

# Protegra CS® Pro RO (EDI)

# Reverse osmosis system



#### **Benefits**

- High-purity deionised water is simple and safe with lonpure<sup>®</sup> CEDI cell Technology
- Service friendly design accessible from all sides
- User-friendly 7-inch touchscreen display
- Intelligent and rugged design
- Optional LED signal light for indication of system status
- Monitoring through BMS
   (Building management system)
   made possible with Modbus®
   interface
- Data transfer via USB, microSD for data recording and firmware updates

### **Consistently high water quality**

The Protegra CS® Pro RO series is a high-performance pure water system that is designed with components for round-the-clock operation (24/7/365) for up to 1200 litres of purified water per hour. Equipped with industry-leading reverse osmosis technology and optional integrated lonpure® CEDI cell, the system maintains water quality to the appropriate high standard. The system must be connected to a tank with level monitoring for production control, for which we offer a range of tank sizes. Optionally, an LED signal tower and an integrable Modbus TCP gateway can also be connected for communication, e.g. with a building control system.

#### Centralised distribution of deionised water

Our Protegra CS Pro systems help improve operations and reduce maintenance and operating costs by offering flexibility in distribution and storage sizing.

Configure the system to meet your requirements as a stand-alone or centralised distribution system supplying water to multiple points of use within a building. Membrane degassing to protect the lonpure CEDI cell is highly recommended and we are happy to offer this as part of the package.

## **Typical applications**

- Industry and general chemistry
- Pharma industry
- Laboratory washing machines
- Autoclaves and environmental chambers
- · Ultrapure water systems
- Hospital cart and utensil washers
- Buffer preparation
- Photometry
- Spectrophotometry
- Media preparation
- Cytological and histological work
- Electrophoreses



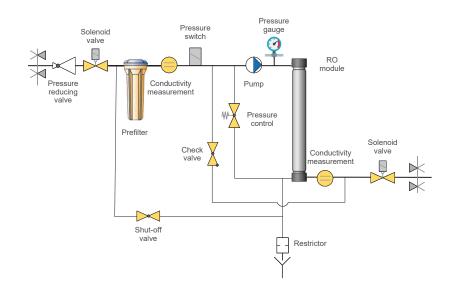
# **Specifications Protegra CS Pro RO**

		200	350	500	750	1000	1200
Pure water output	l/h	150 - 200	200 - 350	350 - 500	500 - 750	750 - 1000	1000 - 1200
Pure water quality	μS/cm	< 40	< 40	< 40	< 40	< 40	< 40
SiO <sub>2</sub>	mg/l	< 15	< 15	< 15	< 15	< 15	< 15
Yield max.	%	80	80	80	80	80	80
Power consumption	kW	0.6	0.6	1.4	2.5	2.5	2.5
Electrical connection				3~/N/PE AC 4	00 V 50/60 Hz		
Dimensions (H x W x D)	mm	1795 x 545 x 650		1795 x 6	65 x 650	1795 x 7	80 x 650
Operating pressure	bar	6 - 14	6 - 14	6 - 14	6 - 14	6 - 14	6 - 14
Part no.		W3T609823	W3T609824	W3T609825	W3T609826	W3T609827	W3T609828

Systems with higher flowrate on demand.

