Picture similar

BW and BW/FU Series: 8500 - 13500 l/h
Brackish water RO systems

Low energy consumption with frequency controlled pump (BW/FU): savings potential up to 30%

Brackish water RO system for desalination of hardness stabilized drinking water (by antiscalant dosing) with a salt content of up to 5000 mg/l. With RO 1000 microprocessor control system.

BW- and BW/FU-systems already contain:

- Control for metering pump Dosin AS-K
- Concentrate flushing device KSE
- Preparation for injection point
- Connection Set for manual cleaning unit, ARA

Advantages BW/FU systems:

Optimized energy and operation cost by adapted pump capacity and full use of net pressure

- Short payback period
- Reduced maintenance, particularly quiet
- Future-proof by efficiency class IE 3

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Unit design

Stainless steel main frame for housing the instruments and controls.

Special inlet filter with 5 µm-filter cartridge, stainless steel **high pressure pump** low noise (incl. frequency converter for BW/FU systems), 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 diaphragm 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, concentrate and concentrate recirculation flow rate.

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

Connection set for cleaning device, T-piece for injection point, concentrate flushing device.

Control cabinet with lockable main switch, electrical switchgear for control of the high-pressure pump and antiscalant dosing unit.

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 BW and BW/FU		**UO 8500 BW**	**UO 10000 BW**	**UO 11500 BW**	**UO 13500 BW**
Permeate flow rate	l/h	8,500	10,000	11,500	13,500
Min. salt rejection	%	97	97	97	97
Recovery	%	50	50	50	50
Operating pressure	bar	15	15	15	15
Membrane element/number		8040/8	8040/9	8040/11	8040/12
Voltage	V/Hz	3 x 400/50	3 x 400/50	3 x 400/50	3 x 400/50
Motor power	kW	11	11	15	18.5
Pre-fusing	A	25	25	32	40
Feedwater connection	DN	50	65	65	65
Permeate/concentrate connection	DN	40/40	50/50	50/50	65/65
Connection dosing point	R	½"	½"	½"	½"
Conductivity range	µS/cm	20 – 2,000	20 – 2,000	20 – 2,000	20 – 2,000
Height	mm	1,900	1,900	1,900	1,900
Width	mm	4,900	3,900	4,900	4,900
Depth	mm	750	800	800	800
Weight approx	kg	860	950	1,050	1,150
Code no. BW Series		384 630	384 640	384 650	384 660
Code no. BW/FU Series		384 637	384 647	384 657	384 667
All installation sizes: Min./max. feed water pressure 2 / 6 bar, Min./max. feed water temperature 5 / 35 °C, Max. ambient temperature 40 °C, pH 3 - 11					