Manual filters for fuel and lubricating oil

An ideal complement for automatic backflushing filters

Manual duplex fuel oil filter MM-140-21

Manual by-pass lube oil filter L-350-800

As a complement to automatic filters, manual Alfa Laval filters for fuel and lubricating oil ensure redundancy and/or the highest level of security in most marine engine installations.

Alfa Laval automatic filters are used for full-flow filtration of fuel or lubricating oil. To ensure redundancy and/or the highest level of security, most marine installations require manual filters as a complement to automatic filters. The filters are used for two important applications in the circuit for full-flow filtering of fuel and lubricating oils for trunk piston and crosshead engines: (1) for the bypass system and (2) for the indicator system.

Alfa Laval offers a complete range of manual safety or indicator filters with the same well-known benefits as the automatic ones: robustness, extreme reliability and a small footprint.

Features
- Robust triple layer filter mesh
- Filter mesh glued into a support frame of perforated stainless steel
- Pressure drop indicator with high-pressure alarm
- Small footprint
- Simple installation and operation

Principle of operation

The operation of the manual filter is as follows:

- The oil to be filtered enters the filter (Q1) and flows into the center of the filter insert (1).
- From here, the oil flows from the inner to the outer diameter of the filter insert, and the solids are trapped in the insert.
- The filtered oil leaves the filter through the outlet (Q2).
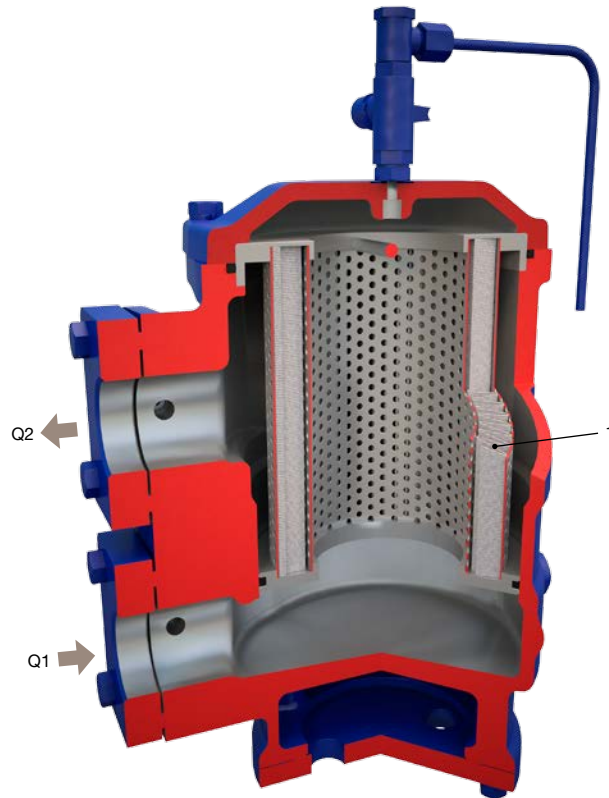
Filtration fineness

Lube oil filters: 35 µm to 80 µm absolute. Fuel oil filters: 25 µm to 100 µm absolute. The fineness is selected in accordance with diesel engine requirements and the specific application.

Other Alfa Laval filtration products

Alfa Laval also manufactures filters for other engine room applications, such as automatic backflushing filters, for fuel and lubricating oils.

Aftersales support

Replacement components and aftersales service are provided through a network of Alfa Laval subsidiaries and representatives worldwide, including marine service centres in all major ports.

Installation

All manual Alfa Laval filters are designed for installation in the engine room. Flanges are supplied according to DIN standards (JIS available as an option).

Technical documentation

Complete information and documentation for the main components and the installation, operation and maintenance of the filter is contained in the Instruction Book that accompanies each Alfa Laval filter. Your local Alfa Laval company will be able to provide more details on the application and sizing of Alfa Laval filters.
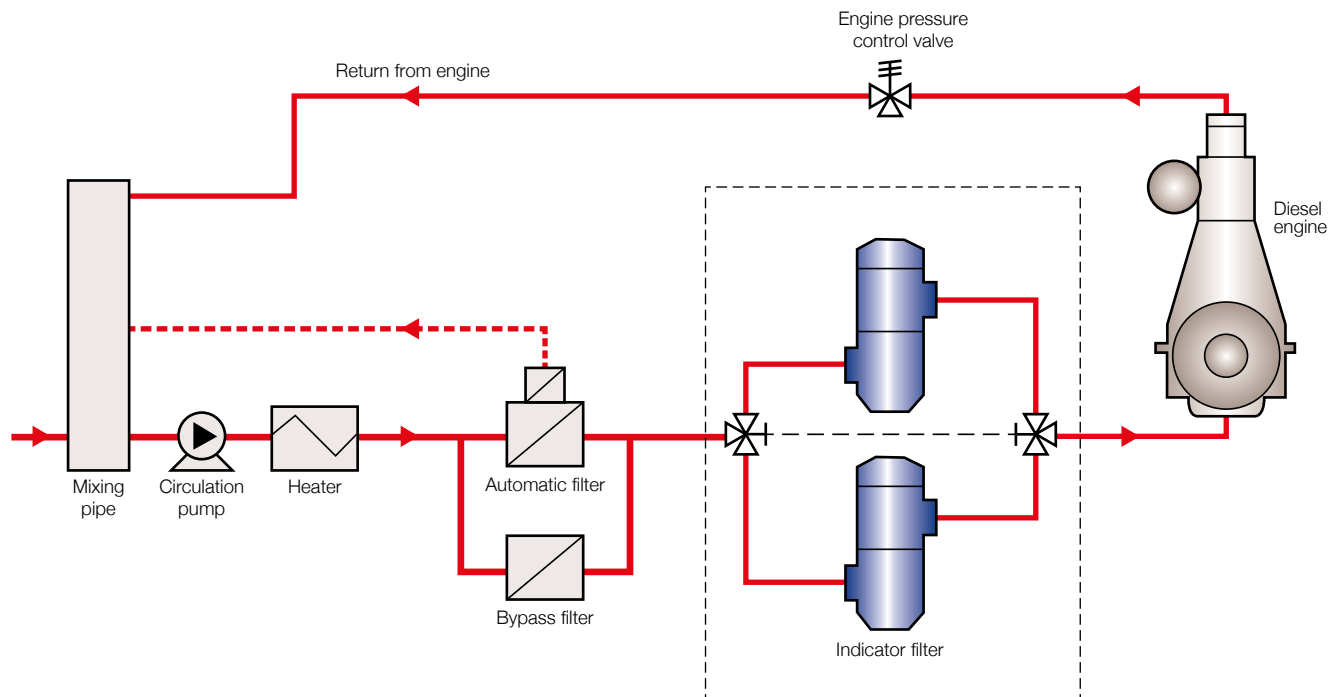

