BERG Kompressoren GmbH
Compressed Air Technology | Air Separation

INSTALLATION AND OPERATING MANUAL

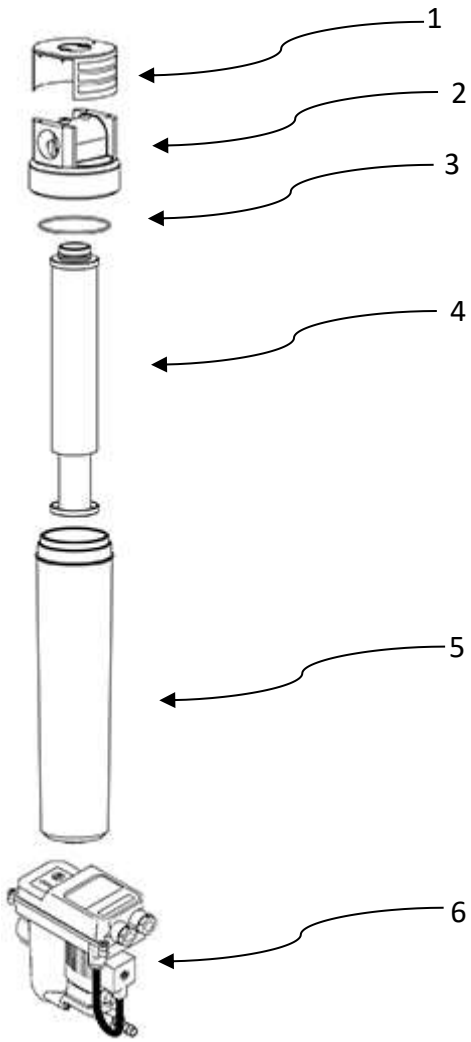
High pressure water separator

PUREBERG FWWHP50

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

CE

Components



	Part
1	Condensate separator head cover
2	Condensate separator head
3	Housing sealing
4	Cyclonic element
5	Condensate separator bowl
6	Condensate drain (optional)

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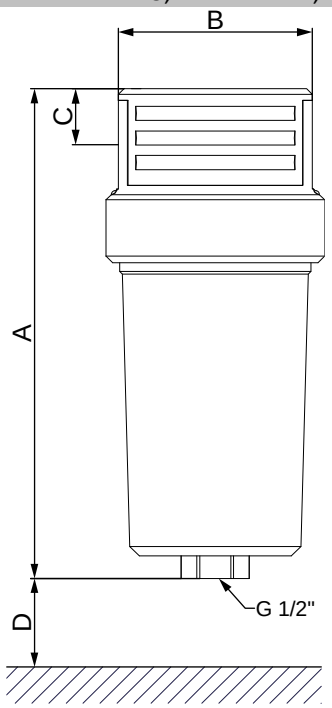
Technical data

TYPE	PIPE SIZE	FLOW CAPACITY		DIMENSIONS [mm]				VOLUME	MASS
	[inch]	[Nm³/h]	[scfm]	A	B	C	D*	[l]	[kg]
F 01 WWHP50	1/2	452	266	250	110	30	80	0,8	2,1
F 02 WWHP50	3/4	714	421	250	110	30	90	0,8	2,1
F 03 WWHP50	1	1301	767	250	110	30	140	0,8	2,1
F 05 WWHP50	1 1/2	1799	1061	535	160	45	260	3,7	9,5
F 07 WWHP50	1 1/2	2552	1505	535	160	45	360	3,7	9,5
F 08 WWHP50	2	3151	1856	715	160	45	540	5,2	12,2

Flow capacity at 7 bar(g), 20°C
*D dimension is applicable for condensate separator housing with no drain valve only.



Operating temperature	1,5 - 65 °C	35 - 149 °F
Operating pressure	0 - 50 bar(g)	0 - 725 psi

MATERIALS

Housing material	Aluminium
Fittings, Screws	Brass, Brass-zinc plated, Steel
Cover	ABS
Sealing	NBR
Corrosion protection	Anodized (optional)
Outside protection	Powder paint coated (Epoxy-polyester base)
Lubricant	Shell cassida grease RLS 2

CORRECTION FACTORS

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

[bar]	17	18	19	20	25	30	35	40	45	50
C_{OP}	0,44	0,46	0,48	0,50	0,61	0,70	0,78	0,86	0,93	1

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

F 01 WWHP50 - F 03 WWHP50	Not required
F 05 WWHP50 - F 07 WWHP50	Category 1, Module A
F 08 WWHP50	Category 2, Module H

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 condensate separator. The condensate separator has been constructed in accordance with the generally recognized rules of engineering. It complies with the requirements of directive 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 condensate 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 exceed max. operating pressure or operating temperature range (see data label).
- The permissible working temperatures and pressures for ad-on parts and condensate separator 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.
- Condensate separator has been designed for a primarily static pressure. Rapid changes of pressure are not allowed.
- Ensure that the condensate separator is not subject to vibrations that could cause fatigue fractures.
- Condensate separator is not to be subjected to mechanical stresses.
- The medium used may not have any corrosive components that could attack the materials of the condensate separator in a way that is not permitted. Do not use the condensate separator in hazardous areas with potentially explosive atmospheres.
- All installation and maintenance work on the condensate separator may only be carried out by trained and experienced specialists.
- It is forbidden to carry out any kind of work on the condensate separator 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 condensate separator is installed without any stresses.
- Use original spare parts only.
- Use the device for appropriate purpose only.

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Appropriate use

PUREBERG FWWHP50 series condensate separator are designed for high efficient removal of solid particles, water, oil aerosols, hydrocarbons, odour and 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:

- condensate separator is not intended for human breathing without proper additional equipment.
- condensate separator can only be used for “GROUPE 2” fluids (PED 2014/68/EU).
- condensate separator cannot be used for explosive, toxic, flammable, corrosive and “GROUPE 1” fluids (PED 2014/68/EU).

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

Operations should be performed only by qualified personnel. Never operate with installation under pressure. The user is responsible to ensure that the condensate separator will never operate at pressure exceeding the nominal values. Eventual over-pressure could be dangerous and hazardous to the operator and the equipment.

Procedure

The condensate separator assembly and installation procedures are as follows:

- If provided, install the pressure drop indicator or the Differential Pressure Gauge (optional) on the condensate separator head.

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- Connect the condensate separator head to the compressed air piping and check that the airflow corresponds to the direction of the arrow positioned on the condensate separator head cap.
- Clean accurately the piping and the condensate separator head outlets, remove any shaving, slaver or scrap from tooling.
- Lubricate the O-ring and the sealing surfaces of the condensate separator head and cartridge, use multipurpose grease (SILICONE FREE).
- Fit the cyclonic element on the condensate separator head by screwing it to the thread.
- Fit the condensate separator bowl and tight it accurately.
- Condensate separator must always be installed in a vertical position with sufficient space around. The minimum distance (D in the technical data table) has to be assured under the condensate separator bowl, which is necessary for cyclonic element changing.
- Slowly pressurize the installation and check it for air leakage.

Maintenance

It is not foreseen that cyclonic elements would ever need to be changed. However, for maintaining safe work condition and trouble free operation, once a year check the cartridge for any defects or damage. If needed, replacement parts are available.

- The housing O-ring can be damaged during condensate separator 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 condensate separator is to be replaced.
- Condensate separator has been designed for a life of 10 years in normal operating environment. After 10 years periodical checks of condensate separator integrity are strongly recommended for safe operation.
- Carry out a check for leaks once the maintenance work has been finished.

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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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