

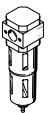
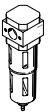
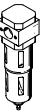
## Filter regulators LFR/LFRS, D series

FESTO



Filter regulators LFR/LFRS, D series, metal

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

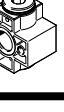
Type	Size	Pneumatic connection										Pressure regulation range [bar]			Grade of filtration [ $\mu\text{m}$ ]			
		M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5	0.5	2.5	0.01	1	5	40
<b>Service units</b>																		
FRC/FRCS		Mini	-	-	■	■	■	-	-	-	-	■	■	-	-	-	■	■
		Midi	-	-	-	■	■	■	■	-	-	■	■	-	-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

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

Type	Size	Bowl guard		Condensate drain		Pressure indicator	Actuator lock	Supply voltage		Options		→ Page/ Internet	
		Metal bowl guard	Plastic bowl	Manual	Semi-automatic			With pressure gauge	Without pressure gauge	Rotary knob with latch	Rotary knob with integrated lock		
<b>Service units</b>													
FRC/FRCS	Mini	■	–	■	–	■	■	■	■	■	–	–	frc
	Midi	■	–	■	–	■	■	■	■	■	–	–	–
	Maxi	■	–	■	–	■	■	■	■	■	–	■	–
FRC-K	Mini	■	–	■	–	■	■	–	■	–	■	–	frc
	Midi	■	–	■	–	■	■	–	■	–	■	–	–
	Maxi	■	–	■	–	■	■	–	■	–	■	■	–
LFR-K	Mini	■	–	■	–	■	■	–	■	■	■	–	lfr
	Midi	■	–	■	–	■	■	–	■	■	■	–	–
	Maxi	■	–	■	–	■	■	–	■	■	■	■	–
<b>Individual devices</b>													
Filter regulators <b>LFR/LFRS</b>	Mini	■	–	■	–	■	■	■	■	–	–	–	6
	Midi	■	–	■	–	■	■	■	■	–	–	–	–
	Maxi	■	–	■	–	■	■	■	■	–	–	■	–
Filters <b>LF</b>	Mini	■	–	■	–	■	–	–	–	–	–	–	lf
	Midi	■	–	■	–	■	–	–	–	–	–	–	–
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–
Fine and micro filters <b>LFMA/LFMB</b>	Mini	■	–	■	–	■	–	–	–	–	–	–	lfma, lfmb
	Midi	■	–	■	–	■	–	–	–	–	–	–	–
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–
Activated carbon filters <b>LFX</b>	Mini	■	–	–	–	–	–	–	–	–	–	–	lfx
	Midi	■	–	–	–	–	–	–	–	–	–	–	–
	Maxi	■	–	–	–	–	–	–	–	–	–	–	–
Filter combinations <b>LFMBA</b>	Mini	■	–	■	–	■	–	–	–	–	–	–	lfmba
	Midi	■	–	■	–	■	–	–	–	–	–	–	–
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–
Pressure regulators <b>LR/LRS</b>	Mini	–	–	–	–	–	■	■	■	–	–	–	lr
	Midi	–	–	–	–	–	■	■	■	–	–	–	–
	Maxi	–	–	–	–	–	■	■	■	–	–	■	–

Filter regulators LFR/LFRS, D series, metal

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

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

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

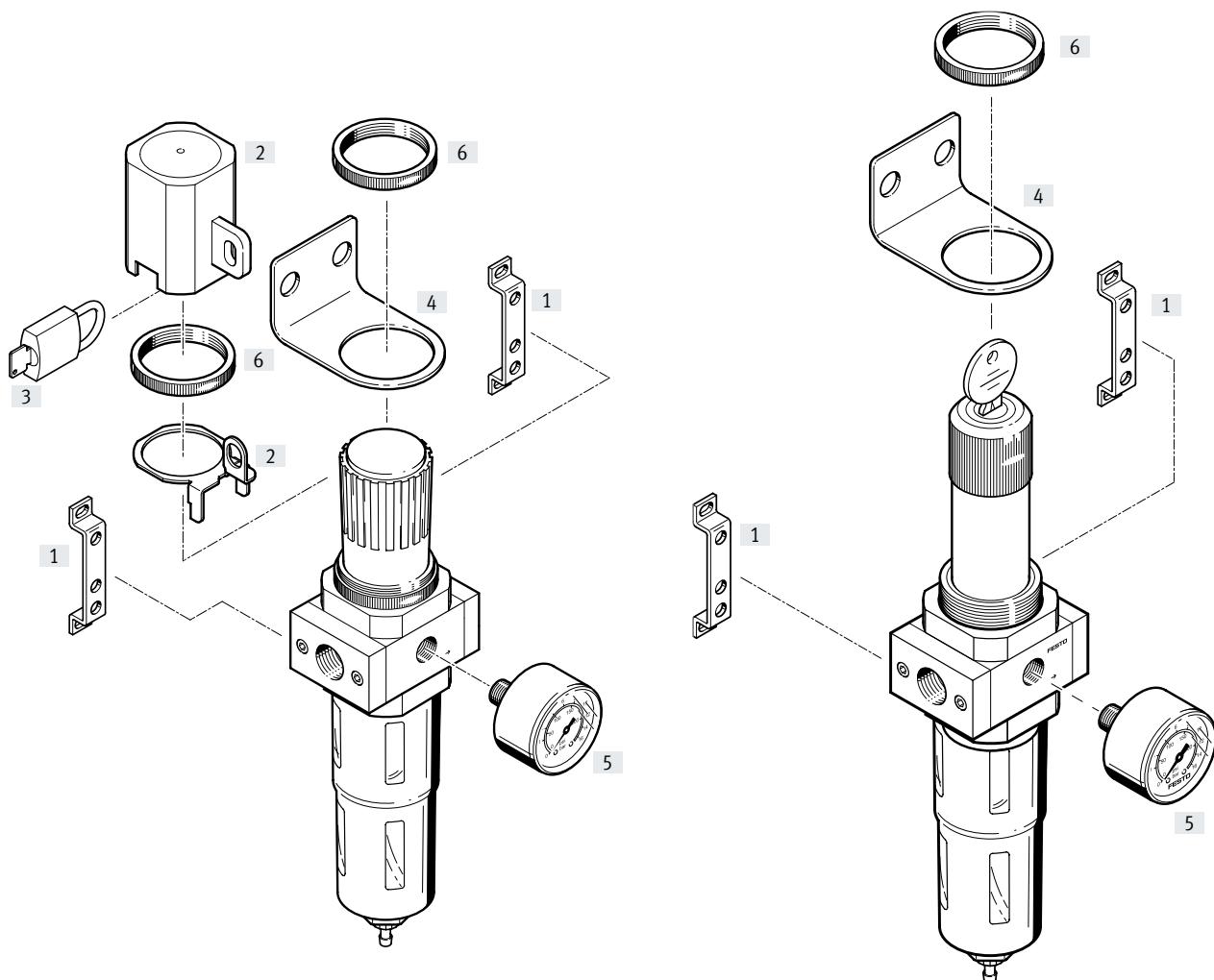
Type	Size	Bowl guard		Pressure indicator		Actuator lock		Supply voltage		Options		→ Page/ Internet	
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with latch	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	With non-return function	Pressure switch	
<b>Individual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

## Peripherals overview

### Mini/Midi/Maxi

Filter regulator LFR

Filter regulator LFRS, lockable



### Mounting attachments and accessories

	Rotary knob with latch	Rotary knob, lockable	→ Page/Internet
[1] Mounting bracket HFOE	■	■	hfoe-d
[2] Regulator lock LRVS	■	—	lrvs-d
[3] Padlock LRVS-D	■	—	lrvs-d
[4] Mounting bracket HR-D	■	■	hr-d
[5] Pressure gauge MA	■	■	28
[6] Knurled nut (included in the scope of delivery) HMR	■	■	—