Support frame of perforated stainless steel.

Triple layer, pleated, filter mesh: fine mesh between two support meshes.

Two different applications for two types

Manual fuel oil filters
A manual duplex filter for the indicator application ensures engine safety and detects any default upstream. The manual duplex filter is mounted in the filter as close as possible to the engine.
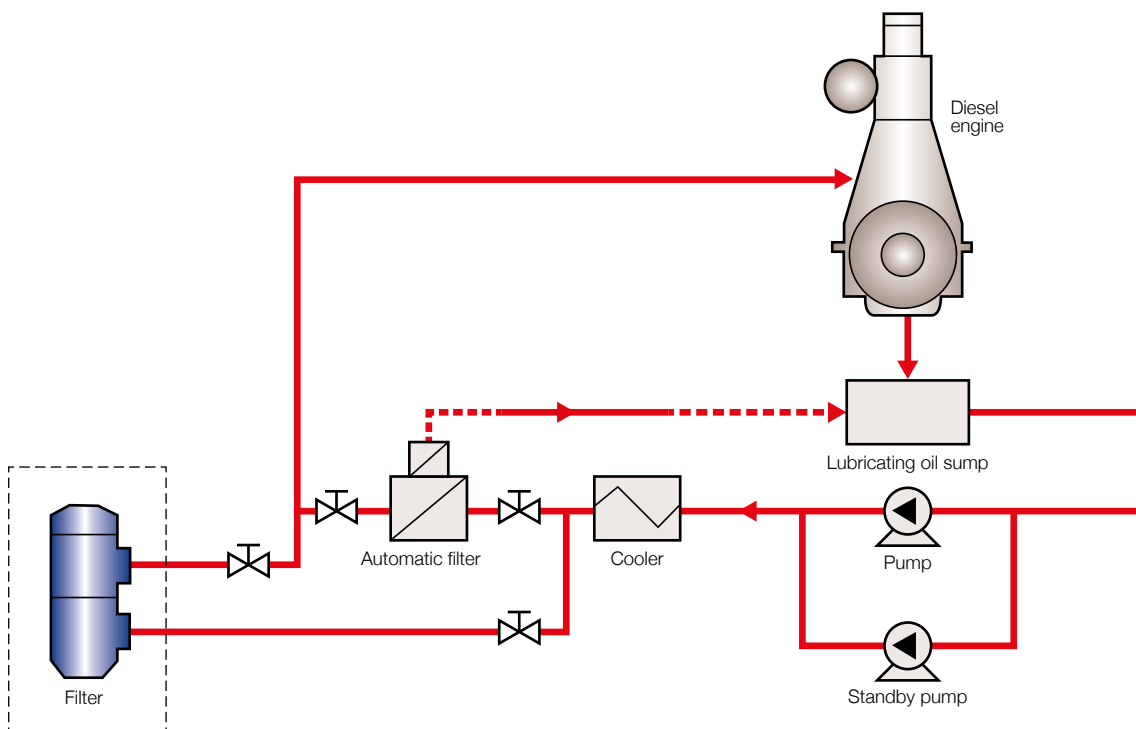
Manual lube oil filters
A single manual filter for the bypass application provides redundancy for the automatic filter without having to stop the engine.

Dimensions* (mm)

	Length	Width	Height
Manual lube oil			
Min.	320	300	470
Max.	1600	700	1800
Manual fuel oil			
Min. (duplex)	450	400	350
Max. (duplex)	1200	300	700

* Dimensions vary depending on the application and flow. Contact Alfa Laval for more information.

Technical data

	Fuel oil	**Lube oil**
Filter inlet pressure (P1 max)	Max. 15 bar	Max. 12 bar
Temperature in the filter	Max. 160°C	Max. 100°C
Normal DP (P1–P2)	0.2–0.4 bar	0.2–0.4 bar
Alarm differential pressure	0.8 bar	0.9 bar
Viscosity in the filter at normal operation	Max. 150 cSt	Max. 130 cSt
Mounting position	Vertical	Vertical
Test pressure	30 bar	24 bar
Housing material	Nodular cast iron	Nodular cast iron
Heating method	Steam, thermal oil, or hot water	
Heating pressure	Max. 7 bar	

Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details
for all countries are always available on
our website at www.alfalaval.com