386 | LFR-1/2-D-DI-MAXI-A |
| | | G3/4 | 192 394 | LFR-3/4-D-5M-DI-MAXI-A | 192 392 | LFR-3/4-D-DI-MAXI-A |
| | | G1 | 192 400 | LFR-1-D-5M-DI-MAXI-A | 192 398 | LFR-1-D-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 192 371 | LFR-1/2-D-5M-O-DI-MAXI | 192 369 | LFR-1/2-D-O-DI-MAXI |
| | | G3/4 | 192 377 | LFR-3/4-D-5M-O-DI-MAXI | 192 375 | LFR-3/4-D-O-DI-MAXI |
| | | G1 | 192 383 | LFR-1-D-5M-O-DI-MAXI | 192 381 | LFR-1-D-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 192 389 | LFR-1/2-D-5M-O-DI-MAXI-A | 192 387 | LFR-1/2-D-O-DI-MAXI-A |
| | | G3/4 | 192 395 | LFR-3/4-D-5M-O-DI-MAXI-A | 192 393 | LFR-3/4-D-O-DI-MAXI-A |
| | | G1 | 192 401 | LFR-1-D-5M-O-DI-MAXI-A | 192 399 | LFR-1-D-O-DI-MAXI-A |

| Ordering data | | | | | | |
|---|------|------------|--------------------------|------|---------------------------|-------------------------|
| Pressure regulation range 0.5 ... 7 bar, directly actuated diaphragm regulator with integrated return flow function | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 192 372 | LFR-1/2-D-7-DI-MAXI |
| | | G3/4 | – | | 192 378 | LFR-3/4-D-7-DI-MAXI |
| | | G1 | – | | 192 384 | LFR-1-D-7-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 192 390 | LFR-1/2-D-7-DI-MAXI-A |
| | | G3/4 | – | | 192 396 | LFR-3/4-D-7-DI-MAXI-A |
| | | G1 | – | | 192 402 | LFR-1-D-7-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 192 373 | LFR-1/2-D-7-O-DI-MAXI |
| | | G3/4 | – | | 192 379 | LFR-3/4-D-7-O-DI-MAXI |
| | | G1 | – | | 192 385 | LFR-1-D-7-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 192 391 | LFR-1/2-D-7-O-DI-MAXI-A |
| | | G3/4 | – | | 192 397 | LFR-3/4-D-7-O-DI-MAXI-A |
| | | G1 | – | | 192 403 | LFR-1-D-7-O-DI-MAXI-A |

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|--|------|-----------------|--------------------------|------------------------------------|---------------------------|---------------------------------|
| Pressure regulation range 0.5 ... 12 bar, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 194 704 | LFRS- $\frac{1}{8}$ -D-5M-MINI | 194 696 | LFRS- $\frac{1}{8}$ -D-MINI |
| | | G $\frac{1}{4}$ | 194 716 | LFRS- $\frac{1}{4}$ -D-5M-MINI | 194 708 | LFRS- $\frac{1}{4}$ -D-MINI |
| | | G $\frac{3}{8}$ | 194 728 | LFRS- $\frac{3}{8}$ -D-5M-MINI | 194 720 | LFRS- $\frac{3}{8}$ -D-MINI |
| | Midi | G $\frac{1}{4}$ | 194 740 | LFRS- $\frac{1}{4}$ -D-5M-MIDI | 194 732 | LFRS- $\frac{1}{4}$ -D-MIDI |
| | | G $\frac{3}{8}$ | 194 752 | LFRS- $\frac{3}{8}$ -D-5M-MIDI | 194 744 | LFRS- $\frac{3}{8}$ -D-MIDI |
| | | G $\frac{1}{2}$ | 194 764 | LFRS- $\frac{1}{2}$ -D-5M-MIDI | 194 756 | LFRS- $\frac{1}{2}$ -D-MIDI |
| | | G $\frac{3}{4}$ | 194 776 | LFRS- $\frac{3}{4}$ -D-5M-MIDI | 194 768 | LFRS- $\frac{3}{4}$ -D-MIDI |
| | Maxi | G $\frac{1}{2}$ | 194 788 | LFRS- $\frac{1}{2}$ -D-5M-MAXI | 194 780 | LFRS- $\frac{1}{2}$ -D-MAXI |
| | | G $\frac{3}{4}$ | 194 800 | LFRS- $\frac{3}{4}$ -D-5M-MAXI | 194 792 | LFRS- $\frac{3}{4}$ -D-MAXI |
| | | G1 | 194 812 | LFRS-1-D-5M-MAXI | 194 804 | LFRS-1-D-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 194 706 | LFRS- $\frac{1}{8}$ -D-5M-MINI-A | 194 697 | LFRS- $\frac{1}{8}$ -D-MINI-A |
| | | G $\frac{1}{4}$ | 194 718 | LFRS- $\frac{1}{4}$ -D-5M-MINI-A | 194 709 | LFRS- $\frac{1}{4}$ -D-MINI-A |
| | | G $\frac{3}{8}$ | 194 730 | LFRS- $\frac{3}{8}$ -D-5M-MINI-A | 194 721 | LFRS- $\frac{3}{8}$ -D-MINI-A |
| | Midi | G $\frac{1}{4}$ | 194 742 | LFRS- $\frac{1}{4}$ -D-5M-MIDI-A | 194 733 | LFRS- $\frac{1}{4}$ -D-MIDI-A |
| | | G $\frac{3}{8}$ | 194 754 | LFRS- $\frac{3}{8}$ -D-5M-MIDI-A | 194 745 | LFRS- $\frac{3}{8}$ -D-MIDI-A |
| | | G $\frac{1}{2}$ | 194 766 | LFRS- $\frac{1}{2}$ -D-5M-MIDI-A | 194 757 | LFRS- $\frac{1}{2}$ -D-MIDI-A |
| | | G $\frac{3}{4}$ | 194 778 | LFRS- $\frac{3}{4}$ -D-5M-MIDI-A | 194 769 | LFRS- $\frac{3}{4}$ -D-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 194 790 | LFRS- $\frac{1}{2}$ -D-5M-MAXI-A | 194 781 | LFRS- $\frac{1}{2}$ -D-MAXI-A |
| | | G $\frac{3}{4}$ | 194 802 | LFRS- $\frac{3}{4}$ -D-5M-MAXI-A | 194 793 | LFRS- $\frac{3}{4}$ -D-MAXI-A |
| | | G1 | 194 814 | LFRS-1-D-5M-MAXI-A | 194 805 | LFRS-1-D-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 194 705 | LFRS- $\frac{1}{8}$ -D-5M-O-MINI | 194 698 | LFRS- $\frac{1}{8}$ -D-O-MINI |
| | | G $\frac{1}{4}$ | 194 717 | LFRS- $\frac{1}{4}$ -D-5M-O-MINI | 194 710 | LFRS- $\frac{1}{4}$ -D-O-MINI |
| | | G $\frac{3}{8}$ | 194 729 | LFRS- $\frac{3}{8}$ -D-5M-O-MINI | 194 722 | LFRS- $\frac{3}{8}$ -D-O-MINI |
| | Midi | G $\frac{1}{4}$ | 194 741 | LFRS- $\frac{1}{4}$ -D-5M-O-MIDI | 194 734 | LFRS- $\frac{1}{4}$ -D-O-MIDI |
| | | G $\frac{3}{8}$ | 194 753 | LFRS- $\frac{3}{8}$ -D-5M-O-MIDI | 194 746 | LFRS- $\frac{3}{8}$ -D-O-MIDI |
| | | G $\frac{1}{2}$ | 194 765 | LFRS- $\frac{1}{2}$ -D-5M-O-MIDI | 194 758 | LFRS- $\frac{1}{2}$ -D-O-MIDI |
| | | G $\frac{3}{4}$ | 194 777 | LFRS- $\frac{3}{4}$ -D-5M-O-MIDI | 194 770 | LFRS- $\frac{3}{4}$ -D-O-MIDI |
| | Maxi | G $\frac{1}{2}$ | 194 789 | LFRS- $\frac{1}{2}$ -D-5M-O-MAXI | 194 782 | LFRS- $\frac{1}{2}$ -D-O-MAXI |
| | | G $\frac{3}{4}$ | 194 801 | LFRS- $\frac{3}{4}$ -D-5M-O-MAXI | 194 794 | LFRS- $\frac{3}{4}$ -D-O-MAXI |
| | | G1 | 194 813 | LFRS-1-D-5M-O-MAXI | 194 806 | LFRS-1-D-O-MAXI |
| Fully automatic | | | | | | |
| Fully automatic | Mini | G $\frac{1}{8}$ | 194 707 | LFRS- $\frac{1}{8}$ -D-5M-O-MINI-A | 194 699 | LFRS- $\frac{1}{8}$ -D-O-MINI-A |
| | | G $\frac{1}{4}$ | 194 719 | LFRS- $\frac{1}{4}$ -D-5M-O-MINI-A | 194 711 | LFRS- $\frac{1}{4}$ -D-O-MINI-A |
| | | G $\frac{3}{8}$ | 194 731 | LFRS- $\frac{3}{8}$ -D-5M-O-MINI-A | 194 723 | LFRS- $\frac{3}{8}$ -D-O-MINI-A |
| | Midi | G $\frac{1}{4}$ | 194 743 | LFRS- $\frac{1}{4}$ -D-5M-O-MIDI-A | 194 735 | LFRS- $\frac{1}{4}$ -D-O-MIDI-A |
| | | G $\frac{3}{8}$ | 194 755 | LFRS- $\frac{3}{8}$ -D-5M-O-MIDI-A | 194 747 | LFRS- $\frac{3}{8}$ -D-O-MIDI-A |
| | | G $\frac{1}{2}$ | 194 767 | LFRS- $\frac{1}{2}$ -D-5M-O-MIDI-A | 194 759 | LFRS- $\frac{1}{2}$ -D-O-MIDI-A |
| | | G $\frac{3}{4}$ | 194 779 | LFRS- $\frac{3}{4}$ -D-5M-O-MIDI-A | 194 771 | LFRS- $\frac{3}{4}$ -D-O-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 194 791 | LFRS- $\frac{1}{2}$ -D-5M-O-MAXI-A | 194 783 | LFRS- $\frac{1}{2}$ -D-O-MAXI-A |
| | | G $\frac{3}{4}$ | 194 803 | LFRS- $\frac{3}{4}$ -D-5M-O-MAXI-A | 194 795 | LFRS- $\frac{3}{4}$ -D-O-MAXI-A |
| | | G1 | 194 815 | LFRS-1-D-5M-O-MAXI-A | 194 807 | LFRS-1-D-O-MAXI-A |

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | |
|---|------|------------|---------------------------|-----------------------|
| Pressure regulation range 0.5 ... 7 bar, lockable | | | | |
| Condensate drain | Size | Connection | Grade of filtration 40 µm | |
| | | | Part No. | Type |
| With pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 194 700 | LFRS-1/8-D-7-MINI |
| | | G1/4 | 194 712 | LFRS-1/4-D-7-MINI |
| | | G3/8 | 194 724 | LFRS-3/8-D-7-MINI |
| | Midi | G1/4 | 194 736 | LFRS-1/4-D-7-MIDI |
| | | G3/8 | 194 748 | LFRS-3/8-D-7-MIDI |
| | | G1/2 | 194 760 | LFRS-1/2-D-7-MIDI |
| | | G3/4 | 194 772 | LFRS-3/4-D-7-MIDI |
| | Maxi | G1/2 | 194 784 | LFRS-1/2-D-7-MAXI |
| | | G3/4 | 194 796 | LFRS-3/4-D-7-MAXI |
| G1 | | 194 808 | LFRS-1-D-7-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 194 702 | LFRS-1/8-D-7-MINI-A |
| | | G1/4 | 194 714 | LFRS-1/4-D-7-MINI-A |
| | | G3/8 | 194 726 | LFRS-3/8-D-7-MINI-A |
| | Midi | G1/4 | 194 738 | LFRS-1/4-D-7-MIDI-A |
| | | G3/8 | 194 750 | LFRS-3/8-D-7-MIDI-A |
| | | G1/2 | 194 762 | LFRS-1/2-D-7-MIDI-A |
| | | G3/4 | 194 774 | LFRS-3/4-D-7-MIDI-A |
| | Maxi | G1/2 | 194 786 | LFRS-1/2-D-7-MAXI-A |
| | | G3/4 | 194 798 | LFRS-3/4-D-7-MAXI-A |
| G1 | | 194 810 | LFRS-1-D-7-MAXI-A | |
| Without pressure gauge | | | | |
| Turned manually | Mini | G1/8 | 194 701 | LFRS-1/8-D-7-O-MINI |
| | | G1/4 | 194 713 | LFRS-1/4-D-7-O-MINI |
| | | G3/8 | 194 725 | LFRS-3/8-D-7-O-MINI |
| | Midi | G1/4 | 194 737 | LFRS-1/4-D-7-O-MIDI |
| | | G3/8 | 194 749 | LFRS-3/8-D-7-O-MIDI |
| | | G1/2 | 194 761 | LFRS-1/2-D-7-O-MIDI |
| | | G3/4 | 194 773 | LFRS-3/4-D-7-O-MIDI |
| | Maxi | G1/2 | 194 785 | LFRS-1/2-D-7-O-MAXI |
| | | G3/4 | 194 797 | LFRS-3/4-D-7-O-MAXI |
| G1 | | 194 809 | LFRS-1-D-7-O-MAXI | |
| Fully automatic | | | | |
| Fully automatic | Mini | G1/8 | 194 703 | LFRS-1/8-D-7-O-MINI-A |
| | | G1/4 | 194 715 | LFRS-1/4-D-7-O-MINI-A |
| | | G3/8 | 194 727 | LFRS-3/8-D-7-O-MINI-A |
| | Midi | G1/4 | 194 739 | LFRS-1/4-D-7-O-MIDI-A |
| | | G3/8 | 194 751 | LFRS-3/8-D-7-O-MIDI-A |
| | | G1/2 | 194 763 | LFRS-1/2-D-7-O-MIDI-A |
| | | G3/4 | 194 775 | LFRS-3/4-D-7-O-MIDI-A |
| | Maxi | G1/2 | 194 787 | LFRS-1/2-D-7-O-MAXI-A |
| | | G3/4 | 194 799 | LFRS-3/4-D-7-O-MAXI-A |
| G1 | | 194 811 | LFRS-1-D-7-O-MAXI-A | |

Filter regulators LFR/LFRS, D series

FESTO

Technical data

| Ordering data | | | | | | |
|--|------|------------|--------------------------|---------------------------|---------------------------|------------------------|
| Pressure regulation range 0.5 ... 12 bar, directly actuated diaphragm regulator with integrated return flow function, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 194 818 | LFRS-1/2-D-5M-DI-MAXI | 194 816 | LFRS-1/2-D-DI-MAXI |
| | | G3/4 | 194 824 | LFRS-3/4-D-5M-DI-MAXI | 194 822 | LFRS-3/4-D-DI-MAXI |
| | | G1 | 194 830 | LFRS-1-D-5M-DI-MAXI | 194 828 | LFRS-1-D-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 194 836 | LFRS-1/2-D-5M-DI-MAXI-A | 194 834 | LFRS-1/2-D-DI-MAXI-A |
| | | G3/4 | 194 842 | LFRS-3/4-D-5M-DI-MAXI-A | 194 840 | LFRS-3/4-D-DI-MAXI-A |
| | | G1 | 194 848 | LFRS-1-D-5M-DI-MAXI-A | 194 846 | LFRS-1-D-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | 194 819 | LFRS-1/2-D-5M-O-DI-MAXI | 194 817 | LFRS-1/2-D-O-DI-MAXI |
| | | G3/4 | 194 825 | LFRS-3/4-D-5M-O-DI-MAXI | 194 823 | LFRS-3/4-D-O-DI-MAXI |
| | | G1 | 194 831 | LFRS-1-D-5M-O-DI-MAXI | 194 829 | LFRS-1-D-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | 194 837 | LFRS-1/2-D-5M-O-DI-MAXI-A | 194 835 | LFRS-1/2-D-O-DI-MAXI-A |
| | | G3/4 | 194 843 | LFRS-3/4-D-5M-O-DI-MAXI-A | 194 841 | LFRS-3/4-D-O-DI-MAXI-A |
| | | G1 | 194 849 | LFRS-1-D-5M-O-DI-MAXI-A | 194 847 | LFRS-1-D-O-DI-MAXI-A |

| Ordering data | | | | | | |
|---|------|------------|--------------------------|------|---------------------------|--------------------------|
| Pressure regulation range 0.5 ... 7 bar, directly actuated diaphragm regulator with integrated return flow function, lockable | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 194 820 | LFRS-1/2-D-7-DI-MAXI |
| | | G3/4 | – | | 194 826 | LFRS-3/4-D-7-DI-MAXI |
| | | G1 | – | | 194 832 | LFRS-1-D-7-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 194 838 | LFRS-1/2-D-7-DI-MAXI-A |
| | | G3/4 | – | | 194 844 | LFRS-3/4-D-7-DI-MAXI-A |
| | | G1 | – | | 194 850 | LFRS-1-D-7-DI-MAXI-A |
| Without pressure gauge | | | | | | |
| Turned manually | Maxi | G1/2 | – | | 194 821 | LFRS-1/2-D-7-O-DI-MAXI |
| | | G3/4 | – | | 194 827 | LFRS-3/4-D-7-O-DI-MAXI |
| | | G1 | – | | 194 833 | LFRS-1-D-7-O-DI-MAXI |
| Fully automatic | Maxi | G1/2 | – | | 194 839 | LFRS-1/2-D-7-O-DI-MAXI-A |
| | | G3/4 | – | | 194 845 | LFRS-3/4-D-7-O-DI-MAXI-A |
| | | G1 | – | | 194 851 | LFRS-1-D-7-O-DI-MAXI-A |

Filters LF, D series

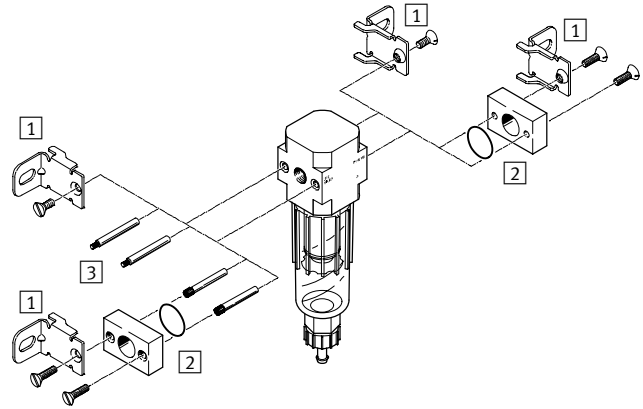
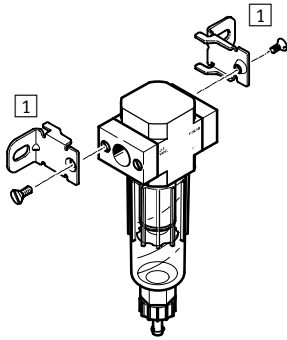
Peripherals overview



Micro

Individual unit with connection plates, connection size G $\frac{1}{8}$, QS4 or QS6

Individual unit without connection plates, for service unit combination connection size M5 or M7 in housing



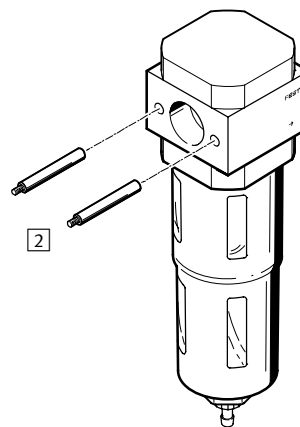
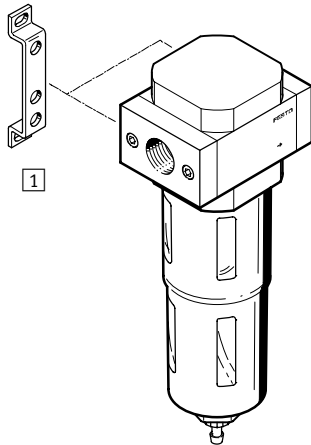
Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|----------------------------|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | ■ | ■ | ■ | 3 / 1.8-9 |
| 2 Connection plate kit PBL | - | ■ | - | ■ | 3 / 1.8-13 |
| 3 Threaded pin FRB | - | - | ■ | ■ | 3 / 1.8-11 |

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |

98.Filters LF, D series

Type codes



LF – 1/4 – D – 5M – MIDI – A

| Basic function | |
|----------------|--------|
| LF | Filter |

| Pneumatic connection | |
|----------------------|---------------------|
| M5 | Thread M5 |
| M7 | Thread M7 |
| QS4 | Push-in fitting QS4 |
| QS6 | Push-in fitting QS6 |
| 1/8 | Thread G1/8 |
| 1/4 | Thread G1/4 |
| 3/8 | Thread G3/8 |
| 1/2 | Thread G1/2 |
| 3/4 | Thread G3/4 |
| 1 | Thread G1 |

| Series | |
|--------|--------|
| D | Series |

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

| 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) |

| Condensate drain | |
|------------------|-----------------|
| | Turned manually |
| H | Semi-automatic |
| A | Fully automatic |

D series service units
Filters

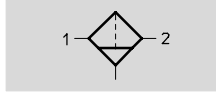
1.3

Filters LF, D series

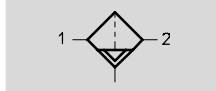
Technical data




Function

Condensate drain turned manually



semi- or fully automatic



-  - Flow rate
170 ... 5300 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
0 ... 16 bar




- Good particle and condensate separation
- High flow rate with minimal pressure drop
- Choice of filter cartridges: 5 µm or 40 µm
- With manual or fully automatic condensate drain

| General technical data | | | | | | | | | | | | | | | |
|---|---|----|-------------------------------|-----|-----|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----|
| Size | Micro | | | | | Mini | | | Midi | | | Maxi | | | |
| Pneumatic connection | M5 | M7 | G ¹ / ₈ | QS4 | QS6 | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G ¹ / ₂ | G ³ / ₄ | G1 |
| Operating medium | Compressed air | | | | | Compressed air | | | | | | | | | |
| Design | Sintered filter with centrifugal separation | | | | | Sintered filter with centrifugal separation | | | | | | | | | |
| Type of mounting | Via accessories | | | | | Via accessories | | | | | | | | | |
| | In-line installation | | | | | In-line installation | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | Vertical ±5° | | | | | | | | | |
| Grade of filtration [µm] | 5 | | | | | 5 or 40 | | | | | | | | | |
| Max. condensate volume [cm ³] | 3 | | | | | 22 | | | 43 | | | 80 | | | |
| Input pressure [bar] | | | | | | | | | | | | | | | |
| Condensate drain | turned manually | | | | | 0 ... 10 | | | | | 0 ... 16 | | | | |
| | semi-automatic | | | | | 1 ... 10 | | | | | - | | | | |
| | fully automatic | | | | | - | | | | | 0 ... 12 | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|---------------|-----|--|-------------------------------|-----|-----|
| Connection | Female thread | | | Connecting plate | | |
| | M5 | M7 | | G ¹ / ₈ | QS4 | QS6 |
| Micro | | | | | | |
| LF | 170 | 280 | | 290 | 170 | 280 |

1) Measured at p₁ = 6 bar and Δp = 1 bar.

A minimum flow rate of 125 l/min is required for flawless functioning.

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

Filters LF, D series

Technical data

FESTO

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| LF-...-D-...(-A) | 1000 | 1200 | 1400 | - | - | - |
| LF-...-D-5M-...(-A) | 800 | 950 | 1100 | - | - | - |
| Midi | | | | | | |
| LF-...-D-...(-A) | - | 1900 | 2700 | 3000 | 3000 | - |
| LF-...-D-5M-...(-A) | - | 1600 | 1800 | 2000 | 2000 | - |
| Maxi | | | | | | |
| LF-...-D-...(-A) | - | - | - | 4400 | 5000 | 5300 |
| LF-...-D-5M-...(-A) | - | - | - | 3700 | 3600 | 3800 |

- 1) Measured at p1 = 6 bar and Δp = 1 bar.
A minimum flow rate of 125 l/min is required for flawless functioning.

| Screw-in depth of connecting thread [mm] | | | | | |
|--|----|----|------|-----|-----|
| Connection | M5 | M7 | G1/8 | QS4 | QS6 |
| Micro | | | | | |
| In housing | 5 | 6 | - | - | - |
| In connecting plates | - | - | 8 | - | - |

| Ambient conditions | | | | | |
|--|-------------|------|------|------|--|
| Size | Micro | Mini | Midi | Maxi | |
| Ambient temperature [°C] | -10 ... +60 | | | | |
| Temperature of medium [°C] | -10 ... +60 | | | | |
| Corrosion resistance class 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.

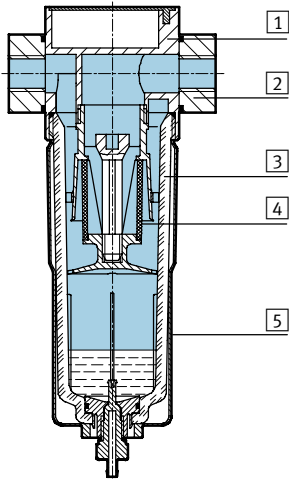
| Weight [g] | | | | | | |
|------------|---------------|------------------|------|------|-----------------------|---------------|
| Size | Micro | | Mini | Midi | Maxi | |
| | Female thread | Connecting plate | | | Connection G1/2, G3/4 | Connection G1 |
| LF-... | 44 | 64 | 250 | 700 | 1340 | 1440 |

Filters LF, D series

Technical data

Materials

Sectional view



| Filter | Micro | Mini/Midi/Maxi |
|---------------------|-------------------------|-------------------------|
| 1 Housing | Wrought aluminium alloy | Die-cast zinc |
| 2 Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 3 Bowl | Polycarbonate | Polycarbonate |
| 4 Filter cartridge | Polyethylene | Polyethylene |
| 5 Metal bowl guard | - | Aluminium |
| - Seals | Nitrile rubber | Nitrile rubber |

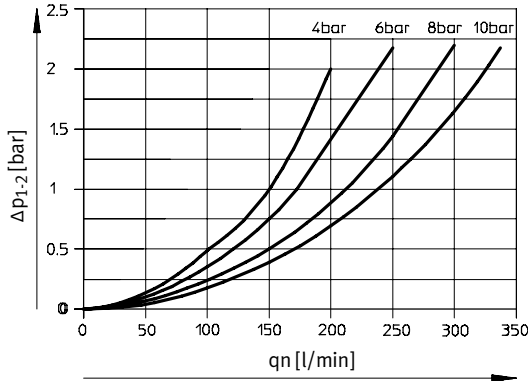
Filters LF, D series

Technical data

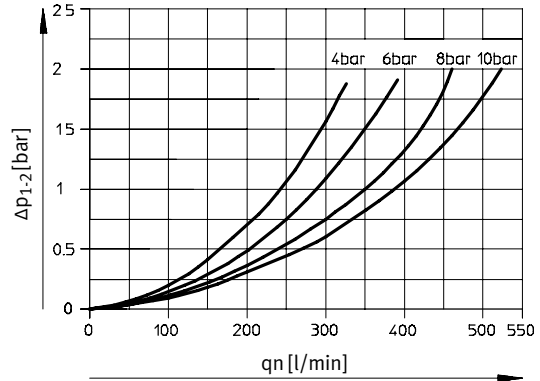


Standard flow rate q_n as a function of the differential pressure Δp_{1-2}

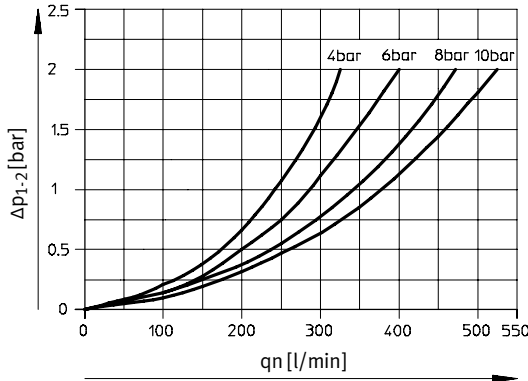
LF-M5-...-MICRO and LF-QS4-...-MICRO



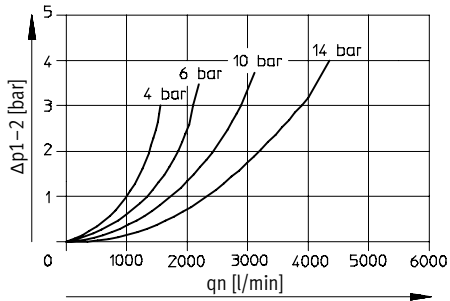
LF-1/8-...-MICRO



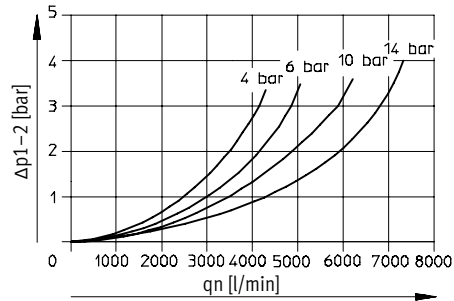
LF-M7-...-MICRO B and LF-QS6-...-MICRO



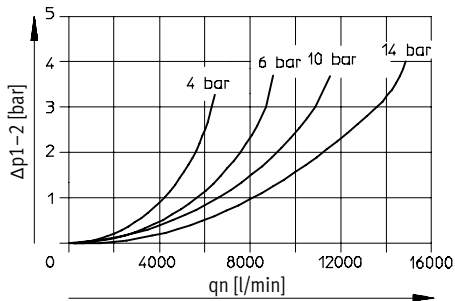
LF-1/4-D-MINI



LF-1/2-D-MIDI



LF-1-D-MAXI



Filters LF, D series

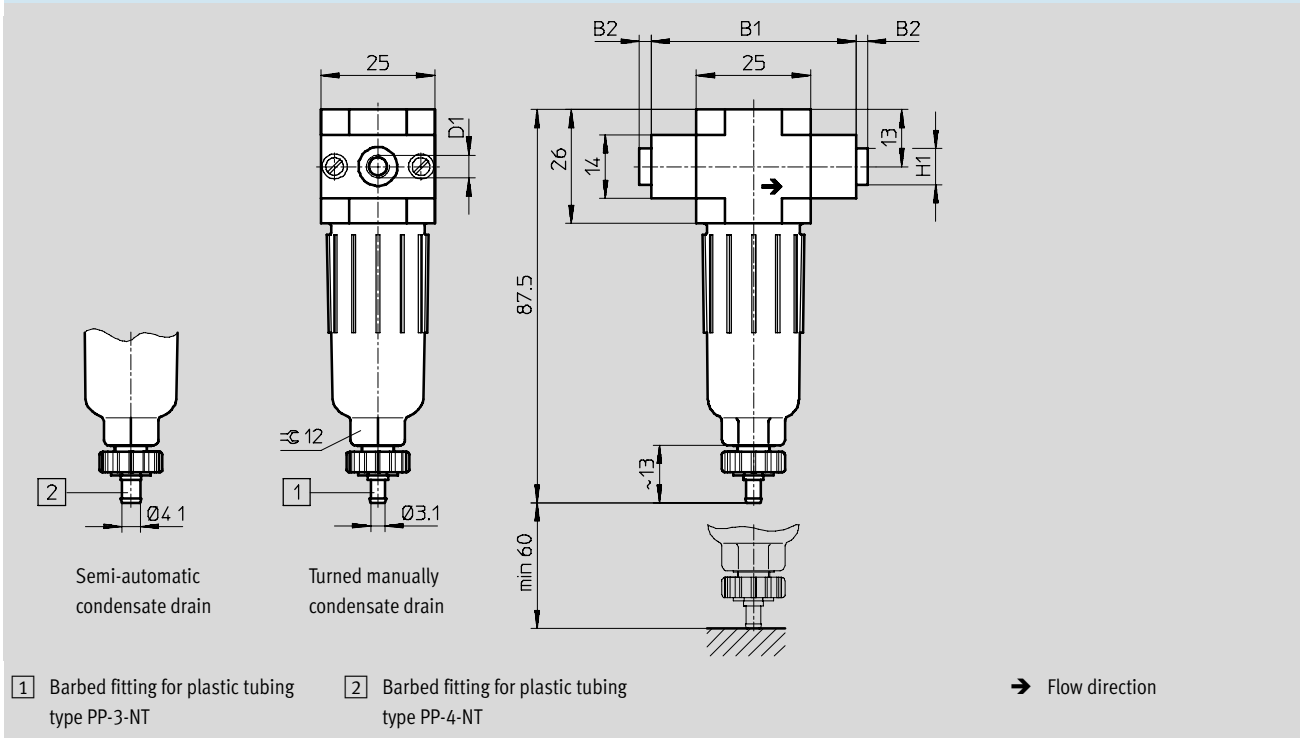
Technical data



Dimensions

Download CAD data → www.festo.com/en/engineering

Micro



D series service units
Filters

1.3

| Type | B1 | B2 | D1 | H1 |
|--------------------------|----|------|------|-----|
| LF-M5-D-7-5M-MICRO (H) | 25 | - | M5 | - |
| LF-M7-D-7-5M-MICRO (H) B | | | M7 | |
| LF-1/8-D-7-5M-MICRO (H) | | | G1/8 | |
| LF-QS4-D-7-5M-MICRO (H) | 45 | ~2.5 | QS4 | ~8 |
| LF-QS6-D-7-5M-MICRO (H) | | | QS6 | ~10 |

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

Filters LF, D series

Technical data



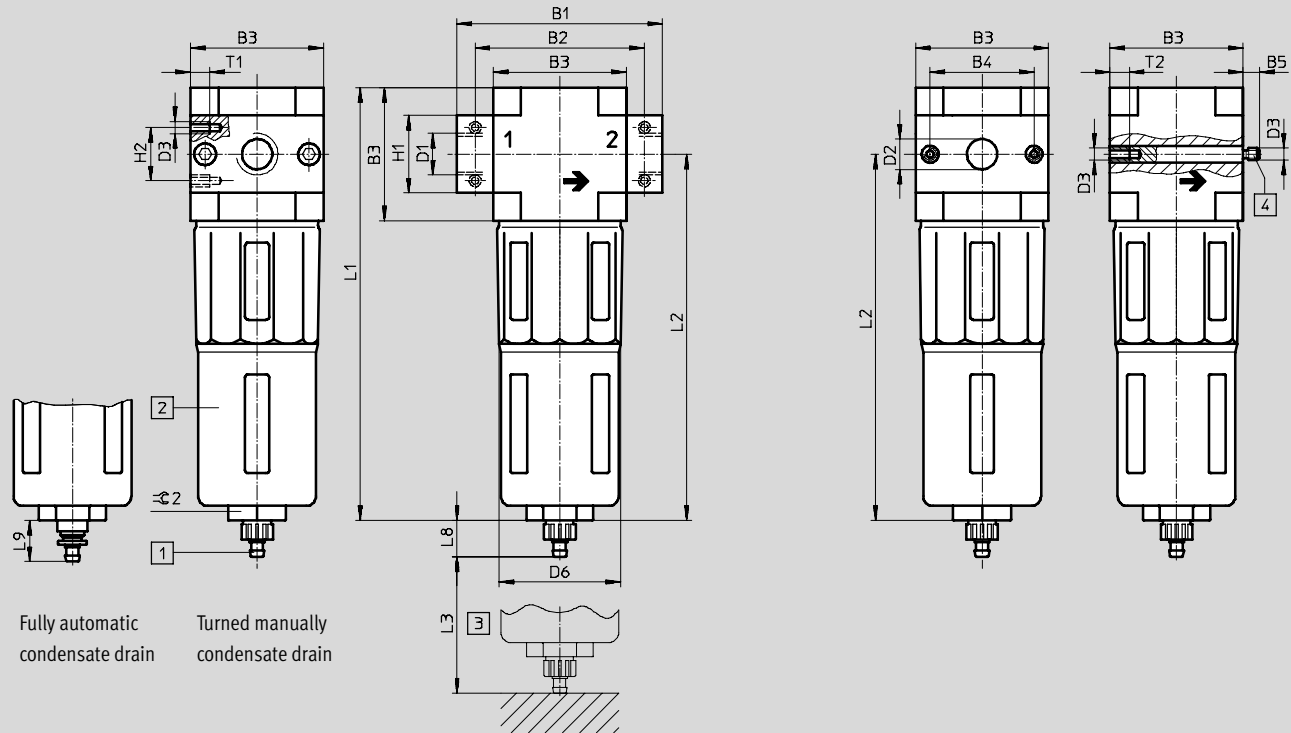
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With threaded connecting plates

Without threaded connecting plates



- 1 Barbed fitting for plastic tubing type PCN-4
- 2 Metal bowl guard
- 3 Installation dimensions
- 4 Threaded pin (exchangeable)
- Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | L8 | L9 | T1 | T2 | ∠ 2 |
|---------------|-----|----|----|----|-----|------|----|----|----|----|----|-----|-----|----|----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | | | | |
| LF-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 38 | 20 | 11 | 144 | 124 | 60 | 15 | 19 | 7 | - | 22 |
| LF-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | | | | | |
| LF-3/8-D-MINI | 70 | - | - | - | 5.8 | G3/8 | 11 | - | - | - | - | - | - | - | - | - | - | - | - |
| LF-D-MINI | | | | | | G1 | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | | |
| LF-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 52 | 32 | 22 | 179 | 151 | 80 | 15 | 19 | 8 | - | 24 |
| LF-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | | | | |
| LF-1/2-D-MIDI | - | - | - | - | 6.8 | G1/2 | 24 | - | - | - | - | - | - | - | - | - | - | - | - |
| LF-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | | | | |
| LF-D-MIDI | G1 | | | | | | | | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | | | | |
| LF-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 65 | 32 | 22 | 203 | 170 | 90 | 15 | 19 | 8 | - | 24 |
| LF3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | | | | |
| LF-1-D-MAXI | 116 | 91 | - | - | 6.8 | G1 | 30 | - | - | 40 | - | - | - | - | - | - | - | - | - |
| LF-D-MAXI | | | | | | G1 | | | | | | | | | | | | | |

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

Filters LF, D series

Technical data

FESTO

| Ordering data | | | |
|-----------------------------|-------|--|---|
| Input pressure 1 ... 10 bar | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm |
| | | | Part No. Type |
| Turned manually | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 297 LF-M5-D-5M-MICRO |
| | | M7 | 534 182 LF-M7-D-5M-MICRO B |
| | | With threaded connecting plates | |
| | | G ¹ / ₈ | 526 299 LF- ¹ / ₈ -D-5M-MICRO |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 305 LF-QS4-D-5M-MICRO |
| | | QS6 | 526 307 LF-QS6-D-5M-MICRO |
| Semi-automatic | Micro | Without threaded connecting plates, connecting thread in housing | |
| | | M5 | 526 298 LF-M5-D-5M-MICRO-H |
| | | M7 | 534 183 LF-M7-D-5M-MICRO-H B |
| | | With threaded connecting plates | |
| | | G ¹ / ₈ | 526 300 LF- ¹ / ₈ -D-5M-MICRO-H |
| | | With connecting plate and push-in fitting | |
| | | QS4 | 526 306 LF-QS4-D-5M-MICRO-H |
| | | QS6 | 526 308 LF-QS6-D-5M-MICRO-H |

| Ordering data | | | | | |
|---|------|--------------------------|----------------|---------------------------|-------------|
| Input pressure 0 ... 16 bar, metal bowl guard | | | | | |
| Condensate drain | Size | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | |
| Turned manually | Mini | 192 557 | LF-D-5M-MINI | 192 551 | LF-D-MINI |
| | Midi | 192 558 | LF-D-5M-MIDI | 192 552 | LF-D-MIDI |
| | Maxi | 192 559 | LF-D-5M-MAXI | 192 553 | LF-D-MAXI |
| Fully automatic | Mini | 192 560 | LF-D-5M-MINI-A | 192 554 | LF-D-MINI-A |
| | Midi | 192 561 | LF-D-5M-MIDI-A | 192 555 | LF-D-MIDI-A |
| | Maxi | 192 562 | LF-D-5M-MAXI-A | 192 556 | LF-D-MAXI-A |

D series service units
Filters

1.3

Filters LF, D series

Technical data

FESTO

| Ordering data | | | | | | |
|---|------|-----------------|--------------------------|--------------------------------|---------------------------|-----------------------------|
| Input pressure 0 ... 16 bar, metal bowl guard | | | | | | |
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
| | | | Part No. | Type | Part No. | Type |
| With threaded connecting plates | | | | | | |
| Turned manually | Mini | G $\frac{1}{8}$ | 162 610 | LF- $\frac{1}{8}$ -D-5M-MINI | 159 612 | LF- $\frac{1}{8}$ -D-MINI |
| | | G $\frac{1}{4}$ | 162 611 | LF- $\frac{1}{4}$ -D-5M-MINI | 159 613 | LF- $\frac{1}{4}$ -D-MINI |
| | | G $\frac{3}{8}$ | 162 612 | LF- $\frac{3}{8}$ -D-5M-MINI | 162 606 | LF- $\frac{3}{8}$ -D-MINI |
| | Midi | G $\frac{1}{4}$ | 186 460 | LF- $\frac{1}{4}$ -D-5M-MIDI | 186 459 | LF- $\frac{1}{4}$ -D-MIDI |
| | | G $\frac{3}{8}$ | 162 613 | LF- $\frac{3}{8}$ -D-5M-MIDI | 159 576 | LF- $\frac{3}{8}$ -D-MIDI |
| | | G $\frac{1}{2}$ | 162 614 | LF- $\frac{1}{2}$ -D-5M-MIDI | 159 578 | LF- $\frac{1}{2}$ -D-MIDI |
| | | G $\frac{3}{4}$ | 162 615 | LF- $\frac{3}{4}$ -D-5M-MIDI | 162 607 | LF- $\frac{3}{4}$ -D-MIDI |
| | Maxi | G $\frac{1}{2}$ | 186 464 | LF- $\frac{1}{2}$ -D-5M-MAXI | 186 463 | LF- $\frac{1}{2}$ -D-MAXI |
| | | G $\frac{3}{4}$ | 162 616 | LF- $\frac{3}{4}$ -D-5M-MAXI | 159 614 | LF- $\frac{3}{4}$ -D-MAXI |
| | | G1 | 162 617 | LF-1-D-5M-MAXI | 159 615 | LF-1-D-MAXI |
| Fully automatic | | | | | | |
| | Mini | G $\frac{1}{8}$ | 162 618 | LF- $\frac{1}{8}$ -D-5M-MINI-A | 159 616 | LF- $\frac{1}{8}$ -D-MINI-A |
| | | G $\frac{1}{4}$ | 162 619 | LF- $\frac{1}{4}$ -D-5M-MINI-A | 159 617 | LF- $\frac{1}{4}$ -D-MINI-A |
| | | G $\frac{3}{8}$ | 162 620 | LF- $\frac{3}{8}$ -D-5M-MINI-A | 162 608 | LF- $\frac{3}{8}$ -D-MINI-A |
| | Midi | G $\frac{1}{4}$ | 186 462 | LF- $\frac{1}{4}$ -D-5M-MIDI-A | 186 461 | LF- $\frac{1}{4}$ -D-MIDI-A |
| | | G $\frac{3}{8}$ | 162 621 | LF- $\frac{3}{8}$ -D-5M-MIDI-A | 159 577 | LF- $\frac{3}{8}$ -D-MIDI-A |
| | | G $\frac{1}{2}$ | 162 622 | LF- $\frac{1}{2}$ -D-5M-MIDI-A | 159 579 | LF- $\frac{1}{2}$ -D-MIDI-A |
| | | G $\frac{3}{4}$ | 162 623 | LF- $\frac{3}{4}$ -D-5M-MIDI-A | 162 609 | LF- $\frac{3}{4}$ -D-MIDI-A |
| | Maxi | G $\frac{1}{2}$ | 186 466 | LF- $\frac{1}{2}$ -D-5M-MAXI-A | 186 465 | LF- $\frac{1}{2}$ -D-MAXI-A |
| | | G $\frac{3}{4}$ | 162 624 | LF- $\frac{3}{4}$ -D-5M-MAXI-A | 159 618 | LF- $\frac{3}{4}$ -D-MAXI-A |
| | | G1 | 162 625 | LF-1-D-5M-MAXI-A | 159 619 | LF-1-D-MAXI-A |

Fine and micro filters LFMA/LFMB, D series

Peripherals overview

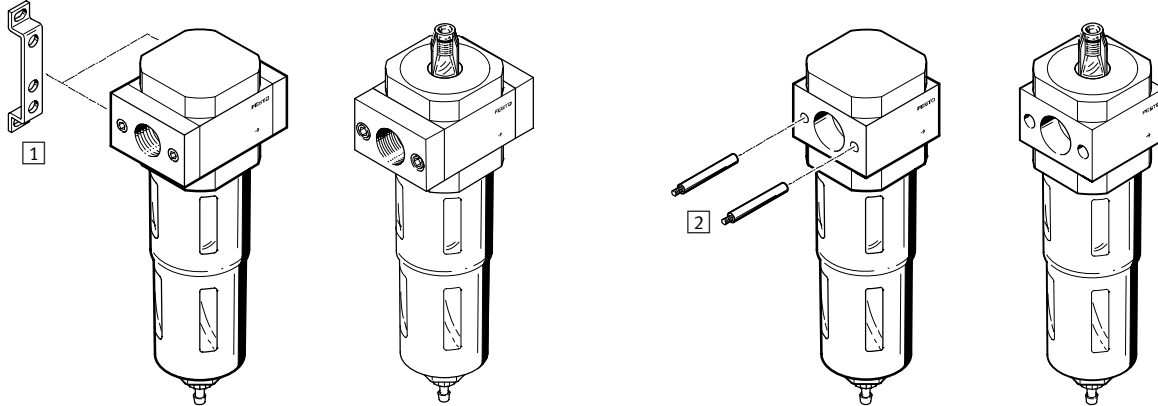
Mini/Midi/Maxi

Individual unit with connection plates without differential pressure indicator

with differential pressure indicator

Individual unit without connection plates, for service unit combination without differential pressure indicator

with differential pressure indicator

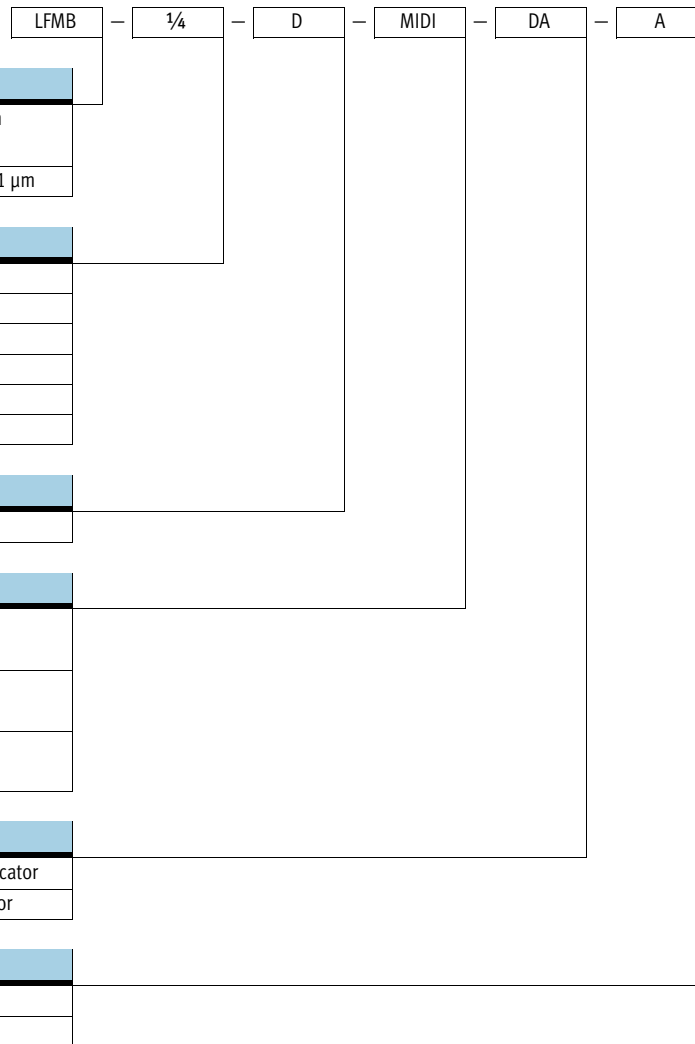


Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |

Fine and micro filters LFMA/LFMB, D series

Type codes

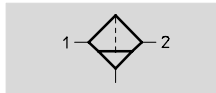


Fine and micro filters LFMA/LFMB, D series

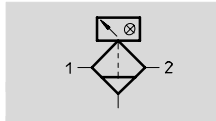
Technical data

Function

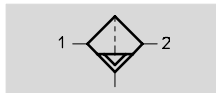
Condensate drain
turned manually
without differential pressure indicator



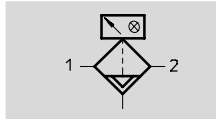
with differential pressure indicator






Condensate drain
fully automatic
without differential pressure indicator



with differential pressure indicator



-  - Flow rate
130 ... 1250 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
1 ... 16 bar



- High efficiency filter for special requirements
- Choice of filter cartridges: 0.01 µm or 1 µm
- Air quality to DIN ISO 8573-1
- With or without threaded connecting plates
- Version with differential pressure indicator for optical indication of filter pollution

LFMA:
DIN ISO class 1 for particles:
max. particle density 0.1 mg/m³
DIN ISO class 2 for oil aerosols:
max. oil concentration 0.1 mg/m³
Filter efficiency 99.9999%

LFMB:
DIN ISO class 2 for particles:
max. particle density 1 mg/m³
DIN ISO class 3 for oil aerosols:
max. oil concentration 1 mg/m³
Filter efficiency 99.99%

| General technical data | | | | | | | | | | |
|---|---|------------|------|------|------|------|------|------|------|----|
| Size | Mini | | | Midi | | | | Maxi | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 |
| Design | Fibre filter | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | | | | | |
| Operating medium | | | | | | | | | | |
| Micro filter LFMA | Filtered compressed air, lubricated or unlubricated, grade of filtration 1 µm | | | | | | | | | |
| Fine filter LFMB | Filtered compressed air, lubricated or unlubricated, grade of filtration 5 µm | | | | | | | | | |
| Grade of filtration [µm] | | | | | | | | | | |
| Micro filter LFMA | 0.01 | | | | | | | | | |
| Fine filter LFMB | 1 | | | | | | | | | |
| Residual oil content [mg/m ³] | | | | | | | | | | |
| Micro filter LFMA | ≤0.01 | | | | | | | | | |
| Fine filter LFMB | ≤0.5 | | | | | | | | | |
| Input pressure [bar] | | | | | | | | | | |
| Condensate drain | turned manually | 1 ... 16 | | | | | | | | |
| | fully automatic | 1.5 ... 12 | | | | | | | | |
| Max. condensate volume [cm ³] | | | | | | | | | | |
| Micro filter LFMA/fine filter LFMB | 22 | | | 43 | | | | 80 | | |

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

Fine and micro filters LFMA/LFMB, D series

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | | | | | |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------|
| Connection | Mini | | | Midi | | | | Maxi | | |
| | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G ¹ / ₂ | G ³ / ₄ | G1 |
| Micro filter LFMA | 130 | 160 | 180 | 350 | 380 | 400 | 460 | 750 | 900 | 950 |
| Fine filter LFMB | 250 | 300 | 310 | 500 | 700 | 900 | 1000 | 1150 | 1200 | 1250 |

1) Measured at p₁ = 6 bar and Δp = 70 mbar.
A minimum flow rate of 125 l/min is required for flawless functioning.

