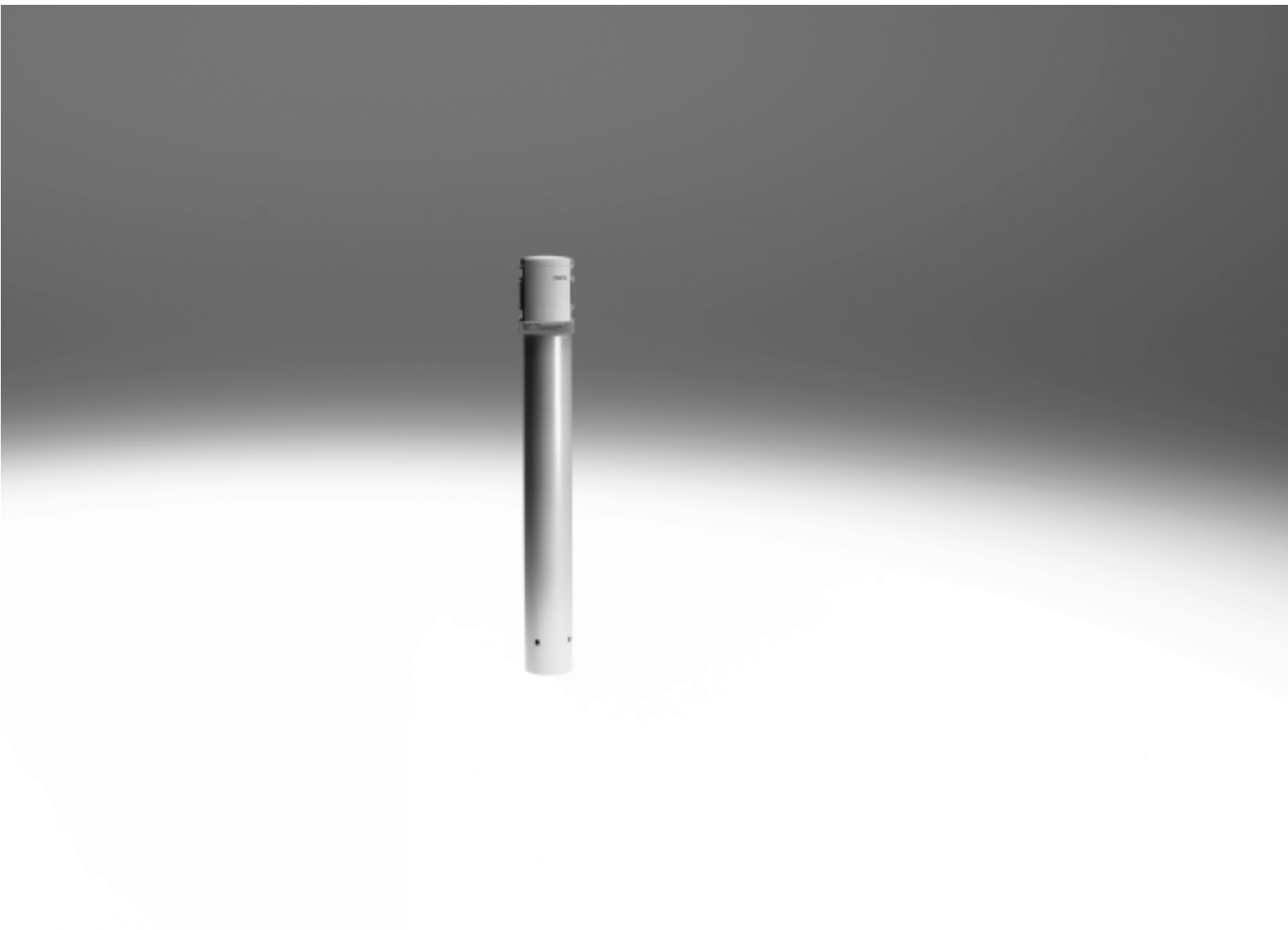
Membrane air dryers MS-LDM1, MS series

FESTO



MS series service unit components

Key features

MS series service unit components

Solutions for every application

With its large product range, highly functional components and a wide choice of services, the MS series from Festo offers a complete concept for compressed air preparation. Suitable for simple standard applications as well as application-specific solutions to the highest quality standards.

