

# Standard Filters MS4N-LF – Inch Series



Standard filters, with filtration grades of 5 microns or 40 microns, are equipped with a water separator that cleans the compressed air of impurities, rust, and condensate. For pre-filtering in pneumatic systems or for special applications.

- Pneumatic connection: 1/8 NPT, 1/4 NPT, 3/8 NPT
- Supply pressure
  - For manual drain: 0 ... 235 psi
  - For semiautomatic drain: 22 ... 176 psi
  - For fully automatic drain: 29 ... 176 psi
- Flow rate: 35.3 ... 60.0 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	Differential pressure indicator	Flow direction from right to left
MS4N		AG...	A	B	C	E	R	U	M	H	V	DA	Z
LF	1/8 NPT, 1/4 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	-	-	■	■	■	■	■	■	■	-	■

### Features

- Sintered filter with centrifugal separation removes contamination, rust and condensate from the compressed air.
- High flow rate with minimal pressure drop
- Replaceable filter cartridges

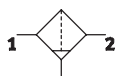
### Contents

- Technical Data → 224
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  - Replacement Parts → 240
- [www.festo.com/catalog/ms4n-lf](http://www.festo.com/catalog/ms4n-lf)

# Standard Filters MS4N-LF – Inch Series

Technical Data

ISO Symbol



Manual bowl drain



Semi or fully automatic bowl drain



General Technical Data			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Filtration grade	[µm]	5 (air purity class at the output 3.7.- to DIN ISO 8573-1) 40 (air purity class at the output 5.7.- to DIN ISO 8573-1)	
Supply pressure	M [psi]	0 ... 206 (manual drain)	
	H [psi]	22 ... 176 (semiautomatic drain)	
	V [psi]	29 ... 176 (fully automatic drain)	

Standard Nominal Flow Rate qnN <sup>1)</sup> [scfm]			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Filtration grade	5 µm	35.3	45.9
	40 µm	38.8	60.0

1) Measured at p1 = 88 psi and Δp = 15 psi

## Standard Filters MS4N-LF – Inch Series

Technical Data

**FESTO**

Operating and Environmental Conditions			
Bowl drain	Manual M	Semiautomatic H	Fully automatic V
Operating medium	Compressed air		
Max. condensate volume [in <sup>3</sup> ]	1.16 (with plastic bowl guard) 1.53 (with metal bowl)		
Bowl guard	Plastic bowl guard		
	Metal bowl		
Ambient temperature [°F]	14 ... 140	41 ... 140	41 ... 140
Temperature of medium [°F]	14 ... 140	41 ... 140	41 ... 140
Storage temperature [°F]	14 ... 140	14 ... 140	14 ... 140
Assembly position	Vertical ±5°		
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 normal industrial environment or media such as coolants or lubricating agents.

Weights [lb]	
With plastic bowl guard	0.38
With metal bowl	0.70

- Wearing parts kits → 240
- Filter cartridges → 240
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Standard Filters MS4N-LF – Inch Series

Technical Data

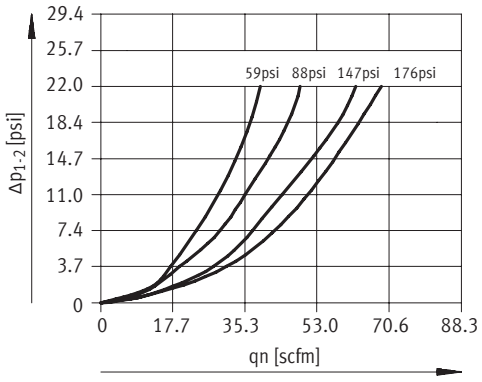
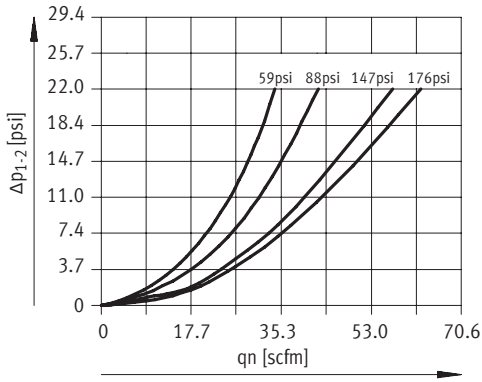


