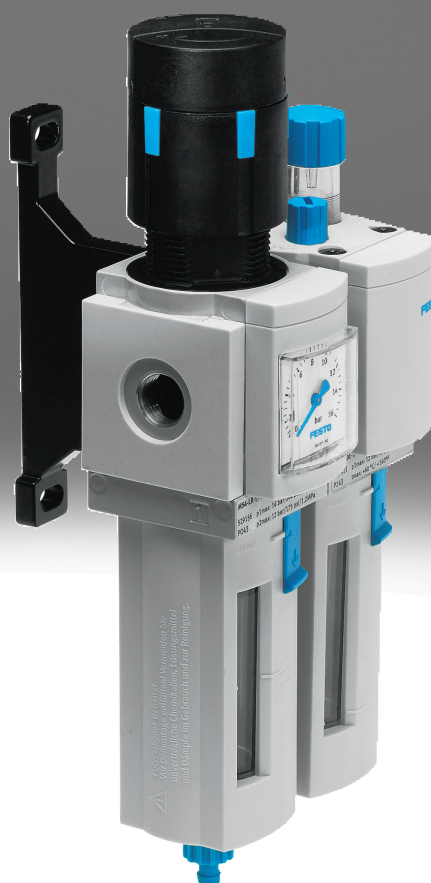


Service unit combination MSB4-FRC

FESTO



Characteristics

At a glance

Combination of filter regulator and lubricator.

- Grid dimension: 40 mm
- High flow rate and extremely efficient in removing contaminants
- Good regulation characteristics with minimal pressure hysteresis
- Setting values are secured by locking the rotary knob
- Lockable rotary knob
- Two pressure regulation ranges: 0.5...7 bar and 0.5...12 bar
- Optionally with manual or fully automatic condensate drain
- Choice of filter inserts 5 µm or 40 µm
- Available with flow in the opposite direction.
- Product complies with ISO 1179-1 and ISO 228-1

Engineering tools

Link [engineering tools](#)



A selection tool for sizing a suitable service unit component and the correct air purity class can be found under Engineering Tools.

Diagrams

Link [msb4-frc](#)



Type code

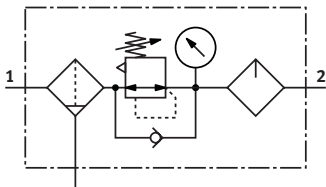
001	Series	
MSB	Service unit component MS series	
002	Size	
4	Grid dimension 40 mm	
003	Pneumatic connection	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
004	Function	
FRC	Service unit combination	
005	Flow direction	
	Flow direction from left to right	
Z	Flow direction from right to left	

006	Service unit component equipment	
J1	Filter regulator, 0.5 ... 12 bar, 40 µm, plastic bowl with plastic bowl guard, manual condensate drain, lockable rotary knob	
J2	Filter regulator, 0.5 ... 12 bar, 40 µm, plastic bowl with plastic bowl guard, fully automatic condensate drain, lockable rotary knob	
J3	Filter regulator, 0.5 ... 12 bar, 5 µm, plastic bowl with plastic bowl guard, manual condensate drain, lockable rotary knob	
J5	Filter regulator, 0.3 ... 7 bar, 40 µm, plastic bowl with plastic bowl guard, manual condensate drain, lockable rotary knob	
J120	Filter regulator, lockable, 0.3 ... 7 bar, 40 µm, plastic bowl with plastic bowl guard, manual condensate drain, MPa, lockable rotary knob	
M1	Lubricator, plastic bowl with plastic bowl guard	

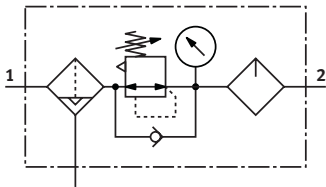
Datasheet

General technical data		
Grade of filtration	5	40
Pneumatic connection, port 1	G1/4	G1/8, G1/4
Pneumatic connection, port 2	G1/4	G1/8, G1/4
Design	Filter regulator with pressure gauge, Proportional standard mist lubricator	
Controller function	Output pressure constant, With primary pressure compensation, With secondary exhausting, With return flow function	
Type of mounting	With accessories	
Mounting position	Vertical +/-5°	
Air purity class at output	Compressed air to ISO 8573-1:2010 [6:4:-]	Compressed air to ISO 8573-1:2010 [7:4:-]
Bowl guard	Plastic bowl guard	
Condensate drain	Manual, rotating	Fully automatic Manual, rotating
Actuator lock	Rotary knob with detent can be closed with accessories	
Pressure regulation range	0.5 ... 12 bar	0.3 ... 12 bar
Pressure gauge (ANALOG) or Pressure display (DIGITAL)	With pressure gauge	

