Operating Manual

arium® pro UF│VF│DI│UV

Water Purification System

Contents

User Information

Warning │ Danger Symbols

WARNING	These notes identify hazards which have a high probability of resulting in death or serious physical injury if not avoided.
CAUTION	These notes identify hazards that can result in moderate or mild injuries if not avoided.
IMPORTANT	These notes identify hazards associated with the risk of material damage.

Explanation of Symbols

ⓘ	This symbol identifies useful information and tips.

The following symbols are used in these instructions:

▶ Indicates required steps.

▷ Describes what happens after you have performed a particular step.

– Texts that use this mark are lists

About these Instructions

▶ Please read these instructions carefully and completely before putting the equipment into operation for the first time. Observe the safety instructions.

▶ These instructions are an important part of the product. Keep these instructions in a safe place. If you give the device to others to use, give them these instructions too.

▶ If these instructions are lost, please contact Sartorius for a replacement or download the latest manual from our website: www.sartorius.com

These operating instructions likewise apply to the arium® pro DI|UF|UV|VF systems. Therefore, the following refers to arium® pro systems in general. A corresponding note is made whenever the arium® pro DI|UF|UV|VF systems differ from one another.

Applications Advice │ Technical Support

Contact addresses for application advice and our technical support can be found online at: www.sartorius.com

Safety Information

Please read the following safety information thoroughly and follow the instructions exactly. This information is designed to ensure your safety and will prevent damage to your arium® pro system.

⚠ WARNING

Danger of electric shock!

– To plug in your arium® pro system, use a properly grounded electrical outlet with a voltage of 100 – 240 V, 50/60 Hz.

– Do not place your arium® pro system on top of electrical equipment. Routine maintenance of the arium® pro system may involve water spillage.

– Remove the plug from the electrical outlet prior to changing the UV bulb on an arium® pro UV|VF.

⚠ WARNING

Danger of injury from fire or explosion!

– Do not use your arium® pro system in the vicinity of highly flammable or combustible materials as it contains components that may ignite such materials.

– The arium® pro system is to be operated with water only. Sanitizing and cleaning agents should only be used according to the instructions given in this manual.

⚠ CAUTION

Danger of injury to eyes and skin!

– Avoid splashing sanitizing agents on clothing, eyes or skin (wear protective clothing).

– Make sure that all tubing connections are sealed tightly to avoid the liquid cleaning agent leaking.

– Carefully follow the manufacturer's safety instructions included on the liquid cleaning agent containers and filter cartridges.

– To prevent the hazard of UV irradiation, never operate your arium® pro UV|VF system with the doors of the unit open.

IMPORTANT	Danger of irreversible damage to arium® pro system components!

– Be sure to replace defective fuses with those of the same type and rating.

– Make sure that the outlet tubing is directed to an open drain.

– Protect against frost.

– When installing a new UV lamp in your arium® pro UV|VF system, do not touch the bulb with your bare hands. Fingerprints can cause damage to the bulb.

– Never connect peripheral devices to the device interfaces unless they have been recommended by Sartorius. This will prevent damage to your arium® pro system.

– Never unplug any cables from your arium® pro when it is running as this can cause malfunctions.

Intended Use

The arium® pro water purification system is designed to provide ultrapure water for the laboratory from water pretreated by distillation, deionization or reverse osmosis. To make sure that these units work properly, only use the filter media and equipment listed in this operating manual. Any other use beyond this is considered improper use.

– The arium® pro system may only be operated by trained personnel.

– Only operate your arium® pro system with original accessories or replacement parts. If you modify this water purification system independently, the performance and operating safety of the system are no longer guaranteed. This can also endanger the safety of the operator.

– If you encounter any problems with your system, please contact your local Sartorius Service Center.

– Please take all pertinent precautions to prevent accidents and observe the generally valid technical and occupational safety rules and regulations.

– Use only materials recommended by Sartorius (such as cartridges, replacement parts and sanitizing agents).

1. Product Description

Front view of an arium® pro VF system

1. Display and control panel
2. Sampling with sterile final filter
3. Door

The arium® pro DI|UF|UV|VF systems were designed to provide ASTM, NCCLS, ISO and USP grade water. Multi-stage purification methods purify pretreated water into ultrapure water by distillation, deionization or reverse osmosis. Depending on the arium® pro device model (DI, UF, UV or VF), purification processes based on mixed bed resins and activated carbon, ultrafiltration, UV illumination and sterile filtration are used.

All these purification processes are integrated into an arium® pro VF system. As the flow diagram for the arium® pro VF system on the subsequent page shows, the feed water first flows through a conductivity measuring cell. There, the quality of the feed water is continually monitored by conductivity measurements (LFF). Afterwards, the pump pumps the water through the first cartridge, the UV lamp and the second cartridge. In the next step, an ultrafilter purifies the water further. At the ultrafilter outlet, another conductivity measuring cell performs permanent monitoring of the ultrapure water quality (LFP). The TOC (total organic carbon) of the ultrapure water content is monitored by an optionally available TOC monitor. The measured values for conductivity and TOC are displayed on the arium® pro system.

To guarantee ultrapure water of consistent and high quality, the ultrapure water purification system is constructed like a circulation ring. If no water is dispensed, the water circulates through the ultrapure water cartridge, the UV lamp and the ultrafilter. The last purification step before dispensing is to run the water through a sterile final filter. Besides dispensing via the display screen, the arium® pro system also features the option of dispensing its ultrapure water through an optionally available remote dispenser.

The following table gives an overview of the different arium® pro systems and the purification processes they feature. The table also lists the arium® systems for which an optional TOC monitor is available.

System	Ultra Pure Water cartridges	UV Lamp	UV Filter	Optional TOC Monitor
pro DI	✓	–	–	–
pro UF	✓	–	✓	–
pro UV	✓	✓	–	✓
pro VF	✓	✓	✓	✓

✓ = Available
– = Not-Existent

1.1 Flow Diagram for arium® pro DI

Sanitization port

Conductivity measurement LFF (feed water)

Pump

Cartridge 1

Cartridge 2

Feed water input

Rinse water outlet

Conductivity measurement LFP (product water)

Final filter 0.2 µm

Product water
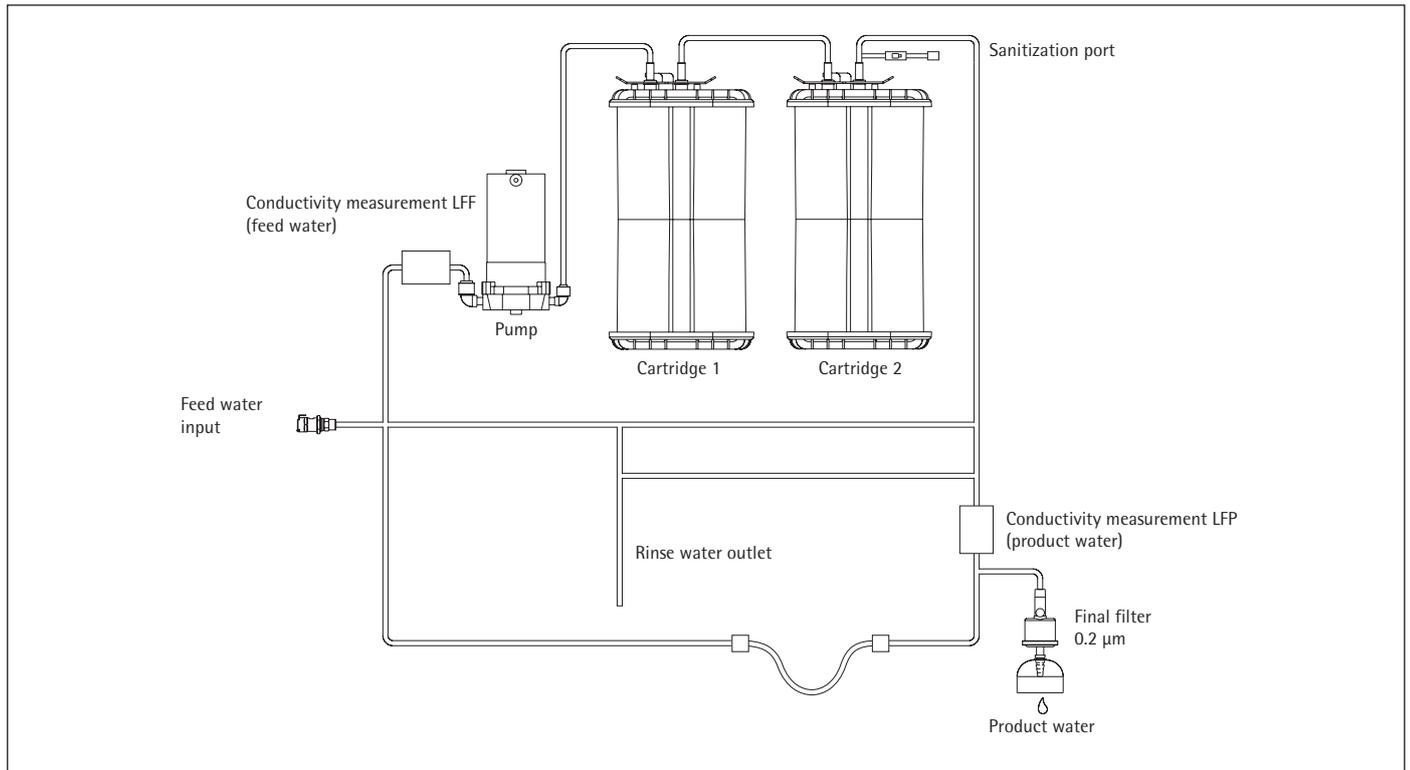
1.2 Flow Diagram for arium® pro UV (with optional TOC monitor)

UV Lamp (185|254 nm)

Sanitization port

Conductivity measurement LFF (feed water)

Pump

Cartridge 1

Cartridge 2

Feed water input

TOC

Rinse water outlet

Conductivity measurement LFP (product water)

Final filter 0.2 µm

Product water

1.3 Flow Diagram for arium® pro UF

Sanitization port

Conductivity measurement LFF
(feed water)

Ultra-
filter

Pump

Cartridge 1   Cartridge 2

Feed water
input

Conductivity measurement LFP
(product water)

Rinse water outlet

Final filter
0.2 µm

Product water

1.4 Flow Diagram for arium® pro VF (with optional TOC monitor)

UV Lamp (185│254 nm)

Sanitization port

Conductivity measurement LFF
(feed water)

Ultra-
filter

Pump

Cartridge 1   Cartridge 2

Feed water
input

TOC

Conductivity measurement LFP
(product water)

