

Fine and Micro Filters MS6N-LFM – Inch Series



Fine and micro filters, with 1 micron or 0.01 micron filtration grades, remove submicronic water or oil droplets and dirt particles for exceptionally clean compressed air.

- Pneumatic connection: 1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT
- Supply pressure
 - For manual drain: 0 ... 294 psi
 - For semiautomatic drain: 22 ... 176 psi
 - For fully automatic drain: 29 ... 176 psi
 - For fully automatic drain, electrically actuated: 12 ... 235 psi
- Flow rate: 13.4 ... 30.0 scfm

Product Range Overview																		
Type	Pneumatic connections		Filtration grade [µm]				Bowl guard		Bowl drain								Contamination control	Reverse flow
	Body thread	Port plate	0.01	1	5	40	Plastic bowl guard	Metal bowl	Manual	Semiautomatic	Fully automatic	Electrical 24 V DC M12	Electrical 110 V AC with terminals	Electrical 230 V AC with terminals	Electrical 24 V DC with terminals	Differential pressure indicator	Flow direction from right to left	
MS6N		AG...	A	B	C	E	R	U	M	H	V	E1	E2	E3	E4	DA	Z	
LFM	1/4 NPT, 3/8 NPT, 1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	■	■	-	-	■	■	■	■	■	■	■	■	■	■	■	

Features

- High-performance filter for exceptionally clean compressed air
- Air quality to DIN ISO 8573-1
- Available with differential pressure indicator for optical indication of filter contamination
- LFM-A:
 - ISO class 1 for particles: max. particle density 0.1 mg/m³
 - ISO class 2 for oil aerosols: max. oil concentration 0.1 mg/m³
 - Filter efficiency 99.9999%
- LFM-B:
 - ISO class 2 for particles: max. particle density 1 mg/m³
 - ISO class 3 for oil aerosols: max. oil concentration 1 mg/m³
 - Filter efficiency 99.99%

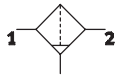
Contents

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- Replacement Parts → 800
- www.festo.com/catalog/ms6n-lfm

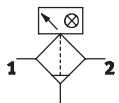
Fine and Micro Filters MS6N-LFM – Inch Series

Technical Data

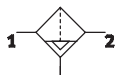
ISO Symbol



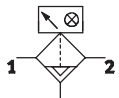
Manual bowl drain
without differential pressure indicator



with differential pressure indicator



Semi or fully automatic bowl drain
without differential pressure indicator



with differential pressure indicator



General Technical Data			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 1, 2					
Filtration grade	[µm]	0.01 (micro filter LFM-A, air purity class at the output 1.7.2 to DIN ISO 8573-1) 1 (fine filter LFM-B, air purity class at the output 2.7.3 to DIN ISO 8573-1)			
Supply pressure	M [psi]	0 ... 294 (manual drain)			
	H [psi]	22 ... 176 (semiautomatic drain)			
	V [psi]	29 ... 176 (fully automatic drain)			
	E... [psi]	12 ... 235 (fully automatic drain, electrically actuated)			

Standard Nominal Flow Rate qnN ¹⁾ and Standard Flow Rate qn [scfm]				
Pneumatic connection 1, 2		1/4 NPT	3/8 NPT	1/2 NPT
Micro filter LFM-A				
qnN 1 → 2		13.4	15.2	16.9
qn min		4.8	4.8	4.8
qn max		31.8	31.8	31.8
Fine filter LFM-B				
qnN 1 → 2		19.4	24.7	30.0
qn min		4.9	4.9	4.9
qn max		33.5	33.5	33.5

1) Measured at p1 = 88 psi and Δp = 1.0 psi

Fine and Micro Filters MS6N-LFM – Inch Series

Technical Data

Operating and Environmental Conditions				
Bowl drain	Manual M	Semiautomatic H	Fully automatic V	Fully automatic, electrically actuated E...
Operating medium micro filter LFM-A	Compressed air, filtered, unlubricated, filtration grade 1 µm			
Operating medium fine filter LFM-B	Compressed air, filtered, unlubricated, filtration grade 5 µm			
Max. condensate volume [in ³]	2.32			
Bowl guard	Plastic bowl guard			
	Metal bowl			
Ambient temperature [°F]	14 ... 140	41 ... 140	41 ... 140	34 ... 140
Temperature of medium [°F]	14 ... 140	41 ... 140	41 ... 140	34 ... 140
Storage temperature [°F]	14 ... 140	14 ... 140	14 ... 140	34 ... 140
Assembly position	Vertical ±5°			
Corrosion resistance CRC ¹⁾	2			