**Standard Flow Rate  $q_n$  as a Function of the Differential Pressure  $\Delta p_{1-2}$**

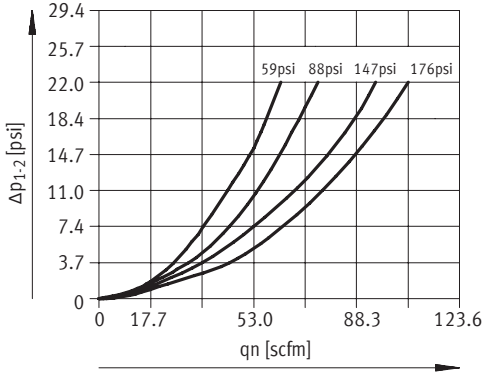
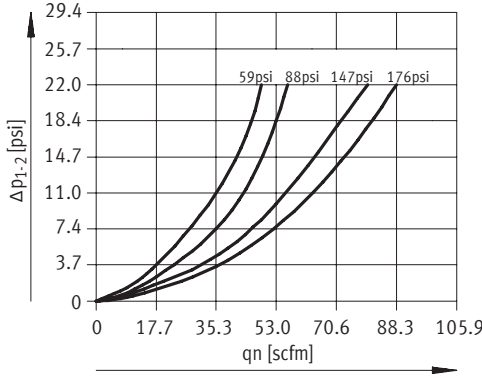
MS4N-LF-1/8

Filtration grade 5  $\mu\text{m}$

Filtration grade 40  $\mu\text{m}$



MS4N-LF-1/4



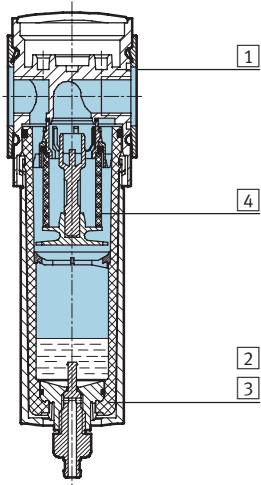
# Standard Filters MS4N-LF – Inch Series

Technical Data



## Materials

Sectional view



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

# Standard Filters MS4N-LF – Inch Series

Dimensional Drawings



**Dimensions<sup>1)</sup> – Standard** Download CAD Data → [www.festo.com/us/cad](http://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					
MS4N-LF-1/8	1.57	0.83	2.13	1/8 NPT	5.62	6.28	1.14	2.38	0.98	0.70	0.70
MS4N-LF-1/4				1/4 NPT							

1) Dimensions are in inches, unless otherwise noted.

**Dimensions<sup>1)</sup> – Bowl Drain** Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Manual M		Semiautomatic H		Fully automatic V	
	Barbed fitting for plastic tubing PCN-4		QS fitting for plastic tubing PUN-6/PAN-6		Barbed fitting for plastic tubing PCN-4
Type	L6	Type	L6	Type	L6
Plastic bowl guard		Plastic bowl guard		Plastic bowl guard	
MS4N-LF-...-M	0.70	MS4N-LF-...-H	0.87	MS4N-LF-...-V	0.80
Metal bowl		Metal bowl		Metal bowl	
MS4N-LF-...-M	0.70	MS4N-LF-...-H	0.87	MS4N-LF-...-V	0.80

1) Dimensions are in inches, unless otherwise noted.

