



## Ultrapure Water System HALIOS 12



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

The HALIOS 12 lab water series is modular designed and can be connected directly to tap water. With an integrated 10l tank and a production rate of 12l/h it provides a high flexibility to adapt to your specific needs. Each system meets and exceeds ASTM type 1 and 2 standards. An integrated pre-treatment cartridge guarantees a long durability of the RO membrane and the following purification cartridges as well as a constant ideal ultrapure water quality for 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<sup>+</sup> and 2
- ✓ External dispenser
  - ◆ detachable and ergonomically shaped
  - ◆ rotatable and vertically adjustable
- ✓ Pre-treatment cartridge for a direct connection to tap water
- ✓ 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
- ✓ 10l tank with complete recirculation ensures the highest microbial purity
- ◆ 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
- Two low-noise and durable pressure and recirculation pumps 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 protect the RO membrane as well as guarantees reproducible results of analysis, a high capacity and low operating costs
- RO membrane removes up to 99% of all impurities in the feed water
- 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
- Dispenser with microfiltration for the sterile ultrapure water withdrawal at the point of use
- 10l pure water tank with conical bottom and pure water (type 2) outlet



### 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)
- 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
- External pure water tanks in 30, 60 or 100l
- EDI module for residual desalination for a continuous quality improvement and lower running costs

## 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 $\Omega$ 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 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%



## 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	Potable tap water
Conductivity at 25°C	< 2000µS/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

<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*

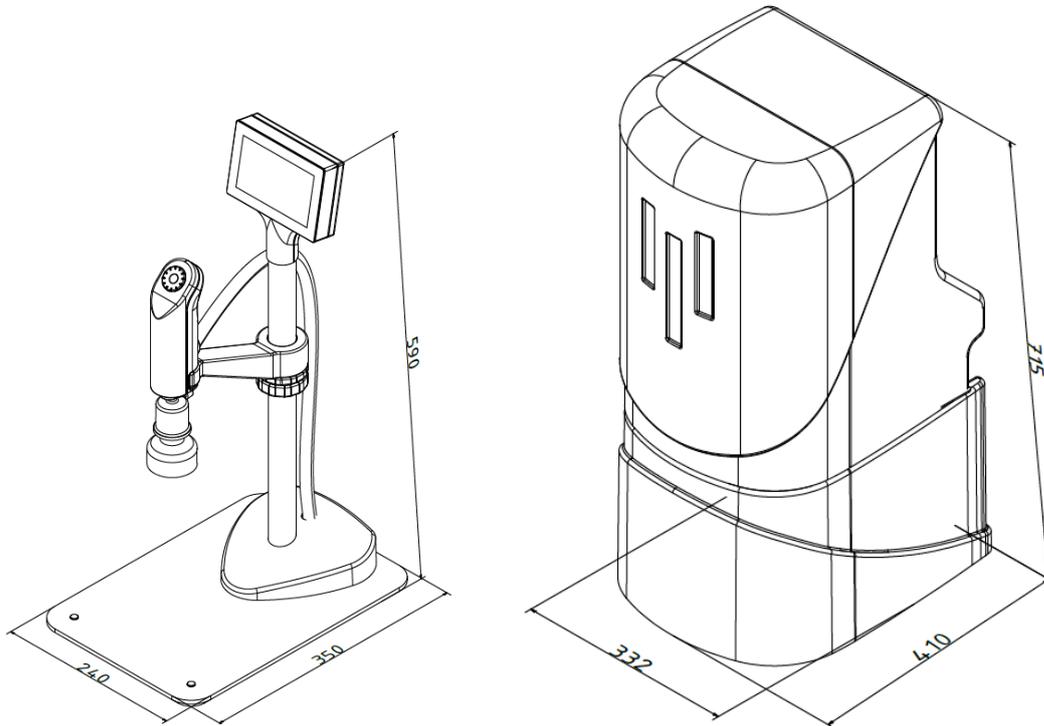
<sup>4</sup> *With sterile filter capsule at the POU*

<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"

## Dimensions



## Ordering information

### Lab water system

#### Catalogue Number

10000112

#### Description

Ultrapure water system HALIOS 12

#### Accessories / options

10000101

Option – UV lamp 185 | 254nm

10000102

Option – Ultrafiltration module

10000103

Option – TOC monitor

10000455

Option - EDI Modul

10000454

Wall mount for production unit and tank HALIOS 6 | 12

10000453

Wall mount for Dispenser HALIOS

10000430

Disinfection kit HALIOS incl. one disinfectant

10000104

Additional remote dispenser HALIOS  
(up to 3 additional)

10000340

Option – XXL Dispenser HALIOS (Height + 15cm)

10000341

Option - 4m connection between dispenser and  
production unit (instead of 1.5m standard)

**Zubehör / Optionen**

Bestellnummer	Beschreibung
10000367	Water softener MixMulti WEA 25 (Recommended when feed water > 20°dH)
10000376	Upgrade - Pure water tank 30l incl. level sensor, circulation pump, dispensing tap, sterile overflow and sterile vent filter + CO <sub>2</sub> Absorber
10000377	Upgrade - Pure water tank 60l incl. level sensor, circulation pump, dispensing tap, sterile overflow and sterile vent filter + CO <sub>2</sub> Absorber
10000378	Upgrade - Pure water tank 100l incl. level sensor, circulation pump, dispensing tap, sterile overflow and sterile vent filter + CO <sub>2</sub> Absorber
10000456	Option - UV tank disinfection for 30/60/100l tank
10000380	Option – Pressure outlet for 30/60/100l tank 120l/h at 3 bar
10000480	Option – External pressure pump 3m <sup>3</sup> /h at 3 bar
10000302	Qualification documents HALIOS 6   12

**Consumables**

10000113	Pretreatment cartridge HALIOS RO-GUARD
10000115	RO membrane 12/h
10000107	Polishing cartridge HALIOS UPW 182
10000110	Replacement ultrafilter
10000108	Replacement UV-lamp 185   245nm
10000109	Sterile filter capsule 0.2µm
10000116	Sterile vent filter 0.2µm
10000431	Disinfectant HALIOS in a syringe (Disinfection kit necessary)