

# Lubricator LOE

**FESTO**



## Characteristics

### At a glance

Proportional lubricator with precision oil dosing

- Reduces wear on drive units subject to high loads
- High flow rate performance
- Quick and easy oil top-up even during operation (under pressure)
- Transparent oiler bowl with metal bowl guard
- Product complies with ISO 1179-1 and ISO 228-1
- Sizes Mini, Midi, Maxi

The following oils are recommended for Festo components (viscosity range to ISO 3448, ISO class VG 32, 32 mm<sup>2</sup>/s (= cSt) at 40 °C):

- Festo special oil OFSW-32 (see accessories)
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

### Series

The proportional lubricator adds a precisely adjustable amount of oil to the compressed air. The pressure drop that occurs when air flows through a Venturi nozzle is used to feed oil from a reservoir to the drip cap. From there, the oil drips into the air duct directly behind the proportional valve, where it is atomised. The amount of oil mist is proportional to the compressed air flow rate.

### Pneumatic connection

Individual fittings can be connected via connecting plates with female threads.

### Version

[D] D series, metal

Sturdy in full metal design for the specific requirements of the process automation industry

## Type code

001	Series
LOE	Lubricator

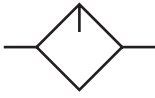
002	Pneumatic connection
	None
<b>1/8</b>	Female thread G1/8
<b>1/4</b>	Female thread G1/4
<b>3/8</b>	Female thread G3/8
<b>1/2</b>	Female thread G1/2
<b>3/4</b>	Female thread G3/4
<b>1</b>	Female thread G1

003	Version
<b>D</b>	D series, metal

004	Size
<b>MINI</b>	Grid dimension 40 mm (without connecting plates)
<b>MIDI</b>	Grid dimension 55 mm (without connecting plates)
<b>MAXI</b>	Grid dimension 66 mm (without connecting plates)

## Datasheet

## General technical data



Size	Maxi			Midi				Mini		
Pneumatic connection, port 1	G1/2	G3/4	G1	G1/4	G3/8	G1/2	G3/4	G1/8	G1/4	G3/8
Pneumatic connection, port 2	G1/2	G3/4	G1	G1/4	G3/8	G1/2	G3/4	G1/8	G1/4	G3/8
Design	Proportional standard mist lubricator									
Type of mounting	With accessories									
Mounting position	Vertical +/-5°									
Air purity class at output	Compressed air to ISO 8573-1:2010 [7:4:] Inert gases									
Bowl type	Polymer with metal bowl guard									
Min. flow rate for lubricator function	10 l/min			8 l/min				3 l/min		
Max. oil capacity	190 cm <sup>3</sup>			110 cm <sup>3</sup>				45 cm <sup>3</sup>		

Standard nominal flow rate q<sub>N</sub>

Size	Maxi			Midi				Mini		
Pneumatic connection, port 1	G1/2	G3/4	G1	G1/4	G3/8	G1/2	G3/4	G1/8	G1/4	G3/8
Standard nominal flow rate (standardised to DIN 1343) <sup>1)</sup>	8,300 l/min	8,400 l/min	9,000 l/min	2,800 l/min	5,500 l/min	6,100 l/min	6,300 l/min	1,300 l/min	2,300 l/min	2,700 l/min

1) in main flow direction 1-&gt;2

## Operating and environmental conditions

Size	Maxi			Midi				Mini		
Operating pressure	0 ... 1.6 MPa									
Operating pressure <sup>1)</sup>	0 ... 16 bar									
Operating pressure	0 ... 232 psi									
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gases									
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)				Lubricated operation not possible					
Ambient temperature	-10 ... 60°C									
Media temperature	-10 ... 60°C									
Storage temperature	-10 ... 60°C									
Corrosion resistance class CRC <sup>2)</sup>	2 - Moderate corrosion stress									

1) With certification UL: 1 ... 10 bar

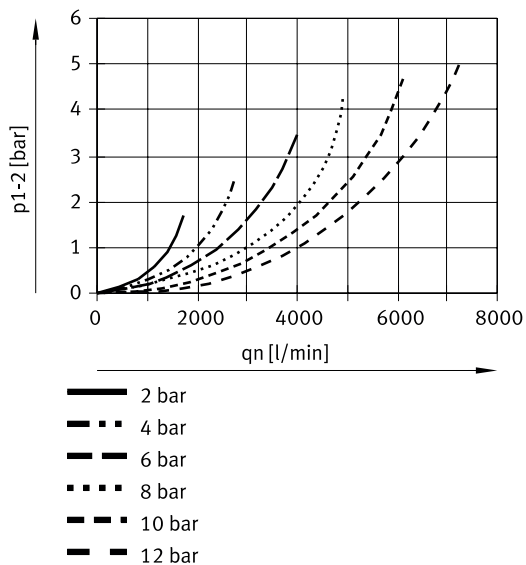
2) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Materials

