

## Specification

### Reverse osmosis system **WL-ROC** for adiabatic and isothermal humidifiers

Ready-to-operate, pre-assembled reverse osmosis unit especially for the production of permeate for use in air humidification systems in the performance classes from 25 l/h to 140 l/h. Ideal for supplying humidification systems that need to be supplied with demineralised water. An integrated rotary vane pump ensures the optimum water pressure in the system. This makes the reverse osmosis system the ideal solution if the water line pressure is between 2 and 5 bar or if there are pressure fluctuations.

The system is composed of:

- Prefilter 5 µm (only WL-ROC-140)
- Active carbon filter 10 µm for dechlorination and additional protection of the membrane
- Microprocessor control with LCD display for fully automatic operation and function monitoring with 2 operating levels for service and operation
- Alarm message as potential-free contact
- Adjustable high-pressure pump to generate the necessary osmotic pressure
- Compact TFC (Thin-Film-Composite) reverse osmosis membrane
- Permeate conductivity monitoring
- Optionally available blending kit for increasing the water conductivity for electrode steam humidifiers
- Optionally 18l or 40l pressure expansion tank incl. wall mounting plate according to the requirements (Connection to larger pressure expansion tanks possible)
- Optionally available UV-disinfection
- Optionally available leakage sensor for point or measuring strip measurement

All device components are compactly installed on a stainless steel mounting plate for wall mounting. Easy to mount with all commercially available mounting rail systems, manufacturer-specific systems are not required. The piping is done via plug-in connections as well as prepared installation kits, which reduces the on-site installation effort to a minimum. The pressure expansion tank can be mounted near the humidifier with its practical and easily installed wall bracket. This provides an even water pressure for the humidifier without an additional pressure booster pump. With adiabatic humidifiers, the optionally available UV disinfection between the RO system and the humidifier is mandatory.

Requirements for on-site water and sewage installations:

As piping material after reverse osmosis, corrosion-resistant material must be used in the permeate area (e.g. plastic or stainless steel). A suitable duct connection must be available to discharge the concentrate. The quality of the feed water must comply with the limit values of the German Drinking Water Ordinance §3/2001. The limit values can be found in our technical documentation.

## Technical data

Water treatment WL-ROC	WL-ROC-25	WL-ROC-40	WL-ROC-80	WL-ROC-140
Permeate capacity [ $\pm 10\%$ ] [l/h at 15°C]	25	40	80	140
Water consumption during operation [l/h]	50	80	160	280
Permeate yield [%]	50	50	50	50
Number of membranes	1 x 12"	2 x 12"	2 x 12"	1 x 21"
Membrane pressure max. [bar]	10			
Water hardness max. [°e (ppm)]	25 °e (357ppm) without pretreatment (otherwise: softening system)			can only be operated with an upstream softening plant or antiscalant dosing device
Salt content max. (TDS) [ppm]	700			
Water feed conductivity max. [ $\mu$ S/cm]	1000			
Inlet water temperature [°C]	5 - 25			
Inlet water pressure [bar]	2 - 5			
Water pressure permeate max.[bar]	4			
Electrical power supply [kW]	0.3	0.3	0.3	0.6
Rated power [V/Hz]	230V / 1Ph / N / 50Hz			
Feed water inlet	3/4" AG			
Permeate pipe connection	John Guest Ø 10mm			
Water outlet	John Guest Ø 8 mm			JG Ø 12 mm
Width x Height x Depth [mm]	420 x 580 x 235			770 x 700 x 220
Operating weight [kg]	19	21	21	41
Antiscalant dosing pump	no			optional *
Conductivity measurement	1 x permeate monitoring with alarm function included			
Blending kit for electrode humidifier	optionally available			
Collective fault potential free output	yes	yes	yes	yes

\* Operation with antiscalant dosing pump possible.