

## Reverse Osmose

Serie UO-D 120 - 500



### Reverse Osmosis Units Series UO-D 120 - 500

For desalination of softened drinking water according to German drinking water regulations (free chlorine not detectable).

With controller RO digital.

Compact unit suitable for wall mounting or fixation on the floor.



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## Serie UO-D 120 - 500

**Panel** made of powder coated steel.

**Special inlet filter** with 5 µm-filter cartridge with tow pressure gauges filled with glycerine.

**high pressure pump** rotary-vane type, low noise, multi-stage centrifugal type,

**High performance wound module(s)** with PA/PS composite membranes in stainless steel pressure vessels

**Valves** such as sampling valves for feed water and permeate, inlet solenoid valve, valves to regulate the flow rate of permeate and concentrate

**Pressure sensors** for pump feed pressure and operating pressure.

**Flow indicator in the display** for permeate and concentrate.

**Conductivity measurement of** permeate with temperature compensation.

**Screw connection** for manual cleaning unit.

**Control cabinet** (3 meters) with 16 A – 6 h CEE three-pole plug

Unit is completely wired, pre-assembled and ready for installation. Electrical equipment in accordance with VDE 0100 part 600, VDE 0113 part 1.

*The unit is designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a maximum colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after three years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.*



**Microprocessor control RO digital** for fully automatic monitoring and control of Reverse Osmosis Unit. **Process visualization with central display of operational status and data (analogue and digital values )** and hours of operation on 4-line, backlit LCD text display. Simple menu-driven operation of the controller with 6 buttons.

**Automatic logging of relevant operating data** (analogue and digital data, 1960 data sets), storage interval programmable.

**Highest operational safety** due to adjustable alarms and limits of the operating parameters with selectable system response.

**Operating conditions:** permeate production, permeate rejection / recirculation, concentrate displacement / flushing, intermittent flushing when system is idle, shutdown by an external signal.

**Analogue inputs:** permeate conductivity (temperature compensated) permeate temperature, feed water, operating and concentrate pressure, flow rates of permeate and concentrate, calculated feed water flow, 2 additional programmable analogue inputs (e.g. for pressure, flow, level measurement).

**Digital Inputs:** RO-unit start, RO-unit stop, hard water / motor protection, external stop, 3 universal inputs (free configurable)

**Analogue outputs:** 2 universal outputs 4-20mA, e.g. for DDC.

**Digital outputs:** high-pressure pump, valve outputs 3x (24 VDC) for example for feed water, concentrate flushing, permeate rejection or recirculation, collective fault indication as a floating changeover contact, universal output.

**LED indicators** for power and fault, fault alarms as plain text in the display.

Technical Data		UO-D 120	UO-D 300	UO-D 500
Permeate flow rate	l/h	120	300	500
Min. salt rejection	%	97	97	97
Recovery	%	75-80	75-80	75-80
Design pressure	bar	12	12	12
Membrane element / number		4021/1	4040/1	4040/2
Voltage	V/Hz	230/50	230/50	230/50
Motor power	kW	0,55	0,55	0,55
Height	mm	1300	1300	1300
Width	mm	420	420	420
Depth	mm	350	350	350
Weight approx	Ca. kg	45	55	70

*Pre-fusing 16 A, Feed water connection DN 20, Permeate / concentrate connection DN 10, Conductivity range 1-999 µS/cm, Feed water pressure min./max. 2/6 bar, Feed water temperature min./max. 5 / 35 °C, Ambient temperature max. 40°C, pH-value 3 – 11*

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