Pure water system RO alpha 60 – 400 (incl. EDI module)

The „all-in-one“ pure water system RO alpha + EDI fulfils highest industry standards for a reliable supply of pure water (Type 2) and maximum operational safety.
Everything in one space-saving cabinet - Available up to 400 l/h.

* The picture might show optional accessories

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 the systems produce complies with appropriate standards such as ASTM and DIN EN 285 & 15883.

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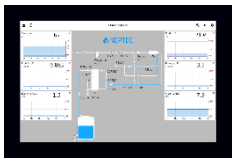
Scope of delivery

- ✓ 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
- ✓ EDI module: As a polisher to achieve highly purified water (Type 2)
- ✓ 10” Touch display: Displays and controls all operation and performance parameters
- ✓ Pressure probe for an exact tank measurement in 1% steps
- ✓ Choose from various option to adapt the system to your specific needs:
  - Optional (Twin) Water 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 consumers
  - Optional UV Tank disinfection, sterile overflow and sterile vent filter
  - Optional Hardness monitor: Protect the system from hardness breakthrough
  - Optional Connection of a loop

Reverse osmosis unit

- ✓ Concentrate recycling for minimum wastewater
- ✓ Measuring cell for determination of pure water conductivity
- ✓ Piping made of PA, PP and stainless-steel
- ✓ Solenoid valves for raw water and quality rinse
- ✓ 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 sensor for system monitoring and fault diagnosis
- ✓ Digital flow meters for monitoring and adjusting the permeate and concentrate flow
- ✓ Regulating valves for setting the operating pressure and the WCF rate (proportional production rate)

10” Touch display



- ✓ Intuitive and simple operation via touch screen
- ✓ Choice of languages (German, English, French and Russian)
- ✓ Adjustable limit values (warning and alarm) for all operating values
- ✓ Digital flow meters and pressure sensors
- ✓ Line diagrams for the operating values
- ✓ Logbook
- ✓ Adjustable remaining time for filters
- ✓ Adjustable code for service access
- ✓ Display for current for EDI
- ✓ Adjustable time for flushing
- ✓ Optional: Ethernet and WIFI connection for remote monitoring
- ✓ Optional: Modbus-TCP interface for all operating values
- ✓ Optional: Alarm reports and status reports by e-mail, including line diagrams

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. Regulating valves and flow meters for setting the pure water and concentrate flow.

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

Optional components – UV disinfection (Flow through and/or tank disinfection)

High quality UVC LED (mercury free) with patented flow chamber to for an efficient chemical-free flow-through disinfection.

The integrated UV immersion tube system were specially developed for the chemical-free disinfection of water in storage tanks and tubs using UV radiation. The UV light irradiates the water and the tank walls above and below the water level with UV-C radiation, so that no biofilm can develop, and the water is permanently disinfected.

Optional components – Cabinet water softener

This volume-controlled unit fully automatically softens drinking water free of iron and manganese as required by drinking water regulations.

Resin volume:	8 liters
Working flow:	0,9 m3/h
Exchange capacity:	30ºHFxm3
Electrical connection:	220V / 50Hz – 24VAC
ByPass:	Included

Optional components – Twin water softener

High performance, economical, ultra-compact twin water softener without interruption..

Resin volume:	2 x 4,5 litres
Working flow:	1,2 m3/h
Pressure (Min/Max):	2,5 / 8,5 bar
Exchange capacity:	18ºHFxm3 (per column)
Electrical connection:	not needed

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 – Sterile overflow and vent filter + CO_2 Absorber

Protection of the pure water stored in the tank from exposure to airborne microorganisms, viruses and/or physical contaminants in the surrounding environment. It prevents the produced water from quality degradation

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. Delivered with built-in dry run protection.

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

Optional components – Hardness monitor

Automatic switch-off of the reverse osmosis unit in the event of hardness breakthrough. For the operation neither water nor chemicals are consumed.

Optional components – Cyclical circulation

Adjustable cyclic circulation for the connection of a loop with stainless steel solenoid valve, conductivity and pressure monitoring

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_2	max. 15 mg/l
SiO_2	max. 10 mg/l
pH value	4 to 11

Pure water specifications

Performance at 10°C	60, 120, 180, 300 or 400 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)
Total Organic Carbon (TOC)*	< 10ppb
Microorganisms*	< 5 CFU/mL

** with optional sterile filter and UV disinfection*

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

Dimensions: