







FilBlack

Self-cleaning filters

Model: FilBlack FBK2000A

Self-cleaning filter with suction nozzles FilBlack FBK2000A

A self-cleaning filter is a type of filter specially designed to remove all suspended solids in surface waters (rivers, lakes, seas), wells and spring waters while automatically removing suspended solids inside the filter and guaranteeing:

-  **Time saving**
Eliminates or reduces the time needed to replace cartridges and filtering bags
-  **Cost saving**
Eliminates or reduces the use of cartridges and filtering bags
-  **Reduction of investment costs**
Self-cleaning filters are much cheaper than classical sand filters
-  **Reduced installation footprint**
Self-cleaning filters take up less space compared to classical sand filters



The automatic self-cleaning filters with suction nozzles manufactured by Everblue, denominated **FilBlack FBK2000A**, are used to remove particles with diameter between 800 and 25 micron inside fresh, brackish and sea water in quantities that don't exceed 100 ppm of TSS (Total Suspended Solids).

Depending on the applications, the functional limit parameters can be exceeded after verification and subsequent authorization by Everblue's technicians

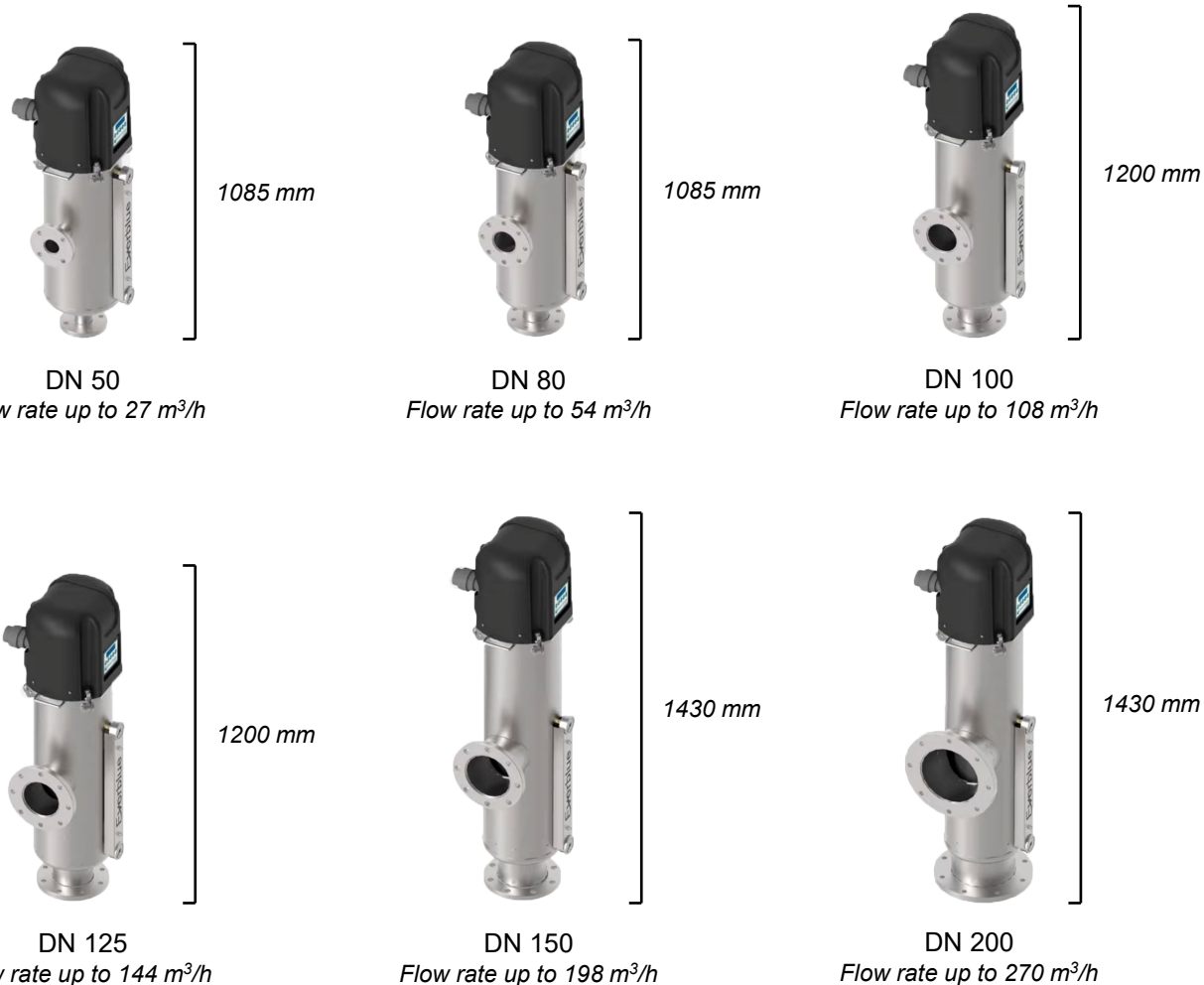
The peculiarity of Everblue automatic self-cleaning filters is the ability, through a process called "regeneration", to rapidly clean themselves in complete autonomy using a very limited quantity of water.