## **Feed water**

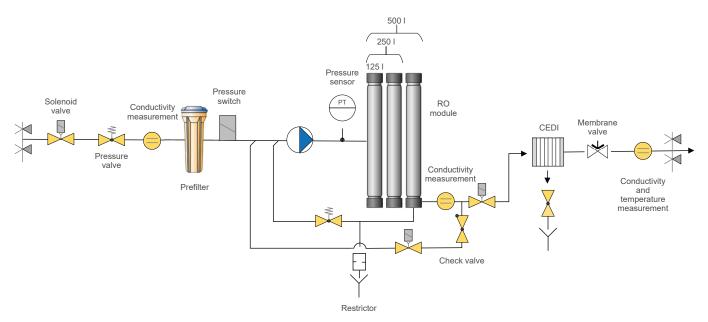
		200	350	500	750	1000	1200
Pressure	bar	2.0 - 6.0	2.0 - 6.0	2.0 - 6.0	2.0 - 6.0	2.0 - 6.0	2.0 - 6.0
Feed water flow rate max.	l/h	260 - 400	460 - 750	650 - 1000	1000 - 1500	1300 - 1900	1900 - 2000
Conductivity	μS/cm	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000
Free chlorine	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CO <sub>2</sub>	mg/l	< 20	< 20	< 20	< 20	< 20	< 20
TOC	ppb	< 1500	< 1500	< 1500	< 1500	< 1500	< 1500
SDI		< 3	< 3	< 3	< 3	< 3	< 3
Langelier index		< 0	< 0	< 0	< 0	< 0	< 0
SiO <sub>2</sub>	mg/l	< 15	< 15	< 15	< 15	< 15	< 15
Iron	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Manganese	mg/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
pH		3 - 9	3 - 9	3 - 9	3 - 9	3 - 9	3 - 9
Temperature	°C	5 - 35	5 - 35	5 - 35	5 - 35	5 - 35	5 - 35



## **Specifications Protegra CS Pro RO EDI**

		125	250	500	750	1000
Delivery flow rate	l/h	125	250	500	750	1000
Pure water quality	μS/cm	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Typical pure water quality	μS/cm	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Yield max.	%	75	75	75	75	75
Feed water						
Pressure	bar	2.5 - 6	2.5 - 6	2.5 - 6	2.5 - 6	2.5 - 6
Conductivity	μS/cm	< 1400	< 1400	< 1400	< 1400	< 1400
Silt density index (SDI)		< 3	< 3	< 3	< 3	< 3
Free chlorine	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Iron	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
SiO <sub>2</sub> *	mg/l	< 10	< 10	< 10	< 10	< 10
CO <sub>2</sub> *	mg/l	< 10	< 10	< 10	< 10	< 10
Temperature	°C	5 - 30	5 - 30	5 - 30	5 - 30	5 - 30
Hardness	ppm	< 1	< 1	< 1	< 1	< 1
Technical data						
Power consumption	kW	1.0	1.2	2.1	3.0	3.0
Power supply		3/N/PE 400 VAC 50/60 Hz				
Dimensions (H x W x D)	mm	1795 x 6	50 x 545	1795 x 6	50 x 665	1795 x 650 x 780
Mounting		Wheels	Wheels	Feet	Feet	Feet
Shipping weight	kg	165	180	265	275	295
Part no.		W3T553431	W3T553432	W3T553433	W3T553434	W3T587432

<sup>\*:</sup> in total not larger than 20 mg/l



\* 750 l: 4 RO modules, 1000 l: 2 x 3 RO modules

#### **Consumables**

Part number	Description
W2T526933	Activated carbon filter cartridge 10"1*
W2T526536	Activated carbon filter cartridge 20"2*
W2T526551	Fine filter cartridge 5 µm Big Blue 10"3*
W2T522516	RO module
W2T505074	Outlet filter
W3T603869	Hose set for Protegra from 500 l/h on

- \*: Only for Pro RO systems with 200 and 350 l/h; \*2: For Pro EDI systems with 125 and 250 l/h; \*3: Only for systems with 500 l/h and higher

#### **Accessories**

Part number	Description
W3T570885	Modbus TCP Gateway (LAB)*
W3T307039	LED signal light (red, yellow, green)
W3T262426	Degassing unit (120 - max. 5000 l/h)

#### **Test kits**

Part number	Description
W2T870161	Test kit Carbon dioxide
W2T870160	Test kit Silica

#### **Tanks**

Part number	Description
W3T199996	200 l, 550 x 1040 mm
W3T197508	300 l, 650 x 1080 mm
W3T198133	500 I, 770 x 1230 mm
W3T198836	750 I, 720 x 720 x 1700 mm
W3T198753	1000 I, 780 x 780 x 1940 mm
W3T199591	1650 l, 2085 x 720 x 1400 mm
W3T199890	2000 I, 2180 x 720 x 1700 mm
W3T199834	3000 l, 2230 x 850 x 2200 mm



Detail of signal light



Easy to operate touchscreen-display

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