

Lubricators MS-LOE, MS series

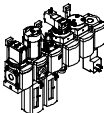
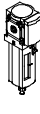
FESTO



Lubricators MS-LOE, MS series

FESTO

Product range overview – MS series service units

Type		Size			Pressure regulation range						Grade of filtration					
					[bar]						[µm]					
					0.05 ... 0.7	0.05 ... 2.5	0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16						
Code			Pneumatic connection in housing	Connecting plate	AG...	D2	D4	D5	D6	D7	D8	A	B	5	40	
Service units																
MSB-FRC		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	■	■	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	■	■	–	–	–	■	■		
		9	–													
		12	–													
Service unit combinations (further variants can be ordered using the configurator → Internet: msb4, msb6 or msb9)																
MSB		4	G1/4	G1/8, G1/4, G3/8	–	–	–	■	■	–	–	–	■	■		
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	■	■	–	–	–	■	■		
		9	–													
		12	–													
Individual devices																
Filter regulators MS-LFR		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	■	–	–	■	■		
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	■	■	■	■	–	–	■	■		
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	■	■	■	–	–	■	■		
Filters MS-LF		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	■	■		
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	■	■		
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	■	■		
Fine and micro filters MS-LFM		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	■	■	–	–		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	■	■	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	■	■	–	–		
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	■	■	–	–		
Activated carbon filters MS-LFX		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–	–		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–	–		
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–	–		
Water separators MS-LWS		4	–													
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–	–		
		12	–													

Lubricators MS-LOE, MS series

FESTO

Product range overview – MS series service units

Type	Size	Bowl guard		Condensate drains				Pressure indicator					Security		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Manual rotary	Semi-automatic	Fully automatic	External, fully automatic, electrical	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	M	H	V	E...	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Service units																	
MSB-FRC	4	■	–	■	–	■	–	–	■	–	–	–	■	–	–	■	msb4
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb6
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Service unit combinations																	
MSB	4	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb4
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb6
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Individual devices																	
Filter regulators MS-LFR	4	■	■	■	■	■	–	■	■	■	■	■	■	■	–	■	ms4-lfr
	6	■	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms6-lfr
	9	–	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms9-lfr
	12	–	■	■	–	■	■	■	■	–	■	–	■	■	–	■	ms12-lfr
Filters MS-LF	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lf
	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lf
	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lf
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lf
Fine and micro filters MS-LFM	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lfm
	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lfm
	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lfm
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lfm
Activated carbon filters MS-LFX	4	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms4-lfx
	6	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms6-lfx
	9	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms9-lfx
	12	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms12-lfx
Water separators MS-LWS	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	ms6-lws
	9	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	ms9-lws
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Lubricators MS-LOE, MS series

Product range overview – MS series service units

FESTO

Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]						Supply voltage			
				0.05 ... 0.7	0.05 ... 2.5	0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16	24 V DC, connection pattern to EN 175301	24 V DC, connection pattern M12 to DESINA	110 V AC, connection pattern to EN 175301	230 V AC, connection pattern to EN 175301
Code			AG...	D2	D4	D5	D6	D7	D8	V24	V24P	V110	V230
Individual devices													
Pressure regulators MS-LR		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	■	■	■	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	■	■	–	–	–	–
Pressure regulators MS-LRB		4	G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRP		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	–	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRPB		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	–	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Electrical pressure regulators MS-LRE		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Lubricators MS-LOE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical on-off valves MS-EM(1)		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical on-off valves MS-EE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	■	–	■	■
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	■	■
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	■	■	■	■
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	■	■	■	■
Electrical soft-start valves MS-DL		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical soft-start valves MS-DE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	■	–	■	■
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	■	■
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	■	■	■	■
Soft start and exhaust valves MS-SV		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–

Lubricators MS-LOE, MS series



Product range overview – MS series service units

Type	Size	Bowl guard		Pressure indicator					Security		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Individual devices													
Pressure regulators MS-LR	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lr
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lr
	9	–	–	■	■	–	■	■	■	■	–	■	ms9-lr
	12	–	–	■	■	–	■	–	■	■	–	■	ms12-lr
Pressure regulators MS-LRB	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lrb
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lrb
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRP	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrp
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRPB	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrpb
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Electrical pressure regulators MS-LRE	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	■	–	■	–	–	–	–	■	ms6-lre
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Lubricators MS-LOE	4	■	■	–	–	–	–	–	–	–	–	■	8
	6	■	■	–	–	–	–	–	–	–	–	■	8
	9	–	■	–	–	–	–	–	–	–	–	■	15
	12	–	■	–	–	–	–	–	–	–	–	■	22
Electrical on-off valves MS-EM(1)	4	–	–	■	■	■	■	■	–	–	■	■	ms4-em1
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-em1
	9	–	–	■	■	–	■	–	–	–	■	■	ms9-em
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-em
Electrical on-off valves MS-EE	4	–	–	■	■	■	■	■	–	–	■	■	ms4-ee
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-ee
	9	–	–	■	■	–	■	–	–	–	■	■	ms9-ee
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-ee
Electrical soft-start valves MS-DL	4	–	–	■	■	■	■	■	–	–	–	■	ms4-dl
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-dl
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-dl
Electrical soft-start valves MS-DE	4	–	–	■	■	■	■	■	–	–	–	■	ms4-de
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-de
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-de
Soft start and exhaust valves MS-SV	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-sv
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–

Lubricators MS-LOE, MS series

FESTO

Product range overview – MS series service units

Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]				Supply voltage			
				0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16	24 V DC, connection pattern to EN 175301	24 V DC, connection pattern M12 to DESINA	110 V AC, connection pattern to EN 175301	230 V AC, connection pattern to EN 175301
Code			AG...	D5	D6	D7	D8	V24	V24P	V110	V230
Individual devices											
Membrane air dryers MS-LDM1		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–
Branching modules MS-FRM		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–
Distributor blocks MS-FRM-FRZ		4	G1/4	–	–	–	–	–	–	–	–
		6	G1/2	–	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–
Flow sensors SFAM		4	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/2	–	–	–	–	–	–	–
		9	–	G1, G1 1/2	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–

