

Line filter Pi 1907

Operating pressure 16 bar, nominal size 400 up to 6000

1. Features

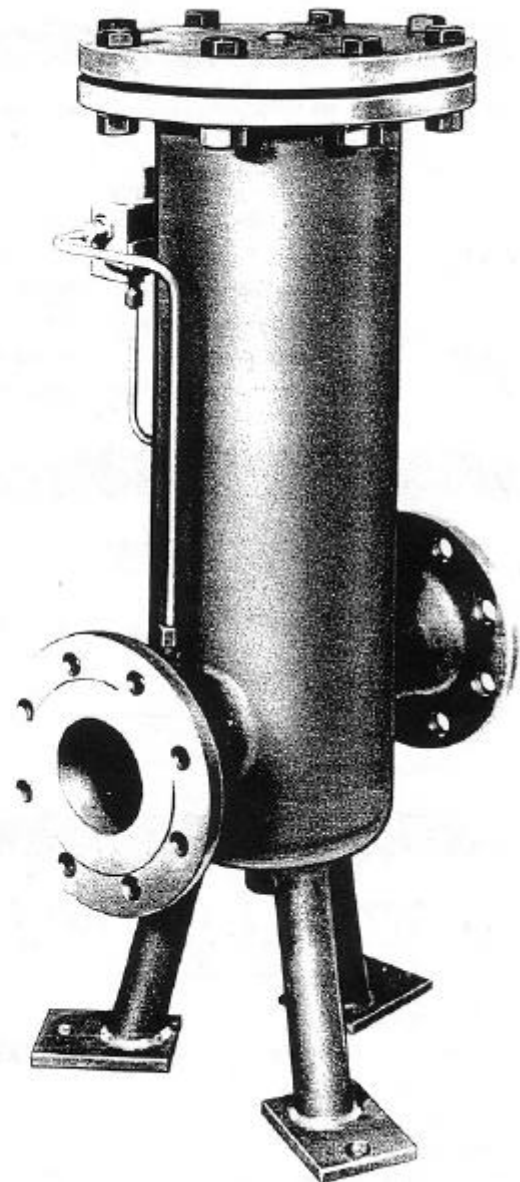
Efficient filters for modern hydraulic systems

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

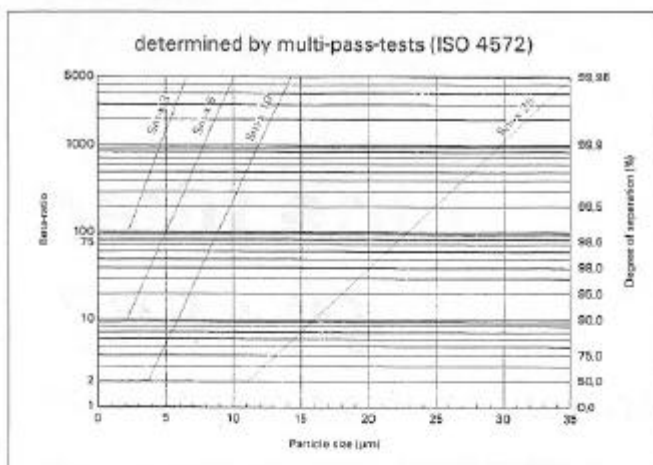
Quality filters, easy to service

- Highly efficient Sm-x filter elements
- B-rated elements per ISO 4572
- Large dirt holding capacity and high differential pressure stability providing optimal element service life
- 100 % bubble-point tested elements

World - wide sales



2. Separation characteristics



3. Filter performance data

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

Sm-x elements with Δp 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

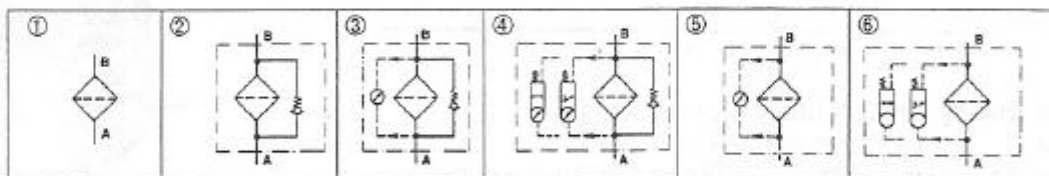
4. Test regulations

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

5. Symbols

- ① without options
- ② with bypass valve
- ③ with bypass valve, visual indicator
- ④ with bypass valve, electrical indicator
- ⑤ with visual indicator
- ⑥ with electrical indicator



