Filtration Group®
Filtering The World

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Mobile Filter Units
Pi 8100

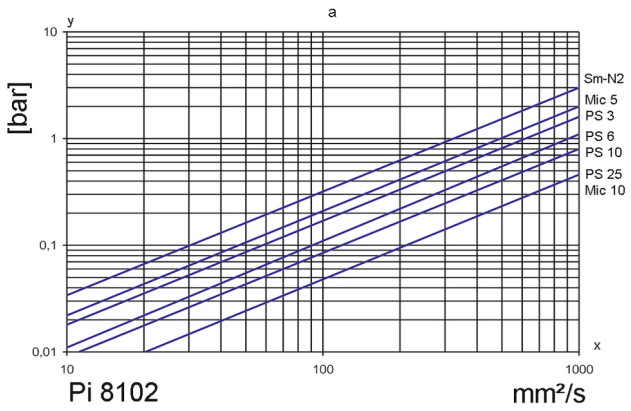
Flow rates 27/32 and 55/66 l/min

1. Features

High performance filters for modern hydraulic systems

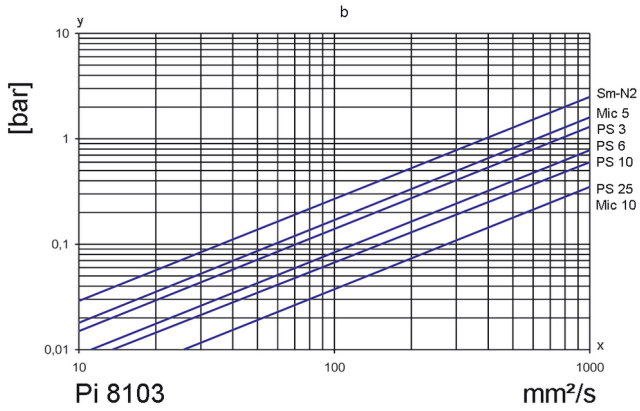
- Mobile bypass filtration for hydraulic and lubricating systems
- System and container filling
- Pumping out of old oil
- Transfer pumping of container contents
- Reduces dirt loading of system filters on start-up and following repairs
- Achievement of specified cleanliness classes using Filtration Group PS filter elements
- Excellent contamination absorption performance using Filtration Group Sm-N 2 filter elements
- Easy to service
- Filtration Group low pressure filter Pi 150 housing with quick-release cover for fast element replacement
- Oil collection tank/automatic bleeding
- Automatic pump cut-off
- Low operating noise
- Robust feed pump with helical gearing and integrated bypass valve
- Suitable for mineral oils, HFC and biodegradable oils
- Good suction performance, also suitable for high viscosity products
- Worldwide distribution

2. Flow rate/pressure drop curve complete filter



a = differential pressure-viscosity curve Pi 8102
flow rate = 27 l/min
y = differential pressure [bar]
x = viscosity [mm²/s]

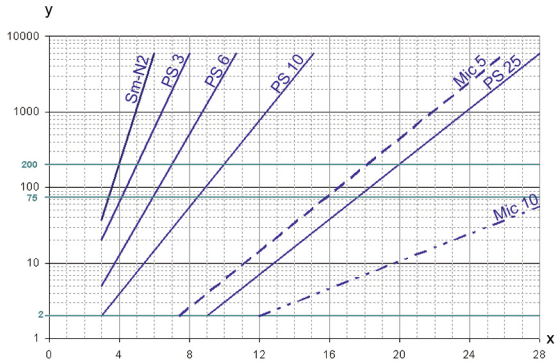
Illustration shows initial Δp of complete filter (housing incl. element) of the mobile filter units.



b = differential pressure-viscosity curve Pi 8103
flow rate = 55 l/min
y = differential pressure [bar]
x = viscosity [mm²/s]

Recommended initial Δp:
max. 0.5 bar at bypass filtration
max. 0.8 bar for filling or transfer by pump

3. Separation grade characteristics



y = beta-value
x = particle size [µm]

determined by multipass tests (ISO 16889)
calibration according to ISO 11171 (NIST)

4. Filter performance data

tested according to ISO 16889 (multipass test)
Sm-N/PS elements with max. Δ p 10 bar

Sm-N	2	$\beta_{4(C)} \geq 200$
PS	3	$\beta_{5(C)} \geq 200$
PS	6	$\beta_{7(C)} \geq 200$
PS	10	$\beta_{10(C)} \geq 200$
PS	25	$\beta_{20(C)} \geq 200$

values guaranteed up to 10 bar differential pressure.

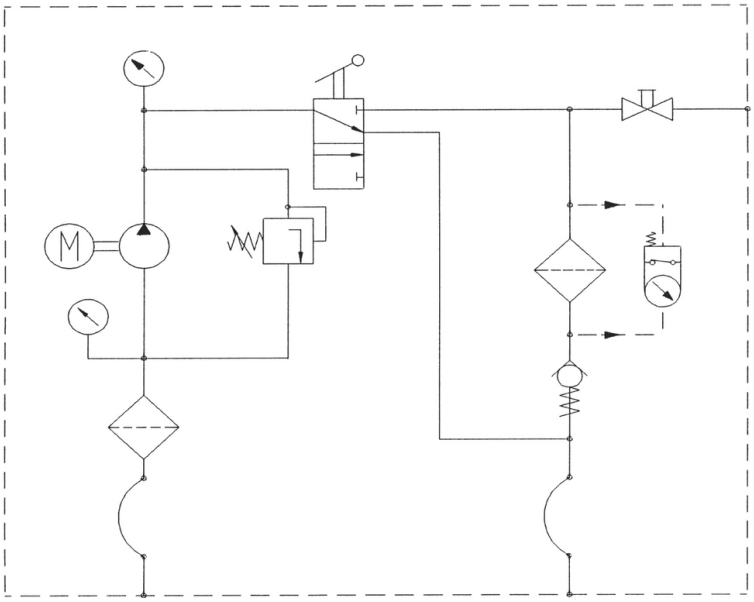
The filter element Sm-N 2 has a very high dirt load capacity and is very suitable for bypass filtration.

