

Filter regulators LFR/LFRS, D series

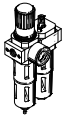
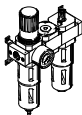
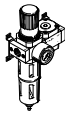
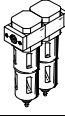
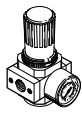
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Filter regulators LFR/LFRS, D series, metal design

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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	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Service unit combinations																			
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	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	–	

Filter regulators LFR/LFRS, D series, metal design

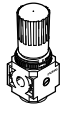
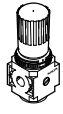
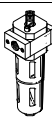
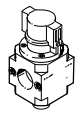
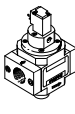
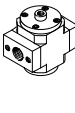
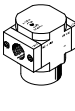
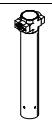
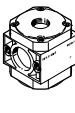
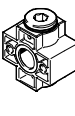
Product range overview D series service units, metal design

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	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Service unit combinations																	
FRC-K	Micro	–															frc
	Mini	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	–	■	–	–	■	■	–	
LFR-K LFRS-K	Micro	–															lfr
	Mini	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	■	■	–	–	■	■	–	
Individual devices																	
Filter regulators LFR/LFRS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	6
	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	–	–	–	–	–	■	■	■	■	–	–	–	■	■	–	

Filter regulators LFR/LFRS, D series, metal design

Product range overview D series service units, metal design

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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-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	—	—	—	—	—	—	—	—	—	—	—	—

Filter regulators LFR/LFRS, 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	-	-	-	■	-	-	-	-	-	-	-	

Filter regulators LFR/LFRS, D series, metal design

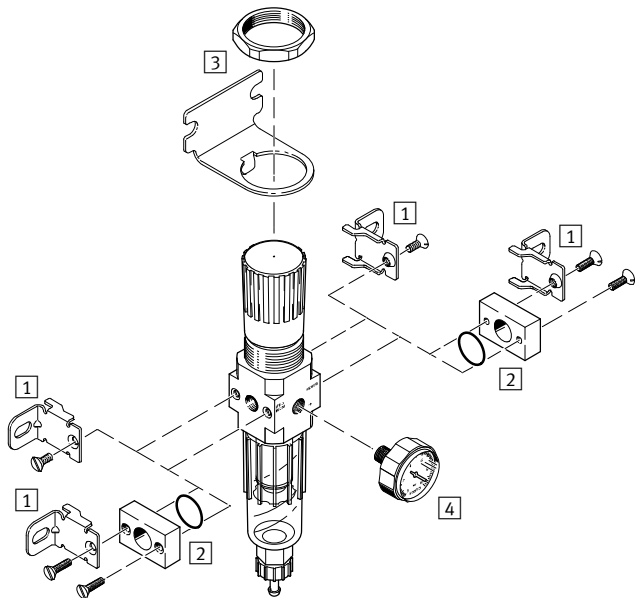
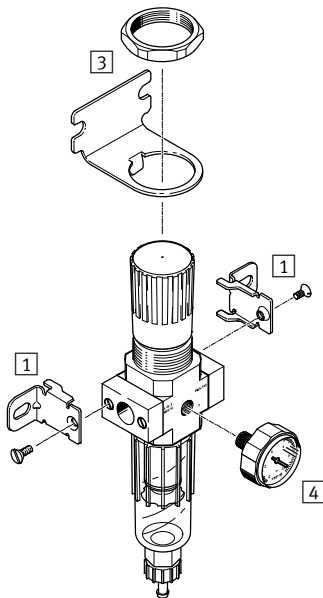
Peripherals overview

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Micro

Individual unit with connection plates,
connection size G $\frac{1}{8}$, QS-4 or QS-6

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



Mounting attachments and accessories					
	Individual unit with connection plates	Individual unit without connection plates	Combination with connection plates	Combination without connection plates	→ Page/ Internet
[1] Mounting bracket HFOE	■	■	■	■	hfoe-d
[2] Connecting plate kit PBL	–	■	–	■	pbl
[3] Mounting bracket HRS	■	■	■	■	hrs-d
[4] Pressure gauge MA-27	■	■	■	■	32

Filter regulators LFR/LFRS, D series, metal design

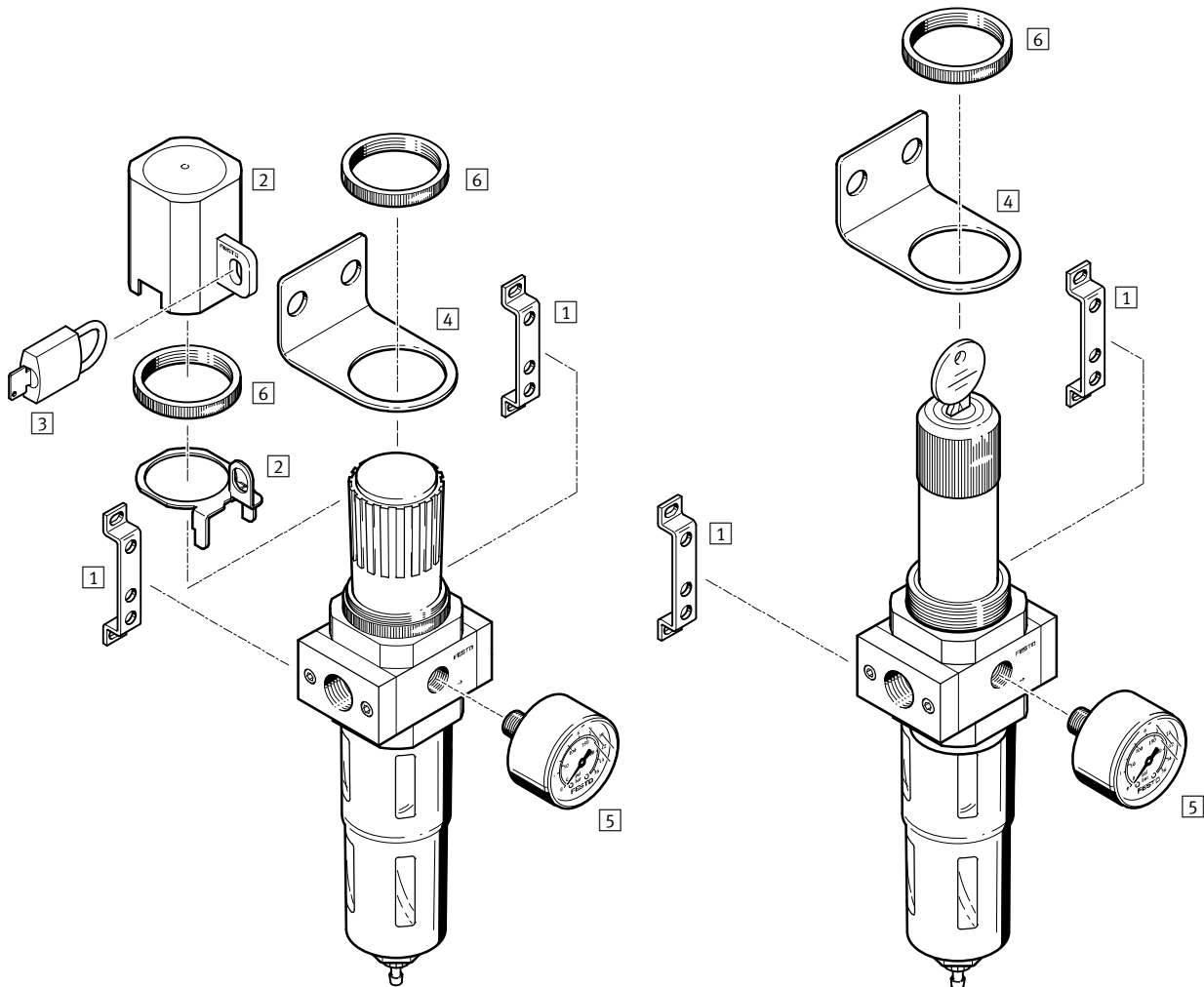
Peripherals overview

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Mini/Midi/Maxi

Filter regulator LFR

Filter regulator LFRS, lockable



Mounting attachments and accessories			
	Rotary knob with detent	Rotary knob, lockable	→ Page/ Internet
1 Mounting bracket HFOE	■	■	hfoe-d
2 Regulator lock LRVS	■	-	lrvs-d
3 Padlock LRVS-D	■	-	lrvs-d
4 Mounting bracket HR-D	■	■	hr-d
5 Pressure gauge MA	■	■	32
6 Knurled nut (included in scope of delivery) HMR	■	■	-

