

# Active Carbon Filters MS12-LFX – Metric Series



Active carbon filters remove liquid and gaseous oil particles as well as odor and taste from compressed air. Pre-filtration with a grade of 0.01 micron is required.

- Pneumatic connection: G1, G1¼, G1½, G2
- Supply pressure 0 ... 20 bar
- Flow rate: 4,800 ... 6,000 l/min

Product Range Overview			
Type	Pneumatic connections	Bowl guard	Reverse flow
	Port plate	Metal bowl	Flow direction from right to left
MS12	AG...	U	Z
LFX	G1, G1¼, G1½, G2	■	■

Features	
<ul style="list-style-type: none"> <li>• Removal of liquid and gaseous oil particles from compressed air using active carbon</li> <li>• Eliminates odors and vapors</li> </ul>	<ul style="list-style-type: none"> <li>• Prefiltration with micro filter MS-LFM-A, filtration grade 0.01 µm, is required.</li> </ul>

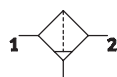
Contents	
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➔ <a href="http://www.festo.com/catalog/ms12-lfx">www.festo.com/catalog/ms12-lfx</a>	

# Active Carbon Filters MS12-LFX – Metric Series

Technical Data

FESTO

ISO Symbol



General Technical Data				
Pneumatic connection 1, 2 <sup>1)</sup>	G1	G1¼	G1½	G2
Air purity class at the output	1.7.1 to DIN ISO 8573-1			
Supply pressure [bar]	0 ... 20			

1) Dependent on port plate selected, must be ordered separately as an accessory → 1157

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate q <sub>N</sub> <sup>2)</sup> [l/min]				
Pneumatic connection 1, 2	G1	G1¼	G1½	G2
In main flow direction 1 → 2	4,800	5,000	5,500	6,000

2) Dependent on port plate selected, must be ordered separately as an accessory → 1157  
Measured at p<sub>1</sub> = 6 bar and Δp = 70 mbar

Operating and Environmental Conditions	
Operating medium	Compressed air, filtered, unlubricated, filtration grade 0.01 µm
Bowl guard	Metal bowl
Ambient temperature [°C]	–10 ... +60
Temperature of medium [°C]	+5 ... +30
Storage temperature [°C]	–10 ... +60
Assembly position	Vertical ±5°
Corrosion resistance CRC <sup>3)</sup>	2

3) 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 [g]	
With metal bowl	7,000

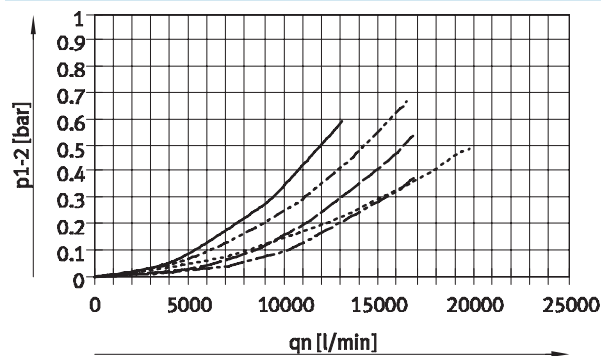
- Filter cartridges → 1159
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Active Carbon Filters MS12-LFX – Metric Series

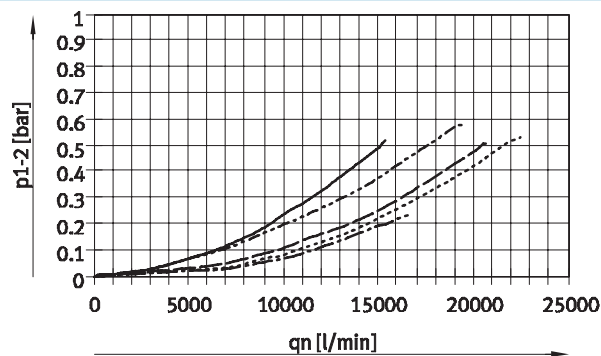
Technical Data



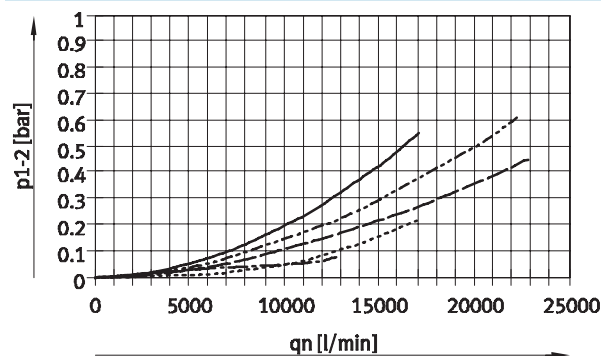
Standard Flow Rate  $q_n$  as a Function of the Differential Pressure  $p_{1-2}$   
 With port plate MS12-AGF, Pneumatic connection G1