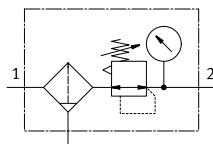
## Type codes

<b>001</b>	<b>Series</b>		<b>006</b>	<b>Pressure gauge</b>	
<b>LFR</b>	Filter regulator			With pressure gauge	
<b>LFRS</b>	Filter regulator, lockable		<b>0</b>	Without pressure gauge	
<b>002</b>	<b>Pneumatic connection</b>		<b>007</b>	<b>Function</b>	
<b>1/8</b>	Female thread G1/8			Directly actuated pressure regulator (MICRO, MINI, MIDI), pilot actuated pressure regulator (only MAXI)	
<b>1/4</b>	Female thread G1/4		<b>DI</b>	Directly actuated pressure regulator with integrated return flow function (only MAXI)	
<b>3/8</b>	Female thread G3/8				
<b>1/2</b>	Female thread G1/2				
<b>3/4</b>	Female thread G3/4				
<b>1</b>	Female thread G1				
<b>003</b>	<b>Version</b>		<b>008</b>	<b>Size</b>	
<b>D</b>	D series, metal		<b>MINI</b>	Grid dimension 40 mm (without connecting plates)	
<b>004</b>	<b>Pressure regulation range</b>		<b>MIDI</b>	Grid dimension 55 mm (without connecting plates)	
<b>7</b>	0.5 ... 7 bar (0.05 ... 0.7 MPa)		<b>MAXI</b>	Grid dimension 66 mm (without connecting plates)	
	0.5 ... 12 bar (0.05 ... 1.2 MPa)				
<b>005</b>	<b>Grade of filtration</b>		<b>009</b>	<b>Condensate drain</b>	
	40 µm			Manually rotating	
<b>5M</b>	5 µm		<b>A</b>	Fully automatic	
			<b>010</b>	<b>Display unit</b>	
				Bar/psi/without	
			<b>MPA</b>	MPa	

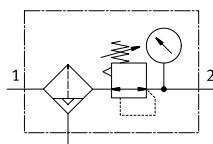
## Datasheet

### LFR/LFRS

Condensate drain, manually rotating,  
with pressure gauge

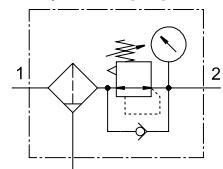


Condensate drain, semi- or fully auto-  
matic, with pressure gauge

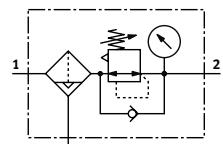


### LFR/LFRS-...-DI-MAXI

Condensate drain, manually rotating,  
with pressure gauge



Condensate drain, fully automatic,  
with pressure gauge



- - Flow rate  
110 ... 11000 l/min
- - Temperature range  
-10 ... +60 °C
- - Operating pressure  
1 ... 16 bar  
(0.1 ... 1.6 MPa)

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

- Two pressure regulation ranges:  
0.5 ... 7 bar (0.05 ... 0.7 MPa) and  
0.5 ... 12 bar (0.05 ... 1.2 MPa)
- Two pressure gauge connections for flexible installation
- Setting values are secured by locking the rotary knob

- Choice of manual, semi-automatic or fully automatic condensate drain
- Choice of 5 µm or 40 µm filter inserts
- New filter cartridges → page 27
- Pressure sensor (optional)  
→ page 28

### General technical data

Size	Mini	Midi	Maxi
Pneumatic connection 1, 2 <sup>1)</sup>	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		
Mounting position	Vertical ±5°		
Grade of filtration [µm]	5		
	40		
Air purity class at the output	Compressed air to ISO 8573-1:2010 [6:8:4] (grade of filtration 5 µm) Compressed air to ISO 8573-1:2010 [7:8:4] (grade of filtration 40 µm) Inert gases		
Bowl guard	Metal bowl guard		
Condensate drain	Manual		
	Fully automatic		
Actuator lock	Rotary knob with latch		
	Rotary knob with integrated lock		
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa) 0.5 ... 12 (0.05 ... 1.2 MPa)		
Max. pressure hysteresis [bar]	0.2 (0.02 MPa)		0.4 (0.04 MPa)
Pressure indication	With pressure gauge		
	Prepared for G1/8	Prepared for G1/4	Prepared for G1/4
Max. condensate volume [cm <sup>3</sup> ]	22	43	80 <sup>2)</sup>

1) Connecting plates with threaded connection

2) The max. condensate volume for the LFR/LFRS-...-DI-MAXI is 43 cm<sup>3</sup>.

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

## Datasheet

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]										
Size	Mini			Midi				Maxi		
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Pressure regulation range, grade of filtration 0.5 ... 7 bar (0.05 ... 0.7 MPa), 40 µm	900	1500	1700	2100	3200	3900	4000	9500 (7600) <sup>2)</sup>	10000 (7700) <sup>2)</sup>	11000 (7800) <sup>2)</sup>
	650	1200	1350	1600	2400	2600	2600	7500 (4000) <sup>2)</sup>	7600 (5800) <sup>2)</sup>	8000 (6000) <sup>2)</sup>
	750	1400	1600	2000	3100	3400	3400	9400 (4500) <sup>2)</sup>	9700 (6800) <sup>2)</sup>	10000 (7000) <sup>2)</sup>

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) With the LFR/LFRS-...-DI.

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

Operating and environmental conditions				
Condensate drain	Manual		Fully automatic	
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)		2 ... 12 (0.2 ... 1.2 MPa)	
Operating medium	Compressed air to ISO 8573-1:2010 [-:9:-]		Compressed air to ISO 8573-1:2010 [7:9:-]	
Ambient temperature [°C]	-10 ... +60		+5 ... +60	
Temperature of medium [°C]	-10 ... +60		+5 ... +60	
Storage temperature [°C]	-10 ... +60			
Corrosion resistance class CRC <sup>1)</sup>	2			

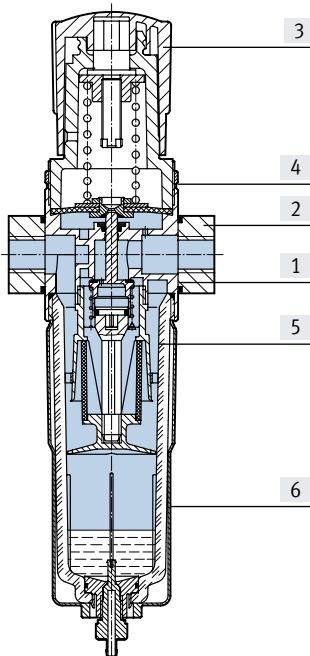
1) Further information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc).

Weight [g]				
Size	Mini	Midi	Maxi	Connection G1/2, G3/4
With pressure gauge				
LFR-...	460	920	1370	1470
LFR-...-DI	-	-	1670	1670
LFRS-...	560	1160	1470	1570
LFRS-...-DI	-	-	1950	1950
Without pressure gauge				
LFR-...	410	830	1300	1400
LFR-...-DI	-	-	1600	1600
LFRS-...	510	1070	1400	1500
LFRS-...-DI	-	-	1880	1880

## Datasheet

### Materials

#### Sectional view

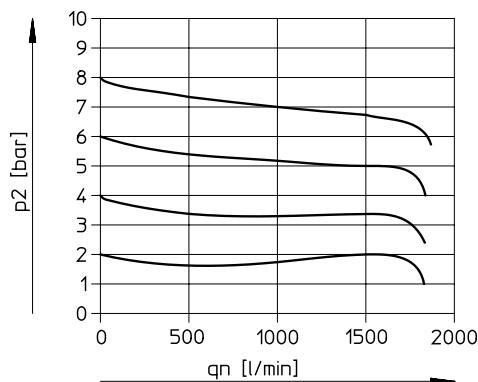


[1]	Housing	Die-cast zinc
[2]	Connecting plates	Die-cast zinc/aluminium
[3]	Regulator knob	PA
[4]	Knurled nut	Aluminium
[5]	Bowl	PC
[6]	Metal bowl guard	Aluminium
-	Seals	NBR
Note on materials		RoHS-compliant