5. Quality assurance

Filtration Group filters and filter elements are prodcued according to the following international standards:

Norm	Designation
DIN ISO 2941	Hydraulic fluid power filter elements; verification of collapse/burst resistance
DIN ISO 2942	Hydraulic fluid power filter elements; verification of fabrication integrity
DIN ISO 2943	Hydraulic fluid power filter elements; verification of material compatibility with fluids
DIN ISO 3723	Hydraulic fluid power filter elements; method for end load test
DIN ISO 3724	Hydraulic fluid power filter elements; verification of flow fatigue characteristics
ISO 3968	Hydraulic fluid power-filters-evaluation of pressure drop versus flow characteristics
ISO 10771.1	Fatigue pressure testing of metal containing envelopes in hydraulic fluid applications
ISO 16889	Hydraulic fluid power filters-multipass method for evaluation filtration performance of a filter element

6. Wiring diagram



7. Order numbers

Example for ordering filters:

1. Filter Unit	2. Replacement element to 1
55 l/min with filter element Sm-N 2 Type: Pi 8103-069/852 761 Sm-N 2	Sm-N 2 Type: Pi 852 761 Sm-N 2 Order number: 78375867

7.1 Housing design*		
Flow rate [l/min]	**Type**	**Design**
27/32	Pi 8102-069	with visual/electrical maintenance indicator and pump cut off
57/66	Pi 8103-069	

* other designs are available on request

7.2 Filter elements*					
Flow rate [l/min]	**Order number**	**Type**	**Filter material**	**max. Δ p [bar]**	**Filter Surface [cm²]**
27/32	77774458	852 760 Mic 5	Mic 5	**5**	23800
	77774441	852 760 Mic 10	Mic 10		23800
	77955859	852 760 Sm-N 2	Sm-N 2	**10**	16000
	77774433	852 760 PS 3	PS 3		14500
	78299042	852 760 PS 6	PS 6		14500
	77774425	852 760 PS 10	PS 10		14500
	77806565	852 760 PS 25	PS 25		14500
55/66	77774417	852 761 Mic 5	Mic 5	**5**	47600
	77774409	852 761 Mic 10	Mic 10		47600
	78375867	852 761 Sm-N 2	Sm-N 2	**10**	32000
	77774391	852 761 PS 3	PS 3		29000
	78225898	852 761 PS 6	PS 6		29000
	77774383	852 761 PS 10	PS 10		29000
	77806573	852 761 PS 25	PS 25		29000

* a wider range of element types is available on request

8. Technical specifications

Filtration unit type	**Pi 8102-069**	**Pi 8103-069**
Delivery flow	27 l/min at 50 Hz	55 l/min at 50 Hz
	32 l/min at 60 Hz	66 l/min at 60 Hz
Motor output	0.75 KW/1400 1/min at 220 - 245/380 - 420 V/50 Hz	1.5 KW/1410 1/min at 220 - 245/380 - 420 V/50 Hz
	0.90 KW/1680 1/min at 220 - 280/380 - 480 V/60 Hz	1.8 KW/1692 1/min at 220 - 280/380 - 480 V/60 Hz
Power supply (standard)	3 AC 400 V/50 Hz	
	others on request	
Connection cable	7 m with EEC connector	7 m with EEC connector
Pressure limiting valve	5 bar	5 bar
Pump, type	WP gear pump with outward-facing helical gear shafts	WP gear pump with outward-facing helical gear shafts
Pump protection filter	Cleanable 150 µm wire mesh suction filter	Cleanable 150 µm wire mesh suction filter
Minimum suction pressure	0.6 bar	0.6 bar
Maximum suction pressure	1.4 bar	1.4 bar
Pump viscosity range	7.5 - 2500 mm²/s	7.5 - 2500 mm²/s
Pump temperature range	-20 °C to +120 °C	-20 °C to +120 °C
Filtration Group low pressure filter	Pi 1535/10-069	Pi 1560/10-069
Nominal pressure	10 bar	10 bar
Filter element	see options table	see options table
Filter area loading	0.0011-0.0019 l/min/cm²	0.0011-0.0019 l/min/cm²
Filter monitor	visual/electrical differential pressure indicator and automatic pump cut-off	visual/electrical differential pressure indicator and automatic pump cut-off
Δp reading threshold pressure	2.2 bar	2.2 bar
Unit monitor	Vacuum pressure gauge at the pump and pressure gauge suction points	Vacuum pressure gauge at the pump and pressure gauge suction points
Filtration unit/ filter element operating range	see differential/viscosity curves	see differential pressure/viscosity curves
Pipes	Screw fittings and pipes are zinc plated and chromated	Screw fittings and pipes are zinc plated and chromated
2.5 m flexible ransparent suction hose with suction pipe	DN 25	DN 38
2.5 m flexible delivery hose, with pipe lance	DN 19	DN 25
Noise level	< 72 db (A)	< 72 db (A)
Seals	FPM (Viton)*	FPM (Viton)*
Weight	approx. 80 kg	approx. 108 kg

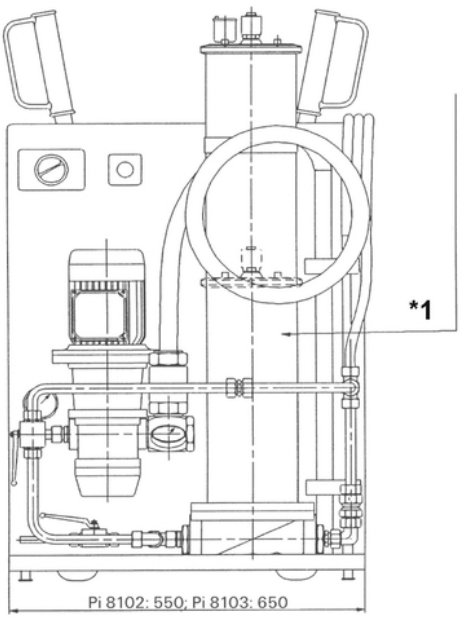
* other seals can be supplied on request

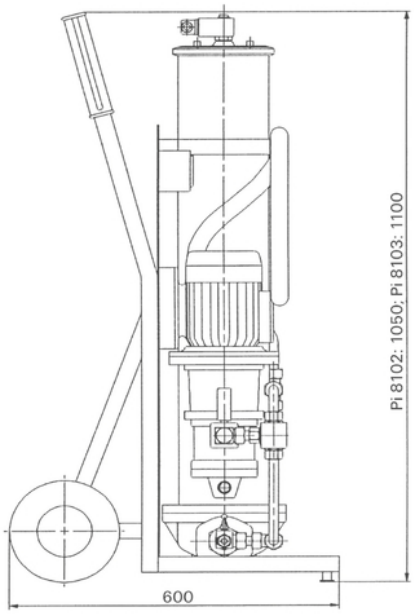
We draw attention to the fact that all values indicated are average values which do not always occur in specific cases of application. Our products are continually being further developed. Values, dimensions and weights can change as a result of this. Our specialized department will be pleased to offer you advice.

