

## Industrial automatic self cleaning filters

### SELF CLEANING FILTERS WITH SUCTION NOZZLES

# FILBLUE FD2000

[Link to product's PDF drawing](http://www.everblue.it/CadDrawings/FD2000DUP.PDF)

(<http://www.everblue.it/CadDrawings/FD2000DUP.PDF>)



#### FEATURES

Model	FD2000
Material	DUPLEX
Connections	2" BSP M, DN 80 FLANGE F, DN 100 FLANGE L, DN 150 FLANGE L, DN 200 FLANGE L
Continuous flow	Yes
Micron	50 - 80 - 125 - 200 - 300 - 500
Efficiency	90%
Efficiency on non compressible particles	High
Efficiency on compressible particles	Good
Efficiency on light particles	Good

#### DESIGN DATA

Min working pressure	0,5 bar
Max working pressure	10 bar
Hydraulic test pressure	15 bar
Max working temperature	60°C
Life test	1.000 cycles from 0 to 10 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	380 Volt 50 Hz
Electric power solenoid valve	24 AC Volt / 6 Watt
Air pressure min	2 bar
Air pressure max	8 bar

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#### 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) <sup>1</sup>	Cleaning flow rate at 1 bar (m <sup>3</sup> /h)	Cleaning time (sec.)	Power needed (Watt)	Q.tity box	-
FD2000DUP200MT500D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	500	25.000	3,00	15	90	1	
FD2000DUP200MT300D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	300	25.000	3,00	15	90	1	
FD2000DUP200MT200D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	200	25.000	3,00	15	90	1	
FD2000DUP200MT125D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	125	25.000	3,00	15	90	1	
FD2000DUP200MT80D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	80	22.500	3,00	15	90	1	
FD2000DUP200MT50D	FILBLUE FD2000	0,1 m <sup>2</sup>	2" BSP M	1" ½ BSP F	50	20.000	3,00	15	90	1	
FD2000DUP300FM500D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	500	60.000	3,00	15	180	1	
FD2000DUP300FM300D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	300	60.000	3,00	15	180	1	
FD2000DUP300FM200D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	200	60.000	3,00	15	180	1	
FD2000DUP300FM125D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	125	60.000	3,00	15	180	1	
FD2000DUP300FM80D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	80	55.000	3,00	15	180	1	
FD2000DUP300FM50D	FILBLUE FD2000	0,15 m <sup>2</sup>	DN 80 FLANGE F	2" BSP F	50	50.000	3,00	15	180	1	
FD2000DUP400FM500D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	500	90.000	6,00	15	180	1	
FD2000DUP400FM300D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	300	90.000	6,00	15	180	1	
FD2000DUP400FM200D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	200	90.000	6,00	15	180	1	
FD2000DUP400FM125D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	125	90.000	6,00	15	180	1	
FD2000DUP400FM80D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	80	80.000	6,00	15	180	1	
FD2000DUP400FM50D	FILBLUE FD2000	0,3 m <sup>2</sup>	DN 100 FLANGE L	2" BSP F	50	70.000	6,00	15	180	1	
FD2000DUP600FM500D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	500	200.000	9,00	15	180	1	

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FD2000DUP600FM300D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	300	200.000	9,00	15	180	1	
FD2000DUP600FM200D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	200	200.000	9,00	15	180	1	
FD2000DUP600FM125D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	125	200.000	9,00	15	180	1	
FD2000DUP600FM80D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	80	180.000	9,00	15	180	1	
FD2000DUP600FM50D	FILBLUE FD2000	0,45 m <sup>2</sup>	DN 150 FLANGE L	2" BSP F	50	170.000	9,00	15	180	1	
FD2000DUP800FM500D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	500	300.000	12,00	15	180	1	
FD2000DUP800FM300D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	300	300.000	12,00	15	180	1	
FD2000DUP800FM200D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	200	300.000	12,00	15	180	1	
FD2000DUP800FM125D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	125	300.000	12,00	15	180	1	
FD2000DUP800FM80D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	80	270.000	12,00	15	180	1	
FD2000DUP800FM50D	FILBLUE FD2000	0,6 m <sup>2</sup>	DN 200 FLANGE L	2" BSP F	50	250.000	12,00	15	180	1	

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



#### European community members only.

These filters satisfy all requirements of the European Directive for Pressure Equipment (P.E.D.) 97/23/EC, following module A (internal production control) as conformity assesment procedure.

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# FILBLUE FD2000

### SELF CLEANING FILTERS CODE LIST

Model	Material	Connection IN/OUT	Micron	Specs and finishing
FD2000	DUPLEX DUP	2" BSP M 200MT DN 80 FLANGE F 300FM DN 100 FLANGE L 400FM DN 150 FLANGE L 600FM DN 200 FLANGE L 800FM	50 80 125 200 300 500	50 80 125 200 300 500 Acid bath treated D



*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](http://www.everblue.it) by choosing microns gradient and connections and selecting specific product data sheet*