Function (with manual condensate drain)



Function (with fully automatic condensate drain)



Standard nominal flow rate (measured at p1 = 10 bar, p2 = 6 bar and Δp = 1 bar)					
Pneumatic connection, port 1	G1/8	G1/4			
Grade of filtration	40 µm	5 µm	40 µm		
Pressure regulation range	0.5 ... 12 bar			0.3 ... 7 bar	0.5 ... 7 bar
Standard nominal flow rate (standardised to DIN 1343) ¹⁾	850 l/min	900 l/min	1,400 l/min		

1) 125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet

Operating and environmental conditions

Condensate drain	Fully automatic	Manual, rotating		
Pressure regulation range	0.5 ... 12 bar		0.3 ... 7 bar	0.5 ... 7 bar
Grade of filtration	40 µm	5 µm	40 µm	
Operating pressure	1.5 ... 12 bar		1.5 ... 14 bar	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:-] Inert gas		Compressed air to ISO 8573-1:2010 [-:4:-] Inert gas	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gas
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)			
Ambient temperature	-10 ... 60°C			
Media temperature	-10 ... 60°C			
Storage temperature	-10 ... 60°C			
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress			
Suitable for use with food ²⁾	—			See supplementary material information

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

2) Further information: www.festo.com/catalogue/msb4-frc → Support/Downloads.

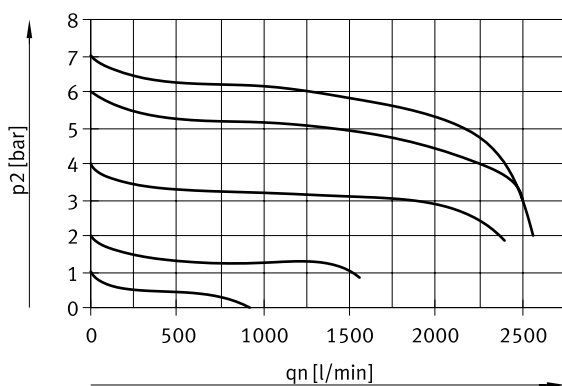
Weight

Product weight	500 g
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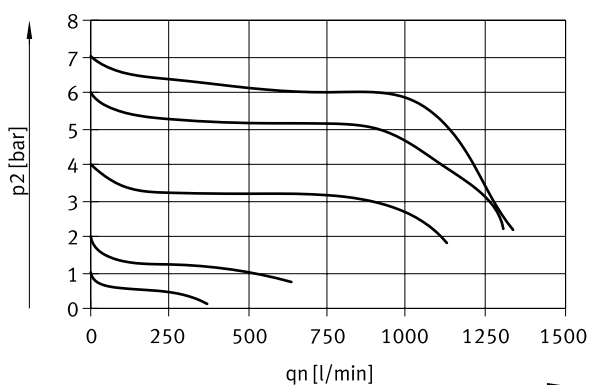
Materials

Material housing	Die-cast aluminium
Material bowl	Makrolon®
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Standard flow rate q_n as a function of output pressure p_2 (MSB4-1/8; pressure regulation range 0.3 ... 7 bar; grade of filtration 40 µm)

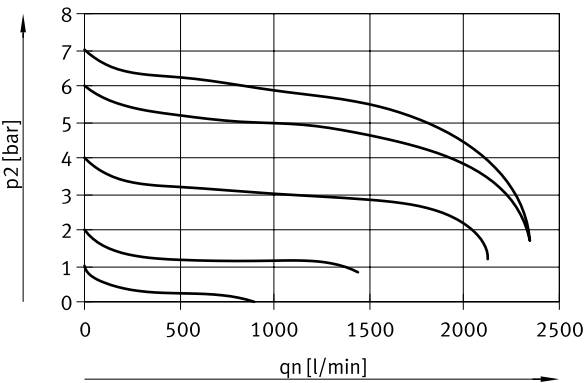


Standard flow rate q_n as a function of output pressure p_2 (MSB4-1/8; pressure regulation range 0.5 ... 12 bar; grade of filtration 40 µm)