We recommend to contact us concerning applications of our filters in areas governed by the EU Directive 94/9 EC /ATEX 95). The standard version can be used for liquids based on mineral oil (corresponding to the fluids in Group 2 of Directive 97/23 EC Article 9). If you consider to use other fluids please contact us for additional support.

Subject to technical alteration without prior notice.

8. Technical specifications





*1
low pressure filter
Pi 8102 (dashed): Pi 1535
Pi 8103: Pi 1560

Filtration Group GmbH
Schleifbachweg 45
D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
sales@filtrationgroup.com
www.filtrationgroup.com
79781899.12/2016

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Filter Aggregate
Pi 8200

Volume flow 14 and 35 l/min

1. Features

Compact, ready-to connect filter aggregates for modern hydraulic and lubrication systems

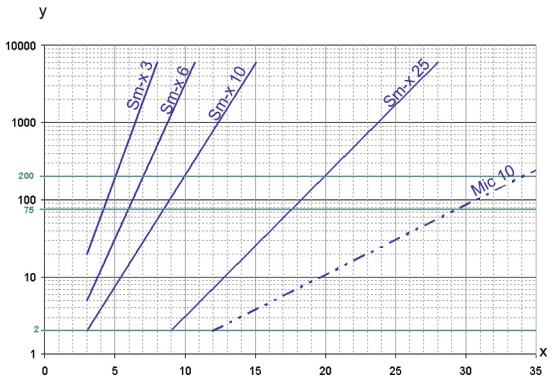
- Low noise internal gear pump with double bearing driving shaft
- Minimum loss of performance due to the high efficiency and the volume flow optimized design of parts
- Integrated pressure limitation valve
- Visual/electrical maintenance indicators
- Equipped with highly efficient Filtration Group Sm-x spin-on cartridges
- Beta rated elements according to ISO 16889 multipass test
- High dirt holding capacity due to the large filter surface
- Defined cleanliness classes
- Easy to service
- Worldwide distribution

2. Mode of operation

The filter assembly consists of a filter block with an integrated electric motor, a gear pump, a filter housing and a spin-on cartridge.
With its double-bearing drive shaft design, the internal-gear pump is extremely quiet and virtually vibration-free, with excellent suction capacity and sophisticated mechanical- and volumetric efficiencies.
The Filtration Group spin-on cartridges can be supplied with filter ratings ranging from 3 µm to 25 µm and Sm-x assembly (ß5(c) to ß20(c) according to ISO 16889) or with Mic elements with a nominal size of 10 and 25 µm.
In bypass mode, superior oil cleanliness codes per ISO 4406 of up to 14/12/09 and better can be achieved with these filter units and the Filtration Group Sm-x spin-on cartridges.

To monitor the filter element, a differential pressure indicator is supplied as standard. For customer-specific requirements, the entire range of Filtration Group differential pressure indicators is available with one or two switching levels, LED displays, various contact types, and connector plugs.
The pump units are suitable for all mineral-oil-based hydraulic oils and lubricating oils.
The standard scope of supply includes the complete unit with On/Off switch, motor protection feature, 2-m plug power cord, pump, maintenance indicator, and the selected spin-on cartridge.
Units are available for prompt delivery.

3. Separation grade characteristics



y = beta-value
x = particle size [µm]

determined by multipass tests (ISO 16889)
calibration according to ISO 11171 (NIST)

4. Filter performance data

tested according to ISO 16889 (multipass test)

Sm-x elements with max. Δ p 10 bar

Sm-x	3	$\beta_{5(C)} \geq 200$
Sm-x	6	$\beta_{7(C)} \geq 200$
Sm-x	10	$\beta_{10(C)} \geq 200$
Sm-x	25	$\beta_{20(C)} \geq 200$

values guaranteed up to 10 bar differential pressure

5. Quality assurance

Filtration Group filters and filter elements are produced according to the following international standards:

Norm	Designation
DIN ISO 2941	Hydraulic fluid power filter elements; verification of collapse/burst resistance
DIN ISO 2942	Hydraulic fluid power filter elements; verification of fabrication integrity
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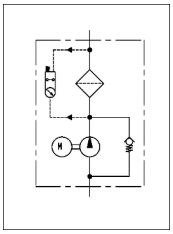
6. Symbols



7. Order numbers

Example for ordering filters:

1. Filter aggregate	2. Spare part spin-on cartridge
V = 14 l/min with visual/electr. maintenance indicator and PX 33 spin-on cartridge Type: Pi 82001-069 PX33-13-2-Smx10 Order number: 70383014	Sm-x 10 Type: PX33-13-2-Smx10 Order number: 70541523

7.1 Filter aggregates

Nominal size NG [l/min]	Order number	Type	with visual/electr. indicator
14	70383013	Pi 82001-069 PX33-13-2-Mic10	
	70383014	Pi 82001-069 PX33-13-2-Smx10	
	70383015	Pi 82001-069 PX37-13-2-Mic10	
	70383019	Pi 82001-069 PX37-13-2-Smx3	
	70383017	Pi 82001-069 PX37-13-2-Smx6	
	70320065	Pi 82001-069 PX37-13-2-Smx10	
	70383016	Pi 82001-069 PX37-13-2-Smx25	
35	70377257	Pi 82003-069 PX37-13-2-Mic10	
	70383025	Pi 82003-069 PX37-13-2-Smx3	
	70383024	Pi 82003-069 PX37-13-2-Smx6	
	70383023	Pi 82003-069 PX37-13-2-Smx10	
	70383022	Pi 82003-069 PX37-13-2-Smx25	

7.2 Spin-on cartridges

Nominal size NG [l/min]	Order number	Type	Filter material	max. Δ p [bar]	Filter surface [cm²]
14 + 35	70541525	PX33-13-2-Mic10	Mic 10	5	7000
	70541523	PX33-13-2-Smx10	Sm-x 10		3400
	70541540	PX37-13-2-Mic10	Mic 10		13500
	70541536	PX37-13-2-Smx3	Sm-x 3		7400
	70541537	PX37-13-2-Smx6	Sm-x 6		
	70541538	PX37-13-2-Smx10	Sm-x 10		
	70541539	PX37-13-2-Smx25	Sm-x 25		

