Micro filter LFMA

Characteristics

At a glance

High-efficiency filter for special requirements.
- Air quality to ISO 8573-1:2010
- With or without connecting plates

Diagrams

Link lfma-d

The diagrams shown in this document are also available online. These can be used to display precise values.

Version

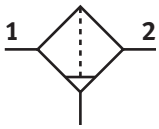
[D]	D series, metal

Sturdy in full metal design for the specific requirements of the process automation industry

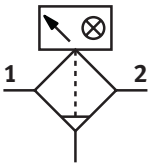
Filter change sensing

Optionally with differential pressure display for indicating filter contamination.

[_]	None



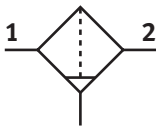
[DA]	Differential pressure display, visual



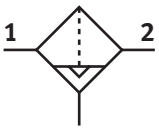
Condensate drain

Optionally with manual or fully automatic condensate drain

[_]	Manually rotating



[A]	Fully automatic



Type code

001	Series	
LFMA	Micro filter	

002	Pneumatic connection	
	None	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	
3/4	Female thread G3/4	
1	Female thread G1	

003	Version	
D	D series, metal	

004	Size	
MINI	Grid dimension 40 mm (without connecting plates)	
MIDI	Grid dimension 55 mm (without connecting plates)	
MAXI	Grid dimension 66 mm (without connecting plates)	

005	Filter change sensing	
	None	
DA	Differential pressure display, visual	

006	Condensate drain	
A	Fully automatic	
	Manually rotating	

Datasheet

General technical data						
Filter change sensing	None [_]			Differential pressure display, visual [DA]		
Size	Maxi	Midi	Mini	Maxi	Midi	Mini
Pneumatic connection, port 1	Sub-base, G1/2, G3/4, G1	Sub-base, G1/4, G3/8, G1/2, G3/4	Sub-base, G1/8, G1/4, G3/8	Sub-base, G1/2, G3/4, G1	Sub-base, G1/4, G3/8, G1/2, G3/4	Sub-base, G1/8, G1/4, G3/8
Pneumatic connection, port 2	Sub-base, G1/2, G3/4, G1	Sub-base, G1/4, G3/8, G1/2, G3/4	Sub-base, G1/8, G1/4, G3/8	Sub-base, G1/2, G3/4, G1	Sub-base, G1/4, G3/8, G1/2, G3/4	Sub-base, G1/8, G1/4, G3/8
Design	Fibre filter					
Type of mounting	Either: In-line installation With accessories					
Mounting position	Vertical +/-5°					
Grade of filtration	0.01 µm					
Air purity class at output	Compressed air to ISO 8573-1:2010 [1:7:2] Inert gases			Compressed air to ISO 8573-1:2010 [3:4:2] Inert gases		
Filter efficiency	*99.99 ... 99.9999%*	*99.9999%*				
MPPS	0.05 µm	–		0.05 µm		
Bowl guard	Metal bowl guard					
Condensate drain	Fully automatic Manually rotating					
Filter efficiency, fine particles	*99,995%*	–		*99,995%*		
Filter efficiency, oil aerosol	*99%*	–		*99%*		
Filter efficiency MPPS	*99.95%*	–		*99.95%*		
Differential pressure display	–			Visual display		
Residual oil content	0.01 mg/m³					

General technical data NPT (NPT – not available in all markets)						
Thread type	NPT thread [NPT]			None [_]		
Size	Maxi	Midi	Mini	Maxi	Midi	Mini
Pneumatic connection, port 1	3/4 NPT, 1 NPT	3/8 NPT, 1/2 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	–		
Pneumatic connection, port 2	3/4 NPT, 1 NPT	3/8 NPT, 1/2 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	–		
Design	–			Fibre filter		
Type of mounting	Either: In-line installation Via mounting bracket			Either: In-line installation With accessories		
Mounting position	Vertical			Vertical +/-5°		
Grade of filtration	0.01 µm					
Air purity class at output	Compressed air to ISO 8573-1:2010 [1:7:2] Inert gases			Compressed air to ISO 8573-1:2010 [3:4:2] Inert gases		
Filter efficiency	*99.9999%*					
MPPS	–			0.05 µm		
Bowl guard	Metal bowl guard					
Condensate drain	Fully automatic Manual, non-detenting			Fully automatic	Fully automatic Manually rotating	
Filter efficiency, fine particles	–			*99,995%*		
Filter efficiency, oil aerosol	–			*99%*		
Filter efficiency MPPS	–			*99.95%*		
Residual oil content	0.01 mg/m³			0.00000027 oz/yd³		