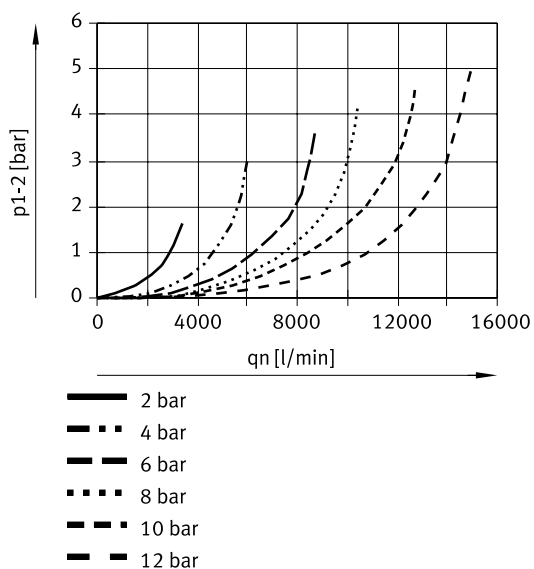
Material bowl	PC
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

# Datasheet

## Standard flow rate $q_n$ as a function of differential pressure $p_{1-2}$ (LOE-1/4-D-MINI)

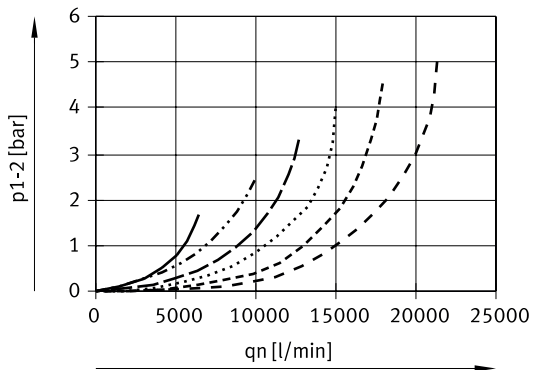


## Standard flow rate $q_n$ as a function of differential pressure $p_{1-2}$ (LOE-1/2-D-MIDI)



Datasheet

Standard flow rate  $q_n$  as a function of differential pressure  $p_{1-2}$  (LOE-1-D-MAX)

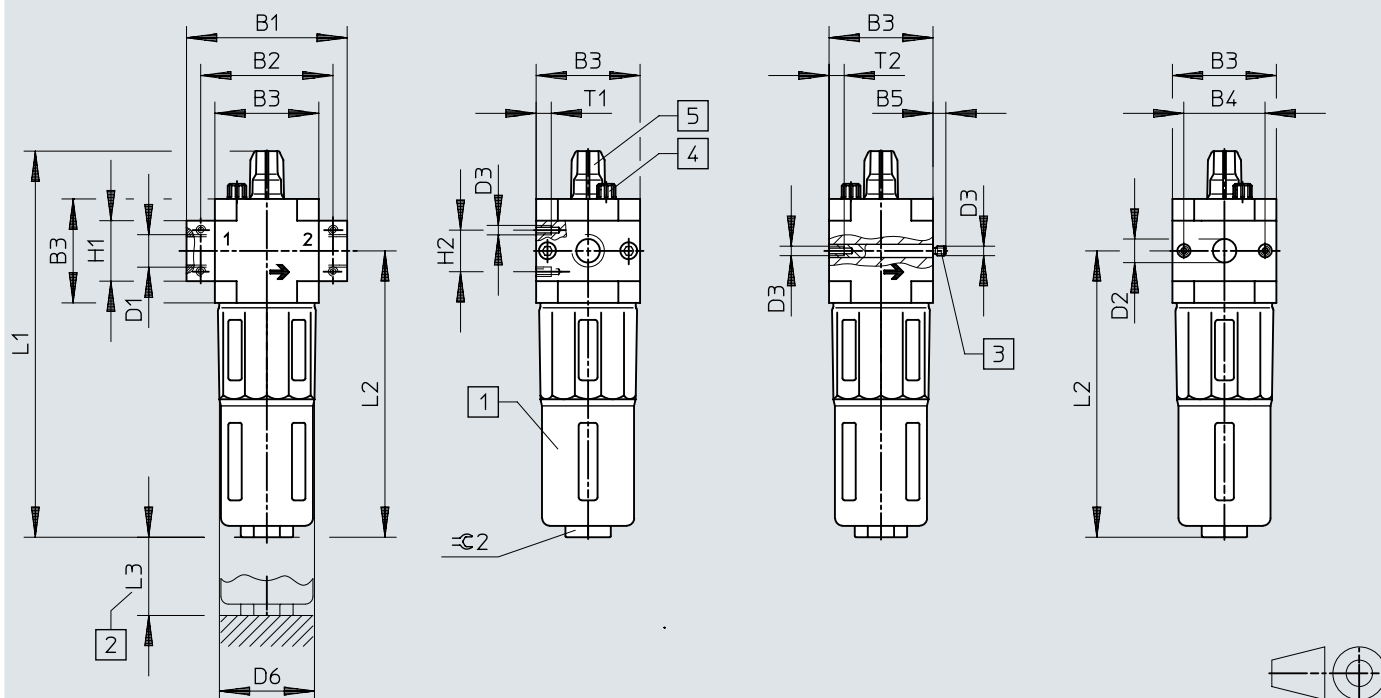


- 2 bar
- - - 4 bar
- · - 6 bar
- · · 8 bar
- - - 10 bar
- · - 12 bar

# Dimensions

## Dimensions – Basic type

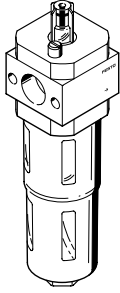
Download CAD data → [www.festo.com](http://www.festo.com)

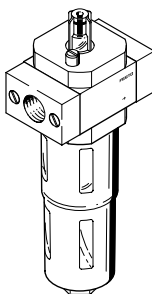


- [1] Metal bowl guard
- [2] Installation dimension
- [3] Threaded bolt (exchangeable)
- [4] Vent screw for oil reservoir
- [5] Oil adjusting screw

	B1	B2	B3	B4	B5	D1	D2 ∅	D3	D6 ∅	H1	H2	L1	L2	L3	T1	T2	$\approx \varnothing 2$	
LOE-1/8-D-MINI	64	52	40	30	-	G1/8	-	M4	38	20	11	169	124	100	7	-	22	
LOE-1/4-D-MINI						G1/4												
LOE-3/8-D-MINI	70					G3/8												
LOE-D-MINI	-	-			5,8	-	11			-	-				-	10		
LOE-1/4-D-MIDI	85	70	55	43	-	G1/4	-	M5	52	32	22	204	151	120	8	-	24	
LOE-3/8-D-MIDI						G3/8												
LOE-1/2-D-MIDI						G1/2												
LOE-3/4-D-MIDI						G3/4												
LOE-D-MIDI	-	-			6,8	-	24			-	-				-	11		
LOE-1/2-D-MAXI	96	80	66	46	-	G1/2	-	M5	65	32	22	228	170	150	8	-	24	
LOE-3/4-D-MAXI						G3/4												
LOE-1-D-MAXI	116	91				G1				40								
LOE-D-MAXI	-	-			6,8	-	30			-	-				-	11		

## Ordering data

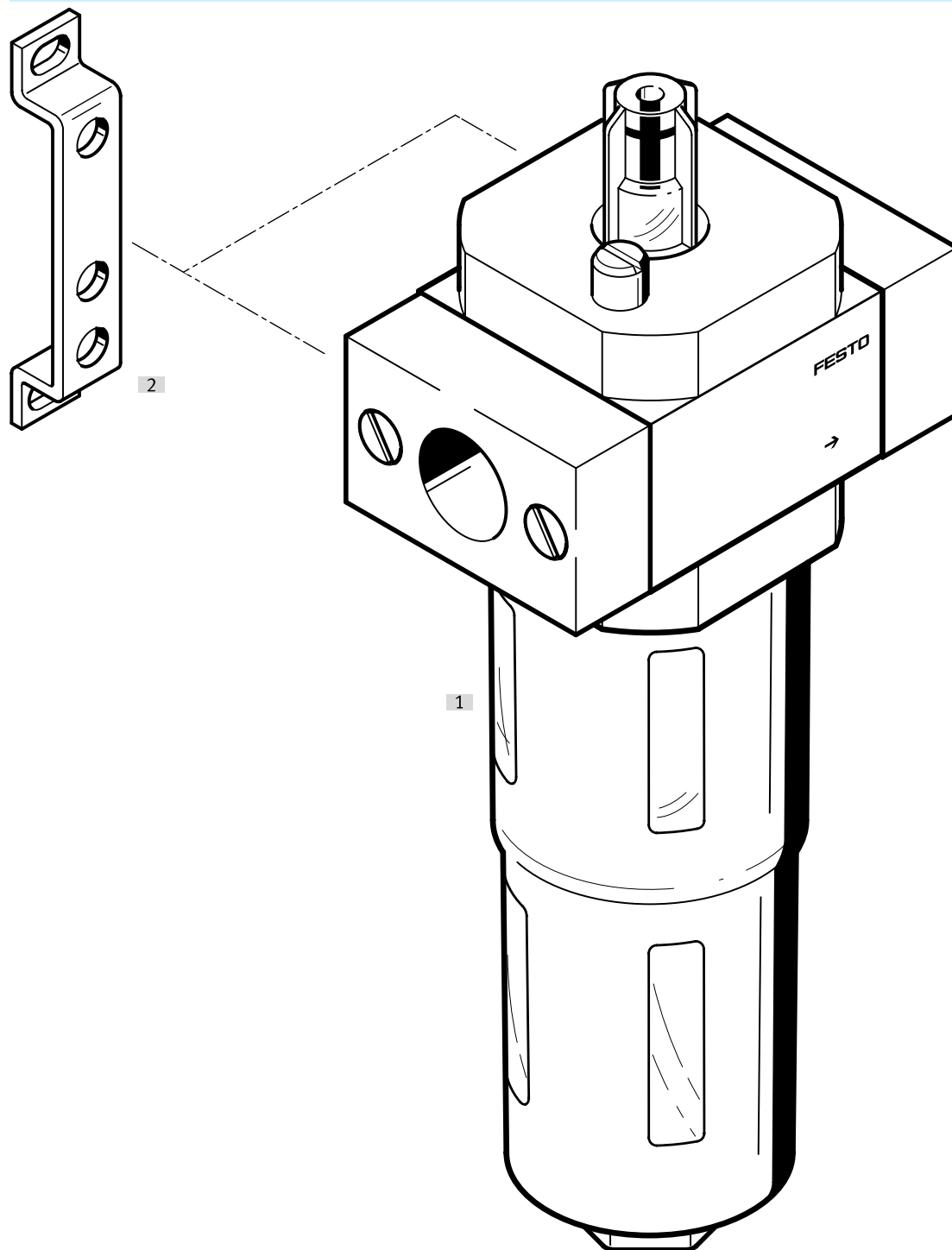
Individual unit without connecting plates, for service unit component combination				
	Size	Product weight	Part no.	Type
	Maxi	1,100 g	<b>192577</b>	<b>LOE-D-MAXI</b>
	Midi	630 g	<b>192576</b>	<b>LOE-D-MIDI</b>
	Mini	270 g	<b>192575</b>	<b>LOE-D-MINI</b>

Single unit with connecting plates					
	Size	Pneumatic connection, port 1	Product weight	Part no.	Type
	Maxi	G1/2	1,100 g	<b>186480</b>	<b>LOE-1/2-D-MAXI</b>
		G3/4		<b>159622</b>	<b>LOE-3/4-D-MAXI</b>
		G1	1,200 g	<b>159623</b>	<b>LOE-1-D-MAXI</b>
	Midi	G1/4	630 g	<b>186479</b>	<b>LOE-1/4-D-MIDI</b>
		G3/8		<b>159586</b>	<b>LOE-3/8-D-MIDI</b>
		G1/2		<b>159587</b>	<b>LOE-1/2-D-MIDI</b>
		G3/4		<b>162681</b>	<b>LOE-3/4-D-MIDI</b>
	Mini	G1/8	270 g	<b>159620</b>	<b>LOE-1/8-D-MINI</b>
		G1/4		<b>159621</b>	<b>LOE-1/4-D-MINI</b>
G3/8		<b>162680</b>		<b>LOE-3/8-D-MINI</b>	



