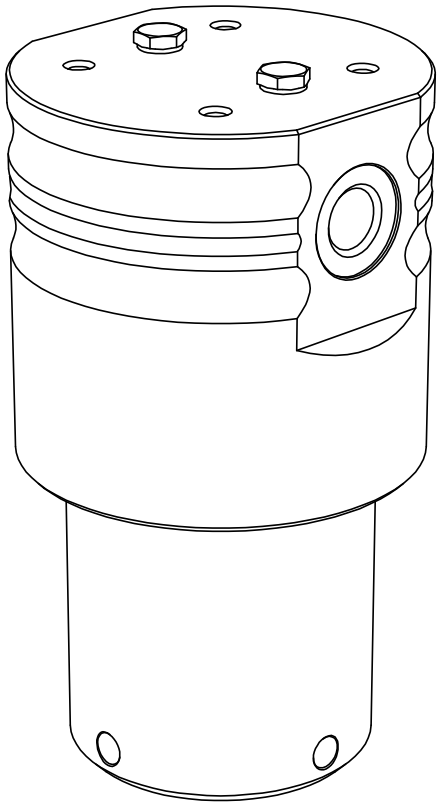
BERG Kompressoren GmbH
Compressed Air Technology | Air Separation

INSTALLATION AND OPERATING MANUAL

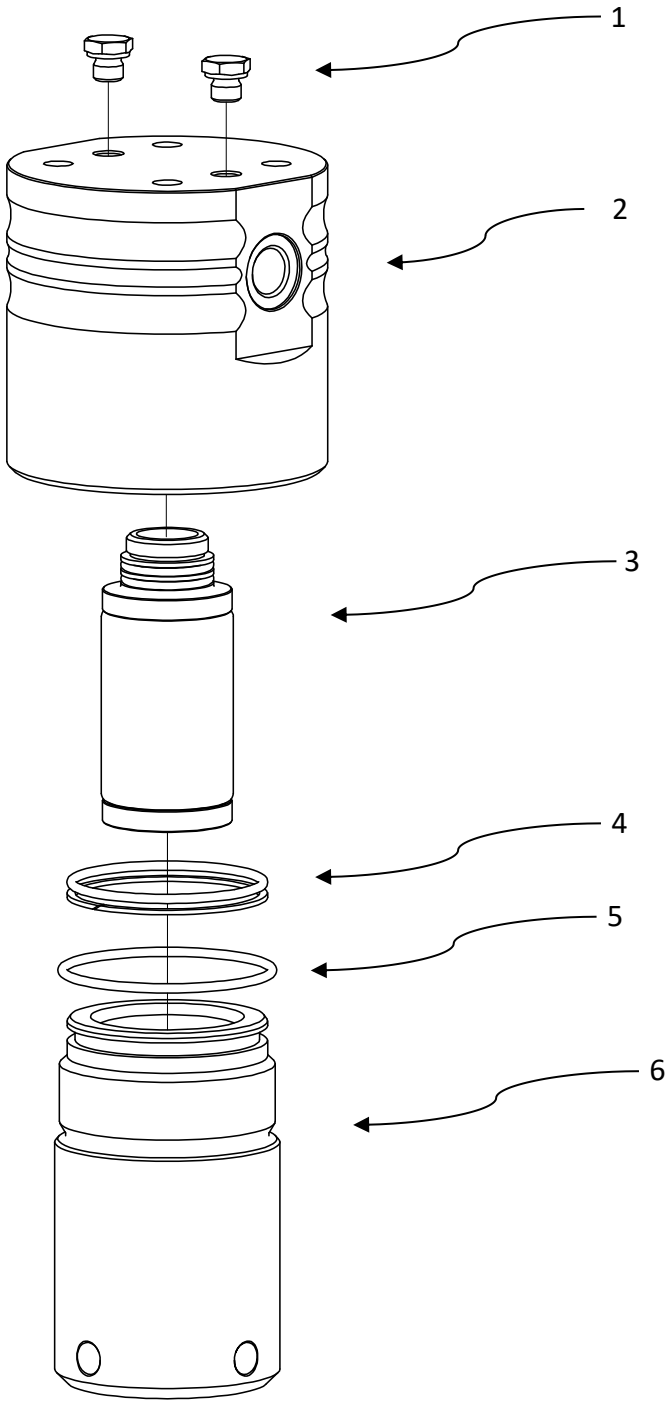
High Pressure Filter
PUREBERG FWHP



Please read the following instructions carefully before installing filter housing unit into service. Trouble free and safe operating of the unit can only be guaranteed if recommendations and conditions stated in this manual are respected.