Rinse water outlet

Final filter
0.2 µm

Product water
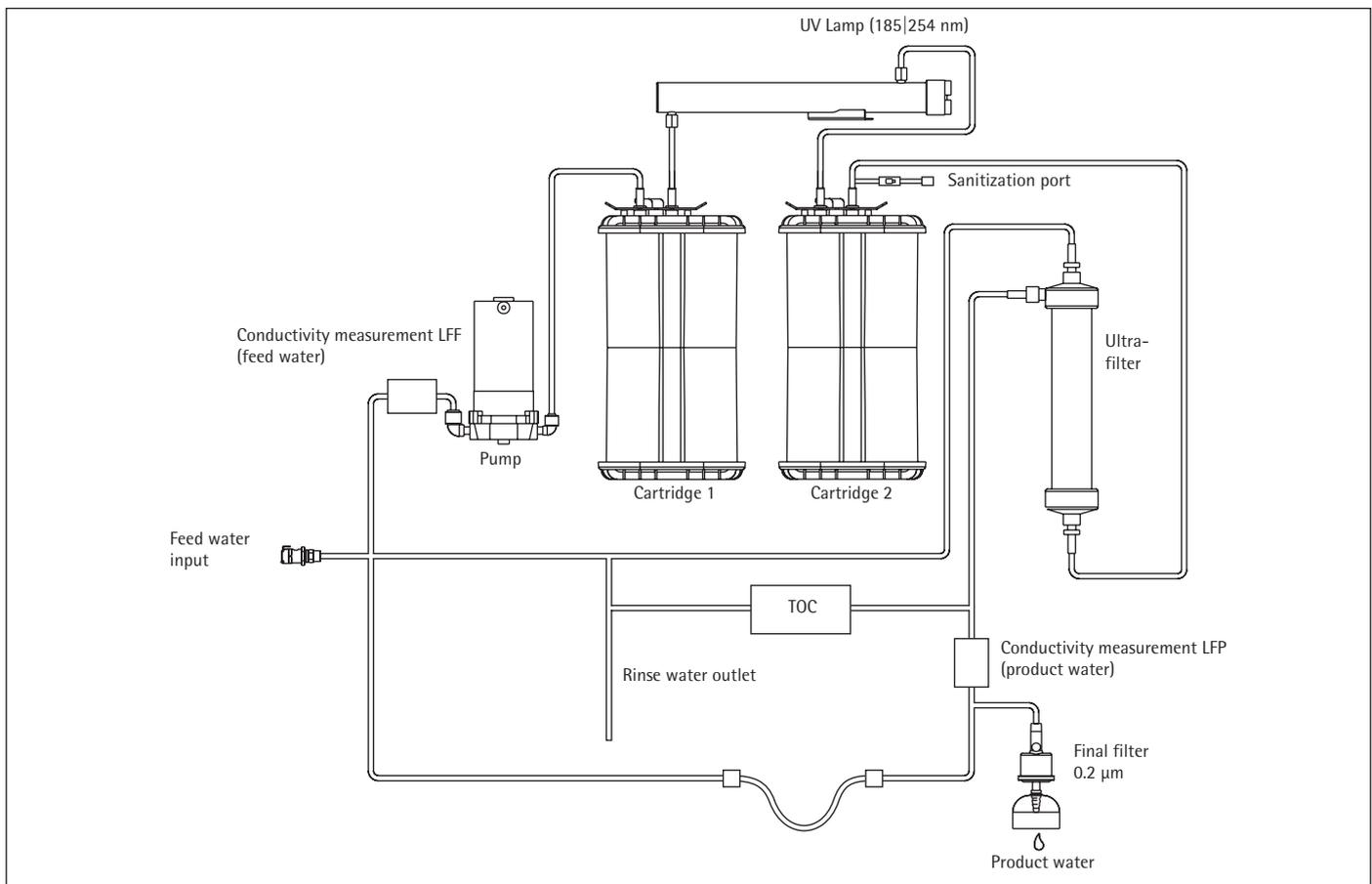
1.5   Electrical Connections
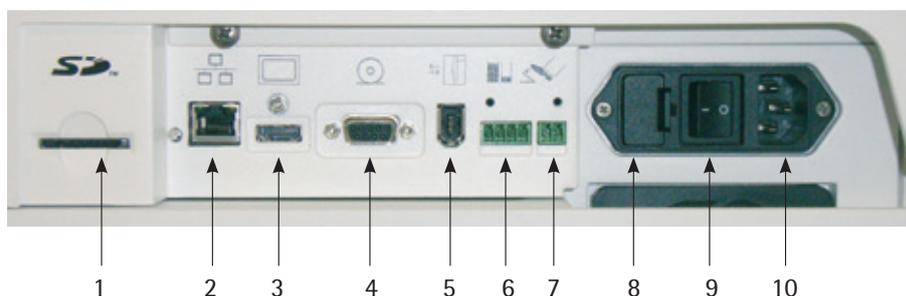
Electrical connections, side view right

1. SD card recorder | scanner
2. Ethernet connection (for Sartorius Service personnel only)
3. Display port for connecting the dispenser unit (on below-bench units)
4. RS-232 serial interface with a 9-pin sub-D port for connecting a printer (Sartorius 611APR1)
5. arium® Exchange interface
6. Connection for optional level sensors
7. Connection for optional foot switch
8. Fuse drawer
9. Main power switch
10. Mains connection

1.6   arium® Exchange Interface

The arium® Exchange interface enables communication with an arium® advance system. When such a cable is connected, the arium® pro system will stop dispensing water if the fill level of the arium® bagtank (< 2 liter) falls below the minimum. This is to prevent any malfunction of the arium® pro system.

Use the Firewire cable delivered with the arium® pro system for device communication when supplying the arium® advance from a bagtank.
To guarantee proper functioning, first switch on the arium® advance and then the arium® pro system.

A bagtank with an integrated pump must be used when supplying the arium® pro system from a bagtank, otherwise this could lead to malfunctioning. A bagtank 20 can be used without a pump as well, as long as it is positioned at the same height or higher than the arium® pro system.

Tubing Connections
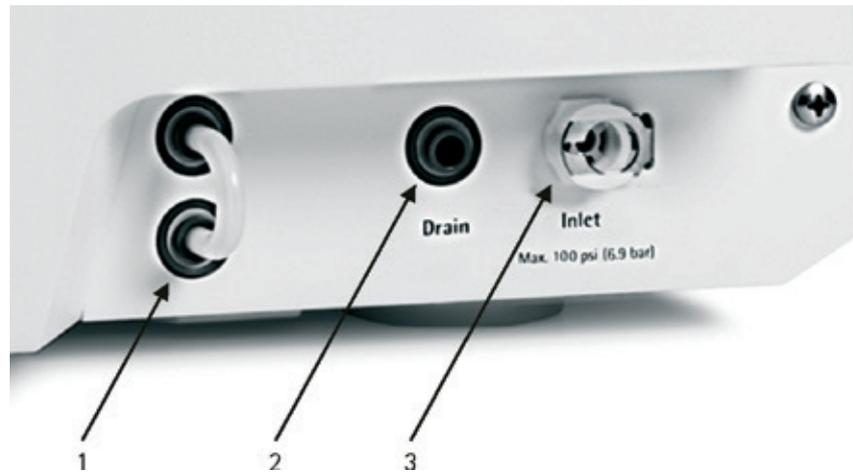
Tubing connectors, side view right

1. Interface port for optional accessories (e.g. remote dispenser, TOC (ATOC1))
2. Connection for rinse water tubing
3. Feed water supply

IMPORTANT	The connection for the rinse water tubing (drain) must permanently be directed towards to drain via the rinse water tubing. During operation of the arium® pro system, water can leak from here.

2. Unpacking and Installation

ℹ️ We recommend that you have the set-up and initial startup of your arium® pro system carried out by a qualified Sartorius service technician.

2.1 Unpacking

Remove your arium® pro system from its packaging. You will find the accessories inside the arium® pro housing and in the top cover of the box. The equipment supplied includes the following:

Part Description	Quantity
arium® pro system (with pre-installed display | dispenser unit)	1
Ultrafilter (arium® pro UF and VF only)	1
Feed water tubing with quick-fit adapter, PE, 3/8" outer diameter, length 2.40 m	1
Rinse water tubing, PE, 1/4" outer diameter, length 3.05	1
Timed dispense tubing, PVDF, 1/4" outer diameter, length 2.40 m	1
Straight connector, 1/4" to 1/4", for connecting the final filter to the timed dispense tubing	1
Screw connector, 1/4" outer diameter to 1/4" tubing connection, for connection to the display	dispenser unit	1
Power cord	1
Operating instructions	1
arium® Quality Assurance Certificate	1
Wall mounting bracket for arium® (on models used as wall-mounted systems)	1

Tubing adapter for feed water with 1/2" internal thread and 3/8" outer diameter	1
Two-part tubing adapter for feed water with G ¾" internal thread and 3/8" outer diameter	1

ℹ️ The cartridges are not included in the equipment supplied with your arium® pro system.

2.2   Bench Mounting

⚠️ **WARNING**	**Danger of electric shock!** Do not place your arium® pro system on top of electrical equipment. Water may spill when using the system.
⚠️ **WARNING**	**Danger of fire or explosion!** Do not use your arium® pro system in the vicinity of highly flammable or combustible materials as it contains components that may ignite such materials.

arium® pro as a benchtop system

– Place the arium® pro system on a flat surface.
– When selecting a place of installation for your arium® pro system, you must ensure that a feed water supply, a 100–240 V electric socket and an atmospherically vented drain are available.

2.3 Wall Mounting

The arium® pro system is optionally supplied with a wall bracket to enable you to attach the system securely to the wall so that it occupies a minimum amount of space. A clear wall area of at least 63 x 63 cm is required.

The wall bracket and the required screws for wall installation are not part of the regular equipment supplied.

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arium® pro as a wall-mounted system

Back panel of the arium® pro system unit's wall mounting bracket and wall rail on models used as wall-mounted systems.

⚠ CAUTION	The assembly of the two wall brackets and wall rail (included in delivery), is suitable for a load of 100 kg (220 lbs) and is only intended for the arium® pro system (including water). Do not put any additional load on the arium® pro system. When mounting the unit on a wall, make sure that the mounting surface and fasteners selected are capable of supporting a minimum of 100 kg (220 lbs). Inadequate support and │ or fasteners may result in injury to the operator and damage to the equipment.
ℹ	When selecting a place of installation for your arium® pro system, you must ensure that a feed water supply, a 100–240 V electric socket and an atmospherically vented drain are available.

– Use the pre-drilled slotted holes in the wall rail to mount it onto the wall.
– Fasten the wall rail to the wall using suitable screws and dowels (ensure that it is horizontally aligned).
– Mount the arium® pro system by hooking it into the wall mounting bracket.

2.4 Below–Bench Mounting

The arium® pro system can also be operated as a below-bench unit.
An additional conversion kit (H2O-ACK-D) is available for this option. In order to ensure the correct operation of the device, the conversion should always be carried out by Sartorius Service. The wall mounting bracket for the display | dispenser unit is included with the conversion kit. Further information is available from Sartorius Service.

arium® pro system as a below-bench unit

3. Operating Concept

Operate your arium® system using the control panel and the display. The control panel features four function keys and a continuously variable slider. The keys are described in the figure below. The display shows system information and menu items. The figure depicts the display in the operating mode your arium® system will be in after initial startup.
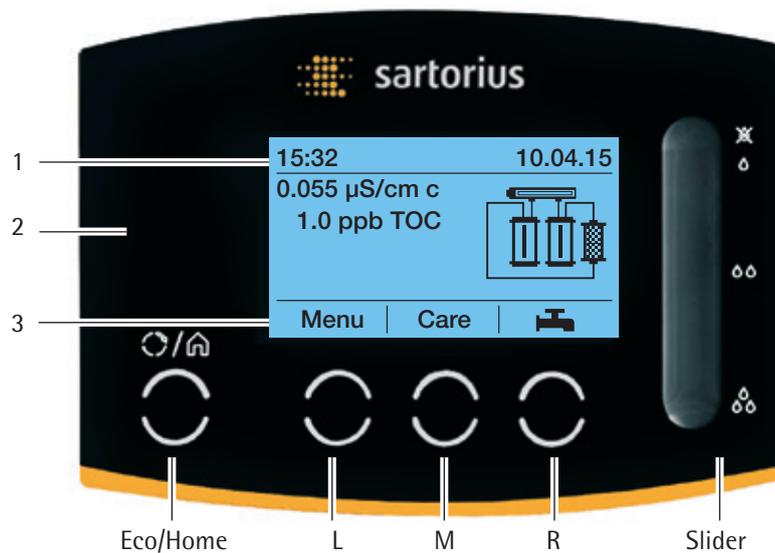
Unless indicated otherwise, all illustrations in this operating manual refer to the arium® pro VF system with integrated TOC instrument.