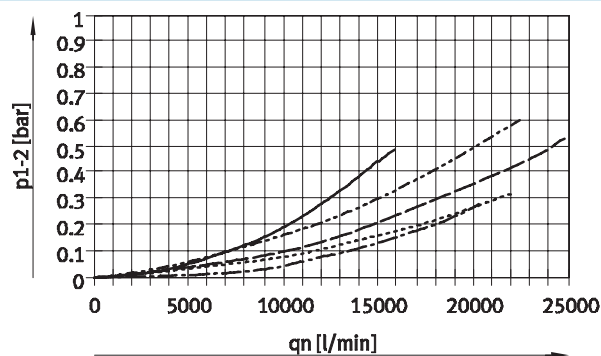
With port plate MS12-AGG, Pneumatic connection G1¼



With port plate MS12-AGH, Pneumatic connection G1½



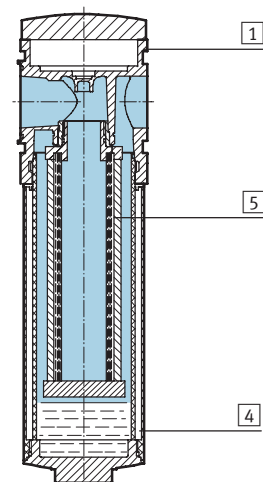
With port plate MS12-AGI, Pneumatic connection G2



- $p_1$ : 4 bar
- - -  $p_1$ : 6 bar
- · -  $p_1$ : 8 bar
- · ·  $p_1$ : 10 bar
- - -  $p_1$ : 12 bar

## Materials

Sectional view



Active carbon filter		
1	Body	Die-cast aluminum
4	Metal bowl	Wrought aluminum alloy
5	Filter	Active carbon
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE

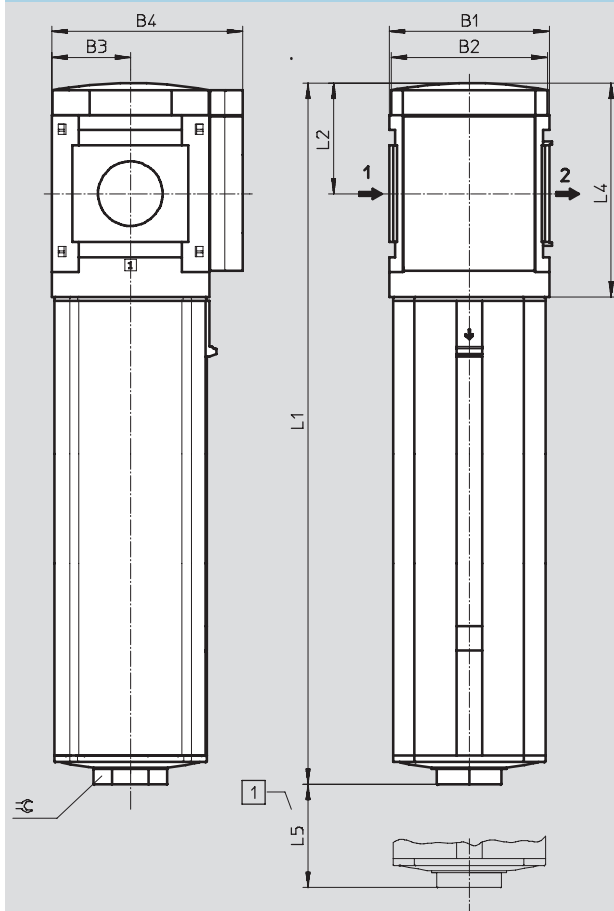
# Active Carbon Filters MS12-LFX – Metric Series

Dimensional Drawings, Ordering Data – Pre-configured Products

**FESTO**

## Dimensions<sup>1)</sup> – Standard

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



1 Installation dimensions

→ Flow direction

B1	B2	B3	B4	L1	L2	L4	L5	≈
124	122	61	148	543	86	166	350	50

1) Dimensions are in millimeters, unless otherwise noted.