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, filter, pressure and flow sensors, dryers, sensors and lubricators. All these allow a suitable solution to be assembled for every task. Their modular structure means that the components are freely combinable. A simple connection system saves time when replacing individual modules without dismantling the entire combination. What's more, many of the components are certified to UL and ATEX.

CAD models and configurator

Convenient aids for planning and selecting application-specific individual devices and combinations. The product configurator lets you configure customised solutions quickly and transfer the order data with no hassle.

Engineering tools

Selection tool for choosing the right service unit without oversizing, and with the right air quality class:
➔ **www.festo.com/engineering/wartungseinheit**

Integrated sensors

Pressure and flow sensors

- Maximum machine availability through controlled processes
- Reliable compressed air preparation and supply for systems
- Integrable 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

Energy savings

Service units MSE6

- Fully automatic monitoring and regulation of 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 up to 18% smaller size
- 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
Port sizes		M5, QS-6	G⅛, G¼, G⅜	G¼, G⅜, G½, G¾	G½, G¾, G1, G1¼, G1½	G1, G1¼, G1½, G2
Standard nominal flow rate qnN[1)]	[l/min]	350	1800	6500	20000	22000

1) Using pressure regulator MS-LR as an example

MS series service unit components

Key features

Note

Information

The next few pages provide a brief overview of the complete product range for the MS series service unit components.

You can find detailed information and all of the technical data in the documentation for the corresponding service unit component.

Accessories such as connection plates or mounting brackets can be ordered either via the configurator or separately.

Structure of a service unit

The order of the individual components within a service unit is relevant for safety and functionality. It is not possible to assemble the service unit components in any order in the flow direction. There are restrictions and rules.

The configurator for service unit MSB is a reliable and convenient way of arranging individual service unit components. This ensures that the applicable rules are complied with. As a result, you get a completely assembled combination with UL or ATEX certification if you need it. When arranging a combination of individually configured and ordered service unit components, the points on the right must be adhered to under all circumstances.

- Regulators MS-LFR/LR/LRP/LRE are only permissible in the flow direction with the same or decreasing pressure regulation range
- Filters MS-LFR/LF/LFM/LFX are only permissible in the flow direction with an increasing grade of filtration
- Lubricators MS-LOE are not permitted in the flow direction upstream of a filter MS-LFR/LFM/LF/LFX, water separator MS-LWS or membrane air dryer MS-LDM1
- A micro filter MS-LFM must be installed upstream of an activated carbon filter MS-LFX or membrane air dryer MS-LDM1 in the flow direction
- A flow sensor SFAM cannot be installed directly downstream of a regulator MS-LFR/LR; a branching module MS-FRM must be positioned between them
- A soft-start/quick exhaust valve MS-SV must be the last service unit component in the flow direction

Total product range for MS series service unit components

Type	Description	Size	Pneumatic connection					
			Push-in connector	Female thread			Connection plate with thread	
				M	G	NPT	G	NPT
Combinations								
Service units MSB-FRC							Technical data ➔ Internet: msb	
	Combinations of filter regulator and lubricator	4	–	–	1/8, 1/4	–	–	–
		6	–	–	1/4, 3/8, 1/2	–	–	–
Service units MSB							Technical data ➔ Internet: msb	
	7 combinations, predefined	4	–	–	1/4	–	–	–
		6	–	–	1/2	–	–	–
	Combinations freely configurable	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
Service units MSE6							Technical data ➔ Internet: mse6	
	Combinations with fieldbus connection for measuring pressure, flow rate and consumption	6	–	–	–	–	1/2	–

MS series service unit components

Key features

Total product range for MS series service unit components								
Type	**Description**	**Size**	**Pneumatic connection**					
			Push-in connector	**Female thread**			**Connection plate with thread**	
				M	**G**	**NPT**	**G**	**NPT**
Individual devices								
Filter regulators MS-LFR							Technical data ➔ Internet: ms-lfr	
	Filter and pressure regulator in a single device, grade of filtration 5 or 40 µm	2	QS-6	M5	–	–	–	–
		4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Filters MS-LF							Technical data ➔ Internet: ms-lf	
	Grade of filtration 5 or 40 µm	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Fine and micro filters MS-LFM							Technical data ➔ Internet: ms-lfm	
	Grade of filtration 0.01 or 1 µm	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Activated carbon filters MS-LFX							Technical data ➔ Internet: ms-lfx	
	For removing liquid and gaseous oil particles	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Water separators MS-LWS							Technical data ➔ Internet: ms-lws	
	Remove condensed water from compressed air, maintenance-free	6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–

