UNDER-BOILER COMPACT FILTER AND MAGNETIC DIRT SEPARATOR

Description

The Barberi filters and magnetic dirt separators restrain the impurities contained in the system water through the triple action of their inner components: decantation in the dirt separator, filtration by the cartridge, removal of ferromagnetic particles by means of an extractable magnet. In this way, heat exchangers and high efficiency pumps, contained in the boiler, are protected.

Range of articles

Series V74.P Under-boiler filter and magnetic dirt separator with compact body. Complete with upstream shut-off valve and fitting for boiler connection. Technopolymer body.

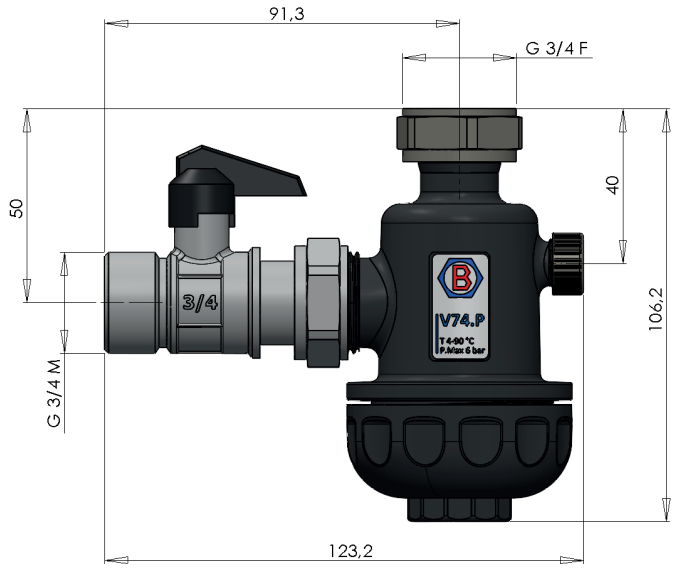
Features

Working temperature range: **4–90 °C**
Max. working pressure: **6 bar**
Magnetic induction: **1,32 T**
Max. suggested flow rate: **2,05 m³/h**
Suitable fluids: **water, glycol solutions (max 50%)**
Threaded connections: **ISO 228-1**
Tightening torque of the decantation chamber (2): **10–12 N·m**
Tightening torque of the boiler fitting (4): **5–6 N·m**
Tightening torque of the drain plug (7): **6–8 N·m**

Materials

Body: **PA66 GF30**
Boiler fitting: **brass EN12165 CW617N**
Shut-off valve:
Body: **brass EN12165 CW617N**
Ball: **brass EN12165 CW617N, chrome plated**
Filtering cartridge (800 μm): **stainless steel AISI 316**
Magnet: **neodymium**
Drain plug: **brass EN12165 CW617N**
Gaskets: **silicone**

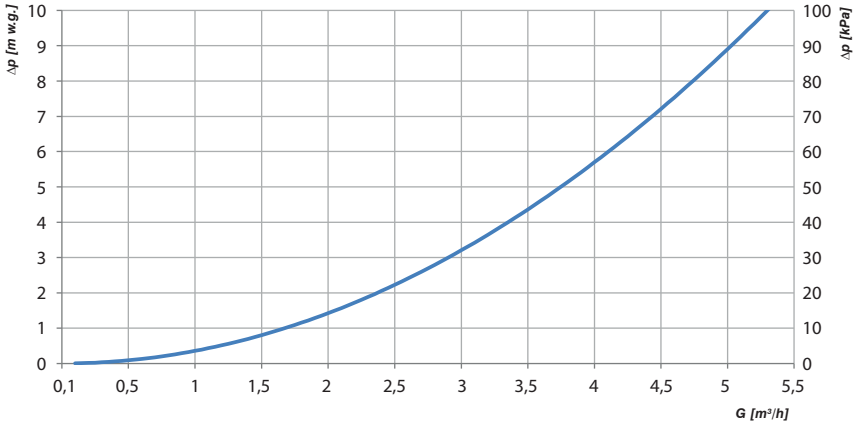
Dimensions



Code	Kv [m³/h]	Mesh size [mm]	Weight [kg]	N. P/B	N. P/C
V74P20N30	5,3	0,8	0,38	1	12

