

Phoenix GT

Technical product data sheet

The Phoenix GT prevents the ingress of bacteria, viruses, turbid matter and rust from the central water supply at the domestic water inlet of buildings and thus also the growth of pathogens in the pipe network. The patented membrane test of the Phoenix GT detects even the smallest damage to the filter and ensures the required germ retention in the long term. In this way, new buildings can be protected holistically and existing buildings can be supported in improving drinking water hygiene in the long term and sustainably.



Excellent removal performance

Seccua ultrafiltration is based on membrane technology from the medical field of dialysis and exceeds the requirements of operators and authorities. The Phoenix features treatment technology that has been proven to reduce viruses, bacteria and parasites in independent tests conducted by the U.S. Environmental Protection Agency (EPA), as well as confirming their direct verification through the fully automated, high-resolution integrity test. This is achieved through a mechanical filtration process - without the use of chemicals.

Integrated membrane test according to DVGW W213-5 and US EPA

In order to be able to regularly check the high retention performance during operation, the Phoenix GT is equipped with an integrated membrane test that detects even the smallest membrane damage and thus permanently ensures the safe retention of 99.99999 % of all bacteria and parasites. The fully automatic and high-resolution integrity test not only complies with DVGW worksheet W213-5, but has also been designed and developed in accordance with the world's most stringent technical regulations, the US EPA Membrane Filtration Guidance Manual. Extremely high-resolution measuring and control devices are integrated into the plant's electronics to perform the test. The specially developed programmable logic controller has capabilities comparable to a standard PLC. The permanent retention of pathogens, as well as the system's ability to detect the smallest defects in the membrane, has been monitored in months of testing and has been proven and confirmed in tests by the world's most stringent health authorities, the United States Environmental Protection Agency (EPA) and the Californian Health Department.

Fully automatic, water-saving cleaning

The Phoenix GT is the only ultrafiltration system in its class that measures the current degree of filter fouling, based on the flow rate and the pressure drop across the filters. This allows



the Phoenix GT to react automatically to fluctuations in water quality and adjust its rinsing cycles accordingly, so it rinses less frequently when the turbidity in the feed is lower, thus saving valuable drinking water.

Remote control and alarm transmission

Equipped with an optionally available GSM modem, the system can send SMS messages to up to ten mobile phones in the event of an operating error (e.g. a failed membrane test, unsuccessful cleaning, pressure surges). With the supplied PC software (operating system: Windows), the operator of the plant can call up all operating data and protocols on site via USB or conveniently via the Internet in connection with the GSM modem and thus control the plant remotely from his desk.

Several devices can be connected in parallel via the integrated CAN bus interface. In addition, the device can also be integrated into existing building management systems or a higher-level control system via the internal CAN bus.

Modular, expandable design

Thanks to the modular design of the Phoenix GT, which can also be expanded at a later date, the requirements of the local conditions can be adapted. The individual components of the Phoenix GT can be inserted through any standard door, and the unit can be connected either only from the left or only from the right, thus enabling installation in smaller elevated tanks and equipment rooms. The installation and commissioning of the Phoenix GT should be carried out by a trained service partner.

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Phoenix GT model series	1	2	3	4
Filter area	646 ft ² (60 m ²)	1,292 ft ² (120 m ²)	1,938 ft ² (180 m ²)	2,583 ft ² (240 m ²)
Peak flow	79 gpm (5 l/s)	159 gpm (10 l/s)	238 gpm (15 l/s)	317 gpm (20 l/s)
Continuous flow ¹	42 gpm (160 l/min)	85 gpm (320 l/min)	127 gpm (480 l/min)	169 gpm (640 l/min)
Height	6.23 ft (190 cm)	6.23 ft (190 cm)	6.23 ft (190 cm)	6.23 ft (190 cm)
Width	4.49 ft (137 cm)	5.34 ft (163 cm)	6.98 ft (213 cm)	8.62 ft (263 cm)
Depth	1.94 ft (59 cm)	1.94 ft (59 cm)	1.94 ft (59 cm)	1.94 ft (59 cm)
Weight (dry)	287 lb (130 kg)	463 lb (210 kg)	639 lb (290 kg)	816 lb (370 kg)

¹ Seccua always recommends a minimum 100 µm fine filter to protect the membrane. Depending on the local water quality, an automatically rinsable 1-5 µm pre-filter may be recommended. For free advice call +1 (503) 766 5551.

Connections and assembly	
Inflow	2" pipe coupling ²
Filtrate	2" pipe coupling
Rinsing water	2" pipe coupling
Installation	standing, no wall mounting necessary

² The pipe coupling is compatible with 2" Victaulic couplings. Couplings for connection to the pipe system are supplied. Transition piece from 2" pipe coupling to DN50 is supplied as an adhesive socket (PVC-U). For free advice call +1 (503) 766 5551.

