NEPTEC
www.neptec.de

PORTFOLIO

LAB WATER SYSTEMS

Specialist in ultrapure water

NEPTEC

Discover the New Standard in Lab Water Purification

From flexible modularity to intelligent monitoring and unmatched water quality, NEPTEC's ultrapure and pure water systems deliver streamlined, sustainable, space-saving solutions. Designed and manufactured in Germany, NEPTEC's lab water systems deliver ASTM®-compliant water tailored for scientific, analytical and clinical applications.

Whether you require ultrapure Type I water for molecular biology, high-performance Type II water for general lab use, or Type III water for rinsing and feed, NEPTEC systems adapt to your lab needs – with scalable tank sizes, precision dispensing, and real-time quality monitoring.

Empowering your research with NEPTEC solutions

Made in Germany

Engineered for Every Application

Explore Our Product Range

Production of Type 1, 2, and 3 pure and ultrapure water with capacities up to 5000 L/h for laboratory and industrial applications.

TRITON

HALIOS

PROTEUS

RO alpha

RO beta

RO delta

TALOS

Ion Exchanger

Minimize Complexity. Maximize Purity.

Reliable Water Always on Hand

Every drop of water in a NEPTEC system is validated and traceable.

From the first filtration stage to final dispense, NEPTEC systems ensure uncompromising water purity — automatically monitored and recorded.

Precision at Every Stage

Integrated Pre-treatment:

Efficient pre-treatment protects the system by removing particles, chlorine, heavy metals and hardness—ensuring long-lasting performance and reliability.

Advanced Reverse Osmosis (RO):

Efficient removal of up to 99% of ions, particles, organics, and microorganisms.

Electrodeionization (EDI):

Constant-quality Type II water without chemical regeneration and with minimal maintenance.

UV Sterilization:

Mercury-free 254 nm UVC or 185/254 dual wavelength for TOC reduction.

Polishing Cartridges:

Final-stage UltraPolish MB1 resin and high-performance adsorption media for trace-level contaminant removal.

Ultrafiltration

Ultrafiltration ensures the highest level of microbiological purity and safety by continuously removing endotoxins, nucleases (RNase/DNase), and other submicron particles.

Point-of-Use Filtration:

0.2 µm sterile filters or application-specific final filters for molecular biology, cell culture, and analytical chemistry.

Green by Design

NEPTEC puts sustainability at the core of every design.

ECO Mode
extends the life of consumables without sacrificing purity

Energy-saving circulation modes
reduce standby consumption

UV systems are mercury-free
for type II systems and tank disinfection

Sustainable packaging
with recycled material

Find the Right System for Your Lab

Selection Guide

Water Quality Classification – Know Your Requirements

TYPE 1
(Ultrapure water - UPW)

18.2 MΩ·cm

Analytical
High-performance liquid chromatography (HPLC)
Gas chromatography (GC)
Ion chromatography (IC)
Inductively coupled plasma spectroscopy (ICP)
Mass spectroscopy (MS)
Atomic absorption (AA)
Total organic carbon (TOC)

Life sciences
Genomics (e.g., PCR, mutagenesis)
Proteomics (e.g., crystallography, electrophoresis)
Immunology (e.g., monoclonal antibody production, blots)
Pharmacology
Cell and tissue culture
Drug discovery
Molecular biology
Microbiology

TYPE 2
(Pure water - PW)

> 5 MΩ·cm

DI Water
Humidification
Glassware washing/rinsing
General lab equipment (water baths, incubators, etc.)
Feed water to Type 1 systems
Media prep
Buffer prep
Chemical and biochemical reagent prep

TYPE 3
(RO water)

Permeate

General Lab Use
Autoclave
Humidification
Glassware washing/rinsing
General lab equipment (water baths, incubators, etc.)

Need guidance? Contact NEPTEC for tailored sizing and integration support.
Choosing the right system ensures compliance, cost efficiency, and continuous operation.

Find the Right System for Your Lab

Selection Guide

Tailored NEPTEC Solutions for Every Application

Modular. Scalable. Application-driven.

		Pretreated water feed required		
				
		TRITON	**HALIOS**	**TALOS**
		Smallest Footprint	Flexible Dispensing	High Performance
Water Quality	Type 1	●	●	●
	Type 2	-	-	-
	Type 3	-	-	-
Technology	RO	-	-	-
	EDI	-	-	-
	UV	●	●	●
	TOC Monitor	●	●	●
Features	Volumetric Dispensing	●	●	●
	Leakage Sensor	●	●	●
	Flexible Dispenser	-	●	-
	Remote Monitoring	-	-	-
	Integrated Pretreatment	-	-	-
	Integrated Storage Tank	-	-	-
Capacity	Daily use to sustain reasonable cartridge life	< 15 L/day	< 100 L/day	> 50 L/day

Tap water feed required







TRITON 6 | 12	HALIOS 6 | 12 | 40	RO delta	PROTEUS	RO gamma	RO alpha	RO beta
Cost-effective Type 1 + 3	Adaptable Type 1 + 2	Economical Type 2 or 3	All-in-one Type 2 or 3	Reliable Type 3	Innovative Type 2 or 3	Central Supply Type 2
●	●	-	-	-	-	-
-	●	●	●	-	●	●
●	-	●	●	●	●	-
●	●	●	●	●	●	●
-	●	●	●	-	●	●
●	●	-	●	-	●	●
-	●	-	-	-	-	-
●	●	-	-	-	-	-
●	●	●	●	●	-	-
-	●	-	●	-	-	-
-	-	-	-	-	●	●
-	●	●	●	-	●	●
●	●	-	●	-	●	-
< 60 L/day	< 100 L/day	< 300 L/day	< 300 L/day	< 1000 L/day	> 200 L/day	> 1000 L/day

Pure and Ultrapure Water on Demand

Compact Lab Water Systems

Ultimate Laboratory Water Solutions

Minimal Operating Costs

Thanks to high-capacity consumables and multiple integrated conductivity sensors, the system provides real-time conductivity readings after each purification stage. Replace consumables only when necessary – for maximum efficiency and cost control.

Modern System Monitoring

Integrated pressure and flow sensors, along with a built-in water leak detector, continuously monitor system performance. This ensures consistent water quality and helps prevent potential damage and unexpected costs.

Flexible Integration in the Laboratory

The modular design allows seamless adaptation to individual application needs. A compact footprint, multiple dispensing and tank options ensure optimal use of valuable lab space**.**

Customizable. Compatible. Future-Proof.

NEPTEC systems grow with your lab. They support multiple dispensing points for shared use, offer tank volumes from 25 to 100 liters with built-in UV sanitization, and can be upgraded to higher production rates as your needs increase.

Easy Operation, Precise Control

A large, intuitive and glove-friendly touchscreen enables effortless operation with real-time monitoring of all critical system parameters.

Simplicity Through Innovation

Exceeding expectations with smart design and versatile configurations — engineered for maximum performance and user convenience.

Compliance with the Highest Standards

Meets or exceeds the requirements of ASTM® D1193, ISO 3696, JIS K 0557, CLSI®, and the European, U.S., Japanese, and Chinese Pharmacopoeias.

German Engineering – Reliable and Eco-Friendly

NEPTEC systems combine robust construction with precision components for long-term reliability and consistent water quality — even under demanding laboratory conditions. Smart energy management and long-life consumables ensure eco-friendly operation with reduced waste and minimal resource consumption.


200 mL
0 mL
25.0°C
0.055
µS/cm @ 25°C
3 ppb TOC
12:15
13.03.2023

Type 1 from Pretreated Water

Lab Water System HALIOS

Designed to enhance efficiency and streamline workflows while optimizing lab productivity.

HALIOS – Precision Meets Flexibility

The HALIOS series sets a new benchmark in laboratory water purification. Its modular design provides unmatched flexibility, seamlessly adapting to any workflow or application.
Delivering consistently ultra-pure water that exceeds ASTM Type 1 standards, HALIOS ensures reliable and reproducible analytical results every time.
An integrated pre-treatment unit enhances performance stability, while the external tabletop dispenser supports intuitive, ergonomic operation. The compact production module fits effortlessly into any laboratory setup, maximizing space without compromising on capability.

