Laboratory Water Purification Products

A Complete Catalogue of Arium® Systems, Accessories, Consumables as Well as Information on Available Services for the Arium® Family

Simplifying Progress

SARTORIUS

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Introduction

Water is one of the most used solvents in the laboratory. Laboratory water comes in different purities, or qualities, and the exact requirements differ depending on your application. It is important to use the right type and quality of water when preparing for example samples or blanks in order to avoid negative effects on the sample itself or the resulting data. Using the right water also helps ensure the reproducibility of your data.

Our Arium® lab water systems are designed to address diverse water quality needs across applications and lab environments. Our exclusive and innovative Bagtank technology helps to simplify lab water storage and maintenance, another critical need. The exchangeable Bags prevent impurities from the ambient air to come in contact with the water, while also simplifying system usage and maintenance – saving both time and effort.

In this catalogue you will find a complete list of systems, consumables and accessories that are available for our Arium® family. Additionally, you will learn about our available scientific and technical support services for lab water, covering installation, maintenance, and qualification requirements.

How to Buy – A Quick Guide

The following are important questions to ask yourself when buying a lab water purification system:

- What are your applications and water type | quality needs?
- How much purified water do you need on a daily basis?
- What is your feed water quality and source?
- How much space do you have in your laboratory?
- Do you need installation, qualification, or maintenance contracts?
- Consider also

What Are Your Applications?

Lab water needs vary depending on your industry and specific applications. Regional standards and regulations can also impact these decisions. There are generally three types | qualities of water , which may be named differently depending on your industry: ultrapure water (Type 1), pure water (Type 2), and reverse osmosis or RO water (Type 3). How they are referred to and their specifications may differ depending on the industry. Critical applications in analytical or life science labs might require high quality Type 1 water, while Type 2 water might be sufficient for less critical applications.

How Much Purified Water Do You Need on a Daily Basis?

Your daily lab water requirements depend on your applications and the scale of each application. For example, you might need a lower daily volume of ultrapure water (Type 1) for HPLC analysis, but a higher daily volume of pure water (Type 2) for your dishwasher and rinsing. Keep in mind that Type 2 or Type 3 water purification systems also require a water storage system.

What Is Your Feed Water?

The choice of water purification system also depends on the feed water quality and source in your lab. For example, if your source is tap water and you need ultrapure water (Type 1), then a pre-treatment system is needed in addition to the final polisher to ensure reliable and intended system performance and water quality. A system combining the pre-treatment and the polishing step into one system might also be an option, instead of two separate systems. However, if you already have a pre-treated water line in your lab, the final polisher may be sufficient.

How Much Space Do You Have In Your Laboratory?

Laboratory space is often quite limited; therefore, the footprint of the water purification system should be considered. Small laboratories that need both a pre-treatment system and a polisher might benefit from a combined system that handles both functions. Different installation options also help with efficient use of space. Installation options include benchtop, wall-mounted, or under | inside laboratory bench or furniture. If space is really limited, then consider if a low-volume water purification system with a smaller footprint would meet your daily needs.

Do You Need Installation, Qualification, or Maintenance Contracts?

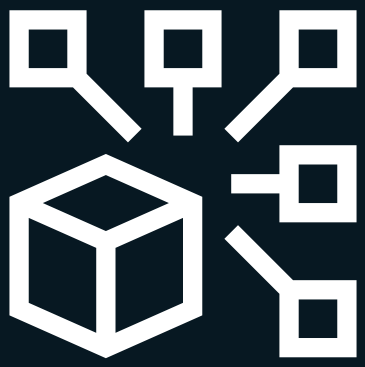
Some industries need special qualification and certification of their lab water systems to meet regulatory standards. Also, it is highly recommended to have a yearly (or more as needed) maintenance of your system to ensure optimal performance. Contracts help to simplify these processes so you can feel confident about the quality of your lab water. Our lab water experts are happy to help if you have any questions regarding our lab water systems or applications.

Consider also

In addition to the initial investment, all water purification systems have annual costs, which in the beginning might be hidden – consumable changes and maintenance being the main contributors here. It is recommended to take this into account already during the consideration phase by comparing the total cost of ownership (TCO) between manufacturers and systems in addition to other considerations you have for you lab water.

Please contact your Sartorius representative or find more information on our webpage: https://www.sartorius.com/en/products/water-purification

Overview of Applications



Arium® Lab Water System

Lab Water Quality by System	Advanced RO	Advanced EDI	Mini	Mini UV	Mini Essential	Mini Essential UV
Type 1 Water			■	■	■	■
Type 2 Water		■				
Type 3 Water	■					
Daily Water Consumption by System[1]						
Type 1 ultrapure water up to approx. 10 L/day			■	■	■	■
Type 1 ultrapure water approx. 10 – 40 L/day						
Type 1 ultrapure water approx. 40– 100 L/day						
Type 2 pure water up to approx. 120 L/day (5 L/h)		■				
Type 2 pure water up to approx. 150 L/day (10 L/h)		■				
Type 3 pure water up to approx. 140 L/day (8 L/h)	■					
Type 3 pure water up to approx. 200 L/day (16 L/h)	■					
Type 3 pure water up to approx. 270 L/day (24 L/h)	■					

■ Average indication depending on incoming feed water

	Mini Plus	Mini Plus UV	Comfort I	Comfort I UV	Comfort II	Comfort II UV	Pro	Pro DI	Pro UV	Pro UF	Pro VF
	■	■	■	■	■	■	■	■	■	■	■
					■	■					
	■	■	■	■							
	■	■									
			■	■	■	■					
							■	■	■	■	■
					■	■					
					■	■					
			■	■							
			■	■							

Lab Water Application Overview | System Requirements by Application

Feed Application	Advanced RO	Advanced EDI	Mini	Mini UV	Mini Essential	Mini Essential UV
Feed ultrapure water systems	■	■				
Feed distilled systems	■	■				
Feed water for laboratory devices (autoclaves | washing machine | ice machine etc.)	■	■				
Manual feed for laboratory equipment (water bath etc.)	■	■				
Non-Critical Applications						
Buffer, media, and pH solutions	■	■	■	■	■	■
Rinsing	■	■	■	■	■	■
AAS (Atomic Absorption Spectroscopy)		■	■	■	■	■
ELISA (Enzyme-Linked Immunosorbent Assay)		■	■	■	■	■
Electrophoresis		■	■		■	■
Histology		■	■	■	■	■
Photometry		■	■	■	■	■
Preparation of reagents, blank samples, etc.		■	■	■	■	■
Solutions for chemical analysis and synthesis		■	■	■	■	■
Critical Life-Science Applications						
DNA sequencing			□		□	
Endotoxin analysis			□		□	
Immunocytochemistry			□		□	
Northern blot			□		□	
Nutrient media for cell culture (mammalian & plant)			□		□	
PCR (Polymerase Chain Reaction)			□		□	
Production of monoclonal antibodies			□		□	
Southern blot			□		□	
Western blot			□		□	
Critical Analytical Applications						
GC-MS (Gas Chromatography–Mass Spectrometry)			■			■
GF-AAS (Graphite Furnace Atomic Absorption Spectrometry)			■			■
HPLC (High-Performance Liquid Chromatography)			■			■
IC (Ion chromatography)			■			■
ICP-MS (Inductively Coupled Plasma Mass Spectrometry)			■			■
SPE (Solid phase extraction)			■			■
TOC analysis			■			■
Trace metal analysis			■			■

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

□ Only in combination with an Arium® Cell Plus ultrafilter

Mini Plus	Mini Plus UV	Comfort I	Comfort I UV	Comfort II	Comfort II UV	Pro	Pro DI	Pro UV	Pro UF	Pro VF
		■	■	■	■					
		■	■	■	■					
		■	■	■	■					
■	■	■	■	■	■	■	■	■	■	■
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Type 1 Ultrapure Water Systems


SARTORIUS
18.2 MΩcm
21.3 °C
ARIUM® MINI

Arium® Mini and Mini Essential

High Quality Ultrapure Water for Low-Volume Requirements

The Arium® Mini and Mini Essential deliver a flow rate of 1 liter per minute and is specially designed for ASTM Type 1 ultrapure water requirements. With the intuitive operator guidance and the practical Arium® aqua stop, the units are ideal for a daily consumption of up to approximately 10 liters of ultrapure water.

The difference between the Arium® Mini and Mini Essential is in how the feed water is supplied. For the Arium® Mini Essential the feed water is directly supplied from your pre-treated water line (RO, DI, EDI, distilled), which is connected to the system. The Arium® Mini on the other hand, utilizes a 5-liter Bag integrated on the side of the system. The Bag is manually filled with bottled pre-treated water, that is either purchased or produced in-house. Therefore, no fixed water line connection is needed for this system.

This space-saving unit with a width of only 28 centimeters (11 inches) easily integrates into nearly any lab environment. Moreover, these compact laboratory-grade water purification systems stand out by virtue of their reliability and user friendliness.

- Reliable: Delivers consistent high-quality water for reliable and reproducible results
- Efficient: Avoids tank cleaning thanks to unique Bagtank technology (Arium® Mini)
- Intuitive: Can be operated even with gloves via a multi-colored touch display
- Compact: Measuring only 28 cm in width and 51 cm in height, the unit fits easily in almost any laboratory

Applications

- Analytical applications (in combination with UV; e.g., HPLC, GC-MS, SPE, LC-MS)
- Life science applications (in combination with Arium® Cell Plus final filter; e.g., cell culture, PCR, histology, photometry)
- Standard applications, such as preparation of solutions, media, and reagents

Reliable

The Arium® Mini and Mini Essential, meet, and exceed, ASTM Type 1 water quality at a low cost of ownership, and ensure reliable and reproducible results.

Efficient

The simple, semi-annual replacement of the Bag in the Arium® Mini allows you to save on the time-consuming cleaning and rinsing processes that are otherwise necessary with conventional tanks. Because there is no need to use chemicals during the cleaning process, you also protect the environment, increase user safety, and reduce risks of introducing cleaning chemicals into your water purification system.

Intuitive

You control the Arium® Mini and Mini Essential by means of a color touch display – even while wearing laboratory gloves. Easy-to-understand symbols guide you through the intuitive menu. The "Favorites" function automatically saves the volume you dispensed last. This increases your efficiency and prevents errors when repeatedly dispensing the same volumes. Likewise, the volume-controlled dispensing function from 50 mL to 5 L (in 50-mL-increments) helps you obtain accurate results.

Compact

The Arium® Mini and Mini Essential measure only 28 cm in width and 51 cm in height and easily fit in almost any laboratory.

Unique Bagtank Technology

Arium® Mini is one of two ultrapure water systems that comes with the Bagtank Technology integrated and features the 5-liter Bag. Originally, the Bag was developed for the pharmaceutical industry and provides optimal conditions for storing pre-treated pure water for the production of Type 1 ultrapure water. Easy exchange of the Bag also facilitates upkeep of the system and considerably reduces maintenance time compared with conventional tank systems.

Specifications

Water purification method	**Adsorption by means of spherical activated carbon, catalyst, reverse osmosis, ion exchange, optional UV irradiation, and by point-of-use particle-removing filtration | sterile filtration**
Dimensions (width × height × depth)	28.0 × 50.9 × 53.1 cm (11 × 20 × 20.9")
Empty weight	Approx. 13 kg (28.6 lbs.)
Operating weight	Approx. 23 kg (50.6 lbs.)
Power supply	100 – 240 VAC; 50 and 60 Hz, 2 A (max.)
Operating temperature	2 °C – 35 °C at max. 80% relative humidity
Storage temperature	5 °C – 45 °C at max. 80% relative humidity

Feed Water Specifications

Treated water via reverse osmosis, distillation, or deionization.

Input pressure	
Mini	Without pressure
Mini Essential	0 – 6.9 bar; (0 – approx. 100 psi); recommended > 2 bar (> 29 psi)
Temperature	2 – 30 °C
Specific conductivity	< 100 µS/cm compensated to 25 °C
TOC	< 50 ppb
Turbidity	< 1 NTU
pH value	4 – 10

Product Water Quality

Water type	ASTM Type 1 ultrapure water
Water dispensing flow rate[1]	Up to 1.0 L/min
Volume-controlled dispensing[1]	50 mL increments, between 0.05 L and 5 L
Volume accuracy[2]	±2% between 0.05 L and 5 L
Typical conductivity	0.055 µS/cm compensated to 25 °C[4]
Typical resistivity	18.2 MΩ × cm compensated to 25 °C[4]
TOC content[4] (system with UV lamp)	< 5 ppb
Bacteria[3]	< 0.01 CFU/mL
Particle content[3]	No particles > 0.22 µm
Pyrogens (endotoxins)[5]	0.001 EU/mL
RNase[5]	< 1 pg/mL
DNase[5]	< 5 pg/mL

[1] Depending on the hydrostatic pressure, and connected accessories and/or final filter

[2] Under constant operating conditions

[3] When using an Arium® sterile filter (Sartopore® 2 150)

[4] Measured value output adjustable to 25 °C compensated or uncompensated

[5] If an Arium® Cell Plus is used

Ordering Information

The Arium® Mini and Mini Essential

Scope of supply: 1 Arium® Mini | Mini Essential with connection set, optional with UV lamp

Order No. w/o UV	Order No. with UV	Description
H2O-MM-T	H2O-MM-UV-T	Arium® Mini benchtop device, for manual feeding with pre-treated feed water
H2O-MM-T-US	H2O-MM-UV-T-US	Arium® Mini benchtop device, for manual feeding with pre-treated feed water with 110 V, 50 Hz
H2O-MU-T	H2O-MU-UV-T	Arium® Mini Essential benchtop device, for direct connection with pre-treated water line (RO, DI, EDI, distilled)
H2O-MU-T-US	H2O-MU-UV-T-US	Arium® Mini Essential benchtop device, for direct connection with pre-treated water line (RO, DI, EDI, distilled) with 110 V, 50 Hz

Single Consumables for Arium® Mini and Mini Essential

Order No.	Description
H2O-S-Pack	Scientific Pack, qty. 1 unit
H2O-CEL1	UV-lamp (185|254 nm), qty. 1 unit
H2O-CBS-5-S	5L Bag, qty. 1 unit (only for Arium® Mini)
5441307H4--CE	Sterile Plus sterile final filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit
H2O-CUF	Cell Plus ultrafilter, qty. 1 unit

Consumable Bundles for Arium® Mini

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0521	All Mini systems	3x 5441307H4--CE	1 & 3
SB-12-03-0523	H2O-MM-T| -US	3x 5441307H4--CE; 1x H2O-S-PACK; 1x H2O-CBS-5-S	2 & 4
	H2O-MM-UV-T | -US	3x 5441307H4--CE; 1x H2O-S-PACK; 1x H2O-CBS-5-S	2
SB-12-03-0526	H2O-MM-UV-T | -US	3x 5441307H4--CE; 1x H2O-S-PACK; 1x H2O-CEL1; 1x H2O-CBS-5-S	4

Consumable Bundles for Arium® Mini Essential

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0521	All Mini systems	3x 5441307H4--CE	1 & 3
SB-12-03-0525	H2O-MU-T | -US	3x 5441307H4--CE; 1x H2O-S-PACK	2 & 4
	H2O-MU-UV- T | -US	3x 5441307H4--CE; 1x H2O-S-PACK	2
SB-12-03-0528	H2O-MU-UV- T| -US	3x 5441307H4--CE; 1x H2O-S-PACK; 1x H2O-CEL1	4

Arium® Pro

Application-Orientated and Flexible to Meet the Highest Demands

The Arium® Pro series offers a flexible and modular system, which demonstrates excellent cost efficiency as you can choose what purification modules you need.

