

Service units LFR-K/LFRS-K, D series

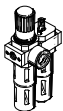
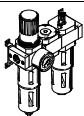
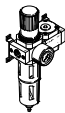
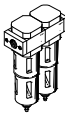
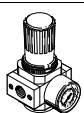
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Service units LFR-K/LFRS-K, D series, metal design

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Product range overview D series service units, metal design

Type	Size	Pneumatic connection										Pressure regulation range [bar]			Grade of filtration [µm]			
		M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5 ...	0.5 ...	2.5 ...	0.01	1	5	40
Service units																		
FRC/FRCS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	–
		Mini	–	–	■	■	■	–	–	–	–	■	■	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	■	■	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■
FRC-K		Micro	–															
		Mini	–	–	■	■	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	■	■	–	–	–	■
LFR-K 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	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	–

Service units LFR-K/LFRS-K, D series, metal design

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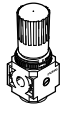
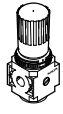
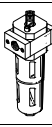
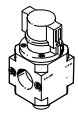
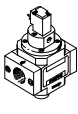
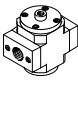
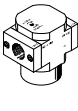
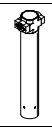
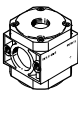
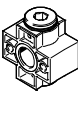
Product range overview D series service units, metal design

Type	Size	Bowl guard		Condensate drain			Pressure indication		Actuator lock		Supply voltage			Options			→ Page/ Internet
		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	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	frc
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
FRC-K	Micro	–															frc
	Mini	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	–	■	–	–	■	■	–	
LFR-K LFRS-K	Micro	–															6
	Mini	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	■	■	–	–	■	■	–	
Individual devices																	
Filter regulators LFR/LFRS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	lfr
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Filters LF	Micro	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	lf
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
Fine and micro filters LFMA/LFMB	Micro	–															lfma, lfmb
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Active carbon filters LFX	Micro	–															lfx
	Mini	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Filter combinations LFMBA	Micro	–															lfmba
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Pressure regulators LR/LRS	Micro	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	lr
	Mini	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Midi	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Maxi	–	–	–	–	–	■	■	■	■	–	–	–	■	■	–	

Service units LFR-K/LFRS-K, D series, metal design

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Product range overview D series service units, metal design

Type		Size	Pneumatic connection										Pressure regulation range [bar]	
													0.5 ... 7	0.5 ... 12
			M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6		
Individual devices														
Pressure regulators LRB/LRBS		Micro	—											
		Mini	—	—	—	■	—	—	—	—	—	—	■	■
		Midi	—	—	—	—	■	—	—	—	—	—	■	■
		Maxi	—											
Pressure regulator combinations LRB-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 air dryers LDM1		Micro	—											
		Mini	—											
		Midi	—											
		Maxi	—	—	—	—	—	■	■	■	—	—	—	—
Branching modules FRM		Micro	—											
		Mini	—	—	■	■	■	—	—	—	—	—	—	—
		Midi	—	—	—	■	■	■	■	—	—	—	—	—
		Maxi	—	—	—	—	—	■	■	■	—	—	—	—
Distributor block FRZ		Micro	—	—	—	—	—	—	—	—	—	—	—	—
		Mini	—	—	—	—	—	—	—	—	—	—	—	—
		Midi	—	—	—	—	—	—	—	—	—	—	—	—
		Maxi	—	—	—	—	—	—	—	—	—	—	—	—

Service units LFR-K/LFRS-K, D series, metal design

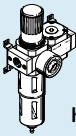
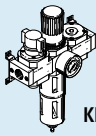
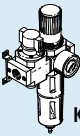
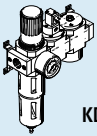
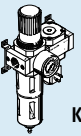
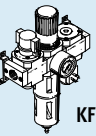
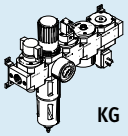
Product range overview D series service units, metal design

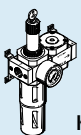
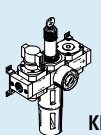
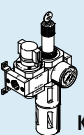
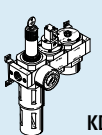
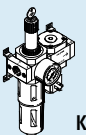
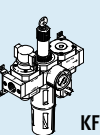
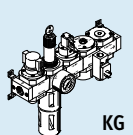
Type	Size	Bowl guard		Pressure indication		Actuator lock		Supply voltage			Options		→ Page/ Internet
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with detent	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Non-return function	Pressure switch	
Individual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

Service units LFR-K/LFRS-K, D series, metal design

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Product range overview

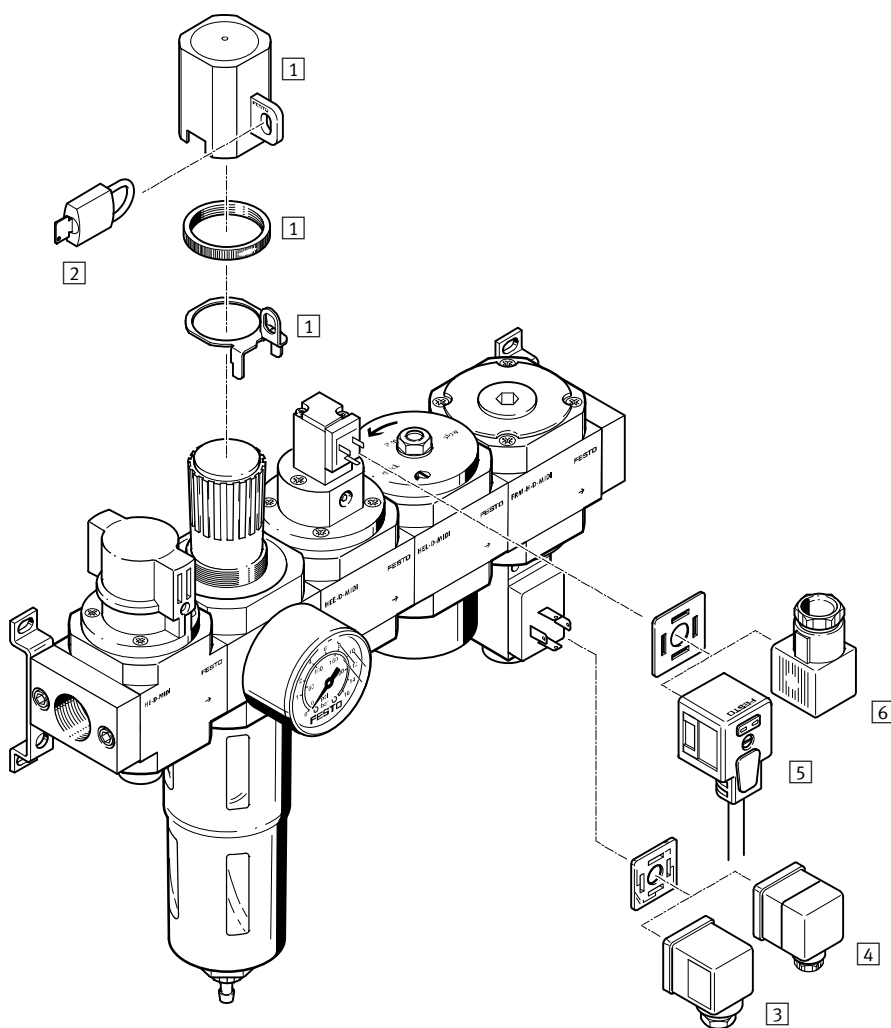
LFR Rotary knob with detent	 KA	 KB	 KC	 KD	 KE	 KF	 KG
Individual devices							
On-off valve manually actuated	–	■	■	–	–	■	■
Filter regulator with pressure gauge	■	■	■	■	■	■	■
Branching module	■	■	–	–	–	–	–
On-off valve solenoid actuated, 24 V DC	–	–	–	■	–	–	■
Soft-start valve pneumatically actuated	–	–	–	■	–	–	■
Branching module with pressure switch	–	–	–	–	■	■	■
Mounting bracket	■	■	■	■	■	■	■
→ Page/Internet	9	13	17	21	25	29	33

LFRS Rotary knob with integrated lock	 KA	 KB	 KC	 KD	 KE	 KF	 KG
Individual devices							
On-off valve manually actuated	–	■	■	–	–	■	■
Filter regulator with pressure gauge	■	■	■	■	■	■	■
Branching module	■	■	–	–	–	–	–
On-off valve with solenoid actuated, 24 V DC	–	–	–	■	–	–	■
Soft-start valve pneumatically actuated	–	–	–	■	–	–	■
Branching module with pressure switch	–	–	–	–	■	■	■
Mounting bracket	■	■	■	■	■	■	■
→ Page/Internet	9	13	17	21	25	29	33

Service units LFR-K/LFRS-K, D series, metal design

Peripherals overview

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 Note

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

Range of accessories

➔ Peripherals pages of the individual devices

Mounting attachments and accessories		➔ Page/ Internet
1	Regulator lock LRVS	lrvs-d
2	Padlock LRVS	lrvs-d
3	Plug socket MSSD-C	49
4	Angled plug socket PEV-...-WD-LED	49
5	Plug socket with cable KMEB-1	49
6	Plug socket MSSD-EB	49
-	Filter cartridge LFP	48

Service units LFR-K/LFRS-K, D series, metal design

FESTO

Type codes

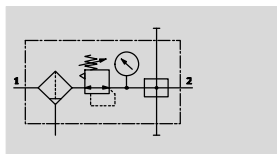
		LFR	–	1/2	–	D	–	DI	–	MAXI	–	KA	–	A
Basic function														
LFR	Service unit													
LFRS	Service unit, lockable													
Pneumatic connection														
1/8	Thread G1/8													
1/4	Thread G1/4													
3/8	Thread G3/8													
1/2	Thread G1/2													
3/4	Thread G3/4													
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 manually actuated, filter regulator, branching module													
KC	On-off valve manually actuated, filter regulator													
KD	Filter regulator, on-off valve solenoid actuated, 24 V DC, soft-start valve pneumatically actuated													
KE	Filter regulator, branching module with pressure switch													
KF	On-off valve manually actuated, filter regulator, branching module with pressure switch													
KG	On-off valve manually actuated, filter regulator, on-off valve solenoid actuated, 24 V DC, soft-start valve pneumatically actuated, branching module with pressure switch													
Condensate drain														
	Turned manually													
A	Fully automatic													

Service units LFR-KA/LFRS-KA, D series, metal design

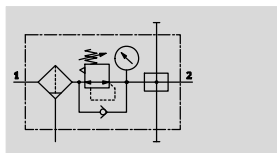
FESTO

Technical data LFR-KA/LFRS-KA

LFR/LFRS-...-MINI/MIDI-KA
With condensate drain
manual rotary

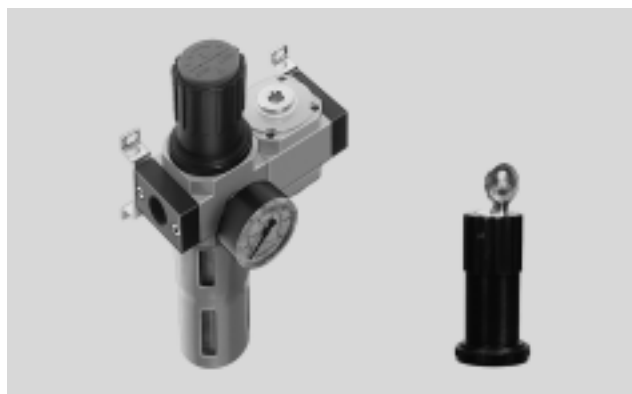


LFR/LFRS-...-MAXI-KA
With condensate drain
manual rotary



- Filter regulator LFR/LFRS
- Branching module FRM
- Mounting accessories

- Flow rate
720 ... 9,400 l/min
- Temperature range
-10 ... +60 °C
- Operating pressure
1 ... 16 bar (0.1 ... 1.6 MPa)
- www.festo.com



- For unlubricated compressed air supply
- Three branch connections are available
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories						
	In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration $[\mu\text{m}]$	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary						
	Fully automatic						
Actuator lock	Rotary knob with detent						
	Rotary knob with integrated lock						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. hysteresis [bar]	0.15 (0.015 MPa)	0.15 (0.015 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.3 (0.03 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR-...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	720	1,140	1,850	2,620	3,050	9,200 (5,200) ²⁾	9,400 (5,800) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR-...-D-DI.

