

Service unit combination MSB6-FRC

FESTO



Characteristics

At a glance

Combination of filter regulator and lubricator.

- Grid dimension: 62 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 [msb6-frc](#)



You can find the diagrams via the following link:

The diagrams shown in this document are also available online. These can be used to display precise values.

Type code

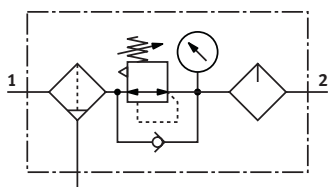
001	Series	
MSB	Service unit component MS series	
002	Size	
6	Grid dimension 62 mm	
003	Pneumatic connection	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	
004	Function	
FRC	Service unit combination	

005	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	
J9	Filter regulator, 0.5 ... 12 bar, 5 µm, metal bowl with manual condensate drain, lockable rotary knob	
J10	Filter regulator, 0.5 ... 12 bar, 5 µm, metal bowl with fully automatic condensate drain, lockable rotary knob	
J11	Filter regulator, 0.5 ... 12 bar, 40 µm, metal bowl with manual condensate drain, lockable rotary knob	
J12	Filter regulator, 0.5 ... 12 bar, 40 µm, metal bowl with fully automatic 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	
M2	Lubricator, metal bowl	
006	Flow direction	
	Flow direction from left to right	
Z	Flow direction from right to left	

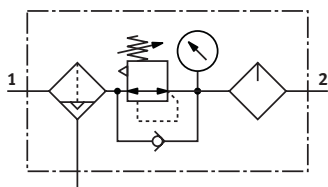
Datasheet

General technical data		
Grade of filtration	5	40
Pneumatic connection, port 1	G1/2	G1/4, G3/8, G1/2
Pneumatic connection, port 2	G1/2	G1/4, G3/8, G1/2
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 Integrated as metal bowl	
Condensate drain	Fully automatic Manual, rotating	
Actuator lock	Rotary knob with integrated lock	Rotary knob with detent Rotary knob with integrated lock 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	G1/4	G3/8	G1/2		
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⁾	1,900 l/min	3,500 l/min	3,600 l/min	3,700 l/min	4,800 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	5 µm	40 µm	5 µm	40 µm	
Operating pressure	1.5 ... 12 bar		1.5 ... 20 bar		0.8 ... 18 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4-], Inert gas		Compressed air to ISO 8573-1:2010 [-: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/msb6-frc → Support/Downloads.

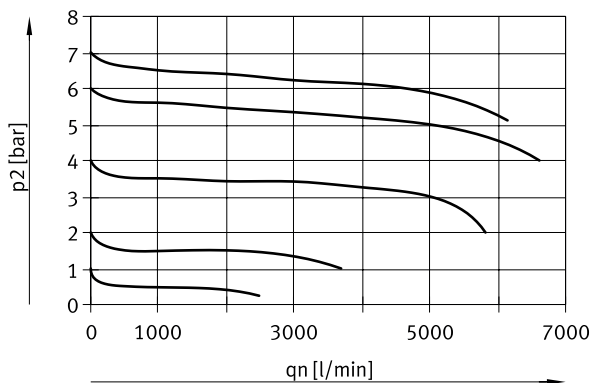
Weight

Bowl guard	Plastic bowl guard	Integrated as metal bowl
Product weight	1,495 g	1,713 g

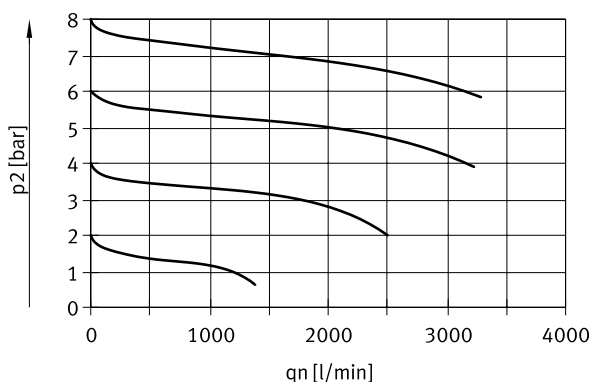
Materials

Material housing	Die-cast aluminium
Material bowl	Makrolon®
Note on materials	RoHS compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Standard flow rate q_n as a function of output pressure p_2 (MSB6-1/2; pressure regulation range 0.3 ... 7 bar; grade of filtration 40 µm)