Filter regulators LFR/LFRS, D series, metal design

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Type codes

		LFR	–	3/8	–	D	–	7	–		–	0	–		–	MIDI	–	A
Basic function																		
LFR	Filter regulator																	
LFRS	Filter regulator, lockable																	
Pneumatic connection																		
MICRO (LFR only)																		
M5	Connecting thread M5 in housing																	
M7	Connecting thread M7 in housing																	
1/8	Connecting plates with connecting thread G1/8																	
QS4	Connecting plates with push-in connector QS-4																	
QS6	Connecting plates with push-in connector QS-6																	
MINI																		
1/8	Connecting plates with connecting thread G1/8																	
1/4	Connecting plates with connecting thread G1/4																	
3/8	Connecting plates with connecting thread G3/8																	
MIDI																		
1/4	Connecting plates with connecting thread G1/4																	
3/8	Connecting plates with connecting thread G3/8																	
1/2	Connecting plates with connecting thread G1/2																	
3/4	Connecting plates with connecting thread G3/4																	
MAXI																		
1/2	Connecting plates with connecting thread G1/2																	
3/4	Connecting plates with connecting thread G3/4																	
1	Connecting plates with connecting thread G1																	
Series																		
D	Series																	
Pressure regulation range																		
7	0.5 ... 7 bar																	
	0.5 ... 12 bar																	
Grade of filtration																		
	40 µm																	
5M	5 µm																	
Pressure gauge																		
	With pressure gauge																	
0	Without pressure gauge																	
Function (optional)																		
DI	Directly actuated pressure regulator with integrated return flow function (MAXI 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)																	
Condensate drain																		
	Turned manually																	
H	Semi-automatic																	
A	Fully automatic																	

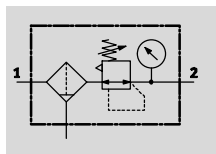
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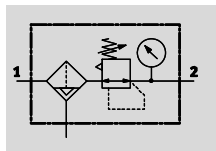
Technical data

LFR/LFRS

Manual rotary condensate drain,
with pressure gauge

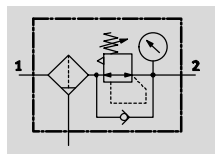


Semi or fully automatic condensate
drain, with pressure gauge

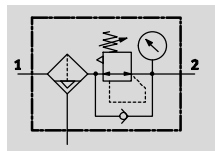


LFR/LFRS-...-DI-MAXI

Manual rotary condensate drain,
with pressure gauge



Fully automatic condensate drain,
with pressure gauge



- - Flow rate
110 ... 11,000 l/min
- - Temperature range
-10 ... +60 °C
- - Operating pressure
1 ... 16 bar

- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate
- Good regulating characteristics with minimal hysteresis

- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Two pressure gauge connections for flexible installation
- Setting values are secured by locking the rotary knob

- With manual, semi-automatic or fully automatic condensate drain
- Choice of filter cartridges: 5 µm or 40 µm
- New filter cartridges → 31
- Pressure sensor (optional) → 32

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

1) Connecting plates with connecting thread

2) Without connecting plates, connecting thread in housing

3) Connecting plates with push-in connector

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

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

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]						
Size		Micro				
Pneumatic connection 1, 2		M5	M7	G $\frac{1}{8}$	QS-4	QS-6
Pressure regulation range	0.5 ... 7 bar	110	280	410	150	410

- 1) Measured at $p_1 = 10$ bar, $p_2 = 6$ bar and $\Delta p = 1$ bar.
 - $\downarrow$ 125 l/min must be available for the semi automatic condensate drain to close correctly.

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]											
Size	Mini			Midi				Maxi			
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1	
Pressure regulation range, grade of filtration	0.5 ... 7 bar, 40 μ m	900	1,500	1,700	2,100	3,200	3,900	4,000	9,500 (7,600) ²⁾	10,000 (7,700) ²⁾	11,000 (7,800) ²⁾
	0.5 ... 12 bar, 5 μ m	650	1,200	1,350	1,600	2,400	2,600	2,600	7,500 (4,000) ²⁾	7,600 (5,800) ²⁾	8,000 (6,000) ²⁾
	0.5 ... 12 bar, 40 μ m	750	1,400	1,600	2,000	3,100	3,400	3,400	9,400 (4,500) ²⁾	9,700 (6,800) ²⁾	10,000 (7,000) ²⁾

- 1) Measured at $p_1 = 10$ bar, $p_2 = 6$ bar and $\Delta p = 1$ bar.
 2) For the LR/LRS-...-DI.
 - $\downarrow$ 125 l/min must be available for the fully automatic condensate drain to close correctly.

Operating and environmental conditions				
Condensate drain	Manual rotary		Semi-automatic	Fully automatic
Size	Micro		Micro	Mini/Midi/Maxi
Operating pressure [bar]	1 ... 10		1 ... 10	2 ... 12
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:9:-]		Compressed air in accordance with ISO 8573-1:2010 [7:9:-]	Compressed air in accordance with ISO 8573-1:2010 [7:9:-]
	Inert gases			
Ambient temperature [°C]	-10 ... +60			+5 ... +60
Temperature of medium [°C]	-10 ... +60			+5 ... +60
Storage temperature [°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	Micro		Mini	Midi	Maxi	
	Connecting thread	Connecting plate			Connection G $\frac{1}{2}$, G $\frac{3}{4}$	Connection G1
With pressure gauge						
LFR-...	104	124	460	920	1,370	1,470
LFR-...-DI	-	-	-	-	1,670	1,670
LFRS-...	-	-	560	1,160	1,470	1,570
LFRS-...-DI	-	-	-	-	1,950	1,950
Without pressure gauge						
LFR-...	94	114	410	830	1,300	1,400
LFR-...-DI	-	-	-	-	1,600	1,600
LFRS-...	-	-	510	1,070	1,400	1,500
LFRS-...-DI	-	-	-	-	1,880	1,880

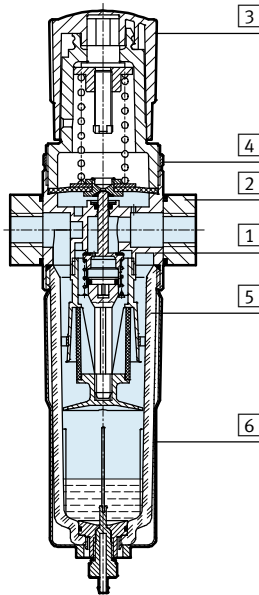
Filter regulators LFR/LFRS, D series, metal design

Technical data

FESTO

Materials

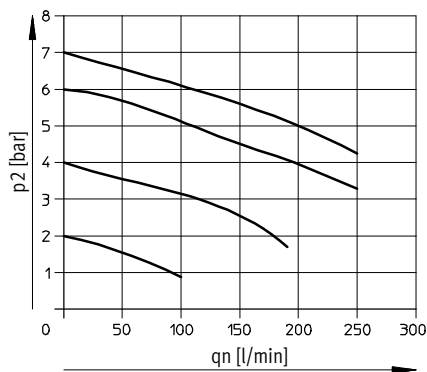
Sectional view



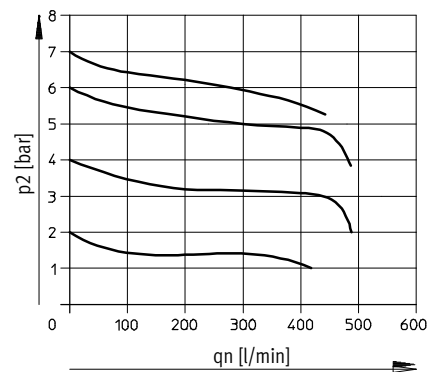
Size	Micro	Mini/Midi/Maxi	
		With pressure gauge	Without pressure gauge
1 Housing	Wrought aluminium alloy	Die-cast zinc	
2 Connecting plates	Wrought aluminium alloy	Die-cast zinc/aluminium	
3 Regulating knob	POM	PA	
4 Knurled nut	–	Aluminium	
5 Bowl	PC	PC	
6 Metal bowl guard	–	Aluminium	
– Seals	NBR	NBR	
Note on materials	RoHS-compliant	RoHS-compliant	
	–	–	Free of copper and PTFE (LFR only)

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

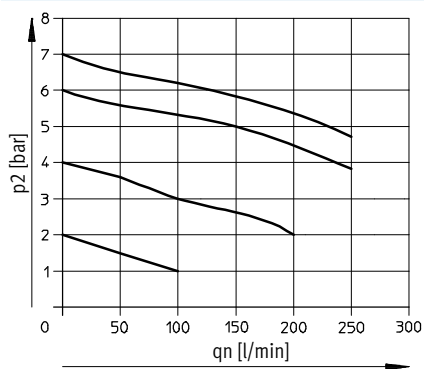
LFR-M5-...-MICRO



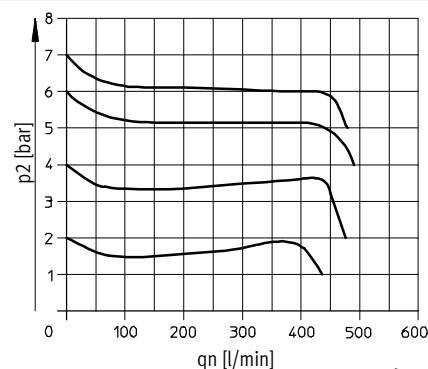
LFR-M7-...-MICRO -B



LFR-QS4-...-MICRO



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



Primary pressure $p_1 = 10$ bar

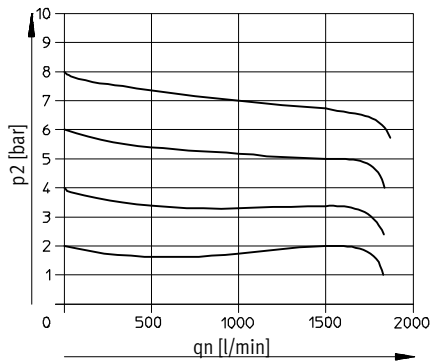
Filter regulators LFR/LFRS, D series, metal design