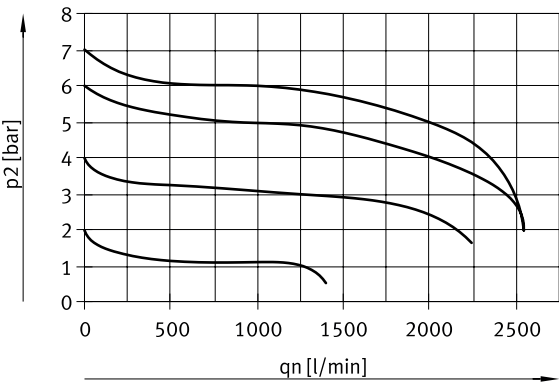
Datasheet

Standard flow rate q_n as a function of output pressure p_2 (MSB4-1/4; pressure regulation range 0.5 ... 12 bar; grade of filtration 5 μm)



Input pressure $p_1 = 10$ bar

Standard flow rate q_n as a function of output pressure p_2 (MSB4-1/4; pressure regulation range 0.5 ... 12 bar; grade of filtration 40 μm)

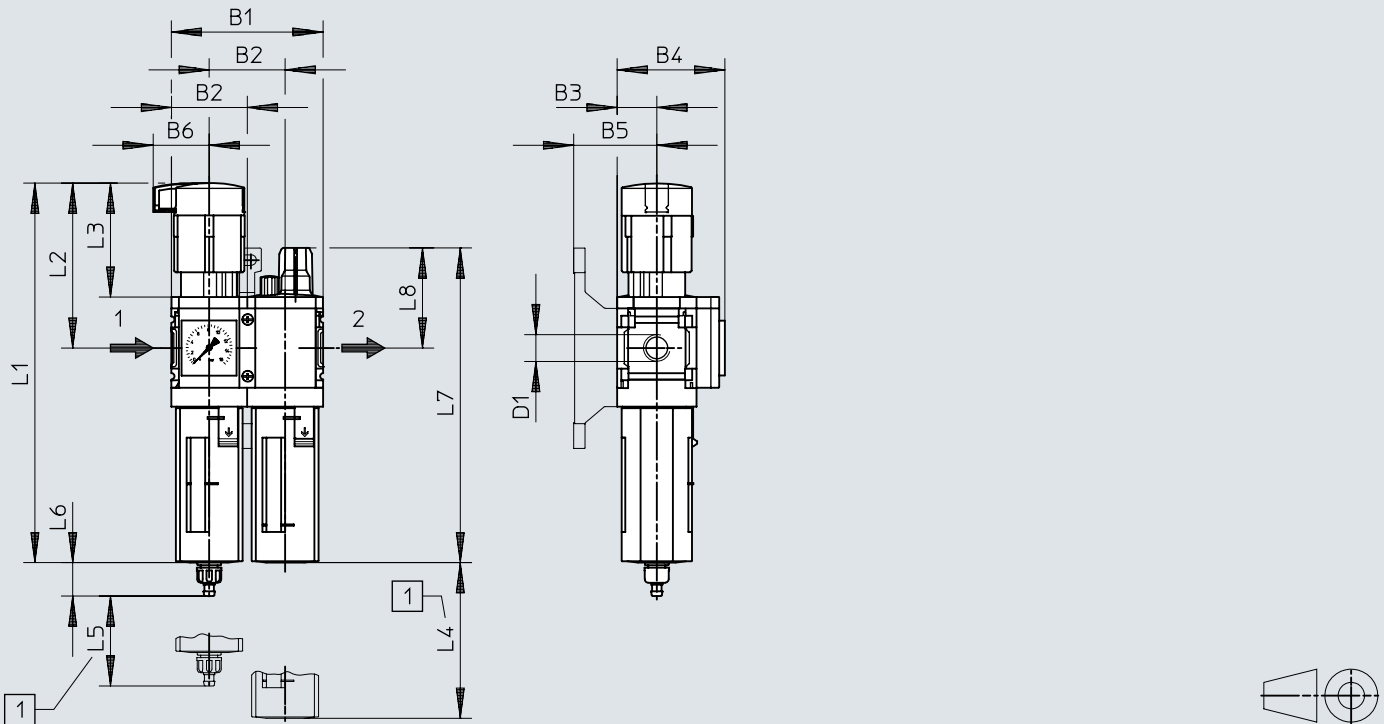


Input pressure $p_1 = 10$ bar

Dimensions

Dimensions – With pressure gauge, display unit [bar]