All systems meet and exceed the ASTM Type 1 water quality standards and ensure reproducible results. Up to 2 liters of consistently high-quality ultrapure water with a conductivity of 0.055 µS/cm (18.2 MΩ × cm) can be dispensed each minute. The ultrapure water is virtually microorganism-free when an Arium® Sterile final filter (Sartopore® 2 150) is used.

Easy to use, efficient and reliable Type 1 ultrapure water systems, Arium® Pro features patented Sartorius technology, an SD card slot, a long in-service life and low maintenance.

- Modular: system selection specifically for your application
- Flexible: perfect fit for nearly any laboratory environment
- Easy to use: glass touch display with intuitive menu navigation
- Fast: Favorites function with direct access for recurring volumes

Modular

The selection of five systems contains module components specially tailored to your application. The Arium® Pro supplies the desired level of ultrapure water quality for any critical and standard applications. Just select the Arium® Pro system that is configured with the built-in options you prefer, such as a UV lamp, a TOC monitor and even an ultrafilter for removal of endotoxins, RNases and DNases.

Flexible

The space-saving installation of the device on, below, or above your workstation enables the system to be integrated perfectly into nearly any laboratory environment. The display and dispense unit can be flexibly positioned.

Display with Touch Function

Easily open the dispensing valve or navigate the menu on the touchscreen display – even with gloves.

“Favorites” Function

The Favorites function allows you to save recurring volumes and retrieve them quickly when needed. It saves time and improves overall efficiency.

Applications

The modular Arium® Pro series can be used for a wide range of applications.

- General Applications: All Arium® Pro systems can be used. We recommend Arium® Pro DI since an ultrafilter or UV lamp is usually required.
- Critical Life Science Applications: Arium® Pro UF or Pro VF is recommended for efficient ultrafiltration and removal of RNase, DNase, and endotoxins.
- Critical Analytical Applications: Arium® Pro UV or Pro VF are recommended. They have a UV lamp, which is needed for reaching ≤ 2 ppb TOC.

Specifications

Dimensions (width × height × depth)	35.0 × 49.2 × 45.1 cm
Empty weight	17 – 19 kg, depending on system type
Operating weight	27 – 29 kg, depending on system 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[1], RS-232 interface

[1] Not applicable to Arium® Pro Basic

Feed Water Specifications

Treated water via reverse osmosis, distillation, or deionization.[2]

Input pressure[3]	0 – 6.9 bar, recomm. > 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

[2] 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.

[3] Dynamic pressure | flow pressure 100 L/h

Arium® Pro DI

Water is purified in a three-stage process. In the first two stages, both organic and inorganic components are removed reliably from the feed water by using the specially developed Elemental Kit cartridges. The third purification stage is performed using the Arium® Sterile Plus final filter, which is connected directly at the point of use and removes particles and bacteria.

The Arium® Pro offers an even more affordable alternative, which is the Arium® Pro DI reduced to only the essential features. This basic version produces ultrapure water, without any compromises or additional features.

Product Water Quality

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

[1] Measured value output adjustable to 25 °C, compensated or uncompensated

[2] When using an Arium® Sterile Plus final filter

[3] Feedwater < 50 ppb TOC

[4] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[5] Under constant operating conditions

Arium® Pro UV

Like Arium® Pro DI, the Arium® Pro UV features a three-stage purification technology. Additionally, the Pro UV uses photooxidation to remove organic components. With two different wavelengths, the horizontally positioned UV lamp (185 | 254 mm) reliably reduces organic compounds to a TOC value of ≤ 2 ppb.

Perfectly matched to support photooxidation technology, the Analytical Kit cartridges optimize water purification and specifically remove inorganic and organic substances. When TOC values are critical, include the optional integrated TOC monitor to continuously measure and show the TOC value on the display, while the ultrapure water is being dispensed.

Product Water Quality

Water purification methods	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[4]	0.1 – 2 L/ min. adjustable
Volume-controlled dispensing[4]	0.05 – 0.1 L in 0.05 L steps, 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[5]	3% between 0.25 L and 60 L
Conductivity[1]	0.055 µS/cm compensated to 25 °C
Resistivity[1]	18.2 MΩ × cm compensated to 25 °C
TOC[3]	≤ 2 ppb
Bacteria[2]	< 0.001 CFU/mL
Particle content[2]	No particles > 0.22 µm

[1] Measured value output adjustable to 25 °C, compensated or uncompensated

[2] When using an Arium® Sterile Plus final filter

[3] Feedwater < 50 ppb TOC

[4] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[5] Under constant operating conditions

Arium® Pro UF

In addition to the three-stage purification technology, also used in Arium® Pro DI, the Arium® Pro UF also includes a hollow fiber ultrafilter. This ultrafilter uses crossflow technology to reliably remove endotoxins, microorganisms, and particles, as well as DNases and RNases from the produced ultrapure water.

As a result, this filter makes the Arium® Pro UF ideal for use in cell cultivation, electrophoresis, and many other related applications in the life science segment. Supported by the top-down flow technology incorporated into Biological Kit cartridges, the system produces ASTM Type 1 ultrapure water for life science applications.

Product Water Quality

Water purification methods	Adsorption by means of spherical activated carbon, deionization, ultrafiltration, optional end-position particle and sterile filtration
Water type	ASTM Type 1 ultrapure water
Output	102 L/h
Water dispensing flow rate[4]	0.1 – 1.7 L/min. adjustable
Volume-controlled dispensing[4]	0.05 – 0.1 L in 0.05 L steps, 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[5]	3 % between 0.25 L and 60 L
Conductivity[1]	0.055 µS/cm compensated to 25 °C
Resistivity[1]	18.2 MΩ × cm compensated to 25 °C
TOC[3]	< 5 ppb
Bacteria[2]	< 0.001 CFU/mL
Particle content[2]	No particles > 0.22 µm
Endotoxin	< 0.001 EU/ml
RNase content	< 0.004 ng/ml
DNase content	< 0.024 pg/µl

[1] Measured value output adjustable to 25 °C, compensated or uncompensated

[2] When using an Arium® Sterile Plus final filter

[3] Feedwater < 50 ppb TOC

[4] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[5] Under constant operating conditions

Arium® Pro VF

This high-end unit delivers ultrapure water of the highest quality and combines the purification technology of the Arium® Pro UF and Pro UV units into one system. With the integrated, horizontal UV lamp (185 | 254 mm), together with the hollow-fiber ultrafilter, the Pro VF not only prevents microbial growth and reduces the TOC content to a minimum of ≤ 2 ppb, but also removes endotoxins, micro-organisms, and particles, as well as DNases and RNases.

As a result, it is the perfect solution for a large number of critical applications in the laboratory. TOC values are continuously measured with the optional integrated TOC monitor and displayed on the screen, even while dispensing.

Product Water Quality

Water purification methods	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	102 L/h
Water dispensing flow rate[4]	0.1 – 1.7 L/min. adjustable
Volume-controlled dispensing[4]	0.05 – 0.1 L in 0.05 L steps, 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[5]	3 % between 0.25 L and 60 L
Conductivity[1]	0.055 µS/cm compensated to 25 °C
Resistivity[1]	18.2 MΩ × cm compensated to 25 °C
TOC[3]	≤ 2 ppb
Bacteria[2]	< 0.001 CFU/mL
Particle content[2]	No particles > 0.22 µm
Endotoxin	< 0.001 EU/ml
RNase content	< 0.004 ng/ml
DNase content	< 0.024 pg/µl

[1] Measured value output adjustable to 25 °C, compensated or uncompensated

[2] When using an Arium® Sterile Plus final filter

[3] Feedwater < 50 ppb TOC

[4] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[5] Under constant operating conditions

Product Water Quality from Arium® Smart Station Ultrapure with connected final filter

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

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

[1] When using an Arium® Sterile Plus (Sartopore® 2 150 final filter)

[2] When using an Arium® Cell Plus final filter

[3] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

Ordering Information

The Arium® Pro Bench-Top Systems

Scope of supply: 1 Arium® Pro with connection set, water guard, optional with UV lamp or TOC-monitor

Order No.	Description
H2Obasic-T	Arium® Pro Basic benchtop system in a compact design for any laboratory workstation
H2Opro-DI-T	Arium® Pro DI benchtop system in a compact design for any laboratory workstation
H2Opro-UF-T	Arium® Pro UF benchtop system in a compact design for any laboratory workstation; ultrafilter included
H2Opro-UV-T	Arium® Pro UV benchtop system in a compact design for any laboratory workstation; UV lamp included
H2Opro-UV-T-TOC	Arium® Pro UV benchtop system in a compact design for any laboratory workstation; UV lamp and TOC monitor included
H2Opro-VF-T	Arium® Pro VF benchtop system in a compact design for any laboratory workstation; UV lamp and ultrafilter included
H2Opro-VF-T-TOC	Arium® Pro VF benchtop system in a compact design for any laboratory workstation; UV lamp, ultrafilter and TOC monitor included

The Arium® Pro Wall-Mounted Systems

Scope of supply: 1 Arium® Pro with connection set, water guard, optional with UV lamp or TOC-monitor

Order No.	Description
H2Obasic-B	Arium® Pro Basic – wall-mounted system with integrated wall bracket
H2Opro-DI-B	Arium® Pro DI – wall-mounted system with integrated wall bracket
H2Opro-UF-B	Arium® Pro UF – wall-mounted system with integrated wall bracket; ultrafilter included
H2Opro-UV-B	Arium® Pro UV – wall-mounted system with integrated wall bracket; UV lamp included
H2Opro-UV-B-TOC	Arium® Pro UV – wall-mounted system with integrated wall bracket; UV lamp and TOC monitor included
H2Opro-VF-B	Arium® Pro VF – wall-mounted system with integrated wall bracket; UV lamp and ultrafilter included
H2Opro-VF-B-TOC	Arium® Pro VF – wall-mounted system with integrated wall bracket; UV lamp, ultrafilter and TOC monitor included

To install Arium® Pro DI, UF, UV or VF as a built-in unit, please order the corresponding benchtop system and a conversion kit H2O-ACK-D described under the Accessories.

Single Consumables for Arium® Pro Systems

Order No.	Description
5441307H4--CE	Sterile Plus sterile final filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit
611CDU5	Ultrafilter, qty. 1 unit
611CEL1	UV lamp, qty. 1 unit
611CDS1	Cleaning syringe for the system, qty. 1 unit

Cartridge Sets for Arium® Pro Systems

Order No.	Description
H2O-A-PACK	Analytical kit for Pro VF & Pro UV ultrapure water systems
H2O-B-PACK	Biological kit for Pro UF ultrapure water systems
H2O-E-PACK	Elemental kit for Pro and Pro DI ultrapure water systems
H2O-U-PACK[1]	Universal kit for Pro ultrapure water systems with tap water feed

[1] To operate Arium® Pro with non-treated drinking water, the Universal Kit can be used in most cases. In order to verify the specifications of your feed water, please contact Sartorius Application Support.

Consumables Bundle for Arium® Pro Systems

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0521	All Pro Basic models	3× 5441307H4--CE	1–3
SB-12-03-0522	All Pro DI | Pro UV | Pro UF | Pro VF models	3× 5441307H4--CE; 1× 611CDS1	1–3
SB-12-03-0529	All Pro Basic models	3× 5441307H4--CE; 1× H2O-E-PACK	4
SB-12-03-0530	All Pro DI models	3× 5441307H4--CE; 1× H2O-E-PACK; 1× 611CDS1	4
SB-12-03-0531	All Pro UF models	3× 5441307H4--CE; 1× H2O-B-PACK; 1× 611CDS1; 1× 611CDU5	4
SB-12-03-0532	All Pro UV models	3× 5441307H4--CE; 1× H2O-A-PACK; 1× 611CDS1; 1× 611CEL1	4
SB-12-03-0533	All Pro VF models	3× 5441307H4--CE; 1× H2O-A-PACK; 1× 611CDS1; 1× 611CDU5; 1× 611CEL1	4

Consumables Bundle for Arium® Pro Systems With U-PACK

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0534	All Pro Basic models	3× 5441307H4--CE; 1× H2O-U-PACK	4
SB-12-03-0535	All Pro DI models	3× 5441307H4--CE; 1× H2O-U-PACK; 1× 611CDS1	4
SB-12-03-0536	All Pro UF models	3× 5441307H4--CE; 1× H2O-U-PACK; 1× 611CDS1; 1× 611CDU5	4
SB-12-03-0537	All Pro UV models	3× 5441307H4--CE; 1× H2O-U-PACK; 1× 611CDS1; 1× 611CEL1	4
SB-12-03-0538	All Pro VF models	3× 5441307H4--CE; 1× H2O-U-PACK; 1× 611CDS1; 1× 611CDU5; 1× 611CEL1	4

Accessories Compatible With Arium® Pro Systems

Order No.	Description
H2O-ALS1	Level sensors for the connection of Arium® H2Opro-systems to an open gravity tank
H2O-ARST-UP-T[1]	Smart Station remote dispenser with height-adjustable stand for ultrapure water from Arium® System
H2O-ARST-UP-B[1]	Smart Station remote dispenser with wall mounting kit for ultrapure water from Arium® System
H2O-ATES-UP[1]	Smart Station tubing | connection extension set (4 m) for ultrapure water from Arium® System
YDP30	Thermo transfer and thermo direct printer for GxP printing on standard paper and self-adhesive labels
SB-12-01-0250	Connection cable for YDP30 printer to Arium® unit
YCC-USB-C-B	Connection cable for YDP30 printer to Arium® Smart Station unit
69Y03285	Set of standard paper and ink ribbon
69Y03287	Standard paper for direct thermal printing
H2O-AFS1*	Foot switch for external control of the time|volume dispense port of Arium® H2Opro units
610AWG1	Water guard
H2O-ACK-D[1]	Conversion kit for built-in installation, inclusive wall mounting kit for display | dispense unit (requires benchtop system)

[1] Not compatible with the Arium® Pro Basic (H2Obasic-T/-B)

Combined Water Systems


SARTORIUS
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Arium® Combined Water Systems

The Arium® combined systems are the highlight of the Sartorius family of lab water systems for turning tap water into RO or pure and ultrapure water.

The Arium® Mini Plus is a combined ultrapure water system, developed to provide ASTM Type 1 and Type 3 water. The system is ideally suited for general and analytical applications with a daily need of approximately 10 liters of ultrapure water. For critical analysis the optional integrated UV lamp together with the ultrapure water cartridge ensure an organic reduction down to < 5 ppb. The system can also be used for life science applications when combined with the Arium® Cell Plus final filter. Pre-treated water needed to produce ultrapure water is stored in the unique 5-liter Bag integrated on the side of the system. The easy to exchange Bag facilitates upkeep of the system and reduces maintenance time considerably compared with conventional tank systems.

The Arium® Comfort systems deliver both ASTM Type 1 ultrapure and ASTM Type 2 pure or Type 3 RO water in one unit, depending on the version you select (Comfort II or I, respectively). The Comfort systems dispense up to 2 liters of ultrapure water per minute and consistently provide you with high-quality water for your application, guaranteeing reproducible results and making your daily lab work easier thanks to their many convenient features. They let you focus on your core tasks as the systems' premium quality components and the most advanced purification technologies ensure high-quality water on demand – in the quality types you need.