MS series service unit components

Key features

Total product range for MS series service unit components								
Type	**Description**	**Size**	**Pneumatic connection**					
			Push-in connector	**Female thread**			**Connection plate with thread**	
				M	**G**	**NPT**	**G**	**NPT**
Individual devices								
Pressure regulators MS-LR							Technical data ➔ Internet: ms-lr	
	For setting the required operating pressure, 4 pressure regulation ranges	2	QS-6	M5	–	–	–	–
		4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Pressure regulators MS-LRB							Technical data ➔ Internet: ms-lrb	
	For creating a regulator manifold with independent pressure regulation ranges. Pressure output is to the front or rear.	4	–	–	1/4	–	1/8, 1/4, 3/8	–
		6	–	–	1/2	–	1/4, 3/8, 1/2, 3/4	–
Precision pressure regulators MS-LRP							Technical data ➔ Internet: ms-lrp	
	For precise setting of the required operating pressure, 4 pressure regulation ranges, pressure hysteresis 0.02 bar	6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
Precision pressure regulators MS-LRPB							Technical data ➔ Internet: ms-lrpb	
	For configuring a regulator manifold with independent pressure regulation ranges. Pressure output is to the front or rear.	6	–	–	1/2	–	1/4, 3/8, 1/2, 3/4	–
Electrical pressure regulators MS-LRE							Technical data ➔ Internet: ms-lre	
	Electrically adjustable pressure regulator, 4 pressure regulation ranges	6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
Lubricators MS-LOE							Technical data ➔ Internet: ms-loe	
	Add a precisely adjustable amount of oil to the compressed air. The oil mist component is proportional to the compressed air flow rate.	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–

MS series service unit components

Key features

Total product range for MS series service unit components								
Type	**Description**	**Size**	**Pneumatic connection**					
			Push-in connector	**Female thread**			**Connection plate with thread**	
				M	**G**	**NPT**	**G**	**NPT**
Individual devices								
On/off valves MS-EM							Technical data ➔ Internet: ms-em	
	Manually operated on/off valve for pressurising and exhausting pneumatic installations.	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
On/off valves MS-EE							Technical data ➔ Internet: ms-ee	
	Solenoid actuated on/off valve for pressurising and exhausting pneumatic installations.	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Soft-start valves MS-DL							Technical data ➔ Internet: ms-dl	
	Pneumatically actuated soft-start valve for slowly pressurising and exhausting pneumatic installations.	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Soft-start valves MS-DE							Technical data ➔ Internet: ms-de	
	Solenoid actuated soft-start valve for slowly pressurising and exhausting pneumatic installations.	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Soft-start/quick exhaust valves MS-SV							Technical data ➔ Internet: ms-sv	
	For building up pressure gradually and reducing pressure quickly and safely in pneumatic piping systems. Up to category 1, PL c.	6	–	–	1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
	Up to category 3, PL d. Up to category 4, PL e in the case of optional extension.	6	–	–	1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
	Up to category 4, PL e.	6	–	–	1/2	–	1/4, 3/8, 1/2, 3/4	–