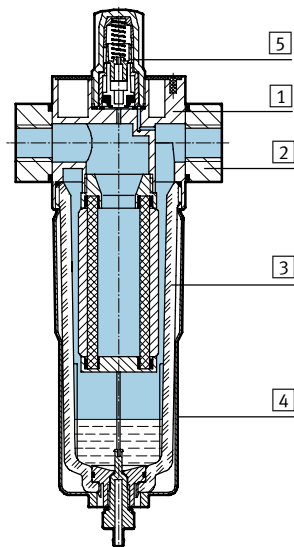
| Ambient conditions | | | | |
|----------------------------|-------------------|--------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | +1.5 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | |
|---|------|------|------|
| Size | Mini | Midi | Maxi |
| Without differential pressure indicator | 250 | 650 | 1200 |
| With differential pressure indicator | 368 | 834 | 1340 |

Materials

Sectional view



| Fine and micro filters | | |
|------------------------|--|-------------------------|
| 1 | Housing | Die-cast zinc |
| 2 | Connecting plates | Aluminium |
| 3 | Bowl | Polycarbonate |
| 4 | Metal bowl guard | Aluminium |
| 5 | Housing for version with differential pressure indicator | Polycarbonate |
| - | Seals | Nitrile rubber |
| | Note on materials | Free of copper and PTFE |

Fine and micro filters LFMA/LFMB, D series

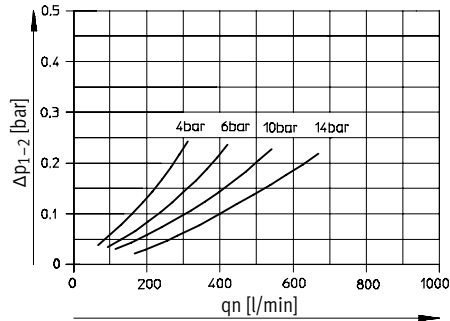
Technical data

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

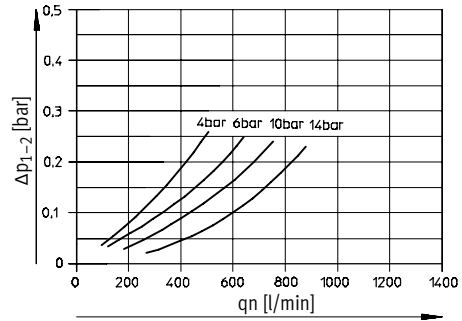
Grade of filtration 0.01 μm

Grade of filtration 1 μm

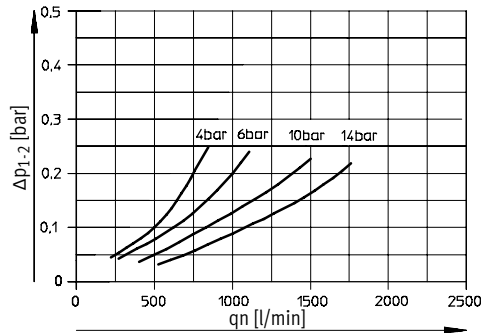
LFMA-1/4-D-MINI and LFMA-1/4-D-MINI-A



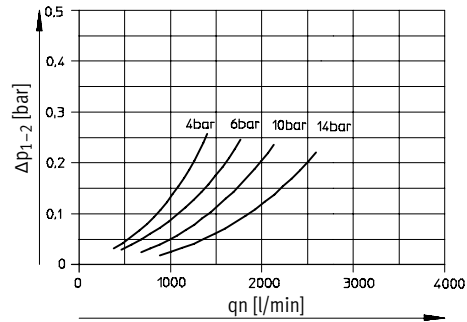
LFMB-1/4-D-MINI and LFMB-1/4-D-MINI-A



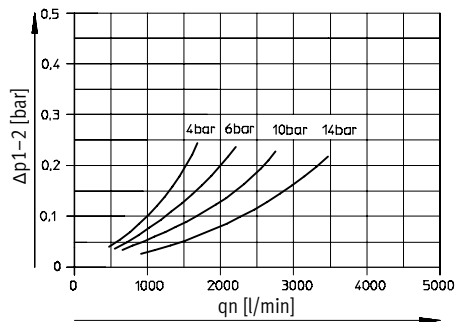
LFMA-1/2-D-MIDI and LFMA-1/2-D-MIDI-A



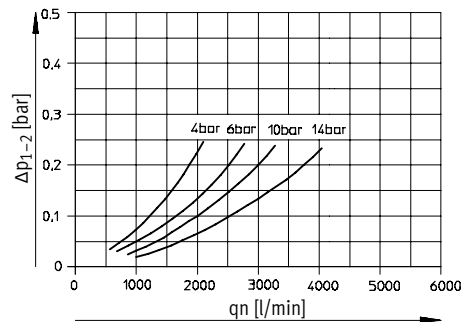
LFMB-1/2-D-MIDI and LFMB-1/2-D-MIDI-A



LFMA-1-D-MAXI and LFMA-1-D-MAXI-A



LFMB-1-D-MAXI and LFMB-1-D-MAXI-A



Fine and micro filters LFMA/LFMB, D series

Technical data



Dimensions

With threaded connecting plates

Download CAD data → www.festo.com/en/engineering

Without threaded connecting plates

1 Barbed fitting for plastic tubing type PCN-4

2 Metal bowl guard

3 Installation dimensions

4 Threaded pin (exchangeable)

→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | L8 | L9 | T1 | T2 | ∅ 2 |
|-------------------|-----|----|----|----|-----|------|----|----|----|----|----|-----|-----|----|----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 38 | 20 | 11 | 144 | 124 | 60 | 15 | 19 | 7 | - | 22 |
| LFMB/A-1/4-D-MINI | | | | | | G3/8 | | | | | | | | | | | | | |
| LFMB/A-3/8-D-MINI | 70 | | | | 5.8 | - | 11 | | | - | - | | | | | | - | 10 | |
| LFMB/A-D-MINI | - | - | | | | | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 52 | 32 | 22 | 179 | 151 | 80 | 15 | 19 | 8 | - | 24 |
| LFMB/A-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | | | | |
| LFMB/A-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | | | | | |
| LFMB/A-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | | | | |
| LFMB/A-D-MIDI | - | - | | | 6.8 | - | 24 | | | - | - | | | | | | - | 11 | |
| Maxi | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 65 | 32 | 22 | 203 | 170 | 90 | 15 | 19 | 8 | - | 24 |
| LFMB/A-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | | | | |
| LFMB/A-1-D-MAXI | 116 | 91 | | | | | | | | 40 | | | | | | | | | |
| LFMB/A-D-MAXI | - | - | | | 6.8 | - | 30 | | | - | - | | | | | | | - | 11 |

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

Fine and micro filters LFMA/LFMB, D series

Technical data

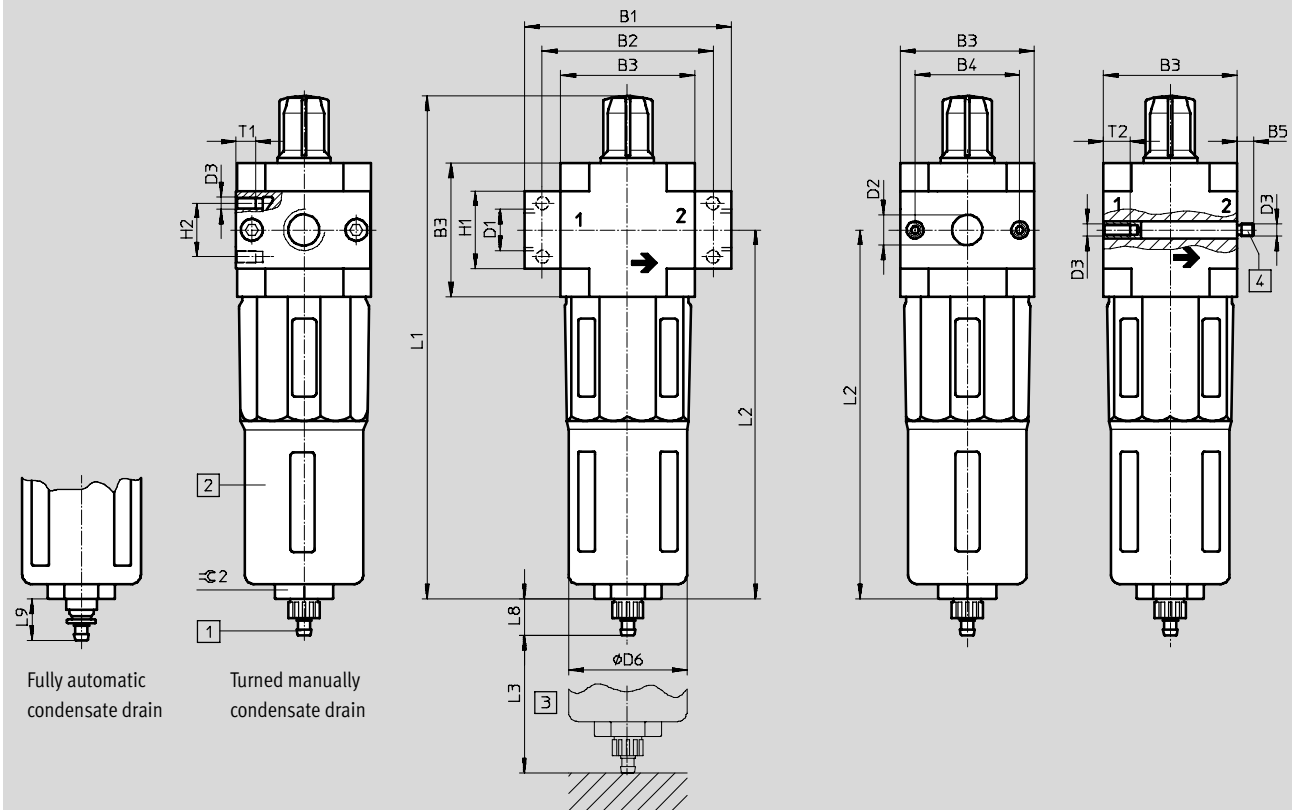


Dimensions with differential pressure indicator DA

Download CAD data → www.festo.com/en/engineering

With threaded connecting plates

Without threaded connecting plates



- 1 Barbed fitting for plastic tubing type PCN-4
- 2 Metal bowl guard
- 3 Installation dimensions
- 4 Threaded pin (exchangeable)
- Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | L8 | L9 | T1 | T2 | $\varnothing 2$ |
|----------------------|-----|----|----|----|-----|------|----|----|----|----|----|-----|-----|----|----|----|----|----|-----------------|
| Mini | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/8-D-MINI-DA | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 38 | 20 | 11 | 173 | 124 | 60 | 15 | 19 | 7 | - | 22 |
| LFMB/A-1/4-D-MINI-DA | | | | | | G1/4 | | | | | | | | | | | | | |
| LFMB/A-3/8-D-MINI-DA | 70 | | | | | G3/8 | | | | | | | | | | | | | |
| LFMB/A-D-MINI-DA | - | - | | | 5.8 | - | 11 | | | - | - | | | | | | - | 10 | |
| Midi | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/4-D-MIDI-DA | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 52 | 32 | 22 | 207 | 151 | 80 | 15 | 19 | 8 | - | 24 |
| LFMB/A-3/8-D-MIDI-DA | | | | | | G3/8 | | | | | | | | | | | | | |
| LFMB/A-1/2-D-MIDI-DA | | | | | | G1/2 | | | | | | | | | | | | | |
| LFMB/A-3/4-D-MIDI-DA | | | | | | G3/4 | | | | | | | | | | | | | |
| LFMB/A-D-MIDI-DA | - | - | | | 6.8 | - | 24 | | | - | - | | | | | | - | 11 | |
| Maxi | | | | | | | | | | | | | | | | | | | |
| LFMB/A-1/2-D-MAXI-DA | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 65 | 32 | 22 | 232 | 170 | 90 | 15 | 19 | 8 | - | 24 |
| LFMB/A-3/4-D-MAXI-DA | | | | | | G3/4 | | | | | | | | | | | | | |
| LFMB/A-1-D-MAXI-DA | 116 | 91 | | | | G1 | | | | 40 | | | | | | | | | |
| LFMB/A-D-MAXI-DA | - | - | | | 6.8 | - | 30 | | | - | - | | | | | | - | 11 | |

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

Fine and micro filters LFMA/LFMB, D series

FESTO

Technical data

| Ordering data – Micro filter LFMA | | | | | |
|---|-----------------|----------------------------------|-----------------------------|----------------------------------|-------------------------------|
| Grade of filtration 0.01 µm, metal bowl guard | | | | | |
| Size | Connection | Input pressure 1 ... 16 bar | | Input pressure 1.5 ... 12 bar | |
| | | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | |
| Mini | | 192 563 | LFMA-D-MINI | 192 566 | LFMA-D-MINI-A |
| Midi | | 192 564 | LFMA-D-MIDI | 192 567 | LFMA-D-MIDI-A |
| Maxi | | 192 565 | LFMA-D-MAXI | 192 568 | LFMA-D-MAXI-A |
| With threaded connecting plates | | | | | |
| Mini | G $\frac{1}{8}$ | 162 642 | LFMA- $\frac{1}{8}$ -D-MINI | 162 650 | LFMA- $\frac{1}{8}$ -D-MINI-A |
| | G $\frac{1}{4}$ | 162 643 | LFMA- $\frac{1}{4}$ -D-MINI | 162 651 | LFMA- $\frac{1}{4}$ -D-MINI-A |
| | G $\frac{3}{8}$ | 162 644 | LFMA- $\frac{3}{8}$ -D-MINI | 162 652 | LFMA- $\frac{3}{8}$ -D-MINI-A |
| Midi | G $\frac{1}{4}$ | 186 469 | LFMA- $\frac{1}{4}$ -D-MIDI | 186 470 | LFMA- $\frac{1}{4}$ -D-MIDI-A |
| | G $\frac{3}{8}$ | 162 645 | LFMA- $\frac{3}{8}$ -D-MIDI | 162 653 | LFMA- $\frac{3}{8}$ -D-MIDI-A |
| | G $\frac{1}{2}$ | 162 646 | LFMA- $\frac{1}{2}$ -D-MIDI | 162 654 | LFMA- $\frac{1}{2}$ -D-MIDI-A |
| | G $\frac{3}{4}$ | 162 647 | LFMA- $\frac{3}{4}$ -D-MIDI | 162 655 | LFMA- $\frac{3}{4}$ -D-MIDI-A |
| Maxi | G $\frac{1}{2}$ | 186 476 | LFMA- $\frac{1}{2}$ -D-MAXI | 186 475 | LFMA- $\frac{1}{2}$ -D-MAXI-A |
| | G $\frac{3}{4}$ | 162 648 | LFMA- $\frac{3}{4}$ -D-MAXI | 162 656 | LFMA- $\frac{3}{4}$ -D-MAXI-A |
| | G1 | 162 649 | LFMA-1-D-MAXI | 162 657 | LFMA-1-D-MAXI-A |

| Ordering data – Fine filter LFMB | | | | | |
|--|-----------------|----------------------------------|-----------------------------|----------------------------------|-------------------------------|
| Grade of filtration 1 µm, metal bowl guard | | | | | |
| Size | Connection | Input pressure 1 ... 16 bar | | Input pressure 1.5 ... 12 bar | |
| | | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | |
| Mini | | 192 569 | LFMB-D-MINI | 192 572 | LFMB-D-MINI-A |
| Midi | | 192 570 | LFMB-D-MIDI | 192 573 | LFMB-D-MIDI-A |
| Maxi | | 192 571 | LFMB-D-MAXI | 192 574 | LFMB-D-MAXI-A |
| With threaded connecting plates | | | | | |
| Mini | G $\frac{1}{8}$ | 162 626 | LFMB- $\frac{1}{8}$ -D-MINI | 162 634 | LFMB- $\frac{1}{8}$ -D-MINI-A |
| | G $\frac{1}{4}$ | 162 627 | LFMB- $\frac{1}{4}$ -D-MINI | 162 635 | LFMB- $\frac{1}{4}$ -D-MINI-A |
| | G $\frac{3}{8}$ | 162 628 | LFMB- $\frac{3}{8}$ -D-MINI | 162 636 | LFMB- $\frac{3}{8}$ -D-MINI-A |
| Midi | G $\frac{1}{4}$ | 186 467 | LFMB- $\frac{1}{4}$ -D-MIDI | 186 468 | LFMB- $\frac{1}{4}$ -D-MIDI-A |
| | G $\frac{3}{8}$ | 162 629 | LFMB- $\frac{3}{8}$ -D-MIDI | 162 637 | LFMB- $\frac{3}{8}$ -D-MIDI-A |
| | G $\frac{1}{2}$ | 162 630 | LFMB- $\frac{1}{2}$ -D-MIDI | 162 638 | LFMB- $\frac{1}{2}$ -D-MIDI-A |
| | G $\frac{3}{4}$ | 162 631 | LFMB- $\frac{3}{4}$ -D-MIDI | 162 639 | LFMB- $\frac{3}{4}$ -D-MIDI-A |
| Maxi | G $\frac{1}{2}$ | 186 473 | LFMB- $\frac{1}{2}$ -D-MAXI | 186 474 | LFMB- $\frac{1}{2}$ -D-MAXI-A |
| | G $\frac{3}{4}$ | 162 632 | LFMB- $\frac{3}{4}$ -D-MAXI | 162 640 | LFMB- $\frac{3}{4}$ -D-MAXI-A |
| | G1 | 162 633 | LFMB-1-D-MAXI | 162 641 | LFMB-1-D-MAXI-A |

Fine and micro filters LFMA/LFMB, D series

FESTO

Technical data

| Ordering data – Micro filter LFMA with differential pressure indicator DA | | | | | |
|---|------------|----------------------------------|--------------------|----------------------------------|----------------------|
| Working pressure 12 bar, grade of filtration 0.01 µm, metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | |
| Mini | | 532 837 | LFMA-D-MINI-DA | 532 840 | LFMA-D-MINI-DA-A |
| Midi | | 532 838 | LFMA-D-MIDI-DA | 532 841 | LFMA-D-MIDI-DA-A |
| Maxi | | 532 839 | LFMA-D-MAXI-DA | 532 842 | LFMA-D-MAXI-DA-A |
| With threaded connecting plates | | | | | |
| Mini | G1/8 | 532 843 | LFMA-1/8-D-MINI-DA | 532 853 | LFMA-1/8-D-MINI-DA-A |
| | G1/4 | 532 844 | LFMA-1/4-D-MINI-DA | 532 854 | LFMA-1/4-D-MINI-DA-A |
| | G3/8 | 532 845 | LFMA-3/8-D-MINI-DA | 532 855 | LFMA-3/8-D-MINI-DA-A |
| Midi | G1/4 | 532 846 | LFMA-1/4-D-MIDI-DA | 532 856 | LFMA-1/4-D-MIDI-DA-A |
| | G3/8 | 532 847 | LFMA-3/8-D-MIDI-DA | 532 857 | LFMA-3/8-D-MIDI-DA-A |
| | G1/2 | 532 848 | LFMA-1/2-D-MIDI-DA | 532 858 | LFMA-1/2-D-MIDI-DA-A |
| | G3/4 | 532 849 | LFMA-3/4-D-MIDI-DA | 532 859 | LFMA-3/4-D-MIDI-DA-A |
| Maxi | G1/2 | 532 850 | LFMA-1/2-D-MAXI-DA | 532 860 | LFMA-1/2-D-MAXI-DA-A |
| | G3/4 | 532 851 | LFMA-3/4-D-MAXI-DA | 532 861 | LFMA-3/4-D-MAXI-DA-A |
| | G1 | 532 852 | LFMA-1-D-MAXI-DA | 532 862 | LFMA-1-D-MAXI-DA-A |

| Ordering data – Fine filter LFMB with differential pressure indicator DA | | | | | |
|--|------------|----------------------------------|--------------------|----------------------------------|----------------------|
| Working pressure 12 bar, grade of filtration 1 µm, metal bowl guard | | | | | |
| Size | Connection | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | |
| Mini | | 532 811 | LFMB-D-MINI-DA | 532 814 | LFMB-D-MINI-DA-A |
| Midi | | 532 812 | LFMB-D-MIDI-DA | 532 815 | LFMB-D-MIDI-DA-A |
| Maxi | | 532 813 | LFMB-D-MAXI-DA | 532 816 | LFMB-D-MAXI-DA-A |
| With threaded connecting plates | | | | | |
| Mini | G1/8 | 532 817 | LFMB-1/8-D-MINI-DA | 532 827 | LFMB-1/8-D-MINI-DA-A |
| | G1/4 | 532 818 | LFMB-1/4-D-MINI-DA | 532 828 | LFMB-1/4-D-MINI-DA-A |
| | G3/8 | 532 819 | LFMB-3/8-D-MINI-DA | 532 829 | LFMB-3/8-D-MINI-DA-A |
| Midi | G1/4 | 532 820 | LFMB-1/4-D-MIDI-DA | 532 830 | LFMB-1/4-D-MIDI-DA-A |
| | G3/8 | 532 821 | LFMB-3/8-D-MIDI-DA | 532 831 | LFMB-3/8-D-MIDI-DA-A |
| | G1/2 | 532 822 | LFMB-1/2-D-MIDI-DA | 532 832 | LFMB-1/2-D-MIDI-DA-A |
| | G3/4 | 532 823 | LFMB-3/4-D-MIDI-DA | 532 833 | LFMB-3/4-D-MIDI-DA-A |
| Maxi | G1/2 | 532 824 | LFMB-1/2-D-MAXI-DA | 532 834 | LFMB-1/2-D-MAXI-DA-A |
| | G3/4 | 532 825 | LFMB-3/4-D-MAXI-DA | 532 835 | LFMB-3/4-D-MAXI-DA-A |
| | G1 | 532 826 | LFMB-1-D-MAXI-DA | 532 836 | LFMB-1-D-MAXI-DA-A |

116.Active carbon filters LFX, D series

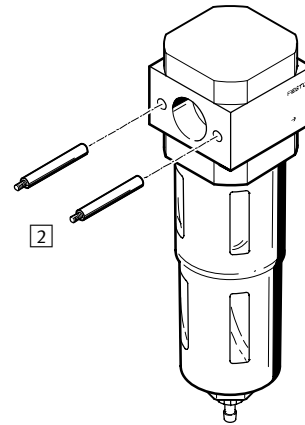
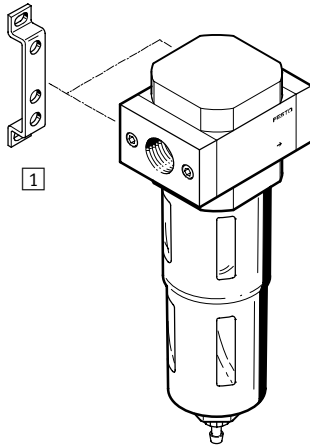
Peripherals overview and type codes



Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |

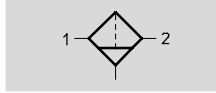
| | | LFX | - | 1/4 | - | D | - | MIDI |
|-----------------------------|--|------|---|--|---|---|---|------|
| Basic function | | LFX | | Activated carbon filters | | | | |
| Pneumatic connection | | 1/8 | | Thread G1/8 | | | | |
| | | 1/4 | | Thread G1/4 | | | | |
| | | 3/8 | | Thread G3/8 | | | | |
| | | 1/2 | | Thread G1/2 | | | | |
| | | 3/4 | | Thread G3/4 | | | | |
| | | 1 | | Thread G1 | | | | |
| Series | | D | | Series | | | | |
| Size | | MINI | | Grid dimension 40 mm (without connection plates) | | | | |
| | | MIDI | | Grid dimension 55 mm (without connection plates) | | | | |
| | | MAXI | | Grid dimension 66 mm (without connection plates) | | | | |




Active carbon filters LFX, D series

Technical data

Function

Condensate drain turned manually



-  - Flow rate
300 ... 1430 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
0 ... 16 bar



- Removal of liquid and gaseous oil particles from compressed air using active carbon
- Active carbon filter cartridges provide odour and oil-free air to food industry standard
- Prefiltration down to a particle size of 0.01µm is recommended

| General technical data | | | | | | | | | | | |
|--------------------------------|---|------|------|------|------|------|------|------|------|----|--|
| Size | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Operating medium | Compressed air, filtered, unlubricated, grade of filtration 0.01 µm | | | | | | | | | | |
| Design | Fibre filter (filter fabric made of active carbon) | | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | | | | | | |
| Residual oil content [mg/m³] | ≤0.003 | | | | | | | | | | |
| Air purity class at the output | 1.7.1 to DIN ISO 8573-1 | | | | | | | | | | |
| Input pressure [bar] | 0 ... 16 | | | | | | | | | | |

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

| Standard nominal flow rate ¹⁾ qnN and standard flow rate qn [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| qnN | 300 | 330 | 400 | - | - | - |
| qn max | 360 | 360 | 360 | - | - | - |
| Midi | | | | | | |
| qnN | - | 650 | 950 | 1050 | 1100 | - |
| qn max | - | 900 | 900 | 900 | 900 | - |
| Maxi | | | | | | |
| qnN | - | - | - | 1350 | 1400 | 1430 |
| qn max | - | - | - | 1100 | 1100 | 1100 |

1) Measured at p1 = 6 bar and Δp = 70 mbar.
A minimum flow rate of 125 l/min is required for flawless functioning.

| Ambient conditions | | | |
|--|----------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | -10 ... +60 °C | | |
| Temperature of medium [°C] | +5 ... +30 °C | | |
| Corrosion resistance class 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.

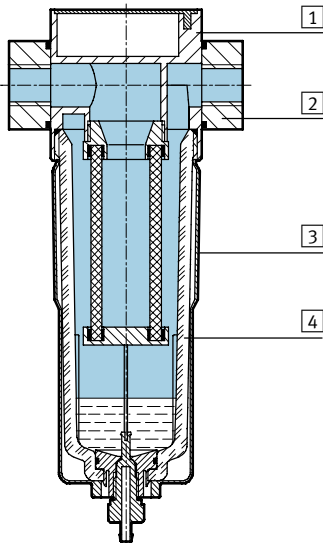
Active carbon filters LFX, D series

Technical data

| Weight [g] | | | |
|---------------------------|------|------|------|
| Size | Mini | Midi | Maxi |
| With connecting plates | 376 | 816 | 1191 |
| Without connecting plates | 283 | 600 | 921 |

Materials

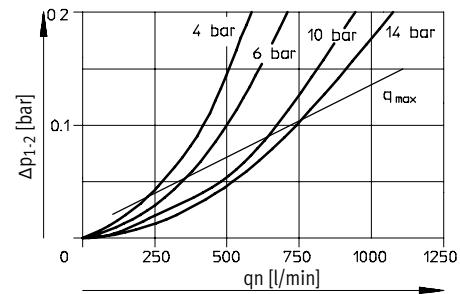
Sectional view



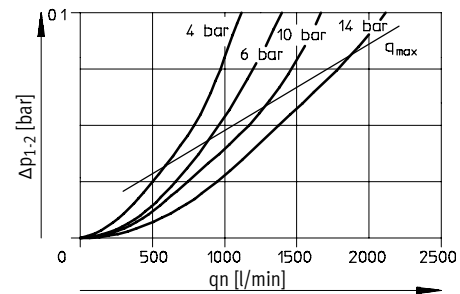
| Active carbon filter | | |
|----------------------|-------------------|-----------------------------------|
| 1 | Housing | Die-cast zinc |
| 2 | Connecting plates | Aluminium |
| 3 | Bowl | Polycarbonate |
| 4 | Metal bowl guard | Aluminium |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

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

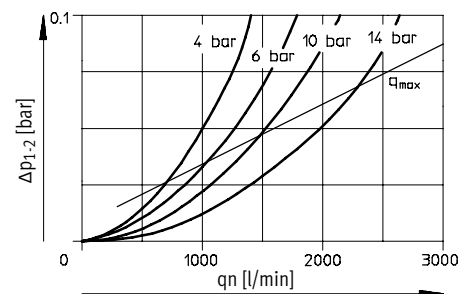
LFX-1/4-D-MINI



LFX-1/2-D-MIDI



LFX-1-D-MAXI



Active carbon filters LFX, D series

Technical data

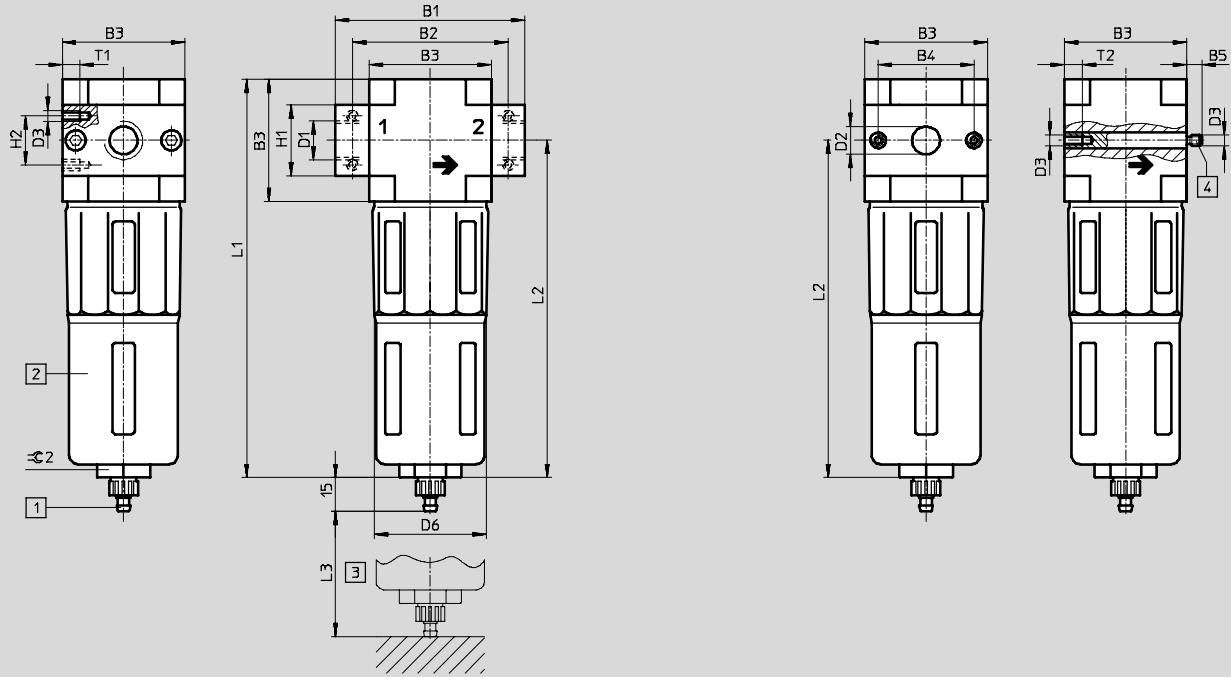


Dimensions

Download CAD data → www.festo.com/en/engineering

With threaded connecting plates

Without threaded connecting plates



- 1 Barbed fitting for plastic tubing type PCN-4
- 2 Metal bowl guard
- 3 Installation dimensions
- 4 Threaded pin (exchangeable)
- Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | T1 | T2 | ⌀ 2 |
|----------------|-----|----|----|----|-----|------|----|----|----|----|----|-----|-----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| LFX-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 38 | 20 | 11 | 144 | 124 | 60 | 7 | - | 22 |
| LFX-1/4-D-MINI | | | | | | G3/8 | | | | | | | | | | | |
| LFX-3/8-D-MINI | 70 | | | | | G3/8 | | | | | | | | | | | |
| LFX-D-MINI | - | - | | | 5.8 | - | 11 | - | | | | | | | | 10 | |
| Midi | | | | | | | | | | | | | | | | | |
| LFX-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 52 | 32 | 22 | 179 | 151 | 80 | 8 | - | 24 |
| LFX-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | | |
| LFX-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | | | |
| LFX-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | | |
| LFX-D-MIDI | - | - | | | 6.8 | - | 24 | | | | | | | | | 11 | |
| Maxi | | | | | | | | | | | | | | | | | |
| LFX-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 65 | 32 | 22 | 203 | 170 | 90 | 8 | - | 24 |
| LFX-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | | |
| LFX-1-D-MAXI | 116 | 91 | | | | G1 | | | | 40 | | | | | | | |
| LFX-D-MAXI | - | - | | | 6.8 | - | 30 | | | | | | | | | 11 | |

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

Active carbon filters LFX, D series

FESTO

Technical data

| Ordering data | | |
|--|----------|------------|
| Active carbon filter with metal bowl guard | | |
| Size | Part No. | Type |
| Without threaded connecting plates | | |
| Mini | 532 776 | LFX-D-MINI |
| Midi | 532 777 | LFX-D-MIDI |
| Maxi | 532 778 | LFX-D-MAXI |

| Ordering data | | | |
|--|-----------------|----------|----------------------------|
| Active carbon filter with metal bowl guard | | | |
| Size | Connection | Part No. | Type |
| With threaded connecting plates | | | |
| Mini | G $\frac{1}{8}$ | 532 779 | LFX- $\frac{1}{8}$ -D-MINI |
| | G $\frac{1}{4}$ | 532 802 | LFX- $\frac{1}{4}$ -D-MINI |
| | G $\frac{3}{8}$ | 532 780 | LFX- $\frac{3}{8}$ -D-MINI |
| Midi | G $\frac{1}{4}$ | 532 781 | LFX- $\frac{1}{4}$ -D-MIDI |
| | G $\frac{3}{8}$ | 532 782 | LFX- $\frac{3}{8}$ -D-MIDI |
| | G $\frac{1}{2}$ | 532 783 | LFX- $\frac{1}{2}$ -D-MIDI |
| | G $\frac{3}{4}$ | 532 784 | LFX- $\frac{3}{4}$ -D-MIDI |
| Maxi | G $\frac{1}{2}$ | 532 785 | LFX- $\frac{1}{2}$ -D-MAXI |
| | G $\frac{3}{4}$ | 532 786 | LFX- $\frac{3}{4}$ -D-MAXI |
| | G1 | 532 787 | LFX-1-D-MAXI |

| Ordering data | | |
|--------------------------------|----------|----------------|
| Active carbon filter cartridge | | |
| Size | Part No. | Type |
| Mini | 532 912 | MS4/D-MINI-LFX |
| Midi | 532 788 | LFACP-MIDI |
| Maxi | 532 789 | LFACP-MAXI |

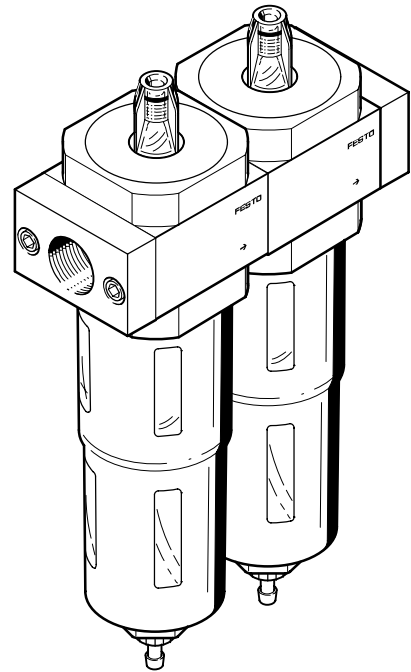
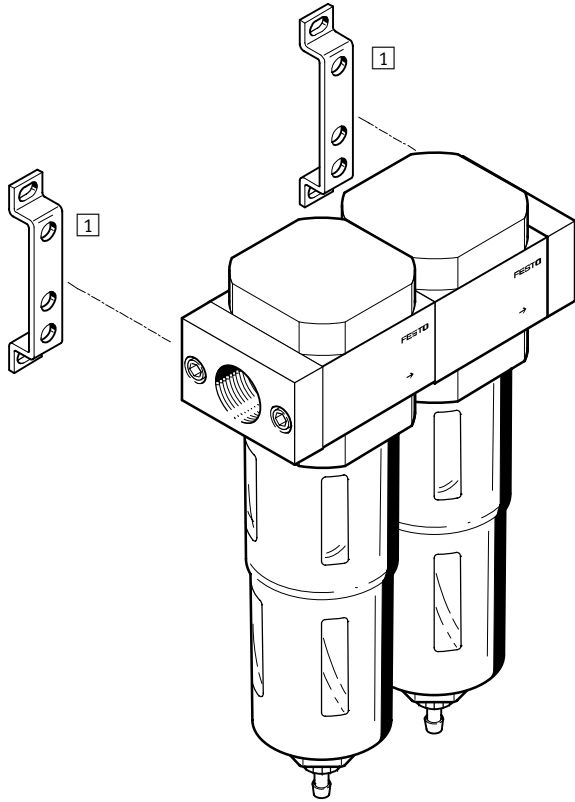
Filter combinations LFMBA, D series

Peripherals overview

Mini/Midi/Maxi

without differential pressure indicator

with differential pressure indicator



Mounting components

→ Page

1 Mounting bracket
HFOE

3 / 1.8-9

Filter combinations LFMBA, D series

Type codes

LFMBA – 1/4 – D – MIDI – DA – A

Basic function

| | |
|-------|--------------------|
| LFMBA | Filter combination |
|-------|--------------------|

Pneumatic connection

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

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Size

| | |
|------|---|
| MINI | Grid dimension 40 mm (without connecting plates) |
| MIDI | Grid dimension 55 mm (without connecting plates) |
| MAXI | Grid dimension 60 mm (without connecting plates) |

Filter change sensor

| | |
|----|---|
| | Without differential pressure indicator |
| DA | With differential pressure indicator |

Condensate drain

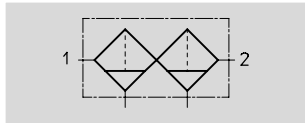
| | |
|---|-----------------|
| | Turned manually |
| A | Fully automatic |

Filter combinations LFMB, D series

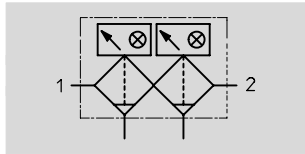
Technical data

Function

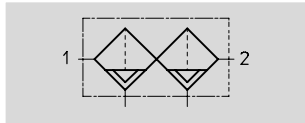
Condensate drain
turned manually
without differential pressure indicator



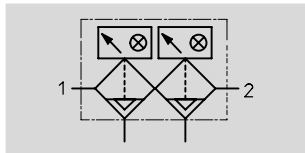
with differential pressure indicator






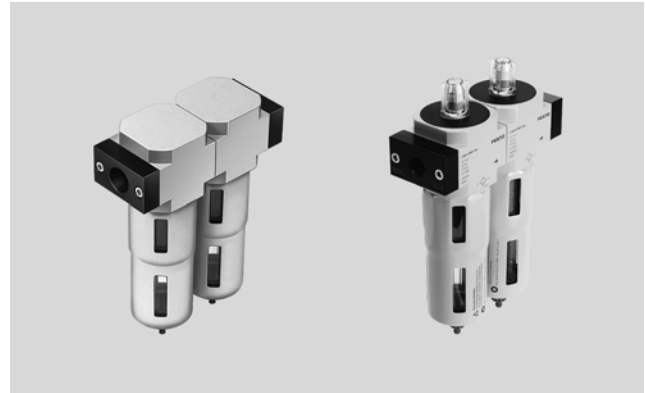
Condensate drain
fully automatic
without differential pressure indicator



with differential pressure indicator



-  Flow rate
125 ... 600 l/min
-  Temperature range
-10 ... +60 °C
-  Input pressure
1 ... 16 bar



- High efficiency filter for special requirements
- Filter cartridges with 1 µm and 0.01 µm
- Air quality to DIN ISO 8573-1
- Available as pre-assembled filter combination
- Version with differential pressure indicator for optical indication of filter pollution


DIN ISO class 1 for particles:
max. particle density 0.1 mg/m³
DIN ISO class 2 for oil aerosols:
max. oil concentration 0.1 mg/m³
Filter efficiency 99.9999%

| General technical data | | | | | | | | | | |
|---|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----|
| Size | Mini | | | Midi | | | | Maxi | | |
| Pneumatic connection | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G ¹ / ₂ | G ³ / ₄ | G1 |
| Operating medium | Filtered compressed air, lubricated or unlubricated | | | | | | | | | |
| Design | Fibre filter | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | | | | | |
| Grade of filtration [µm] | 0.01 and 1 | | | | | | | | | |
| Residual oil content [mg/m ³] | ≤0.01 | | | | | | | | | |
| Max. condensate volume [cm ³] | 22 | | | 43 | | | | 80 | | |
| Input pressure [bar] | | | | | | | | | | |
| Condensate drain | | | | | | | | | | |
| turned manually | 1 ... 16 | | | | | | | | | |
| fully automatic | 1.5 ... 12 | | | | | | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | | | | | |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----|
| Connection | Mini | | | Midi | | | | Maxi | | |
| | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G ¹ / ₂ | G ³ / ₄ | G1 |
| LFMBA | 125 | 130 | 140 | 300 | 350 | 350 | 350 | 550 | 550 | 600 |

1) Measured at p₁ = 6 bar and Δp = 70 mbar.

A minimum flow rate of 125 l/min is required for flawless functioning.

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

Filter combinations LFMBA, D series

Technical data

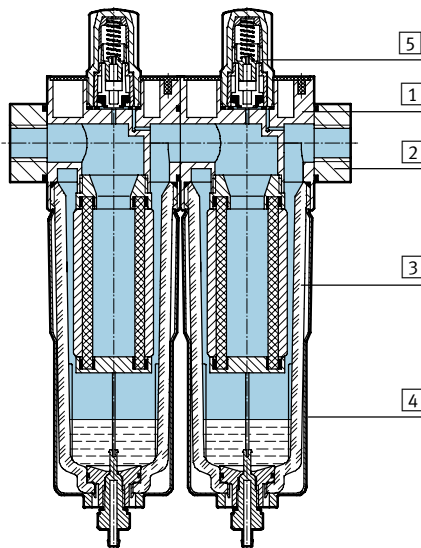
| Ambient conditions | | | | |
|----------------------------|-------------------|--------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | +1.5 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|---|--|------|------|------|
| Size | | Mini | Midi | Maxi |
| Without differential pressure indicator | | 500 | 1300 | 2400 |
| With differential pressure indicator | | 651 | 1429 | 2362 |

Materials

Sectional view



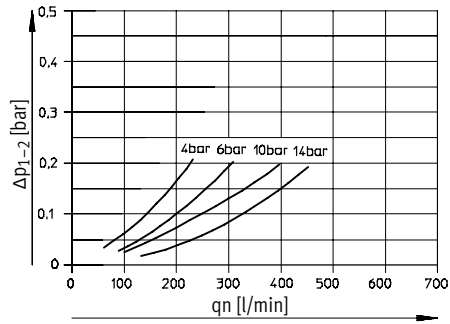
| Filter combination | | |
|--------------------|--|-------------------------|
| 1 | Housing | Die-cast zinc |
| 2 | Connecting plates | Die-cast zinc |
| 3 | Bowl | Polycarbonate |
| 4 | Bowl guard | Aluminium |
| 5 | Housing for version with differential pressure indicator | Polycarbonate |
| - | Seals | Nitrile rubber |
| - | Note on materials | Free of copper and PTFE |

Filter combinations LFMBA, D series

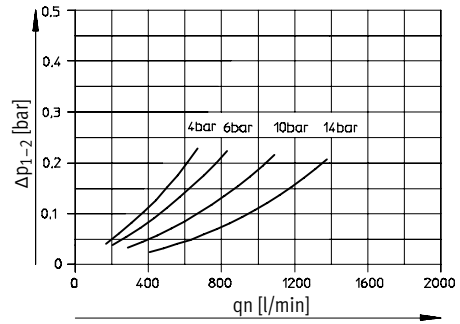
Technical data

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

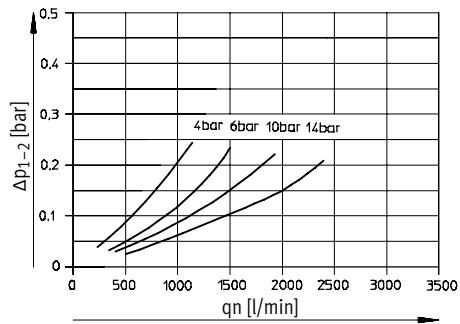
LFMBA-1/4-D-MINI and LFMBA-1/4-D-MINI-A



LFMBA-1/2-D-MIDI and LFMBA-1/2-D-MIDI-A



LFMBA-1-D-MAXI and LFMBA-1-D-MAXI-A



Filter combinations LFMBA, D series

Technical data



Download CAD data → www.festo.com/en/engineering

1 Barbed fitting for plastic tubing type PCN-4 2 Metal bowl guard → Flow direction
 3 Installation dimensions

| Type | B1 | B2 | B3 | B4 | D1 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | L8 | L9 | T1 | ∅ 2 |
|------------------|-----|-----|----|-----|------|----|----|----|----|-----|-----|----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | |
| LFMBA-1/8-D-MINI | 104 | 92 | 40 | 80 | G1/8 | M4 | 38 | 20 | 11 | 144 | 124 | 60 | 15 | 19 | 7 | 22 |
| LFMBA-1/4-D-MINI | | | | | G1/4 | | | | | | | | | | | |
| LFMBA-3/8-D-MINI | | | | | G3/8 | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | |
| LFMBA-1/4-D-MIDI | 140 | 125 | 55 | 110 | G1/4 | M5 | 52 | 32 | 22 | 179 | 151 | 80 | 15 | 19 | 8 | 24 |
| LFMBA-3/8-D-MIDI | | | | | G3/8 | | | | | | | | | | | |
| LFMBA-1/2-D-MIDI | | | | | G1/2 | | | | | | | | | | | |
| LFMBA-3/4-D-MIDI | | | | | G3/4 | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | |
| LFMBA-1/2-D-MAXI | 162 | 146 | 66 | 132 | G1/2 | M5 | 65 | 32 | 22 | 203 | 170 | 90 | 15 | 19 | 8 | 24 |
| LFMBA-3/4-D-MAXI | | | | | G3/4 | | | | | | | | | | | |
| LFMBA-1-D-MAXI | | | | | G1 | | | | | | | | | | | |

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

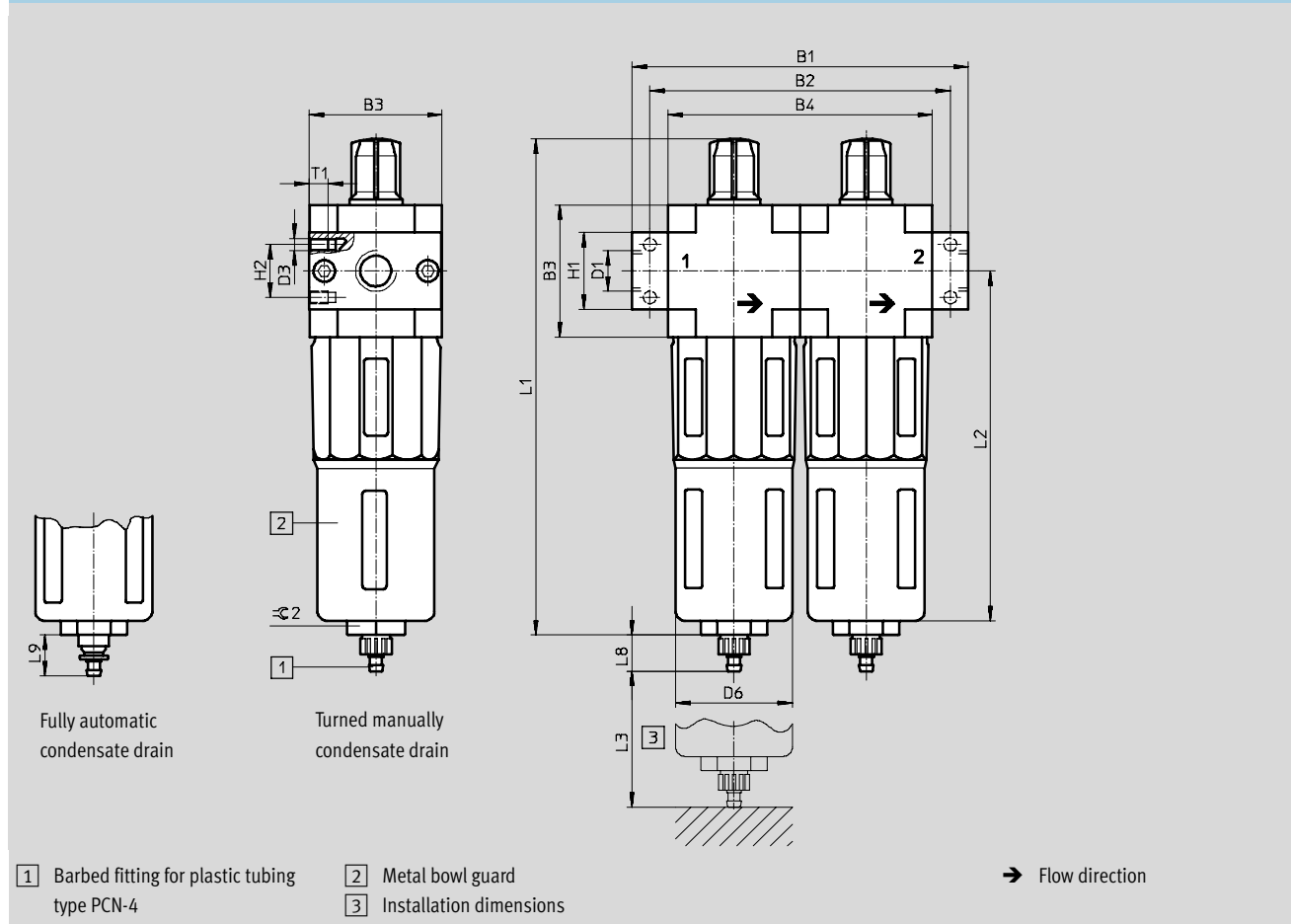
Filter combinations LFMBA, D series

Technical data



Dimensions with differential pressure indicator

Download CAD data → www.festo.com/en/engineering



| Type | B1 | B2 | B3 | B4 | D1 | D3 | D6 Ø | H1 | H2 | L1 | L2 | L3 | L8 | L9 | T1 | ⊕ 2 |
|---------------------|-----|-----|----|-----|------|----|---------|-----|----|-----|-----|----|----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | |
| LFMBA-1/8-D-MINI-DA | 104 | 92 | 40 | 80 | G1/8 | M4 | 38 | 20 | 11 | 173 | 124 | 60 | 15 | 19 | 7 | 22 |
| LFMBA-1/4-D-MINI-DA | | | | | G1/4 | | | | | | | | | | | |
| LFMBA-3/8-D-MINI-DA | | | | | G3/8 | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | | |
| LFMBA-1/4-D-MIDI-DA | 140 | 125 | 55 | 110 | G1/4 | M5 | 52 | 32 | 22 | 206 | 151 | 80 | 15 | 19 | 8 | 24 |
| LFMBA-3/8-D-MIDI-DA | | | | | G3/8 | | | | | | | | | | | |
| LFMBA-1/2-D-MIDI-DA | | | | | G1/2 | | | | | | | | | | | |
| LFMBA-3/4-D-MIDI-DA | | | | | G3/4 | | | | | | | | | | | |
| Maxi | | | | | | | | | | | | | | | | |
| LFMBA-1/2-D-MAXI-DA | 162 | 146 | 66 | 132 | G1/2 | M5 | 65 | 32 | 22 | 231 | 170 | 90 | 15 | 19 | 8 | 24 |
| LFMBA-3/4-D-MAXI-DA | | | | | G3/4 | | | | | | | | | | | |
| LFMBA-1-D-MAXI-DA | | | | | 182 | | | 157 | | | | | | | | |

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

Filter combinations LF MBA, D series

Technical data

| Ordering data – Filter combination LF MBA | | | | | |
|--|------------|----------------------------------|------------------|----------------------------------|--------------------|
| Grade of filtration 1 µm and 0.01 µm, metal bowl guard | | | | | |
| Size | Connection | Input pressure 1 ... 16 bar | | Input pressure 1.5 ... 12 bar | |
| | | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Mini | G1/8 | 162 658 | LFMBA-1/8-D-MINI | 162 666 | LFMBA-1/8-D-MINI-A |
| | G1/4 | 162 659 | LFMBA-1/4-D-MINI | 162 667 | LFMBA-1/4-D-MINI-A |
| | G3/8 | 162 660 | LFMBA-3/8-D-MINI | 162 668 | LFMBA-3/8-D-MINI-A |
| Midi | G1/4 | 186 471 | LFMBA-1/4-D-MIDI | 186 472 | LFMBA-1/4-D-MIDI-A |
| | G3/8 | 162 661 | LFMBA-3/8-D-MIDI | 162 669 | LFMBA-3/8-D-MIDI-A |
| | G1/2 | 162 662 | LFMBA-1/2-D-MIDI | 162 670 | LFMBA-1/2-D-MIDI-A |
| | G3/4 | 162 663 | LFMBA-3/4-D-MIDI | 162 671 | LFMBA-3/4-D-MIDI-A |
| Maxi | G1/2 | 186 477 | LFMBA-1/2-D-MAXI | 186 478 | LFMBA-1/2-D-MAXI-A |
| | G3/4 | 162 664 | LFMBA-3/4-D-MAXI | 162 672 | LFMBA-3/4-D-MAXI-A |
| | G1 | 162 665 | LFMBA-1-D-MAXI | 162 673 | LFMBA-1-D-MAXI-A |

| Ordering data – Filter combination LF MBA with differential pressure indicator DA | | | | | |
|---|------------|----------------------------------|---------------------|----------------------------------|-----------------------|
| Grade of filtration 1 µm and 0.01 µm, metal bowl guard | | | | | |
| Size | Connection | Input pressure 1 ... 16 bar | | Input pressure 1.5 ... 12 bar | |
| | | Condensate drain turned manually | | Condensate drain fully automatic | |
| | | Part No. | Type | Part No. | Type |
| Mini | G1/8 | 532 863 | LFMBA-1/8-D-MINI-DA | 532 873 | LFMBA-1/8-D-MINI-DA-A |
| | G1/4 | 532 864 | LFMBA-1/4-D-MINI-DA | 532 874 | LFMBA-1/4-D-MINI-DA-A |
| | G3/8 | 532 865 | LFMBA-3/8-D-MINI-DA | 532 875 | LFMBA-3/8-D-MINI-DA-A |
| Midi | G1/4 | 532 866 | LFMBA-1/4-D-MIDI-DA | 532 876 | LFMBA-1/4-D-MIDI-DA-A |
| | G3/8 | 532 867 | LFMBA-3/8-D-MIDI-DA | 532 877 | LFMBA-3/8-D-MIDI-DA-A |
| | G1/2 | 532 868 | LFMBA-1/2-D-MIDI-DA | 532 878 | LFMBA-1/2-D-MIDI-DA-A |
| | G3/4 | 532 869 | LFMBA-3/4-D-MIDI-DA | 532 879 | LFMBA-3/4-D-MIDI-DA-A |
| Maxi | G1/2 | 532 870 | LFMBA-1/2-D-MAXI-DA | 532 880 | LFMBA-1/2-D-MAXI-DA-A |
| | G3/4 | 532 871 | LFMBA-3/4-D-MAXI-DA | 532 881 | LFMBA-3/4-D-MAXI-DA-A |
| | G1 | 532 872 | LFMBA-1-D-MAXI-DA | 532 882 | LFMBA-1-D-MAXI-DA-A |