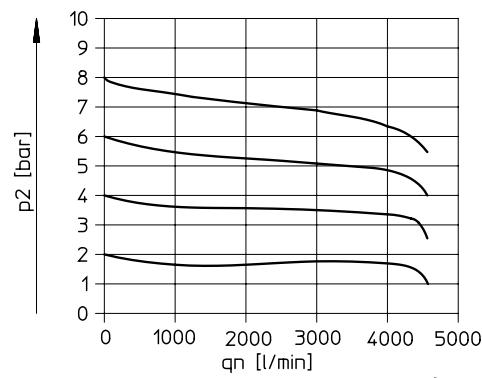
## Datasheet

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

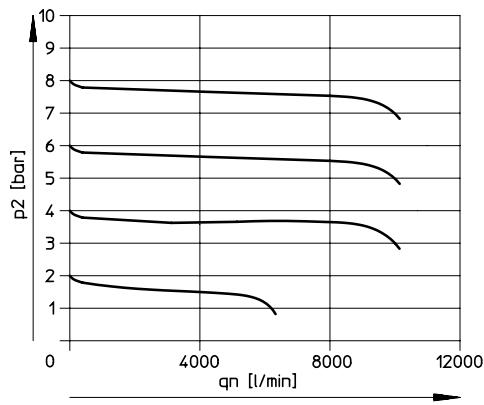
LFR/LFRS-1/4-D-MINI



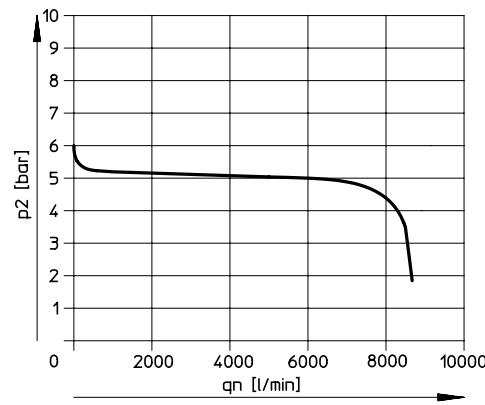
LFR/LFRS-1/2-D-MIDI



LFR/LFRS-1-D-MAXI



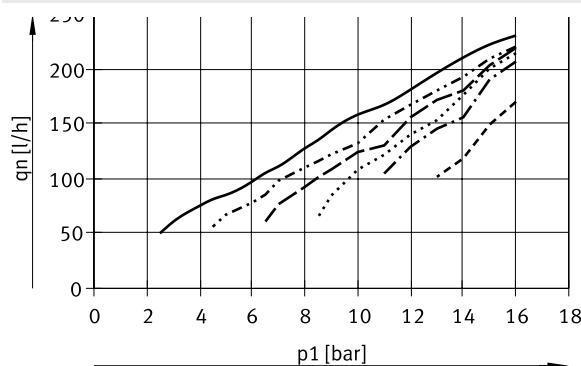
LFR/LFRS-1-D-DI-MAXI

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

In order to improve the control performance, internal air consumption depending on the input pressure is integrated into the design with the LFR/LFRS-...-MAXI.

Internal air consumption  $q_n$  as a function of input pressure  $p_1$ 

LFR/LFRS-...-MAXI

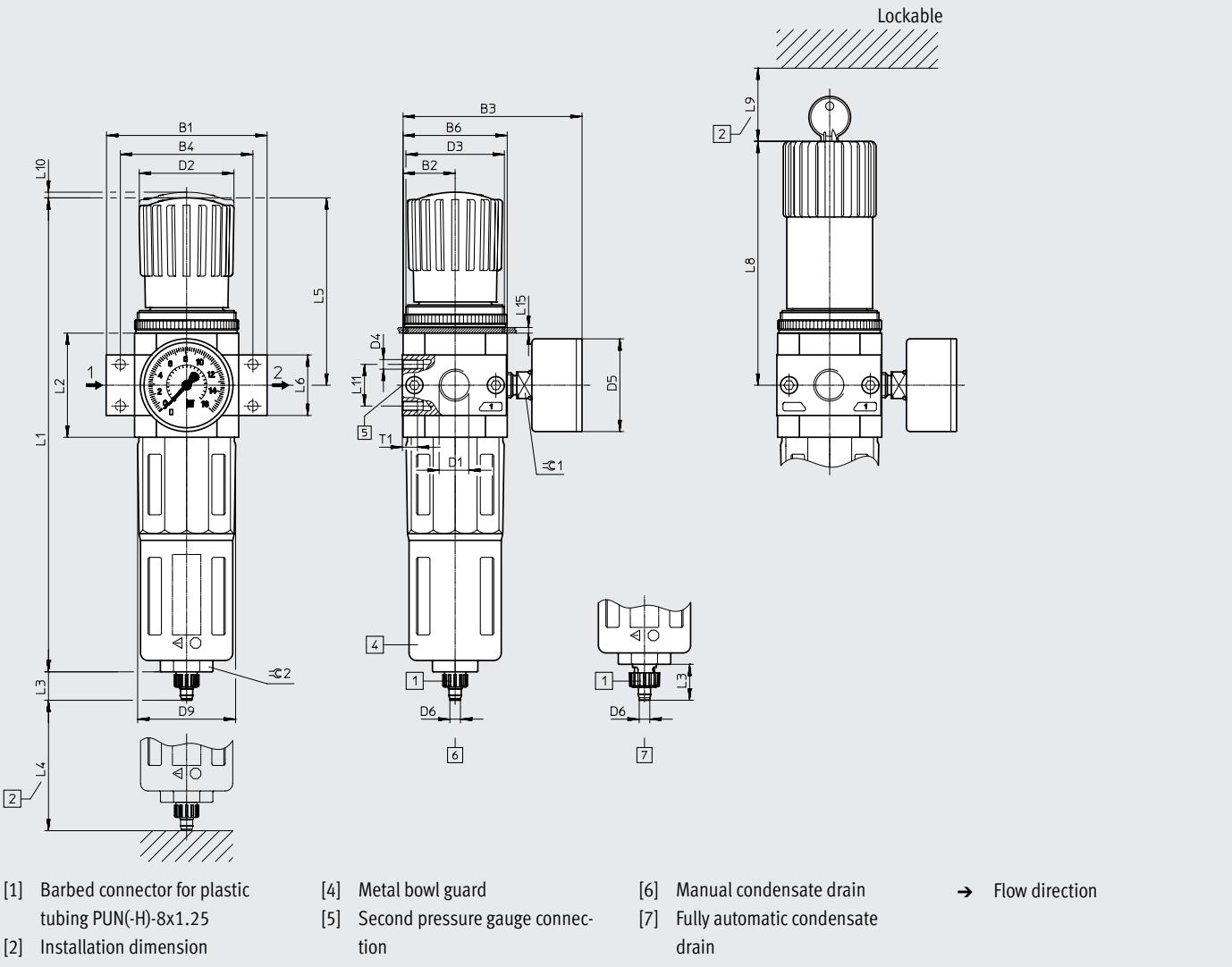


- p<sub>2</sub> = 2 bar (0.2 MPa)
- - - - - p<sub>2</sub> = 4 bar (0.4 MPa)
- - - - - p<sub>2</sub> = 6 bar (0.6 MPa)
- p<sub>2</sub> = 8 bar (0.8 MPa)
- - - - - p<sub>2</sub> = 10 bar (1 MPa)
- - - - - p<sub>2</sub> = 12 bar (1.2 MPa)

## Datasheet

## Dimensions

Mini/Midi/Maxi

Download CAD data → [www.festo.com](http://www.festo.com)

