

## Duplex filter PI 5075

Operating pressure 16 bar, Nominal size 400 up to 6000

### 1. Features

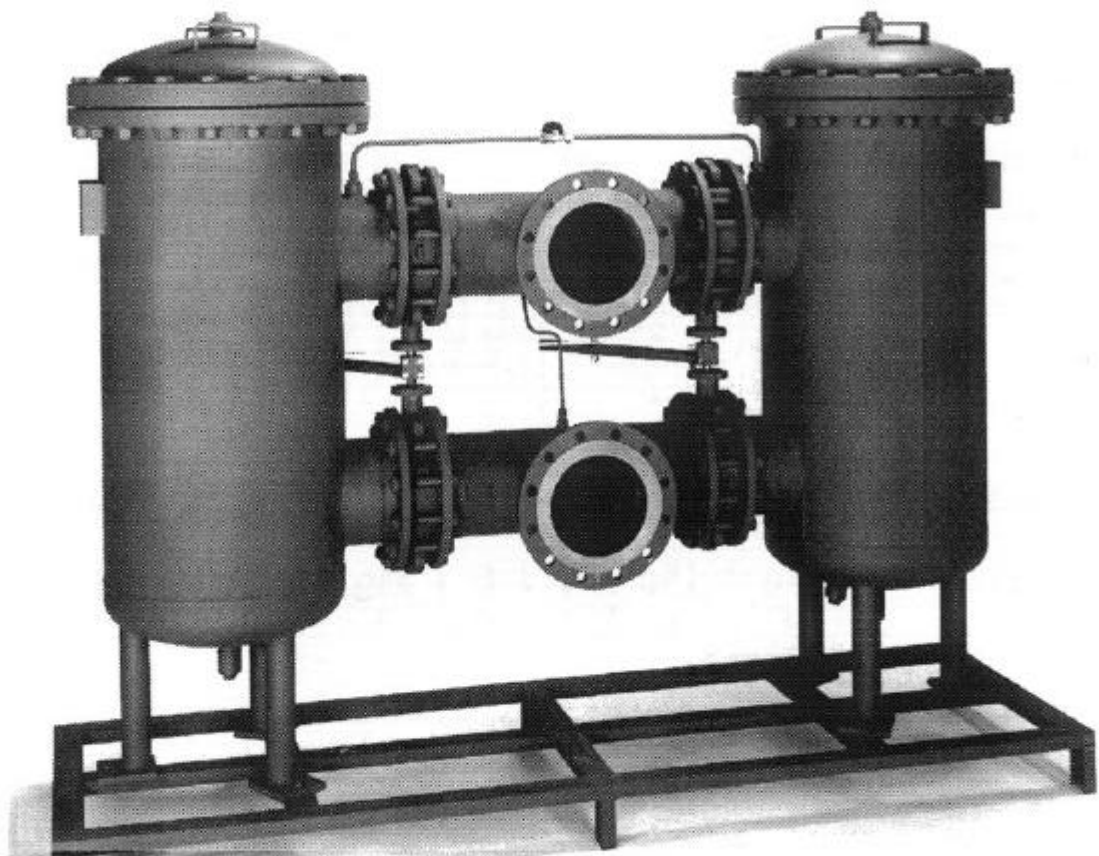
Efficient filters for modern hydraulic systems

- Minimal pressure loss
- Compact design
- Visual / electrical /electronical contamination control
- Flange ports

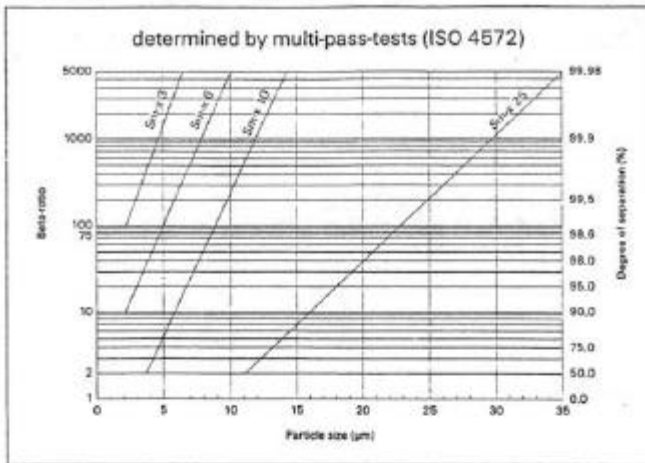
Quality filters, easy to service

- Highly efficient Sm-x filter elements
- $\beta$ -rated elements per ISO 4572
- Large dirt holding capacity and high differential pressure stability providing optimal element service life

