

# arium® comfort II

The Best Technology Without Compromise

## Advantages

- Reliable – Consistently high quality Type 2 water thanks to state-of-the-art EDI technology
- Safe – TOC content  $\leq 2$  ppb for reproducible results
- Optimized water consumption – automatic with iJust



## Product Description

Sartorius offers the compact, environmentally friendly, reliable and easy-to-use arium® comfort II for producing ASTM Type 1 ultrapure water and Type 2 pure water combined in a single system. The system features state-of-the-art reverse osmosis, is equipped with the latest EDI technology and a unique cartridge kit especially developed for the production of the highest quality ultrapure water. Compared to conventional water systems, the arium® comfort II optimizes water consumption using the integrated iJust control unit. This unique touch display with intuitive menu navigation ensures the utmost ease-of-use.

With the optional integrated TOC monitor, its compact design, the flexible display and SD card slot, the arium® comfort II is the optimal choice for critical laboratory applications.

## Applications

- |                      |                                    |                    |                                       |
|----------------------|------------------------------------|--------------------|---------------------------------------|
| – HPLC               | – TOC Analysis                     | – Histology        | – Feed water for laboratory devices:  |
| – GC-MS, AAS, ICP-MS | – Photometry                       | – ELISA, RIA       | Autoclaves, dishwashers, humidifiers, |
| – Ion chromatography | – Microbiological media & reagents | – Buffer solutions | water baths etc.                      |

## iJust

The iJust conceals an innovative technology that optimizes product water quality and water consumption. The intelligent arium® software controls a valve on the concentrate outlet corresponding to the measurement data for  $\text{CaCO}_3$  and  $\text{CO}_2$ .

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

### Lowest TOC content

The optional integrated UV lamp (185 | 254 nm) avoids microbiological growth and reduces the content of TOC to

a minimum. Reproducible and reliable results are guaranteed due to the low TOC content of up to  $\leq 2$  ppb.

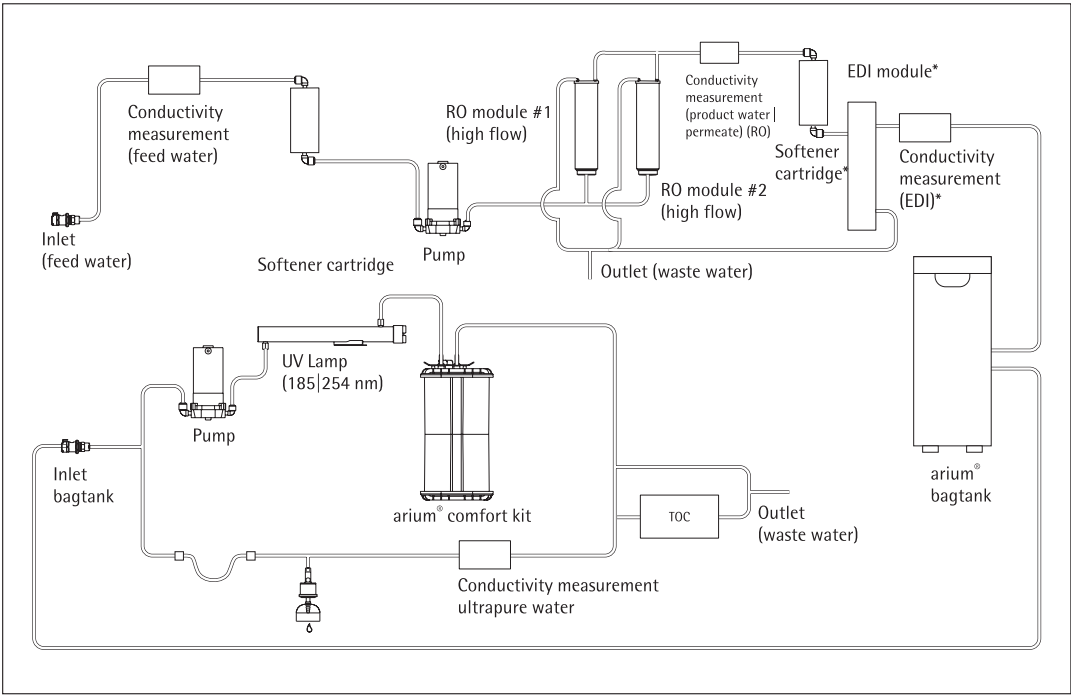
### Consistently High Quality Type 2 Water

