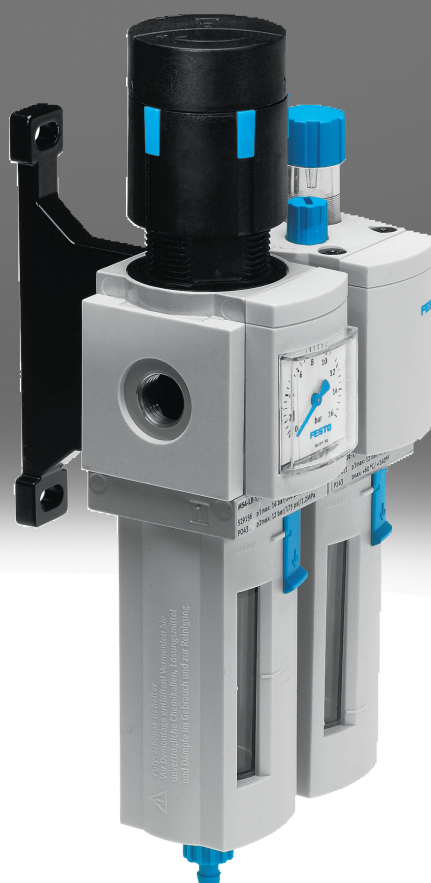


Service unit combination MSB4N-FRC

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: 4.4 ... 103 psi and 7.4 ... 176 psi
- Optionally with manual or fully automatic condensate drain
- Choice of filter inserts 5 µm or 40 µm

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.

Type code

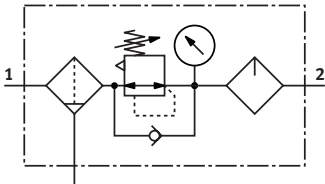
001	Series	
MSB	Service unit component MS series	
002	Size	
4	Grid dimension 40 mm	
003	Thread type	
N	NPT thread	
004	Pneumatic connection, inch	
1/8	Female thread NPT 1/8	
1/4	Female thread NPT 1/4	
005	Function	
FRC	Service unit combination	

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	
J4	Filter regulator, 0.5 ... 12 bar, 5 µm, plastic bowl with plastic bowl guard, fully automatic 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	
J6	Filter regulator, 0.3 ... 7 bar, 40 µm, plastic bowl with plastic bowl guard, fully automatic condensate drain, lockable rotary knob	
J7	Filter regulator, 0.3 ... 7 bar, 5 µm, plastic bowl with plastic bowl guard, manual condensate drain, lockable rotary knob	
J8	Filter regulator, 0.3 ... 7 bar, 5 µm, plastic bowl with plastic bowl guard, fully automatic condensate drain, lockable rotary knob	
M1	Lubricator, plastic bowl with plastic bowl guard	
007	Flow direction	
	Flow direction from left to right	

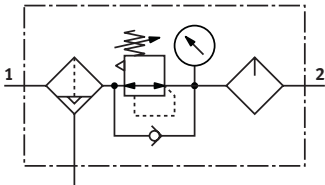
Datasheet

General technical data		
Grade of filtration	5 µm	40 µm
Air purity class at output	Compressed air to ISO 8573-1:2010 [6:4:-]	Compressed air to ISO 8573-1:2010 [7:4:-]
Pneumatic connection, port 1	1/8 NPT, 1/4 NPT	
Pneumatic connection, port 2	1/8 NPT, 1/4 NPT	
Design	Filter regulator with pressure gauge, Proportional standard mist lubricator	
Controller function	Output pressure constant, Via primary pressure compensation, With secondary venting, With return flow function	
Type of mounting	With accessories	
Mounting position	Vertical +/-5°	
Bowl guard	Plastic bowl guard	
Condensate drain	Fully automatic Manually rotating	
Actuator lock	Rotary knob with integrated lock	
Pressure regulation range	1 ... 12 bar	
Pressure gauge (ANALOG) or Pressure display (DIGITAL)	With pressure gauge	
Product weight	500 g	