Lubricators MS-LOE, MS series



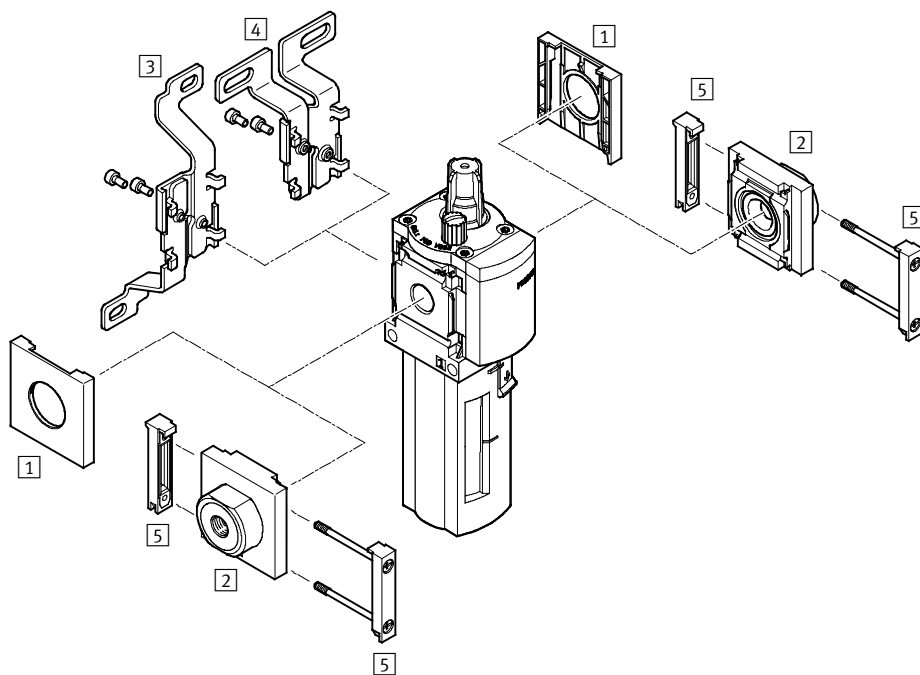
Product range overview – MS series service units

Type	Size	Bowl guard		Pressure indicator					Switch output		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	2x PNP or NPN, 1 analogue output 4 ... 20 mA	2x PNP or NPN, 1 analogue output 0 ... 10 V	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	2SA	2SV	S	Z/R	
Individual devices													
Membrane air dryers MS-LDM1	4	–	■	–	–	–	–	–	–	–	–	■	ms4-ldm1
	6	–	■	–	–	–	–	–	–	–	–	■	ms6-ldm1
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Branching modules MS-FRM	4	–	–	■	■	■	■	■	–	–	–	■	ms4-frm
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-frm
	9	–	–	■	■	–	■	■	–	–	–	■	ms9-frm
	12	–	–	■	–	–	–	–	–	–	–	–	ms12-frm
Distributor blocks MS-FRM-FRZ	4	–	–	–	–	–	–	–	–	–	–	■	ms4-frm
	6	–	–	–	–	–	–	–	–	–	–	■	ms6-frm
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Flow sensors SFAM	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	■	■	–	■	sfam-62
	9	–	–	–	–	–	–	–	■	■	–	■	sfam-90
	12	–	–	–	–	–	–	–	–	–	–	–	–

Lubricators MS4/MS6-LOE, MS series

Peripherals overview

FESTO



-  - 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 connect- ing plate	with connecting plate	without connect- ing plate	with connecting plate	
1	Cover cap MS4/6-END	■	–	■	–	ms4-end, ms6-end
2	Connecting plate MS4/6-AG...	–	■	–	■	ms4-ag, ms6-ag
3	Mounting bracket MS4/6-WB	■	■	–	–	ms4-wb, ms6-wb
4	Mounting bracket MS4-WBM	■	■	–	–	ms4-wbm
5	Module connector MS4/6-MV	–	■	■	■	ms4-mv, ms6-mv
–	Mounting bracket MS4/6-WP/WPB/WPE/WPM	–	■	■	■	ms4-wp, ms6-wp

Lubricators MS4/MS6-LOE, MS series

FESTO

Type codes

		MS	6	-	LOE	-	1/4	-	U
Series									
MS	Standard service unit								
Size									
4	Grid dimension 40 mm								
6	Grid dimension 62 mm								
Service function									
LOE	Lubricators								
Connection size									
MS4									
1/8	Thread G1/8								
1/4	Thread G1/4								
MS6									
1/4	Thread G1/4								
3/8	Thread G3/8								
1/2	Thread G1/2								
Bowl guard									
R	Plastic bowl guard								
U	Integrated as metal bowl								

Further variants can be ordered using the modular system → 14

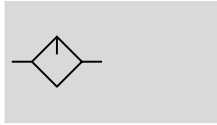
- Connecting plates
- Type of mounting
- Alternative flow direction

Lubricators MS4/MS6-LOE, MS series

FESTO

Technical data

Function



- Flow rate
1,100 ... 7,200 l/min
- Temperature range
-10 ... +60 °C
- Operating pressure
1 ... 16 bar



The proportional lubricator adds a precision adjustable quantity of oil to the compressed air stream. The pressure drop that occurs when air flows through a Venturi nozzle is used to convey oil from the container

to the drip cap. From here, the oil drips into the air duct directly behind the proportional valve, where it is atomised. The oil mist component is proportional to the compressed air flow rate.