As well as pretreatment and purification via the reverse osmosis module, the device also performs electrochemical deionization in the third purification stage. Thanks to this modern EDI

technology, the arium® comfort II guarantees the reliable and safe removal of all contamination contained in the feed water.

### Technical Specifications

Water purification method	Adsorption using spherical activated carbon, catalyst, reverse osmosis, electrochemical deionization, optional final particle and sterile filtration
Dimensions: Width × Height × Depth	43.5 × 50.1 × 47.6 cm
Empty weight	28 kg
Operating weight	36 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
Data output	SD card slot, RS-232 interface



Flow chart arium® comfort II (H2O-II-2-TOC-T)

## Product Water Quality

Type of water	Ultrapure water ASTM Type 1	Pure water Type 2
Output <sup>5</sup>	120 L/h	5 L/h or 10 L/h
Water dispensing flow rate <sup>3</sup>	up to 2 L/min	up to 3 L/min
Volume-controlled dispensing <sup>3</sup>	2 L/min in 100 mL, 1 L or 5 L steps, depending on total dispense between 0.1 L and 60 L	–
Volume accuracy <sup>4</sup>	3% in the range of 0.25 L and 60 L	–
Typical conductivity	0.055 µS/cm compensated to 25°C <sup>7</sup>	0.2–0.07 µS/cm compensated to 25°C <sup>4</sup>
Typical resistivity	18.2 MΩ × cm compensated to 25°C <sup>7</sup>	5–15 MΩ × cm compensated to 25 °C <sup>4</sup>
Typical TOC reduction <sup>6</sup>	–	95%
TOC content <sup>2</sup> (System with UV Lamp)	≤ 2 ppb	–
TOC content <sup>2</sup> (System without UV Lamp)	< 5 ppb	–
Microorganism content <sup>1</sup>	< 1 CFU/1,000 mL	< 1 CFU/1,000 mL
Particle content <sup>1</sup>	< 1/mL	< 1/mL
Particle and microorganism retention	–	> 99%

## Feed Water Quality

Exclusively potable water according to the drinking water regulations of the USA, the European Union, or Japan.

Inlet pressure	2.0–6.9 bar
Temperature	2–30°C
Specific conductivity	< 1,500 µS/cm compensated to 25°C
TOC content	< 2,000 ppb
Max. total hardness (max. CaCO <sub>3</sub> )	360 ppm
Free chlorine	< 4 ppm
Iron (total Fe content)	< 0.1 ppm
Manganese	< 0.05 ppm
Aluminum	< 0.05 ppm
CO <sub>2</sub> in solution	≤ 40 ppm
Fouling Index (SDI)	< 5
Turbidity	<1 NTU
pH value	4–10

<sup>1</sup> When using an arium® sterile-grade filter (Sartopore® 2 150, 0.2 µm pore size)

<sup>2</sup> Determined with municipal water (Goettingen), TOC < 1,000 ppb

<sup>3</sup> Depending on the arium® bagtank design, hydrostatic pressure, and connected accessories and end filter

<sup>4</sup> Under constant operating conditions

<sup>5</sup> Depending on the feed water pressure, temperature and condition of the RO module(s)

<sup>6</sup> Depending on the type of organic impurities in the feed water

<sup>7</sup> Constant of the ultrapure water measurement cell: 0.01 cm<sup>-1</sup>

## Ordering Information

### arium® comfort II for producing ASTM Type 1 ultrapure water and Type 2 pure water

Equipment supplied: 1 arium® comfort II, RO module(s) (reverse osmosis) and connection set, optional with UV Lamp, TOC Monitor