6. Types

(Example for ordering filters)

Pi	1907	/	3	/	16	/	150	/	V	/	E	/	Mg	/	Abh	/	852 888	Sm-x	10
	1		2		3		4		5		6		7		8		9		

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 :	NG	400	630	800	1250	1800	3500	6000
	DN	50	65	80	100	125	150	200

Flange connections up to DN 200 / PN 16 : DIN 2633
 Flange connections DN 150 and DN 200 / PN 10 : DIN 2632 / DIN 2633

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 :	Δp 3,5 bar $\pm$ 10 %							
Activating pressure of visual / electrical contamination indicator :	Δp 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 Ø 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

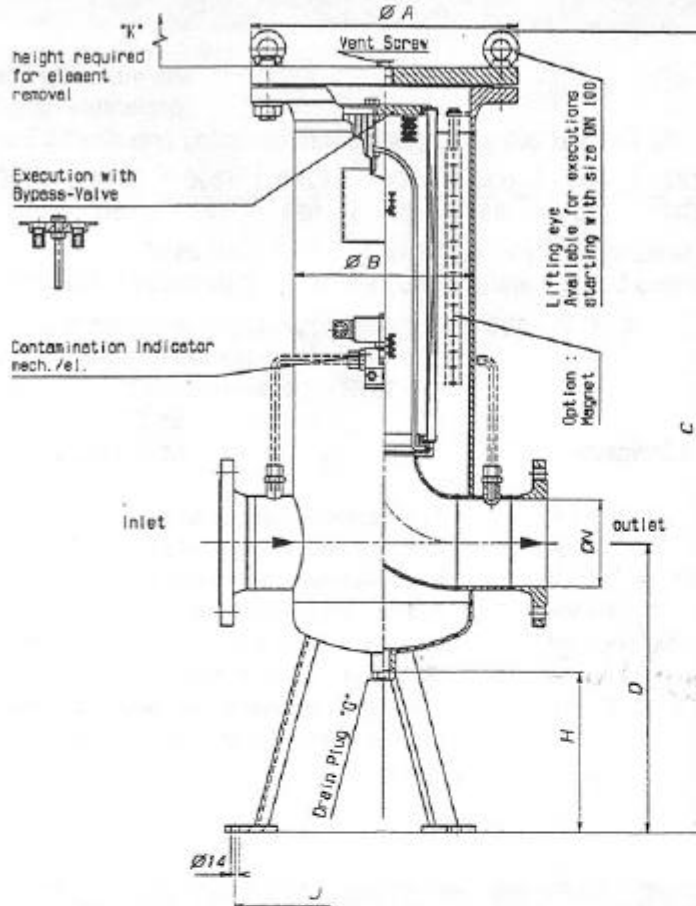
Prior to commissioning the filter open the venting screw and wait until liquid emerges. Then tighten the venting screw. After that all sealing points must be visually inspected for leaks.
 If the contamination indicator gives a signal when the operating temperature has been reached, the filter element must be replaced after the end of the shift.
 For element replacement stop system and 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.
 Clean contaminated filter elements or replace by new MAHLE filters (only Drg-elements are cleanable).
 Inspect all sealing points and seals and replace by new if required.
 Assembly is performed in reverse order.
 Following commissioning inspect all sealing points for leaks.