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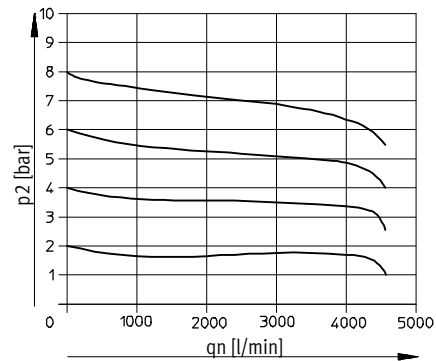
Technical data

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

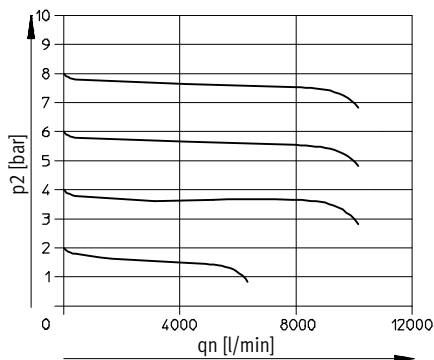
LFR/LFRS-1/4-D-MINI



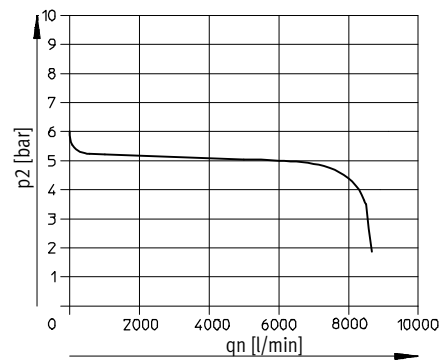
LFR/LFRS-1/2-D-MIDI



LFR/LFRS-1-D-MAXI



LFR/LFRS-1-D-DI-MAXI



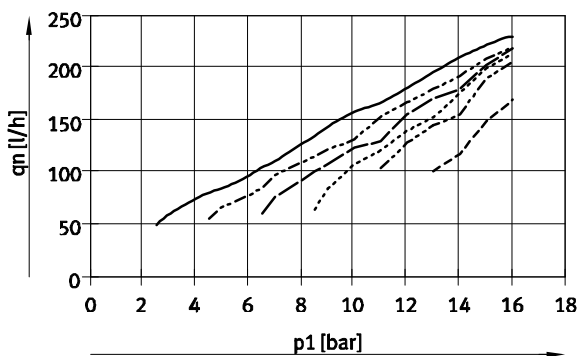
Primary pressure $p_1 = 10$ bar

-  - Note

In order to improve control behaviour, primary-pressure dependent internal air consumption is provided on the LFR/LFRS-...-MAXI.

Internal air consumption q_n as a function of input pressure p_1

LFR/LFRS-...-MAXI



— $p_2 = 2$ bar
 - - - $p_2 = 4$ bar
 - · - $p_2 = 6$ bar
 · · · $p_2 = 8$ bar
 - · - $p_2 = 10$ bar
 - - - $p_2 = 12$ bar

Filter regulators LFR/LFRS, D series, metal design

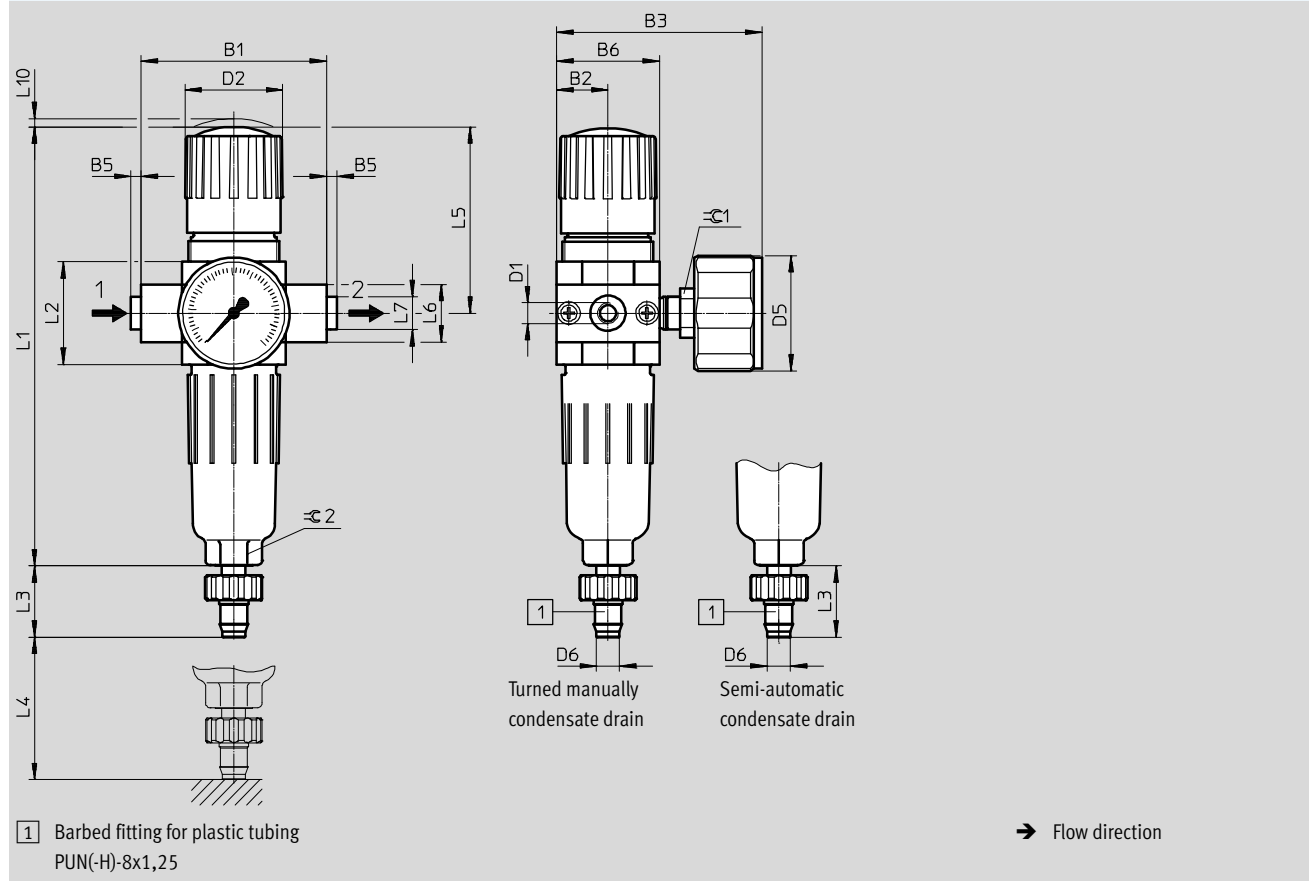
Technical data

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Dimensions

Download CAD data → www.festo.com

Micro



Type	B1	B2	B3	B5	B3	D1	D2 Ø	D5 Ø	D6 Ø			
LFR-M5-...-MICRO (H)	25	12.5	50	-	25	M5	~24	28	5.6			
LFR-M7-...-MICRO (H) B						M7						
LFR-1/8-...-MICRO (H)	45			~2.5		G1/8						
LFR-QS4-...-MICRO (H)						QS-4						
LFR-QS6-...-MICRO (H)						QS-6						

Type	L1	L2	L3	L4 min.	L5	L6	L7	L10	≈ 1	≈ 2
LFR-M5-...-MICRO (H)	107.5	26	~17.3	60	46	14	-	2	12	12
LFR-M7-...-MICRO (H) B							-			
LFR-1/8-...-MICRO (H)							~8			
LFR-QS4-...-MICRO (H)							~10			
LFR-QS6-...-MICRO (H)							~10			

