



# Arium® Pro Ultrapure Water Systems

Application-orientated  
and flexible to meet  
the highest demands

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## Advantages

- Modular – System selection specifically for your application
- Flexible – Perfect integration into any laboratory
- Easy to use – Display with touch function and intuitive menu
- Fast – Favorites function with direct access for recurring volumes

## Product Description

As a reliable source of ultrapure water, the Arium® Pro series offers a flexible and modular system which, compared to conventional devices, demonstrates excellent added value.

All systems produce consistent ASTM Type 1 ultrapure water quality and provide the best reproducible results. The ultrapure water can be extracted at up to 2 litres per minute with a conductivity of 0.055  $\mu\text{S}/\text{cm}$  ( $18.2 \text{ M}\Omega \times \text{cm}$ ). When using an Arium® Sterile Plus final filter, the ultrapure water is virtually free of microorganisms.

The patented Sartorius technology, the SD card slot, the long service life and low maintenance requirement distinguish the Arium® Pro systems as an easy-to-use, economical and reliable Type 1 ultrapure water system.

## Modular

Various device configurations are specifically tailored to your application. Arium® Pro delivers any desired ultrapure water quality for general, analytical and life science applications.

## “Favorites” function

With the new favorites function it is possible to save recurring volumes and retrieve them as required by direct access.

Simplify your daily routine by using the new function to save time and work more efficiently in the laboratory.

## Technical Specifications

Dimensions: width × height × depth	35.0 × 49.2 × 45.1 cm
Empty weight	17–19 kg, depending on the device type
Operating weight	27–29 kg, depending on the device type
Power supply	100–240 VAC (±10%); 50–60 Hz, 130 VA (max.)
Operating temperature	2 °C–35 °C at max. 80% relative humidity
Storage temperature	5 °C–45 °C at max. 80% relative humidity
Data output	SD card slot <sup>2</sup> , RS-232 interface

## Display with touch function

Simply navigate intuitively in the easy-to-use and clear menu by lightly touching the display – even with gloves. Even the opening of the dispensing valve can be controlled by the unique touch display.

## Flexible

The space-saving installation of the device on, under, or above your workstation integrates it perfectly into any laboratory. The positioning of the display and the water dispensing point is very flexible.

## Feed Water Quality

Treated water by reverse osmosis, distillation or deionization.<sup>1</sup>

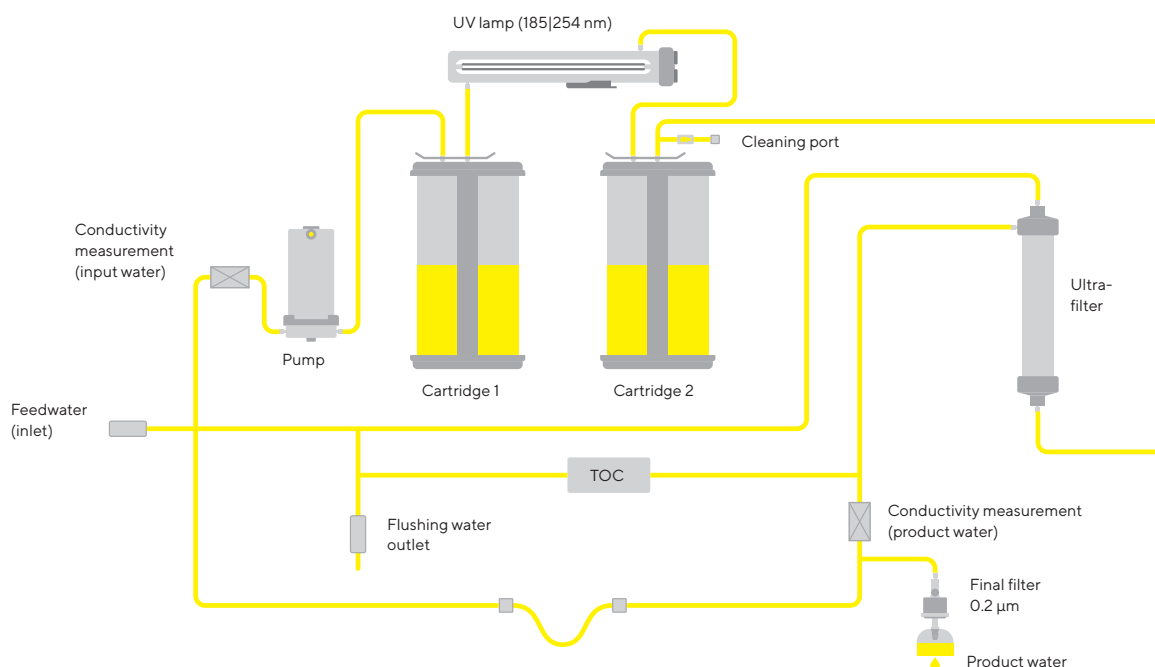
Input pressure <sup>3</sup>	0–6.9 bar, recommended > 2 bar
Temperature	2–30 °C
Specific conductivity	< 100 µS/cm compensated to 25 °C
TOC	< 50 ppb
Turbidity	< 1 NTU
pH value	4–10