## Ordering Data

Metal bowl

Connection	Part No.	Type	LT
G1 ... G2 <sup>1)</sup>	537155	MS12-LFX-G-U	1D

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

1) Port plate must be ordered separately as an accessory → 1157

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

# Active Carbon Filters MS12-LFX – Metric Series

Ordering Data – Configurable Products

**FESTO**

M Mandatory Data						O Options	
Part No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Reverse flow direction
535043	MS	12	LFX	AGF AGG AGH AGI G	U	WP	Z
<b>Order example</b>							
535043	MS	12	- LFX	- AGF	- U	- WP	- Z

Ordering Table							
Grid dimension		[mm]	124	Conditions	Code	Enter code	
M	Part No.	535043					
	Series	Standard			MS		MS
	Size	12			12		12
	Function	Active carbon filter			-LFX		-LFX
	Connection size	Port plate G1 (dimensions → 1157)			-AGF		
		Port plate G1¼ (dimensions → 1157)			-AGG		
		Port plate G1½ (dimensions → 1157)			-AGH		
		Port plate G2 (dimensions → 1157)			-AGI		
		Module without connecting thread, without port plate			-G		
	Bowl	Metal bowl			-U		-U
O	Type of mounting	Mounting bracket (dimensions → 1158)		1	-WP		
	Reverse flow direction	Flow direction from right to left			-Z		

1 WP Only with port plate AGF, AGG, AGH or AGI

Transfer order code

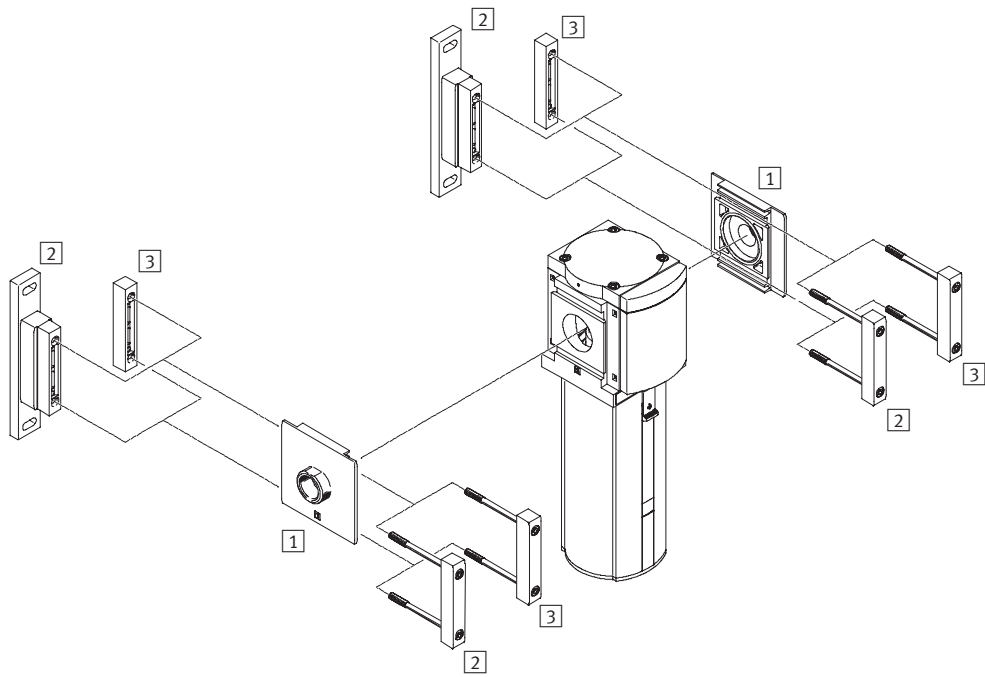
535043	MS	12	- LFX	-		- U	-		-	
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# Active Carbon Filters MS12-LFX – Metric Series

Accessories Overview



## Mounting Attachments and Accessories



Mounting Attachments and Accessories		→ Page
1	Port plate MS12-AG...	1157
2	Mounting bracket MS12-WP	1158
3	Body connector MS12-MV	1157

# Active Carbon Filters MS12-LFX – Metric Series

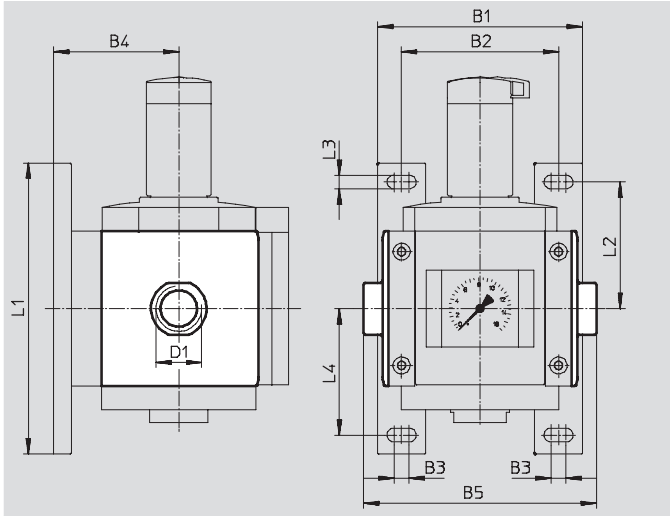


Accessories

## 1 Port plate MS12-AG...

- Adapter for pneumatic connection

Material:  
Die-cast aluminum  
Free of copper and PTFE



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	D1	L1	L2	L3	L4	Weight [g]	Part No.	Type
162	124	12	99	184	G1	230	100	11	100	1,300	537135	MS12-AGF
				184	G1¼						537136	MS12-AGG
				184	G1½						537137	MS12-AGH
				196	G2						537138	MS12-AGI

