



Picture similar

BW Series: 250 - 1250 l/h Brackish water RO systems

Stand-type unit for desalination of softened brackish water (TDS < 5000 mg/l, free chlorine not detectable), operating on the principle of reverse osmosis.

With RO 1000 microprocessor control system.

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Brackish water RO systems

Unit design

Stainless steel main frame.

Special inlet filter with 5 µm-filter cartridge, stainless steel **high pressure pump** low noise, multi-stage centrifugal type, **low energy spirally wound modules** with energy-efficient PA/PS composite membranes in GRP vessels with inliner.

Valves such as sampling valves for feed water and permeate (for each pressure vessel), inlet solenoid valve, valves made of stainless steel to regulate the flow rate of permeate, concentrate and concentrate recirculation.

Pressure gauges for inlet and outlet pressure pre-filter, pump pressure, operating pressure and concentrate pressure, pressure switch for monitoring the feed water pressure.

Flow meters for permeate and concentrate flow rate.

Permeate **conductivity measurement**, temperature compensated, measuring range 2-200 µS/cm.

Control cabinet with lockable main switch, electrical switchgear with soft-starter for control of the high-pressure pump.

Unit is completely wired, pre-assembled and ready for installation. Electrical equipment in accordance with VDE 0100 part 600, VDE part 1.

RO 1000 microprocessor control system for fully automated monitoring and control of the reverse osmosis unit with **two-line LCD** (16 characters per line) and process-visualisation of

Operating data: permeate conductivity (temperature-corrected), permeate temperature, operating hours,

Malfunction signals: low pressure, hard water, motor overload, high conductivity prealarm, high conductivity fault, status signals: permeate discard, permeate recycling, concentrate displacement, concentrate rinse, intermittent rinse during shut-down, shut-down by external signal (forced stop, regeneration), LEDs for operation, malfunction, regeneration, discard, disinfection and full tank.

Inputs (low voltage) for level control with 1 or 2 float switches, hardness monitoring unit (the RO 1000 control system includes control functions for the limitron hardness monitoring unit), shut-downs by external signal (forced stop, regeneration), 2 universal inputs,

Outputs for softening unit (230V/50Hz), 2 solenoid valves for concentrate rinse, permeate discard and recirculation, universal output, analogue output conductivity permeate (4-20 mA) and DDC (collective malfunction signal on floating changeover contact).

The units are designed for a maximum TDS of 5,000 mg/l, a water temperature of 15°C, a maximum colloidal index of 3 and free permeate outlet. Under these conditions, the units still reach design permeate flow after three years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

Permeate flushing unit as an option available.

| Technical Data | | UO 250 BW | UO 500 BW | UO 750 BW | UO 1000 BW | UO 1250 BW |
|---------------------------------|--------|------------|------------|------------|------------|------------|
| Permeate flow rate | l/h | 250 | 500 | 750 | 1,000 | 1,250 |
| Min. salt rejection | % | 97 | 97 | 97 | 97 | 97 |
| Recovery | % | 50 | 50 | 50 | 50 | 50 |
| Operating pressure | bar | 15 | 15 | 15 | 15 | 15 |
| Membrane element/number | | 4040/1 | 4040/2 | 4040/3 | 4040/4 | 4040/5 |
| Voltage | V/Hz | 3 x 400/50 | 3 x 400/50 | 3 x 400/50 | 3 x 400/50 | 3 x 400/50 |
| Motor power | kW | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Pre-fusing | A | 16 | 16 | 16 | 16 | 16 |
| Feedwater connection | DN | 20 | 20 | 20 | 20 | 20 |
| Permeate/concentrate connection | DN | 20 | 20 | 20 | 20 | 20 |
| Conductivity range | µS/cm | 20 – 2,000 | 20 – 2,000 | 20 – 2,000 | 20 – 2000 | 20 – 2000 |
| Min./max. feedwater pressure | bar | 2/6 | 2/6 | 2/6 | 2/6 | 2/6 |
| Min./max. feedwater temperature | °C | 5/35 | 5/35 | 5/35 | 5/35 | 5/35 |
| Max. ambient temperature | °C | 40 | 40 | 40 | 40 | 40 |
| pH | | 3 – 11 | 3 – 11 | 3 – 11 | 3 – 11 | 3 – 11 |
| Height | mm | 1,650 | 1,650 | 1,650 | 1,650 | 1,650 |
| Width | mm | 660 | 660 | 660 | 660 | 660 |
| Depth | mm | 690 | 690 | 690 | 690 | 690 |
| Weight approx | ca. kg | 115 | 135 | 155 | 175 | 195 |
| Code no. | | 384 500 | 384 510 | 384 520 | 384 530 | 384 540 |