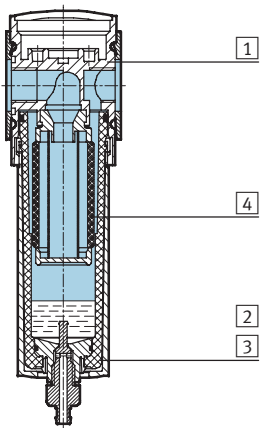
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weights [lb]	
With plastic bowl guard	1.20
With metal bowl	1.64
With metal bowl and fully automatic, electrically actuated bowl drain	3.60

- Wearing parts kits → 800
- Filter cartridges → 800
- For spare parts go to: www.festo.com/en/spare_parts_service

Materials

Sectional view



Fine and micro filter		
1	Body	Die-cast aluminum
2	Plastic bowl guard	Polycarbonate/polyamide
3	Metal bowl	Aluminum
	Viewing window	Polyamide
4	Filters	Borosilicate fiber
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE

Fine and Micro Filters MS6N-LFM – Inch Series

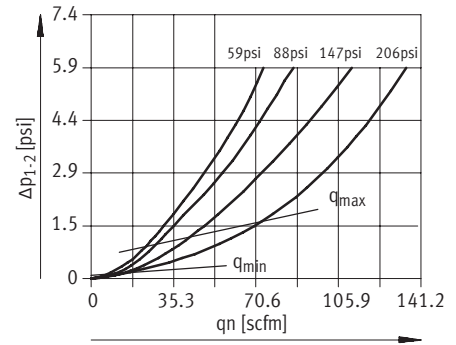
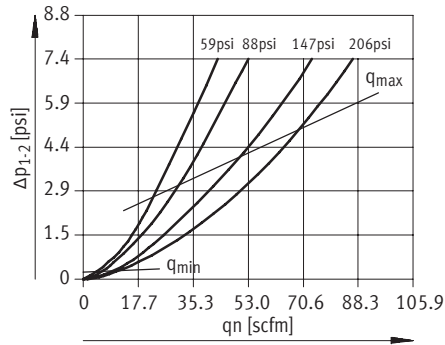
Technical Data

Standard Flow Rate q_n as a Function of the Differential Pressure Δp_{1-2}

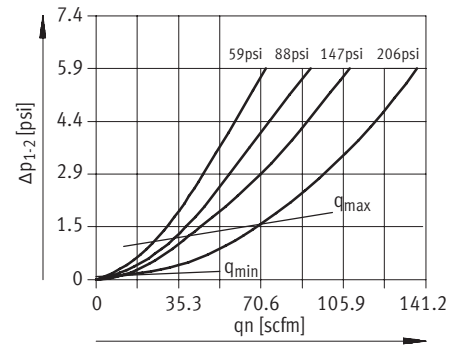
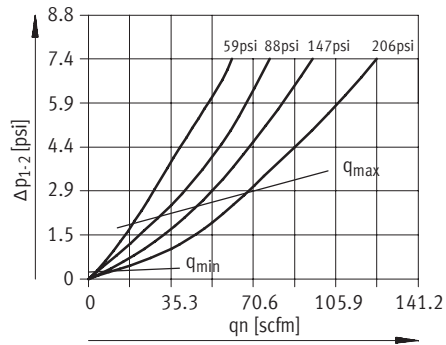
Filtration grade 0.01 μm

Filtration grade 1 μm

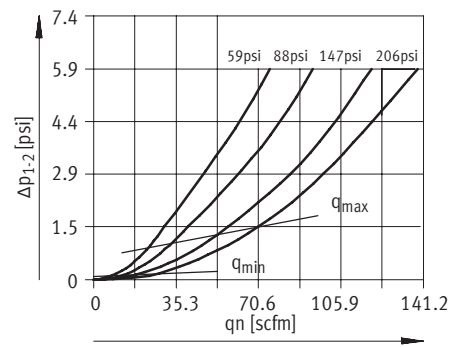
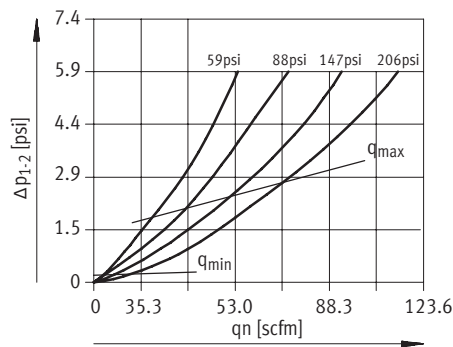
MS6N-LFM-1/4



MS6N-LFM-3/8



MS6N-LFM-1/2



Fine and Micro Filters MS6N-LFM – Inch Series

Dimensional Drawings



Dimensions¹⁾ – Standard Download CAD Data → www.festo.com/us/cad

Manual bowl drain

1 Installation dimensions
→ Flow direction

Type	B1	B2	B3	D1	L1		L2	L3	L5	L6	
					Bowl guard					Plastic	Metal
					Plastic	Metal					
MS6N-LFM-1/4	2.44	1.22	2.99	1/4 NPT	7.44	7.80	1.65	3.43	2.95	0.62	0.75
MS6N-LFM-3/8				3/8 NPT							
MS6N-LFM-1/2				1/2 NPT							

1) Dimensions are in inches, unless otherwise noted.

Fine and Micro Filters MS6N-LFM – Inch Series

Dimensional Drawings



Dimensions¹⁾ – Differential Pressure Indicator Download CAD Data → www.festo.com/us/cad

→ Flow direction

Type	B1	B2	B3	D1	L1 Bowl guard		L2	L3
					Plastic	Metal		
MS6N-LFM-1/4-...-DA	2.44	1.22	2.99	1/4 NPT	8.58	8.82	2.68	4.45
MS6N-LFM-3/8-...-DA				3/8 NPT				
MS6N-LFM-1/2-...-DA				1/2 NPT				

1) Dimensions are in inches, unless otherwise noted.

Dimensions¹⁾ – Bowl Drain Download CAD Data → www.festo.com/us/cad

Manual M

Barbed fitting for plastic tubing
PCN-4

Semiautomatic H

QS fitting for plastic tubing
PUN-6/PAN-6

Fully automatic V

Barbed fitting for plastic tubing
PCN-4

Type	L6
Plastic bowl guard	
MS6N-LFM-...-M	0.62
Metal bowl	
MS6N-LFM-...-M	0.75

Type	L6
Plastic bowl guard	
MS6N-LFM-...-H	0.80
Metal bowl	
MS6N-LFM-...-H	0.90

Type	L6
Plastic bowl guard	
MS6N-LFM-...-V	0.73
Metal bowl	
MS6N-LFM-...-V	0.87

Fully automatic, electrically actuated E1 ... E4 Technical data PWEA → www.festo.com/catalog/pwea

1 Variant E1
PWEA-AP-... with M12x1 plug,
5-pin for SIM-M12-5GD-...

2 Variants E2/E3/E4
PWEA-AC-... with cable conduit
fitting Pg9

3 Connection 360° rotatable for
plastic tubing PUN-H-12x2-...

1) Dimensions are in inches, unless otherwise noted.

Fine and Micro Filters MS6N-LFM – Inch Series



Ordering Data – Pre-configured Products

Ordering Data							
Without differential pressure indicator							
Bowl drain	Connection	Micro filter			Fine filter		
		Filtration grade 0.01 µm			Filtration grade 1 µm		
		Part No.	Type	LT	Part No.	Type	LT
Plastic bowl guard							
Manual	1/4 NPT	531860	MS6N-LFM-1/4-ARM		531848	MS6N-LFM-1/4-BRM	
	3/8 NPT	531862	MS6N-LFM-3/8-ARM		531850	MS6N-LFM-3/8-BRM	
	1/2 NPT	531861	MS6N-LFM-1/2-ARM		531849	MS6N-LFM-1/2-BRM	
Fully automatic	1/4 NPT	531866	MS6N-LFM-1/4-ARV		531854	MS6N-LFM-1/4-BRV	
	3/8 NPT	531868	MS6N-LFM-3/8-ARV		531856	MS6N-LFM-3/8-BRV	
	1/2 NPT	531867	MS6N-LFM-1/2-ARV		531855	MS6N-LFM-1/2-BRV	
Metal bowl							
Fully automatic	1/4 NPT	531878	MS6N-LFM-1/4-AUV		531872	MS6N-LFM-1/4-BUV	
	3/8 NPT	531880	MS6N-LFM-3/8-AUV		531874	MS6N-LFM-3/8-BUV	
	1/2 NPT	531879	MS6N-LFM-1/2-AUV		531873	MS6N-LFM-1/2-BUV	

Ordering Data							
With differential pressure indicator							
Bowl drain	Connection	Micro filter			Fine filter		
		Filtration grade 0.01 µm			Filtration grade 1 µm		
		Part No.	Type	LT	Part No.	Type	LT
Plastic bowl guard							
Manual	1/4 NPT	536887	MS6N-LFM-1/4-ARM-DA	1D	536851	MS6N-LFM-1/4-BRM-DA	1D
	3/8 NPT	536888	MS6N-LFM-3/8-ARM-DA	1D	536852	MS6N-LFM-3/8-BRM-DA	1D
	1/2 NPT	536889	MS6N-LFM-1/2-ARM-DA	1D	536853	MS6N-LFM-1/2-BRM-DA	1D
Fully automatic	1/4 NPT	536893	MS6N-LFM-1/4-ARV-DA	1D	536857	MS6N-LFM-1/4-BRV-DA	1D
	3/8 NPT	536894	MS6N-LFM-3/8-ARV-DA	1D	536858	MS6N-LFM-3/8-BRV-DA	1D
	1/2 NPT	536895	MS6N-LFM-1/2-ARV-DA	1D	536859	MS6N-LFM-1/2-BRV-DA	1D
Metal bowl							
Fully automatic	1/4 NPT	536899	MS6N-LFM-1/4-AUV-DA	Q	536863	MS6N-LFM-1/4-BUV-DA	Q
	3/8 NPT	536900	MS6N-LFM-3/8-AUV-DA	Q	536864	MS6N-LFM-3/8-BUV-DA	Q
	1/2 NPT	536901	MS6N-LFM-1/2-AUV-DA	Q	536865	MS6N-LFM-1/2-BUV-DA	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Fine and Micro Filters MS6N-LFM – Inch Series

Ordering Data – Configurable Products



M Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Filtration grade	Bowl
527671	MS	6	N	LFM	1/4, 3/8, 1/2, AQN, AQP, AQR, AQS	B A	R U
Order example							
527671	MS	6	N	- LFM	- AQN	- B	- R

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	527671				
Series	Standard			MS	MS
Size	6			6	6
Thread	NPT thread			N	N
Function	Fine and micro filter			-LFM	-LFM
Connection size	Body thread 1/4 NPT			-1/4	
	Body thread 3/8 NPT			-3/8	
	Body thread 1/2 NPT			-1/2	
	Port plate 1/4 NPT (dimensions → 832)			-AQN	
	Port plate 3/8 NPT (dimensions → 832)			-AQP	
	Port plate 1/2 NPT (dimensions → 832)			-AQR	
	Port plate 3/4 NPT (dimensions → 832)			-AQS	
Filtration grade	1 µm			-B	
	0.01 µm			-A	
Bowl	Plastic bowl with plastic bowl guard			-R	
	Metal bowl			-U	

Transfer order code

527671	MS	6	N	- LFM	-		-		-	
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Fine and Micro Filters MS6N-LFM – Inch Series



Ordering Data – Configurable Products

→ M Mandatory Data	O Options		
Bowl drain	Filter change sensor	Type of mounting	Reverse flow direction
M H V E1 E2 E3 E4	DA	WP WPM WB	Z
- M	-	WP	- Z

Ordering Table					
Grid dimension	[mm]	62	Conditions Code Enter code		
M	Bowl drain	Manual	-M		
		Semiautomatic (P1 max. 176 psi)	-H		
		Fully automatic (P1 max. 176 psi)	-V		
		External fully automatic bowl drain, electrical, 24 V DC, M12	1 -E1		
		External fully automatic bowl drain, electrical, 110 V AC, terminals	1 -E2		
		External fully automatic bowl drain, electrical, 230 V AC, terminals	1 -E3		
		External fully automatic bowl drain, electrical, 24 V DC, terminals	1 -E4		
O	Filter change sensor	Differential pressure indicator, optical	-DA		
		Type of mounting	Mounting bracket (dimensions → 833)		2 -WP
			Mounting bracket (dimensions → 833)		2 -WPM
			Mounting bracket (dimensions → 830)		-WB
Reverse flow direction	Flow direction from right to left	-Z			

1 E1, E2, E3, E4

Only with metal bowl U

2 WP, WPM

Only with port plate AQN, AQP, AQR or AQS

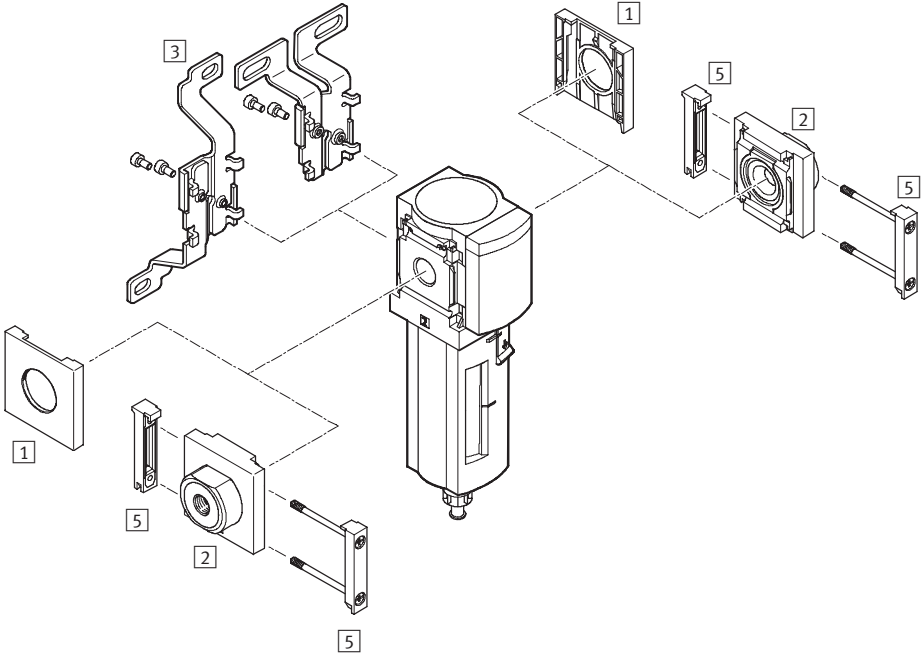
Transfer order code

- [] - [] - [] - []

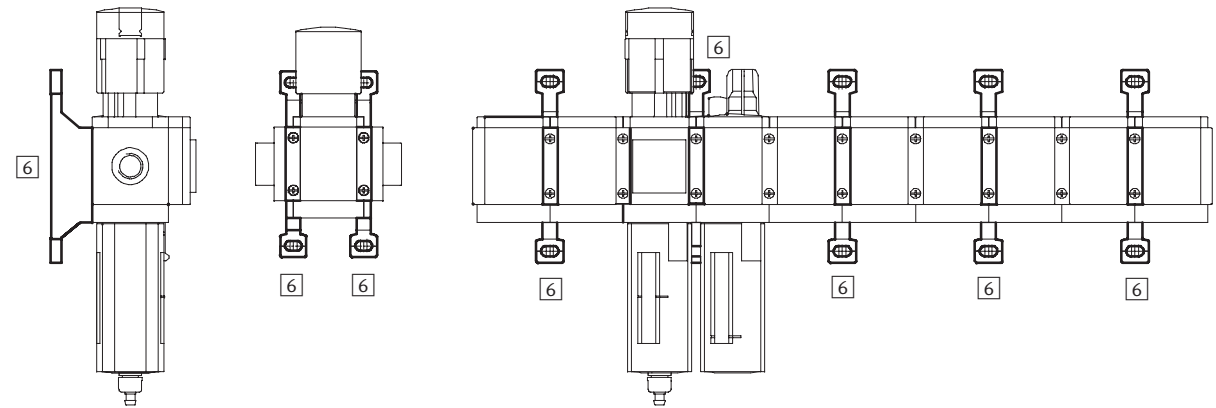
Fine and Micro Filters MS6N-LFM – Inch Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Fine and Micro Filters MS6N-LFM – Inch Series

Accessories Overview



Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	831
2	Port plate MS6N-AQ...	-	■	-	■	832
3	Mounting bracket MS6-WB	■	■	-	-	830
5	Body connector MS6-MV	-	■	■	■	832
6	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	833

Fine and Micro Filters MS6N-LFM – Inch Series



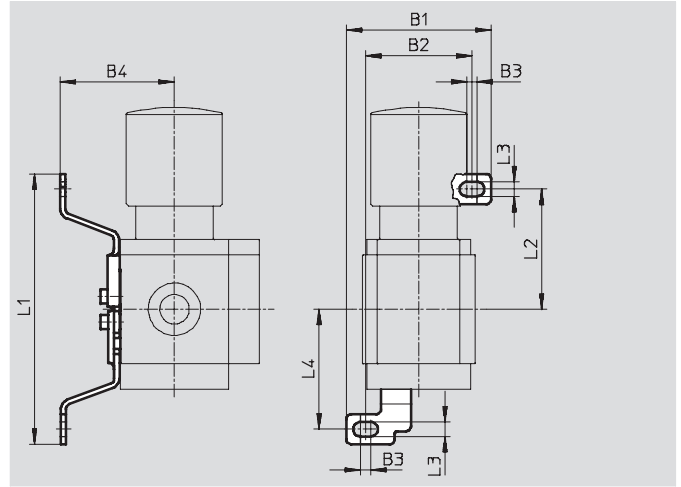
Accessories

3 Mounting bracket MS6-WB

- For wall mounting

Material:

Steel



Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.13	2.44	0.18	2.17	6.20	2.80	0.26	2.80	0.24	532196	MS6-WB

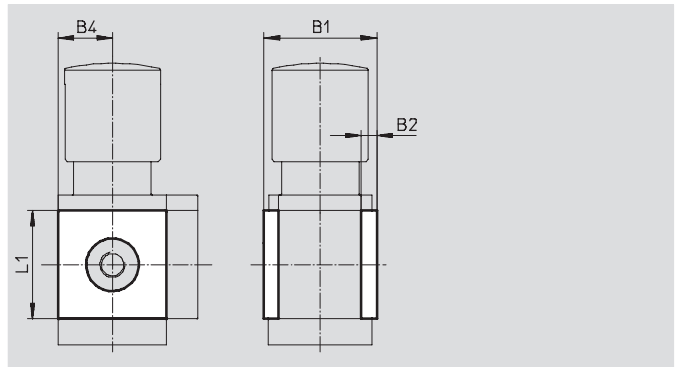
Fine and Micro Filters MS6N-LFM – Inch Series

Accessories

1 Cover cap MS6-END

- Can be used to cover the body sides of the first and last module if port plates are not used.

Material:
Reinforced polyamide
Free of copper and PTFE

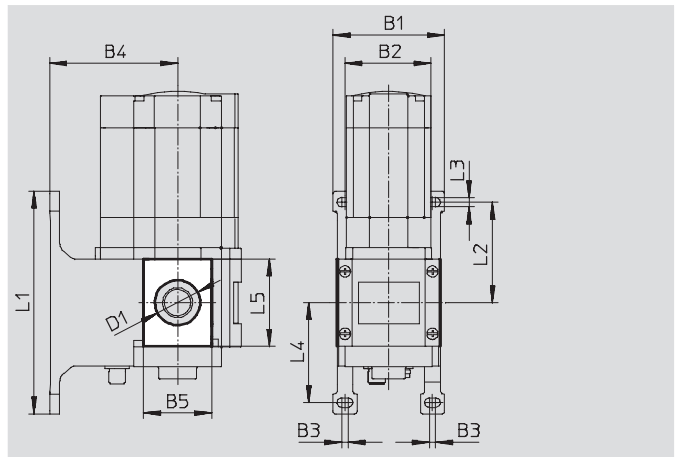


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
2.64	0.31	1.22	2.44	538780	MS6-END	

Mounting plate MS6-AEND

- In combination with mounting bracket MS-WP or MS-WPB for mounting an individual unit with body thread on a wall

Material:
Reinforced polyamide
Conforms to RoHS
Free of copper and PTFE



Dimensions and Ordering Data															
B1	B2	B3	B4		B5	D1 ∅	L1	L2	L3	L4	L5	CRC ¹⁾	Weight [lb]	Part No.	Type
			WP	WPB											
3.11	2.44	0.18	2.13	3.56	1.91	1.26	6.22	2.80	0.26	2.80	2.44	2	0.03	535408	MS6-AEND

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 normal industrial environment or media such as coolants or lubricating agents.

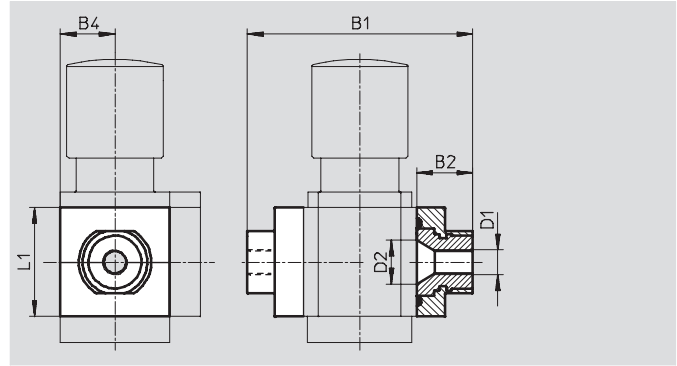
Fine and Micro Filters MS6N-LFM – Inch Series

Accessories

2 Port plate MS6N-AQ...

- Adapter for pneumatic connection
- MS6-AGE for implementing threaded connection 3/4 NPT

Material:
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Type
4.53	1.04	1.22	1/4 NPT	0.94	2.44	0.60	526076	MS6N-AQN
			3/8 NPT				526077	MS6N-AQP
			1/2 NPT				526078	MS6N-AQR
			3/4 NPT				526079	MS6N-AQS