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

Service units LFR-KA/LFRS-KA, D series, metal design

FESTO

Technical data LFR-KA/LFRS-KA

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	800	1,800	2,400 (2,600) ¹⁾
LFRS	900	2,040	2,500

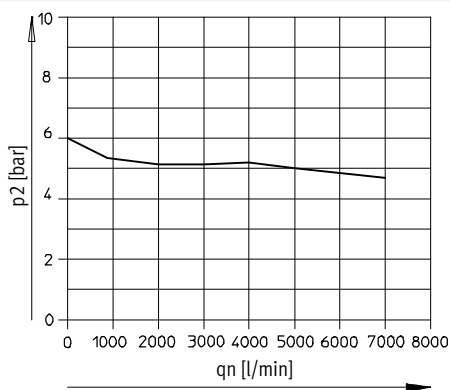
1) For the LFR-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Service units LFR-KA/LFRS-KA, D series, metal design

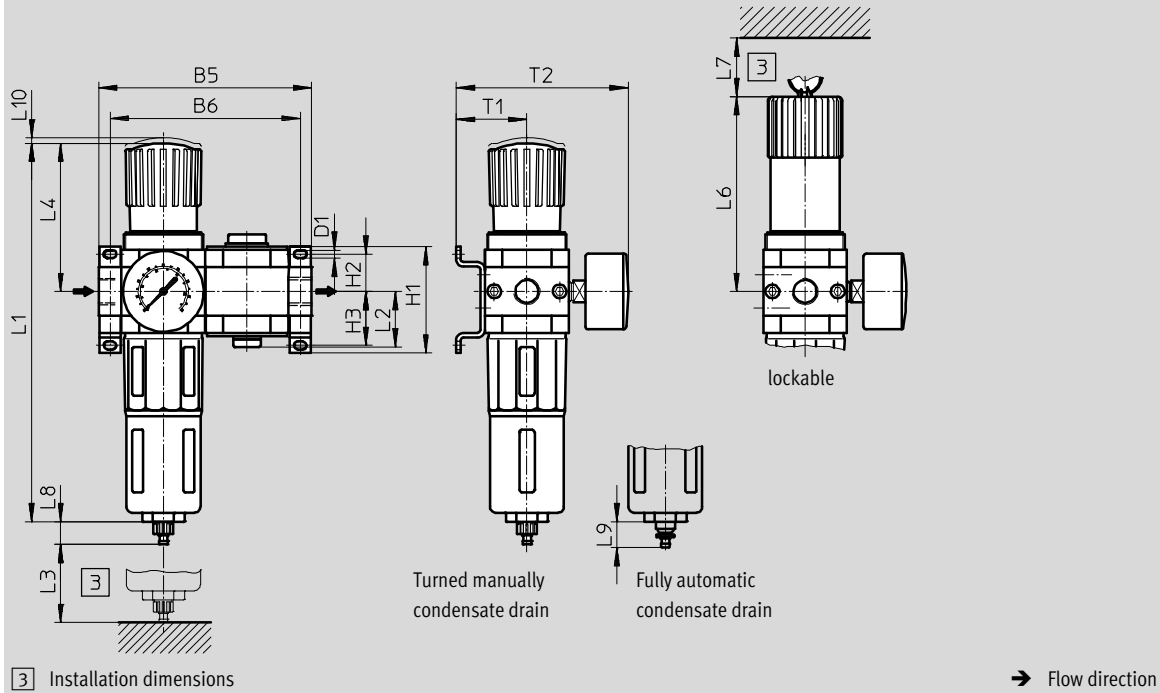
Technical data LFR-KA/LFRS-KA

FESTO

Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KA



Type	B5	B6	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L8	L9	L10	T1	T2
Mini																	
LFR-...-D-MINI-KA (A)	104	92	4.3	43	17.5	17.5	193	28	60	68	98	60	15	19	3	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	130	60	15	19	3	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	111	60	15	19	3	53	126
LFRS-....-D-MAXI-KA (A)																	
LFR-....-D-DI-MAXI-KA (A)							275			105	135						

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

Service units LFR-KA/LFRS-KA, D series, metal design

FESTO

Technical data LFR-KA/LFRS-KA

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185707	LFR-1/8-D-MINI-KA	185708	LFR-1/8-D-MINI-KA-A
	G $\frac{1}{4}$	185709	LFR-1/4-D-MINI-KA	185710	LFR-1/4-D-MINI-KA-A
Midi	G $\frac{1}{4}$	185711	LFR-1/4-D-MIDI-KA	185712	LFR-1/4-D-MIDI-KA-A
	G $\frac{3}{8}$	185713	LFR-3/8-D-MIDI-KA	185714	LFR-3/8-D-MIDI-KA-A
	G $\frac{1}{2}$	185715	LFR-1/2-D-MIDI-KA	185716	LFR-1/2-D-MIDI-KA-A
Maxi	G $\frac{1}{2}$	186039	LFR-1/2-D-MAXI-KA	186040	LFR-1/2-D-MAXI-KA-A
	G $\frac{3}{4}$	185717	LFR-3/4-D-MAXI-KA	185718	LFR-3/4-D-MAXI-KA-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192440	LFR-1/2-D-DI-MAXI-KA	192454	LFR-1/2-D-DI-MAXI-KA-A
	G $\frac{3}{4}$	192447	LFR-3/4-D-DI-MAXI-KA	192461	LFR-3/4-D-DI-MAXI-KA-A

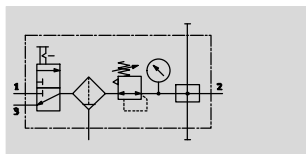
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195008	LFRS-1/8-D-MINI-KA	195009	LFRS-1/8-D-MINI-KA-A
	G $\frac{1}{4}$	195022	LFRS-1/4-D-MINI-KA	195023	LFRS-1/4-D-MINI-KA-A
Midi	G $\frac{1}{4}$	195036	LFRS-1/4-D-MIDI-KA	195037	LFRS-1/4-D-MIDI-KA-A
	G $\frac{3}{8}$	195050	LFRS-3/8-D-MIDI-KA	195051	LFRS-3/8-D-MIDI-KA-A
	G $\frac{1}{2}$	195064	LFRS-1/2-D-MIDI-KA	195065	LFRS-1/2-D-MIDI-KA-A
Maxi	G $\frac{1}{2}$	195078	LFRS-1/2-D-MAXI-KA	195079	LFRS-1/2-D-MAXI-KA-A
	G $\frac{3}{4}$	195092	LFRS-3/4-D-MAXI-KA	195093	LFRS-3/4-D-MAXI-KA-A

Service units LFR-KB/LFRS-KB, D series, metal design

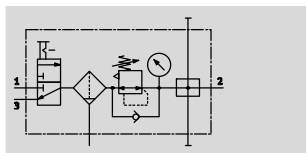
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Technical data LFR-KB/LFRS-KB

LFR/LFRS-...-MINI/MIDI-KB
With condensate drain
manual rotary



LFR/LFRS-...-MAXI-KB
With condensate drain
manual rotary



- On-off valve HE manually actuated
- Filter regulator LFR/LFRS
- Branching module FRM
- Mounting accessories

- - Flow rate
700 ... 8,400 l/min
- - Temperature range
-10 ... +60 °C
- - Operating pressure
1 ... 16 bar (0.1 ... 1.6 MPa)
- - www.festo.com



- For unlubricated compressed air supply
- Operating 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
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration [μm]	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾ Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary Fully automatic						
Actuator lock	Rotary knob with detent Rotary knob with integrated lock						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. hysteresis [bar]	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.25 (0.025 MPa)	0.35 (0.035 MPa)	0.35 (0.035 MPa)	0.1 (0.01 MPa)	0.2 (0.02 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR/LFRS-...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	700	1,050	1,720	2,420	2,920	8,000 (5,400) ²⁾	8,400 (7,000) ²⁾

1) Measured at p₁ = 10 bar (1 MPa), p₂ = 6 bar (0.6 MPa) and Δp = 1 bar (0.1 MPa).

2) For the LFR/LFRS-...-D-DI.

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

Service units LFR-KB/LFRS-KB, D series, metal design

FESTO

Technical data LFR-KB/LFRS-KB

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	1,000	2,200	3,300 (3,500) ¹⁾
LFRS	1,100	2,440	3,400 (3,740) ¹⁾

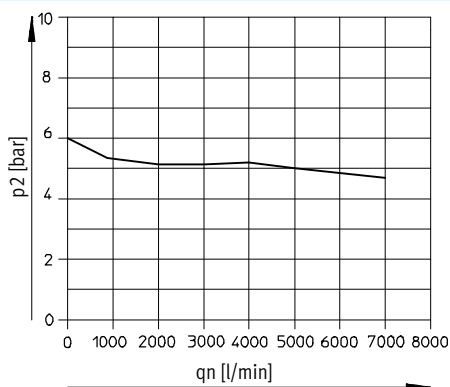
1) For the LFR/LFRS-...-D-DI.

 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 (1 MPa)

Service units LFR-KB/LFRS-KB, D series, metal design

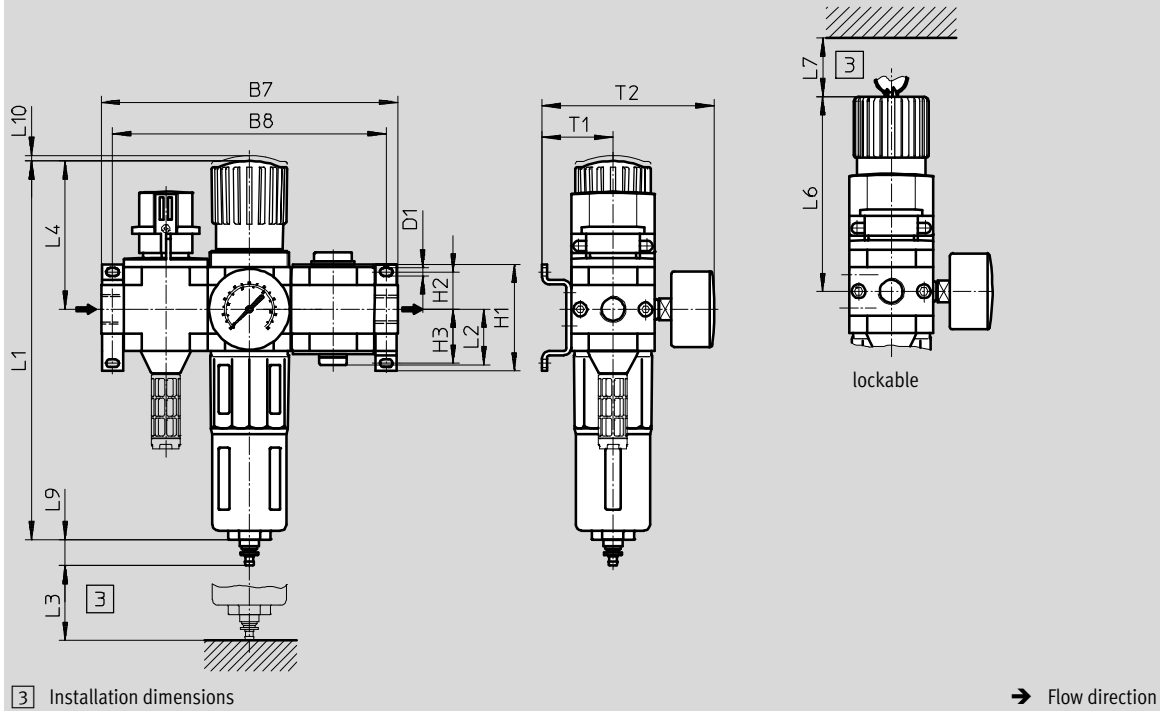
Technical data LFR-KB/LFRS-KB

FESTO

Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KB



Type	B7	B8	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	T1	T2
Mini																
LFR-...-D-MINI-KB (A)	144	132	4.3	43	17.5	17.5	193	28	60	68	98	60	19	3	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	130	60	19	3	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	111	60	19	3	53	126
LFRS-....-D-MAXI-KB (A)							275			105	135					
LFR/LFRS-....-D-DI-MAXI-KB (A)																

