

Industrial automatic self cleaning filters

BACKWASHABLE SELF CLEANING FILTERS

FILBLUE FB4000

[Link to product's PDF drawing](#)

 www.everblue.it/CadDrawings/F20180509110048191FB4000PP112FT_

FEATURES

Model	FB4000
Material	PP
Connections	1" ½ BSP F
Continuous flow	No
Micron	80 - 300
Efficiency	75%
Efficiency on non compressible particles	High
Efficiency on compressible particles	Good
Efficiency on light particles	Good

DESIGN DATA

Min working pressure	1 bar
Max working pressure	8 bar
Hydraulic test pressure	12 bar
Max working temperature	50°C
Life test	200.000 cycles from 0 to 10 bar
pH min	5
pH max	8
Max diameter inlet particles	3 mm
Max total suspended solids	100 mg/l
Max turbidity	10 NTU

POWER

Electric power	-
Electric power solenoid valve	-
Air pressure min	-
Air pressure max	-

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APPLICATIONS

Water

Prefiltration for water treatment plants

Process water

Evaporative cooling towers

Heat exchangers

Irrigation

Aquaculture

Protection of spray nozzles

Prefiltration for ultrafiltration (UF) plants

Prefiltration for reverse osmosis (RO) plants

Code	Description	Surface area	Connection In/Out	Connection drain	Micron	Flow rate (l/h) ¹	Cleaning flow rate at 1 bar (m ³ /h)	Cleaning time (sec.)	Power needed (Watt)	Q.tity box	-
FB4000PP112FT8009	FILBLUE FB4000	0,09 m ²	1" ½ BSP F	--	80	4.050	4,05	15	-	1	
FB4000PP112FT30009	FILBLUE FB4000	0,09 m ²	1" ½ BSP F	--	300	4.500	4,50	15	-	1	
FB4000PP112FT8020	FILBLUE FB4000	0,18 m ²	1" ½ BSP F	--	80	8.100	8,10	15	-	1	
FB4000PP112FT30020	FILBLUE FB4000	0,18 m ²	1" ½ BSP F	--	300	9.000	9,00	15	-	1	

¹Max clean water flow rate in l/h at 20°C and differential pressure 0,15 bar.

European community members only.



These filters are free of the "CE" stamp since they are included in the article n. 4 para 3 of the P.E.D. 2014/68/EU of 15 May 2014. These filters can be used only with the fluid and design that respect the conditions established by the directive above mentioned.

PED REFERENCES: PED 2014/68/EU

FLUID: NOT DANGEROUS, ARTICLES: 4.1 LETTER (a) (ii); 4.3; 13.1

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SELF CLEANING FILTERS CODE LIST

Model	Material		Connection IN/OUT	Micron		Specs and finishing
FB4000	PP	PP	1" ½ BSP F 112FT	80 300	80 300	Length 20" 20 Length 9"¾ 09