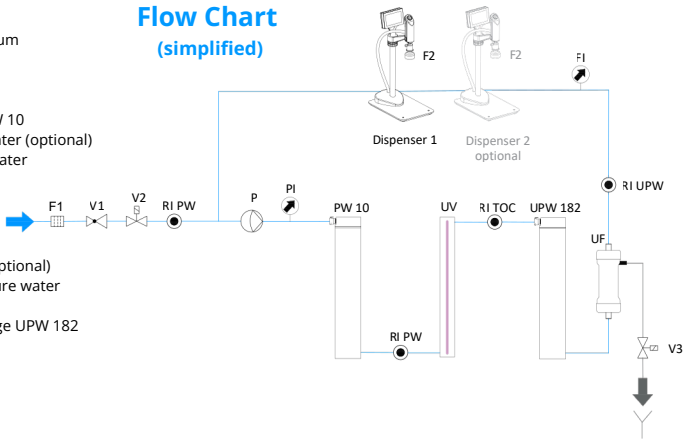
HALIOS Key Features – Compact. Intelligent. Reliable.

- **Ultrapure Water at ASTM Type 1+**
  Consistent high-quality water for even the most sensitive applications.
- **Smart External Dispenser (up to 4)**
  Detachable, rotatable, and height-adjustable for ergonomic and flexible use.
- **User-Centered Interface & Controls**
  Large intuitive touchscreen, clear-text notifications, alarm history, and programmable volume dispensing for full control and ease of use.
- **Efficient Maintenance**
  Quick, tool-free consumable changes, simple disinfection process, and timely—but non-binding—replacement notifications.
- **Built-In System Protection**
  Leak detector, dry-run protection, integrated pressure reducer, plus pressure and flow sensors ensure safe and stable operation.
- **Complete Recirculation & UV Sterilization**
  Continuous circulation and dual-wavelength UV (185/254 nm) maintain the highest microbial purity and reduce TOC.
- **Data & Connectivity**
  USB data capture for easy tracking and documentation.
- **Plug & Use**
  All consumables and installation materials included – ready to operate out of the box.
- **Eco Mode**
  Increases cartridge lifespan by up to 20%, lowering operating costs and environmental impact.

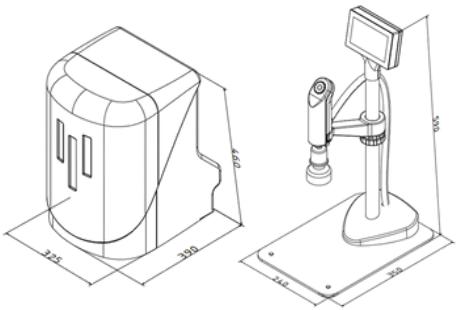
F1: Particle filter
F2: Sterile filter capsule 0.2µm
FI: Flow meter
P: Pump
PI: Pressure sensor
PW 10: Pure water cartridge PW 10
RI FW: Conductivity cell feedwater (optional)
RI PW: Conductivity cell pure water

RI TOC: Conductivity cell TOC (optional)
RI UPW: Conductivity cell ultrapure water
UF: Ultrafilter (optional)
UPW 182: Ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm
V1: Pressure reducer
V2: Inlet solenoid valve
V3: Flush solenoid valve

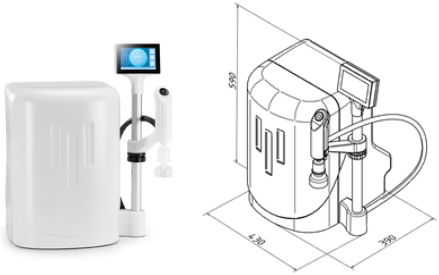
Flow Chart
(simplified)



Dimensions



Also available as HALIOS ID



Feed water requirement

Feed water quality	Pre-treated water (EDI, DI, RO, distilled water)
Conductivity at 25°C	< 100 µS/cm
Total Organic Carbon (TOC)	< 50 ppb
Inlet Pressure	Max. 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 2 ppb
Particle count [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	Adjustable, 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 ≤5 ppb
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/HALIOS

Type 1 from Pretreated Water

Lab Water System TRITON

Designed for maximum purity in minimum space – economical, efficient, and ready for daily lab routines.

TRITON – Ultra-Compact

TRITON is one of the smallest Type 1 water purification systems on the market - compact yet uncompromising in performance. It's the ideal solution for labs where space is limited but expectations are high.

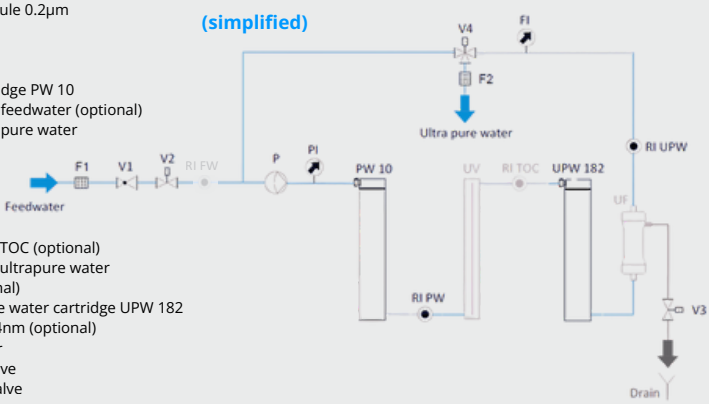
Despite its compact footprint, TRITON delivers ultrapure water at ASTM Type 1+ quality, ensuring reliable, reproducible results for sensitive analytical and life science applications. Its economical operation, intuitive controls, and low-cost maintenance make it a smart investment for any lab environment.

TRITON Key Features – Compact. Economical. Dependable.

- **Ultrapure Water at ASTM Type 1+**
  High-quality water that meets the strictest purity standards.
- **Exceptionally Compact Design**
  One of the smallest systems in its class
  – perfect for tight lab spaces without sacrificing performance.
- **Intuitive Touchscreen Control**
  Large, user-friendly interface with clear-text alerts, alarm history, and programmable volume dispensing.
- **Quick & Easy Maintenance**
  Tool-free consumable changes, straightforward disinfection, and optional (non-binding) replacement notifications.
- **Integrated Safety Systems**
  Leak detector, dry-run protection, and sensors for pressure and flow ensure worry-free operation.
- **Full Recirculation & Dual UV Lamp**
  Continuous internal recirculation with 185/254 nm UV sterilization for highest microbial purity and TOC control.
- **USB Data Logging**
  Easy documentation and export via USB – ideal for audit-ready environments.
- **Plug & Use**
  All consumables and installation materials included – ready to operate out of the box.

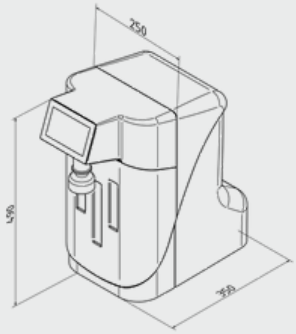
F1: Particle filter
F2: Sterile filter capsule 0.2µm
FI: Flow meter
P: Pump
PI: Pressure sensor
PW 10: Pure water cartridge PW 10
RI FW: Conductivity cell feedwater (optional)
RI PW: Conductivity cell pure water

Flow Chart
(simplified)



RI TOC: Conductivity cell TOC (optional)
RI UPW: Conductivity cell ultrapure water
UF: Ultrafilter (optional)
UPW 182: TRITON ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm (optional)
V1: Pressure reducer
V2: Inlet solenoid valve
V3: Flush solenoid valve

Dimensions



Feed water requirement

Feed water quality	Pre-treated water (EDI, DI, RO, distilled water)
Conductivity at 25°C	< 100 µS/cm
Total Organic Carbon (TOC)	< 50 ppb
Inlet Pressure	Max. 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 2 ppb
Particle count [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 ≤5 ppb
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/TRITON

Type 1 from Pretreated Water

Lab Water System TALOS

High performance meets smart savings – built for demanding applications and cost-effective operation.

TALOS – Economically Designed

The TALOS series is made for high-throughput labs that demand uncompromising water purity and long-term reliability. Supplied with pretreated water, TALOS delivers ASTM Type 1+ ultrapure quality at consistently high flow rates – ideal for busy environments, shared use, or applications with elevated consumption needs.

