

Lubricators MS12-LOE – Metric Series

FESTO



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 atomized. The oil mist component is proportional to the compressed air flow rate.

- Pneumatic connection: G1, G1¼, G1½, G2
- Supply pressure: 1 ... 16 bar
- Flow rate: 20,000 ... 22,000 l/min

Product Range Overview						
Type	Flow rate [l/min]	Pneumatic connections		Bowl guard		Reverse flow
		Body thread	Port plate	Plastic bowl guard	Metal bowl	Flow direction from right to left
MS12			AG...	R	U	Z
LOE	20,000 ... 22,000	–	G1, G1¼, G1½, G2	–	■	■

Features

- 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
→ 1180
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

Contents

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→ www.festo.com/catalog/ms12-loe	

Lubricators MS12-LOE – Metric Series

Technical Data

FESTO

ISO Symbol



General Technical Data				
Pneumatic connection 1, 2 ¹⁾	G1	G1¼	G1½	G2
Supply pressure [bar]	1 ... 16			

1) Dependent on port plate selected, must be ordered separately as an accessory → 1178

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate q _N ²⁾ [l/min]				
Pneumatic connection 1, 2	G1	G1¼	G1½	G2
In main flow direction 1 → 2	20,000	20,500	21,000	22,000

2) Dependent on port plate selected, must be ordered separately as an accessory → 1178
Measured at p₁ = 6 bar and Δp = 0.5 bar

Operating and Environmental Conditions	
Minimum flow for lubricator operation	≤400 [l/min]
Operating medium	Compressed air, air quality class 5.7 – to DIN ISO 8573-1
Max. oil capacity	1,500 [cm ³]
Bowl guard	Metal bowl
Ambient temperature	0 ... +60 [°C]
Temperature of medium	0 ... +60 [°C]
Storage temperature	–10 ... +60 [°C]
Assembly position	Vertical ±5°
Corrosion resistance	CRC ³⁾ 2

3) 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]	
With metal bowl	6,500

- Wearing parts kits → 1180
- For spare parts go to: www.festo.com/en/spare_parts_service