## 3 Body connector MS12-MV

- For connecting modules

Material:  
Die-cast aluminum,  
Free of copper and PTFE



Ordering Data			
Size	Weight [g]	Part No.	Type
MS12	500	537134	MS12-MV

# Active Carbon Filters MS12-LFX – Metric Series

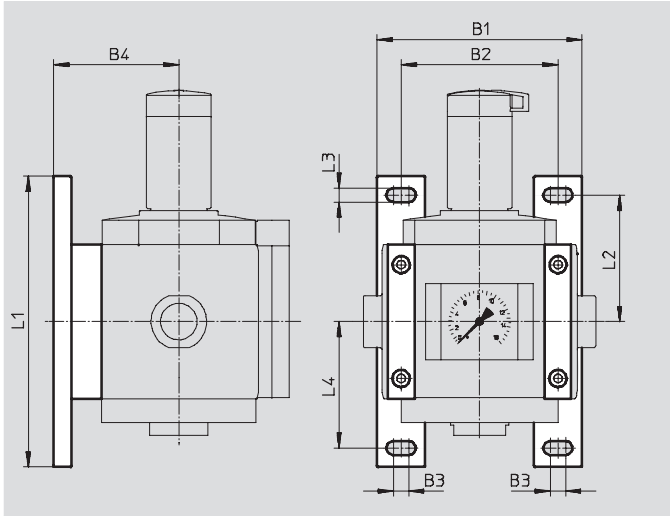


Accessories

## 2 Mounting bracket MS12-WP

- To connect the modules for wall mounting
- In combination with a port plate for mounting an individual unit on a wall

Material:  
Die-cast aluminum  
Free of copper and PTFE



Dimensions and Ordering Data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS12	162	124	12	99	230	100	11	100	700	537133	MS12-WP



# Active Carbon Filters MS12-LFX – Metric Series

Replacement Parts



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS12	Residual oil content ≤ 0.003 mg/m <sup>3</sup>	537147	MS12-LFX

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



# Active Carbon Filters MS12N-LFX – Inch Series



Active carbon filters remove liquid and gaseous oil particles as well as odor and taste from compressed air. Pre-filtration with a grade of 0.01 micron is required.

- Pneumatic connection: 1 NPT, 1 1/4 NPT, 1 1/2 NPT, 2 NPT
- Supply pressure 0 ... 294 psi
- Flow rate: 169.4 ... 211.8 scfm

Product Range Overview			
Type	Pneumatic connections	Bowl guard	Reverse flow
	Port plate	Metal bowl	Flow direction from right to left
MS12N	AG...	U	Z
LFX	1 NPT, 1 1/4 NPT, 1 1/2 NPT, 2 NPT	■	■

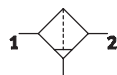
Features		Contents
<ul style="list-style-type: none"> <li>• Removal of liquid and gaseous oil particles from compressed air using active carbon</li> <li>• Eliminates odors and vapors</li> </ul>	<ul style="list-style-type: none"> <li>• Prefiltration with micro filter MS-LFM-A, filtration grade 0.01 µm, is required.</li> </ul>	<ul style="list-style-type: none"> <li>Technical Data → 1162</li> <li>Dimensional Drawings → 1164</li> <li>Ordering Data → 1164</li> <li>Accessories → 1166</li> </ul>
		→ <a href="http://www.festo.com/catalog/ms12n-lfx">www.festo.com/catalog/ms12n-lfx</a>

# Active Carbon Filters MS12N-LFX – Inch Series

Technical Data

**FESTO**

ISO Symbol



General Technical Data				
Pneumatic connection 1, 2 <sup>1)</sup>	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Air purity class at the output	1.7.1 to DIN ISO 8573-1			
Supply pressure [psi]	0 ... 294			

1) Dependent on port plate selected, must be ordered separately as an accessory → 1167

Standard Nominal Flow Rate q <sub>N</sub> <sup>2)</sup> [scfm]				
Pneumatic connection 1, 2	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
In main flow direction 1 → 2	169.4	176.5	194.2	211.8

2) Dependent on port plate selected, must be ordered separately as an accessory → 1167  
Measured at p<sub>1</sub> = 88 psi and Δp = 1.0 psi

Operating and Environmental Conditions	
Operating medium	Compressed air, filtered, unlubricated, filtration grade 0.01 μm
Bowl guard	Metal bowl
Ambient temperature [°F]	14 ... 140
Temperature of medium [°F]	41 ... 86
Storage temperature [°F]	14 ... 140
Assembly position	Vertical ±5°
Corrosion resistance CRC <sup>3)</sup>	2

