Virex Pro

The new Virex® Pro.

Meet the toughest regulatory standards with Seccua's leading-edge Ultrafiltration: Certified pathogen-removal, integrated membrane testing, data-logging and web-based remote access.

Plus full control over all required peripherals to filter water from any source, from waste- to well-water.

Ultimate Removal Performance

The nano-pores of the Seccua Virex Pro provide removal characterisitcs, that meet and exceed regulatory requirements for membrane filtration used in drinking water treatment. The Virex Pro has proven to fully remove virus, cyst and bacteria, tested against US EPA and DVGW standards.

Integrated Membrane Testing

The Virex Pro provides a fully automated, integrated, state-of-the-art membrane integrity test. It detects membrane damages smaller than the size of bacteria and parasites. The Virex Pro complies to US EPA and German DVGW requirements for membrane integrity testing.

Removes Bacteria and Parasites

As the only standardized, light scale membrane filtration system, the Virex Pro meets the regulator's requirements for reliable long-term removal of bacteria and parasites. Every day the system tests itself, without requiring any operator's attention, for damages small enough to let bacteria and parasites pass, and alerts the user immediately should it detect a defect. Many Health Authorities in the US, Germany, Canada, Australia and other countries have selected the Virex Pro to be their system of choice when it comes to treating microbiologically contaminated raw water.

Wherever you are

Once the system is equipped with its unique GPRS interface, the Virex Pro offers access to its operating parameters and extensive logged history of operating-data from any computer connected to the internet.

Natural filtration - still most reliable

The Virex Pro has copied one of natures most effective processes when it comes to water purification: filtration. With its filter's pores being smaller than pathogens and turbidity-causing particles, the Virex Pro removes bacteria, parasites and turbidity in one single treatment step. With its state-of-the art technology, the Virex Pro offers water purification at lowest driving pressures and therewith lowest energy consumption.

Long filter-life

Being able to clean itself fully automatically, without requiring any operator-attention, the Virex Pro offers long filter-life and significantly lower operating costs than any other conventional filtration technology. If required, the Virex Pro can even run chemically enhanced cleaning sequences using different cleaning chemicals to clean the filters most efficiently.

Go Green!

Without any additional equipment required, the system can be connected to solar power supplying 12 VDC. Its ultimate low power consumption gives it a superior advantage over desinfection technologies like UV, using often more than 97% less energy than UV disinfection systems. Furthermore Seccua offers a unique recycling program for its filter elements, helping you to act more sustainable.

seccua®
Solutions for better living.

Performance Data

Membrane surface area	16 m^2 (172 ft^2)
Filtration Performance[1]	
Peak load, short term	up to 1.3 l/s (20.6 gpm)
Continuous load	up to 1,600 l/h (10,000 gpd)
Removal performance	
Virus (MS2 Phage)[2]	full removal (>4.7 log tested)
Bacteria (B. Subtilis, E-Coli)[2]	full removal (>4.9 log tested)
Parasites (Crypto)[2]	full removal (>4.7 log tested)
Water consumption during flushing	typically less than 2%

[1] Filtration performance depends on water quality and temperature. Please design carefully before designing a Virex Pro system and consult with Seccua Authorized System Partners for advise if required.

[2] Virus and Bacteria removal of the Ultrafiltration membrane was measured by US EPA against EPA Standards for Ultrafiltration systems used on surface water filtration on a new membrane.

Operating Conditions

Max. operating pressure	5 bar (75 psi)
Max. operating temperature	40 °C (104 °F)

Operating Modes

Filtration	Feed pressurized by gravity or pump (I/O or 4-20 mA), feed flocculation can be controlled
Cleaning method	Flushing and backwashing by interval-, time of day- or fouling.
	Automatic chemically enhanced cleaning possible
Maximum Δp inlet to filtrate	3.0 bar (45 psi)

Integrated Integrity Testing

Test method	Pressure Hold Test, Patent pending US 12/293,071 PCT/EP 2007/052477
Resolution	Adjustable (approx 0,5 - 3 µm) Standard settings: 1,6 µm
Frequency	Triggered by turbidity threshold or daily

[3] requires external turbidity-meter, not supplied.

Programming and remote access

The unit is programmed comfortably through a Windows (XP/7) software and can be accessed locally through CAN-Bus or USB connection or remotelly over the internet (GSM Modem optional).

Data Logging

Data Logging	Event-driven or by time-interval
Logged Data-Sets	Date, Time, feed- filtrate- pressure, turbidity, flow, Tank- buffer-level, alerts and failures
Data Memory	Approx. 40,000 data-sets

Power supply

Voltage[4]	12 V DC, 110 V AC, 230 V AC
Power consumption	
during filtration	approx. 5 W
during cleaning	max. 35 W (typically[5] hourly for 20 s.)

[4] Units are shipped with US and German power-cables. Other country-specific equipment and an adaptor to connect to 12 VDC is upon request.

[5] The cleaning frequency depends on the contamination of the raw water and may vary. The power requirement of the pumps is not included in the consumption data.

Control system interfaces

Output interfaces[6]

Feed-Pump	Power On/Off or 4-20 mA
Feed-Dosing-Pump	Power On/Off or 4-20 mA (flow)
Backwash Pumps	Power On/Off
Alert Monitoring	Cold Contact, CAN Bus or SMS (modem optional)
Flow measured by Virex Pro	4-20 mA
Operating mode status	CAN Bus

Input interfaces[6]

Turbidity meter	4-20 mA
Alert monitoring peripherals	12 V Potential
Feed-/Storage tank signal	4-20 mA

[6] Some of the listed functions require the optional Virex Pro Connectivity Kit.

Control interfaces[6]

Integrated CAN-BUS signal can be tanslated to Ethernet-IP Bus (e.g. Allen Bradley PLC), Serial- or Profi-BUS (e.g. Siemens S7 PLC) through an available Gateway-Module.

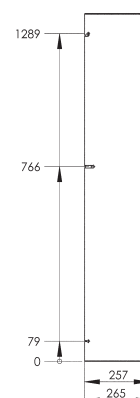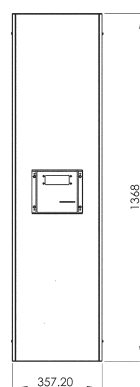|	
Controllable functions (slave)	All standard operating functions
Monitored Functions	Flow, Operating Mode, Pumps' & Peripherals' Modes, Alarms

Approvals and Compliance

NSF 61, DVGW KTW, DVGW Info 71, CE, VDE
Tested by US EPA to EPA Filtration Guidance Manual Standards (equals NSF ETV standards) for removal of Parasites, Bacteria and Virus to >4 log removal.
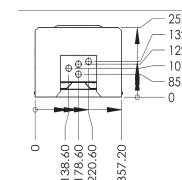
Weights and Dimensions

Width	358 mm (14 in.)
Depth	265 mm (10.5 in.)
Height	1,368 mm (54 in.)
Weight (dry)	35 kg (77 lb)

Bottom View incl. Connectors:

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