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	1/8 NPT				1/4 NPT			
Grade of filtration	5 µm		40 µm		5 µm		40 µm	
Pressure regulation range	1 ... 7 bar	1 ... 12 bar	1 ... 7 bar	1 ... 12 bar	1 ... 7 bar	1 ... 12 bar	1 ... 7 bar	1 ... 12 bar
Standard nominal flow rate (standardised to DIN 1343) ¹⁾	900 l/min	800 l/min	950 l/min	850 l/min	1,300 l/min	850 l/min	1,400 l/min	900 ... 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				Manually rotating		
Pressure regulation range	1 ... 7 bar		1 ... 12 bar		1 ... 7 bar		1 ... 12 bar
Operating pressure	1.5 ... 12 bar	1.5 ... 14 bar	1.5 ... 12 bar	1.5 ... 14 bar	1.5 ... 12 bar	1.5 ... 14 bar	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:-] Inert gases	Compressed air to ISO 8573-1:2010 [-:4:-] Inert gases	Compressed air to ISO 8573-1:2010 [7:4:-] Inert gases	Compressed air to ISO 8573-1:2010 [-:4:-] Inert gases	Compressed air to ISO 8573-1:2010 [7:4:-] Inert gases	Compressed air to ISO 8573-1:2010 [-:4:-] Inert gases	
Grade of filtration	40 µm	5 µm	5 ... 40 µm	40 µm	5 µm	40 µm	5 ... 40 µm
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)						
Ambient temperature	5 ... 60°C	-10 ... 60°C	5 ... 60°C	-10 ... 60°C	5 ... 60°C	-10 ... 60°C	
Media temperature	5 ... 60°C	-10 ... 60°C	5 ... 60°C	-10 ... 60°C	5 ... 60°C	-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						

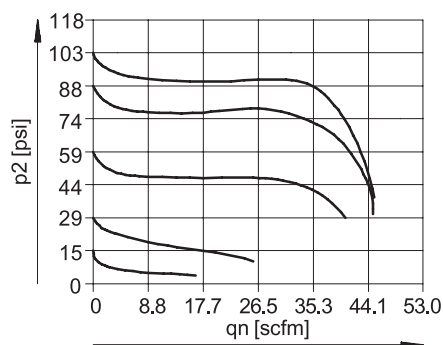
1) More information www.festo.com/x/topic/crc

2) More information www.festo.com/catalogue/msb4n-frc → Support/Downloads.

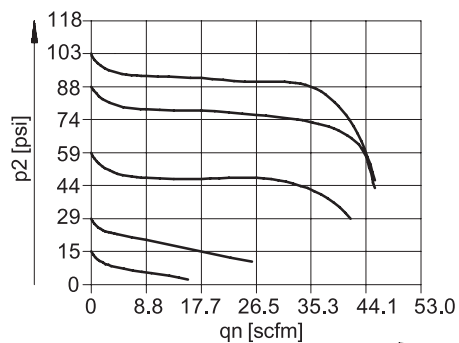
Materials

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

Normal flow q_n as a function of output pressure p_2 (MSB4N-1/8; pressure regulation range 4.4 ... 103 psi; grade of filtration 5 µm)

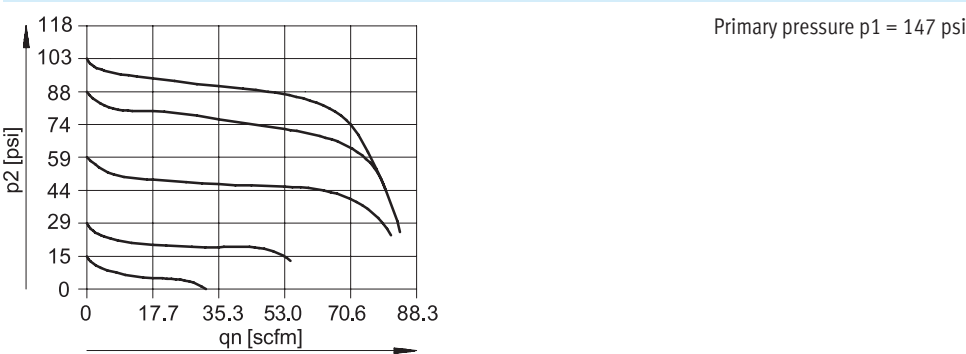


Normal flow q_n as a function of output pressure p_2 (MSB4N-1/8; pressure regulation range 4.4 ... 103 psi; grade of filtration 40 µm)