129.Filter cartridges, D series

Accessories

FESTO

Filter cartridge LFP
for service units

Material:
Polyethylene
Free of copper, PTFE and silicone



| Ordering data | | |
|-------------------------------|----------|----------------|
| Size | Part No. | Type |
| 5 µm filter cartridge | | |
| Micro | 526 818 | LFP-D-MICRO-5M |
| Mini | 159 640 | LFP-D-MINI-5M |
| Midi | 159 594 | LFP-D-MIDI-5M |
| Maxi | 159 641 | LFP-D-MAXI-5M |
| 40 µm filter cartridge | | |
| Mini | 363 665 | LFP-D-MINI-40M |
| Midi | 363 667 | LFP-D-MIDI-40M |
| Maxi | 363 664 | LFP-D-MAXI-40M |

Filter cartridge LFMBP/LFMAP
for fine and micro filters

Material:
Borosilicate fibre mesh
Free of copper, PTFE and silicone



| Ordering data | | |
|---------------------------------|----------|------------------|
| Size | Part No. | Type |
| 1 µm filter cartridge | | |
| Mini | 162 677 | MS4/D-MINI-LFM-B |
| Midi | 162 678 | LFMBP-D-MIDI |
| Maxi | 162 679 | LFMBP-D-MAXI |
| 0.01 µm filter cartridge | | |
| Mini | 162 674 | MS4/D-MINI-LFM-A |
| Midi | 162 675 | LFMAP-D-MIDI |
| Maxi | 162 676 | LFMAP-D-MAXI |

Pressure regulators LR/LRS, D series

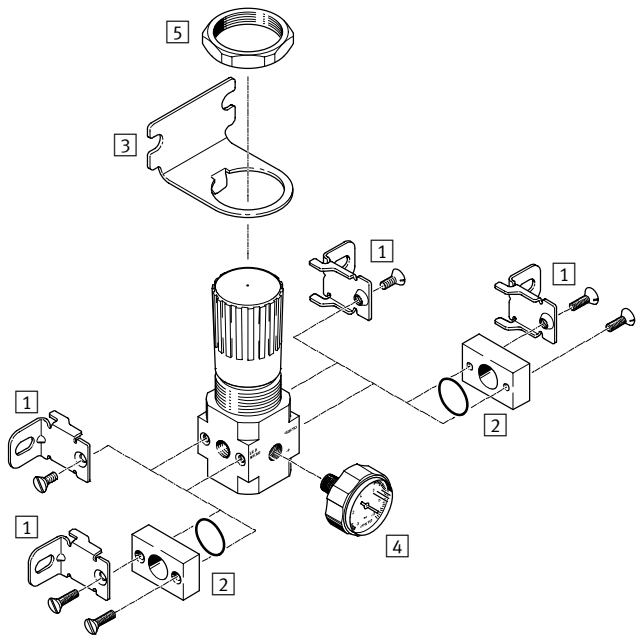
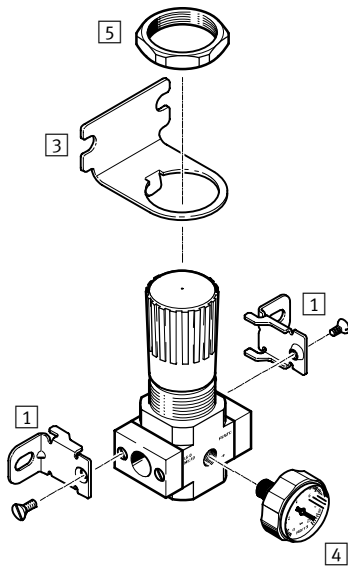
Peripherals overview



Micro

Individual unit with connection plates,
connection size G1/8, QS4 or QS6

Individual unit without connection plates, for service unit combination
connection size M5 or M7 in housing



D series service units
Pressure regulators

1.4

Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| [1] Mounting bracket HFOE | ■ | ■ | ■ | ■ | 3 / 1.8-9 |
| [2] Connection plate kit PBL | - | ■ | - | ■ | 3 / 1.8-13 |
| [3] Mounting bracket HRS | ■ | ■ | ■ | ■ | 3 / 1.8-10 |
| [4] Pressure gauge MA-27 | ■ | ■ | ■ | ■ | 3 / 1.8-15 |
| [5] Hexagon nut (included in scope of delivery) HMR | ■ | ■ | ■ | ■ | - |

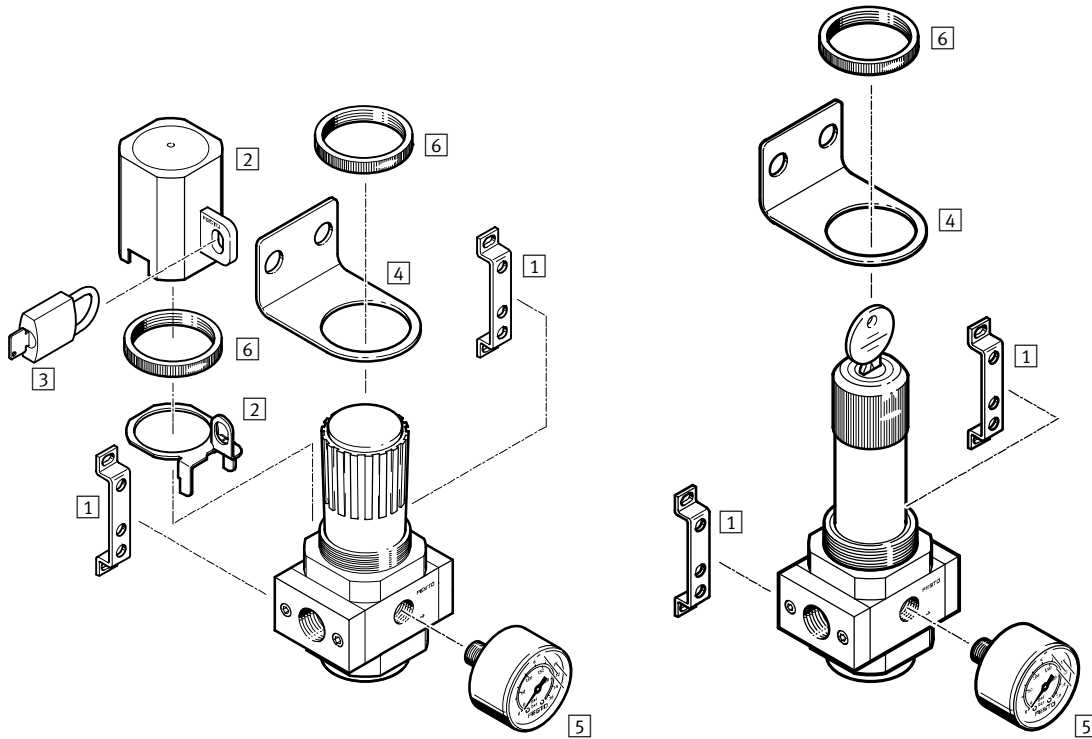
Pressure regulators LR/LRS, D series

Peripherals overview

Mini/Midi/Maxi

Pressure regulator LR

Pressure regulator LRS, lockable



| Mounting attachments and accessories | | | | |
|--------------------------------------|--|-----------------------|--------|------------|
| | Rotary knob with detent | Rotary knob, lockable | → Page | |
| 1 | Mounting bracket HFOE | ■ | ■ | 3 / 1.8-9 |
| 2 | Regulator lock LRVS | ■ | - | 3 / 1.8-14 |
| 3 | Padlock LRVS-D | ■ | - | 3 / 1.8-14 |
| 4 | Mounting bracket HR-D | ■ | ■ | 3 / 1.8-11 |
| 5 | Pressure gauge MA | ■ | ■ | 3 / 1.8-15 |
| 6 | Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

132. Pressure regulators LR/LRS, D series

Type codes

LR - 1/2 - D - 7 - 0 - DI - MAXI

Basic function

| | |
|-----|------------------------------|
| LR | Pressure regulator |
| LRS | Pressure regulator, lockable |

Pneumatic connection

| | |
|-----|---------------------|
| M5 | Thread M5 |
| M7 | Thread M7 |
| QS4 | Push-in fitting QS4 |
| QS6 | Push-in fitting QS6 |
| 1/8 | Thread G1/8 |
| 1/4 | Thread G1/4 |
| 3/8 | Thread G3/8 |
| 1/2 | Thread G1/2 |
| 3/4 | Thread G3/4 |
| 1 | Thread G1 |

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Pressure regulation range

| | |
|---|----------------|
| | 0.5 ... 12 bar |
| 7 | 0.5 ... 7 bar |

Pressure gauge

| | |
|---|------------------------|
| | With pressure gauge |
| 0 | Without pressure gauge |

Functions

| | |
|----|---|
| I | With integrated return flow function |
| DI | Directly actuated pressure regulator with integrated return flow function (MAXI units only) |

Size

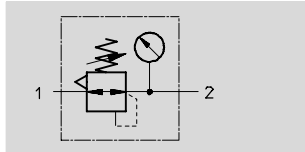
| | |
|-------|--|
| MICRO | Grid dimension 25 mm (without connecting plates) |
| MINI | Grid dimension 40 mm (without connecting plates) |
| MIDI | Grid dimension 55 mm (without connecting plates) |
| MAXI | Grid dimension 66 mm (without connecting plates) |

Pressure regulators LR/LRS, D series

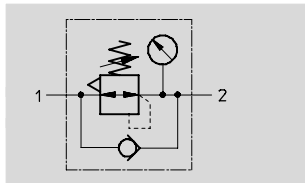
Technical data




Function

LR/LRS-...-D-...



LR/LRS-...-D-DI-MAXI



-  - Flow rate
120 ... 12500 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
1 ... 16 bar

Integrated universal locking for pressure regulators of D series which prevents alteration of the set secondary pressure (p2) by unauthorized persons. Universal locking means that multiple locks can be closed with the same key. A cylinder lock is integrated in the rotary knob.



- Also suitable for front panel mounting
- Two pressure gauge connections for different fitting options
- Mini and Midi sizes: Directly actuated diaphragm regulator
- Maxi size: Pilot actuated piston regulator, diaphragm regulator LRS-DI
- Good regulating characteristics with minimal pressure hysteresis
- High flow rate
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Setting values are secured by locking the rotary knob
- Return flow option for venting from output 2 to input 1
- Pressure sensor (optional) → 3 / 1.8-16

| General technical data | | | | | | | | | | | | | | | | |
|---------------------------------|---------------------------------------|----|------|-----|-----|--|------|------|---------------|------|------|------|---------------------------------------|------|-----|--|
| Size | Micro | | | | | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection | M5 | M7 | G1/8 | QS4 | QS6 | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Operating medium | Compressed air | | | | | Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm | | | | | | | | | | |
| Design | Directly actuated diaphragm regulator | | | | | Directly actuated diaphragm regulator | | | | | | | Pilot actuated piston regulator | | | |
| | | | | | | | | | | | | | Directly actuated diaphragm regulator | | | |
| Type of mounting | Via accessories | | | | | Via accessories | | | | | | | | | | |
| | In-line installation | | | | | In-line installation | | | | | | | | | | |
| | Front panel mounting | | | | | Front panel mounting | | | | | | | | | | |
| Assembly position | Any | | | | | Any | | | | | | | | | | |
| Max. hysteresis [bar] | 0.3 | | | | | 0.2 | | | | | | | | | 0.4 | |
| Input pressure [bar] | 1 ... 10 | | | | | 1 ... 16 | | | | | | | | | | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | | | 0.5 ... 7 | | | | | | | 0.5 ... 12 | | | |
| Pressure indication | Via pressure gauge | | | | | Via pressure gauge | | | | | | | | | | |
| | M5 prepared | | | | | G1/8 prepared | | | G1/4 prepared | | | | G1/4 prepared | | | |

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

Pressure regulators LR/LRS, D series

FESTO

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | |
|--|---------------|-----|------------------|-----|-----|
| Connection | Female thread | | Connecting plate | | |
| | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| LR | 120 | 300 | 450 | 160 | 450 |

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

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| Connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ | G $\frac{3}{8}$ | G $\frac{1}{2}$ | G $\frac{3}{4}$ | G1 |
| Mini | | | | | | |
| Pressure regulation range 0.5 ... 7 bar | 1000 | 1600 | 1800 | – | – | – |
| Pressure regulation range 0.5 ... 12 bar | 800 | 1500 | 1700 | – | – | – |
| Midi | | | | | | |
| Pressure regulation range 0.5 ... 7 bar | – | 2200 | 3300 | 4000 | 4500 | – |
| Pressure regulation range 0.5 ... 12 bar | – | 2100 | 3200 | 3500 | 3500 | – |
| Maxi | | | | | | |
| Pressure regulation range 0.5 ... 7 bar | – | – | – | 10700 | 12000 | 12500 |
| Pressure regulation range 0.5 ... 12 bar | – | – | – | 10500 | 11000 | 11500 |
| Maxi – Directly actuated pressure regulator with integrated return flow function | | | | | | |
| Pressure regulation range 0.5 ... 7 bar | – | – | – | 5400 | 6800 | 7000 |
| Pressure regulation range 0.5 ... 12 bar | – | – | – | 7300 | 8350 | 8400 |

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

| Screw-in depth of connecting thread [mm] | | | | | |
|--|----|----|-----------------|-----|-----|
| Connection | M5 | M7 | G $\frac{1}{8}$ | QS4 | QS6 |
| Micro | | | | | |
| In housing | 5 | 6 | – | – | – |
| In connecting plates | – | – | 8 | – | – |

| Ambient conditions | | | | |
|--|-------------|------|------|------|
| Size | Micro | Mini | Midi | Maxi |
| Ambient temperature [°C] | –10 ... +60 | | | |
| Temperature of medium [°C] | –10 ... +60 | | | |
| Corrosion resistance class 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.

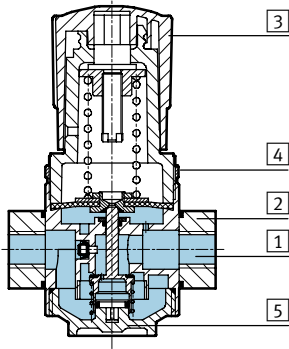
| Weight [g] | | | | | |
|------------------------|---------------|------------------|------|-------|-------|
| Size | Micro | | Mini | Midi | Maxi |
| | Female thread | Connecting plate | | | |
| With pressure gauge | | | | | |
| LR | 60 | 80 | 350 | 720 | 1200 |
| LRS | – | – | 520 | 1250 | 1290 |
| Without pressure gauge | | | | | |
| LR | 50 | 70 | 300 | 660 | 1 100 |
| LRS | – | – | 470 | 1 180 | 1 215 |

Pressure regulators LR/LRS, D series

Technical data

Materials

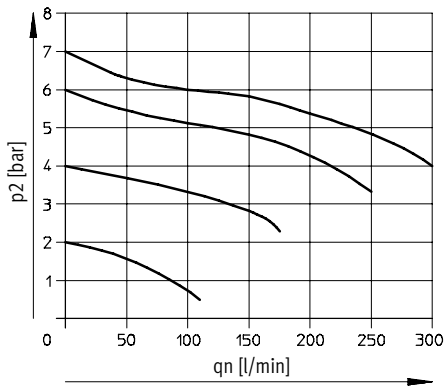
Sectional view



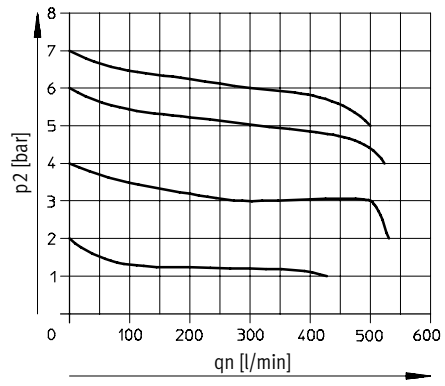
| Pressure regulator | Micro | Mini/Midi/Maxi |
|---------------------|-------------------------|---|
| 1 Housing | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 2 Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 3 Regulating knob | Polyacetal | Polyacetal |
| 4 Knurled nut | - | Aluminium |
| 5 Plug cap | Polycarbonate | Polycarbonate |
| - Seals | Nitrile rubber | Nitrile rubber |
| Note on materials | - | Designs free of copper, PTFE and silicone → Ordering data |

Standard flow rate q_n as a function of the output pressure p_2

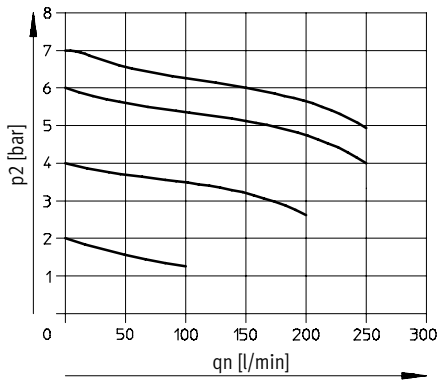
LR-M5-...-MICRO



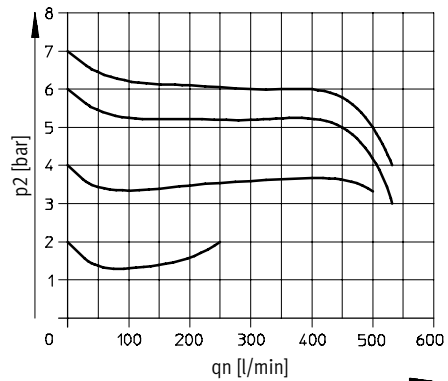
LR-M7-...-MICRO B



LR-QS4-...-MICRO



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



Primary pressure $p_1 = 10$ bar

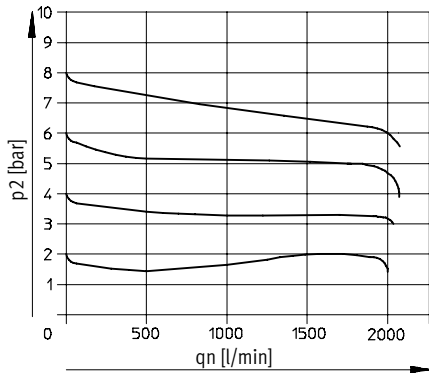
Pressure regulators LR/LRS, D series

Technical data

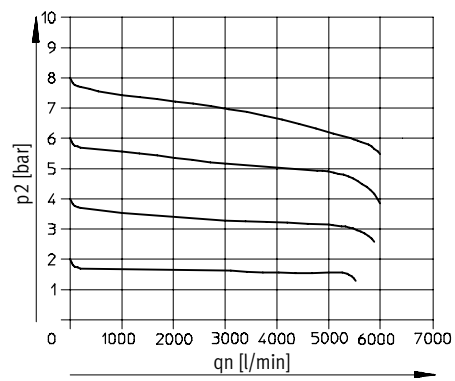


Standard flow rate q_n as a function of the output pressure p_2

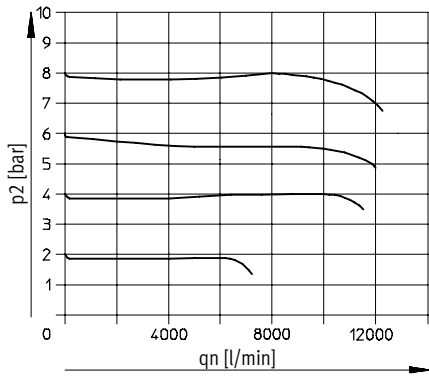
LR/LRS-1/4-D-MINI



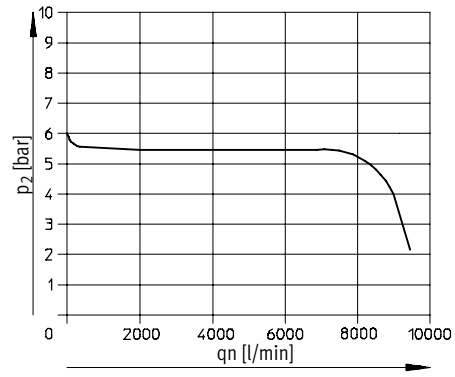
LR/LRS-1/2-D-MIDI



LR/LRS-1-D-MAXI



LR/LRS-1-D-DI-MAXI



Primary pressure $p_1 = 10$ bar

Pressure regulators LR/LRS, D series

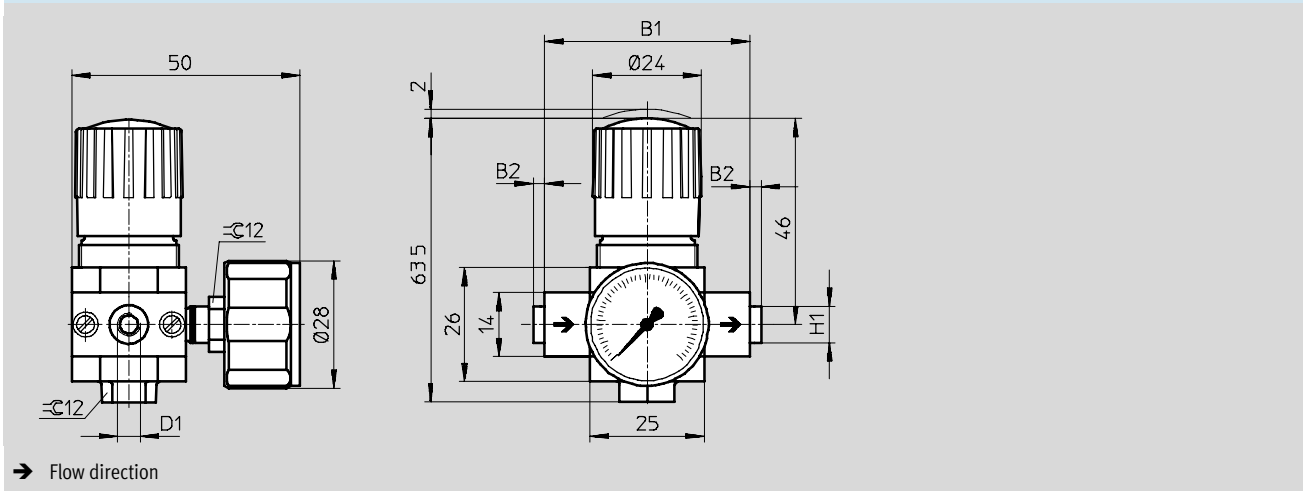
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Micro



| Type | B1 | B2 | D1 | H1 |
|-------------------|----|------|------|-----|
| Micro | | | | |
| LR-M5-D-7-MICRO | 25 | - | M5 | - |
| LR-M7-D-7-MICRO B | | | M7 | |
| LR-1/8-D-7-MICRO | 45 | ~2.5 | G1/8 | - |
| LR-QS4-D-7-MICRO | | | QS4 | ~8 |
| LR-QS6-D-7-MICRO | | | QS6 | ~10 |

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

Pressure regulators LR/LRS, D series

Technical data

FESTO

Dimensions Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

1 Second pressure gauge connection 3 Installation dimensions

lockable

→ Flow direction

| Type | B1 | B2 | B3 | B4 | D1 | D2 ∅ | D3 | D4 | D5 ∅ |
|-----------------------|-----|----|----|-----|------|---------|----|---------|---------|
| Mini | | | | | | | | | |
| LR/LRS-1/8-D-(I)-MINI | 64 | 52 | 40 | 76 | G1/8 | 31 | M4 | M36x1.5 | 41 |
| LR/LRS-1/4-D-(I)-MINI | | | | | G1/4 | | | | |
| LR/LRS-3/8-D-(I)-MINI | 70 | | | | G3/8 | | | | |
| Midi | | | | | | | | | |
| LR/LRS-1/4-D-(I)-MIDI | 85 | 70 | 55 | 95 | G1/4 | 50 | M5 | M52x1.5 | 50 |
| LR/LRS-3/8-D-(I)-MIDI | | | | | G3/8 | | | | |
| LR/LRS-1/2-D-(I)-MIDI | | | | | G1/2 | | | | |
| LR/LRS-3/4-D-(I)-MIDI | | | | | G3/4 | | | | |
| Maxi | | | | | | | | | |
| LR/LRS-1/2-D-MAXI | 96 | 80 | 66 | 107 | G1/2 | 31 | M5 | M36x1.5 | 50 |
| LR/LRS-1/2-D-DI-MAXI | | | | | | 49 | | M52x1.5 | |
| LR/LRS-3/4-D-MAXI | 116 | 91 | 66 | 107 | G3/4 | 31 | M5 | M36x1.5 | 50 |
| LR/LRS-3/4-D-DI-MAXI | | | | | | 49 | | M52x1.5 | |
| LR/LRS-1-D-MAXI | 116 | 91 | 66 | 107 | G1 | 31 | M5 | M36x1.5 | 50 |
| LR/LRS-1-D-DI-MAXI | | | | | | 49 | | M52x1.5 | |

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

Pressure regulators LR/LRS, D series



Technical data

| Type | H1 | H2 | L1 | L4 | L5 max. | L6 | L7 | T1 | ≙ 1 | ≙ 2 |
|----------------------|----|----|-----|-----|------------|-----|----|----|-----|-----|
| Mini | | | | | | | | | | |
| LR/LRS-1/8-D-MINI | 20 | 11 | 96 | 68 | 3 | 98 | 60 | 7 | 14 | 17 |
| LR/LRS-1/4-D-MINI | | | | | | | | | | |
| LR/LRS-3/8-D-MINI | | | | | | | | | | |
| Midi | | | | | | | | | | |
| LR/LRS-1/4-D-MIDI | 32 | 22 | 135 | 99 | 5 | 130 | 60 | 8 | 14 | 36 |
| LR/LRS-3/8-D-MIDI | | | | | | | | | | |
| LR/LRS-1/2-D-MIDI | | | | | | | | | | |
| LR/LRS-3/4-D-MIDI | | | | | | | | | | |
| Maxi | | | | | | | | | | |
| LR/LRS-1/2-D-MAXI | 32 | 22 | 125 | 82 | 4 | 111 | 60 | 8 | 14 | 22 |
| LR/LRS-1/2-D-DI-MAXI | | | 148 | 105 | | 135 | | | | |
| LR/LRS-3/4-D-MAXI | | | 125 | 82 | | 111 | | | | |
| LR/LRS-3/4-D-DI-MAXI | | | 148 | 105 | | 135 | | | | |
| LR/LRS-1-D-MAXI | 40 | | 125 | 82 | | 111 | | | | |
| LR/LRS-1-D-DI-MAXI | | | 148 | 105 | | 135 | | | | |

Pressure regulators LR/LRS, D series

FESTO

Technical data

| Ordering data | | | |
|------------------------|--|---|--------------------------------|
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | |
| | | Part No. | Type |
| With pressure gauge | | | |
| Micro | Without threaded connecting plates, connecting thread in housing | | |
| | M5 | 526 261 | LR-M5-D-7-MICRO |
| | M7 | 534 180 | LR-M7-D-7-MICRO B |
| | With threaded connecting plates | | |
| | G $\frac{1}{8}$ | 526 263 | LR- $\frac{1}{8}$ -D-7-MICRO |
| | With connecting plate and push-in fitting | | |
| | QS4 | 526 269 | LR-QS4-D-7-MICRO |
| QS6 | 526 271 | LR-QS6-D-7-MICRO | |
| Without pressure gauge | | | |
| Micro | Without threaded connecting plates, connecting thread in housing | | |
| | M5 | 526 262 | LR-M5-D-O-7-MICRO |
| | M7 | 534 181 | LR-M7-D-O-7-MICRO B |
| | With threaded connecting plates | | |
| | G $\frac{1}{8}$ | 526 264 | LR- $\frac{1}{8}$ -D-O-7-MICRO |
| | With connecting plate and push-in fitting | | |
| | QS4 | 526 270 | LR-QS4-D-O-7-MICRO |
| QS6 | 526 272 | LR-QS6-D-O-7-MICRO | |

| Ordering data | | | | | |
|------------------------|-----------------|---|---|--|---|
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | |
| Mini | G $\frac{1}{8}$ | 162 582 | LR- $\frac{1}{8}$ -D-7-MINI | 159 624 | LR- $\frac{1}{8}$ -D-MINI |
| | G $\frac{1}{4}$ | 162 583 | LR- $\frac{1}{4}$ -D-7-MINI | 159 625 | LR- $\frac{1}{4}$ -D-MINI |
| | G $\frac{3}{8}$ | 162 584 | LR- $\frac{3}{8}$ -D-7-MINI | 162 580 | LR- $\frac{3}{8}$ -D-MINI |
| Midi | G $\frac{1}{4}$ | 186 453 | LR- $\frac{1}{4}$ -D-7-MIDI | 186 451 | LR- $\frac{1}{4}$ -D-MIDI |
| | G $\frac{3}{8}$ | 162 585 | LR- $\frac{3}{8}$ -D-7-MIDI | 159 580 | LR- $\frac{3}{8}$ -D-MIDI |
| | G $\frac{1}{2}$ | 162 586 | LR- $\frac{1}{2}$ -D-7-MIDI | 159 581 | LR- $\frac{1}{2}$ -D-MIDI |
| | G $\frac{3}{4}$ | 162 587 | LR- $\frac{3}{4}$ -D-7-MIDI | 162 581 | LR- $\frac{3}{4}$ -D-MIDI |
| Maxi | G $\frac{1}{2}$ | 186 457 | LR- $\frac{1}{2}$ -D-7-MAXI | 186 455 | LR- $\frac{1}{2}$ -D-MAXI |
| | G $\frac{3}{4}$ | 162 588 | LR- $\frac{3}{4}$ -D-7-MAXI | 159 626 | LR- $\frac{3}{4}$ -D-MAXI |
| | G1 | 162 589 | LR-1-D-7-MAXI | 159 627 | LR-1-D-MAXI |
| Without pressure gauge | | | | | |
| Mini | G $\frac{1}{8}$ | 162 598 | LR- $\frac{1}{8}$ -D-7-O-MINI ¹⁾ | 162 590 | LR- $\frac{1}{8}$ -D-O-MINI ¹⁾ |
| | G $\frac{1}{4}$ | 162 599 | LR- $\frac{1}{4}$ -D-7-O-MINI ¹⁾ | 162 591 | LR- $\frac{1}{4}$ -D-O-MINI ¹⁾ |
| | G $\frac{3}{8}$ | 162 600 | LR- $\frac{3}{8}$ -D-7-O-MINI ¹⁾ | 162 592 | LR- $\frac{3}{8}$ -D-O-MINI ¹⁾ |
| Midi | G $\frac{1}{4}$ | 186 454 | LR- $\frac{1}{4}$ -D-7-O-MIDI ¹⁾ | 186 452 | LR- $\frac{1}{4}$ -D-O-MIDI ¹⁾ |
| | G $\frac{3}{8}$ | 162 601 | LR- $\frac{3}{8}$ -D-7-O-MIDI ¹⁾ | 162 593 | LR- $\frac{3}{8}$ -D-O-MIDI ¹⁾ |
| | G $\frac{1}{2}$ | 162 602 | LR- $\frac{1}{2}$ -D-7-O-MIDI ¹⁾ | 162 594 | LR- $\frac{1}{2}$ -D-O-MIDI ¹⁾ |
| | G $\frac{3}{4}$ | 162 603 | LR- $\frac{3}{4}$ -D-7-O-MIDI ¹⁾ | 162 595 | LR- $\frac{3}{4}$ -D-O-MIDI ¹⁾ |
| Maxi | G $\frac{1}{2}$ | 186 458 | LR- $\frac{1}{2}$ -D-7-O-MAXI ¹⁾ | 186 456 | LR- $\frac{1}{2}$ -D-O-MAXI ¹⁾ |
| | G $\frac{3}{4}$ | 162 604 | LR- $\frac{3}{4}$ -D-7-O-MAXI ¹⁾ | 162 596 | LR- $\frac{3}{4}$ -D-O-MAXI ¹⁾ |
| | G1 | 162 605 | LR-1-D-7-O-MAXI ¹⁾ | 162 597 | LR-1-D-O-MAXI ¹⁾ |

1) Free of copper, PTFE and silicone

 Core Range

Pressure regulators LR/LRS, D series

FESTO

Technical data

| Ordering data | | | | |
|---|-----------------|---|---|---|
| Pressure regulator with integrated return flow function | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar |
| | | Part No. | Type | Part No. Type |
| With pressure gauge | | | | |
| Mini | G $\frac{1}{8}$ | 192 299 | LR- $\frac{1}{8}$ -D-7-I-MINI | 192 298 LR- $\frac{1}{8}$ -D-I-MINI |
| | G $\frac{1}{4}$ | 192 301 | LR- $\frac{1}{4}$ -D-7-I-MINI | 192 300 LR- $\frac{1}{4}$ -D-I-MINI |
| | G $\frac{3}{8}$ | 192 303 | LR- $\frac{3}{8}$ -D-7-I-MINI | 192 302 LR- $\frac{3}{8}$ -D-I-MINI |
| Midi | G $\frac{1}{4}$ | 192 311 | LR- $\frac{1}{4}$ -D-7-I-MIDI | 192 310 LR- $\frac{1}{4}$ -D-I-MIDI |
| | G $\frac{3}{8}$ | 192 313 | LR- $\frac{3}{8}$ -D-7-I-MIDI | 192 312 LR- $\frac{3}{8}$ -D-I-MIDI |
| | G $\frac{1}{2}$ | 192 315 | LR- $\frac{1}{2}$ -D-7-I-MIDI | 192 314 LR- $\frac{1}{2}$ -D-I-MIDI |
| | G $\frac{3}{4}$ | 192 317 | LR- $\frac{3}{4}$ -D-7-I-MIDI | 192 316 LR- $\frac{3}{4}$ -D-I-MIDI |
| Without pressure gauge | | | | |
| Mini | G $\frac{1}{8}$ | 192 305 | LR- $\frac{1}{8}$ -D-7-O-I-MINI ¹⁾ | 192 304 LR- $\frac{1}{8}$ -D-O-I-MINI ¹⁾ |
| | G $\frac{1}{4}$ | 192 307 | LR- $\frac{1}{4}$ -D-7-O-I-MINI ¹⁾ | 192 306 LR- $\frac{1}{4}$ -D-O-I-MINI ¹⁾ |
| | G $\frac{3}{8}$ | 192 309 | LR- $\frac{3}{8}$ -D-7-O-I-MINI ¹⁾ | 192 308 LR- $\frac{3}{8}$ -D-O-I-MINI ¹⁾ |
| Midi | G $\frac{1}{4}$ | 192 319 | LR- $\frac{1}{4}$ -D-7-O-I-MIDI ¹⁾ | 192 318 LR- $\frac{1}{4}$ -D-O-I-MIDI ¹⁾ |
| | G $\frac{3}{8}$ | 192 321 | LR- $\frac{3}{8}$ -D-7-O-I-MIDI ¹⁾ | 192 320 LR- $\frac{3}{8}$ -D-O-I-MIDI ¹⁾ |
| | G $\frac{1}{2}$ | 192 323 | LR- $\frac{1}{2}$ -D-7-O-I-MIDI ¹⁾ | 192 322 LR- $\frac{1}{2}$ -D-O-I-MIDI ¹⁾ |
| | G $\frac{3}{4}$ | 192 325 | LR- $\frac{3}{4}$ -D-7-O-I-MIDI ¹⁾ | 192 324 LR- $\frac{3}{4}$ -D-O-I-MIDI ¹⁾ |

1) Free of copper, PTFE and silicone

| Ordering data | | | | |
|---|-----------------|---|--|--|
| Directly actuated pressure regulator with integrated return flow function | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar |
| | | Part No. | Type | Part No. Type |
| With pressure gauge | | | | |
| Maxi | G $\frac{1}{2}$ | 192 358 | LR- $\frac{1}{2}$ -D-7-DI-MAXI | 192 356 LR- $\frac{1}{2}$ -D-DI-MAXI |
| | G $\frac{3}{4}$ | 192 362 | LR- $\frac{3}{4}$ -D-7-DI-MAXI | 192 360 LR- $\frac{3}{4}$ -D-DI-MAXI |
| | G1 | 192 366 | LR-1-D-7-DI-MAXI | 192 364 LR-1-D-DI-MAXI |
| Without pressure gauge | | | | |
| Maxi | G $\frac{1}{2}$ | 192 359 | LR- $\frac{1}{2}$ -D-7-O-DI-MAXI ¹⁾ | 192 357 LR- $\frac{1}{2}$ -D-O-DI-MAXI ¹⁾ |
| | G $\frac{3}{4}$ | 192 363 | LR- $\frac{3}{4}$ -D-7-O-DI-MAXI ¹⁾ | 192 361 LR- $\frac{3}{4}$ -D-O-DI-MAXI ¹⁾ |
| | G1 | 192 367 | LR-1-D-7-O-DI-MAXI ¹⁾ | 192 365 LR-1-D-O-DI-MAXI ¹⁾ |

1) Free of copper, PTFE and silicone

Pressure regulators LR/LRS, D series

FESTO

Technical data

| Ordering data | | | | |
|------------------------------|------------|---|--------------------|--|
| Pressure regulator, lockable | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar |
| | | Part No. | Type | Part No. Type |
| With pressure gauge | | | | |
| Mini | G1/8 | 194 606 | LRS-1/8-D-7-MINI | 194 602 LRS-1/8-D-MINI |
| | G1/4 | 194 614 | LRS-1/4-D-7-MINI | 194 610 LRS-1/4-D-MINI |
| | G3/8 | 194 622 | LRS-3/8-D-7-MINI | 194 618 LRS-3/8-D-MINI |
| Midi | G1/4 | 194 630 | LRS-1/4-D-7-MIDI | 194 626 LRS-1/4-D-MIDI |
| | G3/8 | 194 638 | LRS-3/8-D-7-MIDI | 194 634 LRS-3/8-D-MIDI |
| | G1/2 | 194 646 | LRS-1/2-D-7-MIDI | 194 642 LRS-1/2-D-MIDI |
| | G3/4 | 194 656 | LRS-3/4-D-7-MIDI | 194 650 LRS-3/4-D-MIDI |
| Maxi | G1/2 | 194 660 | LRS-1/2-D-7-MAXI | 194 658 LRS-1/2-D-MAXI |
| | G3/4 | 194 662 | LRS-3/4-D-7-MAXI | 194 664 LRS-3/4-D-MAXI |
| | G1 | 194 668 | LRS-1-D-7-MAXI | 194 666 LRS-1-D-MAXI |
| Without pressure gauge | | | | |
| Mini | G1/8 | 194 608 | LRS-1/8-D-7-O-MINI | 194 604 LRS-1/8-D-O-MINI |
| | G1/4 | 194 616 | LRS-1/4-D-7-O-MINI | 194 612 LRS-1/4-D-O-MINI |
| | G3/8 | 194 624 | LRS-3/8-D-7-O-MINI | 194 620 LRS-3/8-D-O-MINI |
| Midi | G1/4 | 194 632 | LRS-1/4-D-7-O-MIDI | 194 628 LRS-1/4-D-O-MIDI |
| | G3/8 | 194 640 | LRS-3/8-D-7-O-MIDI | 194 636 LRS-3/8-D-O-MIDI |
| | G1/2 | 194 648 | LRS-1/2-D-7-O-MIDI | 194 644 LRS-1/2-D-O-MIDI |
| | G3/4 | 194 654 | LRS-3/4-D-7-O-MIDI | 194 652 LRS-3/4-D-O-MIDI |
| Maxi | G1/2 | 194 661 | LRS-1/2-D-7-O-MAXI | 194 659 LRS-1/2-D-O-MAXI |
| | G3/4 | 194 663 | LRS-3/4-D-7-O-MAXI | 194 665 LRS-3/4-D-O-MAXI |
| | G1 | 194 669 | LRS-1-D-7-O-MAXI | 194 667 LRS-1-D-O-MAXI |

| Ordering data | | | | |
|---|------------|---|----------------------|--|
| Pressure regulator with integrated return flow function, lockable | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar |
| | | Part No. | Type | Part No. Type |
| With pressure gauge | | | | |
| Mini | G1/8 | 194 607 | LRS-1/8-D-7-I-MINI | 194 603 LRS-1/8-D-I-MINI |
| | G1/4 | 194 615 | LRS-1/4-D-7-I-MINI | 194 611 LRS-1/4-D-I-MINI |
| | G3/8 | 194 623 | LRS-3/8-D-7-I-MINI | 194 619 LRS-3/8-D-I-MINI |
| Midi | G1/4 | 194 631 | LRS-1/4-D-7-I-MIDI | 194 627 LRS-1/4-D-I-MIDI |
| | G3/8 | 194 639 | LRS-3/8-D-7-I-MIDI | 194 635 LRS-3/8-D-I-MIDI |
| | G1/2 | 194 647 | LRS-1/2-D-7-I-MIDI | 194 643 LRS-1/2-D-I-MIDI |
| | G3/4 | 194 657 | LRS-3/4-D-7-I-MIDI | 194 651 LRS-3/4-D-I-MIDI |
| Without pressure gauge | | | | |
| Mini | G1/8 | 194 609 | LRS-1/8-D-7-O-I-MINI | 194 605 LRS-1/8-D-O-I-MINI |
| | G1/4 | 194 617 | LRS-1/4-D-7-O-I-MINI | 194 613 LRS-1/4-D-O-I-MINI |
| | G3/8 | 194 625 | LRS-3/8-D-7-O-I-MINI | 194 621 LRS-3/8-D-O-I-MINI |
| Midi | G1/4 | 194 633 | LRS-1/4-D-7-O-I-MIDI | 194 629 LRS-1/4-D-O-I-MIDI |
| | G3/8 | 194 641 | LRS-3/8-D-7-O-I-MIDI | 194 637 LRS-3/8-D-O-I-MIDI |
| | G1/2 | 194 649 | LRS-1/2-D-7-O-I-MIDI | 194 645 LRS-1/2-D-O-I-MIDI |
| | G3/4 | 194 655 | LRS-3/4-D-7-O-I-MIDI | 194 653 LRS-3/4-D-O-I-MIDI |

Pressure regulators LR/LRS, D series

FESTO

Technical data

| Ordering data | | | | | |
|---|-----------------|---|---|--|---|
| Directly actuated pressure regulator with integrated return flow function, lockable | | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | |
| Maxi | G $\frac{1}{2}$ | 194 672 | LRS-$\frac{1}{2}$-D-7-DI-MAXI | 194 670 | LRS-$\frac{1}{2}$-D-DI-MAXI |
| | G $\frac{3}{4}$ | 194 676 | LRS-$\frac{3}{4}$-D-7-DI-MAXI | 194 674 | LRS-$\frac{3}{4}$-D-DI-MAXI |
| | G1 | 194 680 | LRS-1-D-7-DI-MAXI | 194 678 | LRS-1-D-DI-MAXI |
| Without pressure gauge | | | | | |
| Maxi | G $\frac{1}{2}$ | 194 673 | LRS-$\frac{1}{2}$-D-7-O-DI-MAXI | 194 671 | LRS-$\frac{1}{2}$-D-O-DI-MAXI |
| | G $\frac{3}{4}$ | 194 677 | LRS-$\frac{3}{4}$-D-7-O-DI-MAXI | 194 675 | LRS-$\frac{3}{4}$-D-O-DI-MAXI |
| | G1 | 194 681 | LRS-1-D-7-O-DI-MAXI | 194 679 | LRS-1-D-O-DI-MAXI |

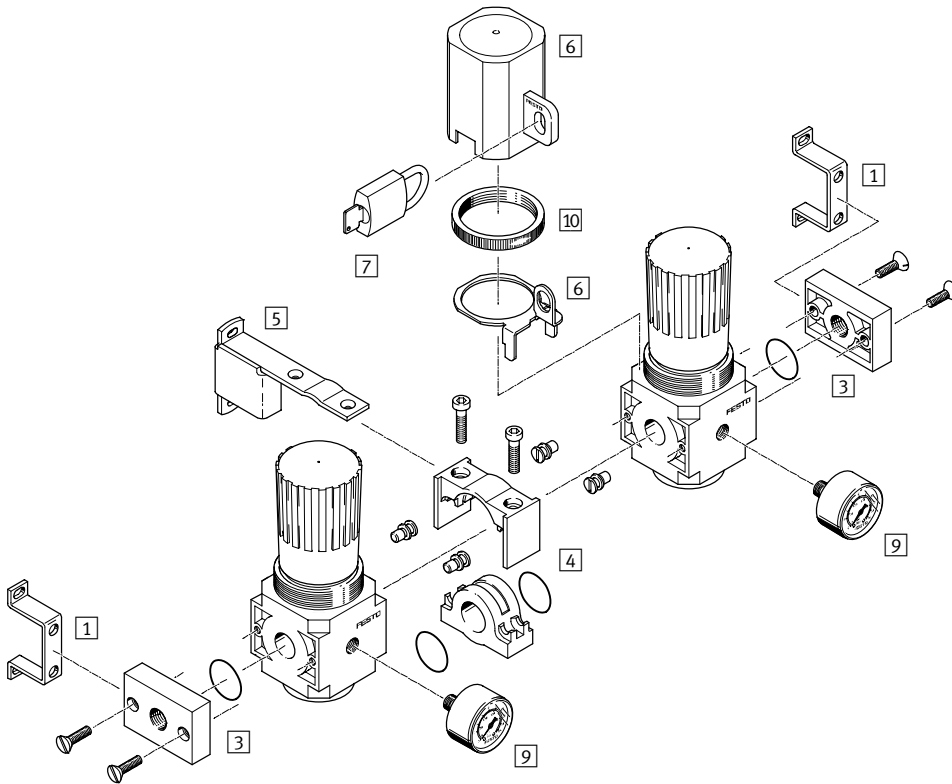
144. Pressure regulators LRB/LRBS, D series

Peripherals overview

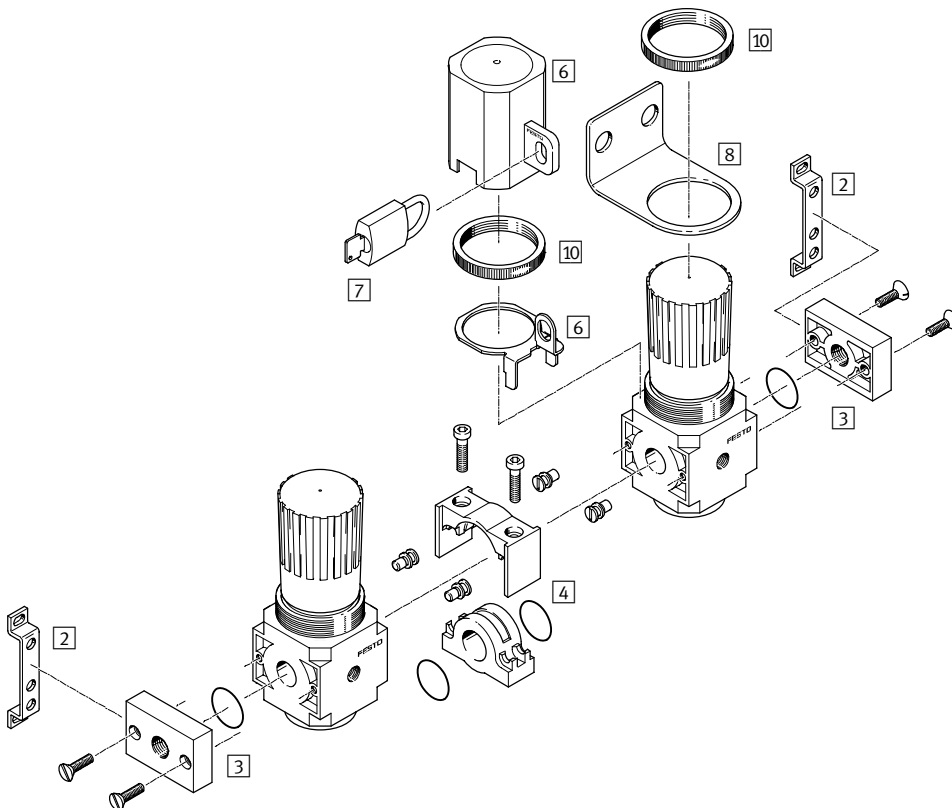


Mini/Midi

Pressure regulator LRB – pressure output at rear



Pressure regulator LRB – pressure output at front



145. Pressure regulators LRB/LRBS, D series

Peripherals overview

| Mounting attachments and accessories | | | |
|---|-------------------------|--------------------------|------------|
| Pressure regulator LRB | Pressure output at rear | Pressure output at front | → Page |
| 1) Mounting bracket HRB | ■ | - | 3 / 1.8-9 |
| 2) Mounting bracket HFOE | - | ■ | 3 / 1.8-9 |
| 3) Connection plates LRBAS | ■ | ■ | 3 / 1.8-13 |
| 4) Adapter kit HRBC | ■ | ■ | 3 / 1.8-12 |
| 5) Mounting bracket HRBK | ■ ¹⁾ | - | 3 / 1.8-9 |
| 6) Regulator lock LRVS | ■ | ■ | 3 / 1.8-14 |
| 7) Padlock LRVS-D | ■ | ■ | 3 / 1.8-14 |
| 8) Mounting bracket HR-D | - | ■ | 3 / 1.8-11 |
| 9) Pressure gauge MA | ■ | - | 3 / 1.8-15 |
| 10) Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

1) The mounting bracket must be mounted after every second pressure regulator.

