

Ultrapure Water System TRITON



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



The TRITON lab water series is modular designed, providing high flexibility to adapt to your specific needs.

Each system meets and exceeds the ASTM type 1 standard.

An integrated pre-treatment guarantees reproducible results of analysis.

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



Features

- ✓ Reliable ultrapure water quality - ASTM type 1+
- ✓ Simple and economical change of the consumables
- ✓ Large and intuitive touchscreen
- ✓ Leak water detector
- ✓ Pressure reducer
- ✓ Data capture via USB
- ✓ Accurate, adjustable volume dispensing
- ✓ Dry-run protection
- ✓ Simple disinfection procedure
- ✓ Pressure and flow sensor
- ✓ 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
- Integrated pre-treatment cartridge protects from impurities in the feedwater and guarantees reproducible results of analysis, a high capacity and low operating costs
- 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
- Sterile ultrapure water withdrawal at the point of use with 0.2 µm microfiltration



Various options to adapt to your specific needs:

- UV-unit (185 | 254nm) for the ultimate microbiological purity and TOC reduction
- Ultrafiltration module - Flushed and integrated for the retention of pyrogens, endotoxins, proteins, and nucleases (DNases and RNases)
- TOC monitor - Real-time for the continuous TOC measurement of the organic compound acc. to USP
- Additional conductivity cell to monitor the feedwater quality
- 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 ($M\Omega\cdot cm$ or $\mu S/cm$)
- 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 sensor monitors 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



Feed water requirements

Feed water quality	Pre-treated water (EDI, DI, RO or distilled water)
Conductivity at 25°C	< 50 µS/cm
Total organic carbon (TOC)	< 50 ppb
Inlet pressure*	max. 6 bar
Temperature	5 – 35 °C

* At an inlet pressure between 0 - 0.2bar the system will operate, but the product flow rate may be lower.

Ultrapure water specifications (ASTM type 1)¹:

Resistivity (Conduct.) at 25°C ²	18.2 MΩ.cm (0.055 µS/cm)
Total Organic Carbon ³ (TOC)	≤ 2 ppb (µg/L) ≤ 10 ppb (w/o option – UV lamp)
Particle content ⁴	< 1 /mL
Bacteria	< 0.01 CFU/mL ⁴ < 0.005 CFU/mL ⁵
Pyrogens (endotoxins) ⁵	< 0.001 EU/mL
RNases ⁵	< 0.004 ng/mL
DNases ⁵	< 0.024 pg/µL
Flow rate	Up to 2 L/min

¹ The actual values may vary depending on the nature and concentration of the contaminants in the feed water.

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

³ In the appropriate operating conditions, otherwise typically ≤5ppb

⁴ With sterile filter capsule at the POU and in the appropriate operating conditions

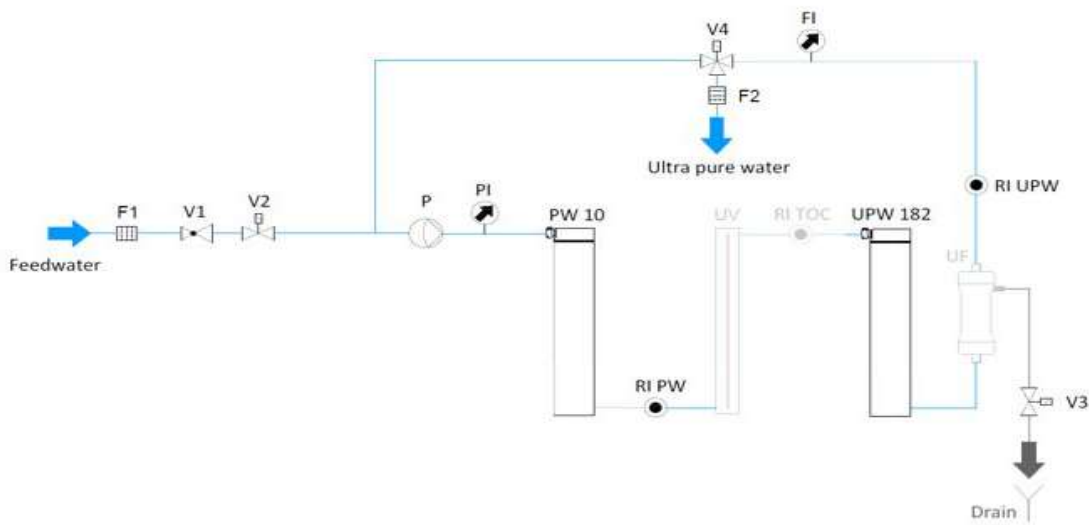
⁵ With option – ultrafiltration module

Technical data

Ambient temperature	+2 – 35 °C
Supply voltage	90-240V / 50-60Hz
Connected load	120 W
Connection size	R ¾“



Flow Chart (simplified)



F1:	Particle filter (inlet)	RI FW:	Conductivity cell feedwater (optional)	UPW 182:	Ultrapure water cartridge
F2:	Sterile filter capsule 0.2µm	RI PW:	Conductivity cell pure water	UV:	UV lamp 185/254nm (optional)
F3:	Flow meter	RI TOC:	Conductivity cell TOC (optional)	V1:	Pressure reducer
FI:	Pump	RI UPW:	Conductivity cell ultrapure water	V2:	Inlet solenoid valve
PI:	Pressure sensor	UF:	Ultrafilter (optional)	V3:	Flush solenoid valve
PW10	Pure water cartridge				

Dimensions