## Standard Filters MS4N-LF – Inch Series

Ordering Data – Pre-configured Products



Ordering Data								
Bowl drain	Connection	Filtration grade 5 µm				Filtration grade 40 µm		
		Part No.	Type	LT	Part No.	Type	LT	
Plastic bowl guard								
Manual	1/8 NPT	531490	MS4N-LF-1/8-CRM	1D	531486	MS4N-LF-1/8-ERM	Q	
	1/4 NPT	531489	MS4N-LF-1/4-CRM	1D	531485	MS4N-LF-1/4-ERM	Q	
Fully automatic	1/8 NPT	531494	MS4N-LF-1/8-CRV	1D	531482	MS4N-LF-1/8-ERV	Q	
	1/4 NPT	531493	MS4N-LF-1/4-CRV	1D	531481	MS4N-LF-1/4-ERV	Q	
Metal bowl								
Manual	1/8 NPT	535670	MS4N-LF-1/8-CUM	Q	535676	MS4N-LF-1/8-EUM	Q	
	1/4 NPT	535686	MS4N-LF-1/4-CUM	Q	535692	MS4N-LF-1/4-EUM	Q	
Fully automatic	1/8 NPT	535672	MS4N-LF-1/8-CUV	Q	535674	MS4N-LF-1/8-EUV	Q	
	1/4 NPT	535688	MS4N-LF-1/4-CUV	Q	535690	MS4N-LF-1/4-EUV	Q	

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

# Standard Filters MS4N-LF – Inch Series

Ordering Data – Configurable Products



**M** Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Filtration grade	Bowl
527696	MS	4	N	LF	1/8, 1/4, AQK, AQN, AQP	E C	R U
<b>Order example</b>							
<b>527696</b>	<b>MS</b>	<b>4</b>	<b>N</b>	<b>- LF</b>	<b>- AQK</b>	<b>- E</b>	<b>- R</b>

**Ordering Table**

Grid dimension	[mm]	40	Conditions	Code	Enter code
<b>M</b> Part No.		<b>527696</b>			
Series		Standard		<b>MS</b>	MS
Size		4		<b>4</b>	4
Thread		NPT thread		<b>N</b>	N
Function		Filters		<b>-LF</b>	-LF
Connection size		Body thread 1/8 NPT		<b>-1/8</b>	
		Body thread 1/4 NPT		<b>-1/4</b>	
		Port plate 1/8 NPT (dimensions → 236)		<b>-AQK</b>	
		Port plate 1/4 NPT (dimensions → 236)		<b>-AQN</b>	
		Port plate 3/8 NPT (dimensions → 236)		<b>-AQP</b>	
Filtration grade		40 µm		<b>-E</b>	
		5 µm		<b>-C</b>	
Bowl		Plastic bowl with plastic bowl guard		<b>-R</b>	
		Metal bowl		<b>-U</b>	

Transfer order code



# Standard Filters MS4N-LF – Inch Series

Ordering Data – Configurable Products

→ M Mandatory Data	O Options	
<b>Bowl drain</b>  M H V	<b>Type of mounting</b>  WP WPM WB WBM	<b>Reverse flow direction</b>  Z
- <b>M</b>	- <b>WP</b>	- <b>Z</b>

Ordering Table			
Grid dimension	[mm]	40	Conditions   Code   Enter code
↓ M	Bowl drain	Manual	-M
		Semiautomatic (P1 max. 176 psi)	-H
		Fully automatic (P1 max. 176 psi)	-V
O	Type of mounting	Mounting bracket (dimensions → 237)	1   -WP
		Mounting bracket (dimensions → 237)	1   -WPM
		Mounting bracket (dimensions → 234)	-WB
		Mounting bracket (dimensions → 234)	-WBM
	Reverse flow direction	Flow direction from right to left	-Z

