

### GENO®-Fine filter FM 150, FM 200 Cold, warm and cooling water version

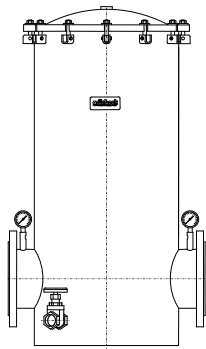


Fig. 1: GENO®-fine filter FM

#### Designated application

The GENO®-fine filters FM are designed for the filtration of drinking and process water. They protect the water pipes and connected water-carrying system parts from disturbances and corrosion damage due to undissolved impurities (particles), such as rust particles, sand, etc.

The GENO®-fine filters FM can also be used for the filtration of well water. For process water, boiler feed water, cooling and air-conditioning water, however, they should only be used in the partial flow. The GENO®-fine filters may only and exclusively be used on the pressure side.

GENO®-fine filters FM are not suitable for oils, greases, solvents, soaps and other lubricating media, nor for the separation of water soluble substances.

#### Function

The raw water flows into the filter tank via the raw water inlet and then from the outside in through the filter elements and to the pure water outlet. Depending on their size and due to the special conduction of flow, the coarse foreign substances will first settle on the bottom of the filter tank.

All other foreign particles of a size  $> 80 \mu\text{m}$  ( $= 0.080 \text{ mm}$ ) will be retained at the exterior of the filter elements (special version  $> 100$  and  $> 500 \mu\text{m}$ ). The service life of the filter elements depends on the water's degree of pollution. They must be replaced if - due to the increasing degree of pollution - the water pressure in the pipe network is no longer sufficient for the designated application or if a differential pressure of max. 0.8 bar has been reached.

However, they must be replaced after 6 months of operation at the latest -

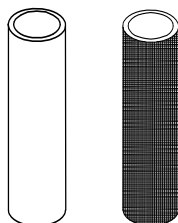


Fig. 2: Replacement filter elements FM

irrespective of the degree of pollution (acc. to DIN EN 806, part 5).

The differential pressure may be determined by the values displayed at the pressure gauges on the raw and pure water side. By means of a differential pressure switch that is available as special accessory, a signal message can be tapped when the differential pressure has been reached. When using this unit, the required replacement of the filter elements can visually or acoustically be signalled as remote indication by means of the corresponding electric contactor.

The operator-friendly locking system ensures the trouble-free and quick replacement of the filter elements at only a short interruption of operation.

#### Differential pressure switch

Recommended if connection to a central control system is desired. With visual indication of the differential pressure and electric contactor (voltage-free) for visual or acoustical signalling of the required replacement of the filter elements, to be connected to the raw water inlet and pure water outlet of the GENO®-fine filter FM.

#### Design

Filter tank made of stainless steel, interior and exterior plastic coated. Raw water inlet and pure water outlet at the same height (flange connection PN 10 acc. to DIN 2642).

Operator-friendly locking system, aeration and deaeration operated manually, draining with shut-off valve. Filter chamber with pressure-resistant fabric/support bodies for the filter elements; filter elements made of rot-proof polyester felt (quantity: refer to "Technical specifications/ Dimensions"); one pressure gauge each on

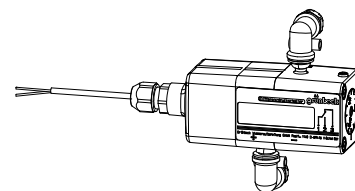


Fig. 3: Differential pressure switch

raw and pure water side to determine the degree of pollution..

#### Scope of supply

GENO®-fine filter FM, complete, with two pressure gauges, aeration and deaeration as well as draining valve. Counter flanges, screws and seals are not included in the scope of supply.

#### Accessories

##### Differential pressure switch

With electric contactor (switching point 0.16 - 1.6 bar, continuously adjustable for visual and acoustic remote signal).

**Order no. 102 870**

##### Connection extension set

for FM 150 - 200

**Order no. 102 850**

##### Replacement filter elements (80 $\mu\text{m}$ )

**Set for FM 150**

Packing unit:

2 pcs in cardboard box

Filter fabric made of rot-proof polyester felt, length of element: 362 mm

**Order no. 103 077**

##### Replacement filter elements (500 $\mu\text{m}$ )

**Set for FM 150**

Packing unit:

2 pcs in cardboard box

Filter fabric made of stainless steel, length of element: 362 mm

**Order no. 103 111**

##### Replacement filter elements (50 $\mu\text{m}$ )

**Set for FM 200**

Packing unit:

28 pcs in cardboard box

Filter fabric made of tear-proof polyester, length of element: 362 mm

**Order no. 103 153**

##### Replacement filter elements (100 $\mu\text{m}$ )

**Set for FM 200**

Packing unit:

14 pcs in cardboard box

Filter fabric made of tear-proof polyester, length of element: 710 mm  
**Order no. 103 150**

### Replacement filter elements (500 µm) Set for FM 200

Packing unit:  
 14 pcs in cardboard box  
 Filter fabric made of VA, length of element: 710 mm (= double length)  
**Order no. 103 151**

### Spare seal for stainless steel filter elements

Packing unit:  
 2 pcs in cardboard box  
**Order no. 102 607e**

### Installation requirements

Please observe local installation directives, general guidelines and technical specifications.

The installation site must be frost-proof. Furthermore, a drain connection (floor drain) should be available. The filters should be installed in pipes of the same dimensions as the nominal diameters of the filters.

Components mounted above the intended installation site must be installed at a sufficient distance in order to ensure the trouble-free replacement of the filter elements.