Standard nominal flow rate qnN (measured at p1 = 6 bar)										
Size	Maxi			Midi				Mini		
Pneumatic connection, port 1	G1/2	G3/4	G1	G1/4	G3/8	G1/2	G3/4	G1/8	G1/4	G3/8
Max. standard flow rate for clean air class	1,500 l/min	1,900 l/min	2,200 l/min	740 l/min	880 l/min	1,120 l/min	1,110 l/min	360 l/min	410 l/min	450 l/min
Min. standard flow rate for clean air class	500 l/min		480 l/min	240 l/min	250 l/min	330 l/min	300 l/min	80 l/min	100 l/min	

Datasheet

Standard nominal flow rate qnN (measured at p1 = 6 bar)							
Size	Maxi		Midi		Mini		
Pneumatic connection, port 1	3/4 NPT	1 NPT	3/8 NPT	1/2 NPT	1/8 NPT	1/4 NPT	3/8 NPT
Max. standard flow rate for clean air class	1,900 l/min	2,200 l/min	880 l/min	1,120 l/min	360 l/min	410 l/min	450 l/min
Min. standard flow rate for clean air class	500 l/min	480 l/min	250 l/min	330 l/min	80 l/min	100 l/min	

Operating and environmental conditions				
Filter change sensing	None [_]		Differential pressure display, visual [DA]	
Condensate drain	Fully automatic	Manually rotating	Fully automatic	Manually rotating
Operating pressure	–		0.2 ... 1.2 MPa	0.1 ... 1.6 MPa
Operating pressure	2 ... 12 bar	1 ... 16 bar	2 ... 12 bar	1 ... 16 bar
Operating pressure	–		29 ... 174 psi	14.5 ... 232 psi
Operating medium [1]	Compressed air to ISO 8573-1:2010 [6:8:4] Inert gases		Compressed air to ISO 8573-1:2010 [6:4:4] Inert gases	
Ambient temperature	-10 ... 60°C			
Media temperature	1.5 ... 60°C			
Corrosion resistance class CRC [2]	2 - Moderate corrosion stress			

1) Compressed air according to ISO 8573-1:2010 [7:9:-] applies to fully automatic condensate drain

2) More information www.festo.com/x/topic/crc

Operating and environmental conditions (NPT – not available in all markets)				
Thread type	NPT thread [NPT]		None [_]	
Condensate drain	Fully automatic	Manual, non-detenting	Fully automatic	Manually rotating
Operating pressure	–		0.2 ... 1.2 MPa	0.1 ... 1.6 MPa
Operating pressure	2 ... 12 bar	1 ... 16 bar	2 ... 12 bar	1 ... 16 bar
Operating pressure	–		29 ... 174 psi	14.5 ... 232 psi
Operating medium [1]	Compressed air to ISO 8573-1:2010 [6:8:4] Inert gases		Compressed air to ISO 8573-1:2010 [6:4:4] Inert gases	
Ambient temperature	-10 ... 60°C		14 ... 140°F	
Media temperature	1.5 ... 60°C		33.8 ... 140°F	
Corrosion resistance class CRC [2]	2 - Moderate corrosion stress			

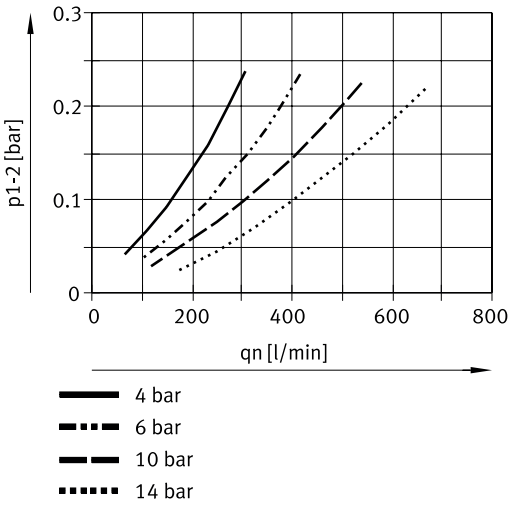
1) Compressed air according to ISO 8573-1:2010 [7:9:-] applies to fully automatic condensate drain