1 WP, WPM Only with port plate AQK, AQN or AQP

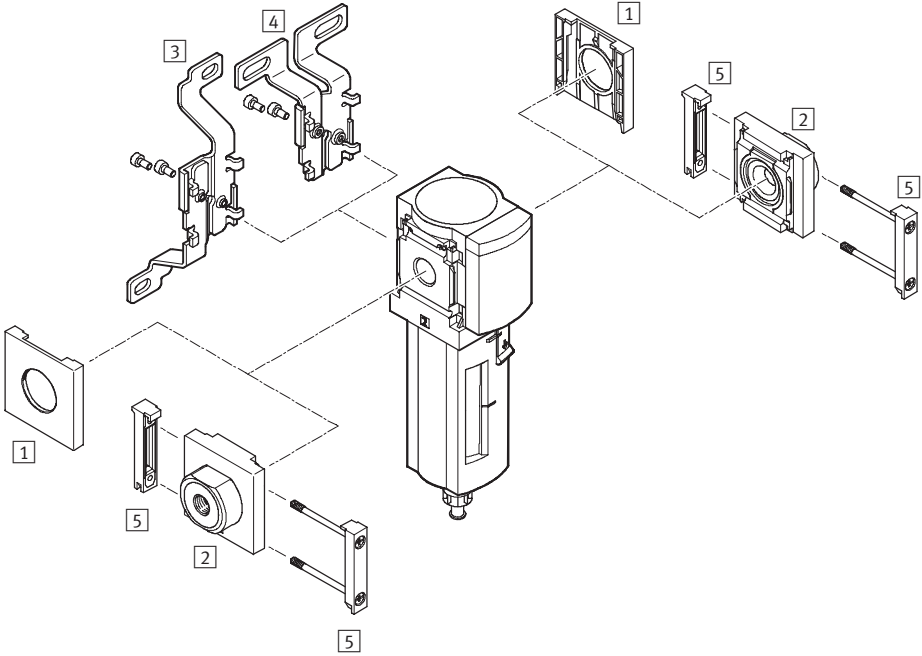
Transfer order code

-  -  -

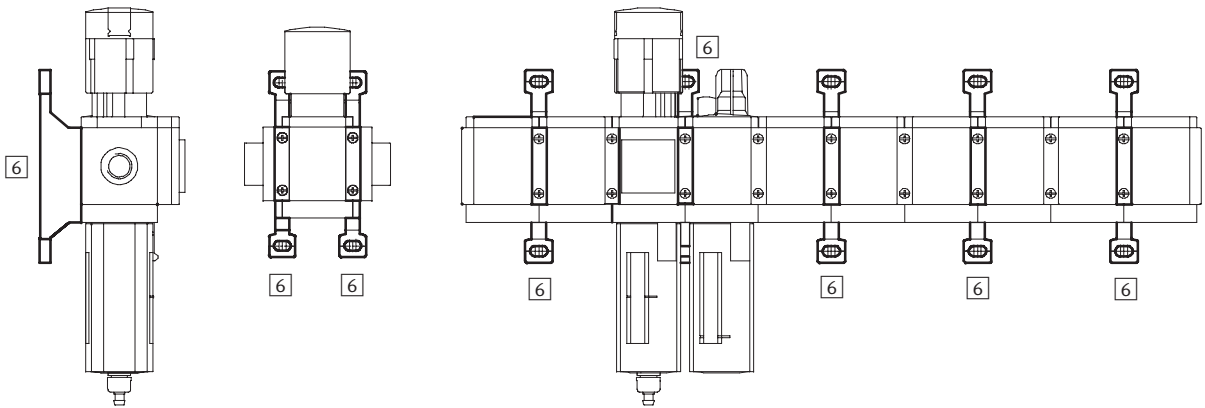
# Standard Filters MS4N-LF – Inch Series

Accessories Overview

## Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



# Standard Filters MS4N-LF – Inch Series

Accessories Overview



Mounting Attachments and Accessories						
		Single unit		Combination unit → 2.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS4-END	■	-	■	-	235
2	Port plate MS4N-AQ...	-	■	-	■	236
3	Mounting bracket MS4-WB	■	■	-	-	234
4	Mounting bracket MS4-WBM	■	■	-	-	234
5	Body connector MS4-MV	-	■	■	■	236
6	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	237