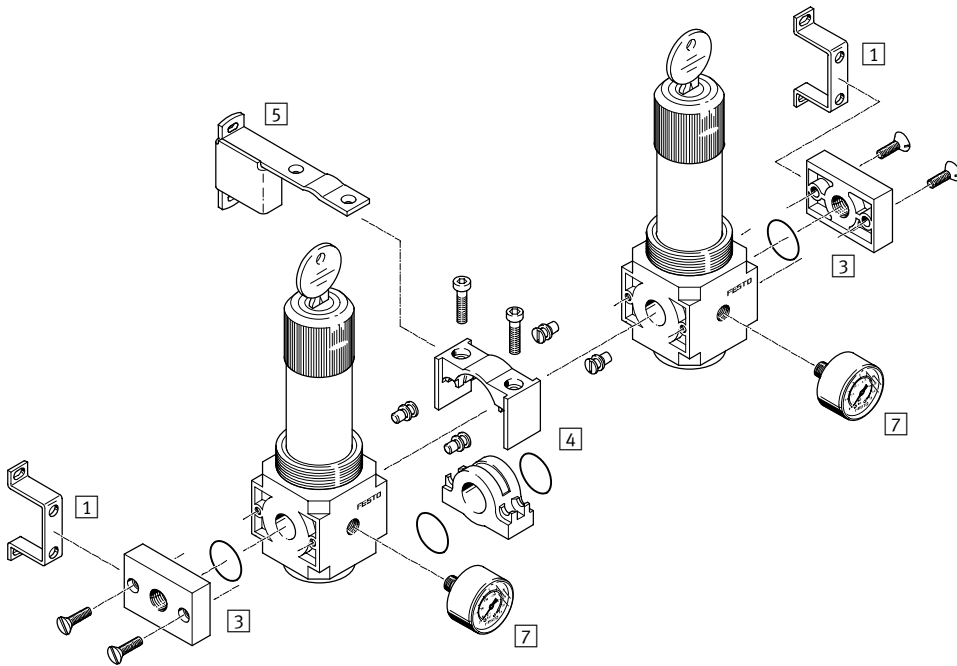
146. Pressure regulators LRB/LRBS, D series

Peripherals overview

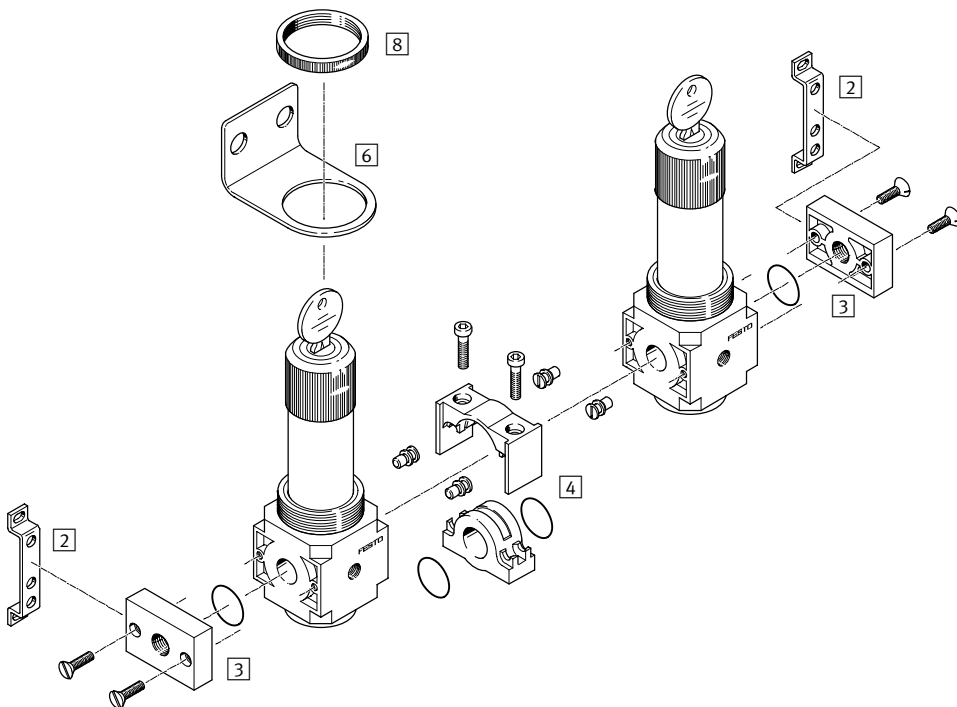
FESTO

Mini/Midi

Pressure regulator LRBS lockable – pressure output at rear



Pressure regulator LRBS lockable – pressure output at front



147. Pressure regulators LRB/LRBS, D series

FESTO

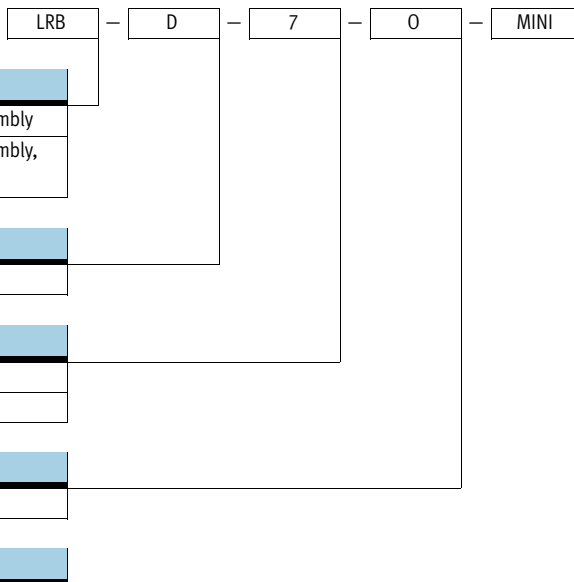
Peripherals overview

| Mounting attachments and accessories | | | |
|---|-------------------------|--------------------------|------------|
| Pressure regulator LRBS, lockable | Pressure output at rear | Pressure output at front | → Page |
| 1) Mounting bracket HRB | ■ | - | 3 / 1.8-9 |
| 2) Mounting bracket HFOE | - | ■ | 3 / 1.8-9 |
| 3) Connection plates LRBAS | ■ | ■ | 3 / 1.8-13 |
| 4) Adapter kit HRBC | ■ | ■ | 3 / 1.8-12 |
| 5) Mounting bracket HRBK | ■ ¹⁾ | - | 3 / 1.8-9 |
| 6) Mounting bracket HR-D | - | ■ | 3 / 1.8-11 |
| 7) Pressure gauge MA | ■ | - | 3 / 1.8-15 |
| 8) Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

1) The mounting bracket must be mounted after every second pressure regulator.

148. Pressure regulators LRB/LRBS, D series

Type codes



Basic function

| | |
|------|--|
| LRB | Pressure regulator for manifold assembly |
| LRBS | Pressure regulator for manifold assembly, lockable |

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Pressure regulation range

| | |
|---|----------------|
| | 0.5 ... 12 bar |
| 7 | 0.5 ... 7 bar |

Pressure gauge

| | |
|---|------------------------|
| 0 | Without pressure gauge |
|---|------------------------|

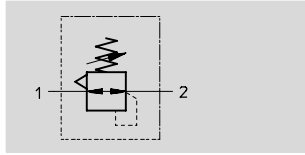
Size




| | |
|------|--|
| MINI | Grid dimension 40 mm (without connecting plates) |
| MIDI | Grid dimension 55 mm (without connecting plates) |

Pressure regulators LRB/LRBS, D series

Technical data

Function




-  - Flow rate
1600 ... 3800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Input pressure
1 ... 16 bar

The pressure regulator is suitable for manifold assemblies with through air supply on both sides, for configuring a regulator manifold with separate, independent pressure ranges. Pressure output is at the front or rear.



- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For configuring a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Settings secured via detent on knob and push-in adjustment lock
- Directly actuated diaphragm regulator

| General technical data | | | | |
|--------------------------------------|--|-------------------------------|--|-------------------------------|
| Size | Mini | | Midi | |
| Pneumatic connection 1 ¹⁾ | G ¹ / ₄ | G ³ / ₈ | G ³ / ₈ | G ¹ / ₂ |
| Pneumatic connection 2 | G ¹ / ₄ | | G ³ / ₈ | |
| Operating medium | Compressed air, filtered, grade of filtration 40 µm | | | |
| Design | Directly actuated diaphragm regulator with through pressure supply | | | |
| Type of mounting | Via accessories | | | |
| | In-line installation | | | |
| Assembly position | Any | | | |
| Max. hysteresis [bar] | 0.2 | | | |
| Input pressure p1 [bar] | 1 ... 16 | | | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | |
| | 0.5 ... 12 | | | |
| Pressure indication | G ¹ / ₈ prepared | | G ¹ / ₄ prepared | |

1) Dependent on connecting plate selected, must be ordered separately as an accessory → 3 / 1.8-13
 -  - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

| Standard nominal flow rate ¹⁾ qnN [l/min] | | |
|--|------|------|
| Size | Mini | Midi |
| Pressure regulation range 0.5 ... 7 bar | 1800 | 3800 |
| Pressure regulation range 0.5 ... 12 bar | 1600 | 3200 |

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

| Ambient conditions | | |
|--|----------------|------|
| Size | Mini | Midi |
| Ambient temperature [°C] | -10 ... +60 °C | |
| Temperature of medium [°C] | -10 ... +60 °C | |
| Corrosion resistance class 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.

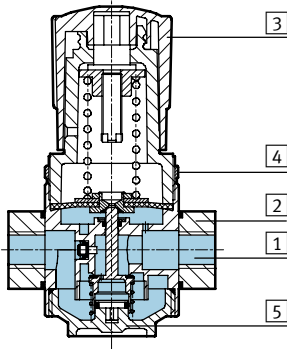
Pressure regulators LRB/LRBS, D series

Technical data

| Weight [g] | | |
|------------------------------|------|------|
| Size | Mini | Midi |
| Pressure regulator | 250 | 700 |
| Pressure regulator, lockable | 350 | 940 |

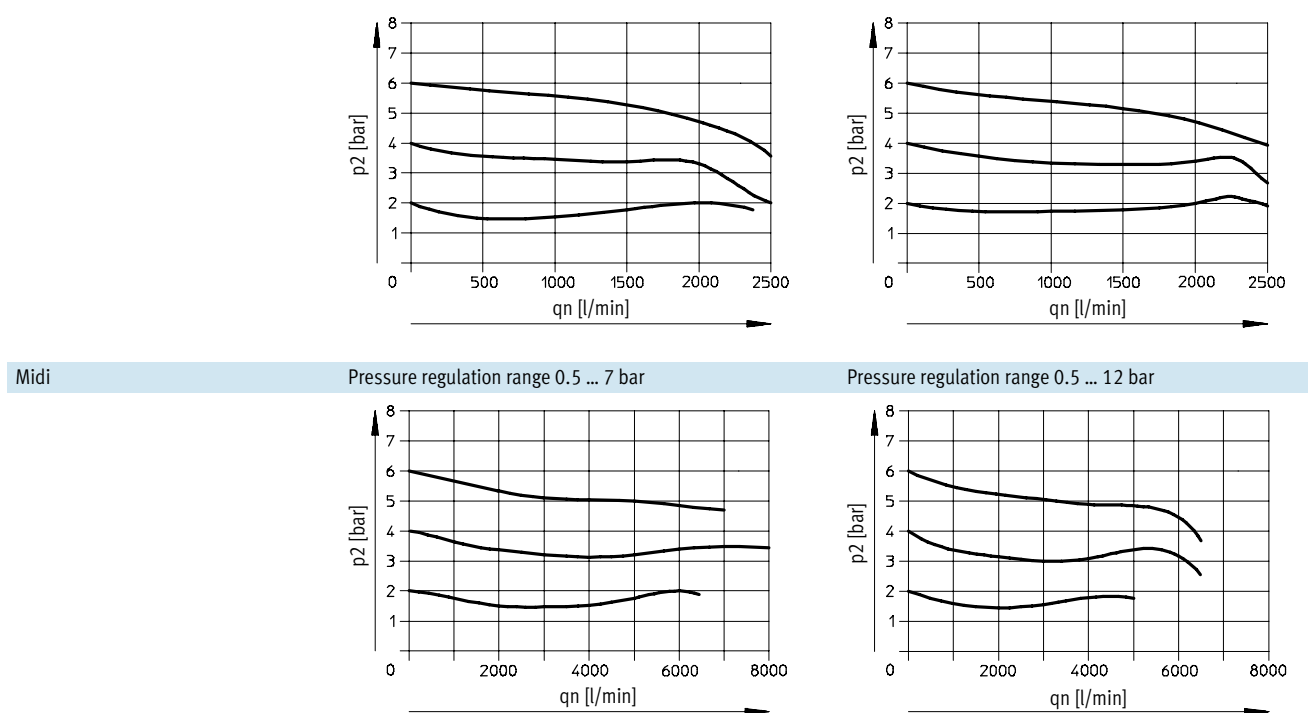
Materials

Sectional view



| Pressure regulator | | |
|--------------------|-------------------|-----------------------------------|
| 1 | Housing | Die-cast zinc |
| 2 | Connecting plates | Die-cast zinc |
| 3 | Regulating knob | Polycetal |
| 4 | Knurled nut | Aluminium |
| 5 | Plug cap | Polycarbonate |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

Standard flow rate q_n as a function of the output pressure p_2



Primary pressure $p_1 = 10$ bar

Pressure regulators LRB/LRBS, D series

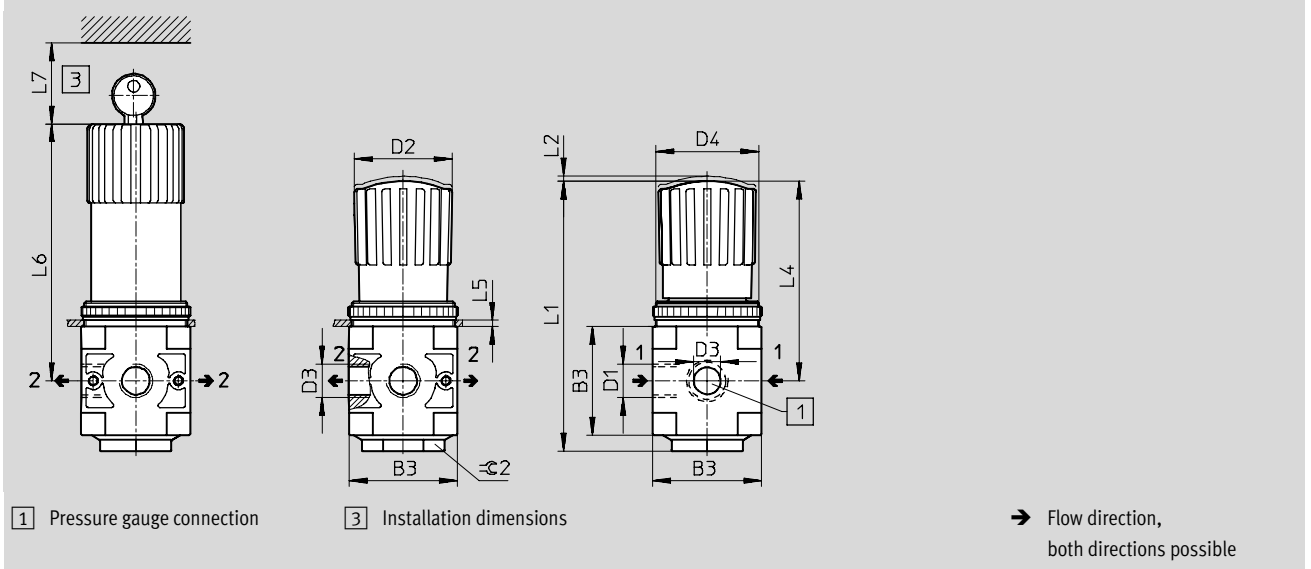


Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

Pressure regulator LRB

Pressure regulator, lockable LRBS



| Type | B3 | D1 | D2 | D3 | D4 | L1 | L2 | L4 | L5 max. | L6 | L7 min. | ±0.2 |
|-----------------|----|-----------------|----|-----------------|---------|--------|----|--------|---------|-------|---------|------|
| Mini | | | | | | | | | | | | |
| LRB-D-...-MINI | 40 | G $\frac{1}{4}$ | 31 | G $\frac{1}{8}$ | M36x1.5 | ~95.4 | 3 | ~68.9 | 3 | 98 | 60 | 17 |
| LRBS-D-...-MINI | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | |
| LRB-D-...-MIDI | 55 | G $\frac{3}{8}$ | 50 | G $\frac{1}{4}$ | M52x1.5 | ~135.8 | 3 | ~100.3 | 5 | 129.2 | 60 | 36 |
| LRBS-D-...-MIDI | | | | | | | | | | | | |

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

Ordering data

Pressure regulator for manifold assembly

| Size | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
|-------------------------------|---|-----------------|--|---------------|
| | Part No. | Type | Part No. | Type |
| Without pressure gauge | | | | |
| Mini | 197 534 | LRB-D-7-O-MINI | 197 535 | LRB-D-O-MINI |
| Midi | 197 538 | LRB-D-7-O-MIDI | 197 539 | LRB-D-O-MIDI |
| Lockable | | | | |
| Mini | 194 683 | LRBS-D-7-O-MINI | 194 682 | LRBS-D-O-MINI |
| Midi | 194 687 | LRBS-D-7-O-MIDI | 194 686 | LRBS-D-O-MIDI |

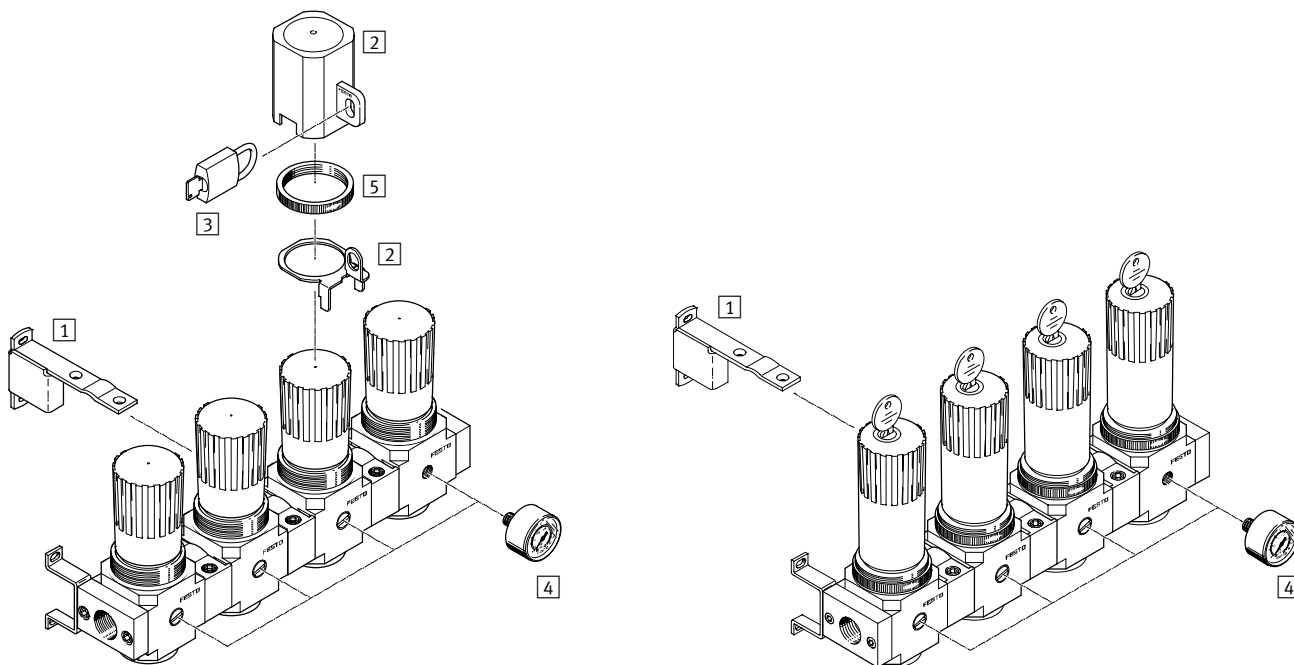
152. Pressure regulator combinations LRB/LRBS-K, D series

Peripherals overview

Mini/Midi

Pressure regulator combination LRB-K

Pressure regulator combination LRBS-K, lockable



Mounting attachments and accessories

| | Rotary knob with detent | Rotary knob, lockable | → Page |
|---|-------------------------|-----------------------|------------|
| 1) Mounting bracket HRBK | ■ 1) | ■ 1) | 3 / 1.8-9 |
| 2) Regulator lock LRVS | ■ | - | 3 / 1.8-14 |
| 3) Padlock LRVS-D | ■ | - | 3 / 1.8-14 |
| 4) Pressure gauge MA | ■ | ■ | 3 / 1.8-15 |
| 5) Knurled nut (included in scope of delivery) HMR | ■ | ■ | - |

1) The mounting bracket must be mounted after every second pressure regulator.

153. Pressure regulator combinations LRB/LRBS-K, D series

Type codes

LRB – 1/4 – D – 7 – 0 – K2 – MINI

Basic function

| | |
|------|--|
| LRB | Pressure regulator combination |
| LRBS | Pressure regulator combination, lockable |

Pneumatic connection

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

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Pressure regulation range

| | |
|---|----------------|
| | 0.5 ... 12 bar |
| 7 | 0.5 ... 7 bar |

Pressure gauge

| | |
|---|------------------------|
| 0 | Without pressure gauge |
|---|------------------------|

Functions

| | |
|----|-------------------------------------|
| K2 | Manifold with 2 pressure regulators |
| K3 | Manifold with 3 pressure regulators |
| K4 | Manifold with 4 pressure regulators |
| K5 | Manifold with 5 pressure regulators |

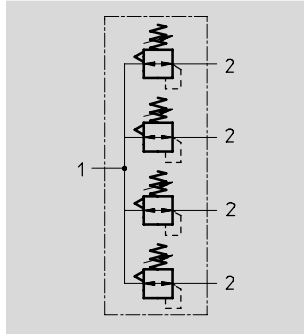
Size

| | |
|------|--|
| MINI | Grid dimension 40 mm (without connecting plates) |
| MIDI | Grid dimension 55 mm (without connecting plates) |

Pressure regulator combinations LRB/LRBS-K, D series

Technical data

Function



- - Flow rate
1600 ... 3800 l/min
- - Temperature range
-10 ... +60 °C
- - Input pressure
1 ... 16 bar
- - Repair service
LRBS-...-D-...-O-K3
LRBS-...-D-...-O-K4
LRBS-...-D-...-O-K5

Pressure regulator combinations
LRB/LRBS-...-D-...-O-K2
LRB/LRBS-...-D-...-O-K3
LRB/LRBS-...-D-...-O-K4
LRB/LRBS-...-D-...-O-K5
with through pressure supply for
manifold assembly



- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For configuring a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Settings secured via detent on knob and push-in adjustment lock
- Directly actuated diaphragm regulator

| General technical data | | | | |
|---------------------------------|--|------|---------------|------|
| Size | Mini | | Midi | |
| Pneumatic connection 1 | G1/4 | G3/8 | G3/8 | G1/2 |
| Pneumatic connection 2 | G1/4 | | G3/8 | |
| Operating medium | Compressed air, filtered, grade of filtration 40 µm | | | |
| Design | Directly actuated diaphragm regulator with through pressure supply | | | |
| Type of mounting | Via accessory (mounting bracket HRB or HRBK included in scope of delivery) | | | |
| Assembly position | Any | | | |
| Max. hysteresis [bar] | 0.2 | | | |
| Input pressure p1 [bar] | 1 ... 16 | | | |
| Pressure regulation range [bar] | 0.5 ... 7 0.5 ... 12 | | | |
| Pressure indication | G1/8 prepared | | G1/4 prepared | |

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

| Standard nominal flow rate ¹⁾ qnN [l/min] | | |
|--|------|------|
| Size | Mini | Midi |
| Pressure regulation range 0.5 ... 7 bar | 1800 | 3800 |
| Pressure regulation range 0.5 ... 12 bar | 1600 | 3200 |

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

Pressure regulator combinations LRB/LRBS-K, D series

Technical data

| Ambient conditions | | |
|----------------------------|-------------------|----------------|
| Size | | |
| Ambient temperature | [°C] | -10 ... +60 °C |
| Temperature of medium | [°C] | -10 ... +60 °C |
| Corrosion resistance class | CRC ¹⁾ | 2 |

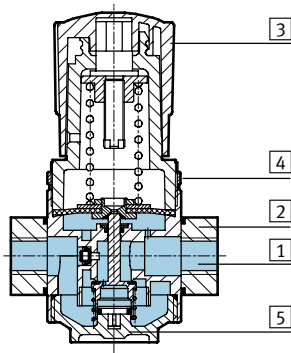
1) Corrosion resistance class 2 according to Festo standard 940 070

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.

| Weight [g] | | |
|-------------------------------------|------|------|
| Size | Mini | Midi |
| Manifold with 2 pressure regulators | | |
| LRB-...-K2 | 760 | 1950 |
| LRBS-...-K2 | 1180 | 2450 |
| Manifold with 3 pressure regulators | | |
| LRB-...-K3 | 1090 | 3144 |
| LRBS-...-K3 | 1720 | 3894 |
| Manifold with 4 pressure regulators | | |
| LRB-...-K4 | 1480 | 3834 |
| LRBS-...-K4 | 2320 | 4834 |
| Manifold with 5 pressure regulators | | |
| LRB-...-K5 | 1860 | 4820 |
| LRBS-...-K5 | 2910 | 6078 |

Materials

Sectional view



| Pressure regulator | Mini/Midi |
|---------------------|----------------|
| 1 Housing | Die-cast zinc |
| 2 Connecting plates | Die-cast zinc |
| 3 Regulating knob | Polyacetal |
| 4 Knurled nut | Aluminium |
| 5 Plug cap | Polycarbonate |
| - Seals | Nitrile rubber |

Pressure regulator combinations LRB/LRBS-K, D series



Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

LRB-...-D-...-K2-... LRBS-...-D-...-K2-...

1 Pressure gauge connection
 3 Installation dimensions
 4 Mounting bracket HRB-D-...
 → Flow direction, both directions possible

2 Connecting kit
 HRBC-D-...

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | D1 | D2 | D3 | D4 | D5 |
|------------------------|-----|------|----|------|------|-----|----|-----|------|----|------|---------|------|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K2-MINI | 119 | ~107 | 40 | 80.7 | 59.2 | 2.5 | 5 | 7.3 | G1/4 | 31 | G1/4 | M36x1.5 | G1/8 |
| LRB-3/8-D-...-K2-MINI | 125 | | | | | | | | G3/8 | | | | |
| LRBS-1/4-D-...-K2-MINI | 119 | | | | | | | | G1/4 | | | | |
| LRBS-3/8-D-...-K2-MINI | 125 | | | | | | | | G3/8 | | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K2-MIDI | 159 | ~144 | 55 | 99.9 | 70.6 | 3 | 5 | 8.3 | G3/8 | 50 | G3/8 | M52x1.5 | G1/4 |
| LRB-1/2-D-...-K2-MIDI | | | | | | | 6 | | G1/2 | | | | |
| LRBS-3/8-D-...-K2-MIDI | | | | | | | 5 | | G3/8 | | | | |
| LRBS-1/2-D-...-K2-MIDI | | | | | | | 6 | | G1/2 | | | | |

| Type | D6 | H1 | H2 ±0.2 | H3 | L1 | L2 | L4 | L5 max. | L6 | L7 min. | ≈C 2 |
|------------------------|-----|----|------------|------|--------|----|--------|------------|-------|------------|------|
| Mini | | | | | | | | | | | |
| LRB-1/4-D-...-K2-MINI | 4.3 | 20 | 35 | 47.3 | ~95.4 | 3 | ~68.9 | 3 | 98 | 60 | 17 |
| LRB-3/8-D-...-K2-MINI | | | | | | | | | | | |
| LRBS-1/4-D-...-K2-MINI | | | | | | | | | | | |
| LRBS-3/8-D-...-K2-MINI | | | | | | | | | | | |
| Midi | | | | | | | | | | | |
| LRB-3/8-D-...-K2-MIDI | 5.3 | 32 | 49 | 62.3 | ~135.8 | 3 | ~100.3 | 5 | 129.2 | 60 | 36 |
| LRB-1/2-D-...-K2-MIDI | | | | | | | | | | | |
| LRBS-3/8-D-...-K2-MIDI | | | | | | | | | | | |
| LRBS-1/2-D-...-K2-MIDI | | | | | | | | | | | |

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

Pressure regulator combinations LRB/LRBS-K, D series



Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

LRB-...-D-...-K3-... LRBS-...-D-...-K3-...

1 Pressure gauge connection 3 Installation dimensions
2 Connecting kit 4 Mounting bracket HRB-D-...
5 Mounting bracket HRBK-D-... → Flow direction, both directions possible

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | D1 | D2 | D3 | D4 |
|------------------------|-----|------|----|------|------|-----|----|-----|-------|------|----|------|---------|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K3-MINI | 174 | ~162 | 40 | 80.7 | 59.2 | 2.5 | 5 | 7.3 | 108.5 | G1/4 | 31 | G1/4 | M36x1.5 |
| LRB-3/8-D-...-K3-MINI | 180 | | | | | | | | | G3/8 | | | |
| LRBS-1/4-D-...-K3-MINI | 174 | | | | | | | | | G1/4 | | | |
| LRBS-3/8-D-...-K3-MINI | 180 | | | | | | | | | G3/8 | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K3-MIDI | 233 | ~218 | 55 | 99.9 | 70.6 | 3 | 5 | 8.3 | 146 | G3/8 | 50 | G3/8 | M52x1.5 |
| LRB-1/2-D-...-K3-MIDI | | | | | | | 6 | | | G1/2 | | | |
| LRBS-3/8-D-...-K3-MIDI | | | | | | | 5 | | | G3/8 | | | |
| LRBS-1/2-D-...-K3-MIDI | | | | | | | 6 | | | G1/2 | | | |

| Type | D5 | D6 | H1 | H2 ±0.2 | H3 | L1 | L2 | L4 | L5 max. | L6 | L7 min. | L8 | ≅ 2 |
|------------------------|------|-----|----|------------|------|--------|----|--------|------------|-------|------------|------|-----|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K3-MINI | G1/8 | 4.3 | 20 | 35 | 47.3 | ~95.4 | 3 | ~68.9 | 3 | 98 | 60 | 17.5 | 17 |
| LRB-3/8-D-...-K3-MINI | | | | | | | | | | | | | |
| LRBS-1/4-D-...-K3-MINI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K3-MINI | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K3-MIDI | G1/4 | 5.3 | 32 | 49 | 62.3 | ~135.8 | 3 | ~100.3 | 5 | 129.2 | 60 | 31.2 | 36 |
| LRB-1/2-D-...-K3-MIDI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K3-MIDI | | | | | | | | | | | | | |
| LRBS-1/2-D-...-K3-MIDI | | | | | | | | | | | | | |

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

Pressure regulator combinations LRB/LRBS-K, D series



Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

LRB-...-D-...-K4-... LRBS-...-D-...-K4-...

1 Pressure gauge connection 3 Installation dimensions
2 Connecting kit 4 Mounting bracket HRB-D-...
5 Mounting bracket HRBK-D-... → Flow direction, both directions possible

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | D1 | D2 | D3 | D4 |
|------------------------|-----|------|----|------|------|-----|----|-----|-------|------|----|------|---------|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K4-MINI | 229 | ~217 | 40 | 80.7 | 59.2 | 2.5 | 5 | 7.3 | 108.5 | G1/4 | 31 | G1/4 | M36x1.5 |
| LRB-3/8-D-...-K4-MINI | 235 | | | | | | | | | G3/8 | | | |
| LRBS-1/4-D-...-K4-MINI | 229 | | | | | | | | | G1/4 | | | |
| LRBS-3/8-D-...-K4-MINI | 235 | | | | | | | | | G3/8 | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K4-MIDI | 307 | ~292 | 55 | 99.9 | 70.6 | 3 | 5 | 8.3 | 146 | G3/8 | 50 | G3/8 | M52x1.5 |
| LRB-1/2-D-...-K4-MIDI | | | | | | | 6 | | | G1/2 | | | |
| LRBS-3/8-D-...-K4-MIDI | | | | | | | 5 | | | G3/8 | | | |
| LRBS-1/2-D-...-K4-MIDI | | | | | | | 6 | | | G1/2 | | | |

| Type | D5 | D6 | H1 | H2 ±0.2 | H3 | L1 | L2 | L4 | L5 max. | L6 | L7 min. | L8 | ≅ 2 |
|------------------------|------|-----|----|------------|------|--------|----|--------|------------|-------|------------|------|-----|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K4-MINI | G1/8 | 4.3 | 20 | 35 | 47.3 | ~95.4 | 3 | ~68.9 | 3 | 98 | 60 | 17.5 | 17 |
| LRB-3/8-D-...-K4-MINI | | | | | | | | | | | | | |
| LRBS-1/4-D-...-K4-MINI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K4-MINI | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K4-MIDI | G1/4 | 5.3 | 32 | 49 | 62.3 | ~135.8 | 3 | ~100.3 | 5 | 129.2 | 60 | 31.2 | 36 |
| LRB-1/2-D-...-K4-MIDI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K4-MIDI | | | | | | | | | | | | | |
| LRBS-1/2-D-...-K4-MIDI | | | | | | | | | | | | | |

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

Pressure regulator combinations LRB/LRBS-K, D series



Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

LRB-...-D-...-K5-... LRBS-...-D-...-K5-...

1 Pressure gauge connection 3 Installation dimensions 5 Mounting bracket HRBK-D-... → Flow direction, both directions possible
2 Connecting kit HRBC-D-... 4 Mounting bracket HRB-D-...

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | D1 | D2 | D3 | D4 |
|------------------------|-----|------|----|------|------|-----|----|-----|-------|-----|------|----|------|---------|
| Mini | | | | | | | | | | | | | | |
| LRB-1/4-D-...-K5-MINI | 284 | ~272 | 40 | 80.7 | 59.2 | 2.5 | 5 | 7.3 | 108.5 | 146 | G1/4 | 31 | G1/4 | M36x1.5 |
| LRB-3/8-D-...-K5-MINI | 290 | | | | | | | | | | G3/8 | | | |
| LRBS-1/4-D-...-K5-MINI | 284 | | | | | | | | | | G1/4 | | | |
| LRBS-3/8-D-...-K5-MINI | 290 | | | | | | | | | | G3/8 | | | |
| Midi | | | | | | | | | | | | | | |
| LRB-3/8-D-...-K5-MIDI | 381 | ~366 | 55 | 99.9 | 70.6 | 3 | 5 | 8.3 | 146 | 186 | G3/8 | 50 | G3/8 | M52x1.5 |
| LRB-1/2-D-...-K5-MIDI | | | | | | | 6 | | | | G1/2 | | | |
| LRBS-3/8-D-...-K5-MIDI | | | | | | | 5 | | | | G3/8 | | | |
| LRBS-1/2-D-...-K5-MIDI | | | | | | | 6 | | | | G1/2 | | | |

| Type | D5 | D6 | H1 | H2 ±0.2 | H3 | L1 | L2 | L4 | L5 max. | L6 | L7 min. | L8 | ≅ 2 |
|------------------------|------|-----|----|------------|------|--------|----|--------|------------|-------|------------|------|-----|
| Mini | | | | | | | | | | | | | |
| LRB-1/4-D-...-K5-MINI | G3/8 | 4.3 | 20 | 35 | 47.3 | ~95.4 | 3 | ~68.9 | 3 | 98 | 60 | 17.5 | 17 |
| LRB-3/8-D-...-K5-MINI | | | | | | | | | | | | | |
| LRBS-1/4-D-...-K5-MINI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K5-MINI | | | | | | | | | | | | | |
| Midi | | | | | | | | | | | | | |
| LRB-3/8-D-...-K5-MIDI | G1/4 | 5.3 | 32 | 49 | 62.3 | ~135.8 | 3 | ~100.3 | 5 | 129.2 | 60 | 31.2 | 36 |
| LRB-1/2-D-...-K5-MIDI | | | | | | | | | | | | | |
| LRBS-3/8-D-...-K5-MIDI | | | | | | | | | | | | | |
| LRBS-1/2-D-...-K5-MIDI | | | | | | | | | | | | | |

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

Pressure regulator combinations LRB/LRBS-K, D series

FESTO

Technical data

| Ordering data | | | | | |
|---|-----------------|---|------------------------------------|--|----------------------------------|
| Connecting kit, connecting plate and mounting bracket | | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| Manifold with 2 pressure regulators | | | | | |
| Mini | G $\frac{1}{4}$ | 528 952 | LRB- $\frac{1}{4}$ -D-7-O-K2-MINI | 528 954 | LRB- $\frac{1}{4}$ -D-O-K2-MINI |
| | G $\frac{3}{8}$ | 528 953 | LRB- $\frac{3}{8}$ -D-7-O-K2-MINI | 528 955 | LRB- $\frac{3}{8}$ -D-O-K2-MINI |
| Midi | G $\frac{3}{8}$ | 528 956 | LRB- $\frac{3}{8}$ -D-7-O-K2-MIDI | 528 958 | LRB- $\frac{3}{8}$ -D-O-K2-MIDI |
| | G $\frac{1}{2}$ | 528 957 | LRB- $\frac{1}{2}$ -D-7-O-K2-MIDI | 528 959 | LRB- $\frac{1}{2}$ -D-O-K2-MIDI |
| Lockable | | | | | |
| Mini | G $\frac{1}{4}$ | 528 960 | LRBS- $\frac{1}{4}$ -D-7-O-K2-MINI | 528 962 | LRBS- $\frac{1}{4}$ -D-O-K2-MINI |
| | G $\frac{3}{8}$ | 528 961 | LRBS- $\frac{3}{8}$ -D-7-O-K2-MINI | 528 963 | LRBS- $\frac{3}{8}$ -D-O-K2-MINI |
| Midi | G $\frac{3}{8}$ | 528 964 | LRBS- $\frac{3}{8}$ -D-7-O-K2-MIDI | 528 966 | LRBS- $\frac{3}{8}$ -D-O-K2-MIDI |
| | G $\frac{1}{2}$ | 528 965 | LRBS- $\frac{1}{2}$ -D-7-O-K2-MIDI | 528 967 | LRBS- $\frac{1}{2}$ -D-O-K2-MIDI |

| Ordering data | | | | | |
|---|-----------------|---|------------------------------------|--|----------------------------------|
| Connecting kit, connecting plate and mounting bracket | | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| Manifold with 3 pressure regulators | | | | | |
| Mini | G $\frac{1}{4}$ | 528 968 | LRB- $\frac{1}{4}$ -D-7-O-K3-MINI | 528 970 | LRB- $\frac{1}{4}$ -D-O-K3-MINI |
| | G $\frac{3}{8}$ | 528 969 | LRB- $\frac{3}{8}$ -D-7-O-K3-MINI | 528 971 | LRB- $\frac{3}{8}$ -D-O-K3-MINI |
| Midi | G $\frac{3}{8}$ | 528 972 | LRB- $\frac{3}{8}$ -D-7-O-K3-MIDI | 528 974 | LRB- $\frac{3}{8}$ -D-O-K3-MIDI |
| | G $\frac{1}{2}$ | 528 973 | LRB- $\frac{1}{2}$ -D-7-O-K3-MIDI | 528 975 | LRB- $\frac{1}{2}$ -D-O-K3-MIDI |
| Lockable | | | | | |
| Mini | G $\frac{1}{4}$ | 528 976 | LRBS- $\frac{1}{4}$ -D-7-O-K3-MINI | 528 978 | LRBS- $\frac{1}{4}$ -D-O-K3-MINI |
| | G $\frac{3}{8}$ | 528 977 | LRBS- $\frac{3}{8}$ -D-7-O-K3-MINI | 528 979 | LRBS- $\frac{3}{8}$ -D-O-K3-MINI |
| Midi | G $\frac{3}{8}$ | 528 980 | LRBS- $\frac{3}{8}$ -D-7-O-K3-MIDI | 528 982 | LRBS- $\frac{3}{8}$ -D-O-K3-MIDI |
| | G $\frac{1}{2}$ | 528 981 | LRBS- $\frac{1}{2}$ -D-7-O-K3-MIDI | 528 983 | LRBS- $\frac{1}{2}$ -D-O-K3-MIDI |

| Ordering data | | | | | |
|---|-----------------|---|------------------------------------|--|----------------------------------|
| Connecting kit, connecting plate and mounting bracket | | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| Manifold with 4 pressure regulators | | | | | |
| Mini | G $\frac{1}{4}$ | 528 984 | LRB- $\frac{1}{4}$ -D-7-O-K4-MINI | 528 986 | LRB- $\frac{1}{4}$ -D-O-K4-MINI |
| | G $\frac{3}{8}$ | 528 985 | LRB- $\frac{3}{8}$ -D-7-O-K4-MINI | 528 987 | LRB- $\frac{3}{8}$ -D-O-K4-MINI |
| Midi | G $\frac{3}{8}$ | 528 988 | LRB- $\frac{3}{8}$ -D-7-O-K4-MIDI | 528 990 | LRB- $\frac{3}{8}$ -D-O-K4-MIDI |
| | G $\frac{1}{2}$ | 528 989 | LRB- $\frac{1}{2}$ -D-7-O-K4-MIDI | 528 991 | LRB- $\frac{1}{2}$ -D-O-K4-MIDI |
| Lockable | | | | | |
| Mini | G $\frac{1}{4}$ | 528 992 | LRBS- $\frac{1}{4}$ -D-7-O-K4-MINI | 528 994 | LRBS- $\frac{1}{4}$ -D-O-K4-MINI |
| | G $\frac{3}{8}$ | 528 993 | LRBS- $\frac{3}{8}$ -D-7-O-K4-MINI | 528 995 | LRBS- $\frac{3}{8}$ -D-O-K4-MINI |
| Midi | G $\frac{3}{8}$ | 528 996 | LRBS- $\frac{3}{8}$ -D-7-O-K4-MIDI | 528 998 | LRBS- $\frac{3}{8}$ -D-O-K4-MIDI |
| | G $\frac{1}{2}$ | 528 997 | LRBS- $\frac{1}{2}$ -D-7-O-K4-MIDI | 528 999 | LRBS- $\frac{1}{2}$ -D-O-K4-MIDI |

Pressure regulator combinations LRB/LRBS-K, D series

FESTO

Technical data

| Ordering data | | | | | |
|---|-----------------|---|------------------------------------|--|----------------------------------|
| Connecting kit, connecting plate and mounting bracket | | | | | |
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | | Pressure regulation range 0.5 ... 12 bar | |
| | | Part No. | Type | Part No. | Type |
| Manifold with 5 pressure regulators | | | | | |
| Mini | G $\frac{1}{4}$ | 529 000 | LRB- $\frac{1}{4}$ -D-7-O-K5-MINI | 529 002 | LRB- $\frac{1}{4}$ -D-O-K5-MINI |
| | G $\frac{3}{8}$ | 529 001 | LRB- $\frac{3}{8}$ -D-7-O-K5-MINI | 529 003 | LRB- $\frac{3}{8}$ -D-O-K5-MINI |
| Midi | G $\frac{3}{8}$ | 529 004 | LRB- $\frac{3}{8}$ -D-7-O-K5-MIDI | 529 006 | LRB- $\frac{3}{8}$ -D-O-K5-MIDI |
| | G $\frac{1}{2}$ | 529 005 | LRB- $\frac{1}{2}$ -D-7-O-K5-MIDI | 529 007 | LRB- $\frac{1}{2}$ -D-O-K5-MIDI |
| Lockable | | | | | |
| Mini | G $\frac{1}{4}$ | 529 008 | LRBS- $\frac{1}{4}$ -D-7-O-K5-MINI | 529 010 | LRBS- $\frac{1}{4}$ -D-O-K5-MINI |
| | G $\frac{3}{8}$ | 529 009 | LRBS- $\frac{3}{8}$ -D-7-O-K5-MINI | 529 011 | LRBS- $\frac{3}{8}$ -D-O-K5-MINI |
| Midi | G $\frac{3}{8}$ | 529 012 | LRBS- $\frac{3}{8}$ -D-7-O-K5-MIDI | 529 014 | LRBS- $\frac{3}{8}$ -D-O-K5-MIDI |
| | G $\frac{1}{2}$ | 529 013 | LRBS- $\frac{1}{2}$ -D-7-O-K5-MIDI | 529 015 | LRBS- $\frac{1}{2}$ -D-O-K5-MIDI |

Lubricators LOE, D series

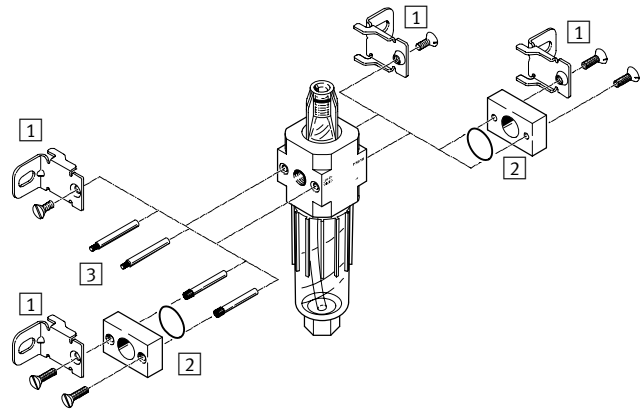
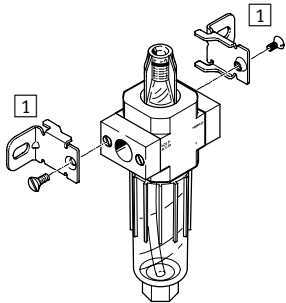
Peripherals overview



Micro

Individual unit with connection plates,
connection size G1/8, QS4 or QS6

Individual unit without connection plates, for service unit combination
connection size M5 or M7 in housing



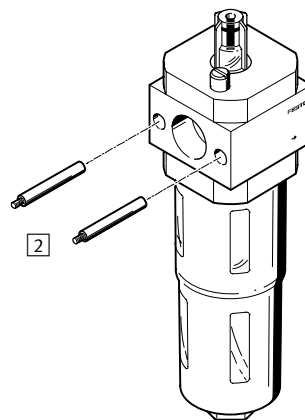
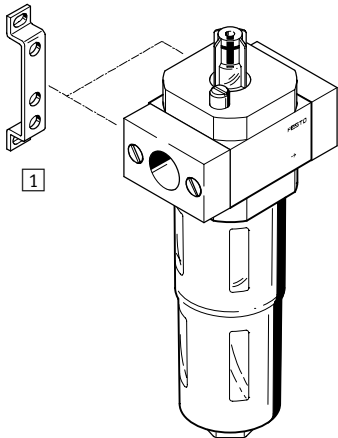
Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|----------------------------|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | ■ | ■ | ■ | 3 / 1.8-9 |
| 2 Connection plate kit PBL | - | ■ | - | ■ | 3 / 1.8-13 |
| 3 Threaded pin FRB | - | - | ■ | ■ | 3 / 1.8-11 |

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination

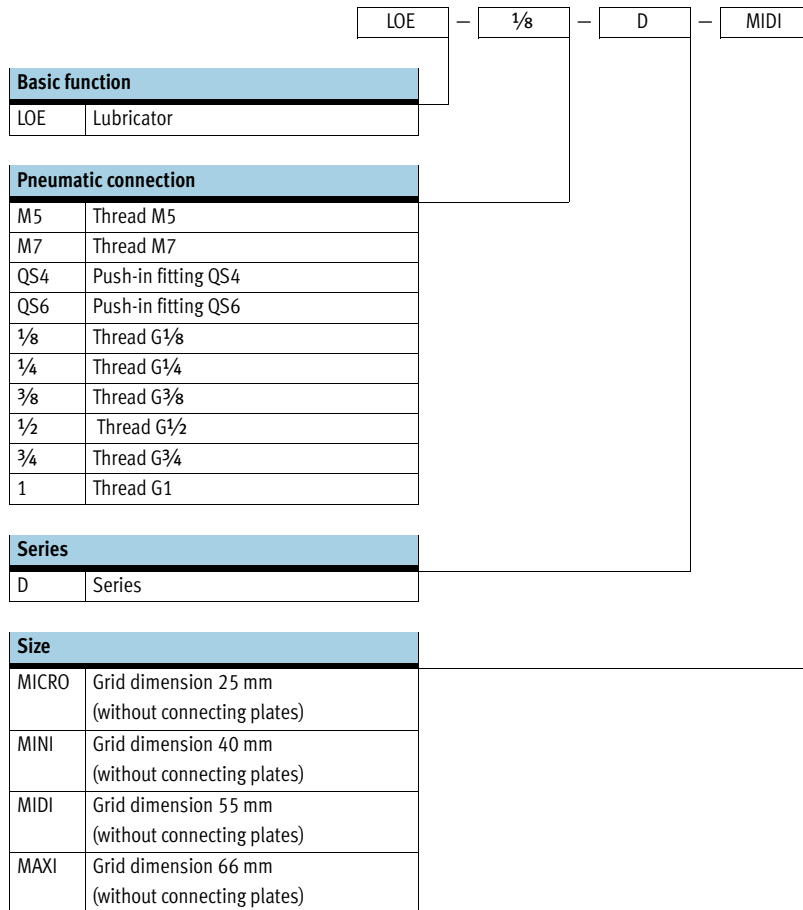


Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |

163.Lubricators LOE, D series

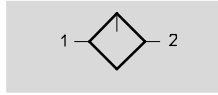
Type codes



Lubricators LOE, D series

Technical data

Function



- - Flow rate
160 ... 9000 l/min
- - Temperature range
-10 ... +60 °C
- - Input pressure
1 ... 16 bar

The proportional lubricator adds a precision adjustable quantity of oil to the compressed air stream.

The pressure drop that occurs when air flows through a Venturi nozzle is used to convey oil from the container to the drip cap. From here, the oil drips into the air duct directly behind the proportional valve, where it is atomised. The oil mist component is proportional to the compressed air flow rate.



- Proportional lubricator with precision oil metering
- Reduces wear on drive units subject to high loading
- High flow rate
- Quick and easy oil top-up
- Robust metal housing
- Transparent lubricator bowl with metallic bowl guard

The following oils are recommended for Festo components:

Viscosity range to ISO 3448, ISO class VG 32
32 mm²/s (= cSt) at 40 °C

- Festo special oil
→ 3 / 1.5-8
- 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 | M5 | M7 | G1/8 | QS4 | QS6 | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 |
| Operating medium | Filtered compressed air, unlubricated, grade of filtration 5 µm | | | | | Filtered compressed air, unlubricated, grade of filtration 40 µm | | | | | | | | | |
| Design | Proportional standard mist lubricator | | | | | | | | | | | | | | |
| Type of mounting | Via accessories | | | | | | | | | | | | | | |
| | In-line installation | | | | | | | | | | | | | | |
| Assembly position | Vertical ±5° | | | | | | | | | | | | | | |
| Input pressure [bar] | 0 ... 10 | | | | | 0 ... 16 | | | | | | | | | |
| Minimum flow for lubricator operation [l/min] | 3 | | | | | 3 | | | 8 | | | | 10 | | |
| Max. oil capacity [cm ³] | 6.5 | | | | | 45 | | | 110 | | | | 190 | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|---------------|-----|--|------------------|-----|-----|
| Connection | Female thread | | | Connecting plate | | |
| | M5 | M7 | | G1/8 | QS4 | QS6 |
| Micro | | | | | | |
| LOE | 200 | 430 | | 410 | 160 | 330 |

1) Measured at p1 = 6 bar and Δp = 1 bar.

