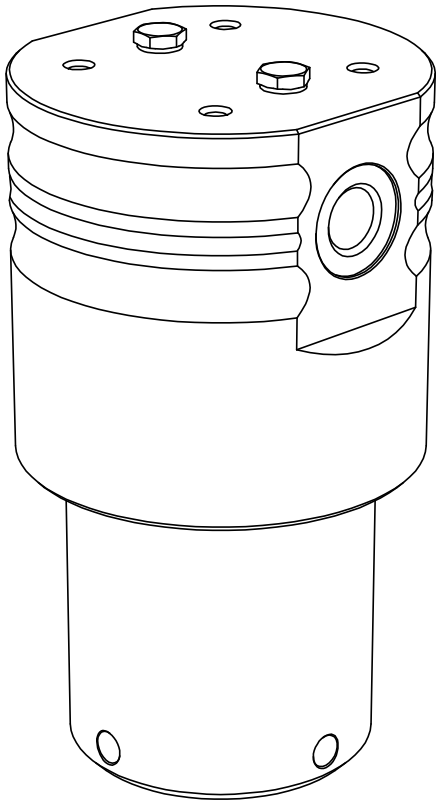
Installation and operating manual

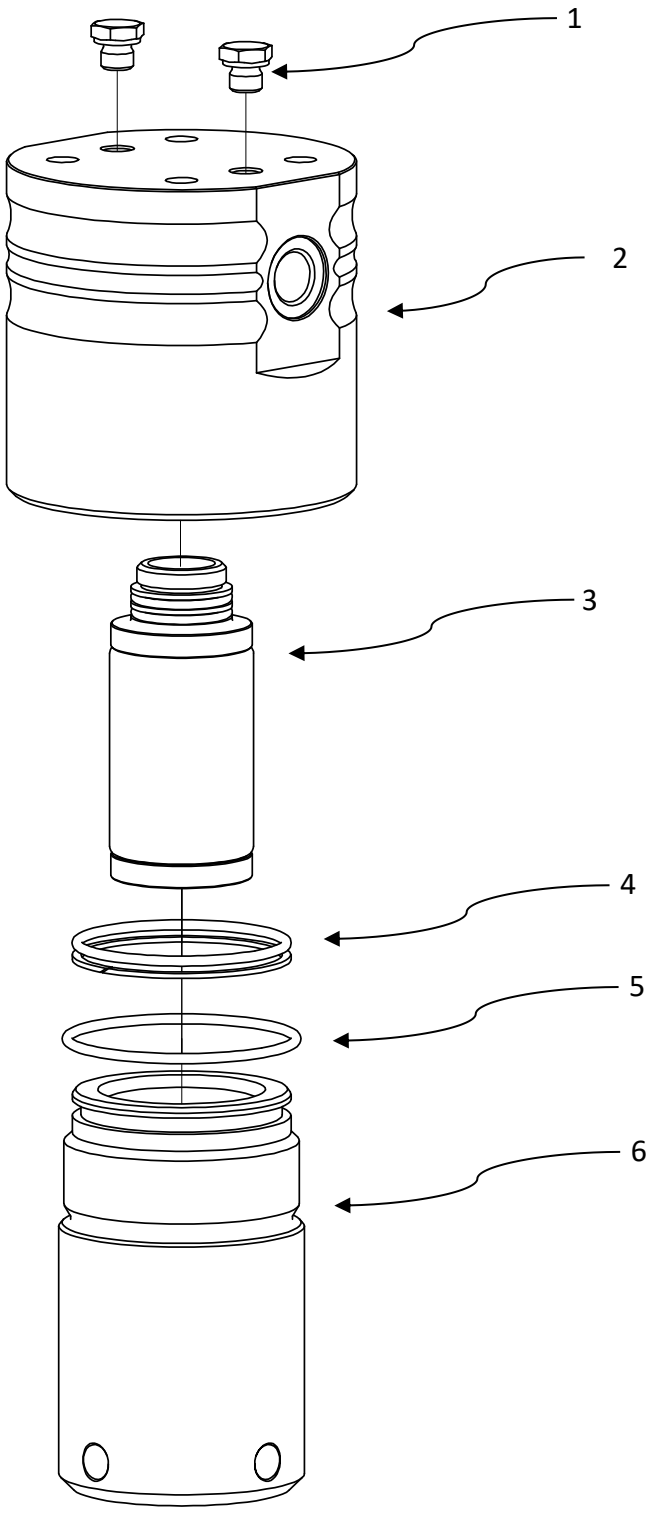
CHP/IHP



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

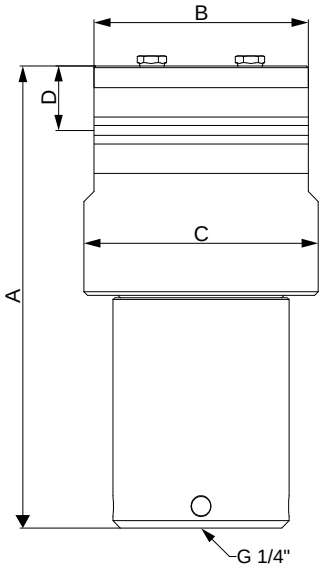


	Part
1	Plugs G1/8”
2	Filter head
3	Filter cartridge
4	O-ring + back-up ring
5	O-ring
6	Filter bowl

Technical data

Housing size	*Connections [inch]	FILTER ELEMENT	**FLOW CAPACITY [Nm³/h]	[scfm]	DIMENSIONS [mm] A	B	C	D	Volume [l]	Weight [kg]
CHP/IHP 003	1/4	CHP/IHP 0305	40	23,5	182	98	104	30	0,19	7,9
CHP/IHP 005	3/8	CHP/IHP 0310	70	41,2	182	98	104	30	0,20	7,9
CHP/IHP 007	1/2	CHP/IHP 0420	130	76,5	230	118	129	36	0,40	15,7
CHP/IHP 010	3/4	CHP/IHP 0520	195	115	254	118	129	36	0,48	16,6
CHP/IHP 018	1	CHP/IHP 0525	275	162	276	145	158	46	0,76	27,3
CHP/IHP 030	1 1/4	CHP/IHP 0725	380	223	328	145	158	46	0,98	29,6
CHP/IHP 047	1 1/2	CHP/IHP 0730	495	291	385	195	216	65	2,2	67,8
CHP/IHP 094	2	CHP/IHP 1030	715	421	460	195	216	65	2,9	73,5

* BSP (ISO 228-1); NPT (ANSI B1.20.1) on request
**Flow capacity at 7 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]	7	25	40	64	100	250	420
[psi]	100	362	580	928	1450	3625	6091
C_{OP}	1	3	5	8	12	12	12

MATERIALS

	CHP	IHP
Housing material	Carbon steel (ANSI A-105),	Stainless steel 1.4301 (1.4404 on requet)
Corrosion protection	Chemical nickel plating (15µm)	/
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
003 - 030	Article 4.3
047	Category 2, Module H1
094	Category 3, Module H1

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

Size	PED Category
003 - 047	Category 3, Module H1
094	Category 4, Module H1

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

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

CHP carbon / IHP 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:

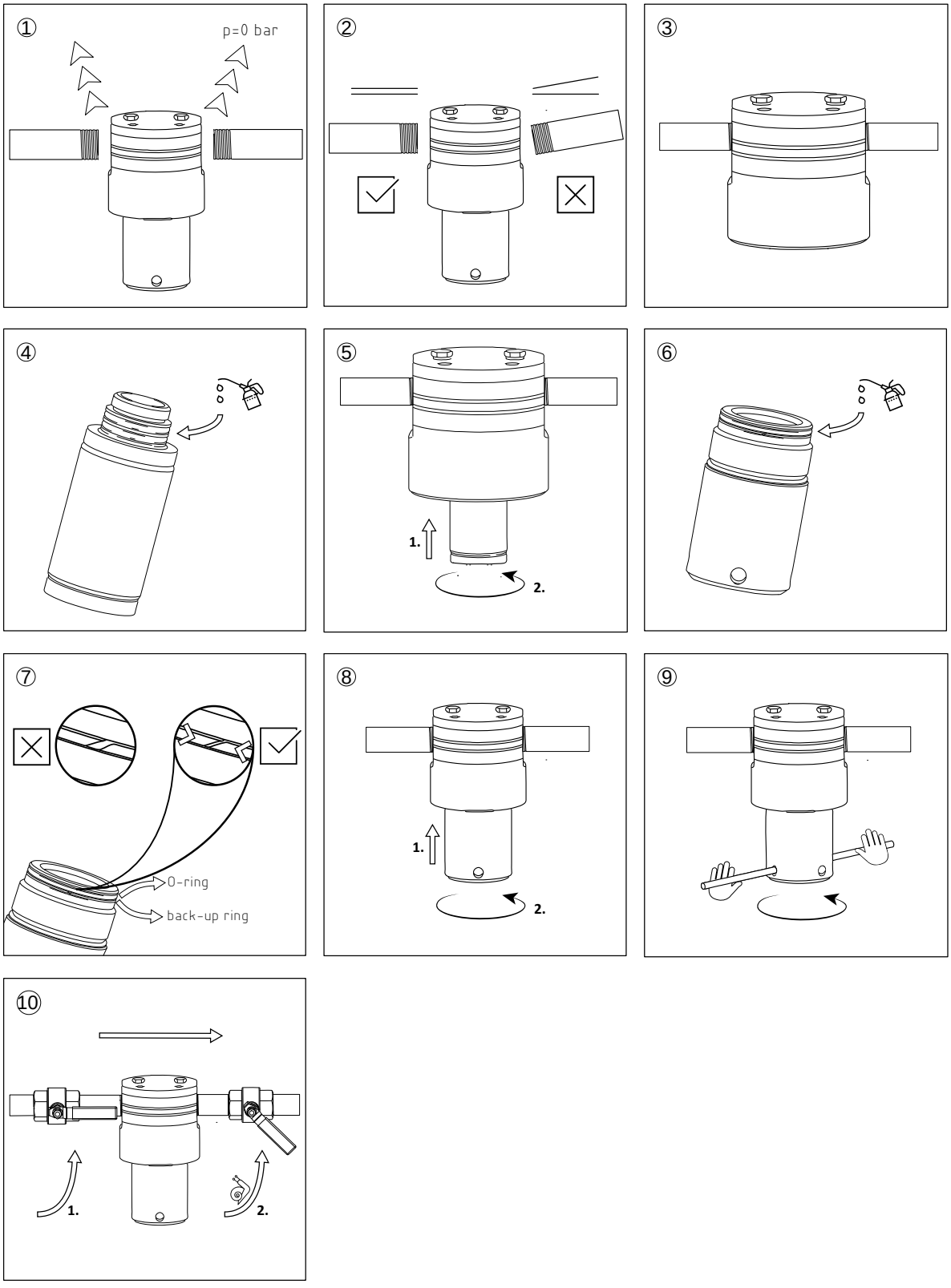
- filter is not intended for human breathing without proper additional equipment.

