



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: G1, G11/4, G11/2, G2
- Supply pressure
 - For manual drain: 0.8 ... 20 bar
 - For fully automatic drain: 2 ... 12 bar
 - For fully automatic drain, electrically actuated: 0.8 ... 16 bar
- Flow rate: 11,500 ... 16,000 l/min

Product Range Overview														
Туре	Pneumatic	Filtration	grade			Bowl	Bowl drai	n					Contamination	Reverse
	connections	[µm]				guard							control	flow
	Port plate	0.01	1	5	40	Metal bowl	Manual	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
MS12	AG	Α	В	С	E	U	M	V	E1	E2	E3	E4	DA	Z
LF	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	-	-	•	•	•	•	•	•	•	•	•	-	•

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	→ 1100
Dimensional Drawings	→ 1103
Ordering Data	→ 1104
Accessories	→ 1106

→ www.festo.com/catalog/ms12-lf

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Technical Data

ISO Symbol



Manual bowl drain



Fully automatic bowl drain



General Technical Data										
Pneumatic connection 1	, 2 ¹⁾		G1	G1 G11/4 G11/2 G2						
Filtration grade		[µm]	5 (air purity class at the output 3.7. – to DIN ISO 8573-1)							
			40 (air purity class at the outpu	it 5.7 to DIN ISO 8573-1)						
Supply pressure	M	[bar]	0.8 20 (manual drain)							
	V	[bar]	2 12 (fully automatic drain)							
	E	[bar]	0.8 16 (fully automatic drain	, electrically actuated)						

1) Dependent on port plate selected, must be ordered separately as an accessory \Rightarrow 1107

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

Standard Nominal Flow Rate qnN ²⁾ [l/min]											
Pneumatic connection 1, 2		G1	G11/4	G1½	G2						
Filtration grade 5 µm		11,500	12,500	13,500	14,000						
	40 µm	12,500	13,000	14,000	16,000						

2) Dependent on port plate selected, must be ordered separately as an accessory → 1107 Measured at p1 = 6 bar and ∆p = 0.5 bar



Technical Data

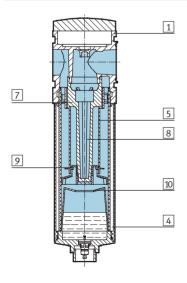
Operating and Environmenta	al Conditions						
Bowl drain		Manual	Fully automatic	Fully automatic, electrically actuated			
		M	V	E			
Operating medium		Compressed air, air quality clas	ss 5.7 to DIN ISO 8573-1				
Max. condensate volume	[cm ³]	400					
Bowl guard		Metal bowl					
Ambient temperature	[°C]	-10 +60	+5 +60	+1 +60			
Temperature of medium	[°C]	-10 +60	+5 +60	+1 +60			
Storage temperature	[°C]	-10 +60	-10 +60	+1 +60			
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 [g]	
With metal bowl	6,500
With metal bowl and fully automatic,	7,200
electrically actuated bowl drain	

- Filter cartridges → 1109
- For spare parts go to: www.festo.com/en/spare_parts_service