3.1 Display

As illustrated in the figure above, the display is divided into the following three main areas.

Header (1)
When your arium® is in the operating mode, the header displays the current time and current date. When navigating through menu items, the open menu item and the menu level are displayed.

Working environment (2)
When your arium® is in the operating mode, the working environment displays the following information:

– The current conductivity of the product water (when the display is activated without compensated conductivity and │ or (if activated), the current water temperature as well)

– The current TOC value of the product water (for systems with a UV lamp & TOC only)

– The flow diagram of the arium® pro system

The **flow chart** lists all the system's purification components: ultrapure water cartridges, UV lamp (on pro UV and VF versions only) and ultrafilter (on UF and VF versions only). As soon as a component change is due, the corresponding element starts blinking and a warning message appears.

If your arium® pro system is not in the operating mode, the working environment of the display shows the current menu item.

Footer (3)
The footer displays the current key function assignment for the keys L, M and R.

3.2   Operation in the Operating Mode
The keys L, M, R and Eco/Home and the slider are available for operation in the operating mode.

"Menu" Key (L)
You can use this key to switch to the system menu. Information on the system menu can be found in Chapter "6. Menu".

"Care" Key (M)
You can use this key to switch to the care section. Information on the care menu can be found in Chapter "7. Care".

"Dispense" Key (R)
You can use this key to switch directly to controlled water dispensing. Here you have the option to select between timed dispense or volume-controlled dispensing. Further information can be found in Chapter "5.2 Dispensing Ultrapure Water".

Slider
Use the slider to start manual product water dispensing. Further information can be found in Chapter "5.2 Dispensing Ultrapure Water".

"Eco/Home" Key
The Eco/Home key is used to activate the "Eco mode". In the Eco mode, the ultrapure water in your arium® pro system is recirculated every hour for 15 minutes. The purpose of this is to guarantee high water quality even during longer periods of operation.

To access the Eco mode, press and hold the Eco/Home key for 3 seconds. To exit an active Eco mode, press the Eco key once more. The picture on the left shows the active Eco mode.
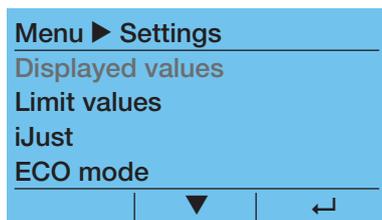
Eco/Home

Your arium® pro system also features an automatic ECO mode. This automatic ECO mode is activated by default and returns the system to the Eco mode after the Eco time has elapsed. The Eco time starts after the last entry into the system. It can be configured in the System menu (see Chapter "6.3.3 ECO Mode", page 39).

Key Locking Function

The arium® pro system has a key locking function. When the key locking function is active, it is not possible to dispense water, not even with a foot switch. All other functions (measurement, expiry of ECO time, print interval, memory interval, and error and warning messages) continue to run in the background. When the automatic ECO time has elapsed, the device enters ECO mode and automatically removes the key lock so that the device is once again ready for operation upon leaving ECO mode. If a warning or an error appears while the key lock is activated, the device will likewise automatically cancel the key lock and display the corresponding message.

To activate the key lock, simultaneously press the Eco/Home key and the "Dispense" Key (R). Use the same key combination to deactivate the key locking function.

Menu ▶ Settings
Displayed values
Limit values
iJust
ECO mode
▼   ↵

3.3   Navigation in the Menus

The L, M, R keys and the Eco/Home key are available for navigating within the menus. The slider has no function here. The keys (L), (M) and (R) have different functions, depending on the menu item selected.

Examples for the assignment of the keys (L), (M) and (R):

Symbol Function

▲   Move upwards
            Short press = one item at a time
            Longer press = scroll

▼   Move downwards
            Short press = one item at a time
            Longer press = scroll

↵   Confirm
OK   Confirm
Start   Start a process
Cancel   Cancel a process
Back   Move up 1 level higher in the menu

The display header displays the current menu level. The number of black arrows indicates the submenu level.

An example of menu levels:

Menu ▶ Settings	1st Submenu level
▶ ▶ Displayed values	2nd Submenu level
▶ ▶ ▶ Conductivity	3rd Submenu level

The display working environment displays the menu items. In the following, the different forms of display are described.

Back   Go to the next higher menu level.
→   Comes before menu items whose selection triggers a direct action (example "Single printout").
⊙   Comes before menu lists that only allow list item selection (example "Set language").
⊠   Comes before menu lists that allow the selection of several list items (example "Save data").

Inputting Numbers

There are various places where numbers must be entered (example "Conductivity limit value for ultrapure water"). Numbers that have several digits are entered digit by digit from left to right. Enter the first digit with the arrow keys "▲ ▼", then switch to the next with "↵".

▶ ▶ Limits

Set LFP limit:
05.00 µS/cm

▲ | ▼ | ↵
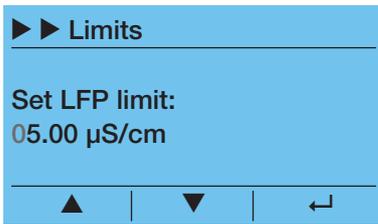
ℹ In some cases, it may only be possible to input numbers in set increments (example "Volume-controlled dispensing").

"Eco/Home" Key

Here, the Eco/Home key features a "Home function". Click on the home key to return from the current menu item to the operating mode of the arium® pro system. Processes such as water dispensing or cleaning are excluded from this function. The Home function cannot be used in this status.

ℹ The Home function is unavailable during initial startup.

4. Initial Startup

After you have installed your arium® pro system, make the electrical connections and put the system into operation.

IMPORTANT	According to device specifications, this requires a supply voltage of 230 - 240 V, 50 Hz or 115 V, 60 Hz, depending on the country standard. You may not connect the system to the power supply if the connection conditions at the setup location do not correspond to the information on the manufacturer's ID label for the arium® pro and arium® bagtank.
i	It takes approx. 60 minutes to start up the arium® pro UF|VF|DI|UV.

For initial startup, carry out steps 4.1 to 4.8.
This operating manual will guide you step-by-step through the sequence of the displays.

4.1 System Startup

i	All system settings (e.g. date, time, displayed values, etc.) configured during initial startup can be subsequently changed in the system menu.

▶ Connect the power plug on the power supply of your arium® pro system to the mains voltage. Next, switch on your arium® pro system via the power switch.

The arium® pro system will then perform a system check and display the start screen shown on the right.

Set language

English

English

French
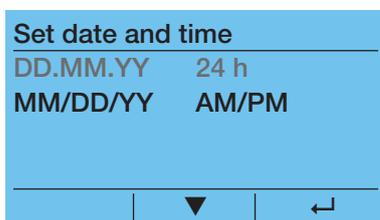
Italian

| | ▼ | ↵ |

4.2 Setting the Language

▶ Select the language for the display. The factory setting is English.

ℹ Not all languages are visible on the display at the same time.
Scroll with the arrow keys to display all languages.

Set date and time

DD.MM.YY   24 h

MM/DD/YY   AM/PM

| | ▼ | ↵ |

4.3 Setting the Date and Time

▶ Use this option to select the desired date and time format.

Set date and time

DD.MM.YY   24 h

10.04.15   11:43

| ▲ | ▼ | ↵ |

▶ Set date and time.

Setting the Measurement Unit

µS/cm comp.

MΩcm comp.

| | ▼ | ↵ |

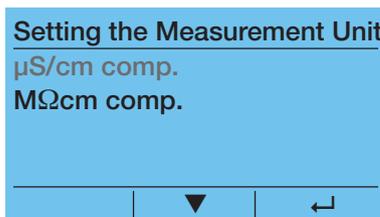### 4.4 Setting the Measurement Unit

▶ You can set the unit in which your measured values should be indicated on the display.

ℹ It is also possible to display the measured values without compensation.
After startup, the displayed values can be changed in the open menu item: **Settings** ▶ **Displayed values** (see Chapter "6.3.1 Displayed Values", page 37).

Startup

Install ultrafilter and cartridges as described in the operating instructions

| | | OK |

4.5 Purification Component Installation

▶ Install the ultrafilter (arium® pro UF and VF only) and the cartridges according to the following instructions.
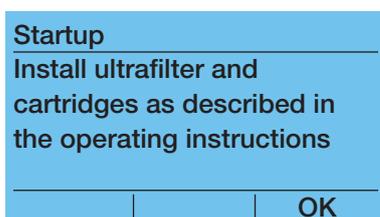
Ultrafilter Installation (arium® pro UF and VF only)

▶ Unpack the new ultrafilter and remove the protective cover from the fittings.

Make sure that the O-ring is seated properly on the left tube connector.

▶ Screw on the lower connection of the ultrafilter (1) and hand-tighten.

▶ Screw on the side connector of the ultrafilter (2) and hand-tighten.

▶ Screw on the upper connection of the ultrafilter (3) and hand-tighten.

▶ Push the ultrafilter back into the holder so that the connection port on the side (2) is pointing up to the left.
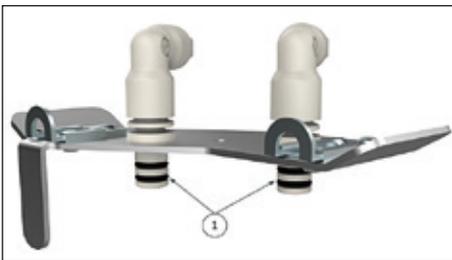
Ultrapure Water Cartridges Installation

▶ Remove the new cartridges from the packaging. One cartridge is marked with a blue label (#1). The other cartridge is marked with a red label (#2). Please write the date of installation on both cartridges under "Date of Installation".

▶ To facilitate the connection of the adapter to the cartridge, don gloves to moisten the O-rings (1) on the connection adapter with distilled water. Avoid direct contact with skin at the connections in order to prevent any microbial contamination.
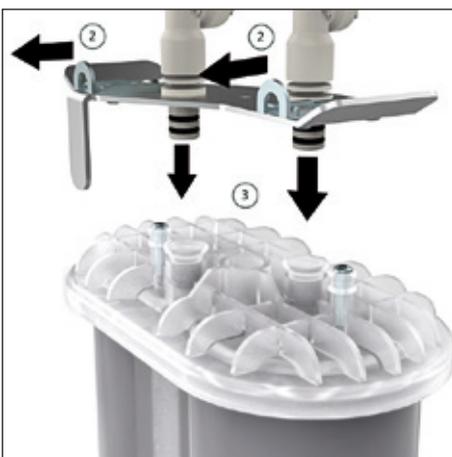
▶ Open the locking tabs (2) of the connection adapter with the red label (#2). Next, press the connection adapter (3) firmly into place on the cover of the cartridge with the red label (#2). Push the connection adapter so far down that the locking tabs are located at the level of the spacers.
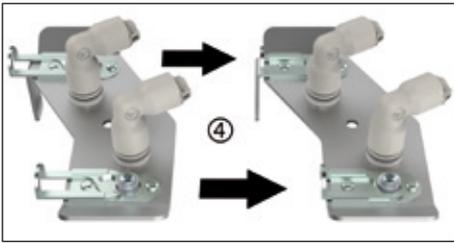
▶ Push both locking tabs (4) of the connection adapter with the red label (#2) all the way under the upper ring of the spacers.