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

Service units LFR-KB/LFRS-KB, D series, metal design

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Technical data LFR-KB/LFRS-KB

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185719	LFR-1/8-D-MINI-KB	185720	LFR-1/8-D-MINI-KB-A
	G $\frac{1}{4}$	185721	LFR-1/4-D-MINI-KB	185722	LFR-1/4-D-MINI-KB-A
Midi	G $\frac{1}{4}$	185723	LFR-1/4-D-MIDI-KB	185724	LFR-1/4-D-MIDI-KB-A
	G $\frac{3}{8}$	185725	LFR-3/8-D-MIDI-KB	185726	LFR-3/8-D-MIDI-KB-A
	G $\frac{1}{2}$	185727	LFR-1/2-D-MIDI-KB	185728	LFR-1/2-D-MIDI-KB-A
Maxi	G $\frac{1}{2}$	186041	LFR-1/2-D-MAXI-KB	186042	LFR-1/2-D-MAXI-KB-A
	G $\frac{3}{4}$	185729	LFR-3/4-D-MAXI-KB	185730	LFR-3/4-D-MAXI-KB-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192441	LFR-1/2-D-DI-MAXI-KB	192455	LFR-1/2-D-DI-MAXI-KB-A
	G $\frac{3}{4}$	192448	LFR-3/4-D-DI-MAXI-KB	192462	LFR-3/4-D-DI-MAXI-KB-A

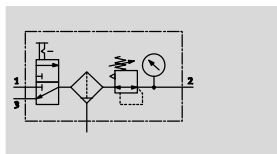
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195010	LFRS-1/8-D-MINI-KB	195011	LFRS-1/8-D-MINI-KB-A
	G $\frac{1}{4}$	195024	LFRS-1/4-D-MINI-KB	195025	LFRS-1/4-D-MINI-KB-A
Midi	G $\frac{1}{4}$	195038	LFRS-1/4-D-MIDI-KB	195039	LFRS-1/4-D-MIDI-KB-A
	G $\frac{3}{8}$	195052	LFRS-3/8-D-MIDI-KB	195053	LFRS-3/8-D-MIDI-KB-A
	G $\frac{1}{2}$	195066	LFRS-1/2-D-MIDI-KB	195067	LFRS-1/2-D-MIDI-KB-A
Maxi	G $\frac{1}{2}$	195080	LFRS-1/2-D-MAXI-KB	195081	LFRS-1/2-D-MAXI-KB-A
	G $\frac{3}{4}$	195094	LFRS-3/4-D-MAXI-KB	195095	LFRS-3/4-D-MAXI-KB-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	195178	LFRS-1/2-D-DI-MAXI-KB	–	
	G $\frac{3}{4}$	195192	LFRS-3/4-D-DI-MAXI-KB	–	

Service units LFR-KC/LFRS-KC, D series, metal design

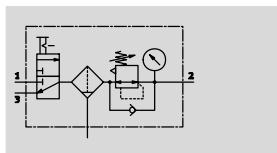
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Technical data LFR-KC/LFRS-KC

LFR/LFRS-...-MINI/MIDI-KC
With condensate drain
manual rotary



LFR/LFRS-...-MAXI-KC
With condensate drain
manual rotary



- On-off valve HE manually actuated
- Filter regulator LFR/LFRS
- Mounting accessories

- Flow rate
750 ... 8,400 l/min
- Temperature range
-10 ... +60 °C
- Operating pressure
1 ... 16 bar (0.1 ... 1.6 MPa)
- www.festo.com



- For unlubricated compressed air
- Operating 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
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories						
	In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration [μm]	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary						
	Fully automatic						
Actuator lock	Rotary knob with detent						
	Rotary knob with integrated lock						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. hysteresis [bar]	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR/LFRS-...-D-DL.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	750	1,150	1,900	2,700	3,150	8,100 (4,800) ²⁾	8,400 (5,400) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR/LFRS-...-D-DL.

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

Service units LFR-KC/LFRS-KC, D series, metal design

FESTO

Technical data LFR-KC/LFRS-KC

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	700	1,600	2,300 (2,600) ¹⁾
LFRS	1,000	1,840	2,400 (2,840) ¹⁾

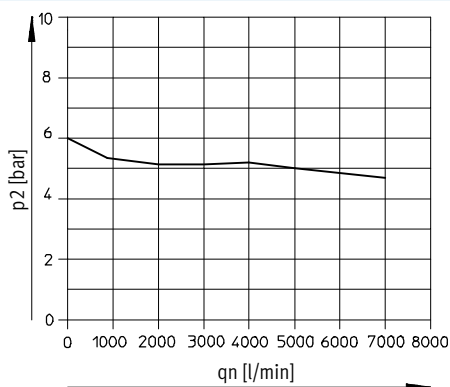
1) For the LFR/LFRS-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Service units LFR-KC/LFRS-KC, D series, metal design

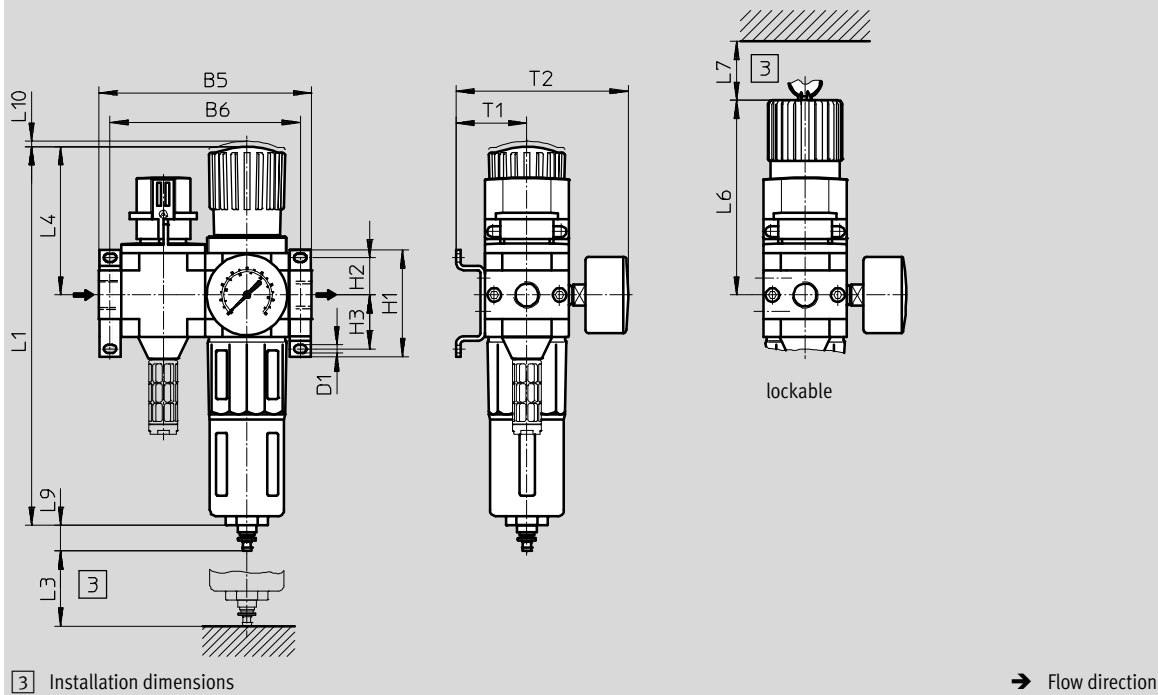
Technical data LFR-KC/LFRS-KC

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Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KC



Type	B5	B6	D1	H1	H2	H3	L1	L3	L4	L6	L7	L9	L10	T1	T2	
Mini																
LFR-...-D-MINI-KC (A)	104	92	4.3	43	17.5	17.5	193	60	68	98	60	19	3	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	130	60	19	3	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	111	60	19	3	53	126	
LFRS-...-D-MAXI-KC (A)									105	135						
LFR/LFRS-...-D-DI-MAXI-KC (A)																

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

Service units LFR-KC/LFRS-KC, D series, metal design

FESTO

Technical data LFR-KC/LFRS-KC

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185731	LFR-1/8-D-MINI-KC	185732	LFR-1/8-D-MINI-KC-A
	G $\frac{1}{4}$	185733	LFR-1/4-D-MINI-KC	185734	LFR-1/4-D-MINI-KC-A
Midi	G $\frac{1}{4}$	185735	LFR-1/4-D-MIDI-KC	185736	LFR-1/4-D-MIDI-KC-A
	G $\frac{3}{8}$	185737	LFR-3/8-D-MIDI-KC	185738	LFR-3/8-D-MIDI-KC-A
	G $\frac{1}{2}$	185739	LFR-1/2-D-MIDI-KC	185740	LFR-1/2-D-MIDI-KC-A
Maxi	G $\frac{1}{2}$	186043	LFR-1/2-D-MAXI-KC	186044	LFR-1/2-D-MAXI-KC-A
	G $\frac{3}{4}$	185741	LFR-3/4-D-MAXI-KC	185742	LFR-3/4-D-MAXI-KC-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192442	LFR-1/2-D-DI-MAXI-KC	192456	LFR-1/2-D-DI-MAXI-KC-A
	G $\frac{3}{4}$	192449	LFR-3/4-D-DI-MAXI-KC	192463	LFR-3/4-D-DI-MAXI-KC-A

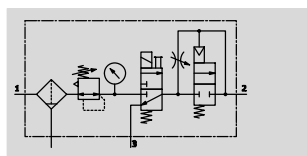
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195012	LFRS-1/8-D-MINI-KC	195013	LFRS-1/8-D-MINI-KC-A
	G $\frac{1}{4}$	195026	LFRS-1/4-D-MINI-KC	195027	LFRS-1/4-D-MINI-KC-A
Midi	G $\frac{1}{4}$	195040	LFRS-1/4-D-MIDI-KC	195041	LFRS-1/4-D-MIDI-KC-A
	G $\frac{3}{8}$	195054	LFRS-3/8-D-MIDI-KC	195055	LFRS-3/8-D-MIDI-KC-A
	G $\frac{1}{2}$	195068	LFRS-1/2-D-MIDI-KC	195069	LFRS-1/2-D-MIDI-KC-A
Maxi	G $\frac{1}{2}$	195082	LFRS-1/2-D-MAXI-KC	195083	LFRS-1/2-D-MAXI-KC-A
	G $\frac{3}{4}$	195096	LFRS-3/4-D-MAXI-KC	195097	LFRS-3/4-D-MAXI-KC-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	195180	LFRS-1/2-D-DI-MAXI-KC	–	
	G $\frac{3}{4}$	–		195195	LFRS-3/4-D-DI-MAXI-KC-A

Service units LFR-KD/LFRS-KD, D series, metal design

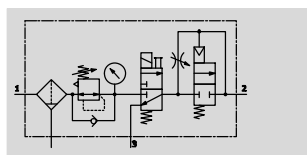
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Technical data LFR-KD/LFRS-KD

LFR/LFRS-...-MINI/MIDI-KD
With condensate drain
manual rotary

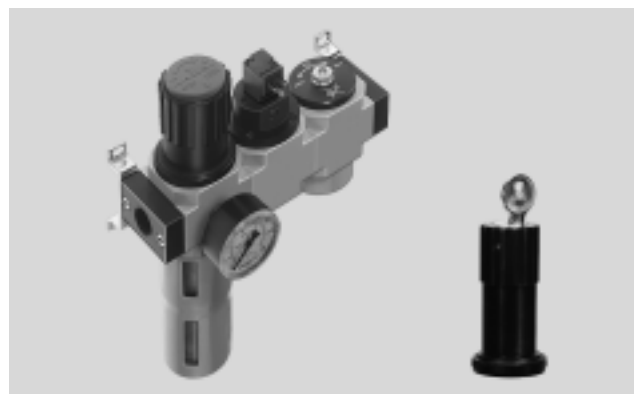


LFR/LFRS-...-MAXI-KD
With condensate drain
manual rotary



- Filter regulator LFR/LFRS
- On-off valve HEE solenoid actuated, 24 V DC
- Soft-start valve HEL pneumatically actuated
- Mounting accessories

- - Flow rate
595 ... 5,000 l/min
- - Temperature range
-10 ... +60 °C
- - Operating pressure
3 ... 16 bar (0.3 ... 1.6 MPa)
- - www.festo.com



- For unlubricated compressed air
- When operating pressure is closed, quick venting ensures rapid pressure reduction
- Gradual pressure build-up prevents sudden, unpredictable movements
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories						
	In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration $[\mu\text{m}]$	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary						
	Fully automatic						
Actuator lock	Rotary knob with detent						
	Rotary knob with integrated lock						
Pressure regulation range [bar]	2.5 ... 12 (0.25 ... 1.2 MPa)						
Max. hysteresis [bar]	0.15 (0.015 MPa)	0.15 (0.015 MPa)	0.25 (0.025 MPa)	0.25 (0.025 MPa)	0.25 (0.025 MPa)	0.3 (0.03 MPa)	0.2 (0.02 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR-...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	595	730	1,440	1,890	2,000	4,300 (3,000) ²⁾	5,000 (2,800) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR-...-D-DI.

