

Instruction Manual - Rev 2024-1

For GBFV8-Series Bag Filter Vessels





I - EQUIPMENT MAIN DESCRIPTION

This document is issued in accordance with European directives and according to the PED 2014/68 /EU directive on pressure equipment in order to ensure the safety of the filter during transport, installation and operation.

Main characteristics:

- Design code ASME Part 1 Division VIII
- PED 2014 / 68 /EU Per article 4§3, Category II, III, or IV depending on model
- Construction material Carbon steel, 304 SS, or 316L SS depending on model
- Usable fluid Per table below
- Maximum allowable pressure 10 bar or by exception as found on data plate
- Maximum allowable temperature Per table below
- Corrosion allowance None
- Weight (empty) 39 kg for GBFV815; 42 kg for GBFV830
- Weight (full of water) 64 kg for GBFV815 and 102 kg for GBFV830
- Maximum pressure drop 2,5 bar (g)

Model	PED 2014/68/EU Category	Max. Pressure In Use	Max. Temperature In Use	Allowable Fluid
GBFV8XXXXX	4§3	10 bar	100°C	liquid group 2*
GBFV8XXXXX-OFXXXX	As specified on the data plate			

*For use with Group 2 liquids, the vapor pressure must not exceed 0,5bar at the maximum allowable temperature.

Fluid used must mandatory be non-LETHAL fluid

According to the ASME code, a lethal substance is a “poisonous gas or liquid of such a nature that a very small amount of the gas or the vapor of the liquid mixed or unmixed with air is dangerous to life when inhaled”.

This equipment is intended to operate only under the above conditions.

Unstable Fluids or fluids not suitable with the housing material are not permitted.

It is the user’s responsibility to confirm that use conditions are respected (i.e. fluid type, pressure, & temperature) and that construction materials (filter housing and gaskets) are compatible with the used fluid.

Filtration Group SAS cannot accept responsibility if equipment is used outside of these conditions.

II - INSTALLATION INSTRUCTIONS

1. Any lifting operation must be done in accordance with good industry practices.
2. The filter vessel can be lifted and manipulated by the eye nuts at the top of the unit under these conditions:
 - a. Vessel must be empty of fluid.
 - b. A minimum of two eye nuts furthest apart should be used to achieve an acceptable weight balance. Before lifting, be certain the eyebolts are firmly tightened.
 - c. The filter should always be lifted vertically. Do not attempt to lift at an angle or drag the unit by the eye nuts.
3. Install the vessel on a flat, hard surface and secure it to the floor using the foot pads.
4. Before plumbing the unit, check for the intended flow direction based on the inlet/outlet port orientation.
5. Connect the necessary piping as well as equipment provided (pressure gauge, temperature probe, purge valve, etc.) as may be required for the application.