MS series service unit components

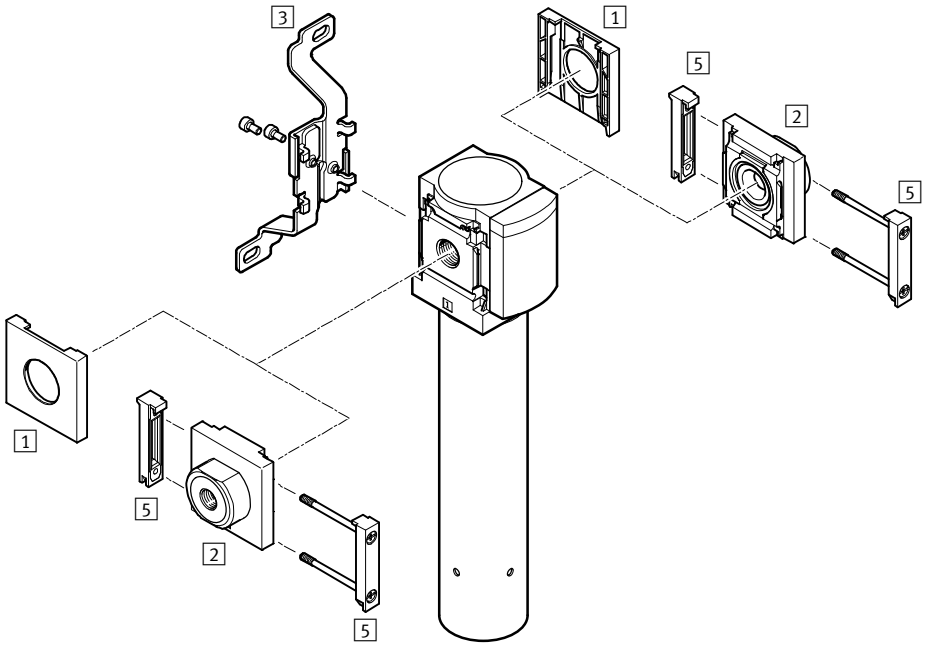
Key features

Total product range for MS series service unit components								
Type	**Description**	**Size**	**Pneumatic connection**					
			Push-in connector	**Female thread**			**Connection plate with thread**	
				M	**G**	**NPT**	**G**	**NPT**
Individual devices								
Membrane air dryers MS-LDM1							Technical data ➔ Internet: ms-ldm	
	Wear-free membrane dryer with internal air consumption	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	1/8, 1/4, 3/8
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4
Branching modules MS-FRM							Technical data ➔ Internet: ms-frm	
	Compressed air distributor with 4 connections	4	–	–	1/8, 1/4	–	1/8, 1/4, 3/8	–
		6	–	–	1/4, 3/8, 1/2	–	1/4, 3/8, 1/2, 3/4	–
		9	–	–	3/4, 1	3/4, 1	1/2, 3/4, 1, 1 1/4, 1 1/2	1/2, 3/4, 1, 1 1/4, 1 1/2
		12	–	–	–	–	1, 1 1/4, 1 1/2, 2	–
Distributor blocks MS-FRM-FRZ							Technical data ➔ Internet: ms-frm-frz	
	Compressed air distributor with 4 connections and half the grid dimension width	4	–	–	–	–	–	–
		6	–	–	–	–	–	–
Flow sensors SFAM							Technical data ➔ Internet: sfam	
	For absolute flow rate information and accumulated air consumption measurement	6	–	–	–	–	1/2	1/2
		9	–	–	–	–	1, 1 1/2	1, 1 1/2

Membrane air dryers MS4/MS6-LDM1, MS series

Peripherals overview

Membrane air dryers MS4/MS6-LDM1



- Note

Additional accessories:

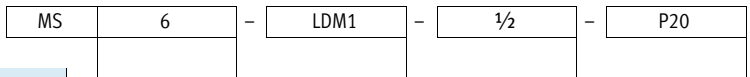
– Module connector for combination with sizes MS4/MS6 or size MS9 ➔ Internet: amv, rmv, armv
– Adapter plate for mounting on profiles ➔ Internet: ipm-80, ipm-40-80, ipm-80-80

Mounting attachments and accessories

		Individual unit		Combination		➔ Page/Internet
		without connecting plate	with connecting plate	without connecting plate	with connecting plate	
1	Cover cap MS4/6-END	■	–	■	–	ms4-end, ms6-end
2	Connecting plate-SET MS4/6-AG...	–	■	–	■	ms4-ag, ms6-ag
	Connecting plate-SET MS4/6-AQ...	–	■	–	■	ms4-aq, ms6-aq
3	Mounting bracket MS4/6-WB	■	■	–	–	ms4-wb, ms6-wb
5	Module connector MS4/6-MV	–	■	■	■	ms4-mv, ms6-mv
–	Mounting bracket MS4-WBM	■	■	–	–	ms4-wbm
–	Mounting bracket MS4/6-WP/WPB/WPE/WPM	–	■	■	■	ms4-wp, ms6-wp

Membrane air dryers MS4/MS6-LDM1, MS series

Type codes



Series	
MS	Standard service unit

Size	
4	Grid dimension 40 mm
6	Grid dimension 62 mm

Service function	
LDM1	Membrane air dryer

Pneumatic connection	
MS4	
¼	Female thread G¼
MS6	
¼	Female thread G¼
½	Female thread G½