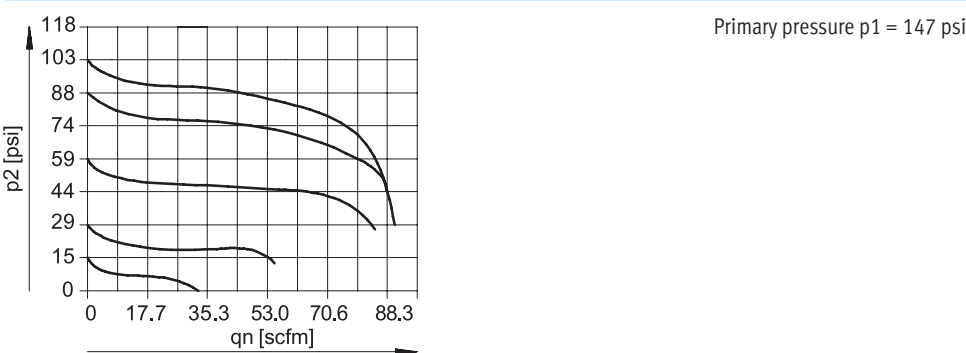


Datasheet

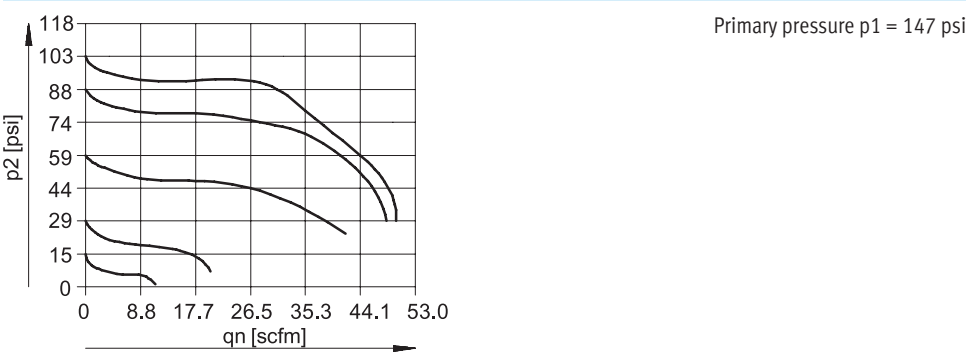
Normal flow qn as a function of output pressure p2 (MSB4N-1/4; pressure regulation range 4.4 ... 103 psi; grade of filtration 5 µm)



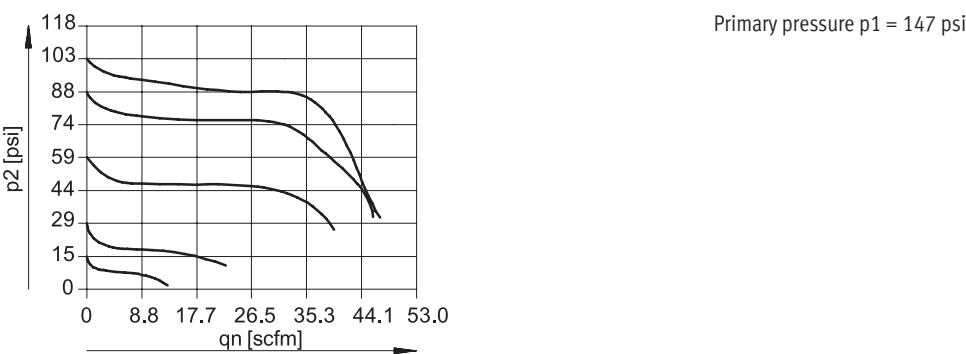
Normal flow qn as a function of output pressure p2 (MSB4N-1/4; pressure regulation range 4.4 ... 103 psi; grade of filtration 40 µm)



Normal flow qn as a function of output pressure p2 (MSB4N-1/8; pressure regulation range 7.4 ... 176 psi; grade of filtration 5 µm)

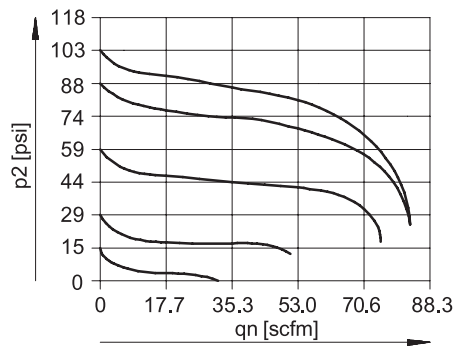


Normal flow qn as a function of output pressure p2 (MSB4N-1/8; pressure regulation range 7.4 ... 176 psi; grade of filtration 40 µm)

