

MS9 - Series/NPT Version

Fine, Micro and Activated Carbon Filters

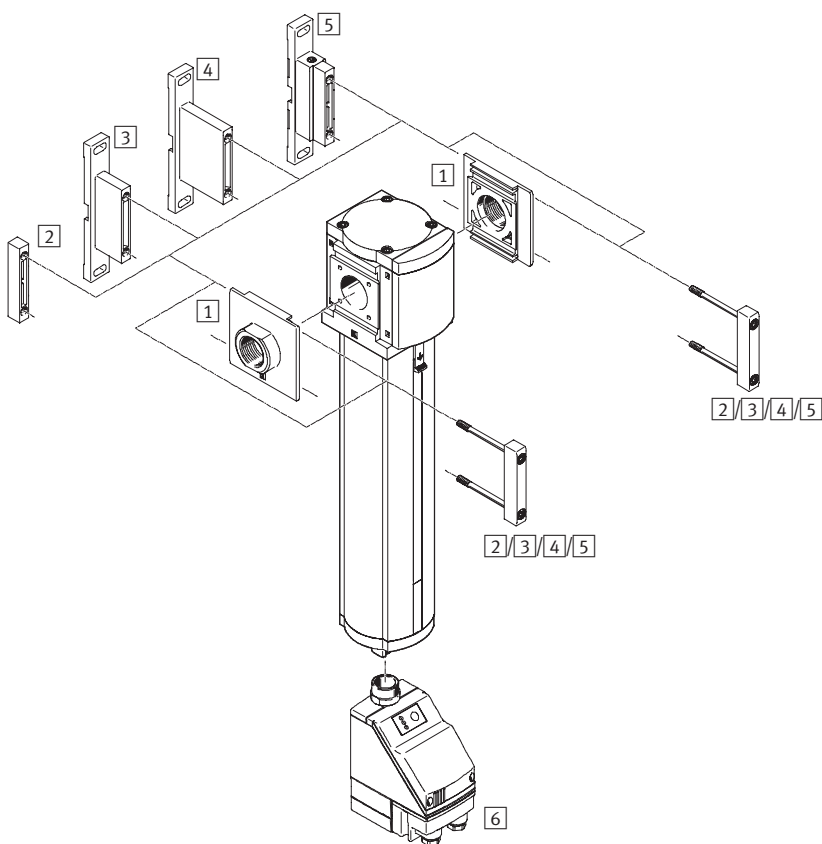
FESTO



Fine and micro filters MS9-LFM, MS series

Peripherals overview

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Note

Other accessories:

– Module connector for combination with size MS6 or size MS12

→ Internet: armv

Mounting attachments and accessories					
		Individual device		Combination	➔ Page/Internet
		without connecting thread	with connecting thread NPT¾-14 or NPT1-11½		
1	Connecting plate MS9-AQ...	■	–	■	ms9-aq
2	Module connector MS9-MV	■	–	■	ms9-mv
3	Mounting bracket MS9-WP	■	■	■	ms9-wp
4	Mounting bracket MS9-WPB	■	■	■	ms9-wp
5	Mounting bracket MS9-WPM	■	–	■	ms9-wp
6	Condensate drain, fully automatic, electrically actuated E1/E2/E3/E4	■	■	■	12

Fine and micro filters MS9-LFM, MS series

Type codes

		MS	9	-	LFM	-	N1	-	A	U	M	-	HF	-	DA
Series															
MS	Standard service unit														
Size															
9	Grid dimension 90 mm														
Service function															
LFM	Fine and micro filter														
Pneumatic connection															
N3/4	Thread NPT3/4														
N1	Thread NPT1														
G	Module without connecting thread, without connecting plate														
Grade of filtration															
A	0.01 µm														
B	1 µm														
Bowl guard															
U	Metal bowl guard														
Condensate drain															
M	Manual rotary														
V	Fully automatic														
Flow rate															
	Standard														
HF	High flow rate														
Filter contamination sensor															
	Without differential pressure indicator														
DA	Differential pressure indicator														

Further variants can be ordered using the modular system

Fine and micro filters LFM → 12

- Connecting plates
- Condensate drain
- Type of mounting
- Alternative flow direction

Fine and micro filters MS9-LFM, MS series

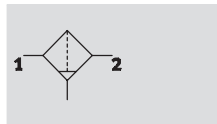
Technical data

Function

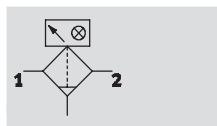
Condensate drain

Manual rotary

Without differential pressure indicator



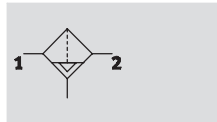
With differential pressure indicator



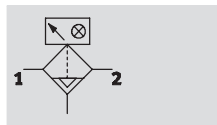
Condensate drain


Semi or fully automatic

Without differential pressure indicator



With differential pressure indicator



 Flow rate
325 ... 10,000 l/min

 Temperature range
-10 ... +60 °C

 Supply pressure
0 ... 20 bar



- High-performance filter for exceptionally clean compressed air
- Air quality to DIN ISO 8573-1
- Available with manual, semi-automatic, fully automatic or fully automatic, electrically actuated condensate drain
- Available with differential pressure indicator for indication of contamination
- Choice of filter cartridges: 0.01 µm or 1 µm
- New filter cartridges → 21

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%

General technical data				
Size	MS9			
Pneumatic connection 1, 2	NPT3/4	NPT1	NPT1/2 ... NPT1 1/2 (with connecting plate AQ...)	– (without connecting thread G)
Constructional design	Fibre filter			
Type of mounting	Via accessories			
	In-line installation			
Installation position	Vertical ±5°			
Grade of filtration [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)			
Bowl guard	Metal bowl guard			
Condensate drain	Manual rotary			
	Semi-automatic			
	Fully automatic			
	Fully automatic, electrically actuated			
Differential pressure indicator	Visual indicator			
Residual oil content [mg/m ³]	≤0.01 (micro filter LFM-A)			
	≤0.5 (fine filter LFM-B)			
Max. condensate volume [cm ³]	225			

Fine and micro filters MS9-LFM, MS series

Technical data

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Standard flow rate $q_n^{1)}$ [l/min]		
Version	Standard	High flow rate HF
Micro filter LFM-A		
q_n min	325	390
q_n max	6,500	7,800
Fine filter LFM-B		
q_n min	350	500
q_n max	7,000	10,000

1) Measured at $p_1 = 6$ bar

Operating and environmental conditions				
Version	Condensate drain			
	Manual rotary	Semi-automatic	Fully automatic	Fully automatic, electrically actuated
	M	H	V	E1 ... E4
Supply pressure [bar]	0 ... 20	1.5 ... 12	2 ... 12	0.8 ... 16
Operating medium for micro filter LFM-A	Filtered compressed air, unlubricated, grade of filtration 1 μ m			
Operating medium for fine filter LFM-B	Filtered compressed air, unlubricated, grade of filtration 5 μ m			
Ambient temperature [°C]	-10 ... +60	+5 ... +60	+5 ... +60	+1 ... +60
Temperature of medium [°C]	-10 ... +60	+5 ... +60	+5 ... +60	+1 ... +60
Storage temperature [°C]	-10 ... +60	+5 ... +60	-10 ... +60	+1 ... +60
Corrosion resistance CRC ¹⁾	2			

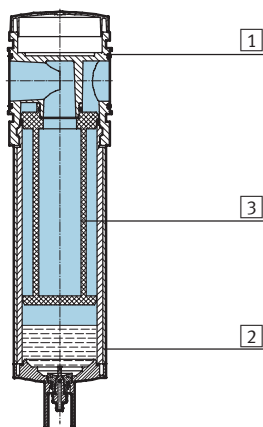
1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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]		
Version	Standard	High flow rate HF
Fine and micro filter	2,000	2,500
Fine and micro filter with condensate drain fully automatic, electrically actuated E1 ... E4	2,900	2,900

Materials

Sectional view



Fine and micro filters		
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
	Inspection window	Polyamide
3	Filter	Borosilicate fibre
-	Seals	Nitrile rubber
	Note on materials	Free of copper and PTFE