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

Lubricators LOE, D series

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| LOE | 1300 | 2300 | 2700 | – | – | – |
| Midi | | | | | | |
| LOE | – | 2800 | 5500 | 6100 | 6300 | – |
| Maxi | | | | | | |
| LOE | – | – | – | 8300 | 8400 | 9000 |

1) Measured at p1 = 6 bar and Δp = 1 bar.

| Screw-in depth of connecting thread [mm] | | | | | |
|--|----|----|------|-----|-----|
| Connection | M5 | M7 | G1/8 | QS4 | QS6 |
| Micro | | | | | |
| In housing | 5 | 6 | – | – | – |
| In connecting plates | – | – | 8 | – | – |

| Ambient conditions | | | | |
|--|-------------|------|------|------|
| Size | Micro | Mini | Midi | Maxi |
| Ambient temperature [°C] | –10 ... +60 | | | |
| Temperature of medium [°C] | –10 ... +60 | | | |
| Corrosion resistance class 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.

| Weight [g] | | | | | | |
|------------|---------------|------------------|------|------|-----------------------|---------------|
| Size | Micro | | Mini | Midi | Maxi | |
| | Female thread | Connecting plate | | | Connection G1/2, G3/4 | Connection G1 |
| LOE | 39 | 59 | 270 | 630 | 1100 | 1200 |

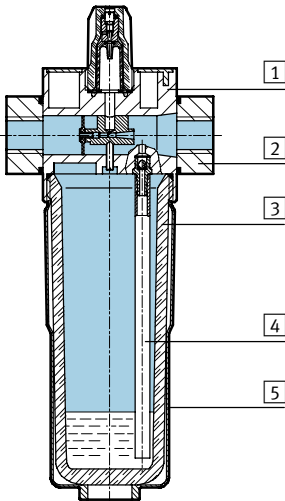
Lubricators LOE, D series

Technical data



Materials

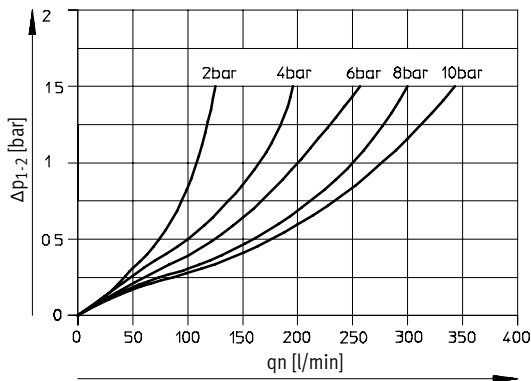
Sectional view



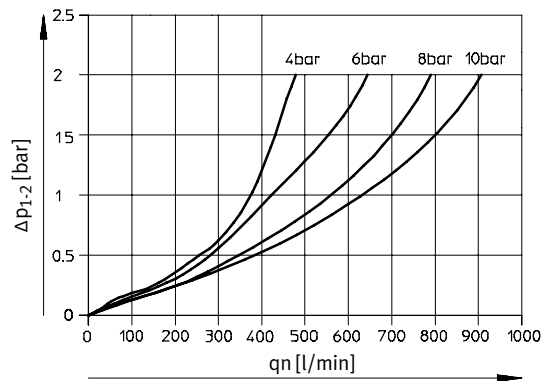
| Lubricator | Micro | Mini/Midi/Maxi |
|---------------------|-------------------------|-------------------------|
| 1 Housing | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 2 Connecting plates | Wrought aluminium alloy | Die-cast zinc/aluminium |
| 3 Bowl | Polycarbonate | Polycarbonate |
| 4 Tubing | Polyethylene | Polyethylene |
| 5 Metal bowl guard | - | Aluminium |
| - Seals | Nitrile rubber | Nitrile rubber |

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

LOE-M5-D-MICRO



LOE-M7-D-MICRO B

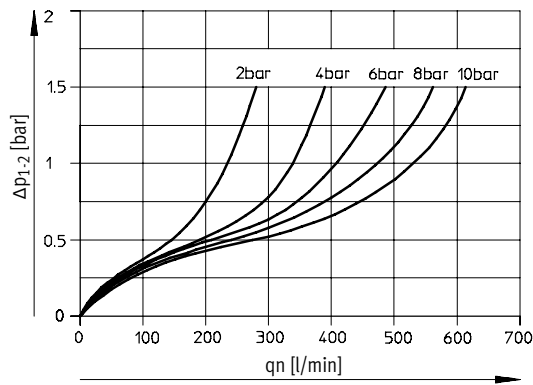


Lubricators LOE, D series

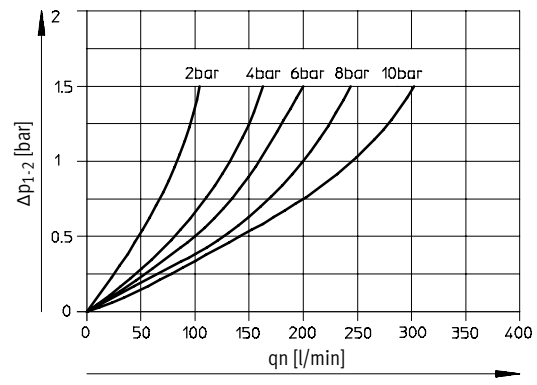
Technical data

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

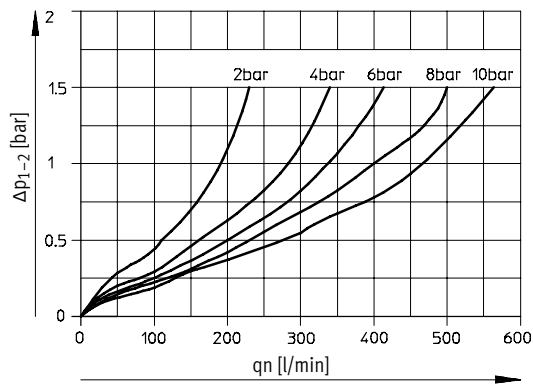
LOE-1/8-D-MICRO



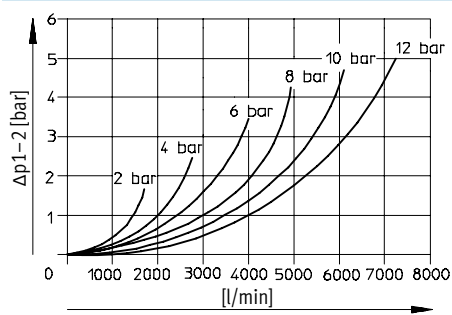
LOE-QS4-D-MICRO



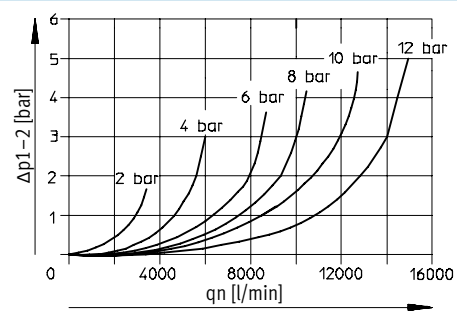
LOE-QS6-D-MICRO



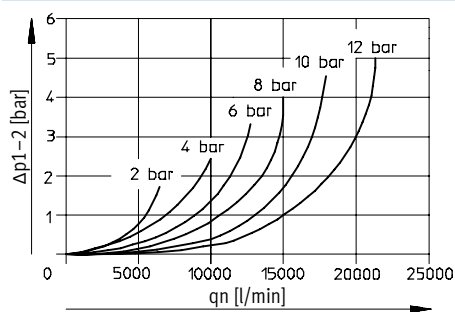
LOE-1/4-D-MINI



LOE-1/2-D-MIDI



LOE-1-D-MAXI



Primary pressure $p_1 = 10$ bar

Lubricators LOE, D series

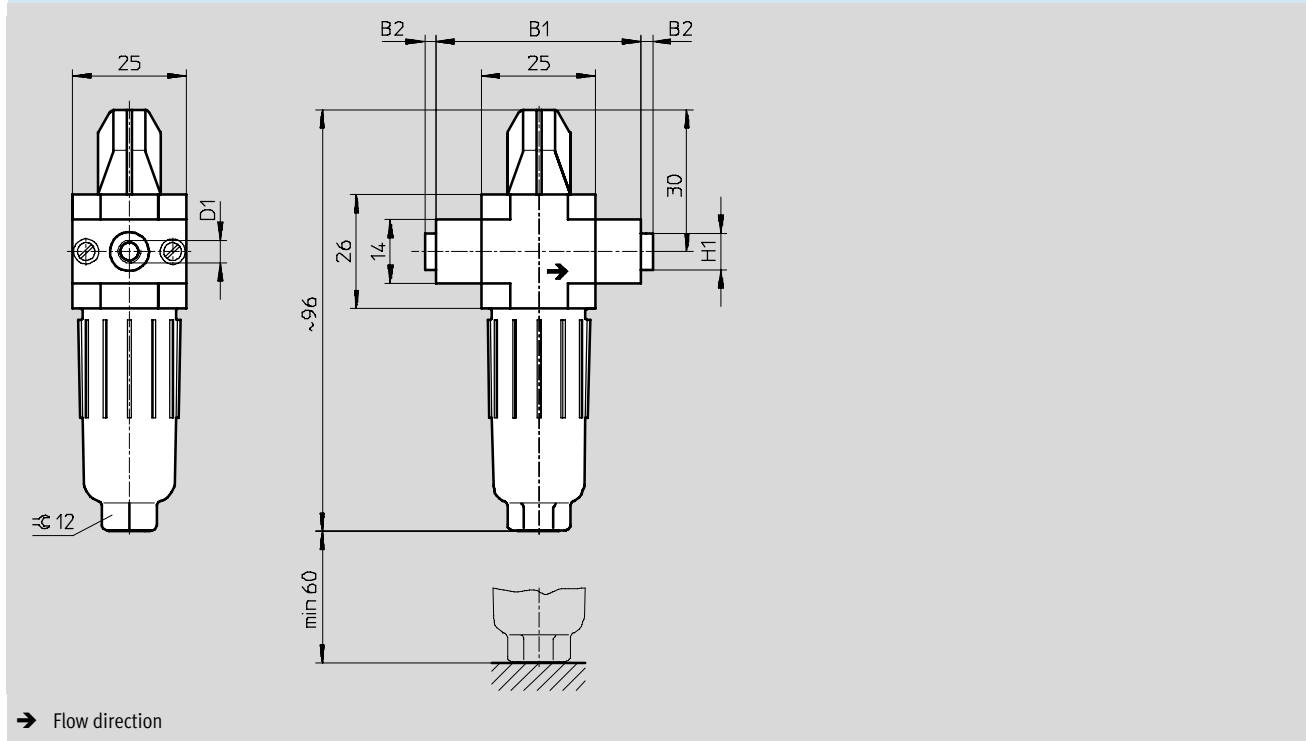
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Micro



| Type | B1 | B2 | D1 | H1 |
|------------------|----|------|------|-----|
| MICRO | | | | |
| LOE-M5-D-MICRO | 25 | - | M5 | - |
| LOE-M7-D-MICRO B | | | M7 | |
| LOE-1/8-D-MICRO | | | G1/8 | |
| LOE-QS4-D-MICRO | 45 | ~2.5 | QS4 | ~8 |
| LOE-QS6-D-MICRO | | | QS6 | ~10 |

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

Lubricators LOE, D series

Technical data

FESTO

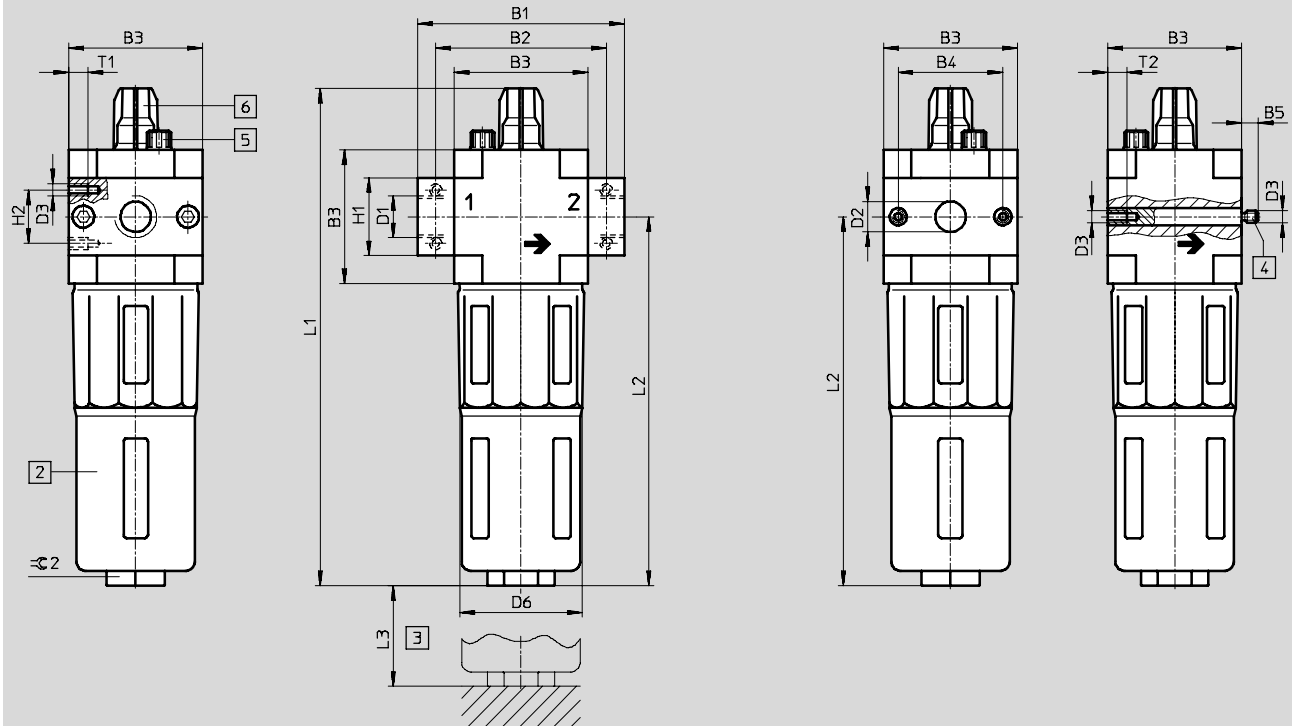
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With threaded connecting plates

Without threaded connecting plates



2 Metal bowl guard
3 Installation dimensions

4 Threaded pin (exchangeable)

5 Bleed screw for oil reservoir
6 Oil adjusting screw

→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D6 | H1 | H2 | L1 | L2 | L3 | T1 | T2 | ⊕ 2 |
|----------------|-----|----|----|----|-----|------|----|----|----|----|----|-----|-----|-----|----|----|-----|
| Mini | | | | | | | | | | | | | | | | | |
| LOE-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 38 | 20 | 11 | 169 | 124 | 100 | 7 | - | 22 |
| LOE-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | | | |
| LOE-3/8-D-MINI | 70 | | | | | G3/8 | | | | | | | | | | | |
| LOE-D-MINI | - | - | | | 5.8 | - | 11 | | | - | - | | | | - | 10 | |
| Midi | | | | | | | | | | | | | | | | | |
| LOE-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 52 | 32 | 22 | 204 | 151 | 120 | 8 | - | 24 |
| LOE-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | | |
| LOE-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | | | |
| LOE-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | | |
| LOE-D-MIDI | - | - | | | 6.8 | - | 24 | | | - | - | | | | - | 11 | |
| Maxi | | | | | | | | | | | | | | | | | |
| LOE-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 65 | 32 | 22 | 228 | 170 | 150 | 8 | - | 24 |
| LOE-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | | |
| LOE-1-D-MAXI | 116 | 91 | | | | G1 | | | | 40 | | | | | | | |
| LOE-D-MAXI | - | - | | | 6.8 | - | 30 | | | - | - | | | | - | 11 | |

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

Lubricators LOE, D series


FESTO

Technical data

| Ordering data | | | |
|---|--|----------|-----------------------------|
| Lubricator, input pressure 0 ... 10 bar | | | |
| Size | Connection | Part No. | Type |
| Micro | Without threaded connecting plates, connecting thread in housing | | |
| | M5 | 526 309 | LOE-M5-D-MICRO |
| | M7 | 534 188 | LOE-M7-D-MICRO B |
| | With threaded connecting plates | | |
| | G $\frac{1}{8}$ | 526 310 | LOE- $\frac{1}{8}$ -D-MICRO |
| | With connecting plate and push-in fitting | | |
| | QS4 | 526 313 | LOE-QS4-D-MICRO |
| | QS6 | 526 314 | LOE-QS6-D-MICRO |

| Ordering data | | | |
|---|----------|------------|--|
| Lubricator, input pressure 0 ... 16 bar, metal bowl guard | | | |
| Size | Part No. | Type | |
| Without threaded connecting plates | | | |
| Mini | 192 575 | LOE-D-MINI | |
| Midi | 192 576 | LOE-D-MIDI | |
| Maxi | 192 577 | LOE-D-MAXI | |

| Ordering data | | | |
|---|-----------------|----------|----------------------------|
| Lubricator, input pressure 0 ... 16 bar, metal bowl guard | | | |
| Size | Connection | Part No. | Type |
| With threaded connecting plates | | | |
| Mini | G $\frac{1}{8}$ | 159 620 | LOE- $\frac{1}{8}$ -D-MINI |
| | G $\frac{1}{4}$ | 159 621 | LOE- $\frac{1}{4}$ -D-MINI |
| | G $\frac{3}{8}$ | 162 680 | LOE- $\frac{3}{8}$ -D-MINI |
| Midi | G $\frac{1}{4}$ | 186 479 | LOE- $\frac{1}{4}$ -D-MIDI |
| | G $\frac{3}{8}$ | 159 586 | LOE- $\frac{3}{8}$ -D-MIDI |
| | G $\frac{1}{2}$ | 159 587 | LOE- $\frac{1}{2}$ -D-MIDI |
| | G $\frac{3}{4}$ | 162 681 | LOE- $\frac{3}{4}$ -D-MIDI |
| Maxi | G $\frac{1}{2}$ | 186 480 | LOE- $\frac{1}{2}$ -D-MAXI |
| | G $\frac{3}{4}$ | 159 622 | LOE- $\frac{3}{4}$ -D-MAXI |
| | G1 | 159 623 | LOE-1-D-MAXI |

| Ordering data – Special oil | | | |
|---|-------------------|----------|---------|
| | Scope of delivery | Part No. | Type |
|  | 1 litre | 152 811 | OFSW-32 |

On-off valves HE, D series

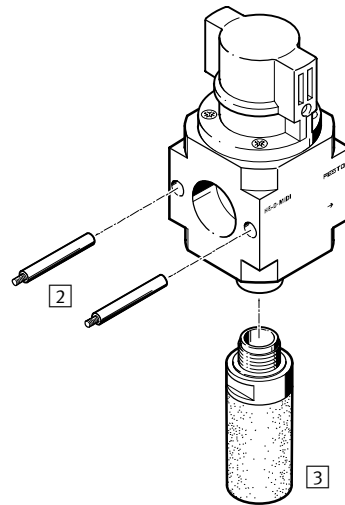
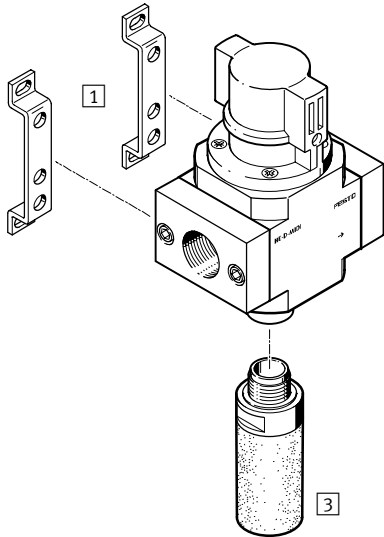
Peripherals overview

FESTO

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|---|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| [1] Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| [2] Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |
| [3] Silencer U | ■ | ■ | ■ | ■ | 3 / 1.8-17 |

172.On-off valves HE, D series

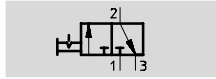
Type codes




| | | | | | | | |
|-----------------------------|---|---|-----|---|---|---|------|
| | HE | - | 1/4 | - | D | - | MIDI |
| Basic function | | | | | | | |
| HE | On-off valve, manual | | | | | | |
| Pneumatic connection | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | |
| 1/4 | Thread G1/4 | | | | | | |
| 3/8 | Thread G3/8 | | | | | | |
| 1/2 | Thread G1/2 | | | | | | |
| 3/4 | Thread G3/4 | | | | | | |
| 1 | Thread G1 | | | | | | |
| Series | | | | | | | |
| D | Series | | | | | | |
| Size | | | | | | | |
| MINI | Grid dimension 40 mm (without connecting plates) | | | | | | |
| MIDI | Grid dimension 55 mm (without connecting plates) | | | | | | |
| MAXI | Grid dimension 66 mm (without connecting plates) | | | | | | |

On-off valves HE, D series

Technical data

Function



-  Flow rate
1000 ... 6500 l/min
-  Temperature range
-10 ... +60 °C
-  Operating pressure
0 ... 16 bar



- 3/2-way manual shut-off valve
- The unit is vented when switched off
- Ducted exhaust possible via a threaded connection
- The switching position is immediately recognisable
- Commercially available padlock can be used for security

| General technical data | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|
| Size | Mini | | | Midi | | | | Maxi | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 |
| Operating medium | Filtered compressed air, lubricated or unlubricated, grade of filtration 50 µm | | | | | | | | | |
| Design | Piston spool valve | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | |
| Assembly position | Any | | | | | | | | | |
| Operating pressure [bar] | 0 ... 16 | | | | | | | | | |
| Valve function | 3/2-way valve, single solenoid | | | | | | | | | |
| Exhaust function | Without flow control | | | | | | | | | |
| Reset method | Mechanical spring | | | | | | | | | |
| C value [l/sbar] | 4.4 | 7.2 | 7.5 | 9.9 | 15.7 | 17.0 | 17.3 | 23.7 | 26.8 | 25.9 |
| b value | 0.44 | 0.28 | 0.27 | 0.45 | 0.30 | 0.30 | 0.42 | 0.32 | 0.35 | 0.37 |
| Direction of flow | Non-reversible | | | | | | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| HE | 1000 | 1500 | 1600 | - | - | - |
| Midi | | | | | | |
| HE | - | 2600 | 3200 | 3600 | 3800 | - |
| Maxi | | | | | | |
| HE | - | - | - | 5600 | 6000 | 6500 |

1) Measured at p1 = 6 bar and Δp = 1 bar.

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

On-off valves HE, D series

Technical data

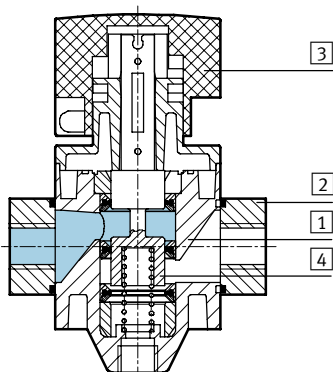
| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|--|------|------|------|
| Size | | Mini | Midi | Maxi |
| HE | | 192 | 511 | 796 |

Materials

Sectional view



| On-off valve | | |
|-------------------|-------------------|-----------------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Connecting plates | Wrought aluminium alloy |
| 3 | Rotary knob | Polyamide |
| 4 | Piston | Stainless steel |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

On-off valves HE, D series

Technical data



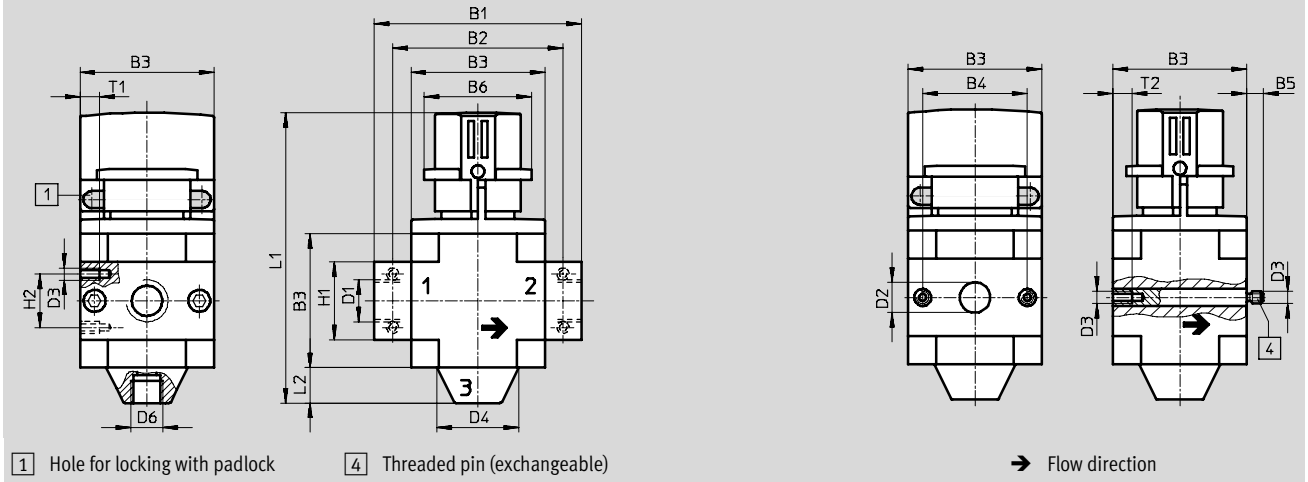
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With threaded connecting plates

Without threaded connecting plates



| Type | B1 | B2 | B3 | B4 | B5 | B6 | D1 | D2 | D3 | D4 | D6 | H1 | H2 | L1 | L2 | T1 | T2 |
|---------------|-----|----|----|----|-----|----|------|----|----|----|------|----|----|-----|----|----|----|
| Mini | | | | | | | | | | | | | | | | | |
| HE-1/8-D-MINI | 64 | 52 | 40 | 30 | - | 32 | G1/8 | - | M4 | 24 | G1/8 | 20 | 11 | 98 | 11 | 7 | - |
| HE-1/4-D-MINI | | | | | | | G1/4 | | | | | | | | | | |
| HE-3/8-D-MINI | 70 | | | | | | G3/8 | | | | | | | | | | |
| HE-D-MINI | - | - | | | 5.8 | | - | 11 | | | | - | - | | | - | 10 |
| Midi | | | | | | | | | | | | | | | | | |
| HE-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | 44 | G1/4 | - | M5 | 34 | G1/4 | 32 | 22 | 119 | 14 | 8 | - |
| HE-3/8-D-MIDI | | | | | | | G3/8 | | | | | | | | | | |
| HE-1/2-D-MIDI | | | | | | | G1/2 | | | | | | | | | | |
| HE-3/4-D-MIDI | | | | | | | G3/4 | | | | | | | | | | |
| HE-D-MIDI | - | - | | | 6.8 | | - | 24 | | | | - | - | | | - | 11 |
| Maxi | | | | | | | | | | | | | | | | | |
| HE-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | 44 | G1/2 | - | M5 | 38 | G3/8 | 32 | 22 | 132 | 16 | 8 | - |
| HE-3/4-D-MAXI | | | | | | | G3/4 | | | | | 40 | | | | | |
| HE-1-D-MAXI | 116 | 91 | | | | | G1 | | | | | - | - | | | | |
| HE-D-MAXI | - | - | | | 6.8 | | - | 30 | | | | - | - | | | - | 11 |

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

On-off valves HE, D series

Technical data

| Ordering data | | | |
|---|----------|-----------|--|
| 3/2-way valve, operating pressure 0 ... 16 bar, normally closed | | | |
| Size | Part No. | Type | |
| Without threaded connecting plates | | | |
| Mini | 170 681 | HE-D-MINI | |
| Midi | 170 682 | HE-D-MIDI | |
| Maxi | 170 683 | HE-D-MAXI | |

| Ordering data | | | |
|---|------------|----------|---------------|
| 3/2-way valve, operating pressure 0 ... 16 bar, normally closed | | | |
| Size | Connection | Part No. | Type |
| With threaded connecting plates | | | |
| Mini | G1/8 | 162 806 | HE-1/8-D-MINI |
| | G1/4 | 162 807 | HE-1/4-D-MINI |
| | G3/8 | 162 808 | HE-3/8-D-MINI |
| Midi | G1/4 | 186 513 | HE-1/4-D-MIDI |
| | G3/8 | 162 809 | HE-3/8-D-MIDI |
| | G1/2 | 162 810 | HE-1/2-D-MIDI |
| | G3/4 | 162 811 | HE-3/4-D-MIDI |
| Maxi | G1/2 | 186 514 | HE-1/2-D-MAXI |
| | G3/4 | 162 812 | HE-3/4-D-MAXI |
| | G1 | 162 813 | HE-1-D-MAXI |

 Core Range

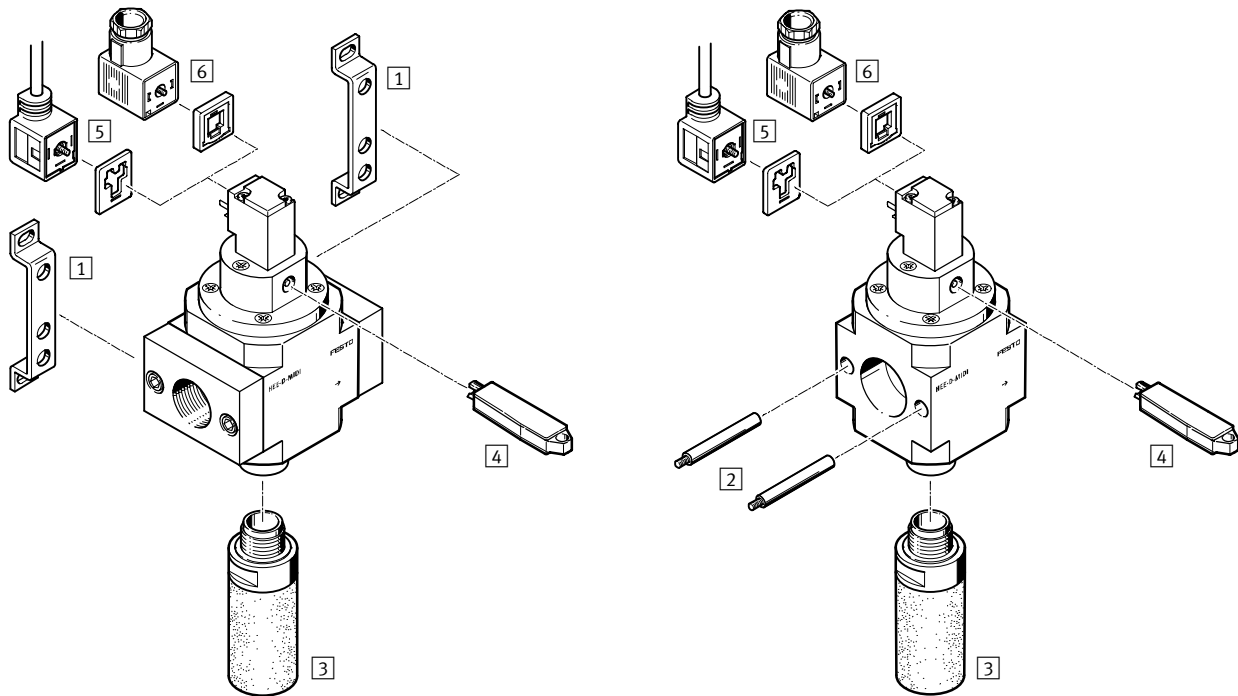
177.On-off valves HEE, D series

Peripherals overview

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|---|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |
| 3 Silencer U | ■ | ■ | ■ | ■ | 3 / 1.8-17 |
| 4 Manual override tool, non-detenting AHB-MD/MF/MY | ■ | ■ | ■ | ■ | - |
| 5 Plug socket with cable KMEB-1 | ■ | ■ | ■ | ■ | 3 / 1.8-21 |
| 6 Plug socket MSSD-EB | ■ | ■ | ■ | ■ | 3 / 1.8-21 |

178.On-off valves HEE, D series

Type codes

HEE – 1/4 – D – MIDI – 110

Basic function

| | |
|-----|--------------------------|
| HEE | On-off valve, electrical |
|-----|--------------------------|

Pneumatic connection

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

Series

| | |
|---|--------|
| D | Series |
|---|--------|

Size

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

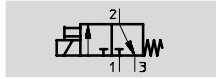
Voltage




| | |
|-----|-------------------------|
| 24 | Supply voltage 24 V DC |
| 110 | Supply voltage 110 V AC |
| 230 | Supply voltage 230 V AC |

On-off valves HEE, D series

Technical data

Function



-  Flow rate
1000 ... 6500 l/min
-  Temperature range
-10 ... +60 °C
-  Operating pressure
2.5 ... 16 bar

Selected types according to ATEX directive for explosive atmospheres
→ www.festo.com/en/ex




- Electrical on-off valve for pressurising and venting pneumatic installations
- With solenoid coil without plug socket
- Three voltage ranges can be selected
- Manual override via pushing and detenting (using override tool AHB-MD/MF/MW)
- Solenoid head can be repositioned by 4 x 90°

| General technical data | | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|--|
| Size | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Operating medium | Filtered compressed air, lubricated or unlubricated, grade of filtration 50 µm | | | | | | | | | | |
| Design | Piston spool valve | | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | | |
| Assembly position | Any | | | | | | | | | | |
| Operating pressure [bar] | 2.5 ... 16 | | | | | | | | | | |
| Valve function | 3/2-way valve, single solenoid | | | | | | | | | | |
| Exhaust function | Without flow control | | | | | | | | | | |
| Type of actuation | Mechanical spring | | | | | | | | | | |
| C value [l/sbar] | 4.4 | 7.0 | 7.3 | 9.7 | 15.7 | 17.0 | 17.3 | 24.2 | 28.0 | 27.6 | |
| b value | 0.44 | 0.31 | 0.28 | 0.47 | 0.33 | 0.30 | 0.41 | 0.30 | 0.32 | 0.32 | |
| Direction of flow | Non-reversible | | | | | | | | | | |
| Supply voltage [V DC/AC] | 24, 110, 230 | | | | | | | | | | |
| Electrical connection | Plug to DIN 43 650, type C | | | | | | | | | | |
| Duty cycle | 100% | | | | | | | | | | |
| Protection class | IP65 | | | | | | | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| HEE | 1000 | 1500 | 1600 | - | - | - |
| Midi | | | | | | |
| HEE | - | 2400 | 3200 | 3600 | 3800 | - |
| Maxi | | | | | | |
| HEE | - | - | - | 5600 | 6000 | 6500 |

1) Measured at p1 = 6 bar and Δp = 1 bar.

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

On-off valves HEE, D series

Technical data

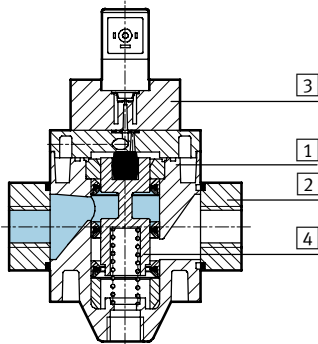
| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|--|------|------|------|
| Size | | Mini | Midi | Maxi |
| HEE | | 223 | 500 | 800 |

Materials

Sectional view



| On-off valve | | |
|-------------------|---------------------------------|-----------------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Connecting plates | Wrought aluminium alloy |
| 3 | Solenoid and intermediate plate | Polyamide |
| 4 | Piston | Stainless steel |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

On-off valves HEE, D series

Technical data

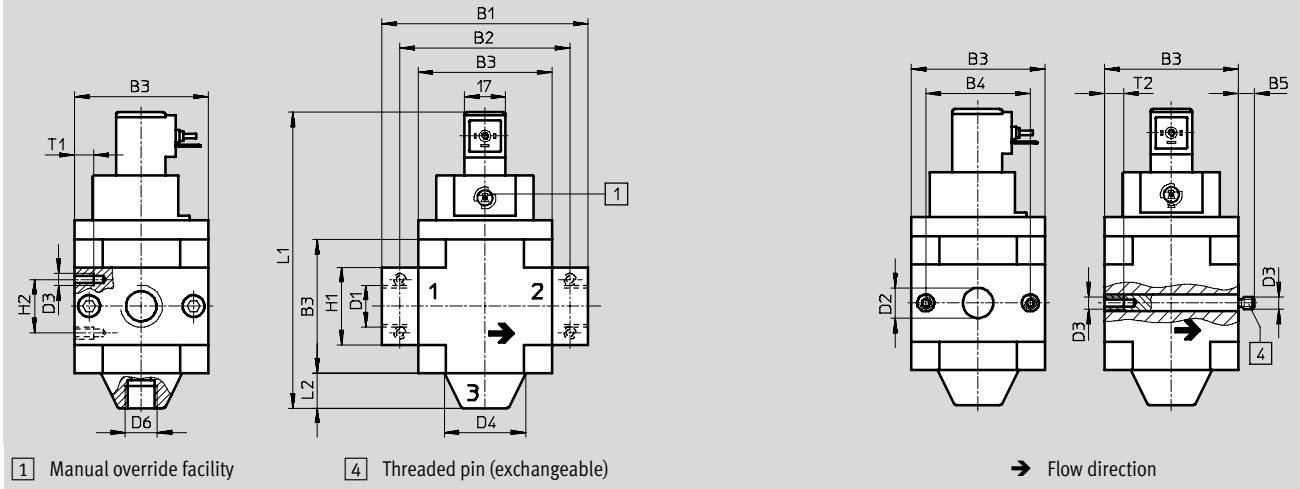
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With threaded connecting plates

Without threaded connecting plates



| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D4 | D6 | H1 | H2 | L1 | L2 | T1 | T2 |
|----------------|-----|----|----|----|-----|------|----|----|----|------|----|----|-----|----|----|----|
| Mini | | | | | | | | | | | | | | | | |
| HEE-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 24 | G3/8 | 20 | 11 | 104 | 11 | 7 | - |
| HEE-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | | |
| HEE-3/8-D-MINI | 70 | | | | | G3/8 | | | | | | | | | | |
| HEE-D-MINI | - | - | | | 5.8 | - | 11 | | | | - | - | | | - | 10 |
| Midi | | | | | | | | | | | | | | | | |
| HEE-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 34 | G1/4 | 32 | 22 | 122 | 14 | 8 | - |
| HEE-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | |
| HEE-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | | |
| HEE-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | |
| HEE-D-MIDI | - | - | | | 6.8 | - | 24 | | | | - | - | | | - | 11 |
| Maxi | | | | | | | | | | | | | | | | |
| HEE-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 38 | G3/8 | 32 | 22 | 135 | 16 | 8 | - |
| HEE-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | |
| HEE-1-D-MAXI | 116 | 91 | | | | G1 | | | | | 40 | | | | | |
| HEE-D-MAXI | - | - | | | 6.8 | - | 30 | | | | - | - | | | - | 11 |

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

On-off valves HEE, D series

FESTO

Technical data

| Ordering data | | | | | | | |
|---|------------|----------|---------------|----------|----------------|----------|----------------|
| 3/2-way valve, operating pressure 2.5 ... 16 bar, normally closed | | | | | | | |
| Size | Connection | 24 V DC | | 110 V AC | | 230 V AC | |
| | | Part No. | Type | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | | | |
| Mini | | 172 956 | HEE-D-MINI-24 | 172 957 | HEE-D-MINI-110 | 172 958 | HEE-D-MINI-230 |
| Midi | | 172 959 | HEE-D-MIDI-24 | 172 960 | HEE-D-MIDI-110 | 172 961 | HEE-D-MIDI-230 |
| Maxi | | 172 962 | HEE-D-MAXI-24 | 172 963 | HEE-D-MAXI-110 | 172 964 | HEE-D-MAXI-230 |

| Ordering data | | | | | | | |
|---|-----------------|----------|-------------------------------|----------|--------------------------------|----------|--------------------------------|
| 3/2-way valve, operating pressure 2.5 ... 16 bar, normally closed | | | | | | | |
| Size | Connection | 24 V DC | | 110 V AC | | 230 V AC | |
| | | Part No. | Type | Part No. | Type | Part No. | Type |
| With threaded connecting plates | | | | | | | |
| Mini | G $\frac{1}{8}$ | 165 068 | HEE- $\frac{1}{8}$ -D-MINI-24 | 165 069 | HEE- $\frac{1}{8}$ -D-MINI-110 | 165 070 | HEE- $\frac{1}{8}$ -D-MINI-230 |
| | G $\frac{1}{4}$ | 165 071 | HEE- $\frac{1}{4}$ -D-MINI-24 | 165 072 | HEE- $\frac{1}{4}$ -D-MINI-110 | 165 073 | HEE- $\frac{1}{4}$ -D-MINI-230 |
| | G $\frac{3}{8}$ | 165 074 | HEE- $\frac{3}{8}$ -D-MINI-24 | 165 075 | HEE- $\frac{3}{8}$ -D-MINI-110 | 172 940 | HEE- $\frac{3}{8}$ -D-MINI-230 |
| Midi | G $\frac{1}{4}$ | 186 515 | HEE- $\frac{1}{4}$ -D-MIDI-24 | 186 517 | HEE- $\frac{1}{4}$ -D-MIDI-110 | 186 516 | HEE- $\frac{1}{4}$ -D-MIDI-230 |
| | G $\frac{3}{8}$ | 172 941 | HEE- $\frac{3}{8}$ -D-MIDI-24 | 172 942 | HEE- $\frac{3}{8}$ -D-MIDI-110 | 172 943 | HEE- $\frac{3}{8}$ -D-MIDI-230 |
| | G $\frac{1}{2}$ | 172 944 | HEE- $\frac{1}{2}$ -D-MIDI-24 | 172 945 | HEE- $\frac{1}{2}$ -D-MIDI-110 | 172 946 | HEE- $\frac{1}{2}$ -D-MIDI-230 |
| | G $\frac{3}{4}$ | 172 947 | HEE- $\frac{3}{4}$ -D-MIDI-24 | 172 948 | HEE- $\frac{3}{4}$ -D-MIDI-110 | 172 949 | HEE- $\frac{3}{4}$ -D-MIDI-230 |
| Maxi | G $\frac{1}{2}$ | 186 518 | HEE- $\frac{1}{2}$ -D-MAXI-24 | 186 520 | HEE- $\frac{1}{2}$ -D-MAXI-110 | 186 519 | HEE- $\frac{1}{2}$ -D-MAXI-230 |
| | G $\frac{3}{4}$ | 172 950 | HEE- $\frac{3}{4}$ -D-MAXI-24 | 172 951 | HEE- $\frac{3}{4}$ -D-MAXI-110 | 172 952 | HEE- $\frac{3}{4}$ -D-MAXI-230 |
| | G1 | 172 953 | HEE-1-D-MAXI-24 | 172 954 | HEE-1-D-MAXI-110 | 172 955 | HEE-1-D-MAXI-230 |

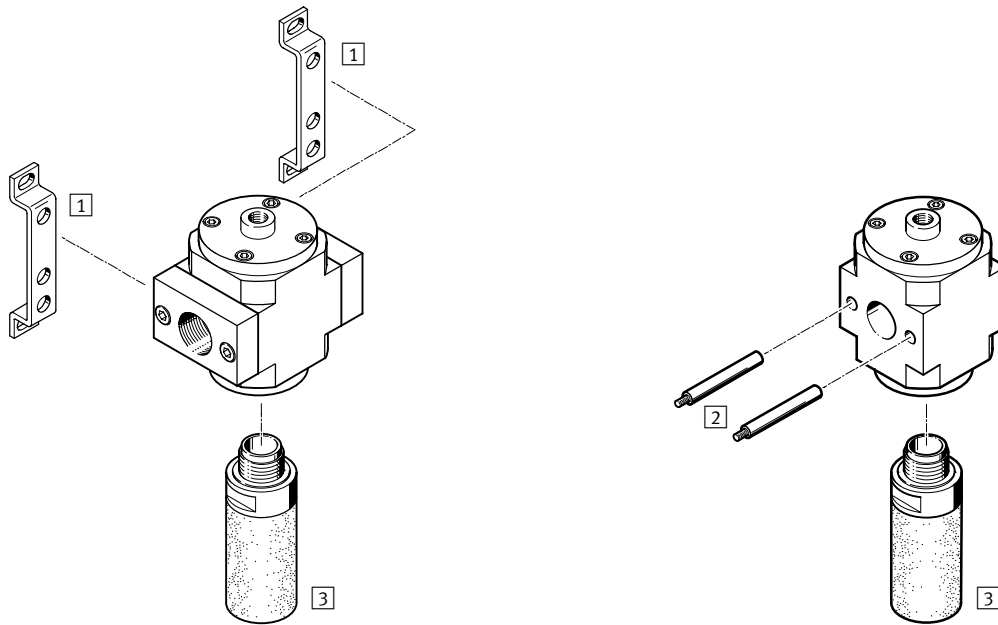
183.On-off valves HEP, D series

Peripherals overview

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|---|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |
| 3 Silencer U | ■ | ■ | ■ | ■ | 3 / 1.8-17 |

184.On-off valves HEP, D series

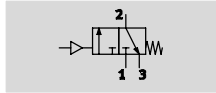
Type codes




| | | | | | | | |
|-----------------------------|---|---|-----|---|---|---|------|
| HEP | | – | 1/4 | – | D | – | MIDI |
| Basic function | | | | | | | |
| HEP | On-off valve, pneumatic | | | | | | |
| Pneumatic connection | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | |
| 1/4 | Thread G1/4 | | | | | | |
| 3/8 | Thread G3/8 | | | | | | |
| 1/2 | Thread G1/2 | | | | | | |
| 3/4 | Thread G3/4 | | | | | | |
| 1 | Thread G1 | | | | | | |
| Series | | | | | | | |
| D | Series | | | | | | |
| Size | | | | | | | |
| MINI | Grid dimension 40 mm (without connecting plates) | | | | | | |
| MIDI | Grid dimension 55 mm (without connecting plates) | | | | | | |
| MAXI | Grid dimension 66 mm (without connecting plates) | | | | | | |

On-off valves HEP, D series

Technical data

Function



-  Flow rate
800 ... 6500 l/min
-  Temperature range
-10 ... +60 °C
-  Operating pressure
2 ... 16 bar



- Pneumatically actuated on-off valve for pressurising and venting pneumatic installations
- The valve can be used as a single unit or in combination with other D series modules
- These valves are particularly suitable for applications in explosion protection areas

| General technical data | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|
| Size | Mini | | | Midi | | | | Maxi | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 |
| Operating medium | Filtered compressed air, lubricated or unlubricated, grade of filtration 50 µm | | | | | | | | | |
| Design | Piston spool valve | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | |
| Assembly position | Any | | | | | | | | | |
| Operating pressure [bar] | 2 ... 16 | | | | | | | | | |
| Pilot pressure [bar] | 3 ... 16 | | | | | | | | | |
| Valve function | 3/2-way valve | | | | | | | | | |
| Exhaust function | Without flow control | | | | | | | | | |
| Type of actuation | Mechanical spring | | | | | | | | | |
| C value [l/sbar] | 4.3 | 7.2 | 7.7 | 10.1 | 15.5 | 16.6 | 16.2 | 24.2 | 28.0 | 27.6 |
| b value | 0.48 | 0.34 | 0.30 | 0.46 | 0.33 | 0.40 | 0.47 | 0.30 | 0.32 | 0.32 |
| Direction of flow | Non-reversible | | | | | | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| HEP | 1000 | 1500 | 1600 | - | - | - |
| Without threaded connecting plates | 800 | | | - | - | - |
| Midi | | | | | | |
| HEP | - | 2600 | 3500 | 3900 | 4100 | - |
| Without threaded connecting plates | - | 1900 | | | | - |
| Maxi | | | | | | |
| HEP | - | - | - | 5600 | 6000 | 6500 |
| Without threaded connecting plates | - | - | - | 2400 | | |

1) Measured at p1 = 6 bar and Δp = 1 bar.

On-off valves HEP, D series



Technical data

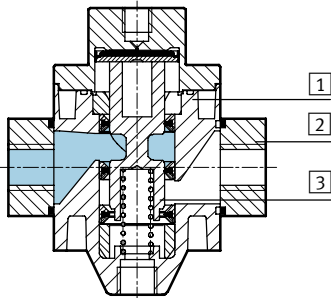
| Ambient conditions | | | | |
|----------------------------|-------------------|----------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 °C | | |
| Temperature of medium | [°C] | -10 ... +60 °C | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|--|------|------|------|
| Size | | Mini | Midi | Maxi |
| HEP | | 223 | 500 | 800 |

Materials

Sectional view



| On-off valve | | |
|-------------------|-------------------|-----------------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Connecting plates | Wrought aluminium alloy |
| 3 | Piston | Stainless steel |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

On-off valves HEE, D series

Technical data

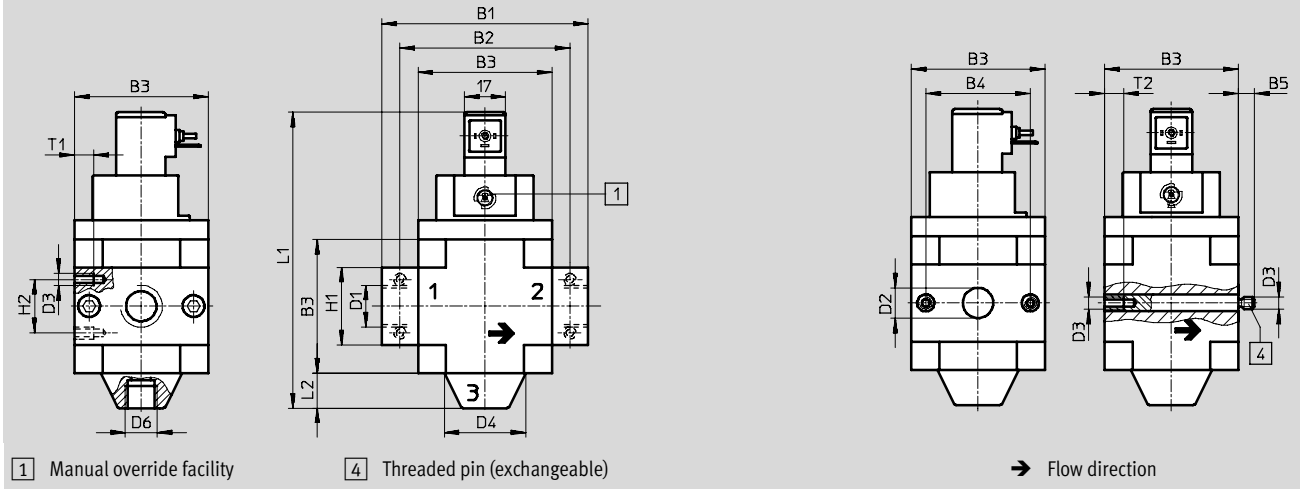
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With threaded connecting plates

Without threaded connecting plates



| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D4 | D6 | H1 | H2 | L1 | L2 | T1 | T2 |
|----------------|-----|----|----|----|-----|------|----|----|----|------|----|----|-----|----|----|----|
| Mini | | | | | | | | | | | | | | | | |
| HEE-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 24 | G3/8 | 20 | 11 | 104 | 11 | 7 | - |
| HEE-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | | |
| HEE-3/8-D-MINI | 70 | | | | | G3/8 | | | | | | | | | | |
| HEE-D-MINI | - | - | | | 5.8 | - | 11 | | | | - | - | | | - | 10 |
| Midi | | | | | | | | | | | | | | | | |
| HEE-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 34 | G1/4 | 32 | 22 | 122 | 14 | 8 | - |
| HEE-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | | |
| HEE-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | | |
| HEE-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | | |
| HEE-D-MIDI | - | - | | | 6.8 | - | 24 | | | | - | - | | | - | 11 |
| Maxi | | | | | | | | | | | | | | | | |
| HEE-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 38 | G3/8 | 32 | 22 | 135 | 16 | 8 | - |
| HEE-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | | |
| HEE-1-D-MAXI | 116 | 91 | | | | G1 | | | | | 40 | | | | | |
| HEE-D-MAXI | - | - | | | 6.8 | - | 30 | | | | - | - | | | - | 11 |

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

On-off valves HEP, D series

FESTO

Technical data

| Ordering data | | | |
|--|----------|------------|--|
| Pneumatic actuation, 3/2-way valve, operating pressure 2 ... 16 bar, normally closed | | | |
| Size | Part No. | Type | |
| Without threaded connecting plates | | | |
| Mini | 193 242 | HEP-D-MINI | |
| Midi | 193 249 | HEP-D-MIDI | |
| Maxi | 193 257 | HEP-D-MAXI | |

| Ordering data | | | |
|--|-----------------|----------|----------------------------|
| Pneumatic actuation, 3/2-way valve, operating pressure 2 ... 16 bar, normally closed | | | |
| Size | Connection | Part No. | Type |
| With threaded connecting plates | | | |
| Mini | G $\frac{1}{8}$ | 193 243 | HEP- $\frac{1}{8}$ -D-MINI |
| | G $\frac{1}{4}$ | 193 244 | HEP- $\frac{1}{4}$ -D-MINI |
| | G $\frac{3}{8}$ | 193 245 | HEP- $\frac{3}{8}$ -D-MINI |
| Midi | G $\frac{1}{4}$ | 193 250 | HEP- $\frac{1}{4}$ -D-MIDI |
| | G $\frac{3}{8}$ | 193 251 | HEP- $\frac{3}{8}$ -D-MIDI |
| | G $\frac{1}{2}$ | 193 252 | HEP- $\frac{1}{2}$ -D-MIDI |
| | G $\frac{3}{4}$ | 193 253 | HEP- $\frac{3}{4}$ -D-MIDI |
| Maxi | G $\frac{1}{2}$ | 193 258 | HEP- $\frac{1}{2}$ -D-MAXI |
| | G $\frac{3}{4}$ | 193 259 | HEP- $\frac{3}{4}$ -D-MAXI |
| | G1 | 193 260 | HEP-1-D-MAXI |

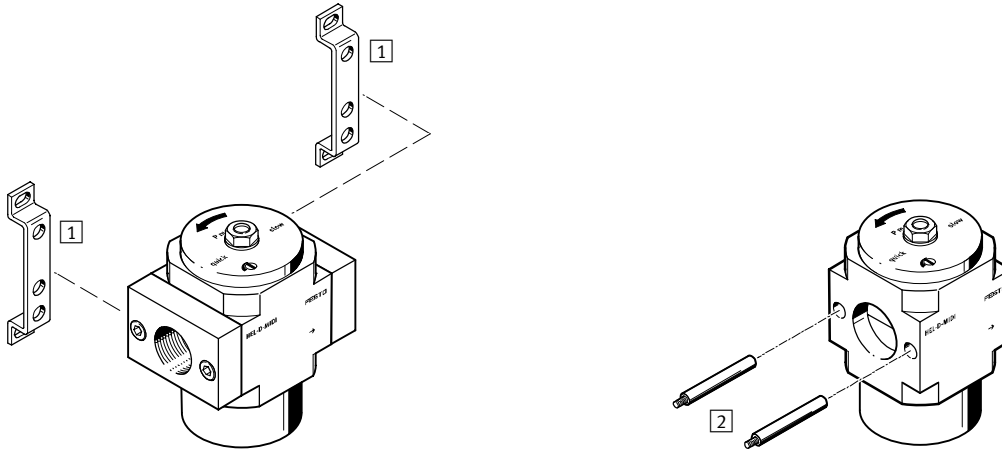
189.Soft-start valves HEL, D series

Peripherals overview

Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination

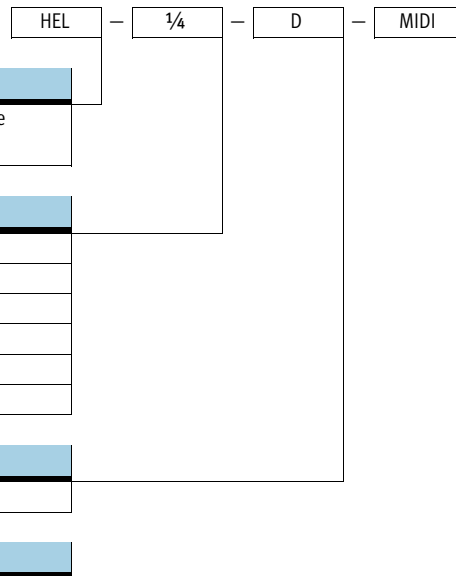


Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |

190.Soft-start valves HEL, D series

Type codes



Basic function

| | |
|-----|---|
| HEL | Soft-start valve, gradual pressure build-up |
|-----|---|

Pneumatic connection

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

Series

| | |
|---|--------|
| D | Series |
|---|--------|

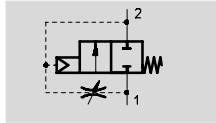
Size




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

Soft-start valves HEL, D series

Technical data

Function



-  - Flow rate
1000 ... 6500 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
3 ... 16 bar



- Soft-start valve for gradual pressure build-up (for use with on-off valves HE and HEE)
- Drives are moved slowly and safely to their initial positions
- Sudden and erratic movements are avoided
- Pressure switching approx. 50% of input pressure
- Adjustable switching time delay

| General technical data | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|
| Size | Mini | | | Midi | | | | Maxi | | |
| Pneumatic connection | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 |
| Operating medium | Filtered compressed air, lubricated or unlubricated, grade of filtration 50 µm | | | | | | | | | |
| Design | Piston spool valve | | | | | | | | | |
| Type of mounting | Via accessories In-line installation | | | | | | | | | |
| Assembly position | Any | | | | | | | | | |
| Operating pressure [bar] | 3 ... 16 | | | | | | | | | |
| Valve function | 2/2-way valve, single solenoid, closed | | | | | | | | | |
| Exhaust function | Flow control | | | | | | | | | |
| Reset method | Mechanical spring | | | | | | | | | |
| C value [l/sbar] | 4.4 | 7.9 | 9.1 | 10.0 | 18.4 | 21.0 | 22.5 | 26.9 | 31.0 | 29.0 |
| b value | 0.46 | 0.38 | 0.29 | 0.49 | 0.33 | 0.29 | 0.36 | 0.36 | 0.30 | 0.38 |
| Type of actuation | Direct | | | | | | | | | |
| Direction of flow | Non-reversible | | | | | | | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | |
|--|------|------|------|------|------|------|
| Connection | G1/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Mini | | | | | | |
| HEL | 1000 | 1500 | 1600 | - | - | - |
| Midi | | | | | | |
| HEL | - | 2600 | 3200 | 3600 | 3800 | - |
| Maxi | | | | | | |
| HEL | - | - | - | 5600 | 6000 | 6500 |

1) Measured at p1 = 6 bar and Δp = 1 bar.