Applications

- Analytical applications
  (in combination with UV; e.g., HPLC, GC-MS, SPE, LC-MS)
- Life science applications
  (in combination with Arium® Cellplus final filter;
  e.g., cell culture, PCR, Histology, Photometry)
- Standard applications, such as preparation of solutions, media, and reagents

Arium® Mini Plus

Unique Bagtank Technology for the Highest Efficiency

The Arium® Mini Plus is exclusively made of high-grade materials for turning tap water into RO (Type 3) and ultrapure water (ASTM Type 1). With its intuitive operator guidance, closed Bag system and the practical Arium® aqua stop, the unit is ideal for a daily consumption of up to approximately 10 liters of ultrapure water. With intelligent technology the Arium® Mini Plus protects the water against impurities from the surrounding environment and consistently ensures high water quality. The closed Bagtank system automatically regulates pressure equalization, which prevents impurities from the ambient air from coming into contact with the pre-treated water. As an added benefit, you profit from particularly high cartridge capacity because there is less demand on the ion exchangers.

- Reliable: Consistent high-quality water for data reliability and reproducibility
- Efficient: Avoids tank cleaning thanks to unique Bagtank technology
- Intuitive: Operate the multi-colored touch display, even with gloves
- Compact: Measuring only 28 cm in width and 51 cm in height, the unit fits in almost any laboratory

Reliable

To ensure that you always obtain reliable and reproducible results, the closed tank system guarantees consistently-high water quality by preventing impurities from the ambient air from contaminating the water.

Efficient

The Bag is simply switched out twice a year, eliminating the time-consuming cleaning and rinsing protocol of conventional tanks. Since hazardous chemicals are no longer involved, you do not have to worry about risks to personal health or the environment.

Intuitive

You control the Arium® Mini Plus with a color touch display, even while wearing laboratory gloves. Easy-to-understand symbols guide you through the intuitive menu. The “Favorites” function automatically saves the last dispensed volume. This increases your efficiency and prevents errors when repeatedly dispensing the same volumes. Likewise, the volume-controlled dispensing function from 50 mL to 5 L (in 50-mL-increments) helps you obtain accurate results.

Compact Footprint

The Arium® Mini Plus measures only 28 cm in width and 51 cm in height to fit easily in almost any laboratory.

Unique Bagtank Technology

Arium® Mini Plus is one of two ultrapure water systems with integrated Bagtank technology. Its design features the 5-liter Bag, originally developed for the pharmaceutical industry, integrated on a side panel. The high-quality Bag provides optimal conditions to store your pre-treated water for the production of Type 1 ultrapure water.

Specifications

Water purification method	Adsorption by means of spherical activated carbon, catalyst, reverse osmosis, ion exchange, optional UV irradiation, and end-position particle | sterile filtration
Dimensions (width × height × depth)	28.0 × 50.9 × 53.1 cm (11 × 20 × 20.9″)
Empty weight	Approx. 13 kg (28.6 lbs.)
Operating weight	Approx. 23 kg (50.6 lbs.)
Power supply	100 – 240 VAC; 50 and 60 Hz, 2 A (max.)
Operating temperature	2 °C – 35 °C at max. 80% relative humidity
Storage temperature	5 °C – 45 °C at max. 80% relative humidity

Feed Water Specifications for Arium® Mini Plus

Exclusively potable tap water pursuant to the drinking water standards of USA, European Union, or Japan.

Input pressure	0.5 – 6 bar (approx. 7.3 – 87 psi); recommended > 2 bar (> 29 psi)
Temperature	2–30°C
Specific conductivity	< 1500 µS/cm compensated to 25 °C
TOC	< 2,000 ppb
Max. total hardness (max. $CaCO_3$)	360 ppm
Free chlorine	< 4 ppm
Iron (total Fe content)	< 0.1 ppm
Fouling Index (SDI)	< 10
Turbidity	< 1 NTU
pH value	4–10

Product Water Quality

Water type	ASTM Type 1 ultrapure water	Type 3 pure water
Production output[1]	–	Up to 8 L/hr
Water dispensing flow rate[2]	Up to 1.0 L/min	Pressure-free via ball valve
Volume-controlled dispensing[2]	50 mL steps, between 0.05 L and 5 L	–
Volume accuracy[3]	±3% between 0.25 L and 5 L	–
Typical conductivity	0.055 µS/cm compensated to 25 °C[6]	< 20 µS/cm[7]
Typical resistivity	18.2 MΩ × cm compensated to 25 °C[6]	< 0.05 MΩ × cm[7]
TOC content[4] (system with UV lamp)	< 5 ppb	–
Bacteria[5]	0.001 CFU/ml	0.001 CFU/ml
Particle content[5]	No particles > 0.22 µm	No particles > 0.22 µm
Pyrogens (endotoxins)[8]	0.001 EU/mL	–
RNase[8]	< 1 pg/mL	–
DNase[8]	< 5 pg/mL	–

Typical ion retention	–	Up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)	–	> 99%
Particle and microorganism retention	–	> 99%

[1] Depending on the feed water pressure, temperature, and condition of the RO modules

[2] Depending on the hydrostatic pressure, and connected accessories and/or final filter

[3] Under constant operating conditions

[4] Determined with municipal water (Goettingen), TOC approx. 1,000 ppb

[5] When using an Arium® Sterileplus (Sartopore® 2 150)

[6] Measured value output adjustable to 25 °C compensated or uncompensated

[7] Depending on feed water

[8] If an Arium® Cell Plus is used

Ordering Information

Arium® Mini Plus for the production of ASTM Type 1 ultrapure water and Type 3 pure water

Scope of supply: 1 Arium® Mini Plus and connection set, optional with UV lamp

Order No. w/o UV	Order No. with UV	Description
H2O-MA-T	H2O-MA-UV-T	Arium® Mini Plus benchtop device, for manual feeding with pre-treated feed water
H2O-MA-T-US	H2O-MA-UV-T-US	Arium® Mini Plus benchtop device, for manual feeding with pre-treated feed water with 110 V, 50 Hz

Single Consumables for Arium® Mini Plus

Order No.	Description
H2O-CPR	Mini Plus Pretreatment Cartridge, qty. 1 unit
H2O-S-PACK	Scientific Pack, qty. 1 unit
H2O-CEL1	UV-lamp (185 | 254 nm), qty. 1 unit
H2O-CBS-5-S	5 L Bag, qty. 1 unit
5441307H4--CE	Sterile Plus sterile final filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit
H2O-CUF	Cell Plus ultrafilter, qty. 1 unit

Consumable Bundles for Arium® Mini Plus

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0521	All Mini systems	3× 5441307H4--CE	1 & 3
SB-12-03-0524	H2O-MA-T | -US	3× 5441307H4--CE; 1× H2O-S-PACK; 1× H2O-CBS-5-S; 1× H2O-CPR	2 & 4
	H2O-MA-UV-T | -US	3× 5441307H4--CE; 1× H2O-S-PACK; 1× H2O-CBS-5-S; 1× H2O-CPR	2
SB-12-03-0527	H2O-MA-UV-T | -US	3× 5441307H4--CE; 1× H2O-S-PACK; 1× H2O-CEL1; 1× H2O-CBS-5-S; 1× H2O-CPR	4

Arium® Comfort

Space-saving Twin Technology

Sartorius presents the compact, environmentally friendly, reliable, and easy-to-use Arium® Comfort series for producing ASTM Type 1 ultrapure water and ASTM Type 2 pure water or Type 3 RO water combined in a single system (Comfort II or Comfort I, respectively). The system contains state-of-the-art reverse osmosis technology to produce Type 3 RO water – the Comfort II is additionally equipped with patented EDI technology for producing ASTM Type 2 pure water. The respective pre-treated water is then intermediately stored in our innovative Bagtank before further purified with a unique cartridge specially designed for production of high-quality ultrapure water.

Compared with conventional water systems, the Arium® Comfort systems optimize water usage thanks to its integrated iJust control unit. This unique touch-function display along with intuitive menu navigation ensures ease of use. Additionally, with the optionally integrated UV-lamp (with or without a TOC-monitor), a compact design, intuitive touch-display, and an SD card slot, the Arium® Comfort series is the optimal choice for critical laboratory applications.

- Time-saving: Use of innovative Bag technology, eliminates time-intensive tank cleaning
- Optimized water consumption: Automatic with iJust
- Easy to use: Display with touch function and intuitive menu
- Quick: Favorites function with direct access for recurring volumes
- Reliable: Consistently high-quality water

Innovative Bag Technology

The pure water is stored in the enclosed Arium® Bagtank system. This provides high-quality storage of the pure water and protects against ambient impurities. Time-consuming tank cleaning intervals are eliminated thanks to the exchangeable Bag.

iJust

The iJust features an innovative technology that optimizes the feed water usage and the quality of the product water produced. The intelligent Arium® software controls a valve on the concentrate outlet based on the data measured for $CaCO_3$ and CO_2.

- Optimized, economic water usage
- Premium product water quality at all times
- Guaranteed longer life of downstream consumables and ultrapure water systems

Display with Touch Function

Simply navigate 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.

“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.

Consistent High-Quality Water

The Arium® Comfort systems ensure high quality pre-treated as well as ultrapure water thanks to efficient pre-treatment and purification by reverse osmosis modules (Comfort I and Comfort II), electrochemical deionization (Comfort II) and a specifically designed ultrapure water cartridge (Comfort I and Comfort II). The patented EDI technology utilized in the Arium® Comfort II reliably guarantees efficient removal of impurities from the feed water.

Specifications

Dimensions (width × height × depth)	280 × 509.4 × 530.7 mm (11 × 20 × 20.9″)
Empty weight	
Comfort I	Approx. 13 kg (28.6 lbs)
Comfort II	Approx 23 kg (50.6 lbs)
Operating weight	
Comfort I	Approx 28 kg (61.7 lbs.)
Comfort II	Approx 36 kg (79.3 lbs.)
Power supply	100 – 240 VAC ±10%; 50 and 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, RS-232 interface

Feed Water Specifications for Arium® Comfort

Exclusively potable tap water pursuant to the drinking water standards of USA, European Union, or Japan.

	Comfort I & Comfort II	Comfort II
Input pressure[1]	0.5–6.9 bar, recommended > 2 bar	
Temperature	2–30°C	
Specific conductivity	< 1500 µS/cm compensated to 25 °C	
TOC	< 2,000 ppb	
Max. total hardness (max. $CaCO_3$)	360 ppm	
Free chlorine	< 4 ppm	
Iron (total Fe content)	< 0.1 ppm	
Fouling Index (SDI)	< 5	
Turbidity	< 1 NTU	
pH value	4–10	
CO_2 in solution		≤ 40 ppm
Manganese		< 0.05 ppm
Aluminum		< 0.05 ppm

Product Water Quality Comfort I

Water purification method	Adsorption by means of spherical activated carbon, catalyst, reverse osmosis, deionization, UV irradiation, optional end-position particle and sterile filtration	
Water type	**ASTM Type 1 ultrapure water**	**Type 3 reverse osmosis water**
Output	120 L/h	8 or 16 L/h[1]
Water dispensing flow rate	Up to 2 L/min[1]	Up to 3 L/min[2]
Volume-controlled dispensing[3]	0.05 – 0.1 L in 0.05 L steps, 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[4]	±3% between 0.25 L and 5 L	–
Typical conductivity[5]	–	< 20 µS/cm
Typical resistivity[5]	–	< 0.05 MΩ × cm
Conductivity[6,7]	0.055 µS/cm compensated to 25 °C[7]	–
Resistivity[6,7]	18.2 MΩ × cm compensated to 25 °C[7]	–
TOC content[8] (system with UV lamp)	≤ 2 ppb	–
TOC content[8] (system without UV lamp)	< 5 ppb	–
Bacteria[9]	< 0.001 CFU/mL	< 0.001 CFU/mL
Particle content[9]	No particles > 0.22 µm	No particles > 0.22 µm
Pyrogens (endotoxins)[10]	0.001 EU/mL	–
RNase[10]	< 1 pg/mL	–
DNase[10]	< 5 pg/mL	–
Typical ion retention	–	Up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)[11]	–	> 99%
Particle and microorganism retention	–	> 99%

[1] Depending on the feed water pressure, temperature, and condition of the RO modules

[2] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

[3] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[4] Depending on feed water and constant operating conditions

[5] Depending on the feed water quality and temperature

[6] Measured value output adjustable to 25 °C, compensated or uncompensated

[7] Constant of the ultrapure water measurement cell: 0.01 cm^{-1}

[8] Determined with municipal water (Goettingen), TOC < 1,000 ppb

[9] When using an Arium® Sterile Plus (Sartopore® 2 150)

[10] When using an Arium® Cell Plus

[11] Depends on the type of organic contamination in the feed water

Product Water Quality Comfort II

Water purification method	Adsorption by means of spherical activated carbon, catalyst, reverse osmosis, electrochemical deionization, optional end-position particle and sterile filtration	
Water type	**ASTM Type 1 ultrapure water**	**Type 2 pure water**
Output	120 L/h	5 L/h or 10 L/h[1]
Water dispensing flow rate	Up to 2 L/min[1]	Up to 3 L/min[2]
Volume-controlled dispensing[3]	0.05 – 0.1 L in 0.05 L steps, 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[4]	±3% between 0.25 L and 5 L	–
Typical conductivity[5]	–	0.2 – 0.07 µS/cm compensated to 25 °C[3]
Typical resistivity[5]	–	5 – 15 MΩ × cm compensated to 25 °C[3]
Conductivity[6,7]	0.055 µS/cm compensated to 25 °C[7]	–
Resistivity[6,7]	18.2 MΩ × cm compensated to 25 °C[7]	–
TOC content[8] (system with UV lamp)	≤ 2 ppb	–
TOC content[8] (system without UV lamp)	< 5 ppb	–
Bacteria[9]	< 0.001 CFU/mL	< 0.001 CFU/mL
Particle content[9]	No particles > 0.22 µm	No particles > 0.22 µm
Pyrogens (endotoxins)[10]	0.001 EU/mL	–
RNase[10]	< 1 pg/mL	–
DNase[10]	< 5 pg/mL	–
Typical ion retention	–	Up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)[11]	–	> 99%
Particle and microorganism retention	–	> 99%

[1] Depending on the feed water pressure, temperature, and condition of the RO modules

[2] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

[3] At a dynamic flow pressure of 2 bar, depending on the connected accessory or final filter

[4] Depending on feed water and constant operating conditions

[5] Depending on the feed water quality (CO_2 ≤ 40 ppm) and temperature

[6] Measured value output adjustable to 25 °C, compensated or uncompensated

[7] Constant of the ultrapure water measurement cell: 0.01 cm^{-1}

[8] Determined with municipal water (Goettingen), TOC < 1,000 ppb

[9] When using an Arium® Sterile Plus (Sartopore® 2 150)

[10] When using an Arium® Cell Plus

[11] Depends on the type of organic contamination in the feed water

Product Water Quality from Arium® Smart Station[1] with connected final filter

Can be used with Comfort I and Comfort II

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

[1] Arium® Smart Station Ultrapure connected to the Arium® Comfort unit and the Arium® Smart Station Pure connected to the Arium® Bagtank

[2] When using an Arium® Sterile Plus (Sartopore® 2 150)