2) More information www.festo.com/x/topic/crc

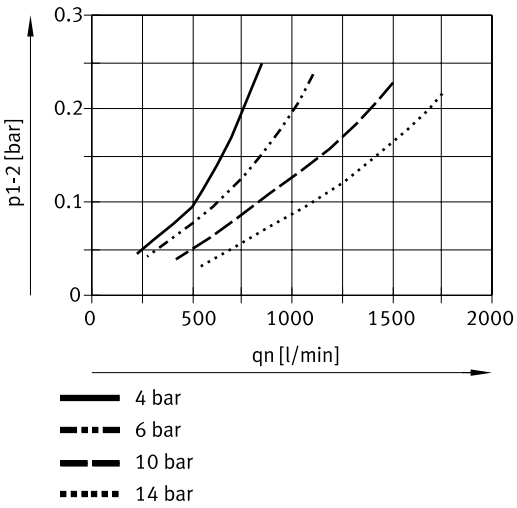
Materials	
Material housing	Die-cast zinc
Material bowl	PC
Material filter	Borosilicate fibre
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Datasheet

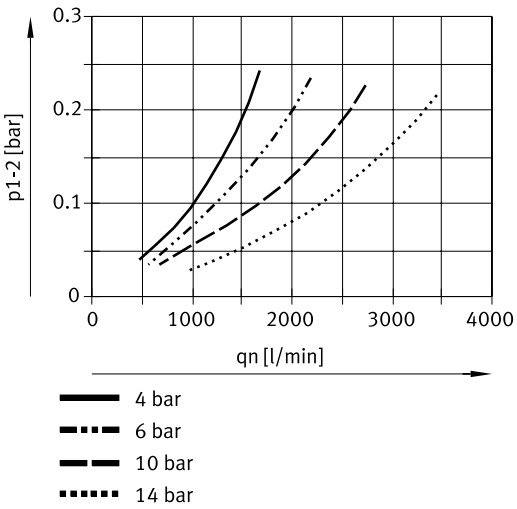
Standard flow rate qn as a function of differential pressure Δp1-2 (LFMA-1/4-D-MINI)



Standard flow rate qn as a function of differential pressure Δp1-2 (LFMA-1/2-D-MIDI)



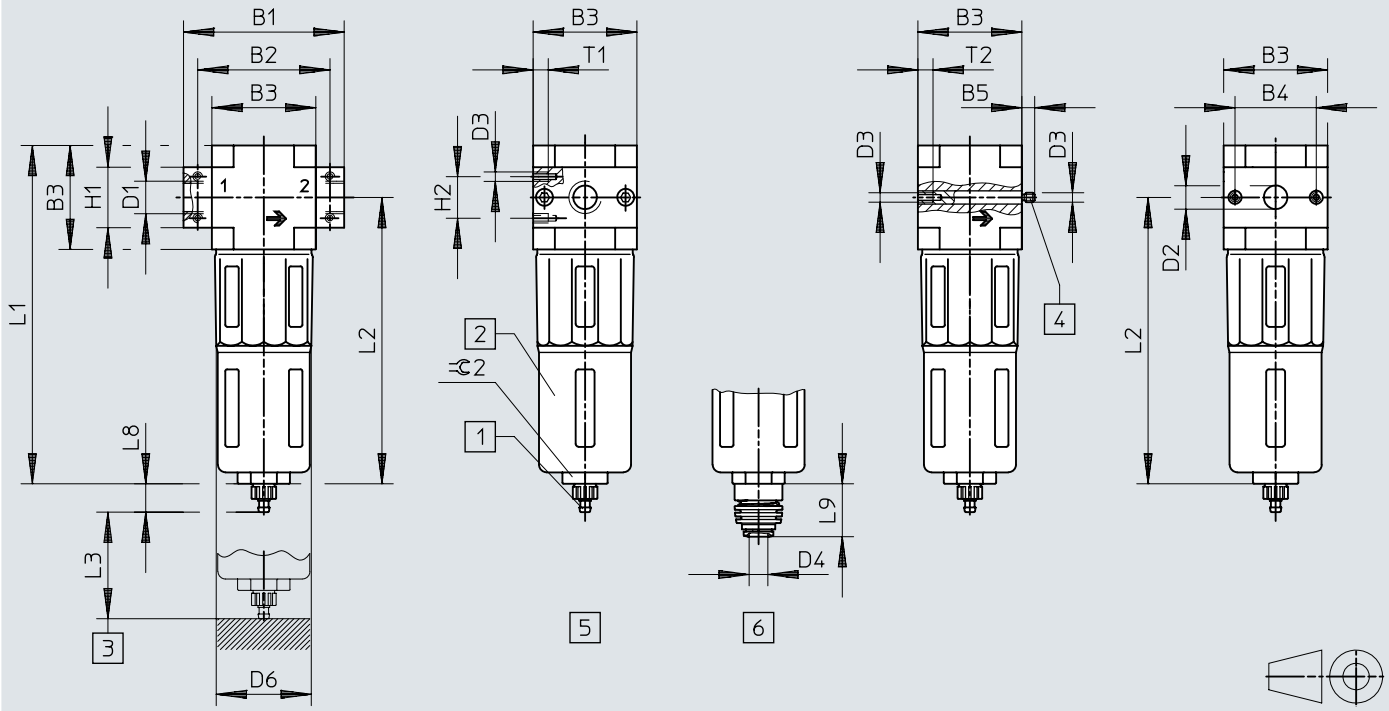
Standard flow rate qn as a function of differential pressure Δp1-2 (LFMA-1-D-MAXI)