N. P/B: number of pieces in box - N. P/C: number of pieces in carton

Diagrams



Working way

The under-boiler filter and magnetic dirt separator Barberi is composed of: body (1) and decantation chamber (2) of the dirt separator, upstream shut-off valve (3), boiler fitting (4), magnet (5), filtering cartridge (6), drain plug (7) (fig. A).
The under-boiler filter and magnetic dirt separator Barberi cleans the water of thermal systems through the combined action of its components: dirt separator (1+2), filter (6) and magnet (5). The cleaning phases are:
- **impurity decantation in the dirt separator**: water enters the decantation chamber (2), slows down and particles begin to fall towards the device bottom under the effect of gravity (fig. B);
- **mechanical filtration**: the particles not yet fallen are hold by the filter mesh (6) (fig. B);
- **magnetic action**: ferromagnetic particles are hold by the magnet (5) (fig. C).
A large amount of particles begins to fall down to the dirt separator bottom, leaving to the filter a less difficult cleaning deal: in this way the filter gets clogged more slowly.
The device eliminates impurities, sludges, ferromagnetic residues originated from the system corrosion. This helps to prevent the clogging of delicate devices such as heat exchangers and the blockage of high efficiency pumps with permanent magnet wet rotor. The device can be easily opened for periodic cleaning.