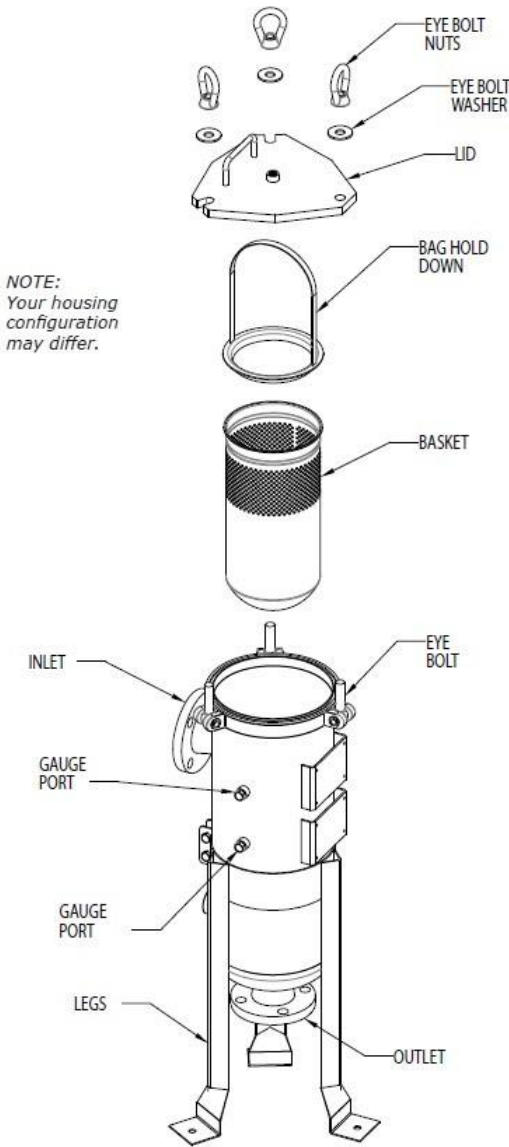
III - INSTRUCTIONS FOR USE

III 1. General Guidelines & Precautions

1. Read, understand, and follow this manual carefully before starting installation of the vessel.
2. This filter must be used within the limits of the parameters defined in Chapter I.
3. Only the user can control the type of fluid (gas and/or liquid) and the resulting level of danger associated with the fluid used. The user has full responsibility for implementing safety measures required for the use of the filter vessel.
4. Assembly and adjustment of the filter vessel must be carried out by a qualified and experienced technician.
5. To ensure safe use of the filter, an appropriately specified pressure relief device must be installed upstream of the filter.
6. The installation of accessories (valves, gauges, piping, gaskets, bolts, and nuts, etc.) must comply with the required specifications and precautions.
7. The filter should be operated and serviced by qualified and trained people to avoid damage to equipment or surrounding accessories.
8. Before opening the cover, it is essential to ensure that the vessel's internal pressure has been completely vented and that the potentially hot walls are at an acceptable temperature.
9. A securing process must be defined by the operator in the event of normal use and in the event of an emergency to avoid greater damage to equipment and people (closing valves, and decompressions, etc.)
10. The filter should be kept away from fire or extreme heat. It must be protected from freezing.
11. In a process of warming up the filter to operating temperature, or cooling down, the increase or decrease of temperature should not exceed 20° C per hour.
12. Protect the unit from pressure hammer. Ensure a slow opening and closing of the valves so as not to cause strain or excessive pressure pulsations on the equipment.
13. Any wind loads, fatigue forces, snow and ice, earthquake, dynamic loads, reaction forces, and torque forces resulting from supports, attached pipes or other attachments have not been considered. The operator is solely responsible for judging the suitability of the unit for these conditions.
14. The standard seal material is nitrile (NBR, Buna-N). The user must ensure that the seal material is compatible with the application. Contact your Filtration Group representative for options. Under no conditions should a non-compatible seal material be used.



III 2. Filter Bag Change-Out Procedure



NOTE:
Your housing
configuration
may differ.

Representative example.
Your filter unit may differ

1. Filter bag elements should be changed when the differential pressure across the unit reaches 1,5 bar (maximum) or if the flow drops to an unacceptable rate.
2. Ensure pressure has been vented from the vessel. Loosen the EYE NUTS and disengage the EYE BOLTS. Use the HANDLE to lift the filter COVER..
3. Inspect the O-RING, COVER, and O-ring sealing surfaces to confirm that there are no defects. Clean any substances from these areas.
4. Remove the BAG HOLD DOWN.
5. Remove and dispose of the used filter bag(s).
6. Install new filter bag(s) of the same type.
7. Place the O-ring in its groove, close the cover, and re-install the swing bolt washers and eye nuts.
8. It is recommended but not mandatory to apply lubricating grease to the threads. Tighten the eye nuts in a crisscrossing manner, in steps, until each nut is evenly torqued and the seal is firmly compressed.
9. With a downstream valve closed and the vent valve open, slowly and partially open the upstream valve to allow fluid to fill the filter vessel. Close the vent valve as soon as liquid is seen exiting.
10. Slowly open the downstream valve until fully open. Then fully open the upstream valve.
11. Once no leaks are evident, the unit is ready for operation.



III 3. Maintenance

A maintenance plan for this type of filter must be established and carried out on a schedule. The unit requires periodic inspections that, at minimum, coincided with the estimated change-out frequency of the bags. The maintenance plan should include, but is not limited to, the following information:

- Identification of components subject to maintenance
- Description of their function
- Details of the service actions to be performed
- A record of work and future planned dates of service work
- The maintenance cycle

The inspections must be carried out under the guidance and/or actions of a knowledgeable and capable quality control or service technician.

The periodic inspection will include but not be limited to:

- The gaskets, which must also be observed periodically and often during the filter use.
- Visual inspection of the entire filter vessel; in particular, observe for signs of leaks or corrosion.

III 4. Using the filter vessel in an ATEX environment

Equipment is classified as category 3 (II3G) usable in ATEX zone 2

It is user's responsibility to check any potential risk the fluid may have considering the used environment user is handling.

Apart from fluid used itself, the risk analysis carried out on this product does not have any potential source of ignition from inside or outside of the equipment.

It is then possible to use the filter in an ATEX zone 2 , is these two conditions are respected:

- Filter material must be stainless steel
- Filter must be ground connected by the user thanks to specific holes located at equipment support. This will avoid any risk of electrostatic accumulation on the filter.

Filters in carbon steel material is not adapted for ATEX environment.