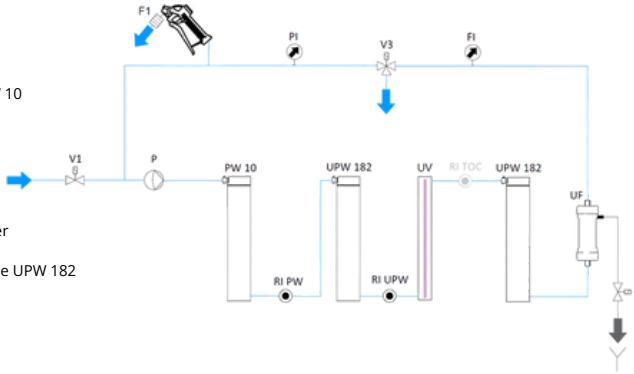
Despite its strong output, TALOS is remarkably economical. With durable components, long-lasting consumables, and a system design focused on operational efficiency, it combines top-tier performance with low running costs.

TALOS Key Features – High Output. Low Overhead.

- **Ultrapure Water at ASTM Type 1+**
  Consistent high-quality water for even the most sensitive applications.
- **High Flow Performance**
  Ideal for multi-user labs or high-demand processes requiring a stable and continuous supply of ultrapure water - up to 10 L/min.
- **Integrated Ultrafiltration Module**
  Built-in 0.05 µm ultrafiltration ensures pyrogen-, endotoxin- and nuclease-free water – with an exceptional service life of up to 3 years.
- **User-Centered Interface & Controls**
  Large intuitive touchscreen, clear-text notifications, alarm history, and programmable volume dispensing for full control and ease of use.
- **Efficient Maintenance**
  Quick, tool-free consumable changes with timely—but non-binding—replacement notifications.
- **Built-In System Protection**
  Leak detector, dry-run protection, integrated pressure reducer, plus pressure and flow sensors ensure safe and stable operation.
- **Complete Recirculation & UV Sterilization**
  Continuous circulation and either mercury-free UV-C LED or dual-wavelength UV disinfection (185/254 nm).
- **Dispensing Gun**
  Detachable for ergonomic and flexible withdrawal of ultrapure water.

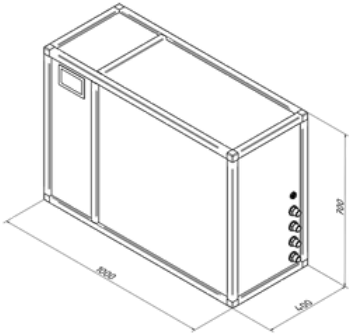
Flow Chart (simplified)

F1: Sterile filter capsule 0.2µm
FI: Flow meter
P: Pump
PI: Pressure sensor
PW 10: TALOS Pure water cartridge PW 10
RI PW: Conductivity cell pure water
RI TOC: Conductivity cell TOC (optional)



RI UPW: Conductivity cell ultrapure water
UF: Ultrafilter (optional)
UPW 182: TALOS Ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm
V1: Pressure reducer
V2: Inlet solenoid valve
V3: Flush solenoid valve

Dimensions



Feed water requirement

Feed water quality	Pre-treated water (EDI, DI, RO, distilled water)
Conductivity at 25°C	< 100 µS/cm
Total Organic Carbon (TOC)	< 50 ppb
Inlet Pressure	Max. 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 5 ppb
Particle count [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	Adjustable, up to 10 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
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/TALOS

Type 1 & Type 2 from Tap Water

Lab Water System HALIOS 6 | 12

High purity meets maximum flexibility – directly from tap water and engineered for efficient operation.

HALIOS – Smart Water for Smart Labs

HALIOS 6 and HALIOS 12 are compact, high-performance systems designed for direct connection to tap water – no external pre-treatment required. Offering both Type 1+ and Type 2 water, HALIOS adapts seamlessly to a wide range of lab environments, from single-user setups to multi-station installations.

What sets HALIOS apart is its unmatched flexibility. Configure up to four independent dispensing points, and position the external dispenser exactly where it's needed – even detached from the main unit. Combined with low operating costs, intuitive touchscreen control, and full recirculation, HALIOS makes high-purity water simpler, smarter, and more accessible.

HALIOS Key Features – Flexible. Efficient. Made for Labs.

- **ASTM Type 1+ & Type 2 Water**
  Two grades of purity in one system – for analytical, life science, and general lab use.
- **Direct Tap Water Connection**
  Integrated pre-treatment and RO membrane allow operation directly from municipal water supply.
- **User-Centered Touchscreen**
  Intuitive interface with clear-text alerts, programmable volume dispensing, and stored dispensing logs for full traceability.
- **Precision External Tabletop Dispenser (up to 4)**
  Rotatable, vertically adjustable, and fully detachable with single-handed operation.
- **Advanced Monitoring & Protection**
  Leak detector, pressure/flow sensors, dry-run protection, real-time conductivity & temperature measurement, and automatic shut-off.
- **Full Recirculation & Dual UV (185/254 nm)**
  Ensures microbial purity and low TOC levels – even during standby, thanks to intelligent flushing and full-quality circulation, including water stored in the integrated 10 L tank.
- **ECO Mode**
  Extends cartridge lifespan by up to 20%, reducing running costs and waste.

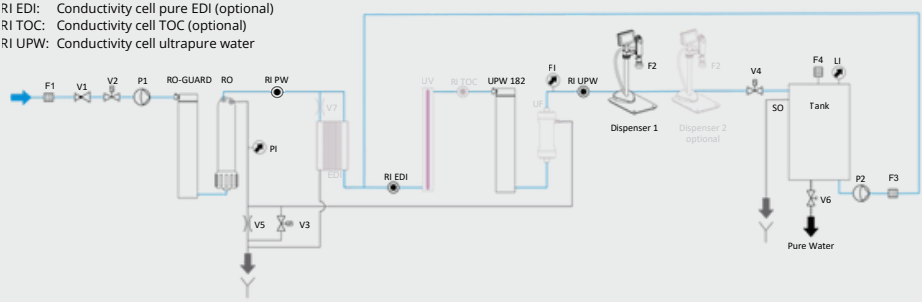
Optional Enhancements

Expand your HALIOS system with a flushed **ultrafiltration module** (3-year service life), real-time **TOC monitoring**, **EDI module** for enhanced desalination, **UV tank disinfection**, **wall-mount** kits, and full GMP/GLP **qualification documentation** – all designed to meet advanced application needs and regulatory standards.

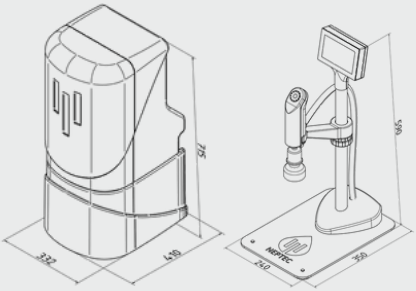
EDI: Electrodeionization module (optional)
F1: Particle filter (inlet)
F2: Sterile filter capsule 0.2µm
F3: Particle filter (tank)
FI: Flow meter
LI: Level sensor
P1: RO pump
P2: Circulation pump
PI: Pressure sensor
RI PW: Conductivity cell pure water
RI EDI: Conductivity cell pure EDI (optional)
RI TOC: Conductivity cell TOC (optional)
RI UPW: Conductivity cell ultrapure water

Flow Chart
(simplified)

RO: Reverse osmosis module
RO GUARD: Pre-treatment cartridge RO-GUARD
SO: Sterile overflow
UF: Ultrafilter (optional)
UPW 182: Ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm
V1: Pressure reducer
V2- V4: Solenoid valves
V5: Pressure hold valve



Dimensions



Also available as HALIOS ID 6 | 12

Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 2 ppb
Particle count [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	Adjustable, up to 2 L/min

Pure water - Tank (Type 2)

Resistivity (Conductivity) at 25°C [2]	> 10 MΩ·cm (< 0.1 µS/cm)
Total Organic Carbon (TOC)	≤ 30 ppb
Performance HALIOS 6	10 L/h at 25°C
Performance HALIOS 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 ≤5 ppb
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/HALIOS_6_12

Type 1 & Type 2 from Tap Water

Lab Water System HALIOS 40

For labs with larger demands and no room for compromise.

HALIOS 40 – Engineered for Productivity

The HALIOS 40 is a high-output laboratory water purification system delivering up to 40 L/h of ASTM Type 1+ and Type 2 water – directly from tap water. Designed for use in higher-demand environments, it combines powerful purification performance with intelligent features and flexible distribution options.

A standout feature of HALIOS 40 is the external 50 L pure water tank with integrated pressure outlet and dispensing gun, enabling immediate, high-volume access to Type 2 water – ideal for rinsing, glassware cleaning, buffer preparation, or feeding laboratory equipment.

HALIOS Key Features – Flexible. Efficient. Made for Labs.

- **ASTM Type 1+ & Type 2 Water**
  Reliable purity for critical analyses and routine lab tasks – from a single, central unit.
- **Direct Tap Water Connection**
  External pre-treatment, RO membrane, and final polishing cartridges enable fully autonomous operation from municipal water.
- **50 L Tank with Pressure Outlet**
  Delivers on-demand Type 2 water via dispensing gun.
- **Precision External Tabletop Dispenser**
  Connect up to 4 external dispensers per system – ideal for multi-user environments or distributed lab layouts. Rotatable, vertically adjustable, and fully detachable with single-handed operation.
- **Advanced Monitoring & Protection**
  Leak detector, pressure/flow sensors, dry-run protection, real-time conductivity & temperature measurement, and automatic shut-off.
- **Full Recirculation & Dual UV (185/254 nm)**
  Ensures microbial purity and low TOC levels – even during standby, thanks to intelligent flushing and full-quality circulation, including water stored in a compact 50 L tank.
- **ECO Mode**
  Extends cartridge lifespan by up to 20%, reducing running costs and waste.

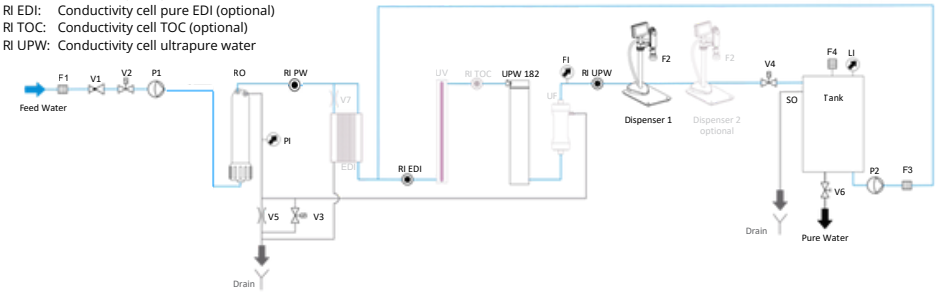
Optional Enhancements

Expand your HALIOS system with a flushed **ultrafiltration module** (3-year service life), real-time **TOC monitoring**, **EDI module** for enhanced desalination, **UV tank disinfection**, **wall-mount** kits, and full GMP/GLP **qualification documentation** – all designed to meet advanced application needs and regulatory standards.

EDI: Electrodeionization module (optional)
F1: Particle filter (inlet)
F2: Sterile filter capsule 0.2µm
F3: Particle filter (tank)
FI: Flow meter
LI: Level sensor
P1: RO pump
P2: Circulation pump
PI: Pressure sensor
RI PW: Conductivity cell pure water
RI EDI: Conductivity cell pure EDI (optional)
RI TOC: Conductivity cell TOC (optional)
RI UPW: Conductivity cell ultrapure water

Flow Chart
(simplified)

RO: Reverse osmosis module
SO: Sterile overflow
UF: Ultrafilter (optional)
UPW 182: Ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm
V1: Pressure reducer
V2- V4: Solenoid valves
V5: Pressure hold valve



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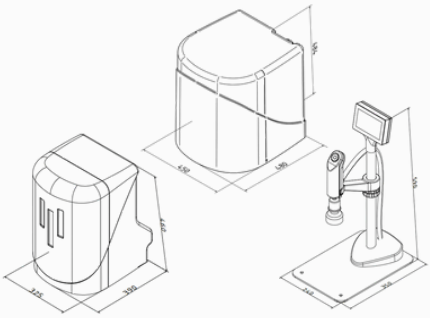
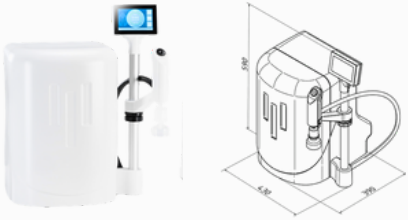


Also available as HALIOS ID 40



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 2 ppb
Particle count [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	Adjustable, up to 2 L/min

Pure water - Tank (Type 2)

Resistivity (Conductivity) at 25°C [2]	> 10 MΩ·cm (< 0.1 µS/cm)
Total Organic Carbon (TOC)	≤ 30 ppb
Performance HALIOS 40	40 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 ≤5 ppb
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/HALIOS_40

Type 1 & Type 3 from Tap Water

Lab Water System TRITON 6 | 12

Maximum purity in minimal space – Built for Big Expectations

TRITON – Compact by Design

TRITON 6 and TRITON 12 are high-efficiency lab water systems engineered for direct connection to tap water. Delivering both Type 1 ultrapure and Type 3 permeate (RO) water from a single compact unit, TRITON is the ideal solution for space-constrained labs that still demand uncompromised performance.

Engineered for labs where space is at a premium, TRITON systems combine efficient purification, intuitive operation, and reliable performance – whether at 10 L/h or 20 L/h output.

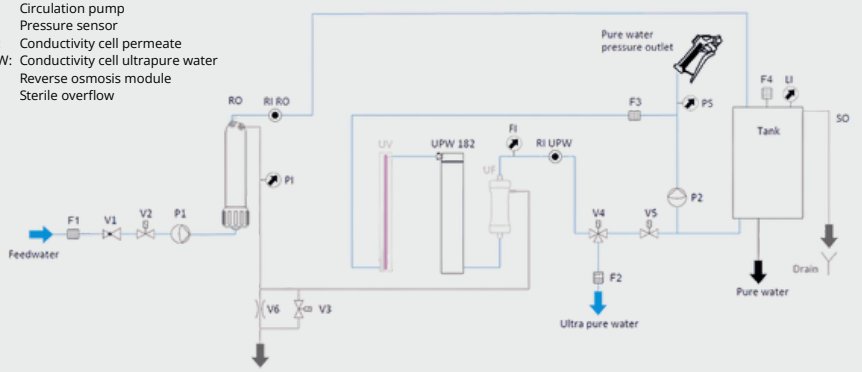
TRITON Key Features – Zero compromise. Direct from Tap Water.

- **ASTM Type 1+ & Type 3 Water**
  Two grades of purity in one system – ideal for analytical, life science, and non-critical tasks.
- **Direct Tap Water Connection**
  External pre-treatment and RO membrane allow operation directly from municipal water supply.
- **User-Centered Touchscreen**
  Intuitive interface with clear-text alerts, programmable volume dispensing, and stored dispensing logs for full traceability.
- **Fast Maintenance**
  Quick-connect fittings and tool-free cartridge changes for minimal downtime.
- **Advanced Monitoring & Protection**
  Leak detector, pressure/flow sensors, dry-run protection, real-time conductivity & temperature measurement, and automatic shut-off.
- **Full Recirculation & Dual UV (185/254 nm)**
  Ensures microbial purity and low TOC levels – even during standby, thanks to intelligent flushing and full-quality circulation.
- **Ultra-Compact Design**
  Possibly the **smallest footprint in its class** – fits effortlessly in every lab.
- **10 L or 50 L Tank**
  50 L tank provides pressurized outlet and dispensing gun for feeding lab equipment.
- **Plug & Use System**
  Delivered with all consumables and installation materials – quick to install, easy to operate.

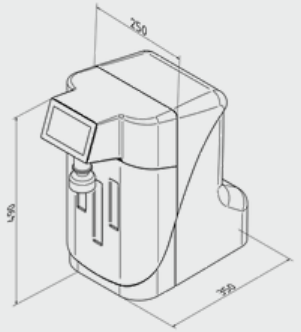
F1: Particle filter (inlet)
F2: Sterile filter capsule 0.2µm
F3: Particle filter (tank)
FI: Flow meter
LI: Level sensor
P1: RO pump
P2: Circulation pump
PI: Pressure sensor
RI RO: Conductivity cell permeate
RI UPW: Conductivity cell ultrapure water
RO: Reverse osmosis module
SO: Sterile overflow

Flow Chart
(simplified)

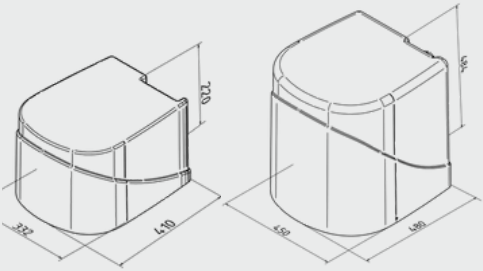
UF: Ultrafilter (optional)
UPW 182: Ultrapure water cartridge UPW 182
UV: UV lamp 185/254nm
V1: Pressure reducer
V2- V5: Solenoid valves
V6: Pressure hold valve



Dimensions System



Dimensions Tanks



10 L Tank 50 L Tank

Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Ultrapure water (Type 1)

Resistivity (Conductivity) at 25°C [2]	18.2 MΩ·cm (0.055 µS/cm)
Total Organic Carbon (TOC) [3]	≤ 2 ppb
Particle count [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	Adjustable, up to 2 L/min

Pure water - Tank (Type 3)

Conductivity at 25°C [2]	typically < 15 µS/cm)
Total Organic Carbon (TOC)	≤ 30 ppb
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 ≤5 ppb
[4] With sterile filter capsule at the POU
[5] With option – ultrafiltration module

For more information please visit:
www.neptec.de/TRITON_6_12

Type 2 or 3 from Tap Water

Lab Water System PROTEUS

Your complete water supply – from tap to pure within one powerful unit

PROTEUS – All in One System

The PROTEUS system is a fully integrated laboratory water purification unit engineered to deliver either Type 3 (RO water) or Type 2 (pure water) – depending on configuration with a polishing cartridge or EDI module.
With all treatment stages enclosed in a single compact housing – including pretreatment, reverse osmosis, post-treatment, mercury-free UV sterilization, an 80 L integrated tank, and a high-capacity distribution pump – PROTEUS is a true all-in-one solution for labs requiring reliable and continuous water supply.

PROTEUS Key Features – Integrated. Versatile. Centralized.

- **Dual Water Quality – Type 3 or Type 2**
  Produces Type 3 RO water by default directly from tap water; can be configured for Type 2 pure water using either polishing cartridges or an EDI module.
- **All-in-One System Design**
  Everything in one unit: pretreatment, RO membrane, post-treatment, 80L storage tank, and distribution – no external components needed.
- **Large 80 L Integrated Tank**
  Large secure storage of purified water with sterile vent filter and overflow for a hygienic operation.
- **High-Capacity Distribution Pump**
  Durable, low-noise pump ensures strong, stable supply to external loops, lab equipment, or multiple tapping points.
- **Flexible Applications**
  Perfect for central supply of dishwashers, autoclaves, climate chambers, analyzers, ultrapure water systems and more.
- **Touchscreen Interface**
  User-friendly control with multilingual menu, alarm log, dispensing options, and real-time monitoring.
- **Safe Operation**
  Equipped with dry-run protection, leak detection, pressure and flow sensors, and automatic routines.

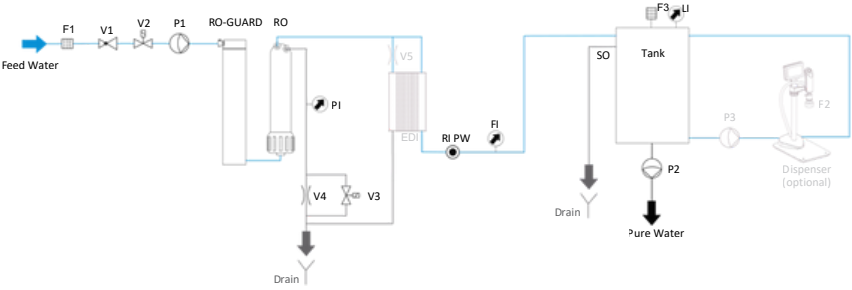
Optional Enhancements

Expand your PROTEUS system with **polishing cartridges and/or EDI module** for Type 2 water, mercury free **UV disinfection**, **loop integration,** external **tabletop dispenser**, additional water softener and full GMP/GLP **qualification documentation** – all tailored to meet advanced application demands and regulatory requirements.

EDI: Electrodeionization module (optional)
F1: Particle filter (inlet)
F2: Sterile filter capsule 0.2µm (optional)
F3: Sterile vent filter 0.2µm + CO Absorber
FI: Flow meter
LI: Level sensor
P1: RO pump
P2: Distribution pump
P3: Circulation pump (optional)

Flow Chart
(simplified)

PI: Pressure sensor
RI PW: Conductivity cell permeate
RI EDI: Conductivity cell pure EDI (optional)
RI UPW: Conductivity cell ultrapure water
RO: RO module
RO GUARD: Pre-treatment cartridge RO-GUARD
SO: Sterile overflow
V1: Pressure reducer
V2-V5: Solenoid valves

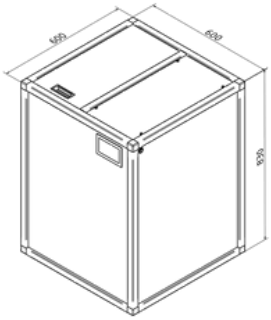


PROTEUS
+ Dispenser
with our innovative external dispenser

PROTEUS
+ Frame Extension
for softener or up to 2 polishing cartridges

PROTEUS UI
with external display

Dimensions



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Pure water

Conductivity at 25°C [2] (with EDI module or polishing cartridge)	< 0.2 µS/cm typ. 0.055-0.1 µS/cm
Retention rate	> 99 % ions, germs and bacteria
Total Organic Carbon (TOC)	≤ 30 ppb
Performance	40 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

For more information please visit:
www.neptec.de/PROTEUS_40

CLRW/CLSI from Tap Water

Lab Water System PROTEUS AS

Reliable water supply for clinical analyzers - 40 L/h

PROTEUS AS – All in One System

The PROTEUS AS is a fully integrated laboratory water purification system engineered to deliver clinical laboratory reagent water (CLRW) (complies with the CLSI guideline).
All treatment stages are enclosed in a single compact cabinet – including pretreatment, reverse osmosis, dual long-life polishing cartridges, mercury-free UV disinfection, an 80 L internal tank, sterile filtration and a low-noise booster pump. The system features continuous circulation right up to the consumer to ensure the highest water quality at the point of use.
In the event of a fault, the emergency supply bypass allows continued operation – ensuring analyzers stay supplied without interruption. The PROTEUS AS delivers consistent water quality, maximum safety, and cost-effective operation.

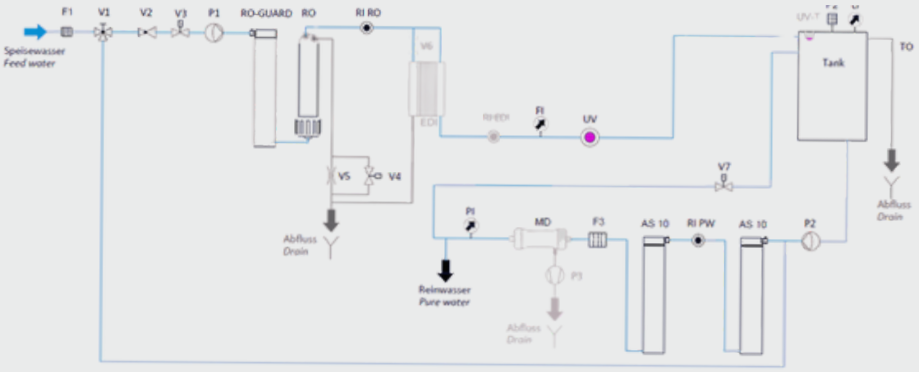
PROTEUS AS Key Features – Integrated. Reliable. Analyzer-Ready.

- **Advanced Purification Stages for Reliable Water Quality**
  Produces constant CLRW by default directly from tap water.
- **All-in-One System Design**
  Everything in one unit: pretreatment, RO membrane, 80L storage tank, mercury-free UV flow-through disinfection, sterile 0.2 µm filter, and dual polishing stage and distribution – no external components needed.
- **Large 80 L Integrated Tank with Complete Recirculation**
  Maintains the highest microbial purity with sterile vent filter and overflow – water is fully circulated to and from the point of use, ensuring optimum water quality.
- **High-Capacity Distribution Pump**
  Delivers pure water directly to analyzers with stable pressure and low noise.
- **Emergency Supply Bypass**
  Ensures uninterrupted water delivery via polishing cartridges if the main system is down.
- **Touchscreen Interface**
  User-friendly control with multilingual menu, alarm log, dispensing options, and real-time monitoring.
- **Safe Operation**
  Equipped with dry-run protection, leak detection, pressure and flow sensors, and automatic routines.
- **Large, Long-Life Consumables**
  Dual stainless steel cartridges (regenerable) or high-capacity disposable cartridges reduce maintenance and operating costs.

Optional Enhancements

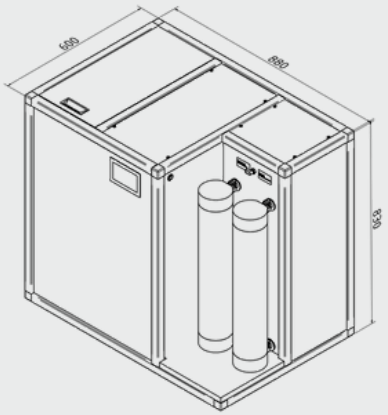
Upgrade your PROTEUS AS with an EDI module for reduced operating costs, degassing module for dissolved gas removal, stainless steel polishing cartridges for regeneration and cost savings, and full GMP/GLP qualification documentation.

Flow Chart
(simplified)



AS 10:	Pure water cartridges AS 10	P3:	Vacuum pump	UV-T:	UV tank disinfection (optional / mercury-free)
EDI:	Electrodeionization Module (optional)	PI:	Pressure sensor	V1:	Emergency supply valve
F1:	Inlet filter	RI EDI:	Conductivity measuring cell EDI	V2:	Pressure reducer
F2:	Sterile vent filter + CO2 absorber	RI PW:	Conductivity measuring cell pure water	V3:	Inlet solenoid valve
F3:	Sterile filter 0.2µm	RI RO:	Conductivity measuring cell permeate	V4:	Rinse solenoid valve
FI:	Flow sensor	RO:	Reverse osmosis membrane	V5:	Pressure hold valve
LI:	Level sensor	RO-GUARD:	Pre-treatment cartridge RO-GUARD	V6:	Concentrate valve EDI (optional)
P1:	RO pump	TO:	Sterile overflow	V7:	Circulation solenoid valve
P2:	Circulation pump	UV:	UV disinfection (mercury-free)		

Dimensions



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Pure water

Conductivity at 25°C [2]	< 0.1µS/cm
Retention rate	> 99 % ions, germs and bacteria
Total Organic Carbon (TOC)	≤ 30 ppb
Bacteria	Typically < 1 CFU/mL
Dissolved silica	< 0.05 mg/L
Performance	40 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

For more information please visit:
www.neptec.de/PROTEUS_AS

Type 3 from Tap Water

Lab Water System TRITON RO

Lab water for feeding dishwashers and other lab utilities - 6 or 12 L/h

For more information please visit:
www.neptec.de/TRITON_RO

TRITON RO – Compact. Efficient. Laboratory-Ready.

The TRITON RO 6 | 12 combines direct tap water connection, high-quality reverse osmosis, and intelligent monitoring in a footprint that fits almost anywhere. Designed for laboratories needing 6 or 12 L/h, it delivers >98% retention of ions, bacteria, and particles while offering flexible storage with 10 L or 50 L tanks.
An integrated pre-treatment cartridge protects the RO membrane for long service life, and quick-connect couplings make consumable changes fast and tool-free. The system features a large, intuitive touchscreen with conductivity and temperature monitoring, clear-text alarms, and early-change reminders.
The TRITON RO is available with an optional UV unit (185|254 nm) for ultimate microbial control and TOC reduction, and can be wall-mounted for maximum space efficiency. The PE storage tanks feature a smooth interior, sterile overflow, sterile vent filter, and CO_2 absorber to maintain purity during storage.

Type 2 or 3 from Tap Water

Lab Water System RO delta

Consistent high-quality Type 2 or Type 3 supply - 40 L/h

For more information please visit:
www.neptec.de/RO_delta

RO delta – Small footprint. Lasting Quality.

The RO delta is a compact, ready-to-connect reverse osmosis system designed for reliable Type 2 or 3 water production at 40 L/h. It combines pretreatment, high-performance RO membranes, and advanced monitoring into a single, space-saving housing.
The RO delta ensures stable water quality while minimizing maintenance through quick-release consumables. The hydrostatic level probe enables precise tank level measurement up to 2 m, ensuring reliable supply and storage control.
Operation is simple via the large, intuitive 5" touchscreen, which offers conductivity and temperature monitoring, variable limit settings, and early-change notifications for consumables. Safety features include leak detection, dry-run protection, pressure and flow monitoring, and automatic shut-off in case of anomalies.

Optional upgrades include a UVC-LED flow-through disinfection module for enhanced microbial control, or an EDI module for achieving Type 2 quality (< 0.2 µS/cm, typically 0.055–0.1 µS/cm).
The RO delta delivers dependable performance with low operating costs, all in a footprint that integrates easily into any lab environment.

Type 3 from Tap Water

Central Water System RO gamma

High performance with minimum operating costs - 60 or 120 L/h

For more information please visit:
www.neptec.de/RO_gamma

RO gamma – Compact. Integrated. Reliable.

A compact, wall-mounted RO system delivering reliable Type 3 water for dishwashers, autoclaves, and climate chambers—according to EN 15883.

Despite its size, RO gamma integrates all key components in one cabinet – including a high-pressure pump, RO membrane, automated rinsing, and a 5" touchscreen controller. It ensures >98% retention of ions, bacteria, and particles, while concentrate recycling minimizes water loss. Flow and pressure sensors, leak detection, and programmable alarms ensure safe and efficient operation.

The touch display offers intuitive control of all performance parameters, permeate conductivity, WCF settings, and includes USP-compliant conductivity and temperature monitoring. Designed with scalability in mind, the RO gamma is modularly expandable, providing a flexible and future-proof solution for Type 3 water supply.

Type 2 from Softened Water

Central Water System RO beta

Economical Type 2 water up to 1100 L/h – for labs, clinics, and industry

For more information please visit:
www.neptec.de/RO_beta

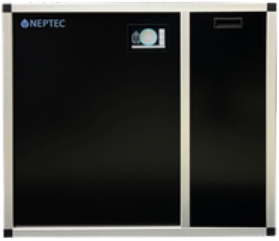
RO beta – High Capacity. Low Maintenance.

The RO beta is a high-performance, ready-to-connect reverse osmosis system with integrated EDI module, designed for central water supply in laboratories, cleanrooms, sterilization units, and pharmaceutical production. Built on a solid, space-efficient frame (W 1300 × D 600 × H 1600 mm), it combines high capacity with outstanding operational safety and long-term efficiency.
All key components – from pre-treatment and reverse osmosis to EDI, UV disinfection and control – are fully integrated into a single system. The 10" touchscreen offers intuitive control of all performance parameters, including conductivity, pressure and flow rates. Concentrate recycling, permeate circulation, and remote monitoring reduce operating costs while ensuring continuous water quality.
With flow rates of 800 or 1100 L/h, RO beta complies with ASTM, CLSI, EN and international standards, making it a versatile and scalable solution for high-purity Type 2 water applications.

Type 2 or Type 3 from Tap Water

Central Water System NEREUS

180L/h pure water – engineered for performance, reliability, and maximum integration



NEUREUS – Next-Generation Performance

A fully integrated, mobile pure water solution engineered for performance, reliability, and complete operational insight.
The NEREUS delivers up to 180 L/h of consistent Type 2 or Type 3 water and can be configured with EDI, degassing, and UV options depending on purity requirements. All critical components are integrated into a single movable cabinet, enabling fast installation, repositioning, and service accessibility.

NEREUS Key Features – Integrated. Connected. Adaptable.

Intelligent System Architecture
Fully integrated purification stages – including pretreatment, 180 L/h reverse osmosis module, booster pump, and digital controller – all housed in a compact movable cabinet on industrial rollers for maximum installation flexibility.

5" Touchscreen Interface
Modern, multilingual display with real-time parameters, alarm and event history, filter status, and secured service-access levels.

Digital Monitoring & High-Precision Sensors
- Digital flow meters on all flow paths (feed, permeate, concentrate, recirculation) for full hydraulic transparency
- Digital pressure sensor for precise monitoring of operating pressure and automated protection routines

Advanced Purification Options – Fully Cabinet-Integrated
Optional high-purity modules seamlessly integrated inside the cabinet:
- EDI module for enhanced Type 2 purity
- Degassing membrane for CO_2 reduction
- UVC-LED disinfection for microbial control

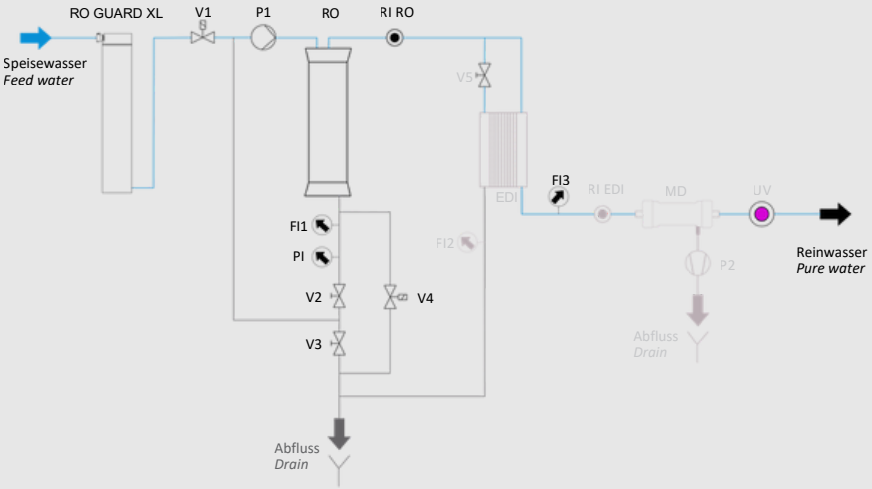
Highly Efficient RO with Concentrate Recycling
Optimized reverse osmosis architecture with integrated concentrate recycling, ensuring minimal wastewater production and significantly improved recovery rates – contributing to sustainable and cost-efficient operation.

Compact, Low-Noise & Movable Cabinet
Noise-optimized cabinet with a footprint of W 880 × D 600 mm, mounted on robust rollers for easy relocation and service access.

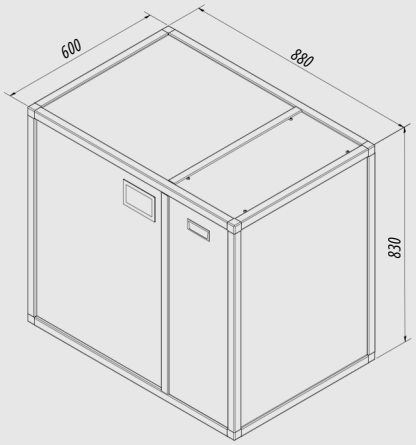
Flow Chart
(simplified)

EDI: Electrodeionization module (optional)
FI1-3: Flow meters
P1: RO pump
P2: Vacuum pump (optional)
PI: Pressure sensor

RI RO: Conductivity cell permeate
RI EDI: Conductivity cell pure EDI (optional)
RO: RO module
RO GUARD XL: Pre-treatment cartridge RO-GUARD XL
V1-V4: Valves



Dimensions



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Pure water

Conductivity at 25°C [2] (with EDI module or polishing cartridge)	<0,2 µS/cm typ. 0.055-0.1 µS/cm
Retention rate	> 99 % ions, germs and bacteria
Total Organic Carbon (TOC)	< 10 ppb [3]
Proportional production rate	up to 75% (adjustable)
Microorganisms	< 5 CFU/mL [3]
Performance at 10°C	180 L/h

[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] with optional sterile filter and UV disinfection

For more information please visit:
www.neptec.de/NEREUS

CLRW/CLSI from Tap Water

Lab Water System NEREUS AS

High-performance water supply for clinical analyzers - 180 L/h

NEREUS AS – HIgh-Capacity All in One System

The NEREUS AS is a fully integrated water system designed to deliver continuous CLRW directly from tap water. With a production capacity of 180 L/h, it is ideal for a stable and dependable purified water supply.
All treatment stages are enclosed in a single, compact cabinet – including a high-performance reverse osmosis module, UV disinfection, polishing cartridges, sterile filtration, an integrated storage tank, and a distribution pump.
The NEREUS AS features advanced concentrate recycling, significantly reducing wastewater for economical operation.
In the event of a fault, the emergency supply bypass allows continued operation – ensuring analyzers stay supplied without interruption.

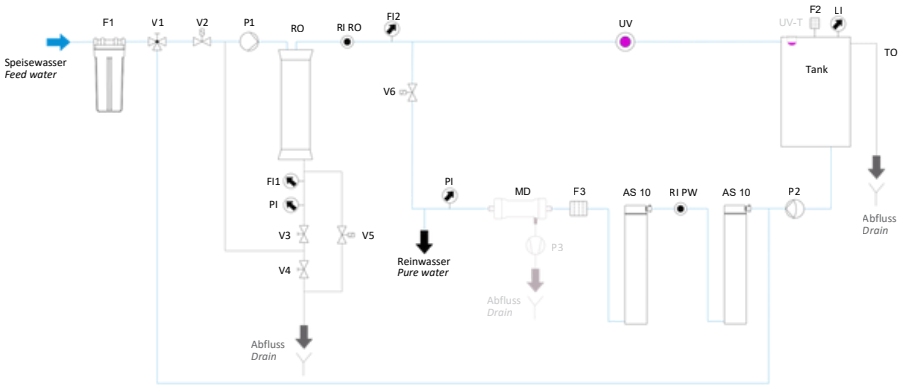
NEREUS AS Key Features – Integrated. Efficient. Sustainable.

- **Highly Efficient Reverse Osmosis with Concentrate Recycling**
  State-of-the-art RO design with concentrate recycling minimizes wastewater and maximizes recovery, ensuring sustainable operation and low running costs.
- **Advanced Purification Technologies for Consistent CLRW Quality**
  Delivers stable, high-quality water directly from tap water, ensuring reliable pure water.
- **All-in-One System Design**
  Everything in one unit: pretreatment, RO membrane, 80L storage tank, mercury-free UV flow-through disinfection, sterile 0.2 µm filter, and dual polishing stage and distribution.
- **80 L Integrated Tank with Full Recirculation**
  Ensures excellent microbial stability with sterile venting and controlled overflow; continuous recirculation to and from the point of use maintains optimal water quality at all times.
- **Emergency Supply Bypass**
  Provides continuous water availability via polishing cartridges in the event of a system fault, ensuring uninterrupted operation.
- **Touchscreen Interface**
  User-friendly control with multilingual menu, alarm log, dispensing options, and real-time monitoring.
- **Operational Safety Features**
  Equipped with dry-run protection, leak detection, pressure and flow sensors, and automatic routines.
- **Large, Long-Life Consumables**
  High-capacity cartridges reduce maintenance and operating costs.

Optional Enhancements

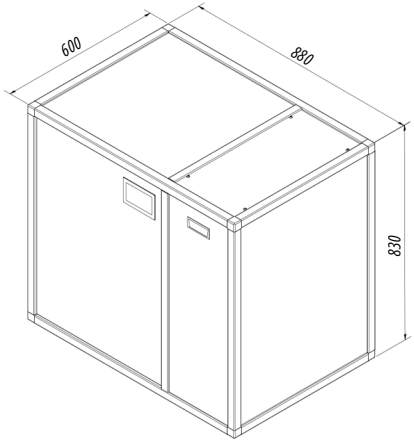
Upgrade your NEUREUS AS with a degassing module for dissolved gas removal and full GMP/GLP qualification documentation.

Flow Chart
(simplified)



AS 10:	Pure water cartridges AS 10	P3:	Vacuum pump	UV-T:	UV tank disinfection (optional / mercury-free)
F1:	Prefilter	PI:	Pressure sensor	V1:	Emergency supply valve
F2:	Sterile vent filter + CO2 absorber	RI PW:	Conductivity measuring cell pure water	V2:	Pressure reducer
F3:	Sterile filter 0.2µm	RI RO:	Conductivity measuring cell permeate	V3:	Inlet solenoid valve
FI1:	Flow sensor concentrate	RO:	Reverse osmosis membrane	V4:	Rinse solenoid valve
FI2:	Flow sensor permeate	RO-GUARD:	Pre-treatment cartridge RO-GUARD	V5:	Pressure hold valve
LI:	Level sensor	TO:	Sterile overflow	V6:	Circulation solenoid valve
P1:	RO pump	UV:	UV disinfection (mercury-free)		
P2:	Circulation pump				

Dimensions



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Pure water

Conductivity at 25°C [2]	< 0.1µS/cm
Retention rate	> 99 % ions, germs and bacteria
Total Organic Carbon (TOC)	≤ 30 ppb
Bacteria	Typically < 1 CFU/mL
Dissolved silica	< 0.05 mg/L
Proportional production rate	up to 75% (adjustable)
Performance	180 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

For more information please visit:
www.neptec.de/NEREUS_AS

Type 2 or Type 3 from Tap Water

Central Water System RO alpha

60 - 1200L/h pure water – engineered for performance, reliability, and flexibility

RO alpha – Smart Water. Complete System.

RO alpha is a fully integrated, space-saving pure water system that delivers reliable Type 2 or 3 water directly from tap water. With flow rates from 60 to 1200 L/h, RO alpha is ideal for supplying entire laboratory floors, hospital departments, or small loops – all in compliance with ASTM and international standards.

Everything is housed in one intelligently designed cabinet: pre-treatment, reverse osmosis, water softening, tank, distribution pump, and full digital control. The system features a 10" intuitive touchscreen and remote monitoring for full operational visibility and control – from anywhere.

RO alpha Key Features – Integrated. Connected. Adaptable.

- **All-in-One System Architecture**
  Fully integrated components (pre-treatment, RO, tank, pump, controller) in one cabinet – no external elements needed.
- **10" Touchscreen Interface**
  Modern, multilingual display with real-time parameters, data logging, trend graphs, alarms, filter status, and service access codes.
- **Remote Monitoring via Wi-Fi**
  Access live system data and control functions via VNC connection – optional Modbus-TCP and Ethernet interface available.
- **Flexible Flow Rates**
  Available in capacities from 60 to 1200 L/h, suitable for labs, medical environments, and industrial applications.
- **Extensive Optional Configurations - integrated in the cabinet**
  Customize with twin or cabinet water softener, EDI module for enhanced Type 2 purity, 160l or 300l tank (RO alpha PLUS), sterile overflow & venting, UV disinfection, hardness monitor, loop integration, and circulation control.
- **Powerful Distribution Pumps**
  WILO or Grundfos booster pumps (direct or loop variants) with smart pressure regulation – rated flow up to 5 m^3/h and head up to 80 m.
- **Sustainable & Cost-Efficient**
  Low-energy components, 99% retention of ions, organics, and bacteria, with concentrate recycling for reduced wastewater and improved recovery (up to 75%).
- **Compact Footprint, Quiet Operation**
  Noise-reducing cabinet design; footprint W 800 × D 600 – ideal for space-conscious technical rooms and labs.

Integrated Components

Twin Softener

EDI Module

160L or 300L Tank

Distribution Pump

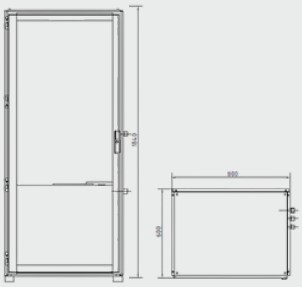
Cabinet Softener

Hardness Monitor

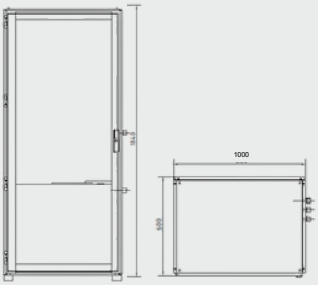
UV Disinfection

Loop Circulation Pump

Dimensions RO alpha



Dimensions RO alpha PLUS



Feed water requirement

Feed water quality	Potable tap water
Conductivity at 25°C	< 2000 µS/cm
Total Organic Carbon (TOC)	< 1 ppm
Inlet Pressure	1 - 6 bar
Temperature	5 - 35°C

Pure water

Conductivity at 25°C [2] (with EDI module or polishing cartridge)	<0,2 µS/cm typ. 0.055-0.1 µS/cm
Retention rate	> 99 % ions, germs and bacteria
Total Organic Carbon (TOC)	< 10 ppb [3]
Proportional production rate	up to 75% (adjustable)
Microorganisms	< 5 CFU/mL [3]
Performance at 10°C	60, 180, 350, 500, 900 or 1200 L/h

[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] with optional sterile filter and UV disinfection

For more information please visit:
www.neptec.de/RO_alpha

For more information please visit:
www.neptec.de/RO_alpha_PLUS

Demineralised Water

Ion Exchangers IE 2500 - 15000

From tap water to demineralised with durable stainless-steel design

Ion Exchangers – Cost-effective demineralisation.

The NEPTEC IE series provides an economical and reliable solution for producing demineralised water, available in sizes from 2500 to 15000 L capacity. Each pressure-resistant stainless-steel cartridge is filled with high-quality mixed-bed resin to remove anions and cations, achieving 0.1–20 µS/cm water quality. With flow rates from 500 to 2400 L/h, the IE systems are ideal for glassware washers, autoclaves, sterilizers (EN 285), cooling systems, ultrapure water units, and various industrial applications including PCB rinsing, boiler feed, and battery water in compliance with DIN VDE 0510.

The robust stainless-steel housing ensures durability under pressures up to 10 bar, while optional quick connections make installation and resin replacement simple. Resin type and configuration can be customised for specific applications, providing maximum flexibility.

FLOW RATE L/h	**CAPACITY** l @ 300µS/cm	**NEPTEC** Description	**RESIN VOLUME** l	**DIMENSIONS** Ø x height mm
300	2500	IE 2500	17	240 X 490
950	2800	IE 2800	20	240 X 570
1000	3600	IE 3600	26	240 X 700
1000	6000	IE 6000	40	240 X 1155
2000	8400	IE 8400	50	363 X 600
2500	11000	IE 11000	75	363 X 850
3000	15000	IE 15000	100	363 X 1100

Additional sizes and versions, such as lightweight, small volume synthetic cartridges, are available on request – ensuring the perfect ion exchanger solution for every application.

For more information please visit:
www.neptec.de/ion-exchanger

Conductivity Monitoring for Pure Water

NEPTEC Conductivity Meters

Simple. Accurate. Reliable.

Conductivity Meters – Accurate monitoring for every application.

NEPTEC offers a complete range of analogue, LED, and digital conductivity meters for continuous online monitoring of pure and ultrapure water quality. With measuring ranges from 0.055 to 100 µS/cm, the meters are ideal for use with ion exchangers, reverse osmosis systems, and ring circuits.
Depending on the model, features include LED or analogue displays, digital readouts with temperature compensation, freely adjustable limits, and visual/acoustic alarms for maximum reliability. All models are supplied ready-to-connect with measuring cell, T-piece, and hose set – making them perfectly suited for laboratories, clinics, and industrial applications.

Conductivity Meter LED 320

The LED 320 continuously measures pure water quality in the range of 0.1–20 µS/cm. Its simple LED display switches from green to yellow to red for instant quality status. With an internal 5-year battery, it's maintenance-free and practical.

Conductivity Meter LED 520

The LED 520 provides continuous monitoring of pure water from ion exchange cartridges with a measuring range of 0.1–20 µS/cm. Five limit zones ensure clear water quality indication via LED display.

Conductivity Meter A 50

The A 50 offers reliable online monitoring of pure water with a measuring range of 0.1–50 µS/cm. Featuring an analogue display and easy installation directly on the cartridge, it is a cost-effective choice for labs, clinics, and industry.

Conductivity Meter D 200

The D 200 conductivity meter offers accurate online monitoring up to 100 µS/cm, ideal for labs, clinics, and industry. A digital display with limit setting and temperature-compensated measurement ensures clarity and reliability.

Conductivity Meter DB 800 / 900

The DB 800 is a professional digital conductivity meter with a range of 0.055–20 µS/cm or 0.055-100µS/cm and temperature monitoring. Designed for ultrapure water, RO systems, or loop monitoring, it includes freely adjustable limits, acoustic/visual alarms, and a potential-free contact for external signaling.

NEPTEC

For more information please visit:

www.neptec.de

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