Order Number System without UV Lamp and TOC Monitor	Order Number System incl. UV Lamp	Order Number System incl. UV Lamp and TOC Monitor	Description
H2O-II-2-T	H2O-II-2-UV-T	H2O-II-2-TOC-T	arium® comfort II bench-top system in a compact design for every laboratory workstation, Type 2 production flow rate 10 L/h
H2O-II-2-B	H2O-II-2-UV-B	H2O-II-2-TOC-B	arium® comfort II space-saving wall-mounted system with integrated wall bracket, Type 2 production flow rate 10 L/h
H2O-II-1-T	H2O-II-1-UV-T	H2O-II-1-TOC-T	arium® comfort II bench-top system in a compact design for every laboratory workstation, Type 2 production flow rate 5 L/h
H2O-II-1-B	H2O-II-1-UV-B	H2O-II-1-TOC-B	arium® comfort II space-saving wall-mounted system with integrated wall bracket, Type 2 production flow rate 5 L/h

To install arium® comfort II as a built-in unit, please order the corresponding bench-top system and a conversion kit H2O-ACK-D described under the Accessories.

## Accessories

### arium® bagtanks

The Most Innovative Tank System

- Integrated venting filter with check valve securely protects against CO<sub>2</sub> contamination
- Optional rollers provide highest flexibility
- Easy and quick replacement of the arium® bags
- High operational safety because no cleaning agents are needed

#### Description

Pure water is stored in the innovative, closed arium® bagtank system. Here, the prepared pure water is securely protected from secondary contamination. The arium® bagtank system enables high water quality over an extended period, thereby providing for longterm, reproducible results. In contrast to typical water tanks, the arium® bag provides a high degree of user safety and saves time by the elimination of complex sanitization processes with chemicals.

arium® bagtanks are housings that are equipped with arium® bags. 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 make the system extremely flexible.

Integrated distribution pumps are a standard component of the 50 L and 100 L bagtanks. 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.



#### Water Dispensing Flow Rate

With pump <sup>1</sup>	up to 3.0 L/min
With pump, dispense gun and sterile-grade filter <sup>1</sup>	up to 2.0 L/min
Without pump <sup>2</sup>	up to 1.5 L/min
Pump pressure	3 bar

#### Intended Use

System Type:

arium® comfort I and comfort II,  
arium® advance RO and advance EDI

## Technical Specifications | Ordering Information

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	86.5 × 43.0 cm
bag 50 l	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 liters
bagtank 50	1 × 50 liters
bagtank 100	2 × 50 liters
Power supply <sup>1</sup>	240 VAC (± 10%), 50 Hz, 120 VA (max.) <sup>2</sup>
Power supply, US versions <sup>1</sup>	115 VAC (± 10%), 60 Hz, 170 VA (max.) <sup>1</sup>
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	
1 × 3/8" PLC Quick Coupling	
Water connection output	
bagtank 20	1 × 3/8" PLC Quick Coupling
bagtank 50, bagtank 100	2 × 3/8" PLC Quick Coupling

Order Number	Description
H2O-AOV-20 <sup>3</sup>	arium® bagtank 20 L, without pump, qty. 1 unit
H2O-AOV-50 <sup>3</sup>	arium® bagtank 50 L, with pump 240 VAC, 50 Hz, qty. 1 unit
H2O-AOV-50-US <sup>3</sup>	arium® bagtank 50 L, with pump 115 VAC, 60 Hz, qty. 1 unit
H2O-AOV-50-W	arium® bagtank 50 L, without pump, qty. 1 unit
H2O-AOV-100 <sup>3</sup>	arium® bagtank 100 L, with pump 240 VAC, 50 Hz, qty. 1 unit
H2O-AOV-100-US <sup>3</sup>	arium® bagtank 100 L, with pump 115 VAC, 60 Hz, qty. 1 unit
H2O-AOV-100-W	arium® bagtank 100 L, without pump, qty. 1 unit
H2O-ADP-20	arium® pump for arium® bagtank 20 L, 240 VAC, 50 Hz, qty. 1 unit
H2O-ADP-20-US	arium® pump for arium® bagtank 20 L, 115 VAC, 60 Hz, qty. 1 unit
H2O-ATR	arium® rollers for arium® bagtank 50 & bagtank 100, incl. fittings, qty. 4 units
H2O-CBS-20	arium® 20 L bag for arium® 20 L bagtank, qty. 2 units
H2O-CBS-50	arium® 50 L bag for arium® 50 L and 100 L bagtank, qty. 2 units
H2O-ATB	arium® wall bracket for arium® bagtank 20, qty. 1 unit

