



sartorius

arium[®] advance EDI

Ultimate Reliable Electrochemical Deionization



arium[®] advance EDI Type 2 pure water system

Consistently high quality Type 2 water thanks to state-of-the-art EDI technology

Optimized water consumption – automatic with iJust

Easy-to-use – unique glass display with touch function

Description

The arium[®] advance EDI provides Type 2 water in consistently high quality. The innovative iJust makes the best use of environmental resources by automatically optimizing water consumption. Unlike conventional water purification systems, the unique display with touch functions in combination with the intuitive menu navigation ensures easy operation.

With a flow rate of up to 10 l/h, the automatic RO membrane backflush, the latest EDI technology and a constant flow rate, the arium[®] advance EDI is the optimal choice for both routine and demanding applications.

Applications

- Microbiological media & reagents
- Solutions for chemical analysis and synthesis
- Histology
- ELISA, RIA
- Buffer solutions
- Feed water for laboratory devices: Autoclaves, dishwashers etc.

Consistently High Water Quality

As well as pre-treatment and purification via the reverse osmosis module, the device also performs softening and electrochemical deionization in the third purification stage. Thanks to this modern EDI technology, the arium[®] advance EDI guarantees the reliable and safe removal of all contamination contained in the feed water.

iJust

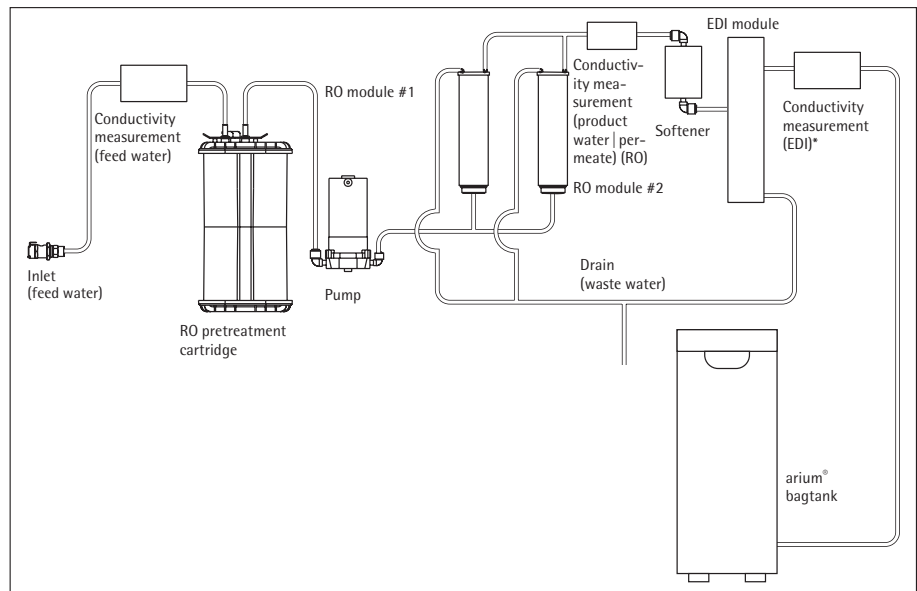
iJust conceals an innovative technology that optimizes water production. The intelligent arium[®] software controls a valve on the concentrate outlet corresponding to the data entered for CaCO₃ and CO₂. iJust thereby optimizes product water quality and water consumption.

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

Display with Touch Function

Simply navigate intuitively in the easy-to-use and clear menu by lightly touching the display – even with gloves.

Technical Specifications



Flow chart arium® advance EDI

Technical Specifications

Water purification method	Particle filtration, adsorption using spherical activated carbon, catalyst, reverse osmosis, softening, electrochemical deionization, optional final particle and sterile filtration
Dimensions: Width x Height x Depth	35.0 x 50.1 x 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

arium® advance EDI for Producing Type 2 Pure Water

Equipment supplied: 1 arium® advance EDI, 2 RO modules (reverse osmosis) and connection set

Order no.	Description
H2O-EDI-2-T	arium® advance EDI Bench-Top system in a compact design for every laboratory workstation
H2O-EDI-2-B	arium® advance EDI space-saving Wall-Mounted system with integrated wall bracket

Product Water Quality

Water type	Pure water Type 2
Output ³	≤ 10 l/h
Water dispensing flow rate ⁵	≤ 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 ⁴	95%
Microorganism content ²	< 1 CFU/1,000 ml
Particle content ²	< 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.