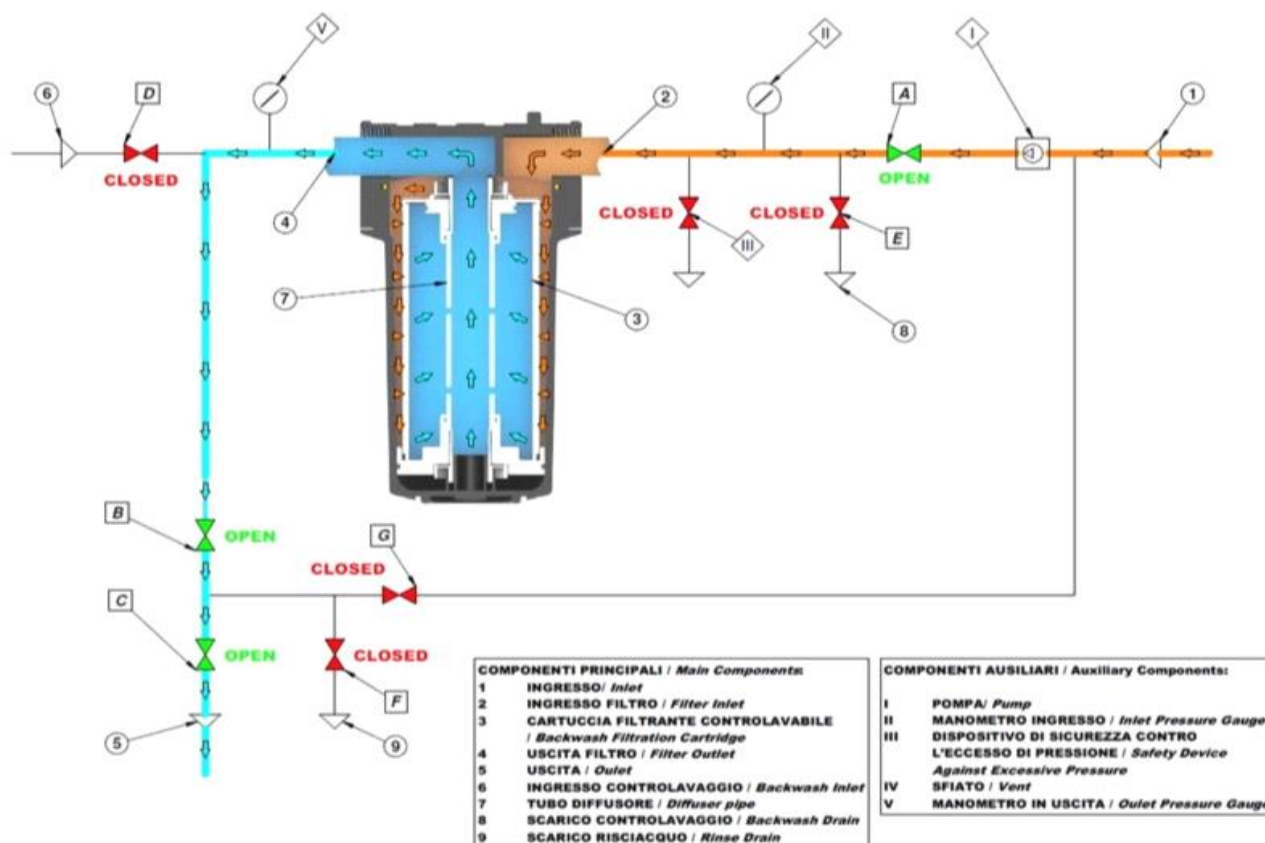


*Approximate picture. Connections and measures choice will lead to the assembly of a product which could differ from those shown in figure
 Flow rate chart available on www.everblue.it by choosing microns gradient and connections and selecting specific product data sheet*

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Service



The water that has to be filtered enters through the inlet (1), passes through the pump (I) (if present) to the filter inlet (2). It then goes from the outside to the inside through the backwashable filter cartridge (3). The foreign particles and suspended solids that are larger than the filter's degree of filtration, are retained by the meshes of the filtering cartridge net, gradually accumulating on it. The filtered water then comes out first from the filter outlet (4) and then from the outlet (5).