9. Filterelements

() filter surface area

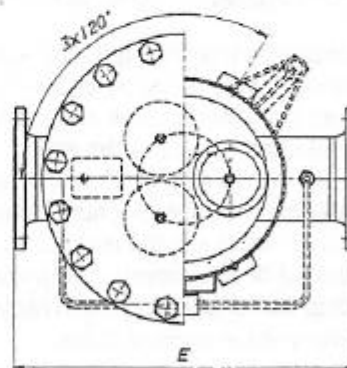
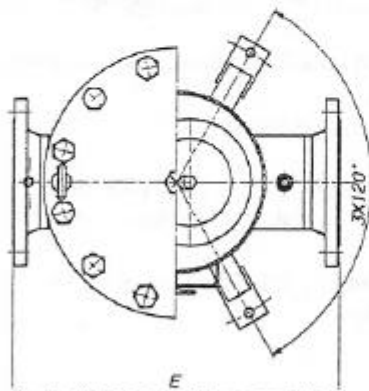
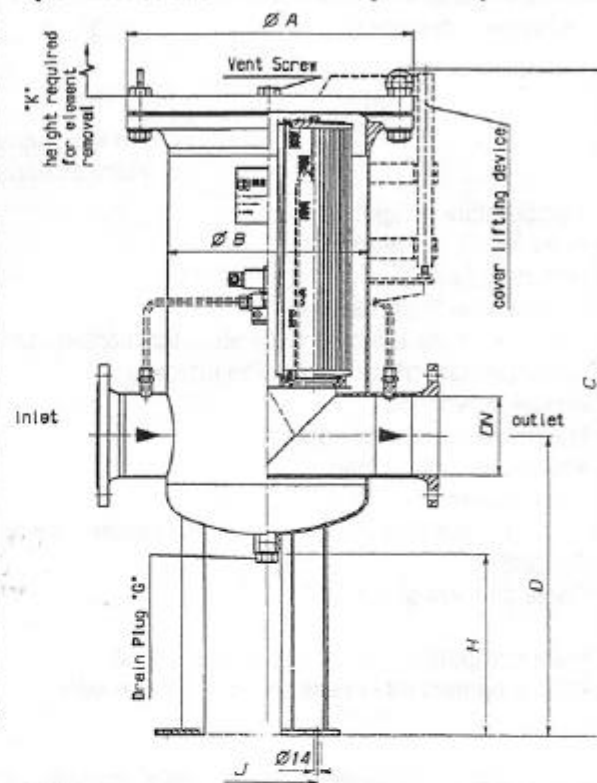
Filter-material	Degree of filtration	NG 400 / DN 50	NG 630 / DN 65	NG 800 / DN 80	NG 1250 / DN 100	NG 1800 / DN 125	NG 3500 / DN 150	NG 6000 / DN 200
Sm-x Δp 10 bar		(9090 cm ²)	(14750 cm ²)	(14750 cm ²)	(21850 cm ²)	(31750 cm ²)	(65550 cm ²)	(95250 cm ²)
	3	Pi 21040 RN	Pi 21063 RN	Pi 21063 RN	852 888 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
Mic Δp 10 bar		(9450 cm ²)	(15550 cm ²)	(15550 cm ²)	(21850 cm ²)	(31750 cm ²)	(65550 cm ²)	(92250 cm ²)
	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
Drg Δp 10 bar		(6370 cm ²)	(10320 cm ²)	(10320 cm ²)	(16500 cm ²)	(23700 cm ²)	(49500 cm ²)	(71100 cm ²)
	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



left illustration: Execution up to flange size DN 125

right illustration: Execution starting with flange size DN 150



Nominal size NG	Connection size DN	Operating pressure PN	A	B	C	D	E	G	H	J	K
400	50	16	285	169	890	250	380	G1/2	110	300	200
630	65		285	169	890	250	380	G1/2	110	300	350
800	80		285	169	890	250	380	G1/2	110	300	350
1250	100		340	220	935	365	450	G1/2	200	380	450
1800	125		405	273	1200	435	500	G1	235	450	450
3500	150		580	407	1330	600	690	G1	300	440	450
6000	200	10	715	508	1465	550	740	G1	270	500	450
3500	150		565	407	1330	600	690	G1	300	440	450
6000	200		670	508	1465	550	740	G1	270	500	450

All dimensions in mm

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Subject to technical alteration without prior notice!