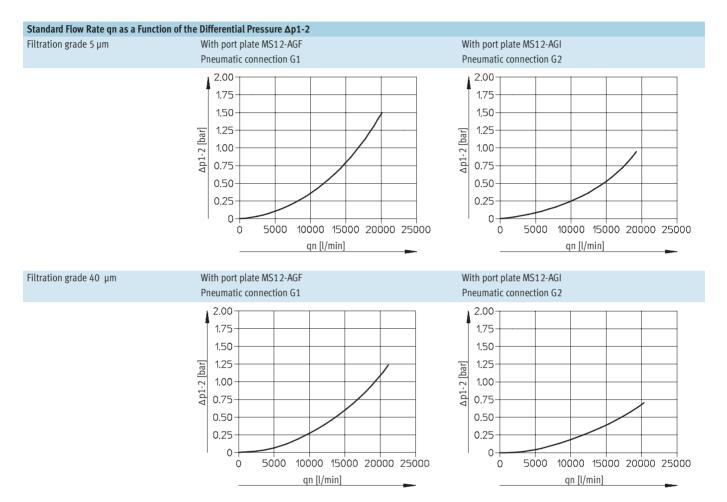
Materials Sectional view



Filte	r	
1	Body	Die-cast aluminum
4	Metal bowl	Wrought aluminum alloy
5	Filter element	Sintered bronze
7	Spin disk	Polyacetate
8	Filter holder	Polyacetate
9	Separating plate	Polyacetate
10	Stabilizing disk	Polyacetate
_	Seals	Nitrile rubber

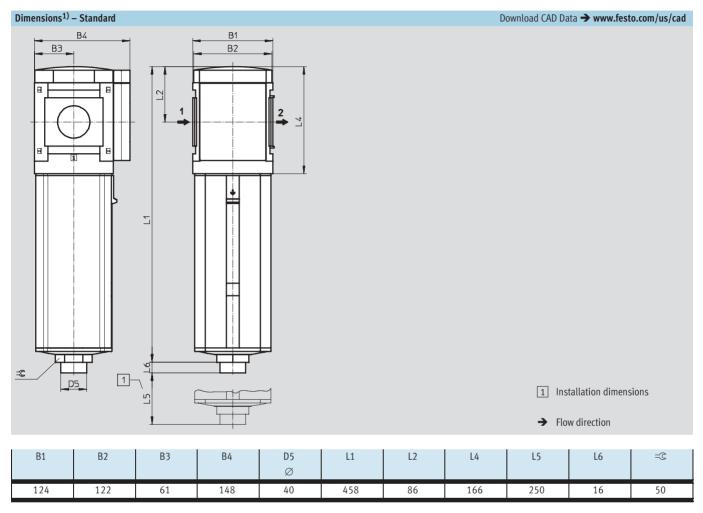


Technical Data





Dimensional Drawings

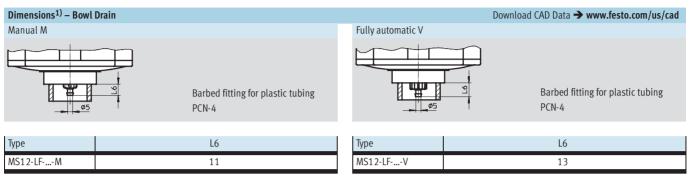


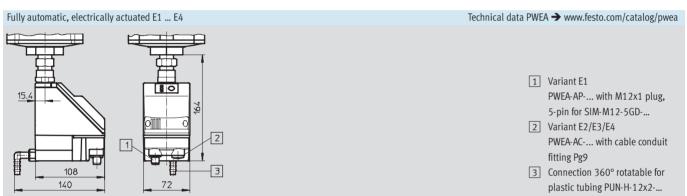
¹⁾ Dimensions are in millimeters, unless otherwise noted.

2007/10 – Subject to change – MS Series



Dimensional Drawings, Ordering Data – Pre-configured Products





1) Dimensions are in millimeters, unless otherwise noted.

Ordering Data					
Metal bowl					
Bowl drain	Connection	Filtration grade 5 μm		Filtration grade 40 µm	
		Part No. Type	LT	Part No. Type	LT
Fully automatic	G1 G2 ²⁾	537152 MS12-LF-G-CUV	1D	537151 MS12-LF-G-EUV	1D

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

²⁾ Port plate must be ordered separately as an accessory → 1107

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



Ordering Data – Configurable Products

M Mandatory I	M Mandatory Data												O Options		
Part No.	Series	Size	F	Function		Connection size		Filtration grade		Bowl		Bowl drain		Type of mounting	Reverse flow direction
535023	MS	12	L	LF		AGF AGG AGH AGI G		E C		U		M V E1 E2 E3		WP	Z
Order example 535023	MS	12	- I	LF	_	G	_	E	-	U	_	V	_	-	