Lubricators MS12-LOE – Metric Series

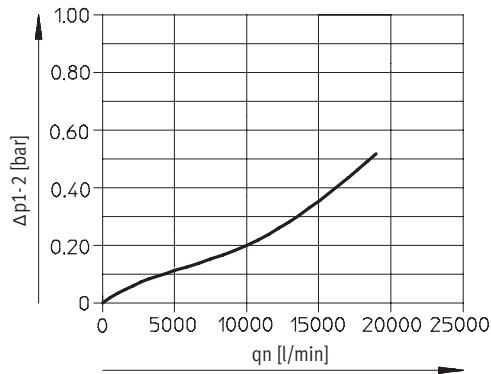
Technical Data

FESTO

Standard Flow Rate q_n as a Function of the Differential Pressure Δp_{1-2}

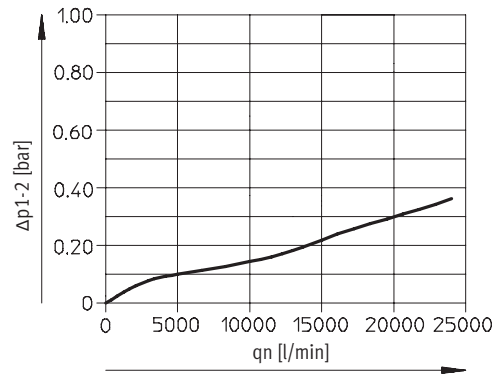
With port plate MS12-AGF

Pneumatic connection G1



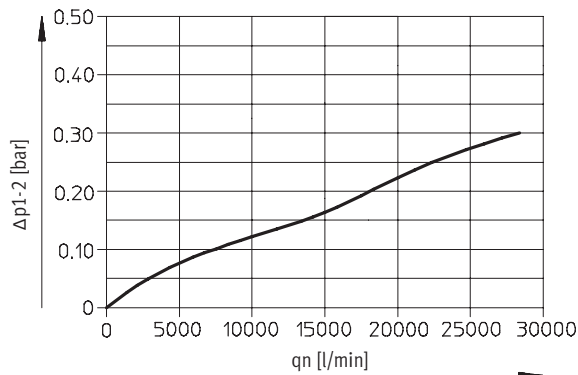
With port plate MS12-AGG

Pneumatic connection G1¼



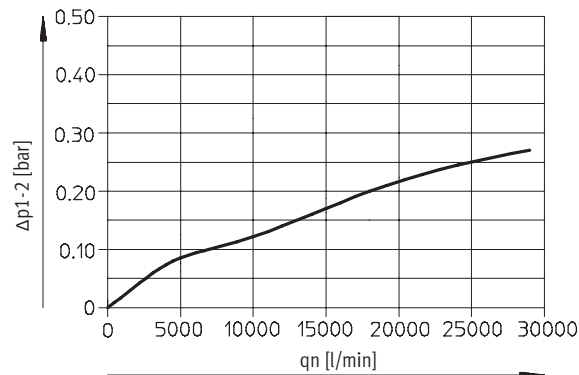
With port plate MS12-AGH

Pneumatic connection G1½



With port plate MS12-AGI

Pneumatic connection G2



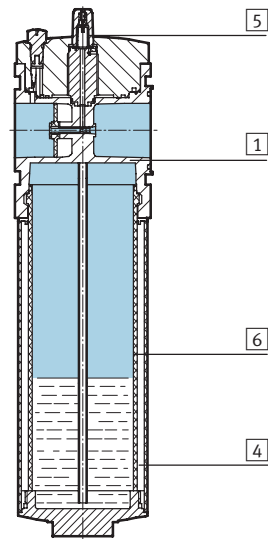
Lubricators MS12-LOE – Metric Series

Technical Data

FESTO

Materials

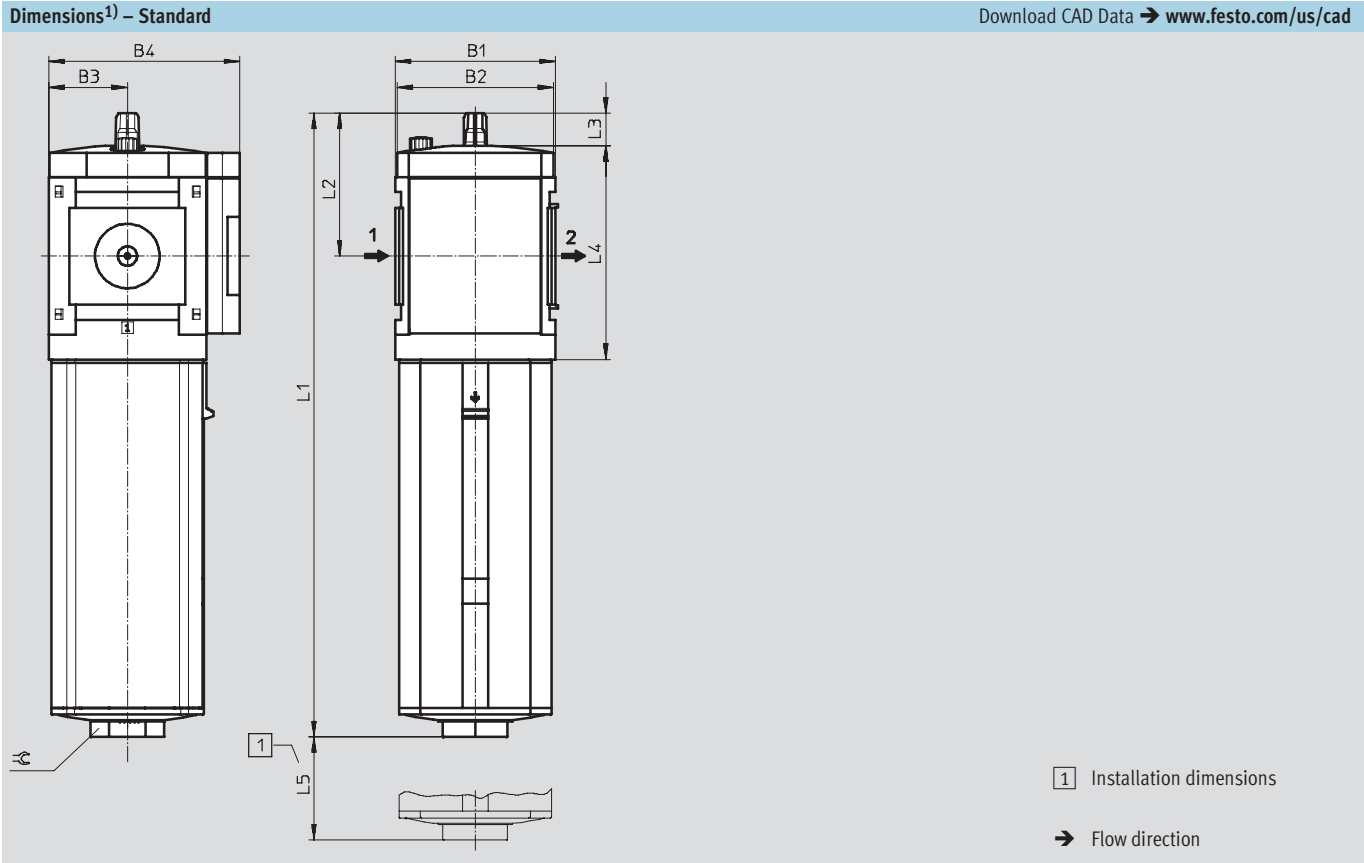
Sectional view



Lubricator		
1	Body	Die-cast aluminum
4	Metal bowl	Aluminum/polyamide
5	Lubricator dome	Polycarbonate
6	Metal bowl sight glass	Polyamide
-	Seals	Nitrile rubber

Lubricators MS12-LOE – Metric Series

Dimensional Drawings, Ordering Data – Pre-configured Products



B1	B2	B3	B4	L1	L2	L3	L4	L5	≅
124	122	61	148	483	111	25	166	300	50

1) Dimensions are in millimeters, unless otherwise noted.