[3] When using an Arium Cell Plus

[4] Depending on hydrostatic pressure, connected accessories or end filter

[5] With Smart Station Pure depending on the tank level

Ordering Information

The Arium® Comfort Benchtop Systems

Scope of supply: 1 Arium® Comfort with connection set, water guard and RO (reverse osmosis) module(s), optional with UV lamp or TOC-monitor

Order No.	Order No. with UV lamp	Order No. with UV lamp and TOC-monitor	Description
H2O-I-1-T	H2O-I-1-UV-T	H2O-I-1-TOC-T	Arium® Comfort I benchtop system in a compact design for any laboratory workstation, Type 3 Production flow rate 8 L/h
H2O-I-2-T	H2O-I-2-UV-T	H2O-I-2-TOC-T	Arium® Comfort I benchtop system in a compact design for any laboratory workstation, Type 3 Production flow rate 16 L/h
H2O-II-1-T	H2O-II-1-UV-T	H2O-II-1-TOC-T	Arium® Comfort II benchtop system in a compact design for any laboratory workstation, Type 2 Production flow rate 5 L/h
H2O-II-2-T	H2O-II-2-UV-T	H2O-II-2-TOC-T	Arium® Comfort II benchtop system in a compact design for any laboratory workstation, Type 2 Production flow rate 10 L/h

The Arium® Comfort Wall-mounted Systems

Scope of supply: 1 Arium® Comfort with connection set, water guard and RO (reverse osmosis) module(s), optional with UV lamp or TOC-monitor

Order No.	Order No. with UV lamp	Order No. with UV lamp and TOC-monitor	Description
H2O-I-1-B	H2O-I-1-UV-B	H2O-I-1-TOC-B	Arium® Comfort I wall-mounted system with integrated wall bracket, Type 3 Production flow rate 8 L/h
H2O-I-2-B	H2O-I-2-UV-B	H2O-I-2-TOC-B	Arium® Comfort I wall-mounted system with integrated wall bracket, Type 3 Production flow rate 16 L/h
H2O-II-1-B	H2O-II-1-UV-B	H2O-II-1-TOC-B	Arium® Comfort II wall-mounted system with integrated wall bracket, Type 2 Production flow rate 5 L/h
H2O-II-2-B	H2O-II-2-UV-B	H2O-II-2-TOC-B	Arium® Comfort II wall-mounted system with integrated wall bracket, Type 2 Production flow rate 10 L/h

To install Arium® Comfort as a built-in unit, please order the corresponding benchtop system and a conversion kit H2O-ACK-D described under the Accessories.

Single Consumables for Arium® Comfort I and II Systems

Order No.	Description
H2O-CPFCO-1	Comfort Pretreatment Cartridge, qty. 1 unit
613CPM4	RO Module, qty. 1 unit (Comfort I, 8 L/h)
613CPM4--------V	RO Modules, qty. 2 units (Comfort I, 16 L/h)
H2O-CSO-1	Softener Cartridge, qty. 1 unit (Comfort II)
H2O-CRO-H-1	RO Module, qty. 1 unit (Comfort II, 5 L/h)
H2O-CRO-H-2	RO Modules, qty. 2 units (Comfort II, 10 L/h)
H2O-C-Pack	Comfort kit, qty. 1 unit
611CEL1	UV-lamp (185 | 254 nm), qty. 1 unit
H2O-CCS	RO Module cleaning set, qty. 1 unit
H2O-CBS-20	20 L Bag for Arium® 20 L Bagtank, qty. 2 units
H2O-CBS-50	50 L Bag for Arium® 50 L and 100 L Bagtank, qty. 2 units
5441307H4--CE	Sterile Plus sterile filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit
H2O-CUF	Cell Plus ultrafilter, qty. 1 unit

Consumable Bundles for Arium® Comfort I Systems

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0500	All Comfort models	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1	1 - 3
SB-12-03-0502	All Comfort I models without UV lamp | TOC monitor	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1; 1× H2O-C-PACK	4
SB-12-03-0503	All Comfort I models with UV lamp | TOC monitor	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× 611CEL1	4
SB-12-03-0506	H2O-I-1-B| -T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× 613CPM4	4th quarter every second year
SB-12-03-0507	H2O-I-2-B| -T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1v H2O-C-PACK; 1× 613CPM4--------V	4th quarter every second year
SB-12-03-0508	H2O-I-1-UV|TOC-B|T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× 611CEL1; 1× 613CPM4	4th quarter every second year
SB-12-03-0509	H2O-I-2-UV|TOC-B|T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× 611CEL1; 1× 613CPM4--------V	4th quarter every second year

Consumable Bundles for Arium® Comfort II Systems

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0500	All Comfort models	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1	1 & 3
SB-12-03-0501	All Comfort II models	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1; 1× H2O-CSO-1	2
SB-12-03-0504	All Comfort II models without UV lamp | TOC monitor	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1	4
SB-12-03-0505	All Comfort II models with UV lamp | TOC monitor	3× 5441307H4--CE; 1× H2O-CCS; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1; 1× 611CEL1	4
SB-12-03-0510	H2O-II-1-B| -T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1; 1× H2O-CRO-H-1	4th quarter every second year
SB-12-03-0511	H2O-II-2-B| -T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1; 1× H2O-CRO-H-2	4th quarter every second year
SB-12-03-0512	H2O-II-1-UV|TOC-B|T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1; 1× 611CEL1; 1× H2O-CRO-H-1	4th quarter every second year
SB-12-03-0513	H2O-II-2-UV|TOC-B|T	3× 5441307H4--CE; 1× H2O-CPFCO-1; 1× H2O-C-PACK; 1× H2O-CSO-1; 1× 611CEL1; 1× H2O-CRO-H-2	4th quarter every second year

Accessories Compatible With Arium® Comfort I and II Systems

Order No.	Description
H2O-AOV-20	Bagtank 20 L, without pump
H2O-AOV-50-W	Bagtank 50 L, without pump
H2O-AOV-50	Bagtank 50 L, with pump 240 VAC 50 Hz
H2O-AOV-50-US	Bagtank 50 L, with pump 115 VAC 60 Hz
H2O-AOV-100-W	Bagtank 100 L, without pump
H2O-AOV-100	Bagtank 100 L, with pump 240 VAC 50 Hz
H2O-AOV-100-US	Bagtank 100 L, with pump 115 VAC 60 Hz
H2O-ADP-20	Pump Bagtank 20 L, 240 VAC, 50 Hz
H2O-ADP-20-US	Pump Bagtank 20 L, 115 VAC, 60 Hz
H2O-ADP-100-EU	Pump for Bagtank H2O-AOV-100-W (Only available with 230 VAC (±10%); 50 Hz)
H2O-ATR	Rollers for Bagtank 50 and Bagtank 100, incl. fittings
H2O-ATB	Wall bracket for Bagtank 20
YDP30	Thermo transfer and thermo direct printer for GxP printing on standard paper and self-adhesive labels
SB-12-01-0250	Connection cable for YDP30 printer to Arium® unit
YCC-USB-C-B	Connection cable for YDP30 printer to Arium® Smart Station unit
69Y03285	Set of standard paper and ink ribbon
69Y03287	Standard paper for direct thermal printing
610AWG1	Water guard
H2O-ARST-P-T	Smart Station remote dispenser with height-adjustable stand for pure water from Arium® Bagtank
H2O-ARST-P-B	Smart Station remote dispenser with wall mounting kit for pure water from Arium® Bagtank
H2O-ATES-P	Smart Station tubing | connection extension set (4 m) for pure water from Arium® Bagtank
H2O-ARST-UP-T	Smart Station remote dispenser with height-adjustable stand for ultrapure water from Arium® System
H2O-ARST-UP-B	Smart Station remote dispenser with wall mounting kit for ultrapure water from Arium® System
H2O-ATES-UP	Smart Station tubing | connection extension set (4 m) for ultrapure water from Arium® System
H2O-AFS1	Foot switch
H2O-ACK-D	Conversion kit for built-in installation, inclusive wall mounting kit for display | dispense unit (requires benchtop system)

Type 2 Pure Water Systems


SARTORIUS
ARIUM® ADVANCE
0.07
21.0
ARIUM®
SARTORIUS

Arium® Advance EDI

The Ultimate in Reliable Electrochemical Deionization

The Arium® Advance EDI version reliably delivers water of consistently high-quality Type 2 water. Based on its patented electrodeonization (EDI) technology and unique iJust function for optimized water usage, this system will help minimize your "cost footprint" and protect the environment. Additionally, the touch-function display in combination with the intuitive menu navigation ensures easy operation.

With a flow rate of 5 or 10 L/h, automatic RO membrane backflushing, the latest EDI technology, and a constant flow rate, the Arium® Advance EDI is the best choice for both routine and demanding applications.

- Reliable: Consistently high Type 2 water quality thanks to the latest EDI technology
- Time-saving: Use of innovative Bag technology eliminates costly tank cleaning
- Optimized water consumption: Automatic with iJust
- Easy to use: Display with touch function and intuitive menu

Consistently High Type 2 Water Quality

In addition to pre-treatment and purification by reverse osmosis modules, softening and electrochemical deionization is also carried out in the third purification step. By means of this patented EDI technology, the Arium® Advance EDI safely and reliably guarantees the removal of most impurities contained in the feed water.

Innovative Bag Technology

The Arium® Bagtank system stores purified water safely and reliably until you need it. Moreover, this single-use Bag removes time-consuming cleaning cycles as it is quick and easy to exchange. Avoid exposing users or the purification system to cleaning chemicals.

iJust

Innovative and unique iJust technology enables you to optimally use your resources. This clever feature takes your specific feed water conditions into account and controls water usage. Additionally, based on the hardness and CO_2 content of your feed water, the intelligent software calculates the required cleaning cycles of the system. Therefore, Arium® Advance EDI saves valuable resources while optimizing water production.

- Premium product water quality at all times
- Optimized, economical water usage
- Guaranteed longer life of downstream ultrapure water systems

Display with Touch Function

Simply navigate the easy-to-use and intuitive menu by lightly touching the display, even while wearing gloves.

Applications

- Preparation of samples, buffers, media, reagents etc.
- Solutions for chemical analysis and synthesis
- Non-critical Life Science applications
- Non-critical analytical applications
- Feed water for laboratory devices: Autoclaves, glass washers, etc.

Specifications

Dimensions (width × height × depth)	35.0 × 50.1 × 45.1 cm
Empty weight	19 kg
Operating weight	26 kg
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

Feed Water Specifications

Exclusively potable tap water pursuant to the drinking water standards of USA, European Union, or Japan.

Input pressure[1]	2.0 – 6.9 bar
Temperature	2 – 30 °C
Specific conductivity	< 1,500 µS/cm compensated to 25 °C
TOC	< 2,000 ppb
Max. total hardness (max. $CaCO_3$)	360 ppm
Free chlorine	< 4 ppm
Iron (total Fe content)	< 0.1 ppm
Manganese	< 0.05 ppm
Aluminum	< 0.05 ppm
CO_2 in solution	≤ 40 ppm
Fouling Index (SDI)	< 5
Turbidity	< 1 NTU
pH value	4 – 10

[1] Dynamic pressure | flow pressure 100 L/h

Product Water Quality

Water purification method	Particle filtration, adsorption using spherical activated carbon, catalyst, reverse osmosis, softening electrochemical deionization
Water type	Type 2 pure water
Output[1]	5 L/h or 10 L/h
Water dispensing flow rate[4]	Up to 3 L/min
Typical conductivity[1]	0.2 – 0.07 µS/cm compensated to 25 °C
Typical resistivity[1]	5 – 15 MΩ × cm compensated to 25 °C
Typical TOC reduction[3]	95%
Particle and microorganism retention	>99%

[1] Depending on the feed water quality (CO_2 ≤ 40 ppm) and temperature

[2] Depending on the feed water pressure, temperature, and condition of the RO module(s)

[3] Depending on the type of organic contamination in the feed water

[4] When using an Arium® Bagtank design with pump, depending on hydrostatic pressure, connected accessories or end filter

Product Water Quality From Arium® Smart Station Pure[1] With Connected Final Filter

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

[1] Connected to an Arium® Bagtank

[2] When using an Arium® Sterile Plus (Sartopore® 2 150 final filter)

[3] When using an Arium® Cell Plus final filter

[4] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

Ordering Information

The Arium® Advance EDI Benchtop System

Scope of supply: 1 Arium® Advance EDI, water guard, RO (reverse osmosis) module(s) and connection set

Order No.	Description
H2O-EDI-1-T	Arium® Advance EDI benchtop device, flow capacity 5 L/h
H2O-EDI-2-T	Arium® Advance EDI benchtop device, flow capacity 10 L/h

The Arium® Advance EDI Wall-mounted system

Scope of supply: 1 Arium® Advance EDI, water guard, RO (reverse osmosis) module(s) and connection set

Order No.	Description
H2O-EDI-1-B	Arium® Advance EDI wall-mounted device, flow capacity 5 L/h
H2O-EDI-2-B	Arium® Advance EDI wall-mounted device, flow capacity 10 L/h

Single Consumables for Arium® EDI

Order No.	Description
H2O-CPFAD-1	Pretreatment Cartridge, qty. 1 unit
H2O-CSO-1	Softener Cartridge, qty. 1 unit
H2O-CRO-H-1	RO Module, qty. 1 unit
H2O-CRO-H-2	RO Modules, qty. 2 units
H2O-CCS	RO Module cleaning set, qty. 1 unit
H2O-CBS-20	20 L Bag for Arium® 20 L Bagtank, qty. 2 units
H2O-CBS-50	50 L Bag for Arium® 50 L and 100 l Bagtank, qty. 2 units
5441307H4--CE	Sterile Plus sterile final filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit

Consumable Bundles for Arium® EDI Systems

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0514	All Advance EDI models	1× H2O-CPFAD-1; 1× H2O-CCS	1 & 3
SB-12-03-0515	All Advance EDI models	1× H2O-CPFAD-1; 1× H2O-CCS; 1× H2O-CSO-1	2 & 4
SB-12-03-0519	H2O-EDI-1-B|T	1× H2O-CPFAD-1; 1× H2O-CSO-1; 1× H2O-CRO-H-1	4th quarter every second year
SB-12-03-0520	H2O-EDI-2-B|T	1× H2O-CPFAD-1; 1× H2O-CSO-1; 1× H2O-CRO-H-2	4th quarter every second year

Accessories Compatible With Arium® EDI Systems

Order No.	Description
H2O-AOV-20	Bagtank 20 L, without pump
H2O-AOV-50-W	Bagtank 50 L, without pump
H2O-AOV-50	Bagtank 50 L, with pump 240 VAC 50 Hz
H2O-AOV-50-US	Bagtank 50 L, with pump 115 VAC 60 Hz
H2O-AOV-100-W	Bagtank 100 L, without pump
H2O-AOV-100	Bagtank 100 L, with pump 240 VAC 50 Hz
H2O-AOV-100-US	Bagtank 100 L, with pump 115 VAC 60 Hz
H2O-ADP-20	Pump Bagtank 20 L, 240 VAC, 50 Hz
H2O-ADP-20-US	Pump Bagtank 20 L, 115 VAC, 60 Hz
H2O-ADP-100-EU	Pump for Bagtank H2O-AOV-100-W (Only available with 230 VAC (±10%); 50 Hz)
H2O-ATR	Rollers for Bagtank 50 and Bagtank 100, incl. fittings
H2O-ATB	Wall bracket for Bagtank 20
610AWG1	Water guard
H2O-ARST-P-T	Smart Station remote dispenser with height-adjustable stand for pure water from Arium® Bagtank
H2O-ARST-P-B	Smart Station remote dispenser with wall mounting kit for pure water from Arium® Bagtank
H2O-ATES-P	Smart Station tubing | connection extension set (4 m) for pure water from Arium® Bagtank

Type 3 Pure Water Systems (Reverse Osmosis)


SARTORIUS
300
250
200
150
100
50

Arium® Type 3 RO Systems

The Arium® product range offers two different water purification families for producing Type 3 reverse osmosis (RO) water, in addition to the combined water purification systems Mini Plus and Comfort I. Arium® Advance RO delivers consistently high-quality Type 3 (reverse osmosis) water at rates of 8,16, or 24 L/h. Advance L on the other hand produces between 100 and 200 L/h, for higher daily volume requirements in the laboratory. The Arium® Advance L, however, is only available with a 230 VAC (±10%); 50 Hz connection.