Ordering Table					
Grid dimension	[mm]	124	Conditions	Code	Enter code
M Part No.		535023			
Series		Standard		MS	MS
Size		12		12	12
Function		Filter		-LF	-LF
Connection size		Port plate G1 (dimensions → 1107)		-AGF	
		Port plate G1¼ (dimensions → 1107)		-AGG	
		Port plate G1½ (dimensions → 1107)		-AGH	
		Port plate G2 (dimensions → 1107)		-AGI	
		Module without connecting thread, without port plate		-G	
Filtration grade		40 μm		-E	
		5 μm		-C	
Bowl		Metal bowl		-U	-U
Bowl drain		Manual		-M	
		Fully automatic (P1 max. 12 bar)		-V	
		External fully automatic bowl drain, electrical, 24 V DC, M12		-E1	
		External fully automatic bowl drain, electrical, 110 V AC, terminals		-E2	
		External fully automatic bowl drain, electrical, 230 V AC, terminals		-E3	
		External fully automatic bowl drain, electrical, 24 V DC, terminals		-E4	
Type of mounting		Mounting bracket (dimensions → 1108)	1	-WP	
Reverse flow direct	ion	Flow direction from right to left		-Z	

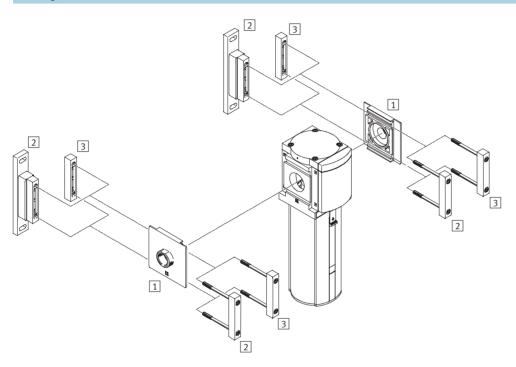
1 WP Only with port plate AGF, AGG, AGH or AGI

 Transfer order code

 535023
 MS
 12
 LF
 U

Accessories Overview

Mounting Attachments and Accessories



Moun	Mounting Attachments and Accessories							
		→ Page						
1	Port plate	1107						
	MS12-AG							
2	Mounting bracket	1108						
	MS12-WP							
3	Body connector	1107						
	MS12-MV							



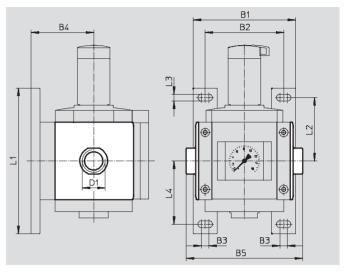
Accessories

1 Port plate MS12-AG...

Adapter for pneumatic connection

Material: Die-cast aluminum Free of copper and PTFE





Dimension	s and Orde	ring Data										
B1	B2	В3	B4	B5	D1	L1	L2	L3	L4	Weight	Part No.	Туре
										[g]		
	162 124			184	G1	230	100	11	100	1,300	537135	MS12-AGF
162		12	99	184	G11/4						537136	MS12-AGG
102		12	99	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	Part No.	Туре
	[g]		
MS12	500	537134	MS12-MV

Filters MS12-LF/LFM/LFX – Metric Series

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Accessories

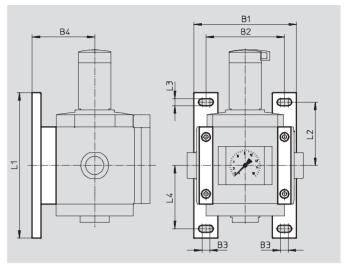
2 Mounting bracket MS12-WP

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



Replacement Parts



Ordering Data - Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Туре
MS12	5	537143	MS12-LFP-C
	40	537144	MS12-LFP-E

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

2007/10 – Subject to change – MS Series

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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 NPT, 11/4 NPT, 11/2 NPT, 2 NPT