▶ Place the red-labeled cartridge (#2) in the housing on the right (5). The label must be facing you.

▶ Open the locking tabs (2) of the connection adapter with the blue label (#1). Next, press the connection adapter (3) firmly into place on the cover of the cartridge with the blue label (#1). Push the connection adapter so far down that the locking tabs are located at the level of the spacers.

▶ Push both locking tabs (4) of the connection adapter with the blue label (#1) all the way under the upper ring of the spacers.

▶ Place the blue-labeled cartridge (#1) into the housing (6). The label must be facing you.

▶ Close the device door.

4.6 System Rinsing

Startup
Connect the feed water tubing and rinsing tubing to the device and open the feed water inlet

| | | **OK** |

▶ Connect the feed water tubing (inlet) and rinse water tubing (drain) to the arium® pro system. Use the pre-assembled tubing from the arium® pro accessories. Next, open the feed water inlet.

ℹ Observe the information in Chapter 8.1 "Technical Specifications"!

Startup
Attach the sampling tubing to the dispenser unit

| | **OK** | |

▶ Attach the sampling tubing to the dispenser unit.
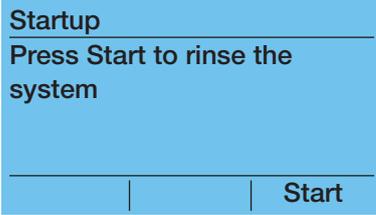
Startup
Channel tubing for rinse water and dispensing to drain

| | | **OK** |

▶ Direct the sampling tubing and the rinse water tubing towards drain.

IMPORTANT The rinsing tubing should be firmly secured in the outlet!
During operation of your arium® pro system, small amounts of water can escape here.
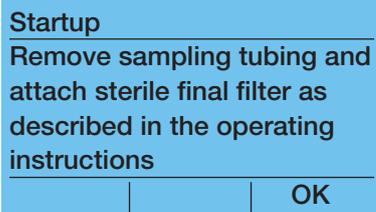
```
Startup
Press Start to rinse the
system



                    |        | Start
```

▶ Start the rinsing process.

```
Startup


         Rinsing
         50.0 min

  Cancel
```

▷ The arium® pro system is rinsed for 20 minutes. The remaining rinsing time is shown on the display.

If you are operating an arium® pro system with connected TOC monitor, the rinsing time is 10 minutes longer.

4.7 Insert Final Filter

```
Startup
Remove sampling tubing and
attach sterile final filter as
described in the operating
instructions
              |        | OK
```

▶ Remove sampling tubing and attach sterile final filter as described in the operating instructions.

Quick connector

Vent valve

Bell assembly

The final filter is supplied together with a bell assembly. To assemble the final filter, proceed as follows:

▶ Press the final filter into the quick connector of the display | dispenser unit.
▶ Attach the bell assembly to the final filter and then confirm by pressing "OK".

▷ After assembly of the sterile final filter, the display switches to the operating mode.

▷ The timers for the cartridges, UV lamp (pro UV and VF versions only), ultrafilters (pro UV and VF versions only) and sterile final filters are reset.

4.8 Rinsing the Final Filter

▶ Place a collection vessel (min. 6 liter capacity) with calibration marks under the final filter. Then, open the water dispensing and rinse the final filter with 6 liters of water. During rinsing, open the vent valve of the final filter so that enclosed air can escape.
▶ Afterwards, attach the protective cap to the bell assembly.

Initial startup is complete.
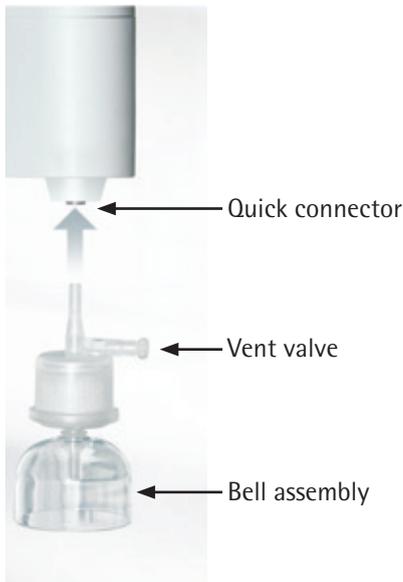
5. Operation

5.1 Operating Mode

Once initial startup is complete, your arium® pro system will be in the operating mode. Ultrapure water can be dispensed.

```
15:32                    10.04.15
0.055 µS/cm c
   1.0 ppb TOC

Menu    |    Care    |
```
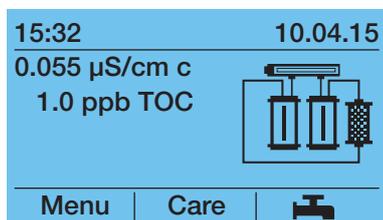
> ℹ️ It is recommended that you do not turn your arium® pro system off during normal operation (e.g., evenings and weekends) to ensure uniformly high ultrapure product water quality. The Eco mode is available for this.

5.2 Dispensing Ultrapure Water

Water can be dispensed manually, volume-controlled or time-controlled.

When dispensing product water, pay attention to the following aspects:

▶ Prior to dispensing the water, remove the protective cap on the bell assembly of the final filter.

▶ After dispensing the water, replace the protective cap back on the bell assembly.

> ℹ️ Before each critical application, you should first dispense and discard 100 ml of water (this corresponds to the volume of the supply to the final filter and the final filter capsule).

5.2.1 Manual Dispensing

Manual dispensing is performed directly using the dispense slider on the right side of the display.

With your fingers, you can use the slider to continuously regulate the volume flow of the product water.

▶ Place your finger in the recess of the slider and move it downwards to elevate the volume flow.

▶ Use your finger to move the slider upwards and lower the volume flow.

▶ Additionally, you can stop the dispense routine by tapping at the top of the slider (on the crossed-through drop symbol). Set the flow to the maximum volume by tapping on the bottom of the slider (on the 3-drop pyramid symbol).

▷ By touching the slider in the middle, you set the average volume flow.

The volume flow may vary as a function of temperature, age and condition of the cartridges!

Example:

Manual dispensing with the maximum flow volume.

```
15:32              10.04.15
0.055 µS/cm c
   1.0 ppb TOC
   ▁▂▃▄▅▆▇█
                    | Stop
```
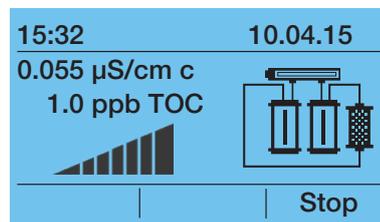
▶ Stop dispensing by tapping on the top of the slider (crossed-through drop) or by pressing the "Dispense" (R) " Stop " key.

Dispense
 Favorite mode
 Set favorites
➜Volume-controlled
  0.20 l
 ▲ | ▼ | ↵

Dispense

Set dispensing volume
 0.1 l

 ▲ | ▼ | ↵

5.2.2 Volume-controlled Dispensing

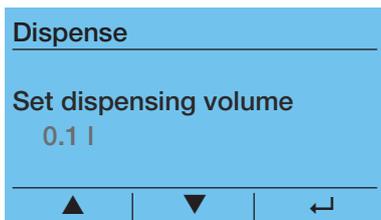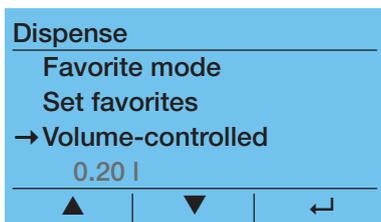▶ To perform volume-controlled dispensing, place an appropriately large vessel under the water outlet and in the operating mode press the (R) " 🔧 " key.

▶ The currently set dispensing volume is shown in the display. To set the dispensing volume, switch to volume entry.

▶ Set the desired dispensing volume.

The following dispensing volumes can be adjusted according to the given scale intervals. The changed dispensing volume (0.1 l in the example) is indicated in the display.

Dispensing volume	Scale interval
0.1 l – 2.0 l	0.1 l
2 l – 20 l	1 l
20 l – 60 l	5 l

Dispense
 Favorite mode
 Set favorites
➜Volume-controlled
  0.20 l
 ▲ | ▼ | Start

▶ Switch to "Volume-controlled" and start volume-controlled dispensing.

11:43   10.04.15
0.055 µS/cm c
 1.0 ppb TOC

0.1 l
  | | Stop

▷ The remaining dispensing volume is indicated in the display.

▶ The remaining dispensing volume is indicated in the display (R) " Stop ". The system then switches back to the operating mode.

ℹ The termination of volume-controlled dispensing is signaled acoustically via the confirmation beep (see Chapter "6.3.12 Acoustic Signals", page 44).

Dispense
→ **Volume-controlled**
   0.20 l
→ **Time-controlled**
   5.0 min
   ▲ | ▼ | ↵

Dispense

Set dispensing time
 2.5 min

   ▲ | ▼ | ↵

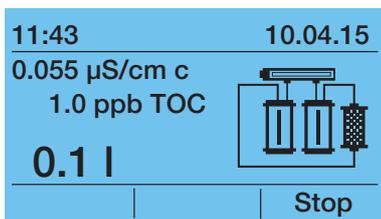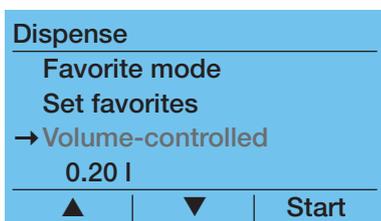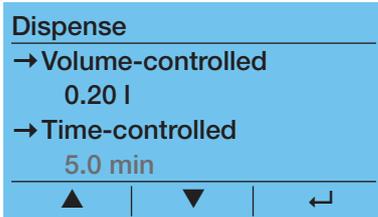### 5.2.3 Time-controlled Dispensing

▶ To perform time-controlled dispensing, place an appropriately large vessel under the sampling outlet and in the operating mode press the (R) "⟶" key.

▶ The currently set dispensing time is shown in the display. To change the dispensing time, select Set dispensing time.

▶ Set the desired dispensing time.

The following dispensing times can be adjusted according to the given scale intervals. The changed dispensing time (2.5 min in the example) is indicated in the display.

Dispensing time	Scale interval
0.5 min – 10 min	0.5 min
10 min – 30 min	1 min
30 min – 60 min	5 min

ℹ The adjustable dispensing time depends on the connected arium® bagtank.

Dispense
   Set favorites
→ **Volume-controlled**
   0.20 l
→ **Time-controlled**
   ▲ | ▼ | Start

▶ Switch to "Time-controlled" and start time-controlled dispensing.

15:32   10.04.15

0.055 µS/cm c
  1.0 ppb TOC

2.0 min

              | Stop
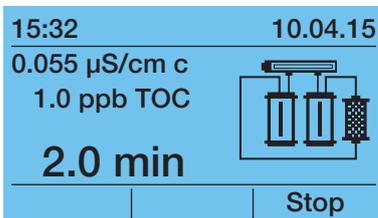
▷ The remaining dispensing time is indicated in the display.

▶ Time-controlled dispensing can be canceled by pressing the function key (R) " Stop ". The system then switches back to the operating mode.