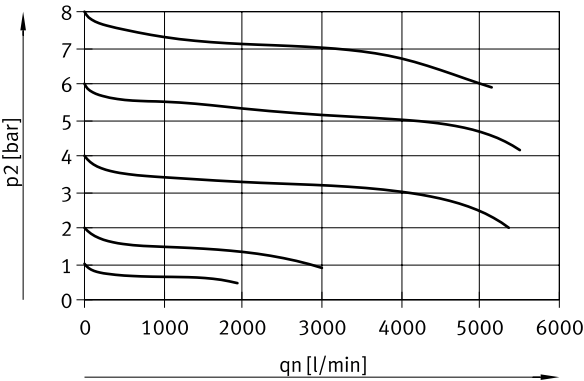


Standard flow rate q_n as a function of output pressure p_2 (MSB6-1/4; pressure regulation range 0.5 ... 12 bar; grade of filtration 40 µm)



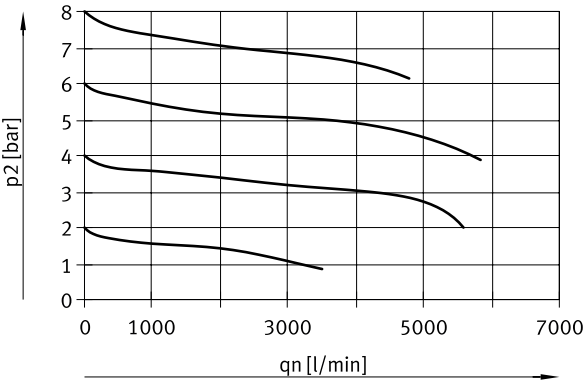
Datasheet

Standard flow rate q_n as a function of output pressure p_2 (MSB6-3/8; pressure regulation range 0.5 ... 12 bar; grade of filtration 40 μm)



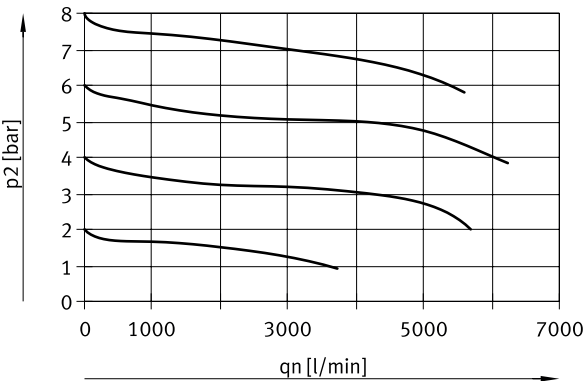
Input pressure $p_1 = 10$ bar

Standard flow rate q_n as a function of output pressure p_2 (MSB6-1/2; 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 (MSB6-1/2; pressure regulation range 0.5 ... 12 bar; grade of filtration 40 μm)