Fine and micro filters MS9-LFM, MS series

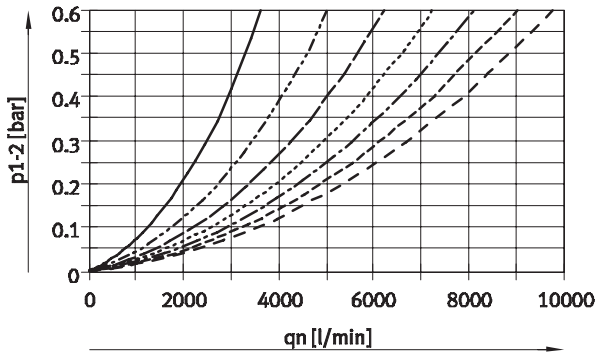
Technical data

FESTO

Standard flow rate q_n as a function of the differential pressure p_{1-2}

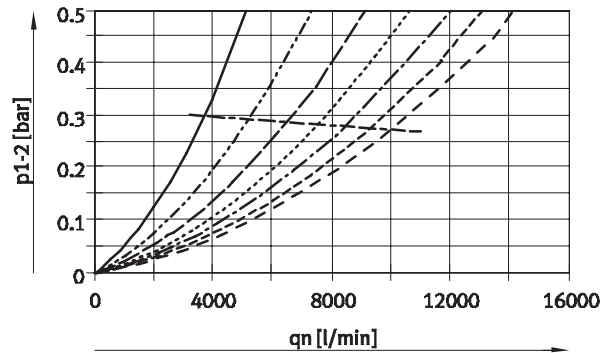
Grade of filtration 0.01 μm

MS9-LFM-AQR, Pneumatic connection NPT $\frac{1}{2}$



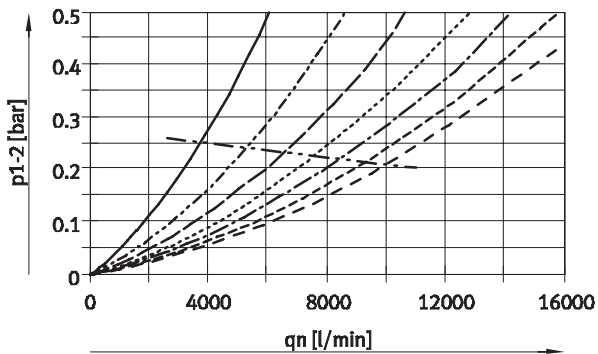
Grade of filtration 0.01 μm

MS9-LFM-N $\frac{3}{4}$ /AQS, Pneumatic connection NPT $\frac{3}{4}$



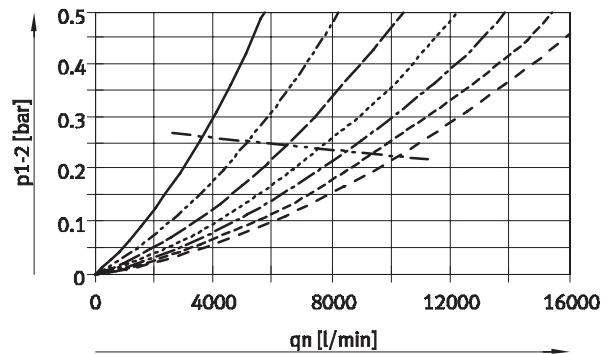
Grade of filtration 0.01 μm

MS9-LFM-N1/AQT, Pneumatic connection NPT1



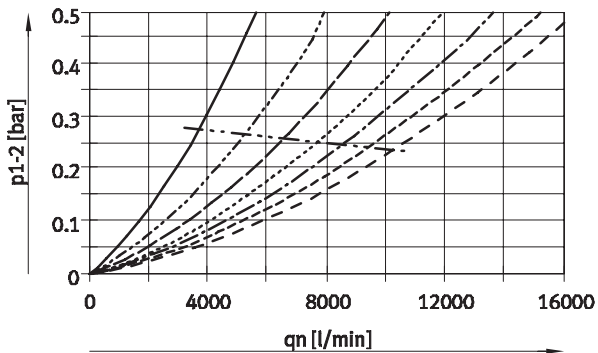
Grade of filtration 0.01 μm

MS9-LFM-AQU, Pneumatic connection NPT1 $\frac{1}{4}$



Grade of filtration 0.01 μm

MS9-LFM-AQV, Pneumatic connection NPT1 $\frac{1}{2}$



- 2 bar
- - - 4 bar ($q_{n \text{ min}}$: 268 l/min)
- · - 6 bar ($q_{n \text{ min}}$: 325 l/min)
- 8 bar
- - - - 10 bar ($q_{n \text{ min}}$: 420 l/min)
- - - - 12 bar
- - - - 14 bar ($q_{n \text{ min}}$: 498 l/min)
- · - · - $q_{n \text{ max}}$
(with MS9-LFM-AGD: $q_{n \text{ max}}$ -values lie above the measured q_n -values)

Fine and micro filters MS9-LFM, MS series

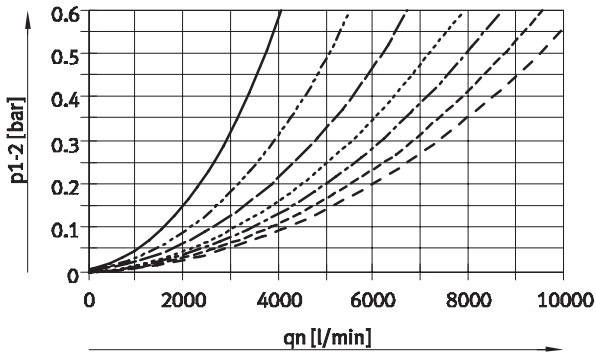
Technical data

FESTO

Standard flow rate q_n as a function of the differential pressure p_{1-2}

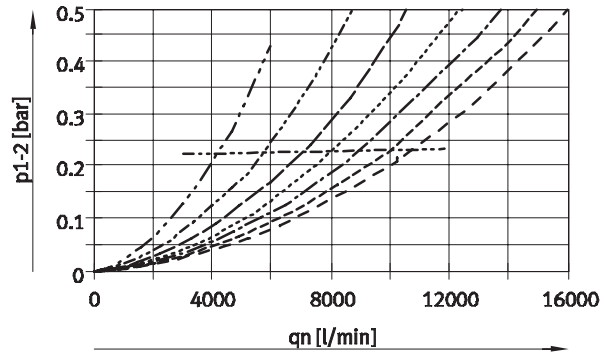
Grade of filtration $1\ \mu\text{m}$

MS9-LFM-AQR, Pneumatic connection NPT $\frac{1}{2}$ -14



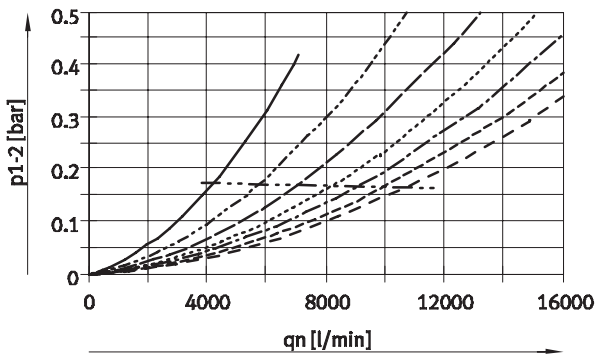
Grade of filtration $1\ \mu\text{m}$

MS9-LFM-N $\frac{3}{4}$ /AQS, Pneumatic connection NPT $\frac{3}{4}$ -14



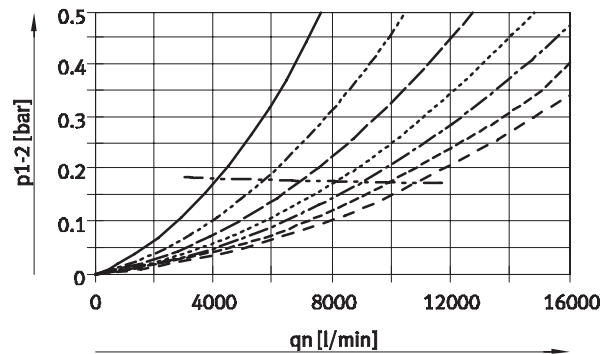
Grade of filtration $1\ \mu\text{m}$

MS9-LFM-N1/AQT, Pneumatic connection NPT1



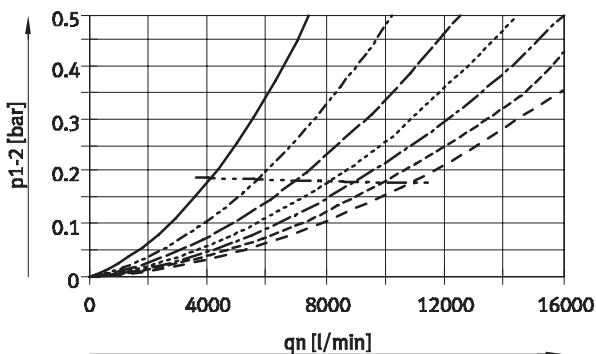
Grade of filtration $1\ \mu\text{m}$

MS9-LFM-AQU, Pneumatic connection NPT $\frac{1}{4}$



Grade of filtration $1\ \mu\text{m}$

MS9-LFM-AQV, Pneumatic connection NPT $\frac{1}{2}$



- 2 bar
- - - 4 bar ($q_{n\ min}$: 289 l/min)
- · - 6 bar ($q_{n\ min}$: 350 l/min)
- · · 8 bar
- - - - 10 bar ($q_{n\ min}$: 450 l/min)
- - - - 12 bar
- - - - 14 bar ($q_{n\ min}$: 540 l/min)
- - - - $q_{n\ max}$
- (with MS9-LFM-AGD: $q_{n\ max}$ -values lie above the measured q_n -values)

Fine and micro filters MS9-LFM, MS series

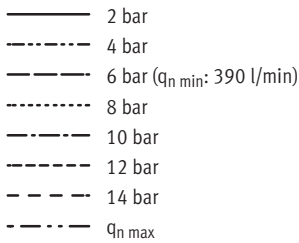
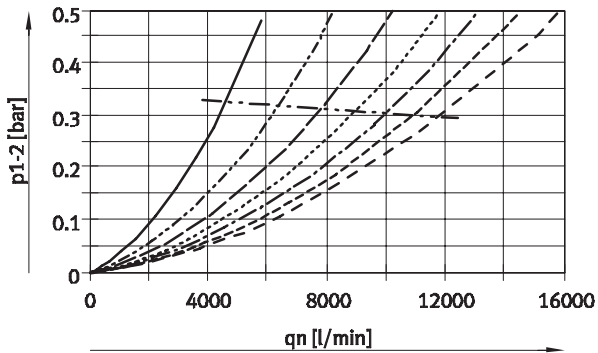
Technical data