CE

Components



	Part
1	Plugs G1/8”
2	Filter head
3	Filter cartridge
4	O-ring + back-up ring
5	O-ring
6	Filter bowl

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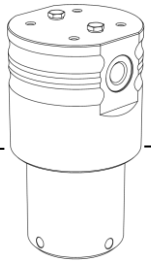
Product identification

[1] = Size: Housing
[2] = Filter elements
[3] = Attachment components top
[4] = Attachment components bottom (optional)

1 2 3

F 03 (type) WHP

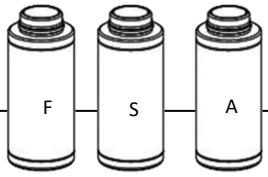
1



Size: Housing

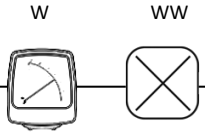
F 03 (type) WHP
F 05 (type) WHP
F 07 (type) WHP
F 10 (type) WHP
F 18 (type) WHP
F 30 (type) WHP
F 47 (type) WHP

2



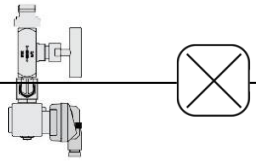
Filter elements

3



Attachment components top

4



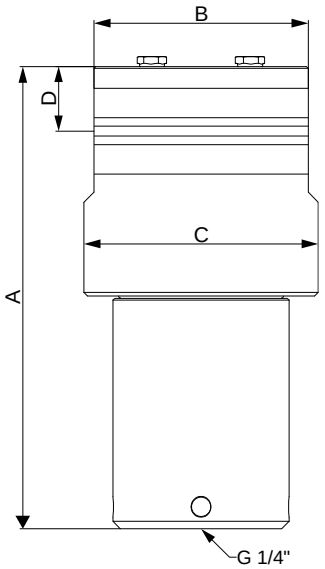
Attachment components bottom (optional)

Technical data

Housing size	*Connections [inch]	FILTER ELEMENT	**FLOW CAPACITY [Nm³/h]	[scfm]	DIMENSIONS [mm] A	B	C	D	Volume [l]	Weight [kg]
F03(type)WHP	1/4	EF03(type)HP	200	117	182	98	104	30	0,19	7,9
F05(type)WHP	3/8	EF05(type)HP	350	206	182	98	104	30	0,20	7,9
F07(type)WHP	1/2	EF07(type)HP	650	382	230	118	129	36	0,40	15,7
F10(type)WHP	3/4	EF10(type)HP	970	575	254	118	129	36	0,48	16,6
F18(type)WHP	1	EF18(type)HP	1300	810	276	145	158	46	0,76	27,3
F30(type)WHP	1 1/4	EF30(type)HP	1900	1115	328	145	158	46	0,98	29,6
F47(type)WHP	1 1/2	EF47(type)HP	2470	1455	385	195	216	65	2,2	67,8

* BSP (ISO 228-1); NPT (ANSI B1.20.1) on request
**Flow capacity at 40 bar(g), 20°C

Operating temperature	1,5 - 65 °C	35 - 149 °F
Operating pressure	100, 250, 420 bar(a)	0 – 1450, 3625, 6091 psi



CORRECTION FACTORS

To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor(s).
CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C_{OP}

OPERATING PRESSURE

[bar]	40	80	100	200	420
C_{OP}	1	2	2.4	2.4	2.4

MATERIALS

	FWHP
Housing material	Stainless steel 1.4301 (1.4404 on requet)
Corrosion protection	/
Fittings, Screws	Stainless steel1.4404
Sealing	FKM with PTFE backup ring
Lubricant	Shell cassida grease RLS 2

PRESSURE EQUIPMENT DIRECTIVE PED 2014/68/EU (Fluid group 2)

Size	PED Category
03 - 30	Article 4.3
47	Category 2, Module H1

PRESSURE EQUIPMENT DIRECTIVE PED 2014/68/EU (Fluid group 1)

Size	PED Category
03 - 47	Category 3, Module H1

There is Technical datasheet available. For additional technical specification, contact manufacturer.