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

Soft-start valves HEL, D series



Technical data

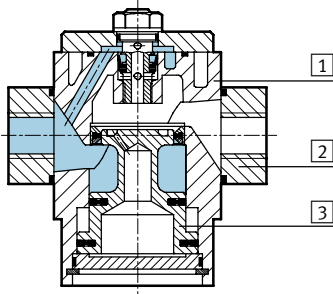
| Ambient conditions | | | | |
|----------------------------|-------------------|-------------|------|------|
| Size | | Mini | Midi | Maxi |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Temperature of medium | [°C] | -10 ... +60 | | |
| Corrosion resistance class | CRC ¹⁾ | 2 | | |

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.

| Weight [g] | | | | |
|------------|--|------|------|------|
| Size | | Mini | Midi | Maxi |
| HEL | | 184 | 586 | 850 |

Materials

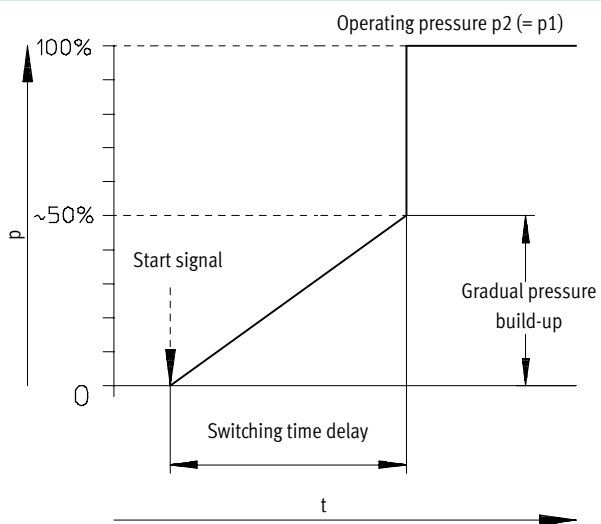
Sectional view



| On-off valve | | |
|-------------------|-------------------|-----------------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Connecting plates | Wrought aluminium alloy |
| 3 | Piston | Stainless steel |
| - | Seals | Nitrile rubber |
| Note on materials | | Free of copper, PTFE and silicone |

Switching point

Pressure p as a function of time t



Soft-start valves HEL, D series

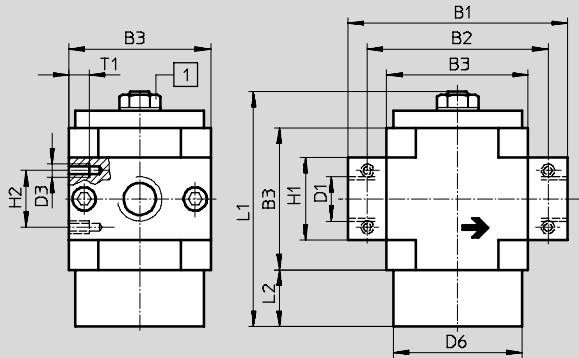


Technical data

Dimensions Download CAD data → www.festo.com/en/engineering

Mini/Midi

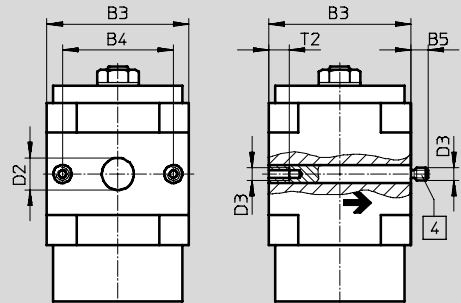
With threaded connecting plates



1 Regulating screw for flow control valve

4 Threaded pin (exchangeable)

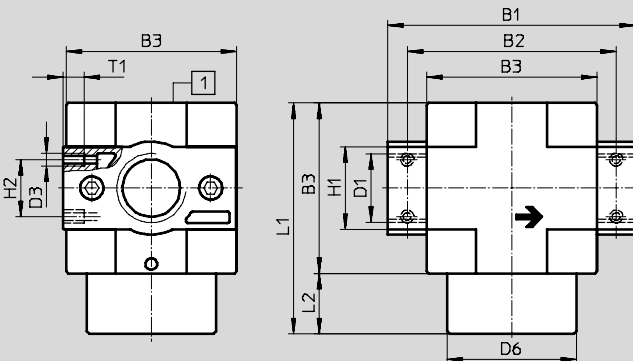
Without threaded connecting plates



→ Flow direction

Maxi

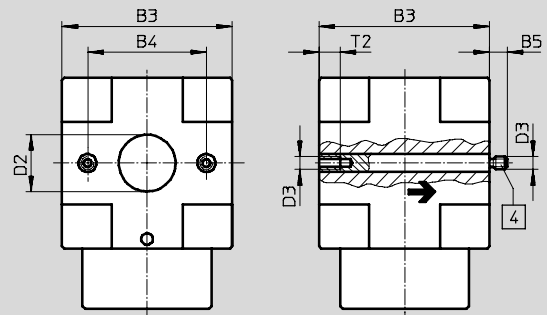
With threaded connecting plates



1 Regulating screw in housing

4 Threaded pin (exchangeable)

Without threaded connecting plates



→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 ∅ | D3 | D6 | H1 | H2 | L1 | L2 | T1 | T2 |
|----------------|-----|----|----|----|----|------|---------|----|----|----|----|----|----|----|----|
| Mini | | | | | | | | | | | | | | | |
| HEL-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | 30 | 20 | 11 | 66 | 16 | 7 | - |
| HEL-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | |
| HEL-3/8-D-MINI | 70 | | | | | G3/8 | | | | | | | | | |
| HEL-D-MINI | - | - | | | | 5.8 | - | 11 | | | | | | - | 10 |
| Midi | | | | | | | | | | | | | | | |
| HEL-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | 50 | 32 | 22 | 91 | 22 | 8 | - |
| HEL-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | |
| HEL-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | |
| HEL-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | |
| HEL-D-MIDI | - | - | | | | 6.8 | - | 24 | | | | | | - | 11 |
| Maxi | | | | | | | | | | | | | | | |
| HEL-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 50 | 32 | 22 | 89 | 23 | 8 | - |
| HEL-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | |
| HEL-1-D-MAXI | 116 | 91 | | | | G1 | | | | | | | | | |
| HEL-D-MAXI | - | - | | | | 6.8 | - | 30 | | | | | | - | 11 |

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

Soft-start valves HEL, D series

FESTO

Technical data

| Ordering data | | | |
|--|----------|------------|--|
| Gradual pressure build-up, 2/2-way valve, operating pressure 3 ... 16 bar, normally closed | | | |
| Size | Part No. | Type | |
| Without threaded connecting plates | | | |
| Mini | 170 690 | HEL-D-MINI | |
| Midi | 170 691 | HEL-D-MIDI | |
| Maxi | 170 692 | HEL-D-MAXI | |

| Ordering data | | | |
|--|-----------------|----------|----------------------------|
| Gradual pressure build-up, 2/2-way valve, operating pressure 3 ... 16 bar, normally closed | | | |
| Size | Connection | Part No. | Type |
| With threaded connecting plates | | | |
| Mini | G $\frac{1}{8}$ | 165 076 | HEL- $\frac{1}{8}$ -D-MINI |
| | G $\frac{1}{4}$ | 165 077 | HEL- $\frac{1}{4}$ -D-MINI |
| | G $\frac{3}{8}$ | 165 078 | HEL- $\frac{3}{8}$ -D-MINI |
| Midi | G $\frac{1}{4}$ | 186 521 | HEL- $\frac{1}{4}$ -D-MIDI |
| | G $\frac{3}{8}$ | 165 079 | HEL- $\frac{3}{8}$ -D-MIDI |
| | G $\frac{1}{2}$ | 165 080 | HEL- $\frac{1}{2}$ -D-MIDI |
| | G $\frac{3}{4}$ | 165 081 | HEL- $\frac{3}{4}$ -D-MIDI |
| Maxi | G $\frac{1}{2}$ | 186 522 | HEL- $\frac{1}{2}$ -D-MAXI |
| | G $\frac{3}{4}$ | 165 082 | HEL- $\frac{3}{4}$ -D-MAXI |
| | G1 | 165 083 | HEL-1-D-MAXI |

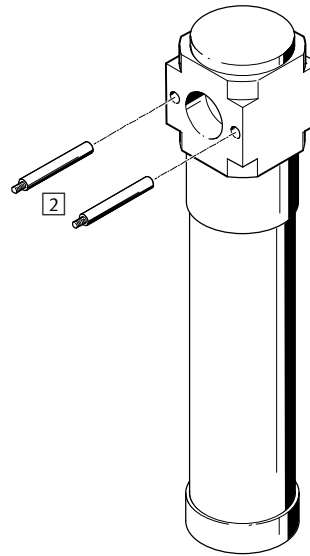
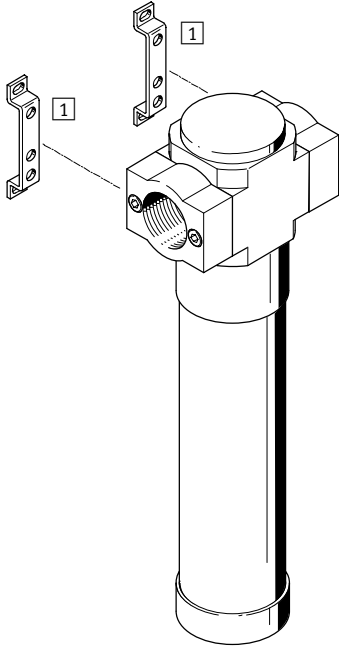
Membrane dryers LDM, D series

Peripherals overview and type codes

Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

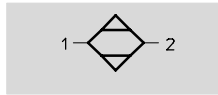
| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| [1] Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| [2] Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |





| Basic function | | LDM | 1/2 | D | MAXI | 300 |
|-------------------------------------|--|-----|-----|---|------|-----|
| LDM | Membrane dryer | | | | | |
| Pneumatic connection | | | | | | |
| 1/2 | Thread G1/2 | | | | | |
| 3/4 | Thread G3/4 | | | | | |
| 1 | Thread G1 | | | | | |
| Series | | | | | | |
| D | Series | | | | | |
| Size | | | | | | |
| MAXI | Grid dimension 66 mm (without connection plates) | | | | | |
| Standard flow rate at output qn Off | | | | | | |
| 300 | 300 l/min | | | | | |
| 600 | 600 l/min | | | | | |
| 1000 | 1,000 l/min | | | | | |

Membrane dryers LDM, D series

Technical data

Function



-  - Flow rate
375 ... 1250 l/min
-  - Temperature range
+5 ... +55 °C
-  - Input pressure
3 ... 8.5 bar
-  - Repair service




- Optimum final dryer with excellent operational reliability
- Suitable for use as an individual device or for integration in existing service unit combinations

- Flow rate-dependent dew point reduction
- Wear-free function requiring no external energy

Typical areas of application:

- Drying, cleaning of precision parts
- Measuring technology
- Rinsing of precision glass scales
- Painting systems
- Paper and packaging machines

-  - Note
Prefiltration of the compressed air using a micro filter LFMA-D-MAXI, grade of filtration 0.01 µm (residual particles < 0.1 µm, residual oil content < 0.1 mg/m³) is vital for flawless functioning of the unit.

| General technical data | | | |
|-----------------------------------|---|------|----|
| Size | Maxi | | |
| Pneumatic connection | G1/2 | G3/4 | G1 |
| Operating medium | Compressed air, air quality class 1.7.2 to DIN ISO 8573-1 | | |
| Design | Membrane dryer with internal air consumption | | |
| Type of mounting | Via accessories In-line installation | | |
| Assembly position | Vertical ±5° | | |
| Input pressure [bar] | 3 ... 8.5 | | |
| Pressure dew point reduction [°C] | 13 | | |

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

| Standard flow rate ¹⁾ qn [l/min] | | | | |
|---|----------|----------------|----------------|-----------------|
| Size | | LDM-D-MAXI-300 | LDM-D-MAXI-600 | LDM-D-MAXI-1000 |
| Input | qn In | 375 | 750 | 1250 |
| Output | qn Out | 300 | 600 | 1000 |
| Purge air | qn Purge | 75 | 150 | 250 |

1) Measured at p1 = 6.9 bar, Tpd In = 20 °C, TPA Out = -20 °C + 15% (Tpd Out = 7 °C + 15%), Tamb = 20 °C

| Ambient conditions | | |
|--|------------|--|
| Size | Maxi | |
| Ambient temperature [°C] | +5 ... +55 | |
| Temperature of medium [°C] | +5 ... +55 | |
| Corrosion resistance class 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.

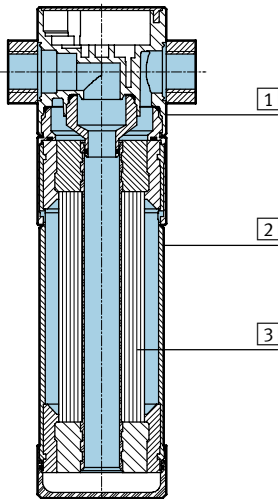
Membrane dryers LDM, D series

Technical data

| Weight [g] | | | |
|-------------|----------------|----------------|-----------------|
| Size | LDM-D-MAXI-300 | LDM-D-MAXI-600 | LDM-D-MAXI-1000 |
| LDM-1/2-... | 1640 | 1850 | 1770 |
| LDM-3/4-... | 1620 | 1670 | 1750 |
| LDM-1-... | 1810 | 1860 | 1940 |
| LDM-D-... | 1470 | 1520 | 1600 |

Materials

Sectional view



| Membrane dryer | |
|----------------|---|
| 1 | Housing Die-cast zinc |
| 2 | Protective sleeve for membrane cartridge Aluminium |
| 3 | Membrane fibres Tetrafluorethylene copolymers |
| - | Seals Nitrile rubber |

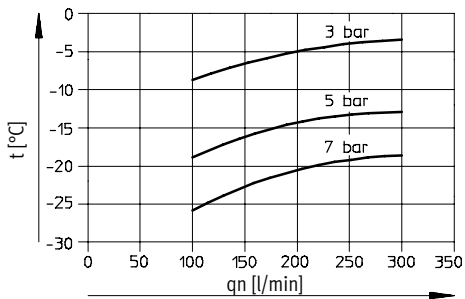
Membrane dryers LDM, D series

Technical data

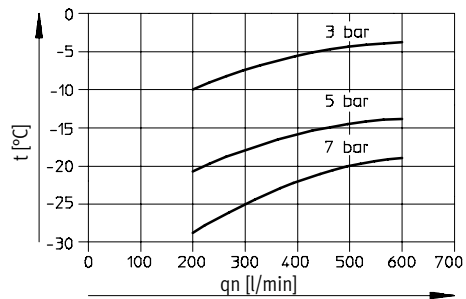
FESTO

Standard flow rate at output q_n as a function of the atmospheric dew point at output t

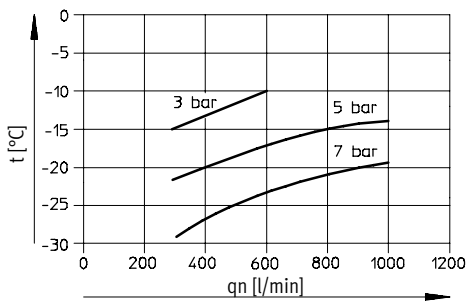
LDM-D-MAXI-300



LDM-D-MAXI-600

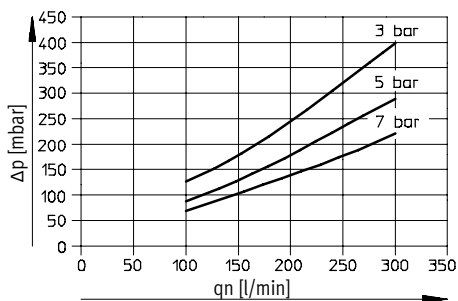


LDM-D-MAXI-1000

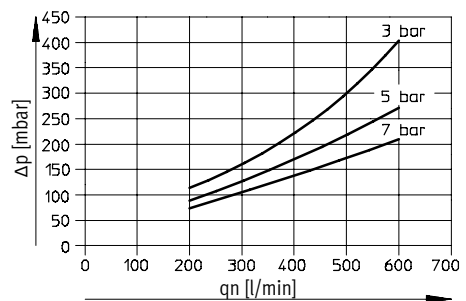


Differential pressure Δp as a function of the nominal flow rate at output q_n

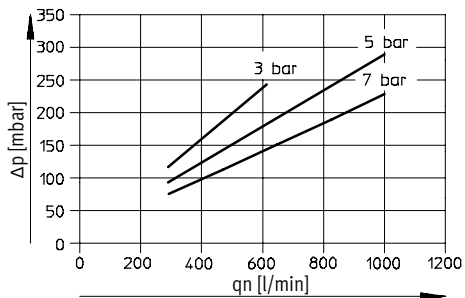
LDM-D-MAXI-300



LDM-D-MAXI-600



LDM-D-MAXI-1000



Membrane dryers LDM, D series



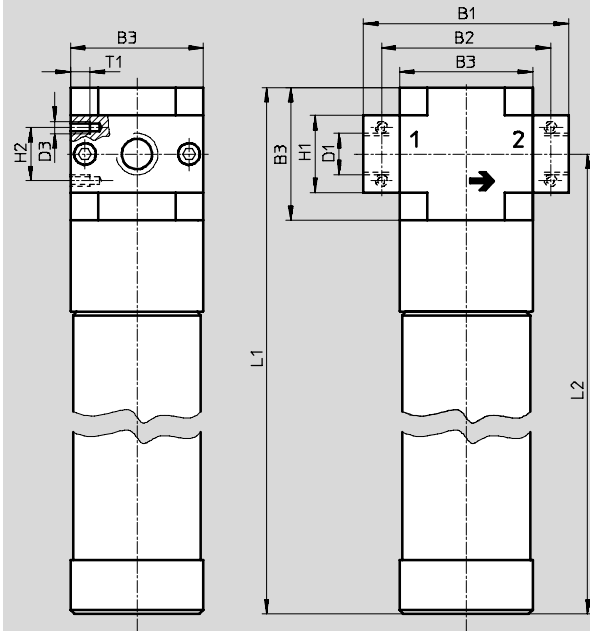
Technical data

Dimensions

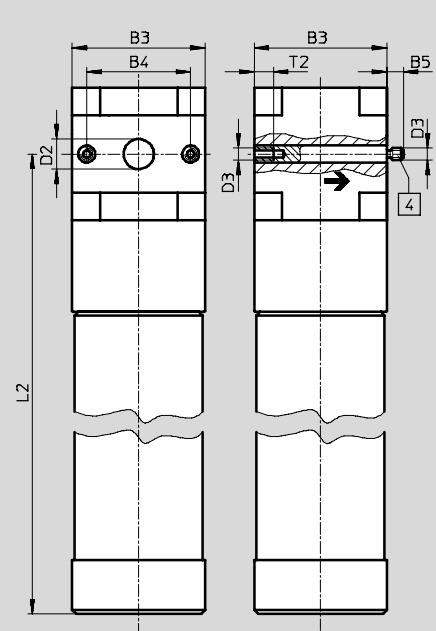
Download CAD data → www.festo.com/en/engineering

LDM

With threaded connecting plates



Without threaded connecting plates



4 Threaded pin (exchangeable)

→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 Ø | D3 | H1 | H2 | L1 | L2 | T1 | T2 |
|----------------|-----|----|----|----|----|------|---------|----|----|----|-----|-----|----|----|
| LDM-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | 32 | 22 | 331 | 298 | 8 | - |
| LDM-3/4-D-MAXI | | | | | | G3/4 | | | 36 | | | | | |
| LDM-1-D-MAXI | 116 | 91 | | | | G1 | | | 41 | | | | | |
| LDM-D-MAXI | - | - | - | - | 7 | - | 30 | - | - | - | - | - | - | 11 |

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

Ordering data

| Size | 300 | | 600 | | 1 000 | |
|------------------------------------|----------|----------------|----------|----------------|----------|-----------------|
| | Part No. | Type | Part No. | Type | Part No. | Type |
| Without threaded connecting plates | | | | | | |
| Maxi | 197 518 | LDM-D-MAXI-300 | 197 519 | LDM-D-MAXI-600 | 197 520 | LDM-D-MAXI-1000 |

Ordering data

| Size | Connection | 300 | | 600 | | 1 000 | |
|---------------------------------|------------|----------|--------------------|----------|--------------------|----------|---------------------|
| | | Part No. | Type | Part No. | Type | Part No. | Type |
| With threaded connecting plates | | | | | | | |
| Maxi | G1/2 | 197 509 | LDM-1/2-D-MAXI-300 | 197 510 | LDM-1/2-D-MAXI-600 | 197 511 | LDM-1/2-D-MAXI-1000 |
| | G3/4 | 197 512 | LDM-3/4-D-MAXI-300 | 197 513 | LDM-3/4-D-MAXI-600 | 197 514 | LDM-3/4-D-MAXI-1000 |
| | G1 | 197 515 | LDM-1-D-MAXI-300 | 197 516 | LDM-1-D-MAXI-600 | 197 517 | LDM-1-D-MAXI-1000 |

Branching modules FRM, D series

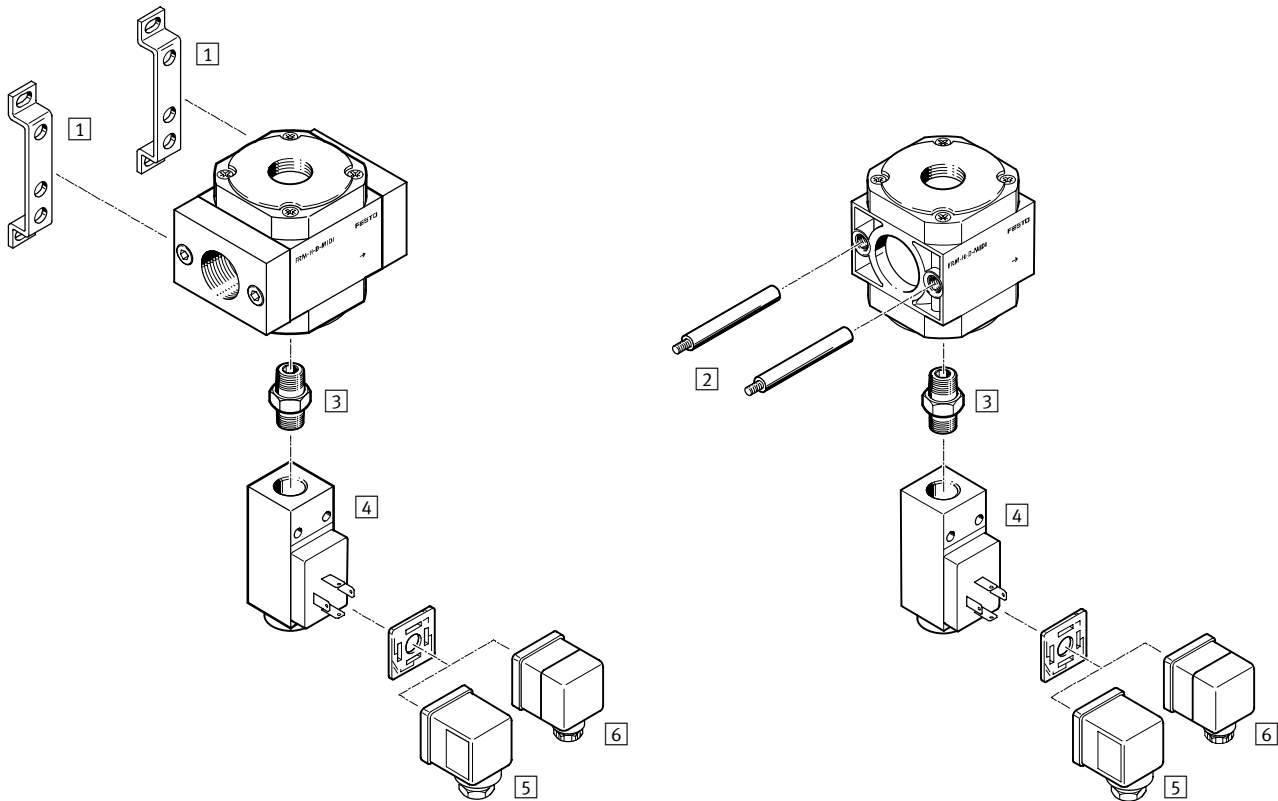
Peripherals overview



Mini/Midi/Maxi

Individual unit with connection plates

Individual unit without connection plates, for service unit combination



Mounting attachments and accessories

| | Individual unit | | Combination | | → Page |
|--|------------------------|---------------------------|------------------------|---------------------------|------------|
| | with connection plates | without connection plates | with connection plates | without connection plates | |
| 1 Mounting bracket HFOE | ■ | - | ■ | - | 3 / 1.8-9 |
| 2 Threaded pin (included in scope of delivery) FRB | - | - | ■ | ■ | 3 / 1.8-11 |
| 3 Double nipple ESK | ■ | ■ | ■ | ■ | 3 / 1.8-17 |
| 4 Pressure switches PEV | ■ | ■ | ■ | ■ | 3 / 1.8-18 |
| 5 Plug socket MSSD-C | ■ | ■ | ■ | ■ | 3 / 1.8-20 |
| 6 Angled plug socket PEV-...-WD-LED | ■ | ■ | ■ | ■ | 3 / 1.8-20 |

Branching modules FRM, D series

FESTO

Type codes

| | | | | | | | | | |
|--|---|---|---|---|-----|---|---|---|------|
| | FRM | - | H | - | 1/4 | - | D | - | MIDI |
| Basic function | | | | | | | | | |
| FRM | Branching module | | | | | | | | |
| Non-return function/pressure switch | | | | | | | | | |
| | Standard | | | | | | | | |
| H | With integrated non-return function | | | | | | | | |
| Y | With pressure switch | | | | | | | | |
| Pneumatic connection | | | | | | | | | |
| | Without connection plates | | | | | | | | |
| 1/8 | Thread G1/8 | | | | | | | | |
| 1/4 | Thread G1/4 | | | | | | | | |
| 3/8 | Thread G3/8 | | | | | | | | |
| 1/2 | Thread G1/2 | | | | | | | | |
| 3/4 | Thread G3/4 | | | | | | | | |
| 1 | Thread G1 | | | | | | | | |
| Series | | | | | | | | | |
| D | Series | | | | | | | | |
| Size | | | | | | | | | |
| MINI | Grid dimension 40 mm (without connection plates) | | | | | | | | |
| MIDI | Grid dimension 55 mm (without connection plates) | | | | | | | | |
| MAXI | Grid dimension 66 mm (without connection plates) | | | | | | | | |


New
With pressure switch

Branching modules FRM, D series

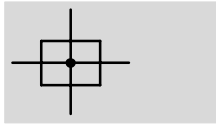
FESTO


Technical data

Function

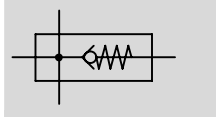
 Flow rate
1,300 ... 20,000 l/min


Standard



 Temperature range
-10 ... +60 °C

With non-return function



 Operating pressure
0 ... 16 bar



- An integrated non-return valve prevents return flow of lubricated compressed air
- Branching module for compressed air distribution for attachment of additional modules (pressure regulator, pressure switch, etc.)
- Several additional air connections for greater flexibility
- Can be used as an intermediate distributor for varying air qualities

| General technical data | | | | | | | | | | | |
|--------------------------------------|-------------------------|------|------|------------|------|------|------|-------------|------|----|--|
| Size | Mini | | | Midi | | | | Maxi | | | |
| Pneumatic connection 1 ¹⁾ | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Pneumatic connection 2 ¹⁾ | G1/8 | G1/4 | G3/8 | G1/4 | G3/8 | G1/2 | G3/4 | G1/2 | G3/4 | G1 | |
| Pneumatic connection 3 | G1/4 | | | G1/2 | | | | G3/4 | | | |
| Pneumatic connection 4 | G1/4 | | | | | | | | | | |
| Operating medium | Filtered compressed air | | | | | | | | | | |
| Design | Branching module | | | | | | | | | | |
| Type of mounting | Via accessories | | | | | | | | | | |
| | In-line installation | | | | | | | | | | |
| Assembly position | Any | | | | | | | | | | |
| Operating pressure [bar] | | | | | | | | | | | |
| Standard | 0 ... 16 | | | | | | | | | | |
| With non-return function | 0.15 ... 16 | | | 0.2 ... 16 | | | | 0.25 ... 16 | | | |
| With pressure switch | 0 ... 12 | | | | | | | | | | |

1) with connection plates

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

Branching modules FRM, D series

FESTO

Technical data

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | | | | |
|--|---------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------|
| Port | Without connection plates | With connection plates | | | | | |
| | | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G1 |
| Mini | | | | | | | |
| Standard | 3,300 | 1,500 | 3,300 | 3,300 | – | – | – |
| With non-return function | 2,000 | 1,300 | 2,000 | 2,100 | – | – | – |
| With pressure switch | 3,300 | – | – | – | – | – | – |
| Midi | | | | | | | |
| Standard | 8,200 | – | 3,500 | 7,000 | 8,200 | 8,800 | – |
| With non-return function | 5,600 | – | 3,400 | 5,500 | 5,600 | 5,500 | – |
| With pressure switch | 8,200 | – | – | – | – | – | – |
| Maxi | | | | | | | |
| Standard | 20,000 | – | – | – | 11,700 | 20,000 | 17,400 |
| With non-return function | 15,000 | – | – | – | 9,600 | 15,000 | 13,400 |
| With pressure switch | 20,000 | – | – | – | – | – | – |

1) Measured at p₁ = 6 bar and Δp = 1 bar.

| Ambient conditions | | | |
|--|-------------|------|------|
| Size | Mini | Midi | Maxi |
| Ambient temperature [°C] | –10 ... +60 | | |
| Temperature of medium [°C] | –10 ... +60 | | |
| Storage temperature [°C] | –10 ... +60 | | |
| Corrosion resistance class CRC ¹⁾ | 2 | | |

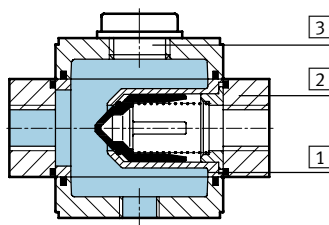
1) Corrosion resistance class 2 according to Festo standard 940 070

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] | | | | | | | |
|-------------------------|---------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------|
| Port | Without connection plates | With connection plates | | | | | |
| | | G ¹ / ₈ | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | G ³ / ₄ | G1 |
| Mini | | | | | | | |
| Without pressure switch | 210 | 290 | 280 | 290 | – | – | – |
| With pressure switch | 590 | – | – | – | – | – | – |
| Midi | | | | | | | |
| Without pressure switch | 520 | – | 770 | 760 | 740 | 710 | – |
| With pressure switch | 900 | – | – | – | – | – | – |
| Maxi | | | | | | | |
| Without pressure switch | 900 | – | – | – | 1,160 | 1,120 | 1,230 |
| With pressure switch | 1,280 | – | – | – | – | – | – |

Materials

Sectional view



| Branching module | |
|------------------|--|
| 1 | Housing Die-cast zinc |
| 2 | Connection plates Die-cast zinc |
| 3 | Cover plate Galvanised steel |
| – | Seals Nitrile rubber, polyvinyl chloride |
| – | Note on materials Free of copper, PTFE and silicone |

New
With pressure switch

Branching modules FRM, D series

FESTO

Technical data

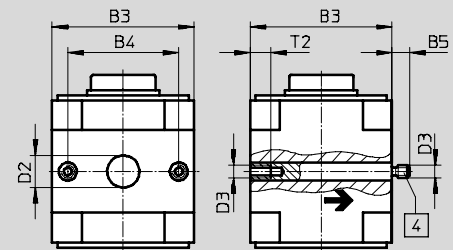
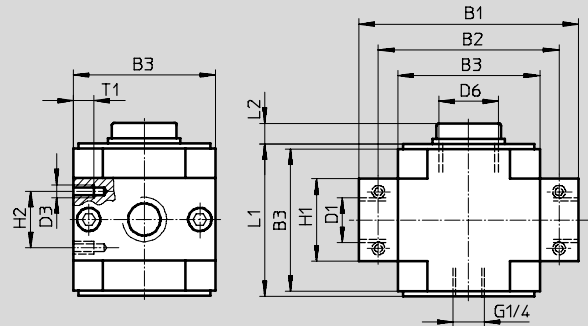
Dimensions

Download CAD data → www.festo.com/en/engineering

Mini/Midi/Maxi

With connection plates

Without connection plates



4 Threaded pin (exchangeable)

→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | D1 | D2 Ø | D3 | D6 | H1 | H2 | L1 | L2 | T1 | T2 |
|----------------|-----|----|----|----|-----|------|---------|----|------|----|----|----|----|----|----|
| Mini | | | | | | | | | | | | | | | |
| FRM-1/8-D-MINI | 64 | 52 | 40 | 30 | - | G1/8 | - | M4 | G1/4 | 20 | 11 | 42 | 7 | 7 | - |
| FRM-1/4-D-MINI | | | | | | G1/4 | | | | | | | | | |
| FRM-3/8-D-MINI | 70 | - | - | - | - | G3/8 | - | - | - | - | - | - | - | - | - |
| FRM-D-MINI | | | | | | G1/4 | | | | | | | | | |
| Midi | | | | | | | | | | | | | | | |
| FRM-1/4-D-MIDI | 85 | 70 | 55 | 43 | - | G1/4 | - | M5 | G1/2 | 32 | 22 | 59 | 8 | 8 | - |
| FRM-3/8-D-MIDI | | | | | | G3/8 | | | | | | | | | |
| FRM-1/2-D-MIDI | | | | | | G1/2 | | | | | | | | | |
| FRM-3/4-D-MIDI | | | | | | G3/4 | | | | | | | | | |
| FRM-D-MIDI | - | - | - | - | 6.8 | - | 24 | - | - | - | - | - | - | - | 11 |
| Maxi | | | | | | | | | | | | | | | |
| FRM-1/2-D-MAXI | 96 | 80 | 66 | 46 | - | G1/2 | - | M5 | G3/4 | 32 | 22 | 70 | 8 | 8 | - |
| FRM-3/4-D-MAXI | | | | | | G3/4 | | | | | | | | | |
| FRM-1-D-MAXI | 116 | 91 | - | - | - | G1 | - | - | - | - | - | - | - | - | - |
| FRM-D-MAXI | | | | | | G3/4 | | | | | | | | | |

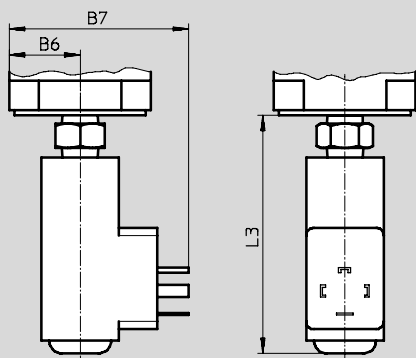
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Dimensions – Pressure switch PEV

Technical data → Volume 4

Technical data → www.festo.com

Mini/Midi/Maxi



Pressure switch PEV-1/4-B-0D with adjustable pressure switching point, plug, square design to DIN EN 175 301, type A

| Type | B6 | B7 | L3 |
|--------------|------|------|------|
| FRM-Y-D-MINI | 20 | 62 | 92.3 |
| FRM-Y-D-MIDI | 27.5 | 69.5 | 92.3 |

FRM-Y-D-MAXI

33

75




92.3

 **New**
With pressure switch

Branching modules FRM, D series

FESTO

Technical data

| Ordering data – Without connection plates | | | | | | |
|---|----------|------------|-------------------------------------|--------------|-----------------------------------|--|
| Size | Standard | | With integrated non-return function | | With pressure switch PEV-1/4-B-0D | |
| | Part No. | Type | Part No. | Type | Part No. | Type |
| Mini | 170 684 | FRM-D-MINI | 170 687 | FRM-H-D-MINI | 542 184 | FRM-Y-D-MINI  New |
| Midi | 170 685 | FRM-D-MIDI | 170 688 | FRM-H-D-MIDI | 542 185 | FRM-Y-D-MIDI  New |
| Maxi | 170 686 | FRM-D-MAXI | 170 689 | FRM-H-D-MAXI | 542 186 | FRM-Y-D-MAXI  New |

| Ordering data – With connection plates | | | | | |
|--|-------------------------------|----------|----------------|-------------------------------------|------------------|
| Size | Port | Standard | | With integrated non-return function | |
| | | Part No. | Type | Part No. | Type |
| Mini | G ¹ / ₈ | 164 949 | FRM-1/8-D-MINI | 162 788 | FRM-H-1/8-D-MINI |
| | G ¹ / ₄ | 164 950 | FRM-1/4-D-MINI | 162 789 | FRM-H-1/4-D-MINI |
| | G ³ / ₈ | 164 951 | FRM-3/8-D-MINI | 162 790 | FRM-H-3/8-D-MINI |
| Midi | G ¹ / ₄ | 186 523 | FRM-1/4-D-MIDI | 186 525 | FRM-H-1/4-D-MIDI |
| | Gy | 164 952 | FRM-3/8-D-MIDI | 162 791 | FRM-H-3/8-D-MIDI |
| | G ¹ / ₂ | 164 953 | FRM-1/2-D-MIDI | 162 792 | FRM-H-1/2-D-MIDI |
| | G ³ / ₄ | 164 954 | FRM-3/4-D-MIDI | 162 793 | FRM-H-3/4-D-MIDI |
| Maxi | G ¹ / ₂ | 186 524 | FRM-1/2-D-MAXI | 186 526 | FRM-H-1/2-D-MAXI |
| | G ³ / ₄ | 164 955 | FRM-3/4-D-MAXI | 162 794 | FRM-H-3/4-D-MAXI |
| | G1 | 164 956 | FRM-1-D-MAXI | 162 795 | FRM-H-1-D-MAXI |

206.Distributor blocks FRZ, D series

Type codes

FESTO

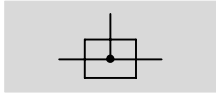
| | | | | | | |
|-----------------------|---|-----|---|---|---|------|
| | | FRZ | - | D | - | MIDI |
| Basic function | | | | | | |
| FRZ | Distributor block | | | | | |
| Series | | | | | | |
| D | Series | | | | | |
| Size | | | | | | |
| MICRO | Grid dimension 25 mm (without connecting plates) | | | | | |
| MINI | Grid dimension 40 mm (without connecting plates) | | | | | |
| MIDI | Grid dimension 55 mm (without connecting plates) | | | | | |
| MAXI | Grid dimension 66 mm (without connecting plates) | | | | | |

Distributor blocks FRZ, D series



Technical data

Function



Additional air connections can be used to branch off filtered, unlubricated compressed air, e.g. to supply air barriers, sensors and control systems, or for especially clean air in combination with micro filter LFM.

Materials:

Housing: Aluminium

Cover plate: Galvanised steel



Dimensions Download CAD data → www.festo.com/en/engineering

Micro Mini/Midi/Maxi

4 Threaded pin (exchangeable) → Flow direction

| Type | B1 | B3 | B4 | B5 | B6 | D1 ∅ | D2 | D3 | D4 | T2 |
|-------------|----|----|----|----|-----|---------|------|----|------|----|
| Mini | | | | | | | | | | |
| FRZ-D-MINI | 30 | 40 | 30 | 6 | 4.5 | 12 | G1/4 | M4 | G1/4 | 12 |
| Midi | | | | | | | | | | |
| FRZ-D-MIDI | 35 | 55 | 43 | 7 | 6 | 16 | G1/4 | M5 | G1/2 | 8 |
| Maxi | | | | | | | | | | |
| FRZ-D-MAXI | 40 | 65 | 30 | 7 | 6 | 22 | G1/4 | M5 | G3/4 | 10 |

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

Ordering data

Distributor block

| Size | Part No. | Type |
|------------------------------------|----------|-------------|
| Without threaded connecting plates | | |
| Micro | 526 815 | FRZ-D-MICRO |
| Mini | 162 786 | FRZ-D-MINI |
| Midi | 159 592 | FRZ-D-MIDI |
| Maxi | 162 787 | FRZ-D-MAXI |

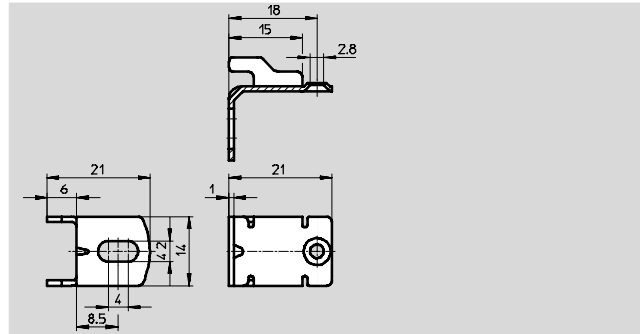
Mounting attachments, D series

Accessories

Mounting bracket HFOE

Micro size
for wall mounting

Material:
Galvanised steel

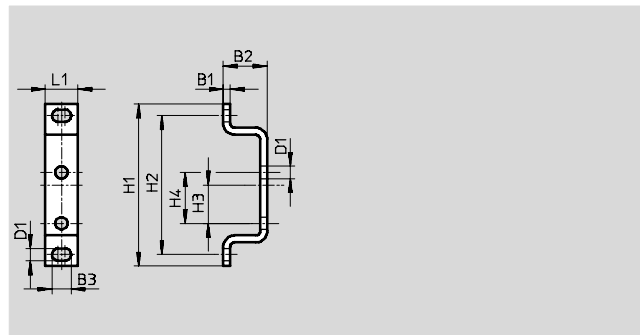


| Ordering data | | | |
|---------------|----------|--------------|--|
| Size | Part No. | Type | |
| Micro | 526 317 | HFOE-D-MICRO | |

Mounting bracket HFOE

Mini/Midi/Maxi size
for wall mounting

Material:
Galvanised steel



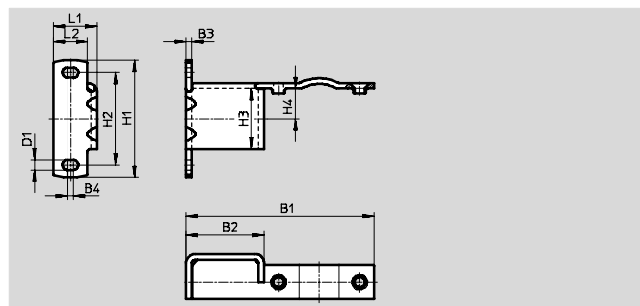
| Dimensions and ordering data | | | | | | | | | | | Part No. | Type |
|------------------------------|----|----|-----|-----|----|----|------|----|----|---------|--------------------------------|------|
| Size | B1 | B2 | B3 | D1 | H1 | H2 | H3 | H4 | L1 | | | |
| Mini | 2 | 19 | 7.3 | 4.3 | 43 | 35 | 5.5 | 11 | 12 | 159 638 | HFOE-D-MINI ¹⁾ | |
| Midi/Maxi | 3 | 19 | 8.3 | 5.3 | 70 | 60 | 16.5 | 22 | 14 | 159 593 | HFOE-D-MIDI/MAXI ¹⁾ | |

1) Free of copper, PTFE and silicone

Mounting bracket HRBK

for LRB/LRBS

Material:
Galvanised steel



| Dimensions and ordering data | | | | | | | | | | | | | Part No. | Type |
|------------------------------|------|------|-----|----|-----|------|----|----|----|------|----|---------|-------------|------|
| Size | B1 | B2 | B3 | B4 | D1 | H1 | H2 | H3 | H4 | L1 | L2 | | | |
| Mini | 80.5 | 37.5 | 2.5 | 3 | 4.3 | 47.3 | 35 | 20 | 10 | 18.5 | 14 | 525 031 | HRBK-D-MINI | |
| Midi | 99.8 | 41.3 | 3 | 3 | 5.3 | 62.3 | 49 | 32 | 16 | 23 | 18 | 525 032 | HRBK-D-MIDI | |

Core Range

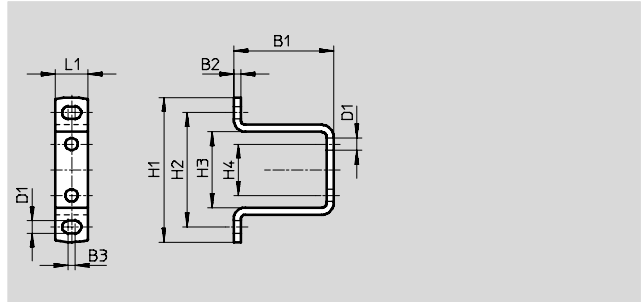
Mounting attachments, D series



Accessories

Mounting bracket HRB for LRB/LRBS

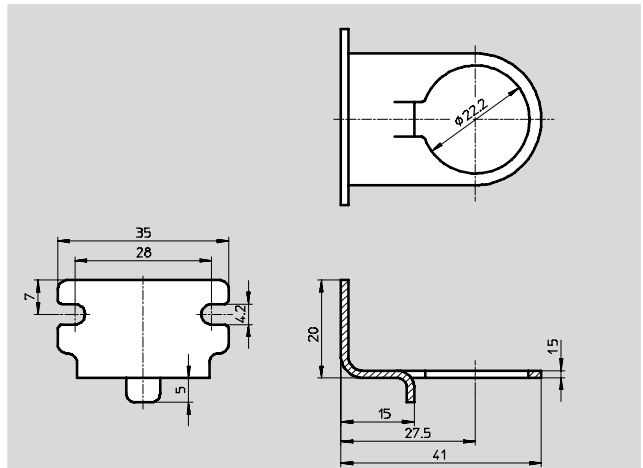
Material:
Galvanised steel



| Dimensions and ordering data | | | | | | | | | | | |
|------------------------------|------|-----|----|---------|------|----|------|----|----|----------|------------|
| Size | B1 | B2 | B3 | D1 Ø | H1 | H2 | H3 | H4 | L1 | Part No. | Type |
| Mini | 38.5 | 2.5 | 3 | 4.3 | 47.3 | 35 | 20 | 11 | 12 | 525 029 | HRB-D-MINI |
| Midi | 42.7 | 3 | 3 | 5.3 | 62.3 | 49 | 32.5 | 22 | 14 | 525 030 | HRB-D-MIDI |

Mounting bracket HRS Micro size for wall mounting

Material:
Galvanised steel



| Ordering data | | |
|---------------|----------|-------------|
| Size | Part No. | Type |
| Micro | 526 316 | HRS-D-MICRO |

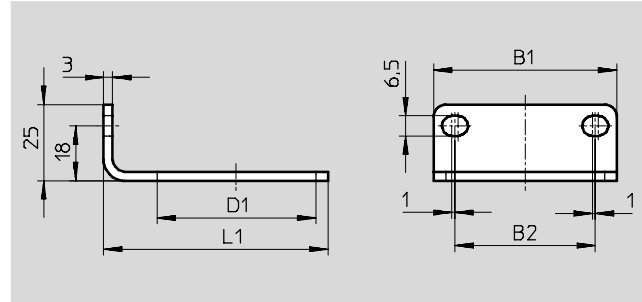
Mounting attachments, D series

Accessories

Mounting bracket HR-D

for wall mounting

Material:
Galvanised steel

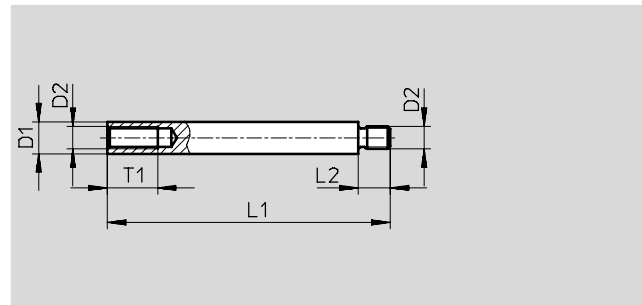


| Dimensions and ordering data | | | | | | |
|------------------------------|----|----|---------|------|----------|--------------|
| Size | B1 | B2 | D1 Ø | L1 | Part No. | Type |
| Mini | 42 | 28 | 36 | 57.5 | 164 936 | HR-D-MINI |
| Midi | 60 | 46 | 52 | 73.5 | 162 804 | HR-D-MIDI |
| Maxi | 64 | 51 | 36 | 82 | 162 805 | HR-D-MAXI |
| | DI | 64 | 51 | 82 | 193 802 | HR-D-DI-MAXI |

Threaded pin FRB

for service unit combinations

Material:
High-alloy steel



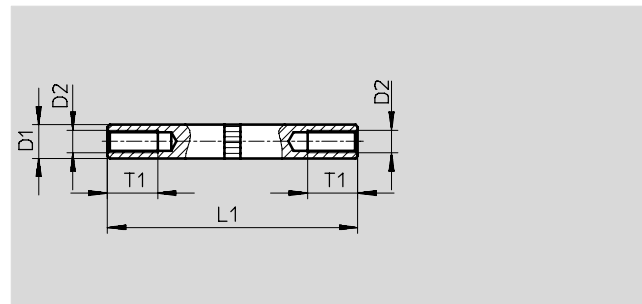
| Dimensions and ordering data | | | | | | | |
|------------------------------|---------|------|------|----|------------|----------|--------------------------|
| Size | D1 Ø | D2 | L1 | L2 | T1 min. | Part No. | Type |
| Micro | 3.5 | M2.5 | 28.4 | 4 | 6 | 526 817 | FRB-D-MICRO |
| Mini | 6 | M4 | 45.8 | 6 | 10 | 159 642 | FRB-D-MINI ¹⁾ |
| Midi | 7 | M5 | 61.8 | 7 | 11 | 159 595 | FRB-D-MIDI ¹⁾ |
| Maxi | 7 | M5 | 72.8 | 7 | 11 | 159 643 | FRB-D-MAXI ¹⁾ |

1) Free of copper, PTFE and silicone

Threaded pin HSB

for fitting individual devices with
connecting plates

Material:
High-alloy steel



| Dimensions and ordering data | | | | | | |
|------------------------------|---------|----|------|------------|----------|------------|
| Size | D1 Ø | D2 | L1 | T1 min. | Part No. | Type |
| Mini | 6.5 | M4 | 39.7 | 10 | 531 057 | HSB-D-MINI |
| Midi | 7.5 | M5 | 54.7 | 11 | 531 058 | HSB-D-MIDI |

Core Range

Mounting attachments, D series

FESTO

Accessories

Hex nut HMR

for filter regulators LFR and pressure regulators LR

Material:

Wrought aluminium alloy



Ordering data

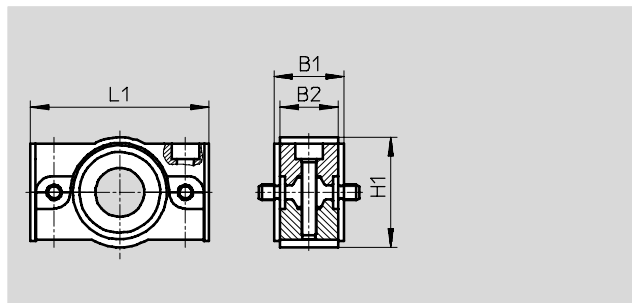
| Size | Part No. | Type |
|-----------|----------|-----------------|
| Micro | 526 816 | HMR-D-MICRO |
| Mini/Maxi | 530 025 | HMR-D-MINI/MAXI |
| Midi | 530 026 | HMR-D-MIDI |

Connecting kit HRBC

for LRB/LRBS

Material:

Die-cast zinc



Dimensions and ordering data

| Size | B1 | B2 | H1 | L1 | Part No. | Type |
|------|------|------|----|------|----------|-------------|
| Mini | 17.4 | 14.8 | 20 | 43 | 529 022 | HRBC-D-MINI |
| Midi | 23 | 18.6 | 38 | 58.5 | 529 023 | HRBC-D-MIDI |

Connecting plates, D series

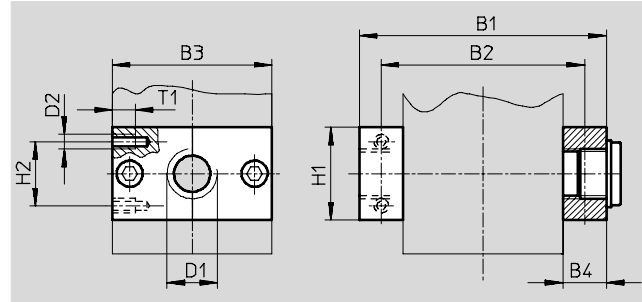


Accessories

Connecting plates LRBAS

for pressure regulators LRB/LRBS

Material:
Die-cast zinc



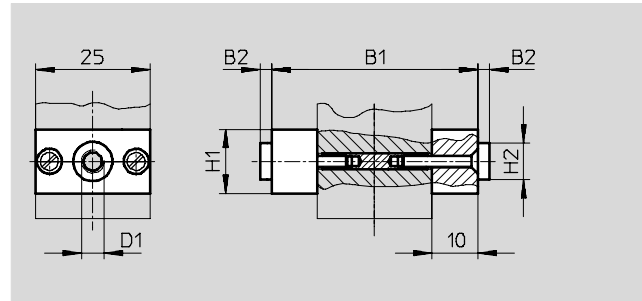
| Dimensions and ordering data | | | | | | | | | | | |
|------------------------------|----|----|----|----|-----------------|----|----|----|---------|----------|------------------------------|
| Connection | B1 | B2 | B3 | B4 | D1 | D2 | H1 | H2 | T1 max. | Part No. | Type |
| G $\frac{1}{4}$ | 64 | 52 | 40 | 12 | G $\frac{1}{4}$ | M4 | 20 | 11 | 7 | 525 033 | LRBAS- $\frac{1}{4}$ -D-MINI |
| G $\frac{3}{8}$ | 70 | 52 | 40 | 15 | G $\frac{3}{8}$ | M4 | 23 | 11 | 7 | 525 034 | LRBAS- $\frac{3}{8}$ -D-MINI |
| G $\frac{3}{8}$ | 85 | 70 | 55 | 15 | G $\frac{3}{8}$ | M5 | 32 | 22 | 8 | 525 035 | LRBAS- $\frac{3}{8}$ -D-MIDI |
| G $\frac{1}{2}$ | 85 | 70 | 55 | 15 | G $\frac{1}{2}$ | M5 | 32 | 22 | 8 | 525 036 | LRBAS- $\frac{1}{2}$ -D-MIDI |

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

Connection set PBL

Micro size
for service units FRC, filter regulators LFR, filters LF, pressure regulators LR and lubricators LOE

Material:
Wrought aluminium alloy



| Dimensions and ordering data | | | | | | | |
|------------------------------|----|-----|-----|----|----|----------|-----------------------------|
| Connection | B1 | B2 | D1 | H1 | H2 | Part No. | Type |
| G $\frac{1}{8}$ | 45 | - | M5 | 10 | - | 526 318 | PBL- $\frac{1}{8}$ -D-MICRO |
| QS4 | 45 | 2.5 | QS4 | 10 | 8 | 526 321 | PBL-QS4-D-MICRO |
| QS6 | 45 | 2.5 | QS6 | 10 | 10 | 526 322 | PBL-QS6-D-MICRO |

Security components, D series

Accessories

FESTO

Padlock LRVS

for regulator lock LRVS for pressure regulators LR and on-off valves HE

Material:

Housing: Brass



| Ordering data | | |
|---------------|----------|--------|
| Weight [g] | Part No. | Type |
| 120 | 193 786 | LRVS-D |

Regulator lock LRVS

Material:

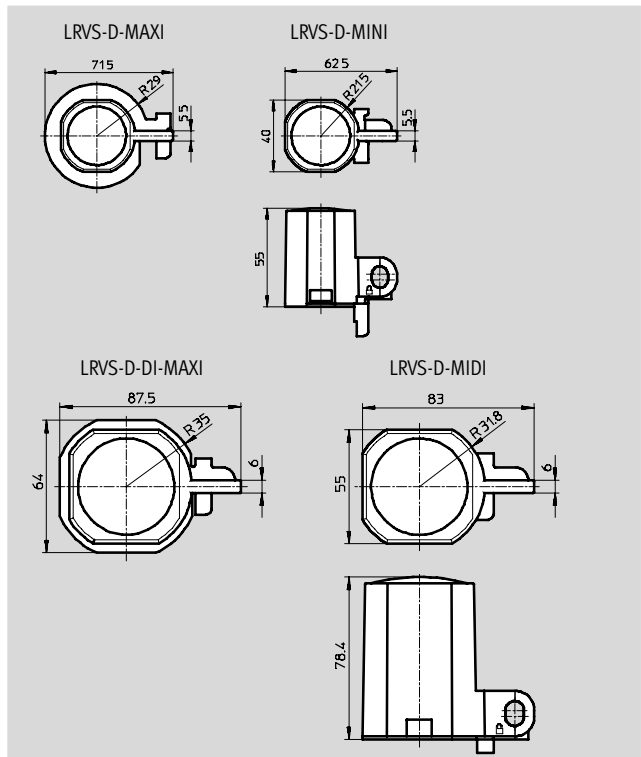
Cap: Polyacetal

Lock plate: Steel

Knurled nut: Aluminium

Lock plate of galvanised steel mounted on pressure regulating valve using knurled nut.

