

## Pure water system RO alpha

The „all-in-one“ pure water system RO alpha fulfils highest industry standards for a reliable supply of pure water and maximum operational safety. Everything in one space-saving cabinet. Available up to 300 l/h.

The ready-for-connection pure water system RO alpha has been developed to economically produce high quality pure water and pump it, as required, to complete laboratory storeys and doctor's offices, where space is scarce. Pre-treatment, softening and reverse osmosis purification steps, a pure water tank and a booster pump are compactly combined and mounted in a noise-reducing cabinet. The digital controller displays and controls all operating and performance parameters. The pure water that Ready systems produce complies with appropriate standards such as ASTM and DIN EN 285 & 15883.



\* The picture might show optional accessories

## Scope of delivery

- ✓ Electronic control cabinet (IP 55): For all system components with a transparent door
- ✓ Pre-treatment unit: Activated carbon with 5µm prefilter against free chlorine and particles in the feed water
- ✓ Reverse osmosis unit: Retains salts and organic and inorganic impurities
- ✓ Digital microprocessor control: Displays and controls all operation and performance parameters (optional touch screen)
- ✓ **Optional** softener: Against hardness in the feed water
- ✓ **Optional** pure water tank: Complete with water level control
- ✓ **Optional** pressure booster system: With constant pressure control for low noise pumping of pure water to the end-users
- ✓ **Optional** EDI module: As a final polisher to achieve highly purified water

## Reverse osmosis unit

- ✓ Safety pressure switch for switch-off when the feed water pressure is too low
- ✓ High pressure pump for generation of the operating pressure with dry-run protection
- ✓ Reverse osmosis membranes with pressure tube and all necessary fittings
- ✓ Operating and feed water pressure gauge for system monitoring and fault diagnosis
- ✓ Flow meters for monitoring and adjusting the permeate and concentrate flow
- ✓ Solenoid valves for raw water and quality rinse
- ✓ Regulating valves for setting the operating pressure and the WCF rate (proportional production rate)
- ✓ Concentrate recycling for minimum wastewater
- ✓ Measuring cell for determination of pure water conductivity
- ✓ Complete piping made of PA, PP and stainless-steel

## Optional components - Water softener

This volume-controlled unit fully automatically softens drinking water free of iron and manganese as required by drinking water regulations. It consists of a 5-step central control valve of Type FLECK 5600 SXT with a NORYL microprocessor, blending valve, water meter, a pressure tank made of corrosion-resistant GFRP and highest quality cation exchanger in an integrated cabinet-type tank with float valve.

Type	WEA 32 SXT
Capacity	32 m <sup>3</sup> x0 dH* (1 dH° = 1.25°)
Nominal flow rate	0.32 m <sup>3</sup> /h
Resin volume	8 litres
Salt stock	25 kg
Spent salt	1.92 kg per regeneration
Water consumption	0.08 m <sup>3</sup> per regeneration
Operating pressure	2 to 6 bar
Water temperature maximum	30°C
Ambient temperature maximum	5 to 40°C
Mains connection	220 V / 50 Hz
Width x depth x height	310 x 430 x 660 mm
Connector	R 1"



## Optional components – Pure water tank

Storage tank for the storage of pure water fed in from the reverse osmosis. Made of black PE. Closed, square and opaque construction, with a 200 mm inspection opening for cleaning. The tank is supplied completely piped and with a level control for fully automatic stock holding. Optional accessories such as UV lamp, sterile overflow and sterile vent filter are available on request.

Nominal volume	160 Liter
Material	PE black
Connections	R 1"
Dimensions	W 705 x D 535 x H 550



## Optional components – Booster pump

Fully integrated, self-priming, compact booster pump with extremely low-noise permanent magnet motor and water cooling. The integrated speed control enabling the keeping of the perfect pressure at the end users, meaning that the pump performance will increase with increasing demand.

Pumped liquid	Pure water
Rated flow	3 m <sup>3</sup> /h
Rated head	27 m
Leistungsaufnahme	550 W
Elektrischer Anschluss	200-240 V / 50/60 Hz
Anschluss Ausgang	R 1"



## Optional components – EDI module

Low-energy, integrated EDI module for the final demineralization. Reliable high-purity water supply without regeneration or other interruptions. No chemicals needed. Lowest operating costs combined with high, constant quality.

Pure water quality	< 0.2 µS/cm typ. 0.055-0.1 µS/cm
Recovery rate	90-95 %



## Optional components – Touch display

- ✓ Choice of languages (English, French, German)
- ✓ Graphic TFT display (800×480, touch panel) with easy to use menu
- ✓ Security of program information against supply failure
- ✓ Up to 6 Recorder outputs 0(4)-20mA for recording measurements
- ✓ Possible Relay card with 4 powered outputs and 3 potential free outputs
- ✓ Possible RS232 and RS485 communication for log data
- ✓ Possible Ethernet communication for web server, e-mail function and remote control

## Feed water requirements

Feed water quality	Potable drinking water acc. to DIN 2000
Conductivity at 25°C	< 2000µS/cm
Chlorine	< 0.01 mg/l
Iron and manganese	each < 0.05 mg/l
CO <sub>2</sub>	max. 15 mg/l
SiO <sub>2</sub>	max. 10 mg/l
pH value	4 to 11

## Pure water specifications

Performance at 10°C	60, 120, 180 or 300 l/h
Retention rate	> 99 % ions, germs and bacteria
Pure water quality (with EDI module)	< 0.2 µS/cm typ. 0.055-0.1 µS/cm
Proportional production rate	up to 75 % (adjustable)

## Technical data

Ambient and water temperature	+2 to 35°C
Raw water pressure	2 – 6 bar
Operating pressure RO	max. 14 bar
Connected load	1 kW
Supply voltage	230 Volt / 50 Hz
Connections	R ¾"
Dimensions	W 800 x D 600 x H 1800 mm
Weight	approx. 200 kg

## Ordering information

<b>Systems</b>	<b>Description</b>
<b>Catalogue number</b>	
10000320	Pure water system RO 60 alpha
10000317	Pure water system RO 120 alpha
10000321	Pure water system RO 180 alpha
10000322	Pure water system RO 300 alpha
<b>Options (integrated in the cabinet)</b>	
<b>Catalogue number</b>	<b>Description</b>
10000326	Option - Softener WEA 32 (up to RO 120 alpha)
10000327	Option - Softener WEA 60 (up to RO 300 alpha)
10000328	Option - Storage tank 160l
10000336	Option - Sterile overflow
10000337	Option - Sterile vent filter
10000329	Option - Pressure pump 3m <sup>3</sup> /h
10000330	Option - 10" filter housing for sterile or particle filter
10000331	Option - EDI Modul S (RO 60 alpha)
10000332	Option - EDI Modul M (RO 120 - 180 alpha)
10000333	Option - EDI Modul L (RO 300 alpha)
10000338	Option - Graphic TFT display for RO alpha

\*more accessories available on request