Dimensions

Dimensions – Connecting plates with threaded connection, without connecting plates

Download CAD data www.festo.com

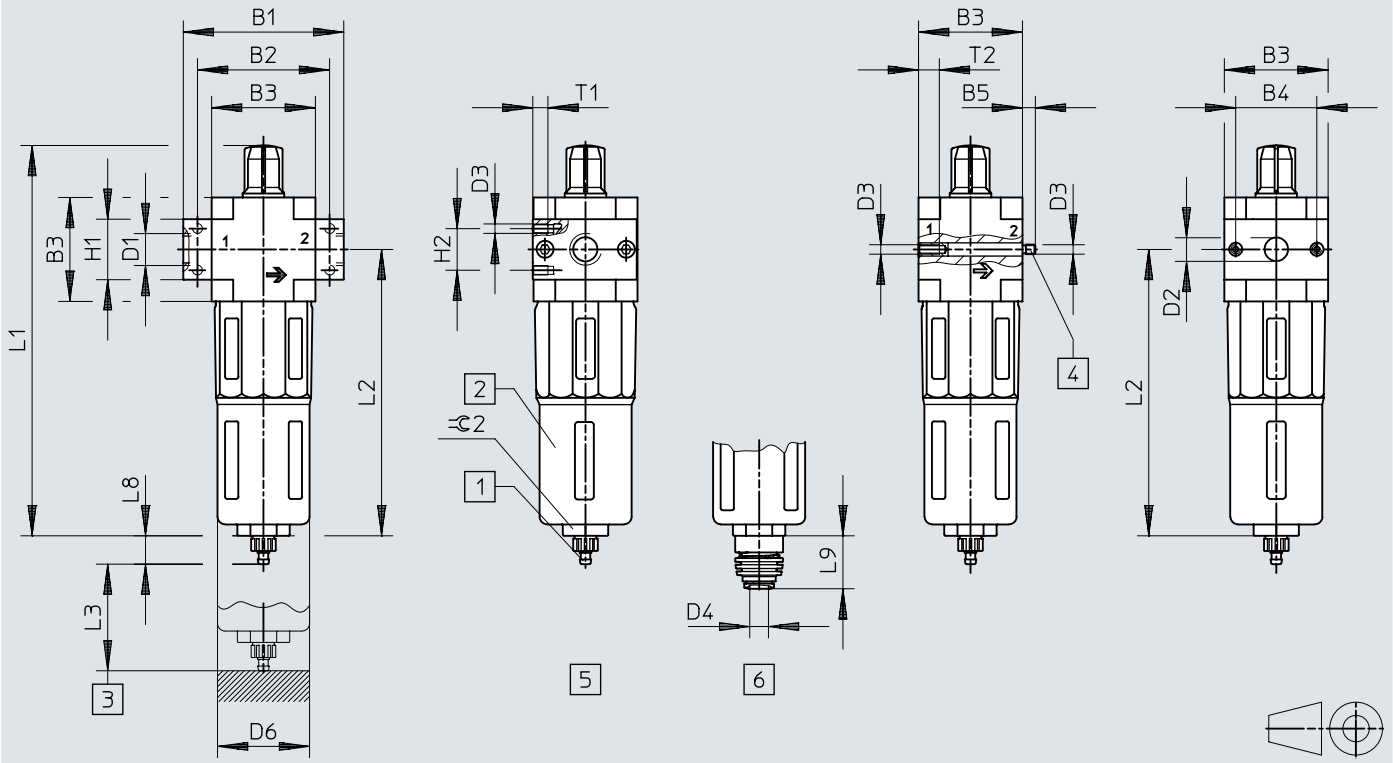


[1] Barbed connector for plastic tubing PUN(-H)-8x1.25
[2] Metal bowl guard
[3] Installation dimension
[4] Threaded bolt (exchangeable)
[5] Manual condensate drain
[6] Fully automatic condensate drain for plastic tubing PUN-6/PAN-6

	B1	B2	B3	B4	B5	D1	D2 ⌀	D3	D6 ⌀	H1	H2	L1	L2	L3	L8	L9	T1	T2	⊂2
Mini																			
LFMA-1/8-D-MINI	64	52	40	30	–	G1/8	–	M4	38	20	11	144	124	60	15	19	7	–	22
LFMA-1/4-D-MINI						G1/4													
LFMA-3/8-D-MINI	70					G3/8													
LFMA-D-MINI	–	–			5,8	–	11			–	–						–	10	
Midi																			
LFMA-1/4-D-MIDI	85	70	55	43	–	G1/4	–	M5	52	32	22	179	151	80	15	19	8	–	24
LFMA-3/8-D-MIDI						G3/8													
LFMA-1/2-D-MIDI						G1/2													
LFMA-3/4-D-MIDI						G3/4													
LFMA-D-MIDI	–	–			6,8	–	24			–	–						–	11	
Maxi																			
LFMA-1/2-D-MAXI	96	80	66	46	–	G1/2	–	M5	65	32	22	203	170	90	15	19	8	–	24
LFMA-3/4-D-MAXI						G3/4													
LFMA-1-D-MAXI	116	91				G1				40									
LFMA-D-MAXI	–	–			6,8	–	30			–	–						–	11	

