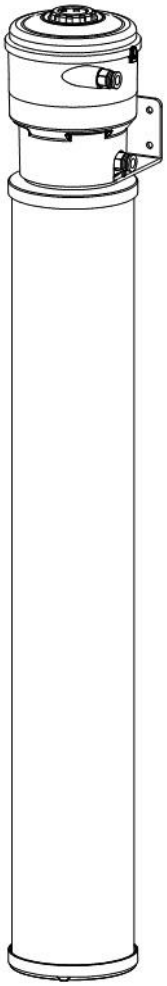
Installation and operating manual

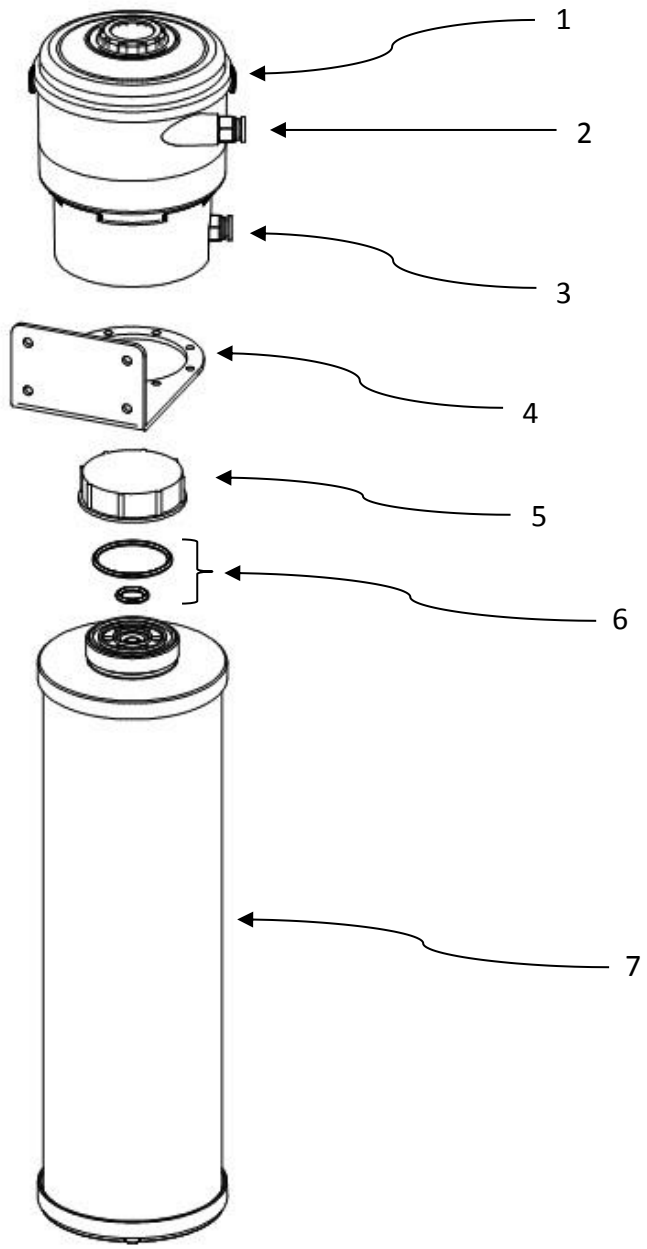
PURE-COMPACT water- oil separator



Please read the following instructions carefully before installing separator 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



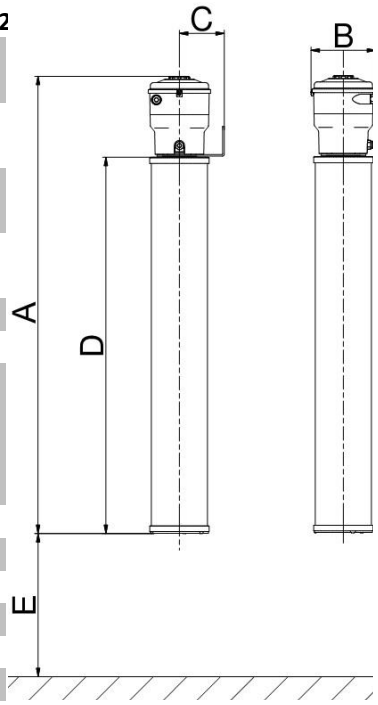
	Part
1	Filter head
2	Inlet connection
3	Outlet connection
4	Wall mounting bracket
5	Filter cap
6	O-rings
7	Filter element

Technical data

Size	Cold climate zone 15°C 60%RH	Mild climate zone 25°C 60%RH	Hot climate zone 40°C 100%RH	
	740	650	370	Max oil adsorption[g]
WOSm1	1,23/43,05	1,08/37,8	0,62/21,9	Max FAD [Nm^3/min]/[scfm]
	0,57	0,90	1,91	Max condensate flow [l/h](1)
	1520	1340	770	Max oil adsorption[g]
WOSm2	2,54/88,9	2,23/78,05	1,28/45,2	Max FAD [Nm^3/min]/[scfm]
	1,19	1,87	3,96	Max condensate flow[l/h](1)

(1)Max condensate volume per condensate drain single discharge is 0,125 ltr.

