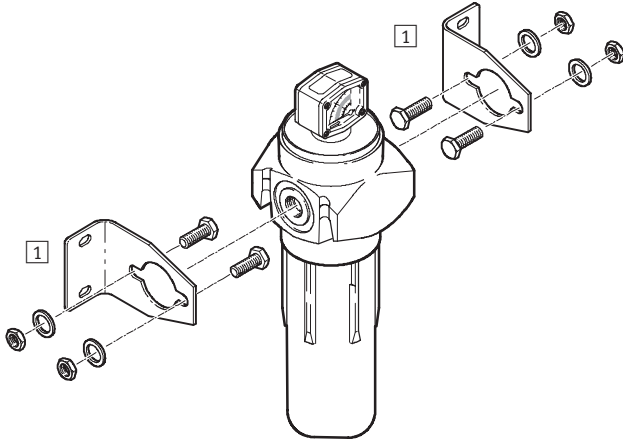


## Fine and micro filters, LFMB-H/LFMA-H, H series

Peripherals overview and type codes

FESTO

### Peripherals overview



Mounting attachments and accessories	Brief description	→ Page
1 Mounting bracket (2 pcs.) LFMM	The fine and micro filters are mounted on the wall using mounting brackets LFMM	3 / 4.3-9

### Type codes

LFMB	–	1/2	–	H	–	A
------	---	-----	---	---	---	---

#### Service function

LFMA	Micro filter
LFMB	Fine filter

#### Pneumatic connection

1/2	Thread G1/2
3/4	Thread G3/4
1	Thread G1

#### Series

H	Series
---	--------

#### Condensate drain

A	Fully automatic
---	-----------------




# Fine and micro filters, LFMB-H/LFMA-H, H series

FESTO

Technical data

Function



-  Flow rate  
1,100 ... 5,200 l/min
-  Temperature range  
-10 ... +60 °C
-  Input pressure  
0 ... 16 bar



Various industries require fine or micro-filtered air: chemicals, pharmaceuticals, process technology, food industry, etc. Festo fine and micro filters clean compressed air almost completely of any remaining minute water and oil droplets, together with any dirt particles.

- Robust die-cast design
- Very high flow rates
- All filter units with automatic condensate drain and differential pressure gauge for displaying filter pollution

- Fine and micro-filters fulfil stringent air quality requirements in accordance with ISO 8573-1
- Easy replacement of filter components
- Resistant to mineral and synthetic lubricants

## Fine filter function

Compressed air flows through a filter cartridge made of borosilicate fibre-glass, from the inside to the outside. As the compressed air flows through the fibre tissues, large particles are prevented from passing the filtration bed by simple inertia, or are collected by collision with the fibres.

Separation of fine and very fine oil vapour particles and solid impurities down to 0.01 micron results from an extremely fine filter tissue. The smallest particles collect on the fibres where they form larger droplets (coalescing effect), which run off due to gravity.

The flow rate recommended for each filter must be observed in order to prevent the oil-water emulsion which has accumulated in the foam jacket from being drawn in by the compressed air. Compressed air should be pre-filtered to 5 µm where fine filters and micro-filters are used.

Individual units  
Filter

4.3

General technical data						
Type	Micro filters LFMA			Fine filters LFMB		
Pneumatic connection	G½	G¾	G1	G½	G¾	G1
Design	Fibre filter					
Type of mounting	In-line installation					
	Via accessories					
Mounting position	Vertical ±5°					
Operating medium	Compressed air, filtered, grade of filtration 1 µm			Compressed air, filtered, grade of filtration 5 µm		
Grade of filtration [µm]	0.01			1		
Residual oil content [mg/m³]	≤0.01			≤0.5		
Filter efficiency [%]	99.9999					
Input pressure [bar]	0 ... 16					
Air purity classes per ISO 8573-1						
Particulate	1			2		
Atomised oil	2			3		

## Fine and micro filters, LFMB-H/LFMA-H, H series

Technical data

**FESTO**

Standard nominal flow rate <sup>1)</sup> q <sub>N</sub> [l/min]			
Connection	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>4</sub>	G1
Micro filters LFMA	1,100	2,000	3,400
Fine filters LFMB	1,600	3,300	5,200

1) With 6 bar input pressure and Δp = 0.07 bar.