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

Filter regulators LFR/LFRS, D series, metal design

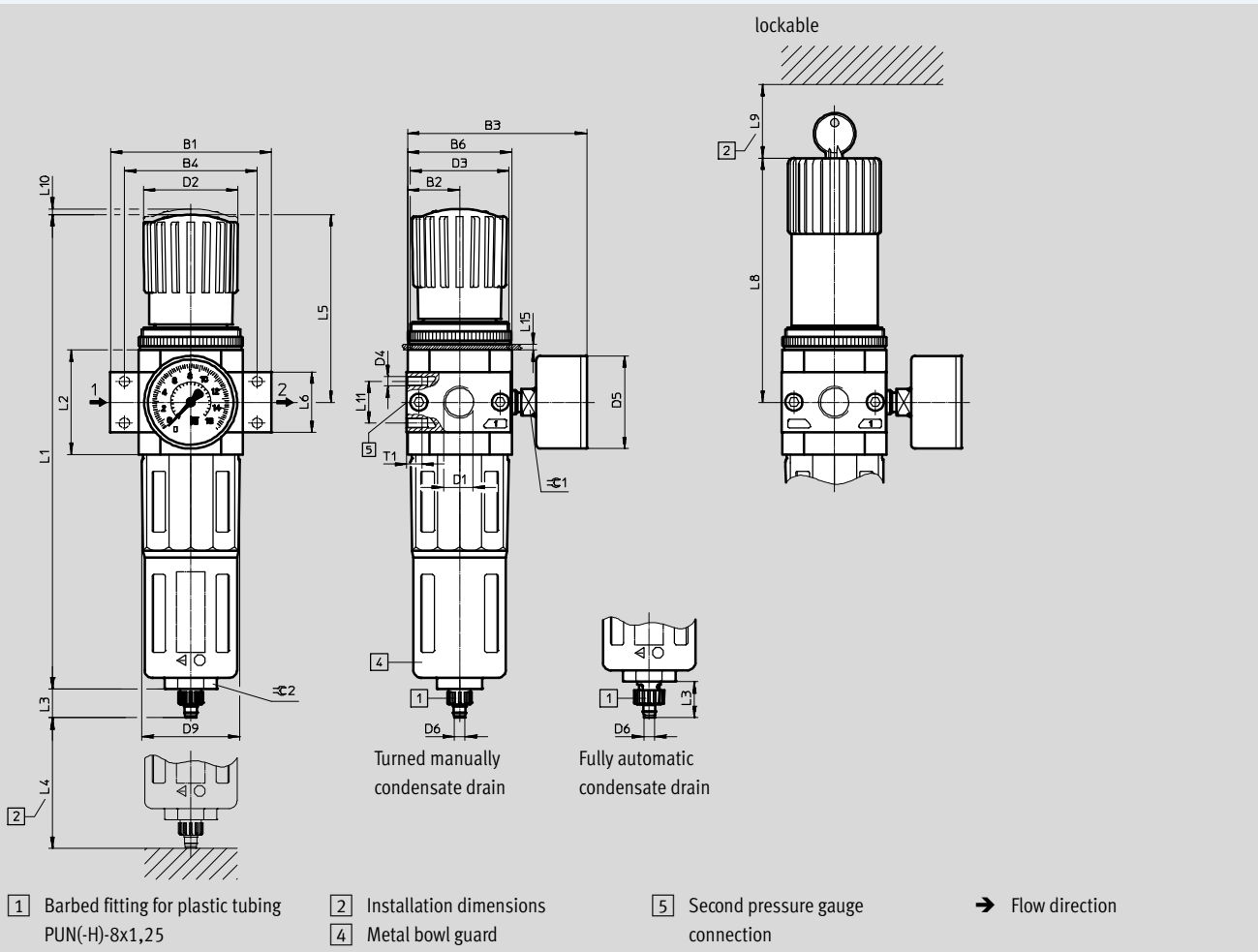
Technical data

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Dimensions

Mini/Midi/Maxi

Download CAD data → www.festo.com



Type	B1	B2	B3	B4	B6	D1	D2 Ø	D3	D4	D5 Ø	D6 Ø	D9 Ø
Mini												
LFR/LFRS-1/8-D-MINI (A)	64	20	76	~52	40	G1/8	31	M36x1.5	M4	41	5.6	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	27.5	~94.5	~70	55	G1/4	50	M52x1.5	M5	49	5.6	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	33	106	80	66	G1/2	31	M36x1.5	M5	49	5.6	65
LFR/LFRS-1/2-D-DI-MAXI (A)			105				49	M52x1.5				
LFR/LFRS-3/4-D-MAXI (A)			106				31	M36x1.5				
LFR/LFRS-3/4-D-DI-MAXI (A)			105			49	M52x1.5					
LFR/LFRS-1-D-MAXI (A)	116		106	91		G1	31	M36x1.5				
LFR/LFRS-1-D-DI-MAXI (A)		105	49		M52x1.5							

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

Filter regulators LFR/LFRS, D series, metal design



Technical data

Type	L1	L2	L3	L4 min.	L5	L6	L8	L9	L10	L11 ±0.2	L15 max.	T1 min.	≧ 1	≧ 2
Mini														
LFR/LFRS-1/8-D-MINI (A)	192.9	40	15 (19) ¹⁾	60	~69	20	98	60	3	11	3	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)	250	55 ±0.1	15 (19) ¹⁾	80	99	32 ±0.3	130	60	3	22	5	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)	252	66	15 (19) ¹⁾	90	82	32	111	60	3	22	4	8	14	24
LFR/LFRS-1/2-D-DI-MAXI (A)	275				~105	32	135		4					
LFR/LFRS-3/4-D-MAXI (A)	252				82	32	111		3					
LFR/LFRS-3/4-D-DI-MAXI (A)	275				~105	36	135		4					
LFR/LFRS-1-D-MAXI (A)	252				82	40	111		3					
LFR/LFRS-1-D-DI-MAXI (A)	275				~105	41	135		4					

1) Value in brackets applies to the fully automatic condensate drain.

Filter regulators LFR/LFRS, D series, metal design

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, outer scale in bar				
Turned manually	Micro	Without connecting plates, connecting thread in housing		
		M5	526273	LFR-M5-D-7-5M-MICRO
		M7	534184	LFR-M7-D-7-5M-MICRO-B
		Connecting plates with connecting thread		
		G1/8	526277	LFR-1/8-D-7-5M-MICRO
		Connecting plates with push-in connector		
		QS-4	526289	LFR-QS4-D-7-5M-MICRO
		QS-6	526293	LFR-QS6-D-7-5M-MICRO
Semi-automatic	Micro	Without connecting plates, connecting thread in housing		
		M5	526274	LFR-M5-D-7-5M-MICRO-H
		M7	534185	LFR-M7-D-7-5M-MICRO-H-B
		Connecting plates with connecting thread		
		G1/8	526278	LFR-1/8-D-7-5M-MICRO-H
		Connecting plates with push-in connector		
		QS-4	526290	LFR-QS4-D-7-5M-MICRO-H
		QS-6	526294	LFR-QS6-D-7-5M-MICRO-H
Without pressure gauge				
Turned manually	Micro	Without connecting plates, connecting thread in housing		
		M5	526275	LFR-M5-D-7-O-5M-MICRO
		M7	534186	LFR-M7-D-7-O-5M-MICRO-B
		Connecting plates with connecting thread		
		G1/8	526279	LFR-1/8-D-7-O-5M-MICRO
		Connecting plates with push-in connector		
		QS-4	526291	LFR-QS4-D-7-O-5M-MICRO
		QS-6	526295	LFR-QS6-D-7-O-5M-MICRO
Semi-automatic	Micro	Without connecting plates, connecting thread in housing		
		M5	526276	LFR-M5-D-7-O-5M-MICRO-H
		M7	534187	LFR-M7-D-7-O-5M-MICRO-H-B
		Connecting plates with connecting thread		
		G1/8	526280	LFR-1/8-D-7-O-5M-MICRO-H
		Connecting plates with push-in connector		
		QS-4	526292	LFR-QS4-D-7-O-5M-MICRO-H
		QS-6	526296	LFR-QS6-D-7-O-5M-MICRO-H