<sup>1</sup> bagtank 20 is supplied without pump; pump optionally available

<sup>2</sup> Value only applies for bagtank 20 dispensing site at the same height or lower than the tank connection

<sup>3</sup> Note: The arium® bag is not included in the equipment supplied with the arium® bagtank

## arium® Conversion Kit

Flexible Positioning, Easy and Space-Saving Integration

- 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

### Description

The arium® conversion kit enables you to easily install an arium® comfort or an arium® pro bench-top 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 saves space on and above your lab bench as the control unit along with the display and dispenser permits variable wall-mounting options to suit your particular requirements.



## Technical Specifications | Ordering Information

Materials	
Tubing	PVDF
Tubing length	3.4 m
Cable length	3.0 m

### Order Number

H20-ACK-D

### Description

arium® Conversion Kit inclusive wall mounting kit for display | dispense unit.\*

\* The arium® conversion kit can only be used in combination with an arium® bench top system.  
It is highly recommended to install the conversion kit via the Sartorius Service.

### Intended Use

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF

## arium® Dispense Gun

Ergonomic Water Dispensing with an up to 3.7 m Working Radius

- Extended working area of 3.7 m
- Available with a height-adjustable stand or wall mounting bracket
- Ergonomic design
- Easy-to-use
- Sterile-grade filter can be connected

### Description

The arium® dispense gun is an ergonomic, easy-to-handle dispensing unit that is excellently suited for dispensing ultrapure water.

Depending on the working environment, you can save space by mounting the dispense gun on the wall or on a stand that is height-adjustable up to 70 cm.

Moreover, the stand lets you work in a relaxed position and allows optimal adjustment to variously sized sampling vessels. Thanks to the extended tube guide, the work area has an expanded radius to up to 2.5 away from the arium® unit and another 1.2 m to the stand.

It's also easy to install a sterile-grade filter (Sartopore® 2 150 capsule) with 0.2 µm pore size for guaranteed sterile and particle-free water dispensing.



## Technical Specifications | Ordering Information

Materials	
Stand	Aluminum (gray anodized)
Dispense gun	Plastic, white finish
Tubing	PVDF

Dimensions, without tubing [H × W × D]	
Dispense gun with stand	18.5 × 59.5 × 51.0 cm
Dispense gun with wall mounting bracket	9.0 × 10.0 × 28.5 cm

Weight without tubing	
Dispense gun with stand	5.60 kg
Dispense gun with wall mounting bracket	0.46 kg

### Order Number

H2Opro-AMDG1	arium® Dispense Gun inclusive height-adjustable stand, qty. 1 unit
H2Opro-AMDG2	arium® Dispense Gun inclusive wall mounting kit, qty. 1 unit

### Description

### Intended Use

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF  
arium® 611

## arium® bagtank Dispense Gun

Ergonomic Water Dispensing from the arium® bagtank with a Working Radius of up to 3.7 m

- Extended working area of 3.7 m
- Available with a height-adjustable stand or wall mounting bracket
- Ergonomic design
- Easy-to-use
- Sterile-grade filter can be connected

### Description

The arium® dispense gun is an ergonomically designed, easy-to-use dispensing unit and is perfectly suited for dispensing pure water.

Depending on the work environment, either position the dispense gun on the wall to save space or on the 70 cm height-adjustable stand. Moreover, the stand lets you work in a relaxed position and allows optimal adjustment to different sized sampling vessels. The extended tube guide ensures a work area 2.5 m away from the arium® bagtank or pressure tank and a further 1.2 m from the stand.

