

WHOF-1 for OneFlow®

Self-cleaning filters

Installation manual

- Ⓢ Installation, use and maintenance manual
- Ⓢ Manuale di installazione, uso e manutenzione
- Ⓢ Notice de montage, d'utilisation et d'entretien
- Ⓢ Handbuch für installation, gebrauch und wartung
- Ⓢ Manual de instalación, uso y mantenimiento
- Ⓢ Руководство по установке, эксплуатации и техобслуживанию



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SELF-CLEANING FILTERS

1. Technical specifications

The filter has a nominal filtration level of 90 micron , and it features a drain funnel to prevent pollution by backflow, in accordance with European standard UNI EN 1717.

When the filtering element is clogged, it is simply cleaned by opening the valve on the bottom of the bowl (figure 1).

This operations generates a depression in the filter that pushes the cartridge down, automatically reversing water flow from the inside (counter-current) to the outside of the cartridge (figure 2).

This water flow in counter-current carries particles and substances deposited on the cartridge to the drain.

After closing the valve, the initial pressure distribution is restored and the internal spring returns the cartridge to its service position (see figure 3).



WARNING

The above described operating modes and the back-wash cleaning in counter-current occur in excellent conditions with minimum 1.8 bar supply pressure. Make sure supply pressure is not under this value, installing a manometer upstream the self-cleaning filter.



WARNING

Only use the filter in the operating conditions indicated on the sticker on the filter bowl.

If the sticker is tampered, damaged, not legible or missing, applicable working conditions are:

- Max pressure 8 bar
- Max temperature 45°C

If hydraulic system pressure exceeds the working conditions, install a pressure reducer. Install an anti-water hammer device to protect the filter (figure C).

General directions for use

- Use only for filtration of water with pH from 6.5 to 9.5.
- In case of filtration of drinking water, do not use with unsafe water or with water of unknown quality without adequate disinfection before or after the filter.
- Keep protected from light.
- Keep protected from back-flows with a non-return valve.
- Keep protected with a pressure-reducer device, if pressure exceeds the working pressure indicated in the product sticker.
- Do not install near to electric appliances.

2. Installation



WARNING

- Before the installation, carefully lubricate the housing o-ring which is located at the bowl top using the lubricant provided with the filter.
- Before the installation, check if the hydraulic system has been set-up according to the rules-of-the art in force.
- Install the products in sheltered rooms and protected from freeze and excessive heat.

Refer to figures:

A Applicable sealant and applicable fittings (depending on model).

B IN-OUT directions presentation and vent-valve (VV) location

C Installation lay-out:

1. Municipal water mains | 2. Non-return valve | 3. Pressure reducer | 4. By-pass | 5. Anti-water hammer device (expansion vessel) - check from the table for the appropriate device volume (V) depending on piping diameter (Ø) | 6. Self-cleaning filter | 7. Other utilities

Before installing the filter, it is strongly recommended the installation of a by-pass and shut-off valve, while keeping both the filter inlet and outlet closed.

- Install a manometer before the filter, to read inlet pressure, and an other one after the filter, to read the outlet pressure.
- Screw the ball valve to the threaded port for discharge on the bottom of the housing, making sure that the gasket of the valve is in place, then screw the drain funnel or the plastic hose-holder to the ball valve, making sure that the gasket is in place.
- Mount the self-cleaning filter on the wall using the support with screws (standard supply). Use flexible tubes to connect the filter to the pipes if necessary.
- Connect the filter inlet and outlet connections only to pipes with BSPP type connections (GAS type) as indicated in the drawing.



WARNING

Only use sealing tape to seal filter connections.

3. Connecting the filter discharge to drain

Connect a rubber tube reinforced with canvas to the drain funnel or hose fitting at the base of the filter, secure with a clamp and have it discharge into the drain (figures 4A and 4B). The drain point must be lower than the drain funnel or hose fitting. The rubber tube reinforced with canvas must not be more than 2 metres long.



WARNING

Avoid bending or pinching the rubber tube reinforced with canvas.

4. Filter start-up

Proceed as follows:

- By gradually opening water supply to the filter, make sure there are no water leaking.
- Gradually fill the filter to about full and then release air in the filter as following: by opening the vent valve on the head of the filter.

Now the filter is ready for proper functioning.



WARNING

Only use self-cleaning filters to filter mains or well water and to filter sand and other large impurities from water with pH levels between 6.5 and 9.5. Do not use the filter to filter silt. Do not filter other liquids.

Self-cleaning filters do not make water drinkable. Do not use the filtered water as drinking water unless water quality is known.