Type	B1	B2	B3	B4	B6	D1	D2	D3	D4	D5	D6	D9
<b>Mini</b>												
LFR/LFRS-1/8-D-MINI (A)	64	20	76	~52	40	G1/8		31	M36x1.5	M4	39	5.6
LFR/LFRS-1/4-D-MINI (A)						G1/4						38
LFR/LFRS-3/8-D-MINI (A)	70					G3/8						
<b>Midi</b>												
LFR/LFRS-1/4-D-MIDI (A)						G1/4		50	M52x1.5	M5	39 (49) <sup>1)</sup>	5.6
LFR/LFRS-3/8-D-MIDI (A)	~85	27.5	~94.5	~70	55	G3/8						52
LFR/LFRS-1/2-D-MIDI (A)						G1/2						
LFR/LFRS-3/4-D-MIDI (A)						G1/2						
<b>Maxi</b>												
LFR/LFRS-1/2-D-MAXI (A)						106		31	M36x1.5			
LFR/LFRS-1/2-D-DI-MAXI (A)	96					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)						106		31	M36x1.5			
LFR/LFRS-1-D-DI-MAXI (A)						105		49	M52x1.5			

1) Pressure gauge with outer scale in MPa and inner scale in bar

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

## Datasheet

Type	L1	L2	L3	L4 min.	L5	L6	L8	L9	L10	L11 ±0.2	L15 max.	T1 min.	=G 1	=G 2
<b>Mini</b>														
LFR/LFRS-1/8-D-MINI (A)	192.9	40	15 (19) <sup>1)</sup>	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)														
<b>Midi</b>														
LFR/LFRS-1/4-D-MIDI (A)	250	55 ±0.1	15 (19) <sup>1)</sup>	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)														
<b>Maxi</b>														
LFR/LFRS-1/2-D-MAXI (A)	252	66	15 (19) <sup>1)</sup>	90	82	32	111	60	3	22	4	8	14	24
LFR/LFRS-1/2-D-DI-MAXI (A)					~105	32	135		4					
LFR/LFRS-3/4-D-MAXI (A)					82	32	111		3					
LFR/LFRS-3/4-D-DI-MAXI (A)					~105	36	135		4					
LFR/LFRS-1-D-MAXI (A)					82	40	111		3					
LFR/LFRS-1-D-DI-MAXI (A)					~105	41	135		4					

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

## Datasheet

Ordering data						
Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa), rotary knob with latch, connecting plates with threaded connection						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part no.	Type	Part no.	Type
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>						
Manual	Mini	G1/8	<b>162718</b>	LFR-1/8-D-5M-MINI	<b>159630</b>	LFR-1/8-D-MINI
		G1/4	<b>162719</b>	LFR-1/4-D-5M-MINI	<b>159631</b>	LFR-1/4-D-MINI
		G3/8	<b>162720</b>	LFR-3/8-D-5M-MINI	<b>162682</b>	LFR-3/8-D-MINI
	Midi	G1/4	<b>186483</b>	LFR-1/4-D-5M-MIDI	<b>186481</b>	LFR-1/4-D-MIDI
		G3/8	<b>162721</b>	LFR-3/8-D-5M-MIDI	<b>159582</b>	LFR-3/8-D-MIDI
		G1/2	<b>162722</b>	LFR-1/2-D-5M-MIDI	<b>159584</b>	LFR-1/2-D-MIDI
		G3/4	<b>162723</b>	LFR-3/4-D-5M-MIDI	<b>162683</b>	LFR-3/4-D-MIDI
	Maxi	G1/2	<b>186491</b>	LFR-1/2-D-5M-MAXI	<b>186489</b>	LFR-1/2-D-MAXI
		G3/4	<b>162724</b>	LFR-3/4-D-5M-MAXI	<b>159632</b>	LFR-3/4-D-MAXI
		G1	<b>162725</b>	LFR-1-D-5M-MAXI	<b>159633</b>	LFR-1-D-MAXI
Fully automatic	Mini	G1/8	<b>162726</b>	LFR-1/8-D-5M-MINI-A	<b>159634</b>	LFR-1/8-D-MINI-A
		G1/4	<b>162727</b>	LFR-1/4-D-5M-MINI-A	<b>159635</b>	LFR-1/4-D-MINI-A
		G3/8	<b>162728</b>	LFR-3/8-D-5M-MINI-A	<b>162684</b>	LFR-3/8-D-MINI-A
	Midi	G1/4	<b>186486</b>	LFR-1/4-D-5M-MIDI-A	<b>186484</b>	LFR-1/4-D-MIDI-A
		G3/8	<b>162729</b>	LFR-3/8-D-5M-MIDI-A	<b>159583</b>	LFR-3/8-D-MIDI-A
		G1/2	<b>162730</b>	LFR-1/2-D-5M-MIDI-A	<b>159585</b>	LFR-1/2-D-MIDI-A
		G3/4	<b>162731</b>	LFR-3/4-D-5M-MIDI-A	<b>162685</b>	LFR-3/4-D-MIDI-A
	Maxi	G1/2	<b>186494</b>	LFR-1/2-D-5M-MAXI-A	<b>186492</b>	LFR-1/2-D-MAXI-A
		G3/4	<b>162732</b>	LFR-3/4-D-5M-MAXI-A	<b>159636</b>	LFR-3/4-D-MAXI-A
		G1	<b>162733</b>	LFR-1-D-5M-MAXI-A	<b>159637</b>	LFR-1-D-MAXI-A
<b>With pressure gauge, outer scale in MPa, inner scale in bar</b>						
Manual	Mini	G1/8	<b>8002316</b>	LFR-1/8-D-5M-MINI-MPA	<b>8002278</b>	LFR-1/8-D-MINI-MPA
		G1/4	<b>8002317</b>	LFR-1/4-D-5M-MINI-MPA	<b>8002279</b>	LFR-1/4-D-MINI-MPA
		G3/8	<b>8002318</b>	LFR-3/8-D-5M-MINI-MPA	<b>8002296</b>	LFR-3/8-D-MINI-MPA
	Midi	G1/4	<b>8002373</b>	LFR-1/4-D-5M-MIDI-MPA	<b>8002372</b>	LFR-1/4-D-MIDI-MPA
		G3/8	<b>8002319</b>	LFR-3/8-D-5M-MIDI-MPA	<b>8002258</b>	LFR-3/8-D-MIDI-MPA
		G1/2	<b>8002320</b>	LFR-1/2-D-5M-MIDI-MPA	<b>8002260</b>	LFR-1/2-D-MIDI-MPA
		G3/4	<b>8002321</b>	LFR-3/4-D-5M-MIDI-MPA	<b>8002297</b>	LFR-3/4-D-MIDI-MPA
	Maxi	G1/2	<b>8002377</b>	LFR-1/2-D-5M-MAXI-MPA	<b>8002376</b>	LFR-1/2-D-MAXI-MPA
		G3/4	<b>8002322</b>	LFR-3/4-D-5M-MAXI-MPA	<b>8002280</b>	LFR-3/4-D-MAXI-MPA
		G1	<b>8002323</b>	LFR-1-D-5M-MAXI-MPA	<b>8002281</b>	LFR-1-D-MAXI-MPA
Fully automatic	Mini	G1/8	<b>8002324</b>	LFR-1/8-D-5M-MINI-A-MPA	<b>8002282</b>	LFR-1/8-D-MINI-A-MPA
		G1/4	<b>8002325</b>	LFR-1/4-D-5M-MINI-A-MPA	<b>8002283</b>	LFR-1/4-D-MINI-A-MPA
		G3/8	<b>8002326</b>	LFR-3/8-D-5M-MINI-A-MPA	<b>8002298</b>	LFR-3/8-D-MINI-A-MPA
	Midi	G1/4	<b>8037020</b>	LFR-1/4-D-5M-MIDI-A-MPA	<b>8002374</b>	LFR-1/4-D-MIDI-A-MPA
		G3/8	<b>8002327</b>	LFR-3/8-D-5M-MIDI-A-MPA	<b>8002259</b>	LFR-3/8-D-MIDI-A-MPA
		G1/2	<b>8002328</b>	LFR-1/2-D-5M-MIDI-A-MPA	<b>8002261</b>	LFR-1/2-D-MIDI-A-MPA
		G3/4	<b>8002329</b>	LFR-3/4-D-5M-MIDI-A-MPA	<b>8002299</b>	LFR-3/4-D-MIDI-A-MPA
	Maxi	G1/2	<b>8025567</b>	LFR-1/2-D-5M-MAXI-A-MPA	<b>8002378</b>	LFR-1/2-D-MAXI-A-MPA
		G3/4	<b>8002330</b>	LFR-3/4-D-5M-MAXI-A-MPA	<b>8002284</b>	LFR-3/4-D-MAXI-A-MPA
		G1	<b>8002331</b>	LFR-1-D-5M-MAXI-A-MPA	<b>8002285</b>	LFR-1-D-MAXI-A-MPA