versatile and efficient

Self-cleaning filter FilBlack FBK2000A

FilBlack FBK2000A self-cleaning filters are produced in different sizes:



The main features of FilBlack FBK2000A self-cleaning filters are:



Versatile

It satisfies a wide range of flow rate and has the possibility to be installed both vertically and horizontally



Efficient

Minimum use of water during washing and negligible energy consumption



Profitable

Reduced installation (capex), operating (opex) and maintenance costs

**Also available in DUPLEX version upon request.*

Why choose FilBlack FBK2000A: simplicity

FilBlack FBK2000A self-cleaning filters are simple because they are made of 3 main parts:

1 FILTER BODY

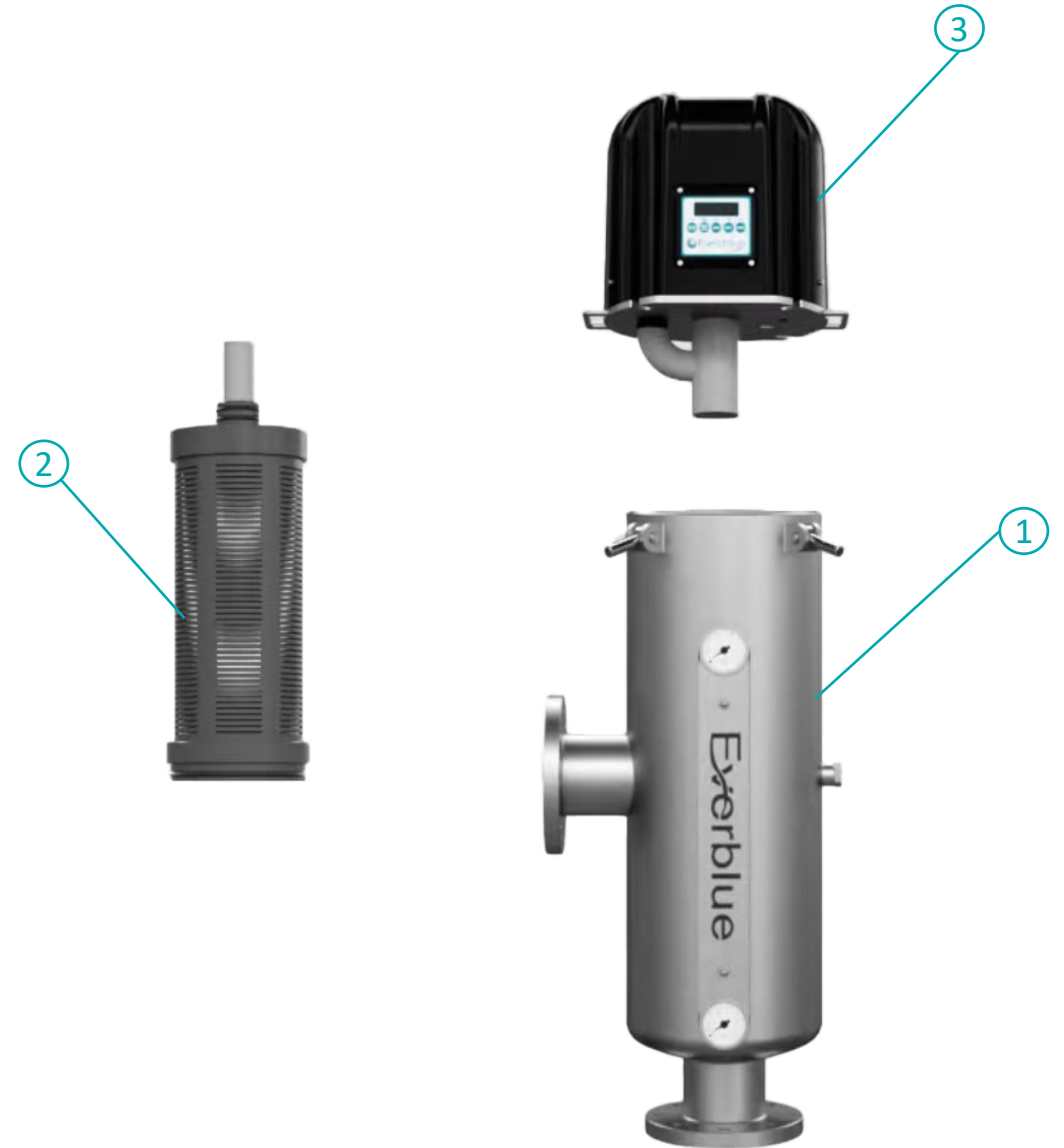
Made of stainless steel 316 L and treated through passivation, pickling and micro-shot peening processes, **FilBlack FBK2000A** self-cleaning filter body can work with brackish water with a salinity lower than 5000 ppm of TDS (Total Dissolved Solids) and with a maximum pressure of 8 bar.