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Safety instructions

The relevant safety at work and accident prevention regulations, plus operating instructions, shall apply for operating the filter. The filter has been constructed in accordance with the generally recognized rules of engineering. It complies with the requirements of directive PED 2014/68/EU concerning pressure equipment.

Ensure that installation complies with local laws for operation and routine testing of pressure equipment at the place of installation.

Operator/user of the filter should make himself familiar with the function, installation and start-up of the unit. All the safety information is always intended to ensure your personal safety.

- Do not exceed max. operating pressure or operating temperature range (see data label).
- The permissible working temperatures and pressures for ad-on parts and filter elements are given under Technical data for those ad-ons. Maximum temperature and pressure for assembled system is the lowest of any individual part.
- It is necessary to ensure that the unit is equipped with the corresponding safety and test devices to prevent the permissible operating parameters from being exceeded.
- Filter has been designed for a primarily static pressure. Rapid changes of pressure are not allowed.
- Ensure that the filter is not subject to vibrations that could cause fatigue fractures.
- Filter is not to be subjected to mechanical stresses.
- The medium used may not have any corrosive components that could attack the materials of the filter in a way that is not permitted. Do not use the filter in hazardous areas with potentially explosive atmospheres.
- All installation and maintenance work on the filter may only be carried out by trained and experienced specialists.
- It is forbidden to carry out any kind of work on the filter and piping, including welding and constructional changes, etc.
- A pressure gauge, which shows the operational pressure, must be installed in the unit, respectively in the pipeline.
- Depressurize the system before carrying out the installation work. The unit must be installed vertically in the piping.
- Ensure that filter is installed without any stresses.
- Use original spare parts only.
- Use the device for appropriate purpose only.

Appropriate use

FWHP stainless steel high pressure filters are intended for high efficient removal of solid particles, water, oil aerosols, hydrocarbons and other vapours from

compressed air systems. This appliance must be used only for the purpose for which it was specifically designed. All other uses are to be considered incorrect.

Specifically:

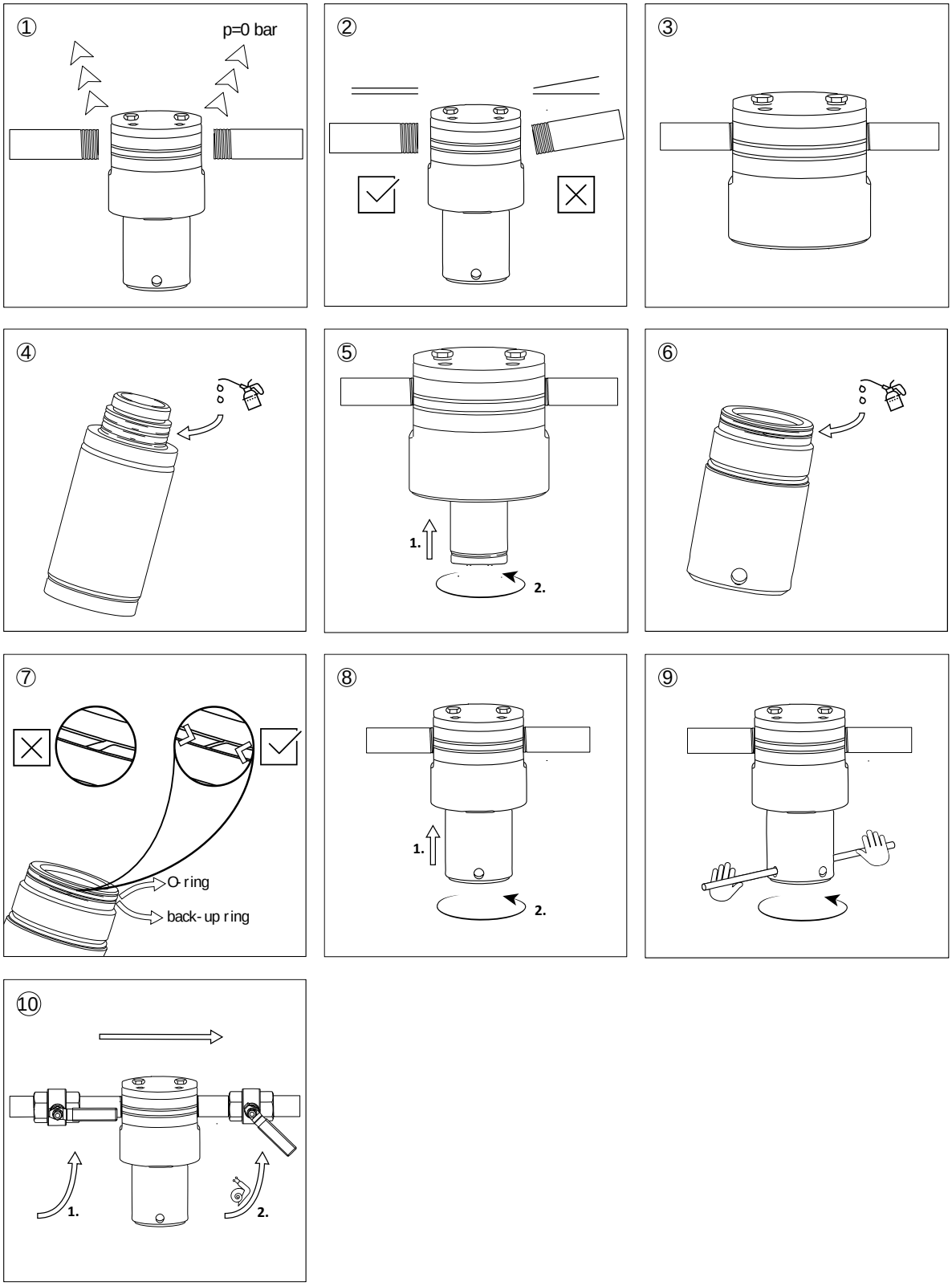
- filter is not intended for human breathing without proper additional equipment.

