

Low Pressure Filter

Pi 1975

Operating pressure 6 bar, Nominal size 50

1. Features

Efficient filters for various applications

- Compact design
 - Minimal pressure loss
 - Visual / electrical differential pressure indication
 - Threaded ports
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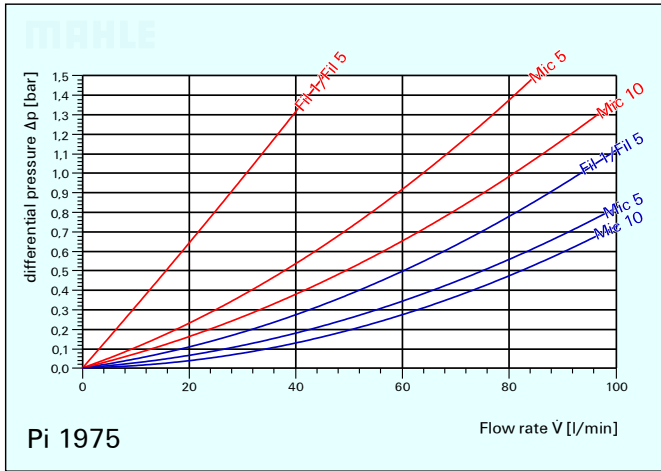
Quality filters, easy to service

- Highly efficient filter elements
 - β -rated elements per ISO 4572
 - Large dirt holding capacity and high differential pressure stability providing optimal element service life
 - Mic 5-element for spark erosion equipment
 - FIL-elements with very large dirt holding capacity for spark erosion equipment with waterless dielectric
 - SmN 2-element for bypass filtration
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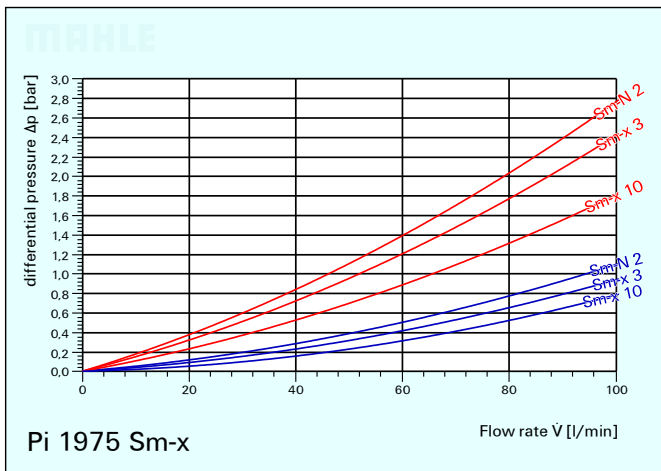
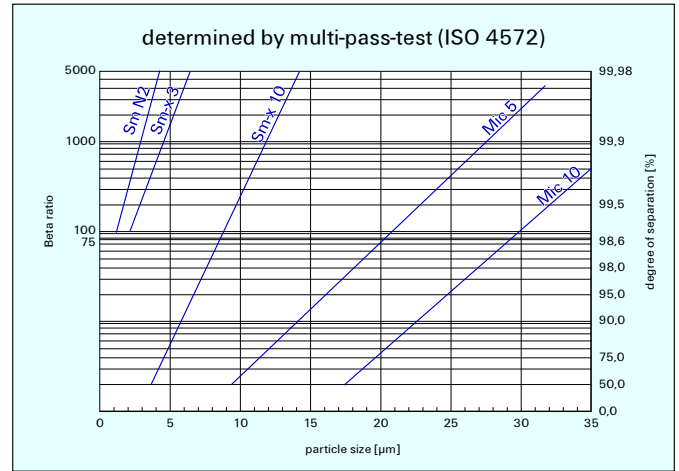
Worldwide sales



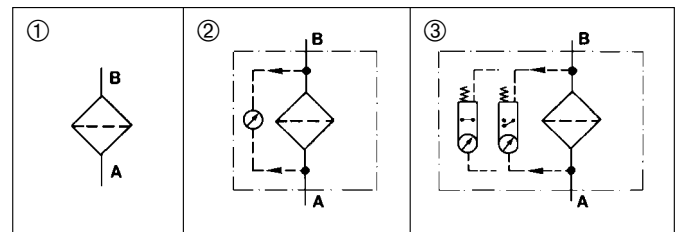
2. Pressure drop curve compl. filter



3. Separation characteristics



4. Symbols



Example for ordering filters:

- Housing design with electrical indication
Type-no. **Pi 1975-E** Order-no. **766.498.0**
+ 2. Filter element Sm-x 10
Type-no. **852 275 Sm-x 10** Order-no. **772.558.3**

5. Test regulations

MAHLE filter elements are manufactured respectively, tested in accordance with the following international standards:

No.	Designation
ISO 2941	Hydraulic-filter elements: Verification of burst resistance
ISO 2942	Hydraulic-filter elements: Determination of fabrication integrity
ISO 2943	Hydraulic-filter elements: Verification of material compatibility with hydraulic fluids
ISO 3723	Hydraulic-filter elements: Method for testing end-cap load
ISO 3724	Hydraulic-filter elements: Verification of flow fatigue characteristics
ISO 3968.2	Hydraulic-filters: Evaluation of pressure drop versus flow
ISO 4572	Hydraulic-filter elements: Testing of filter performance (multi-pass-test)

6. Order numbers

6.1 Housing design

Order number	Type number	Nominal size (NG)	① without indicator	② with visual indicator	③ with electrical indicator
766.495.6	Pi 1975	50			
766.496.4	Pi 1975-M				
766.498.0	Pi 1975-E				

It must be ascertained that the collapse pressure of the element is not exceeded.

