

Industrial automatic self cleaning filters

SELF CLEANING FILTERS WITH SUCTION NOZZLES

FILBLUE FV2000 A

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

 [erblue.it/CadDrawings/F20200805141616397FV2000AFRPN_..._F_ME](http://www.everblue.it/CadDrawings/F20200805141616397FV2000AFRPN_..._F_ME)

FEATURES

| | |
|--|---|
| Model | FV2000 A |
| Material | FRP |
| Connections | DN 80 FLANGE DN8063 PN16, DN 150 FLANGE DN8063 PN16 |
| Continuous flow | Yes |
| Micron | 50 - 80 - 125 - 200 - 300 - 500 |
| Efficiency | 90% |
| Efficiency on non compressible particles | High |
| Efficiency on compressible particles | Medium |
| Efficiency on light particles | Medium |

DESIGN DATA

| | |
|------------------------------|--|
| Min working pressure | 2 bar |
| Max working pressure | 6 bar |
| Hydraulic test pressure | 10 bar |
| Max working temperature | 50°C |
| Life test | 1.000 cycles from 0 to 6 bar |
| pH min | 5 |
| pH max | 8 |
| Max diameter inlet particles | 3 mm |
| Max total suspended solids | 50 mg/l (50-80 µm) - 100 mg/l (125-200-300-500 µm) |
| Max turbidity | 10 NTU |

POWER

| | |
|-------------------------------|-------------------------|
| Electric power | 12 Volt DC 10A 120 Watt |
| Electric power solenoid valve | 12 DC |
| Air pressure min | 2 bar |
| Air pressure max | 8 bar |

Industrial automatic self cleaning filters

SELF CLEANING FILTERS WITH SUCTION NOZZLES

FILBLUE FV2000 A

APPLICATIONS

Water

Sea 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 2 bar(m ³ /h) ¹ | Cleaning time (sec.) | Power needed (Watt) | Q.tity box | - |
|----------------------|------------------|---------------------|------------------------------|------------------|--------|------------------------------|---|----------------------|---------------------|------------|---|
| FV2000 AFRPDN80F500 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 500 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN80F300 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 300 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN80F200 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 200 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN80F125 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 125 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN80F80 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 80 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN80F50 | FILBLUE FV2000 A | 0,15 m ² | DN 80 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 50 | 54.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F500 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 500 | 162.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F300 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 300 | 162.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F200 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 200 | 162.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F125 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 125 | 162.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F80 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 80 | 162.000 | 12,00 | 10 | 180 | 1 | |
| FV2000 AFRPDN150F50 | FILBLUE FV2000 A | 0,45 m ² | DN 150 FLANGE DN8063 PN16 | 1" 1/4 BSP F | 50 | 162.000 | 12,00 | 10 | 180 | 1 | |

¹Max clean water flow rate in l/h at 20°C, 2 bar pressure and differential pressure 0,3 bar.

¹The cleaning flow rate of 12m³/h refers to a feed pressure of 2 bar.

For feed pressures higher than 2 bar the cleaning flow rate is higher. To obtain the minimum washing flow rate of 12m³/h required to clean the filter, it is recommended to install a manual valve on the drain pipe.



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

Design code:

BS EN 13923 2005

Industrial automatic self cleaning filters SELF CLEANING FILTERS WITH SUCTION NOZZLES

FILBLUE FV2000 A

SELF CLEANING FILTERS CODE LIST

| Model | Material | | Connection IN/OUT | Micron | Specs and finishing | |
|----------|----------|-----|--|--------------------------------------|--------------------------------------|--|
| FV2000 A | FRP | FRP | DN 80 FLANGE DN8063 PN16 DN80F DN 150 FLANGE DN8063 PN16 DN150F | 50 80 125 200 300 500 | 50 80 125 200 300 500 | |



*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*

Industrial automatic self cleaning filters

SELF CLEANING FILTERS WITH SUCTION NOZZLES

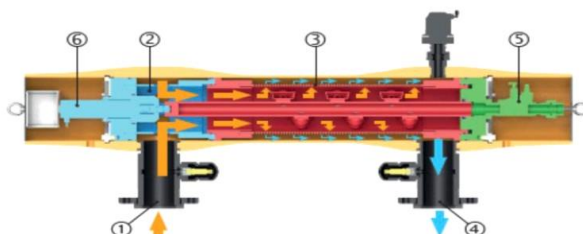
FILBLUE FV2000 A

LAVORO

L'acqua entra nel filtro tramite l'ingresso (1), attraversa il cilindro di ingresso (2) dall'esterno all'interno e poi il cilindro filtrante (3) dall'interno all'esterno. Il cestello filtrante trattiene tutti i solidi sospesi più grandi o uguali del grado di filtrazione installato. L'acqua filtrata fuoriesce attraverso il tubo di uscita (4).