- Proportional lubricator with precision oil metering
- Reduces wear on drive units subject to high loading
- High flow rate
- Quick and easy oil top-up even during operation (under pressure)

The following oils are recommended for Festo components:
Viscosity range to ISO 3448, ISO class VG 32
32 mm²/s (= cSt) at 40°C

- Festo special oil OFSW-32 → 29
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

General technical data					
Size	MS4		MS6		
Pneumatic connection 1, 2	G ¹ / ₈	G ¹ / ₄	G ¹ / ₄	G ³ / ₈	G ¹ / ₂
Design	Proportional standard mist lubricator				
Type of mounting	Via accessories				
	In-line installation				
Assembly position	Vertical ±5°				
Bowl guard	Plastic bowl guard				
	Integrated as metal bowl				
Minimum flow for lubricator operation [l/min]	40		50		
Max. oil capacity [cm ³]	30 (with plastic bowl guard)		75 (with plastic bowl guard)		
	36 (with metal bowl)		80 (with metal bowl)		

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

Standard nominal flow rate qnN [l/min]					
Size	MS4		MS6		
Pneumatic connection	G ¹ / ₈	G ¹ / ₄	G ¹ / ₄	G ³ / ₈	G ¹ / ₂
In main flow direction 1 → 2	1,100	2,200	2,500	5,300	7,200

Lubricators MS4/MS6-LOE, MS series

FESTO

Technical data

Operating and environmental conditions		
Size	MS4	MS6
Operating pressure [bar]	1 ... 12	1 ... 16
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]	
	Inert gases	
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)	
Ambient temperature [°C]	-10 ... +60	0 ... +60
Temperature of medium [°C]	-10 ... +60	0 ... +60
Storage temperature [°C]	-10 ... +60	-10 ... +60
Corrosion resistance CRC ¹⁾	2	

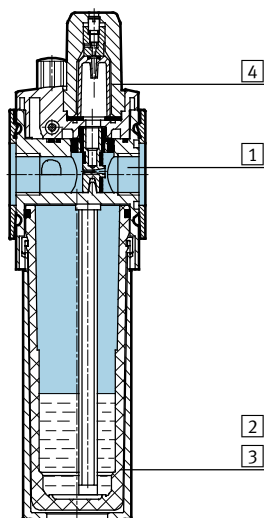
1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weights [g]		
Size	MS4	MS6
Lubricator with plastic bowl guard R	194	600
Lubricator with metal bowl U	354	810

Materials

Sectional view



Lubricators		
1	Body	Die-cast aluminium
2	Plastic bowl guard	PC
3	Metal bowl	Aluminium
	Viewing window	PA
4	Lubricator dome	PC
-	Seals	NBR
Note on materials		RoHS-compliant

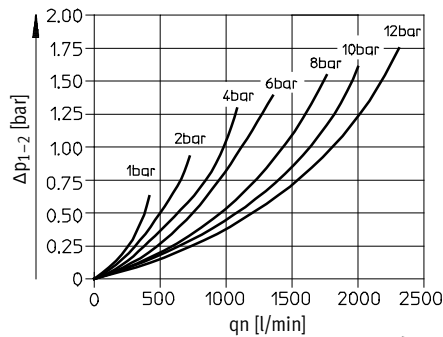
Lubricators MS4/MS6-LOE, MS series

Technical data

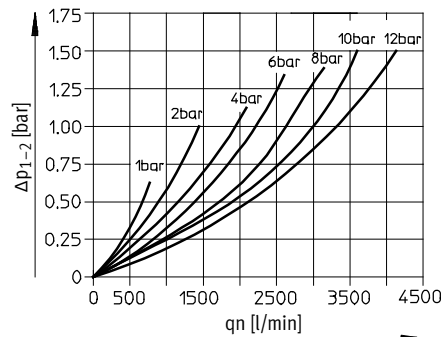
FESTO

Standard flow rate q_n as a function of the differential pressure Δp_{1-2}

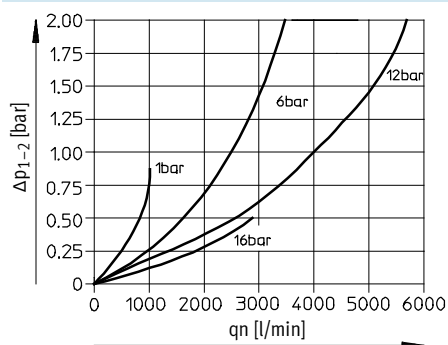
MS4-LOE- $\frac{1}{8}$



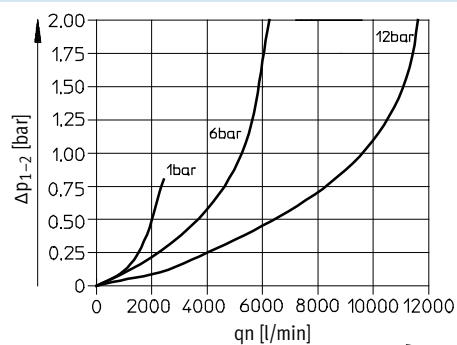
MS4-LOE- $\frac{1}{4}$



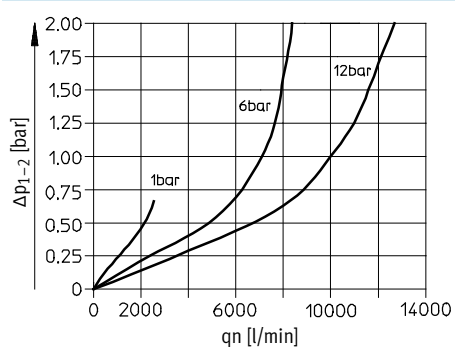
MS6-LOE- $\frac{1}{4}$



MS6-LOE- $\frac{3}{8}$



MS6-LOE- $\frac{1}{2}$



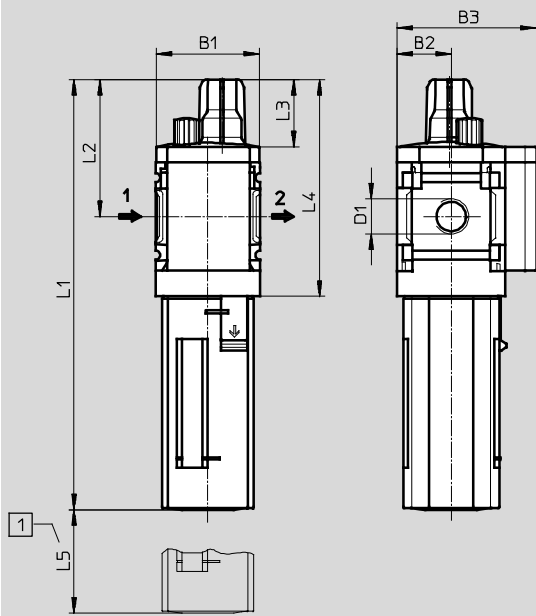
Lubricators MS4/MS6-LOE, MS series

Technical data

FESTO

Dimensions – Basic version

Download CAD data → www.festo.com



1 Installation dimensions

→ Flow direction

Type	B1	B2	B3	D1	L1 Bowl guard		L2	L3	L4	L5
					Plastic	Metal				
MS4-LOE-1/8	42	21	54	G1/8	166.6	184.9	53	26	84	80
MS4-LOE-1/4				G1/4						
MS6-LOE-1/4	62	31	76	G1/4	215.7	222	66	27	111	130
MS6-LOE-3/8				G3/8						
MS6-LOE-1/2				G1/2						