Input pressure	2.0 – 6.9 bar
Temperature	2 – 30°C
Specific conductivity	< 1,500 µS/cm compensated to 25°C
TOC content	< 1,000 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 Depending on the feed water (CO₂ ≤ 40 ppm) and temperature

² When using an arium® sterile-grade filter (Sartopore® 2 150, 0.2 µm pore size)

³ Depending on the feed water pressure, temperature and condition of the RO modules

⁴ Depending on the type of organic impurities in the feed water

⁵ Depending on the arium® bagtank design, hydrostatic pressure, connected accessories and end filter

arium® bagtanks

The Most Innovative Tank System



- Integrated venting filter with check valve securely protects against CO₂ contamination
- Optional rollers provide highest flexibility
- Easy replacement of arium® bags, with no time-consuming sanitization
- High operation safety, no use of cleaning agents

Description

The pure water is stored in the innovative, closed arium® bagtank system. Here, the prepared pure water is securely protected from secondary contamination. 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 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 ¹	up to 3.0 l/min
with pump, dispense gun and sterile-grade filter ¹	up to 2.0 l/min
without pump ²	up to 1.5 l/min

Intended Use

System types:
arium® comfort I and comfort II,
arium® advance RO and advance EDI

¹ arium® bagtank 20 is supplied without pump as standard; pumps are optionally available

² Value only applies for arium® bagtank 20, the dispensing site at the same height or lower than the tank connection

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

Technical 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	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 ¹	240 VAC (± 10%), 50 Hz, 120 VA (max.)
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Power supply, US versions ¹	115 VAC (± 10%), 60 Hz, 170 VA (max.)
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Operating temperature	2°C–35°C at max. 80% relative humidity
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Storage temperature	5°C–45°C at max. 80% relative humidity
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Water connection input	1 × 3/8" PLC Quick Coupling
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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 ³	arium® bagtank 20 l, without pump, qty. 1 unit
H2O-AOV-50 ³	arium® bagtank 50 l, with pump 240 VAC, 50 Hz, qty. 1 unit
H2O-AOV-50-US ³	arium® bagtank 50 l, with pump 115 VAC, 60 Hz, qty. 1 unit
H2O-AOV-100 ³	arium® bagtank 100 l, with pump 240 VAC, 50 Hz, qty. 1 unit
H2O-AOV-100-US ³	arium® bagtank 100 l, with pump 115 VAC, 60 Hz, 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

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

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

Technical Specifications

Materials

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

Dimensions without tubing [W × H × 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

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® 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. Leaks 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 sensors and high-grade materials mean that the arium® water guard is perfect for all ultrapure and pure water systems.

Order number Description

610AWG1	arium® water guard, qty. 1 unit
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Technical Specifications

Sensor dimensions

Diameter	5 cm
Elevation	2.5 cm
Cable length	2 m

Tubing connections

Inlet	3/8" plug connection
Outlet	3/8" 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
arium® 611, 612 and 613

arium® Sterile-grade 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-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 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 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.

Technical Specifications

Materials

Membranes	Asymmetrical polyethersulfone
Filling bell	Polycarbonate
Other plastics	Polypropylene
Pore size	0.45 µm + 0.2 µm
Filtration area	0.015 m ²
Inlet and outlet	¼" 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

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

Order number	Description
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5441307H4--CE--B	arium® sterile-grade filter (Sartopore® 2 150 capsule), 0.2 µm pore size, qty. 5 units
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arium® RO Pretreatment Cartridge

Safe Protection of the RO Module



- 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

Description

The best protection for a downstream reverse osmosis (RO) membrane is the combination of spherical, catalytic effective activated carbon, a catalyst and a depth filter. It reliably removes oxidizing 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 pretreatment. It is particularly efficient at removing free chlorine and at a lower temperature and | or higher pH value compared to activated carbon alone.

Apart from preventing deposits, the catalyst reduces fouling processes and inhibits microbiological growth. The patented cartridge design saves time with its easy installation and replacement.

Technical 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
Feed water requirements	See "Technical Specifications" page 2

Intended Use

System Type:
 arium® advance RO and advance EDI
 61316, 61215

Order Number	Description
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613CPF05-----V	arium® RO pretreatment cartridge set, qty. 2 units
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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

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

Intended Use

For arium® advance EDI and arium® comfort II

Order Number

Description

H20-CRO-H-2	arium® RO modules, qty. 2 units
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arium® Softener Cartridges

Maximum Service Life of the EDI Module



- Consistently high water quality
- Long service lives
- Effective CaCO₃ 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

Materials

Housing	High-grade polypropylene
Filling material	Ultrapure ion exchange resin

Intended Use

System Types:
arium® comfort II
arium® advance EDI

Order Number

Description

H20-CS0	arium® softener cartridges, qty. 2 units
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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

Ingredients

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

Intended Use

System Types:

arium® comfort I and comfort II
arium® advance RO and advance EDI
arium® 612 and 613

Order Number

Description

H2O-CCS

arium® RO module cleaning set, qty. 1 unit