Dimensions

Dimensions – With differential pressure display DA Download CAD data www.festo.com



[1] Barbed connector for plastic tubing PUN(-H)-8x1.25
[2] Metal bowl guard
[3] Installation dimension
[4] Threaded bolt (exchangeable)
[5] Manual condensate drain
[6] Fully automatic condensate drain for plastic tubing PUN-6/PAN-6

	B1	B2	B3	B4	B5	D1	D2 ø	D3	D6 ø	H1	H2	L1	L2	L3	L8	L9	T1	T2	⊂ 2
Mini																			
LFMA-1/8-D-MINI-DA	64	52	40	30	–	G1/8	–	M4	38	20	11	173	124	60	15	19	7	–	22
LFMA-1/4-D-MINI-DA						G1/4													
LFMA-3/8-D-MINI-DA	70					G3/8													
LFMA-D-MINI-DA	–	–			5,8	–	11			–	–						–	10	
Midi																			
LFMA-1/4-D-MIDI-DA	85	70	55	43	–	G1/4	–	M5	52	32	22	207	151	80	15	19	8	–	24
LFMA-3/8-D-MIDI-DA						G3/8													
LFMA-1/2-D-MIDI-DA						G1/2													
LFMA-3/4-D-MIDI-DA						G3/4													
LFMA-D-MIDI-DA	–	–			6,8	–	24			–	–						–	11	
Maxi																			
LFMA-1/2-D-MAXI-DA	96	80	66	46	–	G1/2	–	M5	65	32	22	232	170	90	15	19	8	–	24
LFMA-3/4-D-MAXI-DA						G3/4													
LFMA-1-D-MAXI-DA	116	91				G1				40									
LFMA-D-MAXI-DA	–	–			6,8	–	30			–	–						–	11	