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Ordering data						
Pressure regulation range 0.5 ... 12 bar, rotary knob with detent, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Mini	G1/8	162718	LFR-1/8-D-5M-MINI	159630	LFR-1/8-D-MINI
		G1/4	162719	LFR-1/4-D-5M-MINI	159631	LFR-1/4-D-MINI
		G3/8	162720	LFR-3/8-D-5M-MINI	162682	LFR-3/8-D-MINI
	Midi	G1/4	186483	LFR-1/4-D-5M-MIDI	186481	LFR-1/4-D-MIDI
		G3/8	162721	LFR-3/8-D-5M-MIDI	159582	LFR-3/8-D-MIDI
		G1/2	162722	LFR-1/2-D-5M-MIDI	159584	LFR-1/2-D-MIDI
		G3/4	162723	LFR-3/4-D-5M-MIDI	162683	LFR-3/4-D-MIDI
	Maxi	G1/2	186491	LFR-1/2-D-5M-MAXI	186489	LFR-1/2-D-MAXI
		G3/4	162724	LFR-3/4-D-5M-MAXI	159632	LFR-3/4-D-MAXI
		G1	162725	LFR-1-D-5M-MAXI	159633	LFR-1-D-MAXI
Fully automatic	Mini	G1/8	162726	LFR-1/8-D-5M-MINI-A	159634	LFR-1/8-D-MINI-A
		G1/4	162727	LFR-1/4-D-5M-MINI-A	159635	LFR-1/4-D-MINI-A
		G3/8	162728	LFR-3/8-D-5M-MINI-A	162684	LFR-3/8-D-MINI-A
	Midi	G1/4	186486	LFR-1/4-D-5M-MIDI-A	186484	LFR-1/4-D-MIDI-A
		G3/8	162729	LFR-3/8-D-5M-MIDI-A	159583	LFR-3/8-D-MIDI-A
		G1/2	162730	LFR-1/2-D-5M-MIDI-A	159585	LFR-1/2-D-MIDI-A
		G3/4	162731	LFR-3/4-D-5M-MIDI-A	162685	LFR-3/4-D-MIDI-A
	Maxi	G1/2	186494	LFR-1/2-D-5M-MAXI-A	186492	LFR-1/2-D-MAXI-A
		G3/4	162732	LFR-3/4-D-5M-MAXI-A	159636	LFR-3/4-D-MAXI-A
		G1	162733	LFR-1-D-5M-MAXI-A	159637	LFR-1-D-MAXI-A
Without pressure gauge						
Turned manually	Mini	G1/8	192610	LFR-1/8-D-5M-O-MINI ¹⁾	162686	LFR-1/8-D-O-MINI ¹⁾
		G1/4	192611	LFR-1/4-D-5M-O-MINI ¹⁾	162687	LFR-1/4-D-O-MINI ¹⁾
		G3/8	192612	LFR-3/8-D-5M-O-MINI ¹⁾	162688	LFR-3/8-D-O-MINI ¹⁾
	Midi	G1/4	192613	LFR-1/4-D-5M-O-MIDI ¹⁾	186482	LFR-1/4-D-O-MIDI ¹⁾
		G3/8	192614	LFR-3/8-D-5M-O-MIDI ¹⁾	162689	LFR-3/8-D-O-MIDI ¹⁾
		G1/2	192615	LFR-1/2-D-5M-O-MIDI ¹⁾	162690	LFR-1/2-D-O-MIDI ¹⁾
		G3/4	192616	LFR-3/4-D-5M-O-MIDI ¹⁾	162691	LFR-3/4-D-O-MIDI ¹⁾
	Maxi	G1/2	192617	LFR-1/2-D-5M-O-MAXI ¹⁾	186490	LFR-1/2-D-O-MAXI ¹⁾
		G3/4	192618	LFR-3/4-D-5M-O-MAXI ¹⁾	162692	LFR-3/4-D-O-MAXI ¹⁾
		G1	192619	LFR-1-D-5M-O-MAXI ¹⁾	162693	LFR-1-D-O-MAXI ¹⁾
Fully automatic	Mini	G1/8	192620	LFR-1/8-D-5M-O-MINI-A ¹⁾	162694	LFR-1/8-D-O-MINI-A ¹⁾
		G1/4	192621	LFR-1/4-D-5M-O-MINI-A ¹⁾	162695	LFR-1/4-D-O-MINI-A ¹⁾
		G3/8	192622	LFR-3/8-D-5M-O-MINI-A ¹⁾	162696	LFR-3/8-D-O-MINI-A ¹⁾
	Midi	G1/4	192623	LFR-1/4-D-5M-O-MIDI-A ¹⁾	186485	LFR-1/4-D-O-MIDI-A ¹⁾
		G3/8	192624	LFR-3/8-D-5M-O-MIDI-A ¹⁾	162697	LFR-3/8-D-O-MIDI-A ¹⁾
		G1/2	192625	LFR-1/2-D-5M-O-MIDI-A ¹⁾	162698	LFR-1/2-D-O-MIDI-A ¹⁾
		G3/4	192626	LFR-3/4-D-5M-O-MIDI-A ¹⁾	162699	LFR-3/4-D-O-MIDI-A ¹⁾
	Maxi	G1/2	192627	LFR-1/2-D-5M-O-MAXI-A ¹⁾	186493	LFR-1/2-D-O-MAXI-A ¹⁾
		G3/4	192628	LFR-3/4-D-5M-O-MAXI-A ¹⁾	162700	LFR-3/4-D-O-MAXI-A ¹⁾
	G1	192629	LFR-1-D-5M-O-MAXI-A ¹⁾	162701	LFR-1-D-O-MAXI-A ¹⁾	

1) Free of copper and PTFE

Filter regulators LFR/LFRS, D series, metal design

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Technical data

Ordering data				
Pressure regulation range 0.5 ... 7 bar, rotary knob with detent, connecting plates with connecting thread				
Condensate drain	Size	Connection	Grade of filtration 40 µm	
			Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi				
Turned manually	Mini	G1/8	162702	LFR-1/8-D-7-MINI
		G1/4	162703	LFR-1/4-D-7-MINI
		G3/8	162704	LFR-3/8-D-7-MINI
	Midi	G1/4	186487	LFR-1/4-D-7-MIDI
		G3/8	162705	LFR-3/8-D-7-MIDI
		G1/2	162706	LFR-1/2-D-7-MIDI
		G3/4	162707	LFR-3/4-D-7-MIDI
	Maxi	G1/2	186495	LFR-1/2-D-7-MAXI
		G3/4	162708	LFR-3/4-D-7-MAXI
		G1	162709	LFR-1-D-7-MAXI
Fully automatic	Mini	G1/8	162710	LFR-1/8-D-7-MINI-A
		G1/4	162711	LFR-1/4-D-7-MINI-A
		G3/8	162712	LFR-3/8-D-7-MINI-A
	Midi	G1/4	186488	LFR-1/4-D-7-MIDI-A
		G3/8	162713	LFR-3/8-D-7-MIDI-A
		G1/2	162714	LFR-1/2-D-7-MIDI-A
		G3/4	162715	LFR-3/4-D-7-MIDI-A
	Maxi	G1/2	186496	LFR-1/2-D-7-MAXI-A
		G3/4	162716	LFR-3/4-D-7-MAXI-A
		G1	162717	LFR-1-D-7-MAXI-A
Without pressure gauge				
Turned manually	Mini	G1/8	192590	LFR-1/8-D-7-O-MINI ¹⁾
		G1/4	192591	LFR-1/4-D-7-O-MINI ¹⁾
		G3/8	192592	LFR-3/8-D-7-O-MINI ¹⁾
	Midi	G1/4	192593	LFR-1/4-D-7-O-MIDI ¹⁾
		G3/8	192594	LFR-3/8-D-7-O-MIDI ¹⁾
		G1/2	192595	LFR-1/2-D-7-O-MIDI ¹⁾
		G3/4	192596	LFR-3/4-D-7-O-MIDI ¹⁾
	Maxi	G1/2	192597	LFR-1/2-D-7-O-MAXI ¹⁾
		G3/4	192598	LFR-3/4-D-7-O-MAXI ¹⁾
		G1	192599	LFR-1-D-7-O-MAXI ¹⁾
Fully automatic	Mini	G1/8	192600	LFR-1/8-D-7-O-MINI-A ¹⁾
		G1/4	192601	LFR-1/4-D-7-O-MINI-A ¹⁾
		G3/8	192602	LFR-3/8-D-7-O-MINI-A ¹⁾
	Midi	G1/4	192603	LFR-1/4-D-7-O-MIDI-A ¹⁾
		G3/8	192604	LFR-3/8-D-7-O-MIDI-A ¹⁾
		G1/2	192605	LFR-1/2-D-7-O-MIDI-A ¹⁾
	G3/4	192606	LFR-3/4-D-7-O-MIDI-A ¹⁾	
	Maxi	G1/2	192607	LFR-1/2-D-7-O-MAXI-A ¹⁾
		G3/4	192608	LFR-3/4-D-7-O-MAXI-A ¹⁾
G1		192609	LFR-1-D-7-O-MAXI-A ¹⁾	

1) Free of copper and PTFE

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Ordering data						
Pressure regulation range 0.5 ... 12 bar, directly actuated diaphragm regulator with integrated return flow function, rotary knob with detent, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Maxi	G½	192370	LFR-½-D-5M-DI-MAXI	192368	LFR-½-D-DI-MAXI
		G¾	192376	LFR-¾-D-5M-DI-MAXI	192374	LFR-¾-D-DI-MAXI
		G1	192382	LFR-1-D-5M-DI-MAXI	192380	LFR-1-D-DI-MAXI
Fully automatic	Maxi	G½	192388	LFR-½-D-5M-DI-MAXI-A	192386	LFR-½-D-DI-MAXI-A
		G¾	192394	LFR-¾-D-5M-DI-MAXI-A	192392	LFR-¾-D-DI-MAXI-A
		G1	192400	LFR-1-D-5M-DI-MAXI-A	192398	LFR-1-D-DI-MAXI-A
Without pressure gauge						
Turned manually	Maxi	G½	192371	LFR-½-D-5M-O-DI-MAXI	192369	LFR-½-D-O-DI-MAXI
		G¾	192377	LFR-¾-D-5M-O-DI-MAXI	192375	LFR-¾-D-O-DI-MAXI
		G1	192383	LFR-1-D-5M-O-DI-MAXI	192381	LFR-1-D-O-DI-MAXI
Fully automatic	Maxi	G½	192389	LFR-½-D-5M-O-DI-MAXI-A	192387	LFR-½-D-O-DI-MAXI-A
		G¾	192395	LFR-¾-D-5M-O-DI-MAXI-A	192393	LFR-¾-D-O-DI-MAXI-A
		G1	192401	LFR-1-D-5M-O-DI-MAXI-A	192399	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, rotary knob with detent, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Maxi	G½	–		192372	LFR-½-D-7-DI-MAXI
		G¾	–		192378	LFR-¾-D-7-DI-MAXI
		G1	–		192384	LFR-1-D-7-DI-MAXI
Fully automatic	Maxi	G½	–		192390	LFR-½-D-7-DI-MAXI-A
		G¾	–		192396	LFR-¾-D-7-DI-MAXI-A
		G1	–		192402	LFR-1-D-7-DI-MAXI-A
Without pressure gauge						
Turned manually	Maxi	G½	–		192373	LFR-½-D-7-O-DI-MAXI
		G¾	–		192379	LFR-¾-D-7-O-DI-MAXI
		G1	–		192385	LFR-1-D-7-O-DI-MAXI
Fully automatic	Maxi	G½	–		192391	LFR-½-D-7-O-DI-MAXI-A
		G¾	–		192397	LFR-¾-D-7-O-DI-MAXI-A
		G1	–		192403	LFR-1-D-7-O-DI-MAXI-A