## Peripherals

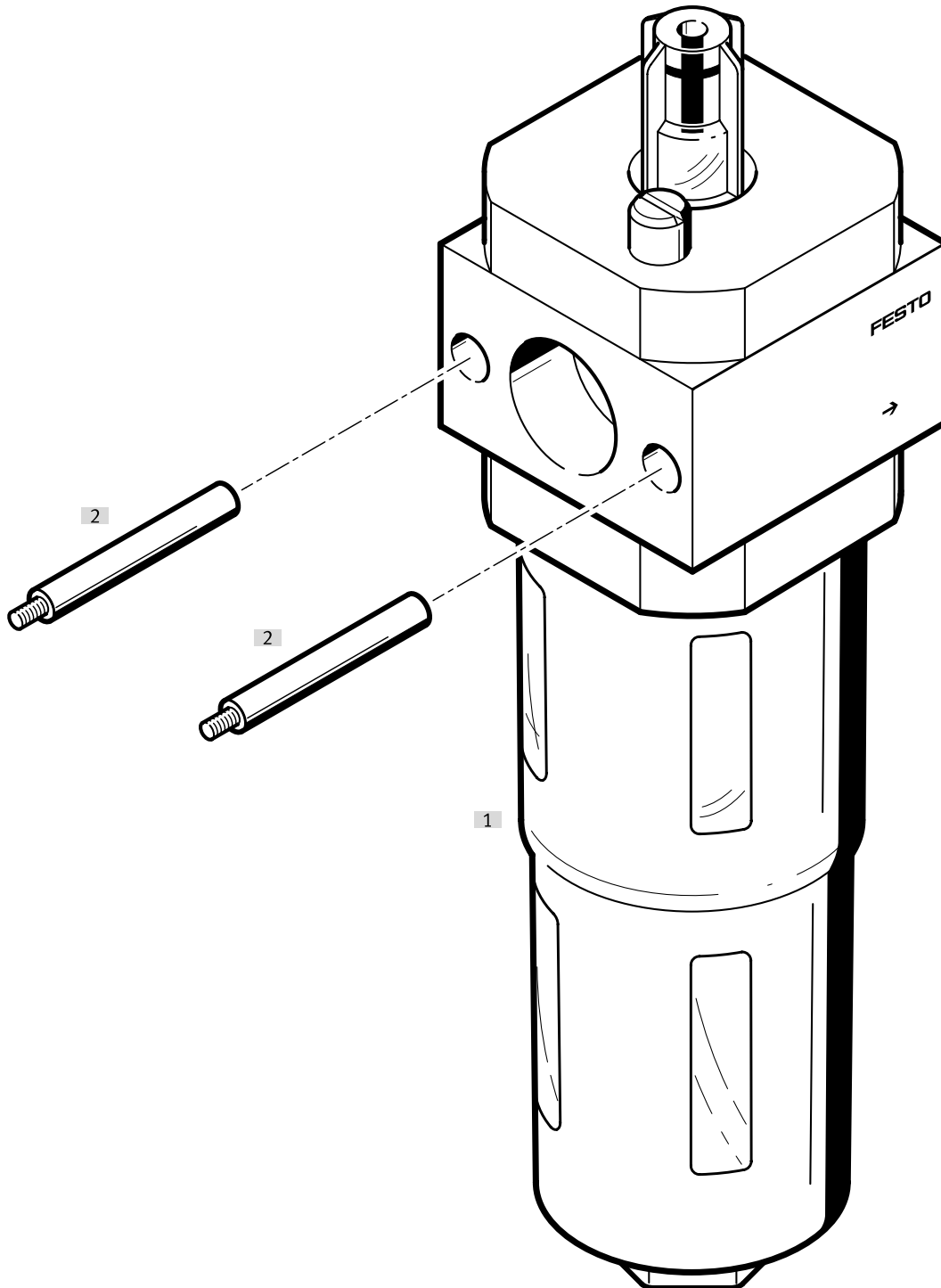
## Peripherals overview – single unit with connecting plates



Accessories		→ Link
Type/order code	Description	
[1] Lubricator LOE-D		loe-d
[2] Mounting bracket HFOE-D		11

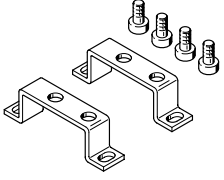
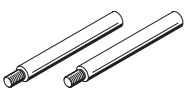
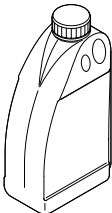
## Peripherals

Peripherals overview – individual unit without connecting plates, for service unit component combination



Accessories		→ Link
Type/order code	Description	
[1] Lubricator LOE-D		loe-d
[2] Threaded bolt FRB-D	Included in the scope of delivery	11

## Accessories

Mounting bracket MS4-WP...				
	Short type code	Corrosion resistance class CRC	Part no.	Type
	HFOE	2 - Moderate corrosion stress	159638	HFOE-D-MINI
			159593	HFOE-D-MIDI/MAXI
Mounting bracket MS4-WB				
	Short type code	Corrosion resistance class CRC	Part no.	Type
	FRB	2 - Moderate corrosion stress	159595	FRB-D-MIDI
			159643	FRB-D-MAXI
			159642	FRB-D-MINI
Special oil OFSW (1 litre)				
	Short type code		Part no.	Type
	OFSW		152811	OFSW-32