

Fig. 1: Filter system GENO-mat F 600 HK

GENO-mat F 500/600 HK; AC/RC

Designated application

The system is designed for the filtration and heating up of pool water in private swimming pools, whirlpools or ornamental pools. Other applications (e. g. well or circulation filtration) are possible upon consultation with Grünbeck.

Function

Filtration

The pool water sucked in by means of a circulation pump is delivered into the filter via the distribution system at the top. The pool water flows through the filter layers from top to bottom, and the top and the bottom distribution systems make sure that the filter material is flown through equally. While flowing through the filter layers, even the finest dirt particles are being filtered from the water. The filtered water flows through the bottom distribution system which is equipped with small slots and is then returned to the pool.

Backwash

Due to the dirt retained, the indicated pressure (pressure gauge) at the filter system increases. If the pressure increases by 0.2 – 0.3 bar above the initial pressure, the filter has to be backwashed. For hygienic reasons, however, a backwash has to take place at least once a week. Depending on the degree of pollution, the backwash process takes about two to three minutes. Furthermore, we recommend a backwash before and after longer periods of standstill. A backwash is initiated through the appropriate setting at the multi-way hand valve. The multi-way hand valve deviates the backwash water in a way that it flows into the filter via the bottom distribution system. That way, the various filter layers are lifted, flown through and the dirt

particles are discharged to the drain via the top distribution system.

The backwash water flowing from the tank can be monitored through a transparent piece of pipe. According to DIN EN 1717, the backwash water pipe leading to the drain pipe must have a free outlet.

Rinsing

During the rinsing process (approx. 0.8 min.), the remaining dirt as well as abrasions of the filter material are discharged to the drain. This process works from top to bottom, in the same way as during filtration.

Circulation

The pool water is delivered by means of the circulation pump and the multi-way hand valve, however, does not pass through the filter.

Closed

All ways of the multi-way hand valve are closed.

Draining

By means of the circulation pump, the pool volume is delivered to the drain. Avoid suction of air.

Design

Filter tank made of glass fibre reinforced plastic (GRP), completely pre-assembled, manual aeration and de-aeration.

The filter control unit BWH-W (only AC version) is suitable for connection of AC pumps. Operation is indicated by means of three light-emitting diodes. Turn-switch to select operating mode (AUS, Hand, Automatik - OFF, manual, automatic) The filter's operating times are set by means of a mechanic timer, incl. a function for temperature regulation.

Control unit GENO-BW-tronic (only RC version) for semi-automatic

operation of filter system via timer programming. Display and operation via keypad and 4-line, backlit LC display, 6 languages to choose from. The control unit is equipped with a two-point temperature controller, incl. voltage-free outlet and serial interface RS 485.

Compact heat exchanger made of stainless steel (V4A), incl. highly efficient heat circulation pump and ball valves to heat up the pool.

Multi-way hand valve DN 40 (Ø 50 mm).

Circulation pump made of plastic, low-noise model with integrated hair and fibre strainer. The circulation pump should be installed below the water surface. In exceptional cases, the circulation pump may be installed max. 2 m above the water surface.

Scope of supply

Complete filter system, pre-assembled and wired on base plate, incl. control unit (BWH-W resp. GENO-BW-tronic), heat exchanger, circulation pump, multi-way hand valve and operation manual.

Accessories

Quartz sand filter filling F 500

Order no. 200 840

AFM filter filling F 500
(glass granulate)

Order no. 240 180

Quartz sand filter filling F 600

Order no. 200 560

AFM filter filling F 600
(glass granulate)

Order no. 241 800

Hydro-anthrasite filter filling F 600

Order no. 200 565

Installation requirements

Please observe local installation directives, general guidelines and technical specifications. The installation has to be made by a specialist.

The installation site must be sufficiently ventilated, should be frost-proof and must not be prone to flooding. Drainage respectively a floor drain (DN 100) is required.

The system must be easily accessible for maintenance and repair purposes. A minimum room height of 1200 resp. 1600 mm is required for the replacement of the filter material.

