

Ultrapure Water System

TRITON 6 | 12



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



The TRITON 6 or 12 lab water series is modular designed and can be connected directly to tap water.

Equipped with an integrated 10 litre tank and a production rate of 10 L/h or 20 L/h, it offers great flexibility for your specific needs.

Each system meets and exceeds ASTM Type 1 and 3 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 3
- ✓ 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
- ✓ Dry-run protection
- ✓ Simple disinfection procedure
- ✓ Pressure and flow sensor
- ✓ 10 L tank (alternative tanks on request)
- ✓ 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)
- ✓ 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
- 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
- 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)
- 50 L RO water tank – Stackable with pressure outlet and dispensing gun for type 2 water (more sizes available on request)
- UVC-LED (mercury-free) 265nm tank disinfection
- 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 (MΩ.cm 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 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



RO water tank 10 L

- Made of PE for a minimum release of extractables
- A smooth inner surface prevents biofilm formation
- A sterile overflow and an advanced 0.22 μm vent filter with CO2 Absorber protecting your stored water against airborne contaminants
- Sloped bottom and circulation ensure the highest microbial purity
- Adjustable tank level and measurement in 1% steps
- RO water (type 3) outlet and dispensing valve
- Stackable with TRITON main production unit



Feed water requirements

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

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

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

RO water specifications in the tank (Type 3)

Retention rate	> 99% ions, germs and bacteria
Performance TRITON 6	10 L/h at 25°C
Performance TRITON 12	20 L/h at 25°C

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

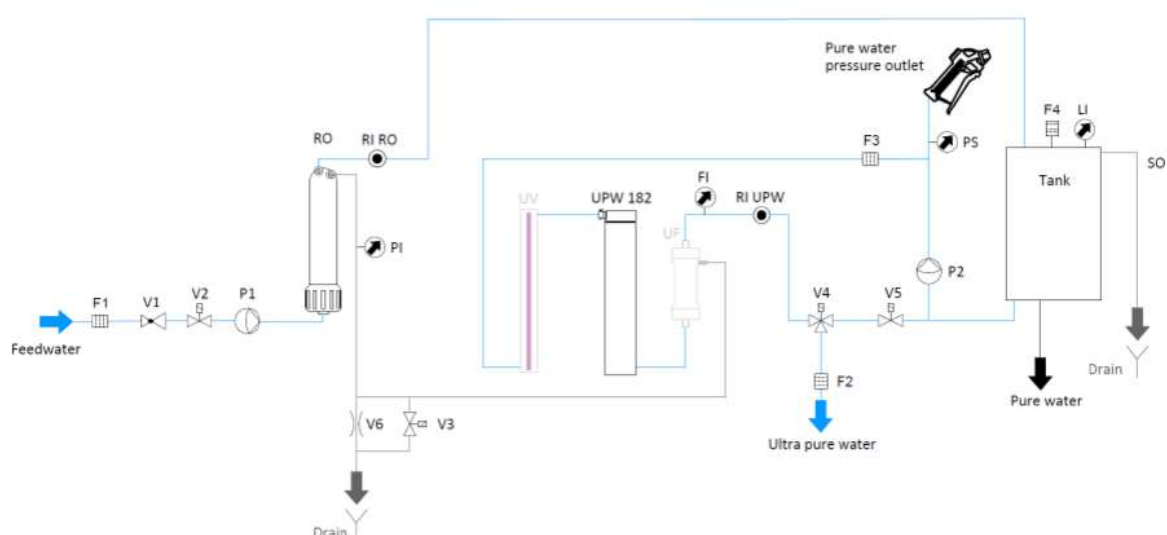
⁵ With option – ultrafiltration module



Technical data

Ambient temperature	+2 – 35 °C
Supply voltage	90-240V / 50-60Hz
Connected load	120 W
Connection size	R ¾"
Weight (system):	15 kg

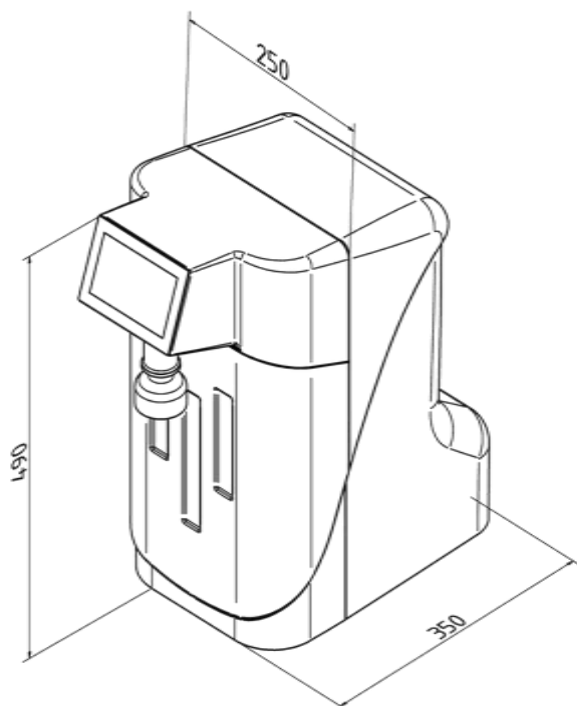
Flow Chart (simplified)



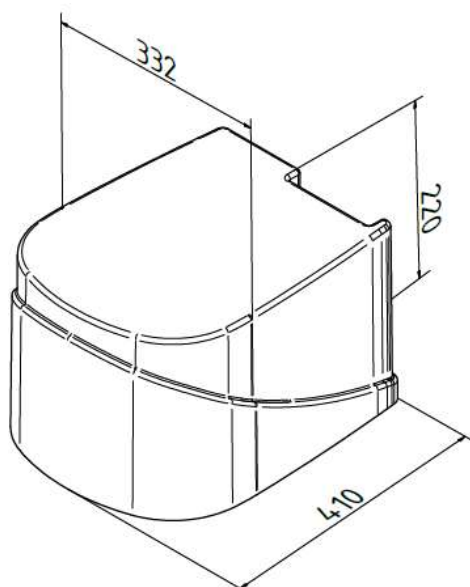
F1:	Particle filter (inlet)	P2:	Circulation pump	UF:	Ultrafilter (optional)
F2:	Sterile filter capsule 0.2µm	PI:	Pressure sensor	UPW 182:	Ultrapure water cartridge
F3:	Particle filter (tank)	RI RO:	Conductivity cell RO permeate	UV:	UV lamp 185/254nm (optional)
FI:	Flow meter	RI UPW:	Conductivity cell ultrapure water	V1	Pressure reducer
LI	Level sensor	RO:	Reverse osmosis module	V2- V5:	Solenoid valves
P1:	RO pump	SO:	Sterile overflow	V6:	Pressure hold valve



Dimensions Production unit



Dimensions 10 L Tank



Dimensions 50 L Tank (optional)