ℹ The termination of time-controlled dispensing is signaled acoustically via the confirmation beep (see Chapter "6.3.12 Acoustic Signals", page 44).
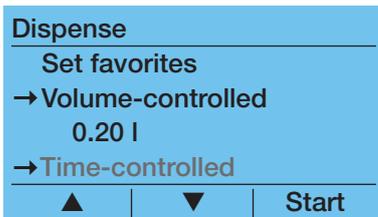
```
11:43                    24.11.14
0.055 µS/cm c  ⬇⬇
    21.0°C            �añ
    1.0 ppb TOC     | _ |
                    |___|
   0.2 l  |  1.0 l  |  2.0 l
```
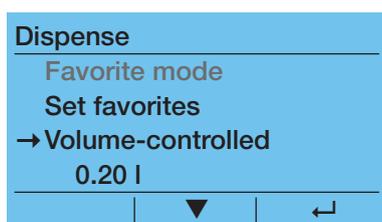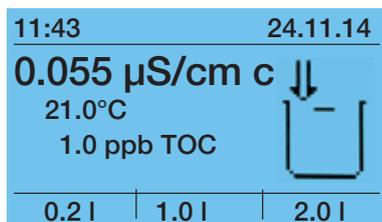
5.2.4 Favorite Screen

Via the dispensing menu of your arium®, you can also configure and activate a Favorite mode.

In the Favorite mode, you have the option of selecting manual water dispensing using the slider and volume-controlled water dispensing via the function keys (L), (M), (R). The function keys are assigned set dispensing volumes that can be adjusted in the dispensing menu.

Set favorites

▶ Toggle to the dispensing menu and select the "Set favorites" menu item.

```
Dispense
   Favorite mode
   Set favorites
→ Volume-controlled
      0.20 l
         |   ▼   |   ↵
```

```
▶ Set favorites
⊠ Favorite 1
      0.10 l
⊠ Favorite 2
      1.00 l
         |   ▼   |   ↵
```

Here, you can assign "Favorite" three dispensing volumes to the function keys (L), (M), (R). To activate a Favorite, highlight the appropriate checkbox. Select the dispensing volume displayed under each Favorite and set the desired dispensing volume. Next, return to the dispensing menu to activate the Favorite Mode by selecting the "Favorite Mode" menu item.

🛈 You can exit the favorite screen by pressing the Eco/Home key.

🛈 The "Favorite mode" menu item is only available for starting the Favorite screens if at least one Favorite has been activated in the dispensing menu (checkbox).

5.2.5 Ultrapure Water Dispensing through the Sampling Tubing

Water can also be dispensed through the sampling tubing included with the equipment supplied. It may be advisable to use the outlet tubing when, for example, you need to fill a larger vessel. To connect the tubing, proceed as follows:

▶ Release the final filter from the quick connector on the display │ dispenser unit by simultaneously pulling out the filter and pressing the retaining ring on the component.

▶ Press the sampling tubing onto the quick connector of the display │ dispenser unit.

▶ Attach the straight connector to the free end of the sampling tubing.

▶ Press the final filter into the straight connector.

▶ Allow 6 liters of water to run through the final filter (e.g. using manual and │ or volume-controlled water dispensing); this is done to rinse the final filter.

▶ Vent the final filter using the attached vent valve.

▶ After dispensing ultrapure water, attach the protective cap to the bell assembly.
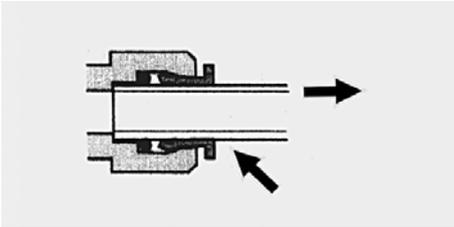
The rinsing of the final filter can be omitted if no new final filter is used.

6. System Menu

```
Menu
Save data
Settings
System status
Back
        ▼          ↵
```
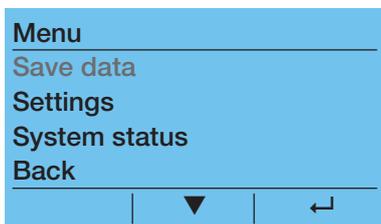
Press "Menu" in the operating mode to access the System menu.
All configuration options in the System menu are described in the following.

6.1 Menu Tree

The following picture illustrates the menu structure of the arium® pro system.

```
Menu ▶ Save data
→ Single printout
⊠ Print interval
⊠ Print when dispensing
→   Save once
            ▼   |   Start
```
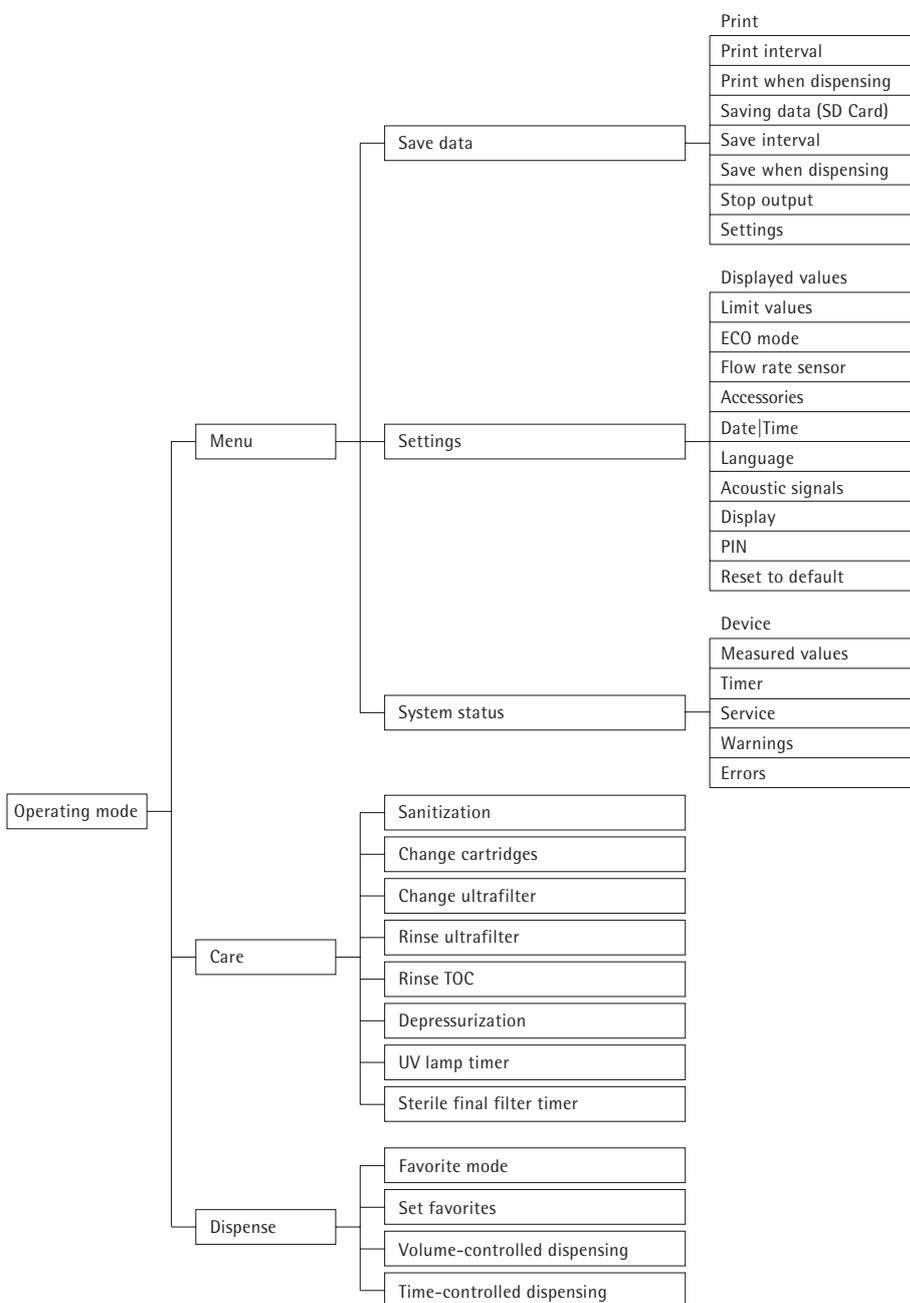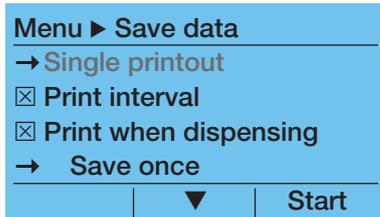
6.2   Save Data

The save data functions are used for output of current measured values and system information to a printer or to save data on an SD memory card. Access the menu item **Menu ▶ Save data**. Three different options are available for printing and saving: Single printout, Print interval and Print when dispensing.

Printing and saving can be used at the same time when Print interval and Print when dispensing are activated. The checkboxes all show active Save data functions.

Printer

For data printing, a data printer of the type Sartorius YDP30 should be used.

SD Card

For digital data storage, an SD memory card can be inserted in the arium® pro system (right side, top). SD cards are supported with a max. capacity of 4 GB. The data are saved in the Excel-compatible csv format. With the arium® pro system, it is not possible to delete saved data and │ or format the SD card.

The following symbols appear in the first line of the display whenever printing and │ or saving is taking place:

– Print symbol:
– Disk symbol:

6.2.1   Parameter Selection

Under **Menu ▶ Save data ▶ Settings** select the parameters to be printed out and │ or to be saved.

Using the checkbox, the following parameters can be selected and deselected:
– System Information
– LFP (conductivity of the ultrapure water)
– TOC (only for system with UV lamp & TOC)
– Temperature (ultrapure water)
– LFF (conductivity of the feed water) (compensated)

6.2.2 Single–item Save

To start a Single printout and │ or Save once procedure, select under **Menu ▶ Save data** the item **Single printout** and │ or **Save once**. The selected parameters are output. Afterwards, the system switches to the operating mode.

6.2.3 Save Interval

To access the Print interval and │ or Save interval functions, highlight the appropriate checkbox under **Menu ▶ Save data**. In the **Menu ▶ Save data ▶ Settings**, the interval can be adjusted within a range of 1 to 60 minutes. This applies to data printing and to digital storage on the SD card.

6.2.4 Save When Dispensing

To access the Print when dispensing and │ or Save when dispensing functions, highlight the appropriate checkbox under **Menu ▶ Save data**. As soon as the arium® pro system dispenses ultrapure water, the data are saved on the selected medium.

6.3 Settings

In the Settings menu, you can configure your arium® pro system. Access is available under **Menu ▶ Settings**. All configuration options are described in the following.

```
Menu ▶ Settings
Displayed values
Limit values
iJust
ECO mode
        ▼        ↵
```
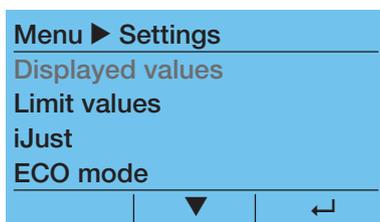
When PIN protection is active, the **Settings menu** can only be accessed after the user enters the right PIN (see Chapter "6.3.14 Pin", page 44).

6.3.1 Displayed Values

Under **Menu ▶ Settings ▶ Displayed values**, you can set the unit in which the conductivity and │ or the temperature will be indicated in the display.

```
▶▶ Displayed Values
Conductivity
Temperature
Back
        ▼        ↵
```
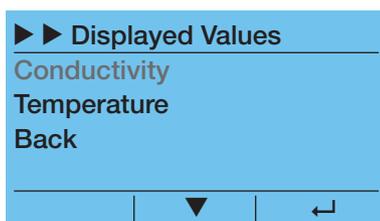
Conductivity

In the conductivity menu, select the desired unit of measure.
The following units are available:

– µS/cm comp.

– µS/cm

– MΩcm comp.

