

Ultrapure Water System

HALIOS



HALIOS lab water systems make your work as pleasant and comfortable as possible and maximize at the same time your lab productivity.



The HALIOS 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.

Interact only with your external tabletop dispenser. The compact production unit can be easily integrated in the lab environment.



Features

- ✓ Reliable ultrapure water quality - ASTM type 1+
- ✓ External dispenser
 - ❖ detachable and ergonomically shaped
 - ❖ rotatable and vertically adjustable
- ✓ 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 are 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
- ✓  ECO Mode to extend the cartridge life by up to 20%



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 four 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
- Dispenser with microfiltration for the sterile ultrapure water withdrawal at the point of use
- Wall brackets for production unit and dispenser



Various options to adapt to your specific needs:

- 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)
- Real-time TOC monitor for the continuous TOC measurement of the organic compound acc. to USP
- Up to 4 external dispensers can be connected to one production unit
- Additional conductivity cell to monitor the feedwater quality
- Potential-free contact for collective error signal
- XXL dispenser (height +15cm) for even more space underneath the dispensing handle
- Qualification documents



User interface

- Large and intuitive touchscreen
- Multilingual interface
- 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
- ECO Mode to extend the cartridge life by up to 20%, reducing operating costs and the amount of waste



Tabletop dispenser

- Ergonomic design for a one-handed operation
- All dosing functions can be easily executed with the rotary encoder at the dispensing handle
- The external dispenser can be placed independent of the production unit
- For an even greater range the HALIOS handle can be detached and reattached with a simple hand movement



Feed water requirements

Feed water quality	pre-treated water (EDI, DI, RO or distilled water)
Conductivity at 25°C	< 100µS/cm
Total organic carbon (TOC)	< 50ppb
Inlet pressure*	max. 6bar
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	18.2MΩcm (0.055µS/cm)
Total Organic Carbon ³ (TOC)	≤ 2ppb (µg/l) ≤ 10ppb (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	< 0,004ng/ml
DNases ⁵	< 0,024pg/µl
Flow rate	Up to 2l/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

Technical data

Ambient temperature	+2 - 35°C
Supply voltage	90-240V / 50-60Hz
Connected load	120W
Connection size	R ¾"
Weight – Production Unit	15kg
Weight – Tabletop Dispenser	7kg



Dimensions