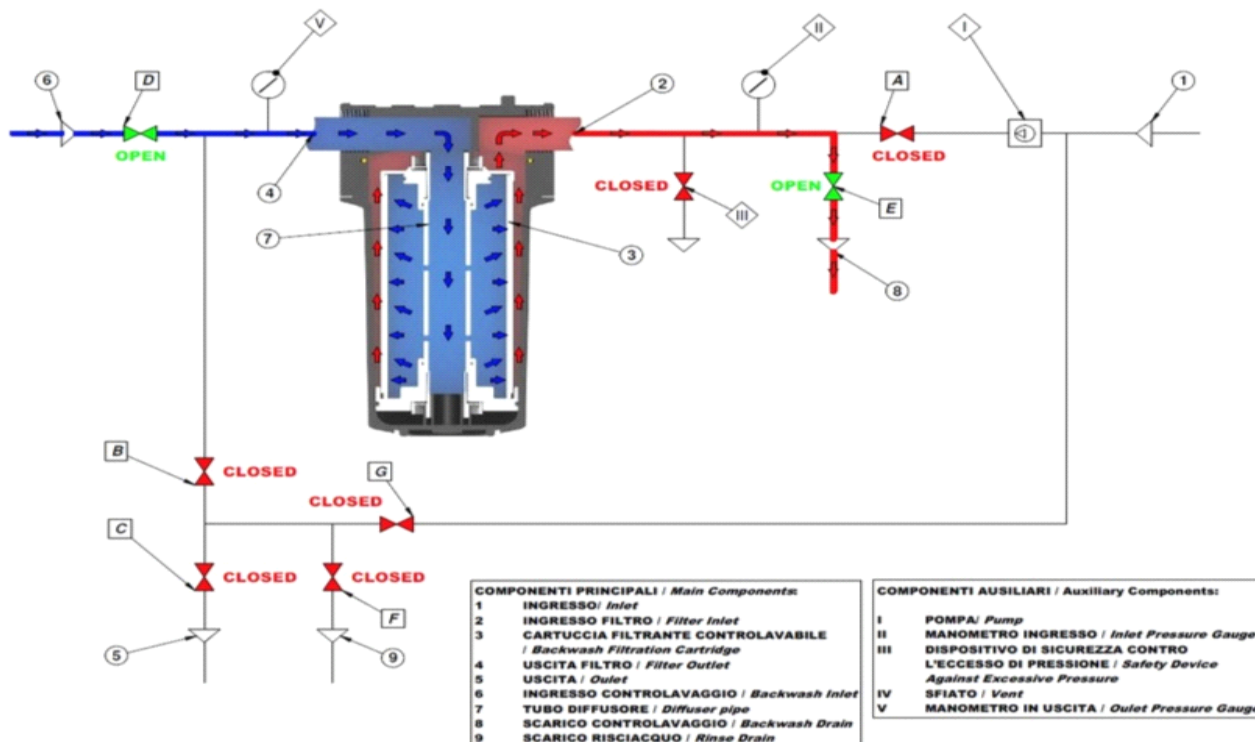
To prevent damages on the filtration sleeve, install, before the backwashable filter, a prefilter (strainer) to remove the particles bigger than 3 mm.