• Supply pressure

- For manual drain: 12 ... 294 psi

- For fully automatic drain: 29 ... 176 psi

- For fully automatic drain, electrically actuated: 12 ... 235 psi

• Flow rate: 406.0 ... 564.8 scfm

Product I	Range Overview													
Туре	Pneumatic	Filtration	grade			Bowl	Bowl drain						Contamination	Reverse
	connections	[µm]	[μm]			guard							control	flow
	Port plate	0.01	1	5	40	Metal bowl	Manual	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
MS12N	AG	Α	В	С	E	U	M	V	E1	E2	E3	E4	DA	Z
LF	1 NPT, 1 ¹ / ₄ NPT, 1 ¹ / ₂ NPT, 2 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	→ 1112
Dimensional Drawings	→ 1115
Ordering Data	→ 1116
Accessories	→ 1118

→ www.festo.com/catalog/ms12n-lf

2007/10 - Subject to change - MS Series

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Technical Data

ISO Symbol



Manual bowl drain



Fully automatic bowl drain



General Technical Data									
Pneumatic connection 1, 2 ¹⁾		1 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	М	[psi]	12 294 (manual drain)						
	V [psi] 29 176 (fully automatic drain)								
	E	[psi]	12 235 (fully automatic drain	235 (fully automatic drain, electrically actuated)					

1) Dependent on port plate selected, must be ordered separately as an accessory \Rightarrow 1119

Standard Nominal Flow Rate qnN ² [scfm]									
Pneumatic connection 1, 2		1 NPT	11/4 NPT	1½ NPT	2 NPT				
Filtration grade	5 μm	406.0	441.3	476.6	494.2				
	40 μm	441.3	458.9	494.2	564.8				

²⁾ Dependent on port plate selected, must be ordered separately as an accessory → 1119 Measured at p1 = 88 psi and Δp = 7.4 psi



Technical Data

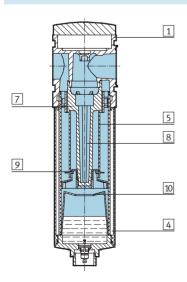
Operating and Environmenta	al Conditions							
Bowl drain		Manual	Fully automatic	Fully automatic, electrically actuated				
		M	V	E				
Operating medium		Compressed air, air quality o	Compressed air, air quality class 5.7. – to DIN ISO 8573-1					
Max. condensate volume	[in ³]	24.40	4.40					
Bowl guard		Metal bowl						
Ambient temperature	[°F]	14 140	41 140	34 140				
Temperature of medium	[°F]	14 140	41 140	34 140				
Storage temperature	[°F]	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 metal bowl	13.00					
With metal bowl and fully automatic,	14.40					
electrically actuated bowl drain						

- Filter cartridges → 1121
- For spare parts go to: www.festo.com/en/spare_parts_service

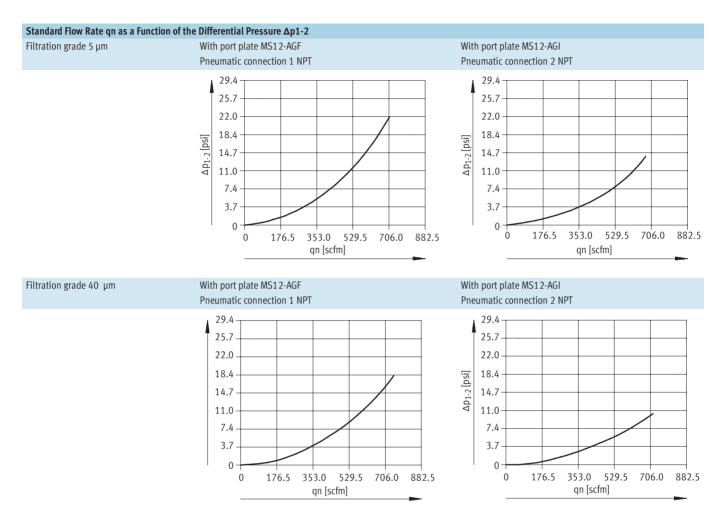
Materials Sectional view



Filte	Filter					
1	Body	Die-cast aluminum				
4	Metal bowl	Wrought aluminum alloy				
5	Filter element	Sintered bronze				
7	Spin disk	Polyacetate				
8	Filter holder	Polyacetate				
9	Separating plate	Polyacetate				
10	Stabilizing disk	Polyacetate				
_	Seals	Nitrile rubber				