## Datasheet

<b>Ordering data</b>				
Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa), rotary knob with latch, connecting plates with threaded connection				
Condensate drain	Size	Connection	Grade of filtration 40 µm	
			Part no.	Type
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>				
Manual	Mini	G1/8	<b>162702</b>	LFR-1/8-D-7-MINI
		G1/4	<b>162703</b>	LFR-1/4-D-7-MINI
		G3/8	<b>162704</b>	LFR-3/8-D-7-MINI
	Midi	G1/4	<b>186487</b>	LFR-1/4-D-7-MIDI
		G3/8	<b>162705</b>	LFR-3/8-D-7-MIDI
		G1/2	<b>162706</b>	LFR-1/2-D-7-MIDI
		G3/4	<b>162707</b>	LFR-3/4-D-7-MIDI
	Maxi	G1/2	<b>186495</b>	LFR-1/2-D-7-MAXI
		G3/4	<b>162708</b>	LFR-3/4-D-7-MAXI
		G1	<b>162709</b>	LFR-1-D-7-MAXI
Fully automatic	Mini	G1/8	<b>162710</b>	LFR-1/8-D-7-MINI-A
		G1/4	<b>162711</b>	LFR-1/4-D-7-MINI-A
		G3/8	<b>162712</b>	LFR-3/8-D-7-MINI-A
	Midi	G1/4	<b>186488</b>	LFR-1/4-D-7-MIDI-A
		G3/8	<b>162713</b>	LFR-3/8-D-7-MIDI-A
		G1/2	<b>162714</b>	LFR-1/2-D-7-MIDI-A
		G3/4	<b>162715</b>	LFR-3/4-D-7-MIDI-A
	Maxi	G1/2	<b>186496</b>	LFR-1/2-D-7-MAXI-A
		G3/4	<b>162716</b>	LFR-3/4-D-7-MAXI-A
		G1	<b>162717</b>	LFR-1-D-7-MAXI-A
<b>With pressure gauge, outer scale in MPa, inner scale in bar</b>				
Manual	Mini	G1/8	<b>8002300</b>	LFR-1/8-D-7-MINI-MPA
		G1/4	<b>8002301</b>	LFR-1/4-D-7-MINI-MPA
		G3/8	<b>8002302</b>	LFR-3/8-D-7-MINI-MPA
	Midi	G3/8	<b>8002303</b>	LFR-3/8-D-7-MIDI-MPA
		G1/2	<b>8002304</b>	LFR-1/2-D-7-MIDI-MPA
		G3/4	<b>8002305</b>	LFR-3/4-D-7-MIDI-MPA
	Maxi	G3/4	<b>8002306</b>	LFR-3/4-D-7-MAXI-MPA
		G1	<b>8002307</b>	LFR-1-D-7-MAXI-MPA
Fully automatic	Mini	G1/8	<b>8002308</b>	LFR-1/8-D-7-MINI-A-MPA
		G1/4	<b>8002309</b>	LFR-1/4-D-7-MINI-A-MPA
		G3/8	<b>8002310</b>	LFR-3/8-D-7-MINI-A-MPA
	Midi	G1/4	<b>8002375</b>	LFR-1/4-D-7-MIDI-A-MPA
		G3/8	<b>8002311</b>	LFR-3/8-D-7-MIDI-A-MPA
		G1/2	<b>8002312</b>	LFR-1/2-D-7-MIDI-A-MPA
		G3/4	<b>8002313</b>	LFR-3/4-D-7-MIDI-A-MPA
	Maxi	G3/4	<b>8002314</b>	LFR-3/4-D-7-MAXI-A-MPA
		G1	<b>8002315</b>	LFR-1-D-7-MAXI-A-MPA

## Datasheet

Ordering data						
Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa), rotary knob with latch, connecting plates with threaded connection						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part no.	Type	Part no.	Type
<b>Without pressure gauge</b>						
Manual	Mini	G1/8	<b>192610</b>	LFR-1/8-D-5M-O-MINI	<b>162686</b>	LFR-1/8-D-O-MINI
		G1/4	<b>192611</b>	LFR-1/4-D-5M-O-MINI	<b>162687</b>	LFR-1/4-D-O-MINI
		G3/8	<b>192612</b>	LFR-3/8-D-5M-O-MINI	<b>162688</b>	LFR-3/8-D-O-MINI
	Midi	G1/4	<b>192613</b>	LFR-1/4-D-5M-O-MIDI	<b>186482</b>	LFR-1/4-D-O-MIDI
		G3/8	<b>192614</b>	LFR-3/8-D-5M-O-MIDI	<b>162689</b>	LFR-3/8-D-O-MIDI
		G1/2	<b>192615</b>	LFR-1/2-D-5M-O-MIDI	<b>162690</b>	LFR-1/2-D-O-MIDI
		G3/4	<b>192616</b>	LFR-3/4-D-5M-O-MIDI	<b>162691</b>	LFR-3/4-D-O-MIDI
	Maxi	G1/2	<b>192617</b>	LFR-1/2-D-5M-O-MAXI	<b>186490</b>	LFR-1/2-D-O-MAXI
		G3/4	<b>192618</b>	LFR-3/4-D-5M-O-MAXI	<b>162692</b>	LFR-3/4-D-O-MAXI
		G1	<b>192619</b>	LFR-1-D-5M-O-MAXI	<b>162693</b>	LFR-1-D-O-MAXI
Fully automatic	Mini	G1/8	<b>192620</b>	LFR-1/8-D-5M-O-MINI-A	<b>162694</b>	LFR-1/8-D-O-MINI-A
		G1/4	<b>192621</b>	LFR-1/4-D-5M-O-MINI-A	<b>162695</b>	LFR-1/4-D-O-MINI-A
		G3/8	<b>192622</b>	LFR-3/8-D-5M-O-MINI-A	<b>162696</b>	LFR-3/8-D-O-MINI-A
	Midi	G1/4	<b>192623</b>	LFR-1/4-D-5M-O-MIDI-A	<b>186485</b>	LFR-1/4-D-O-MIDI-A
		G3/8	<b>192624</b>	LFR-3/8-D-5M-O-MIDI-A	<b>162697</b>	LFR-3/8-D-O-MIDI-A
		G1/2	<b>192625</b>	LFR-1/2-D-5M-O-MIDI-A	<b>162698</b>	LFR-1/2-D-O-MIDI-A
		G3/4	<b>192626</b>	LFR-3/4-D-5M-O-MIDI-A	<b>162699</b>	LFR-3/4-D-O-MIDI-A
	Maxi	G1/2	<b>192627</b>	LFR-1/2-D-5M-O-MAXI-A	<b>186493</b>	LFR-1/2-D-O-MAXI-A
		G3/4	<b>192628</b>	LFR-3/4-D-5M-O-MAXI-A	<b>162700</b>	LFR-3/4-D-O-MAXI-A
		G1	<b>192629</b>	LFR-1-D-5M-O-MAXI-A	<b>162701</b>	LFR-1-D-O-MAXI-A