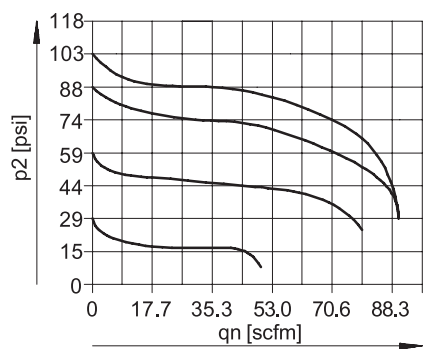


Datasheet

Normal flow q_n as a function of output pressure p_2 (MSB4N-1/4; pressure regulation range 7.4 ... 176 psi; grade of filtration 5 μm)

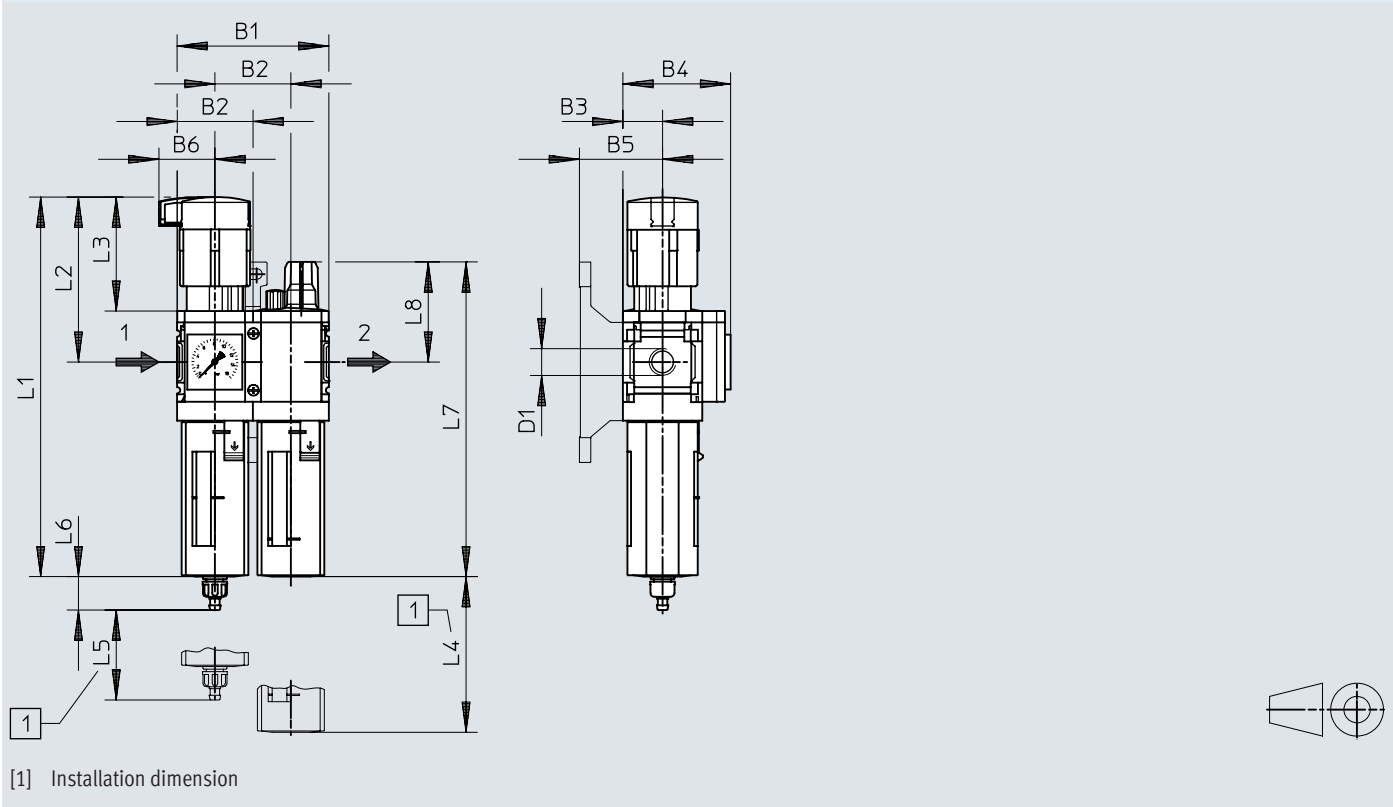


Normal flow q_n as a function of output pressure p_2 (MSB4N-1/4; pressure regulation range 7.4 ... 176 psi; grade of filtration 40 μm)



