stakpure Pure water system RO 170 ED ultra

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This compact system is widely applied for the reliable and economical production of the pure water that is required by laboratories and laboratory complexes, central sterilisation in clinics and the pharmaceutical and other industries. Two proven techniques are combined to produce a pure water quality that fulfils current standards, such as ASTM II, CLSI and DIN EN 285. Reverse osmosis is the first step. It produces a demineralised permeate that is passed to the second step, electrodeionization, a process that is continually subject to self-regeneration and removes remaining salts. A downstream polisher cartridge ensures the maintenance of pure water quality. The cabinet holds both of these purification steps, a pretreatment unit and also the digital microprocessor control that controls and displays all operating and performance parameters. It has a clear-visibility door and not only keeps the system dust-free but also reduces noise to a low level.

Scope of delivery and technical data

Electronic control cabinet for holding RO 170 ED

Low noise, dust-free and lockable

Pretreatment unit consisting of two 10“ filter cartridges
for protection against free chlorine and particles

Reverse osmosis unit
for initial desalting and removal of organic and inorganic impurities

Continuously self-regenerating **electrode ionization module**
for removal of remaining salts,

Polisher cartridge for TOC reduction and maintenance of pure water quality

Digital microprocessor control
for controlling and calling of all operating and performance parameters

Reverse Osmosis unit

- √ Safety pressure switch for shutdown with low supply water pressure
- √ High pressure pump for producing working pressure
- √ Reverse osmosis membranes including pressure tube and all necessary fittings
- √ Operating pressure gauge for system monitoring and error diagnostics
- √ 2 x solenoid valves for water inspection and quality inspection
- √ 2 x regulating valves for setting the working pressure and the WCF rate
- √ Measuring cells for the determination of the raw and pure water conductance value
- √ Complete piping made of materials PA, PP, POM and stainless steel

Polisher cartridge

Stainless steel cartridge

Carrying handles made of hard rubber and lance system

Filling of high quality mixed bed resin – type: “nuclear grade”

Typ:	DS 2800 NC
Material:	AISI 316
Pressure resistant up to max.:	10 bar
Pure water quality:	0,067-0,1 µS/cm
Water temperature max.:	30°C
Dimension x high:	240 Ø x 570 mm
Connection:	R ¾” AG
Weight:	24 kg

Digital microprocessor control unit

This universally usable unit is designed for the automatic control and monitoring of reverse osmosis systems. It is equipped with one, or optionally two, conductivity meters with temperature compensation. It is integrated in a separate electronic control cabinet for wall mounting. The following functions / operating modes are carried out and displayed:

- √ Stand-by
- √ Production
- √ Rinse following production
- √ Interval rinsing
- √ Maintenance

*Here without control cabinet

Adaption options by programmed

Configuration that can be deposited in a storage.

Features

Menu-driven programming in a two-line display

- √ Choice of language: English, French, Spanish, Italian or Dutch
- √ Matching to application-specific requirements via programmable options
- √ Symbols on the control keys make for simple handling and controlling
- √ Universally usable, even for large reverse osmosis plants
- √ Production can be controlled manually or via the level switch
- √ Maintenance interval display programmable via a code
- √ Service number can be shown in the display
- √ The Info-key calls the status display for the following conditions:
  Current status of inputs and outputs, service telephone number,
  software version, programming status, type of fault message,
  interval rinse with actual time interval, manual rinse time status,
  conductivity measuring probe, cell constants
- √ Display of the actual raw water and permeate conductivities with indication of the desalting rate in the large green LED display
- √ Inputs for:
  Production stop, storage container full/empty, overpressure, lack of raw water,
  protective motor switch, alarm reset, temperature probe (optional),concentrate monitoring
- √ Integrated conductivity meter with measuring range switching
- √ Cell constants adjustable for conductivity measurements in the 0.1- 100000µS/cm range
- √ Cell constants are programmable in the 0.01-10.00cm range
- √ Manual and automatic temperature compensation

- √ Extension of conductivity measurement via the dual-function display
- √ Optional thermal circuit breaker for the pressure pump and fault message
- √ Outputs for:

  Pressure pump (protection), inlet solenoid valve, rinsing valve, permeate valve, fault message contact
- √ Not prone to damage on a power failure as all programme functions are stored without a storage battery.
- √ Large microprocessor storage capacity with a “Watchdog” to counter “Operation Code” and frequency monitoring
- √ The control unit construction, with galvanic separation between the microprocessor and inlet and outlet circuits (plus the installation of an extra filter), conforms to the EMC standard
- √ The control unit can be supplied as wall unit or inserted in a cabinet
- √ Available input/output voltages (input/output) 24/24V 115/115V 230/230V

Technical data

Pure water system for connection to softened (0°dH) tap water that complies with the German drinking water regulations.

Blocking index	max. 3
Salt content	max. 2,000 mg/l
Free chlorine concentration	< 0.01 mg/l
Manganese content	< 0.05 mg/l
Iron content	< 0.05 mg/l
CO_2-content	max. 15 mg/l
SiO_2-content	max. 0.4 mg/l
pH-Range	4 to 11

Pure water system for the production of water with the following specifications:

Performance (at 10°C)	170 l/h
RO Membrane retention quota	> 99 % of salts, microorganisms and bacteria
Remaining conductivity *	15 – 10* MΩx cm
Typical residual conductivity*	0,067-0,1 µS/cm
TOC- value*	< 10 ppb
Silicate and microorganism reduction ED*	> 99 %
WCF-Rate of the entire system	up to 75%

*depends on the tap water quality and the CO_2 content of the feedwater

Connection values

Ambient temperature	5 to 40°C
Feedwater temperature	5 to 35°C
Raw water pressure RO	2 to 6 bar
Operating pressure RO	max. 14 bar
Operating pressure ED	1 to 4 bar
Pure water back-pressure	max. 0 to1 bar
Supply voltage	230 Volt / 50 Hz
Connected load	0.9 kW
Inlet connector	DN 20
Outlet connector	DN 20
Saline connector	DN 10
Width x depth x height	615 x 620 x 1600 mm
Approximate weight	160 kg

Article number:

17500170	Pure water system RO170 ED ultra