Ordering data						
Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa), rotary knob with latch, connecting plates with threaded connection						
Condensate drain	Size	Connection	Grade of filtration 40 µm			
			Part no.	Type		
<b>Without pressure gauge</b>						
Manual	Mini	G1/8	<b>192590</b>	LFR-1/8-D-7-O-MINI		
		G1/4	<b>192591</b>	LFR-1/4-D-7-O-MINI		
		G3/8	<b>192592</b>	LFR-3/8-D-7-O-MINI		
	Midi	G1/4	<b>192593</b>	LFR-1/4-D-7-O-MIDI		
		G3/8	<b>192594</b>	LFR-3/8-D-7-O-MIDI		
		G1/2	<b>192595</b>	LFR-1/2-D-7-O-MIDI		
		G3/4	<b>192596</b>	LFR-3/4-D-7-O-MIDI		
	Maxi	G1/2	<b>192597</b>	LFR-1/2-D-7-O-MAXI		
		G3/4	<b>192598</b>	LFR-3/4-D-7-O-MAXI		
		G1	<b>192599</b>	LFR-1-D-7-O-MAXI		
Fully automatic	Mini	G1/8	<b>192600</b>	LFR-1/8-D-7-O-MINI-A		
		G1/4	<b>192601</b>	LFR-1/4-D-7-O-MINI-A		
		G3/8	<b>192602</b>	LFR-3/8-D-7-O-MINI-A		
	Midi	G1/4	<b>192603</b>	LFR-1/4-D-7-O-MIDI-A		
		G3/8	<b>192604</b>	LFR-3/8-D-7-O-MIDI-A		
		G1/2	<b>192605</b>	LFR-1/2-D-7-O-MIDI-A		
		G3/4	<b>192606</b>	LFR-3/4-D-7-O-MIDI-A		
	Maxi	G1/2	<b>192607</b>	LFR-1/2-D-7-O-MAXI-A		
		G3/4	<b>192608</b>	LFR-3/4-D-7-O-MAXI-A		
		G1	<b>192609</b>	LFR-1-D-7-O-MAXI-A		

## Datasheet

### Ordering data

Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa), directly actuated diaphragm regulator with integrated return flow function, rotary knob with latch, connecting plates with threaded connection

Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm		
			Part no.	Type	Part no.	Type	
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>							
Manual	Maxi	G1/2	192370	LFR-1/2-D-5M-DI-MAXI	192368	LFR-1/2-D-DI-MAXI	
		G3/4	192376	LFR-3/4-D-5M-DI-MAXI		192374	LFR-3/4-D-DI-MAXI
		G1	192382	LFR-1-D-5M-DI-MAXI		192380	LFR-1-D-DI-MAXI
Fully automatic	Maxi	G1/2	192388	LFR-1/2-D-5M-DI-MAXI-A	192386	LFR-1/2-D-DI-MAXI-A	
		G3/4	192394	LFR-3/4-D-5M-DI-MAXI-A		192392	LFR-3/4-D-DI-MAXI-A
		G1	192400	LFR-1-D-5M-DI-MAXI-A		192398	LFR-1-D-DI-MAXI-A
<b>Without pressure gauge</b>							
Manual	Maxi	G1/2	192371	LFR-1/2-D-5M-O-DI-MAXI	192369	LFR-1/2-D-O-DI-MAXI	
		G3/4	192377	LFR-3/4-D-5M-O-DI-MAXI		192375	LFR-3/4-D-O-DI-MAXI
		G1	192383	LFR-1-D-5M-O-DI-MAXI		192381	LFR-1-D-O-DI-MAXI
Fully automatic	Maxi	G1/2	192389	LFR-1/2-D-5M-O-DI-MAXI-A	192387	LFR-1/2-D-O-DI-MAXI-A	
		G3/4	192395	LFR-3/4-D-5M-O-DI-MAXI-A		192393	LFR-3/4-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 (0.05 ... 0.7 MPa), directly actuated diaphragm regulator with integrated return flow function, rotary knob with latch, connecting plates with threaded connection

Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm		
			Part no.	Type	Part no.	Type	
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>							
Manual	Maxi	G1/2	—		192372	LFR-1/2-D-7-DI-MAXI	
		G3/4	—			192378	LFR-3/4-D-7-DI-MAXI
		G1	—			192384	LFR-1-D-7-DI-MAXI
Fully automatic	Maxi	G1/2	—		192390	LFR-1/2-D-7-DI-MAXI-A	
		G3/4	—			192396	LFR-3/4-D-7-DI-MAXI-A
		G1	—			192402	LFR-1-D-7-DI-MAXI-A
<b>With pressure gauge, outer scale in MPa, inner scale in bar</b>							
Manual	Maxi	G1	—		8002399	LFR-1-D-7-DI-MAXI-MPA	
<b>Without pressure gauge</b>							
Manual	Maxi	G1/2	—		192373	LFR-1/2-D-7-O-DI-MAXI	
		G3/4	—			192379	LFR-3/4-D-7-O-DI-MAXI
		G1	—			192385	LFR-1-D-7-O-DI-MAXI
Fully automatic	Maxi	G1/2	—		192391	LFR-1/2-D-7-O-DI-MAXI-A	
		G3/4	—			192397	LFR-3/4-D-7-O-DI-MAXI-A

## Datasheet

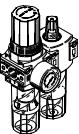
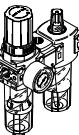
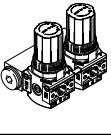
<b>Ordering data</b>							
Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa), rotary knob with integrated lock, connecting plates with threaded connection							
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm		
			Part no.	Type	Part no.	Type	
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>							
Manual	Mini	G1/4	<b>194716</b>	<b>LFRS-1/4-D-5M-MINI</b>	<b>194708</b>	<b>LFRS-1/4-D-MINI</b>	
	Midi	G1/2	<b>194764</b>	<b>LFRS-1/2-D-5M-MIDI</b>		<b>194756</b>	<b>LFRS-1/2-D-MIDI</b>
Fully automatic	Mini	G1/4	<b>194718</b>	<b>LFRS-1/4-D-5M-MINI-A</b>	<b>194709</b>	<b>LFRS-1/4-D-MINI-A</b>	
	Midi	G1/2	<b>194766</b>	<b>LFRS-1/2-D-5M-MIDI-A</b>		<b>194757</b>	<b>LFRS-1/2-D-MIDI-A</b>

<b>Ordering data</b>							
Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa), rotary knob with integrated lock, connecting plates with threaded connection							
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm		
			Part no.	Type	Part no.	Type	
<b>With pressure gauge, outer scale in bar, inner scale in psi</b>							
Manual	Mini	G1/4	<b>194712</b>	<b>LFRS-1/4-D-7-MINI</b>	<b>194760</b>	<b>LFRS-1/2-D-7-MIDI</b>	
	Midi	G1/2	<b>194760</b>	<b>LFRS-1/2-D-7-MIDI</b>		<b>194714</b>	<b>LFRS-1/4-D-7-MINI-A</b>
Fully automatic	Mini	G1/4	<b>194714</b>	<b>LFRS-1/4-D-7-MINI-A</b>	<b>194762</b>	<b>LFRS-1/2-D-7-MIDI-A</b>	
	Midi	G1/2	<b>194762</b>	<b>LFRS-1/2-D-7-MIDI-A</b>		<b>194712</b>	<b>LFRS-1/4-D-7-MINI</b>