3) 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 metal bowl	14.00

- Filter cartridges → 1169
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

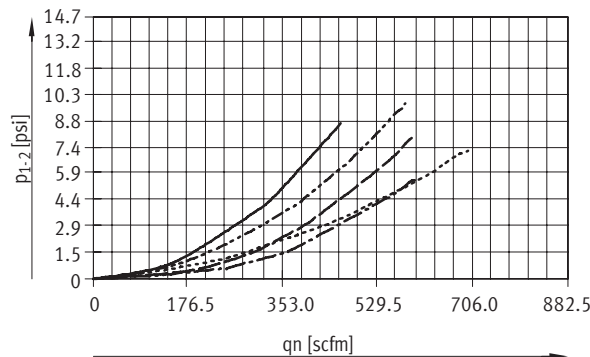
# Active Carbon Filters MS12N-LFX – Inch Series

Technical Data

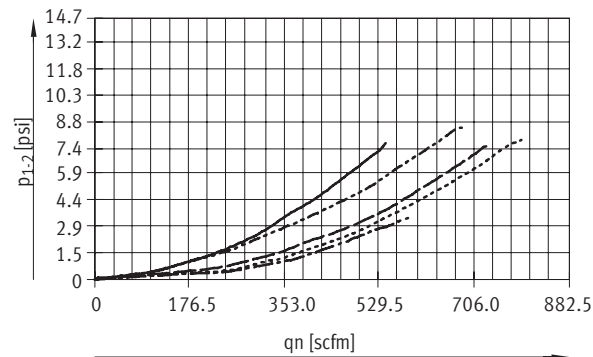
FESTO

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

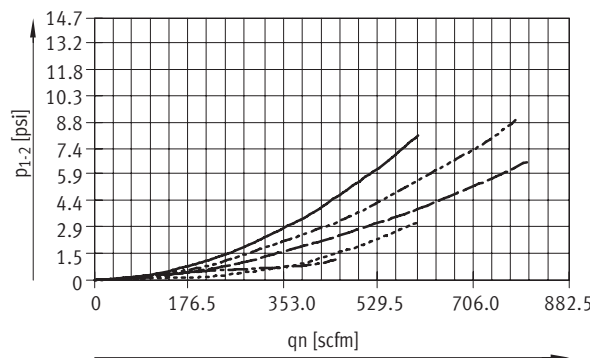
With port plate MS12-AGF, Pneumatic connection 1 NPT



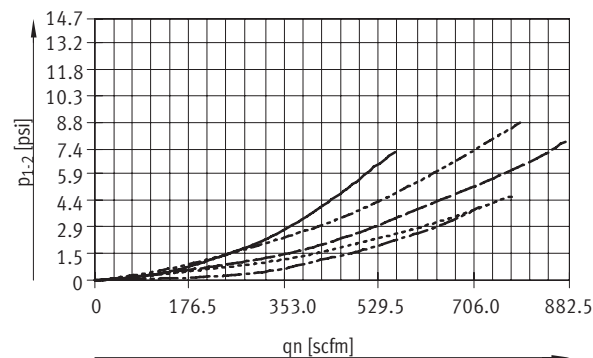
With port plate MS12-AGG, Pneumatic connection 1¼ NPT



With port plate MS12-AGH, Pneumatic connection 1½ NPT



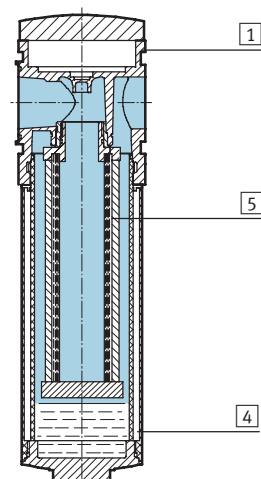
With port plate MS12-AGI, Pneumatic connection 2 NPT



- p1: 59 psi
- - - p1: 88 psi
- · - p1: 118 psi
- p1: 147 psi
- - - - p1: 176 psi