World - wide  
sales



## 2. Separation characteristics



## 3. Filter performance data

tested according to ISO 4572 ( multi - pass - test )

Sm-x elements with  $\Delta p$  10 bar

Sm-x 3	$\beta_{3} \geq 75$
Sm-x 6	$\beta_{6} \geq 75$
Sm-x 10	$\beta_{10} \geq 75$
Sm-x 25	$\beta_{25} \geq 75$

at 5 bar differential pressure

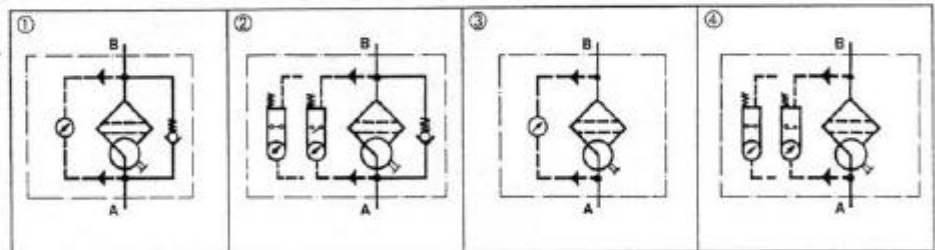
## 4. Test regulations

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-filter: Evaluation of pressure drop versus flow
ISO 4572	Hydraulic-filter elements: Testing of filter performance (multi-pass-test)

## 5. Symbols

- ① with bypass valve, visual indicator
- ② with bypass valve, electrical indicator
- ③ with visual indicator
- ④ with electrical indicator



## 6. Types

( Example for ordering filters : )

**Pi 5075 / 3 / 16 / 150 / V / E / Mg / Abh / 852 888 Sm-x 10**

1	2	3	4	5	6	7	8	9
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1	Filter - type	
2	Number of elements	( up to DN 125 1 ea., DN 150 and DN 200 3 ea. )
3	Operating pressure	
4	Connection size	
5	Bypass valve	
6	Contamination indicator	E = electrical M = visual
7	Magnets	( available for flange size DN 100 up to DN 200 )
8	Cover lifting device	( available for flange size DN 150, DN 200 )
9	Filterelement	

## 7. Specifications

Design :	line mounting filter																
Fitting position :	preferable upright																
Operating pressure :	16 bar ( NG 150 and 200 also possible with operating pressure 10 bar )																
Connections :	<table border="1"> <tr> <td>NG</td> <td>400</td> <td>630</td> <td>800</td> <td>1250</td> <td>1800</td> <td>3500</td> <td>6000</td> </tr> <tr> <td>DN</td> <td>50</td> <td>65</td> <td>80</td> <td>100</td> <td>125</td> <td>150</td> <td>200</td> </tr> </table>	NG	400	630	800	1250	1800	3500	6000	DN	50	65	80	100	125	150	200
NG	400	630	800	1250	1800	3500	6000										
DN	50	65	80	100	125	150	200										

Flange connections ( IN , OUT ) : DIN 2633

Switch over by means of butterfly valves

Temperature range :	-10°C to +100°C ( other temperature ranges on request )
Filter housing material :	steel welded construction
Material of seals :	NBR ( other materials on request )
Bypass opening pressure :	$\Delta p$ 3,5 bar $\pm$ 10 %
Activating pressure of visual / electrical contamination indicator :	$\Delta p$ 2,2 bar $\pm$ 10 %
Electrical data of contamination indicator :	
Maximum voltage :	230 V ~ / =
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. Inductivity in the direct current may require the use of a signal eraser. For further information and executions please see our leaflet "Contamination indicators".

Filter compatible with standard mineral oils.  
Please contact us in case of using other media.