Dimensions

Dimensions – With pressure gauge, display unit [psi] Download CAD data www.festo.com



	B1 [inch]	B2 [inch]	B3 [inch]	B4 [inch]	B5 [inch]	B6 [inch]	D1	L1 [inch]	L2 [inch]	L3 [inch]	L4 [inch]	L5 [inch]	L6 [inch] ¹⁾ [inch] ²⁾		L7 [inch]	L8 [inch]
MSB4N-1/8	3,17	1,58	0,58	2,24	1,74	1,17	1/8 NPT	7,91	3,43	2,36	3,15	0,98	0,7	0,8	6,57	2,09
MSB4N-1/4							1/4 NPT									

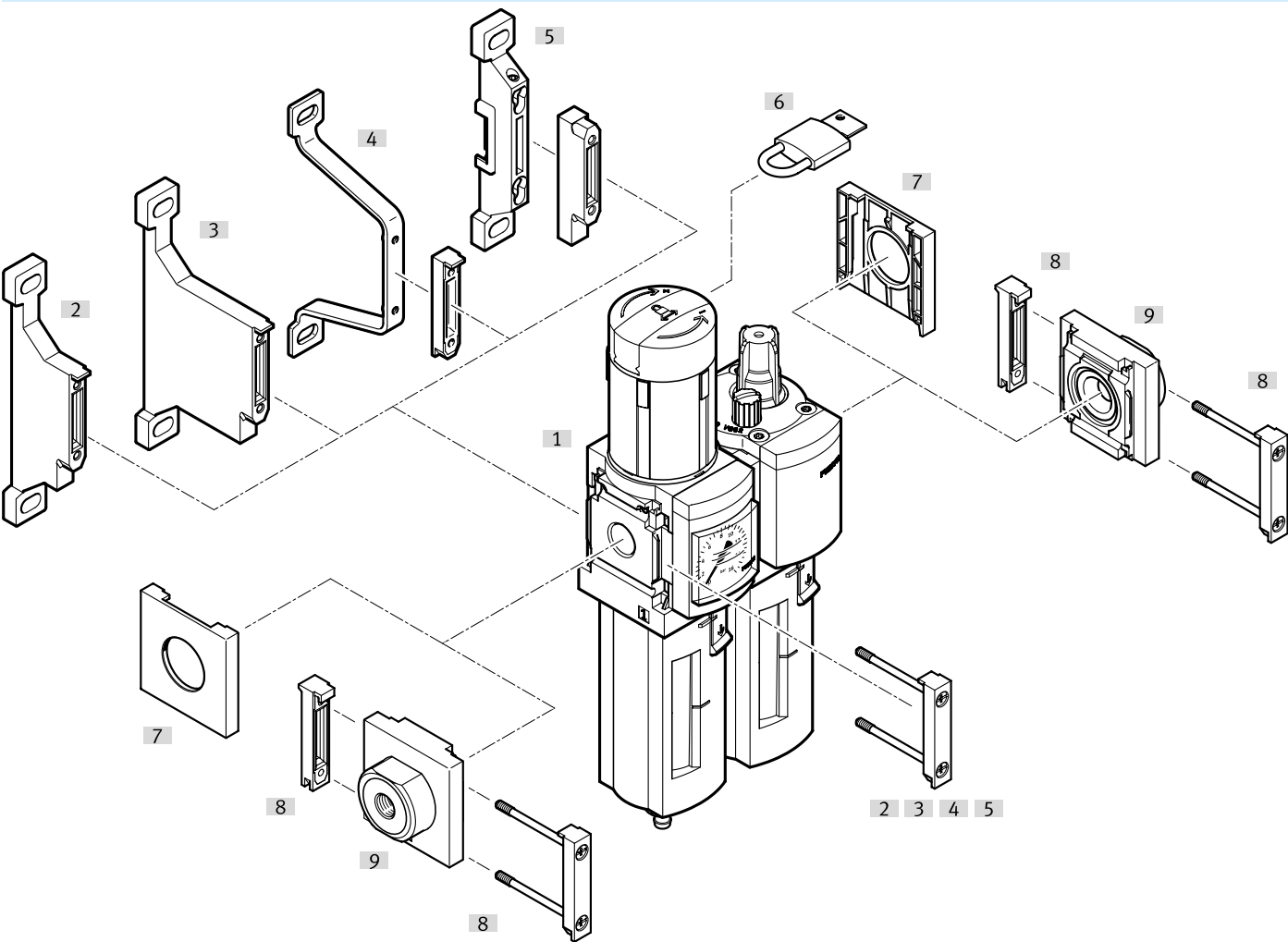
1) Manual condensate drain
2) Fully automatic condensate drain