A sterile-grade filter (Sartopore® 2 150 capsule) with 0.2 µm pore size can be easily connected for guaranteed sterile and particle-free water dispensing.



## Technical Specifications | Ordering Information

Materials	
Stand	Aluminum (gray anodized)
Dispense gun	Plastic, white finish
Tubing	PE
Dimensions, without tubing [H × W × D]	
Dispense gun with stand	18.5 × 59.5 × 51.0 cm
Dispense gun with wall mounting bracket	9.0 × 10.0 × 28.5 cm
Weight without tubing	
Dispense gun with stand	5.60 kg
Dispense gun with wall mounting bracket	0.46 kg

Order Number	Description
613-AMDG1	arium® Dispense Gun inclusive height-adjustable stand for connection to arium® bagtanks, qty. 1 unit
613-AMDG2	arium® Dispense Gun inclusive wall mounting kit for connection to arium® bagtanks, qty. 1 unit

### Intended Use for arium® bagtanks:

arium® bagtank 20\*  
arium® bagtank 50  
arium® bagtank 100

arium® pressure tank 30  
arium® pressure tank 50  
arium® pressure tank 70  
arium® pressure tank 100

\* only in conjunction with an optional distribution pump



# arium® Display Mounting Kit

All Menu Functions Directly at the Dispensing Port

- Visual quality control directly at the water-dispensing site
- System control directly at the work place
- Optimal customization to the variously sized vessels
- Water dispensing using the slider
- Radius extends up to 2.5 meters
- Sterile-grade filter can be connected

## Description

The display mounting kit not only extends the working radius to up to 2.5 meter from arium® ultrapure water system, but at the same time, enables the control of the device and monitoring of ultrapure water quality directly at the dispensing port. The bracket is integrated in the stand to which the flexible arium® display is mounted. This creates a combination that provides complete access to the menu with all its functions along with the practical convenience of a dispense gun.

Moreover, the over 70 cm height-adjustable stand lets you work in a relaxed position one-handedly and allows optimal adjustment to different sized sampling vessels.

It's also easy to install a sterile-grade filter (Sartopore® 2 150 capsule) with 0.2 µm pore size for guaranteed sterile and particulate-free water dispensing.



## Technical Specifications | Ordering Information

Material Stand	Aluminum (gray anodized)
Dimensions [W × H × D]	22.0 × 59.5 × 25.5 cm
Weight	5.60 kg

Order Number	Description
H2Opro-ADM1	arium® Display Mounting Kit, height-adjustable, for arium® built-In systems, qty. 1 unit

### Intended Use for arium® Built-In Units

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF

# arium® Multifunction Stand

Full Menu Functionality Offering the Highest Flexibility

- Visual quality control directly at the water-dispensing port
- System control directly at the work place
- Optimal customization to the variously sized sampling vessels
- Water dispensing using the slider
- Radius extends up to 2.5 meters
- Sterile final filters connectable

## Description

The multifunction stand combines the convenience of a display mounting stand with the flexibility of a remote dispense gun. With these components integrated all into one unit, the multifunction stand enables pure water to be dispensed on demand in the different quantities needed.

Pure water can be dispensed in a number of ways, ranging from volume-controlled removal to time-controlled dispensing or manual removal. Whichever the user's application, the combination dispensing unit set up as a stationary unit or used as a portable device offers the user the best option for dispensing. Moreover, the user can check the downstream pure water quality and control the lab water system directly at the dispensing point.



As the stand can be adjusted by up to a height of 70 cm, or more than 2 ft., and the tube guide can be extended by up to 2.5 m, or more than 8 ft., the user's working radius can be optimally adapted to his or her specific requirements.

For dispensing pure water that is guaranteed to be sterile and free of particles, a sterile final filter (Sartopore® 2 150 Capsule) with a 0.2 µm pore size can be easily connected to the point-of-use outlet.