LAVORO

Water enters into the filter through the inlet (1), it goes through the inlet cylinder (2) from outside to inside and then into the filtration cylinder (3) from inside to outside. The filtration cylinder retains all the suspended solids with size larger or equal to the filtration degree installed. Filtered water leaves through the outlet pipe (4).



Prima del filtro autopulente è necessario installare un filtro a cestello di prefiltrazione con lo scopo di trattenere i solidi aventi dimensioni maggiori di 3 mm che potrebbero occludere gli ugelli aspiranti compromettendo l'efficacia del lavaggio e danneggiare la rete filtrante.

Il cilindro filtrante (3) è costituito da un cestello in PVC microfessurato che supporta 3 strati:

- rete drenante in polipropilene (posta tra il cestello in PVC e la rete filtrante in poliestere)
- rete filtrante in poliestere (svolge il processo di filtrazione)
- rete spaziatrice (protegge la rete filtrante e mantiene la corretta distanza tra la rete filtrante e l'ugello filtrante)

Before the self cleaning filter it is necessary to install a strainer as pre-treatment to retain solids larger than 3 mm that could close the suction nozzles compromising the efficiency of the regeneration (suction) and damaging the filtration sleeve.

The filtration cylinder (3) is made up of a PVC basket that supports 3 layers:

- polypropylene drainage sleeve (placed between the PVC basket and the polyester filtering sleeve)
- polyester filtering sleeve (performs the filtration process)
- spacer sleeve (protects the filter sleeve and maintains the correct distance between the filtering sleeve and the suction nozzles)

Industrial automatic self cleaning filters

SELF CLEANING FILTERS WITH SUCTION NOZZLES

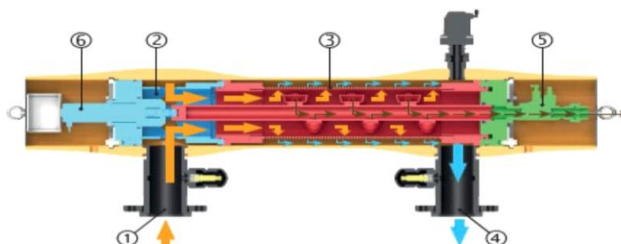
FILBLUE FV2000 A

RIGENERAZIONE

Il continuo depositarsi di solidi sospesi all'interno del cilindro filtrante (3) crea un impedimento di passaggio all'acqua il quale si traduce in una differenza di pressione (ΔP). Ad un valore stabilito di ΔP (regolabile 0,3 ÷ 1 Bar) avviene il ciclo automatico di pulizia del cilindro filtrante. Questa operazione a inizio con un segnale che apre la valvola di scarico (5) e mette in rotazione il tubo porta ugelli aspiranti attraverso il motore elettrico (6). Lo sporco viene aspirato per mezzo degli ugelli il quale viene svacuato tramite la valvola di scarico. Il ciclo di pulizia ha una durata di circa 15 secondi.

RIGENERATION

The continuous settling of suspended solids inside the filtration cylinder obstructs the passage of water which results in a differential pressure (ΔP) between inlet and outlet. At a preset value of ΔP (range 0.3 ÷ 1 Bar) the automatic regeneration cycle of the filtration cylinder will start. This operation begins with a signal that opens the discharge valve (5) and rotates the suction nozzles through the electric motor (6). Dirt is sucked up by the suction nozzles and evacuated through the discharge valve. The regeneration cycle lasts approximately 15 seconds.



L'aspirazione attraverso gli ugelli aspiranti avviene grazie alla differenza di pressione che si crea sulla superficie di contatto degli ugelli aspiranti stessi con il cestello filtrante.

Gli ugelli aspiranti sono collegati, tramite i relativi supporti, al tubo di scarico collocato all'interno del filtro autopulente che a sua volta è connesso alla valvola di scarico.

La valvola di scarico, collegata ad un pozzetto o ad una tubazione non in pressione, genera, aprendosi, una differenza di pressione con l'interno del filtro (pressurizzato) creando così l'effetto aspirante sugli ugelli.

Per creare l'aspirazione, il filtro necessita solamente di 1 bar di pressione di alimento garantendo così decisivi risparmi dal punto di vista energetico.

Il FILBLUE FV2000 permette una continuità di flusso anche durante la fase di rigenerazione, mantenendo al contempo la sua produttività e limitando al minimo gli sprechi di acqua.

Suction through the suction nozzles occurs due to the differential pressure that is created on the contact surface of the suction nozzles with the filter basket.

The suction nozzles are connected, via the relative supports, to the exhaust pipe placed inside the self-cleaning filter, which, at the same time, is connected to the drain valve.

The drain valve, connected to a cockpit or a non-pressurized pipe, generates, while opening, a pressure difference with the inside of the filter (pressurized) thus creating the suction effect on the nozzles.

To create suction, the filter requires only 1 bar of pressure, thus ensuring decisive energy savings.

The FILBLUE FV2000 allows a flow continuity even during the regeneration phase, while maintaining its productivity and minimizing wastage of water.