Ordering data

Micro filter LFMA

	Size	Pneumatic connection, port 1	Condensate drain	Product weight	Part no.	Type
	Maxi	Sub-base	Fully automatic		192568	LFMA-D-MAXI-A
			Manually rotating		192565	LFMA-D-MAXI
		G1/2	Fully automatic		186475	LFMA-1/2-D-MAXI-A
			Manually rotating		186476	LFMA-1/2-D-MAXI
		G3/4	Fully automatic	1,200 g	162656	LFMA-3/4-D-MAXI-A
			Manually rotating		162648	LFMA-3/4-D-MAXI
		G1	Fully automatic		162657	LFMA-1-D-MAXI-A
			Manually rotating		162649	LFMA-1-D-MAXI
	Midi	Sub-base	Fully automatic		192567	LFMA-D-MIDI-A
			Manually rotating		192564	LFMA-D-MIDI
		G1/4	Fully automatic		186470	LFMA-1/4-D-MIDI-A
			Manually rotating		186469	LFMA-1/4-D-MIDI
		G3/8	Fully automatic	650 g	162653	LFMA-3/8-D-MIDI-A
			Manually rotating		162645	LFMA-3/8-D-MIDI
		G1/2	Fully automatic		162654	LFMA-1/2-D-MIDI-A
			Manually rotating		162646	LFMA-1/2-D-MIDI
		G3/4	Fully automatic		162655	LFMA-3/4-D-MIDI-A
			Manually rotating		162647	LFMA-3/4-D-MIDI
	Mini	Sub-base	Fully automatic		192566	LFMA-D-MINI-A
			Manually rotating		192563	LFMA-D-MINI
		G1/8	Fully automatic	250 g	162650	LFMA-1/8-D-MINI-A
			Manually rotating		162642	LFMA-1/8-D-MINI
		G1/4	Fully automatic		162651	LFMA-1/4-D-MINI-A
			Manually rotating		162643	LFMA-1/4-D-MINI
		G3/8	Fully automatic		162652	LFMA-3/8-D-MINI-A
			Manually rotating		162644	LFMA-3/8-D-MINI

Micro filter LFMA with differential pressure display

	Size	Pneumatic connection, port 1	Condensate drain	Product weight	Part no.	Type
	Maxi	Sub-base	Fully automatic		532842	LFMA-D-MAXI-DA-A
			Manually rotating		532839	LFMA-D-MAXI-DA
		G1/2	Fully automatic	1,340 g	532860	LFMA-1/2-D-MAXI-DA-A
			Manually rotating		532850	LFMA-1/2-D-MAXI-DA
		G3/4	Fully automatic		532861	LFMA-3/4-D-MAXI-DA-A
			Manually rotating		532851	LFMA-3/4-D-MAXI-DA
		G1	Fully automatic		532862	LFMA-1-D-MAXI-DA-A
			Manually rotating		532852	LFMA-1-D-MAXI-DA
	Midi	Sub-base	Fully automatic		532841	LFMA-D-MIDI-DA-A
			Manually rotating		532838	LFMA-D-MIDI-DA
		G1/4	Fully automatic	834 g	532856	LFMA-1/4-D-MIDI-DA-A
			Manually rotating		532846	LFMA-1/4-D-MIDI-DA
		G3/8	Fully automatic		532857	LFMA-3/8-D-MIDI-DA-A
			Manually rotating		532847	LFMA-3/8-D-MIDI-DA
		G1/2	Fully automatic		532858	LFMA-1/2-D-MIDI-DA-A
			Manually rotating		532848	LFMA-1/2-D-MIDI-DA
		G3/4	Fully automatic		532859	LFMA-3/4-D-MIDI-DA-A
			Manually rotating		532849	LFMA-3/4-D-MIDI-DA
	Mini	Sub-base	Fully automatic		532840	LFMA-D-MINI-DA-A

