

Medium Size RO Systems

Osorno started to build RO systems in cooperation with AquaCare GmbH more than 10 years ago. The main focus of this joint work was concentrated around the small size RO with electronic control that will act as central control for complete water treatment plant, and at the same time, will incorporate capabilities for remote monitoring of complete treatment process.

The target was made on the systems that will produce from 60 to 150 l/h and will use small size RO or nano membranes for ease of maintenance and service. With time this range was extended and currently it includes also RO systems built with slightly larger RO membranes, which allowed to increase production rate to 250 l/h.

Features

- ▶ All components are mounted on board, which can be attached to the wall or placed on a stand.
- ▶ All systems have Intelligent control, which firstly, allows easily to identify problems in the system, and secondly, prevents system from operation when damages to the electrical components may occur.



- ▶ All systems can be built with and without process visualisation screen.
- ▶ Visualisation screen is loaded with the SCADA software package that is based on the Process View Browser, a well-established Open Source process visualisation system.
- ▶ All systems have option of secure remote monitoring via Internet (Internet service is not included).

- ▶ Other devices that carry the Intelligent control (sensors and filters) feature can be added to the RO control system and will communicate with it via Ethernet.
- ▶ Compact design of WAGO automation and electronic components supports the efficient and space saving design of the control cabinet.
- ▶ The WAGO automation modules are exposed only to 24VDC control voltage, and are thus completely isolated from the high voltage of field equipment by an array of coupling relays, for increased operational reliability and safety.

Medium RO Systems Overview

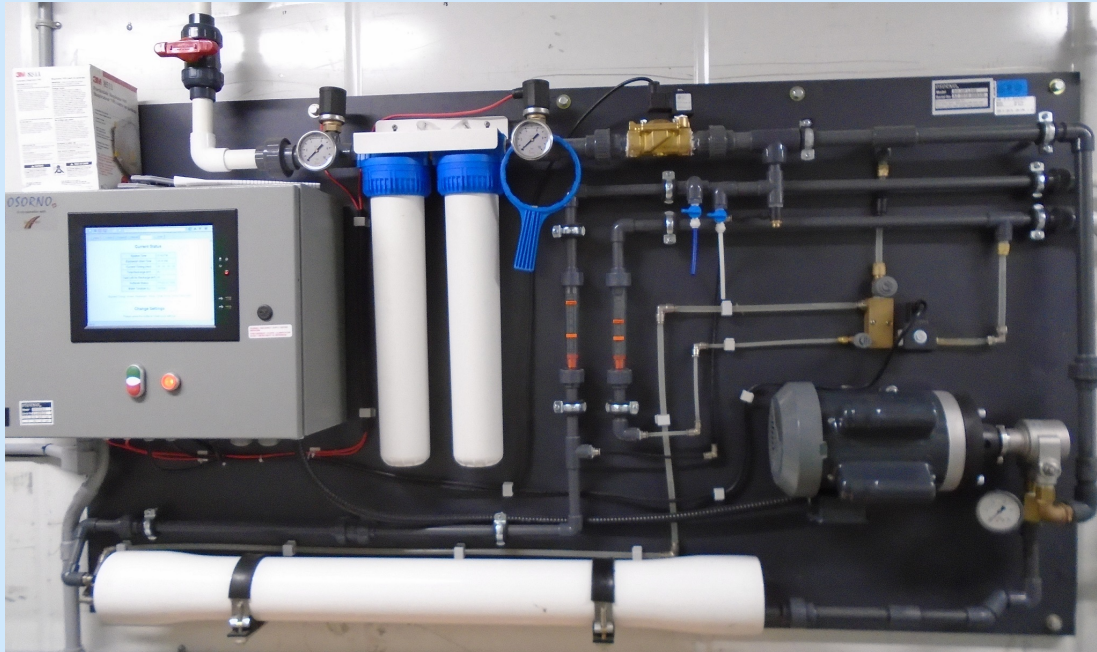
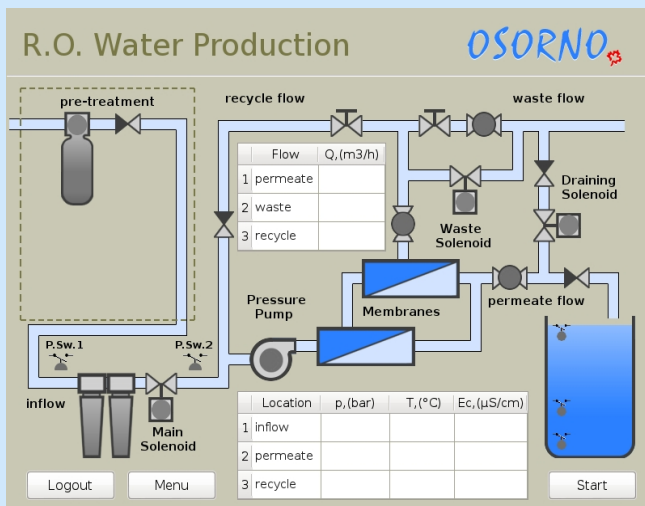


Photo of ML-1U system

	Flow	Prefiltration	RO Modules	Pressure	Power
SM-5U	up to 140 l/h	double or tripple set of housings	2012	feed 30 - 70 psi boost 120 - 150 psi	115 VAC, 0.5 kW
SM-2U	up to 150 l/h	double or tripple set of housings	2812	feed 30 - 70 psi boost 120 - 150 psi	115 VAC, 0.5 kW
ML-1U	up to 250 l/h	double or tripple set of housings	4040	feed 30 - 70 psi boost 150 - 190 psi	115 VAC, 0.7 kW

a. All data at 15°C, 500 ppm TDS, SDI < 3; b. Recovery and rejection depend on used feed water and unit configuration;
c. Rejection depends on recovery resp. ratio concentrate to permeate



RO system SCADA screen

Customer Benefits

- ▶ Hands free electronic control.
- ▶ Availability of remote monitoring via Internet.
- ▶ If system is ordered with SCADA screed, and it is connected to the Internet, the system can send alarms via e-mail or SMS.
- ▶ Easy to maintain.
- ▶ Inexpensive non-proprietary consumables and spare parts.



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