The systems attain high ion retention rates, while ensuring optimal pure water yield. It reliably removes oxidants, heavy metal ions and particulates from feed water. Each Type 3 RO system continuously monitors the water quality. One glance at the display will keep you updated about all important data. That is why the Arium® Type 3 RO systems are ideal for routine lab applications, such as supplying feed water to lab instruments like ultrapure water systems, autoclaves, glassware washers, humidifiers, ice machines and water baths, and for preparation of non-critical buffers and solutions.

The RO water produced from the Arium® Advance RO is stored in the Arium® Bagtank system, while the Advance L has its own intermediate storage tanks keeping the water at high quality, ready to be used when needed.

Applications

- Feed water for ultrapure water systems
- Rinsing of glass and laboratory containers
- Feed water for various laboratory devices, such as humidifiers, autoclaves and lab glassware washers

Arium® Advance RO

Reverse Osmosis System with iJust

The Arium® Advance RO provides Type 3 reverse osmosis water of high quality. Innovative iJust automatically optimizes water usage and the touch-function display. The combination of iJust and the intuitive menu navigation provides an easy-to-use system.

With a selection of constant flow rates of up to 8 L/h, 16 L/h or 24 L/h and automatic RO membrane backflushing, the Arium® Advance RO is the optimal choice for daily laboratory applications.

- Time-saving: Use of innovative Bag technology eliminates costly tank cleaning
- Optimized water consumption: Automatic with iJust
- Easy to use: Display with touch function and intuitive menu

Innovative Bag Technology

The pure water is stored in the enclosed Arium® Bagtank system. This provides high-quality storage of the pure water and protects against impurities from the ambient air. Time-consuming tank cleaning intervals are eliminated thanks to the exchangeable Bag.

iJust

iJust is based on an innovative technology that optimizes water purification. The intelligent Arium® software controls a valve at the concentrate outlet based on the data measured for $CaCO_3$ and CO_2, and optimizes product water quality and feed water usage.

- High product water quality at all times
- Optimized, economic water usage
- Guaranteed longer life of downstream ultrapure water systems

Display with Touch Function

Simply navigate the easy-to-use and intuitive menu by lightly touching the display, even while wearing gloves.

Specifications

Dimensions (width × height × depth)	35.0 × 50.1 × 45.1 cm
Empty weight	approx. 15 kg
Operating weight	approx. 22 kg
Power supply	100 – 240 VAC (±10%); 50 – 60 Hz, 130 VA (max.)
Operating temperature	2 – 35 °C at max. 80% relative humidity
Storage temperature	5 – 45 °C at max. 80% relative humidity

Feed Water Specifications

Exclusively potable tap water pursuant to the drinking water standards of the USA, the European Union, or Japan.

Input pressure[1]	0.5 – 6.9 bar, recommended > 2 bar
Temperature	2 – 30 °C
Specific conductivity	< 1,500 µS/cm compensated to 25 °C
TOC	< 2,000 ppb
Max. total hardness (max. $CaCO_3$)	360 ppm
Free chlorine	< 4 ppm
Iron (total Fe content)	< 0.1 ppm
Fouling Index (SDI)	< 5
Turbidity	< 1 NTU
pH value	4 – 10

[1] Dynamic pressure | flow pressure 100 L/h

Product Water Quality

Water purification method	Particle filtration, adsorption by means of spherical activated carbon, catalyst and reverse osmosis
Water type	Type 3, reverse osmosis water
Production Output[2]	8, 16 or 24 L/h
Water dispensing flow rate[3]	Up to 3 L/min
Typical conductivity[1]	< 20 µS/cm
Typical resistivity[1]	< 0.05 MΩ × cm
Typical ion retention	up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)	> 99%
Particle and microorganism retention	>99%

[1] Depending on the feed water quality and temperature

[2] Depending on the feed water pressure, temperature, and condition of the RO modules

[3] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

Product Water Quality From Arium® Smart Station Pure[1] With Connected Final Filter

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

[1] Connected to an Arium® Bagtank

[2] When using an Arium® Sterile Plus (Sartopore® 2 150 final filter)

[3] When using an Arium® Cell Plus final filter

[4] When using an Arium® Bagtank with pump, depending on hydrostatic pressure, connected accessories or end filter

Ordering Information

Arium® Advance RO Benchtop System

Scope of supply: 1 Arium® Advance RO, water guard, RO (reverse osmosis) module(s) and connection set

Order No.	Description
H2O-RO-1-T	Arium® Advance RO benchtop device, flow capacity 8 L/h
H2O-RO-2-T	Arium® Advance RO benchtop device, flow capacity 16 L/h
H2O-RO-3-T	Arium® Advance RO benchtop device, flow capacity 24 L/h

Arium® Advance RO Wall-Mounted System

Scope of supply: 1 Arium® Advance RO, water guard, RO (reverse osmosis) module(s) and connection set

Order No.	Description
H2O-RO-1-B	Arium® Advance RO wall-mounted device, flow capacity 8 L/h
H2O-RO-2-B	Arium® Advance RO wall-mounted device, flow capacity 16 L/h
H2O-RO-3-B	Arium® Advance RO wall-mounted device, flow capacity 24 L/h

Single Consumables for Arium® RO

Order No.	Description
H2O-CPFAD-1	Pretreatment Cartridge, qty. 1 unit
613CPM4	RO Module, qty. 1 unit
613CPM4--------V	RO Modules, qty. 2 units
H2O-CCS	RO Module cleaning set, qty. 1 unit
H2O-CBS-20	20 L Bag for Arium® 20 L Bagtank, qty. 2 units
H2O-CBS-50	50 L Bag for Arium® 50 L and 100 L Bagtank, qty. 2 units
5441307H4--CE	Sterile Plus sterile final filter (Sartopore® 2 150 capsules, 0.2 µm pore size), qty. 1 unit

Consumable Bundles for Arium® RO Systems

Order No.	For system	Consumables included	For Quarter of Operation
SB-12-03-0514	All Advance RO models	1× H2O-CPFAD-1; 1× H2O-CCS	1–4
SB-12-03-0516	H2O-RO-1-B|T	1× H2O-CPFAD-1; 1× 613CPM4	th quarter every second year
SB-12-03-0517	H2O-RO-2-B|T	1× H2O-CPFAD-1; 1× 613CPM4--------V	4th quarter every second year
SB-12-03-0518	H2O-RO-3-B|T	1× H2O-CPFAD-1; 1× 613CPM4; 1× 613CPM4--------V	4th quarter every second year

Accessories Compatible With Arium® RO Systems

Order No.	Description
H2O-AOV-20	Bagtank 20 L, without pump
H2O-AOV-50-W	Bagtank 50 L, without pump
H2O-AOV-50	Bagtank 50 L, with pump 240 VAC 50 Hz
H2O-AOV-50-US	Bagtank 50 L, with pump 115 VAC 60 Hz
H2O-AOV-100-W	Bagtank 100 L, without pump
H2O-AOV-100	Bagtank 100 L, with pump 240 VAC 50 Hz
H2O-AOV-100-US	Bagtank 100 L, with pump 115 VAC 60 Hz
H2O-ADP-20	Pump Bagtank 20 L, 240 VAC, 50 Hz
H2O-ADP-20-US	Pump Bagtank 20 L, 115 VAC, 60 Hz
H2O-ADP-100-EU	Pump for Bagtank H2O-AOV-100-W (Only available with 230 VAC (±10%); 50 Hz)
H2O-ATR	Rollers for Bagtank 50 and Bagtank 100, incl. fittings
H2O-ATB	Wall bracket for Bagtank 20
610AWG1	Water guard
H2O-ARST-P-T	Smart Station remote dispenser with height-adjustable stand for pure water from Arium® Bagtank
H2O-ARST-P-B	Smart Station remote dispenser with wall mounting kit for pure water from Arium® Bagtank
H2O-ATES-P	Smart Station tubing | connection extension set (4 m) for pure water from Arium® Bagtank

Arium® Advance L

High Volume Reverse Osmosis System

The Arium® Advance L reverse osmosis (RO) system has been developed for applications requiring large volumes of RO water on a daily basis. Capable of delivering up to 200 L/h of purified water per hour, the Arium® Advance L is an efficient, reliable, low-maintenance RO system that is also affordable. The Arium® Advance L is only available with a 230 VAC (±10%); 50 Hz connection, and therefore cannot be used in countries where other voltage is used at this moment.

The high-performance RO membranes reduce water wastage and provide excellent product water quality, while ensuring high retention rates of water constituents.

Product water storage is simplified using an integrated 100- or 200-liter tank. The built-in distribution pump readily distributes the product water at a speed of 1 m^3/h and a pressure of 3.0 bar to the point of use.

Applications

- High-performance, low-energy, thin-film composite (TFC) RO membranes
- Integrated feed water pump for stable system pressure and constant water flow
- Permeate distribution pump delivers water at up to 1 m^3/h
- 5 µm particle-removing filter
- Integrated 100 or 200 L tank
- Compact design
- High-quality components (Grundfos pump, Danfoss valves) extend instrument lifetime
- Control function displayed by LED lights
- Optional UV lamp and conductivity meter

Specifications

Model	H2O-RO-L-100-T/H2O-RO-H-100-T	H2O-RO-L-200-T/H2O-RO-H-200-T
Tank volume	**100 L**	**200 L**
Water purification method	Particle filtration, adsorption by means of activated carbon and reverse osmosis	
Dimensions (width × height × depth)	58 × 62.5 × 79.6 cm	60 × 62.5 × 134.0 cm
Empty weight	66 kg	70 kg
Operating weight	166 kg	270 kg
Power supply	230 VAC (±10%); 50 Hz	
Operating temperature	5 – 35 °C at max. 80% relative humidity	

Feed Water Specifications

Potable tap water pursuant to the drinking water standards.

Input pressure[1]	3 – 6 bar
Flow rate of integrated transport pump[1]	1 m^3/h
Temperature	5 – 25 °C
Specific conductivity compensated to 25 °C	< 1,500 µS/cm
TOC content	< 2,000 ppb
Max. total hardness (max. $CaCO_3$)	360 ppm
Iron content (Fe)	< 0.05 ppm
Manganese content (Mn)	< 0.02 ppm
Chlorine content (Cl_2)	< 0.1 ppm
Silicate content (Si_2)	< 15 ppm
Salt content (TDS)	< 500 ppm
Potassium permanganate content ($KMnO_4$)	< 10 ppm
Silt density index (SDI_{15})	< 3.0%/min
Oxidizing substances	< 0.05 ppm
Turbidity	< 1 NTU
pH value	4 – 10

[1] Dynamic water pressure at 1,000 L/h

Product Water Quality

Water type	Type 3 reverse osmosis water
Output[1,2]	min. 100 or 200 L/h
Typical ion retention	up to 99%
Retention of dissolved organic	< 1 pg/mL
substances (MW > 300 Dalton)	> 99%
Particle and microorganism retention	>99%
Permeate yield (WCF)[4]	40 – 80%
Typical conductivity[1,3]	< 20 µS/cm
Typical resistivity[1,3]	< 0.05 MΩ × cm

[1] Measured at feed water in drinking water quality of: 10 °C/15 °C, 3 bar, TDS ≤ 500 mg/L ± 15%, SDI ≤ 3.0, oxidants (Fe and Mn) ≤ 0.05 mg/L.
[2] Depending on system type. The first value corresponds to the system with 100 liter tank, the second value corresponds to the system with 200 liter tank
[3] Depending on feed water
[4] Calculated according to pre-treated feed water quality with max. TDS < 500 mg/L (5 µm prefilter + pre-treatment: softening or decalcification)

Ordering Information

Arium® Advance L Benchtop System

Scope of supply: 1 Arium® Advance RO, including 5 µm pre-filter, activated carbon filter, filter housing, RO-membrane and tubing connection set

Order No.	Description
H2O-RO-L -100	Arium® Advance L-system with integrated 100 L tank, 230 V, 50 Hz, production flow rate 100 L/h
H2O-RO-H-100	Arium® Advance L-system with integrated 100 L tank, 230 V, 50 Hz, production flow rate 200 L/h
H2O-RO-L -200	Arium® Advance L-system with integrated 200 L tank, 230 V, 50 Hz, production flow rate 100 L/h
H2O-RO-H-200	Arium® Advance L-system with integrated 200 L tank, 230 V, 50 Hz, production flow rate 200 L/h

Consumables for Arium® Advance L

Order No.	Description
H2O-CACL-1	Activated carbon filter, qty. 1 unit
H2O-CPFL-1	5 µm pre-filter, qty. 1 unit
H2O-CRO-LF-1	Low-flow RO-membrane
H2O-CRO-HF-1	High-flow RO-membrane
613L-CE010	Replacement UV-lamp for 613L-AE010, qty. 1 unit

Accessories Compatible with Arium® RO Systems

Order No.	Description
H2O-AFHL-1	Pre-filter single housing
H2O-AFHL-2	Pre-filter double housing
H2O-AHSL-1	Tubing connection set pre-filter
613L-AE010	External UV-lamp with housing

Pre-treatment Systems


SARTORIUS
ARIUM® PRO

Arium® 615DI Deionization Cartridges

Water Pre-treatment Systems

The Arium® 615DI Deionization Cartridges are the Arium® family's stand-alone pre-treatment systems. They have highly efficient ion exchange resins, deliver long-lasting performance, and feature low-maintenance operation to optimize the feed water conditions for your lab water systems. Compact and ultra-easy installation makes the systems ideal for reducing ions, like calcium and magnesium, to a minimum and increasing the maintenance intervals of upstream water purification systems.

The ion exchange resins remove cations and anions from water by exchanging H+ and OH-. Their uniform and compact mixed bed ensures reliable desalination and optimal utilization of the resin material, resulting to a conductivity of < 0.1 µS/cm (resistivity of 10 MΩ × cm).

The Arium® series also includes conductivity meters for checking the quality of the product water. These convenient options are available in a choice of LED-controlled display or digitally-controlled display. The LED-controlled conductivity meter enables the user to monitor the conductivity of the product water with a red (> 20 µS/cm) or green (< 20 µS/cm) LED light. The digitally-controlled conductivity meter lets the user monitor the conductivity by individually defined setpoint limits (0.1–200 µS/cm). The conductivity measurement range is between 0.056 and 200 µS/cm.

Applications

Pre-treatment for:

- Ultrapure water systems
- Autoclaves
- Glassware machinery, etc.

