Key features

Service unit components of the MS series

Solutions for every application

With its large product range, highly effective components and a wide choice of functions, the MS series from Festo offers a complete concept for compressed air preparation. It is suitable for simple standard applications as well as application-specific solutions with very high quality requirements. Available as individual components, pre-assembled combinations ex-stock, application-specific combinations or complete turnkey solutions. The five sizes in the MS series achieve maximum flow rates with minimum space requirements.

Freely combinable function modules

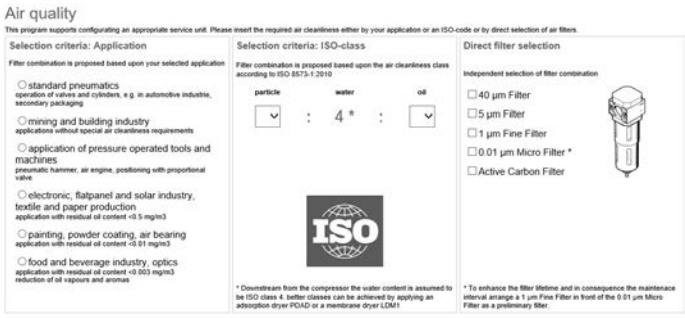
Pressure regulators, on/off and soft-start valves with safety function, filters, pressure and flow sensors, dryers, sensors and lubricators can be assembled into a suitable solution for every task. Thanks to the modular structure the components can be combined as required. The simple connection system saves time because there is no need to disassemble the entire combination when replacing individual modules.
Many of the components are also UL and ATEX certified.

CAD models and configurator

Convenient tools for planning and selecting application-specific individual devices and combinations. The product configurator can be used to configure customised solutions quickly and to transfer the order data without any hassle.

Engineering tools

Selection tool for choosing the right combination of service unit components without oversizing, and with the right air purity class:
→ www.festo.com/engineering/service unit



Integrated sensors

Pressure and flow sensors

- Maximum machine availability thanks to controlled processes
- Reliable air preparation and supply for systems
- Integrated or stand-alone
- Easy to connect with M8/M12 plug

Safety functions

Soft-start/quick exhaust valves MS6-SV/MS9-SV

- Fast and reliable exhausting of systems up to Performance Level e, certified to EN ISO 13849-1
- Integrated soft-start function

Saving energy

Service unit combinations MSE6

- Fully automatic monitoring and regulation of the compressed air supply
- Automatic shut-off of the compressed air in stand-by mode
- Detection and notification of leakages
- Condition monitoring of relevant process data

Intelligent mix of sizes

- Optimum flow rate with a size that is up to 18% smaller
- Excellent energy efficiency
- Cost-optimised combinations – save up to 30%!

Size differences

Size		MS2	MS4	MS6	MS9	MS12
Grid dimension	[mm]	25	40	62	90	124
Connection sizes		M5, QS-6	G1/8, G1/4, G3/8	G1/4, G3/8, G1/2, G3/4	G1/2, G3/4, G1, G1 1/4, G1 1/2	G1, G1 1/4, G1 1/2, G2
Standard nominal flow rate qnN[1)]	[l/min]	350	1800	6500	20000	22000

1) Using pressure regulator MS-LR as an example

Datasheet – Combination 2

Characteristic flow rate values – MS4/6-EM1FR-...-B [l/min]			
Size		MS4-EM1FR-...-B	MS6-EM1FR-...-B
Standard flow rate qn (exhaust) [1]			
Grade of filtration	40 µm	1400	3600
Standard nominal flow rate qnN			
Grade of filtration	5 µm	1500	4750
	40 µm	1700	5300

1) 0.6 → 0 MPa (6 → 0 bar, 87 → 0 psi)

125 l/min must be available for the fully automatic condensate drain to close correctly.

Characteristic flow rate values – MSB4/6 [l/min]					
Condensate drain		Manual		Fully automatic	
Size		MSB4	MSB6	MSB4	MSB6
Standard nominal flow rate qnN (pressure regulation range 0.5 ... 7 bar)					
Grade of filtration	40 µm	1150	5500	–	–
Standard nominal flow rate qnN (pressure regulation range 0.5 ... 12 bar)					
Grade of filtration	5 µm	950	4800	950	4800
	40 µm	1700	5100	1000	5100

125 l/min must be available for the fully automatic condensate drain to close correctly.

Operating and environmental conditions – MS4/6-EM1FR-...-B					
Condensate drain		Manual		Fully automatic	
Size		MS4-EM1FR-...-B	MS6-EM1FR-...-B	MS4-EM1FR-...-B	MS6-EM1FR-...-B
Operating pressure	[MPa]	0.1 ... 1			
	[bar]	1 ... 10			
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium		Compatibility with ester oil not guaranteed			
Ambient temperature	[°C]	–5 ... +50		+5 ... +50	
Temperature of medium	[°C]	–5 ... +50		+5 ... +50	
Storage temperature	[°C]	–5 ... +50			
Corrosion resistance class CRC[1]		1 - Low corrosion stress			

1) More information www.festo.com/x/topic/crc

Operating and environmental conditions – MSB4/6								
Grade of filtration		5				40			
Condensate drain		Manual		Fully automatic		Manual		Fully automatic	
Size		MSB4	MSB6	MSB4	MSB6	MSB4	MSB6	MSB4	MSB6
Operating pressure	[bar]	0.8 ... 14 (1.5 ... 14)[1]	0.8 ... 18	2 ... 12		0.8 ... 14 (1.5 ... 14)[1]	0.8 ... 18	2 ... 12	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4], inert gases							
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)							
Air purity class at the output		Compressed air to ISO 8573-1:2010 [6:4:4]				Compressed air to ISO 8573-1:2010 [7:4:4]			
Ambient temperature	[°C]	–10 ... +60		+5 ... +60		–10 ... +60		+5 ... +60	
Temperature of medium	[°C]	–10 ... +60		+5 ... +60		–10 ... +60		+5 ... +60	
Storage temperature	[°C]	–10 ... +60							
Corrosion resistance class CRC [2]		2 - Moderate corrosion stress							
Food-safe[3]		See supplementary material information							

1) For pressure regulation range 0.5 ... 7 bar

2) More information www.festo.com/x/topic/crc

3) More information: www.festo.com/catalogue/msb → Support/Downloads.