Ordering data

Ordering data							
	Pneumatic connection, port 1	Condensate drain	Grade of filtration	Pressure regulation range	Standard nominal flow rate (standardised to DIN 1343)	Part no.	Type
	1/8 NPT	Fully automatic	40 µm	1 ... 7 bar	950 l/min	533965	MSB4N-1/8-FRC2:J6M1
				1 ... 12 bar	850 l/min	533973	MSB4N-1/8-FRC6:J2M1
		Manually rotating	5 µm	1 ... 7 bar	900 l/min	533971	MSB4N-1/8-FRC5:J1M1
				1 ... 12 bar	800 l/min	533969	MSB4N-1/8-FRC4:J8M1
			40 µm	1 ... 7 bar	950 l/min	533975	MSB4N-1/8-FRC7:J3M1
						533963	MSB4N-1/8-FRC1:J5M1
	1/4 NPT	Fully automatic	5 µm		1,400 l/min	533949	MSB4N-1/4-FRC2:J6M1
					1,300 l/min	533951	MSB4N-1/4-FRC3:J7M1
				1 ... 12 bar	850 l/min	533961	MSB4N-1/4-FRC8:J4M1
		Manually rotating	40 µm		900 l/min	533957	MSB4N-1/4-FRC6:J2M1
						533953	MSB4N-1/4-FRC4:J8M1
			5 µm	1 ... 7 bar	1,300 l/min	533959	MSB4N-1/4-FRC7:J3M1
				1 ... 12 bar	850 l/min	533955	MSB4N-1/4-FRC5:J1M1
			40 µm		900 l/min	533947	MSB4N-1/4-FRC1:J5M1
					1,400 l/min		

Peripherals

Peripherals overview



Accessories		→ Link
Type/order code	Description	
[1] Service unit combination MSB4N-FRC		msb4n-frc
[2] Mounting bracket MS4-WP		11
[3] Mounting bracket MS4-WPB		11
[4] Mounting bracket MS4-WPE		11
[5] Mounting bracket MS4-WPM		11
[6] Padlock LRVS-D		12
[7] Cover cap MS4-END		11
[8] Module connector MS4-MV1		11
[9] Connecting plate SET MS4N-AQ...		11

Accessories

Cover cap MS4-END				
	Size	Part no.	Type	
	4	538779	MS4-END	

Connecting plate SET MS4N-AQ...					
	Size	Pneumatic connection, port 1	Product weight	Part no.	Type
	4	1/8 NPT	128 g	526065	MS4N-AQK
		1/4 NPT		526066	MS4N-AQN
		3/8 NPT		526067	MS4N-AQP

Module connector MS4-MV1				
	Size	Product weight	Part no.	Type
	4	13 g	8119201	MS4-MV1

Mounting bracket MS4-WP...				
	Size	Product weight	Part no.	Type
	4	39 g	532184	MS4-WP
		45 g	526060	MS4-WPM-D
		55 g	526063	MS4-WPB
			526061	MS4-WPM-2D

Filter cartridge MS-LFP				
	Size	Grade of filtration	Part no.	Type
	4	5 µm	534501	MS4-LFP-C

Accessories

Filter cartridge MS-LFP				
	Size	Grade of filtration	Part no.	Type
	4	40 µm	534502	MS4-LFP-E

Special oil OPSW-32 (1 litre)				
	Short type code		Part no.	Type
	OFSW		152811	OFSW-32

Padlock LRVS-D						
	Short type code	Corrosion resistance class CRC ¹⁾	LABS (PWIS) conformity	Product weight	Part no.	Type
	LRVS-D	2 - Moderate corrosion stress	VDMA24364-B1/B2-L	120 g	193786	LRVS-D

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