

# Ultrapure Water System

## TRITON 12



COMPACTNESS REDEFINED: Experience unmatched user-friendliness with one of the smallest systems on the market!



The TRITON 12 lab water series is modular designed and can be connected directly to tap water.

With a 10-litre tank and a production rate of 12 litres per hour, it offers great flexibility for your specific needs.

Each system meets and exceeds ASTM Type 1 and 2 standards. The combination of state-of-the-art treatment technologies ensures consistently ideal ultrapure water quality for reproducible analytical results.

The compact design of the TRITON makes it easy to integrate into almost any laboratory environment.



## Features

- ✓ Reliable ultrapure water quality - ASTM type 1+ and 2
- ✓ Simple and economical change of the consumables
- ✓ Large and intuitive touchscreen
- ✓ Leak water detector
- ✓ Measuring and monitoring of the permeate flow
- ✓ Pressure reducer
- ✓ Data capture via USB
- ✓ Accurate, adjustable volume dispensing
- ✓ Dry-run protection
- ✓ Simple disinfection procedure
- ✓ Pressure and flow sensor
- ✓ 10l tank
- ✓ Tank water conductivity and temperature measurement
- ✓ Plug and Use – All consumables and installation material included
- ✓ Note on the replacement of all consumables (no obligation to replace)
- ✓ Complete recirculation ensures the highest microbial purity
- ✓ Warnings and notes in clear text
- ✓ Alarm history
- ✓ 100% Made in Germany



## System configuration

- Wide-range power supply 80-264V / 50-60Hz
- Housing with an easily accessible service cover
- Compact production unit fits easily into various free spaces in the lab
- Exchange of consumables within seconds due to quick-connect couplings
- Integrated pressure reducer for different inlet pressures
- Flow meter for an accurate volume dispensing
- Pressure sensor for monitoring of the working pressure and as a dry-running protection
- Low-noise and durable recirculation pump for the complete internal recirculation of all wetted parts up to the final dispensing valve
- Ultrapure water cartridge for the final removal of organics and remaining ions
- Up to three measuring cells for the exact measurement of the conductivity and temperature after each purification cartridge
- Flush valve for the effective cleaning of all wetted parts as well as an adjustable quality flush during stand-by
- Microfiltration for the sterile ultrapure water withdrawal at the point of use



## Optional

- UV-unit (185 | 254nm) for the ultimate microbiological purity and TOC reduction
- Flushed and integrated ultrafiltration module for the retention of pyrogens, endotoxins, proteins, and nucleases (DNases and RNases)
- Potential-free contact for collective error signal
- Wall mount
- Qualification documents



## User interface

- Large and intuitive touchscreen
- Stored dispensing reports with all information ensure an absolute traceability of the water withdrawals
- 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
- GLP-compliant data storage via USB



## Storage tank

- 10l pure water tank with conical bottom and pure water (type 2) outlet
- Adjustable cyclic circulation to maintain the optimum water quality
- Flexible positioning, for example as a platform for the main system
- With sterile overflow and sterile vent filter against external contamination
- Adjustable tank level and measurement in 1% steps
- Bigger tank available on request



## Feed water requirements

Feed water quality	Potable tap water
Conductivity at 25°C	< 1000µS/cm
Total organic carbon (TOC)	< 1ppm
Inlet pressure*	1 – 6bar
Temperature	5 – 35°C

*Additional pre-treatment units are available if the feed water is out of specs*

## Ultrapure water specifications (ASTM type 1)<sup>1</sup>:

Resistivity (Conduct.) at 25°C <sup>2</sup>	18.2MΩcm (0.055µS/cm)
Total Organic Carbon <sup>3</sup> (TOC)	≤ 2ppb (µg/l) ≤ 10ppb (w/o option – UV lamp)
Particle content <sup>4</sup>	< 1/ml
Bacteria	< 0,01 CFU/ml <sup>4</sup> < 0,005 CFU/ml <sup>5</sup>
Pyrogens (endotoxins) <sup>5</sup>	< 0,001 EU/ml
RNases <sup>5</sup>	< 0,004ng/ml
DNases <sup>5</sup>	< 0,024pg/µl
Flow rate	Up to 2l/min

## Pure water specifications in the tank (ASTM type 2)

Resistivity (Conduct.) at 25°C	> 10MΩcm (<0,1µS/cm)
TOC	≤ 30ppb (µg/l)
Performance	12l/h at 10°C 16l/h at 20°C 20l/h at 30°C

<sup>1</sup> The actual values may vary depending on the nature and concentration of the contaminants in the feed water

<sup>2</sup> Conductivity/resistivity can also be displayed non-temperature compensated as required by USP

<sup>3</sup> In the appropriate operating conditions

<sup>4</sup> With sterile filter capsule at the POU

<sup>5</sup> With option – ultrafiltration module

## Technical data

Ambient temperature	+2 - 35°C
Supply voltage	90-240V / 50-60Hz
Connected load	120W
Connection size	R ¾"
Weight (complete):	25kg



## Dimensions