## Materials

Sectional view

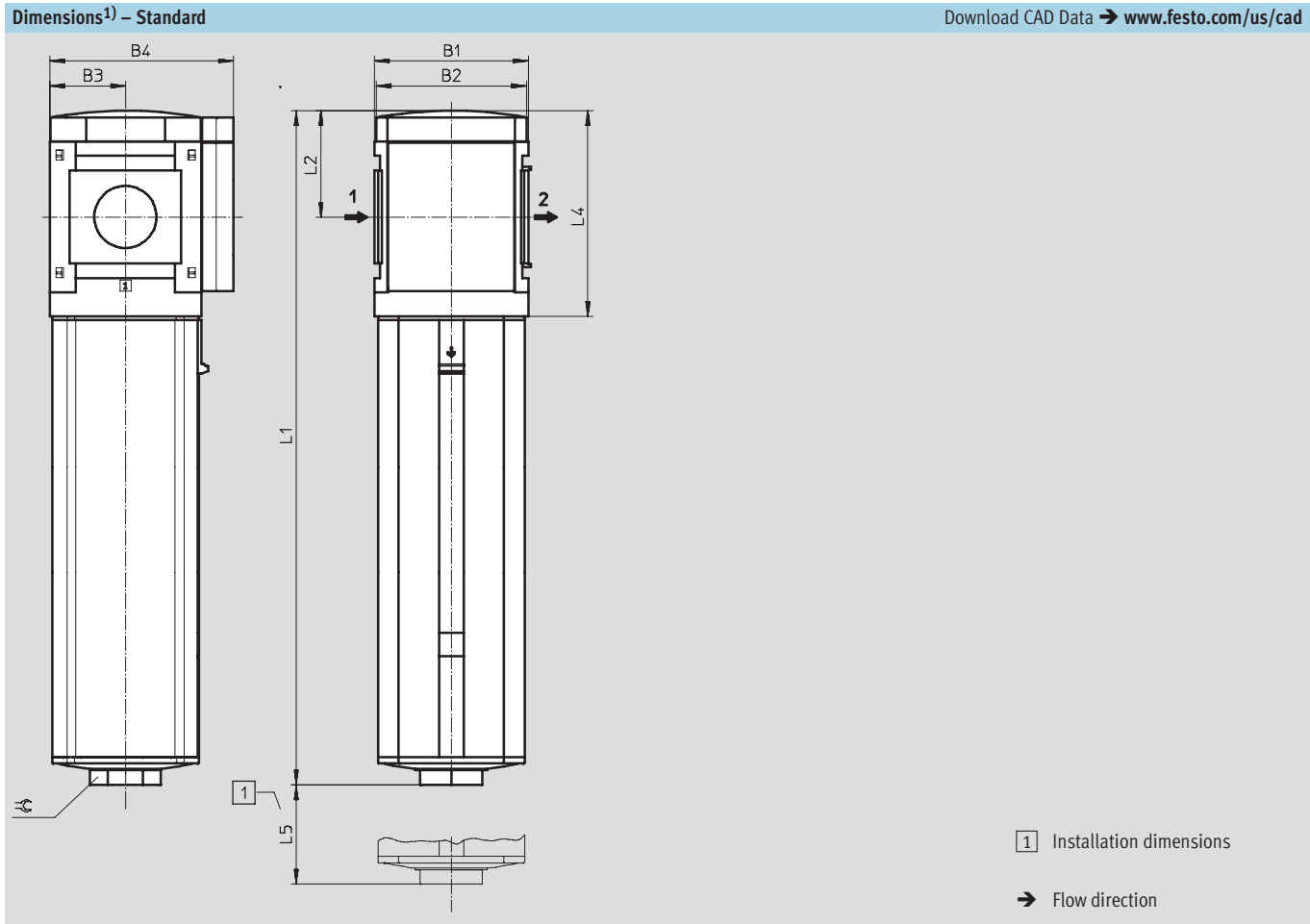


Active carbon filter		
1	Body	Die-cast aluminum
4	Metal bowl	Wrought aluminum alloy
5	Filter	Active carbon
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE

# Active Carbon Filters MS12N-LFX – Inch Series

Dimensional Drawings, Ordering Data – Pre-configured Products

**FESTO**



B1	B2	B3	B4	L1	L2	L4	L5	≈C
4.88	4.80	2.40	5.83	21.38	3.39	6.54	13.78	1.97

1) Dimensions are in inches, unless otherwise noted.

Ordering Data			
Metal bowl			
Connection	Part No.	Type	LT
1 NPT ... 2 NPT <sup>1)</sup>	537155	MS12-LFX-G-U	1D

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

1) Port plate must be ordered separately as an accessory → 1167

# Active Carbon Filters MS12N-LFX – Inch Series

Ordering Data – Configurable Products

**FESTO**

M Mandatory Data							O Options	
Part No.	Series	Size	Thread	Function	Connection size	Bowl	Type of mounting	Reverse flow direction
535046	MS	12	N	LFX	AQT AQU AQV AQW G	U	WP	Z
<b>Order example</b>								
535046	MS	12	N	- LFX	- AQT	- U	- WP	- Z