Ordering Data									
Metal bowl									
Connection	Part No.	Type							LT
G1 ... G2 ²⁾	537156	MS12-LOE-G-U							1D

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

2) Port plate must be ordered separately as an accessory → 1178

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Lubricators MS12-LOE – Metric Series

Ordering Data – Configurable Products



M Mandatory Data						O Options	
Part No.	Series	Size	Function	Connection size	Bowl	Type of mounting	Reverse flow direction
535041	MS	12	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	Conditions	Code	Enter code	
M	Part No.	535041					
	Series	Standard			MS		MS
	Size	12			12		12
	Function	Lubricator			-LOE		-LOE
	Connection size	Port plate G1 (dimensions → 1178)			-AGF		
		Port plate G1¼ (dimensions → 1178)			-AGG		
		Port plate G1½ (dimensions → 1178)			-AGH		
		Port plate G2 (dimensions → 1178)			-AGI		
		Module without connecting thread, without port plate			-G		
	Bowl	Metal bowl			-U		-U
O	Type of mounting	Mounting bracket (dimensions → 1179)		1	-WP		
	Reverse flow direction	Flow direction from right to left			-Z		

1 WP Only with port plate AGF, AGG, AGH or AGI

Transfer order code

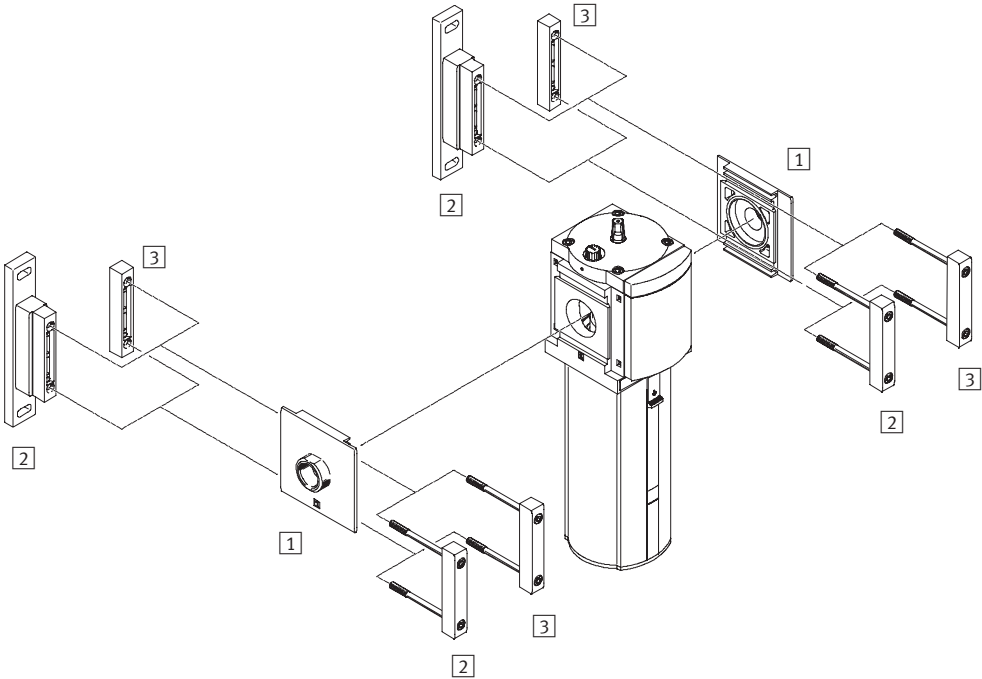
535041	MS	12	- LOE	-		- U	-		-	
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Lubricators MS12-LOE – Metric Series

Accessories Overview



Mounting Attachments and Accessories



Mounting Attachments and Accessories		→ Page
1	Port plate MS12-AG...	1178
2	Mounting bracket MS12-WP	1179
3	Body connector MS12-MV	1178