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

Service units LFR-KD/LFRS-KD, D series, metal design

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Technical data LFR-KD/LFRS-KD

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	3 ... 16 (0.3 ... 1.6 MPa)	3 ... 12 (0.3 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	900	2,100	3,100 (3,300) ¹⁾
LFRS	1,000	2,340	3,200

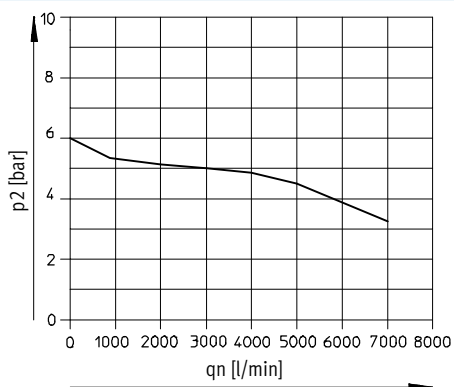
1) For the LFR-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Technical data LFR-KD/LFRS-KD

Download CAD data → www.festo.com

Technical drawing of the lockable 1/2" BSP 100 bar pressure washer lance, showing three views: front, side, and top. The drawing includes various dimensions and labels for installation and identification.

Dimensions:

- Front View:** L1 (total height), L2 (height of the trigger gun), L3 (height of the trigger gun handle), L4 (height of the trigger gun trigger), L9 (height of the trigger gun trigger), L10 (height of the trigger gun trigger).
- Side View:** T1 (width of the trigger gun), T2 (width of the trigger gun), T4 (width of the trigger gun), T5 (width of the trigger gun).
- Top View:** B7 (width of the trigger gun), B8 (width of the trigger gun), D1 (width of the trigger gun), H1 (height of the trigger gun), H2 (height of the trigger gun), H3 (height of the trigger gun), L7 (height of the trigger gun).

Labels:

- 3** (in a box): Installation dimensions
- lockable**: Indicates the trigger gun is lockable.
- Flow direction**: Indicated by an arrow pointing right.

Type	B7	B8	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	T1	T2	T4	T5
Mini																		
LFR-...-D-MINI-KD (A)	144	132	4.3	43	17.5	17.5	193	36	60	68	98	60	19	3	39	95	78	15
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	130	60	19	3	47	114	86	15
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	111	60	19	3	53	126	92	15
LFRS-...-D-MAXI-KD (A)																		
LFR-...-D-DI-MAXI-KD (A)							275			105	135							

2018/05 – Subject to change

Service units LFR-KD/LFRS-KD, D series, metal design

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Technical data LFR-KD/LFRS-KD

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185743	LFR-1/8-D-MINI-KD	185744	LFR-1/8-D-MINI-KD-A
	G $\frac{1}{4}$	185745	LFR-1/4-D-MINI-KD	185746	LFR-1/4-D-MINI-KD-A
Midi	G $\frac{1}{4}$	185747	LFR-1/4-D-MIDI-KD	185748	LFR-1/4-D-MIDI-KD-A
	G $\frac{3}{8}$	185749	LFR-3/8-D-MIDI-KD	185750	LFR-3/8-D-MIDI-KD-A
	G $\frac{1}{2}$	185751	LFR-1/2-D-MIDI-KD	185752	LFR-1/2-D-MIDI-KD-A
Maxi	G $\frac{1}{2}$	186045	LFR-1/2-D-MAXI-KD	186046	LFR-1/2-D-MAXI-KD-A
	G $\frac{3}{4}$	185753	LFR-3/4-D-MAXI-KD	185754	LFR-3/4-D-MAXI-KD-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192443	LFR-1/2-D-DI-MAXI-KD	192457	LFR-1/2-D-DI-MAXI-KD-A
	G $\frac{3}{4}$	192450	LFR-3/4-D-DI-MAXI-KD	192464	LFR-3/4-D-DI-MAXI-KD-A

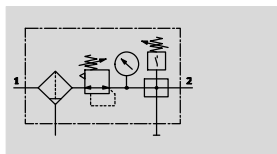
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195014	LFRS-1/8-D-MINI-KD	195015	LFRS-1/8-D-MINI-KD-A
	G $\frac{1}{4}$	195028	LFRS-1/4-D-MINI-KD	195029	LFRS-1/4-D-MINI-KD-A
Midi	G $\frac{1}{4}$	195042	LFRS-1/4-D-MIDI-KD	195043	LFRS-1/4-D-MIDI-KD-A
	G $\frac{3}{8}$	195056	LFRS-3/8-D-MIDI-KD	195057	LFRS-3/8-D-MIDI-KD-A
	G $\frac{1}{2}$	195070	LFRS-1/2-D-MIDI-KD	195071	LFRS-1/2-D-MIDI-KD-A
Maxi	G $\frac{1}{2}$	195084	LFRS-1/2-D-MAXI-KD	195085	LFRS-1/2-D-MAXI-KD-A
	G $\frac{3}{4}$	195098	LFRS-3/4-D-MAXI-KD	195099	LFRS-3/4-D-MAXI-KD-A

Service units LFR-KE/LFRS-KE, D series, metal design

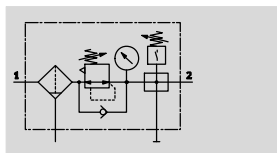
FESTO

Technical data LFR-KE/LFRS-KE

LFR/LFRS-...-MINI/MIDI-KE
With condensate drain
manual rotary

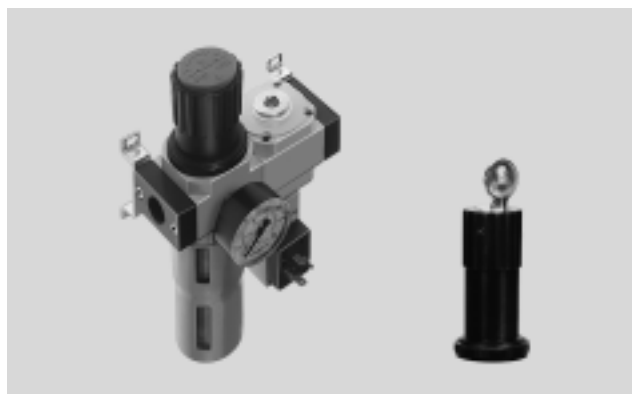


LFR/LFRS-...-MAXI-KE
With condensate drain
manual rotary



- Filter regulator LFR/LFRS
- Branching module FRM with pressure switch
- Mounting accessories

- - Flow rate
720 ... 9,400 l/min
- - Temperature range
-10 ... +60 °C
- - Operating pressure
1 ... 16 bar (0.1 ... 1.6 MPa)
- - www.festo.com



- For unlubricated compressed air
- Two branch connections are available
- Electrical pressure monitoring with adjustable switching pressure
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾ Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary Fully automatic						
Actuator lock	Rotary knob with detent Rotary knob with integrated lock						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. hysteresis [bar]	0.15 (0.015 MPa)	0.15 (0.015 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.3 (0.03 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR-...-D-DL.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	720	1,140	1,850	2,620	3,050	9,200 (5,000) ²⁾	9,400 (6,000) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR-...-D-DL.

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

Service units LFR-KE/LFRS-KE, D series, metal design

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Technical data LFR-KE/LFRS-KE

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	1,000	2,000	2,400 (2,600) ¹⁾
LFRS	1,100	2,240	2,500

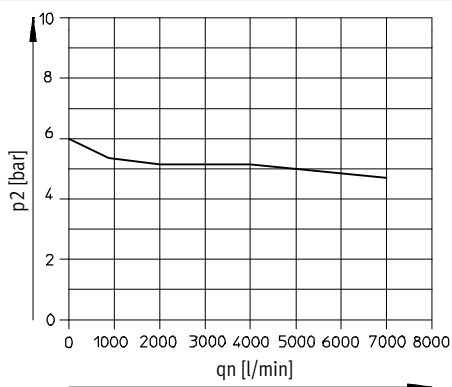
1) For the LFR-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Service units LFR-KE/LFRS-KE, D series, metal design

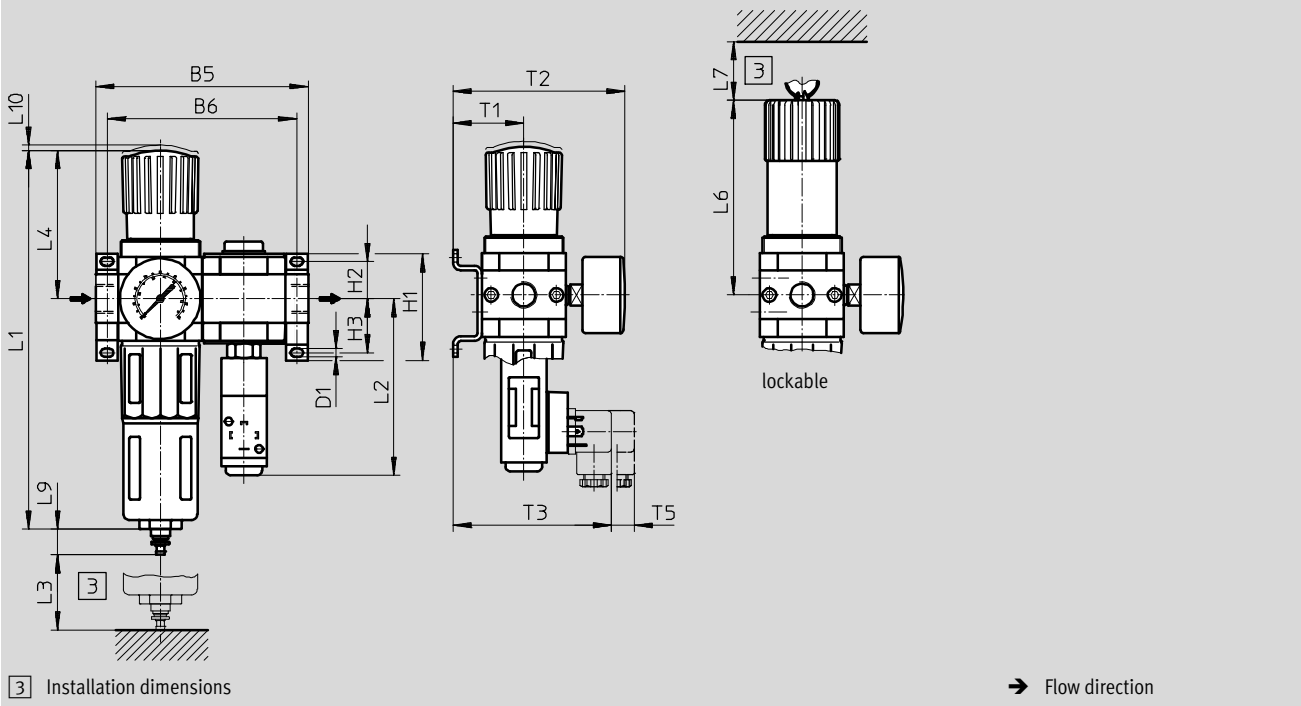
Technical data LFR-KE/LFRS-KE

FESTO

Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KE



Type	B5	B6	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	T1	T2	T3	T5
Mini																		
LFR-...-D-MINI-KE (A)	104	92	4.3	43	17.5	17.5	193	108	60	68	98	60	19	3	39	95	97	15
LFRS-...-D-MINI-KE (A)																		
Midi																		
LFR-...-D-MIDI-KE (A)	140	125	5.3	70	24.5	35.5	250	117	80	99	130	60	19	3	47	114	109	15
LFRS-...-D-MIDI-KE (A)																		
Maxi																		
LFR-...-D-MAXI-KE (A)	162	146	5.3	70	24.5	35.5	252	122	90	82	111	60	19	3	53	126	111	15
LFRS-...-D-MAXI-KE (A)																		
LFR-...-D-DI-MAXI-KE (A)							275			105	135							