Flow cartridge	
MS4	
P10	Cartridge P10
MS6	
P20	Cartridge P20
P40	Cartridge P40

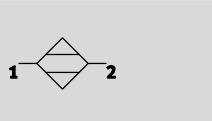
Further variants can be ordered using the modular system ➔ 15

- Pneumatic connection
- Flow cartridge
- Ducted purging air
- Type of mounting
- EU certification
- UL certification
- Flow direction

Membrane air dryers MS4/MS6-LDM1, MS series

Technical data

Function



Flow rate
50 ... 400 l/min

Temperature range
+2 ... +50 °C

Operating pressure
3 ... 12.5 bar

Pressure dew point reduction:
20 K

- Optimum final dryer with excellent operational reliability
- Suitable for use as an individual unit or for integration in existing service unit combinations
- Flow rate-dependent dew point reduction
- Wear-free function requiring no external energy
- The composition of the compressed air remains almost unchanged due to the drying process
- 15% purge air flow rate
- Optional purge ring for ducting of purging air
- Optional device variant EX4 for use in potentially explosive areas in zones 1, 2, 21 and 22

Typical areas of application:
- Drying, cleaning of precision parts
- Measuring technology
- Rinsing of precision glass scales
- Painting systems
- Paper and packaging machines

Note

Prefiltration of the compressed air using a micro filter MS-LFM-A, grade of filtration 0.01 µm (residual particles < 0.1 µm, residual oil content < 0.1 mg/m^3) is vital for flawless functioning of the unit.

General technical data			
Size		MS4	MS6
Pneumatic connection 1, 2			
	Female thread	G1/8 or G1/4	G1/4, G3/8 or G1/2
	Connecting plate AG...	G1/8, G1/4 or G3/8	G1/4, G3/8, G1/2 or G3/4
	Connecting plate AQ...	NPT1/8, NPT1/4 or NPT3/8	NPT1/4, NPT3/8, NPT1/2 or NPT3/4
Design		Membrane dryer with internal air consumption	
Type of mounting		Via accessories	
		In-line installation	
Assembly position		Vertical ±5°	
Air purity class at the output		Compressed air in accordance with ISO 8573-1:2010 [1:3:2]	

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard flow rate qn[1] [l/min]					
Size	MS4		MS6		
	Cartridge P05	Cartridge P10	Cartridge P20	Cartridge P30	Cartridge P40
Input $q_{n\ In}$	59	118	235	353	471
Output $q_{n\ Out}$	50	100	200	300	400
Purge air $q_{n\ Purge}$	8.8	17.6	35.3	52.9	70.6

1) Measured at p_1 = 6.9 bar, $\vartheta_{pd\ In}$ = 25 °C, $\vartheta_{pd\ Out}$ = 5 °C ± 1.5 °C ($\vartheta_{pA\ Out}$ = −21.5 °C ± 1.2 °C), ϑ_{amb} = 25 °C

Membrane air dryers MS4/MS6-LDM1, MS series

Technical data

Operating and environmental conditions		
Operating pressure	[bar]	3 … 12.5 (3 … 10)[1]
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [1:4:2]
Note on operating/pilot medium		Operation with lubricated medium not possible
Pressure dew point reduction	[K]	20
Ambient temperature	[°C]	+2 … +50
Temperature of medium	[°C]	+2 … +50
Storage temperature	[°C]	−20 … +60
Corrosion resistance class CRC[2]		2
Food-safe[3]		See supplementary material information
UL certification[3]		cULus recognized (OL)

1) Value in brackets applies to MS4/MS6-LDM1 with UL certification.
2) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
3) Additional information www.festo.com/sp ➔ Certificates.