8. Technical specifications

	Pi 82001-069/Pi 82003-069
Volume flow:	14 l/min/35 l/min
Temperature range:	-10 to +80 °C
Setting pressure limiting valve:	4 ±0.5 bar
Maintenance indicator setting:	2.2 bar
Connection suction side:	G¾/G1
Connection pressure side:	G¾/G1
Motor output:	0.25 kW/0.55 kW
Revolutions:	1400 1/min
Voltage:	230V AC/50 Hz
Nominal current:	2.5 A/4.2 A
Type of protection:	IP 54 in inserted and secured status
Contact:	normally open/closed
Cable sleave:	M20x1.5
Viscosity range:	10 – 200 mm²/s

The switching function can be changed by turning the electric upper part by 180° (normally closed contact or normally open contact). The state on delivery is a normally closed contact. By inductivity in the direct current circuit the use of suitable protection circuit should be considered. Further maintenance indicator details and designs are available in the maintenance indicator data sheet.

We draw attention to the fact that all values indicated are average values and do not always occur in specific cases of application. Our products are continually being further developed. Values, dimensions and weights can change as a result of this. Our specialized department will be pleased to offer you advice.

We recommend you to contact us concerning applications of our filters in areas governed by the EU Directive 94/9 EC (ATEX 95). The standard version can be used for liquids based on mineral oil (corresponding to the fluids in Group 2 of Directive 97/23 EC Article 9). If you consider to use other fluids please contact us for additional support.

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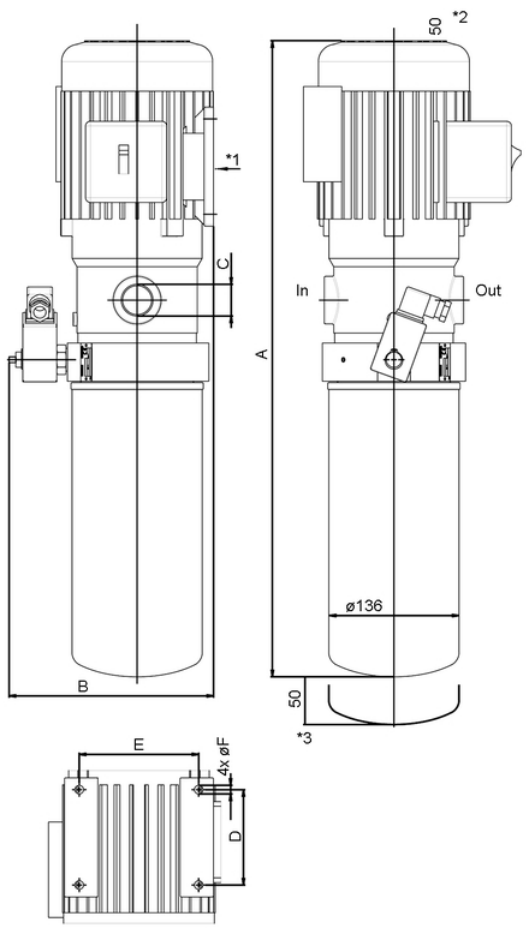


In = Inlet
Out = Outlet
*1 = View mounting
*2 = Minimum clearance
*3 = Clearance for cartridge change

9. Dimensions

All dimensions except "C" in mm.

Aggregate type	Spin-on cartridge type	A	B	C	D	E	F
Pi 82001-069	PX33	495	183	G¾	90	112	7
	PX37	633	183	G¾	90	112	7
Pi 82003-069	PX37	667	214	G1	100	125	9

10. Installation, operating and maintenance instructions

10.1 Filter aggregate installation

When installing the filter aggregate make sure that sufficient space is available to remove the spin-on cartridge. The filter aggregate should be installed with the spin-on cartridge pointing downwards.
The maintenance indicator must be visible.

10.2 Connecting the electrical maintenance indicator

The electrical indicator is connected via a 2-pole appliance plug according to DIN EN 175301-803 with poles marked 1 and 2.
The electrical section can be inverted to change from normally open position to normally closed position or vice versa.

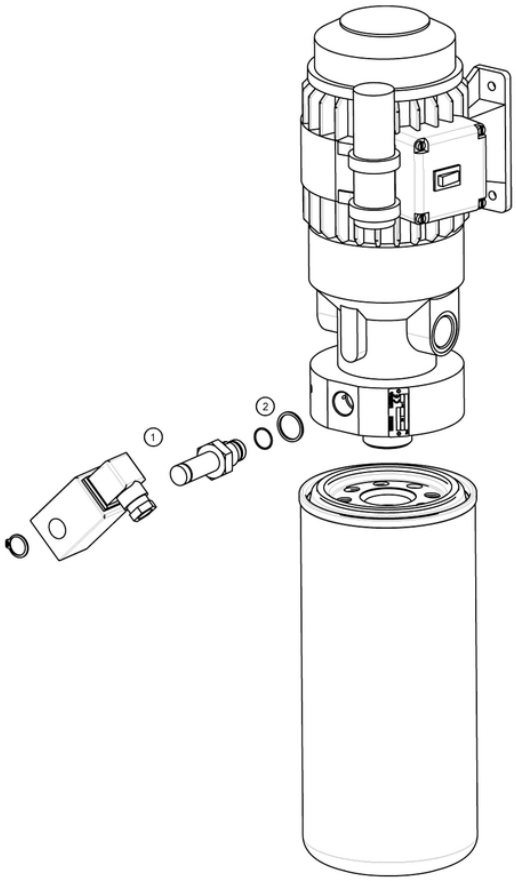
10.3 When should the filter element be replaced?

1. Filter aggregates equipped with visual and electrical maintenance
   indicator:
   During cold starts, the indicator may give a warning signal. Press the red button of the visual indicator once again only after operating temperature has been reached. If the red button immediately pops up 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.
2. Filter aggregates without maintenance indicator:
   The spin-on cartridge should be replaced after the trial run or flushing of the system. Afterwards follow instructions of the manufacturer.
3. Please always ensure that you have original Filtration Group spare
   spin-on cartridges in stock.

10.4 Spin-on cartrige exchange

1. Stop system and relieve filter aggregate from pressure.
2. Unscrew the spin-on cartridge with the aid of a belt spanner by turning some to the left.
3. Make sure that the order number on the spin-on cartridge corresponds to the order number of the plate.
4. The seal of the screw-on cartridge should be lightly oiled.
5. Screw cartridge on in accordance with the printed-on instructions.