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

Service units LFR-KE/LFRS-KE, D series, metal design

FESTO

Technical data LFR-KE/LFRS-KE

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185755	LFR-1/8-D-MINI-KE	185756	LFR-1/8-D-MINI-KE-A
	G $\frac{1}{4}$	185757	LFR-1/4-D-MINI-KE	185758	LFR-1/4-D-MINI-KE-A
Midi	G $\frac{1}{4}$	185759	LFR-1/4-D-MIDI-KE	185760	LFR-1/4-D-MIDI-KE-A
	G $\frac{3}{8}$	185761	LFR-3/8-D-MIDI-KE	185762	LFR-3/8-D-MIDI-KE-A
	G $\frac{1}{2}$	185763	LFR-1/2-D-MIDI-KE	185764	LFR-1/2-D-MIDI-KE-A
Maxi	G $\frac{1}{2}$	186047	LFR-1/2-D-MAXI-KE	186048	LFR-1/2-D-MAXI-KE-A
	G $\frac{3}{4}$	185765	LFR-3/4-D-MAXI-KE	185766	LFR-3/4-D-MAXI-KE-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192444	LFR-1/2-D-DI-MAXI-KE	192458	LFR-1/2-D-DI-MAXI-KE-A
	G $\frac{3}{4}$	192451	LFR-3/4-D-DI-MAXI-KE	192465	LFR-3/4-D-DI-MAXI-KE-A

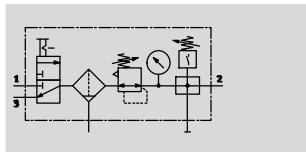
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195016	LFRS-1/8-D-MINI-KE	195017	LFRS-1/8-D-MINI-KE-A
	G $\frac{1}{4}$	195030	LFRS-1/4-D-MINI-KE	195031	LFRS-1/4-D-MINI-KE-A
Midi	G $\frac{1}{4}$	195044	LFRS-1/4-D-MIDI-KE	195045	LFRS-1/4-D-MIDI-KE-A
	G $\frac{3}{8}$	195058	LFRS-3/8-D-MIDI-KE	195059	LFRS-3/8-D-MIDI-KE-A
	G $\frac{1}{2}$	195072	LFRS-1/2-D-MIDI-KE	195073	LFRS-1/2-D-MIDI-KE-A
Maxi	G $\frac{1}{2}$	195086	LFRS-1/2-D-MAXI-KE	195087	LFRS-1/2-D-MAXI-KE-A
	G $\frac{3}{4}$	195100	LFRS-3/4-D-MAXI-KE	195101	LFRS-3/4-D-MAXI-KE-A

Service units LFR-KF/LFRS-KF, D series, metal design

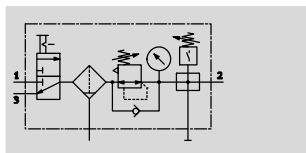
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Technical data LFR-KF/LFRS-KF

LFR/LFRS-...-MINI/MIDI-KF
With condensate drain
manual rotary

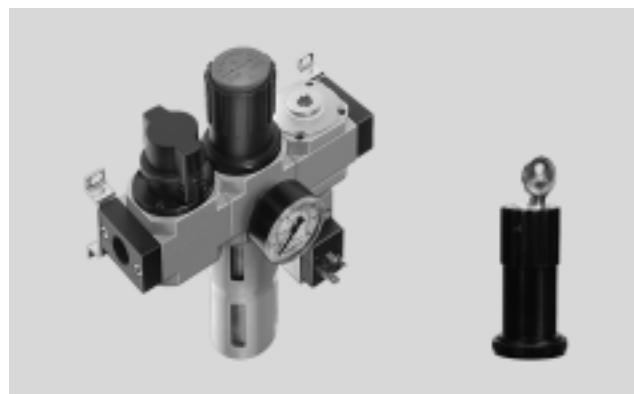


LFR/LFRS-...-MAXI-KF
With condensate drain
manual rotary



- On-off valve HE manually actuated
- Filter regulator LFR/LFRS
- Branching module FRM with pressure switch
- Mounting accessories

- Flow rate
700 ... 8,400 l/min
- Temperature range
-10 ... +60 °C
- Operating pressure
1 ... 16 bar (0.1 ... 1.6 MPa)
- www.festo.com



- For unlubricated compressed air
- Operating 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
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories						
	In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration [μm]	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary						
	Fully automatic						
Actuator lock	Rotary knob with detent						
	Rotary knob with integrated lock						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. hysteresis [bar]	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.25 (0.025 MPa)	0.3 (0.03 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR/LFRS-...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	700	1,050	1,720	2,420	2,920	8,000 (5,000) ²⁾	8,400 (6,000) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR/LFRS-...-D-DI.

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

Service units LFR-KF/LFRS-KF, D series, metal design

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Technical data LFR-KF/LFRS-KF

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Components subject to moderate corrosion stress. 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.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	1,200	2,400	3,300 (3,500) ¹⁾
LFRS	1,300	2,640	3,400 (3,740) ¹⁾

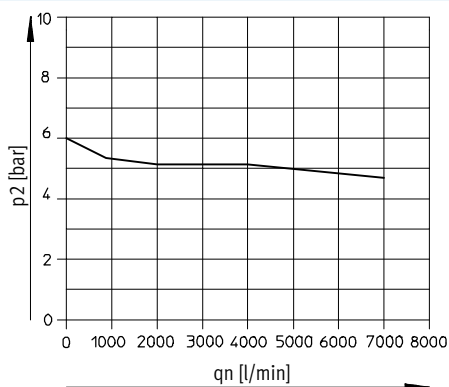
1) For the LFR/LFRS-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Service units LFR-KF/LFRS-KF, D series, metal design

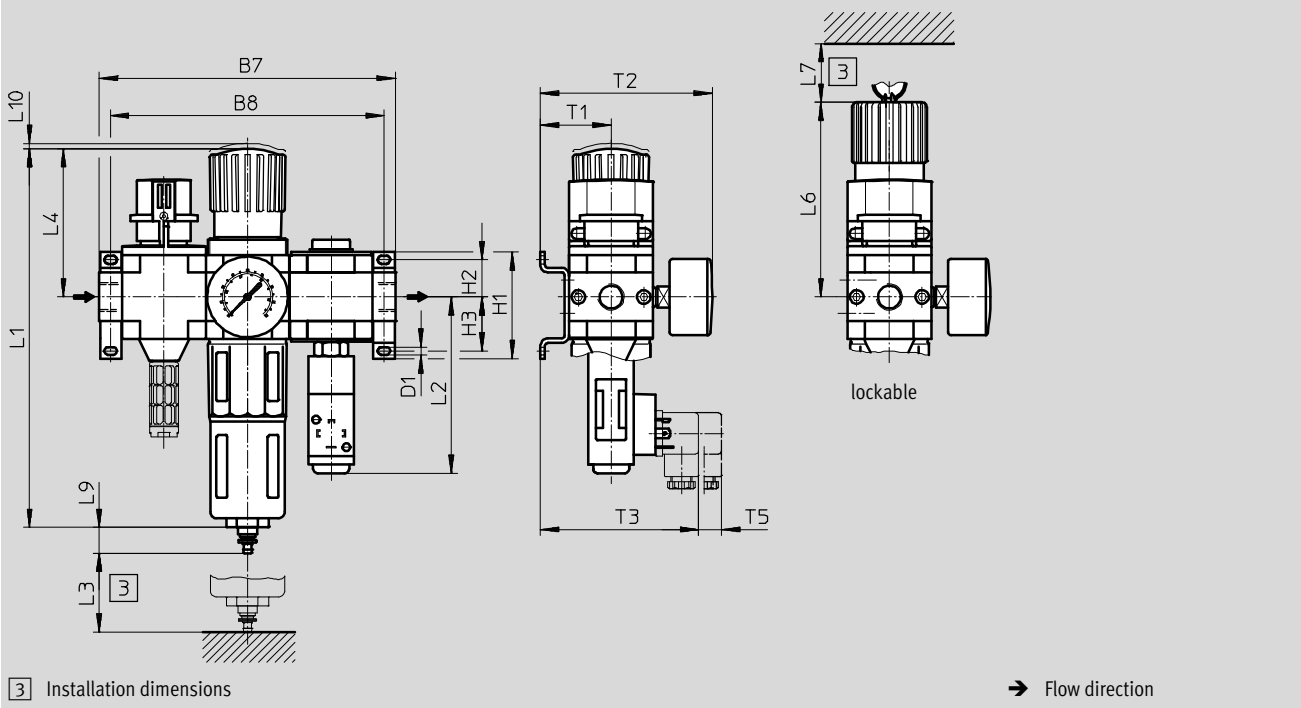
Technical data LFR-KF/LFRS-KF

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Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KF



Type	B7	B8	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	T1	T2	T3	T5
Mini																		
LFR-...-D-MINI-KF (A)	144	132	4.3	43	17.5	17.5	193	108	60	68	98	60	19	3	39	95	97	15
LFRS-...-D-MINI-KF (A)																		
Midi																		
LFR-...-D-MIDI-KF (A)	195	180	5.3	70	24.5	35.5	250	117	80	99	130	60	19	3	47	114	105	15
LFRS-...-D-MIDI-KF (A)																		
Maxi																		
LFR-...-D-MAXI-KF (A)	228	212	5.3	70	24.5	35.5	252	122	90	82	111	60	19	3	53	126	111	15
LFRS-...-D-MAXI-KF (A)																		
LFR/LFRS-...-D-DI-MAXI-KF (A)							275			105	135							

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

Service units LFR-KF/LFRS-KF, D series, metal design

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Technical data LFR-KF/LFRS-KF

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185767	LFR-1/8-D-MINI-KF	185768	LFR-1/8-D-MINI-KF-A
	G $\frac{1}{4}$	185769	LFR-1/4-D-MINI-KF	185770	LFR-1/4-D-MINI-KF-A
Midi	G $\frac{1}{4}$	185771	LFR-1/4-D-MIDI-KF	185772	LFR-1/4-D-MIDI-KF-A
	G $\frac{3}{8}$	185773	LFR-3/8-D-MIDI-KF	185774	LFR-3/8-D-MIDI-KF-A
	G $\frac{1}{2}$	185775	LFR-1/2-D-MIDI-KF	185776	LFR-1/2-D-MIDI-KF-A
Maxi	G $\frac{1}{2}$	186049	LFR-1/2-D-MAXI-KF	186050	LFR-1/2-D-MAXI-KF-A
	G $\frac{3}{4}$	185777	LFR-3/4-D-MAXI-KF	185778	LFR-3/4-D-MAXI-KF-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192445	LFR-1/2-D-DI-MAXI-KF	192459	LFR-1/2-D-DI-MAXI-KF-A
	G $\frac{3}{4}$	192452	LFR-3/4-D-DI-MAXI-KF	192466	LFR-3/4-D-DI-MAXI-KF-A