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Ordering data						
Pressure regulation range 0.5 ... 12 bar, rotary knob with integrated lock, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Mini	G1/8	194704	LFRS-1/8-D-5M-MINI	194696	LFRS-1/8-D-MINI
		G1/4	194716	LFRS-1/4-D-5M-MINI	194708	LFRS-1/4-D-MINI
		G3/8	194728	LFRS-3/8-D-5M-MINI	194720	LFRS-3/8-D-MINI
	Midi	G1/4	194740	LFRS-1/4-D-5M-MIDI	194732	LFRS-1/4-D-MIDI
		G3/8	194752	LFRS-3/8-D-5M-MIDI	194744	LFRS-3/8-D-MIDI
		G1/2	194764	LFRS-1/2-D-5M-MIDI	194756	LFRS-1/2-D-MIDI
		G3/4	194776	LFRS-3/4-D-5M-MIDI	194768	LFRS-3/4-D-MIDI
	Maxi	G1/2	194788	LFRS-1/2-D-5M-MAXI	194780	LFRS-1/2-D-MAXI
		G3/4	194800	LFRS-3/4-D-5M-MAXI	194792	LFRS-3/4-D-MAXI
		G1	194812	LFRS-1-D-5M-MAXI	194804	LFRS-1-D-MAXI
Fully automatic	Mini	G1/8	194706	LFRS-1/8-D-5M-MINI-A	194697	LFRS-1/8-D-MINI-A
		G1/4	194718	LFRS-1/4-D-5M-MINI-A	194709	LFRS-1/4-D-MINI-A
		G3/8	194730	LFRS-3/8-D-5M-MINI-A	194721	LFRS-3/8-D-MINI-A
	Midi	G1/4	194742	LFRS-1/4-D-5M-MIDI-A	194733	LFRS-1/4-D-MIDI-A
		G3/8	194754	LFRS-3/8-D-5M-MIDI-A	194745	LFRS-3/8-D-MIDI-A
		G1/2	194766	LFRS-1/2-D-5M-MIDI-A	194757	LFRS-1/2-D-MIDI-A
		G3/4	194778	LFRS-3/4-D-5M-MIDI-A	194769	LFRS-3/4-D-MIDI-A
	Maxi	G1/2	194790	LFRS-1/2-D-5M-MAXI-A	194781	LFRS-1/2-D-MAXI-A
		G3/4	194802	LFRS-3/4-D-5M-MAXI-A	194793	LFRS-3/4-D-MAXI-A
		G1	194814	LFRS-1-D-5M-MAXI-A	194805	LFRS-1-D-MAXI-A
Without pressure gauge						
Turned manually	Mini	G1/8	194705	LFRS-1/8-D-5M-O-MINI	194698	LFRS-1/8-D-O-MINI
		G1/4	194717	LFRS-1/4-D-5M-O-MINI	194710	LFRS-1/4-D-O-MINI
		G3/8	194729	LFRS-3/8-D-5M-O-MINI	194722	LFRS-3/8-D-O-MINI
	Midi	G1/4	194741	LFRS-1/4-D-5M-O-MIDI	194734	LFRS-1/4-D-O-MIDI
		G3/8	194753	LFRS-3/8-D-5M-O-MIDI	194746	LFRS-3/8-D-O-MIDI
		G1/2	194765	LFRS-1/2-D-5M-O-MIDI	194758	LFRS-1/2-D-O-MIDI
		G3/4	194777	LFRS-3/4-D-5M-O-MIDI	194770	LFRS-3/4-D-O-MIDI
	Maxi	G1/2	194789	LFRS-1/2-D-5M-O-MAXI	194782	LFRS-1/2-D-O-MAXI
		G3/4	194801	LFRS-3/4-D-5M-O-MAXI	194794	LFRS-3/4-D-O-MAXI
		G1	194813	LFRS-1-D-5M-O-MAXI	194806	LFRS-1-D-O-MAXI
Fully automatic	Mini	G1/8	194707	LFRS-1/8-D-5M-O-MINI-A	194699	LFRS-1/8-D-O-MINI-A
		G1/4	194719	LFRS-1/4-D-5M-O-MINI-A	194711	LFRS-1/4-D-O-MINI-A
		G3/8	194731	LFRS-3/8-D-5M-O-MINI-A	194723	LFRS-3/8-D-O-MINI-A
	Midi	G1/4	194743	LFRS-1/4-D-5M-O-MIDI-A	194735	LFRS-1/4-D-O-MIDI-A
		G3/8	194755	LFRS-3/8-D-5M-O-MIDI-A	194747	LFRS-3/8-D-O-MIDI-A
		G1/2	194767	LFRS-1/2-D-5M-O-MIDI-A	194759	LFRS-1/2-D-O-MIDI-A
		G3/4	194779	LFRS-3/4-D-5M-O-MIDI-A	194771	LFRS-3/4-D-O-MIDI-A
	Maxi	G1/2	194791	LFRS-1/2-D-5M-O-MAXI-A	194783	LFRS-1/2-D-O-MAXI-A
		G3/4	194803	LFRS-3/4-D-5M-O-MAXI-A	194795	LFRS-3/4-D-O-MAXI-A
		G1	194815	LFRS-1-D-5M-O-MAXI-A	194807	LFRS-1-D-O-MAXI-A

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Ordering data				
Pressure regulation range 0.5 ... 7 bar, rotary knob with integrated lock, connecting plates with connecting thread				
Condensate drain	Size	Connection	Grade of filtration 40 µm	
			Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi				
Turned manually	Mini	G1/8	194700	LFRS-1/8-D-7-MINI
		G1/4	194712	LFRS-1/4-D-7-MINI
		G3/8	194724	LFRS-3/8-D-7-MINI
	Midi	G1/4	194736	LFRS-1/4-D-7-MIDI
		G3/8	194748	LFRS-3/8-D-7-MIDI
		G1/2	194760	LFRS-1/2-D-7-MIDI
		G3/4	194772	LFRS-3/4-D-7-MIDI
	Maxi	G1/2	194784	LFRS-1/2-D-7-MAXI
		G3/4	194796	LFRS-3/4-D-7-MAXI
		G1	194808	LFRS-1-D-7-MAXI
Fully automatic	Mini	G1/8	194702	LFRS-1/8-D-7-MINI-A
		G1/4	194714	LFRS-1/4-D-7-MINI-A
		G3/8	194726	LFRS-3/8-D-7-MINI-A
	Midi	G1/4	194738	LFRS-1/4-D-7-MIDI-A
		G3/8	194750	LFRS-3/8-D-7-MIDI-A
		G1/2	194762	LFRS-1/2-D-7-MIDI-A
		G3/4	194774	LFRS-3/4-D-7-MIDI-A
	Maxi	G1/2	194786	LFRS-1/2-D-7-MAXI-A
		G3/4	194798	LFRS-3/4-D-7-MAXI-A
		G1	194810	LFRS-1-D-7-MAXI-A
Without pressure gauge				
Turned manually	Mini	G1/8	194701	LFRS-1/8-D-7-O-MINI
		G1/4	194713	LFRS-1/4-D-7-O-MINI
		G3/8	194725	LFRS-3/8-D-7-O-MINI
	Midi	G1/4	194737	LFRS-1/4-D-7-O-MIDI
		G3/8	194749	LFRS-3/8-D-7-O-MIDI
		G1/2	194761	LFRS-1/2-D-7-O-MIDI
		G3/4	194773	LFRS-3/4-D-7-O-MIDI
	Maxi	G1/2	194785	LFRS-1/2-D-7-O-MAXI
		G3/4	194797	LFRS-3/4-D-7-O-MAXI
		G1	194809	LFRS-1-D-7-O-MAXI
Fully automatic	Mini	G1/8	194703	LFRS-1/8-D-7-O-MINI-A
		G1/4	194715	LFRS-1/4-D-7-O-MINI-A
		G3/8	194727	LFRS-3/8-D-7-O-MINI-A
	Midi	G1/4	194739	LFRS-1/4-D-7-O-MIDI-A
		G3/8	194751	LFRS-3/8-D-7-O-MIDI-A
		G1/2	194763	LFRS-1/2-D-7-O-MIDI-A
		G3/4	194775	LFRS-3/4-D-7-O-MIDI-A
	Maxi	G1/2	194787	LFRS-1/2-D-7-O-MAXI-A
		G3/4	194799	LFRS-3/4-D-7-O-MAXI-A
G1	194811	LFRS-1-D-7-O-MAXI-A		