## 8. Commissioning

Prior to commissioning the filter open the venting screw of that filter half that is to be commissioned and wait until liquid emerges. Then tighten the venting screw.

After that all sealing points must be visually inspected for leaks.

If the contamination indicator gives a signal when the operating temperature has been reached, the filter element must be replaced after the end of the shift.

Switch over the filter ( open the pressure compensating valve to switch over the filter ).

Elements may be changed only on non operating filter half. Relieve filter from pressure, empty filter over drain plug, remove hex nuts, remove container top, remove hex nut, remove valve plate, remove nut, remove filter element.

Clean filter housing using a suitable medium.

Inspect all sealing points and seals and replace by new if required.

Assembly is performed in reverse order.

Vent filter half ( open the venting screw, open the pressure compensating valve until liquid emerges ).

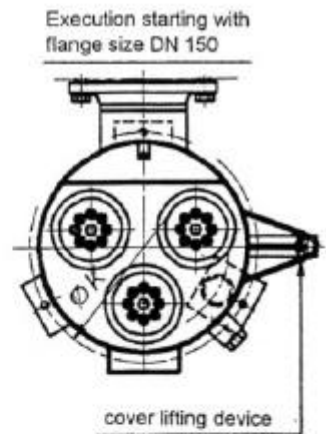
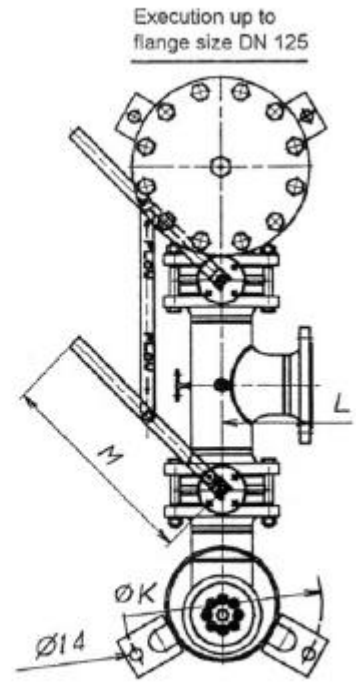
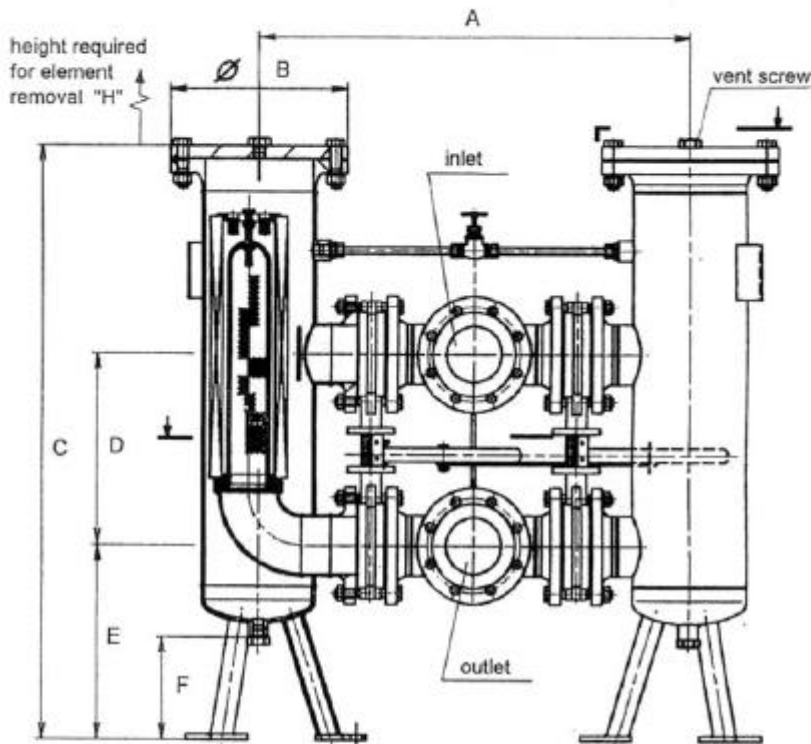
Following commissioning inspect all sealing points for leaks.