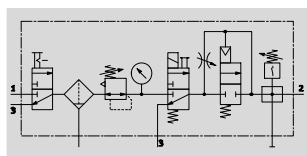
Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195018	LFRS-1/8-D-MINI-KF	195019	LFRS-1/8-D-MINI-KF-A
	G $\frac{1}{4}$	195032	LFRS-1/4-D-MINI-KF	195033	LFRS-1/4-D-MINI-KF-A
Midi	G $\frac{1}{4}$	195046	LFRS-1/4-D-MIDI-KF	195047	LFRS-1/4-D-MIDI-KF-A
	G $\frac{3}{8}$	195060	LFRS-3/8-D-MIDI-KF	195061	LFRS-3/8-D-MIDI-KF-A
	G $\frac{1}{2}$	195074	LFRS-1/2-D-MIDI-KF	195075	LFRS-1/2-D-MIDI-KF-A
Maxi	G $\frac{1}{2}$	195088	LFRS-1/2-D-MAXI-KF	195089	LFRS-1/2-D-MAXI-KF-A
	G $\frac{3}{4}$	195102	LFRS-3/4-D-MAXI-KF	195103	LFRS-3/4-D-MAXI-KF-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	195186	LFRS-1/2-D-DI-MAXI-KF	195187	LFRS-1/2-D-DI-MAXI-KF-A
	G $\frac{3}{4}$	195200	LFRS-3/4-D-DI-MAXI-KF	–	

Service units LFR-KG/LFRS-KG, D series, metal design

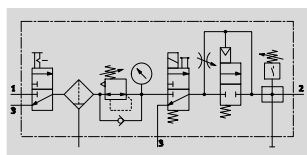
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Technical data LFR-KG/LFRS-KG

LFR/LFRS-...-MINI/MIDI-KG
With condensate drain
manual rotary

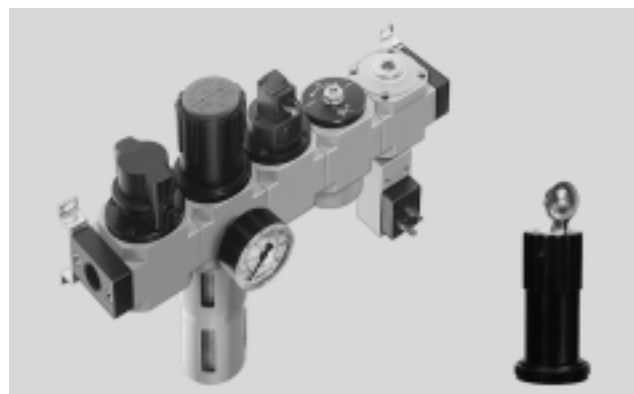


LFR/LFRS-...-MAXI-KG
With condensate drain
manual rotary



- On-off valve HE manually actuated
- Filter regulator LFR/LFRS
- On-off valve HEE solenoid actuated, 24 V DC
- Soft-start valve HEL pneumatically actuated
- Branching module FRM with pressure switch
- Mounting accessories

- Flow rate
575 ... 4,900 l/min
- Temperature range
-10 ... +60 °C
- Operating pressure
3 ... 16 bar (0.3 ... 1.6 MPa)
- www.festo.com



- 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
- Two branch connections are available
- Gradual pressure build-up prevents sudden, unpredictable movements
- Electrical pressure monitoring with adjustable switching pressure
- New filter cartridges → 48

General technical data							
Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
Type of mounting	Via accessories						
	In-line installation						
Assembly position	Vertical $\pm 5^\circ$						
Grade of filtration $[\mu\text{m}]$	40						
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:8:4] (Compressed air in accordance with ISO 8573-1:2010 [6:8:4]) ¹⁾						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual rotary						
	Fully automatic						
Actuator lock	Rotary knob with detent						
	Rotary knob with integrated lock						
Pressure regulation range [bar]	2.5 ... 12 (0.25 ... 1.2 MPa)						
Max. hysteresis [bar]	0.15 (0.015 MPa)	0.15 (0.015 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.25 (0.025 MPa)	0.25 (0.025 MPa)
Pressure indication	Via pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) For the LFR/LFRS-...-D-DI.

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

Standard nominal flow rate q_{N1} [l/min]							
Connection	Mini		Midi			Maxi	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G $\frac{3}{4}$
In main flow direction 1 → 2	575	715	1,370	1,680	1,740	4,200 (2,500) ²⁾	4,900 (3,000) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

2) For the LFR/LFRS-...-D-DI.

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

Service units LFR-KG/LFRS-KG, D series, metal design

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Technical data LFR-KG/LFRS-KG

Operating and environmental conditions		
Condensate drain	Manual rotary	Fully automatic
Operating pressure [bar]	3 ... 16 (0.3 ... 1.6 MPa)	3 ... 12 (0.3 ... 1.2 MPa)
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	
Maritime classification	See certificate (only LFR) ²⁾	

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

Weight [g]			
Size	Mini	Midi	Maxi
LFR	1,500	3,400	5,200 (5,400) ¹⁾
LFRS	1,600	3,640	5,300 (5,640) ¹⁾

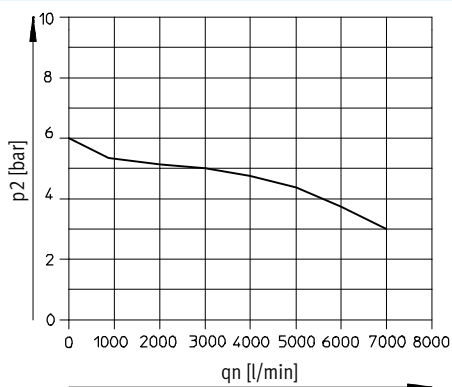
1) For the LFR/LFRS-...-D-DI.

 Note

Materials → Technical data of the individual devices

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

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



Primary pressure $p_1 = 10$ bar (1 MPa)

Service units LFR-KG/LFRS-KG, D series, metal design

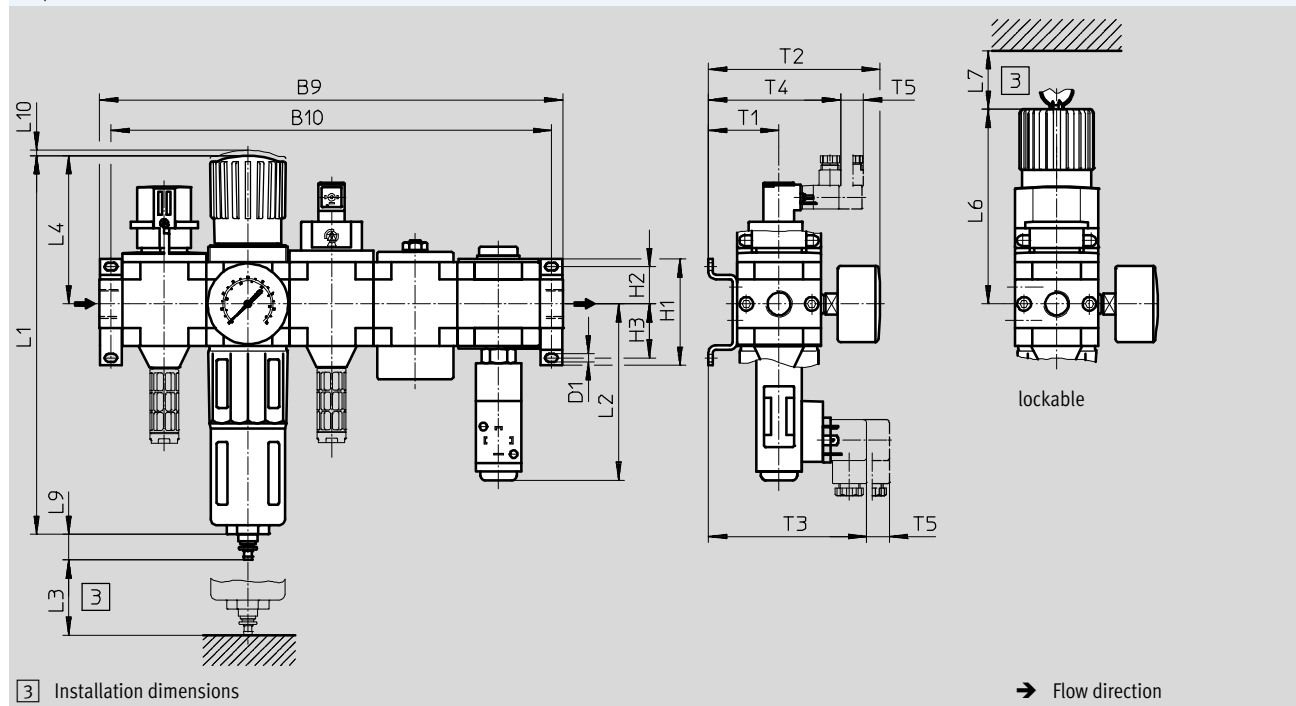
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Technical data LFR-KG/LFRS-KG

Dimensions

Download CAD data → www.festo.com

LFR/LFRS-...-KG



Type	B9	B10	D1	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	T1	T2	T3	T4	T5
Mini																			
LFR-...-D-MINI-KG (A)	224	212	4.3	43	17.5	17.5	193	108	60	68	98	60	19	3	39	95	97	78	15
LFRS-...-D-MINI-KG (A)																			
Midi																			
LFR-...-D-MIDI-KG (A)	305	290	5.3	70	24.5	35.5	250	117	80	99	130	60	19	3	47	114	105	86	15
LFRS-...-D-MIDI-KG (A)																			
Maxi																			
LFR-...-D-MAXI-KG (A)	360	344	5.3	70	24.5	35.5	252	122	90	82	111	60	19	3	53	126	111	92	15
LFRS-...-D-MAXI-KG (A)																			
LFR/LFRS-...-D-DI-MAXI-KG (A)							275			105	135								

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

Service units LFR-KG/LFRS-KG, D series, metal design

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Technical data LFR-KG/LFRS-KG

Ordering data					
Rotary knob with detent, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	185779	LFR-1/8-D-MINI-KG	185780	LFR-1/8-D-MINI-KG-A
	G $\frac{1}{4}$	185781	LFR-1/4-D-MINI-KG	185782	LFR-1/4-D-MINI-KG-A
Midi	G $\frac{1}{4}$	185783	LFR-1/4-D-MIDI-KG	185784	LFR-1/4-D-MIDI-KG-A
	G $\frac{3}{8}$	185785	LFR-3/8-D-MIDI-KG	185786	LFR-3/8-D-MIDI-KG-A
	G $\frac{1}{2}$	185787	LFR-1/2-D-MIDI-KG	185788	LFR-1/2-D-MIDI-KG-A
Maxi	G $\frac{1}{2}$	186051	LFR-1/2-D-MAXI-KG	186052	LFR-1/2-D-MAXI-KG-A
	G $\frac{3}{4}$	185789	LFR-3/4-D-MAXI-KG	185790	LFR-3/4-D-MAXI-KG-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	192446	LFR-1/2-D-DI-MAXI-KG	192460	LFR-1/2-D-DI-MAXI-KG-A
	G $\frac{3}{4}$	192453	LFR-3/4-D-DI-MAXI-KG	192467	LFR-3/4-D-DI-MAXI-KG-A