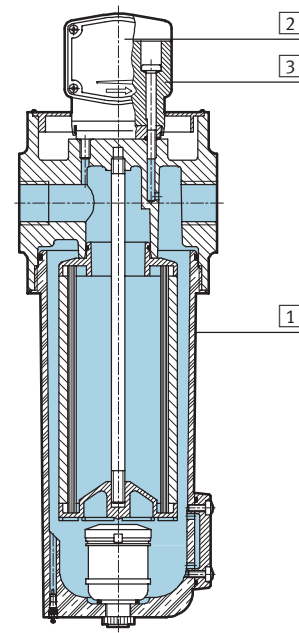
Ambient conditions		
Ambient temperature	[°C]	-10 ... +60
Corrosion resistance	CRC <sup>1)</sup>	2

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Weights [g]			
	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>4</sub>	G1
Micro filters LFMA	1,100	2,800	3,200
Fine filters LFMB	1,100	2,800	3,200

Materials	
Sectional view	



Fine and micro filters		
[1]	Housing/bowl	Die-cast zinc
[2]	Pressure gauge sight glass	Polymethylmethacrylate
[3]	Pressure gauge housing	Polyamide
–	Seals	Nitrile rubber

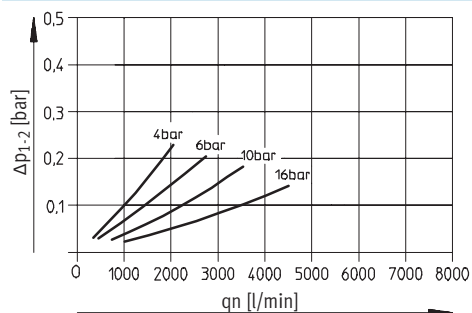
# Fine and micro filters, LFMB-H/LFMA-H, H series