Lubricators MS12-LOE – Metric Series

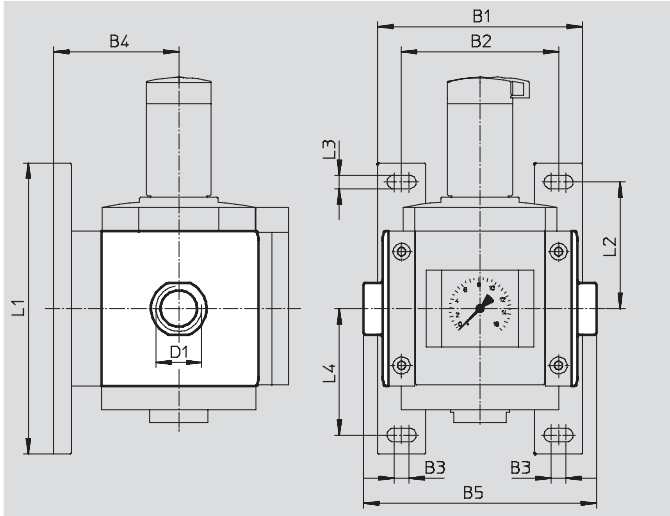


Accessories

1 Port plate MS12-AG...

- Adapter for pneumatic connection

Material:
Die-cast aluminum
Free of copper and PTFE



Dimensions and Ordering Data												Part No.	Type
B1	B2	B3	B4	B5	D1	L1	L2	L3	L4	Weight [g]			
162	124	12	99	184	G1	230	100	11	100	1,300		537135	MS12-AGF
				184	G1¼							537136	MS12-AGG
				184	G1½							537137	MS12-AGH
				196	G2							537138	MS12-AGI

3 Body connector MS12-MV

- For connecting modules

Material:
Die-cast aluminum,
Free of copper and PTFE



Ordering Data			
Size	Weight [g]	Part No.	Type
MS12	500	537134	MS12-MV

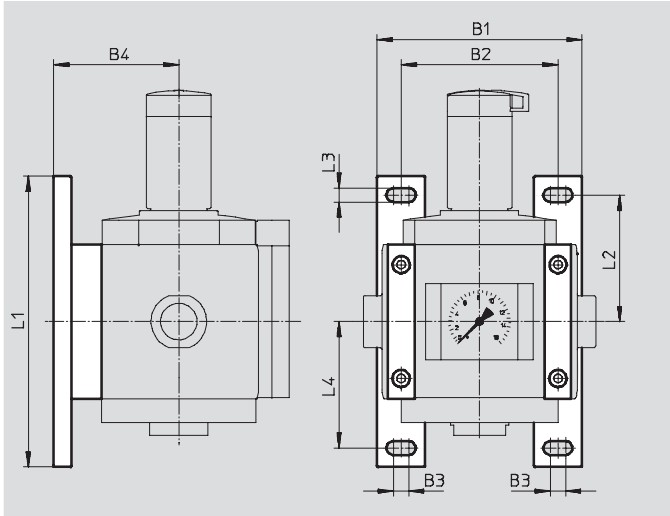
Lubricators MS12-LOE – Metric Series

Accessories

2 Mounting bracket MS12-WP

- To connect the modules for wall mounting
- In combination with a port plate for mounting an individual unit on a wall

Material:
Die-cast aluminum
Free of copper and PTFE



Dimensions and Ordering Data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS12	162	124	12	99	230	100	11	100	700	537133	MS12-WP

Lubricators MS12-LOE – Metric Series

Accessories

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Ordering Data – Special Oil OFSW				
	Description	Scope of delivery	Part No.	Type
	for lubricators	1 liter	152811	OFSW-32

Ordering Data – Wearing Parts Kits				
Size	Description		Part No.	Type
MS12	O-rings, seal		673746	MS12-LOE

- For spare parts go to: www.festo.com/en/spare_parts_service

Lubricators MS12N-LOE – Metric Series

FESTO



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 atomized. The oil mist component is proportional to the compressed air flow rate.

- Pneumatic connection: 1 NPT, 1¼ NPT, 1½ NPT, 2 NPT
- Supply pressure: 15 ... 235 psi
- Flow rate: 706.0 ... 776.6 scfm

Product Range Overview						
Type	Flow rate [scfm]	Pneumatic connections		Bowl guard		Reverse flow
		Body thread	Port plate	Plastic bowl guard	Metal bowl	Flow direction from right to left
MS12N			AG...	R	U	Z
LOE	706.0 ... 776.6	–	1 NPT, 1¼ NPT, 1½ NPT, 2 NPT	–	■	■

Features			Contents
<ul style="list-style-type: none"> • 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) 	<p>The following oils are recommended for Festo components:</p> <p>Viscosity range to ISO 3448, ISO class VG 32</p> <p>32 mm²/s (= cSt) at 40°C</p>	<ul style="list-style-type: none"> • Festo special oil OFSW-32 → 1190 • ARAL Vitam GF 32 • BP Energol HLP 32 • Esso Nuto H 32 • Mobil DTE 24 • Shell Tellus Oil DO 32 	<p>Technical Data → 1182</p> <p>Dimensional Drawings → 1185</p> <p>Ordering Data → 1185</p> <p>Accessories → 1187</p> <p>→ www.festo.com/catalog/ms12n-loe</p>