Ordering data					
Rotary knob with integrated lock, pressure gauge with outer scale in bar and inner scale in psi					
Size	Connection	Condensate drain turned manually		Condensate drain fully automatic	
		Part No.	Type	Part No.	Type
Mini	G $\frac{1}{8}$	195020	LFRS-1/8-D-MINI-KG	195021	LFRS-1/8-D-MINI-KG-A
	G $\frac{1}{4}$	195034	LFRS-1/4-D-MINI-KG	195035	LFRS-1/4-D-MINI-KG-A
Midi	G $\frac{1}{4}$	195048	LFRS-1/4-D-MIDI-KG	195049	LFRS-1/4-D-MIDI-KG-A
	G $\frac{3}{8}$	195062	LFRS-3/8-D-MIDI-KG	195063	LFRS-3/8-D-MIDI-KG-A
	G $\frac{1}{2}$	195076	LFRS-1/2-D-MIDI-KG	195077	LFRS-1/2-D-MIDI-KG-A
Maxi	G $\frac{1}{2}$	195090	LFRS-1/2-D-MAXI-KG	195091	LFRS-1/2-D-MAXI-KG-A
	G $\frac{3}{4}$	195104	LFRS-3/4-D-MAXI-KG	195105	LFRS-3/4-D-MAXI-KG-A
Directly actuated pressure regulator with integrated return flow function					
Maxi	G $\frac{1}{2}$	195188	LFRS-1/2-D-DI-MAXI-KG	195189	LFRS-1/2-D-DI-MAXI-KG-A
	G $\frac{3}{4}$	195202	LFRS-3/4-D-DI-MAXI-KG	195203	LFRS-3/4-D-DI-MAXI-KG-A

Service units LFR-KG/LFRS-KG, D series, metal design

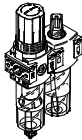
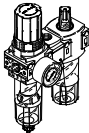
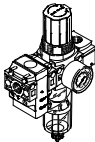
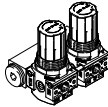
Technical data LFR-KG/LFRS-KG

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Service unit combinations LFR-K, D series, polymer

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Product range overview D series service units, polymer

Type		Size	Pneumatic connection		Pressure regulation range [bar]	Grade of filtration [µm]	
			G¼	G½	0.5 ... 7	5	40
Service units							
FRC		Mini	■	–	■	■	■
Service unit combinations							
FRC-K		Mini	■	–	■	–	■
LFR-K		Mini	■	–	■	–	■
Individual devices							
Filter regulators LFR		Mini	■	–	■	■	■
Pressure regulators LR		Mini	■	–	■	–	–
Pressure regulator combinations LRB-K		Mini	–	■	■	–	–
On-off valves HE		Mini	■	–	–	–	–

Service unit combinations LFR-K, D series, polymer

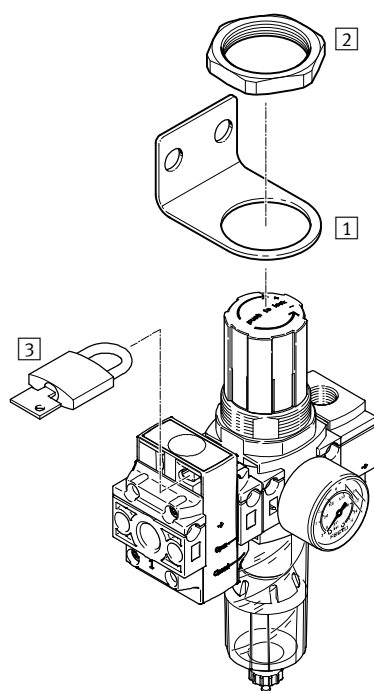
Product range overview D series service units, polymer

Type	Size	Condensate drain		Pressure display		Actuator lock	Regulating functions		→ Page/ Internet
		Manual rotary	Semi-automatic	With pressure gauge	Without pressure gauge	Rotary knob with detent	With secondary venting	With return flow function	
Service units									
FRC	Mini	■	■	■	-	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	-	■	-	■	■	■	frc
LFR-K	Mini	■	-	■	-	■	■	■	40
Individual devices									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators LR	Mini	-	-	■	■	■	■	■	lr
Pressure regulator combinations LRB-K	Mini	-	-	-	■	■	■	■	lrb
On-off valves HE	Mini	-	-	-	■	-	-	-	he

Service unit combinations LFR-K, D series, polymer

Peripherals overview

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-  - Note

The range of accessories depends on the selected service unit combination. The example shows the service unit combination LFR-KB.

Mounting components and accessories

		→ Page/Internet
1	Mounting bracket HR-D	hr-d
2	Hex nut HMR	hmr-d
3	Padlock LRVS	lrvs-d
-	Filter cartridge MS4-LFP-E	48

Service unit combinations LFR-K, D series, polymer

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Type codes

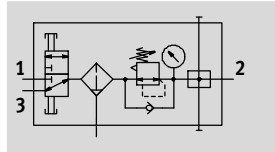
		LFR	–	1/4	–	DB	–	7	–	MINI	–	KB	–	
Basic function														
LFR	Service unit combination													
Pneumatic connection														
1/4	Thread G1/4													
Series														
DB	D series, polymer design													
Pressure regulation range														
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)													
Size														
MINI														
Options for service unit combinations														
KB	Manually operated on-off valve, filter regulator and distributor module													
KC	Manually operated on-off valve and filter regulator													
Display unit of the pressure gauge														
	Outer scale in bar													
MPA	Outer scale in MPa													

Service unit combinations LFR-KB, D series, polymer

FESTO

Technical data LFR-KB

Function



- Manually operated on-off valve
- Filter regulator
- Distributor module

- - Standard nominal flow rate
1,900 l/min
- - Temperature range
-5 ... +50 °C
- - Operating pressure
1.5 ... 10 bar
(0.15 ... 1 MPa)



- For unlubricated compressed air
- The operating pressure can be switched on or off
- Three connections are available
- New filter cartridges → 48

General technical data	
Size	Mini
Pneumatic connection 1, 2, 3	G $\frac{1}{4}$
Design	On-off valve/filter regulator/distributor module
Regulator type	Output pressure constant, without primary pressure compensation, with return flow action, with secondary venting
Type of mounting	In-line installation Via through-hole Via mounting bracket
Mounting position	Vertical $\pm 5^\circ$
Grade of filtration [μm]	40
Air purity class at the output	Compressed air according to ISO 8573-1:2010 [7:8:4]
Condensate drain	Manual rotary
Actuation security	Rotary knob with detent Padlock (optional)
Exhaust function	No flow control
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa)
Max. pressure hysteresis [bar]	0.5 (0.05 MPa)
Pressure indication	Via pressure gauge
Pressure gauge connection	G $\frac{1}{8}$
Max. condensate volume [ml]	13

Flow rates [l/min]	
Standard nominal flow rate $q_{nN}^{1)}$	1,900
Max. standard flow rate	2,500

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

- - Note	
The design allows for slight leakage at the outlet. It improves the control response of the controller without	input pressure compensation. In rare cases, however, the leakage can sporadically be up to 500 l/h.

Service unit combinations LFR-KB, D series, polymer

FESTO

Technical data LFR-KB

Operating and environmental conditions		
Operating pressure	[bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium		Compressed air according to ISO 8573-1:2010 [7:9:4]
Note on operating/pilot medium		Lubricated operation not possible
Ambient temperature	[°C]	−5 ... +50
Temperature of medium	[°C]	−5 ... +50
Storage temperature	[°C]	−5 ... +50
Corrosion resistance class CRC ¹⁾		1

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

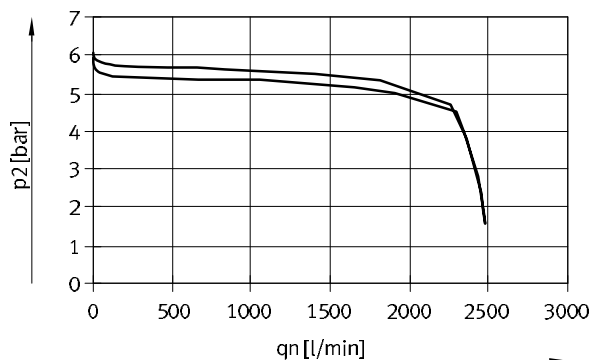
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Weight [g]	
Service unit	270

Materials	
Housing	PA reinforced
Piston spool	POM
Bowl	PC
Rotary knob	POM
Filter	PE
Seals	NBR
On-off valve seals	FPM
Note on materials	RoHS-compliant

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

LFR-1/4-DB-7-MINI-KB



Input pressure $p_1 = 10$ bar (1 MPa)

Service unit combinations LFR-KB, D series, polymer

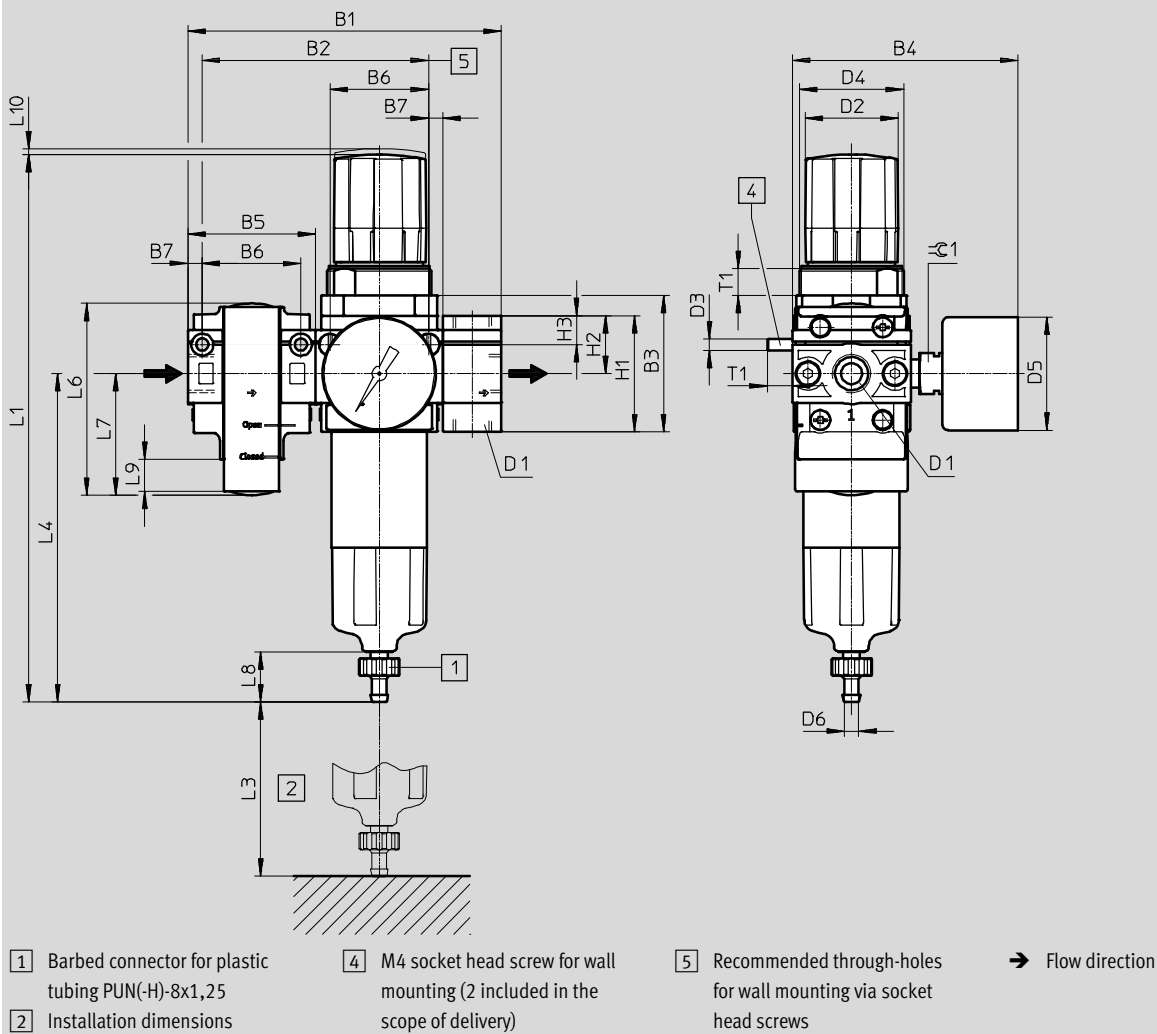
Technical data LFR-KB

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Dimensions

Download CAD data → www.festo.com

Mini



Type	D1	B1	B2	B3	B4	B5	B6	B7	D2	D3	D4	D5	D6
LFR-1/4-DB	G $\frac{1}{4}$	108	78	47	78	44	34	5	$\varnothing$ 32	M4	M36x1.5	$\varnothing$ 39	$\varnothing$ 5.6