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

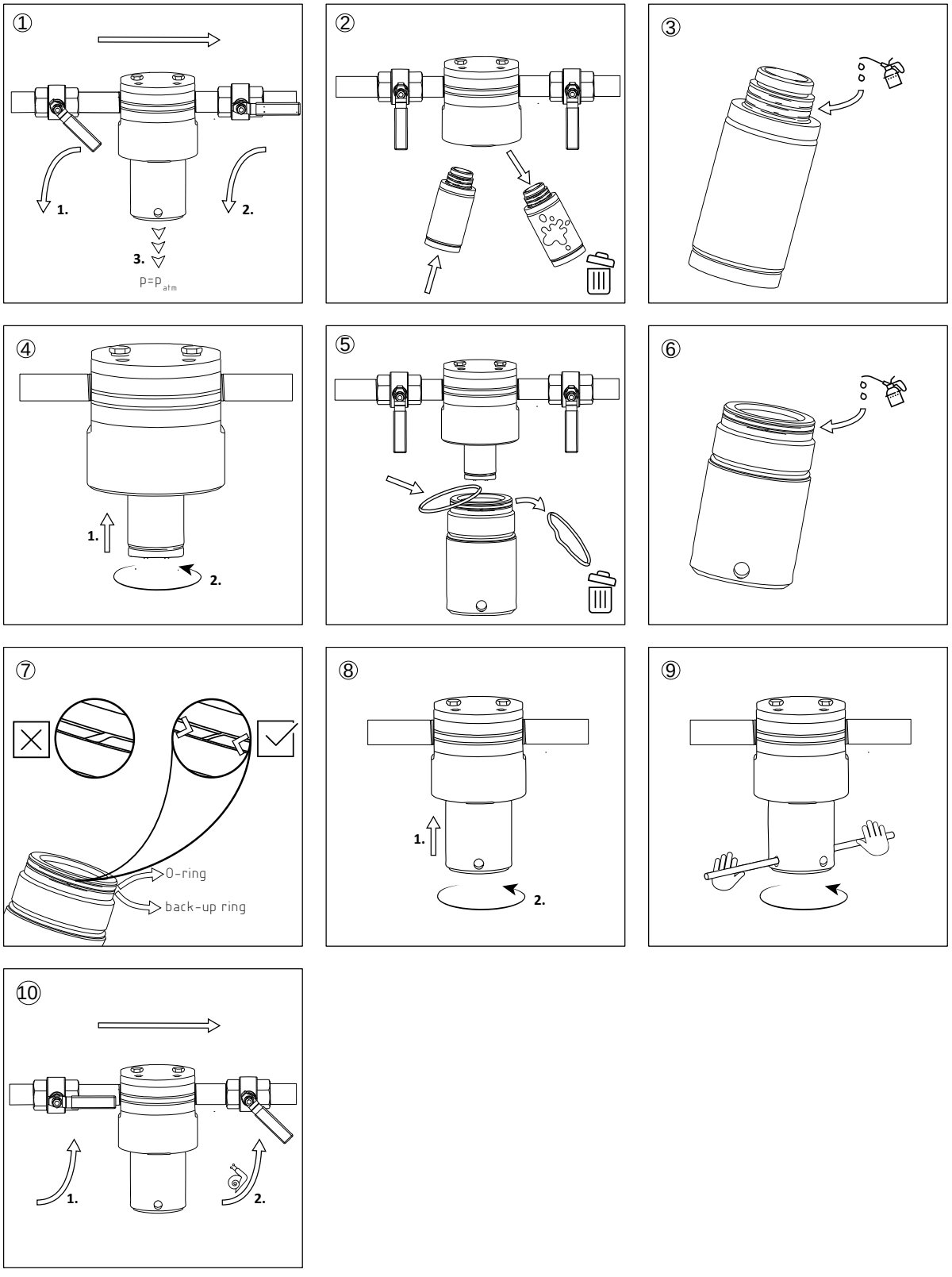
The manufacturer will under no circumstances be responsible for any damage resulting from improper, incorrect or unreasonable use.

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



Spare parts by ordering code

Consumables

Housing size	O-ring 1 (upper)	Back-up ring	O-ring 2	Plug (1/8”)
003; 005	2900884	2900880	2900272	3509881
007; 010	2900885	2900881	2900180	3509881
018; 030	2900886	2900882	2900800	3509881
047; 094	2900887	2900883	2900292	3509881

Filter elements (CHP)

Housing size	B Sintred 25 µm	P Prefilter 3 µm	R Prefilter 1 µm	M microfilter 0,1 µm	S microfilter 0,01 µm	A actived carbon
CHP 003	10006165	10005035	10005531	10005036	10005037	10005038
CHP 005	10004892	10005039	10004893	10005040	10005041	10005042
CHP 007	10006166	10005043	10005532	10005044	10005045	10005046
CHP 010	10006167	10005047	10005533	10005048	10005049	10005050
CHP 018	10006168	10005051	10005534	10005052	10005053	10005054
CHP 030	10006169	10005055	10005535	10005056	10005057	10005058
CHP 047	10006170	10005059	10005536	10005060	10005061	10005062
CHP 094	10006171	10005063	10005537	10005064	10005065	10005066

Filter elements (IHP)

Housing size	N25 25 µm	N5 5 µm	R Prefilter 1 µm	M microfilter 0,1 µm	S microfilter 0,01 µm	A actived carbon
IHP 003	10002008	10002000	10002048	10002016	10002024	10002032
IHP 005	10002009	10002001	10002049	10002017	10002025	10002033
IHP 007	10002010	10002002	10002050	10002018	10002026	10002034
IHP 010	10002011	10002003	10002051	10002019	10002027	10002035
IHP 018	10002012	10002004	10002052	10002020	10002028	10002036
IHP 030	10002013	10002005	10002053	10002021	10002029	10002037
IHP 047	10002014	10002006	10002054	10002022	10002030	10002038
IHP 094	10002015	10002007	10002055	10002023	10002031	10002039

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 P, R, M, S at least once per year or when pressure drop reaches 350mbar.
- A filter element must be changed after 6 months.
- B filter element can be cleaned with ultrasonic bath or with back flushing. Intervals of cleaning depend on application. If necessary replace filter element with new one.

- 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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