## Technical Specifications | Ordering Information

Material Stand	Aluminum (gray anodized)
Dimensions [W × H × D]	22.0 × 59.5 × 25.5 cm
Weight	5.60 kg

Order Number	Description
H2O-ADD	arium® Multifunction Stand, display mounting kit with dispense gun, height-adjustable, for arium® built-In systems, qty. 1 unit

### Intended use for arium® Built-In Units

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF

## arium® Foot Switch

More Convenient Ultrapure Water Dispensing

- Water dispensing at a press of the foot
- Facilitates working in clean rooms and minimizes the risk of contamination
- Comfortable fatigue-free switching thanks to low height

### Description

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



## Technical Specifications | Ordering Information

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

### Order Number

H20-AFS1

### Description

arium® Foot Switch, qty. 1 unit

### Intended Use

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF

## arium® Printer

GMP Data Logging Made Easy

- Acquisition and documentation of current measurement data

### Description

Current measurements can be output to the printer via an RS-232 interface to support qualification and documentation tasks.



## Technical Specifications | Ordering Information

Dimensions [W × H × D]	21.5 × 7.8 × 15.5 cm
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### Order Number

611APR1

### Description

arium® Printer, qty. 1 unit

### Intended Use

arium® comfort I and comfort II  
arium® pro DI, pro UF, pro UV and pro VF  
arium® 611, 612 and 613

# arium® Water Guard

Early Detection of Leakages Protects the Laboratory

- 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



## Description

Only the early detection of water leakages provides optimal protection against water damage in the laboratory. Leakages are registered by the highly sensitive optical sensor.

In contrast to conventional sensors, this sensor functions independently of conductivity measurement values as these are so low in the ultrapure water area that the activation of the guard is not guaranteed. Once a leakage is detected the water guard automatically locks the feed water inlet line. An acoustic warning is triggered immediately and the system status can be constantly controlled using the integrated LED display. The sensitive, optical sensors and high-grade materials mean that the arium® water guard is perfect for all ultrapure and pure water systems.

## Technical Specifications | Ordering Information

Sensor Dimensions	
Diameter	5 cm
Height	2.5 cm
Cable length	2 m
Tubing Connections	
Input	3/8" plug connection
Output	3/8" plug connection
Power supply	100 – 240 VAC 50 – 60 Hz

Order Number	Description
610AWG1	arium® Water Guard, qty. 1 unit

**Intended Use**  
System type:  
arium® comfort I and comfort II  
arium® pro, pro DI, pro UF, pro UV and pro VF  
arium® advance RO and EDI  
arium® 611, 612 and 613

## Consumables

### arium® Sterile Final Filter

Sterile and Particle-Free Water Dispensing

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



#### Description

The arium® sterile final 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 polyethersulfone double membrane. It enables an excellent service life and output. The capsule is attached, by a quick connector at the final position and reliably removes all particles and microorganisms 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 application 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.

## Technical Specifications | Ordering Information

Materials	
Membranes	Asymmetrical polyethersulfone
Filling bell	Polycarbonate
Other plastics	Polypropylene
Pore size	0.45 µm + 0.2 µm
Filtration area	0.015 m <sup>2</sup>
Inlet and outlet	1/4" plug connection
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

Order Number	Description
5441307H4--CE--B	arium® Sterile Final Filter (Sartopore® 2 150 capsule), 0.2 µm pore size, qty. 5 units

#### Intended Use

On Dispense Guns and Display-Dispense Units for system type:  
arium® comfort I and comfort II  
arium® pro, pro DI, pro UF, pro UV and pro VF  
arium® 611  
arium® bagtank Dispense Gun  
arium® Dispense Gun

# arium® comfort Pretreatment Cartridge

Full Menu Functionality Offering the Highest Flexibility

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

## Description

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

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

In addition to preventing deposits from forming, the catalyst diminishes fouling processes and inhibits microbiological growth.