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

Ordering data

Size	Connection	Plastic bowl guard		Integrated as metal bowl	
		Part No.	Type	Part No.	Type
MS4	G1/8	529413	MS4-LOE-1/8-R	535791	MS4-LOE-1/8-U
	G1/4	529411	MS4-LOE-1/4-R	535790	MS4-LOE-1/4-U
MS6	G1/4	529779	MS6-LOE-1/4-R	529781	MS6-LOE-1/4-U
	G3/8	529783	MS6-LOE-3/8-R	529785	MS6-LOE-3/8-U
	G1/2	529775	MS6-LOE-1/2-R	529777	MS6-LOE-1/2-U

Lubricators MS4/MS6-LOE, MS series

Ordering data – Modular products

FESTO

M Mandatory data						O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Alternative flow direction
527701 527674	MS	4 6	LOE	1/8, 1/4, 3/8, 1/2, AGA, AGB, AGC, AGD, AGE	R U	WP WPM WB WBM	Z
Order example							
527701	MS	4	- LOE	- AGB	- R	- WP	- Z

Ordering table							
Grid dimension		[mm]	40	62	Condi- tions	Code	Enter code
M	Module No.		527701	527674			
	Series		Standard			MS	MS
	Size		4	6		...	
	Function		Lubricators			-LOE	-LOE
	Connection size		G1/8 thread	-		-1/8	
			Thread G1/4	Thread G1/4		-1/4	
			-	Thread G3/8		-3/8	
			-	Thread G1/2		-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	
	Bowl		Plastic bowl with plastic bowl guard			-R	
			Metal bowl			-U	
O	Type of mounting		Mounting bracket		1	-WP	
			Mounting bracket		1	-WPM	
			Mounting bracket			-WB	
			Mounting bracket	-		-WBM	
	Alternative flow direction		Flow direction from right to left			-Z	

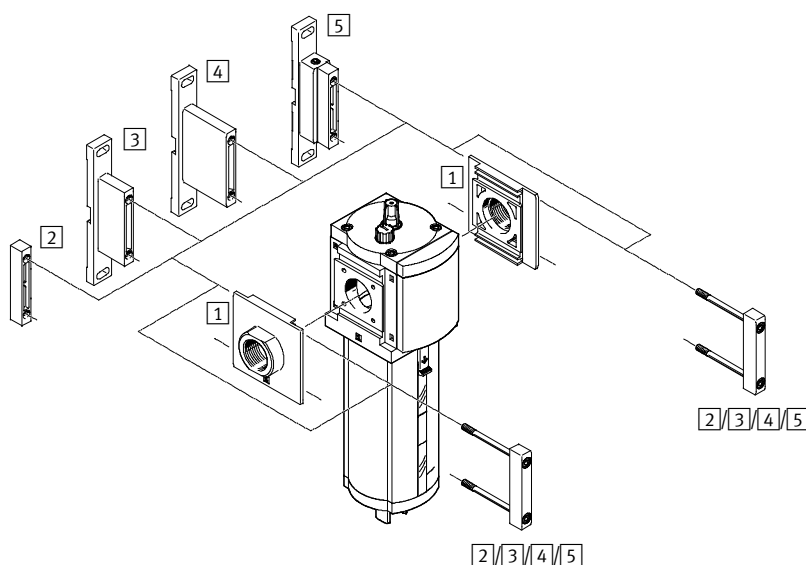
1 WP, WPM Only with connecting plate AGA, AGB, AGC, AGD or AGE.

Transfer order code

	MS		-	LOE	-		-		-		-	
--	----	--	---	-----	---	--	---	--	---	--	---	--

Lubricators MS9-LOE, MS series

Peripherals overview



Note

Additional accessories:

- Module connector for combinations with size MS6, MS9 or MS12
- Internet: rmv, armv

Mounting attachments and accessories					
		Individual unit		Combination	➔ Page/Internet
		Without connecting thread	With connecting thread ¾ or 1		
1	Connecting plate MS9-AG...	■	–	■	ms9-ag
2	Module connector MS9-MV	■	–	■	ms9-mv
3	Mounting bracket MS9-WP	■	■	■	ms9-wp
4	Mounting bracket MS9-WPB	■	■	■	ms9-wp
5	Mounting bracket MS9-WPM	■	–	■	ms9-wp

Lubricators MS9-LOE, MS series

Type codes

FESTO

		MS	9	-	LOE	-	G	-	U
Series									
MS	Standard service unit								
Size									
9	Grid dimension 90 mm								
Service function									
LOE	Lubricator								
Pneumatic connection									
G	Module without connecting thread, without connecting plate								
Bowl guard									
U	Integrated as metal bowl								

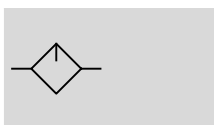
Additional variants can be ordered using the modular product system → 21

- Connecting thread
- Connecting plates
- Type of mounting
- Alternative flow direction

Lubricators MS9-LOE, MS series

Technical data

Function



-  - Flow rate
15,000 ... 20,000 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
1 ... 16 bar



The proportional lubricator adds a precisely adjustable quantity of oil to the compressed air.

The pressure drop that occurs when air flows through a Venturi nozzle is used to convey oil from the container

to the drip cap. From here, the oil drips into the air duct directly behind the proportional valve, where it is atomised. The oil mist part is proportional to the compressed air flow rate.