Lubricators MS12N-LOE – Inch Series

Technical Data

FESTO

ISO Symbol



General Technical Data				
Pneumatic connection 1, 2 ¹⁾	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Supply pressure [psi]	15 ... 235			

1) Dependent on port plate selected, must be ordered separately as an accessory → 1188

Standard Nominal Flow Rate q _N ²⁾ [scfm]				
Pneumatic connection 1, 2	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
In main flow direction 1 → 2	706.0	723.7	741.3	776.6

2) Dependent on port plate selected, must be ordered separately as an accessory → 1188
Measured at p₁ = 88 psi and Δp = 7.4 psi

Operating and Environmental Conditions	
Minimum flow for lubricator operation [scfm]	≤14.1
Operating medium	Compressed air, air quality class 5.7.– to DIN ISO 8573-1
Max. oil capacity [in ³]	91.50
Bowl guard	Metal bowl
Ambient temperature [°F]	32 ... 140
Temperature of medium [°F]	32 ... 140
Storage temperature [°F]	14 ... 140
Assembly position	Vertical ±5°
Corrosion resistance CRC ³⁾	2

3) 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 [lb]	
With metal bowl	13.00

- Wearing parts kits → 1190
- For spare parts go to: www.festo.com/en/spare_parts_service

Lubricators MS12N-LOE – Inch Series

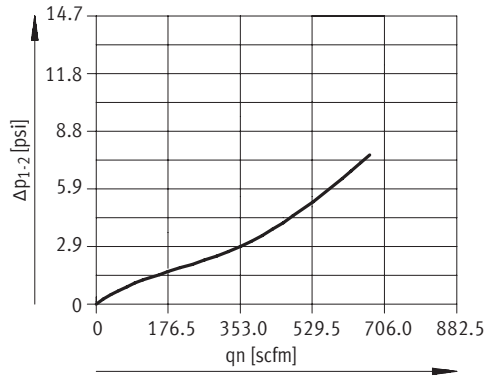
Technical Data

FESTO

Standard Flow Rate q_n as a Function of the Differential Pressure Δp_{1-2}

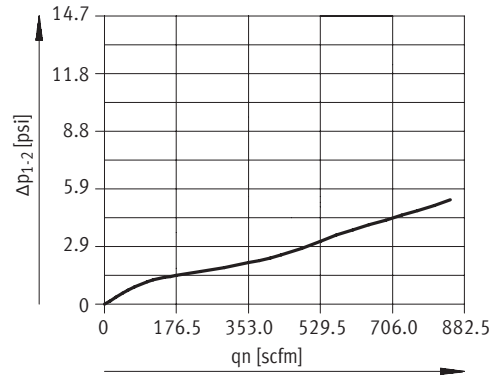
With port plate MS12-AGF

Pneumatic connection 1NPT



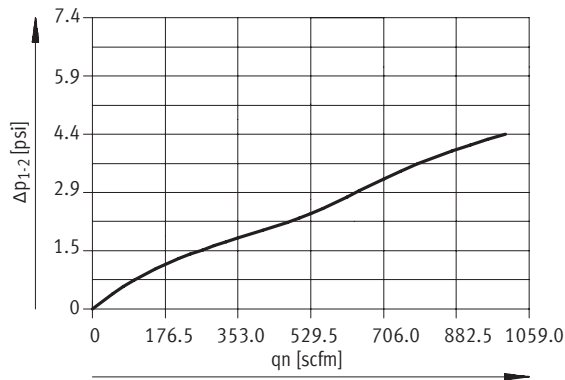
With port plate MS12-AGG

Pneumatic connection 1¼NPT



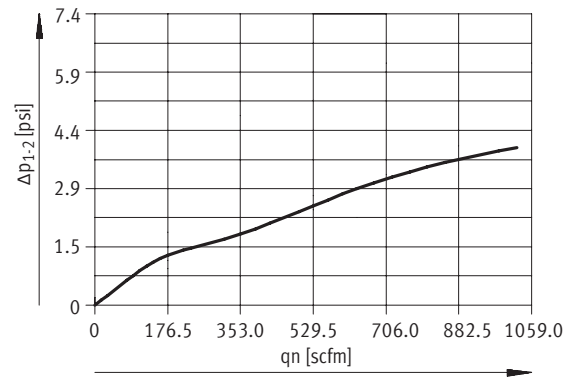
With port plate MS12-AGH

Pneumatic connection 1½NPT



With port plate MS12-AGI

Pneumatic connection 2NPT



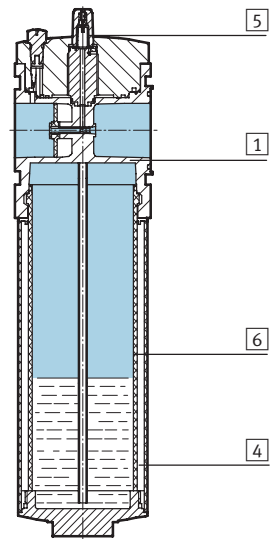
Lubricators MS12N-LOE – Inch Series

Technical Data



Materials

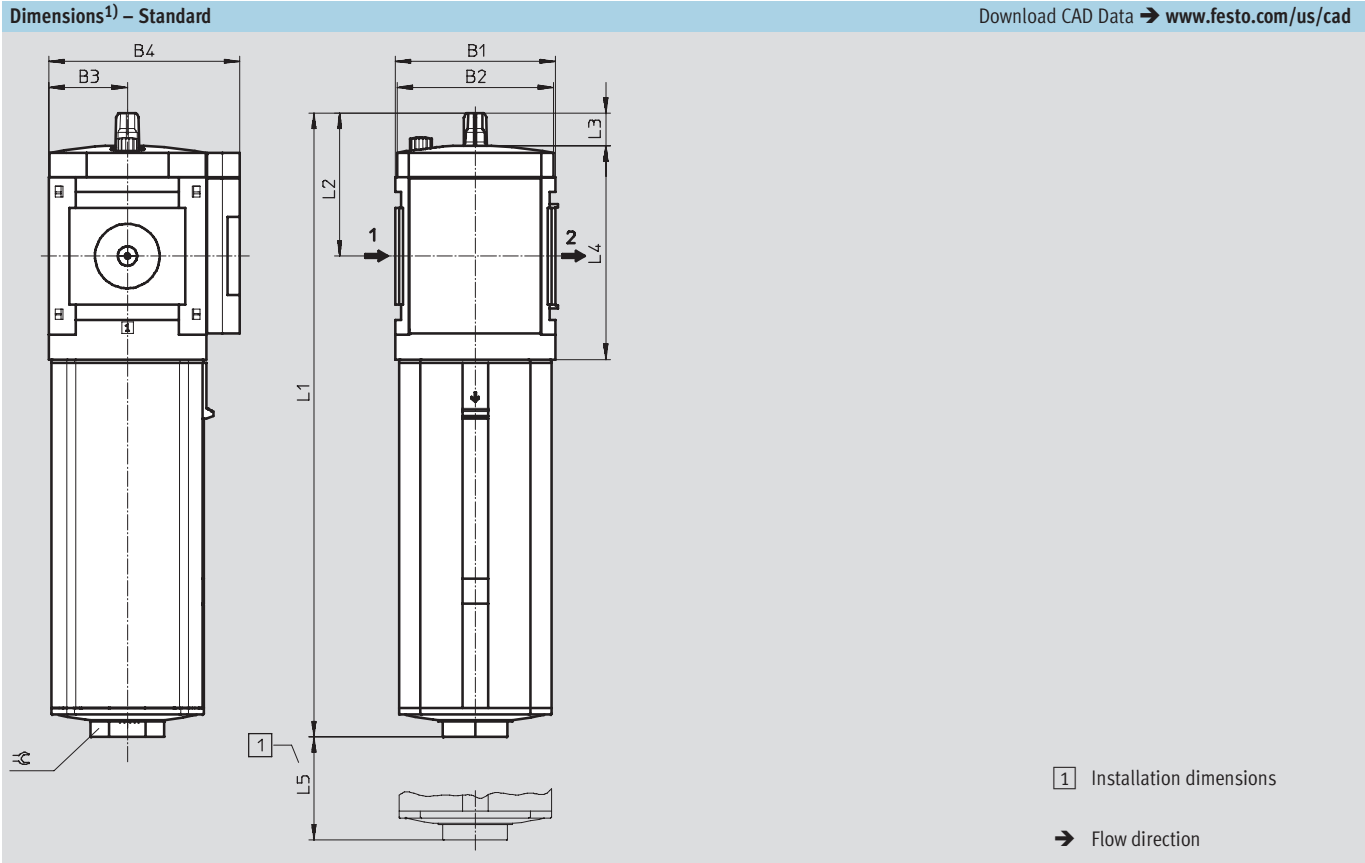
Sectional view



Lubricator		
1	Body	Die-cast aluminum
4	Metal bowl	Aluminum/polyamide
5	Lubricator dome	Polycarbonate
6	Metal bowl sight glass	Polyamide
-	Seals	Nitrile rubber

Lubricators MS12N-LOE – Inch Series

Dimensional Drawings, Ordering Data – Pre-configured Products



B1	B2	B3	B4	L1	L2	L3	L4	L5	⌀
4.88	4.80	2.40	5.83	19.02	4.37	0.98	6.54	11.81	1.97

1) Dimensions are in inches, unless otherwise noted.