11. Spare parts list



Order number for spare parts		
Position	**Type**	**Order number**
①	Maintenance indicator	
	Visual PiS 3098/2,2	77669971
	Electrical PiS 3097/2,2	77669948
	Electrical upper part only	77536550
②	Seal kit for maintenance indicator	
	NBR	77760309

Filtration Group GmbH
Schleifbachweg 45
D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
fm.de.sales@filtrationgroup.com
www.filtrationgroup.com
70383043.03/2017

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Mobile Filter Unit
Pi 8210

Flow rate 15 l/min

1. Features

High performance filter unit for modern hydraulic and lubrication systems

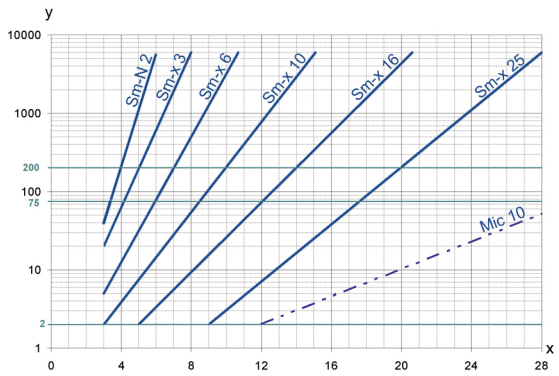
- Simple filling and cleaning of hydraulic and lubrication systems
- Sturdy and stable, flexible handling thanks to a frame with wheels and folding carrying handle, even stairs present no obstacle (like a case trolley)
- Folding down the handle allows the unit to be carried in one hand
- Low-noise internal gear pump with drive shaft mounted in double bearings and integrated pressure relief valve
- Complete with intake and delivery hose, suction lance with coarse screen
- Integrated oil drip pan
- Minimum power loss thanks to high efficiency and optimum flow design of the components
- Maintenance indicator (pressure gauge)
- Equipped with highly efficient Filtration Group Sm-x spin-on cartridges
- Beta rated elements according to ISO 16889 multipass test
- Elements with high dirt holding capacity thanks to large filter surface
- Achievement of defined purity classes
- Easy to service
- Worldwide distribution

2. Mode of operation

The self-priming internal gear wheel pump draws in the medium from the extraction point via the lance in the suction hose and delivers it via the spin-on cartridge and the pressure hose with lance to the delivery point. A significant improvement in the oil quality is thus achieved during filling and refilling oil tanks. Filtration Group PX Series spin-on cartridges are available as filters.

In bypass mode, outstanding oil cleanliness classes to ISO 4406/1999 can be achieved with this unit and the Filtration Group Sm-x spin-on cartridges. A gauge with red/green field is installed to monitor the filter cartridges. The filter unit is suitable for all mineral oil-based hydraulic and lubricating oils.

3. Separation grade characteristics



y = beta-value
x = particle size [µm]
determined by multi-pass measurements (ISO 16889)
calibration according to ISO 11171 (NIST)

4. Filter performance data

tested according to ISO 16889 (multipass test)

Sm-N	2	$ß_{4(C)} \geq 200$
Sm-x	3	$ß_{5(C)} \geq 200$
Sm-x	6	$ß_{7(C)} \geq 200$
Sm-x	10	$ß_{10(C)} \geq 200$
Sm-x	25	$ß_{20(C)} \geq 200$

up to 10 bar differential pressure

5. Quality assurance

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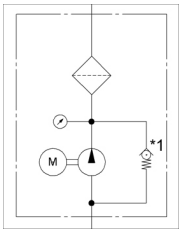
6. Symbols



*1 pressure relief valve 4 bar ± 0.5 %

7. Order numbers

Ordering example for filter:

1. Filter unit	2. Replacement spin-on cartridge
V = 15 l/min with gauge and Sm-x 3 spin-on cartridge Type designation: Pi 82101-063/PX33-13-2 Sm-x3 Order number: 70551659	Sm-x 3 Type designation: PX33-13-2 Sm-x3 Order number: 70541521

7.1 Filter unit

Nominal size NG [l/min]	Order number	Type designation	with gauge
15	70573194	Pi 82101-063/PX33-13-2 Sm-N2	
	70551659	Pi 82101-063/PX33-13-2 Sm-x3	
	70573195	Pi 82101-063/PX33-13-2 Sm-x6	
	70573196	Pi 82101-063/PX33-13-2 Sm-x10	
	70573197	Pi 82101-063/PX33-13-2 Sm-x25	
	70573198	Pi 82101-063/PX33-13-2 Mic10	
	70573199	Pi 82101-063/PX33-13-2 Mic25	

7.2 Spin-on cartridges

Nominal size NG [l/min]	Order number	Type designation	Filter material	max. Δ p [bar]	Filter surface [cm²]
100	70548477	PX33-13-2 Sm-N2	Sm-N 2	5	3400
	70541521	PX33-13-2 Sm-x3	Sm-x 3		3400
	70541522	PX33-13-2 Sm-x6	Sm-x 6		3400
	70541523	PX33-13-2 Sm-x10	Sm-x 10		3400
	70541524	PX33-13-2 Sm-x25	Sm-x 25		3400
	70541525	PX33-13-2 Mic10	Mic 10		7000
	70541527	PX33-13-2 Mic25	Mic 25		7000