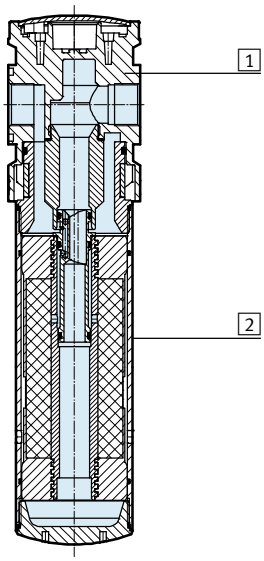
ATEX	
EU certification	EX4
ATEX category gas	II 2G
Ex-ignition protection type gas	Ex h IIC T6 Gb X
ATEX category dust	II 2D
EX-ignition protection type dust	Ex h IIIC T60°C Db X
ATEX ambient temperature	+2 °C ≤ Ta ≤ +50 °C
CE mark (see declaration of conformity)[1]	To EU Explosion Protection Directive (ATEX)

1) Additional information www.festo.com/sp ➔ Certificates.

Weights [g]					
Size	MS4		MS6		
	Cartridge P05	Cartridge P10	Cartridge P20	Cartridge P30	Cartridge P40
Membrane air dryer	420	530	1,050	1,200	1,300

Materials

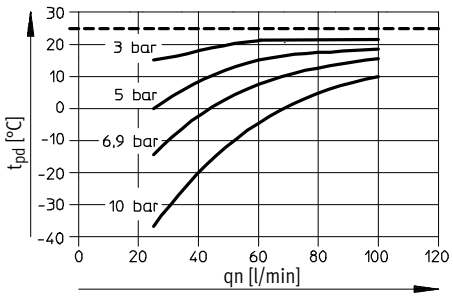
Sectional view



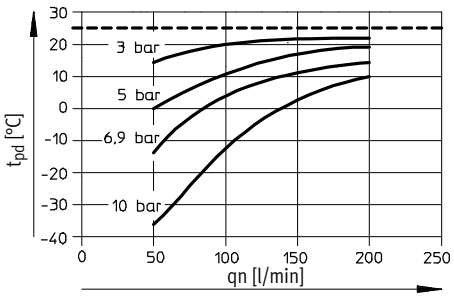
Membrane air dryer		
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
–	Seals	NBR
Note on materials		RoHS-compliant

Pressure dew point t_{pd} (output) as a function of the standard flow rate at output q_n 1)

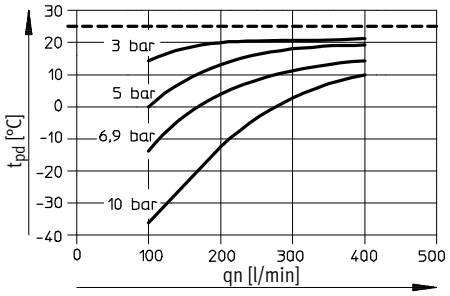
MS4-LDM1-...-P05



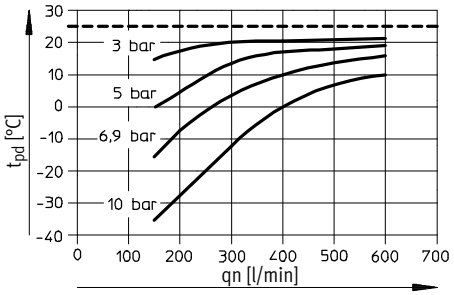
MS4-LDM1-...-P10



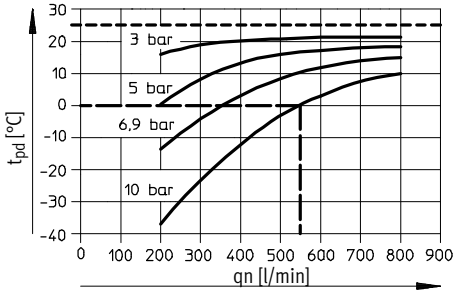
MS6-LDM1-...-P20



MS6-LDM1-...-P30



MS6-LDM1-...-P40

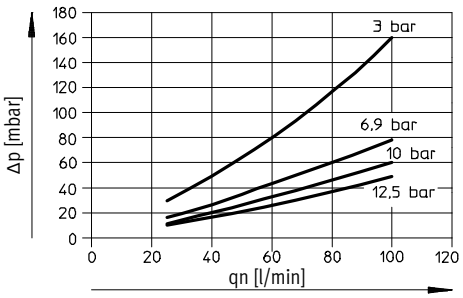


1) Measured at pressure dew point t_{pd} (supply) = 25 °C.