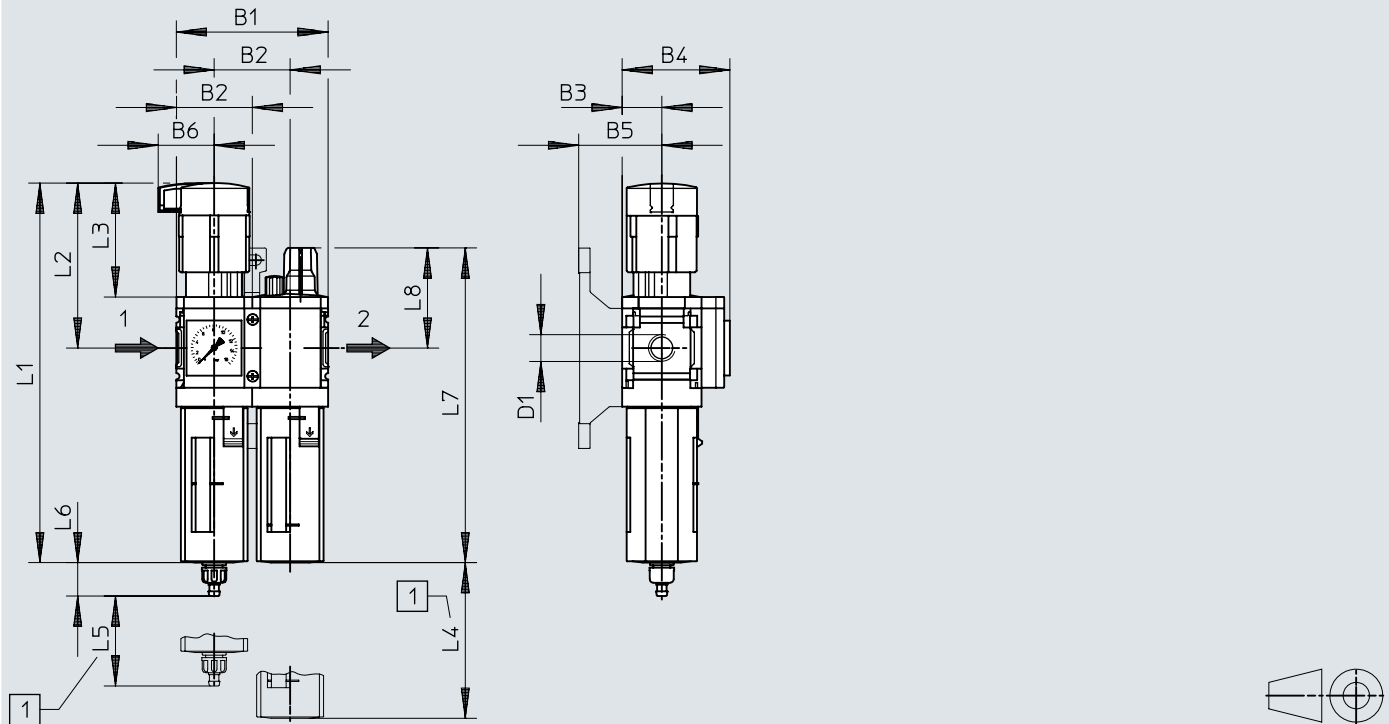


Input pressure $p_1 = 10$ bar

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)		
MSB6-1/4	124	62	31	77	54	38,8	G1/4	284,8	134,5	95,5	130	68	15,8	18,5	215,3	65,6
MSB6-3/8							G3/8									
MSB6-1/2							G1/2									

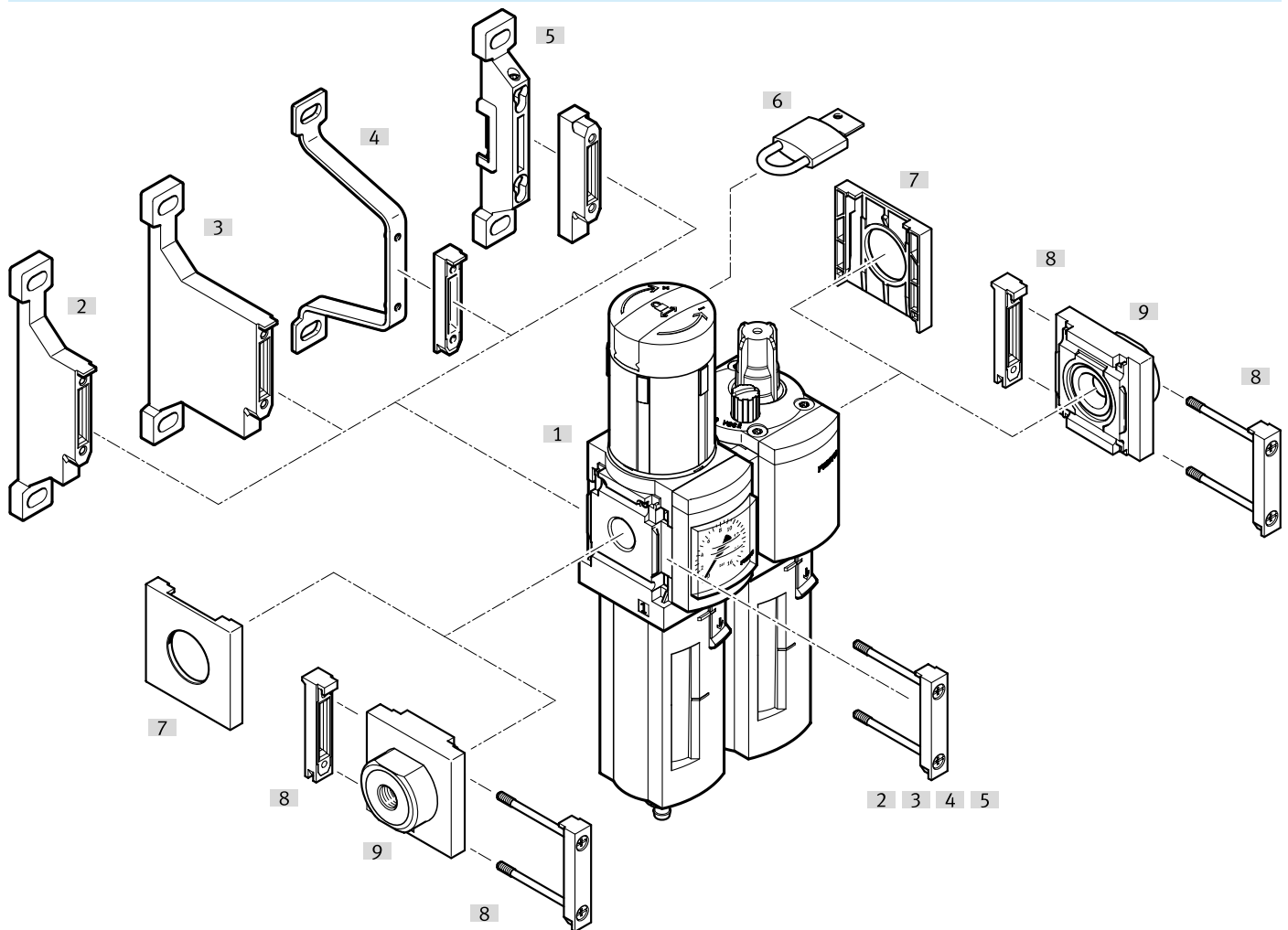
- 1) Manual condensate drain
2) Fully automatic condensate drain