## Datasheet

## Filter regulators LFR, D series, polymer

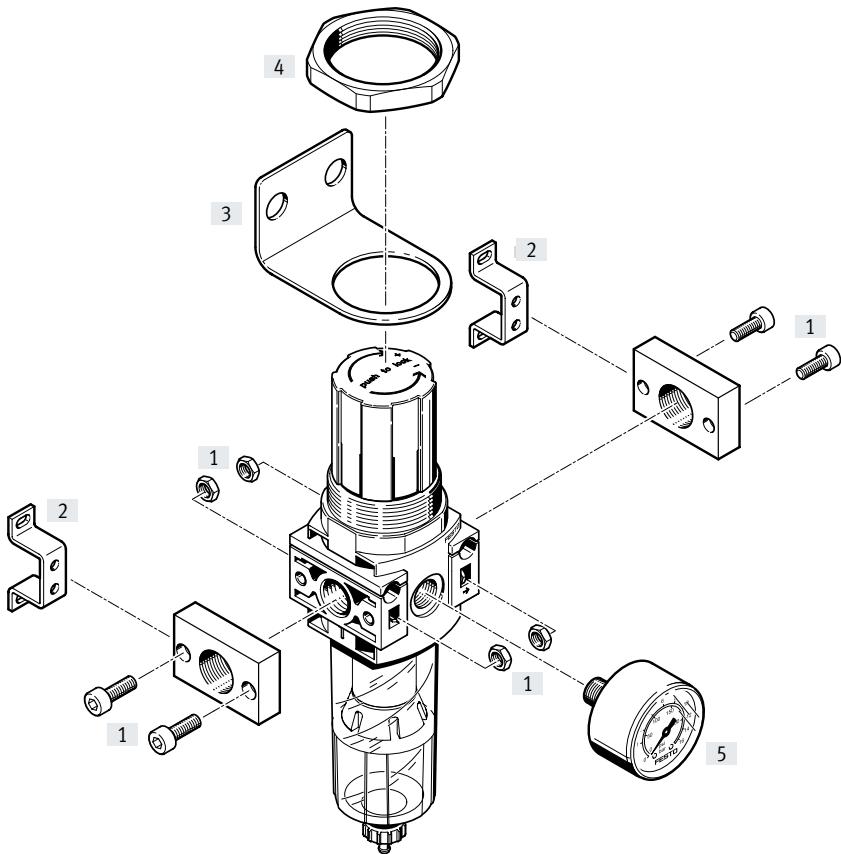
### Product range overview – Service unit components, D series, polymer

Type	Size	Pneumatic connection		Pressure regulation range [bar]	Grade of filtration [ $\mu\text{m}$ ]		
		G1/4	G1/2				
<b>Service units</b>							
FRC		Mini	■	–	■	■	■
<b>Service unit combinations</b>							
FRC-K		Mini	■	–	■	–	■
LFR-K		Mini	■	–	■	–	■
<b>Individual devices</b>							
Filter regulators LFR		Mini	■	–	■	■	■
Pressure regulators LR		Mini	■	–	■	–	–
Pressure regulator manifolds LRB-K		Mini	–	■	■	–	–
On/off valves HE		Mini	■	–	–	–	–

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

Type	Size	Condensate drain		Pressure indication		Actuator lock	Regulator functions		→ Page/ Internet
		Manual	Semi-automatic	With pressure gauge	Without pressure gauge		With secondary exhausting	With return flow function	
<b>Service units</b>									
FRC	Mini	■	■	■	–	■	■	■	frc
<b>Service unit combinations</b>									
FRC-K	Mini	■	–	■	–	■	■	■	frc
LFR-K	Mini	■	–	■	–	■	■	■	lfr
<b>Individual devices</b>									
Filter regulators <b>LFR</b>	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators <b>LR</b>	Mini	–	–	■	■	■	■	■	lr
Pressure regulator manifolds <b>LRB-K</b>	Mini	–	–	–	■	■	■	■	lrb
On/off valves <b>HE</b>	Mini	–	–	–	■	–	–	–	he

## Peripherals overview



## Mounting attachments and accessories

→ Page/Internet

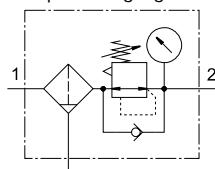
[1]	Connection kit PBL	pbl
[2]	Mounting bracket HFOE	hfoe-d
[3]	Mounting bracket HR-D	hr-d
[4]	Hex nut HMR	hmr-d
[5]	Pressure gauge MA/PAGN	28

## Type codes

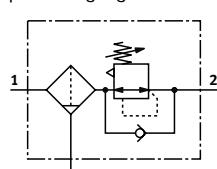
<b>001</b>	<b>Series</b>		<b>005</b>	<b>Grade of filtration</b>	
<b>LFR</b>	Filter regulator			40 µm	
<b>002</b>	<b>Pneumatic connection</b>		<b>5M</b>	5 µm	
<b>1/4</b>	Female thread G1/4				
<b>003</b>	<b>Version</b>		<b>006</b>	<b>Pressure gauge</b>	
<b>DB</b>	D series, polymer			With pressure gauge	
<b>004</b>	<b>Pressure regulation range</b>		<b>O</b>	Without pressure gauge	
<b>7</b>	0.5 ... 7 bar (0.05 ... 0.7 MPa)		<b>007</b>	<b>Size</b>	
			<b>MINI</b>	Grid dimension 40 mm (without connecting plates)	
			<b>008</b>	<b>Condensate drain</b>	
				Manually rotating	
			<b>H</b>	Semi-automatic	

## Datasheet

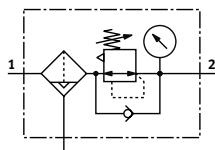
Condensate drain, manually rotating,  
with pressure gauge



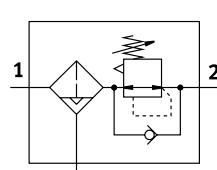
Condensate drain, manual, without  
pressure gauge



Condensate drain, semi-automatic,  
with pressure gauge



Condensate drain, semi-automatic,  
without pressure gauge



- Flow rate  
500 ... 1200 l/min
- Temperature range  
-5 ... +50 °C
- Operating pressure  
1.5 ... 10 bar  
(0.15 ... 1 MPa)

- Space-saving design with filter and regulator in a single unit
- Good regulation characteristics with minimal hysteresis
- Good particle separation and high flow rate
- Choice of manual or semi-automatic condensate drain
- Setting values are secured by locking the rotary knob
- Choice of 5 µm or 40 µm filter inserts
- New filter cartridges → page 27

### General technical data

Size	Mini	
Pneumatic connection 1, 2	G1/4	
Design	With pressure gauge	Without pressure gauge
Regulator function	With return flow function, with secondary exhaust	
Type of mounting	In-line installation	
	Via through-hole	
	With mounting bracket	
Mounting position	Vertical ±5°	
Grade of filtration [µm]	5	
	40	
Air purity class at the output	Compressed air to ISO 8573-1:2010 [6:8:4] (grade of filtration 5 µm) Compressed air to ISO 8573-1:2010 [7:8:4] (grade of filtration 40 µm) Inert gases	
Condensate drain	Manual	
	Semi-automatic	
Actuator lock	Rotary knob with latch	
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa)	
Max. pressure hysteresis [bar]	0.5 (0.05 MPa)	
Pressure indication	With pressure gauge	Prepared for G1/8
Pressure gauge connection	G1/8	

### Standard nominal flow rate<sup>1)</sup> qN [l/min]

Size	Mini	
Grade of filtration	5 µm	≥ 1000
	40 µm	≥ 1200

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

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

## Datasheet

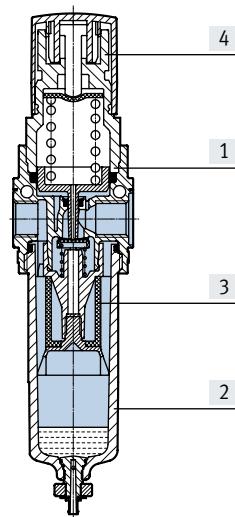
Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [-:9:-] Inert gases
Ambient temperature [°C]	-5 ... +50
Temperature of medium [°C]	-5 ... +50
Corrosion resistance class CRC <sup>1)</sup>	1