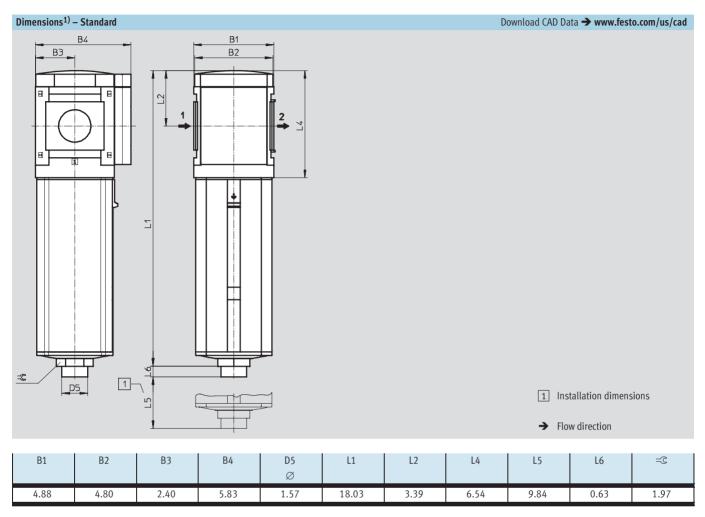


Technical Data



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Dimensional Drawings

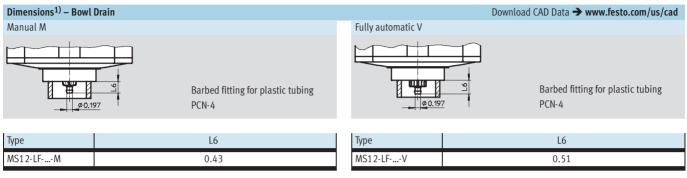


¹⁾ Dimensions are in inches, unless otherwise noted.

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Dimensional Drawings, Ordering Data – Pre-configured Products





1) Dimensions are in inches, unless otherwise noted.

Ordering Data							
Metal bowl							
Bowl drain	Connection	Filtration grade 5 µm			Filtration grade 40 μm		
		Part No. Type	LT		Part No. Type	LT	
Fully automatic	1 NPT 2 NPT ²⁾	537152 MS12-LF-G-CUV	1D		537151 MS12-LF-G-EUV	1D	

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time	
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²⁾ Port plate must be ordered separately as an accessory → 1119



Ordering Data – Configurable Products

M Mandatory D	M Mandatory Data												O Options					
Part No.	S	eries	Size	Thread		Function		Connection size		Filtration grade		Bowl		Bowl drain		Type of mounting		Reverse flow lirection
535026	N	MS .	12	N		LF		AQT AQU AQV AQW G		E C		U		M V E1 E2 E3		WP	Z	:
Order example														•				
535026	N	ΛS	12	N	-	LF	-	G	-	E	-	U	-	٧	-	-	- 🔲	