- Proportional lubricator with precision oil metering
- Integrated sintered filter for filtering the oil
- Reduces wear on drive units subject to high loading
- High flow rate
- Quick and easy oil top-up even during operation (under pressure)

The following oils are recommended for Festo components:

Viscosity range to ISO 3448, ISO class VG 32

32 mm²/s (= cSt) at 40 °C

- Festo special oil OFSW-32 → 29
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

General technical data				
Size	MS9			
Pneumatic connection 1, 2	G¾	G1	G½ ... G1½ (with connecting plate AG...)	– (without connecting thread G)
Design	Proportional standard mist lubricator			
Type of mounting	Via accessories			
	In-line installation			
Mounting position	Vertical ±5°			
Bowl guard	Integrated as metal bowl			
Minimum flow rate for lubricator operation	[l/min]	100		
Max. oil capacity	[ml]	490		

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

Standard nominal flow rate q _N ¹⁾ [l/min]					
Pneumatic connection	Connecting plate AGD	Thread G3/4 or connecting plate AGE	Thread G1 or connecting plate AGF	Connecting plate AGG	Connecting plate AGH
In main flow direction 1 → 2	8,500	15,000	23,000	26,000	27,000

1) Measured at p₁ = 6 bar and Δp = 1 bar.

Lubricators MS9-LOE, MS series

Technical data

FESTO

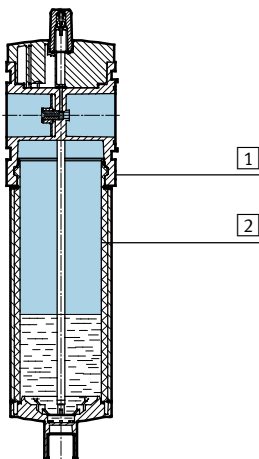
Operating and environmental conditions	
Operating pressure [bar]	1... 16
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Ambient temperature [°C]	-10 ... +60
Temperature of medium [°C]	-10 ... +60
Storage temperature [°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	2

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weight [g]	
Lubricator	2,000

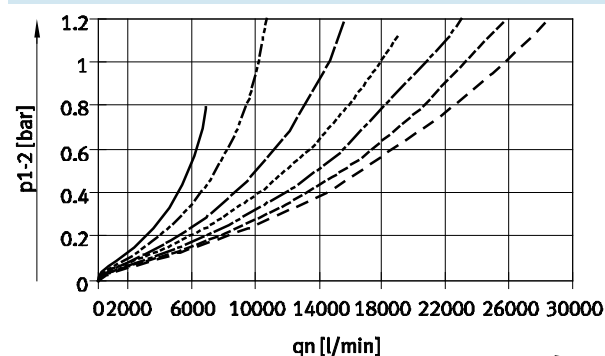
Materials	
Sectional view	



Lubricator	
1 Housing	Die-cast aluminium
2 Bowl	Wrought aluminium alloy
Inspection window	PA
- Cover	PA reinforced
- Connecting plate, module connector, mounting bracket	Die-cast aluminium
- Seals	NBR
Note on materials	RoHS-compliant

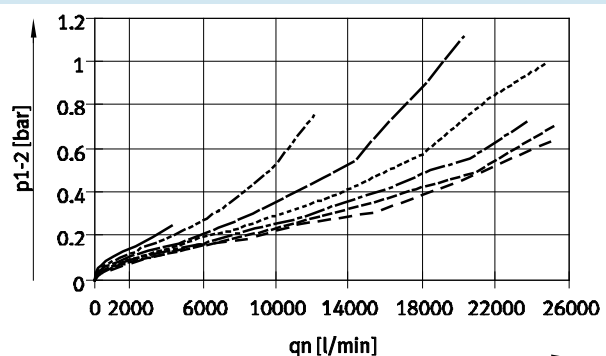
Standard flow rate q_n as a function of differential pressure p_{1-2}

MS9-LOE-3/4/AGE, pneumatic connection G3/4



— 1 bar
 - - - 2 bar
 . . . 4 bar
 - . - 6 bar
 - - - 8 bar
 - - - 10 bar
 - - - 12 bar

