Germaniastraße 28
44379 Dortmund
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Postfach 700110
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www.gefa.com

GEFA PROCESSTECHNIK GMBH

Automatic Backflush Filter

GEFA M1XX

Data-Sheet

Model C, LP, XLP

DN 50 (2“) – DN 250 (10“)

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 M1xx 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: Carbon steel 37-2 (Epoxy coated)
Mesh Screen: Stainless steel AISI-316
Molded plastic support structure
Filtration degrees: 80, 100, 130, 200, 300, 500 µm (other on request)
Working pressure: min. 2 bar / max. 10 bar (LP/XLP)
Pressure Level: PN 10
Max. Working Temperature: 55 °C
Nominal Size: DN 50 - 250 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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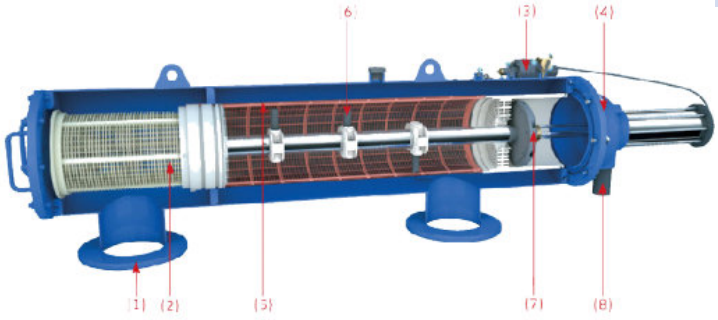

Function of the filter

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	M 102C	M 103C	M 103CL	M 104C	M 104LP	M 106LP	M 104XLP	M 106XLP	M 108LP	M 110P
Inlet/Outlet	DN 50 (2“)	DN 80 (3“)	DN 80 (3“)	DN 100 (4“)	DN 100 (4“)	DN 150 (6“)	DN 100 (4“)	DN 150 (6“)	DN 200 (8“)	DN 250 (10“)
Working pressure	min. 2 bar / max. 8 bar				min. 2 bar / max. 10 bar					
Working temperature	55 °C									
Mesh Screen										
Max. Flow * (m³/h)	25	40	40	80	100	180	100	180	320	400
Screen area	750 cm²		1500 cm²		4500 cm²		6800 cm²			
Weight (empty) (kg)	22	25	30	35	90	115	110	120	140	158
Filtration degree	80, 100, 130, 200, 300, 500 µm (others on request)									
Automatic Backflush										
Exhaust Valve	1 ½“ / DN 40				2“ / DN 50					
Flush time	ca. 5-10 sec.				ca. 10-15 sec.					
Flow for flushing	ca. 15-18 m³/h				ca. 30-35 m³/h					
Reject water volume per flush cycle	ca. 20 l		ca. 50 l		ca. 125 l		ca. 150 l			
Materials										
Filter housing	Carbon Steel 37-2									
Coating	Epoxy-coated									
Cleaning mechanism	Stainless Steel AISI-316L									
Screen type	Molded Weave Wire, Stainless Steel 316 on plastic support structure									
Nozzles	PVC									
Exhaust valve	Brass, Stainless Steel, BUNA-N									
Seals	BUNA-N									
Filter lid	High Density Polypropylene				Stahl 37-2					

*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.