Technical data

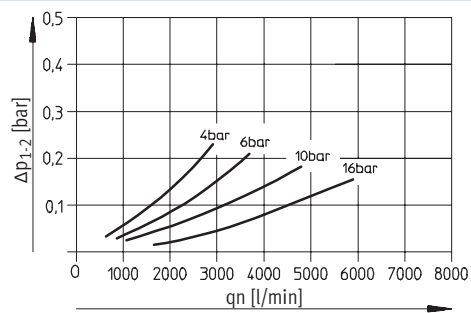
FESTO

## Standard flow rate $q_n$ as a function of the output pressure $\Delta p_{1-2}$

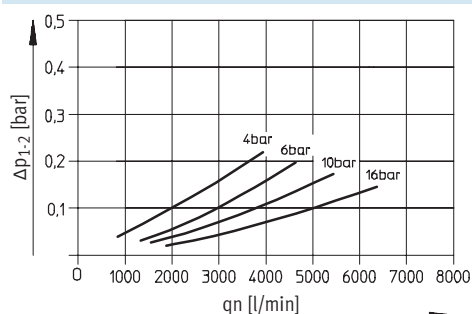
LFMA-1/2-H-A



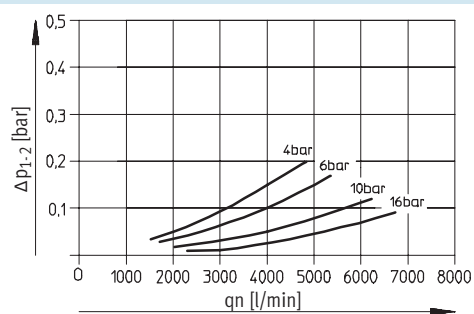
LFMB-1/2-H-A



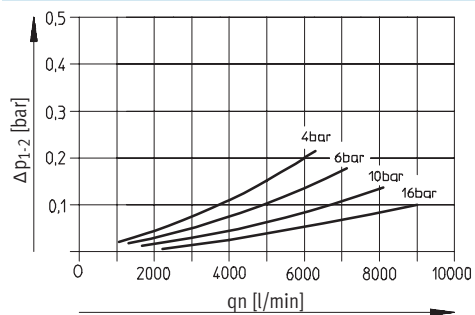
LFMA-3/4-H-A



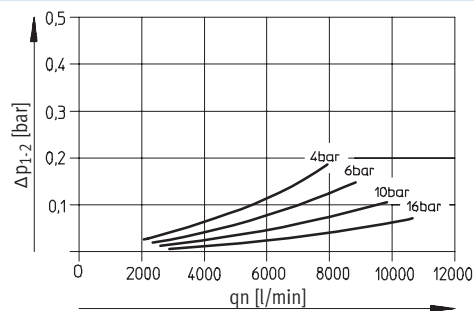
LFMB-3/4-H-A



LFMA-1-H-A



LFMB-1-H-A

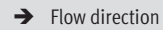


Individual units  
Filter

4.3

## Technical data

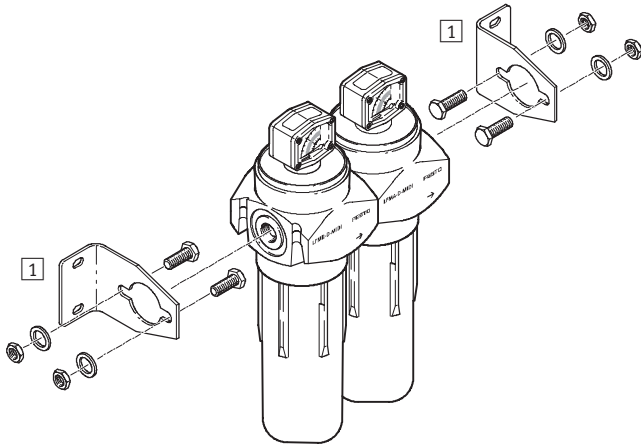
**FESTO**

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

Ordering data				
Connection	Grade of filtration 1 µm		Grade of filtration 0.01 µm	
	Part No.	Type	Part No.	Type
G1/2	162 818	LFMB-1/2-H-A	162 815	LFMA-1/2-H-A
G3/4	162 819	LFMB-3/4-H-A	162 816	LFMA-3/4-H-A
G1	162 820	LFMB-1-H-A	162 817	LFMA-1-H-A

## Peripherals overview

## Peripherals overview



Mounting attachments and accessories		Brief description	→ Page
1	Mounting bracket (2 pcs.) LFMM	The filter combination is attached to the wall by means of the mounting brackets LFMM	3 / 4.3-9

## Type codes

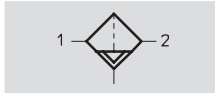
	LFMBA	–	1/2	–	H	–	A
<b>Service function</b>							
LFMBA	Filter combination						
<b>Pneumatic connection</b>							
1/2	Thread G1/2						
3/4	Thread G3/4						
1	Thread G1						
<b>Series</b>							
H	Series						
<b>Condensate drain</b>							
A	Fully automatic						




## Filter combinations LFMB-A-H, H series

Technical data

FESTO

Function



-  - Flow rate  
800 ... 2,600 l/min
-  - Temperature range  
-10 ... +60 °C
-  - Input pressure  
0 ... 16 bar



Various industries require fine or micro-filtered air: chemicals, pharmaceuticals, process technology, food industry, etc. Festo fine and micro filters clean compressed air almost completely of any remaining minute water and oil droplets, together with any dirt particles.

- Available as pre-assembled filter combination
- Very high flow rates
- All filter units with automatic condensate drain and differential pressure gauge for displaying filter pollution

- Fine and micro-filters fulfil stringent air quality requirements in accordance with ISO 8573-1
- Easy to replace filter components
- Resistant to mineral and synthetic lubricants

General technical data			
Type	Filter combination LFMB-A		
Pneumatic connection	G1/2	G3/4	G1
Design	Fibre filter		
Type of mounting	In-line installation		
	Via accessories		
Mounting position	Vertical ±5°		
Grade of filtration	[µm]	0.01	
Residual oil content	[mg/m³]	≤0.01	
Filter efficiency	[%]	99.9999	
Input pressure	[bar]	0 ... 16	
Air purity classes per ISO 8573-1			
Particulate	1		
Atomised oil	2		

Standard nominal flow rate <sup>1)</sup> qnN [l/min]			
Connection	G1/2	G3/4	G1
LFMB-A...-H-A	800	1,400	2,600

1) With 6 bar input pressure and Δp = 0.07 bar.