FESTO

Standard flow rate q_n as a function of the differential pressure p_{1-2}

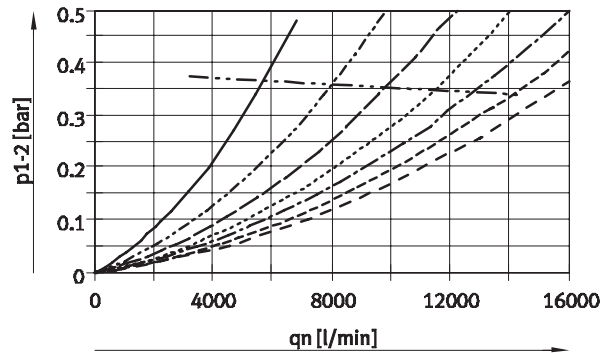
Grade of filtration 0.01 μm

MS9-LFM-N $\frac{3}{4}$ -...-HF, Pneumatic connection NPT $\frac{3}{4}$



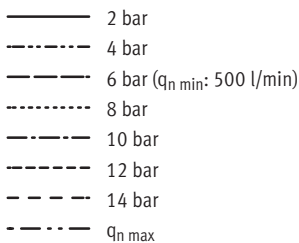
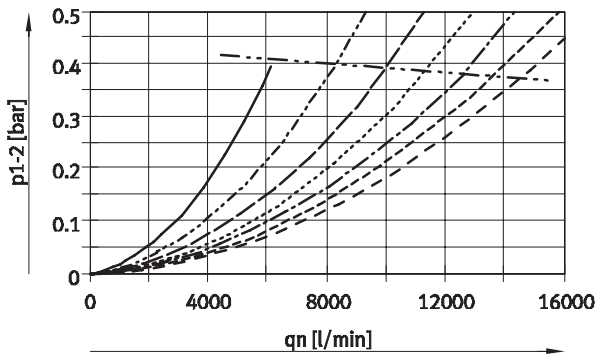
Grade of filtration 0.01 μm

MS9-LFM-N1-...-HF, Pneumatic connection NPT1



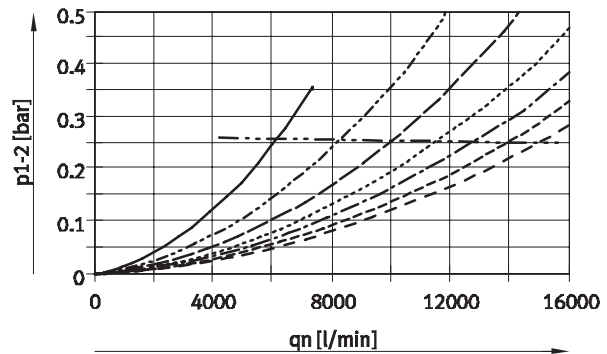
Grade of filtration 1 μm

MS9-LFM-N $\frac{3}{4}$ -...-HF, Pneumatic connection NPT $\frac{3}{4}$



Grade of filtration 1 μm

MS9-LFM-N1-...-HF, Pneumatic connection NPT1



Fine and micro filters MS9-LFM, MS series

Technical data

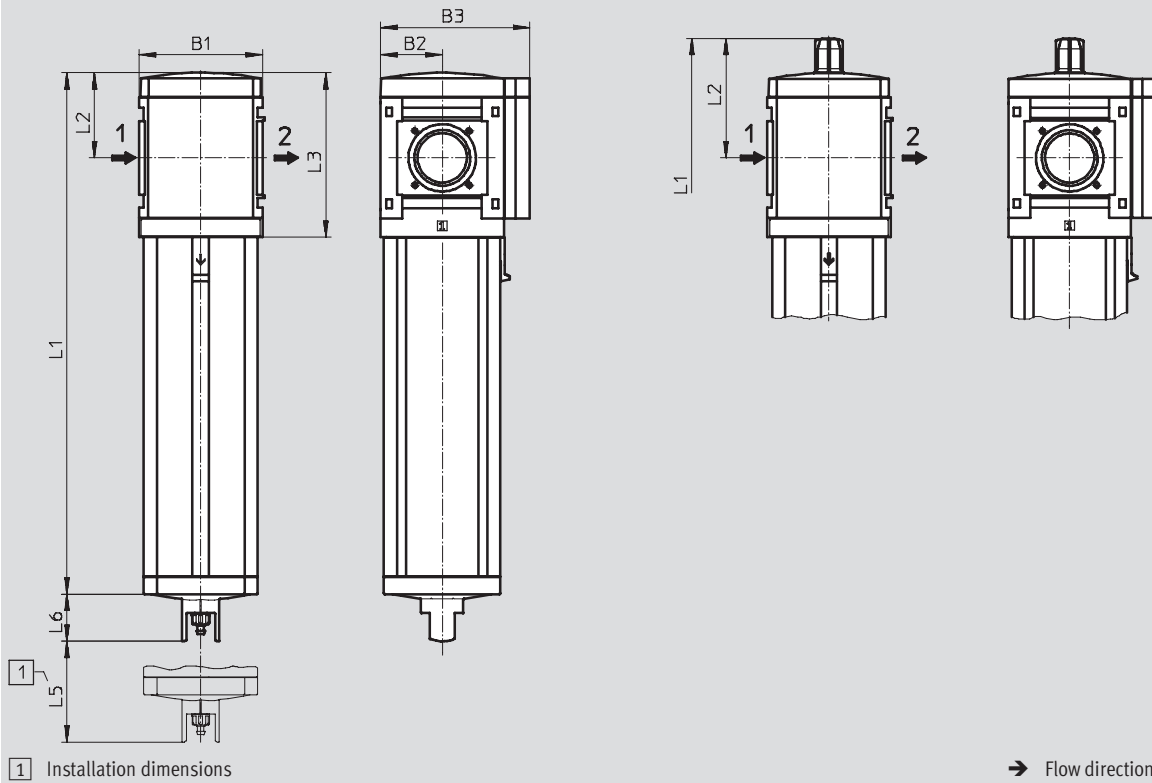
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Dimensions – Basic version

without connecting thread G

Download CAD data → www.festo.com

without connecting thread G, with differential pressure indicator DA



Type	B1	B2	B3	L1		L2	L3	L5	L6
				Standard	High flow rate HF				
MS9-LFM-G	90	45	109	380.5	480.5	62	120	50	34.5
MS9-LFM-G-...-DA				405.5	505.5	87			

Fine and micro filters MS9-LFM, MS series

Technical data

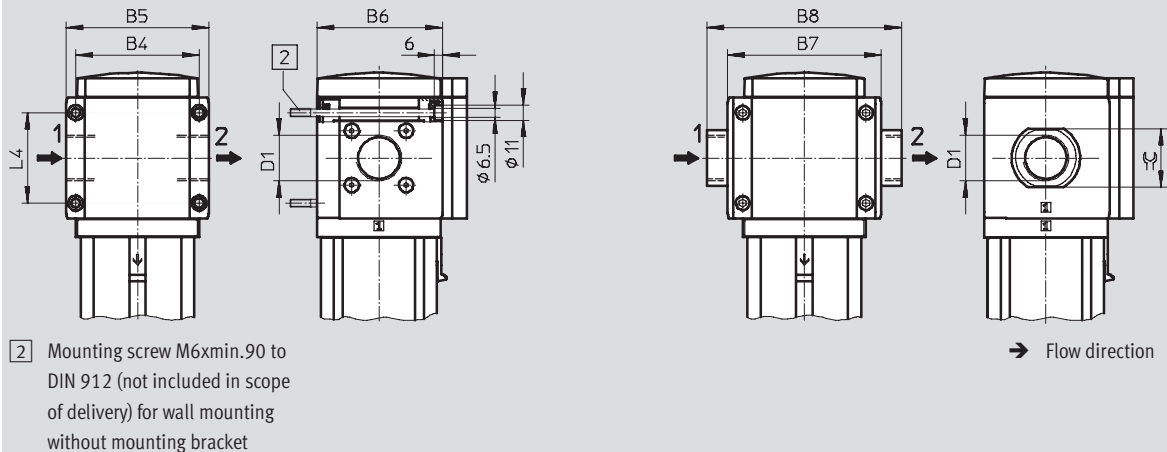
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Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

with connecting thread N $\frac{3}{4}$ or N1

with connecting plate AQ...

