Germaniastraße 28
44379 Dortmund
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Postfach 700110
44371 Dortmund
www.gefa.com

GEFA PROCESSTECHNIK GMBH

Automatic Backflush Filter

GEFA Series FW

Data-Sheet

DN 50 (2“) – DN 350 (14“)

Stand 01.2018

Filtertechnik

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GENERAL

GEFA filters are one of the most technically innovative self-cleaning filters available, combining proven high performance, reliability and economy in a compact robust design. GEFA Series FW can be mounted in any position or orientation, with minimal space requirements.

The key feature to GEFA performance and reliability is the use of the escaping backflush water to rotate the internal cleaning mechanism inside the filter vessel. No external motor, mechanism or power is required, reducing the number of moving/wearing parts to a minimum. Automatic Operation of the self cleaning backflush cycle is achieved when a pre-set pressure drop (40 - 50 kPa) across the filter is reached. 100% cleaning as every spot on the fine screen surface is cleaned with a high velocity, aggressive backflush flow.

No External Power is required (when using the hydraulic controlled filter). All functions are powered by the line pressure only. All controls required come complete with the filter.

Equipment

Filter Housing: Stainless Steel AISI-304 (316 on request)
Mesh Screen: Stainless Steel AISI-316
Filtration degrees: 30, 50, 80, 100, 120, 150, 200, 400, 800 µm
Working pressure: min. 2 bar / max. 10 bar
Pressure Level: PN 10 (PN 16 on request)
Max. Working Temperature: 55 °C (higher on request)
Nominal Size: DN 50 - 350 Female/Flange

Options

- Hydraulic, electro-pneumatic or electric-control
- Non-ferrous Metal-free design
- Silicone-free version

General safety instructions

	• To prevent accidents, the installation, connection and commissioning of the electrical components may only be carried out by authorized and qualified personnel.

	**Note:** 1. The flush volume is added to the flow volume. 2. The backwash pipe is to be laid against loss and pressure-free. 3. When installed in open air, the filter must be protected from frost.

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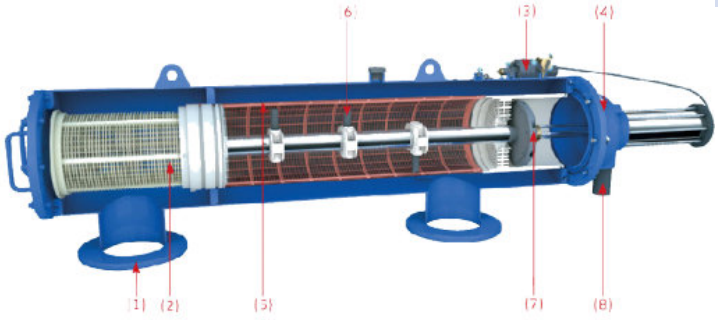

Function of the filter

During normal filtering mode the raw water enters the Inlet of the filter (1), passes through the Coarse Screen (2), (this removes large debris that may obstruct the lower mechanism). Water then travels to the inside and through the Fine Screen (2) to the Outlet. The solids in the water are trapped on the Fine Screen (5), eventually causing a pressure drop (DP) across the filter.

At a pressure drop of 40 - 50 kPa, the Controller (3) activates the cleaning cycle by opening the Flush Valve (8) to drain (atmosphere). The interconnection of the Suction Nozzles (6) via the Dirt Collector to the Drain causes a back flushing or 'vacuum clean' effect on the Fine Screen (5) with a high velocity suction jet of water from the clean outlet side of the screen, removing the dirt on the screen as it passes through. The water escaping via the Rotor (7) causes the Dirt Collector and Suction Nozzle assembly (6) to rotate. The Flushing Valve (8) allows this assembly to travel along the length of the Fine Screen (5) in a spiralling motion, cleaning the entire screen surface area in approximately 5 seconds. The Flushing Valve (8) closes, and returns the mechanism back to its original position, ready for the next cycle. Cleaning also occurs on the return stroke.

Product-details

Model	**FW 050**	**FW 080**	**FW 080 EX**	**FW 100**	**FW 100 EX**	**FW 100 EXL**	**FW 150**	**FW 150 EX**	**FW 200**	**FW 250**	**FW 250 EX**	**FW 300**	**FW 350**
Inlet / Outlet	DN50 (2“)	DN80 (3“)	DN80 (3“)	DN100 (4“)	DN100 (4“)	DN100 (4“)	DN150 (6“)	DN150 (6“)	DN200 (8“)	DN250 (10“)	DN250 (10“)	DN300 (12“)	DN350 (14“)
Working pressure	min. 2 bar / max. 10 bar (*PN 16 on request*)												
Working temp.	55 °C (*95 °C on request*)												
Max. Flow * (m³/h)	25	50	50	80	100	100	180	180	320	400	400	600	900
Weight empty (kg)	23	25	29	30	85	110	105	115	130	155	235	240	285
Screen area cm²	1220	1220	1980	1980	5600	8115	5600	8115	8115	8115	10415	10415	12170
Filtration degree	30, 50, 80, 100, 120, 150, 200, 400, 800 µm												
Automatic Backflush													
Exhaust Valve	2“ / DN 50												
Flush time	ca. 5-7 sec.				ca. 15-17 sec.								
Flow for flushing	ca. 15-18 m³/h				ca. 30-35 m³/h								
Reject water volume per cycle	30 l				150 l								
Materials													
Filter housing	Stainless Steel AISI-304 (*AISI316 on request*)												
Cleaning mechanism	Stainless Steel AISI-304												
Fine screen	Stainless Steel AISI-316												
Nozzles	GfK												
Exhaust valve	Brass, Stainless Steel, NBR, EPDM												
Seals	NBR, EPDM												
Filter lid	GfK, Stainless Steel AISI-304 (*AISI 316 on request*)												

*Capacity is depending on dirt load and filter fineness. Please consult with GEFA.

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GEFA Certificates

ISO 9001 - OHSAS 18001 - ISO 14001

Zusätzlich zum Qualitätsmanagementsystem **ISO 9001** hat die GEFA Processtechnik GmbH jetzt auch für die Bereiche Arbeitsschutz (**OHSAS 18001**) und Umweltmanagement (**ISO 14001**) ein sichtbares Zeichen:

Die **OHSAS 18001** und **ISO 14001** Zertifizierungen sind weltweit anerkannte Standards mit dem Fokus auf Personenschutz, Arbeitssicherheit, Gesundheitsvorsorge und Umweltschutz.