MS9-LOE-1/AGE, pneumatic connection G1



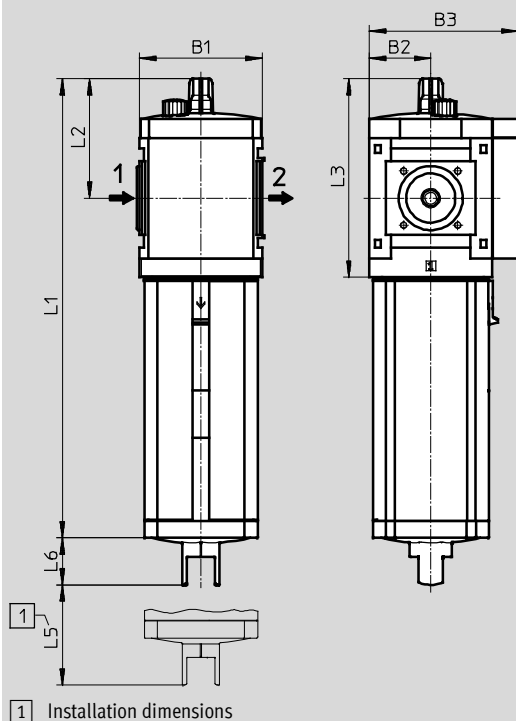
Lubricators MS9-LOE, MS series

Technical data

Dimensions – Basic version

Download CAD data → www.festo.com

Without connecting thread G



1 Installation dimensions

→ Flow direction

Type	B1	B2	B3	L1	L2	L3	L5 min.	L6
MS9-LOE-G	90	45	109	336.3	87	145	225	34.5

Lubricators MS9-LOE, MS series

Technical data

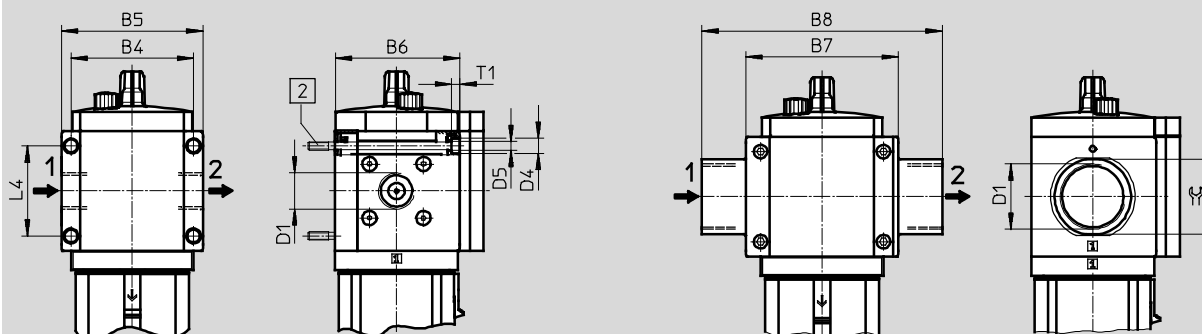
FESTO

Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

With connecting thread 3/4 or 1

With connecting plate AG...



[2] Mounting screw M6xmin.90 to DIN 912 (not included in the scope of delivery) for wall mounting without mounting bracket

→ Flow direction

Type	B4	B5	B6	B7	B8	D1	D4 Ø	D5 Ø	L4	T1	≡
MS9-LOE-3/4	90	104	91.5	–	–	G3/4	11	6.5	66	6	–
MS9-LOE-1						G1					
MS9-LOE-AGD	–	–	–	112	132	G1/2	–	–	–	–	30
MS9-LOE-AGE					132	G3/4					36
MS9-LOE-AGF					142	G1					41
MS9-LOE-AGG					162	G1 1/4					50
MS9-LOE-AGH					176	G1 1/2					55

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

Ordering data			
Size	Connection	Part No.	Type
MS9	–	564144	MS9-LOE-G-U

Lubricators MS9-LOE, MS series

Ordering data – Modular products

M Mandatory data						O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Alternative flow direction
562533	MS	9	LOE	3/4, 1, AGD, AGE, AGF, AGG, AGH, G	U	WP, WPM, WPB	Z
Ordering example							
562533	MS	9	- LOE	- AGD	- U	- WP	

Ordering table					
Grid dimension	[mm]	90	Condi- tions	Code	Enter code
M	Module No.	562533			
	Series	Standard service unit		MS	MS
	Size	9		9	9
	Function	Lubricator		-LOE	-LOE
	Connection size	Thread G3/4		-3/4	
		Thread G1		-1	
		Connecting plate G1/2		-AGD	
		Connecting plate G3/4		-AGE	
		Connecting plate G1		-AGF	
		Connecting plate G1 1/4		-AGG	
		Connecting plate G1 1/2		-AGH	
		Module without connecting thread, without connecting plate		-G	
	Bowl	Metal bowl		-U	-U
O	Type of mounting	Mounting bracket	1	-WP	
		Mounting bracket	1	-WPM	
		Mounting bracket for large wall gap	1	-WPB	
	Alternative flow direction	Flow direction from right to left		-Z	

1 WP, WPM, WPB Not with module G

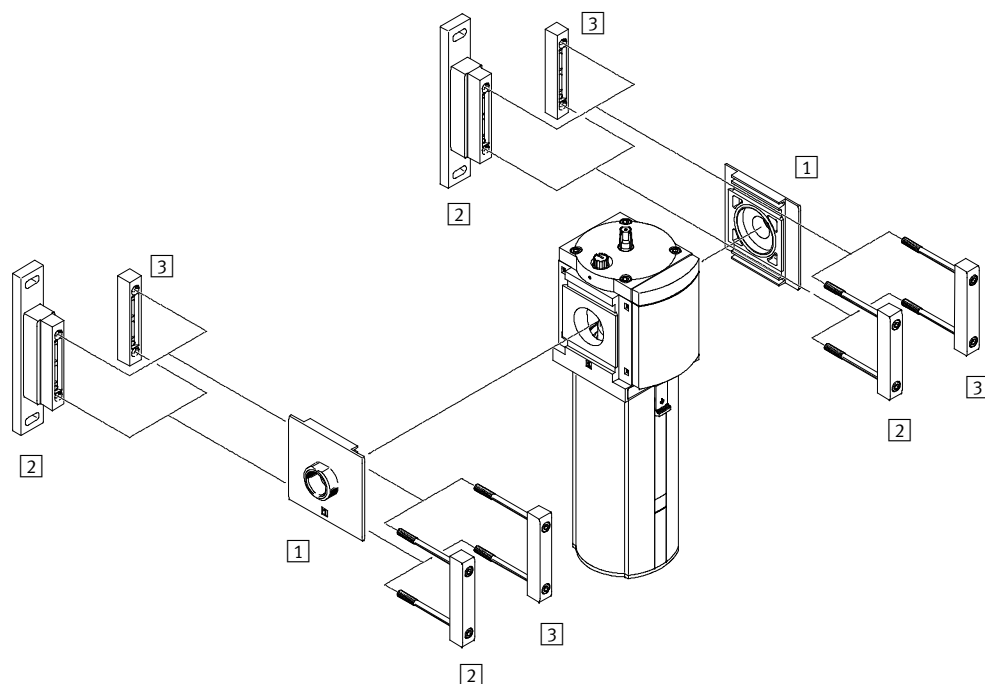
Transfer order code

562533	MS	9	-	LOE	-		-	U	-		-	
--------	----	---	---	-----	---	--	---	---	---	--	---	--

Lubricators MS12-LOE, MS series

Peripherals overview

FESTO



-  - Note

Additional accessories:

- Module connector for combination with size MS9 → Internet: armv

Mounting attachments and accessories		→ Page/Internet
1	Connecting plate MS12-AG...	ms12-ag
2	Mounting bracket MS12-WP	ms12-wp
3	Module connector MS12-MV	ms12-mv

Lubricators MS12-LOE, MS series

FESTO

Type codes

		MS	12	–	LOE	–	G	–	U
Series									
MS	Standard service unit								
Size									
12	Grid dimension 124 mm								
Service function									
LOE	Lubricator								
Connection size									
G	Module without connecting thread, without connecting plate Connecting plates → Accessories								
Bowl guard									
U	Metal bowl								

Further variants can be ordered using the modular system → 28

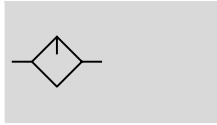
- Connecting plates
- Type of mounting
- Alternative flow direction

Lubricators MS12-LOE, MS series

FESTO

Technical data

Function



-  - Flow rate
20,000 ... 22,000 l/min
-  - Temperature range
0 ... 60 °C
-  - Operating pressure
1 ... 16 bar
-  - www.festo.com

Wearing parts kits
→ 27



The proportional lubricator adds a precision adjustable quantity of oil to the compressed air stream.

