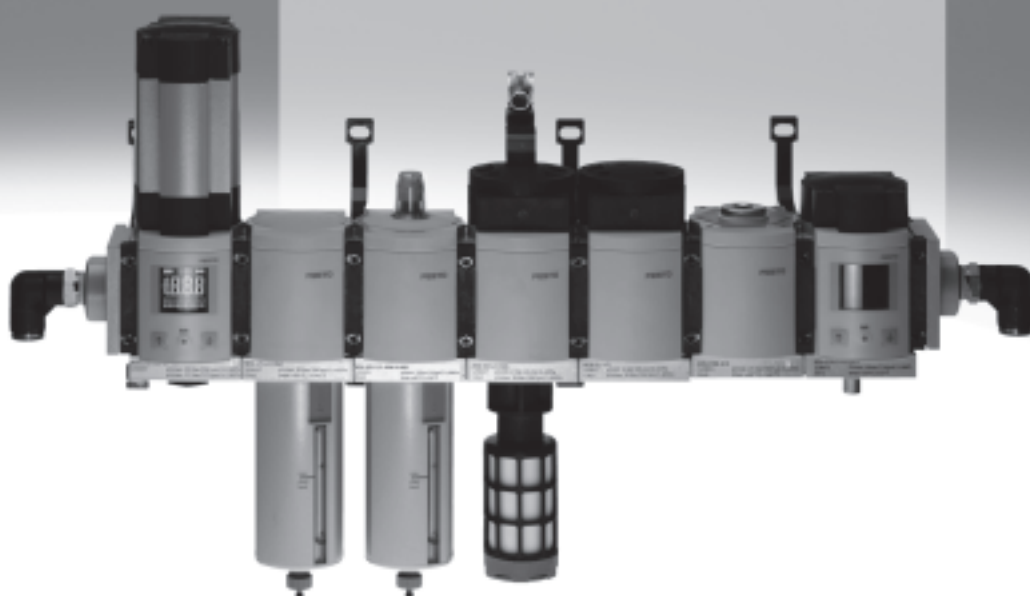


Lubricators MS-LOE, MS series

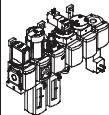
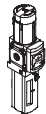
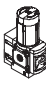
FESTO



Lubricators MS-LOE, MS series

Product range overview – MS series service units

FESTO

Type		Size		Pneumatic connection in housing	Connecting plate	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					AG...	D2	D4	D5	D6	D7	D8	A	B	C	E
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	–												
		12	–	G1, G1¼, G1½, G2	–	–	–	■	■	■	–	–	■	■	
Filter 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	–												
		12	–	G1, G1¼, G1½, 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, G1¼, G1½	–	–	–	–	–	–	■	■	–	–	
		12	–	G1, G1¼, G1½, 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, G1¼, G1½	–	–	–	–	–	–	–	–	–	–	
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–	
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	–												
		12	–	G1, G1¼, G1½, 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	–												

Lubricators MS-LOE, MS series

Product range overview – MS series service units

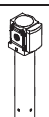
FESTO

Type	Size	Bowl guard		Condensate drains				Pressure indicator					Actuator lock		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 with display	Rotary knob, lockable	Rotary knob, long	Silencer	Flow direction from right to left	
Code		R	U	M	H	V	E ...	VS	AG	A8	A4	AD...	AS	LD	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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	■	■	–	■	■	■	■	–	■	–	■	■	–	■	ms12-lfr
Filters MS-LF	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lf
	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lf
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	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
Pressure regulators MS-LR	4	–	–	–	–	–	–	■	■	■	■	■	■	■	–	■	ms4-lr
	6	–	–	–	–	–	–	■	■	–	■	■	■	■	–	■	ms6-lr
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