Locking device to prevent unauthorised alteration of the set pressure of pressure and filter regulators.



| Ordering data | | |
|---------------|------------|---|
| Size | Weight [g] | Part No. Type |
| Mini | 40 | 193 781 LRVS-D-MINI ¹⁾ |
| Midi | 60 | 193 782 LRVS-D-MIDI ¹⁾ |
| Maxi | 56 | 193 783 LRVS-D-MAXI ¹⁾ |
| | DI | 36 193 784 LRVS-D-DI-MAXI ¹⁾ |

1) Free of copper, PTFE and silicone

Pressure gauges, D series

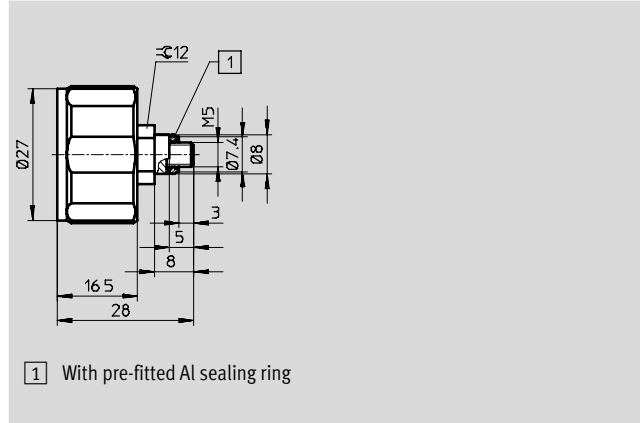
Accessories



Pressure gauge MA

Material:
Housing: Plastic

- These pressure gauges are used for pressure measurement and display in control systems
- They do not contain any paint-wetting impairment substances
- Pressure gauges may only be loaded to $\frac{3}{4}$ of their full scale value during continuous operation

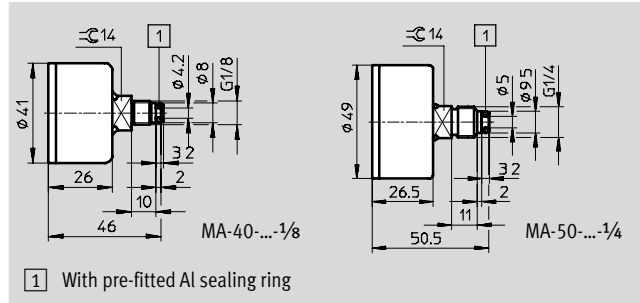


1 With pre-fitted Al sealing ring

| Ordering data | | |
|-------------------|----------|------------------|
| Indicating range | Part No. | Type |
| M5, 0 ... 10 bar | 526 323 | MA-27-10-M5 |
| M5, 0 ... 10 MPa | 526 324 | MA-27-1,0-M5-MPA |
| M5, 0 ... 145 psi | 527 405 | MA-27-160-M5-PSI |

Pressure gauge MA

Material:
Housing: Acrylic butadiene styrene



1 With pre-fitted Al sealing ring

| Ordering data | | |
|----------------------------|----------|-------------------------|
| Display unit [bar] | Part No. | Type |
| G $\frac{1}{8}$, 0 ... 10 | 359 874 | MA-40-10- $\frac{1}{8}$ |
| G $\frac{1}{8}$, 0 ... 16 | 345 395 | MA-40-16- $\frac{1}{8}$ |
| G $\frac{1}{4}$, 0 ... 10 | 359 873 | MA-50-10- $\frac{1}{4}$ |
| G $\frac{1}{4}$, 0 ... 16 | 356 759 | MA-50-16- $\frac{1}{4}$ |

Additional functions, D series

Accessories

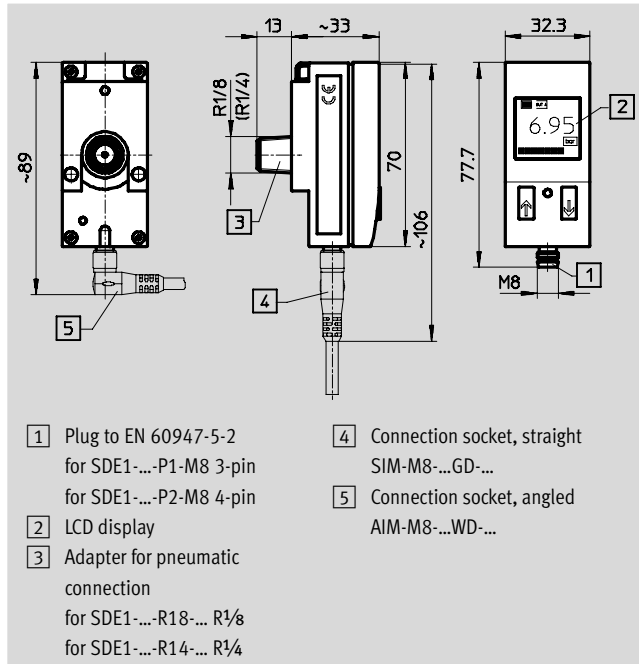
FESTO

Pressure sensor SDE1 with LCD display

Material: Polyacetal

Besides freely programmable switching pressures and hysteresis for each switching output, all SDE1-... variants provide the following setting possibilities:

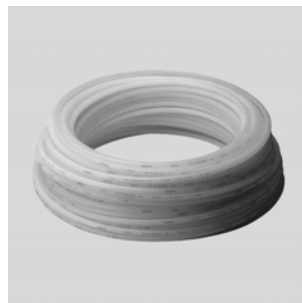
- Selection of threshold value/window comparator
- Selection of NO contacts/NC contacts
- Selection of pressure display in bar/kPa/psi
- Fast programming option through teach-in function
- Option for protecting against unauthorised programming via a PIN code



| Ordering data | | | |
|--|------------|----------|-------------------------|
| Connection | Weight [g] | Part No. | Type |
| Pressure range 0 ... 10 bar, overload pressure max. 20 bar, temperature range 0 ... +50 °C | | | |
| R $\frac{1}{4}$ -...-M8 | 95 | 192 028 | SDE1-D10-G2-R14-C-P1-M8 |
| R $\frac{1}{4}$ -...-M8 | 95 | 192 029 | SDE1-D10-G2-R14-C-P2-M8 |
| R $\frac{1}{8}$ -...-M8 | 95 | 192 026 | SDE1-D10-G2-R18-C-P1-M8 |
| R $\frac{1}{8}$ -...-M8 | 95 | 192 027 | SDE1-D10-G2-R18-C-P2-M8 |

Plastic tubing PCN for condensate drain

Material:
Tubing: Polyvinyl chloride



| Ordering data | | | |
|---------------|--------------|----------|----------|
| Length [m] | Weight [g/m] | Part No. | Type |
| 50 | 25 | 7134 | PCN-4-NT |

Additional functions, D series

Accessories

FESTO

Silencer U

Further silencers

→ NO TAG

→ www.festo.com



| Ordering data | | Technical data → NO TAG | |
|----------------------|----------|---|--|
| Ordering data | | Technical data → www.festo.com | |
| Pneumatic connection | Part No. | Type | |
| G $\frac{1}{8}$ | 6 841 | U- $\frac{1}{8}$ -B | |
| G $\frac{1}{4}$ | 6 842 | U- $\frac{1}{4}$ -B | |
| G $\frac{3}{8}$ | 6 843 | U- $\frac{3}{8}$ -B | |

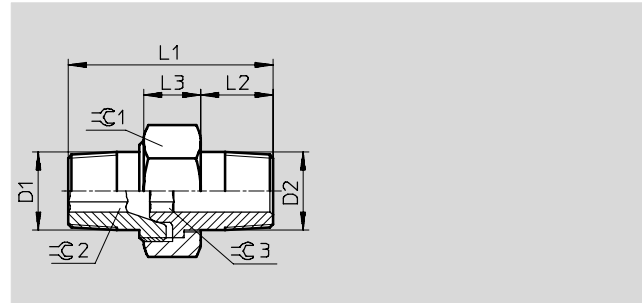
Double nipple ESK

Adjustable for angular compensation

■ For retro-fitting pressure switch PEV to branching module FRM


Material:

Brass



| Dimensions and ordering data | | | | | | | | | | |
|------------------------------|-----------------|----|----|-----|-----------------|-----------------|-----------------|----------|------------------------------------|-----|
| Connection | | L1 | L2 | L3 | $\varnothing 1$ | $\varnothing 2$ | $\varnothing 3$ | Part No. | Type | PU* |
| D1 | D2 | | | | | | | | | |
| R $\frac{1}{4}$ | R $\frac{1}{4}$ | 34 | 12 | 9.5 | 19 | 6 | 6 | 151 521 | ESK- $\frac{1}{4}$ - $\frac{1}{4}$ | 1 |

* Packaging unit quantity

 Core Range

Additional functions, D series

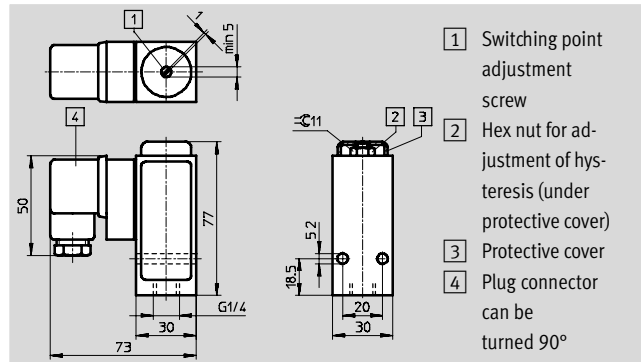
FESTO

Accessories

Pressure switch PEV

adjustable
with plug socket

Material:
Housing: Wrought aluminium alloy

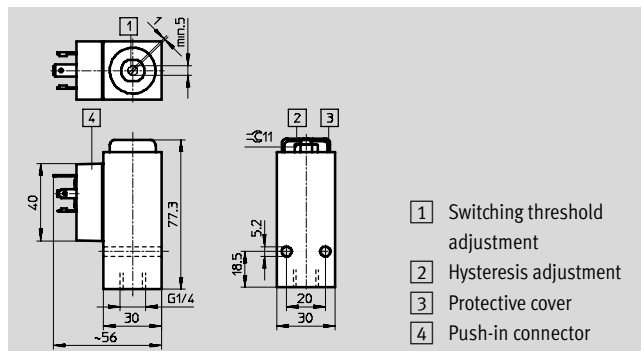


| Ordering data | | Technical data → Volume 4 | |
|---------------|------------|--------------------------------|-----------|
| Ordering data | | Technical data → www.festo.com | |
| Connection | Weight [g] | Part No. | Type |
| G1/4 | 231 | 10 773 | PEV-1/4-B |

Pressure switch PEV

adjustable
without plug socket

Material:
Housing: Wrought aluminium alloy

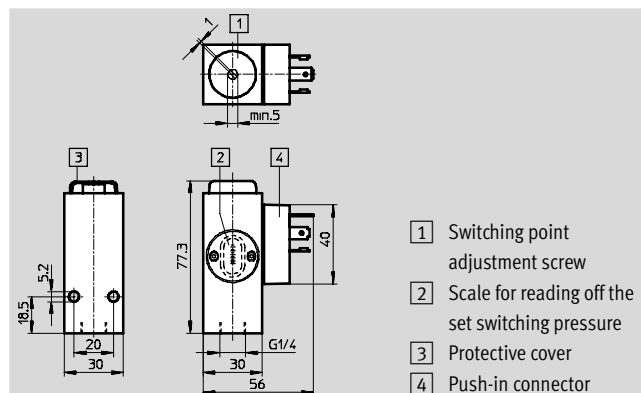


| Ordering data | | Technical data → Volume 4 | |
|---------------|------------|--------------------------------|--------------|
| Ordering data | | Technical data → www.festo.com | |
| Connection | Weight [g] | Part No. | Type |
| G1/4 | 220 | 175 250 | PEV-1/4-B-0D |

Pressure switch PEV

adjustable with visual scale
without plug socket

Material:
Housing: Wrought aluminium alloy



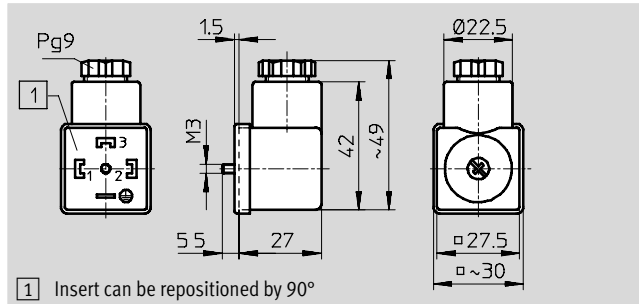
| Ordering data | | Technical data → Volume 4 | |
|-------------------------------|---------------|---|--|
| Ordering data | | Technical data → www.festo.com | |
| Connection | Weight [g] | Part No. | Type |
| G ¹ / ₄ | 170 | 161 760 | PEV-¹/₄-SC-0D |

Additional functions, D series

Accessories

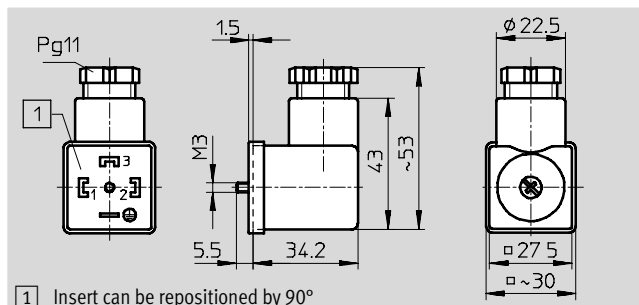
FESTO

Plug socket MSSD
for pressure switch PEV



| Ordering data | | Technical data → Volume 2 Technical data → www.festo.com | |
|---------------|----------|---|--|
| Weight [g] | Part No. | Type | |
| 22 | 171 157 | MSSD-C-4P | |

Angled plug socket with LED
for pressure switch PEV



| Ordering data | | Technical data → Volume 4 Technical data → www.festo.com | |
|---------------|------------|---|------------------|
| Voltage | Weight [g] | Part No. | Type |
| 24 V DC | 22 | 164 274 | PEV-¼-WD-LED-24 |
| 230 V AC | 22 | 164 275 | PEV-¼-WD-LED-230 |

Illuminating seal MEB
for on-off valve HEE

Material:
Polymer, silicone-free



| Ordering data | | Technical data → Volume 2 Technical data → www.festo.com | |
|---------------|------------|---|----------------|
| Voltage | Weight [g] | Part No. | Type |
| 24 V DC | 5 | 151 717 | MEB-LD-12-24DC |
| 230 V AC | 5 | 151 718 | MEB-LD-230AC |

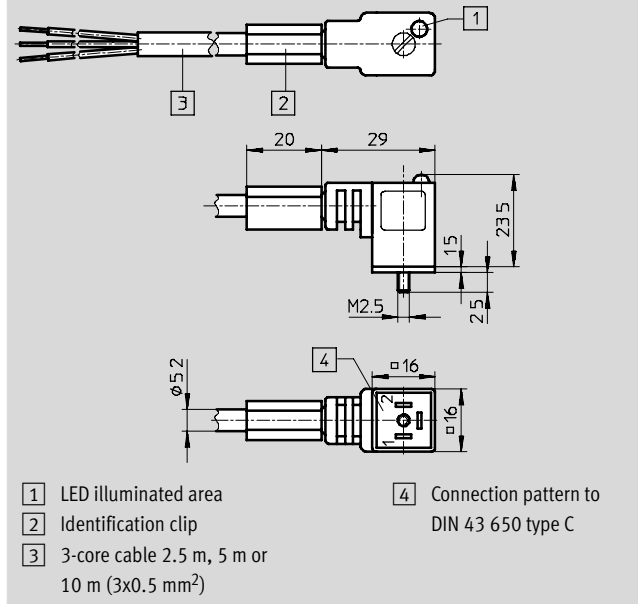
Core Range

Additional functions, D series

Accessories

Plug socket with cable KMEB and LED for on-off valve HEE

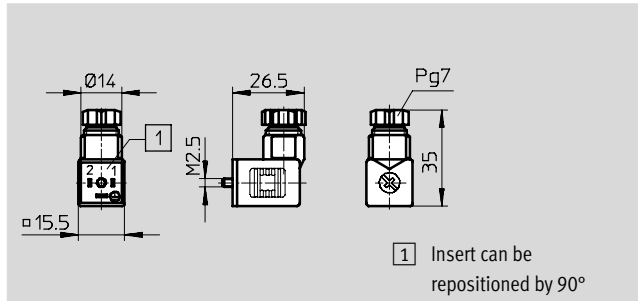
Material:
Housing: Polymer
Seal: Nitrile rubber
Cable: Polyvinyl chloride



| Ordering data | | | Technical data → Volume 2 | |
|---------------|------------------|------------|--------------------------------|-------------------|
| Ordering data | | | Technical data → www.festo.com | |
| Voltage | Cable length [m] | Weight [g] | Part No. | Type |
| 24 V DC | 2.5 | 125 | 151 688 | KMEB-1-24-2,5-LED |
| 24 V DC | 5 | 230 | 151 689 | KMEB-1-24-5-LED |
| 24 V DC | 10 | 460 | 193 457 | KMEB-1-24-10-LED |
| 230 V AC | 2.5 | 125 | 151 690 | KMEB-1-230AC-2,5 |
| 230 V AC | 5 | 230 | 151 691 | KMEB-1-230AC-5 |

Plug socket MSSD for on-off valve HEE

Material:
Housing: Polymer
Seal: Nitrile rubber



| Ordering data | | Technical data → Volume 2 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Weight [g] | Part No. | Type | |
| 11 | 151 687 | MSSD-EB | |

Core Range

Additional functions, D series

Accessories

FESTO

Plug socket MSSD

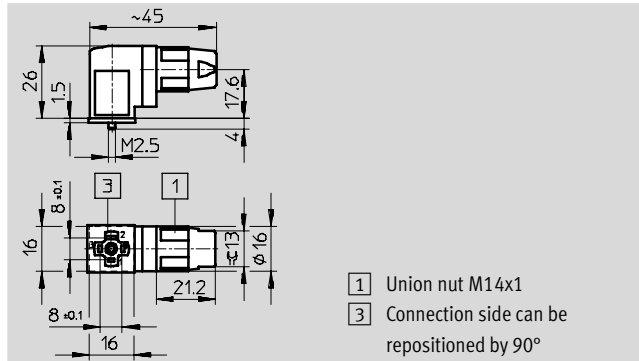
for on-off valve HEE

Insulation displacement technology

Material:

Housing: Polymer

Seal: Nitrile rubber



| Ordering data | | Technical data → Volume 2 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Weight [g] | Part No. | Type | |
| 11 | 192 745 | MSSD-EB-S-M14 | |

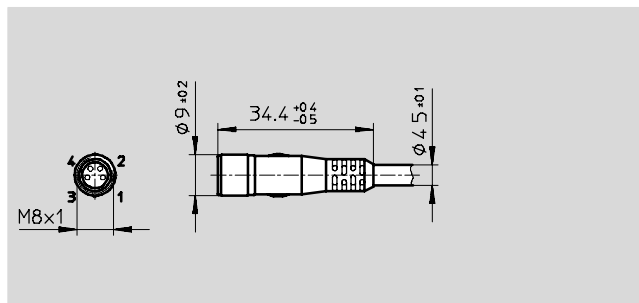
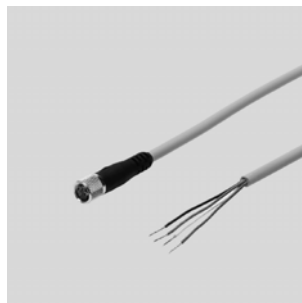
Plug socket with cable SIM

M8, 4-pin

straight socket

Material:

Polyurethane



| Ordering data | | Technical data → Volume 4 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Length [m] | Part No. | Type | |
| 2.5 | 158 960 | SIM-M8-4GD-2,5-PU | |
| 5 | 158 961 | SIM-M8-4GD-5-PU | |

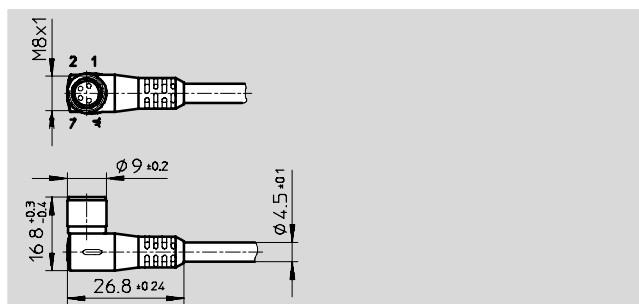
Plug socket with cable SIM

M8, 4-pin

Angled socket

Material:

Polyurethane



| Ordering data | | Technical data → Volume 4 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Length [m] | Part No. | Type | |
| 2.5 | 158 962 | SIM-M8-4WD-2,5-PU | |
| 5 | 158 963 | SIM-M8-4WD-5-PU | |

Additional functions, D series

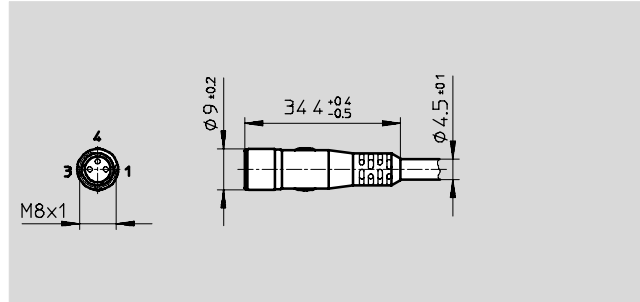
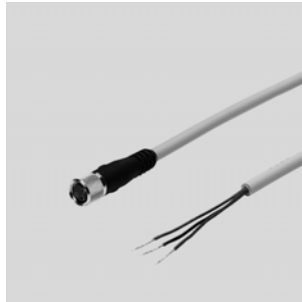
Accessories

FESTO

Plug socket with cable SIM

Push-in/screwed fitting
M8, 3-pin
straight socket without LED

Material:
Polyurethane

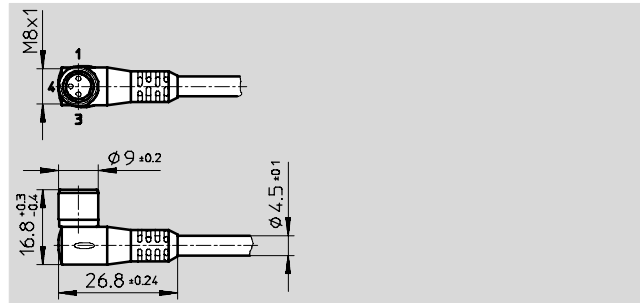


| Ordering data | | Technical data → Volume 4 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Length [m] | Part No. | Type | |
| 2.5 | 159 420 | SIM-M8-3GD-2,5-PU | |
| 5 | 159 421 | SIM-M8-3GD-5-PU | |

Plug socket with cable SIM

Push-in/screwed fitting
M8, 3-pin
angled plug socket without LED

Material:
Polyurethane



| Ordering data | | Technical data → Volume 4 | |
|---------------|----------|--------------------------------|--|
| Ordering data | | Technical data → www.festo.com | |
| Length [m] | Part No. | Type | |
| 2.5 | 159 422 | SIM-M8-3WD-2,5-PU | |
| 5 | 159 423 | SIM-M8-3WD-5-PU | |

Core Range

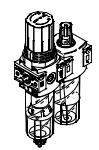
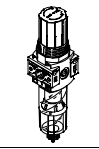
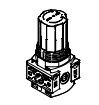
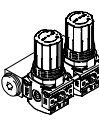


- Basic functions at an attractive price
- Compatible with components of the D series of service units
- Award-winning design suitable for modern systems
- Sturdy connection technology
- High reliability and long service life



Service units, DB components

Product range overview

| Type | Size | Pneumatic connection | | | Pressure regulation range [bar] | Grade of filtration [µm] | |
|---------------------------------------|--|----------------------|------|------|---------------------------------|--------------------------|----|
| | | G1/8 | G1/4 | G1/2 | | 5 | 40 |
| Service units | | | | | | | |
| FRC |  Mini | ■ | ■ | - | ■ | ■ | ■ |
| Individual devices | | | | | | | |
| Filter regulators LFR |  Mini | ■ | ■ | - | ■ | ■ | ■ |
| Pressure regulators LR |  Mini | ■ | ■ | - | ■ | - | - |
| Pressure regulator combinations LRB-K |  Mini | - | - | ■ | ■ | - | - |

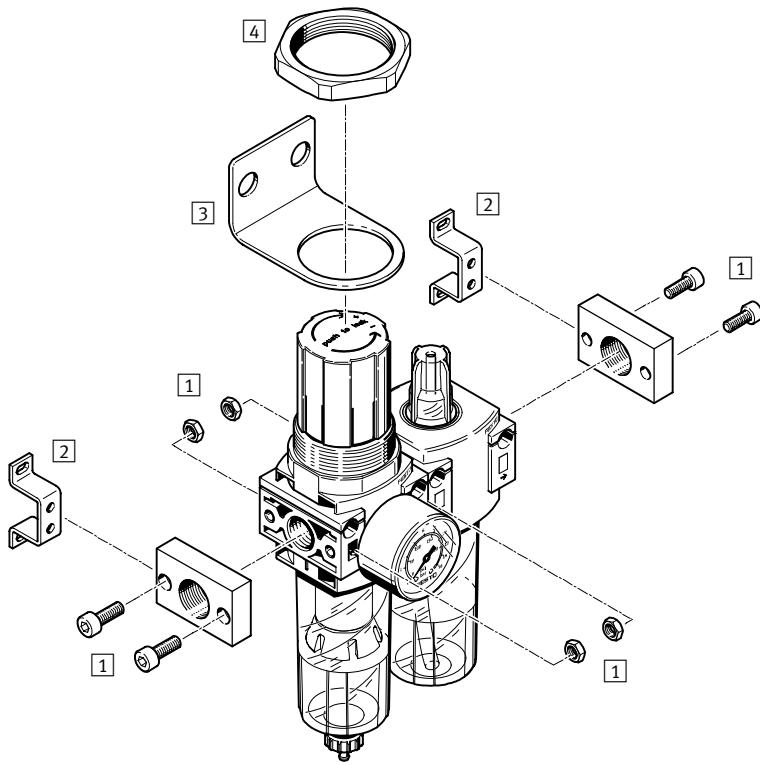
Service units, DB components

Product range overview

| Type | Size | Condensate drain | | Pressure display | | Actuator lock | Regulating functions | | → Page |
|--|------|------------------|----------------|---------------------|------------------------|---------------|------------------------|---------------------------|------------|
| | | Manual rotary | Semi-automatic | With pressure gauge | Without pressure gauge | | With secondary venting | With return flow function | |
| Service units | | | | | | | | | |
| FRC | Mini | ■ | ■ | ■ | - | ■ | ■ | ■ | 3 / 1.9-4 |
| Individual devices | | | | | | | | | |
| Filter regulators LFR | Mini | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 3 / 1.9-10 |
| Pressure regulators LR | Mini | - | - | ■ | ■ | ■ | ■ | ■ | 3 / 1.9-16 |
| Pressure regulator combinations LRB-K | Mini | - | - | - | ■ | ■ | ■ | ■ | 3 / 1.9-21 |

Service units FRC, DB components

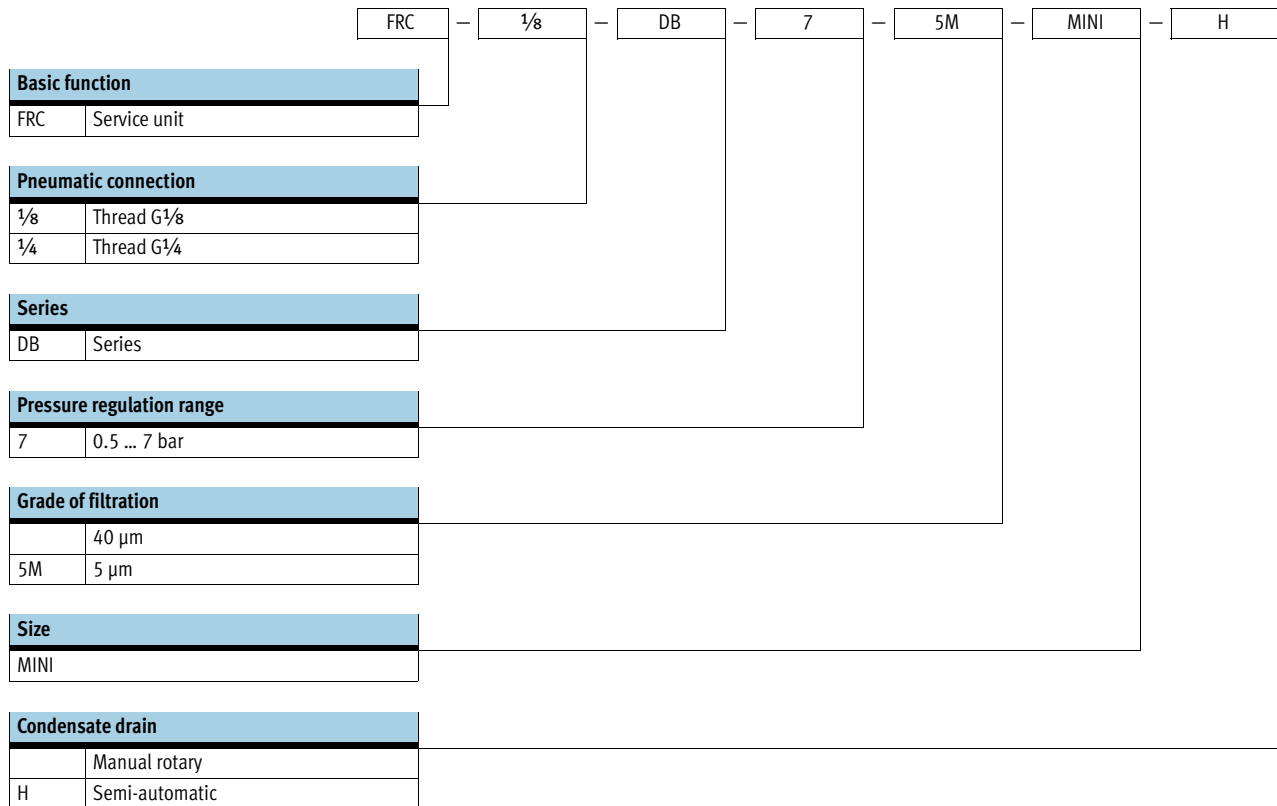
Peripherals overview



| Mounting attachments and accessories | | → Page |
|--------------------------------------|-----------------------------|------------|
| 1 | Connecting plate kit PBL | 3 / 1.9-29 |
| 2 | Mounting bracket HFOE | 3 / 1.9-30 |
| 3 | Mounting bracket HR-D | 3 / 1.9-29 |
| 4 | Hex nut HMR | 3 / 1.9-29 |

Service units FRC, DB components


Type codes



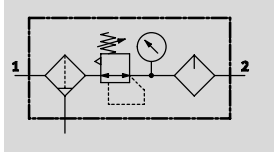
Service units FRC, DB components


Technical data


Function

 Flow rate
400 ... 650 l/min

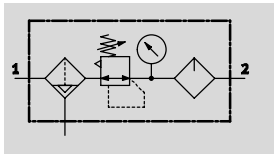
Condensate drain
manual rotary



 Temperature range
-5 ... +50 °C

 Input pressure
1.5 ... 10 bar

semi-automatic



- Filter, regulator and lubricator functions 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 means of the rotary knob with detent
- With manual or semi-automatic condensate drain

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
→ 3 / 1.9-9
- 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 | G $\frac{3}{8}$ | G $\frac{1}{4}$ |
| Operating medium | Compressed air | |
| Design | Filter/regulator/lubricator | |
| Regulating function | With return flow function | |
| | With secondary venting | |
| Type of mounting | Inline installation | |
| | Via through-holes | |
| | Via mounting bracket | |
| Assembly position | Vertical $\pm 5^\circ$ | |
| Grade of filtration | [μ m] | 5 or 40 |
| Max. hysteresis | [bar] | 0.5 |
| Input pressure | [bar] | 1.5 ... 10 |
| Pressure regulation range | [bar] | 0.5 ... 7 |
| Pressure indication | Via pressure gauge | |
| Pressure gauge connection | G $\frac{3}{8}$ | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | |
|--|-----------------|------------|-----------------|
| Pneumatic connection | G $\frac{3}{8}$ | | G $\frac{1}{4}$ |
| Mini | | | |
| Grade of filtration | 5 μ m | ≥ 400 | ≥ 550 |
| | 40 μ m | ≥ 550 | ≥ 650 |

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

Service units FRC, DB components

Technical data

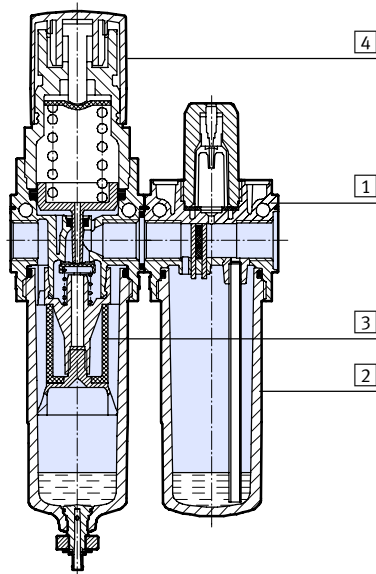
| Ambient conditions | | |
|----------------------------|-------------------|------------|
| Size | | Mini |
| Ambient temperature | [°C] | -5 ... +50 |
| Temperature of medium | [°C] | -5 ... +50 |
| Corrosion resistance class | CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

| Weight [g] | |
|--------------|------|
| Size | Mini |
| Service unit | 300 |

Materials

Sectional view



| Service unit | Mini |
|---------------|-----------------------|
| 1 Housing | Polyamide, reinforced |
| 2 Bowl | Polycarbonate |
| 3 Filter | Polyethylene |
| 4 Rotary knob | Polyacetate |
| - Seals | Nitrile rubber |

Service units FRC, DB components

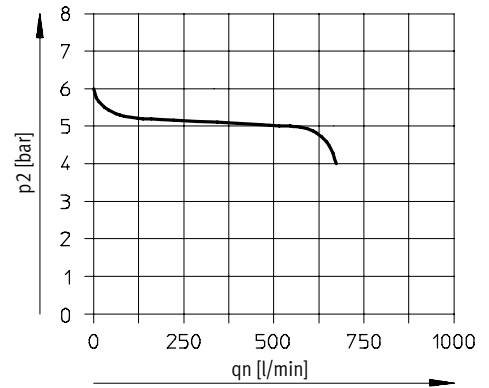
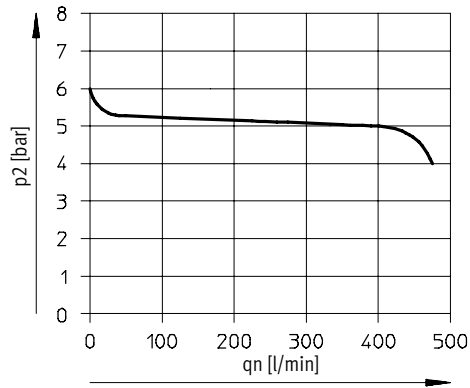
Technical data

Standard flow rate q_n as a function of output pressure p_2

Pneumatic connection G $\frac{1}{8}$

Grade of filtration 5 μm

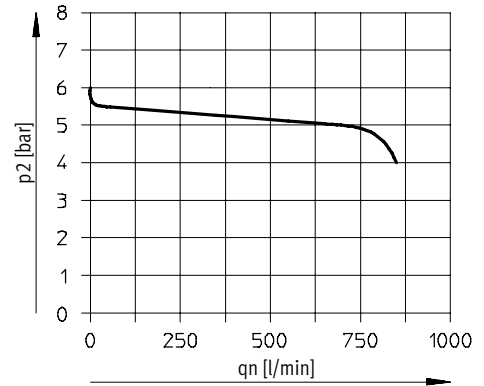
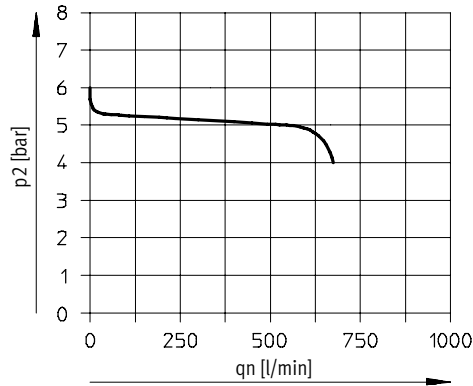
Grade of filtration 40 μm



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

Grade of filtration 5 μm

Grade of filtration 40 μm



Primary pressure $p_1 = 10$ bar

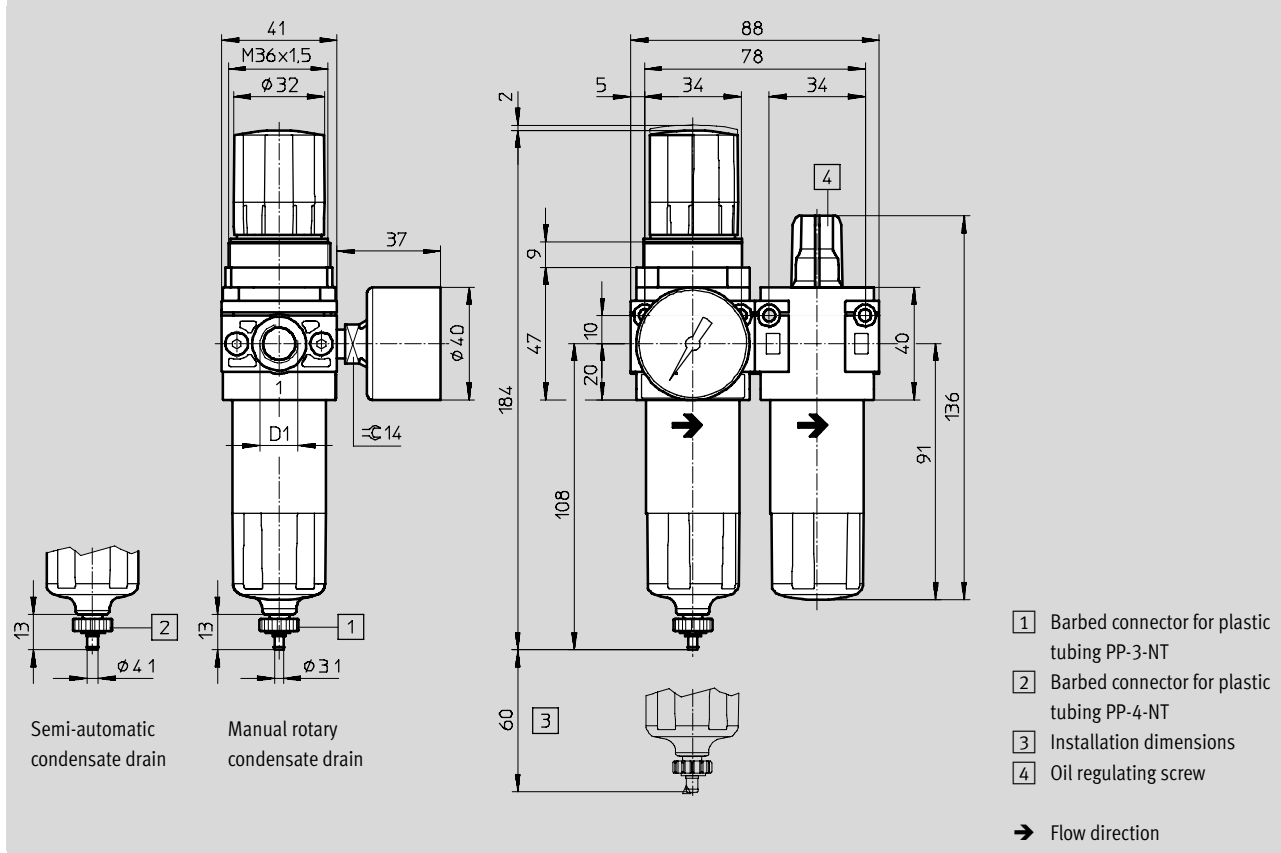
Service units FRC, DB components

Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

Mini




| Type | D1 |
|------------|------|
| FRC-1/8-DB | G1/8 |
| FRC-1/4-DB | G1/4 |

Ordering data

Pressure regulation range 0.5 ... 7 bar

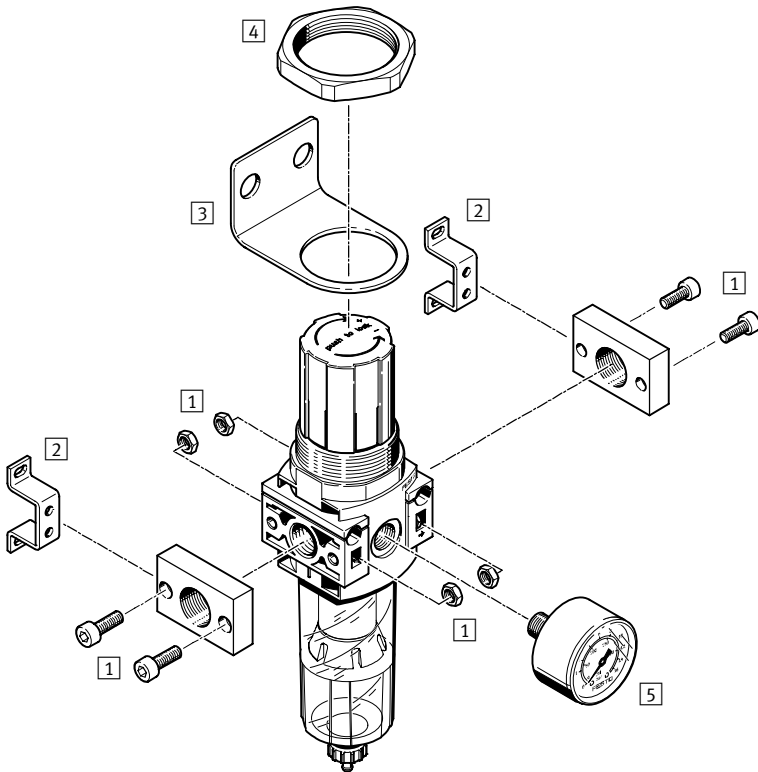
| Condensate drain | Size | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
|---------------------|------|------------|--------------------------|------------------------|---------------------------|---------------------|
| | | | Part No. | Type | Part No. | Type |
| With pressure gauge | | | | | | |
| Manual rotary | Mini | G1/8 | 537 659 | FRC-1/8-DB-7-5M-MINI | 537 655 | FRC-1/8-DB-7-MINI |
| | | G1/4 | 537 658 | FRC-1/4-DB-7-5M-MINI | 537 654 | FRC-1/4-DB-7-MINI |
| Semi-automatic | Mini | G1/8 | 537 661 | FRC-1/8-DB-7-5M-MINI-H | 537 657 | FRC-1/8-DB-7-MINI-H |
| | | G1/4 | 537 660 | FRC-1/4-DB-7-5M-MINI-H | 537 656 | FRC-1/4-DB-7-MINI-H |

Ordering data – Special oil

| | Scope of delivery | Part No. | Type |
|---|-------------------|----------|---------|
|  | 1 litre | 152 811 | OFSW-32 |