The pressure drop that occurs when air flows through a Venturi nozzle is used to convey oil from the container

to the drip cap. From here, the oil drips into the air duct directly behind the proportional valve, where it is atomised. The oil mist component is proportional to the compressed air flow rate.

- Proportional lubricator with precision oil metering
- Reduces wear on drive units subject to high loading
- High flow rate
- Quick and easy oil top-up even during operation (under pressure)

The following oils are recommended for Festo components:

Viscosity range to ISO 3448, ISO class VG 32
32 mm²/s (= cSt) at 40°C

- Festo special oil OFSW-32 → 29
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

General technical data				
Pneumatic connection 1, 2 ¹⁾	G1	G1¼	G1½	G2
Design	Proportional standard mist lubricator			
Type of mounting	Via accessories			
	In-line installation			
Assembly position	Vertical ±5°			
Bowl guard	Metal bowl			
Minimum flow for lubricator operation [l/min]	≤400			
Max. oil capacity [cm ³]	1,500			

1) Dependent on connecting plate selected, must be ordered separately as an accessory → Internet: ms12-ag

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

Standard nominal flow rate qnN ¹⁾ [l/min]				
Pneumatic connection	G1	G1¼	G1½	G2
In main flow direction 1 → 2	20,000	20,500	21,000	22,000

1) Dependent on connecting plate selected, must be ordered separately as an accessory → Internet: ms12-ag
Measured at p₁ = 6 bar and Δp = 0.5 bar

Lubricators MS12-LOE, MS series

FESTO

Technical data

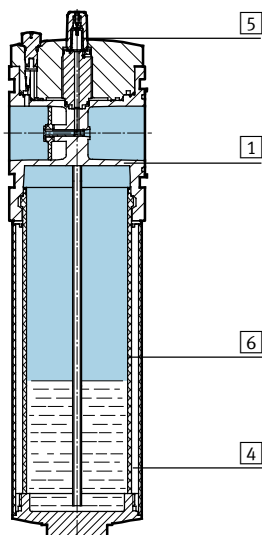
Operating and environmental conditions		
Operating pressure	[bar]	1 ... 16
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Ambient temperature	[°C]	0 ... +60
Temperature of medium	[°C]	0 ... +60
Storage temperature	[°C]	-10 ... +60
Corrosion resistance	CRC ¹⁾	2

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weights [g]	
Lubricator with metal bowl U	6,500

Materials	
Sectional view	



Lubricator		
1	Body	Die-cast aluminium
4	Metal bowl	Aluminium
5	Lubricator dome	PC
6	Metal bowl sight glass	PA
-	Seals	NBR