Datasheet – Combination 2

★ Core Range

Ordering data – MSB4/6-EM1FR-...-B

Size	Connection	Condensate drain	Grade of filtration [µm]	Part no.	Type
Pressure indication: G1/8" prepared					
MS4-EM1FR-...-B	G1/4	Manual	5	★ 8130947	MS4-EM1FR-1/4-D6-C-P-M-A8-WPE-B
		Fully automatic	5	★ 8130949	MS4-EM1FR-1/4-D6-C-P-VC-A8-WPE-B
		Manual	40	★ 8130950	MS4-EM1FR-1/4-D6-E-P-M-A8-WPE-B
		Fully automatic	40	★ 8130948	MS4-EM1FR-1/4-D6-E-P-VC-A8-WPE-B
MS6-EM1FR-...-B	G1/2	Manual	5	★ 8130912	MS6-EM1FR-1/2-D6-C-P-M-A8-WPE-B
		Fully automatic	5	★ 8130911	MS6-EM1FR-1/2-D6-C-P-VC-A8-WPE-B
		Manual	40	★ 8130913	MS6-EM1FR-1/2-D6-E-P-M-A8-WPE-B
		Fully automatic	40	★ 8130914	MS6-EM1FR-1/2-D6-E-P-VC-A8-WPE-B
Pressure gauge with outer scale in MPa					
MS4-EM1FR-...-B	G1/4	Manual	5	★ 8098378	MS4-EM1FR-1/4-D6-C-P-M-AG-MPA-WPE-B
		Fully automatic	5	★ 8098377	MS4-EM1FR-1/4-D6-C-P-VC-AG-MPA-WPE-B
		Manual	40	★ 8098374	MS4-EM1FR-1/4-D6-E-P-M-AG-MPA-WPE-B
		Fully automatic	40	★ 8098380	MS4-EM1FR-1/4-D6-E-P-VC-AG-MPA-WPE-B
MS6-EM1FR-...-B	G1/2	Manual	5	★ 8098371	MS6-EM1FR-1/2-D6-C-P-M-AG-MPA-WPE-B
		Fully automatic	5	★ 8098368	MS6-EM1FR-1/2-D6-C-P-VC-AG-MPA-WPE-B
		Manual	40	★ 8098369	MS6-EM1FR-1/2-D6-E-P-M-AG-MPA-WPE-B
		Fully automatic	40	★ 8098364	MS6-EM1FR-1/2-D6-E-P-VC-AG-MPA-WPE-B
Pressure gauge with outer scale in bar and inner scale in psi					
MS4-EM1FR-...-B	G1/4	Manual	5	★ 8098373	MS4-EM1FR-1/4-D6-C-P-M-AG-BAR-WPE-B
		Fully automatic	5	★ 8098372	MS4-EM1FR-1/4-D6-C-P-VC-AG-BAR-WPE-B
		Manual	40	★ 8098376	MS4-EM1FR-1/4-D6-E-P-M-AG-BAR-WPE-B
		Fully automatic	40	★ 8098379	MS4-EM1FR-1/4-D6-E-P-VC-AG-BAR-WPE-B
MS6-EM1FR-...-B	G1/2	Manual	5	★ 8098363	MS6-EM1FR-1/2-D6-C-P-M-AG-BAR-WPE-B
		Fully automatic	5	★ 8098370	MS6-EM1FR-1/2-D6-C-P-VC-AG-BAR-WPE-B
		Manual	40	★ 8098365	MS6-EM1FR-1/2-D6-E-P-M-AG-BAR-WPE-B
		Fully automatic	40	★ 8098367	MS6-EM1FR-1/2-D6-E-P-VC-AG-BAR-WPE-B

Ordering data – MSB4/6

Size	Connection	Condensate drain	Grade of filtration [µm]	Part no.	Type
Pressure regulation range 0.5 ... 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G1/4	Manual	40	★ 8025354	MSB4-1/4:C3:J1-WP
MSB6	G1/2	Manual	40	★ 8025355	MSB6-1/2:C3:J1-WP

Ordering data – MSB4/6

Size	Connection	Condensate drain	Grade of filtration [µm]	Part no.	Type
Pressure regulation range 0.5 ... 7 bar, pressure gauge with outer scale in MPa					
MSB4	G1/4	Manual	40	8042668	MSB4-1/4:C3:J120-WP
MSB6	G1/2	Manual	40	8042672	MSB6-1/2:C3:J120-WP
Pressure regulation range 0.5 ... 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G1/4	Manual	5	542304	MSB4-1/4:C3J3-WP
		Fully automatic	40	542298	MSB4-1/4:C3J2-WP
			5	542310	MSB4-1/4:C3J4-WP
MSB6	G1/2	Manual	5	542280	MSB6-1/2:C3J3-WP
		Fully automatic	40	542274	MSB6-1/2:C3J2-WP
			5	542286	MSB6-1/2:C3J4-WP