Technical specifications/Dimensions	Filter system GENO-mat F			
	500 HK; RC	500 HK; AC	600 HK; RC	600 HK; AC
Connection data				
Nominal connection diameter	R 2" / DN 40			
Nominal diameter of drain connection	DN 100			
Nominal connection diameter of heating	R 1"			
Filter pump	GENO-Top 8		GENO-Top 14	
Power supply [V]/[Hz]	400 / 50	230 / 50	400 / 50	230 / 50
Protection	IP 54			
Power input of motor [kW]	0.48	0.58	0.90	0.97
Current input* [A]	1.2	3.2	2.1	5.7
Fuse protection by others [A]	10			
Performance data				
Nominal pressure [bar]	2			
Max. operating pressure on heating side [bar]	6			
Max. filter/backwash capacity [m³/h]	6/8		12/15	
Pump capacity (at 8 mWC) [m³/h]	8.5		14	
Max. pool volume [m³]	35		70	
Max. suction height [m]	3			
Max. inlet height on suction side of pump [m]	3			
Min. heating circulation [m³/h]	2			
Heating capacity (inlet: 90°C, pool water 20°C) [kW]	42			
Heating capacity (inlet: 60°C, pool water 20°C) [kW]	24			
Dimensions and weights				
A Height of filter system [mm]	1020	971	1250	1222
B Width of filter system [mm]	610		780	
C Depth of filter system [mm]	831		900	
D Height of drain connection [mm]	692		523	
E Min. room height [mm]	1200		1600	
F Height of suction connection [mm]	198		198	
G Height of pool return [mm]	91		91	
H Offset suction connection/ pool return (horizontal) [mm]	180		-	
J Operating height [mm]	893		725	
Empty weight [kg]	41		60	
Filter tank Ø [mm]	510		630	
Ambient data				
Water temperature [°C]	5-40			
Ambient temperature [°C]	5-35			
Max. humidity of air (non-cendensing) [%]	90			
Order no.	240 410	240 430	241 410	241 430

* According to the standards, the nominal power of pumps (< 1.3 kW) may be 20 % above the indications by the manufacturer (indicated on the type designation plate); this tolerance has been taken into consideration in the control unit GENO-BW-tronic and above table.

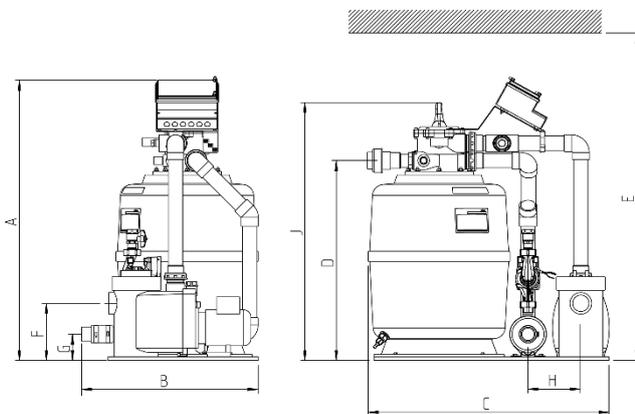


Fig. 2 Dimensional drawing of filter system GENO-mat F 500 HK; AC

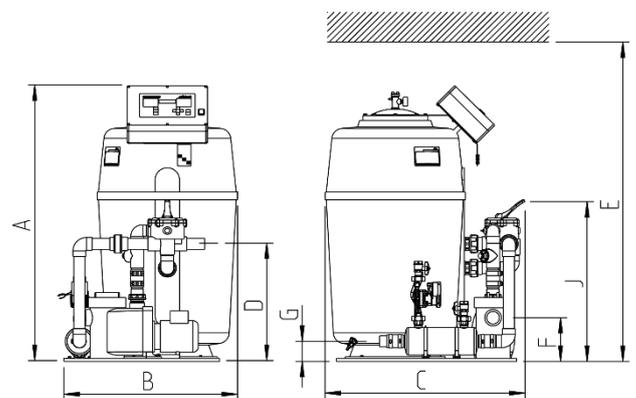


Fig. 3 Dimensional drawing of filter system GENO-mat F 600 HK; RC