Lubricators MS12-LOE, MS series

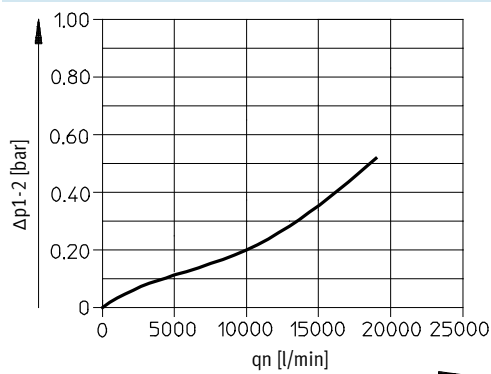
Technical data

FESTO

Standard flow rate q_n as a function of the differential pressure Δp_{1-2}

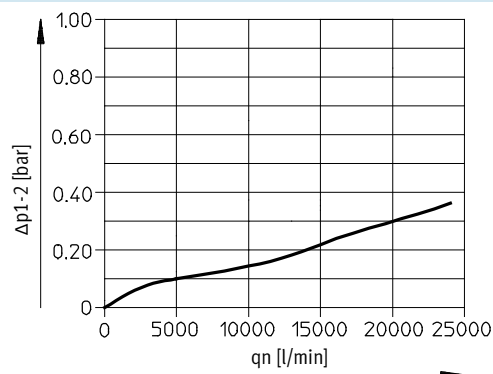
With connecting plate MS12-AGF

Pneumatic connection G1



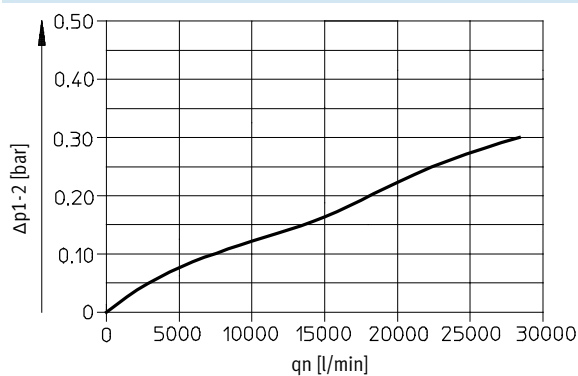
With connecting plate MS12-AGG

Pneumatic connection G1¼



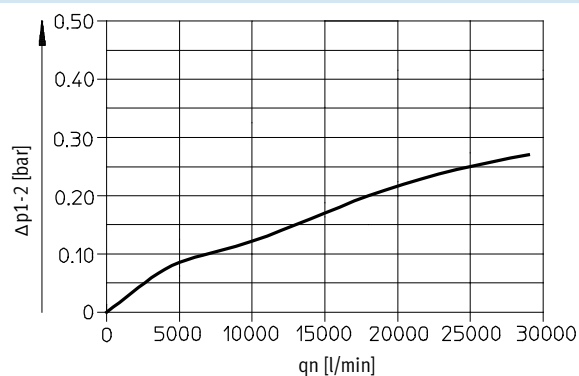
With connecting plate MS12-AGH

Pneumatic connection G1½



With connecting plate MS12-AGI

Pneumatic connection G2



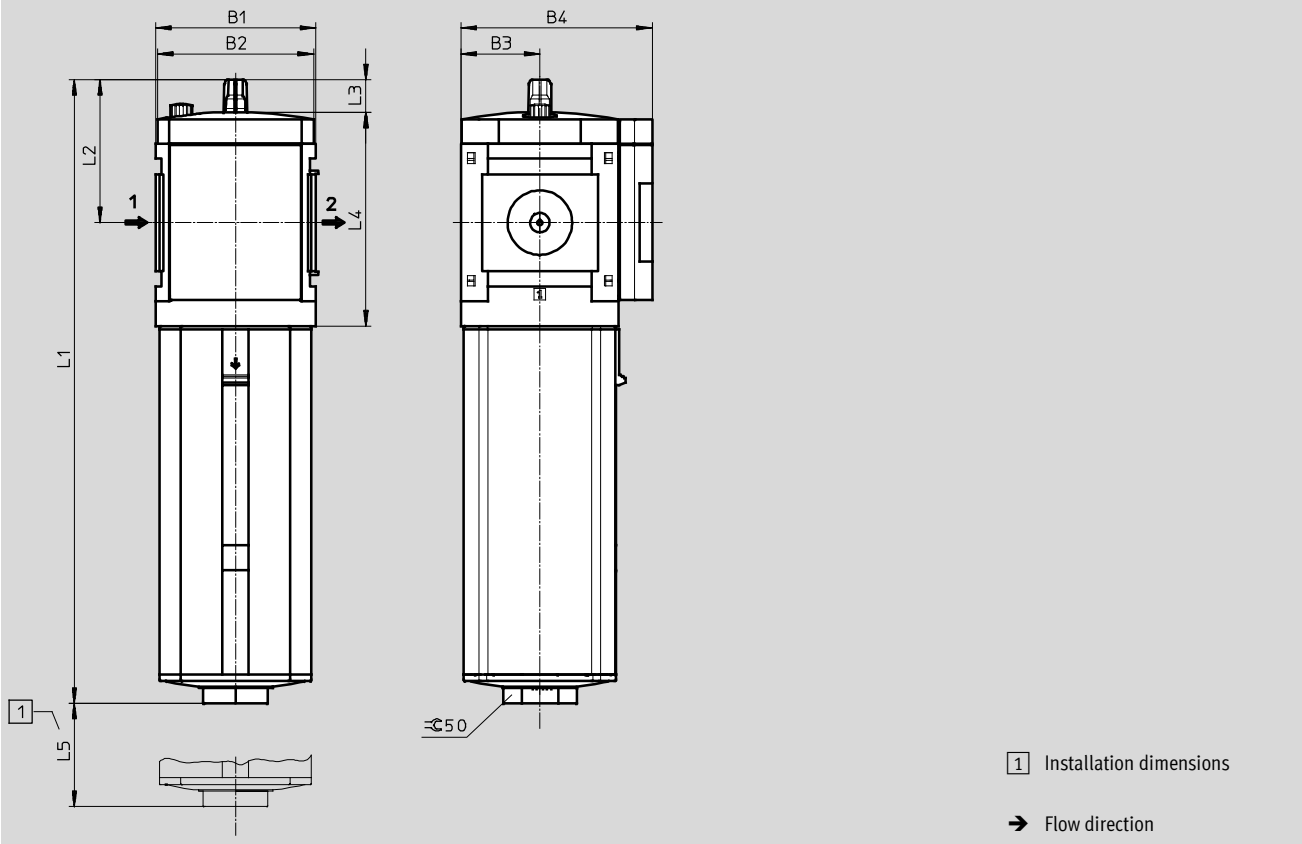
Lubricators MS12-LOE, MS series

Technical data

FESTO

Dimensions – Basic version

Download CAD data → www.festo.com



Type	B1	B2	B3	B4	L1	L2	L3	L4	L5
MS12-LOE	124	122	61	148	483	111	25	166	300

Ordering data

Metal bowl

Size	Connection	Part No.	Type
MS12	G1 ... G2 ¹⁾	537156	MS12-LOE-G-U

1) Connecting plate must be ordered separately as an accessory → Internet: ms12-ag

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

Ordering data – Wearing parts kits

Size	Part No.	Type
MS12	673746	MS12-LOE

Lubricators MS12-LOE, MS series

FESTO

Ordering data – Modular products

M Mandatory data						O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Alternative flow direction
535041	MS		LOE	AGF AGG AGH AGI G	U	WP	Z
Order example							
535041	MS	12	- LOE	- AGI	- U	- WP	- Z

Ordering table							
Grid dimension		[mm]	124	Condi- tions	Code	Enter code	
M	Module No.	535041					
	Series	Standard			MS		MS
	Size	12			12		12
	Function	Lubricator			-LOE		-LOE
	Connection size	Connecting plate G1			-AGF		
		Connecting plate G1 ¼			-AGG		
		Connecting plate G1 ½			-AGH		
		Connecting plate G2			-AGI		
		Module without connecting thread, without connecting plate			-G		
	Bowl	Metal bowl			-U		-U
O	Type of mounting	Mounting bracket		1	-WP		
	Alternative flow direction	Flow direction from right to left			-Z		

1 WP Only with connecting plate AGF, AGG, AGH or AGI.

Transfer order code

535041	MS	12	-	LOE	-		-	U	-		-	
--------	----	----	---	-----	---	--	---	---	---	--	---	--

Lubricators MS-LOE, MS series

Accessories



Special oil



Ordering data		
Scope of delivery	Part No.	Type
1 litre	152811	OFSW-32