7. Specifications

Design:	line mounting filter
Operating pressure:	6 bar
Test pressure:	8 bar
Temperature range:	-10 °C to +120 °C (other temperature ranges on request)
Filter housing material:	St
Material of seals:	NBR / Cu
Activating pressure of visual / electrical differential pressure indicator:	Δp 1,2 bar \pm 0,2 bar
Electrical data of contamination indicator:	
Maximum voltage:	230 V \sim / =
Maximum current on contact:	2,5 A
Maximum contact load:	60 VA / 40 W
Inrush current:	70 VA
Type of protection:	IP 65 when inserted and secured
Contact:	bistable
Cable connection:	PG 11 \varnothing 6-10

The electrical indicator function can be changed from the Normally Open position to the Normally Closed position or visa versa by inverting the electrical section.

With the inrush current of 70 VA the indicator can trigger small contactors or contactor relays.

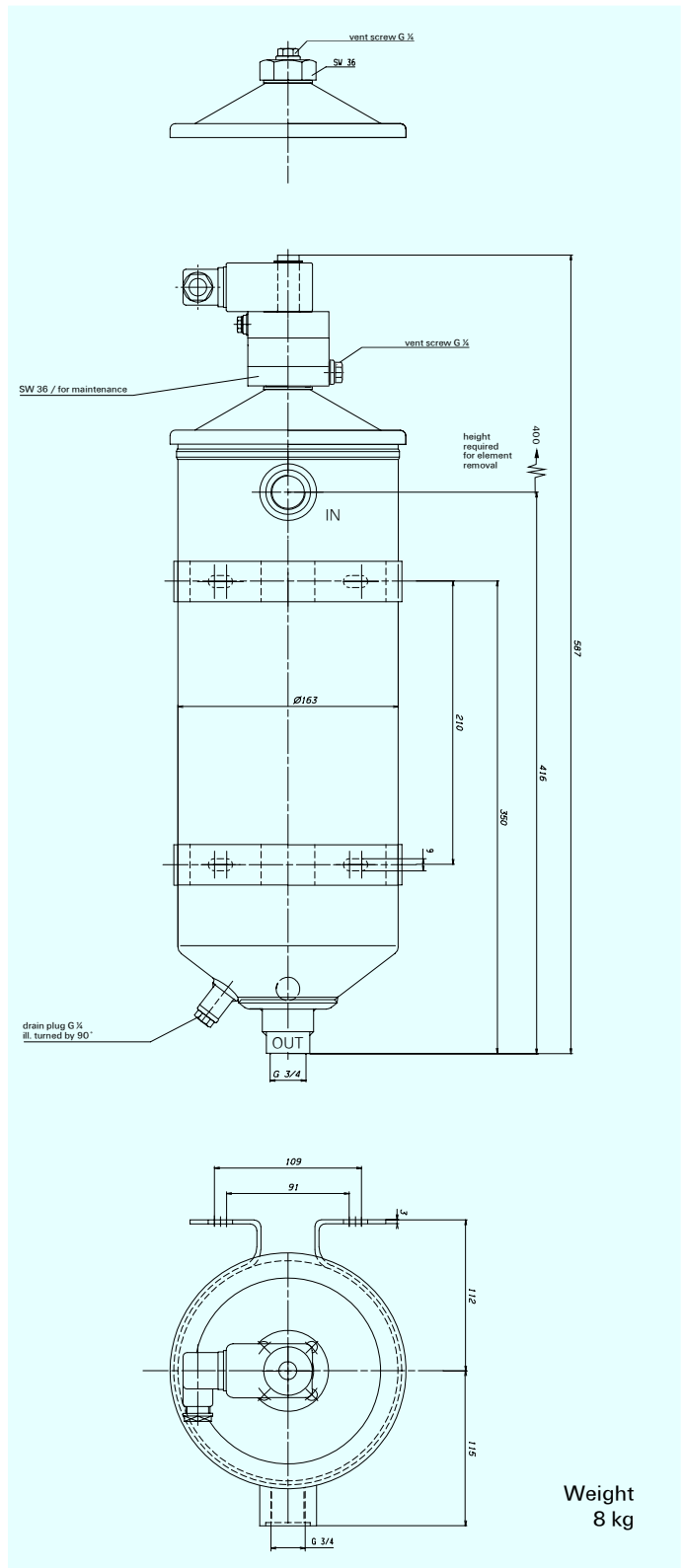
Inductivity in the direct current may require the use of a signal eraser.