Download CAD data www.festo.com



[1] Installation dimension

	B1	B2	B3	B4	B5	B6	D1	L1	L2	L3	L4	L5	L6		L7	L8
													1)	2)		
MSB4-1/8	80,4	40,2	21	57	44	29,7	G1/8	201	87	60	80	25	17,7	20,4	167	53
MSB4-1/4							G1/4									

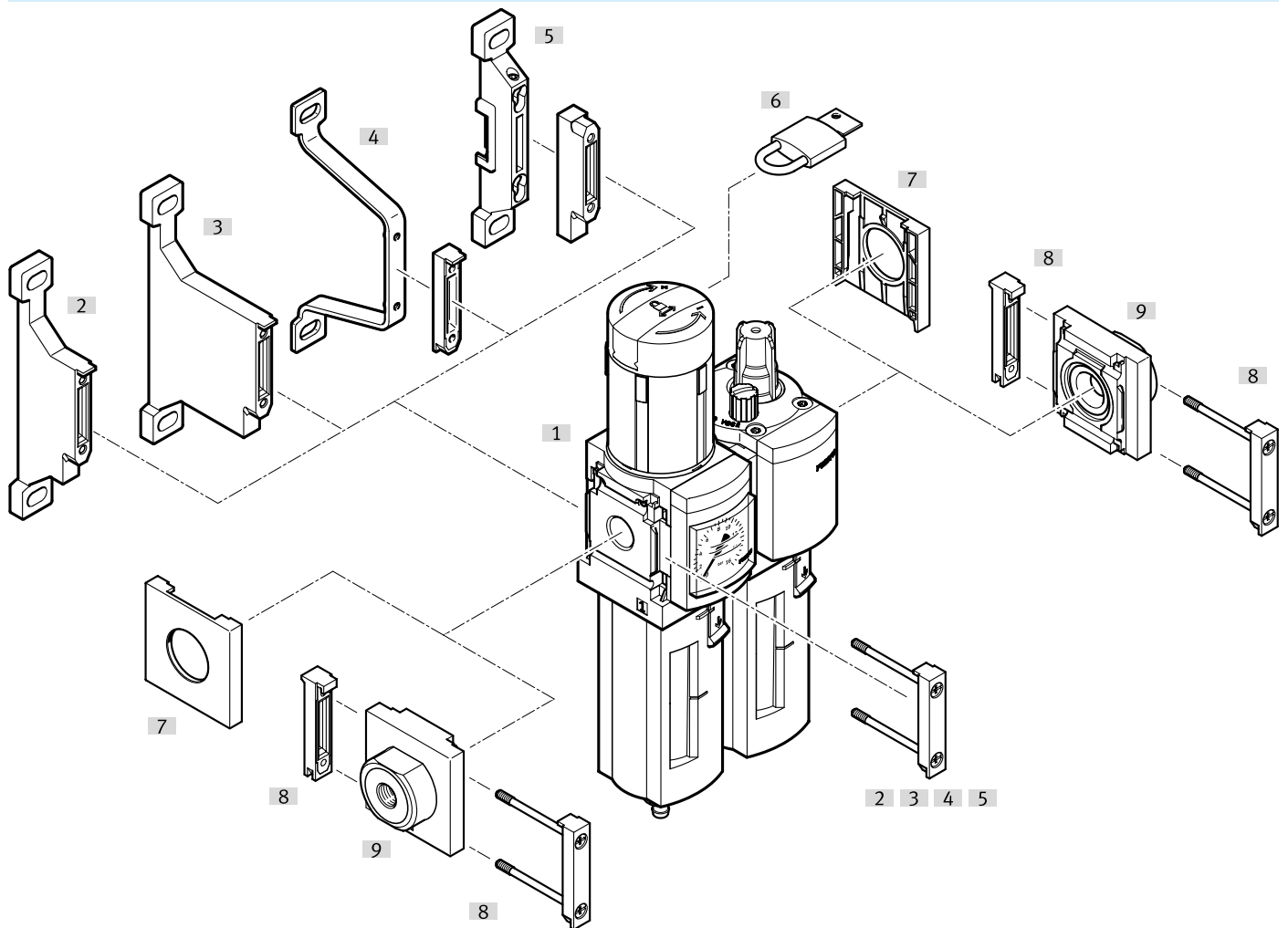
- 1) Manual condensate drain
- 2) Fully automatic condensate drain