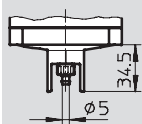


Type	B4	B5	B6	B7	B8	D1	L4	≅
MS9-LFM-N $\frac{3}{4}$	90	104	91.5	-	-	NPT $\frac{3}{4}$	66	-
MS9-LFM-N1						NPT1		
MS9-LFM-AQR	-	-	-	112	132	NPT $\frac{1}{2}$	-	30
MS9-LFM-AQS					132	NPT $\frac{3}{4}$		36
MS9-LFM-AQT					142	NPT1		41
MS9-LFM-AQU					162	NPT1 $\frac{1}{4}$		50
MS9-LFM-AQV					176	NPT1 $\frac{1}{2}$		55

Dimensions – Condensate drain

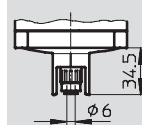
Download CAD data → www.festo.com

Manual rotary M/fully automatic V



Barbed fitting for plastic tubing
PCN-4

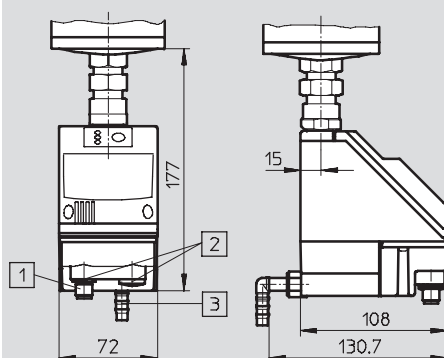
Semi-automatic H



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

Fully automatic, electrically actuated E1 ... E4

Technical data → Internet: pwea



- 1 Variant E1
PWEA-AP-... with M12x1 plug,
5-pin for NEBU-M12...-LE5
- 2 Variants E2/E3/E4
PWEA-AC-... with cable conduit
fitting Pg9
- 3 Connection 360° rotatable for
plastic tubing PUN-H-12x2-...

Fine and micro filters MS9-LFM, MS series

Technical data

Ordering data							
Without differential pressure indicator							
Size	Condensate drain	Connection	Micro filter		Fine filter		
			Grade of filtration 0.01 μm		Grade of filtration 1 μm		
			Part No.	Type	Part No.	Type	
Standard							
MS9	Manual rotary	NPT¾	553086	MS9-LFM-N¾-AUM	553090	MS9-LFM-N¾-BUM	
		NPT1	553016	MS9-LFM-N1-AUM	553020	MS9-LFM-N1-BUM	
		–	564047	MS9-LFM-G-AUM	564039	MS9-LFM-G-BUM	
	Fully automatic	NPT¾	553088	MS9-LFM-N¾-AUV	553092	MS9-LFM-N¾-BUV	
		NPT1	553018	MS9-LFM-N1-AUV	553022	MS9-LFM-N1-BUV	
		–	564049	MS9-LFM-G-AUV	564041	MS9-LFM-G-BUV	
		High flow rate					
MS9	Manual rotary	NPT¾	552980	MS9-LFM-N¾-AUM-HF	552984	MS9-LFM-N¾-BUM-HF	
		NPT1	553054	MS9-LFM-N1-AUM-HF	553058	MS9-LFM-N1-BUM-HF	
		–	564051	MS9-LFM-G-AUM-HF	564043	MS9-LFM-G-BUM-HF	
	Fully automatic	NPT¾	552982	MS9-LFM-N¾-AUV-HF	552986	MS9-LFM-N¾-BUV-HF	
		NPT1	553056	MS9-LFM-N1-AUV-HF	553060	MS9-LFM-N1-BUV-HF	
		–	564053	MS9-LFM-G-AUV-HF	564045	MS9-LFM-G-BUV-HF	

Ordering data						
With differential pressure indicator						
Size	Condensate drain	Connection	Micro filter		Fine filter	
			Grade of filtration 0.01 μm		Grade of filtration 1 μm	
			Part No.	Type	Part No.	Type
Standard						
MS9	Manual rotary	NPT¾	553094	MS9-LFM-N¾-AUM-DA	553098	MS9-LFM-N¾-BUM-DA
		NPT1	553024	MS9-LFM-N1-AUM-DA	553028	MS9-LFM-N1-BUM-DA
		–	564048	MS9-LFM-G-AUM-DA	564040	MS9-LFM-G-BUM-DA
	Fully automatic	NPT¾	553096	MS9-LFM-N¾-AUV-DA	553100	MS9-LFM-N¾-BUV-DA
		NPT1	553026	MS9-LFM-N1-AUV-DA	553030	MS9-LFM-N1-BUV-DA
		–	564050	MS9-LFM-G-AUV-DA	564042	MS9-LFM-G-BUV-DA
High flow rate						
MS9	Manual rotary	NPT¾	552988	MS9-LFM-N¾-AUM-HF-DA	552992	MS9-LFM-N¾-BUM-HF-DA
		NPT1	553062	MS9-LFM-N1-AUM-HF-DA	553066	MS9-LFM-N1-BUM-HF-DA
		–	564052	MS9-LFM-G-AUM-HF-DA	564044	MS9-LFM-G-BUM-HF-DA
	Fully automatic	NPT¾	552990	MS9-LFM-N¾-AUV-HF-DA	552994	MS9-LFM-N¾-BUV-HF-DA
		NPT1	553064	MS9-LFM-N1-AUV-HF-DA	553068	MS9-LFM-N1-BUV-HF-DA
		–	564054	MS9-LFM-G-AUV-HF-DA	564046	MS9-LFM-G-BUV-HF-DA

Fine and micro filters MS9-LFM, MS series

Ordering data – Modular products

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Mandatory data →						
Module No.	Series	Size	Function	Connection size	Grade of filtration	Bowl
552940	MS	9	LFM	N $\frac{3}{4}$, N1 AQR, AQS, AQT, AQU, AQV G	B A	U
Order example						
552940	MS	9	- LFM	- AQR	- B	- U

Ordering table					
Grid dimension [mm]		90	Condi- tions	Code	Enter code
M	Module No.	552940			
	Series	Standard service unit		MS	MS
	Size	9		9	9
	Function	Fine and micro filter		-LFM	-LFM
	Connection size	Thread N $\frac{3}{4}$		-N $\frac{3}{4}$	
		Thread N1		-N1	
		Connecting plate N $\frac{1}{2}$		-AQR	
		Connecting plate N $\frac{3}{4}$		-AQS	
		Connecting plate N1		-AQT	
		Connecting plate N1 $\frac{1}{4}$		-AQU	
		Connecting plate N1 $\frac{1}{2}$		-AQV	
		Module without connecting thread, without connecting plate		-G	
	Grade of filtration μm	1		-B	
		0.01		-A	
↓	Bowl	Metal bowl		-U	-U

Transfer order code

552940	MS	9	-	LFM	-		-		-	U
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Fine and micro filters MS9-LFM, MS series

Ordering data – Modular products

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→ M Mandatory data		O Options		
Condensate drain	Flow rate	Filter contamination sensor	Type of mounting	Alternative flow direction
M H V E1 E2 E3 E4	HF	DA	WP WPM WPB	Z
- M	- HF	- DA	- WP	- Z

Ordering table					
Grid dimension	[mm]	90	Condi- tions	Code	Enter code
↓ M	Condensate drain	Manual		-M	
		Semi-automatic (P1 max. 12 bar)		-H	
		Fully automatic (P1 max. 12 bar)		-V	
		External fully automatic condensate drain, electrical, 24 V DC, M12		-E1	
		External fully automatic condensate drain, electrical, 110 V AC, terminal strip		-E2	
		External fully automatic condensate drain, electrical, 230 V AC, terminal strip		-E3	
		External fully automatic condensate drain, electrical, 24 V DC, terminal strip		-E4	
O	Flow rate	High flow rate		-HF	
	Filter contamination sensor	Differential pressure indicator, visual		-DA	
	Type of mounting	Mounting bracket	1	-WP	
		Mounting bracket	1	-WPM	
		Wall mounting bracket for large wall gap	1	-WPB	
	Alternative flow direction	Flow direction from right to left		-Z	

1 WP, WPM, WPB Not with module G

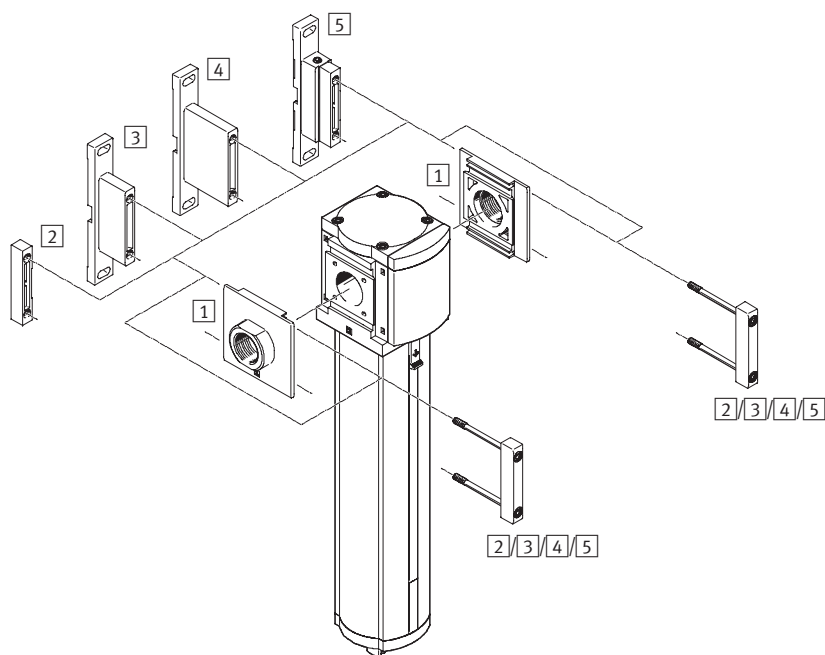
Transfer order code

- - - - -

Activated carbon filters MS9-LFX, MS series

Peripherals overview

FESTO



Note

Other accessories:

- Module connector for combination with size MS6 or size MS12

➔ Internet: armv

Mounting attachments and accessories

		Individual device		Combination	➔ Page/Internet
		without connecting thread	with connecting thread NPT $\frac{3}{4}$ or NPT1		
1	Connecting plate MS9-AQ...	■	–	■	ms9-aq
2	Module connector MS9-MV	■	–	■	ms9-mv
3	Mounting bracket MS9-WP	■	■	■	ms9-wp
4	Mounting bracket MS9-WPB	■	■	■	ms9-wp
5	Mounting bracket MS9-WPM	■	–	■	ms9-wp

Activated carbon filters MS9-LFX, MS series

Type codes

		MS	9	–	LFX	–	N $\frac{3}{4}$	–	U
Series									
MS	Standard service unit								
Size									
9	Grid dimension 90 mm								
Service function									
LFX	Activated carbon filter								
Pneumatic connection									
N $\frac{3}{4}$	Thread NPT $\frac{3}{4}$								
N1	Thread NPT1								
G	Module without connecting thread, without connecting plate								
Bowl guard									
U	Metal bowl guard								

Further variants can be ordered using the modular system

Activated carbon filters LFX → 20

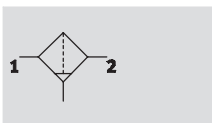
- Connecting plates
- Type of mounting
- Alternative flow direction


Activated carbon filters MS9-LFX, MS series

FESTO

Technical data

Function



 Flow rate
max. 6,500 l/min

 Temperature range
-10 ... +60 °C

 Supply pressure
0 ... 20 bar



- Removal of liquid and gaseous oil particles from compressed air using activated carbon
- Eliminates odours and vapours
- Prefiltration with micro filter MS-LFM-A, grade of filtration 0.01 µm, recommended
- New filter cartridges → 21

General technical data				
Size	MS9			
Pneumatic connection 1, 2	NPT3/4	NPT1	NPT1/2 ... NPT1 1/2 (with connecting plate AQ...)	– (without connecting thread G)
Constructional design	Activated carbon filter			
Type of mounting	Via accessories In-line installation			
Installation position	Vertical ±5°			
Air purity class at the output ¹⁾	1.7.1 to DIN ISO 8573-1			
Bowl guard	Metal bowl guard			
Residual oil content [mg/m³]	≤0.003			

1) It is recommended to replace filter cartridges after 1,000 operating hours (applies to an ambient temperature of 21 °C). The service life of a filter cartridge is reduced at higher temperatures.

Standard flow rate qn ¹⁾ [l/min]	
qn max.	6,500

1) Measured at p1 = 6 bar

Operating and environmental conditions		
Supply pressure [bar]	0 ... 20	
Operating medium	Filtered compressed air, unlubricated, grade of filtration 0.01 µm	
Ambient temperature [°C]	-10 ... +60	
Temperature of medium [°C]	+5 ... +30	
Storage temperature [°C]	-10 ... +60	
Corrosion resistance CRC ¹⁾	2	

1) Corrosion resistance class 2 as per Festo standard 940 070
Components subject to moderate corrosion stress. 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.

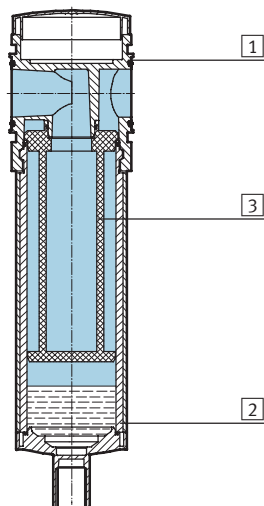
Weights [g]	
Activated carbon filter	2,000

Activated carbon filters MS9-LFX, MS series

Technical data

Materials

Sectional view

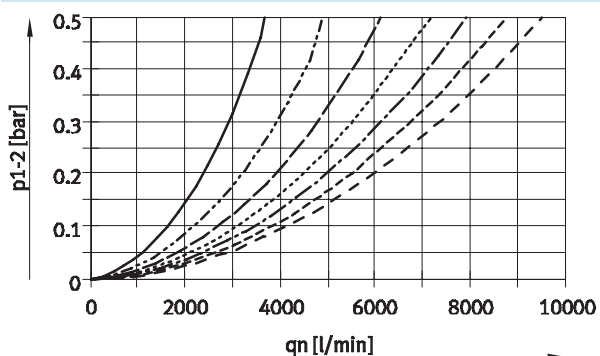


Activated carbon filter

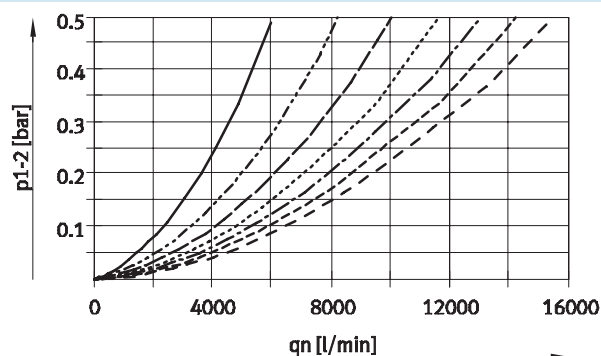
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
	Inspection window	Polyamide
3	Filter	Activated carbon
-	Seals	Nitrile rubber
	Note on materials	Free of copper and PTFE

Standard flow rate q_n as a function of the differential pressure p_{1-2}

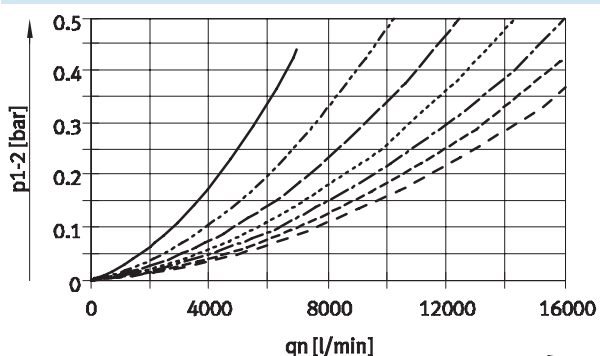
MS9-LFX-AQR, Pneumatic connection NPT $\frac{1}{2}$



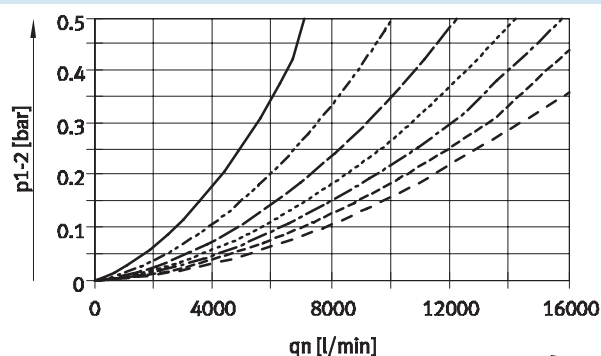
MS9-LFX-N $\frac{3}{4}$ /AQS, Pneumatic connection NPT $\frac{3}{4}$



MS9-LFX-N1/AQT, Pneumatic connection NPT1



MS9-LFX-AQV, Pneumatic connection NPT $\frac{1}{2}$



- 2 bar
- - - 4 bar
- · - 6 bar
- · · 8 bar
- - - 10 bar
- - - 12 bar
- - - 14 bar

Activated carbon filters MS9-LFX, MS series

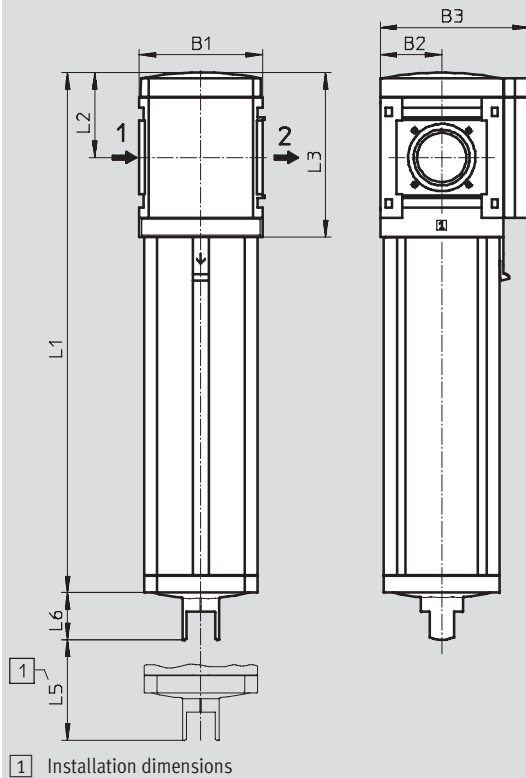
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Technical data

Dimensions – Basic version

Download CAD data → www.festo.com

without connecting thread G



Type	B1	B2	B3	L1	L2	L3	L5	L6
MS9-LFX-G	90	45	109	380.5	62	120	50	34.5

Activated carbon filters MS9-LFX, MS series

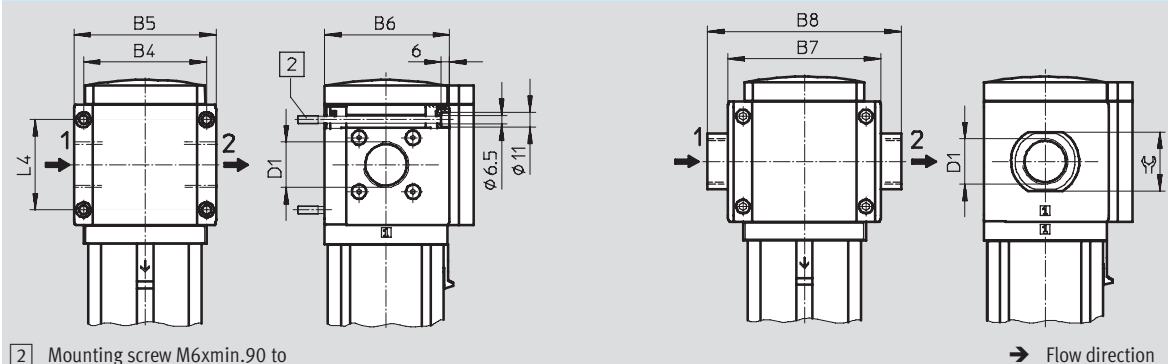
Technical data

Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

with connecting thread N $\frac{3}{4}$ or N1

with connecting plate AQ...