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			
				0.3 ... 4	0.3 ... 7	0.5 ... 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											
Electrical pressure regulators MS-LRE		4	–					–	–	–	–
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	■	■	■	■	–	–	–
		9	–								
		12	–								
Lubricators MS-LOE		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	–	–	–
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	–	–	–
		9	–								
		12	–	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	–	–	–	–	–	–	–
Electrical on-off valves MS-EM(1)		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	–	–	–
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	–	–	–
		9	–								
		12	–	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	–	–	–	–	–	–	–
Electrical on-off valves MS-EE		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	■	–	■
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	■	–	■
		9	–								
		12	–	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	–	–	–	–	■	■	■
Electrical soft-start valves MS-DL		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	–	–	–
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	–	–	–
		9	–								
		12	–	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	–	–	–	–	–	–	–
Electrical soft-start valves MS-DE		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	■	–	■
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	■	–	■
		9	–								
		12	–	G1, G1 ¹ / ₄ , G1 ¹ / ₂ , G2	–	–	–	–	■	■	■
Soft start and exhaust valves MS-SV		4	–								
		6	G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	■	–	–
		9	–								
		12	–								
Membrane air dryers MS-LDM1		4	G ¹ / ₈ , G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	–	–	–	–	–	–	–
		6	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	–	–	–	–	–	–	–
		9	–								
		12	–								

Lubricators MS-LOE, MS series

Product range overview – MS series service units



Type	Size	Bowl guard		Pressure indicator					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 with display	Silencer	Flow direction from right to left	
Individual devices											
Electrical pressure regulators MS-LRE	4	-									-
	6	-	-	■	■	-	■	-	-	■	ms6-lre
	9	-									-
	12	-									-
Lubricators MS-LOE	4	■	■	-	-	-	-	-	-	■	8
	6	■	■	-	-	-	-	-	-	■	8
	9	-									-
	12	-	■	-	-	-	-	-	-	■	14
Electrical on-off valves MS-EM(1)	4	-	-	■	■	■	■	■	■	■	ms4-em1
	6	-	-	■	■	-	■	■	■	■	ms6-em1
	9	-									-
	12	-	-	■	■	-	■	-	■	■	ms12-em
Electrical on-off valves MS-EE	4	-	-	■	■	■	■	■	■	■	ms4-ee
	6	-	-	■	■	-	■	■	■	■	ms6-ee
	9	-									-
	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	-									-
Membrane air dryers MS-LDM1	4	-	■	-	-	-	-	-	-	■	ms4-ldm1
	6	-	■	-	-	-	-	-	-	■	ms6-ldm1
	9	-									-
	12	-									-

Lubricators MS-LOE, MS series

Product range overview – MS series service units



Type	Size				Pressure regulation range [bar]				Supply voltage			
Code		Pneumatic connection in housing	Connecting plate	0.3 ... 4	0.3 ... 7	0.5 ... 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	
			AG...	D5	D6	D7	D8	V24	V24P	V110	V230	
Individual devices												
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	–									
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	
Distributor blocks MS-FRM-FRZ		4	G¼	–	–	–	–	–	–	–	–	
		6	G½	–	–	–	–	–	–	–	–	
		9	–									
		12	–									
Flow sensors MS-SFE		4	–									
		6	G½	G½	–	–	–	–	–	–	–	
		9	–									
		12	–									