# Standard Filters MS4N-LF – Inch Series

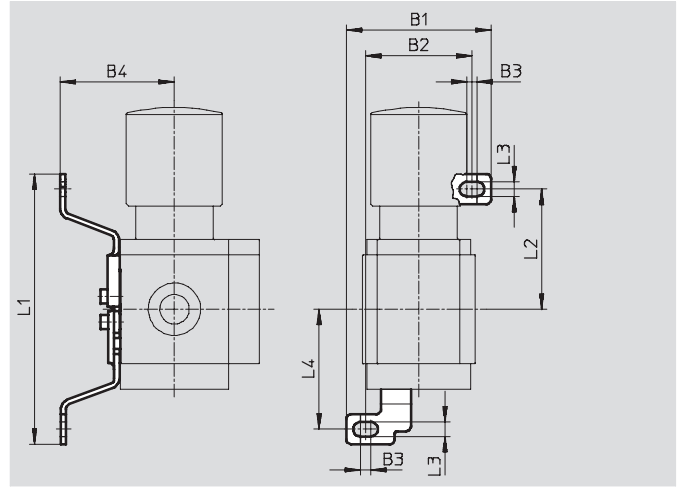


Accessories

## 3 Mounting bracket MS4-WB

- For wall mounting

Material:  
Steel



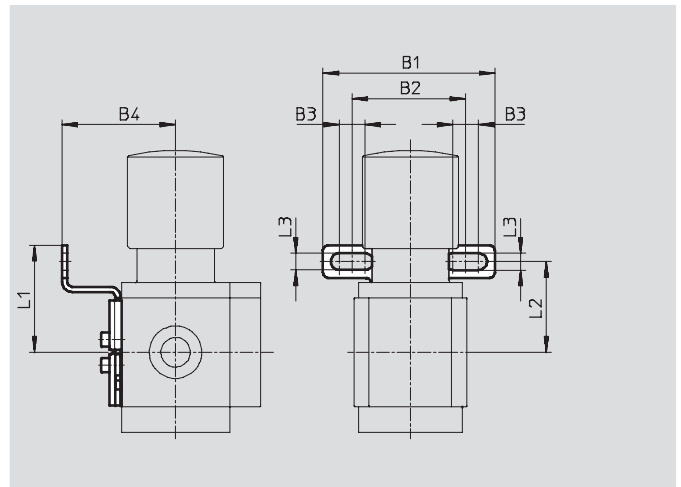
### Dimensions and Ordering Data

B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.21	1.62	0.16	1.74	4.12	1.83	0.22	1.79	0.09	532185	MS4-WB

## 4 Mounting bracket MS4-WBM

- For wall mounting

Material:  
Steel



### Dimensions and Ordering Data

B1	B2	B3	B4	L1	L2	L3	Weight [lb]	Part No.	Type
2.62	1.73	0.39	1.73	1.63	1.38	0.26	0.10	526062	MS4-WBM

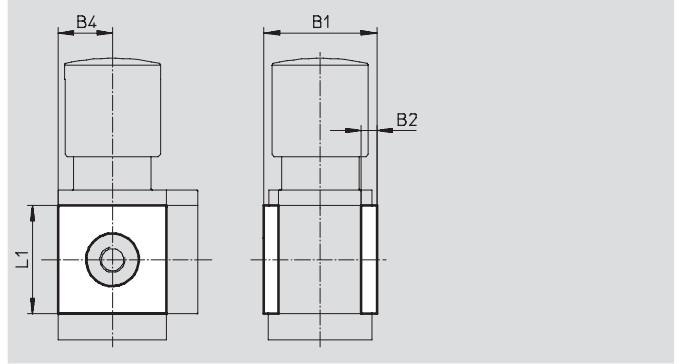
# Standard Filters MS4N-LF – Inch Series