Filter regulators LFR, DB components

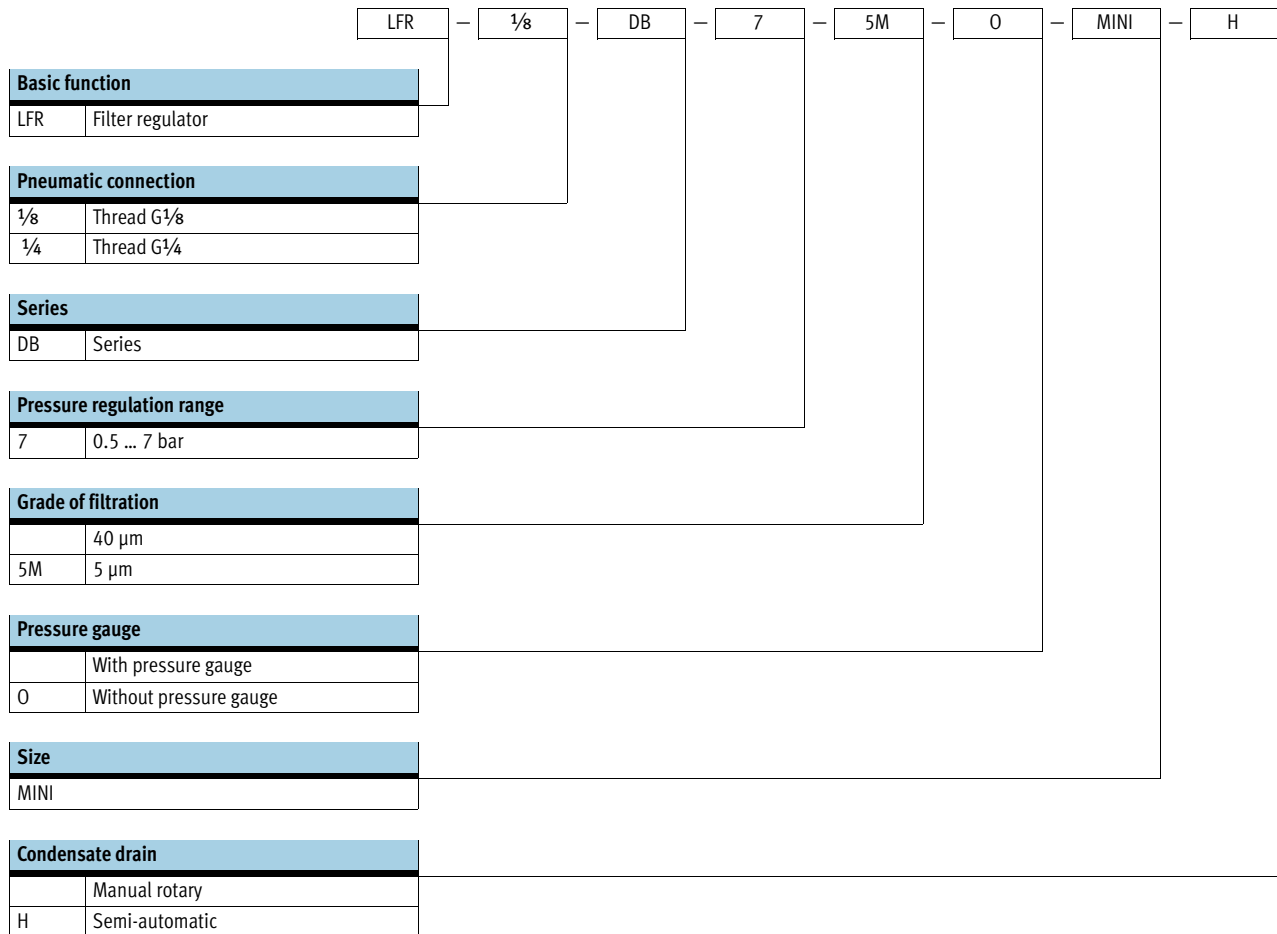
Peripherals overview



| Mounting attachments and accessories | | → Page |
|--------------------------------------|-----------------------------|------------|
| 1 | Connecting plate kit PBL | 3 / 1.9-29 |
| 2 | Mounting bracket HFOE | 3 / 1.9-30 |
| 3 | Mounting bracket HR-D | 3 / 1.9-29 |
| 4 | Hex nut HMR | 3 / 1.9-29 |
| 5 | Pressure gauge MA | 3 / 1.9-32 |

Filter regulators LFR, DB components

Type codes

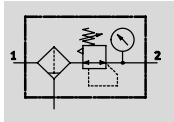





Filter regulators LFR, DB components

Technical data

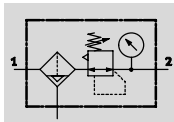
Function

with pressure gauge
Condensate drain
manual rotary

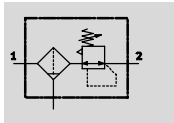


-  - Flow rate
500 ... 1200 l/min
-  - Temperature range
-5 ... +50 °C
-  - Input pressure
1.5 ... 10 bar

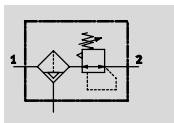
semi-automatic



without pressure gauge
Condensate drain
manual rotary



semi-automatic



- Setting values are secured by locking the rotary knob
- With manual or semi-automatic condensate drain
- Choice of filter cartridges: 5 µm or 40 µm
- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate
- Good regulating characteristics with minimal hysteresis

| General technical data | | | | |
|---------------------------------|--------------------------------------|------|---|------|
| Size | Mini | | | |
| | with pressure gauge | | without pressure gauge | |
| Pneumatic connection | G1/8 | G1/4 | G1/8 | G1/4 |
| Operating medium | Compressed air | | | |
| Design | Filter regulator with pressure gauge | | Filter regulator without pressure gauge | |
| Regulating function | With return flow function | | | |
| | With secondary venting | | | |
| Type of mounting | Inline installation | | | |
| | Via through-holes | | | |
| | Via mounting bracket | | | |
| Assembly position | Vertical ±5° | | | |
| Grade of filtration [µm] | 5 or 40 | | 5 or 40 | |
| Max. hysteresis [bar] | 0.5 | | | |
| Input pressure [bar] | 1.5 ... 10 | | | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | |
| Pressure indication | Via pressure gauge | | G1/8 prepared | |
| Pressure gauge connection | G1/8 | | | |

| Standard nominal flow rate ¹⁾ qnN [l/min] | | | | |
|--|-------|-------|--|--------|
| Pneumatic connection | | G1/8 | | G1/4 |
| Mini | | | | |
| Grade of filtration | 5 µm | ≥ 500 | | ≥ 1000 |
| | 40 µm | ≥ 700 | | ≥ 1200 |

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

Filter regulators LFR, DB components

Technical data

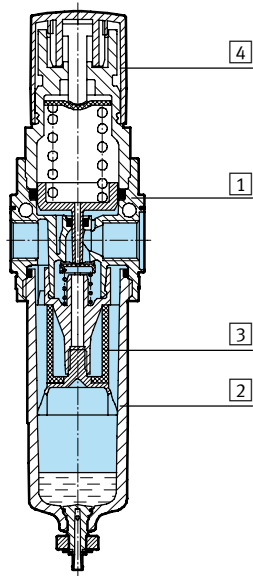
| Ambient conditions | | |
|----------------------------|-------------------|------------|
| Size | | Mini |
| Ambient temperature | [°C] | -5 ... +50 |
| Temperature of medium | [°C] | -5 ... +50 |
| Corrosion resistance class | CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

| Weight [g] | |
|------------------|------|
| Size | Mini |
| Filter regulator | 200 |

Materials

Sectional view



| Filter regulator | Mini |
|------------------|-----------------------|
| 1 Housing | Polyamide, reinforced |
| 2 Bowl | Polycarbonate |
| 3 Filter | Polyethylene |
| 4 Rotary knob | Polyacetate |
| - Seals | Nitrile rubber |

Filter regulators LFR, DB components

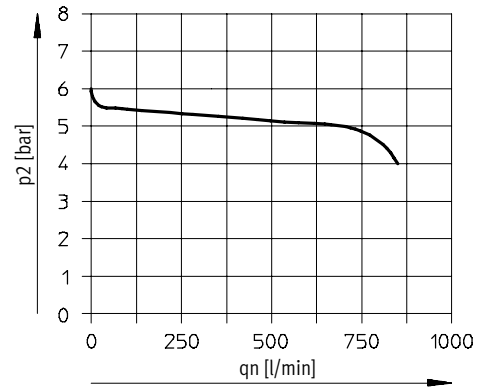
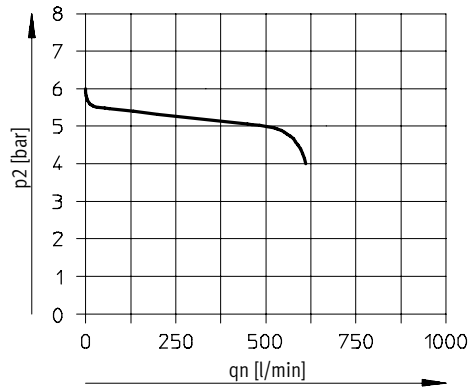
Technical data

Standard flow rate q_n as a function of output pressure p_2

Pneumatic connection G $\frac{1}{8}$

Grade of filtration 5 μm

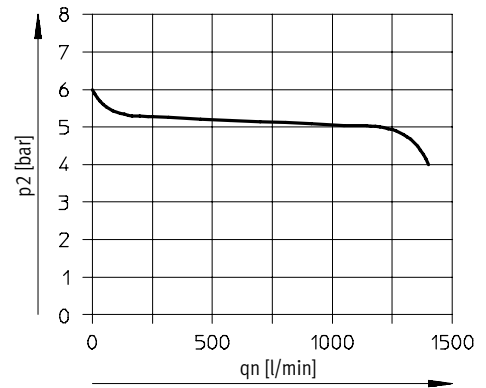
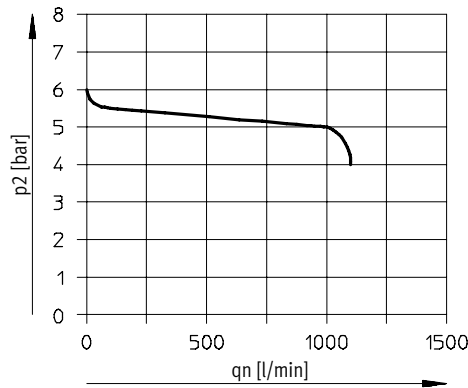
Grade of filtration 40 μm



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

Grade of filtration 5 μm

Grade of filtration 40 μm



Primary pressure $p_1 = 10$ bar

Filter regulators LFR, DB components

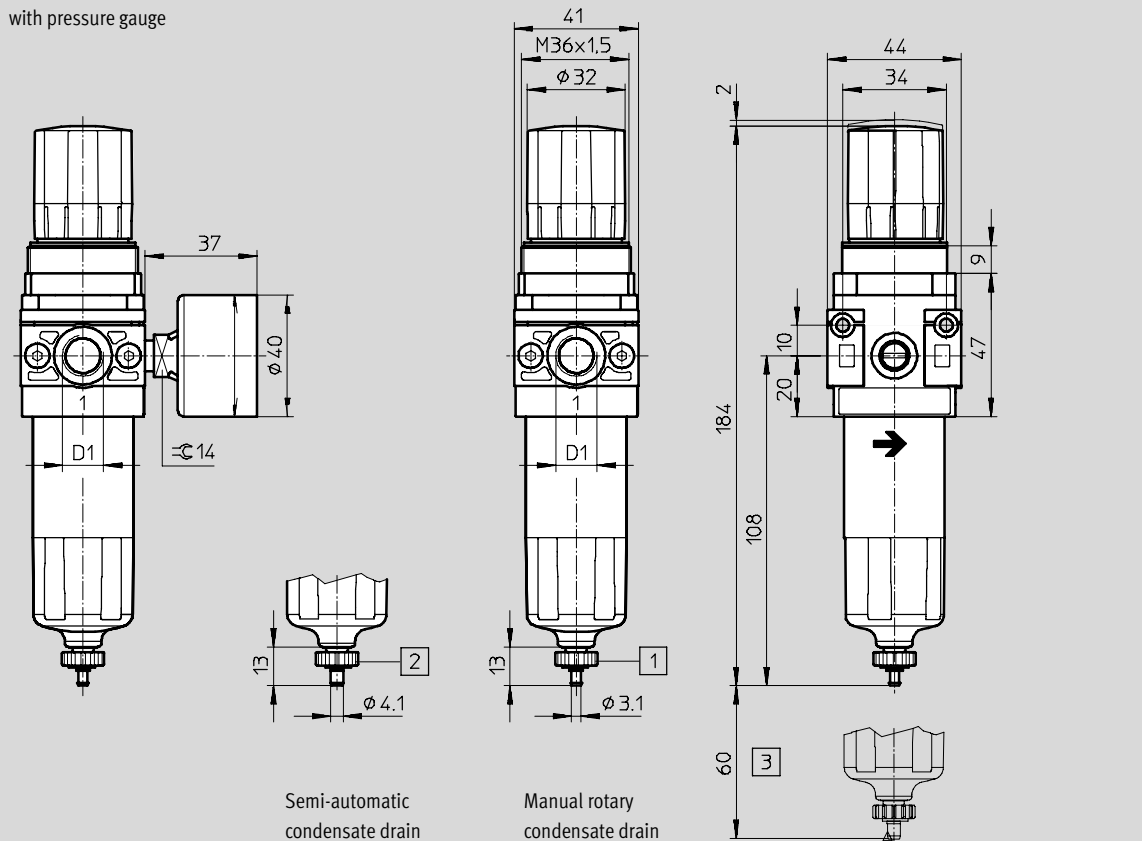
Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

Mini

with pressure gauge



- 1 Barbed connector for plastic tubing PP-3-NT
- 2 Barbed connector for plastic tubing PP-4-NT
- 3 Installation dimensions
- Flow direction

| | |
|------------|------|
| Type | D1 |
| LFR-1/8-DB | G1/8 |
| LFR-1/4-DB | G1/4 |

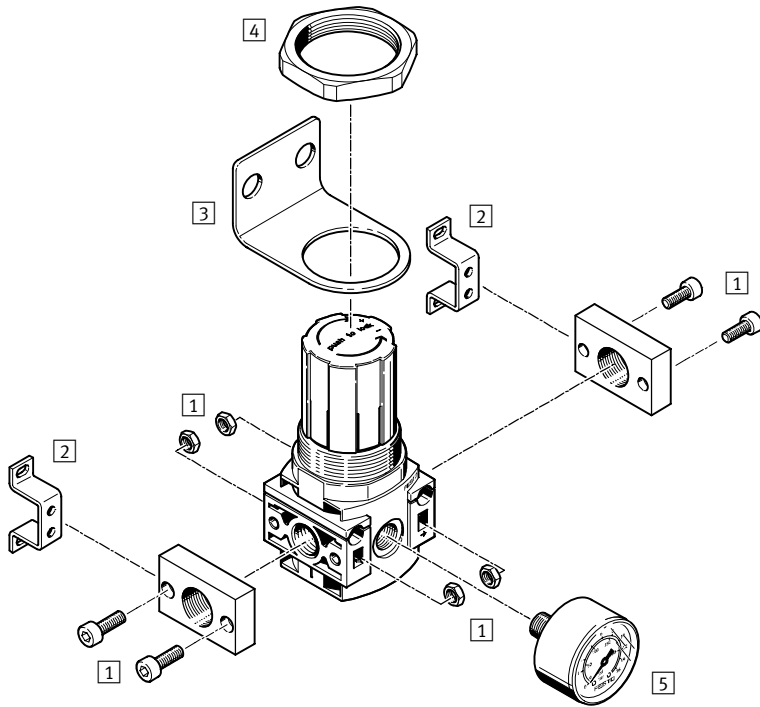
Ordering data

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 | | | | | | |
| Manual rotary | Mini | G1/8 | 539 687 | LFR-1/8-DB-7-5M-MINI | 539 683 | LFR-1/8-DB-7-MINI |
| | | G1/4 | 539 689 | LFR-1/4-DB-7-5M-MINI | 539 685 | LFR-1/4-DB-7-MINI |
| Semi-automatic | Mini | G1/8 | 539 688 | LFR-1/8-DB-7-5M-MINI-H | 539 684 | LFR-1/8-DB-7-MINI-H |
| | | G1/4 | 539 690 | LFR-1/4-DB-7-5M-MINI-H | 539 686 | LFR-1/4-DB-7-MINI-H |
| Without pressure gauge | | | | | | |
| Manual rotary | Mini | G1/8 | 537 648 | LFR-1/8-DB-7-5M-O-MINI | 537 651 | LFR-1/8-DB-7-O-MINI |
| | | G1/4 | 537 644 | LFR-1/4-DB-7-5M-O-MINI | 537 647 | LFR-1/4-DB-7-O-MINI |
| Semi-automatic | Mini | G1/8 | 537 650 | LFR-1/8-DB-7-5M-O-MINI-H | 537 649 | LFR-1/8-DB-7-O-MINI-H |
| | | G1/4 | 537 646 | LFR-1/4-DB-7-5M-O-MINI-H | 537 645 | LFR-1/4-DB-7-O-MINI-H |

Pressure regulators LR, DB components

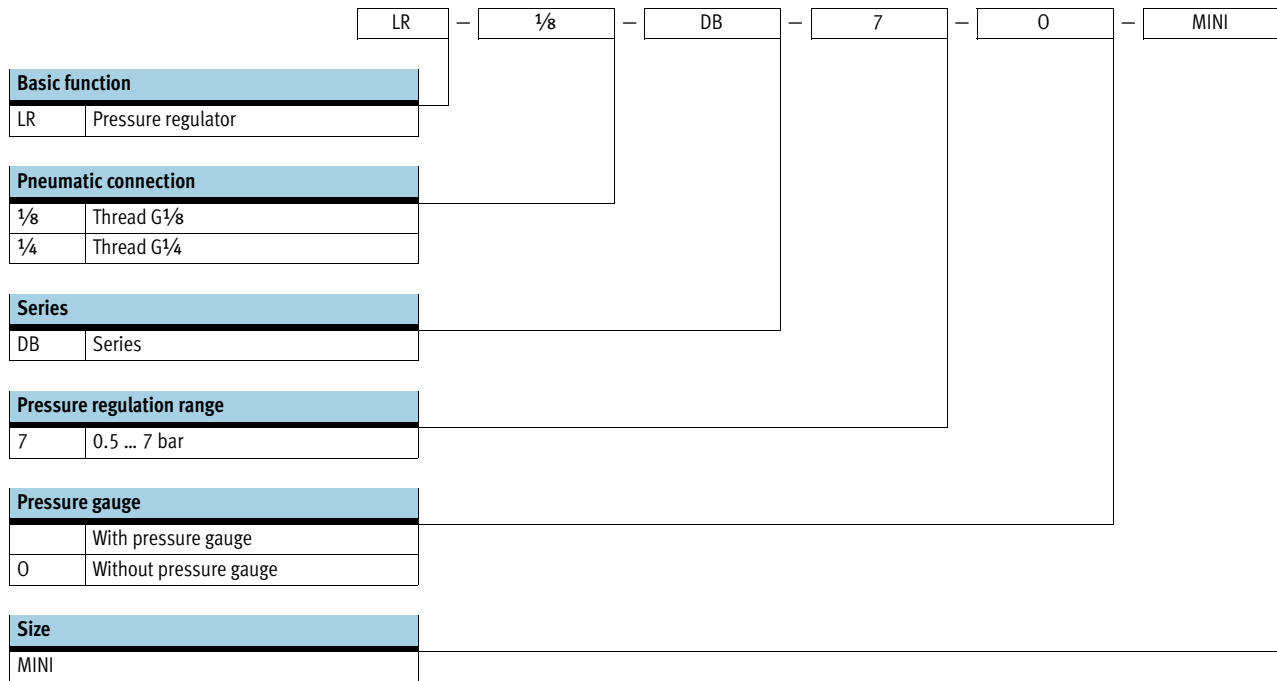
Peripherals overview



| Mounting attachments and accessories | | → Page |
|--------------------------------------|-----------------------------|------------|
| 1 | Connecting plate kit PBL | 3 / 1.9-29 |
| 2 | Mounting bracket HFOE | 3 / 1.9-30 |
| 3 | Mounting bracket HR-D | 3 / 1.9-29 |
| 4 | Hex nut HMR | 3 / 1.9-29 |
| 5 | Pressure gauge MA | 3 / 1.9-32 |

Pressure regulators LR, DB components

Type codes

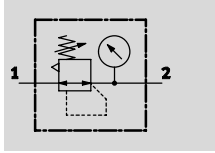


Pressure regulators LR, DB components

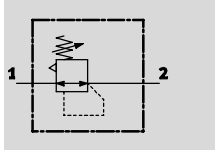
Technical data




Function

with pressure gauge



without pressure gauge



-  - Flow rate
800 ... 1300 l/min
-  - Temperature range
-5 ... +50 °C
-  - Input pressure
1.5 ... 10 bar



- Setting values are secured by locking the rotary knob
- High flow rate
- Good regulating characteristics with minimal pressure hysteresis

General technical data

| Size | Mini | | | |
|---------------------------------|--|-----------------|---|-----------------|
| | With pressure gauge | | Without pressure gauge | |
| Pneumatic connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ | G $\frac{1}{8}$ | G $\frac{1}{4}$ |
| Operating medium | Compressed air | | | |
| Design | Pressure regulator with pressure gauge | | Pressure regulator without pressure gauge | |
| Regulating function | With return flow function | | | |
| | With secondary venting | | | |
| Type of mounting | Inline installation | | | |
| | Via through-holes | | | |
| | Via mounting bracket | | | |
| | Front panel mounting | | | |
| Assembly position | Any | | | |
| Max. hysteresis [bar] | 0.5 | | | |
| Input pressure [bar] | 1.5 ... 10 | | | |
| Pressure regulation range [bar] | 0.5 ... 7 | | | |
| Pressure indication | Via pressure gauge | | G $\frac{1}{8}$ prepared | |
| Pressure gauge connection | G $\frac{1}{8}$ | | | |

Standard nominal flow rate¹⁾ qnN [l/min]

| Pneumatic connection | G $\frac{1}{8}$ | G $\frac{1}{4}$ |
|---|-----------------|-----------------|
| Mini | | |
| Pressure regulation range 0.5 ... 7 bar | ≥ 800 | ≥ 1300 |

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

Pressure regulators LR, DB components

Technical data

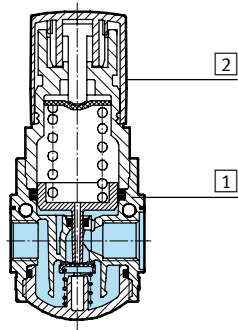
| Ambient conditions | | |
|----------------------------|-------------------|------------|
| Size | | Mini |
| Ambient temperature | [°C] | -5 ... +50 |
| Temperature of medium | [°C] | -5 ... +50 |
| Corrosion resistance class | CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

| Weight [g] | |
|--------------------|------|
| Size | Mini |
| Pressure regulator | 150 |

Materials

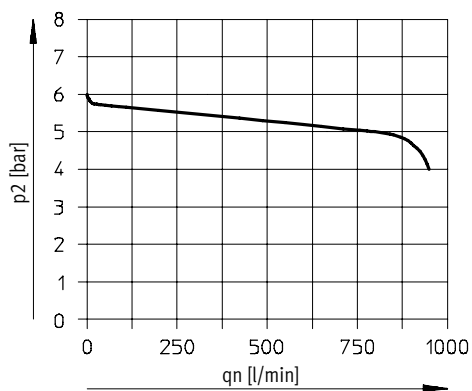
Sectional view



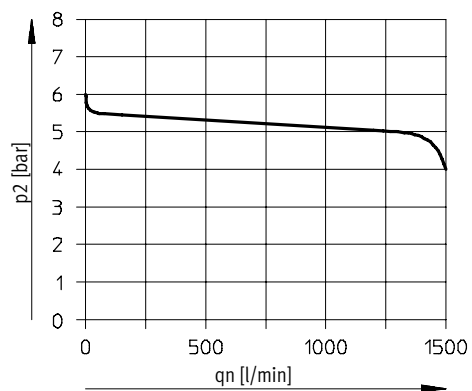
| Pressure regulator | Mini |
|--------------------|-----------------------|
| 1) Housing | Polyamide, reinforced |
| 2) Rotary knob | Polyacetate |
| - Seals | Nitrile rubber |

Standard flow rate qn as a function of output pressure p2

Pneumatic connection G¹/₈



Pneumatic connection G¹/₄



Primary pressure p₁ = 10 bar

Pressure regulators LR, DB components

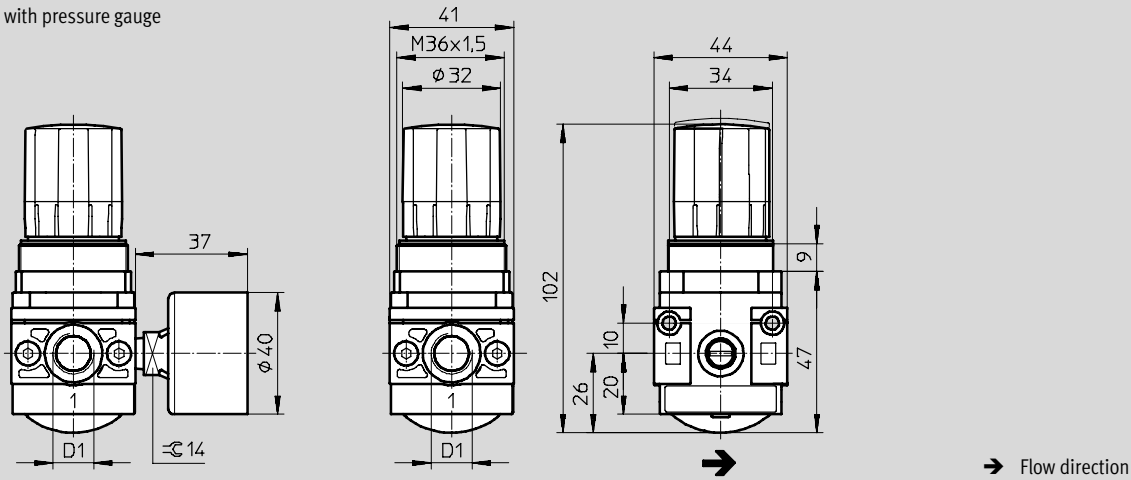
Technical data

Dimensions

Download CAD data → www.festo.com/en/engineering

Mini

with pressure gauge



| | |
|-----------|------|
| Type | D1 |
| Mini | |
| LR-1/8-DB | G1/8 |
| LR-1/4-DB | G1/4 |

Ordering data

| Size | Connection | Pressure regulation range 0.5 ... 7 bar | |
|-------------------------------|------------|---|--------------------|
| | | Part No. | Type |
| With pressure gauge | | | |
| Mini | G1/8 | 539 681 | LR-1/8-DB-7-MINI |
| | G1/4 | 539 682 | LR-1/4-DB-7-MINI |
| Without pressure gauge | | | |
| Mini | G1/8 | 537 642 | LR-1/8-DB-7-O-MINI |
| | G1/4 | 537 643 | LR-1/4-DB-7-O-MINI |

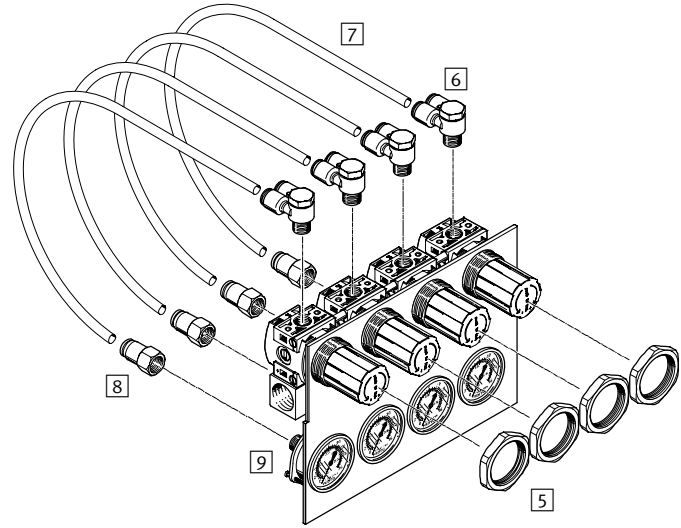
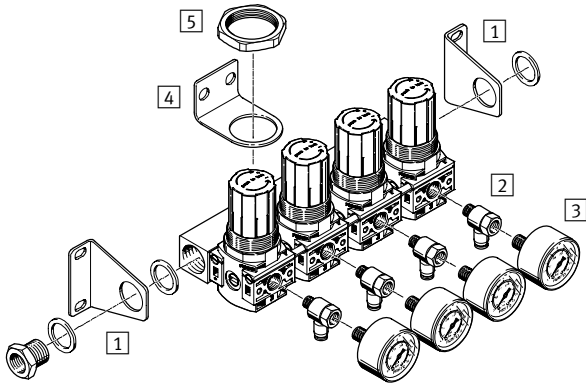
Pressure regulator combinations LRB, DB components

Peripherals overview

Mini

With mounting bracket

Front panel mounting

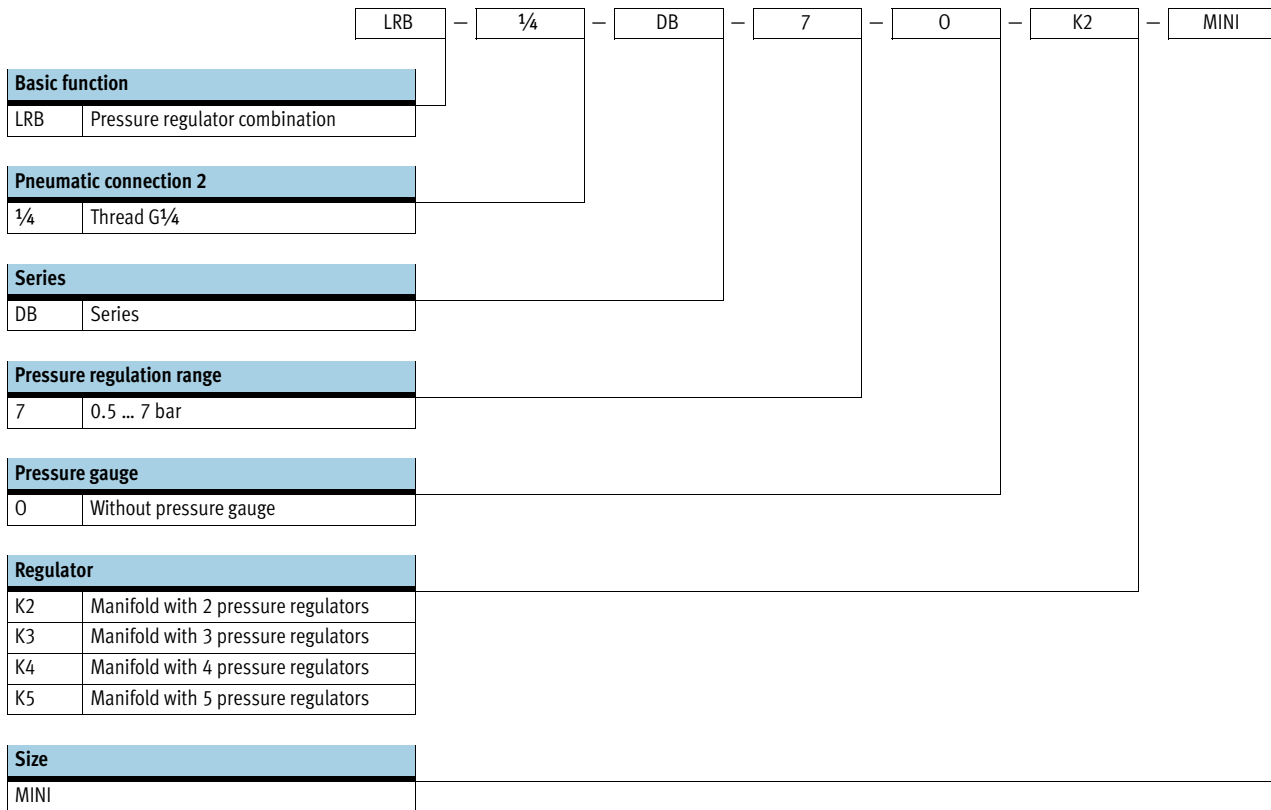


Mounting attachments and accessories

| | With mounting bracket | Front panel mounting | → Page |
|--|-----------------------|----------------------|------------|
| 1 Mounting bracket kit HRBS-DB-MINI | ■ | - | 3 / 1.9-30 |
| 2 Push-in T-fitting QSTF | ■ | - | 3 / 1.9-33 |
| 3 Pressure gauge MA | ■ | - | 3 / 1.9-32 |
| 4 Mounting bracket HR-D | ■ | - | 3 / 1.9-29 |
| 5 Hex nut HMR | ■ | ■ | 3 / 1.9-29 |
| 6 Push-in Y-fitting QSYLV | - | ■ | 3 / 1.9-33 |
| 7 Plastic tubing PUN-E | - | ■ | 3 / 1.9-34 |
| 8 Push-in fitting QSF | - | ■ | 3 / 1.9-33 |
| 9 Flanged pressure gauge FMA | - | ■ | 3 / 1.9-32 |

Pressure regulator combinations LRB, DB components

Type codes

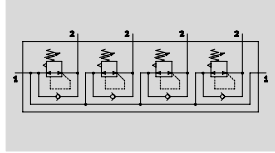





Pressure regulator combinations LRB, DB components

Technical data

Function

without pressure gauge



-  - Flow rate
1000 l/min
-  - Temperature range
-5 ... +50 °C
-  - Input pressure
1.5 ... 10 bar



- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For the configuration of a regulator manifold with independent pressure ranges
- Setting values are secured by locking the rotary knob

| General technical data | |
|---------------------------------|------------------------------------|
| Size | Mini |
| Pneumatic connection 1 | G½ |
| Pneumatic connection 2 | G¼ |
| Operating medium | Compressed air |
| Regulating functions | Output pressure constant |
| | With return flow function |
| | With secondary venting |
| Design | Directly actuated piston regulator |
| | On P-manifold |
| Type of mounting | Front panel mounting |
| | Via accessories |
| Assembly position | Any |
| Max. hysteresis [bar] | 0.5 |
| Input pressure [bar] | 1.5 ... 10 |
| Pressure regulation range [bar] | 0.5 ... 7 |

| Standard nominal flow rate ¹⁾ qnN [l/min] | |
|--|--------|
| Size | Mini |
| Pressure regulation range 0.5 ... 7 bar | ≥ 1000 |

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

| Ambient conditions | |
|--|------------|
| Ambient temperature [°C] | -5 ... +50 |
| Temperature of medium [°C] | -5 ... +50 |
| Corrosion resistance class CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

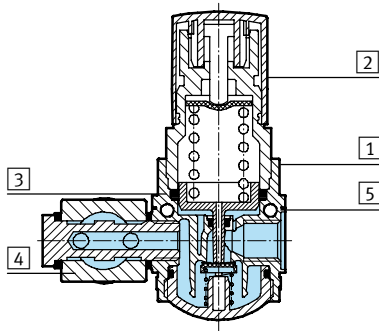
Pressure regulator combinations LRB, DB components

Technical data

| Weight [g] | |
|-------------------------------------|------|
| Size | Mini |
| Manifold with 2 pressure regulators | |
| LRB-...-K2 | 500 |
| Manifold with 3 pressure regulators | |
| LRB-...-K3 | 750 |
| Manifold with 4 pressure regulators | |
| LRB-...-K4 | 1000 |
| Manifold with 5 pressure regulators | |
| LRB-...-K5 | 1250 |

Materials

Sectional view



| Pressure regulator | Mini |
|--------------------|-------------------------|
| 1 Housing | Polyamide, reinforced |
| 2 Rotary knob | Polyacetate |
| 3 Sealing ring | Polyvinyl chloride |
| 4 Manifold strip | Wrought aluminium alloy |
| 5 Spacing bolt | Wrought aluminium alloy |
| - Seals | Nitrile rubber |

Pressure regulator combinations LRB, DB components

FESTO

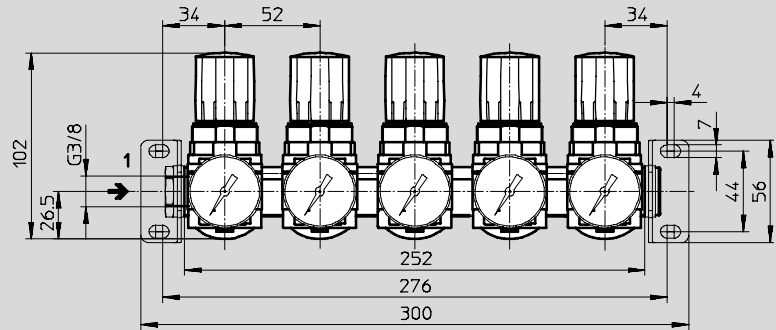
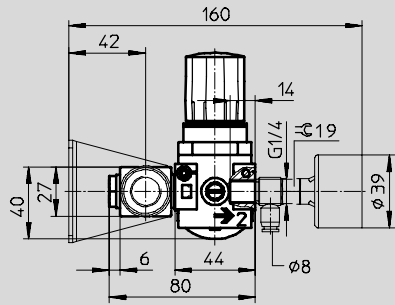
Technical data

Dimensions

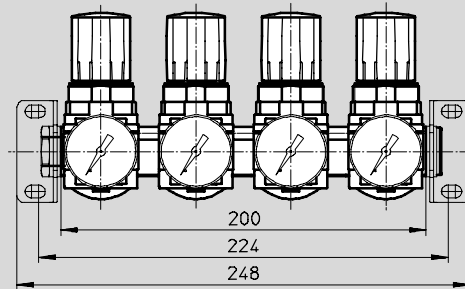
Download CAD data → www.festo.com/en/engineering

With mounting bracket

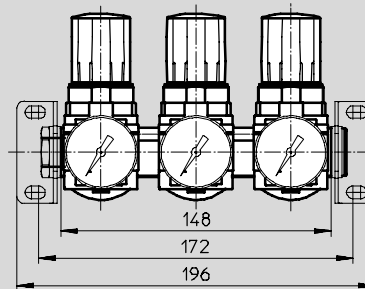
LRB-...-K5



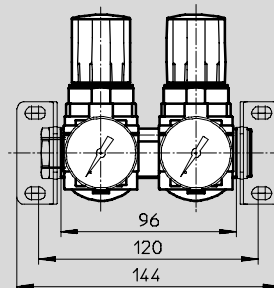
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

 **New**

Pressure regulator combinations LRB, DB components

FESTO

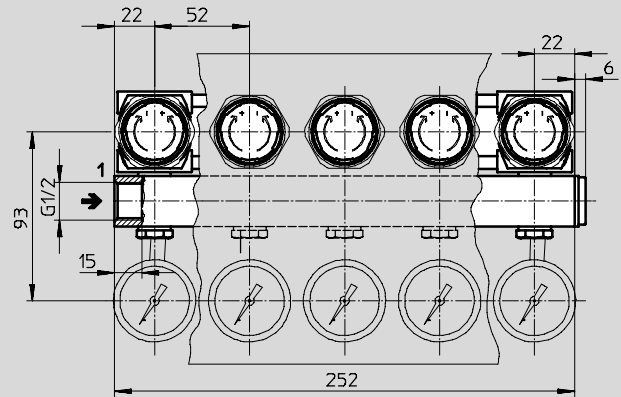
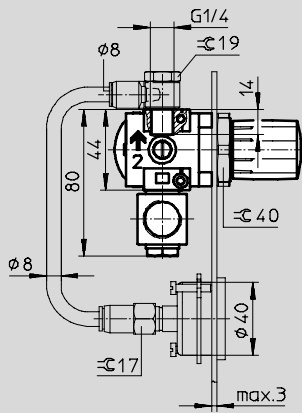
Technical data

Dimensions

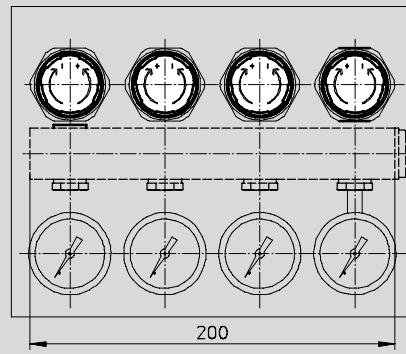
Download CAD data → www.festo.com/en/engineering

Front panel mounting

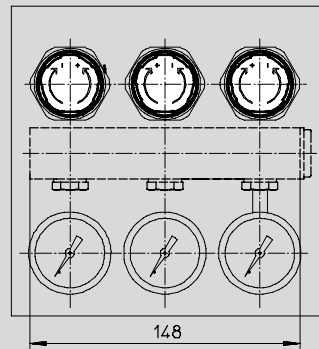
LRB-...-K5



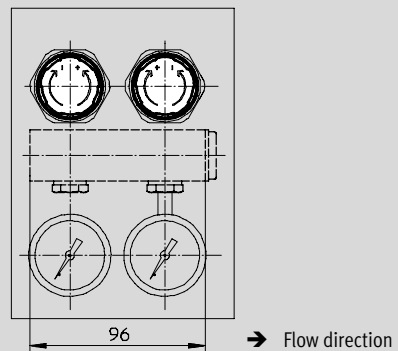
LRB-...-K4



LRB-...-K3



LRB-...-K2



Pressure regulator combinations LRB, DB components

Technical data

| Ordering data | | | |
|-------------------------------------|-----------------|---|--|
| Size | Connection | Pressure regulation range 0.5 ... 7 bar | |
| | | Part No. | Type |
| Manifold with 2 pressure regulators | | | |
| Mini | G $\frac{1}{4}$ | 540 040 | LRB-$\frac{1}{4}$-DB-7-O-K2-MINI |
| Manifold with 3 pressure regulators | | | |
| Mini | G $\frac{1}{4}$ | 540 041 | LRB-$\frac{1}{4}$-DB-7-O-K3-MINI |
| Manifold with 4 pressure regulators | | | |
| Mini | G $\frac{1}{4}$ | 540 042 | LRB-$\frac{1}{4}$-DB-7-O-K4-MINI |
| Manifold with 5 pressure regulators | | | |
| Mini | G $\frac{1}{4}$ | 540 043 | LRB-$\frac{1}{4}$-DB-7-O-K5-MINI |


Mounting attachments, DB components

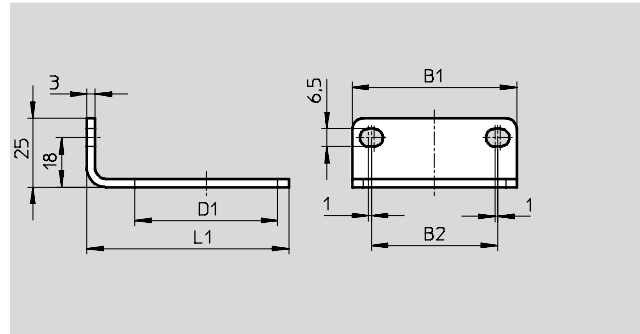
Accessories

Mounting bracket HR-D

■ For wall mounting

Material:
Galvanised steel

-  - Note
The hex nut for attaching this bracket must be ordered separately.



| Dimensions and ordering data | | | | | | | |
|------------------------------|----|----|---------|------|-------------------|----------|-----------|
| Size | B1 | B2 | D1 Ø | L1 | CRC ¹⁾ | Part No. | Type |
| Mini | 42 | 28 | 36 | 57.5 | 2 | 164 936 | HR-D-MINI |

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.

Hex nut HMR

■ For front panel mounting
■ For attaching the mounting bracket HR-D

Material:
Wrought aluminium alloy



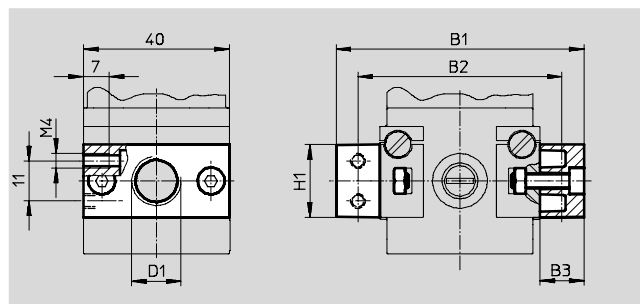
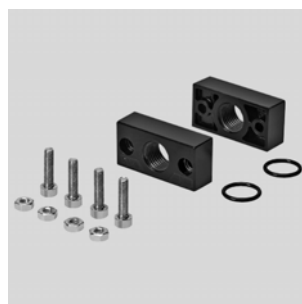
| Ordering data | | |
|---------------|----------|-----------------|
| Size | Part No. | Type |
| Mini | 530 025 | HMR-D-MINI/MAXI |

Connecting plate kit PBL

■ For wall mounting
■ For establishing a pneumatic connection G $\frac{3}{8}$


Material:
Connecting plate: Die-cast zinc
Nut, screws: Galvanised steel
Seals: Nitrile rubber

Note on materials:
Free of copper and PTFE



| Dimensions and ordering data | | | | | | | |
|------------------------------|----|----|----|-----------------|----|-------------------|-------------------------------------|
| Size | B1 | B2 | B3 | D1 | H1 | CRC ¹⁾ | Part No. Type |
| Mini | 68 | 56 | 12 | G $\frac{1}{8}$ | 20 | 1 | 542 787 PBL- $\frac{1}{8}$ -DB-MINI |
| | 68 | 56 | 12 | G $\frac{1}{4}$ | 20 | | 542 788 PBL- $\frac{1}{4}$ -DB-MINI |
| | 74 | 56 | 15 | G $\frac{3}{8}$ | 23 | | 542 789 PBL- $\frac{3}{8}$ -DB-MINI |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

 Core Range

Mounting attachments, DB components

Accessories

Mounting bracket HFOE

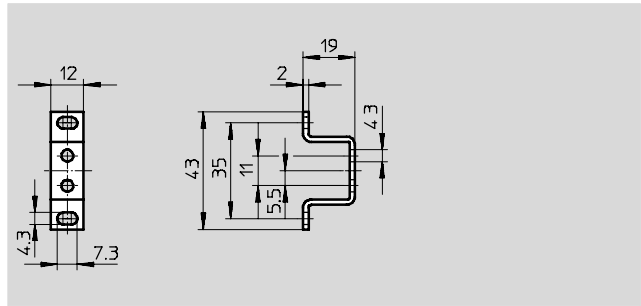
■ For wall mounting

Material:

Galvanised steel

Note on materials:

Free of copper and PTFE



| Dimensions and ordering data | | | |
|------------------------------|-------------------|----------|-------------|
| Size | CRC ¹⁾ | Part No. | Type |
| Mini | 2 | 159 638 | HFOE-D-MINI |

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.

Mounting bracket kit HRBS-DB-MINI

■ For wall mounting

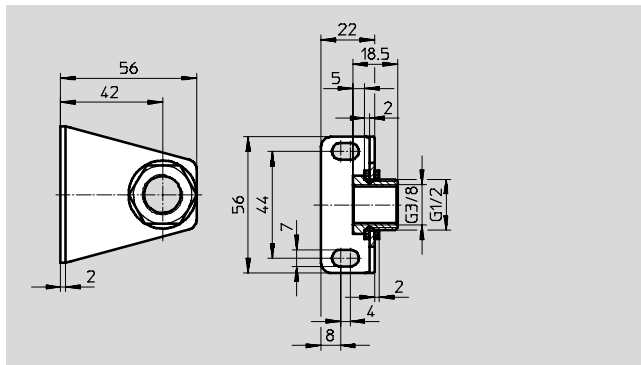
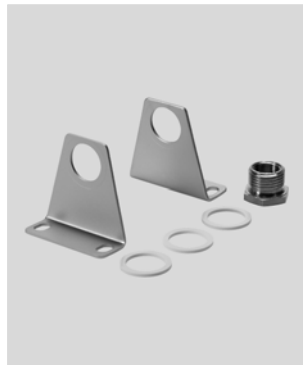
Material:

Hollow bolt, housing: Galvanised steel

Sealing ring: Polyvinyl chloride

Note on materials:

Free of copper and PTFE



| Dimensions and ordering data | | | | | |
|------------------------------|------------------------|-------------------|------------|----------|--------------|
| Size | Pneumatic connection 1 | CRC ¹⁾ | Weight [g] | Part No. | Type |
| Mini | G $\frac{3}{8}$ | 2 | 150 | 540 791 | HRBS-DB-MINI |

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.

Mounting attachments, DB components

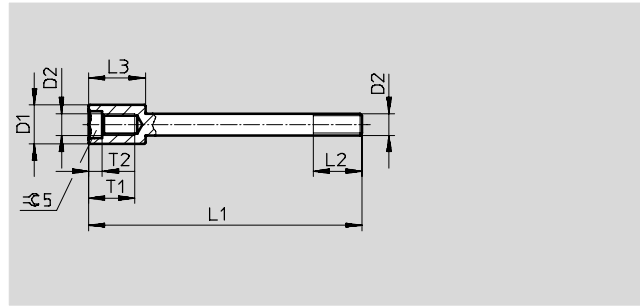
Accessories

Threaded pin FRB

■ For service unit combinations

Material:
Steel

Note on materials:
Free of copper and PTFE



| Dimensions and ordering data | | | | | | | | | | |
|------------------------------|---------|----|------|------------|------|-----|-----|-------------------|----------|-------------|
| Size | D1 ∅ | D2 | L1 | L2 min. | L3 | T1 | T2 | CRC ¹⁾ | Part No. | Type |
| Mini | 7.2 | M4 | 50.5 | 9 | 10.5 | 8.5 | 2.5 | 1 | 542 187 | FRB-DB-MINI |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Nut assortment M4-DB

■ For service unit combinations

Material:
Galvanised steel

Note on materials:
Free of copper and PTFE



| Ordering data | | | |
|---------------|-------------------|----------|------------|
| Size | CRC ¹⁾ | Part No. | Type |
| Mini | 1 | 542 790 | M4-DB-MINI |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Pressure gauge, DB components

Accessories

Pressure gauge MA, DIN EN 837-1

- For filter regulators and pressure regulators

Further pressure gauges

- NO TAG
- www.festo.com



| Ordering data | | | | |
|----------------------|------------------|-----------|----------------|--|
| Pneumatic connection | Indicating range | | Part No. | Type |
| | [bar] | [psi] | | |
| R $\frac{3}{8}$ | 0 ... 10 | 0 ... 145 | 162 835 | MA-40-10-R$\frac{3}{8}$-EN |

Pressure gauge MA, DIN EN 837-1

- For pressure regulator combinations with mounting via bracket

Further pressure gauges

- NO TAG
- www.festo.com



| Ordering data | | | | |
|----------------------|------------------|-----------|----------------|--|
| Pneumatic connection | Indicating range | | Part No. | Type |
| | [bar] | [psi] | | |
| G $\frac{1}{4}$ | 0 ... 10 | 0 ... 145 | 183 900 | MA-40-10-G$\frac{1}{4}$-EN |

Flanged pressure gauge FMA, DIN EN 837-1

- For pressure regulator combinations with front panel mounting

Further pressure gauges

- NO TAG
- www.festo.com



| Ordering data | | | | | |
|---------------|----------------------|------------------|-----------|----------------|---|
| Nominal size | Pneumatic connection | Indicating range | | Part No. | Type |
| | | [bar] | [psi] | | |
| 40 | G $\frac{1}{4}$ | 0 ... 10 | 0 ... 145 | 159 596 | FMA-40-10-G$\frac{1}{4}$-EN |

Push-in fittings, DB components

Accessories

Push-in T-fitting QSTF

360° rotatable
with male and female thread

Further push-in fittings

- NO TAG
- www.festo.com



| Ordering data | | | | | |
|----------------------|-----------------|-------------|----------|-------------------------|-----|
| Pneumatic connection | | | Part No. | Type | PU* |
| Male thread | Female thread | Tubing O.D. | | | |
| G $\frac{1}{4}$ | G $\frac{1}{4}$ | 8 | 186 203 | QSTF-G $\frac{1}{4}$ -8 | 1 |

* Packaging unit quantity

Push-in Y-fitting QSYLV

360° rotatable
Male thread
with external hex

Further push-in fittings

- NO TAG
- www.festo.com



| Ordering data | | | | | |
|----------------------|--|-------------|----------|--------------------------|-----|
| Pneumatic connection | | Tubing O.D. | Part No. | Type | PU* |
| G $\frac{1}{4}$ | | 8 | 186 210 | QSYLV-G $\frac{1}{4}$ -8 | 1 |

* Packaging unit quantity

Push-in fitting QSF

Female thread
with external hex

Further push-in fittings

- NO TAG
- www.festo.com



| Ordering data | | | | | |
|----------------------|--|-------------|----------|-------------------------|-----|
| Pneumatic connection | | Tubing O.D. | Part No. | Type | PU* |
| G $\frac{1}{4}$ | | 8 | 153 026 | QSF- $\frac{1}{4}$ -8-B | 10 |

* Packaging unit quantity

Plastic tubing, DB components

Accessories

Plastic tubing PP

■ For condensate drain

Material: Polyamide

Note on materials:
Free of copper and PTFE

Further tubing

- ➔ NO TAG
- ➔ www.festo.com



| Ordering data | | | |
|---------------------|----------|---------|------------|
| Tubing I.D. [mm] | Part No. | Type | PU* [m] |
| 3 | 4 572 | PP-3-NT | 50 |
| 4 | 4 231 | PP-4-NT | 50 |

* Packaging unit

Plastic tubing PUN-E

Highly flexible, hydrolysis and
microbe resistant tubing

Material: Polyurethane

Note on materials:
Free of copper and PTFE

Further tubing

- ➔ NO TAG
- ➔ www.festo.com



| Ordering data | | | | |
|---------------------|--------|----------|------------------|------------|
| Tubing O.D. [mm] | Colour | Part No. | Type | PU* [m] |
| 8 | Silver | 535 322 | PUN-E-8x1-SI | 50 |
| | | 534 174 | PUN-E-8x1-SI-400 | 400 |
| | Blue | 535 327 | PUN-E-8x1-BL | 50 |
| | | 534 175 | PUN-E-8x1-BL-400 | 400 |
| | Black | 538 467 | PUN-E-8x1-SW | 50 |
| | | 538 462 | PUN-E-8x1-SW-400 | 400 |

* Packaging unit