8. Technical specifications

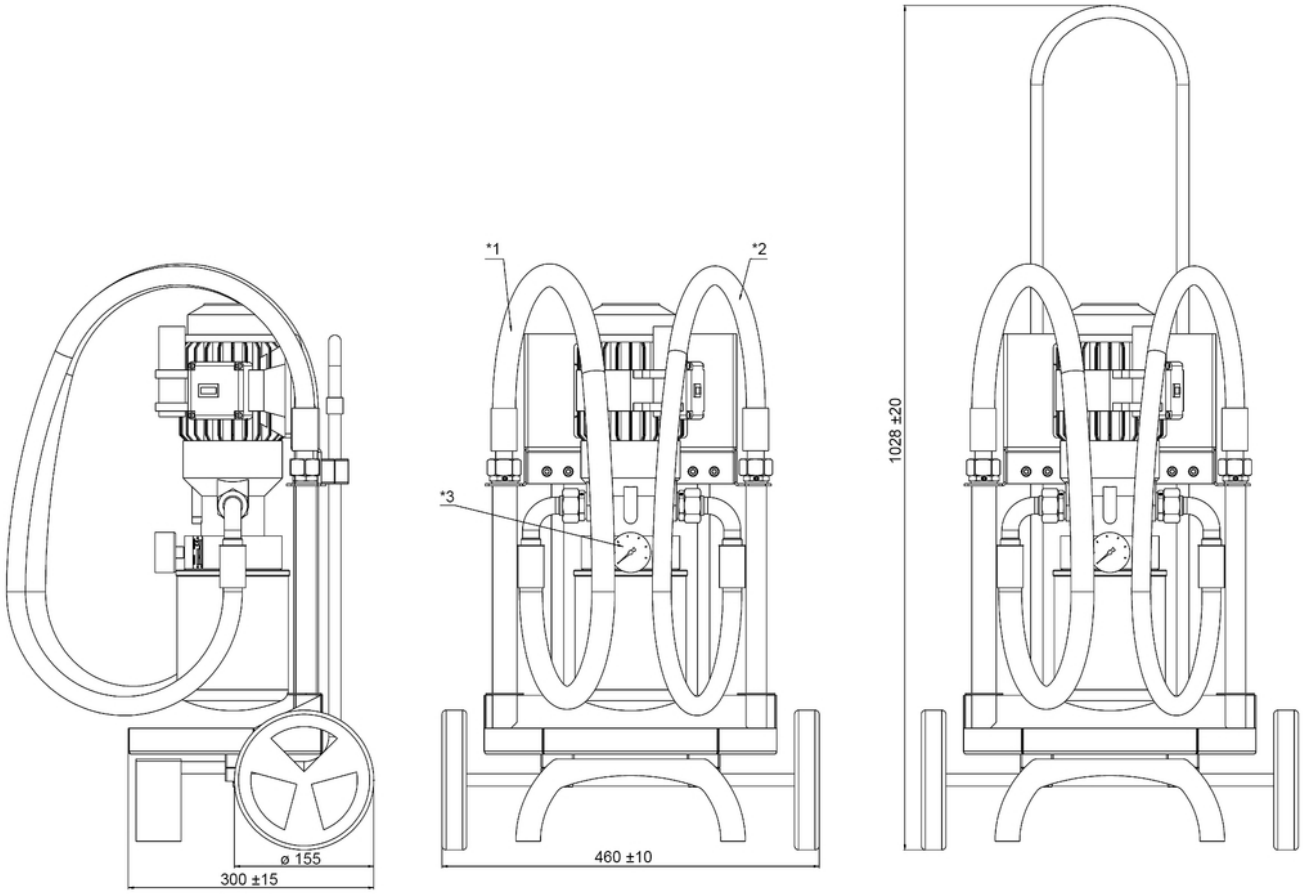
Delivery volume:	15 l/min
Perm. temperature:	-10 to +80 °C
Setting pressure limiting valve:	4 ±0.5 bar
Green/red gauge border line:	2.2 bar
Motor output:	0.25 kW
Revolutions:	1400 1/min
Voltage:	230 V AC/50 Hz
Rated current:	1.9 A
Protection class:	IP54
Viscosity range:	10 – 400 mm²/s
Length of hoses:	2.5 m
Weight:	18 kg

We draw attention to the fact that all values indicated are average values. Our products are continually being further developed. Values, dimensions and weights can change as a result of this. Our specialised department will be pleased to help you.

Please contact us before using our filters in areas governed by EU Directive 94/9/EC (ATEX 95). The standard version can be used for liquids based on mineral oil (corresponding to the fluids in Group 2 of Directive 97/23 EC Article 9). If you consider to use other fluids please contact us for additional support.

Subject to technical alteration without prior notice.

9. Dimensions



*1 = Suction hose DN19
*2 = Pressure hose DN16
*3 = Gauge

Filtration Group GmbH
Schleifbachweg 45
D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
fm.de.sales@filtrationgroup.com
www.filtrationgroup.com
70563104.03/2017

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Filtering The World

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Off-line Oil Filter Module
Pi 8400

Volume flow 3 l/min

1. Features

Compact, ready-to connect oil filter module for modern hydraulic and lubrication systems

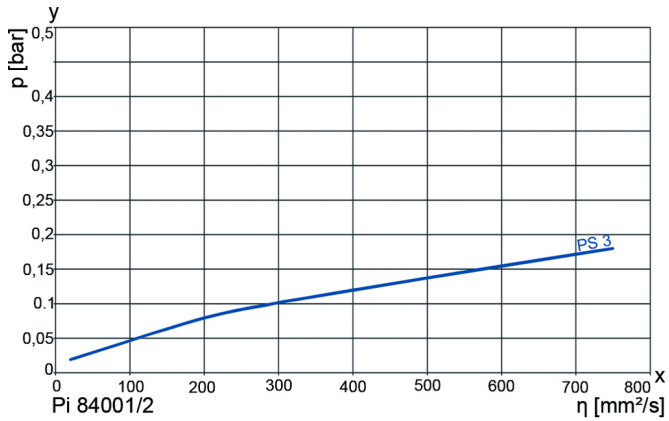
- Low noise internal gear pump
- Minimum loss of performance due to the high efficiency and the volume flow optimised design of parts
- Integrated pressure relieve valve
- Visual maintenance indicator (gauge)
- Drain outlet dirt side
- Equipped with highly efficient Filtration Group Premium Select filter elements
- Compact and weight optimised design
- Guaranteed retention rates according to ISO 16889 multipass test
- High dirt holding capacity due to the large filter surface
- Defined cleanliness classes according to ISO 4406
- Easy to service
- Worldwide sales and service

2. Mode of operation

The oil filter module consists of an electric motor, a gear pump, a filter housing and a filter element.
The internal-gear pump is extremely quiet and virtually vibration-free, with excellent suction capacity and sophisticated mechanical and volumetric efficiencies.
Two versions of the oil filter modul are available. Type Pi 84001/1-063 is fitted with standard DIN-norm elements. Type 84001/2-063 is fitted with Filtration Group designed elements 852 109 WS. These elements have the additional characteristics of water adsorption. 852 109 WS elements do not fit into Pi 84001/1-063 housings.