Ambient conditions			
Variant	G1/2	G3/4	G1
Ambient temperature	[°C]	-10 ... +60	
Corrosion resistance	CRC <sup>1)</sup>	2	

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

# Filter combinations LFMBA-H, H series

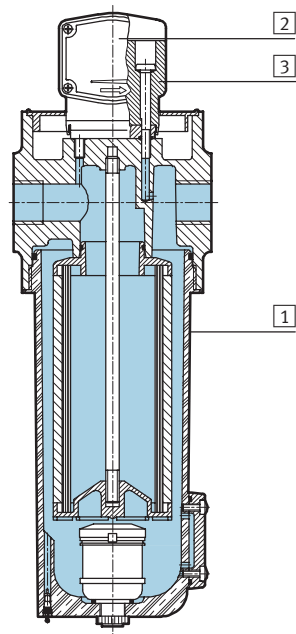
Technical data

FESTO

Weights [g]			
	G1/2	G3/4	G1
LFMBA-...	2,300	5,700	6,500

## Materials

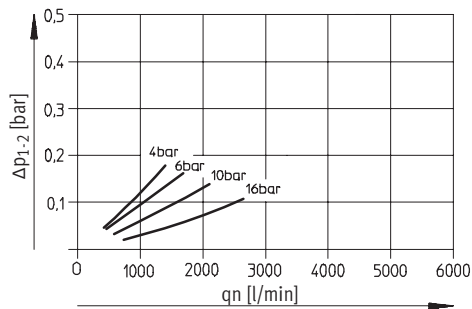
Sectional view



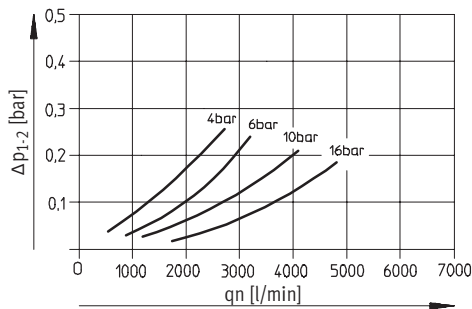
Fine and micro filters		
1	Housing/bowl	Die-cast zinc
2	Pressure gauge sight glass	Polymethylmethacrylate
3	Pressure gauge housing	Polyamide
–	Seals	Nitrile rubber