Filter regulators LFR/LFRS, D series, metal design

FESTO

Technical data

Ordering data						
Pressure regulation range 0.5 ... 12 bar, directly actuated diaphragm regulator with integrated return flow function, rotary knob with integrated lock, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Maxi	G½	194818	LFRS-½-D-5M-DI-MAXI	194816	LFRS-½-D-DI-MAXI
		G¾	194824	LFRS-¾-D-5M-DI-MAXI	194822	LFRS-¾-D-DI-MAXI
		G1	194830	LFRS-1-D-5M-DI-MAXI	194828	LFRS-1-D-DI-MAXI
Fully automatic	Maxi	G½	194836	LFRS-½-D-5M-DI-MAXI-A	194834	LFRS-½-D-DI-MAXI-A
		G¾	194842	LFRS-¾-D-5M-DI-MAXI-A	194840	LFRS-¾-D-DI-MAXI-A
		G1	194848	LFRS-1-D-5M-DI-MAXI-A	194846	LFRS-1-D-DI-MAXI-A
Without pressure gauge						
Turned manually	Maxi	G½	194819	LFRS-½-D-5M-O-DI-MAXI	194817	LFRS-½-D-O-DI-MAXI
		G¾	194825	LFRS-¾-D-5M-O-DI-MAXI	194823	LFRS-¾-D-O-DI-MAXI
		G1	194831	LFRS-1-D-5M-O-DI-MAXI	194829	LFRS-1-D-O-DI-MAXI
Fully automatic	Maxi	G½	194837	LFRS-½-D-5M-O-DI-MAXI-A	194835	LFRS-½-D-O-DI-MAXI-A
		G¾	194843	LFRS-¾-D-5M-O-DI-MAXI-A	194841	LFRS-¾-D-O-DI-MAXI-A
		G1	194849	LFRS-1-D-5M-O-DI-MAXI-A	194847	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, rotary knob with integrated lock, connecting plates with connecting thread						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi						
Turned manually	Maxi	G½	–		194820	LFRS-½-D-7-DI-MAXI
		G¾	–		194826	LFRS-¾-D-7-DI-MAXI
		G1	–		194832	LFRS-1-D-7-DI-MAXI
Fully automatic	Maxi	G½	–		194838	LFRS-½-D-7-DI-MAXI-A
		G¾	–		194844	LFRS-¾-D-7-DI-MAXI-A
		G1	–		194850	LFRS-1-D-7-DI-MAXI-A
Without pressure gauge						
Turned manually	Maxi	G½	–		194821	LFRS-½-D-7-O-DI-MAXI
		G¾	–		194827	LFRS-¾-D-7-O-DI-MAXI
		G1	–		194833	LFRS-1-D-7-O-DI-MAXI
Fully automatic	Maxi	G½	–		194839	LFRS-½-D-7-O-DI-MAXI-A
		G¾	–		194845	LFRS-¾-D-7-O-DI-MAXI-A
		G1	–		194851	LFRS-1-D-7-O-DI-MAXI-A

Filter regulators LFR/LFRS, D series, metal design

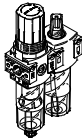
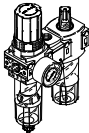
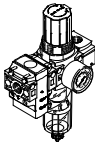
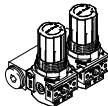
Technical data

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Filter regulators LFR, D series, polymer

Product range overview D series service units, polymer

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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	■	–	–	–	–

Filter regulators LFR, D series, polymer

Product range overview D series service units, polymer

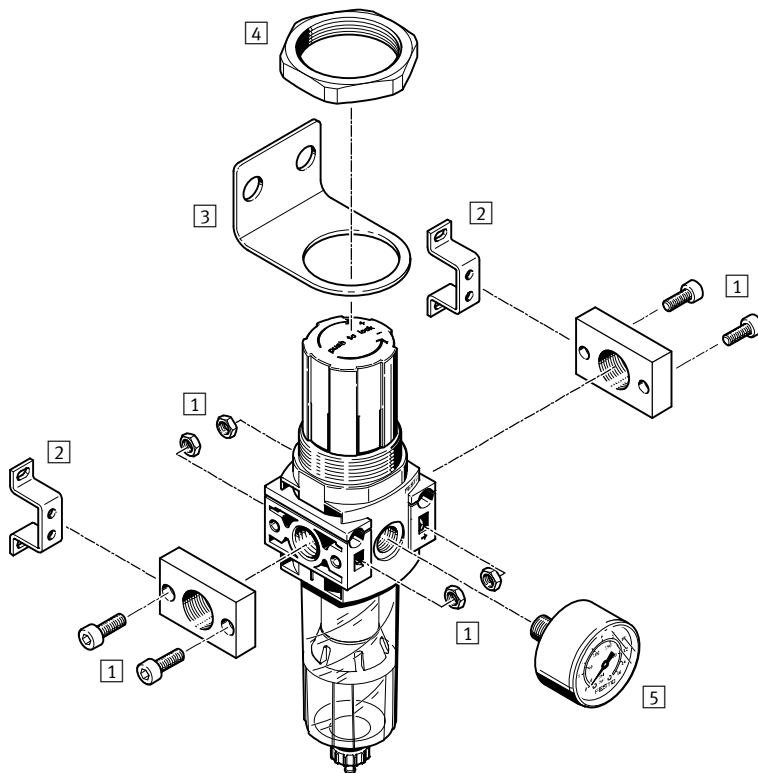
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Type	Size	Condensate drain		Pressure display		Actuator lock	Regulating functions		→ Page/ Internet
		Manual rotary	Semi-automatic	With pressure gauge	Without pressure gauge	Rotary knob with detent	With secondary venting	With return flow function	
Service units									
FRC	Mini	■	■	■	-	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	-	■	-	■	■	■	frc
LFR-K	Mini	■	-	■	-	■	■	■	lfr
Individual devices									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	26
Pressure regulators LR	Mini	-	-	■	■	■	■	■	lr
Pressure regulator combinations LRB-K	Mini	-	-	-	■	■	■	■	lrb
On-off valves HE	Mini	-	-	-	■	-	-	-	he

Filter regulators LFR, D series, polymer

Peripherals overview

FESTO



Mounting attachments and accessories

	→ Page/ Internet
1 Connecting plate kit PBL	pbl
2 Mounting bracket HFOE	hfoe-d
3 Mounting bracket HR-D	hr-d
4 Hex nut HMR	hmr-d
5 Pressure gauge MA	32

Filter regulators LFR, D series, polymer

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Type codes

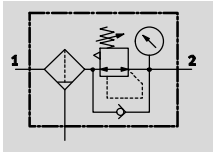
		LFR	–	1/4	–	DB	–	7	–	5M	–	0	–	MINI	–	H
Basic function																
LFR	Filter regulator															
Pneumatic connection																
1/4	Thread G1/4															
Series																
DB	Series															
Pressure regulation range																
7	0.5 ... 7 bar															
Grade of filtration																
	40 µm															
5M	5 µm															
Pressure gauge																
	With pressure gauge															
0	Without pressure gauge															
Size																
	MINI															
Condensate drain																
	Manual rotary															
H	Semi-automatic															

Filter regulators LFR, D series, polymer

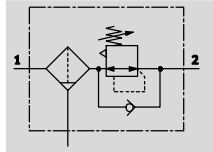
Technical data

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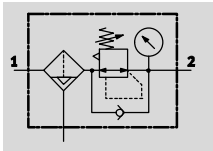
Manual rotary condensate drain,
with pressure gauge



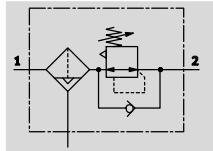
Manual rotary condensate drain,
without pressure gauge



Semi-automatic condensate drain,
with pressure gauge



Semi-automatic condensate drain,
without pressure gauge



-  - Flow rate
500 ... 1,200 l/min
-  - Temperature range
-5 ... +50 °C
-  - Operating pressure
1.5 ... 10 bar

- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate

- Good regulating characteristics with minimal hysteresis
- With manual or semi-automatic condensate drain

- Setting values are secured by locking the rotary knob
- Choice of filter cartridges: 5 µm or 40 µm
- New filter cartridges → 31

General technical data		
Size	Mini	
	with pressure gauge	without pressure gauge
Pneumatic connection 1, 2	G $\frac{1}{4}$	
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 $\pm 5^\circ$	
Grade of filtration [µm]	5	
	40	
Air purity class at the output	Compressed air according to ISO 8573-1:2010 [6:8:4] (grade of filtration 5 µm)	
	Compressed air according to ISO 8573-1:2010 [7:8:4] (grade of filtration 40 µm)	
	Inert gases	
Condensate drain	Manual rotary	
	Semi-automatic	
Regulator lock	Rotary knob with detent	
Pressure regulation range [bar]	0.5 ... 7	
Max. hysteresis [bar]	0.5	
Pressure indication	Via pressure gauge	G $\frac{1}{8}$ prepared
Pressure gauge connection	G $\frac{1}{8}$	

Standard nominal flow rate ¹⁾ qnN [l/min]		
Size	Mini	
	5 µm	40 µm
Grade of filtration	≥ 1,000	≥ 1,200

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

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

Filter regulators LFR, D series, polymer

FESTO

Technical data

Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:9:–] Inert gases
Ambient temperature [°C]	–5 ... +50
Temperature of medium [°C]	–5 ... +50
Corrosion resistance class CRC ¹⁾	1