Ordering Data				
Metal bowl				
Connection	Part No.	Type		LT
1NPT ... 2NPT ²⁾	537156	MS12-LOE-G-U		1D

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

2) Port plate must be ordered separately as an accessory → 1188

Lubricators MS12N-LOE – Inch Series

Ordering Data – Configurable Products

FESTO

M Mandatory Data							O Options	
Part No.	Series	Size	Thread	Function	Connection size	Bowl	Type of mounting	Reverse flow direction
535044	MS	12	N	LOE	AQT AQU AQV AQW G	U	WP	Z
Order example								
535044	MS	12	N	- LOE	- AQW	- U	- WP	- Z

Ordering Table					
Grid dimension [mm]		124	Conditions	Code	Enter code
M	Part No.	535044			
	Series	Standard		MS	MS
	Size	12		12	12
	Thread	NPT thread		N	N
	Function	Lubricator		-LOE	-LOE
	Connection size	Port plate 1 NPT (dimensions → 1188)		-AQT	
		Port plate 1¼ NPT (dimensions → 1188)		-AQU	
		Port plate 1½ NPT (dimensions → 1188)		-AQV	
		Port plate 2 NPT (dimensions → 1188)		-AQW	
		Module without connecting thread, without port plate		-G	
	Bowl	Metal bowl		-U	-U
O	Type of mounting	Mounting bracket (dimensions → 1189)	1	-WP	
	Reverse flow direction	Flow direction from right to left		-Z	

1 WP Only with port plate AQT, AQU, AQV or AQW

Transfer order code

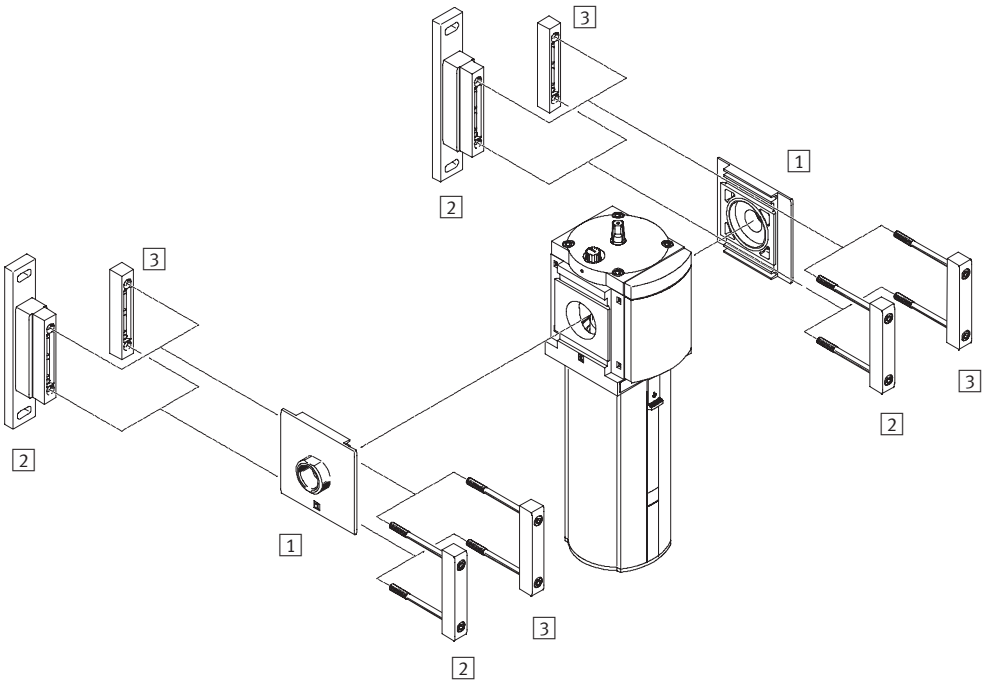
535044 MS 12 N - LOE - U - -

Lubricators MS12N-LOE – Inch Series

Accessories Overview



Mounting Attachments and Accessories



Mounting Attachments and Accessories		→ Page
1	Port plate MS12-AQ...	1188
2	Mounting bracket MS12-WP	1189
3	Body connector MS12-MV	1188

Lubricators MS12N-LOE – Inch Series

FESTO

Accessories

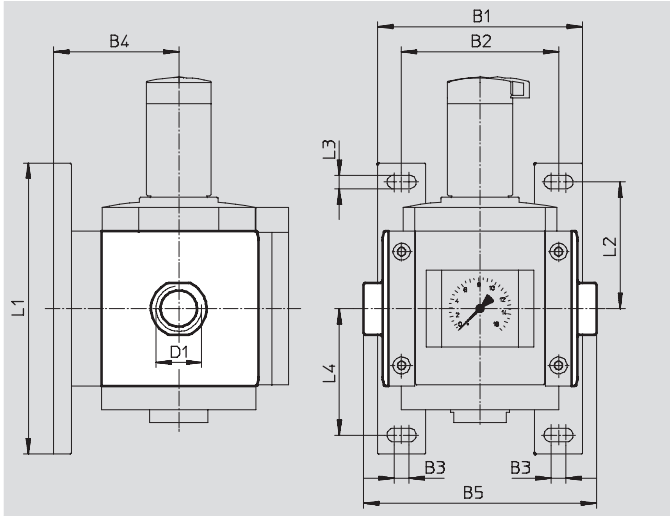
1 Port plate MS12-AQ...