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Backwash



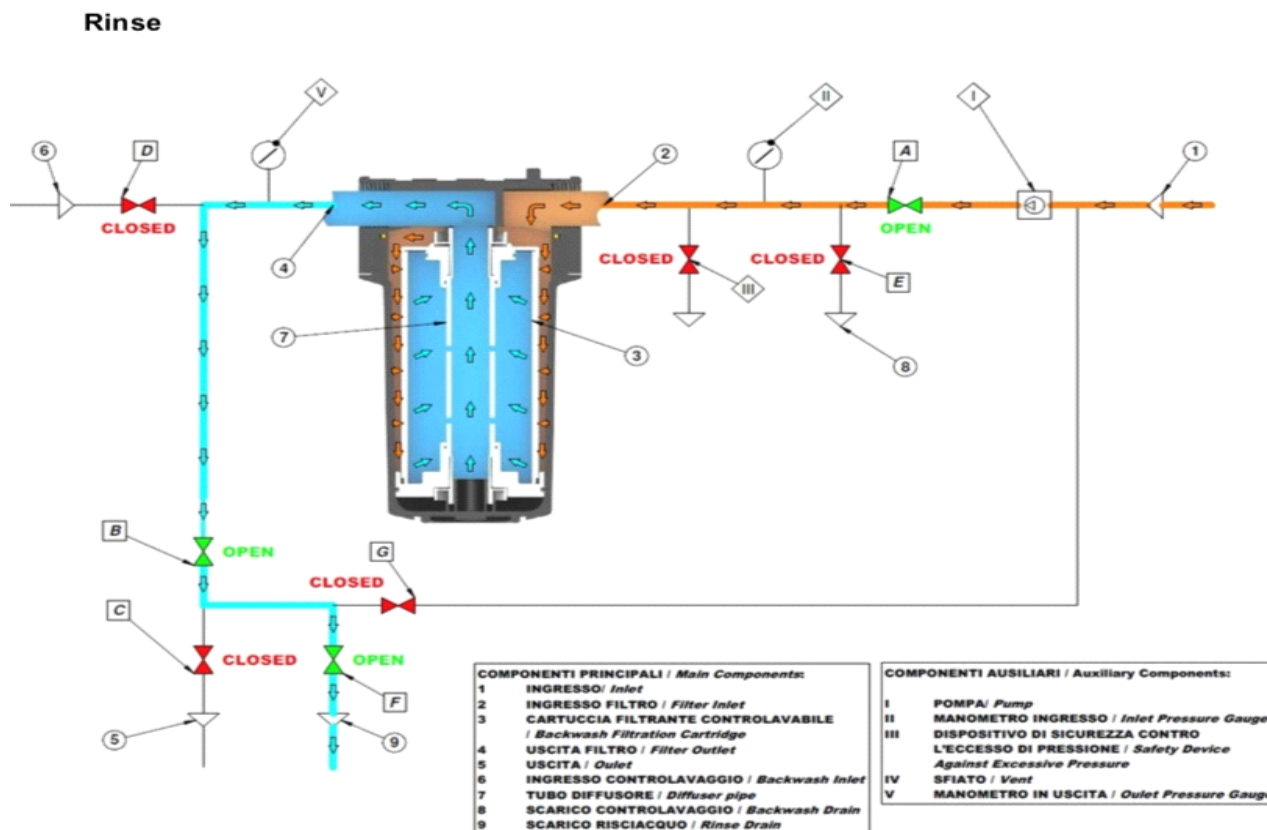
The foreign particles and suspended solids on the surface of the backwashable filter cartridge (3) gradually occlude the meshes of the network, increasing the pressure drop. Thus, a pressure difference (ΔP) can be detected between the inlet pressure gauge (II) and the outlet pressure gauge (V). At a set value of ΔP (variable between $0.3 \div 1$ Bar) it is necessary to start the backwash cycle.

During this cycle the backwashing water first enters through the backwashing inlet (6), then into the filter through the filter outlet (4). The flow of the backwashing water is distributed equally inside the backwashable filter cartridge (3) from the diffuser pipe (7) thanks to the appropriately sized holes on its surface. The backwashing water then passes through the backwashable filter cartridge (3) from the inside outwards. This process brings the foreign particles and suspended solids to detach from the surface of the backwashable filter cartridge (3), and then exit the backwash drain (8).

The duration of the backwashing cycle must be at least 30 seconds, at the backwash pressure and flow rate recommended in the data sheet of the backwashable self-cleaning filter. In any case, the effective duration of the backwashing cycle must be extended enough time to drag to the backwash drain (8), the volume of water contained inside the pipe between the filter outlet (4) and the backwash drain valve (E).

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In order to avoid subsequent contamination of the filtered water downstream of the filter, it is always advisable to provide a rinsing phase.

In the rinsing phase the water to be filtered enters through the inlet (1), passes through the pump (I) (if present) arriving at the inlet of the filter (2). It is then filtered by the backwashable filter cartridge (3) with the methods already described. It then comes out first from the filter outlet (4) to the rinse drain (9).

The duration of the backwashing cycle must be at least 20 seconds, at the backwash pressure and flow rate recommended in the data sheet of the backwashable self-cleaning filter. In any case, the effective duration of the backwashing cycle must be extended enough time to drag to the rinse drain (9), the volume of water contained inside the pipe between the filter outlet (4) and the rinse drain valve (F).

Considering all these characteristics, we can certainly say that the FILBLUE FB4000 represents one of the best performing and efficient solutions in the wide range of industrial self-cleaning filters on the market.