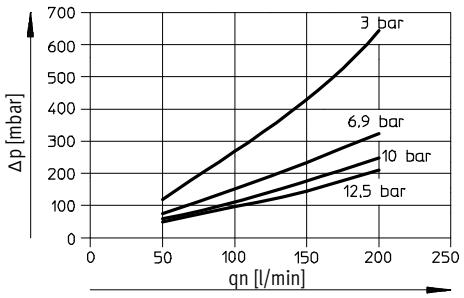
Example MS6-LDM1-...-P40 with 10 bar operating pressure: the pressure dew point reduction at a nominal flow rate of q_n = 550 l/min is 25 K.

Differential pressure Δp as a function of the standard flow rate at output qn

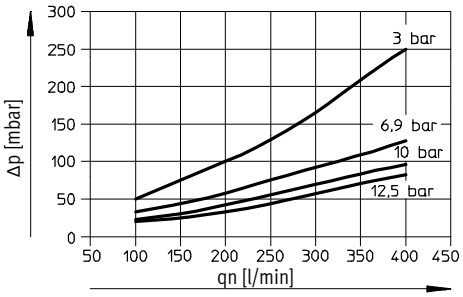
MS4-LDM1-...-P05



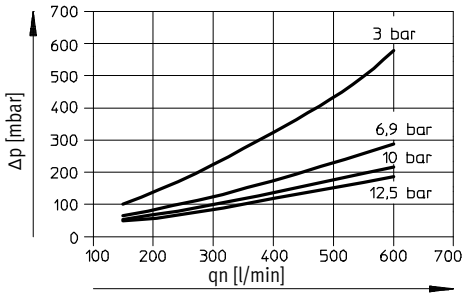
MS4-LDM1-...-P10



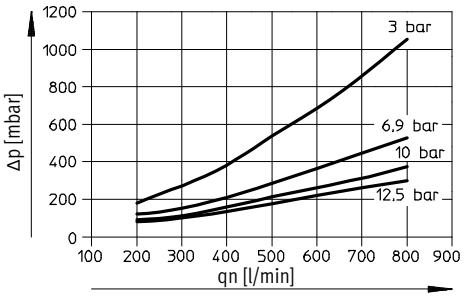
MS6-LDM1-...-P20



MS6-LDM1-...-P30



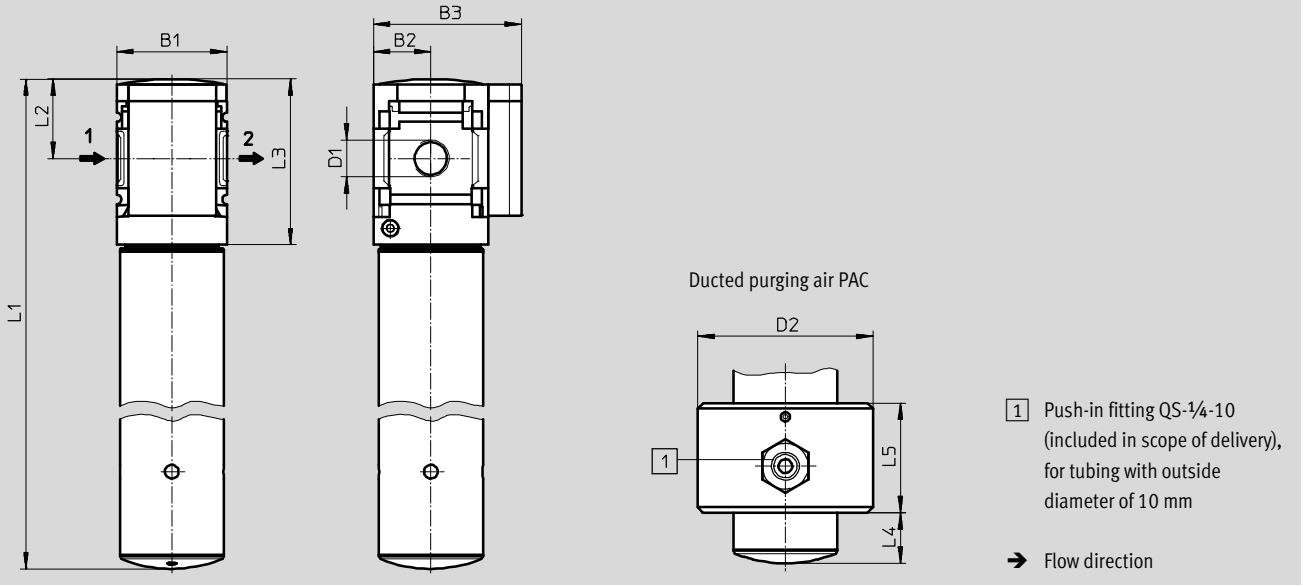
MS6-LDM1-...-P40



Membrane air dryers MS4/MS6-LDM1, MS series

Technical data

Dimensions Download CAD data ➔ **www.festo.com**



Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS4-LDM1-⅛-P05	40	21	54	G⅛	64	245	29	60	18	40
MS4-LDM1-⅛-P10						345				
MS4-LDM1-¼-P05	40	21	54	G¼	64	245	29	60	18	40
MS4-LDM1-¼-P10						345				
MS6-LDM1-¼-P20	62	31	76	G¼	80	345	42	87	34	40
MS6-LDM1-¼-P30						415				
MS6-LDM1-¼-P40						475				
MS6-LDM1-⅜-P20	62	31	76	G⅜	80	345	42	87	34	40
MS6-LDM1-⅜-P30						415				
MS6-LDM1-⅜-P40						475				
MS6-LDM1-½-P20	62	31	76	G½	80	345	42	87	34	40
MS6-LDM1-½-P30						415				
MS6-LDM1-½-P40						475				

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

Size	Flow cartridge	Connection	Part No.	Type
MS4	P10	G¼	**543632**	**MS4-LDM1-¼-P10**
MS6	P20	G¼	**543640**	**MS6-LDM1-¼-P20**
		G½	**543644**	**MS6-LDM1-½-P20**
	P40	G½	**543650**	**MS6-LDM1-½-P40**

Membrane air dryers MS4/MS6-LDM1, MS series

Ordering data – Modular products

Ordering table

	Grid dimension [mm]	40	62	Condi-tions	Code		Enter code
M	Module No.	**543628**	**543638**				
	Series	Standard			**MS**		MS
	Size	4	6		**...**		
	Function	Membrane dryer			**-LDM1**		-LDM1