Ordering Table					
Grid dimension	[mm]	124	Conditions	Code	Enter code
M Part No.		535026			
Series		Standard		MS	MS
Size		12		12	12
Thread		NPT thread		N	N
Function		Filter		-LF	-LF
Connection size		Port plate 1 NPT (dimensions → 1119)		-AQT	
		Port plate 1¼ NPT (dimensions → 1119)		-AQU	
		Port plate 1½ NPT (dimensions → 1119)		-AQV	
		Port plate 2 NPT (dimensions → 1119)		-AQW	
		Module without connecting thread, without port plate		-G	
Filtration grade		40 μm		-E	
		5 μm		-C	
Bowl		Metal bowl		-U	-U
Bowl drain		Manual		-M	
		Fully automatic (P1 max. 176 psi)		-V	
		External fully automatic bowl drain, electrical, 24 V DC, M12		-E1	
		External fully automatic bowl drain, electrical, 110 V AC, terminals		-E2	
		External fully automatic bowl drain, electrical, 230 V AC, terminals		-E3	
		External fully automatic bowl drain, electrical, 24 V DC, terminals		-E4	
Type of mounting		Mounting bracket (dimensions → 1120)	1	-WP	
Reverse flow direction	n	Flow direction from right to left		-Z	

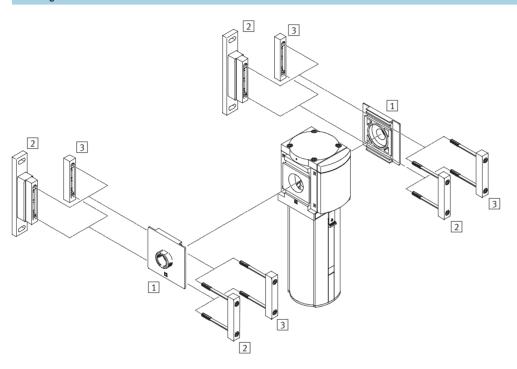
1 WP Only with port plate AQT, AQU, AQV or AQW

 Transfer order code

 535026
 MS
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Accessories Overview

Mounting Attachments and Accessories



Moun	Mounting Attachments and Accessories							
		→ Page						
1	Port plate	1119						
	MS12-AQ							
2	Mounting bracket	1120						
	MS12-WP							
3	Body connector	1119						
	MS12-MV							

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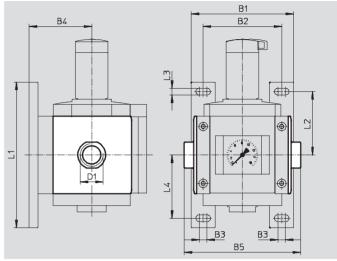
Accessories

1 Port plate MS12-AQ...

Adapter for pneumatic connection

Material: Die-cast aluminum Free of copper and PTFE





Dimension	s and Orde	ring Data										
B1	B2	В3	B4	B5	D1	L1	L2	L3	L4	Weight [lb]	Part No.	Туре
										[tb]		
				7.24	1 NPT					2.60	537139	MS12-AQT
6.38	4.88	0.47	3.90	7.24	11/4 NPT	9.06	3.94	0.43	3.94		537140	MS12-AQU
0.56	0.36 4.66	0.47	3.90	7.24	1½ NPT	9.00	3.94	0.43	3.54		537141	MS12-AQV
					7.72	2 NPT						537142

3 Body connector MS12-MV

• For connecting modules

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



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

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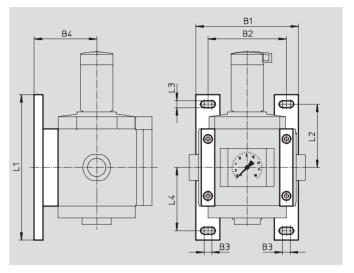
Accessories

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	В3	B4	L1	L2	L3		Weight [lb]	Part No.	Туре
MS12	6.38	4.88	0.47	3.90	9.06	3.94	0.43	3.94	1.40	537133	MS12-WP



Replacement Parts



Ordering Data – Filter Cartridges										
Size	Filtration grade [µm]	Part No.	Туре							
MS12	5	537143	MS12-LFP-C							
	40	537144	MS12-LFP-E							

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

2007/10 - Subject to change - MS Series

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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 ComponentsComplete custom engineered solutions



Custom Control CabinetsComprehensive engineering support and on-site services



Complete SystemsShipment, 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.



ElectromechanicalElectromechanical 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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