Accessories

## 1 Cover cap MS4-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

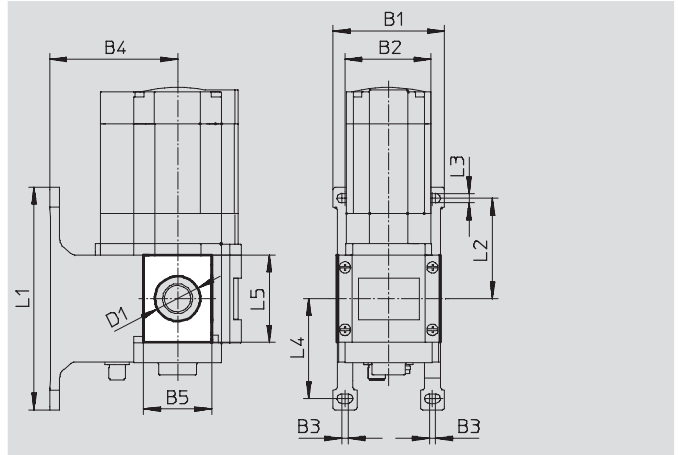


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
1.72	0.24	0.83	1.65	538779	MS4-END	

## Mounting plate MS4-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 <sup>1)</sup>	Weight [lb]	Part No.	Type
			WP	WPB											
2.17	1.58	0.16	1.73	2.60	1.20	0.80	4.17	1.83	0.22	1.84	1.65	2	0.01	542966	MS4-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.

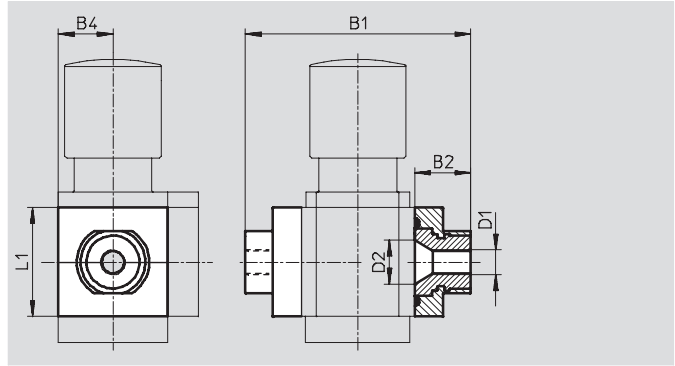
## Standard Filters MS4N-LF – Inch Series

Accessories

### 2 Port plate MS4N-AQ...

- Adapter for pneumatic connection

Material:  
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Type
3.29	0.85	0.83	1/8 NPT	0.66	1.65	0.26	526065	MS4N-AQK
			1/4 NPT				526066	MS4N-AQN
			3/8 NPT				526067	MS4N-AQP

### 5 Body connector MS4-MV

- For connecting modules

Material:  
Stainless steel/polyacetate



Ordering Data		
Weight [lb]	Part No.	Type
0.07	532798	MS4-MV

# Standard Filters MS4N-LF – Inch Series

Accessories



## 6 Mounting Bracket MS4-WP...

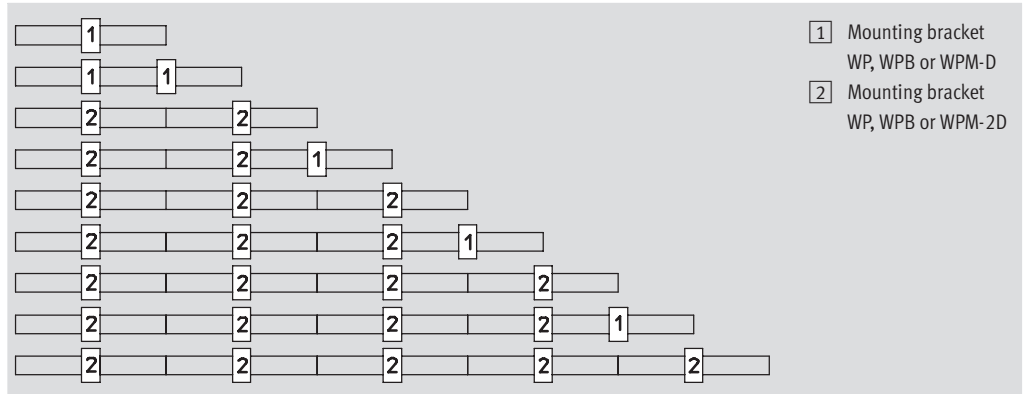
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 1.575 in