Lubricators MS-LOE, MS series

Product range overview – MS series service units



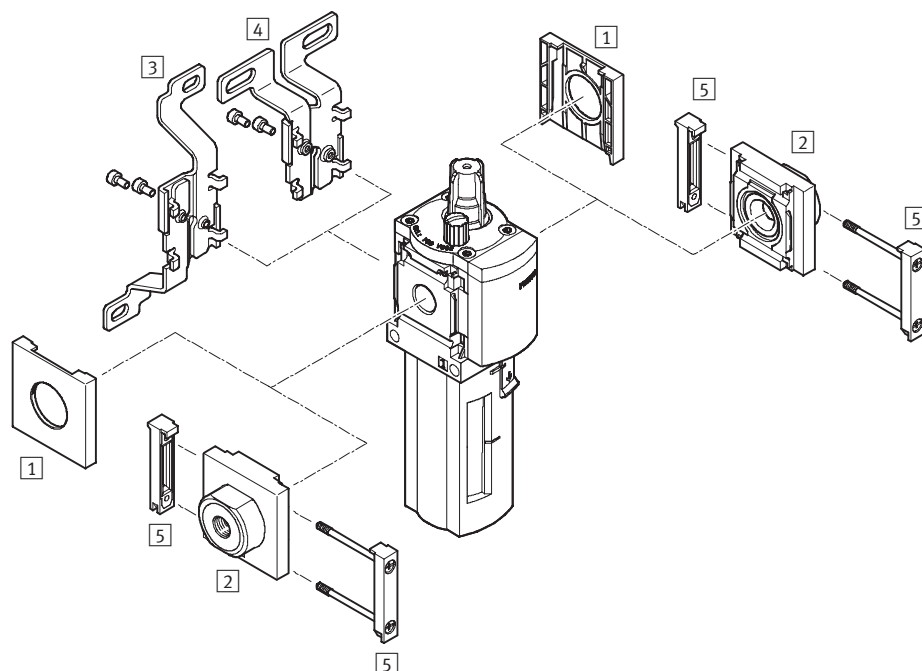
Type	Size	Pressure indicator					Switch output		Options		→ Page/ Internet
		Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor with display	2x PNP	2x NPN	Silencer	Flow direction from right to left	
VS	AG	A8	A4	AD...	P2	N2	S	Z			
Individual devices											
Branching modules MS-FRM	4	■	■	■	■	■	-	-	-	■	ms4-frm
	6	■	■	-	■	■	-	-	-	■	ms6-frm
	9	-									-
	12	■	-	-	-	-	-	-	-	-	ms12-frm
Distributor blocks MS-FRM-FRZ	4	-	-	-	-	-	-	-	-	-	ms4-frm
	6	-	-	-	-	-	-	-	-	-	ms6-frm
	9	-									-
	12	-									-
Flow sensors MS-SFE	4	-									-
	6	-	-	-	-	-	■	■	-	■ ¹⁾	ms6-sfe
	9	-									-
	12	-									-

1) Can only be ordered using the configurator → Internet: ms6-sfe

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/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									
1/8	Thread G1/8								
1/4	Thread G1/4								
3/8	Thread G3/8								
1/2	Thread G1/2								
Bowl guard									
R	Plastic bowl guard								
U	Metal bowl								

Further variants can be ordered using the modular system

Lubricator LOE

➔ 13

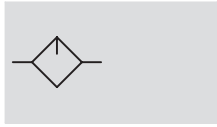
- Connecting plates
- Type of mounting
- Alternative flow direction

Lubricators MS4/MS6-LOE, MS series

FESTO

Technical data

Function



- Flow rate
1,100 ... 7,200 l/min
- Temperature range
-10 ... +60 °C
- Input 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 pro-

portional 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 → 21
- 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				
	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 with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate q _N [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

Operating and environmental conditions		
Size	MS4	MS6
Input pressure [bar]	1 ... 12	1 ... 16
Operating medium	Compressed air	
Ambient temperature [°C]	-10 ... +60	
Temperature of medium [°C]	-10 ... +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.

Lubricators MS4/MS6-LOE, MS series

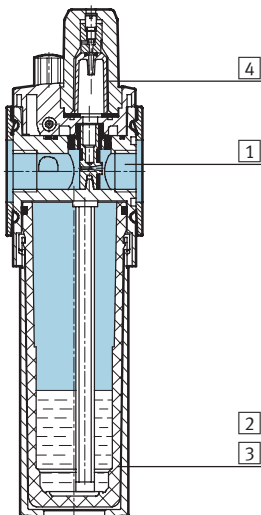
Technical data

FESTO

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

Materials

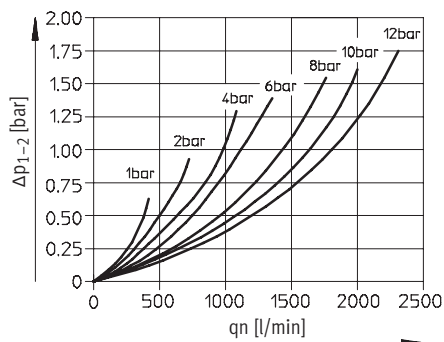
Sectional view



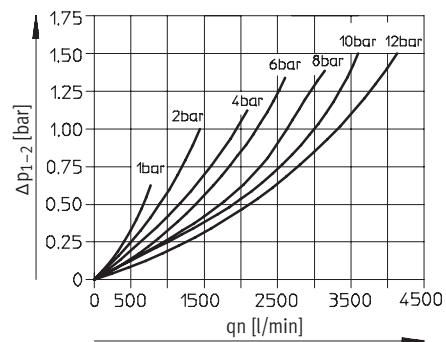
Lubricators		
1	Body	Die-cast aluminium
2	Plastic bowl guard	Polycarbonate/polyamide
3	Metal bowl Viewing window	Aluminium Polyamide
4	Lubricator dome	Polycarbonate
-	Seals	Nitrile rubber