– MΩcm

Compensated displays are compensated to a reference temperature of 25°C. In the operating mode, a "c" attached to the unit of measure indicates a compensated display.

ⓘ If no valid conductivity value exists, the unit of measure will flash. This can take place, for example, after exiting the ECO mode. The flashing display indicates that a conductivity measurement is being performed. The measurement takes a minute at the most.

ⓘ In the vernacular of the arium® pro system, the term "conductivity" (unit: μS/cm) is synonymous with "specific resistivity" (unit: MΩcm).

▶▶▶ Temperature
⊙ °C
○ °F
⊠ **Show always**

▼   ↵

Temperature

In the Temperature menu, you can select between the units °C and °F. When a display without compensated conductivity (μS/cm and │ or MOhm*cm) is selected, the temperature of the ultrapure water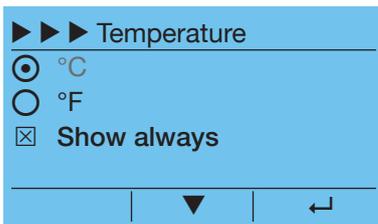 is displayed in the operating mode. If you also want to display the temperature with a compensated conductivity display, click the checkbox "Show always".

▶▶ Limits
LFP
LFF
Back

▲   ▼   ↵

6.3.2   Limit Values

Under **Menu ▶ Settings ▶ Limit Values**, you can define the minimum requirements for feed water and ultrapure water. If the set conductivity limit value is exceeded (unit: μS/cm) and │ or below the range (unit: MΩcm), your arium® pro system issues a warning message.

The following limit values can be set in the Limit values menu:

	Factory Settings	Adjustable range
LFF – conductivity of the feed water	0.05 MΩx cm 50 μS/cm	0.003 – 10 MΩx cm 333.3 – 0.1 μS/cm
LFP – conductivity of the ultrapure water	10.5 MΩx cm 0.095 μS/cm	1 – 18 MΩx cm 1 – 0.055 μS/cm

ⓘ The limit values are set in the unit of measure configured under Displayed values.

ⓘ The limit values apply to the compensated conductivity values. If displayed values are selected in the menu without a compensated conductivity display, this may be the reason for the warning "Limit value exceeded" being issued although the uncompensated value is located within the permitted range.

6.3.3   ECO Mode

```
▶▶ ECO mode

Automatic ECO mode:
 0 h 30 min
_____
   ▲    |    ▼    |    ↵
```
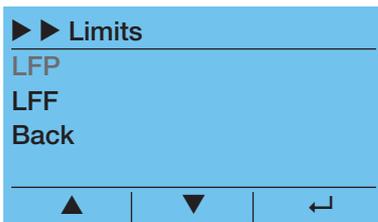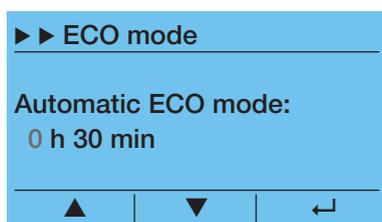
For economic and ecological operation of the system, we recommend that you switch the arium® pro system to Eco mode when no water is being dispensed. The Eco mode guarantees high water quality even during longer periods of operation of the system. The Eco mode activates the following automatic functions:

– The water in the system is recirculated every hour for 15 minutes.
– If the water temperature rises to over 35°C, a 5-minute rinsing process is triggered to lower the water temperature.
– On an arium® pro system with ultrafilter (UF and VF), a rinsing process is performed in the ECO mode after 12 hours' dwell time. This rinse cycle will be repeated every 24 hours.

The Eco mode can be activated manually and automatically. A dark, empty display and a yellow backlit Eco/Home key indicate that the Eco mode is activated.

Manual Activation

▶ In the operating mode, press and hold the Eco/Home key for at least three seconds.

Automatic ECO mode

– The Eco mode can be activated automatically after the automatic ECO time has elapsed. The time starts following the last operating process.
– Under **Menu ▶ Settings ▶ Eco mode**, set the Eco time.
– If you enter a time of "0 hours 00 min", the automatic ECO mode is deactivated.
– The maximum Eco time is 9 hours 59 minutes.

Exit Eco mode
Exit the Eco mode by pressing the Eco/Home key.
The system switches back to operating mode.

ⓘ The automatic ECO mode is factory-set to 10 minutes and | or pre-set to 30 minutes with a connected TOC monitor.

6.3.4   Flow Rate Sensor

```
▶▶ Flow rate sensor

Correction value:
 + 0
_____
   ▲    |    ▼    |    ↵
```
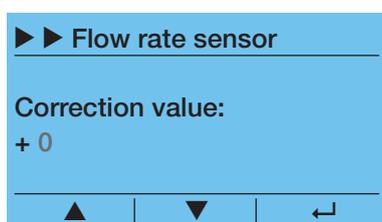
Depending on the environmental conditions (e.g. temperature), minor deviations in the volume-controlled dispense may arise. To compensate for these deviations, you have the option to make minor adjustments using a correction value. The flow rate can be corrected between +3 (maximum increase) and –3 (maximum reduction).

This function is located under **Menu ▶ Settings ▶ Flow rate sensor.**

```
▶▶ Accessories
─────────────────────
TOC
Dispense gun
Foot switch
 Back
─────────────────────
        |    ▼    |    ↵
```

6.3.5   Accessories

The following components can be activated or adapted to your device by selecting **Menu ▶ Settings ▶ Accessories**:

– TOC (only for system with UV lamp & TOC)
– Dispense gun
– Foot switch
– Level sensors

```
▶▶▶ TOC
─────────────────────
⊙ Interval
     1 h
◯ Continuous
◯ Off
─────────────────────
        |    ▼    |  Back
```

6.3.6   TOC (for systems with TOC monitor only)

On arium® pro systems with a UV lamp, a TOC monitor is optionally available. The TOC monitor is a module for determining the TOC (Total Organic Carbon) content of ultrapure water. The measuring range of the TOC monitor is ppb (parts per billion). The measuring principle is based on UV oxidation and a conductivity measurement.

If your arium® pro system is equipped with a TOC monitor, you can configure the TOC measurement under **Menu ▶ Settings ▶ TOC**.

The following operating modes can be selected:

– Intervals can be set: 1 – 12h and 24h)
– Continuous
– Off

The default setting is one-hour interval measurement. This setting is recommended by Sartorius. For TOC critical applications, you can also select the continuous measurement mode. Please consider that continuous measurements can impact cartridge capacity.

TOC Display

In the operating mode, the measured TOC value is regularly indicated in the display. The following readings are displayed:

– The unit ppb flashes, no value is indicated.
   The TOC measurement or the arium® pro system was just switched on.
   Measurement of the TOC value is being performed.
– A TOC value is shown on the display.
   The latest TOC value reading is displayed. It is not older than one hour.
– A TOC value is indicated in brackets on the display.
   The latest TOC value reading is displayed. This is older than one hour and therefore invalid. It can be assumed that this measured value no longer reflects the current ultrapure water content.
– A flashing TOC value is indicated in brackets on the display.
   The latest TOC value reading is displayed. This is older than one hour and therefore invalid. The flashing value indicates that a new TOC measurement is currently taking place.
– No TOC value is displayed.
   The TOC measurement has been switched off, exceeded the recalibration time and | or no TOC monitor is built in.
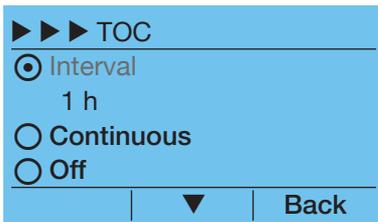
Recalibrating the TOC Monitor

The TOC monitor is equipped with a UV radiator. This UV radiator is subject to ageing and must be replaced at regular intervals. To ensure accurate TOC measurements after replacing the UV radiator, the TOC monitor must be recalibrated by Sartorius Service.

The normal service interval for recalibration is one year. If your TOC measurements are more frequent, the UV radiator ages faster. This is the case when continuous measurements are performed and the arium® pro system is in frequent use. In such cases, earlier recalibration may be required.

Your arium® pro system issues warning messages at the intervals 6, 4, 2 weeks as soon as recalibration is required.
For recalibration, please contact Sartorius Service.

ℹ	If the service interval for the TOC monitor has expired (at least after a year), the TOC monitor on your arium® pro system will be deactivated. You cannot measure TOC again until after recalibration. Ultrapure water can continue to be dispensed.
ℹ	The arium® pro system alerts the recalibration of the TOC monitor at the intervals 6, 4, 2 weeks. Please inform your service technician after the first message.
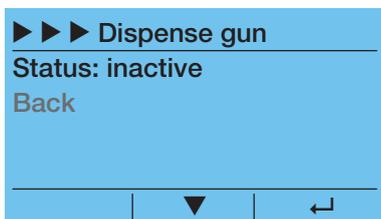
6.3.7 Dispense Gun

If a dispense gun is connected to your arium® pro system, you must activate it under **Menu ▶ Settings ▶ Accessories ▶ Dispense gun** (default setting: inactive). This increases the pump throughput in system. When the remote dispenser is active, the pump throughput is increased, allowing ultrapure water to be dispensed at the maximum flow rate.

```
▶ ▶ ▶ Dispense gun
Status: inactive
Back

          ▼    |   ↵
```

ℹ	Details on installing the dispense gun are included in the installation instructions for the dispense gun.

```
▶ ▶ ▶ Foot switch
Manual
Volume-controlled
Time-controlled
─────────────────────────
         |    ▼    |    ↵
```
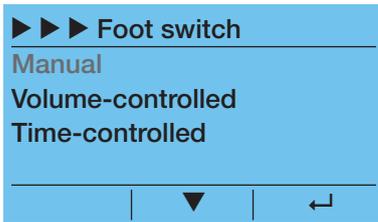
6.3.8   Foot Switch

Under **Menu ▶ Settings ▶ Accessories ▶ Foot switch**, you can adapt a foot switch connected to the arium® pro (see Chapter "11. Accessories and Replacement Parts", page 71) to the required operating mode (manual, volume-controlled, time-controlled).

"Manual foot switch" Operating Mode

In "Manual foot switch" operating mode, the foot switch is used to start manual water dispensing with 100% pump throughput.

You can stop water dispensing by pressing the foot switch again, by touching the upper slider (crossed-out drop), or by pressing the (R) " Stop " key.

"Volume-controlled foot switch" Operating Mode

In "Volume-controlled foot switch" operating mode, the foot switch is used to start volume-controlled water dispensing with the value set in the dispensing menu.

You can stop water dispensing by pressing the foot switch again, by touching the upper slider (crossed-out drop), or by pressing the (R) " Stop " key.

"Time-controlled foot switch" Operating Mode

In "Time-controlled foot switch" operating mode, the foot switch is used to start time-controlled water dispensing with the value set in the dispensing menu.

You can stop water dispensing by pressing the foot switch again, by touching the upper slider (crossed-out drop), or by pressing the (R) " Stop " key.

6.3.9 Level Sensors

Under **Menu ▶ Settings ▶ Accessories ▶ Level sensors**, level sensors connected to the arium® pro system can be activated. The level sensors are deactivated by default.

Please consult the operating manual included with the level sensors.