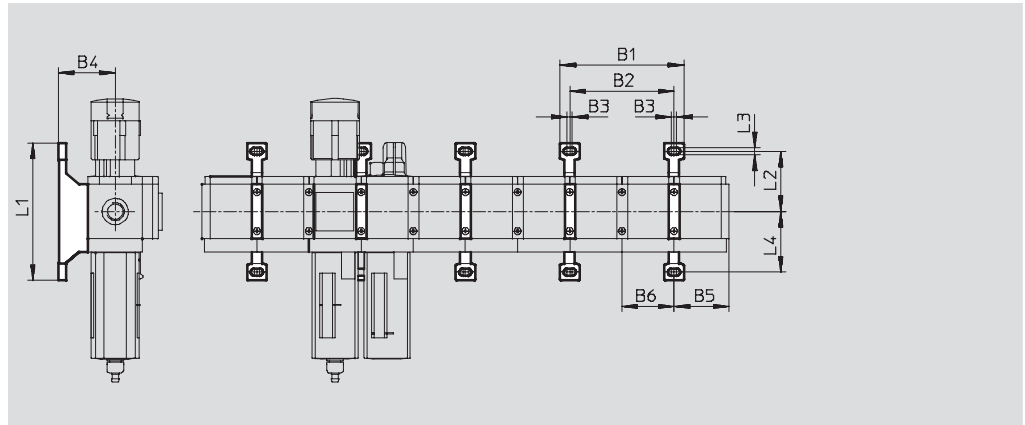
2 units: 3.15 in

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
MS4-WP	3.75	3.15	0.16	1.73	1.65	1.57	4.17	1.83	0.22	1.84
MS4-WPB				2.60						1.57
MS4-WPM-...D				1.73						1.57