<sup>1</sup> With the Universal Kit, Arium® Pro can be directly fed with untreated drinking water to produce ultrapure water.

The appropriate Sartorius application specialists should be consulted to check the feed water specifications.

<sup>2</sup> Does not apply to Arium® Pro

<sup>3</sup> Dynamic pressure/flow pressure 100 L/h



Flow diagram for Arium® Pro VF TOC

# Water Applications

	Pro	Pro DI	Pro UV	Pro UF	Pro VF
<b>Water Quality</b>					
Type 1 Water	■	■	■	■	■
<b>Lab Water System by Daily Water Consumption</b>					
Type 1 ultrapure water approx. 40 - 100 Liter/day	■	■	■	■	■
<b>General Laboratory Application</b>					
Buffer, media and pH solutions	■	■	■	■	■
Histology	■	■	■	■	■
ELISA (Enzyme-Linked Immunosorbent Assay)	■	■	■	■	■
AAS (Atomic Absorption Spectroscopy)	■	■	■	■	■
Solutions for chemical analysis and synthesis	■	■	■	■	■
GF-AAS (Graphite Furnace Atomic Absorption Spectrometry)	■	■	■	■	■
Preparation of reagents	■	■	■	■	■
Photometry	■	■	■	■	■
<b>Molecular Biology   Lifescience Application</b>					
Electrophoresis				■	■
Northern Blot				■	■
Southern Blot				■	■
Western Blot				■	■
Endotoxin analysis				■	■
Immunocytochemistry				■	■
Production of monoclonal antibodies				■	■
PCR (Polymerase Chain Reaction)				■	■
DNA Sequencing				■	■
Nutrient media for cell culture (Mammalia & plant)				■	■
Chromatography				■	■
<b>Analytical Application</b>					
SPE (Solid phase extraction)			■		■
Trace metal analysis			■		■
IC (Ion chromatography)			■		■
ICP-MS (Inductively Coupled Plasma Mass Spectrometry)			■		■
GC-MS (Gas Chromatography-Mass Spectrometry)			■		■
HPLC (High-Performance Liquid Chromatography)			■		■
TOC analysis			■		■

All displayed applicable systems starting with the minimal requested water quality criteria

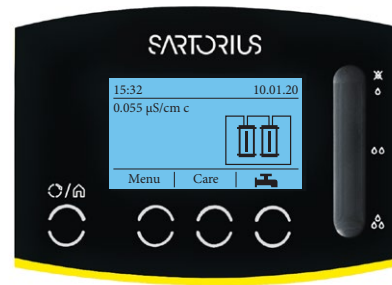
# Arium® Pro DI and Arium® Pro

## Description

The Arium® Pro DI produces ASTM Type 1 ultrapure water and is used for standard daily laboratory applications.

The water is treated using the specially developed Elemental Kit, which reliably removes organic and inorganic impurities from the feed water using a mixture of activated carbon and ion exchange resins.

To protect against contamination by particles and bacteria, an Arium® Sterile Plus can additionally be connected at the consumer endpoint.