	PURE-COMPACT-1	PURE-COMPACT-2
Operating temperature range	1,5 - 45 °C (max. 65°C)[2] 35 - 113 °F (max. 149 °F)[2]	
Operating media	Condensate (air, water, oil); non-aggressive; not suitable for emulsion	
Nr. of inlet connections	1	1
Nr. of outlet connection	1	1
Connection type	Push-in fitting for hose (diameter 8mm)	
Residual oil content	< 20ppm	
Service interval	When first of the following parameters appears: - 4000 operating hours of compressor(2) - 12 months regardless compressor operating hours - All white polypropylene filling becomes yellow (adsorbed oil)	
DIMENSIONS		
A [mm]	475	810
B [mm]	106	106
C [mm]	80	80
D [mm]	335	670
E [mm]	50	50



[2]Max. operating temperature is 65°C, but when temperature is over 45°C, performance may decrease.

MATERIALS

Housing material	Pa6 30% Glass fiber, Aluminium
Transparent part	Acryl
Fittings	Steel, anodized
Sealing	NBR
Filter material	PP (polypropylene), Active carbon
Bonding	Polyurethane

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 separator. The separator has been constructed in accordance with the generally recognized rules of engineering.

Ensure that installation complies with local laws and directives.

Operator/user of the separator 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 apply pressure to the separator.
- The permissible working temperatures and pressures for ad-on parts and separator elements are given under “Technical data sheet” and “Installation and operating manual” for those ad-ons. Maximum temperature and pressure for assembled system is the lowest of any individual part.
- The medium used may not have any corrosive components that could attack the materials of the separator in a way that is not permitted. Do not use the separator in hazardous areas with potentially explosive atmospheres.
- All installation and maintenance work on the separator may only be carried out by trained and experienced specialists.
- It is forbidden to carry out any kind of work on the separator and piping, including welding and constructional changes, etc.
- Depressurize the system before carrying out the installation work.
- Use original spare parts only.
- Use the device for appropriate purpose only.
- There shouldn’t be any tension between separator and installation. Separator shouldn’t be subject to any stress, vibration or other influence that could cause damage to the unit.

Appropriate use

PURE-COMPACT water oil separators are intended for separation of lubricant oil from condensate generated in 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.

The manufacturer cannot be held 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.

Advanced dimensioning

For advanced dimensioning please use following equations

$$t(working\ hours)[h] = \frac{\mathrm{m(Max\ oil\ adsorption)[g]}}{\mathrm{FAD(compressor)}\left[\frac{\mathrm{Nm^3}}{\mathrm{h}}\right] * \mathrm{c(oil\ carryover)}\left[\frac{\mathrm{g}}{\mathrm{Nm^3}}\right]}$$

Oil carry over (c) can be determined by measuring oil volume at two sequential compressor services. In order to determine oil carry over compare initial volume of new oil with volume of oil drained out of compressor at oil replacement. It is recommended to keep a record of compressor services. When oil carry over is not known we suggest to use c(oil carryover)=0,005g/Nm3.

$$c(oil\ carryover)\left[\frac{g}{Nm^3}\right] = \frac{(V(new\ oil)[l] - V(used\ oil)[l]) * \rho(oil)\left[\frac{kg}{l}\right] * 10^3}{t(\mathrm{comp.\ working\ hours\ between\ oil\ changes})[h] * FAD(compressor)\left[\frac{Nm^3}{h}\right]}$$

Installation

- Unpack the device
- **Fill the filter element with clean water!**
- PURE-COMPACT separator is optimized for mounting on the wall and therefore wall mounting bracket is included. (wall mounting screws are not included)
- Make sure that you have easy access to the device and that there is enough space to unscrew and remove filter element.
- Fix the cyclonic chamber to wall mounting bracket (4 screws M4x10 DIN912 are included).
- Change the housing O-ring.
- Remove plastic cap from the filter element and tighten cartridge to the cyclonic chamber (make sure that o-rings are in appropriate position).
- Connect device to the system. At least 10% outlet pipe/hose slope recommended. Trapped air prevents condensate to flow into or out of the PURE-COMPACT separator. During installation ensure that no water pockets are formed in the inlet/ outlet pipe/hose.
- Outlet must be connected to the sewage system.

 **Warning**

It is strongly recommended to fill the device with clean water at least 24h (we recommend to fill water into cartridge 1 day before installation/service) before you start to drain condensate into the separator. If you start to drain condensate into an empty device, filter element **can get saturated instantly or efficiency may be decreased.**

Maintenance

It is recommended, that you do a check once per week to evaluate filter element saturation. To test water quality use test set. Instructions are attached in test set. Filter element must be replaced when first of the following parameters appears:

- 4000 operating hours of compressor[3]
- 12 months regardless compressor operating hours
- All polypropylene filling that is normally white becomes yellow due to adsorbed oil. During operation coloured area (adsorbed oil) spreads from top of the cartridge to the bottom.

[3] At compressor oil carry over 2,5mg/m^3. Lower/higher oil carry over means proportionally longer/shorter lifetime (e.g. if oil carryover is 5mg/m^3 lifetime reduces to 2000 operating hours).
Water quality can also be checked with "oil indicating test paper". For test set please contact us or your local distributor.

To replace filter element follow this steps:

- Remove plastic cap from NEW filter element, fill the cartridge with clean water and close it back with plastic cap. **(Please pay attention to warning specified in INSTALLATION chapter)**
- The housing O-ring should also be changed at the same time the filter is changed.
- Close condensate inlet or make sure condensate will not be discharged into WOSm during service.
- Unscrew saturated filter element and seal it with enclosed plastic cap.
- Clean connection for filter element on cyclonic depressurization chamber.
- If necessary clean interior of cyclonic chamber.
- Remove plastic cap from NEW filter element and save it for next filter change.
- Tighten NEW filter element to cyclonic chamber
- Replace old coalescing filter on cyclonic chamber with NEW one.
- Open inlet connection and put the unit in the operation.

Warning

Disposal of used filter elements must be carried out in accordance with local regulations and laws.

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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