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

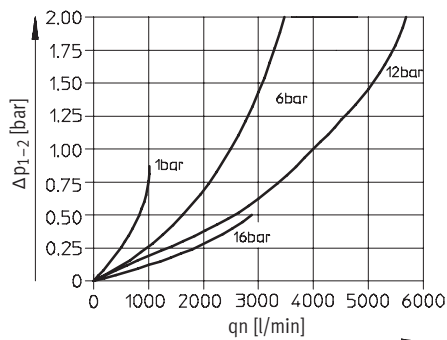
MS4-LOE-1/8



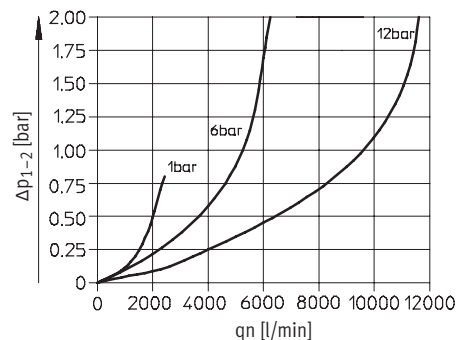
MS4-LOE-1/4



MS6-LOE-1/4



MS6-LOE-3/8



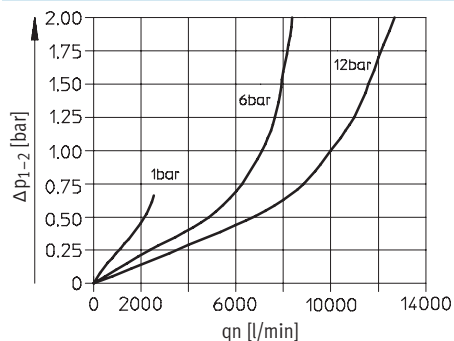
Lubricators MS4/MS6-LOE, MS series

Technical data

FESTO

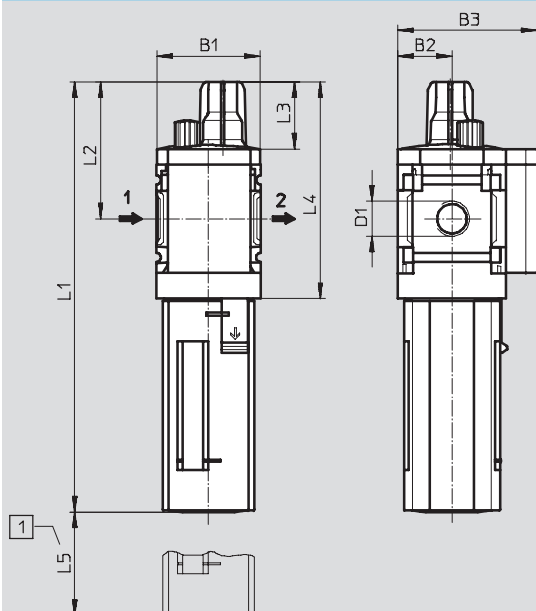
Standard flow rate q_n as a function of the differential pressure Δp_{1-2}

MS6-LOE-1/2



Dimensions – Standard

Download CAD data → www.festo.com



1 Installation dimensions

→ Flow direction

Type	B1	B2	B3	D1	L1		L2	L3	L4	L5
					Bowl guard					
					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 with the ISO 1179-1 standard and the ISO 228-1 standard.