## Standard flow rate $q_n$ as a function of the output pressure $\Delta p_{1-2}$

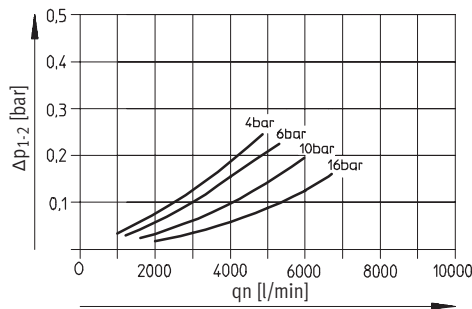
LFMBA-1/2-H-A



LFMBA-3/4-H-A



LFMBA-1-H-A





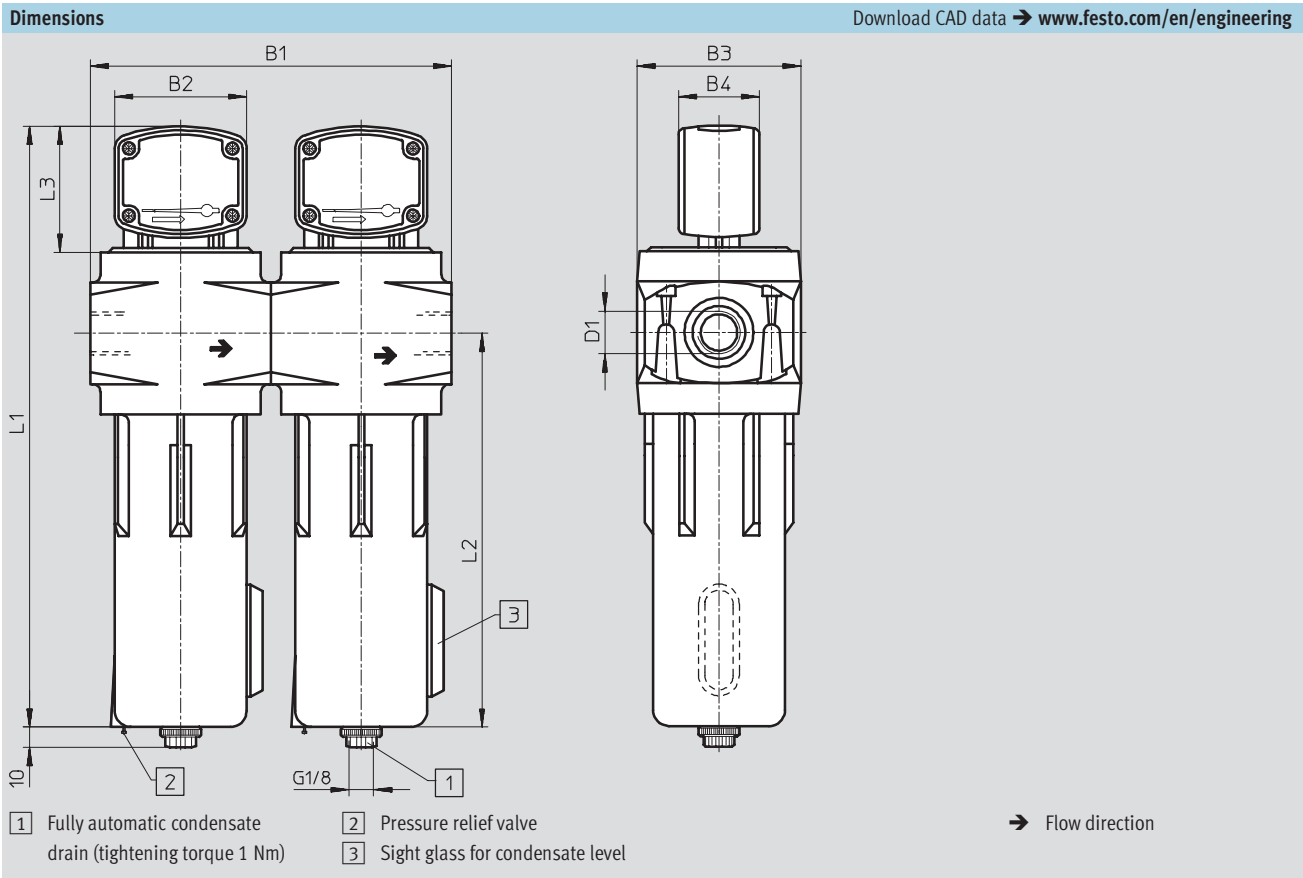
# Filter combinations LFMBA-H, H series

Technical data



Individual units  
Filter

4.3



Type	B1	B2	B3	B4	D1	L1	L2	L3
LFMBA-1/2-H-A	178	65	81	39	G1/2	294	194	60
LFMBA-3/4-H-A	240		112		G3/4	366	251	
LFMBA-1-H-A	240		112		G1	466	351	

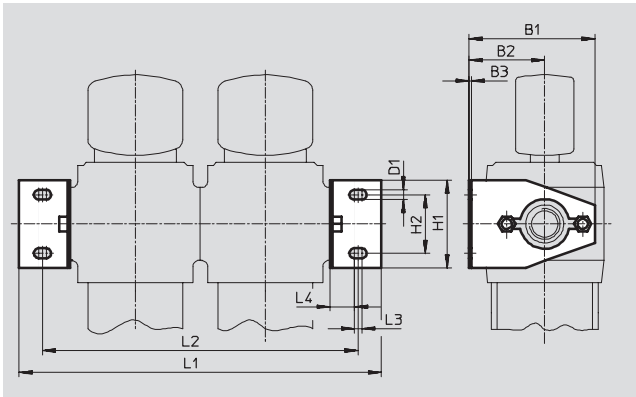
Ordering data		
Connection	Part No.	Type
G1/2	162 821	LFMBA-1/2-H-A
G3/4	162 822	LFMBA-3/4-H-A
G1	162 823	LFMBA-1-H-A