- Adapter for pneumatic connection

Material:

Die-cast aluminum

Free of copper and PTFE



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	D1	L1	L2	L3	L4	Weight [[b]	Part No.	Type
6.38	4.88	0.47	3.90	7.24	1 NPT	9.06	3.94	0.43	3.94	2.60	537139	MS12-AQT
				7.24	1¼ NPT						537140	MS12-AQU
				7.24	1½ NPT						537141	MS12-AQV
				7.72	2 NPT						537142	MS12-AQW

3 Body connector MS12-MV

- For connecting modules

Material:

Die-cast aluminum,

Free of copper and PTFE



Ordering Data			
Size	Weight [[b]	Part No.	Type
MS12	1.00	537134	MS12-MV

Lubricators MS12N-LOE – Inch Series

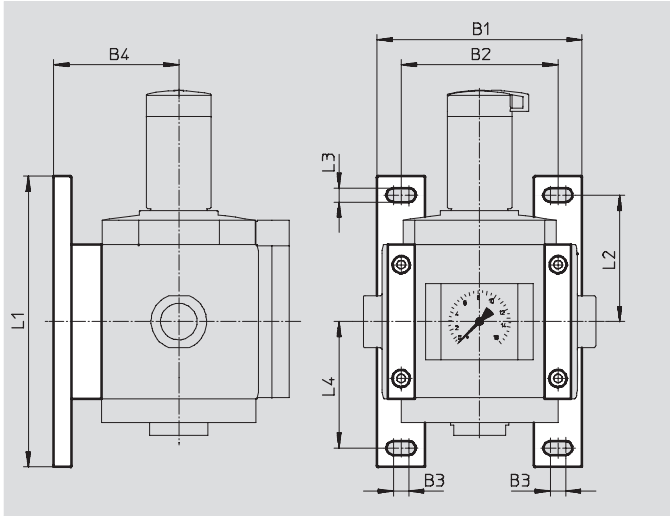


Accessories

2 Mounting bracket MS12-WP

- To connect the modules for wall mounting
- In combination with a port plate for mounting an individual unit on a wall

Material:
Die-cast aluminum
Free of copper and PTFE



Dimensions and Ordering Data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [[b]	Part No.	Type
MS12	6.38	4.88	0.47	3.90	9.06	3.94	0.43	3.94	1.40	537133	MS12-WP

Lubricators MS12N-LOE – Inch Series

Accessories

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Ordering Data – Special Oil OFSW				
	Description	Scope of delivery	Part No.	Type
	for lubricators	1 liter	152811	OFSW-32

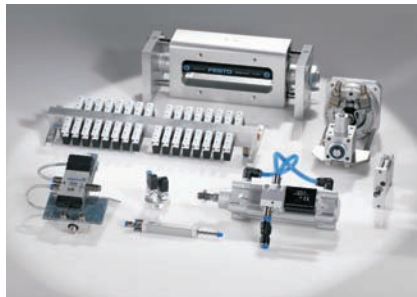
Ordering Data – Wearing Parts Kits				
Size	Description		Part No.	Type
MS12	O-rings, seal		673746	MS12-LOE

- For spare parts go to: www.festo.com/en/spare_parts_service

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



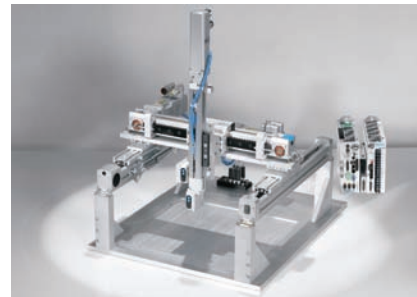
Custom Automation Components

Complete custom engineered solutions



Custom Control Cabinets

Comprehensive engineering support and on-site services



Complete Systems

Shipment, stocking and storage services

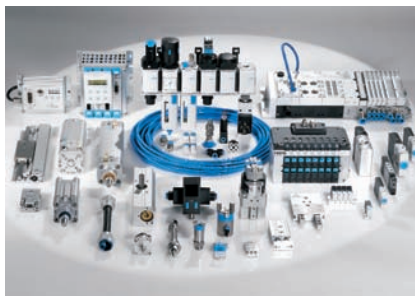
The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical

Electromechanical actuators, motors, controllers & drives



Pneumatics

Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices

PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 11,500 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 Certification

Festo Corporation is committed to provide Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

All Festo locations within the United States are registered to ISO 9001.



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