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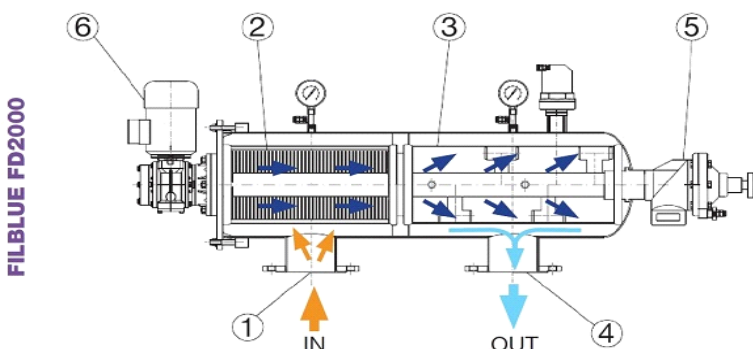
## SELF CLEANING FILTERS WITH SUCTION NOZZLES

### FILBLUE FD2000

#### FUNZIONAMENTO E SCHEMA DI FLUSSO

##### LAVORO

L'acqua entra nel filtro tramite l'ingresso (1), attraversa la camera di pre-filtrazione (2) ed entra nel cilindro di filtrazione (3). La filtrazione avviene dall'interno all'esterno. La rete filtrante in poliestere posizionata sul cestello di sostegno trattiene tutti i solidi sospesi aventi dimensioni più grandi o uguali al grado di filtrazione installato. L'acqua filtrata fuoriesce attraverso il tubo di uscita (4).



#### FUNDAMENTALS OF OPERATION

##### SERVICE

The water enters the filter (IN), then crosses a prefiltration chamber (1) from out to in and then through the fine secondary filter (3), from in to out. The prefilter prevents passage of larger suspended matter in order to protect the cleaning components in the second stage. The water is filtered to the required degree in the second stage before passing to service (4) Filtration in the second stage is effected by a polyester sleeve of the desired micron rating, fitted over an internal support mesh.

Lavoro - Service	
Valvola - Valve (5)	Chiusa - Closed
Motore - Motor (6)	Spento - Off

#### RIGENERAZIONE

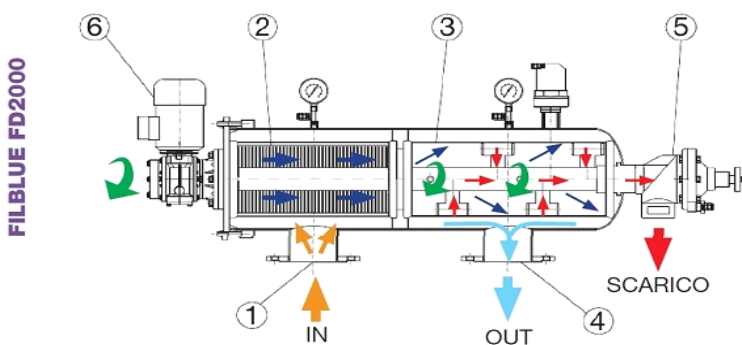
Il continuo depositarsi di solidi sospesi crea un impedimento di passaggio all'acqua il quale si traduce in una differenza di pressione ( $\Delta P$ ). Ad un valore stabilito di  $\Delta P$  (regolabile da 0,3 ÷ 1 Bar) avviene il ciclo automatico di pulizia del cilindro filtrante. Questa operazione, che ha inizio tramite un segnale, avviene nel seguente modo:

- apertura della valvola (5) che essendo collegata a uno scarico libero crea un effetto aspirante degli ugelli ad essa collegati tramite il tubo di supporto/rotazione degli stessi.
- contemporaneo azionamento del motore elettrico (6) che pone in rotazione gli ugelli di aspirazione all'interno del cilindro filtrante i quali allontanano il contaminante attraverso la valvola di scarico (5). Il ciclo di pulizia ha una durata di circa 15 secondi. Il filtro continua ad erogare acqua in servizio anche durante la fase di rigenerazione.

#### SELF CLEANING CYCLE

The deposition of suspended particles on the filter sleeve impedes water flow across it and hence causes a pressure differential ( $\Delta P$ ) across the filter sleeve. The self cleaning cycle is initiated when the pressure differential reaches a pre-set value, adjustable between 0,3 and 1 bar. A signal:-

- opens the drain valve (5)
- starts the electric motor (6) which drives the rotation of the suction nozzle shaft
- The particles on the internal surface of the sleeve are removed through the suction nozzles and discharged through the drain valve. The suction effect is created by opening the discharge valve and the cleaning cycle has a duration of 15 secs. The unit continues to supply water to service during the cleaning cycle



Rigenerazione - Cleaning	
Valvola - Valve (5)	Aperta - Open
Motore - Motor (6)	Acceso - On

#### CONTROLLO

Un quadro elettrico gestisce le fasi di lavaggio. Il segnale che aziona il ciclo di pulizia viene fornito da un pressostato differenziale. Il quadro elettrico è dotato di un segnale "allarme" in caso di anomalia nel sistema di lavaggio. Tali segnali possono essere inviati ad una centrale di controllo già esistente. La fase di lavaggio può essere comandata anche manualmente tramite il quadro di comando.

#### CONTROLLER

A control panel mounted either on the body or separate from the unit, controls the cleaning cycle on receipt of a signal from the pressure differential switch or by manual initiation. The control panel has an alarm fitted to indicate malfunction of the cleaning cycle. The cleaning cycle may be activated manually in the control panel.

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