Ordering data

Ordering data						
	Pneumatic connection, port 1	Condensate drain	Grade of filtration	Pressure regulation range	Part no.	Type
	G1/4	Manual, rotating	40 µm	0.5 ... 12 bar	530268	MSB6-1/4-FRC5:J1M1
	G3/8				530292	MSB6-3/8-FRC5:J1M1
	G1/2	Fully automatic	5 µm		530236	MSB6-1/2-FRC12:J10M2
			40 µm		530232	MSB6-1/2-FRC10:J12M2
					530246	MSB6-1/2-FRC6:J2M1
					530248	MSB6-1/2-FRC7:J3M1
		Manual, rotating	5 µm		530234	MSB6-1/2-FRC11:J9M2
					530230	MSB6-1/2-FRC1:J5M1
			40 µm	0.3 ... 7 bar	8042673	MSB6-1/2-FRC13:J120M1
				0.5 ... 7 bar	530252	MSB6-1/2-FRC9:J11M2
				0.5 ... 12 bar	530244	MSB6-1/2-FRC5:J1M1
					530245	MSB6-1/2-FRC5:J1M1-Z

Peripherals

Peripherals overview



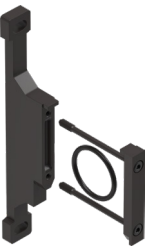
Accessories		→ Link
Type/order code	Description	
[1] Service unit combination MSB6-FRC		msb6-frc
[2] Mounting bracket MS6-WP		10
[3] Mounting bracket MS6-WPB		10
[4] Mounting bracket MS6-WPE		10
[5] Mounting bracket MS6-WPM		10
[6] Padlock LRVS		11
[7] Cover cap MS6-END		10
[8] Module connector MS6-MV1		10
[9] Connecting plate MS6-AG...		10

Accessories

Cover cap MS6-END					
	Material housing	LABS (PWIS) conformity	Part no.	Type	
	Reinforced PA	VDMA24364-B1/B2-L	538780	MS6-END	

Connecting plate-SET MS6-AG...						
	Pneumatic connection, port 1	Material sub-base	LABS (PWIS) conformity	Product weight	Part no.	Type
	G1/4	Die-cast aluminium	VDMA24364-B1/B2-L	300 g	526080	MS6-AGB
	G3/8				541538	MS6-AGB-EX
	G1/2				526081	MS6-AGC
	G3/4				541539	MS6-AGC-EX
					526082	MS6-AGD
					541540	MS6-AGD-EX
					526083	MS6-AGE
					541541	MS6-AGE-EX

Module connector MS6-MV1					
	Material module connector	LABS (PWIS) conformity	Product weight	Part no.	Type
	POM, High-alloy stainless steel	VDMA24364-B1/B2-L	33 g	8119204	MS6-MV1

Mounting bracket MS6-WP...					
	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	Die-cast aluminium	VDMA24364-B1/B2-L		1025936	MS6-WPE
			76 g	532195	MS6-WP
				541544	MS6-WP-EX
			115 g	526074	MS6-WPB
				541542	MS6-WPB-EX
			144 g	526073	MS6-WPM-D
			154 g	532186	MS6-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	534499	MS6-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	534500	MS6-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