Ordering data

Size	Connection	Plastic bowl guard		Metal bowl	
		Part No.	Type	Part No.	Type
MS4	G1/8	529 413	MS4-LOE-1/8-R	535 791	MS4-LOE-1/8-U
	G1/4	529 411	MS4-LOE-1/4-R	535 790	MS4-LOE-1/4-U
MS6	G1/4	529 779	MS6-LOE-1/4-R	529 781	MS6-LOE-1/4-U
	G3/8	529 783	MS6-LOE-3/8-R	529 785	MS6-LOE-3/8-U
	G1/2	529 775	MS6-LOE-1/2-R	529 777	MS6-LOE-1/2-U

Lubricators MS4/MS6-LOE, MS series

Ordering data – Modular products

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M Mandatory data						O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Alternative flow direction
527 701 527 674	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							
527 701	MS	4	- LOE	- AGB	- R	- WP	- Z

Ordering table							
Grid dimension		[mm]	40	62	Condi- tions	Code	Enter code
M	Module No.		527 701	527 674			
	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.

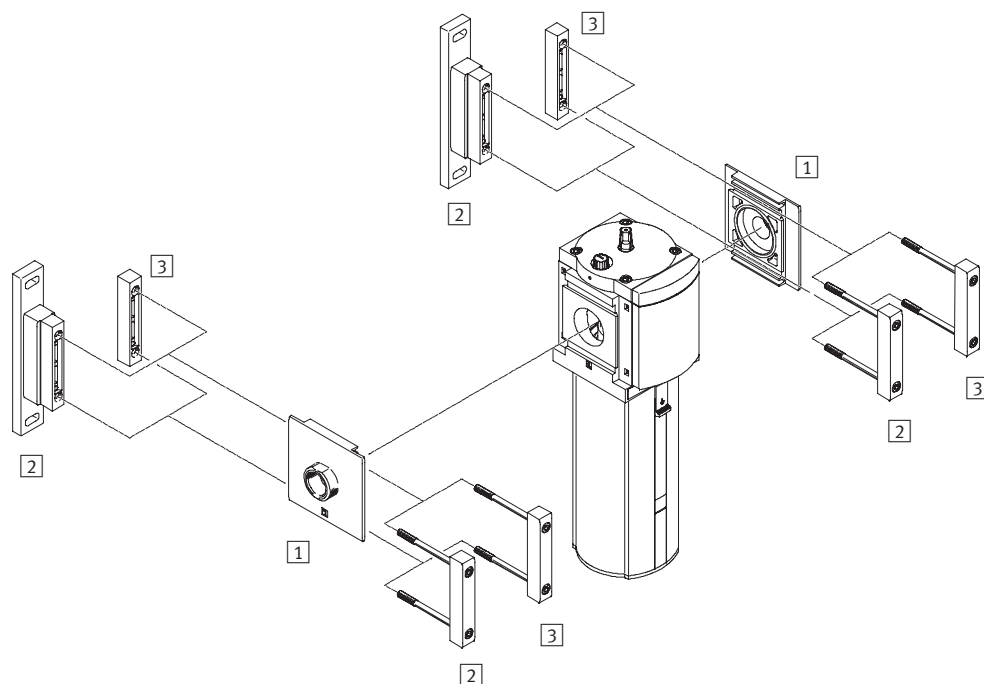
Transfer order code

	MS		- LOE					
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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

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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

Lubricators LOE → 20

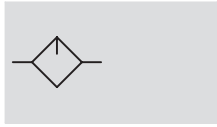
- Connecting plates
- Type of mounting
- Alternative flow direction

Lubricators MS12-LOE, MS series

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Technical data

Function



-  - Flow rate
20,000 ... 22,000 l/min

-  - Temperature range
0 ... 60 °C

-  - Input pressure
1 ... 16 bar

-  - www.festo.com

Wearing parts kits
→ 19



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 → 21
- 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 with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate q _N 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		
Input pressure	[bar]	1 ... 16
Operating medium		Compressed air, air quality class 5.7.- to DIN ISO 8573-1
Ambient temperature	[°C]	0 ... +60
Temperature of medium	[°C]	0 ... +60
Storage temperature	[°C]	-10 ... +60
Corrosion resistance	CRC ¹⁾	2