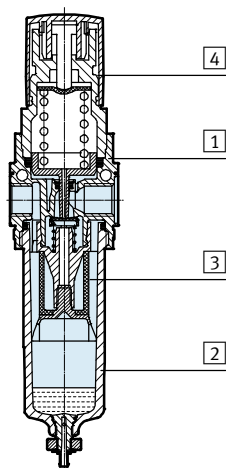
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

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]	
Size	Mini
Filter regulator	200

Materials

Sectional view

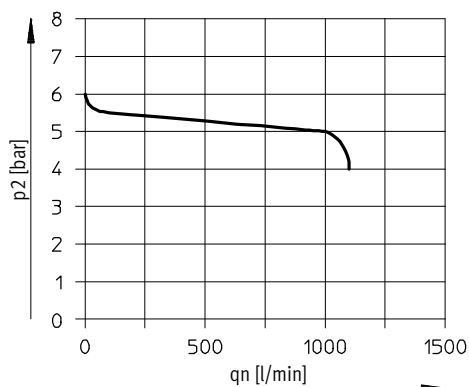


Filter regulator	Mini
1 Housing	PA-reinforced
2 Bowl	PC
3 Filter	PE
4 Rotary knob	POM
– Seals	NBR
Note on materials	RoHS-compliant

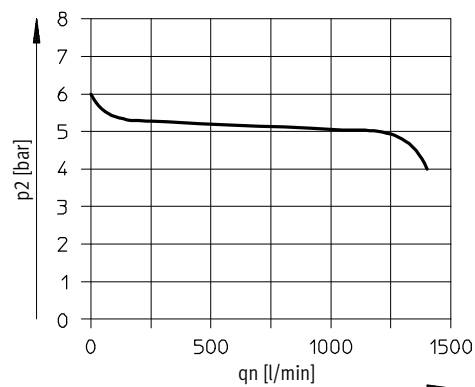
Standard flow rate q_n as a function of output pressure p_2

Operating pressure $p_1 = 10$ bar

Grade of filtration 5 μm



Grade of filtration 40 μm



Note

Slight leakage at the output has been taken into account in the design. It improves the control behaviour of the non pre-pressure

compensated controller. In a few cases leakage may amount to 500 l/h.

Filter regulators LFR, D series, polymer

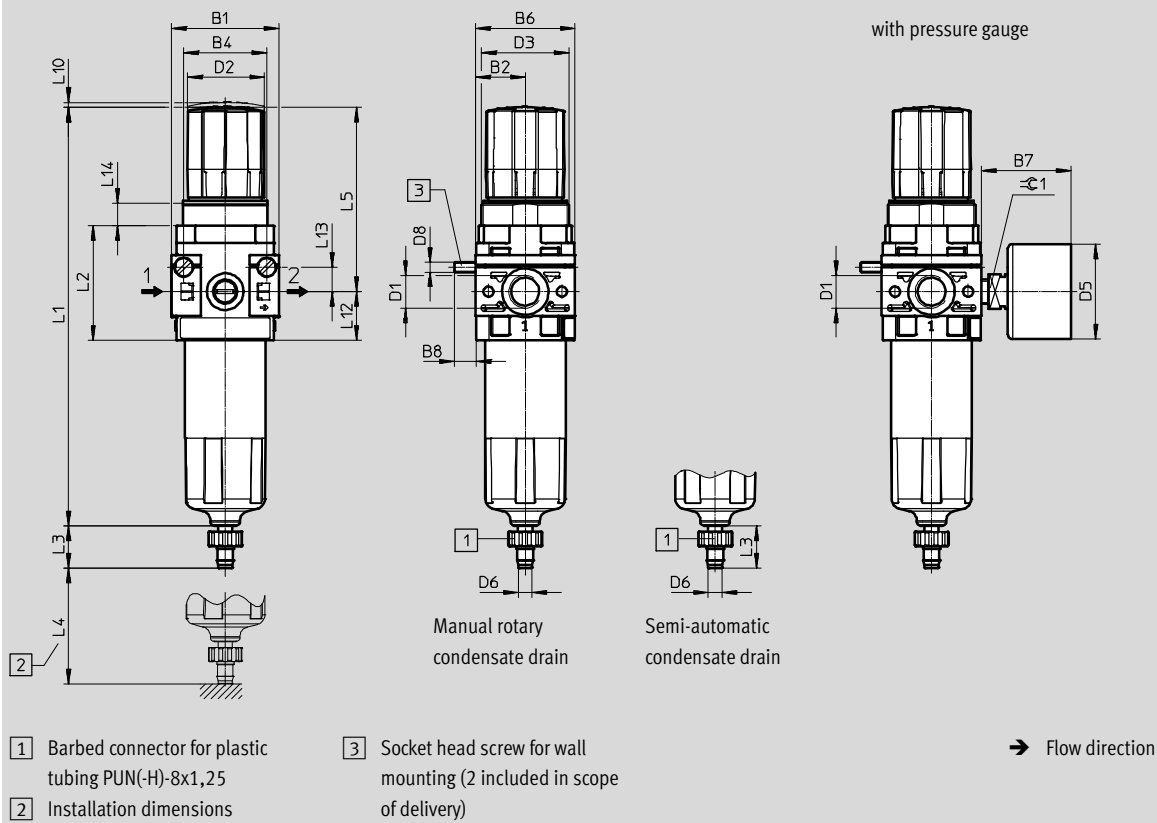
Technical data

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Dimensions

Download CAD data → www.festo.com

Mini



Type	B1	B2	B4	B6	B7 max.	B8	D1	D2 Ø	D3	D5 Ø	D6 Ø	D8
LFR-1/4-DB	44	20.5	34	41	37	9	G1/4	32	M36x1.5	39	5.6	M4

Type	L1	L2	L3	L4 min.	L5	L10	L12	L13	L14	≈ 1
LFR-1/4-DB	171.7	47	17.3	60	76	2	20	10	9	14

Ordering data

Pressure regulation range 0.5 ... 7 bar

Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type

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

Manual rotary	Mini	G1/4	539689	LFR-1/4-DB-7-5M-MINI	539685	LFR-1/4-DB-7-MINI
Semi-automatic	Mini	G1/4	539690	LFR-1/4-DB-7-5M-MINI-H	539686	LFR-1/4-DB-7-MINI-H

Without pressure gauge

Manual rotary	Mini	G1/4	537644	LFR-1/4-DB-7-5M-O-MINI	537647	LFR-1/4-DB-7-O-MINI
Semi-automatic	Mini	G1/4	537646	LFR-1/4-DB-7-5M-O-MINI-H	537645	LFR-1/4-DB-7-O-MINI-H

Filter regulators LFR/LFRS, D series

Accessories

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Filter cartridges, D series, metal design



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

Filter cartridges, D series, polymer



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

Filter regulators LFR/LFRS, D series

Accessories

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Ordering data – Pressure gauge MA						
	Nominal size	Pneumatic connection	Indicating range		Part No.	Type
			[bar]	[psi]		
	Pressure gauge MA				Technical data ➔ Internet: ma	
	27	M5	0 ... 10	–	526323	MA-27-10-M5
	40	G $\frac{1}{8}$	0 ... 10	0 ... 145	359874	MA-40-10- $\frac{1}{8}$
			0 ... 16	0 ... 232	345395	MA-40-16- $\frac{1}{8}$
	50	G $\frac{1}{4}$	0 ... 10	0 ... 145	359873	MA-50-10- $\frac{1}{4}$
			0 ... 16	0 ... 232	356759	MA-50-16- $\frac{1}{4}$
	Pressure gauge MA, DIN EN 837-1				Technical data ➔ Internet: ma	
	40	R $\frac{1}{8}$	0 ... 10	0 ... 145	162835	MA-40-10- $\frac{1}{8}$ -EN
		G $\frac{1}{4}$	0 ... 10	0 ... 145	183900	MA-40-10-G $\frac{1}{4}$ -EN
	Flanged pressure gauge FMA, DIN EN 837-1				Technical data ➔ Internet: fma	
40	G $\frac{1}{4}$	0 ... 10	0 ... 145	159596	FMA-40-10- $\frac{1}{4}$ -EN	
		0 ... 16	0 ... 232	159597	FMA-40-16- $\frac{1}{4}$ -EN	
50	G $\frac{1}{4}$	0 ... 10	0 ... 145	159599	FMA-50-10- $\frac{1}{4}$ -EN	
		0 ... 16	0 ... 232	159600	FMA-50-16- $\frac{1}{4}$ -EN	

Ordering data – Pressure sensor SPAU						Technical data → Internet: spau	
	Pneumatic connection	Switching output	Display type	Electrical connection	Part No.	Type	
Pressure sensor SPAU for direct mounting on the service unit with pressure gauge connection (adapter for pneumatic connection included in scope of delivery), pressure measuring range 0 ... 10 bar, relative pressure measurement							
	Male thread R1/8	2x PNP or 2x NPN, switchable	Illuminated LCD	M8x1, 4-pin	8001203	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M8D	
	Male thread R1/4			M12x1, 4-pin	8001206	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D	
				M8x1, 4-pin	8001209	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D	
				M12x1, 4-pin	8001208	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D	