A more cost-effective alternative is the Arium® Pro. Reduced to the most important functions, it produces ultrapure water without compromising quality.

## Product Water Quality

Water purification method	Adsorption by means of spherical activated carbon, deionization, optional end-position particle and sterile filtration
Water type	ASTM Type 1 ultrapure water
Output	120 L/h
Water dispensing flow rate <sup>4</sup>	0.1–2 L/min, adjustable
Volume-controlled dispensing <sup>4</sup>	0.05 in 0.05 L step, 0.1–2.0 L in 0.1 L steps, 2.0–20 L in 1 L steps, 20–60 L in 5 L steps
Volume accuracy <sup>5</sup>	3% between 0.25 L and 60 L
Conductivity <sup>1</sup>	0.055 µS/cm compensated to 25 °C
Resistivity <sup>1</sup>	18.2 MΩ × cm compensated to 25 °C
TOC <sup>3</sup>	< 5 ppb
Bacteria <sup>2</sup>	< 0.001 CFU/mL
Particle content <sup>2</sup>	No particles > 0.22 µm

<sup>1</sup> Measured value output adjustable to 25 °C, compensated or uncompensated

<sup>2</sup> When using an Arium® Sterile Plus final filter

<sup>3</sup> Feedwater < 50 ppb TOC

<sup>4</sup> At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

<sup>5</sup> Under constant operating conditions

## Ordering Information

### Arium® Pro DI and Pro systems, for the production of ASTM Type 1 ultrapure water

Scope of supply: 1 Arium® Pro or Pro DI, water guard and connection set

Order number	Description
H2Opro-DI-T	Arium® Pro DI benchtop device
H2Opro-DI-B	Arium® Pro DI wall-mounted device
H2Obasic-T	Arium® Pro benchtop device
H2Obasic-B	Arium® Pro wall-mounted device

For under-bench installation of the Arium® Pro DI devices please order a comparable bench-top device, as well as the conversion kit described under the accessories (H2O-ACK-D).

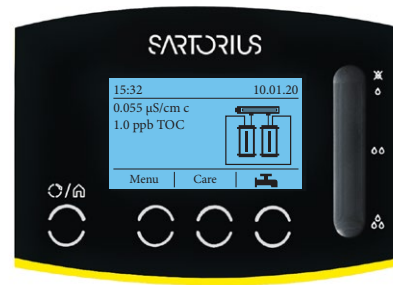
# Arium® Pro UV

## Description

The Arium® Pro UV produces ASTM Type 1 ultrapure water and is used for critical analytical applications in the laboratory.

In addition to the removal of organic and inorganic impurities via the Analytical Kit, by means of a mixture of activated carbon and ion exchange resins, the Arium Pro UV also purifies the water via a UV lamp.

The UV lamp (185|254 nm) reduces organic components to a minimum (TOC ≤ 2 ppb) and thus ensures reliable and precise analytical results.



Current TOC values can be continuously measured by the optionally integrated TOC monitor and shown on the display.

An Arium® Sterile Plus can also be connected to the consumer endpoint to protect against particulate and bacterial contamination.

## Product Water Quality

Water purification method	Adsorption by means of spherical activated carbon, deionization, UV irradiation, optional end-position particle and sterile filtration
Water type	ASTM Type 1 ultrapure water
Output	120 L/h
Water dispensing flow rate <sup>4</sup>	0.1 – 2 L/min, adjustable
Volume-controlled dispensing <sup>4</sup>	0.05 in 0.05 L step, 0.1 – 2.0 L in 0.1 L steps, 2.0 – 20 L in 1 L steps, 20 – 60 L in 5 L steps
Volume accuracy <sup>5</sup>	3% between 0.25 L and 60 L
Conductivity <sup>1</sup>	0.055 µS/cm compensated to 25 °C
Resistivity <sup>1</sup>	18.2 MΩ × cm compensated to 25 °C
TOC <sup>3</sup>	≤ 2 ppb
Bacteria <sup>2</sup>	< 0.001 CFU/mL
Particle content <sup>2</sup>	No particles > 0.22 µm