# Standard Filters MS4N-LF – Inch Series

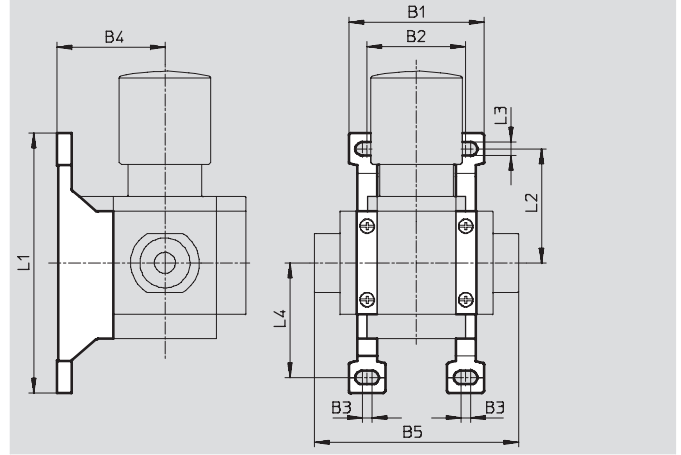


Accessories

## Mounting bracket MS4-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

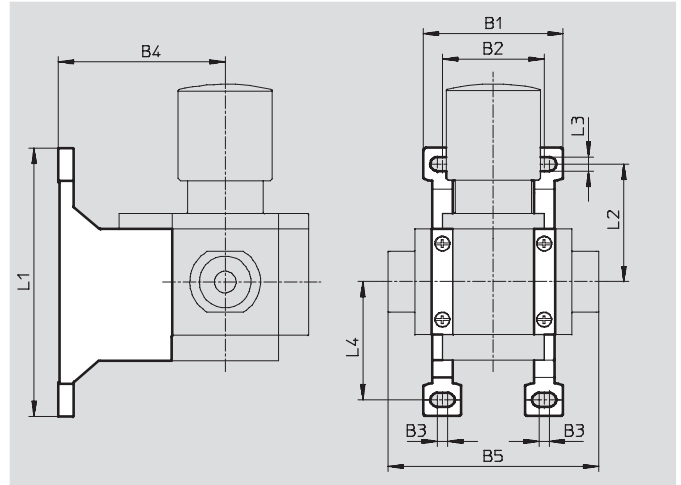


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	1.73	3.28	4.17	1.83	0.22	1.84	0.08	532184	MS4-WP

## Mounting bracket MS4-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
2.17	1.58	0.16	2.60	3.28	4.17	1.83	0.22	1.84	0.11	526063	MS4-WPB



## Standard Filters MS4N-LF – Inch Series

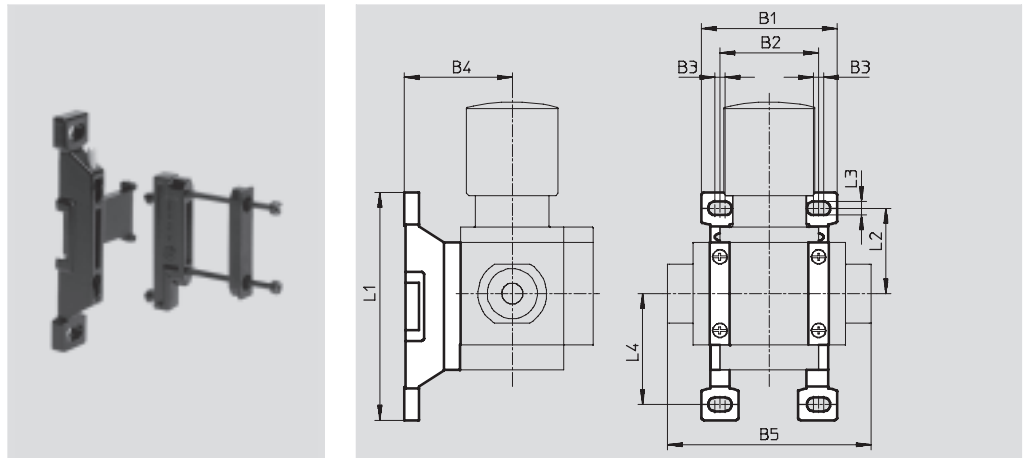
Accessories

### Mounting bracket MS4-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
2.17	1.57	0.16	1.73	3.28	3.65	1.37	0.22	1.78	1.57	0.09	526060	MS4-WPM-D
3.75	3.15			4.86					3.15	0.11	526061	MS4-WPM-2D

### Body connector MS4-MVM

- For installation of modules with regulating knob pointing downwards

Material:  
Die-cast aluminum



Ordering Data		
Size	Part No.	Type
MS4	532800	MS4-MVM

## Standard Filters MS4N-LF – Inch Series

FESTO

Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS4	O-rings, screws, sealing ring	673639	MS4-LF



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS4	5	534501	MS4-LFP-C
	40	534502	MS4-LFP-E

- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Product Range and Company Overview

## A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



**Custom Automation Components**  
Complete custom engineered solutions



**Custom Control Cabinets**  
Comprehensive engineering support and on-site services



**Complete Systems**  
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## The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



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Electromechanical actuators, motors, controllers & drives



**Pneumatics**  
Pneumatic linear and rotary actuators, valves, and air supply



**PLCs and I/O Devices**  
PLC's, operator interfaces, sensors and I/O devices

## Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

## Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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# Festo North America

## United States

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Earth City, MO 63045

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**Fax:** 1.800.96.FESTO

**Email:** [customer.service@us.festo.com](mailto:customer.service@us.festo.com)

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