

# MANN In-Line Filter Series 66 and 67

## Operating Instructions



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## 1. Preface

These operating instructions should make it easier for personnel to familiarize themselves with the MANN in-line filter and to use it in the various application areas for which it was designed.

The operating instructions contain important information on operating the components safely, correctly and economically. These instructions must be followed in order to avoid danger, reduce repair costs and down times and increase the reliability and working life of your machine.

The instructions must be made accessible to every person working with the filter.

Furthermore, these instructions must be supplemented as necessary with the applicable national regulations regarding accident prevention and environmental protection (in particular the disposal of removed parts).

We reserve the right to make technical modifications to the filter and/or modify the content of these operating instructions.

## 2. Safety

### 2.1 Warnings and symbols



Indicates all points in the maintenance instruction affecting your personal safety. Non-observance of these instructions may endanger life and limb.



This symbol indicates that the instructions must be especially carefully observed in order to guarantee a trouble-free and economical operation.

## 3. General points

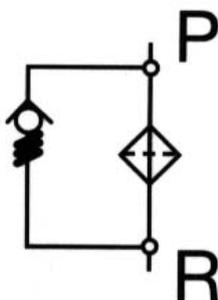
MANN in-line filters are fine filters used mainly in hydraulic systems, for the filtration of engine and gearbox oil and in lube-oil circuits in general mechanical engineering. The fineness of the MANN Micro Top spin-on filter elements is in the  $\mu\text{m}$  range.

## 4. Design

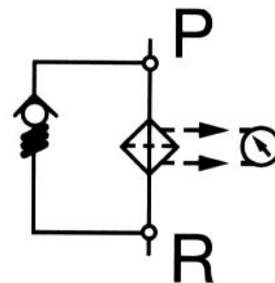
The basic filter consists of the filter head with two threads, mounting holes, and the MANN Micro Top spin-on filter as filter element.

### Options:

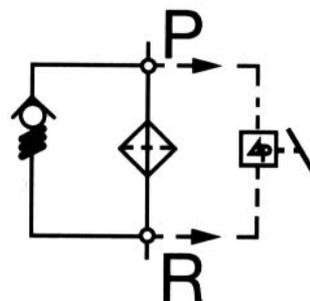
- in-line filter fitted in parallel
- selectable duplex in-line filter
- with by-pass valve and without service indicator



- with by-pass valve and service indicator



- with by-pass valve and service indicator (make/brake contact, convertible).



Service indicators or service switches are combined with the by-pass valve to signal a needed filter service before the by-pass valve opens.

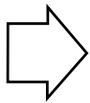
## 5. Function

MANN in-line filters are mainly used in the full flow - with large hydraulic systems also for filtering a part of the flow.

During operational life of the filter the deposit of filtered dirt particles on the paper element slowly causes the flow resistance of the filter to increase. When a defined differential pressure has been reached (e.g. upon a cold start or with a clogged filter element) the by-pass valve in the filter opens to ensure sufficient and constant lubrication. The opening pressure of the by-pass valve is listed in the customer drawing.

## 6. Installation

The filter is fitted in pipelines.



Pay attention to the flow direction

The flow direction is indicated by arrows on the threads.

## 7. Maintenance

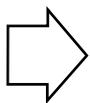
The service due point can be signalled by the service indicator or service switch.

With the selectable duplex model where the filter half can be switched maintenance of the filter can be carried out without turning off the unit whereby one filter half is serviced while the other filter half stays in operation (see customer drawing).

With **non**-switchable models the system must be switched off, made pressure-free and secured against inadvertent switching on.

### 7.1 Service procedure

1. Switch off the filter to be changed by turning over the cock plug (only for switchable version; for lever position, refer to customer drawing).



Filtration now takes place exclusively via the remaining filter element. Since now only half of the filter surface is available, pressure loss increases accordingly.



**Danger of splashing and burns!**  
Wear protective equipment!.



**Fire hazard!**  
Protect hot motor components against contact with escaping oil!

2. Slowly open vent screw (if fitted; see customer drawing) on the side of the filter element to be changed.
3. Unscrew MANN micro TOP easy-change filter by turning anticlockwise using a suitable removal tool. Unscrew MANN micro TOP spin-on filter by turning anticlockwise using a suitable removal tool.
4. Clean sealing surface on filter head.
5. Apply a small amount of oil to the gasket on the new MANN micro TOP easy-change filter.
6. Manually tighten the MANN micro TOP easy-change filter.



**Danger of splashing and burns!**  
Wear protective equipment!

7. Move the cock plug slowly a little bit towards centre position to fill the filter.
8. As soon as oil emerges at the vent screws, close the vent screw(s).
9. Move the cock plug into centre position.
10. Check the filter for seal-tightness.
11. To change the other filter element, use the corresponding vent screws and cock plug positions.

**Dispose of used filters according to the respectively valid regulations in order to protect the environment.**

## 8. Technical data / Spare parts

See customer drawing