Type	H1	H2	H3	L1	L3	L4	L6	L7	L8	L9	L10	T1	$\approx$ 1
LFR-1/4-DB	40	20	10	189	min. 60	113	66	42	17	11	2	9	14

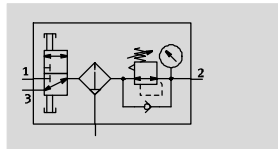
Ordering data			
Condensate drain	Size	Connection	Grade of filtration 40 μ m
			Part No.
			Type
Pressure gauge with outer scale in bar and inner scale in psi			
Manual rotary	Mini	G $\frac{1}{4}$	8002798 LFR-1/4-DB-7-MINI-KB
Pressure gauge with outer scale in MPa and inner scale in bar			
Manual rotary	Mini	G $\frac{1}{4}$	3339283 LFR-1/4-DB-7-MINI-KB-MPA

Service unit combinations LFR-KC, D series, polymer

FESTO

Technical data LFR-KC

Function



- Manually operated on-off valve
- Filter regulator

- - Standard nominal flow rate
1,900 l/min
- - Temperature range
-5 ... +50 °C
- - Operating pressure
1.5 ... 10 bar
(0.15 ... 1 MPa)



- For unlubricated compressed air
- The operating pressure can be switched on or off
- New filter cartridges → 48

General technical data	
Size	Mini
Pneumatic connection 1, 2	G $\frac{1}{4}$
Design	On-off valve/filter regulator
Regulator type	Output pressure constant, without primary pressure compensation, with return flow action, with secondary venting
Type of mounting	In-line installation Via through-hole Via mounting bracket
Mounting position	Vertical $\pm 5^\circ$
Grade of filtration [μm]	40
Air purity class at the output	Compressed air according to ISO 8573-1:2010 [7:8:4]
Condensate drain	Manual rotary
Actuation security	Rotary knob with detent Padlock (optional)
Exhaust function	No flow control
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa)
Max. pressure hysteresis [bar]	0.5 (0.05 MPa)
Pressure indication	Via pressure gauge
Pressure gauge connection	G $\frac{1}{8}$
Max. condensate volume [ml]	13

Flow rates [l/min]	
Standard nominal flow rate $q_{nN}^{1)}$	1,900
Max. standard flow rate	2,500

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

- - Note	
The design allows for slight leakage at the outlet. It improves the control response of the controller without	input pressure compensation. In rare cases, however, the leakage can sporadically be up to 500 l/h.

Service unit combinations LFR-KC, D series, polymer

Technical data LFR-KC

Operating and environmental conditions		
Operating pressure	[bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium		Compressed air according to ISO 8573-1:2010 [7:9:4]
Note on operating/pilot medium		Lubricated operation not possible
Ambient temperature	[°C]	−5 ... +50
Temperature of medium	[°C]	−5 ... +50
Storage temperature	[°C]	−5 ... +50
Corrosion resistance class CRC ¹⁾		1

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

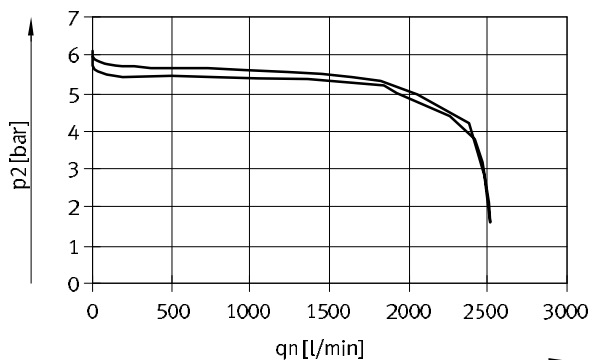
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Weight [g]	
Service unit	245

Materials	
Housing	PA reinforced
Piston spool	POM
Bowl	PC
Rotary knob	POM
Filter	PE
Seals	NBR
On-off valve seals	FPM
Note on materials	RoHS-compliant

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

LFR-1/4-DB-7-MINI-KC



Input pressure $p_1 = 10$ bar (1 MPa)

Service unit combinations LFR-KC, D series, polymer

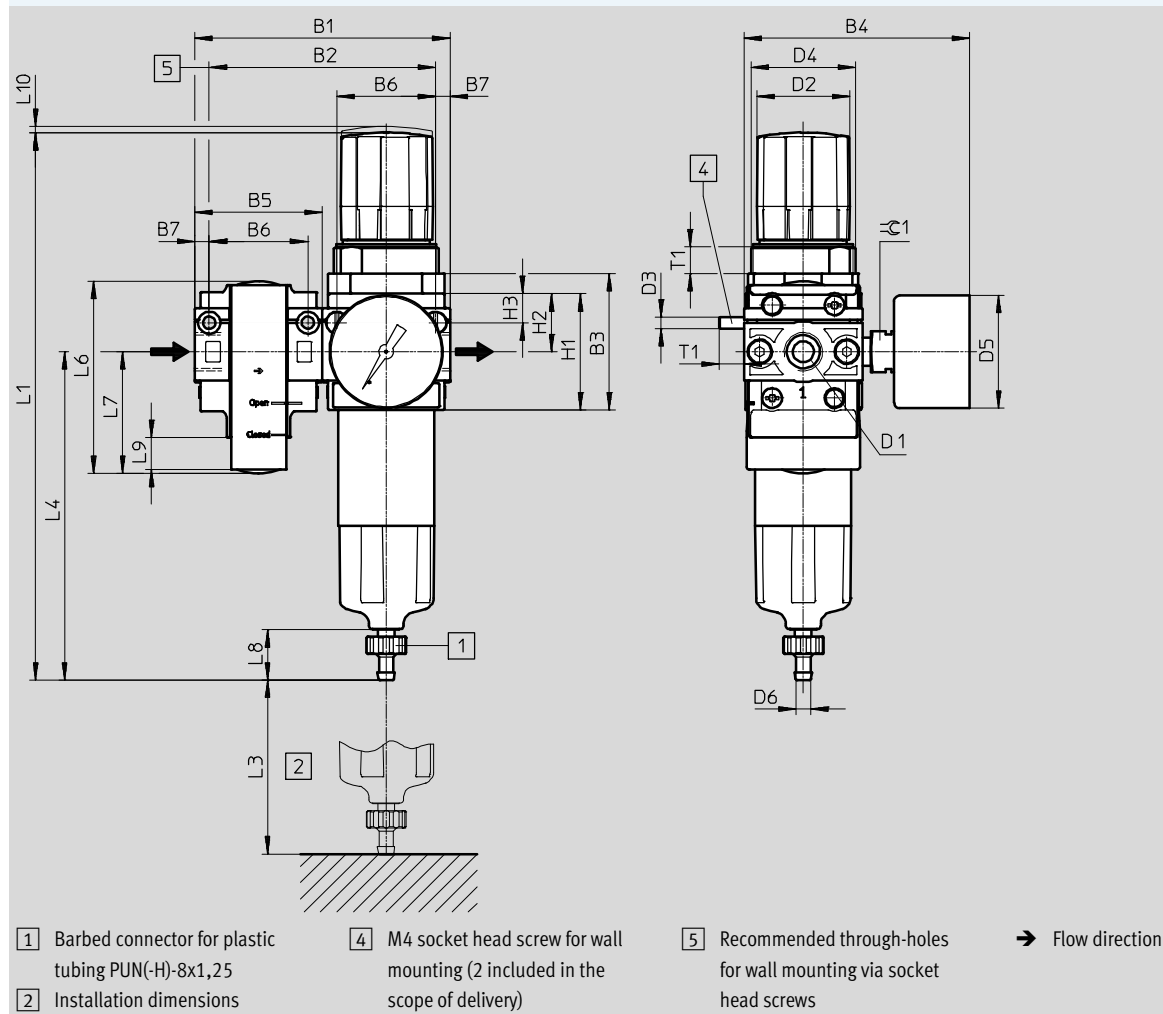
Technical data LFR-KC

FESTO

Dimensions

Mini

Download CAD data → www.festo.com



Type	D1	B1	B2	B3	B4	B5	B6	B7	D2 Ø	D3	D4	D5 Ø	D6 Ø
LFR-1/4-DB	G $\frac{1}{4}$	88	78	47	78	44	34	5	32	M4	M36x1.5	39	5.6

Type	H1	H2	H3	L1	L3 min.	L4	L6	L7	L8	L9	L10	T1	≈ 1
LFR-1/4-DB	40	20	10	189	60	113	66	42	17	11	2	9	14

Ordering data

Condensate drain	Size	Connection	Grade of filtration 40 µm
			Part No. Type
Pressure gauge with outer scale in bar and inner scale in psi			
Manual rotary	Mini	G $\frac{1}{4}$	8002799 LFR-1/4-DB-7-MINI-KC
Pressure gauge with outer scale in MPa and inner scale in bar			
Manual rotary	Mini	G $\frac{1}{4}$	3339285 LFR-1/4-DB-7-MINI-KC-MPA

Service units LFR-K/LFRS-K, D series

Accessories

FESTO

Filter cartridges, D series, metal design



Ordering data			
Size	Grade of filtration [µm]	Part No.	Type
Mini	40 (colour: white)	363665	LFP-D-MINI-40M
Midi	40 (colour: white)	363667	LFP-D-MIDI-40M
Maxi	40 (colour: white)	363664	LFP-D-MAXI-40M

Filter cartridges, D series, polymer



Ordering data			
Size	Grade of filtration [µm]	Part No.	Type
Mini	40	534502	MS4-LFP-E

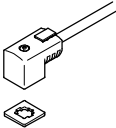
Service units LFR-K/LFRS-K, D series

Accessories

FESTO

Ordering data – Angled socket PEV					Technical data → Internet: pev-1/4	
	Description	Operating voltage range	Electrical connection	Switching status display	Part No.	Type
	for PEV-1/4-...-OD	15 ... 30 V DC	4-pin	Yellow LED	164274	PEV-1/4-WD-LED-24
		≤ 230 V AC	4-pin	Yellow LED	164275	PEV-1/4-WD-LED-230
		≤ 180 V DC				

Ordering data – Plug socket MSSD					Technical data → Internet: mssd	
	Description	Operating voltage range	Electrical connection	Type of mounting cable connection	Part No.	Type
	for PEV-1/4-...-OD	≤ 250 V AC/DC	3-pin	Clamping screws	171157	MSSD-C-4P
	for on-off valve HEE	≤ 250 V AC/DC	3-pin	Clamping screws	151687	MSSD-EB
			4-pin	Insulation displacement technology	192745	MSSD-EB-S-M14

Ordering data – Plug socket with cable KMEB						Technical data → Internet: kmeb	
	Description	Operating voltage range	Electrical connection	Switching status display	Cable length [m]	Part No.	Type
	for on-off valve HEE	24 V DC	3-pin	LED	2.5	151688	KMEB-1-24-2,5-LED
					5	151689	KMEB-1-24-5-LED
					10	193457	KMEB-1-24-10-LED
		230 V AC	3-pin	–	2.5	151690	KMEB-1-230AC-2,5
					5	151691	KMEB-1-230AC-5

Ordering data – Illuminating seal MEB-LD				Technical data → Internet: meb	
	Description	Operating voltage range		Part No.	Type
	for plug socket with cable KMEB and plug socket MSSD-EB	12 ... 24 V DC		151717	MEB-LD-12-24DC
		230 V DC/AC ±10%		151718	MEB-LD-230AC