Type	B4	B5	B6	B7	B8	D1	L4	≅
MS9-LFX-N $\frac{3}{4}$	90	104	91.5	-	-	NPT $\frac{3}{4}$	66	-
MS9-LFX-N1						NPT1		
MS9-LFX-AQR	-	-	-	112	132	NPT $\frac{1}{2}$	-	30
MS9-LFX-AQS					132	NPT $\frac{3}{4}$		36
MS9-LFX-AQT					142	NPT1		41
MS9-LFX-AQU					162	NPT1 $\frac{1}{4}$		50
MS9-LFX-AQV					176	NPT1 $\frac{1}{2}$		55

Ordering data

Size	Connection	Part No.	Type
MS9	NPT $\frac{3}{4}$	552998	MS9-LFX-N $\frac{3}{4}$ -U
	NPT1	553034	MS9-LFX-N1-U
	-	564038	MS9-LFX-G-U

Activated carbon filters MS9-LFX, MS series

FESTO

Ordering data – Modular products

M Mandatory data						O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Alternative flow direction
552942	MS	9	LFX	N $\frac{3}{4}$, N1 AQR, AQS, AQT, AQU, AQV G	U	WP WPM WPB	Z
Order example							
552942	MS	9	- LFX	- AQR	- U	- WP	- Z

Ordering table					
Grid dimension	[mm]	90	Condi- tions	Code	Enter code
M Module No.	552942				
Series	Standard service unit			MS	MS
Size	9			9	9
Function	Activated carbon filter			-LFX	-LFX
Connection size	Thread N $\frac{3}{4}$			-N $\frac{3}{4}$	
	Thread N1			-N1	
	Connecting plate N $\frac{1}{2}$			-AQR	
	Connecting plate N $\frac{3}{4}$			-AQS	
	Connecting plate N1			-AQT	
	Connecting plate N1 $\frac{1}{4}$			-AQU	
	Connecting plate N1 $\frac{1}{2}$			-AQV	
	Module without connecting thread, without connecting plate			-G	
Bowl	Metal bowl			-U	-U
O Type of mounting	Mounting bracket			1 -WP	
	Mounting bracket			1 -WPM	
	Wall mounting bracket for large wall gap			1 -WPB	
Alternative flow direction	Flow direction from right to left			-Z	-Z

1 WP, WPM, WPB

Not with module G

Transfer order code

552942	MS	9	- LFX	-		- U	-		-	
--------	----	---	-------	---	--	-----	---	--	---	--

Filters MS-LFM/LFX, MS series

Accessories

Filter cartridges, MS9 series



Ordering data				
Size	Filter cartridge	Grade of filtration [μm]	Part No.	Type
MS9	Micro-filter cartridge	0.01	553036	MS9-LFM-A
	Fine-filter cartridge	1	553037	MS9-LFM-B
	Activated carbon filter cartridge	–	552946	MS9-LFX
High flow rate HF				
MS9	Micro-filter cartridge	0.01	552944	MS9-LFM-A-HF
	Fine-filter cartridge	1	552945	MS9-LFM-B-HF

Accessories, MS series

Mounting attachments MS9

FESTO

Mounting bracket MS9-WP...

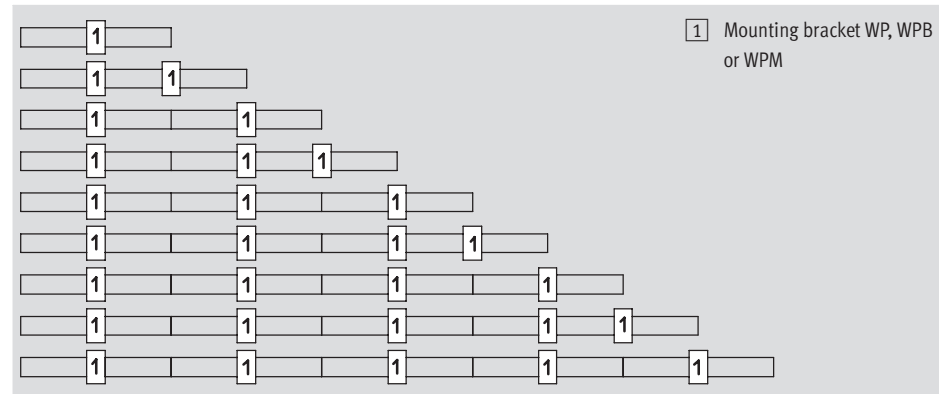
Clearances for mounting service unit combinations

1 service unit: 90 mm

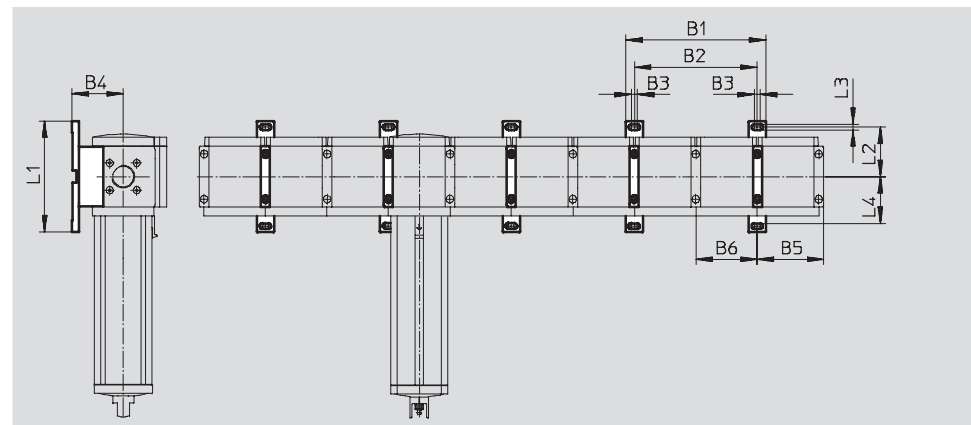
2 service units: 180 mm

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
MS9-WP	205	180	8.5	75	97	90	162	72.75	8.3	72.25
MS9-WPB				99						
MS9-WPM				90.5						

Accessories, MS series

Mounting attachments MS9

Mounting bracket MS9-WP

(order code: WP)

- For connecting modules via wall mounting
- In combination with a connecting plate MS9-AG... for individual wall mounting

Material:

Module connector, bracket,
hollow bolt: Die-cast aluminium

Screws: Steel

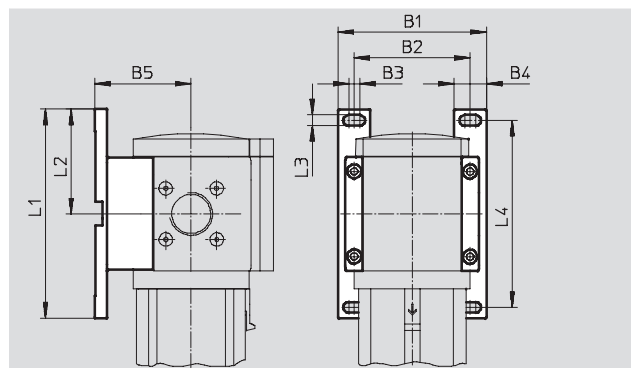
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data													
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	CRC ¹⁾	Weight [g]	Part No.	Type
MS9	115	90	8.5	25	75	162	81.25	8.3	145	2	180	552947	MS9-WP

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Mounting bracket MS9-WPB

(order code: WPB)

- For connecting modules via wall mounting
- In combination with a connecting plate MS9-AG... for individual wall mounting
- Same wall gap for combination with MS12 series using the mounting bracket MS12-WP

Material:

Module connector, bracket,
hollow bolt: Die-cast aluminium

Screws: Steel

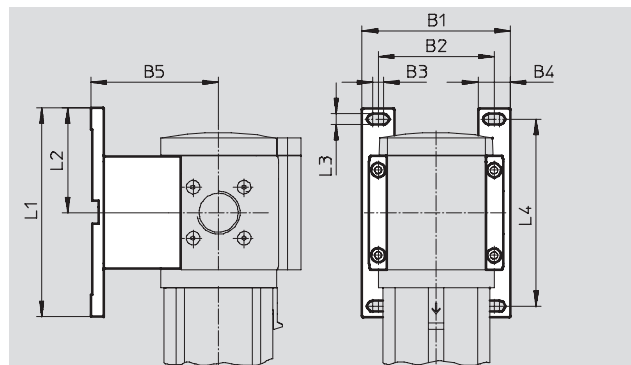
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data													
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	CRC ¹⁾	Weight [g]	Part No.	Type
MS9	115	90	8.5	25	99	162	81.25	8.3	145	2	210	552949	MS9-WPB

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Accessories, MS series

Mounting attachments MS9

FESTO

Mounting bracket MS9-WPM

(order code: WPM)

- For connecting modules via wall mounting
- In combination with a connecting plate MS9-AG... for individual wall mounting

- Speedy attachment and detachment
- Same wall gap for combination with MS6 series using the mounting bracket MS6-WPB

The distance pieces included in the scope of delivery ensure the correct clearance.