5 Body connector MS6-MV

- For connecting modules

Material:
Stainless steel/polyacetate



Ordering Data		
Weight [lb]	Part No.	Type
0.11	532799	MS6-MV

Fine and Micro Filters MS6N-LFM – Inch Series

Accessories



6 Mounting Bracket MS6-WP...

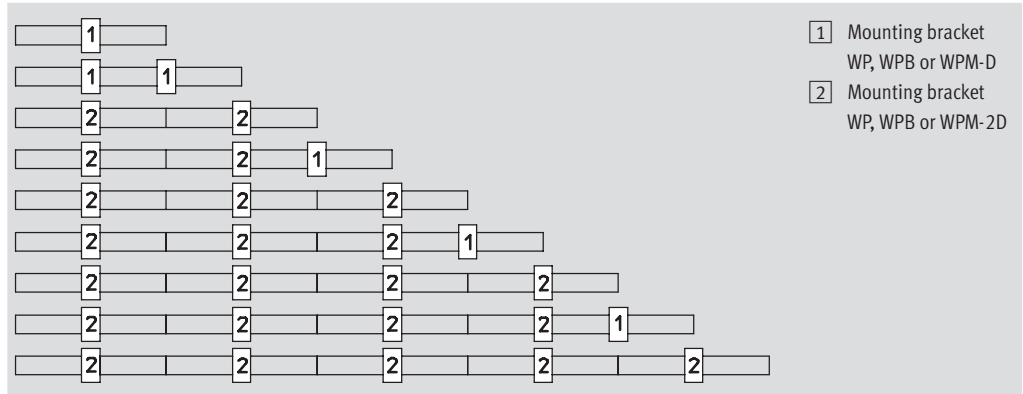
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 2.44 in with WP, WPB
2.715 in with WPM-D

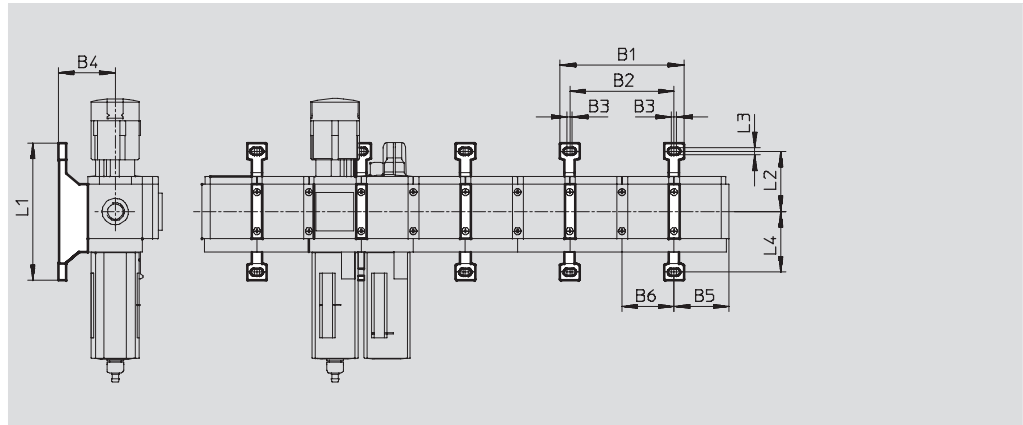
2 units: 4.88 in with WP, WPB
5.43 in with WPM-2D

Number of units

1 2 3 4 5 6 7 8 9 10



Mounting dimensions



Type	B1	B2	B3	B4	B5	B6	L1	L2	L3	L4
MS6-WP	5.55	4.88	0.18	2.13	2.54	2.44	6.22	2.80	0.26	2.80
MS6-WPB				3.56						1.63
MS6-WPM-...D	6.61	5.43	0.69	2.13	2.58	2.72	3.88	1.63		1.63

Fine and Micro Filters MS6N-LFM – Inch Series

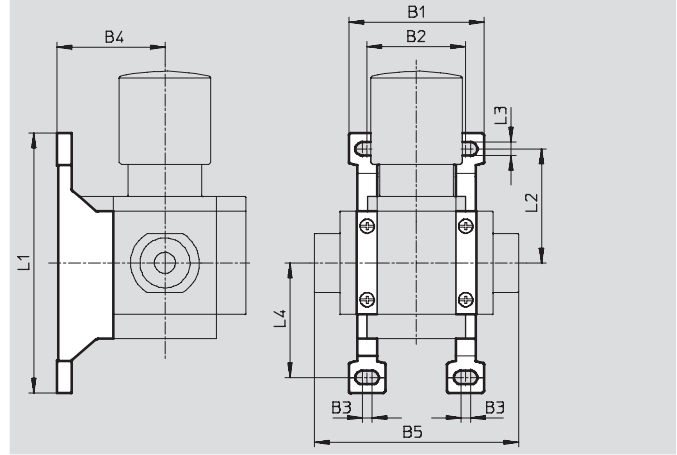
Accessories



Mounting bracket MS6-WP

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with body thread on a wall
- For pressure regulator LRB with angled outlet block B... at rear