Usually 10 micron filtration is beeing used in the main filtration circuit. Therefore we recommend a 3 micron retention rate at the off-line circuit. Other degrees of filtration are available on request. All retention rates are according to ISO 16889.
In bypass mode, superior oil cleanliness codes per ISO 4406 of up to 14/12/09 and better can be achieved with these filter units and the Filtration Group PS filter elements.
For monitoring the filter element, a gauge is mounted. The oil filter modules are suitable for all mineral-oil-based hydraulic oils and lubricating oils.
Units are available for prompt delivery

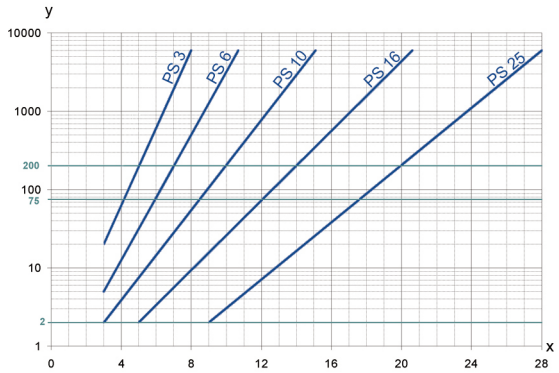
3. Flow rate/pressure drop curve (filter housing incl. element)



y = pressure p [bar]
x = viscosity [mm²/s]

A wider range of grade of filtration on request.

4. Separation grade characteristics



y = beta-value
x = particle size [µm

determined by multipass tests (ISO 16889)
calibration according to ISO 11171 (NIST)

5. Filter performance data

tested according to ISO 16889 (Multipass-Test)

PS elements with max.Δ p 10 bar

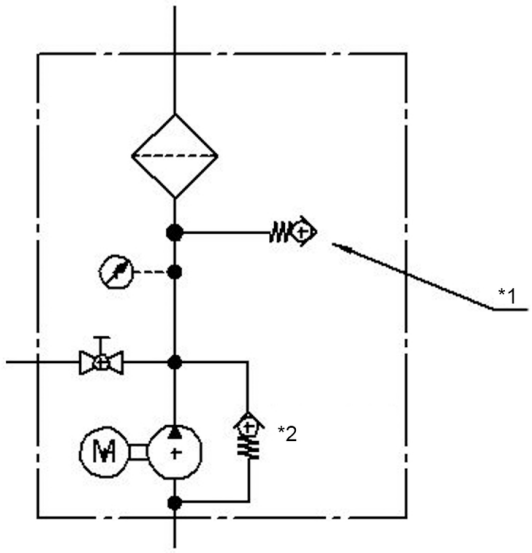
PS	3	$\beta_{5(C)} \geq 200$
PS	6	$\beta_{7(C)} \geq 200$
PS	10	$\beta_{10(C)} \geq 200$
PS	16	$\beta_{15(C)} \geq 200$
PS	25	$\beta_{20(C)} \geq 200$

6. Quality assurance

Filtration Group filters and filter elements are produced according to the following international standards:

Norm	Designation
DIN ISO 2941	Hydraulic fluid power filter elements; verification of collapse/burst resistance
DIN ISO 2942	Hydraulic fluid power filter elements; verification of fabrication integrity
DIN ISO 2943	Hydraulic fluid power filter elements; verification of material compatibility with fluids
DIN ISO 3723	Hydraulic fluid power filter elements; method for end load test
DIN ISO 3724	Hydraulic fluid power filter elements; verification of flow fatigue characteristics
ISO 3968	Hydraulic fluid power-filters-evaluation of pressure drop versus flow characteristics
ISO 10771.1	Fatigue pressure testing of metal containing envelopes in hydraulic fluid applications
ISO 16889	Hydraulic fluid power filters-multipass method for evaluation filtration performance of a filter element

7. Symbols



*1 measuring connection available

*2 pressure relieve valve 4.8 bar (70 psi) ± 10 %

8. Order numbers

Example for ordering filters:

1. Off-line oil filter module	2. Filter element
with gauge Type: Pi 84001/1-063 Order number: 70562951	PS 10 Type: Pi 23025 PS 10 Order number: 77924160

8.1 Off-line oil filter module		
Type	**Order number**	**with gauge**
Pi 84001/1-063	70562951	
Pi 84001/2-063	70562883	

8.2 Filter elements				
Off-line oil filter module	**Order number**	**Type**	**Degree of filtration [µm]**	**Filter surface [cm²]**
Pi 84001/1-063	77924152	Pi 21025 RN PS 3	3	5940
	77964075	Pi 22025 RN PS 6	6	5940
	77924160	Pi 23025 RN PS 10	10	5940
	77963655	Pi 24025 RN PS 16	16	5940
	77960248	Pi 25025 RN PS 25	25	5940
Pi 84001/2-063	70566180	852 109 WS PS 3	3	10.507