<sup>1</sup> Measured value output adjustable to 25 °C, compensated or uncompensated

<sup>2</sup> When using an Arium® Sterile Plus final filter

<sup>3</sup> Feedwater < 50 ppb TOC

<sup>4</sup> At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

<sup>5</sup> Under constant operating conditions

## Ordering Information

### Arium® Pro systems, for the production of ASTM Type 1 ultrapure water

Scope of supply: 1 Arium® Pro with UV lamp (185 | 254 nm), water guard and connection set

Order number	Description
H2Opro-UV-T	Arium® Pro UV benchtop device, including UV lamp
H2Opro-UV-B	Arium® Pro UV wall-mounted device, including UV lamp
H2Opro-UV-T-TOC	Arium® Pro UV benchtop device, including UV lamp and TOC monitor
H2Opro-UV-B-TOC	Arium® Pro UV wall-mounted device, including UV lamp and TOC monitor

For under-bench installation of the Arium® Pro UV devices please order a comparable bench-top device, as well as the conversion kit described under the accessories (H2O-ACK-D).

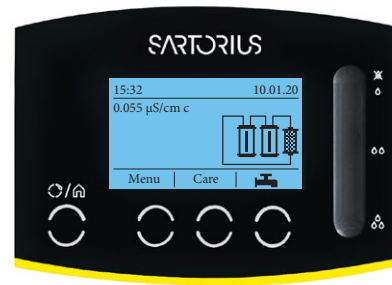
# Arium® Pro UF

## Description

The Arium® Pro UF produces ASTM Type 1 ultrapure water and is used for critical biological applications in the laboratory.

The water is first treated with the Elemental Kit, using a mixture of activated carbon and ion exchange resins to remove organic and inorganic impurities.

Subsequently, purification takes place via an ultrafilter using cross-flow technology. The ultrafilter reliably removes endotoxins, DNases and RNases, making the system ideal for use in cell culture or critical biological applications.



To protect against contamination by particles and bacteria, an Arium® Sterile Plus can additionally be connected at the consumer endpoint.

## Product Water Quality

Water purification method	Adsorption by means of spherical activated carbon, deionization, ultrafiltration, optional end-position particle and sterile filtration
Water type	ASTM Type 1 ultrapure water
Output	120 L/h
Water dispensing flow rate <sup>4</sup>	0.1–1.7 L/min, adjustable
Volume-controlled dispensing <sup>4</sup>	0.05 in 0.05 L step, 0.1 - 1.7 L in 0.1 L steps, 1.7 - 20 L in 1 L steps, 20 - 60 L in 5 L steps
Volume accuracy <sup>5</sup>	3% between 0.25 L and 60 L
Conductivity <sup>1</sup>	0.055 µS/cm compensated to 25 °C
Resistivity <sup>1</sup>	18.2 MΩ × cm compensated to 25 °C
TOC <sup>3</sup>	< 5 ppb
Bacteria <sup>2</sup>	< 0.001 CFU/mL
Particle content <sup>2</sup>	No particles > 0.22 µm
Endotoxin	< 0.001 EU/ml
RNase content	< 0.004 ng/ml
DNase content	< 0.024 pg/µl

<sup>1</sup> Measured value output adjustable to 25 °C, compensated or uncompensated

<sup>2</sup> When using an Arium® Sterile Plus final filter

<sup>3</sup> Feedwater < 50 ppb TOC

<sup>4</sup> At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

<sup>5</sup> Under constant operating conditions

## Ordering Information

### Arium® Pro UF systems, for the production of ASTM Type 1 ultrapure water

Scope of supply: 1 Arium® Pro with ultrafilter, water guard and connection set

Order number	Description
H2Opro-UF-T	Arium® Pro UF benchtop device, including ultrafilter
H2Opro-UF-B	Arium® Pro UF wall-mounted device, including ultrafilter

For under-bench installation of the Arium® Pro UF devices please order a comparable bench-top device, as well as the conversion kit described under the accessories (H2O-ACK-D).