2 SELF-CLEANING BASKET

Entirely made of plastic material (PVC and PP) they are the elements necessary for filtration and for the “regeneration” system. Inside, a rotating system in which the basic elements are the suction nozzles, allows the cartridge to continue filtering even during the regeneration and cleaning process of the net.

3 FILTER HEAD

Filter head constitutes the soul of the filter, which is what makes it a completely autonomous and automatic product in all respects. The control panel allows constant monitoring of operation and allows the management of all the filter functions.



Why choose FilBlack FBK2000A: versatility

FilBlack FBK2000A self-cleaning filter can be installed in six different ways, both vertically and horizontally. Holding the head fixed, you can rotate the filter body according to requirements:



Filter body in standard vertical position



Filter body rotated of 90° vertically



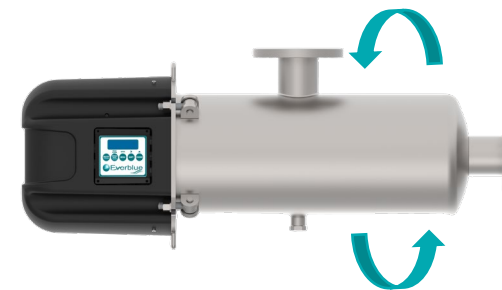
Filter body rotated of 180° vertically



Filter body rotated of 270° vertically



Filter body in standard horizontal position



Filter body rotated of 180° horizontally

Why choose FilBlack FBK2000A: easy maintenance

The installation of **FilBlack FBK2000A** self-cleaning filter is very simple and takes only a couple of minutes.

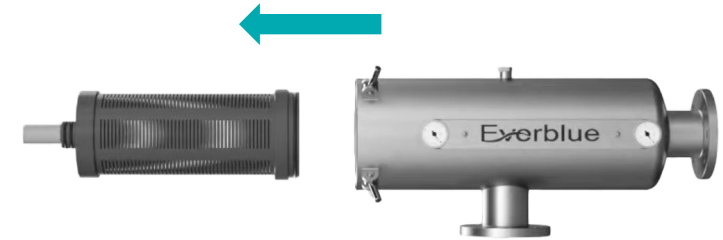
- 1 Unscrew and remove the nuts and washers that hold the lid together with the **FilBlack FBK2000A** body:



- 2 You can then remove the full cover of the **FilBlack FBK2000A** filter using the appropriate handles:



- 3 Grab and pull the self-cleaning basket out of the **FilBlack FBK2000A** body:



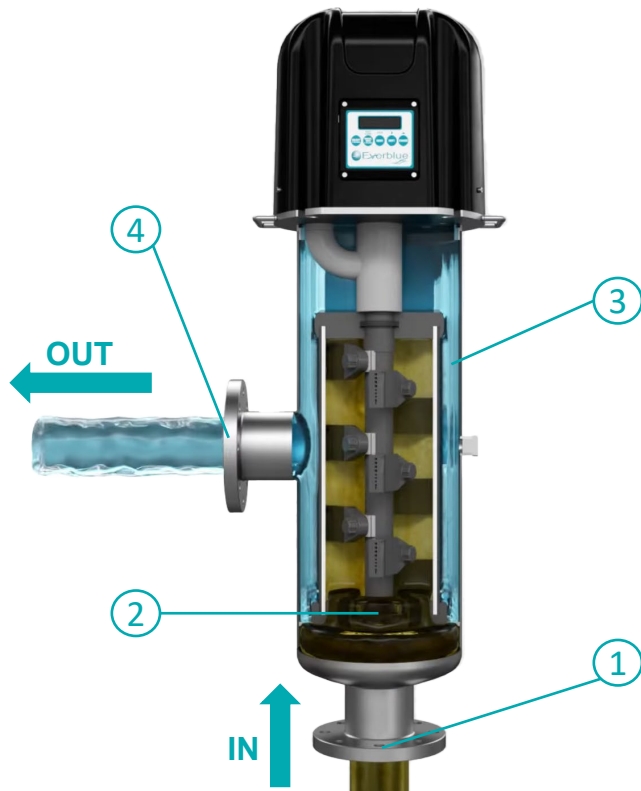
- 4 Insert the self-cleaning basket again followed by the cover, insert the washer and screw the bolts to reassemble the **FilBlack FBK2000A**:



FilBlack FBK2000 A: functioning

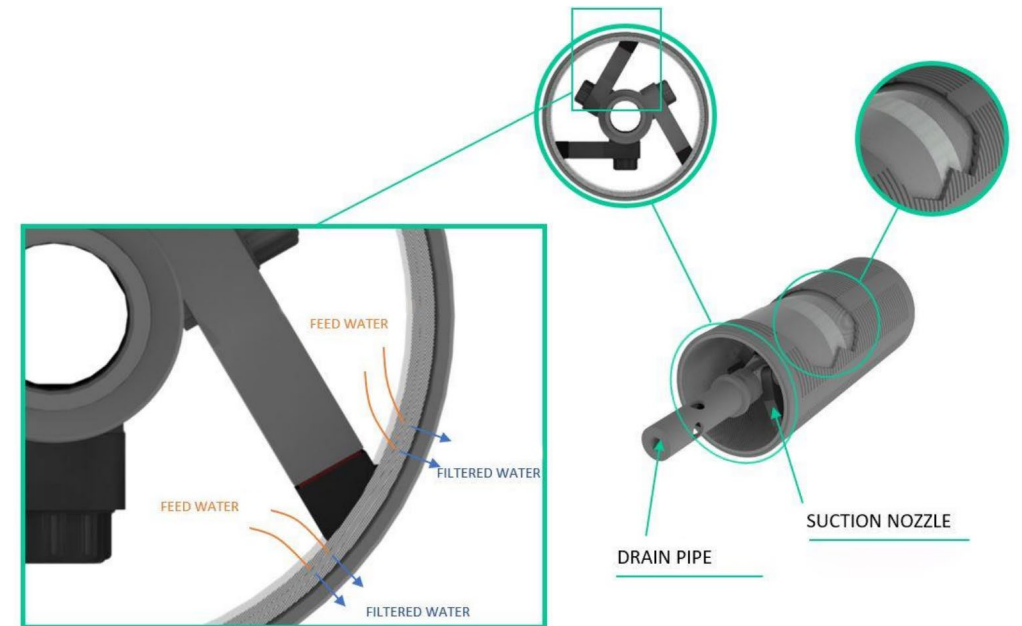
Water enters the filter (1) it goes through the tube (2) from the outside to the inside, then it is distributed inside the filtering mesh (3), which retains all suspended solids larger or equal to the degree of filtration installed. The filtered water leaves the filter (4).

Before the self-cleaning filter you must install a pre-filtration filtering basket to block all solids larger than 3 mm that could obstruct the suction nozzles compromising the washing effectiveness and damaging the filtering net, compromising the effectiveness of the filter and its integrity.