Operating conditions	
Max. operating pressure	72 psi (5 bar)
Max. operating temperature	104 °F (40 °C)
Max. permissible differential pressure across the filter	36 psi (2,5 bar)

Retention	
Viruses	up to 99,99 %
Bacteria / parasites and other microorganisms	99,99999 %
Turbidity and particles	below visibility limit (<0,15 NTU)

The following interfaces are available:	
Inlet dosing, volume flow signal, error signal, BUS connection, turbidity measurement, error monitoring, mobile radio (optional), CAN BUS (optional) and a gateway can also be integrated into building management system	



Production data acquisition	
Data acquisition	event-controlled or according to adjustable time interval (up to every minute)
Stored data	Date, time, inlet pressure, filtrate pressure, turbidity, flow rate, water temperature, tank level, alarm messages and errors, result of the membrane test.
Data storage	approx. 4 months, with data acquisition every 15 minutes

Integrated membrane test	
Test method	Patented pressure retention test, according to requirements of US EPA Membrane Filtration Guidance Manual and DVGW Worksheet W 213-5
Resolution	adjustable (approx. 0.5- 3 µm), standard setting
Frequency	Triggered by turbidity fluctuation ³ and at daily set time

³ Triggered by turbidity fluctuation in the filtrate. Existing Phoenix systems can also be retrofitted. Requires an additional turbidity measurement (not part of the scope of delivery).

Contact:

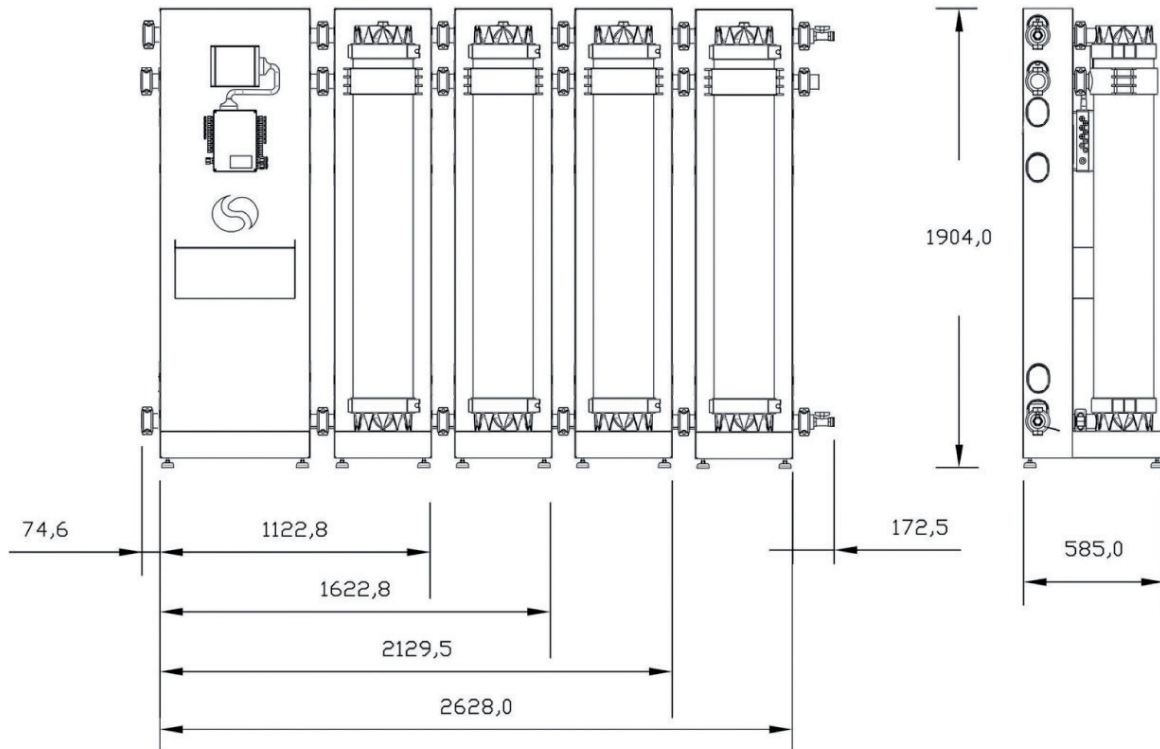
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Filtration and cleaning	
Filtration	100 % of the feed is filtered, no continuous flushing water consumption.
Cleaning	Cleaning is fully automatic within a set flushing cycle.
Replacement	Depending on the local water quality, the filter should be changed regularly, but no later than after 10 years (if the flow decreases prematurely, an earlier filter change may be necessary).

Approvals and standards	
Material	All materials used that come into contact with water comply with the material regulations for this area of application. material regulations for this area of application (NSF 61, FDA oder KTW).
Electronics	The unit is splash-proof (IP67) and can be installed in wet rooms. It complies with the required national standards and directives.

Power supply	
Power connection	230 V or 110 V, 1-phase 400 V or 200 V, 3-phase 16 A per phase
Power	Approx. 5 W during filtration, max. 100 W during integrity

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