Post-treatment for:

- RO permeate

Features

- Low water usage
- Compact design, easy to install
- Reliable procedure
- High efficiency ion reduction up to < 0.1 µS/cm

Specifications

	615DI004	615DI007	615DI010	615DI014
Material of construction	Plastic (white)	Plastic (white)	Stainless steel	Stainless steel
Capacity				
At 1° dH	840 L	1,300 L	2,100 L	2,800 L
At 20° dH	420 L	650 L	1,050 L	1,400 L
Flow	40 L/h	300 L/h	300 L/h	600 L/h
Dimensions				
Height	40 cm	140 cm	44.5 cm	60 cm
Diameter	23 cm	23 cm	23.7 cm	23.7 cm
Connectors				
Inlet (male)	3″	3″	3″	3″
Outlet (male)	3″	3″	3″	3″
Operating pressure				
Max.	6 bar	6 bar	6 bar	6 bar
Min.	0.5 bar	0.5 bar	0.5 bar	0.5 bar
Operating Temperature	35 °C	35 °C	35 °C	35 °C
Volume of resin	5 L	12 L	15 L	20 L

Ordering Information

Arium® Deionization Cartridge Systems

Scope of supply: 1 Arium® Deionization Cartridge and connection set

Order No.	Description
615DI004	Deionization cartridge including installation kit, capacity range up to 420 L @ 20 °dH, flow rate 40 L/h
615DI007	Deionization cartridge including installation kit, capacity range up to 650 L @ 20 °dH, flow rate 300 L/h
615DI010	Deionization cartridge including installation kit, capacity range up to 1,050 L @ 20 °dH, flow rate 300 L/h
615DI014	Deionization cartridge including installation kit, capacity range up to 1,400 L @ 20 °dH, flow rate 600 L/h

Consumables for Arium® Deionization Cartridges

Order No.	Description
615DIC01	Refill ion exchange resin for deionization cartridges, 25-liter PE pack

Accessories Compatible With Arium® Deionization Cartridges

Order No.	Description
615ALC1	Conductivity meter with LED indication for deionization cartridges
615ADC1	Conductivity meter with digital indication for deionization cartridges (Measurement range 0.056-200 µS/cm)

Accessories


SARTORIUS
ARIUM®
Ultrapure

Arium® Smart Station

Flexible Remote Dispenser for Pure and Ultrapure Water

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

In addition, for maximum flexibility you can connect up to three Smart Stations to the ultrapure water cycle. Using the extended connection set, the distance between each Smart Stations can be set up to 4 meters. Based on your needs different point of use filters (Sterile Final filter or Cell Plus final filter) can be used.

- Compact: Small footprint easily integrates 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 dispensing for reliable buffer and sample preparation
- Connect to your computer and ELN with Ethernet or USB-C for monitoring and documenting quality data

Intended Use

Smart Station Ultrapure	Smart Station Pure
Arium® Pro[1]	Arium® Comfort I[2] and Comfort II[2]
Arium® Comfort I and Comfort II	Advance RO[2] and Advance EDI[2]

[1] Excluding the Arium® Pro Basic
[2] Connected to a Bagtank

Order Information

Order No.	Description
H2O-ARST-P-T	Smart Station remote dispenser with height-adjustable stand for pure water from Arium® Bagtank
H2O-ARST-P-B	Smart Station remote dispenser with wall mounting kit for pure water from Arium® Bagtank
H2O-ATES-P	Smart Station tubing | connection extension set (4 m) for pure water from Arium® Bagtank
H2O-ARST-UP-T	Smart Station remote dispenser with height-adjustable stand for ultrapure water from Arium® System
H2O-ARST-UP-B	Smart Station remote dispenser with wall mounting kit for ultrapure water from Arium® System
H2O-ATES-UP	Smart Station tubing | connection extension set (4 m) for ultrapure water from Arium® System

Specifications

General Specifications	
Volume-controlled dispensing	50 mL – 50 L
Cable length	
Standard	2 m
Extended (optional)	4 m
Power supply	100 – 240 VAC, 50 – 60 Hz
Connection	Phoenix plug, 2-pin

Arium® Bagtank

The Most Innovative Tank System

The innovative, closed Arium® Bagtank system utilizes Arium® Bags to store pure water. Inside the Bag, the pre-treated water is protected from impurities in the ambient environment. The Sartorius Bagtank system enables consistent water quality over an extended period, thereby providing for long-term, reproducible results. In contrast to typical water tanks, the Arium® Bag provides a high degree of user safety and saves time by eliminating complex sanitization processes using chemicals.

The Arium® Bagtanks are available in 20 L, 50 L, and 100 L volumes. Their space-saving design is adaptable to any laboratory environment, and the optional rollers for the 50 and 100 L systems make them extremely flexible.

Integrated distribution pumps are a standard component of the 50 L and 100 L Bagtanks, however they can also be ordered without an integrated pump. An optional distribution pump is also available for the 20 L Bagtank. Also available is a wall bracket for the space-saving and user-friendly installation of the Arium® Bagtank 20.

- Integrated venting filter with check valve securely protects against CO_2 contamination
- Optional rollers provide the highest flexibility
- Easy replacement of Arium® Bags, with no time-consuming cleaning
- High operation safety, no use of cleaning agents

Water Dispensing Flow Rate

With pump[1]	up to 3.0 L/min
With pump, dispense gun and sterile-grade filter	up to 2.0 L/min
Without pump[2]	up to 1.5 L/min

[1] Arium® Bagtank 20 is supplied without a pump as standard; pumps are available as an option

[2] Value only applies for Arium® Bagtank 20, the dispensing site at the same height or lower than the tank connection

Intended Use

System types

- Arium® Comfort I and Comfort II,
  Arium® Advance RO and Advance EDI

Order Information

Order No.	Description
H2O-AOV-20[1]	Arium® Bagtank 20 L, without pump, qty. 1 unit
H2O-AOV-50[1]	Arium® Bagtank 50 L, with pump 240 VAC 50 Hz, qty. 1 unit
H2O-AOV-50-US[1]	Arium® Bagtank 50 L, with pump 115 VAC 60 Hz, qty. 1 unit
H2O-AOV-50-W[1]	Arium® Bagtank 50 L, without pump, qty. 1 unit
H2O-AOV-100[1]	Arium® Bagtank 100 L, with pump 240 VAC 50 Hz, qty. 1 unit
H2O-AOV-100-US[1]	Arium® Bagtank 100 L, with pump 115 VAC 60 Hz, qty. 1 unit
H2O-AOV-100-W[1]	Arium® Bagtank 100 L, without pump, qty. 1 unit
H2O-ADP-20	Arium® pump Bagtank 20 L, 240 VAC 50 Hz, qty. 1 unit
H2O-ADP-20-US	Arium® pump Bagtank 20 L, 115 VAC 60 Hz, qty. 1 unit
H2O-ATR	Rollers for Arium® Bagtank 50 and Bagtank 100, incl. fittings, qty. 4 units
H2O-ATB	Wall bracket for Arium® Bagtank 20, qty. 1 unit

[1] Arium® Bag is not included with the Arium® Bagtank

Specifications

Materials		
Bagtank	Stainless steel | plastic	
Bag	S71 film	
Tubing	PE | silicon	
Dimensions, without Rollers and Wall Brackets [H × W × D]		
Bagtank 20	80.8 × 16.6 × 43.7 cm	
Bagtank 50	85.2 × 25.4 × 58.7 cm	
Bagtank 100	85.2 × 51.4 × 58.7 cm	
Bag 20 L[1]	86.5 × 43.0 cm	
Bag 50 L[1]	90.0 × 58.1 cm	
Empty Weight without Arium® Bag | Operating Weight with Filled Arium® Bag		
Bagtank 20	19 kg | 40 kg	
Bagtank 50	33 kg | 84 kg	
Bagtank 100	47 kg | 148 kg	
Number of Bags per Tank		
Bagtank 20	1 × 20 L	
Bagtank 50	1 × 50 L	
Bagtank 100	2 × 50 L	
Power Supply[2]	240 VAC (±10%), 50 Hz, 120 VA (max.)	
Power Supply, US Versions[2]	115 VAC (±10%), 60 Hz, 170 VA (max.)	
Operating Temperature	2 °C – 35 °C at max. 80% relative humidity	
Storage Temperature	5 °C – 45 °C at max. 80% relative humidity	
Water Connection	**Input**	**Output**
Bagtank 20	1 + a" PLC Quick Coupling	1 + a" PLC Quick Coupling
Bagtank 50	1 + a" PLC Quick Coupling	2 + a" PLC Quick Coupling
Bagtank 100	1 + a" PLC Quick Coupling	2 + a" PLC Quick Coupling

[1] When empty

[2] With integrated pump

Arium® Conversion Kit

Flexible Positioning, Easy and Space-Saving Integration

The Arium® Conversion kit enables you to easily install an Arium® Comfort or an Arium® Pro benchtop system as a built-in unit. Its extended tubing as well as its display and dispensing unit let you optimally integrate this equipment into your laboratory environment. This built-in version serves as a control unit and saves space on and above your lab bench. The display and dispenser allow variable wall-mounting options to suit your requirements.

The Arium® Conversion Kit can only be used in combination with an Arium® benchtop system. It is highly recommended using Sartorius Services to install the Conversion kit.

- Optimally integrates into your available laboratory furnishings
- Variable wall-mounting options for the display and dispensing unit save space
- User-friendly display and dispensing unit at eye level for full operator control

Intended Use

- Arium® Comfort I and Comfort II
- Arium® Pro DI, Pro UF, Pro UV and Pro VF

Order Information

H2O-ACK-D	Arium® Conversion Kit, inclusive wall mounting kit for display | dispense unit[1]

[1] Needs to be in combination with the benchtop version

Specifications

Tubing material	PVDF
Tubing length	3.4 m
Cable length	3.0 m

Arium® Level Sensor

Practical Separate Tank Filling

The level sensor makes it easy to connect an external water storage tank and subsequently fill a tank with ultrapure water.

Intended Use

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

Order Information

H2O-ALS1	Arium® Level Sensor, qty. 1 unit

Specifications

Length Level Sensor	88 mm
Diameter Connection	2.03 cm (max.)
Bore	1.65 cm
Cable length	3 m

Arium® Foot Switch

More Convenient Ultrapure Water Dispensing

Easy-to-connect foot switch for hands-free water dispensing frees up both hands for other tasks, such as changing vessels, and minimizes the risk of contamination in the cleanroom.

- Water dispensing at a press of the foot
- Facilitates working in cleanrooms and minimizes the risk of contamination
- Ergonomic design allows easy, strain-free operation

Intended Use

- Arium® Comfort I and Comfort II
- Arium® Pro DI, Pro UF, Pro UV and Pro VF

Order Information

H2O-AFS1	Arium® Foot Switch, qty. 1 unit

Specifications

Material	Nylon, glass fiber reinforced
Dimensions (W × H × D)	14.0 × 4.5 (max.) × 10.6 cm
Cable length	2 m
Power supply	100 – 240 VAC, 50 – 60 Hz
Connection	Phoenix plug, 2-pin

Arium® Printer

GMP Data Documentation Made Easy

- Acquisition & documentation of current measurement data
- High printing speed
- Compact and robust design
- Thermal transfer printing process
  (for durable prints in regulated areas)
- Direct thermal printing method possible
  (for less stringent requirements in standard use)

Description

To assist with qualification and documentation tasks, current measured values are transferred to the printer via an RS-232 interface.

Intended Use

- Arium® Comfort I and Comfort II
- Arium® Pro DI, Pro UF, Pro UV and Pro VF
- Arium® Smart Station Pure and Ultrapure

Order Information

YDP30	Arium® printer, (1 pc)
SB-12-01-0250	Connection cable for YDP30 printer to Arium® unit
YCC-USB-C-B	Connection cable for YDP30 printer to Arium® Smart Station unit
69Y03285	Set of standard paper and ink ribbon for thermal transfer printing (GMP-compliant)
69Y03287	Standard paper for direct thermal printing

Specifications

Dimensions (L × W × H)	241.3 × 139.9 × 177.4 mm
Interface	RS-232 (max 115,200 bps) – USB 2.0 (full speed)
Power supply	External universal switching power supply ▪ Input: 100 – 240 V ▪ Output: 24 V 2.5 A

Arium® Water Guard

Early Detection of Leakages Protects the Laboratory

Early detection of water leakages provides the best protection against water damage in the laboratory. Leaks are detected by the highly sensitive optical sensor.

In contrast to conventional sensors, the Arium® sensor does not reply on conductivity measurement values, which is very low in ultrapure water and hard to detect. Once a leakage is detected the water guard automatically locks the feed water inlet line and triggers a sound warning. The system status and alarm can be controlled using the integrated LED display. The sensitive sensors and high-grade materials mean that the Arium® Water Guard is perfect for all ultra-pure and pure water systems.

- Highly sensitive optical sensor
- Audiovisual alarm signals
- Automatic water-stop in case of leakage
- High-grade material, non-corrosive
- Easy to install
- Integrated wall mounting bracket for magnetic valve

Order Information

610AWG1	Arium® Water Guard, qty. 1 unit

Specifications

Sensor Dimensions	
Diameter	5 cm
Elevation	2.5 cm
Cable length	2 m
Tubing Connections	
Inlet	a“ plug connection
Outlet	a“ plug connection
Power supply	100 – 240 VAC 50 – 60 Hz

Intended Use

System Types:

- Arium® Comfort I and Comfort II
- Arium® Pro, Pro DI, Pro UF, Pro UV and Pro VF
- Arium® Advance RO and EDI

Ordering Information

Arium® Accessories

Order No.	Description
H2O-ARST-P-T	Smart Station remote dispenser with height-adjustable stand for pure water from Arium® Bagtank
H2O-ARST-P-B	Smart Station remote dispenser with wall mounting kit for pure water from Arium® Bagtank
H2O-ATES-P	Smart Station tubing | connection extension set (4 m) for pure water from Arium® Bagtank
H2O-ARST-UP-T	Smart Station remote dispenser with height-adjustable stand for ultrapure water from Arium® System
H2O-ARST-UP-B	Smart Station remote dispenser with wall mounting kit for ultrapure water from Arium® System
H2O-ATES-UP	Smart Station tubing | connection extension set (4 m) for ultrapure water from Arium® System
H2O-AOV-20[1]	Arium® Bagtank 20 L, without pump, qty. 1 unit
H2O-AOV-50[1]	Arium® Bagtank 50 L, with pump 240 VAC 50 Hz, qty. 1 unit
H2O-AOV-50-US[1]	Arium® Bagtank 50 L, with pump 115 VAC 60 Hz, qty. 1 unit
H2O-AOV-50-W[1]	Arium® Bagtank 50 L, without pump, qty. 1 unit
H2O-AOV-100[1]	Arium® Bagtank 100 L, with pump 240 VAC 50 Hz, qty. 1 unit
H2O-AOV-100-US[1]	Arium® Bagtank 100 L, with pump 115 VAC 60 Hz, qty. 1 unit
H2O-AOV-100-W[1]	Arium® Bagtank 100 L, without pump, qty. 1 unit
H2O-ADP-20	Arium® pump Bagtank 20 L, 240 VAC 50 Hz, qty. 1 unit
H2O-ADP-20-US	Arium® pump Bagtank 20 L, 115 VAC 60 Hz, qty. 1 unit
H2O-ATR	Rollers for Arium® Bagtank 50 and Bagtank 100, incl. fittings, qty. 4 units
H2O-ATB	Wall bracket for Arium® Bagtank 20, qty. 1 unit
H2O-ACK-D	Arium® Conversion Kit, inclusive wall mounting kit for display | dispense unit[2]
H2O-ALS1	Arium® Level Sensor, qty. 1 unit
H2O-AFS1	Arium® Foot Switch, qty. 1 unit
YDP30	Arium® printer, (1 pc)
SB-12-01-0250	Connection cable for YDP30 printer to Arium® unit
YCC-USB-C-B	Connection cable for YDP30 printer to Arium® Smart Station unit
69Y03285	Set of standard paper and ink ribbon for thermal transfer printing (GMP-compliant)
69Y03287	Standard paper for direct thermal printing
610AWG1	Arium® Water Guard, qty. 1 unit

[1] Arium® Bag is not included with the Arium® Bagtank

[2] Needs to be in combination with the benchtop version of Arium® Comfort or Pro

Consumables


SARTORIUS
ARIUM® COMFORT

Arium® Bag

Innovative Bag for Storing Pre-treated Water

The Arium® Bag is used with Arium® Bagtanks and the Arium® Mini and Mini Plus. Originally the Bag was designed and manufactured for the pharmaceutical industry to prepare, store and transport biopharmaceutical solutions. The Bag was then redesigned for storing pre-treated water in combination with the Arium® water purification systems.