The self-cleaning basket (3) is made of a micro-fessured PVC basket that supports 3 different nets that allow effective and long-lasting filtration:

- Draining polypropylene net (placed between the PVC basket and the polyester filtering net)
- Polyester filtering net (carries out the filtration process)
- Separating net (protects the filtering net and maintains the correct distance between the filtering net and the filtering nozzle)

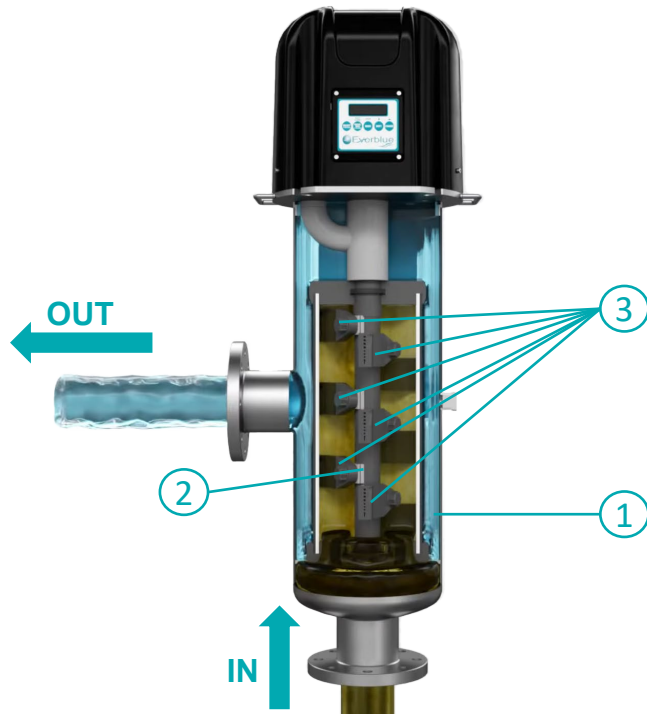


FilBlack FBK2000 A: regeneration

The continuous settling of suspended solids inside the self-cleaning basket (1) form an impediment to the passage of water, which is manifested in a pressure difference (ΔP).

At a preset value of ΔP (range 0,3÷1 Bar) the cartridge cleaning cycle will start automatically. This operation begins with a signal that opens the drain valve and rotates the scanner (3) through the electric motor.

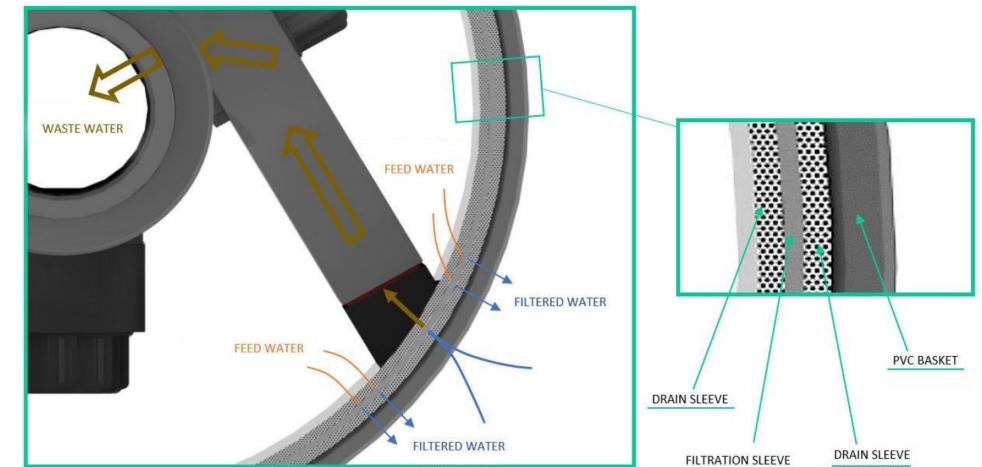
Dirt is sucked up by the nozzles (3) and evacuated through the drain valve. The cleaning cycle lasts approximately 14 seconds.



Suction through the suction nozzles is possible thanks to the differential pressure on the surface of the suction nozzles and the filtering basket.

The suction nozzles are connected, through the related supports, to the discharge pipe located inside the self-cleaning filter that is also connected to the discharge valve. When the discharge valve, connected to the cockpit or a pipe with no pressure opens, it generates a differential pressure compared to the inside of the filter (pressurized) creating the sucking effect on the nozzles. To create the suction the filter need 1 bar of pressure only and can guarantee high energy savings.

FilBlack FBK2000A allows continuous flow even during the regeneration phase, while maintaining its productivity and reducing the waste of water to a minimum.



More Info



Data Sheet
FBK 2000A



Video
FBK 2000A



Case History
FBK 2000A

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