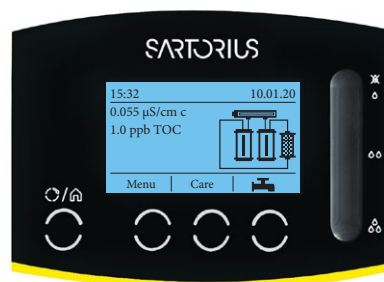
# Arium® Pro VF

## Description

The Arium® Pro VF is the high-end instrument and produces ASTM Type 1 ultrapure water for both critical biological and critical analytical applications.

In addition to water treatment via the Analytical Kit, using activated carbon and ion exchange resins, the Arium Pro VF combines the advantages of the Arium Pro UV and Arium Pro UF in one system.

The combination of integrated UV lamp (185|254) and ultrafilter thus not only provides a reduction of organic contamination to a minimum (TOC  $\leq$  2 ppb), but also simultaneously removes endotoxins, as well as DNases and RNases. This makes the Arium Pro VF ideal for a variety of different critical applications in the laboratory.



Current TOC values can be continuously measured by the optionally integrated TOC monitor and shown on the display.

An Arium® Sterile Plus can also be connected to the consumer endpoint to protect against particulate and bacterial contamination.

## Product Water Quality

Water purification method	Adsorption by means of spherical activated carbon, deionization, ultrafiltration, UV irradiation, optional end-position particle and sterile filtration
Water type	ASTM Type 1 ultrapure water
Output	120 L/h
Water dispensing flow rate <sup>4</sup>	0.1 – 1.7 L/min, adjustable
Volume-controlled dispensing <sup>4</sup>	0.05 in 0.05 L step, 0.1 – 1.7 L in 0.1 L steps, 1.7 – 20 L in 1 L steps, 20 – 60 L in 5 L steps
Volume accuracy <sup>5</sup>	3% between 0.25 L and 60 L
Conductivity <sup>1</sup>	0.055 $\mu$ S/cm compensated to 25 °C
Resistivity <sup>1</sup>	18.2 M $\Omega$ $\times$ cm compensated to 25 °C
TOC <sup>3</sup>	$\leq$ 2 ppb
Bacteria <sup>2</sup>	< 0.001 CFU/mL
Particle content <sup>2</sup>	No particles > 0.22 $\mu$ m
Endotoxin	< 0.001 EU/ml
RNase content	< 0.004 ng/ml
DNase content	< 0.024 pg/ $\mu$ l

<sup>1</sup> Measured value output adjustable to 25 °C, compensated or uncompensated

<sup>2</sup> When using an Arium® Sterile Plus final filter

<sup>3</sup> Feedwater < 50 ppb TOC

<sup>4</sup> At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

<sup>5</sup> Under constant operating conditions

## Ordering Information

### Arium® Pro VF systems, for the production of ASTM Type 1 ultrapure water

Scope of supply: 1 Arium® Pro VF with UV lamp (185 | 254 nm), ultrafilter, water guard and connection set

Order number	Description
H2Opro-VF-T	Arium® Pro VF benchtop device, including UV lamp and ultrafilter
H2Opro-VF-B	Arium® Pro VF wall-mounted device, including UV lamp and ultrafilter
H2Opro-VF-T-TOC	Arium® Pro VF benchtop device, including UV lamp, ultrafilter and TOC monitor
H2Opro-VF-B-TOC	Arium® Pro VF wall-mounted device, including UV lamp, ultrafilter and TOC monitor

For under-bench installation of the Arium® Pro VF devices please order a comparable bench-top device, as well as the conversion kit described under the accessories (H2O-ACK-D).