	Pneumatic connection	Female thread G1/8	–	1	**-1/8**		
		Female thread G1/4	Female thread G1/4	1	**-1/4**		
		–	Female thread G3/8	1	**-3/8**		
		–	Female thread G1/2	1	**-1/2**		
		Connecting plate G1/8	–		**-AGA**		
		Connecting plate G1/4	Connecting plate G1/4		**-AGB**		
		Connecting plate G3/8	Connecting plate G3/8		**-AGC**		
		–	Connecting plate G1/2		**-AGD**		
		–	Connecting plate G3/4		**-AGE**		
		Connecting plate NPT1/8	–	1	**-AQK**		
		Connecting plate NPT1/4	Connecting plate NPT1/4	1	**-AQN**		
		Connecting plate NPT3/8	Connecting plate NPT3/8	1	**-AQP**		
		–	Connecting plate NPT1/2	1	**-AQR**		
		–	Connecting plate NPT3/4	1	**-AQS**		
	Flow cartridge	50 l/min	–		**-P05**		
		100 l/min	–		**-P10**		
		–	200 l/min		**-P20**		
		–	300 l/min		**-P30**		
		–	400 l/min		**-P40**		
O	Purging air	Ducted purging air		1	**-PAC**		
	Type of mounting	Mounting bracket standard design		2	**-WP**		
		Mounting bracket for attaching the service units		1 2	**-WPM**		
		Mounting bracket centrally at rear (wall mounting top and bottom), connecting plates not required			**-WB**		
		Mounting bracket centrally at rear (wall mounting top), connecting plates not required	–		**-WBM**		
	EU certification	II 2GD to EU Explosion Protection Directive (ATEX)			**-EX4**		
	UL certification	cULus, ordinary location for Canada and USA			**-UL1**		
	Flow direction	Flow direction from right to left			**-Z**		

1 **1/8, 1/4, 3/8, 1/2, AQK, AQN, AQP, AQR, AQS, PAC, WPM**
Not with EU certification EX4

2 **WP, WPM** Only with connecting plate AGA, AGB, AGC, AGD, AGE, AQK, AQN, AQP, AQR or AQS

M Mandatory data
O Options

Transfer order code

	MS		–	**LDM1**	–		–		–		–		–		–		–		–	