

Reverse osmosis LW UO- GD 600 ZK



Similar to illustration

Reverse osmosis system for desalinating softened drinking water in accordance with the German Drinking Water Ordinance.

Back pressure system designed for **permeate extraction under pressure up to 7 bar**.

System in **hygienic design** to prevent contamination.

For direct supply, without intermediate permeate storage, to consumers such as humidifiers, with water in accordance with **VDI 6022**.

Reverse osmosis LW UO- GD 600 ZK

System design:

Stainless steel base frame with plastic front panel.

Special pre-filter with 5 µm filter cartridge, **low-maintenance valve block** with hard nickel plating, **High-pressure pump** as a low-noise, multi-stage centrifugal pump, **Ultra-low-pressure high-performance winding modules** with energy-saving PA/PS composite membranes in GRP pressure pipes.

Fittings such as sampling valves for feed water and UO permeate, inlet solenoid valve, valves for adjusting the flow rates of permeate and concentrate.

Pressure sensors for inlet pressure, operating pressure and concentrate pressure.

Flow sensors for permeate and concentrate. **Conductivity measurement** of permeate with temperature compensation. **Valves** for internal permeate recirculation or permeate discharge. **Fully flow-through membrane pressure vessel for permeate.**

Connection fittings for manual cleaning systems.

Control cabinet with lockable main switch and power unit for controlling the high-pressure pump. **Limitron hardness control device** (source resin sensor)

RO digital microprocessor control for fully automatic, central monitoring and control of the reverse osmosis system with **automatic logging of relevant operating data** (analogue and digital inputs and outputs), programmable storage interval. **Maximum operational reliability** thanks to adjustable operating parameter limits.

User-friendly four-line illuminated LCD plain text display (20 characters each) for process visualisation and display of operating status and relevant measured values. **Simple menu-guided operation of the control system with 6 buttons.**

Password-protected programming of operating sequences and operating parameters. Key product

features and advantages:

- Central display of operating status/operating parameters
- Circular storage of 1,960 data records with selectable storage interval
- Maximum operational reliability thanks to adjustable limit values with fault indicators for conductivity, temperature, flow rates and pressures
- Option of control to constant permeate quantity PKR (version with frequency converter FU)
- Water meter for integrated water volumes (feed water, permeate, concentrate)
- Calculation of permeate yield
- Quality-controlled permeate recirculation/rejection at system start-up
- Flushing programme for concentrate displacement/flushing during system shutdown
- Interval flushing to prevent contamination during system shutdown
- Adjustable forced flushing, e.g. during antiscalant operation
- Manual flushing mode
- Logging mode for recording system data, e.g. during maintenance
- Diagnostic mode for easy fault analysis
- Automatic start delay after pressure failure shutdown to protect the system
- System shutdown in case of hard water / motor protection
- Operating hours counter
- LED indicators for operation and malfunction

Connection options:

Digital inputs:

Inputs for connecting potential-free switching contacts for

- UO system start
- UO system stop
- Motor protection / Hard water
- External stop
- 3x universal inputs (configurable)

Analogue inputs:

- Permeate conductivity 1-999 $\mu\text{S}/\text{cm}$
- Permeate temperature
- Pump inlet pressure
- Operating pressure
- Permeate flow rate
- 4 configurable analogue inputs, e.g. for:
Flows: feed water, concentrate, concentrate return
or pressures: pre-filter inlet, pump pressure, concentrate pressure, permeate pressure or permeate tank level measurement.

Digital outputs:

- One potential-loaded pump output 230 VAC, 2-phase N and L connected, 5A fuse
- three potential-carrying valve outputs 24 V DC, max. 0.5 A for feed water valve, permeate valve, concentrate flush valve
- Two potential-free relay outputs, changeover contacts, max. contact rating 230 V AC/4 A
- 24 VDC/1A for collective fault signal Universal output (configurable)

Analogue outputs:

- 2 configurable analogue outputs 4-20 mA, max. load 500 ohms

Technical data

Permeate capacity	
• at 4 bar back pressure	600 l/h
• at 7 bar back pressure	400 l/h
Desalination rate approx.	97
Yield approx.	75-80
Operating pressure	13-15 bar
Permeate back pressure max.	7 bar
Membrane element / number	4040 / 2
Electrical connection	3 x 400 V/50 Hz
Connected load	1.5 kW
Backup fuse	20 A
Feed water connection	DN 20
Permeate/concentrate connections	DN 15/15
LF measuring range	1-999 $\mu\text{S}/\text{cm}$
Feed water pressure min./max.	2/4 bar
Feed water temperature min./max.	5/35 °C
Ambient temperature max.	40 °C
pH value	6.5-9.5
Height	1,630 mm
Width	710 mm
Depth	790 mm
Weight	approx. 140 kg

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