Warning: internal corrosion can seriously reduce the safety of installation: check it during changing the cartridge.

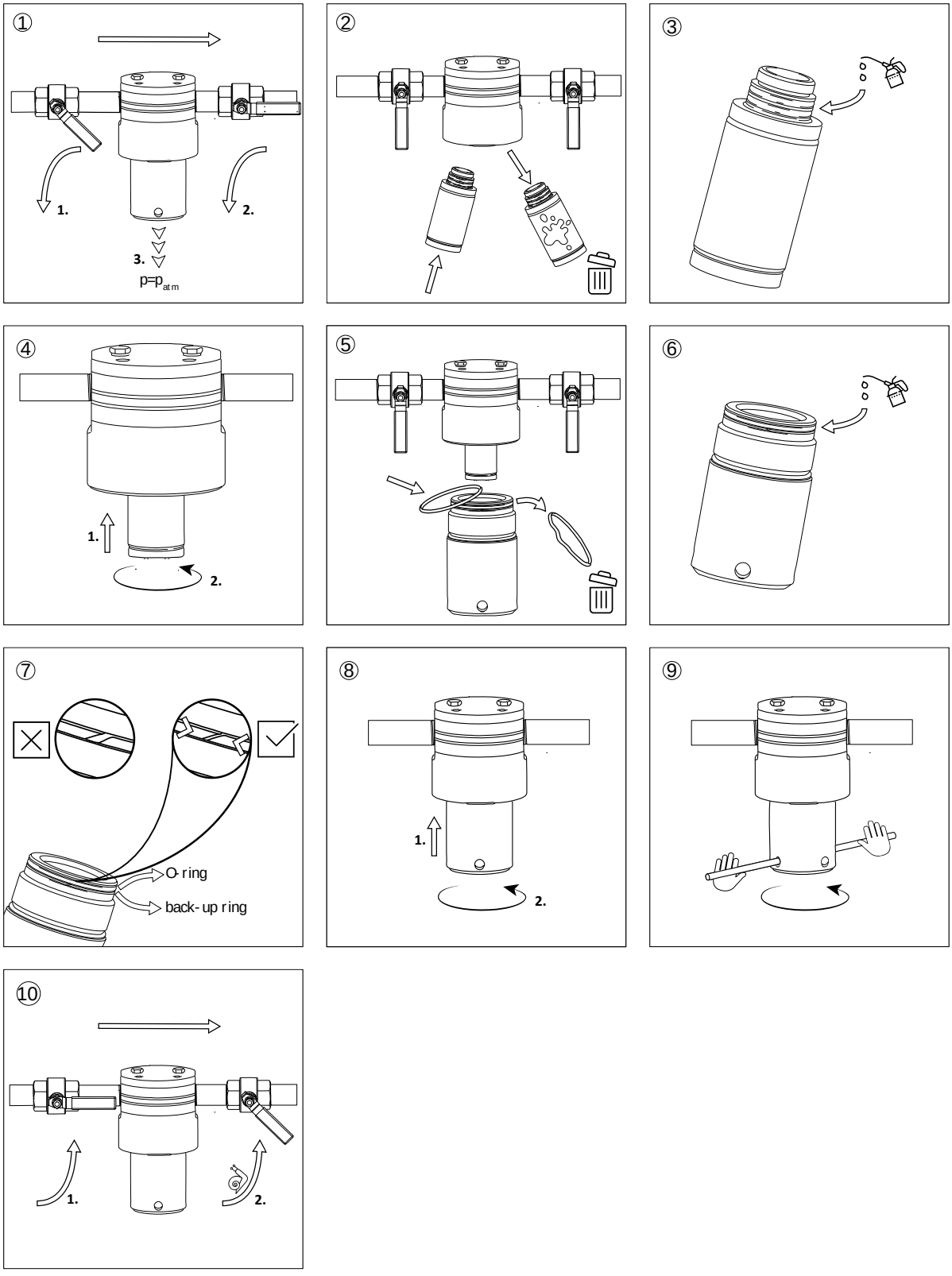
The manufacturer will under no circumstances be responsible for any damage resulting from improper, incorrect or unreasonable use.