When level sensors are activated, the slider and dispensing menu are locked. Water dispensing is controlled exclusively via the level sensors.
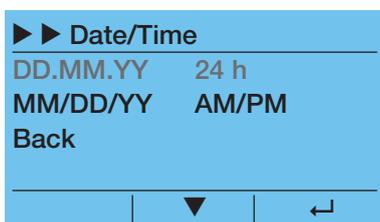
6.3.10 Date │ Time

Under **Menu ▶ Settings ▶ Date │ Time**, you can configure the settings for date and time. In the first step, enter the desired format; in the second, the date and the time.

```
▶ ▶ Date/Time
DD.MM.YY      24 h
MM/DD/YY      AM/PM
Back

         ▼          ↵
```

6.3.11 Language

Under **Menu ▶ Settings ▶ Language** select the language to display texts.
You can choose between the following languages:

– English
– English
– French
– Italian
– Spanish
– Russian
– Japanese
– Chinese
– Portuguese
– Polish

```
▶ ▶ Language
English
English
French
Italian
         ▼          ↵
```

```
▶▶ Acoustic signals
⊠   Warning alarm
⊠   Error alarm
⊠   Confirmation beep
⊠   Key beeps
        |    ▼    |    ↵
```

6.3.12 Acoustic Signals

Under **Menu ▶ Settings ▶ Acoustic Signals**, acoustic signals can be activated and │ or deactivated. The following signals are available:

– Warning alarm:
  Continuous signal sounds until the triggered warning is confirmed by user.
– Error alarm:
  Continuous signal sounds until the triggered error is confirmed by user.
– Confirmation beep:
  Longer signal, occurs at the end of time sequences (time- and volume-controlled dispensing, rinsing).
– Key beeps:
  Short signal when tapping a key.

```
▶▶ Display
Contrast: bright
Brightness: normal
Back

        |    ▼    |    ↵
```

6.3.13 Display

Under **Menu ▶ Settings ▶ Display**, the contrast and brightness of the display screen can be adapted to your requirements, each in 3 stages. With this option, the contrast and │ or brightness can be adapted to your requirements.

```
▶▶ PIN
Status: Inactive
Change PIN
Back

        |    ▼    |
```

6.3.14 Pin

This function lets you limit access to the **Menu ▶ Settings** and the **Care** modes. If you have active PIN protection, these two sections can only be accessed by entering a PIN.

The PIN protection function is located under **Menu ▶ Settings ▶ PIN**. The factory setting for PIN protection is deactivated and the standard PIN is set to "0000".
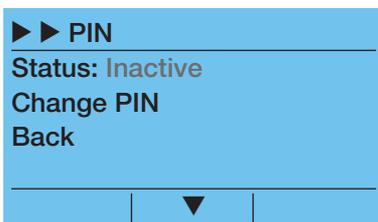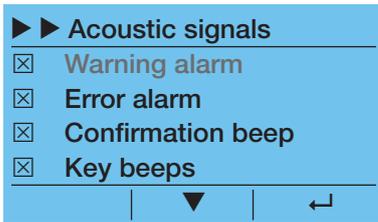
ℹ️ If you forget your PIN, it can only be reset by a service technician.

```
▶▶ Reset to default
Restore default settings



─────────────────────────
     ↵     |        | Cancel
```
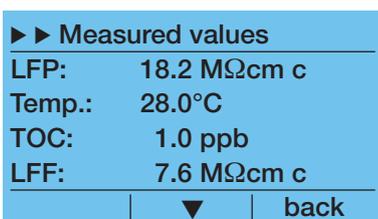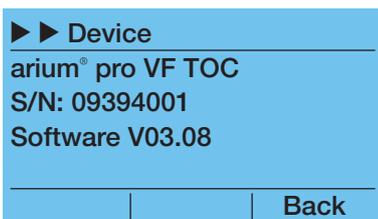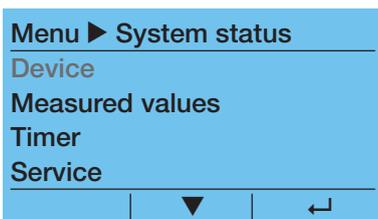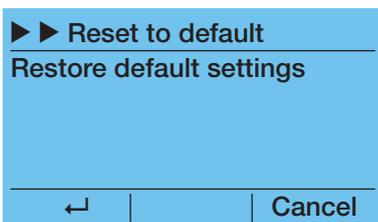
6.3.15 Resetting to Default

Under **Menu ▶ Settings ▶ Reset to default**, you can restore your arium® pro system to default settings. This applies to all settings configured on the system after initial startup (e.g. Limit values, Display and Acoustic signals, etc.).

The system reboots after connection.

```
Menu ▶ System status
Device
Measured values
Timer
Service
─────────────────────────
        |    ▼    |    ↵
```

6.4   System Status

Under **Menu ▶ System status**, information about the following sub-items can be obtained:
– Device
– Measured values
– Timer
– Service
– Warnings
– Errors

6.4.1   Device

```
▶▶ Device
arium® pro VF TOC
S/N: 09394001
Software V03.08

─────────────────────────
        |        |  Back
```

Under **Menu ▶ System status ▶ Device**, you can display the following information:
– Model
– Serial number
– Software version

```
▶▶ Measured values
LFP:       18.2 MΩcm c
Temp.:     28.0°C
TOC:        1.0 ppb
LFF:        7.6 MΩcm c
─────────────────────────
        |    ▼    |  back
```

6.4.2   Measured Values

Under **Menu ▶ System status ▶ Measured values**, you can display the following information:
– LFP – conductivity in the ultrapure water (compensated only)
– Temperature in ultrapure water
– TOC in ultrapure water (with built-in TOC monitor only)
– Volume of dispensed ultrapure water
– LFF – conductivity of the feed water (compensated only)

6.4.3 Timer

```
▶▶ Timer
Final filter: 5 days
Cartridges: 232 days
Sanitization: 22 days
Ultrafilter: 232 days
        |   ▼   |  back
```
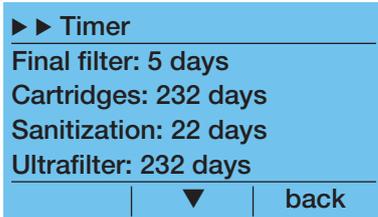
Under **Menu ▶ System status ▶ Timer**, you can display the remaining service life for the following components:

– Final filter
– Cartridges
– Sanitization
– Ultrafilter
– UV lamp

The arium® pro system issues a warning when the replacement interval of a component has expired. The corresponding component must then be replaced (Care menu).

6.4.4 Service

```
▶▶ Service
Service telephone number:
www.sartorius.com
Next maintenance due in
32 weeks
        |       |  Back
```

Under **Menu ▶ System status ▶ Service**, you can display the following information:

– Service telephone number (can be entered by a local service technician – Sartorius Internet address is displayed here when the device is shipped for delivery)
– Next maintenance (only if a service │ maintenance contract exists)

6.4.5 Warnings

```
▶▶ Warnings
Active warnings
History
 Back

        |   ▼   |  ↵
```
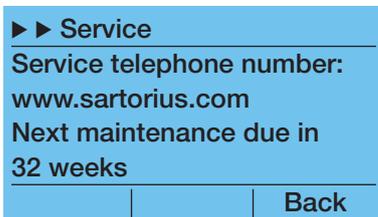
Under menu item **Menu ▶ System status ▶ Warnings**, you can display activated and cancelled (history) warning messages. Both lists comprise the last 20 entries at most.

> ⓘ Appendix 7.2.1 lists possible warning messages.

6.4.6 Errors

```
▶▶ Error
Active errors
History
 Back

        |   ▼   |  ↵
```

Under menu item **Menu ▶ System status ▶ Errors**, you can display activated and cancelled (history) error messages. Both lists comprise the last 20 entries at most.

> ⓘ Appendix 7.2.1 shows a possible warning message.

7. Care and Maintenance

The **Care** menu contains the maintenance section for your system.

You have access to the following options:
– Sanitization (for system with ultrafilter only)
– Change cartridges
– Change ultrafilter (for system with ultrafilter only)
– Rinse ultrafilter (for system with ultrafilter only)
– Rinse TOC (for system with UV lamp & TOC only)
– Depressurization
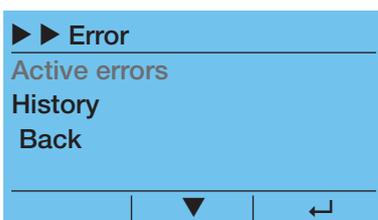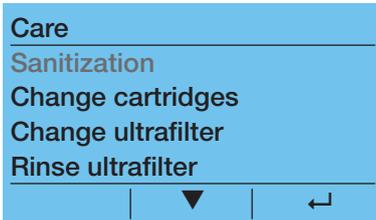– UV lamp timer (for system with UV lamp only)
– Sterile final filter timer

ⓘ	When PIN protection is active, the Care menu can only be accessed after the user enters the right PIN.

The Care function is primarily designed to help you keep your arium® pro system free of contamination and guarantee consistent water quality.

ⓘ	The arium® pro system issues an automatic warning when the care interval of a component has expired. The color of the display then turns yellow (active warning). Once the appropriate care has been performed, the interval is reset and the warning deactivated. The arium® pro system has the following recommended factory-set care intervals:

Component	Interval
Sanitization (for system with ultrafilter only)	1 – 6 months
Change cartridge	12 months
Replace the ultrafilter (for version with ultrafilter)	12 months
Replace UV lamp (for version with UV lamp)	12 months
Sterile final filter	1 month

ⓘ	The service | cleaning intervals are recommendations. The intervals may vary, depending on the quality of your feed water and | or your requirements for the quality of ultrapure water.

7.1 Sanitization (arium® pro UF and VF only)

Sanitization is performed to reduce bacterial growth and to minimize and|or prevent the formation of the biofilm that can build up within the cartridges and lines.

The sanitization interval depends on:

– Feed water quality

– Ultrapure water quality requirements

– Ultrapure water consumption

The following components are required to perform a sanitization cycle:

– A vessel with approx. 100 ml of product water from arium® pro system.
– Sanitization syringe, 611CDS.

ℹ️ After performing sanitization, it is easy to raise the TOC for a while.

ℹ️ On models with a below-bench dispenser or a remote dispenser, use two sanitization syringes.
On models with two options (below-bench dispenser unit and remote dispenser), use three sanitization syringes.

Sanitization is started under **Care ▶ Sanitization ▶ Start Sanitization**.
It takes approx. 100 minutes and cannot be cancelled.

▶ Disconnect the feed water tubing from the device.

Care ▶ Sanitization
Disconnect the feed water tubing from the device
Cancel | | OK
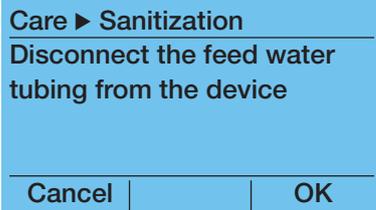
Last chance to cancel

Care ▶ Sanitization
Remove sterile final filter and attach sampling tubing to the dispenser unit
Cancel | | OK

▶ Release the final filter from the quick connector on the display │ dispenser unit by simultaneously pulling out the filter and pressing the retaining ring on the component.
▶ Attach the sampling tubing to the dispenser unit.
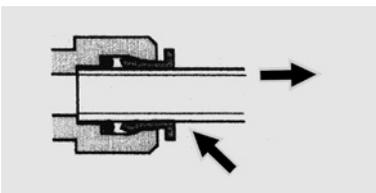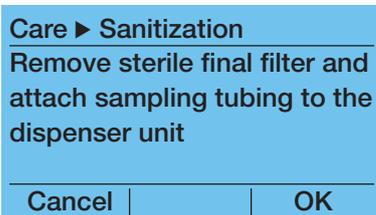
Care ▶ Sanitization
Direct sampling tubing to drain
_____	___	OK

▶ Direct sampling tubing towards drain.