WARNING

Make sure that there are no water leaks from the product, and especially control the tightening between the housing head and the housing bowl. Continue checking that the tightening is good and there is no water leakage for 48 hours following the installation and start-up. In case of leakage, open the housing, remove the o-ring from the bowl, place a new o-ring and apply lubricant, then re-tighten the bowl to head and repeat the leakage check as above. Ask your vendor for o-rings, lubricant and other spare parts.

Remark: after the installation, slowly turn on a water supply (tap) downstream the installed unit and let the water flow for at least 5 minutes before the use.

5. Routine maintenance

Clean the filter cartridge with back-wash in counter-current operation by opening the drain valve for 15/20 seconds.

Repeat the operation with the same procedure one or more times until the desired cleanliness is reached. If acceptable cleanliness is not achieved for a good filter operations, follow the extraordinary maintenance procedure as described here following.

Notes for a proper routine maintenance:

1. Carry-on the routine maintenance before the pressure difference between the inlet and outlet manometers exceeds 1 bar.
2. For mains water we recommend routine maintenance at least once a week.
3. For well water we recommend routine maintenance several times a week.



WARNING

During cleaning operations discontinue the water supply by closing faucets or the by-pass faucet downstream from the filter to reach maximum pressure in counter-current and the best cartridge cleaning results.

6. Extraordinary maintenance

In time, extraordinary cartridge cleaning is required as follows:

- Shut-off water flow upstream from the filter.
- Release the filter pressure by opening a tap downstream the filter.
- Open the filter by unscrewing the bowl from the head using the supplied spanner.
- Remove the cartridge.
- Clean the cartridge under a jet of cold water and use a soft brush to remove impurities.
- Insert the clean cartridge in the bowl.
- Screw the bowl onto the head.
- Follow the procedure under “FILTER START-UP” to put the filter in service.



WARNING

At re-start after every maintenance operation, when the filter's bowl is unscrewed from head, change the o-ring with a new one and carefully lubricate before tightening the bowl to the head. Make sure that there are no water leaks from the product and especially control the tightening between the housing head and the housing bowl. Continue checking that the tightening is good and there is no water leakage for 48 hours following the installation and start-up. In case of leakage, open the housing, remove the o-ring from the bowl, place a new o-ring and apply lubricant, then re-tighten the bowl to head and repeat the leakage check as above. Ask your vendor for original o-rings, lubricant and other spare parts.

Remark: after the maintenance, slowly turn on a water supply (tap) downstream the installed unit and let the water flow for at least 5 minutes before the use.



WARNING

For persistent encrustations onto the filter net or if the pressure difference between the two manometers remains above 1 bar after cleaning the filter, replace the filter with a new one. We recommend replacing stainless steel net cartridges at least every 48 months. The filter bowl must be replaced with a new one at least every 5 years. Follow the local regulation in force when disposing cartridges and bowls.

7. Troubleshooting

See here following a series of problems that may occur due to incorrect installation or maintenance or improper use, possible negligence or due to filter or filter parts consumption.

PROBLEM	CAUSE	SOLUTION
Water does not run from faucets.	<ul style="list-style-type: none"> • Cartridge clogged. • Bowl broken. • Cut-off valves and/or By-pass closed. 	<ul style="list-style-type: none"> • Clean the cartridge following the extraordinary maintenance procedure. • Replace the bowl and o-ring. • Open the closed cut-off valve or by-pass.
Unfiltered water runs from faucets.	<ul style="list-style-type: none"> • Cartridge broken. • Spring broken. • Cartridge gasket ruined. • By-pass valve open. 	<ul style="list-style-type: none"> • Replace the cartridge. • Replace the spring. • Replace the cartridge gasket. • Close the by-pass valve.
The cartridge does not clean during self-cleaning operation.	<ul style="list-style-type: none"> • Insufficient pressure in the bowl. • Cartridge not correctly positioned in the bowl. 	<ul style="list-style-type: none"> • Check the drain pipe: if pinched or bent, remove the problem. • Rotate the cartridge clockwise or counter-clockwise so that it moves vertically without strain in the bowl.
Water leaks between the filter head and bowl.	<ul style="list-style-type: none"> • Bowl o-ring ruined. 	<ul style="list-style-type: none"> • Replace the o-ring.
Water leaks from connections between pipes and from the sides of the filter.	<ul style="list-style-type: none"> • Sealant insufficient. 	<ul style="list-style-type: none"> • Add a few turns of sealant.
Water leaks between the bowl and drain valve.	<ul style="list-style-type: none"> • Drain valve gasket damaged. 	<ul style="list-style-type: none"> • Replace the gasket.