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

Weight [g]	
Size	Mini
Filter regulator	200

## Materials

### Sectional view

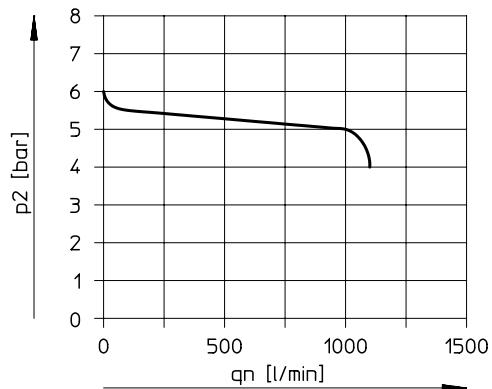


Filter regulator	Mini
[1] Housing	Reinforced PA
[2] Bowl	PC
[3] Filter	PE
[4] Rotary knob	POM
- Seals	NBR
Note on materials	RoHS-compliant

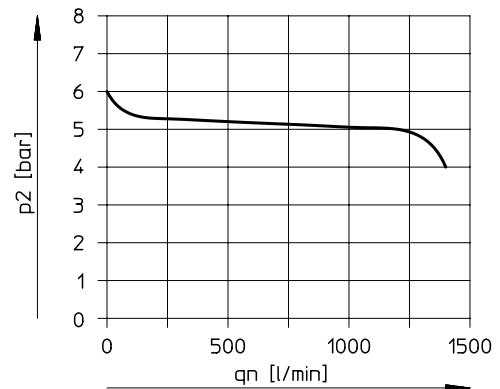
## Standard flow rate $q_n$ as a function of output pressure $p_2$

Grade of filtration 5 µm

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



Grade of filtration 40 µm



### Note

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

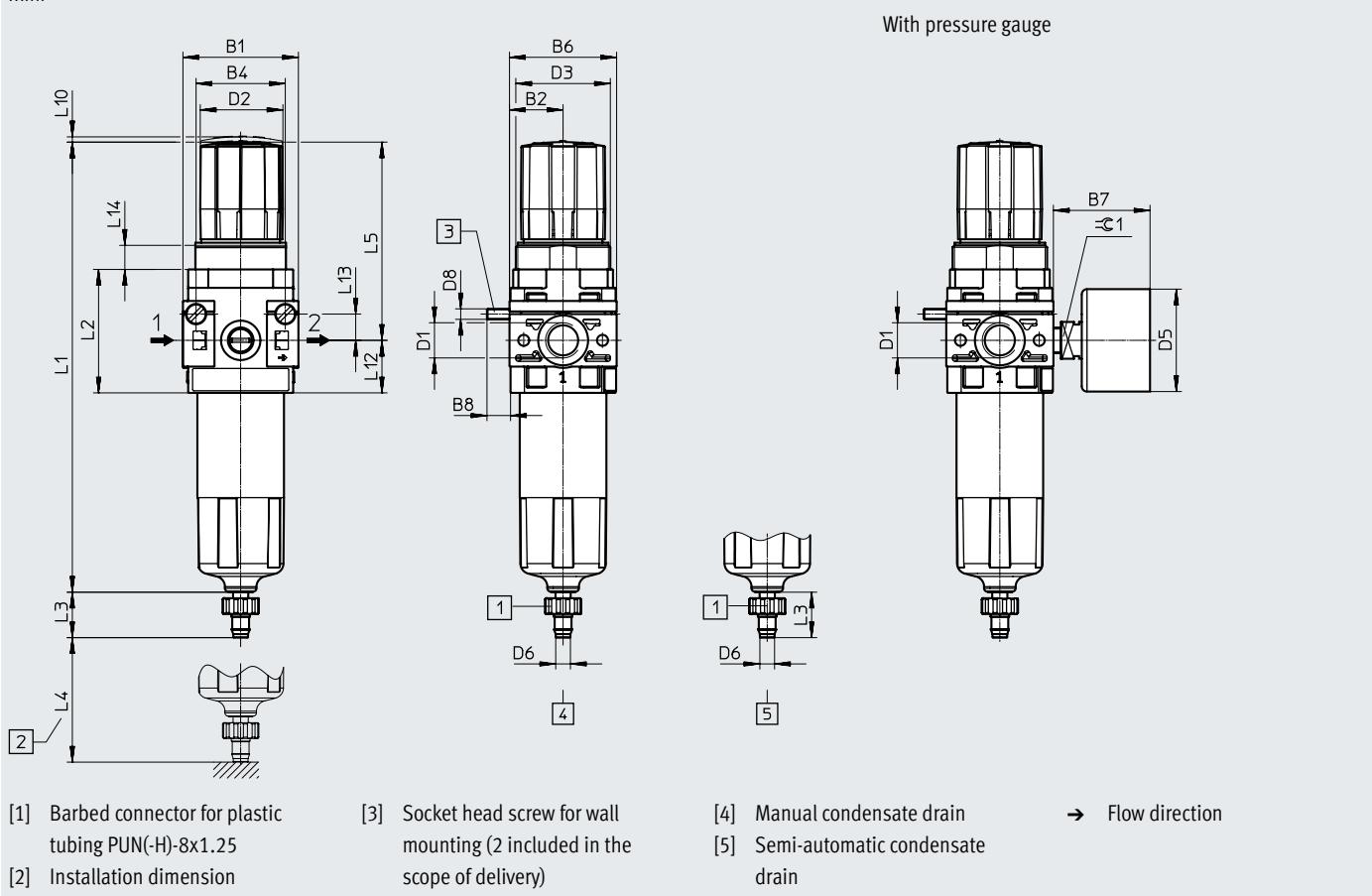
In rare cases, however, the leakage can be up to 500 l/h.

## Datasheet

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Mini



	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
	L1	L2	L3	L4 min.	L5	L10	L12	L13	L14	=G 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 (0.05 ... 0.7 MPa)

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

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

Manual	Mini	G1/4	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	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

## Accessories

### Filter cartridges, D series, metal



Ordering data		Grade of filtration [µm]	Part no.	Type
Size				
Mini	5		159640	LFP-D-MINI-5M
Midi			159594	LFP-D-MIDI-5M
Maxi			159641	LFP-D-MAXI-5M

### Filter cartridges, D series, polymer



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

## Accessories

Ordering data – Pressure gauge MA						
	Nominal size	Pneumatic connection	Display range		Part no.	Type
			Outer scale	Inner scale		
	<b>Pressure gauge MA</b>				Datasheets → Internet: ma	
	40	G1/8	0 ... 10 bar	0 ... 145 psi	359874	MA-40-10-1/8
			0 ... 16 bar	0 ... 232 psi	345395	MA-40-16-1/8
	50	G1/4	0 ... 10 bar	0 ... 145 psi	359873	MA-50-10-1/4
			0 ... 16 bar	0 ... 232 psi	356759	MA-50-16-1/4
	<b>Pressure gauge MA</b>				Datasheets → Internet: ma	
	40	G1/8	0 ... 1 MPa	–	192732	MA-40-1-G1/8-MPA
			0 ... 1.6 MPa	–	192733	MA-40-1.6-G1/8-MPA
	50	G1/4	0 ... 1 MPa	–	192734	MA-50-1-G1/4-MPA
			0 ... 1.6 MPa	–	192735	MA-50-1.6-G1/4-MPA
	<b>Pressure gauge MA, DIN EN 837-1</b>				Datasheets → Internet: ma	
	40	R1/8	0 ... 10 bar	0 ... 145 psi	162835	MA-40-10-1/8-EN
			0 ... 10 bar	0 ... 145 psi	183900	MA-40-10-G1/4-EN
	<b>Flanged pressure gauge FMA, DIN EN 837-1</b>				Datasheets → Internet: fma	
	40	G1/4	0 ... 10 bar	0 ... 145 psi	159596	FMA-40-10-1/4-EN
			0 ... 16 bar	0 ... 232 psi	159597	FMA-40-16-1/4-EN
	50	G1/4	0 ... 10 bar	0 ... 145 psi	159599	FMA-50-10-1/4-EN
			0 ... 16 bar	0 ... 232 psi	159600	FMA-50-16-1/4-EN

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