Pure Water System

PROTEUS UI

NEPTEC



The “all-in-one” pure water system PROTEUS UI fulfils highest standards for a reliable supply of pure water and maximum operational safety. Ideal for under-bench installation with its flexible display.



The ready-for-connection pure water system PROTEUS UI 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, reverse osmosis, optional EDI purification steps, a pure water tank and a booster pump are compactly combined and mounted in a compact cabinet.

The modern touch display, which can be flexibly integrated into cabinet panels, 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.

NEPTEC GmbH
Heidenhäuschenstr. 14
65627 Elbtal

+49 6436 94891 00
info@neptec.de
www.neptec.de

Features

- ✓ Reliable ultrapure water quality - ASTM type 2 or Type 3
- ✓ Simple and economical change of the consumables
- ✓ Large and intuitive 5” touchscreen
- ✓ Leak water detector
- ✓ Integrated pretreatment cartridge to protect the RO membrane
- ✓ Reverse-osmosis module for desalination and removal of up to 99% organic and inorganic impurities
- ✓ Pressure reducer
- ✓ Dry-run protection
- ✓ Digital Pressure and flow sensors
- ✓ Production rate monitoring
- ✓ Internal 80l tank with complete recirculation ensures the highest microbial purity
- ✓ Booster pump with convenient constant pressure control for low-noise delivery of pure water to the end user
- ✓ Plug and Use – All consumables and installation material are included
- ✓ Warnings and notes in clear text
- ✓ Alarm history
- ✓ 100% Made in Germany

Optional EDI module as residual desalination for consistently highest pure water quality

Optional UV disinfection

System configuration

- Compact production unit fits easily into various free spaces in the lab
- Integrated pressure reducer for different inlet pressures
- Flow meter for an accurate measuring of the production rate
- Pressure sensor for monitoring of the working pressure and as a dry-running protection
- Low-noise and durable RO pressure pump
- RO membrane removes up to 99% of all impurities in the feed water
- Flush valve for the effective cleaning of all wetted parts as well as an adjustable quality flush during stand-by
- Internal pure water tank with sloped bottom and pure water outlet
- Up to three measuring cells for the exact measurement of the conductivity and temperature after each purification cartridge

User interface



- Large and intuitive touchscreen
- Individual adjustment for displaying the conductivity (MΩcm or µS/cm)
- Multilevel conductivity and temperature monitoring for pure and ultrapure water, temperature compensated with stepless limit adjustments
- High-precision measuring with integrated reference resistors as well as deactivatable temperature compensation acc. to USP
- Leakage monitor with error message and automatic shut-off of the feed water supply
- Continuous surveillance of all relevant parameters and values incl. early reminders when a change of consumables is pending

Pure water tank 80L

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. With sterile overflow and sterile vent filter.



Nominal volume	50 Litre
Material	PE black

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
Connection size	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. 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.
- UVC LED tank disinfection specially developed for the chemical-free disinfection of water in storage tanks 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.

Feed water requirements

Feed water quality	Potable tap water (Softened water for systems with EDI)
Conductivity at 25°C	< 2000µS/cm
Total organic carbon (TOC)	< 1ppm
Chlorine*	< 0,01mg/l
CO_2*	< 15 mg/l
SiO_2*	< 10 mg/l
pH value*	4 - 11
Inlet pressure*	1 – 6bar
Temperature	5 – 35°C

Additional pretreatment units are available if the feed water is out of specs

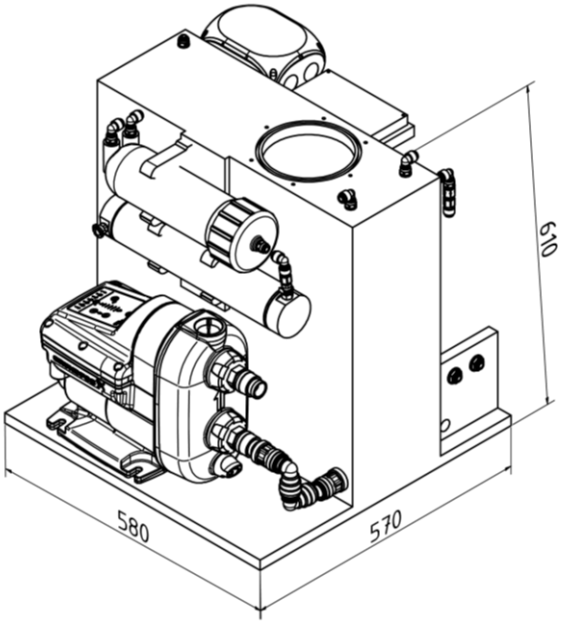
Pure water specifications

Performance	40 l/h at 10°C 52 l/h at 20°C
Retention rate	> 99 % ions, germs and bacteria
Pure water quality (with EDI module or ion exchanger)	< 0.2 µS/cm typ. 0.055-0.1 µS/cm

Technical data

Ambient temperature	+2 - 35°C
Supply voltage	230V / 50-60Hz
Connected load	900W
Connection size	Tube d8 inlet, R 1“ outlet

Dimensions Production Unit



Dimensions Embedded Display

Seamless integration into any front panel