# Fine and micro filters, H series

Accessories

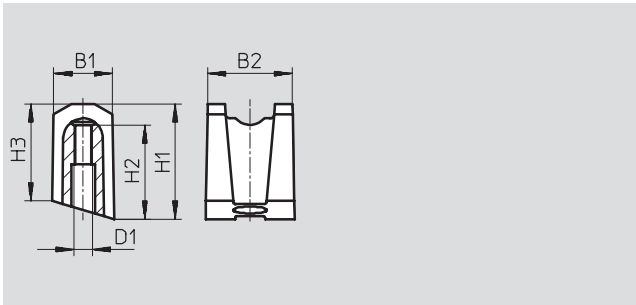


## Mounting bracket LFMM



Ordering data														
Connection	B1	B2	B3	D1	H1	H2	LFMB/A		LFMBA		L3	L4	Part No.	Type
							L1	L2	L1	L2				
G1½	86	52	1.6	7	60	40	159	127	248	216	5	16.5	162 830	LFMM-½-H
G¾, G1	116	68	2	9	80	60	200	157	320	277	5	16	162 831	LFMM-¾-1-H

## Connection piece LFMV for connecting two filters



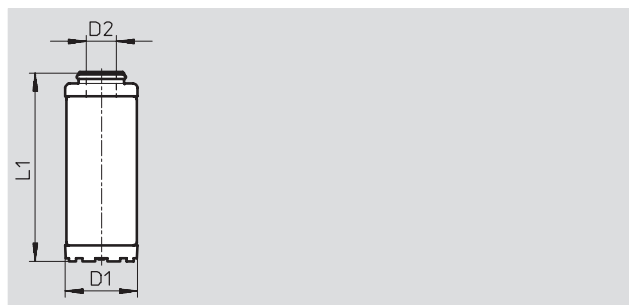
Ordering data							
Connection	B1	B2	D1	H1	H2	H3	Part No. Type
G1/2	9.75	14	M3x0.5	19	15.5	16	162 832 LFMV-1/2-H
G3/4, G1	12.5	20	M4	29	26	25.5	162 833 LFMV-3/4-1-H

## Fine and micro filters, H series

Accessories

**FESTO**

Filter cartridge LFMBP/LFMAP



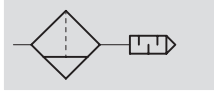
Ordering data					
Connection	D1 Ø	D2 Ø	L1	Part No.	Type
For fine filter					
G $\frac{1}{4}$	35	6.75	74	185 689	LFMBP- $\frac{1}{4}$ -H
G $\frac{1}{2}$	48	21.7	126	162 827	LFMBP- $\frac{1}{2}$ -H
G $\frac{3}{4}$	72	33	168.8	162 828	LFMBP- $\frac{3}{4}$ -H
G1	72	33	268.8	162 829	LFMBP-1-H
For micro filter					
G $\frac{1}{4}$	35	6.75	74	185 688	LFMAP- $\frac{1}{4}$ -H
G $\frac{1}{2}$	48	21.7	126	162 824	LFMAP- $\frac{1}{2}$ -H
G $\frac{3}{4}$	72	33	168.8	162 825	LFMAP- $\frac{3}{4}$ -H
G1	72	33	268.8	162 826	LFMAP-1-H




## Filter silencers LFU

Technical data

**FESTO**

### Function



-  - Flow rate  
4,000 ... 12,500 l/min
-  - Temperature range  
-10 ... +100 °C
-  - Input pressure  
0 ... 16 bar

All exhaust air from pneumatic control systems is cleaned by the filter silencer.

Exhaust air is discharged into the atmosphere via a fine filter cartridge (degree of filtration: >99.99%).

At the same time, exhaust noise is greatly reduced. Condensate is collected in the lower plastic bowl and can be discharged via the condensate drain.



- Exhaust air is up to 99.99% free of oil and other contaminants.
- The silencer reduces exhaust noise regardless of frequency.
- Condensate drain, manual rotary.

General technical data				
Size	G <sup>1</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G1
Pneumatic connection	G <sup>1</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G1
Mounting position	Vertical ±5°			
Flow rate <sup>1)</sup> [l/min]	≥4,000	≥4,700	≤6,000	≤12,500
Input pressure [bar]	0 ... 16			
Noise reduction <sup>1)</sup>	Reduction of 40 db(A)		>40 db(A)	

1) At 6 bar with respect to atmosphere.

Ambient conditions		
Ambient temperature [°C]	-10 ... +60	0 ... +100
Corrosion resistance CRC <sup>1)</sup>	2	

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Weights [g]				
Size	G <sup>1</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G1
Filter silencer	190	190	570	1,010

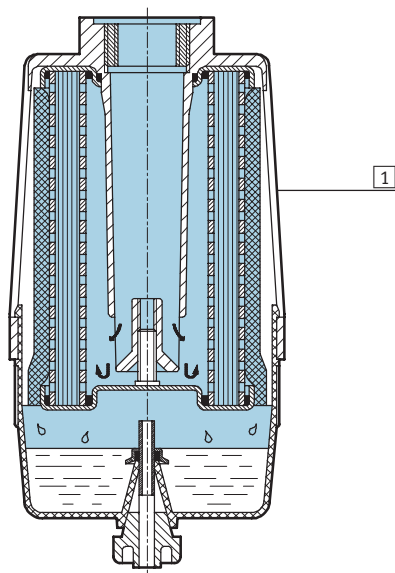
## Filter silencers LFU

Technical data

**FESTO**

### Materials

Sectional view

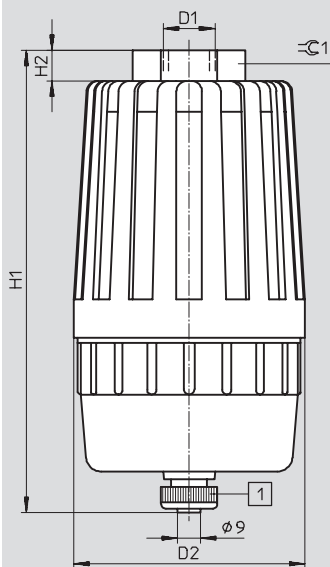


### Filter silencer



1	Housing	Polypropylen
	Note on material	Free of copper and PTFE

### Dimensions and ordering data

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



1 Condensate drain, manual rotary

Connection	D1	D2	H1	H2	≡1	Part No.	Type
G $\frac{1}{4}$	G $\frac{1}{4}$	77	131	7	26	539 132	LFU- $\frac{1}{4}$  New
G $\frac{3}{8}$	G $\frac{3}{8}$	77	131	7	26	539 133	LFU- $\frac{3}{8}$  New
G $\frac{1}{2}$	G $\frac{1}{2}$	90	180	12	41	10 494	LFU- $\frac{1}{2}$
G1	G1	100	252	15	50	10 495	LFU-1

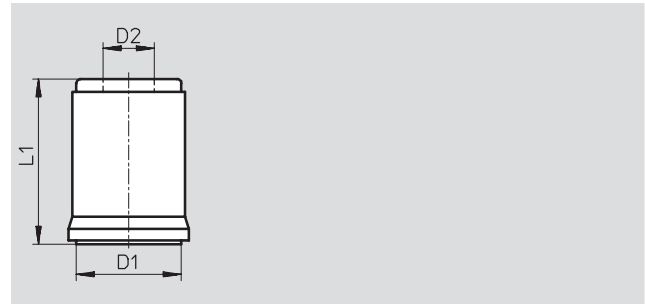
## Filter silencers LFU


Accessories

**FESTO**

### Filter cartridge LFPU

Note on material:  
Free of copper and PTFE



Dimensions and ordering data					
For connection	D1 Ø	D2 Ø	L1	Part No.	Type
G1/4, 3/8	60	28	69	<b>539134</b>	<b>LFPU-1/4-3/8</b>  <b>New</b>
G1/2	70	34.8	110	<b>10 496</b>	<b>LFPU-1/2</b>
G1	82	42.8	180	<b>10 497</b>	<b>LFPU-1</b>