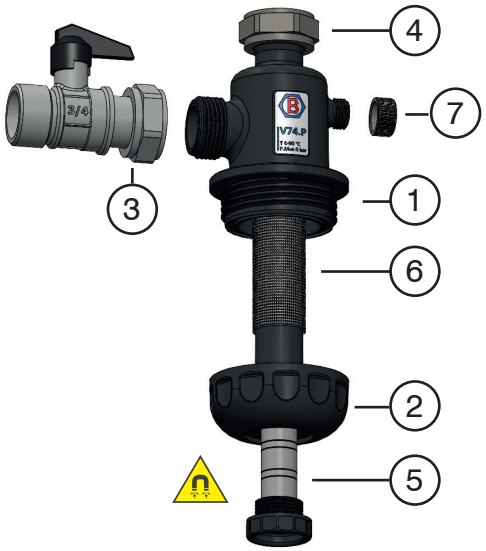


Fig. A: components

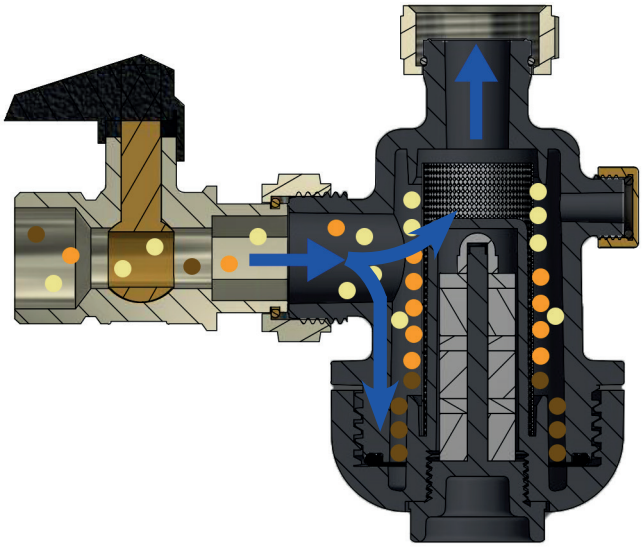


Fig. B: decantation and mechanical filtration

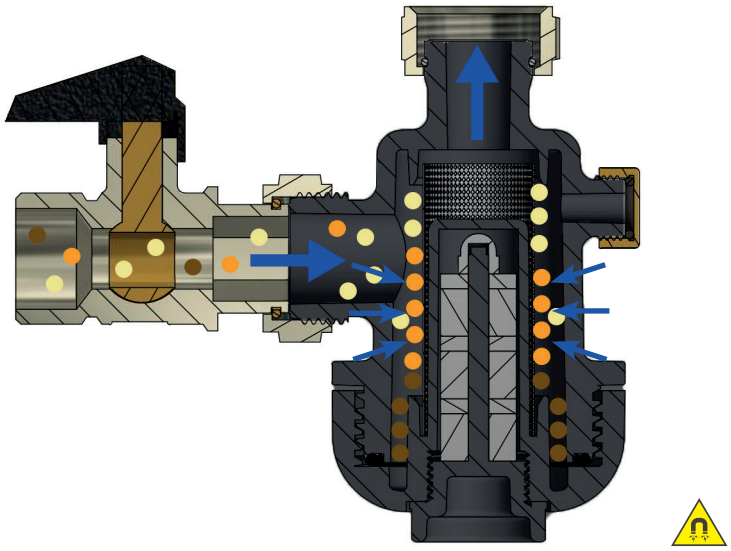


Fig. C: magnetic action

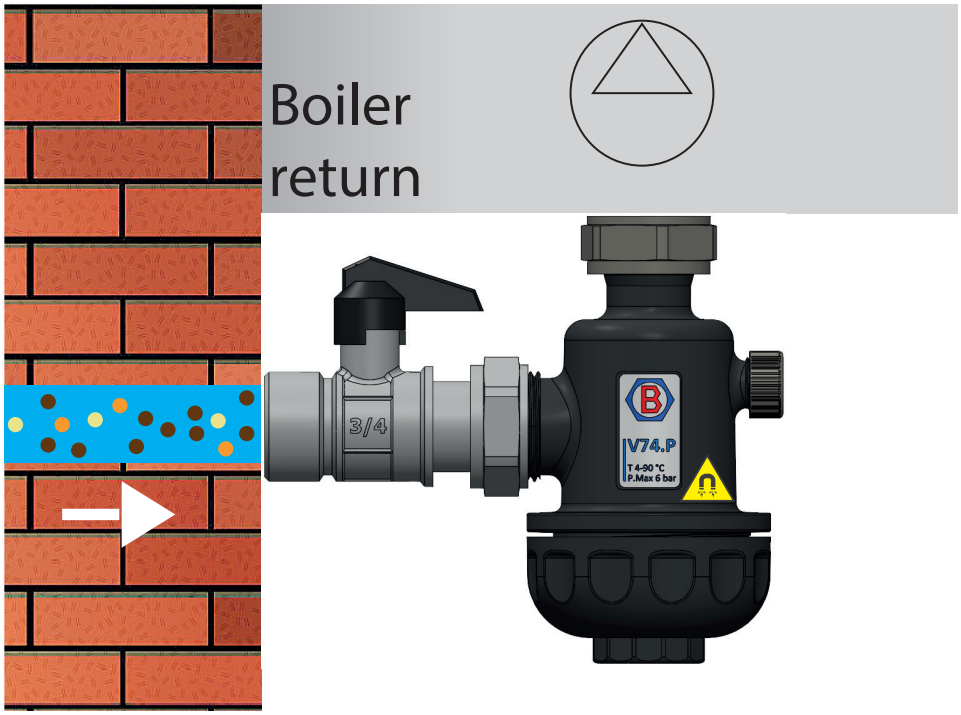
Features

Advantages
Dirt separator + filter + magnet
The fluid cleaning is maximized thanks to the three devices integrated in a single product. The fluid passes through the dirt separator first and then the filter in sequence, optimizing the cleaning process and reducing the filter clogging.
Compactness
The compact dimensions of the valve body allow installation under wall-mounted boilers even in very small spaces.
Simple cleaning
The body is easily removable for in-depth cleaning. The decantation chamber can be easily separated from the rest of the body in order to access the filter.
High performance magnet
The magnet features a high induction of 1,32 Tesla to maximize the separation of ferromagnetic particles. In addition, a specific coating prevents oxidation and makes the magnet maintenance-free.

Installation

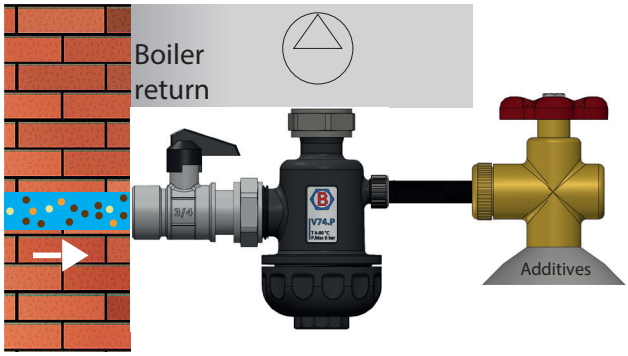
The filter and magnetic dirt separator must be installed on the return pipe to clean the fluid before returning into the generator.
Respect the flow direction indicated by the arrows on the valve body:
The only installation position, shown in the following figure, optimizes the device action as the fluid first passes through the dirt separator and then the filter, thus limiting the filter clogging.