Material:
Die-cast aluminum

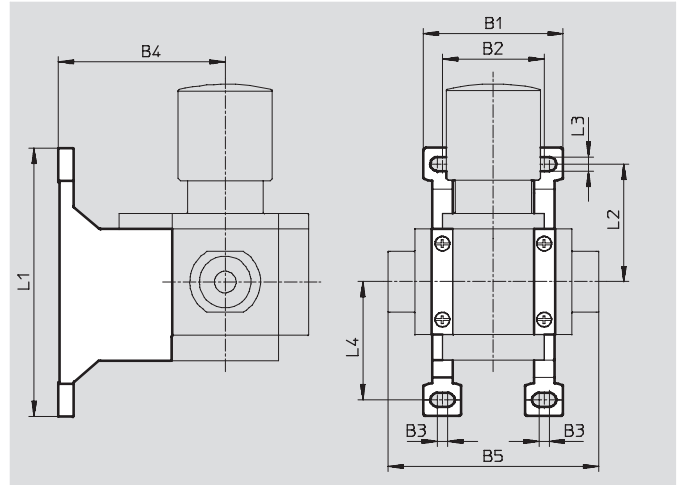


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.11	2.44	0.18	2.13	4.53	6.22	2.80	0.26	2.80	0.15	532195	MS6-WP

Mounting bracket MS6-WPB

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- Provides large wall gap for pressure regulator

Material:
Die-cast aluminum



Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.11	2.44	0.18	3.56	4.53	6.22	2.80	0.26	2.80	0.23	526074	MS6-WPB

Fine and Micro Filters MS6N-LFM – Inch Series

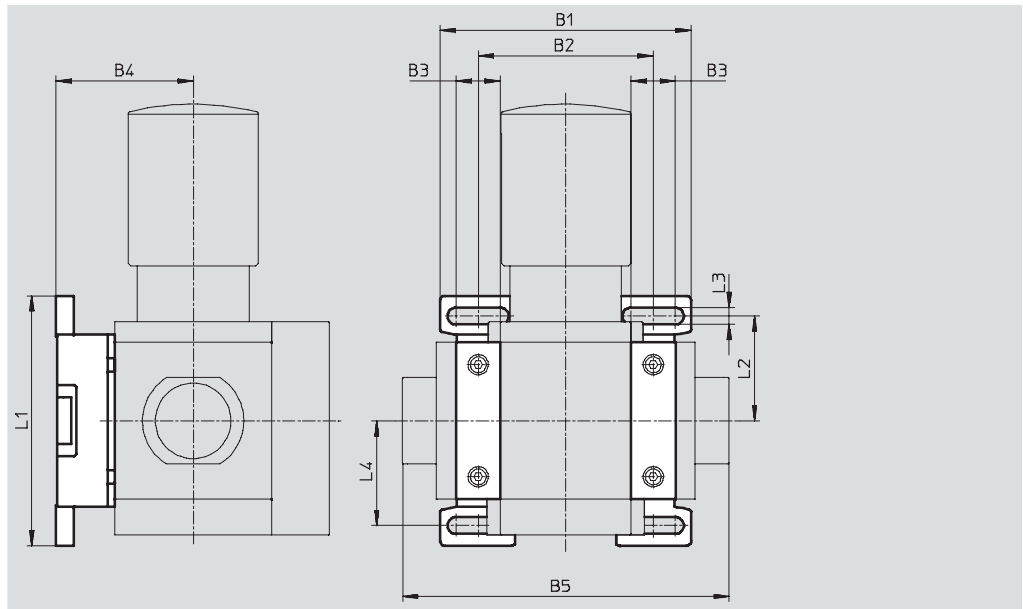
Accessories

Mounting bracket MS6-WPM

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

The distance piece D or 2D (designated in the type code) is included in the scope of delivery and ensures the correct clearance

Material:
Die-cast aluminum



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	L1	L2	L3	L4	Clearance	Weight [lb]	Part No.	Type
3.90	2.72	0.69	2.13	5.08	3.88	1.63	0.26	1.63	2.44	0.29	526073	MS6-WPM-D
6.61	5.43			7.80					4.88			

Body connector MS6-MVM

- For installation of modules with regulating knob pointing downwards

Material:
Die-cast aluminum



Ordering Data		
Size	Part No.	Type
MS6	532801	MS6-MVM

Fine and Micro Filters MS6N-LFM – Inch Series

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Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS6	Flat seal, O-rings, screws	673642	MS6-LFM



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS6	0.01	532909	MS6-LFM-A
	1	532910	MS6-LFM-B

- For spare parts go to: www.festo.com/en/spare_parts_service

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