Ordering Table					
Grid dimension [mm]		124	Conditions	Code	Enter code
M	Part No.	535046			
	Series	Standard		MS	MS
	Size	12		12	12
	Thread	NPT thread		N	N
	Function	Active carbon filter		-LFX	-LFX
	Connection size	Port plate 1 NPT (dimensions → 1167)		-AQT	
		Port plate 1¼ NPT (dimensions → 1167)		-AQU	
		Port plate 1½ NPT (dimensions → 1167)		-AQV	
		Port plate 2 NPT (dimensions → 1167)		-AQW	
		Module without connecting thread, without port plate		-G	
	Bowl	Metal bowl		-U	-U
O	Type of mounting	Mounting bracket (dimensions → 1168)	1	-WP	
	Reverse flow direction	Flow direction from right to left		-Z	

1 WP Only with port plate AQT, AQU, AQV or AQW

Transfer order code

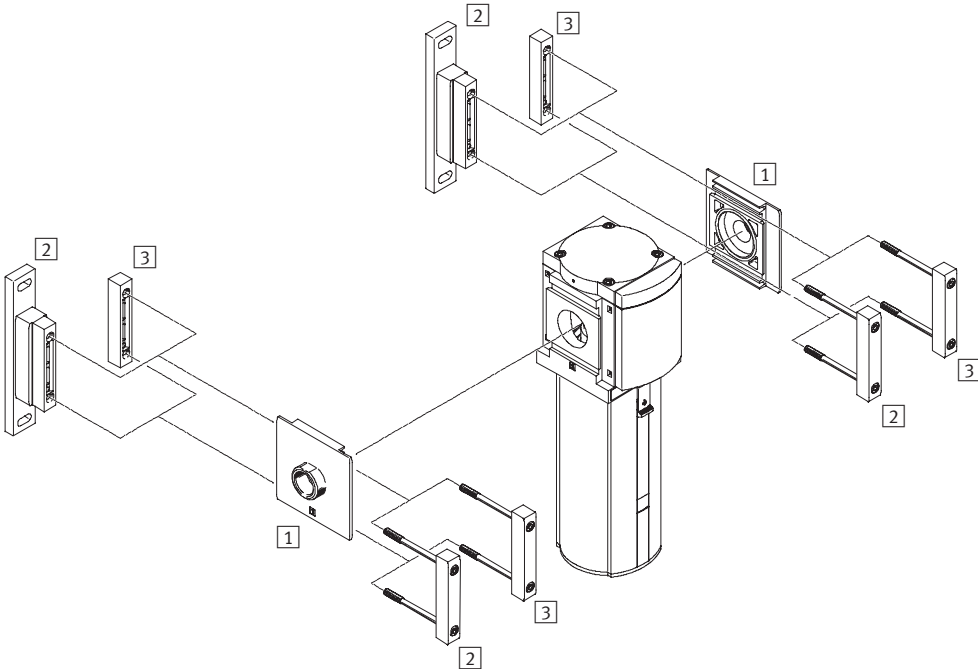
535046	MS	12	N	- LFX	-	U	-		-	
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# Active Carbon Filters MS12N-LFX – Inch Series

Accessories Overview



## Mounting Attachments and Accessories



Mounting Attachments and Accessories		→ Page
1	Port plate MS12-AQ...	1167
2	Mounting bracket MS12-WP	1168
3	Body connector MS12-MV	1167



Active Carbon Filters MS12N-LFX – Inch Series

Accessories

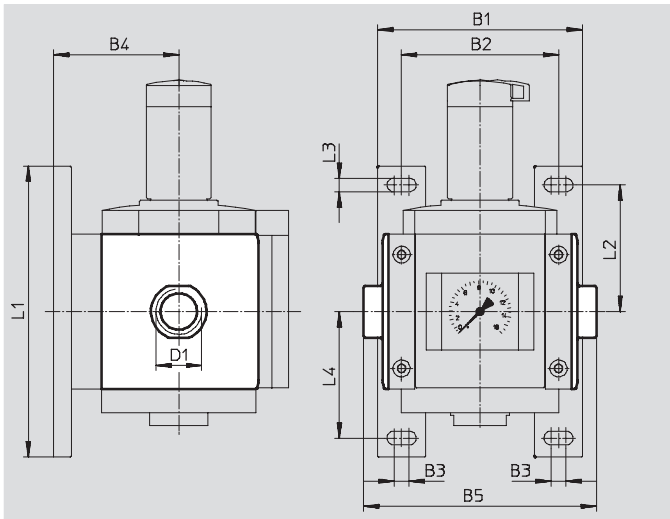
1 Port plate MS12-AQ...