Use genuine spare parts only. Any damage or malfunction caused by the use of ungenuine parts is not covered by Warranty or Product Liability.

Installation



Changing the filter element



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Spare parts by ordering code

Consumables				
Housing size	**O-ring 1 (upper)**	**Back-up ring**	**O-ring 2**	**Plug (1/8”)**
03; 05	2900884	2900880	2900272	3509881
07; 10	2900885	2900881	2900180	3509881
18; 30	2900886	2900882	2900800	3509881
47	2900887	2900883	2900292	3509881

Filter elements			
Housing size	**F** **Fine filter** **0,1 µm**	**S** **Super fine filter** **0,01 µm**	**A** **Actived carbon**
F03(type)WHP	EF03FHP	EF03SHP	EF03AHP
F05(type)WHP	EF05FHP	EF05SHP	EF05AHP
F07(type)WHP	EF07FHP	EF07SHP	EF07AHP
F10(type)WHP	EF10FHP	EF10SHP	EF10AHP
F18(type)WHP	EF18FHP	EF18SHP	EF18AHP
F30(type)WHP	EF30FHP	EF30SHP	EF30AHP
F47(type)WHP	EF47FHP	EF47SHP	EF47AHP

Maintenance

Filter elements are subject to wear. In order to maintain system efficiency, optimal performance and best air quality, these rules of proper maintenance should be followed:

- Replace filter elements F, S at least once per year or when pressure drop reaches 350mbar.
- A filter element must be changed after 6 months.
- The housing O-ring can be damaged during filter element change. To prevent air leakage and malfunction replace housing O-ring if necessary. For replacement contact manufacturer.
- Damaged components are to be replaced by new ones. If a marked degree of damage is found, the entire filter is to be replaced.
- Filter has been designed for a life of 10 years in normal operating environment. After 10 years periodical checks of filter integrity are strongly recommended for safe operation.
- Carry out a check for leaks once the maintenance work has been finished.

Warranty exclusion

The guarantee shall be void if:

- The operating instructions were not followed with respect to initial commissioning and maintenance.
- The unit was not operated properly and appropriately.
- The unit was operated when it was clearly defective.
- Non-original spare parts or replacement parts were used.
- The unit was not operated within the permissible technical parameters.
- Unauthorised constructional changes were made to the unit or if parts of the unit that may not be opened were dismantled.

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