Ordering data

Ordering data						
	Pneumatic connection, port 1	Condensate drain	Grade of filtration	Pressure regulation range	Part no.	Type
	G1/8	Manual, rotating	40 µm	0.5 ... 12 bar	531133	MSB4-1/8-FRC5:J1M1
	G1/4	Fully automatic			531119	MSB4-1/4-FRC6:J2M1
		Manual, rotating	5 µm		531121	MSB4-1/4-FRC7:J3M1
			40 µm	0.3 ... 7 bar	531109	MSB4-1/4-FRC1:J5M1
				0.5 ... 7 bar	8042669	MSB4-1/4-FRC13:J120M1
				0.5 ... 12 bar	531117	MSB4-1/4-FRC5:J1M1
					531118	MSB4-1/4-FRC5:J1M1-Z

Peripherals

Peripherals overview



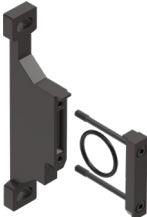
Accessories		→ Link
Type/order code	Description	
[1] Service unit combination MSB4-FRC		msb4-frc
[2] Mounting bracket MS4-WP		10
[3] Mounting bracket MS4-WPB		10
[4] Mounting bracket MS4-WPE		10
[5] Mounting bracket MS4-WPM		10
[6] Padlock LRVS-D		11
[7] Cover cap MS4-END		10
[8] Module connector MS4-MV1		10
[9] Connecting plate SET MS4-AG...		10

Accessories

Cover cap MS4-END					
	Material housing	LABS (PWIS) conformity	Part no.	Type	
	Reinforced PA	VDMA24364-B1/B2-L	538779	MS4-END	

Connecting plate-SET MS4-AG...						
	Pneumatic connection, port 1	Material sub-base	LABS (PWIS) conformity	Product weight	Part no.	Type
	G1/8	Die-cast aluminium	VDMA24364-B1/B2-L	128 g	526068	MS4-AGA
	G1/4				541549	MS4-AGA-EX
					526069	MS4-AGB
	G3/8				541550	MS4-AGB-EX
					526070	MS4-AGC
					541551	MS4-AGC-EX

Module connector MS4-MV1					
	Material module connector	LABS (PWIS) conformity	Product weight	Part no.	Type
	POM, High-alloy stainless steel	VDMA24364-B1/B2-L	13 g	8119201	MS4-MV1

Mounting bracket MS4-WP...					
	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	Die-cast aluminium	VDMA24364-B1/B2-L		558869	MS4-WPE
			39 g	541554	MS4-WP-EX
				532184	MS4-WP
			45 g	526060	MS4-WPM-D
			55 g	526063	MS4-WPB
				541552	MS4-WPB-EX
				526061	MS4-WPM-2D

Filter cartridge MS-LFP					
	Grade of filtration	Material filter	LABS (PWIS) conformity	Part no.	Type
	5 µm	Packaging unit	VDMA24364-B1/B2-L	534501	MS4-LFP-C

Accessories

Filter cartridge MS-LFP					
	Grade of filtration	Material filter	LABS (PWIS) conformity	Part no.	Type
	40 µm	Packaging unit	VDMA24364-B1/B2-L	534502	MS4-LFP-E

Special oil OFSW (1 litre)				
	Short type code	LABS (PWIS) conformity	Part no.	Type
	OFSW	VDMA24364-B2-L	152811	OFSW-32

Padlock LRVS-D				
	LABS (PWIS) conformity	Product weight	Part no.	Type
	VDMA24364-B1/B2-L	120 g	193786	LRVS-D