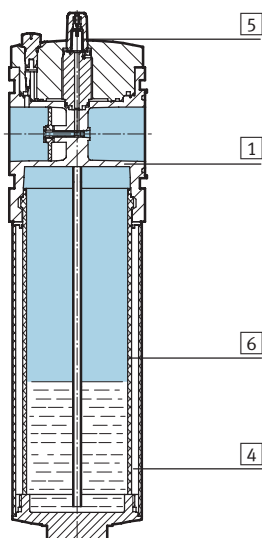
1) Corrosion resistance class 2 according to Festo standard 940 070

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/polyamide
5	Lubricator dome	Polycarbonate
6	Metal bowl sight glass	Polyamide
-	Seals	Nitrile rubber

Lubricators MS12-LOE, MS series

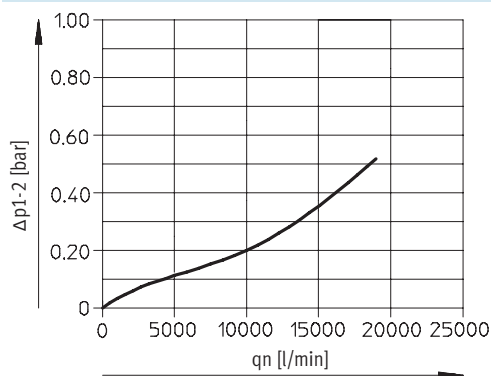
Technical data

FESTO

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

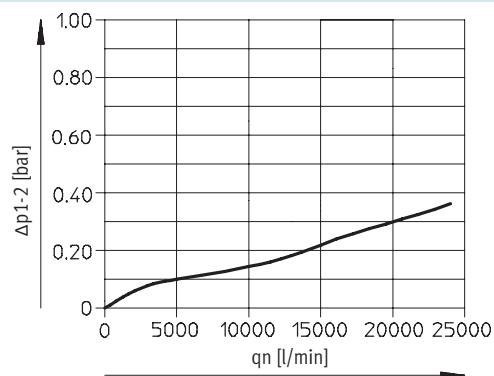
With connecting plate MS12-AGF

Pneumatic connection G1



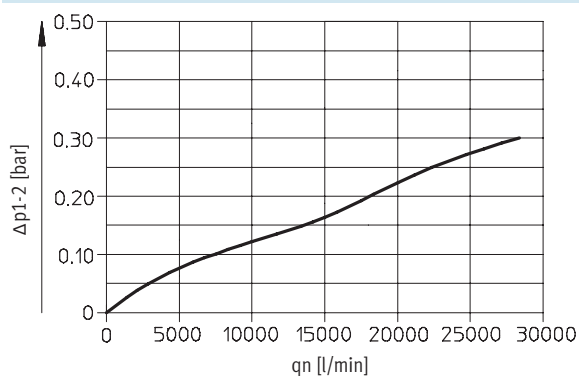
With connecting plate MS12-AGG

Pneumatic connection G1¼



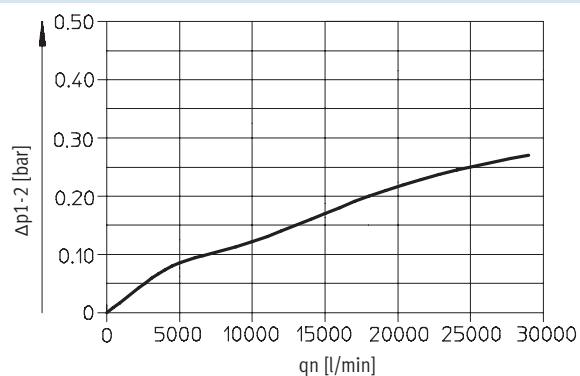
With connecting plate MS12-AGH

Pneumatic connection G1½



With connecting plate MS12-AGI

Pneumatic connection G2



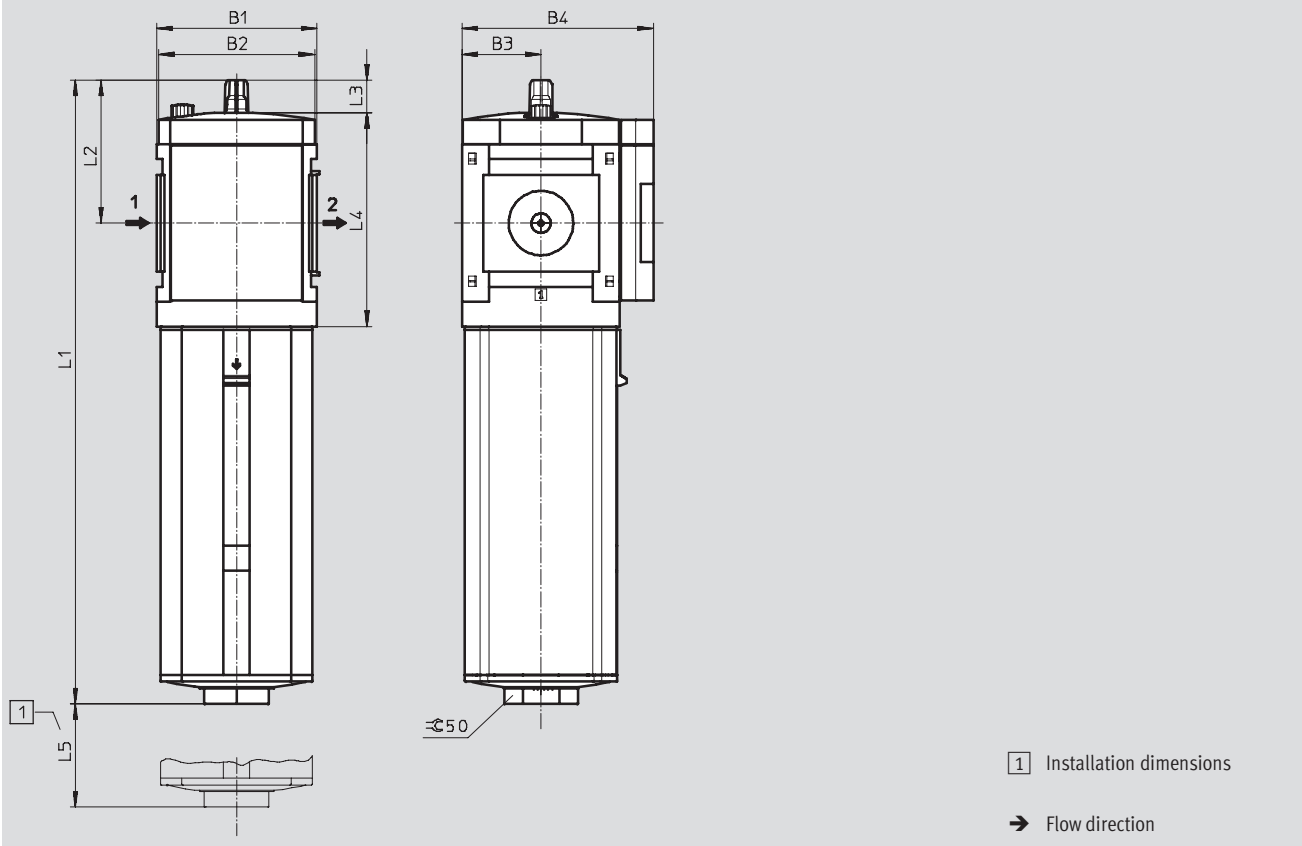
Lubricators MS12-LOE, MS series

Technical data

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Dimensions – Standard

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⁾	537 156	MS12-LOE-G-U

1) Connecting plate must be ordered separately as an accessory → Internet: ms12-ag
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Ordering data – Wearing parts kits

Size	Part No.	Type
MS12	673 746	MS12-LOE

Lubricators MS12-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
535 041	MS		LOE	AGF AGG AGH AGI G	U	WP	Z
Order example							
535 041	MS	12	- LOE	- AGI	- U	- WP	- Z

Ordering table							
Grid dimension		[mm]	124	Condi- tions	Code	Enter code	
M	Module No.	535 041					
	Series	Standard			MS		MS
	Size	12			12		12
	Function	Lubricator			-LOE		-LOE
	Connection size	Connecting plate G1			-AGF		
		Connecting plate G1¼			-AGG		
		Connecting plate G1½			-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

535 041 MS 12 - LOE - U - -

Lubricators MS-LOE, MS series

Accessories



Special oil



Ordering data		
Scope of delivery	Part No.	Type
1 litre	152 811	OFSW-32