Material:

Module connector, bracket, hollow

bolt: Die-cast aluminium

Screws: Steel

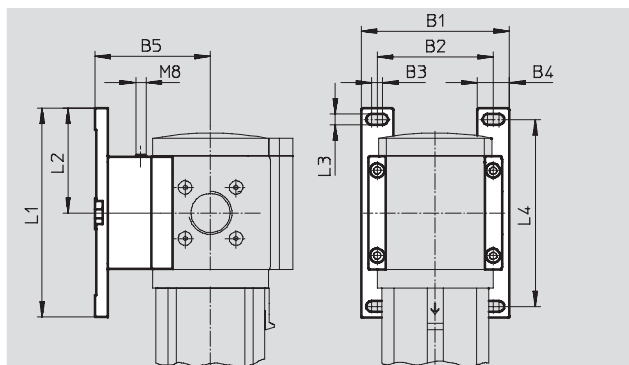
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data													
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	CRC ¹⁾	Weight [g]	Part No.	Type
MS9	115	90	8.5	25	90.5	162	81.25	8.3	145	2	220	552948	MS9-WPM

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Module connector MS9-MV

- For connecting modules

Material:

Module connector, hollow bolt:

Die-cast aluminium

Screws: Steel

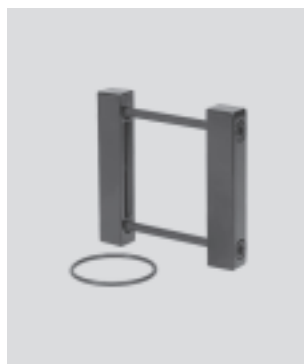
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



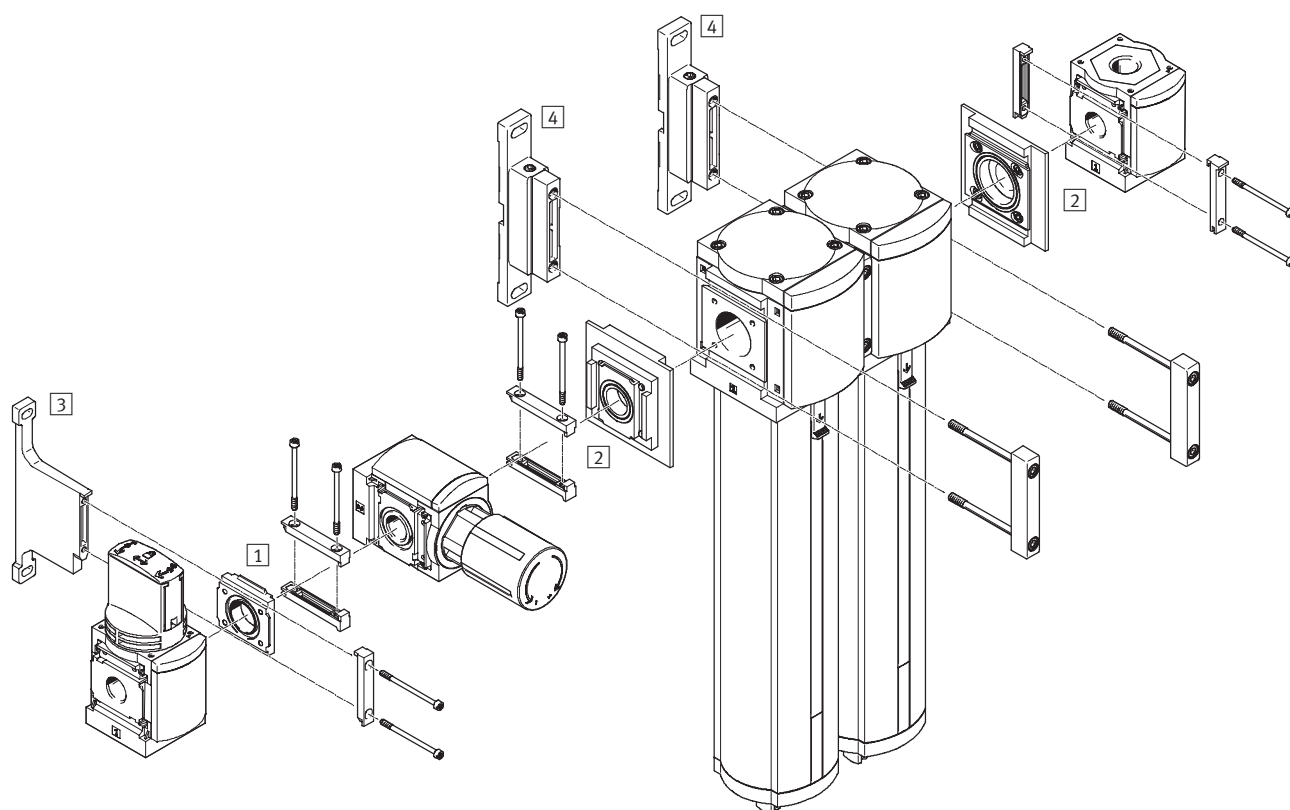
Ordering data				
Size	CRC ¹⁾	Weight [g]	Part No.	Type
MS9	2	110	552950	MS9-MV

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Accessories, MS series

Mounting attachments MS6/MS9



Mounting attachments		→ Page/Internet
1	Module connector MS6-RMV	17
2	Module connector MS6-9-ARMV	20
3	Mounting bracket MS6-WPB	8
4	Mounting bracket MS9-WPM	14

Accessories, MS series

Module connector MS6/MS9

FESTO

Module connector MS6-9-ARMV

- For connecting MS6 and MS9 service units into one unit
- Rotation of service unit at right angles to the axis of connection possible

Material:

Connecting plate, module connector:

Die-cast aluminium

Screws: Steel

Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

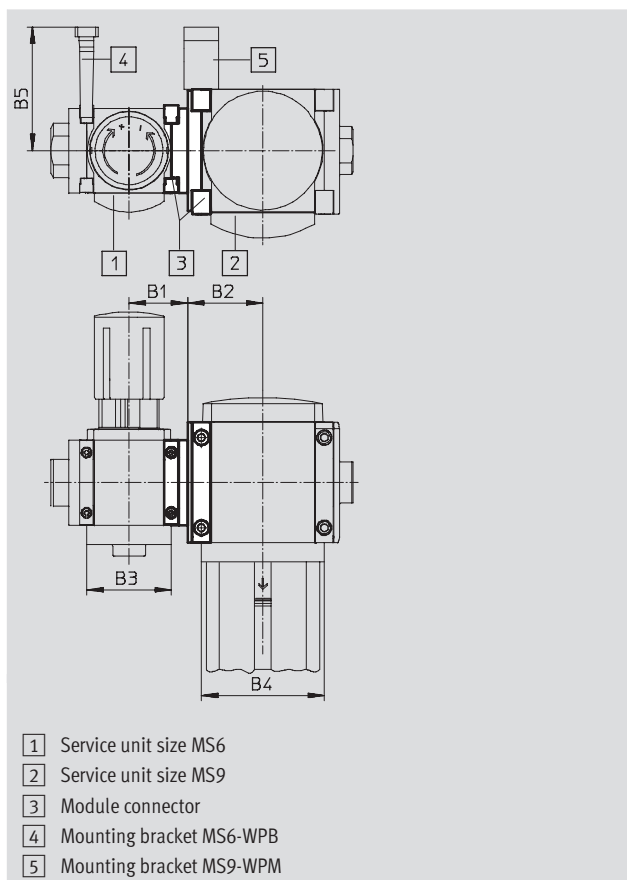
Temperature of medium:

-10 ... +60 °C



Note

The larger mounting bracket must always be used on the module connector. The mounting bracket must be ordered separately.