The Bags have an integrated one-way check valve to prevent ambient air from coming into contact with the pre-treated water in the Bag, and therefore keeps the water at a high quality, and ready to be used when needed for different applications. The Bags are available in 5, 20 and 50 L volumes.

Intended Use

- Arium® Bagtank 20, 50 and 100 L
- Arium® Mini and Mini Plus

Order Information

H2O-CBS-5-S	Arium® 5 L Bag for Arium® Mini and Mini Plus, qty. 1 unit
H2O-CBS-20	Arium® 20 L Bag for Arium® Bagtank 20, qty. 2 units
H2O-CBS-50	Arium® 50 L Bag for Arium® Bagtank 50 & 100, qty. 2 units

Specifications

Materials	
Bag	S71 film
Tubing	PE | silicon
Dimensions, without Rollers and Wall Brackets [H × W]	
Bag 5 L	59.0 × 40.50 cm
Bag 20 L	86.5 × 43.0 cm
Bag 50 L	90.0 × 58.1 cm
Operating Temperature	2 °C – 35 °C at max. 80% relative humidity
Storage Temperature	5 °C – 45 °C at max. 80% relative humidity

Arium® Advance Pretreatment Cartridge

Safe Protection of the RO Module

An efficient protection for a downstream reverse osmosis (RO) membrane is the combination of spherical activated carbon, a catalyst, and a depth filter. It reliably removes oxidation agents, such as free chlorine, heavy metal ions and particle impurities, from the system's feed water.

A special catalyst is an integral part of pre-treatment. It is particularly efficient at removing free chlorine and at a lower temperature and | or higher pH value compared to activated carbon alone.

The patented cartridge design ensures minimal time expenditure with ultra-easy installation and exchange.

- Quick and effective adsorption of impurities by high-grade activated carbon
- 5 µm depth filter for the retention of particles
- Highly efficient catalyst for removing free chlorine
- Easy to install by patented cartridge design

Intended Use

- Arium® Advance RO and Advance EDI

Order Information

H2O-CPFAD-1	Arium® Advance Pretreatment Cartridge, qty. 1 unit

Specifications

Materials	
Housing	High-quality polypropylene
Cleaning media	Spherical catalytic effective activated carbon plus polypropylene filter cartridge with nom. 5 µm retention rate
Dimensions (W × H × D)	18 × 26 × 11 cm
Operating weight	3.5 kg

Arium® Comfort Pretreatment Cartridge

Reliable Protection of the Comfort RO Modules

The combination of spherical, catalytically active activated carbon with an added catalyst constitutes an efficient protection for a downstream reverse osmosis (RO) membrane. It reliably removes oxidation agents, such as free chlorine and ozone,heavy-metal ions and particulate impurities from the feed water of the system.

A special catalyst is an integral part of the pre-treatment. It efficiently removes free chlorine, even at low temperatures and | or high pH (unlike pure activated carbon).

The patented cartridge design ensures minimal time expenditure with ultra-easy installation and replacement.

- Fast and effective adsorption of impurities through high-grade activated carbon
- A highly efficiently catalyst removes free chlorine

Intended Use

- Arium® Comfort I and Comfort II

Order Information

H2O-CPFCO-1	H2O-CPFCO-1 Arium® Comfort Pretreatment Cartridge, qty. 1 unit

Specifications

Materials	
Housing	High-grade polypropylene
Cleaning media	Spherical catalytic effective activated carbon
Dimensions (W × H × D)	18 × 26 × 11 cm
Operating weight	3.5 kg

Arium® Mini Plus Pretreatment Cartridge

Reliable Protection for the Treatment of Feed Water

Efficient purification via a combination of activated carbon, a catalyst and a downstream reverse osmosis membrane. The spherical, catalytic-effective, activated carbon and an additional catalyst reliably remove oxidation agents such as free chlorine and ozone, heavy metal ions and particulate contaminants from the feed water.

In addition, due to the downstream reverse osmosis membrane, up to 98% of all salts, as well as bacteria and particles are retained.

- Fast and effective adsorption of impurities through high-grade activated carbon
- Highly efficient catalyst for removing oxidation agents such as chlorine
- Highly efficient reverse osmosis membranes, optimized water consumption
- Low-energy membranes for ecological and economical operation

Intended Use

- Arium® Mini Plus

Order Information

H2O-CPR	Arium® Mini Plus Pretreatment Cartridge, qty. 1 unit

Specifications

Materials	
Housing	High-quality polypropylene
Cleaning media	Spherical, catalytic activated carbon
Dimensions (W × H × D)	18 × 26 × 11 cm
Operating weight	3.5 kg

Arium® RO Modules

Reverse Osmosis Modules With Low-Energy Membranes

The Arium® RO modules consist of two independent membrane housings that are designed for easy installation and reliable operation. Each of the two modules contains a low-energy reverse osmosis membrane in a polypropylene housing. The housing has connections for feed water, permeate (product water) and concentrate (wastewater). The RO Modules typically enable high recovery rates. Arium® RO modules consist of two different versions, one for water purification systems with (Arium® Advance EDI and Arium® Comfort II), and one for systems without (Arium® Advance RO and Arium® Comfort I) an integrated EDI module after the RO module.

This optimizes the water usage while still retaining at least 98% of the ions. Due to the backflush with permeate, particles and salts are removed from the surface of the membrane. This results in a longer service life and lower system maintenance costs. In addition, the restarting of the backflush system allows for the immediate dispensing of high-quality water.

- Highly efficient reverse osmosis membranes, optimized water usage
- Low-energy membranes for ecological and economical operation
- Backflush with product water increases the service life
- Easy replacement
- Constant flow
- Consistently- high water quality

Intended Use

- Arium® Advance RO and Advance EDI
- Arium® Comfort I and Comfort II

Order Information

613CPM4	Arium® RO module, qty. 1 unit (only for Arium® Advance RO and Comfort I)
613CPM4--------V	Arium® RO modules, qty. 2 units (only for Arium® Advance RO Comfort I)
H2O-CRO-H-1	Arium® RO module, qty. 1 unit (only for Arium® Advance EDI and Comfort II)
H2O-CRO-H-2	Arium® RO modules, qty. 2 units (only for Arium® Advance EDI and Comfort II)

Specifications

Materials	
RO membranes	Low-energy membrane made of polyamide
Housing	Polypropylene
Dimension of Each Module	
Height	30.8 cm
Diameter	7.8 cm
Weight	0.468 kg

Arium® Softener Cartridge

For Maximum Service Life of the EDI Module

It is sensible to soften the feed water to improve protection of the EDI module. The cartridge reliably removes traces of alkaline earth ions from the water, thereby guaranteeing consistently high water qualityconsistent high-quality water and a long service life of the EDI module.

- Consistently high-quality water quality
- Long service lives
- Effective $CaCO_3$ elimination

Intended Use

System Types:

- Arium® Comfort II and Advance EDI

Order Information

H2O-CSO-1	Arium® Softener cartridge, qty. 1 unit (only for Arium® Advance EDI and Comfort II)

Specifications

Materials	
Housing	High-grade polypropylene
Filling material	Ultrapure ion exchange resin

Arium® Mini Cartridge Set

Deionization Cartridge Featuring Top-Down Flow Technology

The cartridge sets are optimized for the removal of both organic and inorganic constituents. The set was designed specifically to match the unit and deliver ultrapure water that exceeds the ASTM Type 1 quality standard. Consistent high-quality water improves the reproducibility of your results.

Optimized filling materials, such as highly effective activated carbon coupled with highly efficient ion exchange resins, deliver long lasting performance and low-maintenance operation.

The top-down flow technology produces ideal purification kinetics and prevents any mixing of cleaning media. The cartridge was designed with the flow rate in the cross section and contact time with the medium in mind.

- High performance capacity thanks to efficient ion exchange resins
- Fast and effective adsorption of impurities through high-grade activated carbon
- Optimized crossflow behavior, prevents separation of the mixed-bed resin
- Patented connection method, easy replacement of consumables

Intended Use

- Arium® Mini and Mini plus

Order Information

H2O-S-PACK	Arium® Scientific Pack, qty. 1 unit

Specifications

Materials	
Housing	High-purity polypropylene
Filtration media	Spherical, catalytic activated carbon Ultrapure mixed bed ion exchange resin in semiconductor quality

Arium® Pro Cartridge Sets

Pre-treatment and Post-treatment Cartridge Utilizing Top-Down Technology

The cartridge sets are optimized for the removal of both organic and inorganic constituents. Every set has been designed specifically to match the unit and delivers ultrapure water that even exceeds the ASTM Type 1 quality standard. Consistent high-quality water improves the reproducibility of your results.

Optimized cartridge materials, such as highly effective activated carbon, coupled with a highly efficient ion-exchange resin deliver long lasting performance and thereby ensure long maintenance intervals. The top-down flow technology produces ideal purification kinetics and prevents any mixing of cleaning media. The cartridge design considers the applicable standards for flow rate in the cross section and the contact time with the medium.

- High performance capacity thanks to efficient ion-exchange resin
- Fast and effective absorption of impurities through high-grade activated carbon
- Optimized crossflow behavior, prevents separation of the mixed-bed resin
- Patented connection process simplifies the replacement of consumables

Intended Use

H2O-A-PACK	Arium® Pro UV and Pro VF
H2O-B-PACK	Arium® Pro UF
H2O-E-PACK	Arium® Pro DI and Pro Basic
H2O-U-PACK*	Arium® Pro Basic, Pro DI, Pro UF, Pro UV and Pro VF

* To operate Arium® Pro with non-treated drinking water the Universal Kit (H2O-U-PACK) could be used in most cases. In order to verify the specifications of your feed water, please contact the Sartorius Application Support.

Specifications

Materials		
Housing	High-grade polypropylene	
Mounting screws	Stainless steel	
Cleaning media	Spherical catalytic effective activated carbon ultrapure, mixed bed ion exchange resin	
Exchange capacity at 18.2 MΩ × cm ultrapure water related to $CaCO_3$		
	[Grain]	**[Equivalent]**
Analytical Kit	965	1.25
Biological Kit	1,141	1.48
Elemental Kit	1,268	1.64
Universal Kit	965	1.25

Arium® Comfort Cartridge Set

Deionization Cartridge Featuring Top-Down Technology

The cartridge sets are optimized for the removal of both organic and inorganic constituents. The set was designed specifically to match the unit and delivers ultrapure water that actually exceeds the ASTM Type 1 quality standard. Consistent high-quality water is guaranteed for optimal reproducibility of your results.

Optimized filling materials, such as highly effective activated carbon coupled with highly efficient ion-replacement resins, deliver long lasting performance and low-maintenance operation.

The top-down flow technology produces ideal purification kinetics and prevents any mixing of cleaning media. The cartridge design considers the applicable standards for flow rate in the cross section and the contact time with the medium.

- High performance capacity thanks to efficient ion-replacement resins
- Fast and effective adsorption of impurities through high-grade activated carbon
- Optimized flow progression, prevents separation of the mixed-bed resin
- Patented connection process simplifies the replacement of consumables

Intended Use

- Arium® Comfort I and Comfort II

Order Information

H2O-C-PACK	Arium® Comfort Kit, qty. 1 unit

Specifications

Materials	
Housing	High-grade polypropylene
Mounting screws	Stainless steel
Cleaning media	Spherical catalytic effective activated carbon ultrapure, semiconductor-grade mixed bed ion exchange resin

Arium® UV Lamp (185 | 254 nm)

Ultrapure Water for applications with low TOC

The horizontally arranged UV lamp delivers especially reliable results. Unlike vertical units, the temperature gradient is less pronounced and does not affect the activity of UV radiation.

The UV lamp functions with two different wavelengths to reliably remove organic substances (TOC).

- Horizontal installation, optimized temperature gradient
- Effective breakdown of organic compounds
- Easy replacement

Intended Use and Ordering Information

H2O-CEL1	Arium® UV lamp (185 | 254 nm) for Arium® Mini, Mini Essential and Mini Plus, qty 1 unit
611CEL1	Arium® UV lamp (185 | 254 nm) for Arium® Comfort I and II, Arium® Pro UV and Pro VF, qty 1 unit

Specifications

	H2O-CEL1	611CEL1
Materials	Fused silica	Quartz glass
TOC value for product water[1]	< 5 ppb	≤ 2 ppb

[1] Depending on feed water and used system type

Arium® Ultrafilter

Ultrapure Water for Life Science Applications

The hollow-fiber ultrafilter utilizes crossflow technology to reliably remove bacterial endotoxins, microorganisms, and particulates, as well as DNases and RNases from the ultrapure water.

The filters have been developed and manufactured according to DIN EN ISO 9001/DIN EN 46 001 certified quality assurance system that meets the requirements of the FDA's Quality System Regulation 21 CFR Part 820. During the manufacturing process, every unit is integrity tested to meet the highest quality standards and safety regulations.

- High flow rates
- Integrity tested
- Long service life
- Certified quality

Intended Use

- Arium® Pro UF and Pro VF

Order Information

611CDU5	Arium® Ultrafilter, qty. 1 unit

Specifications

Materials	
Membrane	Polysulfone
Composites	Polyurethane (PUR)
Housings, Caps	Polycarbonate (PC)
Plugs	Polypropylene (PP)
Effective membrane area	2.1 m²
Max. pressure	3 bar at room temperature
Sanitization	200 ppm sodium hypochlorite, 45 min, max. 1×/week
Filling volume	
Lumen	152 mL
Filtrate area	306 mL
Retention of bacteria and endotoxins	
Brev. diminuta	LRV 7–10
E. coli	LRV > 3.5
Natural Endotoxins	LRV > 3.0
Dimensions fibers	
Inner diameter	215 µm
Wall thickness	50 µm
Molecular Weight Cut Off (MWCO)	5,000 (= 5 kD)

Arium® Sterile Final Filter

Sterile and Particle-Free Water Dispensing

The Arium® sterile-grade filter (Sartopore® 2 150) is a sterile, ready-to-use membrane filter capsule for the most stringent requirements. Sartopore® 2 150 membrane filter capsules contain a hydrophilic, heterogeneous polyether sulfone double membrane. It enables excellent service life and output. The capsule is attached by a quick connector at the final position and reliably removes all particles and micro-organisms in the last water purification step. A hydrophobic PTFE membrane at the farthest point upstream allows for easy and clean ventilation of the capsule.