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



## Technical Specifications | Ordering Information

Materials	
Housing	High-quality polypropylene
Cleaning media	Spherical catalytic effective activated carbon
Dimensions [W×H×D]	18×26×11 cm
Operating weight	3.5 kg
Feed water requirements	See "Technical Specifications" page 2

Order Number	Description
H2O-CPF	arium® comfort Pretreatment Cartridge, qty. 2 units

**Intended Use**  
arium® comfort I and comfort II

# arium® Softener Cartridge

For Maximum Service Life of the EDI Module

- Consistently high water quality
- Long service lives
- Effective CaCO<sub>3</sub> elimination

## Description

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 quality and a long service life of the EDI module.



## Technical Specifications | Ordering Information

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

Order Number	Description
H2O-CSO	arium® Softener Cartridge, qty. 2 units

**Intended Use**  
System Types:  
arium® comfort II  
arium® advance EDI

## arium® RO Modules

### Reverse Osmosis Modules with Low-Energy Membranes

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

#### Description

The arium® RO modules consist of two independent membrane housings whose design guarantees 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 (waste water). The RO Modules typically enable high recovery rates. This optimizes the water consumption while still retaining at least up to 98% of the ions. Thanks 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, this backflush function on restarting the system allows for the immediate dispensing of high quality water.



## Technical Specifications | Ordering Information

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
Product water quality	See "Technical Specifications" page 2

#### Order Number

H2O-CRO-H- 1	arium® RO module, qty. 1 unit
H2O-CRO-H- 2	arium® RO modules, qty. 2 units

#### Description

#### Intended Use

arium® comfort II and  
arium® advance EDI



# arium® comfort Cartridge Set

Deionization Cartridge Featuring Top-Down Technology

- 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 resin mixed-bed
- Patented connection process simplifies the replacement of consumables

## Description

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 even exceeds the ASTM Type 1 quality standard. Such consistently high water quality is a guarantee for optimal 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 applicable standards for flow rate in the cross section and contact time with the medium in mind.



## Technical Specifications | Ordering Information

Materials	
Housing	High-grade polypropylene
Mounting screws	Stainless steel
Cleaning media	Spherical catalytic effective activated carbon Ultrapure, semiconductor-grade mixed bed ion exchange resin
Further data for product water quality	See "Technical Specifications" page 2

Order Number	Description
H2O-C-PACK	arium® comfort Cartridge Set , qty. 1 unit

**Intended Use**  
arium® comfort I and comfort II

# arium® UV Lamp (185 | 254 nm)

Ultrapure Water, Free of TOC

- Horizontal installation, optimize temperature gradient
- Effectively destroys organic compounds
- Reduces microbiological growth
- Easy replacement

## Description

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 waves.

The two different wavelengths reliably removes organic substances (TOC or total organic carbon), effectively preventing microbiological growth. Organic compounds oxidize at 185 nm, whereas 254 nm prevents microbiological growth.



## Technical Specifications | Ordering Information

Material	quartz glass
TOC-content product water	≤ 2 ppb

Order Number	Description
611CEL1	arium® UV Lamp (185   254 nm), qty. 1 unit

**Intended Use**  
arium® comfort I and comfort II  
(UV & TOC version)  
arium® pro UV and pro VF  
arium® 611 UV and VF

# arium® RO Module Cleaning Set

Maximum Service Life of the RO Module

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

## Description

Two-stage cleaning set for removing scaling and organic contaminants.

The alkaline substance contains non-foaming tensides that dissolve organic compounds and disperse colloids. The tensides do not remain on the membrane surface and can be quickly removed from the membrane surface. Cleaning efficiency depends on the pH value that can be safely maintained over a wide temperature range by the contained buffer substances.

The acidic cleaning agent to remove scaling contains chelate and reducing agents in order to dissolve metallic fouling. Even during cleaning, buffers keep the ideal pH consistently low over a wide range.



## Technical Specifications | Ordering Information

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

Order Number	Description
H2O-CCS	arium® RO Module Cleaning Set, qty. 1 unit

**Intended Use**  
 System Types:  
 arium® comfort I and comfort II  
 arium® advance RO and advance EDI  
 arium® 612 and 613

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