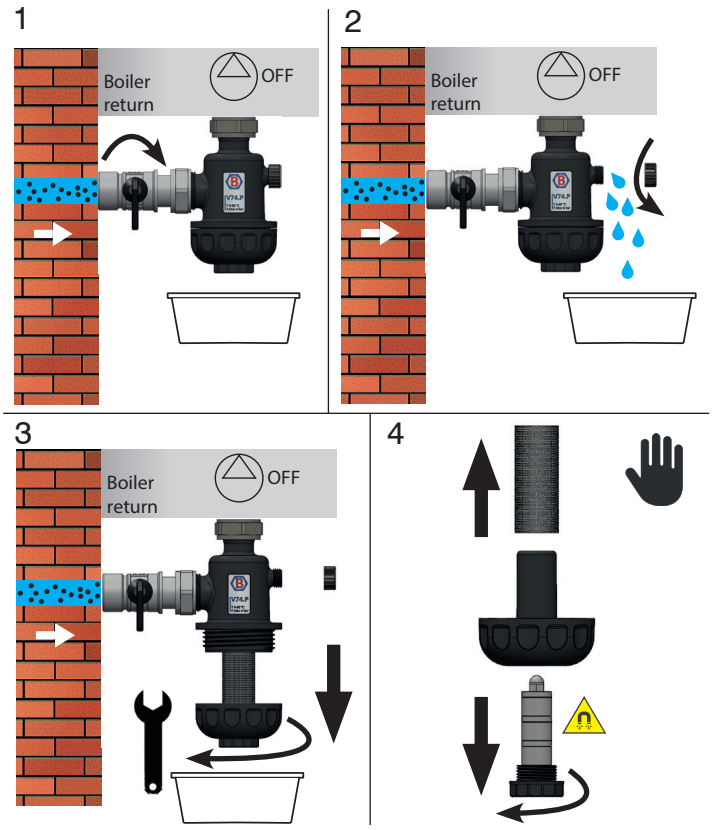
ATTENTION: MAGNETIC FIELD! The symbol on the device indicates the presence of a strong magnetic field. Do not put the magnet close to electronic or electro-medical devices such as pacemakers, magnetic cards, etc. as it could cause damage or malfunction.



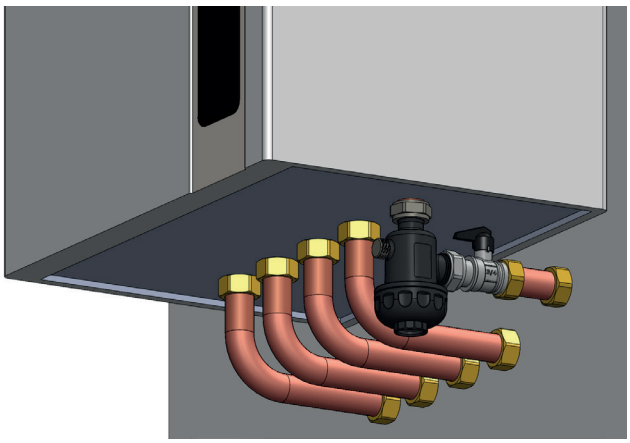
Maintenance

The amount of sludge and impurities that are deposited in the device depend on the system conditions.
No maintenance is needed for the magnet since it is protected by a specific coating.
Cleaning is recommended after one month from the first installation, then once a year, at the beginning of the seasonal use.
Cleaning must be performed with boiler off and system cold.
The procedure consists in unscrewing the decantation chamber to access the filter cartridge inside. After removing the magnet from the specific pocket, the ferromagnetic particles can be also removed. After washing the removed components with water, proceed with their reassembly. Cleaning is described in detail in the instructions for use and maintenance.
The connection with drain plug can be used as injection point for chemical additives.





System diagrams



Specifications

Series V74.P
Compact filter and magnetic dirt separator for under-boiler application. Complete with upstream shut-off valve and fitting for boiler connection. G 3/4 M x G 3/4 RN connections. Technopolymer body. Boiler connection and drain plug in brass. Upstream shut-off valve with brass body and ball. Filtering cartridge in stainless steel. Neodymium magnet, magnetic induction 1,32 T. Silicone gaskets. Working temperature range 4–90 °C. Maximum working pressure 6 bar. Suitable fluids water, glycol solutions (max 50%).

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