### Product Water Quality from Arium® Smart Station<sup>1</sup> with connected final filter

Can be used with Arium® Pro DI, UV, UF and VF

Particle content <sup>2</sup>	No particles > 0.22 µm
Bacteria <sup>2</sup>	< 0.001 CFU/mL
Endotoxins <sup>3</sup>	< 0.001 EU/mL
RNase concentration <sup>3</sup>	< 1 pg/mL
DNase concentration <sup>3</sup>	< 5 pg/mL
Water dispensing flow rate <sup>4</sup>	Up to 2 L/min
Volume-controlled removal	0.05 – 60 L in 50 mL steps

<sup>1</sup> Connected to an Arium® Pro DI, UV, UF and VF

<sup>2</sup> When using an Arium® Sterile Plus (Sartopore® 2 150 final filter)

<sup>3</sup> When using an Arium® Cell Plus final filter

<sup>4</sup> When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter



# Accessories

## Arium® Conversion Kit

### Flexibly placeable, simple and space-saving integration

- Optimal integration into your laboratory furniture
- Space-saving arrangement of the system through variable wall installation of the display | dispenser unit
- Full operation directly on the display | dispenser unit

### Description

In conjunction with an Arium® bench top system, the Arium® Conversion Kit also enables the installation of the device as a built-in version.

By extending the tube routing as well as the display | dispenser unit, the system can be ideally integrated into your laboratory furniture.

This version creates more space on and above the laboratory bench, as the control unit with display and water dispenser can be mounted on the wall in various ways.



### Technical Specifications | Ordering Information

Materials	
Tubing	PVDF
Tube length	3.4 m
Cable length	3.0 m

Order number	Description
H2O-ACK-D	Arium® Conversion Kit, including wall mounting kit for the display   dispenser unit*

\* The Arium® Conversion Kit can only be used in conjunction with an Arium® bench-top device. Conversion of the system should only be carried out by Sartorius Service specialists.

### Intended Use

Device type:

- Arium® Pro DI, Pro UF, Pro UV and Pro VF

# Arium® Smart Station

## Remote dispensing at high flexibility

- Compact: Save space integrating in your lab
- Intuitive: Touch-activated color display with direct access to all important functions
- Flexible: Stepless height adjustment to fill different size containers
- Accurate: Precise volume dispense for reliable buffer and sample preparation

## Description

The Arium® Smart Station is designed for flexible remote dispensing of pure water directly at the point of use. While dispensing water into a broad range of different sized containers, the Smart Station offers constant control of every important quality parameters, at all times. The ergonomic design supports left- and right-hand operation and can be easily adjusted to your need.

Using the extended connection set, the distance between the Smart Station and the Arium® Bagtank can be set up to 4 meters. Based on your needs different point of use filters can be added.

## Arium® Smart Station Ultrapure:

Supply Ultrapure water from Arium® Comfort



# Technical Specifications | Ordering Information

## Dimensions Smart Station Bench-Top

Control box with stand (w × d × h)	213 × 213 × 598 mm (8.4 × 8.4 × 8.2")
Operating range fixed dispense arm (d × w × h)	428 × 476 × 835 mm (16.9 × 18.7 × 32.9")
Tubing Length: Distance to water system   bagtank	2 Meter
Operating range flexible hand held	0.7 Meter
Weight	Approx. 4.9 kg (10.8 lbs)

## Dimensions Smart Station Wall-Mounted

Control box (w × d × h)	172 × 157 × 343 mm (6.8 × 6.2 × 13.5")
Operating range dispense arm (d × w × h)	242 × 90 × 300 mm (9.5 × 3.5 × 11.8")
Tubing Length: Distance to water system   bagtank	2 Meter
Operating range flexible hand held	0.7 Meter
Weight	Approx. 2.4 kg (5.3 lbs)

## General Specifications

Volume-controlled dispensing	50 mL – 50 Liter
Volume accuracy	±5% between
Power supply	100–240 VAC; 50 and 60 Hz, 2.5 A (max.) 2 °C – 40 °C
Power cord (IEC 60320-1 / C14)	Country specific

Order number	Description
H2O-ARST-UP-T	Arium® Smart Station Ultrapure for benchtop installation
H2O-ARST-UP-B	Arium® Smart Station Ultrapure for wall-mounted installation

Benchtop and wall-mounted edition can be assembled for left or right hand side, without additional equipment required.

## Intended Use

Device type:

- Arium® Pro, Pro DI, Pro UF, Pro UV and Pro VF



For further information,  
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