Ordering data

Micro filter LFMA with differential pressure display

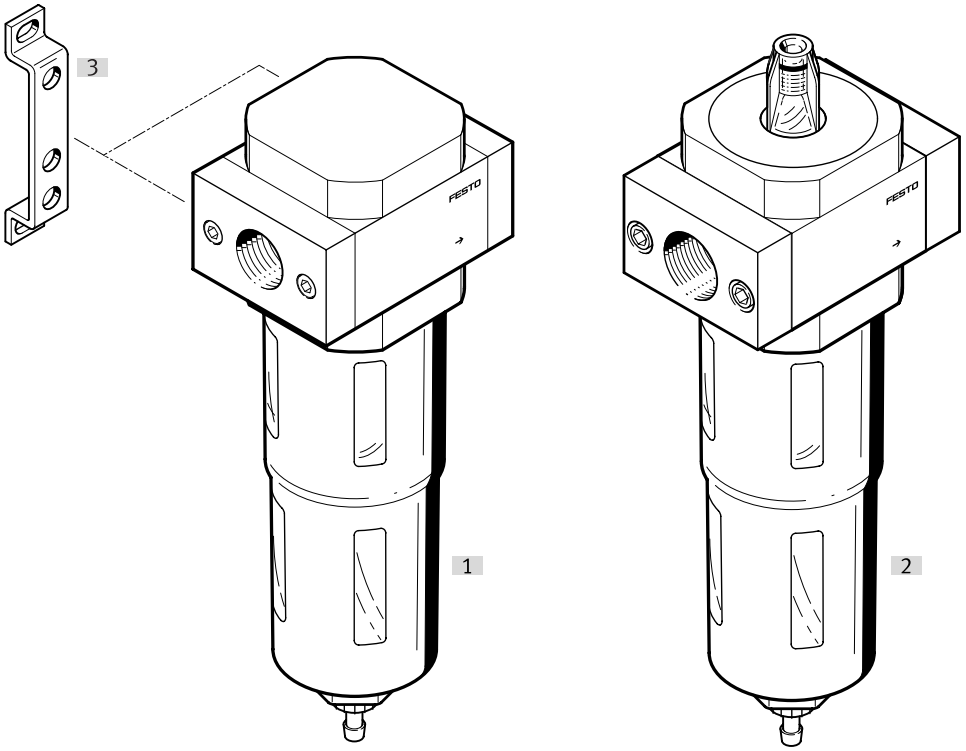
	Size	Pneumatic connection, port 1	Condensate drain	Product weight	Part no.	Type
	Mini	Sub-base	Manually rotating		**532837**	**LFMA-D-MINI-DA**
		G1/8		368 g	**532843**	**LFMA-1/8-D-MINI-DA**
		G1/4	Fully automatic		**532854**	**LFMA-1/4-D-MINI-DA-A**
			Manually rotating		**532844**	**LFMA-1/4-D-MINI-DA**
		G3/8	Fully automatic		**532855**	**LFMA-3/8-D-MINI-DA-A**
			Manually rotating		**532845**	**LFMA-3/8-D-MINI-DA**

Micro filter LFMA (NPT – not available in all markets)

	Size	Pneumatic connection, port 1	Condensate drain	Product weight	Part no.	Type
	Maxi		Fully automatic	1,190.7 oz	**546449**	**LFMA-D-MAXI-A-U**
		3/4 NPT			**173737**	**LFMA-3/4-D-MAXI-A-NPT**
		1 NPT	Manual, non-detenting		**173738**	**LFMA-1-D-MAXI-NPT**
	Midi		Fully automatic	644.962 oz	**546446**	**LFMA-D-MIDI-A-U**
			Manually rotating		**546443**	**LFMA-D-MIDI-U**
		3/8 NPT	Fully automatic		**173731**	**LFMA-3/8-D-MIDI-A-NPT**
			Manual, non-detenting		**173730**	**LFMA-3/8-D-MIDI-NPT**
		1/2 NPT	Fully automatic		**173733**	**LFMA-1/2-D-MIDI-A-NPT**
			Manual, non-detenting		**173732**	**LFMA-1/2-D-MIDI-NPT**
	Mini		Fully automatic	248.062 oz	**546441**	**LFMA-D-MINI-A-U**
			Manually rotating		**546439**	**LFMA-D-MINI-U**
		1/8 NPT	Manual, non-detenting		**173724**	**LFMA-1/8-D-MINI-NPT**
		1/4 NPT	Fully automatic		**173727**	**LFMA-1/4-D-MINI-A-NPT**
		3/8 NPT			**173729**	**LFMA-3/8-D-MINI-A-NPT**