For further information and executions please see our leaflet: "Contamination indicators".

Filters compatible with standard mineral oils.

Please contact us in case of using other media.

8. Dimensions



6.2 Filter elements () = filter surface area [] = type number

	Mic 5 Δp 5 bar	Mic 10 Δp 5 bar	FIL 1 Δp 1,4 bar	FIL 5 Δp 1,4 bar	SmN 2 Δp 5 bar	Sm-x 3 Δp 5 bar	Sm-x 10 Δp 5 bar
	(27000 cm ²)	(27000 cm ²)			(13150 cm ²)	(15500 cm ²)	(15500 cm ²)
	769.881.4	767.590.3	767.812.1	767.811.3	930.930.3	795.622.0	772.558.3
	[852 275 Mic 5]	[852 275 Mic 10]	[852 275 FIL 1]	[852 275 FIL 5]	[852 275 SmN 2]	[852 275 Sm-x 3]	[852 275 Sm-x 10]

* other elements on request

9. Installation, operating and maintenance instructions

9.1 Filter installation

When installing the filter make sure that sufficient place is available to remove the filter element.

9.2 Connecting the electrical contamination indicator

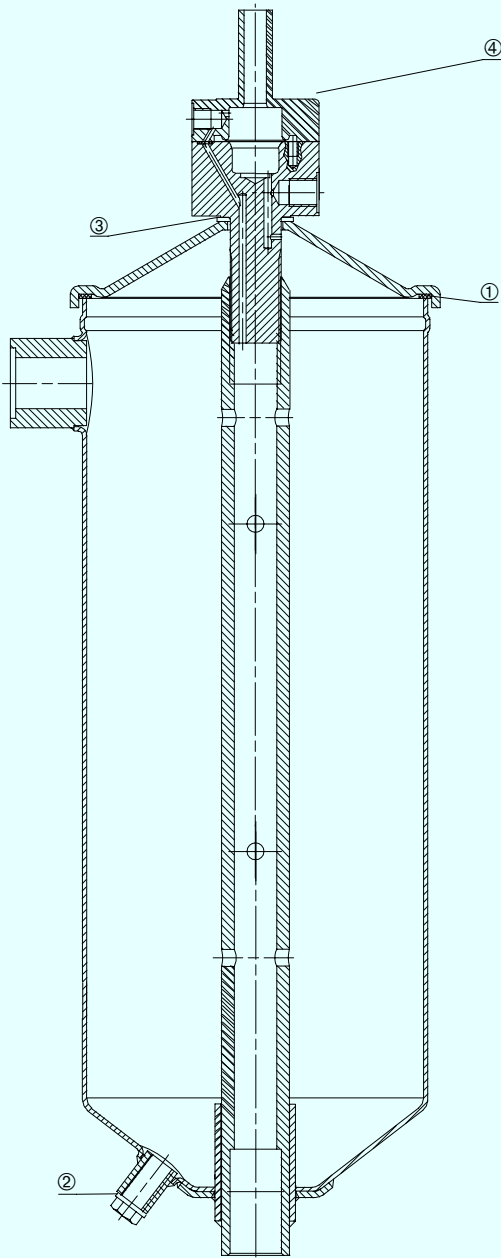
The electrical indicator is connected via a 2-pole appliance plug according to DIN 43650 with poles marked 1 and 2. The electrical section can be inverted to change from Normally Open position to Normally Closed position or visa versa.

9.3 When must the filter element be replaced?

- Filters equipped with the visual and electrical contamination indicator:
During cold starts, the indicator may give a warning signal. Depress the red button of the visual indicator once again only after operating temperature has been reached. If the red button immediately pops out again and/or the electrical signal has not switched off after reaching operating temperature, the filter element must be replaced after the end of the shift.
- Filters without contamination indicator:
The filter element should be replaced after the trial run or flushing of the system. Afterwards follow instructions of the manufacturer.
- Please always ensure that you have original MAHLE replacement elements in stock. Disposable elements (Mic, FIL or Sm-x) cannot be cleaned.

9.4 Element replacement

- Stop system and relieve filter from pressure.
- Remove cover screw, then lift off cover. On executions with indicator please unscrew contamination indicator.
- Remove filter element.
- Check gasket on filter cover for damage. Replace, if necessary.
- Make sure that the part number on the filter spare element corresponds with the part number on the filter name-plate. Remove filter element from the plastic bag and fit element on the spigot in the filterhousing.
- Reassemble in reverse order.
- Venting of the filter by means of the vent screw. Back off the screw 1–2 turns till medium escapes. Tight vent screw.



10. Spare parts list

Pos.	Order-no. / type-no.		
①–③	Seal kit for filter housing NBR 789.883.6		
④	Contamination indicator visual Pis 3112/1,2 828.769.0	electrical Pis 3113/1,2 828.770.8	electrical upper part only 753.655.0
	Seal kit for contamination indicator NBR 838.928.0		

Subject to technical changes.

MAHLE

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