Dimensions and ordering data

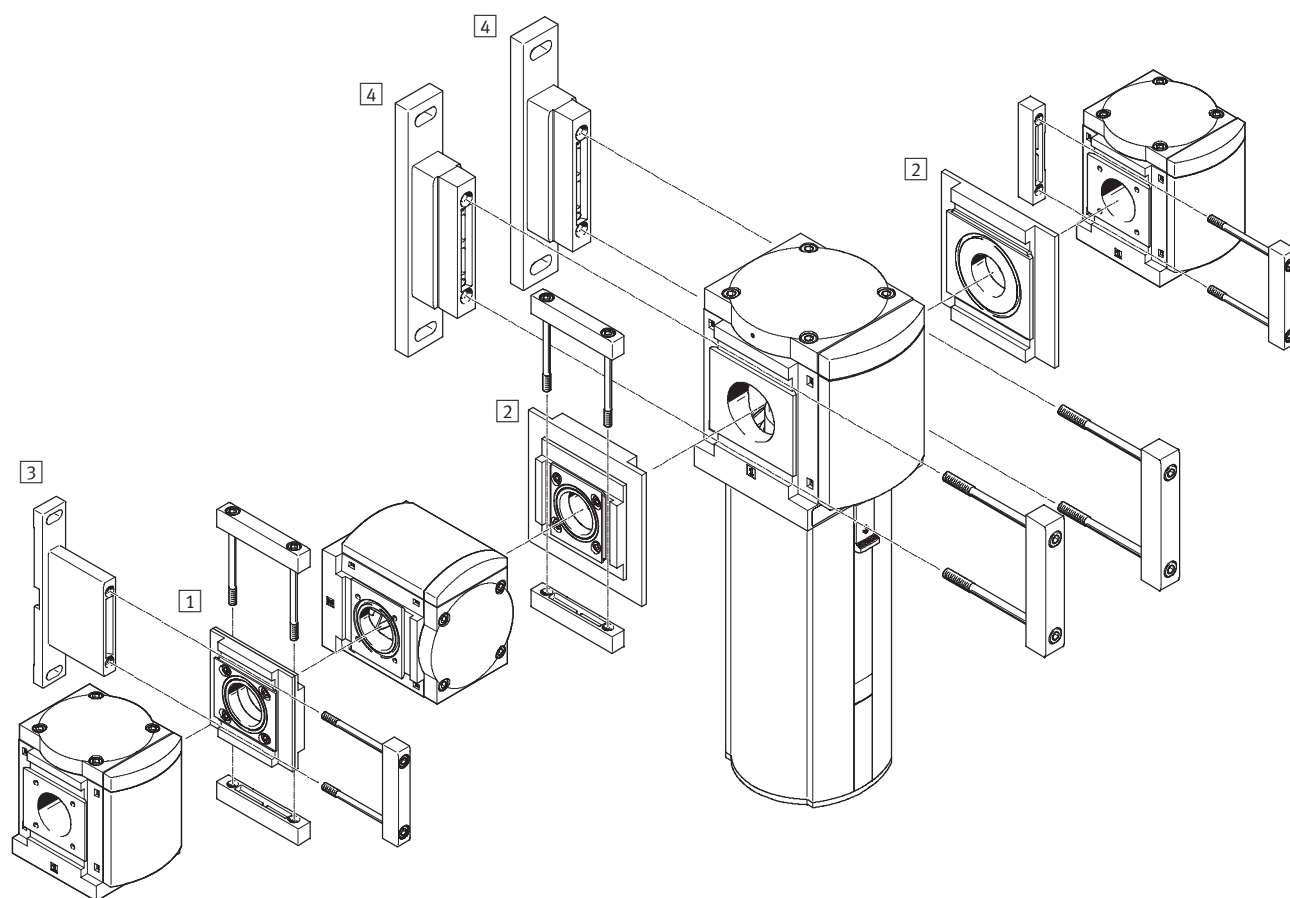
Size	B1	B2	B3	B4	B5	CRC ¹⁾	Weight [g]	Part No.	Type
MS6/9	43	55	62	90	90.5	2	350	552951	MS6-9-ARMV

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Accessories, MS series

Mounting attachments MS9/MS12



Mounting attachments		→ Page/Internet
1	Module connector MS9-RMV	22
2	Module connector MS9-12-ARMV	23
3	Mounting bracket MS9-WPB	13
4	Mounting bracket MS12-WP	15

Accessories, MS series

Mounting attachments MS9/MS12

FESTO

Module connector MS9-RMV

- For connecting service units at right angles to the axis of connection

Material:

Connecting plate, module connector:

Die-cast aluminium

Screws: Steel

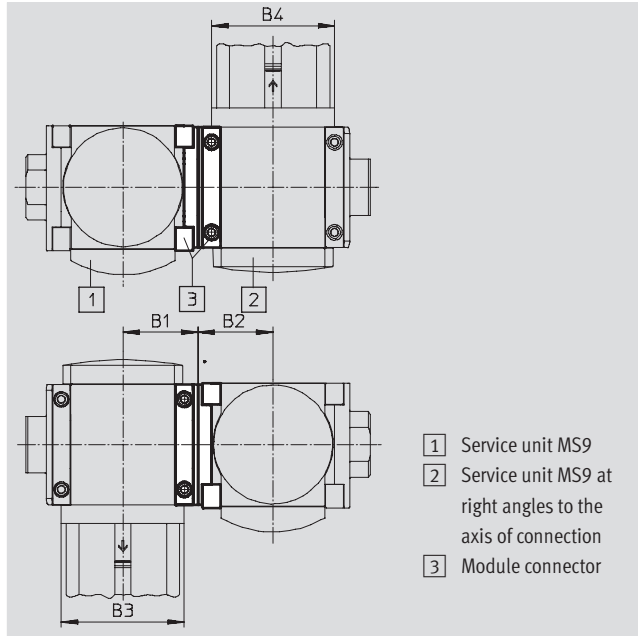
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data								
Size	B1	B2	B3	B4	CRC ¹⁾	Weight [g]	Part No.	Type
MS9	55	55	90	90	2	920	552952	MS9-RMV

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Accessories, MS series

Mounting attachments MS9/MS12

Module connector MS9-12-ARMV

- For connecting MS9 and MS12 service units into one unit
- Rotation of service unit at right angles to the axis of connection possible

Material:

Connecting plate, module connector:

Die-cast aluminium

Screws: Steel

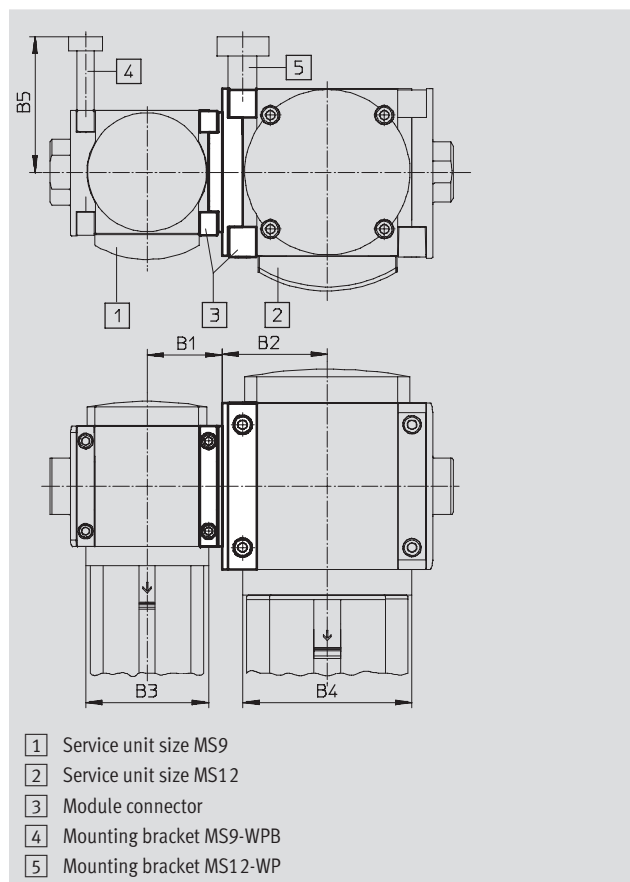
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Note

The larger mounting bracket must always be used on the module connector. The mounting bracket must be ordered separately.

Dimensions and ordering data

Size	B1	B2	B3	B4	B5	CRC ¹⁾	Weight [g]	Part No.	Type
MS9/12	55	77	90	124	99	2	990	552953	MS9-12-ARMV

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

Accessories, MS series

Connecting plates MS9

FESTO

Connecting plate MS9-AQ...

(order code: AQ...)

- Adapter for pneumatic connection

Material:

Connecting plate, hollow bolt:

Die-cast aluminium

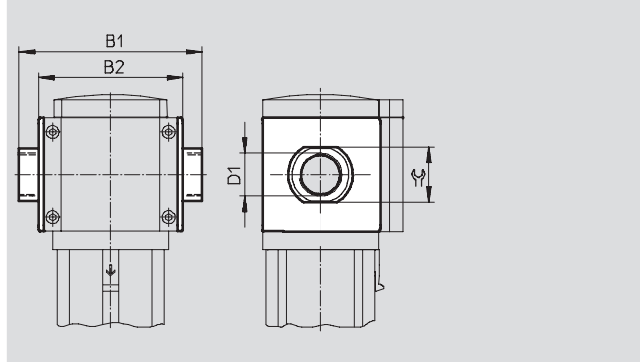
Seals: Nitrile rubber

RoHS-compliant

Free of copper and PTFE

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data								
Size	B1	B2	D1	≅	KBK1)	Weight [g]	Part No.	Type
MS9	132	112	NPT1/2	30	2	300	552959	MS9-AQR
	132	112	NPT3/4	36	2	300	552960	MS9-AQS
	142	112	NPT1	41	2	300	552961	MS9-AQT
	162	112	NPT1 1/4	50	2	400	552962	MS9-AQU
	176	112	NPT1 1/2	55	2	400	552963	MS9-AQV

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. 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.

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