- Adapter for pneumatic connection

Material:

Die-cast aluminum

Free of copper and PTFE



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	D1	L1	L2	L3	L4	Weight [lb]	Part No.	Type
6.38	4.88	0.47	3.90	7.24	1 NPT	9.06	3.94	0.43	3.94	2.60	537139	MS12-AQT
				7.24	1¼ NPT						537140	MS12-AQU
				7.24	1½ NPT						537141	MS12-AQV
				7.72	2 NPT						537142	MS12-AQW

3 Body connector MS12-MV

- For connecting modules

Material:

Die-cast aluminum,

Free of copper and PTFE



Ordering Data			
Size	Weight [lb]	Part No.	Type
MS12	1.00	537134	MS12-MV

# Active Carbon Filters MS12N-LFX – Inch Series

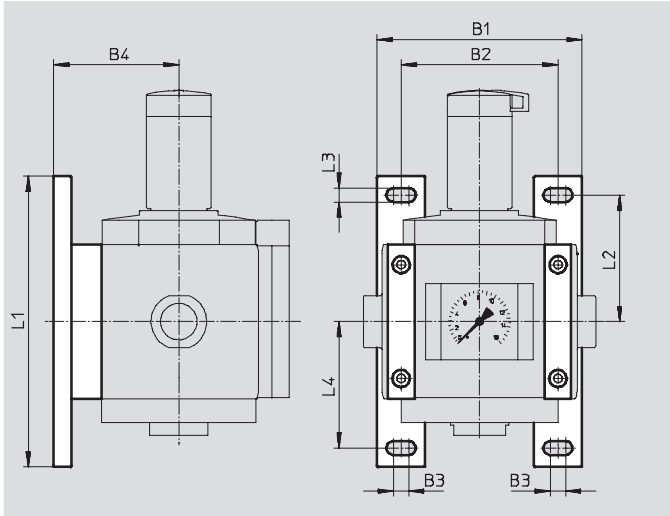


Accessories

## 2 Mounting bracket MS12-WP

- To connect the modules for wall mounting
- In combination with a port plate for mounting an individual unit on a wall

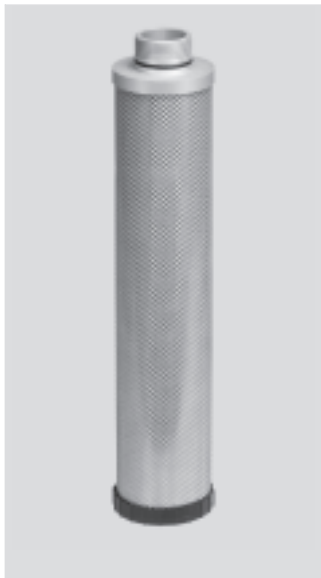
Material:  
Die-cast aluminum  
Free of copper and PTFE



Dimensions and Ordering Data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [[b]	Part No.	Type
MS12	6.38	4.88	0.47	3.90	9.06	3.94	0.43	3.94	1.40	537133	MS12-WP

# Active Carbon Filters MS12N-LFX – Inch Series

Replacement Parts



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS12	Residual oil content $\leq 0.003 \text{ mg/m}^3$	537147	MS12-LFX

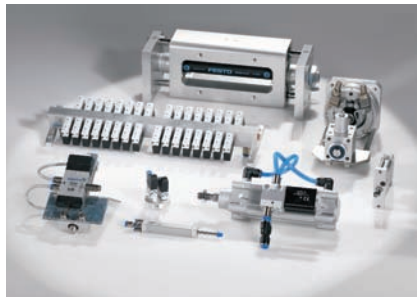
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)



# 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.



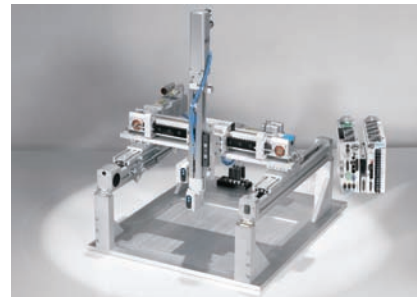
### Custom Automation Components

Complete custom engineered solutions



### Custom Control Cabinets

Comprehensive engineering support and on-site services



### Complete Systems

Shipment, stocking and storage services

## 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.



### Electromechanical

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 11,500 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 Certification

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

All Festo locations within the United States are registered to ISO 9001.



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# Festo North America

## United States

### Customer Resource Center

502 Earth City Expy., Suite 125  
Earth City, MO 63045

For ordering assistance, or to find  
your nearest Festo Distributor,

**Call:** 1.800.99.FESTO

**Fax:** 1.800.96.FESTO

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

For technical support,

**Call:** 1.866.GO.FESTO

**Fax:** 1.800.96.FESTO

**Email:** [product.support@us.festo.com](mailto:product.support@us.festo.com)

### Headquarters

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#### Chicago

1441 East Business Center Drive  
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#### Dallas

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Lewisville, TX 75057

#### Detroit - Automotive Engineering Center

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**West:** 2800 Collier Canyon Road, Livermore, CA 94550

## Mexico

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[www.festo.com/mx](http://www.festo.com/mx)



## Canada

### Headquarters

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