## 9. Filterelements

( ) filter surface area

Filter-material	Degree of filtration	NG 400 / DN 50	NG 630 / DN 65	NG 800 / DN 80	NG 1250 / DN 100	NG 1800 / DN 125	NG 3500 / DN 150	NG 6000 / DN 200
<b>Sm-x</b> $\Delta p$ 10 bar		( 9090 cm <sup>2</sup> )	( 14750 cm <sup>2</sup> )	( 14750 cm <sup>2</sup> )	( 21850 cm <sup>2</sup> )	( 31750 cm <sup>2</sup> )	( 65550 cm <sup>2</sup> )	( 95250 cm <sup>2</sup> )
	3	PI 21040 RN	PI 21063 RN	PI 21063 RN	852 888 Sm-x 3	852 884 Sm-x 3	852 888 Sm-x 3	852 884 Sm-x 3
	6	PI 22040 RN	PI 22063 RN	PI 22063 RN	852 888 Sm-x 6	852 884 Sm-x 6	852 888 Sm-x 6	852 884 Sm-x 6
	10	PI 23040 RN	PI 23063 RN	PI 23063 RN	852 888 Sm-x 10	852 884 Sm-x 10	852 888 Sm-x 10	852 884 Sm-x 10
	25	PI 25040 RN	PI 25063 RN	PI 25063 RN	852 888 Sm-x 25	852 884 Sm-x 25	852 888 Sm-x 25	852 884 Sm-x 25
<b>Mic</b> $\Delta p$ 10 bar		( 9450 cm <sup>2</sup> )	( 15550 cm <sup>2</sup> )	( 15550 cm <sup>2</sup> )	( 21850 cm <sup>2</sup> )	( 31750 cm <sup>2</sup> )	( 65550 cm <sup>2</sup> )	( 92250 cm <sup>2</sup> )
	10	PI 13040 RN	PI 13063 RN	PI 13063 RN	852 888 Mic 10	852 884 Mic 10	852 888 Mic 10	852 884 Mic 10
<b>Drg</b> $\Delta p$ 10 bar		( 6370 cm <sup>2</sup> )	( 10320 cm <sup>2</sup> )	( 10320 cm <sup>2</sup> )	( 16500 cm <sup>2</sup> )	( 23700 cm <sup>2</sup> )	( 49500 cm <sup>2</sup> )	( 71100 cm <sup>2</sup> )
	25	PI 35040 RN	PI 35063 RN	PI 35063 RN	852 888 Drg 25	852 884 Drg 25	852 888 Drg 25	852 884 Drg 25
	40	PI 36040 RN	PI 36063 RN	PI 36063 RN	852 888 Drg 40	852 884 Drg 40	852 888 Drg 40	852 884 Drg 40
	60	PI 37040 RN	PI 37063 RN	PI 37063 RN	852 888 Drg 60	852 884 Drg 60	852 888 Drg 60	852 884 Drg 60
	100	PI 38040 RN	PI 38063 RN	PI 38063 RN	852 888 Drg 100	852 884 Drg 100	852 888 Drg 100	852 884 Drg 100

# 10. Dimensions



Nominal size NG	Connection size DN	Operating pressure PN	A	B	C	D	E	F	H	K	L	M
400	50	16	676	285	890	307	250	110	200	300	105	250
630	65		706	285	890	323	250	110	350	300	117	250
800	80		736	285	890	337	250	110	350	300	132	250
1250	100		790	340	1130	365	370	195	450	380	153	300
1800	125		902	405	1230	391	435	230	450	450	175	300
3500	150		1228	580	1238	435	550	300	450	440	194	400
6000	200	1332	715	1550	483	550	300	450	440	236	400	
3500	150	10	1228	565	1238	435	550	300	450	440	194	400
6000	200		1332	670	1550	483	550	300	450	440	236	400

All dimensions in mm

Subject to technical alteration without prior notice

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MAHLE Filtersysteme GmbH  
 Bereich Industriefilter  
 Schleifbachweg 45 D-74613 Öhringen  
 P.O. Box 13 09 D-74603 Öhringen  
 Tel./Phone +49 (0) 79 41 67-0  
 Telefax +49 (0) 79 41 67-4 29  
 Internet: www.mahle.com  
 E-mail: ub2.industrie@mahle.com