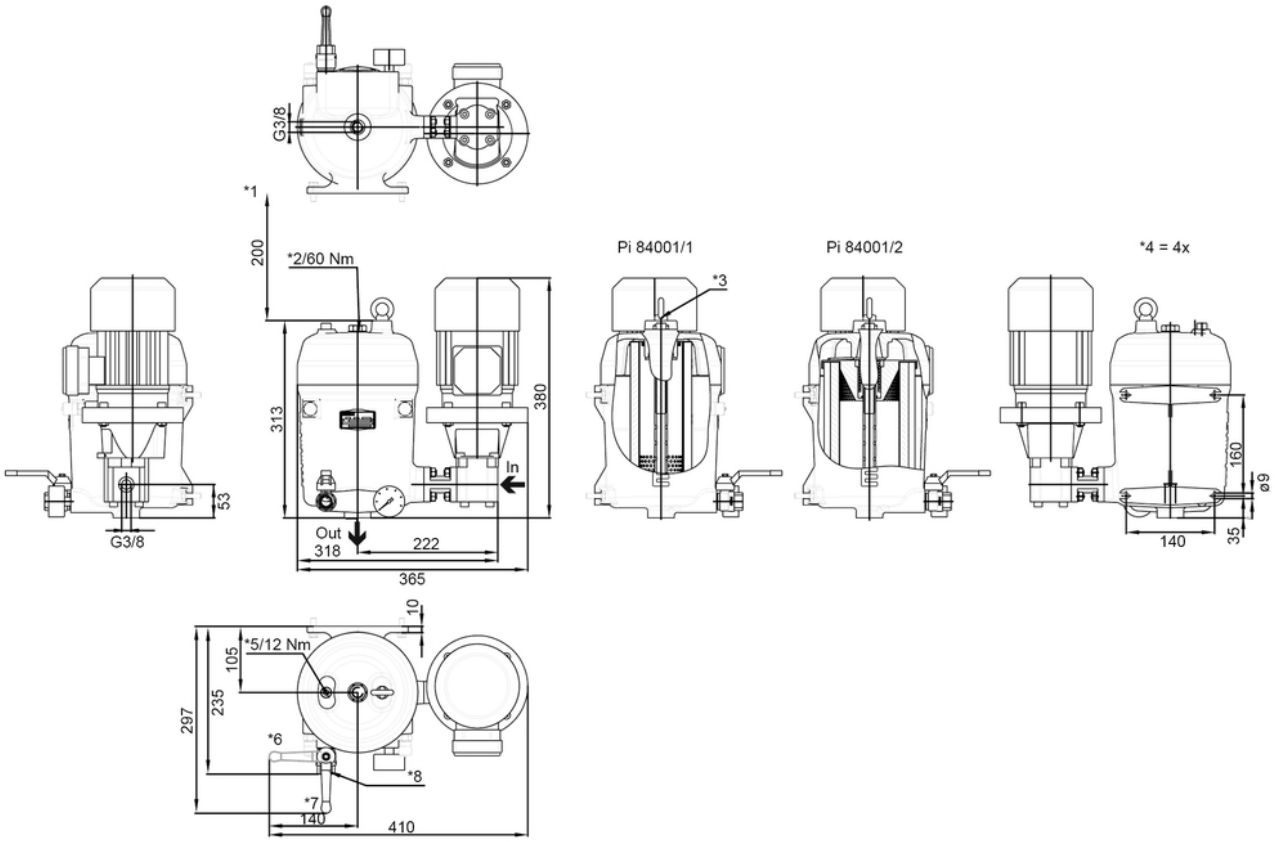
9. Technical specifications

Type:	Pi 8400
Material main components:	Aluminium
	Optional paint on customer request
Volume flow:	3 l/min
Nominal pressure:	10 bar (145 psi)
Pressure relieve valve setting:	4.8 bar (70 psi) ± 10 %
Oil temperature:	-10 °C to +80 °C
Gauge (red/green scale):	2.2 bar (32 psi)
Connection suction side:	G3/8
Connection pressure side:	G3/8
Motor output:	0.18 kW
Revolutions:	1380 1/min
Voltage:	230 V AC/50 Hz
Nominal current:	1,25 A
Type of protection:	IP55
Viscosity start:	700 mm²/s
Viscosity operation:	20 mm²/s - 120 mm²/s

Other motor versions on request

Subject to technical alteration without prior notice

10. Dimensions



In	Inlet	*4	Fixing points (4x ø 9 mm)
Out	Outlet	*5	Venting screw (12 Nm)
*1	Minimum clearance for filter element	*6	Ball valve drain dirt side closed
*2	Cover fixing (60 Nm)	*7	Ball valve drain dirt side open
*3	Connection maintenance indicator (optional)	*8	Drain dirt side

11. Installation, operating and maintenance instructions

11.1 Off-line oil filter module installation

When installing the filter make sure that sufficient space is available to remove filter element. The filter must be installed with the filter housing pointing upwards. The gauge must be visible.

11.2 When should the filter element be replaced?

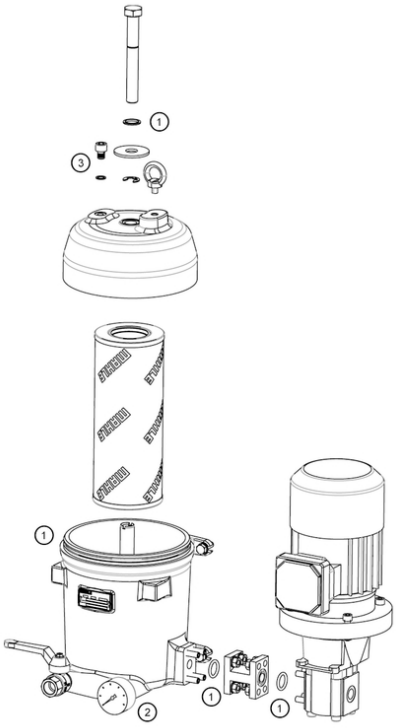
1 . The filter element should be replaced after the trial run or flushing of the system. Afterwards follow instructions of the manufacturer.
2 . Please always ensure that you have original Filtration Group spare
elements in stock: Disposable elements (PS) cannot be cleaned.

11.3 Element replacement

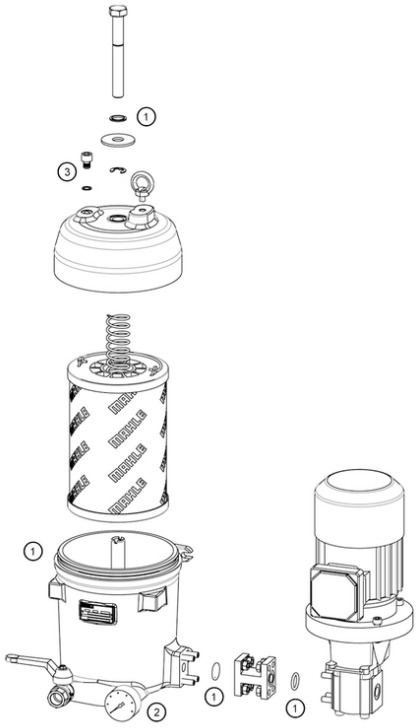
1 . Stop system and relieve filter module from pressure.
2 . Unscrew the cover with an open-end wrench and remove it.
3 . Open the drain and discharge the housing completely.
4 . Remove element out of the housing carefully.
5 . Check seals on the filter housing for damage. Replace, if necessary.
6 . Make sure that the order number on the spare element corresponds to the order number of the filter name-plate.
To ensure no contamination occurs during the exchange of the element first open the plastic bag and push the element over the spigot in the filter head. Now remove plastic bag.
7 . Close the drain.
8 . Tighten the cover (tightening torque 60 Nm).
9 . Vent the filter module (tightening torque of the venting screw 12 Nm).

12. Spare parts list

Pi 84001/1



Pi 84001/2



Order numbers for spare parts		
Position	**Type**	**Order number**
①	Seal kit	70560114
②	Gauge	78381998
③	Venting screw incl. seal	70560152

Filtration Group GmbH
Schleifbachweg 45
D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
sales@filtrationgroup.com
www.filtrationgroup.com
70564541.12/2016