Peripherals

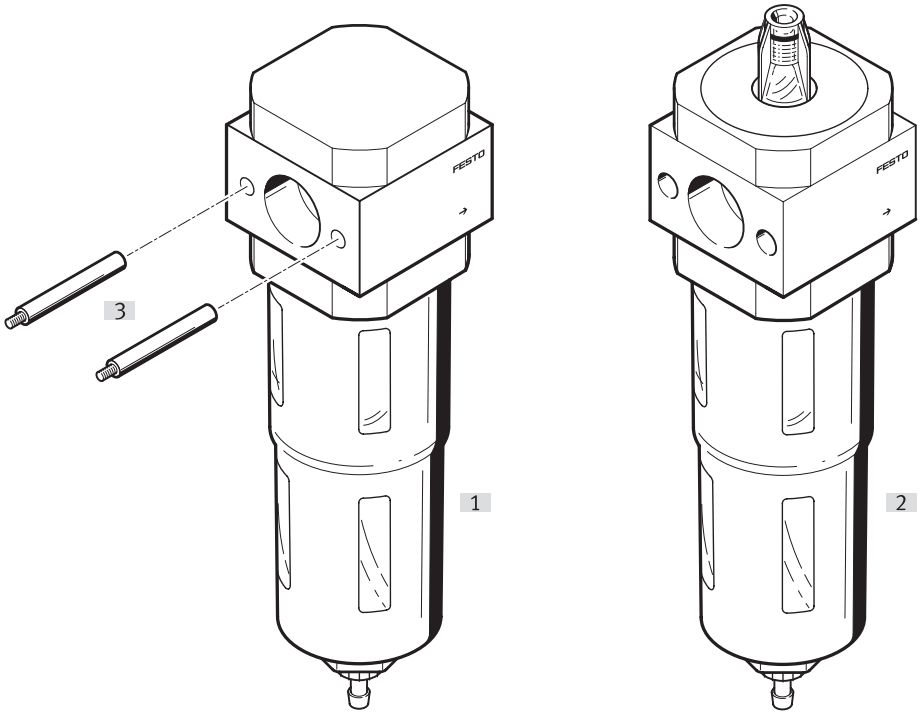
Peripherals overview – single unit with connecting plates



Accessories			→ Link
	Type/order code	Description	
[1]	Fine filter LFMA-D		lfma-d
[2]	Fine filter LFMA-D	With differential pressure indication	lfma-d
[3]	Mounting bracket HFOE-D		13

Peripherals

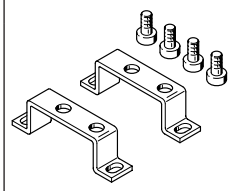
Peripherals overview – individual unit without connecting plates, for service unit component combination



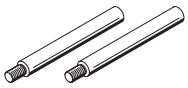
Accessories			→ Link
	Type/order code	Description	
[1]	Fine filter LFMA-D		lfma-d
[2]	Fine filter LFMA-D	With differential pressure indication	lfma-d
[3]	Threaded bolt FRB-D	Included in the scope of delivery	13

Accessories

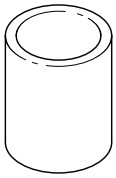
Mounting bracket MS4-WP...

	Short type code	Corrosion resistance class CRC	Part no.	Type
	HFOE	2 - Moderate corrosion stress	**159638**	**HFOE-D-MINI**
			159593	**HFOE-D-MIDI/MAXI**

Mounting bracket MS4-WB

	Short type code	Corrosion resistance class CRC	Part no.	Type
	FRB	2 - Moderate corrosion stress	**159595**	**FRB-D-MIDI**
			159643	**FRB-D-MAXI**
			159642	**FRB-D-MINI**

Fine-filter cartridges

	Size	Grade of filtration [1]	Part no.	Type
	Maxi	0.01 µm	**162676**	**LFMAP-D-MAXI**
	Midi		**162675**	**LFMAP-D-MIDI**
	Mini		★ **162674**	**MS4/D-MINI-LFM-A**