In cases where the water supply must be maintained during the replacement of the filter element, either a filter with a lower flow capacity must be installed in the bypass pipe or 2 GENO®-fine filters FM (each covering 50 % of the max. flow capacity) must be switched in parallel.

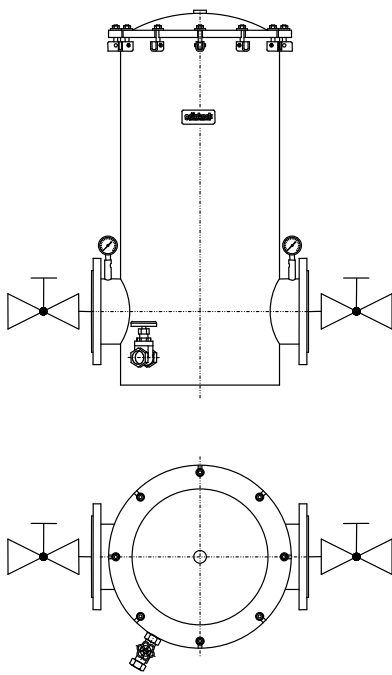


Fig. 4: Installation diagram

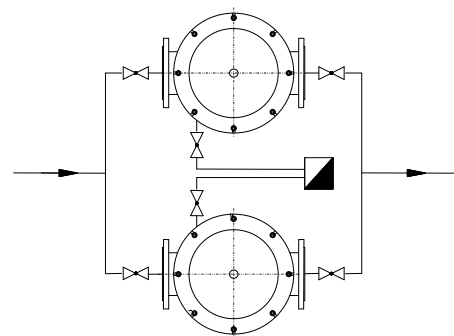


Fig. 5: Parallel switching

Technical specifications		GENO®-fine filter FM	
		150	200
<b>Connection data</b>			
Nominal connection diameter	[DN]	150	200
<b>Performance data</b>			
Flow capacity at 0.2 bar $\Delta p$	[m <sup>3</sup> /h]	150	280
Filter fineness cold, warm water/cooling water		80 / 500	50 / 500
Nominal pressure	[bar]	Cold water	PN 10
		Warm water	PN 6
<b>Dimensions and weights</b>			
A	Installation length without counter flanges acc. to DIN 2642	[mm]	690
B	Min. distance from wall to centre of connection	[mm]	300
C	Overall height above centre of connection	[mm]	597
F	Clearance required for replacement of filter element	[mm]	600
	Overall height of UK filter up to centre of connection	[mm]	233
	Total height	[mm]	830
	Filter elements (quantity)		14
	Operating weight, approx.	[kg]	255
	Empty weight, approx.	[kg]	100
<b>Ambient data</b>			
Max. water/ambient temperature	[°C]	Cold water	30/40
	[°C]	Warm water	90/40
Operating pressure at max. water temperature	[bar/°C]	Cold water	10/30
	[bar/°C]	Warm water	6/90
Max. admissible differential pressure	[bar]	0.8	
<b>Order no. (cold water version)</b>		<b>102 400</b>	<b>102 500</b>
<b>Order no. (warm water version)</b>		<b>102 401</b>	<b>102 501</b>
<b>Order no. (cooling water version)</b>		<b>102 470</b>	<b>102 570</b>

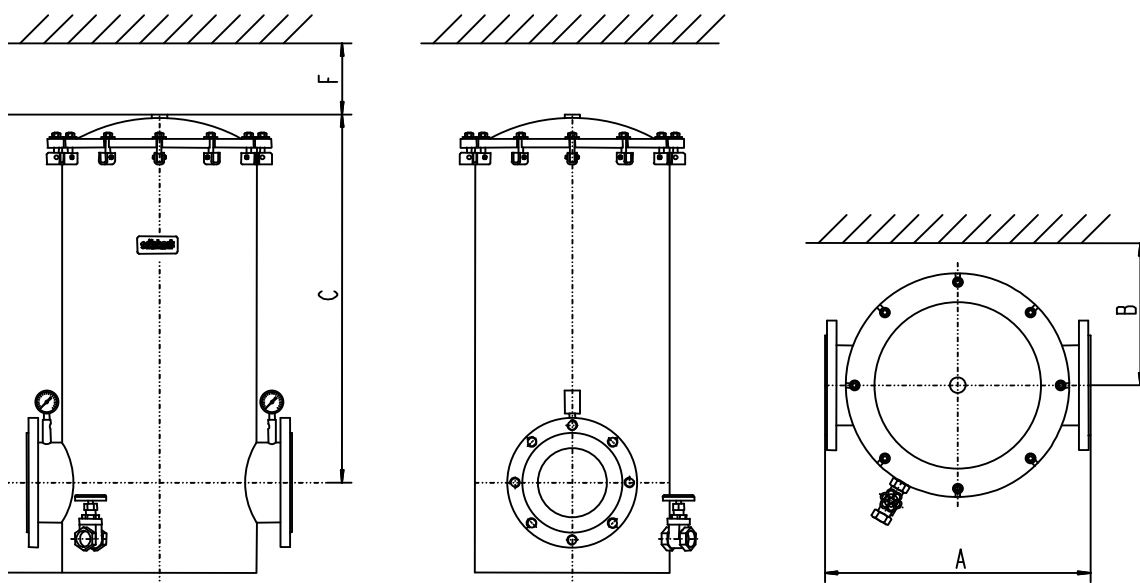


Fig. 6: Dimensional drawing