All pleated Sartopore® 2 membrane filter units are validated as sterile filters for biopharmaceutical applications according to the HIMA and ASTM F-838-05 guidelines (documentation available). During the manufacturing process, every capsule is integrity tested to meet the highest quality standards and safety regulations.

- Excellent service life and flow rate
- Integrity tested
- Validated according to HIMA and ASTM F-838-05
- Meets WFI quality standards according to USP incl. USP plastic class VI test
- Manufactured according to DIN ISO 9001
- Easy to install
- Automatic venting
- Certified quality

Intended Use

- Arium® Mini, Mini Essential and Mini Plus
- Arium® Comfort I and Comfort II
- Arium® Pro Basic, Pro DI, Pro UF, Pro UV and Pro VF
- Arium® Smart Station Pure and Smart Station Ultrapure

Order Information

5441307H4--CE	Arium® Sterile Final Filter (Sartopore® 2 150 capsule), 0.2 µm pore size, qty. 1 unit

Specifications

Materials	
Membranes	Asymmetrical polyethersulfone (PES)
Bell assembly	Polycarbonate (PC)
Other plastics	Polypropylene (PP)
Pore size	0.45 µm × 0.2 µm
Filtration area	0.015 m²
Inlet and outlet	¼" Plug-in connector
Sterilization (max. 3 cycles)	Autoclaving at 134 °C, 1 bar, 30 min
Max. diffusion	1 mL/min at 2.5 bar
Min. bubble point	3.2 bar

Arium® Cell Plus Final Filter

External Point-Of-Use Ultrafilter

The Arium® Cell Plus is a point-of-use ultrafilter for efficient removal of endotoxins, RNase, DNase, microorganisms and particles. Designed for Arium® water systems, this sterile packaged ultrafilter provides high protection for your critical cell culture applications. A protective bell supplied with the ultrafilter additionally prevents retrograde contamination.

Moreover, the high-grade material selected for Arium® Cell Plus enables excellent total throughput and optimal flow rates.

- For effective removal of endotoxins in cell culture applications
- Effective removal of RNase | DNase
- Reliable removal of endotoxins
- High flow rate performance
- Certified quality
- Sterile packaged

Intended Use

- Arium® Mini, Mini Essential and Mini Plus
- Arium® Comfort I and Comfort II
- Arium® Smart Station Pure and Smart Station Ultrapure

Order Information

H2O-CUF	Arium® CellPlus Ultrafilter

Specifications

Materials	
Membrane	Polysulfone
Composite material	Polyurethane (PUR)
Housing	Acrylonitrile butadiene styrene (ABS)
Protective bell	Polycarbonate (PC)
Typical Specifications	
Flow rate (Depends on the inlet pressure and type of system)	Up to 2.0 L/min
Endotoxins	<0.001 EU/mL
Bacteria	<1 cfu/100 mL
RNase concentration	< 1 pg/mL
DNase concentration	< 5 pg/mL
General Specifications	
Dimensions (height × diameter)	169 × 50 mm
Max. operating pressure	6 bar (87 psi)
Max. inlet temperature	50 °C
Effective membrane area	0.5 m²

Arium® Cleaning Syringes

Effective cleaning for a long lifetime

The Arium® Cleaning Solution is used to effectively remove impurities that can build up over time during water treatment. Regular cleaning not only removes impurities but also leads to a longer service life of consumables and increases the flow rate.

Filled and ready to use in the practical cleaning syringe, the cleaning solution can be used directly.

- Highly effective cleaning
- Free of organic components
- Gentle to the materials

Intended Use

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

Order Information

611CDS1	Arium® Cleaning Syringes, prefilled in 50 mL syringes, qty. 1 units

Specifications

Ingredients	
	Sodium hypochlorite

Arium® RO Module Cleaning Set

Maximum Service Life of the RO Module

Two-stage cleaning set for removing scaling and organic impurities. The alkaline substance contains non-foaming surfactants that dissolve organic compounds and disperse colloids and can be quickly removed again from the membrane surface. Cleaning efficiency depends on the pH value that is steadily maintained by buffer substances over a wide temperature range. The acidic cleaning agent to remove scaling contains chelate and reducing agents in order to dissolve metallic fouling. The buffer maintains optimal the pH values over a wide range during cleaning.

- Effective removal of scaling and metal fouling
- Elimination of organic compounds
- Dispersion of colloids
- Stable pH values
- Gentle on materials

Intended Use

- Arium® Advance RO and Advance EDI
- Arium® Comfort I and Comfort II

Order Information

H2O-CCS	Arium® RO module cleaning set, qty. 1 unit

Specifications

Ingredients	
Alkaline cleaner	HEDTA, ethanolamine, triethanolamine
Acidic cleaner	HEDTA, phosphoric acid, citric acid

Ordering Information

Arium® Consumables

Order No.	Description
H2O-CPFAD-1	Arium® Advance Pretreatment Cartridges, qty. 1 unit
H2O-CPFCO-1	Arium® Comfort Pretreatment Cartridge, qty. 1 unit
H2O-CPR	Arium® Mini Plus Pretreatment Cartridge, qty. 1 unit
613CPM4	Arium® RO Module, qty. 1 unit (only for Arium® Advance RO and Comfort I)
613CPM4--------V	Arium® RO Modules, qty. 2 units (only for Arium® Advance RO Comfort I)
H2O-CRO-H-1	Arium® RO Module, qty. 1 unit (only for Arium® Advance EDI and Comfort II)
H2O-CRO-H-2	Arium® RO Modules, qty. 2 units (only for Arium® Advance EDI and Comfort II)
H2O-CSO-1	Arium® Softener Cartridge, qty. 1 unit (only for Arium® Advance EDI and Comfort II)
H2O-S-Pack	Arium® Scientific Pack, qty. 1 unit (only for Arium® Mini, Mini Essential and Mini Plus)
H2O-A-PACK	Arium® Analytical Kit, Arium® Pro Cartridge Set for biological, chemical-analytical and standard ultrapure water applications, qty. 1 unit
H2O-B-PACK	Arium® Biological Kit, Arium® Pro Cartridge Set for biological ultrapure water applications, qty. 1 unit
H2O-E-PACK	Arium® Elemental Kit, Arium® Pro Cartridge Set for standard ultrapure water applications, qty. 1 unit
H2O-U-PACK[1]	Arium® Universal Kit, Arium® Pro Cartridge Set for non-treated drinking water[1], qty. 1 unit
H2O-C-PACK	Arium® Comfort Kit, qty. 1 unit
H2O-CEL1	Arium® UV lamp (185 | 254 nm) for Arium® Mini, Mini Essential and Mini Plus, (1 pc)
611CEL1	Arium® UV Lamp (185 | 254 nm) for Arium® Comfort I and II, Arium® Pro and Pro VF, qty. 1 unit
611CDU5	Arium® Ultrafilter, qty. 1 unit
H2O-CUF	Arium® Cell Plus Ultrafilter
5441307H4--CE	Arium® Sterile Final Filter (Sartopore® 2 150 capsule), 0.2 µm pore size, qty. 1 unit
611CDS1	Arium® Cleaning Syringes, prefilled in 50 ml syringes, qty. 1 units
H2O-CCS	Arium® RO module cleaning set, qty. 1 unit
H2O-CBS-5-S	Arium® 5 L Bag for Arium® Mini and Mini Plus, qty. 1 unit
H2O-CBS-20	Arium® 20 L bag for Arium® Bagtank 20, qty. 2 units
H2O-CBS-50	Arium® 50 L bag for Arium® Bagtank 50 & 100, qty. 2 units

[1] 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.

Sartorius Service

A Strong Team Dedicated to Your Success

The success of your business is our primary concern. Sartorius' professional services ensure that your equipment performs reliably and for the longest possible product lifetime.

Our services cover all of your installation, qualification and maintenance needs, while ensuring consistently high-quality lab water production.

Installation Service

Expert installation is the key to maximizing the value of your investment in a Sartorius lab water system. Our installation service ensures full equipment functionality and reliable results, right from the start.

Additional benefits of our services include equipment integration into your lab processes, fulfillment of quality standards and regulatory compliance. Our installation service offers you everything you need for your Arium® system:

- Analysis of your feed water
- System setup and connection to feed lines
- Installation of consumables
- Brief instructions on how to operate your system
- Comprehensive installation report
- Consultation on device maintenance and maintenance cycles

Qualification Service (IQ | OQ)

We understand that when you work within a regulated environment, it is essential to prove that your new Sartorius water purification systems is fit for its intended use and that this is being documented properly.

Our qualification service helps you meet these requirements. We focus on all the factors that impact the water quality of your water system. All executed tasks related to Installation Qualification (IQ) and Operational Qualification (OQ) are documented in a comprehensive Equipment Qualification binder to achieve full compliance with GLP | GMP and FDA regulations.

Our qualification service[1] covers:

- Delivery inspection, complete installation, commissioning and testing of your lab water system
- Monitoring of the environmental conditions at the place of installation
- Functional tests according to your lab water system specifications
- All findings documented in GMP-compliant qualification templates

Preventative Maintenance

We offer preventative maintenance to extend the lifetime and optimize the reliability of your Sartorius water purification system. This enables you to protect your investment over the long term and ensures optimal performance of your lab water equipment. Moreover, preventative maintenance helps you maximize output, consistency, and efficient use of your purified water.

We recommend that you take out a long-term maintenance and service contract for your Arium® system to ensure you are always on the safe side. In addition, you will never miss a maintenance interval as we take care of that.

Our preventative maintenance service covers:

- Inspection of your lab water system and analysis of your feed water
- Sanitization Cleaning of the system (if applicable)
- Exchange Replacement of consumables
- Calibration of the sensors
- Leakage check
- Entire System testing and issue of a service detailed maintenance report

If you don't wish to make any compromises, you can opt for our supplementary services:

- Consumables packages and subscription
- Quarterly replacement of consumables performed by our engineers
- Annual care-free packages covering repairs and spare parts

[1] Not available with Arium® Advance L

All-in-One Service Contracts for Your Lab Equipment

In addition to our service contracts covering your Arium®, we also offer tailored service contracts for all your other Sartorius lab equipment, such as balances, pipettes, lab water systems, moisture analyzers, and sterility testing and air monitoring systems. This means you not only enjoy the full range of services from a single source, but also save time and effort. We guarantee that your laboratory equipment will undergo regular maintenance, including calibration and adjustment.

Sartorius Service and Support

Is your lab equipment not performing the way it should? Thanks to our global service network, your Sartorius Service specialist is just a phone call away. Our well-trained service engineers and original spare parts are guarantors of the highest service quality for your equipment. Following the repair, a detailed service report is provided.

Why Do You Need Sartorius Service?

Sartorius Service are tailored to your needs and help to improve your processes and reduce the risk of equipment downtimes.

- Installation and qualification by Sartorius ensure the best performance and consistent high-quality lab water right from the start. We also ensure full compliance with GLP | GMP and FDA regulations.
- Regular preventative maintenance protects your investment over the long term. Moreover, this service helps you maximize output, consistency, and efficient use of your purified water. In the event that your equipment is not running perfectly, we identify any problems and remedy them in a timely manner.

Global Laboratory Instrument Service in Brief:

- A comprehensive service network worldwide (60+ service locations, 500+ service employees)
- Decades of industry and service experience
- Well-trained service specialists who are always up-to-date
- More than 3,200 IQ | OQ validations per year
- Flexible service offerings and contracts, tailored to your needs

Frequently Asked Questions About Lab Water

Why is water quality important?
If you do general, critical or life science analysis in your laboratory, impurities can have an impact on your results. For example, ions in your water can cause interference with reagents, or organic material can create ghost peaks in your chromatography diagrams. To ensure reliable and constant results, it is important to use purified water optimized for your applications.

What standards are used in laboratories?
Standards provide direction on what quality is needed for certain applications or industries. It is important to know if you need to follow a specific standard in your application | industry. Some examples of generally used standards are the American Society for Testing and Materials (ASTM), the International Organization for Standardization (ISO), the Clinical and Laboratory Standards Institute – Clinical Laboratory Reagent Water (CLSI-CLRW) and the International Pharmacopeia (including USP, EP and JP).

What type of water should be used for which application?
Lab Applications can be divided into three categories in terms of laboratory water: analytic and life science applications, general and feed water. For feed water applications, (such as dish washers, autoclaves or Type 1 water purification systems), you can use Type 3 water. For general applications that are a bit more critical (such as sample, media and buffer preparation) and for less sensitive analytical methods, Type 2 water should be used. Type 2 water can also be used as feed water for autoclaves, washing or feeding Type 1 water systems. For the most critical applications, Type 1 water should be used. For critical life science applications, a Type 1 ultrapure water system - together with an ultrafilter - should be used. If it is analytical work (more sensitive analytical methods such as HPLC, ICP), the ultrapure water system should have an UV-light implemented.

What purification techniques are used for water purification?
Depending on which water quality is required, various technologies can be used and combined. For Type 3, reverse osmosis (RO) purification is typically used. For Type 2, it can be a combination of RO and ion exchange technology. Type 1 is mainly based on ion exchange on already pre-treated water (either Type 3 or 2). These processes can be further optimized with additional components like activated carbon, ultrafiltration, UV-lamps, etc. Add-on steps depend on the applications for which the water is used. Generally, Type 3 or Type 2 water is used for feeding instruments or preparing non-critical solutions, whereas Type 1 water is used for all critical applications, like analytic or life science.

Is a water purification system worth it?
Every laboratory requires water for sampling, dilution, blanks, buffer preparation and media preparation as well as feed water for different instruments (such as dishwasher or autoclaves). The water is either store-bought or sourced from a water purification system. A purification system in the laboratory means fresh water on-demand. Therefore, there is no risk of storage contamination – you know your water is always of good quality. The amount and type of water needed might determine if a water purification system is required. If your daily water consumption is very low (<5 L/day), it might not be worth it, but it always depends on your specific application and situation. In general, the continuous expenditure of bottled water is a higher total cost over time than the total cost of investing in a purification system.

Frequently Asked Questions About Service

Can I replace the consumables on my Arium® system on my own?
While this is possible, we recommend contacting one of our Sartorius Service specialists, especially in the case of more complicated replacement procedures. Our specialists will also examine the overall system and identify problems before they impact performance.

Why should Sartorius carry out the installation and qualification of my system?
Sartorius has an original manufacturer's expertise and is constantly expanding the wealth of its experience with more than 3,200 IQ|OQ validations per year. Professional installation ensures proper operation of the system and the highest quality of water. Our services and documentation are also fully compliant with the GMP requirements, so you can be sure that you meet all quality standards.

Why is regular preventative maintenance useful for my lab water system?
Regular professional cleaning and replacement of old parts ensures a consistent quality of results and protects against a system breakdown and microbiological contamination. Regular maintenance checks also help extend the lifetime of your equipment and avoid unnecessary and costly downtimes. We strongly recommend purchasing a service contract; this way you can focus on your research knowing that your instrument is getting the service it needs.

How do I know if my equipment needs servicing?
The Arium® system has built-in display functions that alert you whenever your system needs service. For your convenience, our operating manual provides more details.

What is the recommended maintenance interval for my Arium® system?
There are no set maintenance intervals because the Arium® system identifies the correct change times for consumables based on your feed water and water consumption and conveniently displays them on the screen. However, we recommend an annual maintenance by our trained service specialists to consistently ensure the highest possible water quality.

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