Care ▶ Sanitization
Inject sanitization solution into the system as described in the operating instructions
_____	___	OK

▶ Inject the sanitization solution into the arium® pro system. To do so, complete the following steps:

▶ Unscrew the Luer end cap from the connection port of the red-marked connection adapter (1) of the cartridge (#2).

▶ Screw the sanitization syringe(s) on the connection port (2) and inject in the sanitization solution. According to the above instructions, several syringes need to be injected in succession.

▶ Remove the sanitization syringe(s) and rinse them twice with the prepared ultrapure water.

▶ Using a rinsed syringe, inject approx. 10 ml of the prepared ultrapure water into the sanitization adapter (2) to rinse it.

▶ Reattach the Luer end cap to the connection port (1) from the connection port of the connection adapter of the cartridge (#2).

Care ▶ Sanitization
Connect the feed water tubing to the device
_____	___	OK

▶ Connect the feed water tubing to your device.

Care ▶ Sanitization
Start sanitization
_____	___	Start

▶ Start the sanitization process.

```
Care ▶ Sanitization


    Sanitization activated
          79 min


  Cancel  |         |
```

▷ Sanitization is performed. The remaining time is shown on the display.

ℹ The termination of sanitization is signaled acoustically via the activated confirmation beep (see Chapter "6.3.12 Acoustic Signals", page 44).
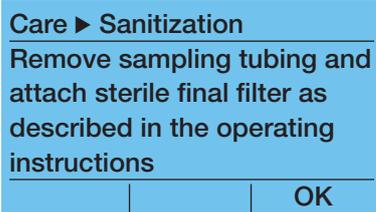
```
Care ▶ Sanitization
Remove sampling tubing and
attach sterile final filter as
described in the operating
instructions
          |         |  OK
```

▶ Release the sampling tubing from the quick connector on the display | dispenser unit.

▶ Press the final filter into the quick connector of the display | dispenser unit.

The sanitization has been completed successfully and the timer for the cleaning reminder reset automatically.

The system is now back in the operating mode.

Setting the Sanitization Interval

Under **Care ▶ Sanitization ▶ Set timer**, you can set the sanitization interval to meet your conditions. Sartorius recommends that sanitization be performed once every three months (default setting).

7.2 Changing Cartridges

The service lifetime of the cartridges is directly dependent on the quality and volume of the feed water to be treated. Sartorius recommends replacing the cartridge once every year. If the ultrapure water quality has already dropped below the user's set limit value, you should replace the cartridge earlier.

Start the replace cartridge function under **Care ▶ Replace cartridges**.

▶ Disconnect the feed water tubing from the device.

Care ▶ Cartridges
Disconnect the feed water tubing from the device
Cancel   OK
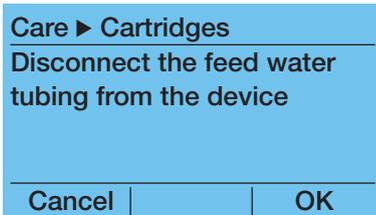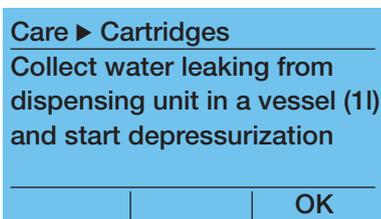
▶ Place a vessel (min. 1l) under the water outlet and start depressurization.

Care ▶ Cartridges
Collect water leaking from dispensing unit in a vessel (1l) and start depressurization
OK

▷ Water exits at the sampling outlet. The procedure takes 30 seconds.
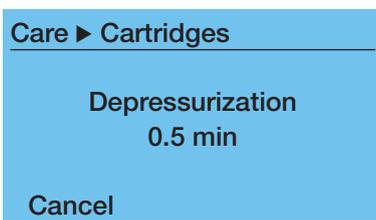
Care ▶ Cartridges
Depressurization
0.5 min
Cancel
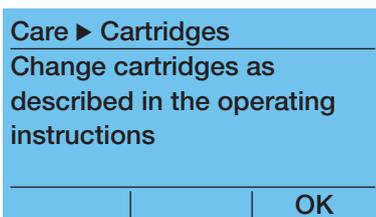
▶ Replace the cartridges according to the following description.

Care ▶ Cartridges
Change cartridges as described in the operating instructions
OK
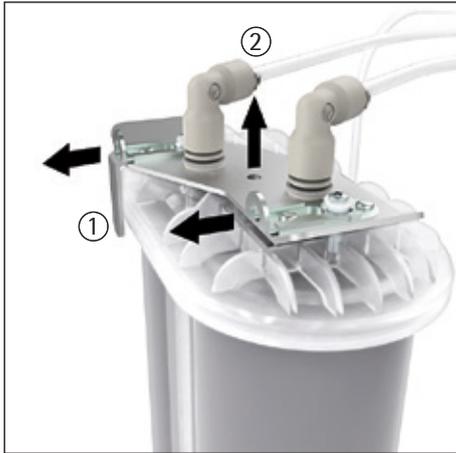
▶ Open the door on the device and remove the cartridge with the blue label (#1).

▶ Pull back the locking tabs (1) on the cartridge adapter with the blue label (#1).

▶ Lift the adapter up out of the cartridge (2).

▶ Remove the cartridge.

Water can easily leak from the adapter.

▶ Take the cartridge with the blue label (#2) out of the device.

▶ Pull back the locking tabs (1) on the cartridge adapter with the red label (#2).

▶ Lift the adapter up out of the cartridge (2).

▶ Remove the cartridge.

Water can easily leak from the adapter.
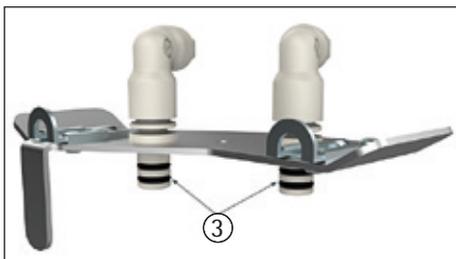
▶ Unpack the new cartridge and write the date of installation of the cartridge under "Date of installation" on the label.

▶ To facilitate the connection of the adapter to the cartridge, don gloves to moisten the O-rings (3) on the connection adapter with distilled water. Avoid direct contact with skin at the connections in order to prevent any microbial contamination.
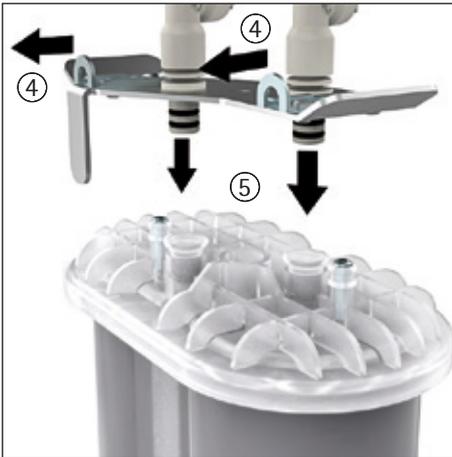
▶ Open the locking tabs (4) of the connection adapter with the red label (#2). Next, press the connection adapter (5) firmly into place on the cover of the cartridge with the red label (#2). Push the connection adapter so far down that the locking tabs are located at the level of the spacers.
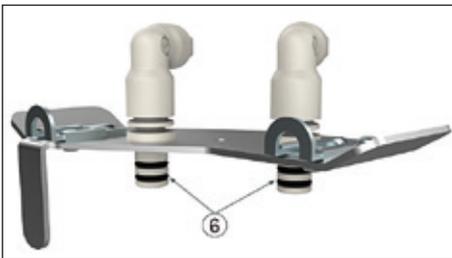
▶ Push both locking tabs (6) all the way under the upper ring of the spacers.
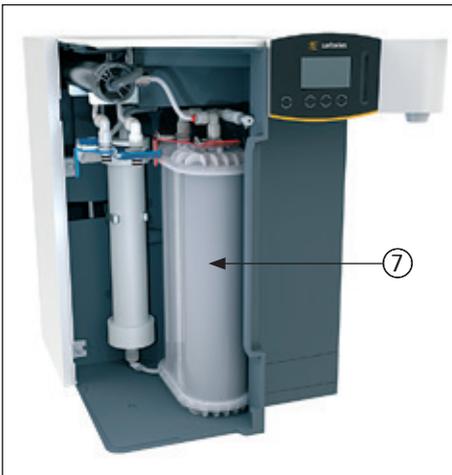
▶ Place the red-labeled cartridge (#2) in the housing on the right (7). The label must be facing you.

▶ Open the locking tabs (4) of the connection adapter with the blue label (#1). Next, press the connection adapter (5) firmly into place on the cover of the cartridge with the blue label (#1). Push the connection adapter so far down that the locking tabs are located at the level of the spacers.

▶ Push both locking tabs (4) of the connection adapter with the blue label (#1) all the way under the upper ring of the spacers.

▶ Place the blue-labeled cartridge (#1) into the housing (8). The label must be facing you.

▶ Close the device door.

Care ▶ Cartridges
Connecting the Feed Water Tubing

| | | **Start** |

▶ Connect the feed water tubing.

Care ▶ Cartridges
Start rinsing process

| | | **Start** |

▶ Start the rinsing process.

Care ▶ Cartridges

Rinsing
20 min

Cancel

▷ The new cartridges will be rinsed for 20 minutes. The remaining rinsing time is shown on the display. Afterwards, the system switches to the operating mode.

7.3   Replacing the Ultrafilter (arium® pro UF and VF only)

Whenever you are unable to completely sanitize your system (i.e. you can no longer obtain endotoxin-free water even after a sanitization cycle), you must also replace the ultrafilter cartridge.

ⓘ The length of your ultrafilter's life will partly depend on how you use the system. Sartorius recommends replacing the ultrafilter once every year.

Under **Care ▶Replace ultrafilter**, you can start replacing the ultrafilter.

| Care ▶ Changing the UF |
| Disconnect the feed water tubing from the device |
| Cancel | OK |

▶ Disconnect the feed water tubing from the device.

| Care ▶ Changing the UF |
| Remove sterile final filter and attach sampling tubing to the dispenser unit |
| Cancel | OK |

▶ Release the final filter from the quick connector on the display │ dispenser unit by simultaneously pulling out the filter and pressing the retaining ring on the component.
▶ Attach the sampling tubing to the dispenser unit.
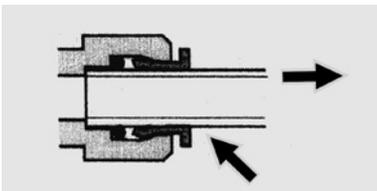
| Care ▶ Changing the UF |
| Direct sampling tubing to drain |
| Cancel | OK |

▶ Direct sampling tubing towards drain.

Care ▶ Changing the UF
Start depressurization
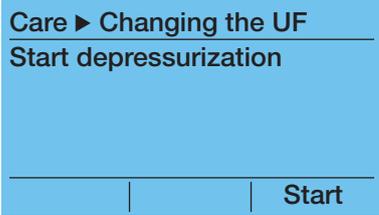
| | Start |

▶ Start the depressurization process.
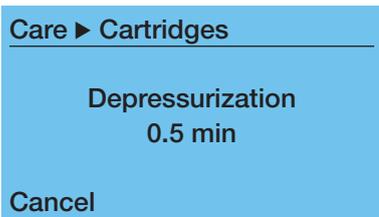
Care ▶ Cartridges

Depressurization
0.5 min

Cancel

▷ Water exits at the sampling outlet. The procedure takes 30 seconds.

Care ▶ Changing the UF
Change ultrafilter as
described in the operating
instructions

| | OK |
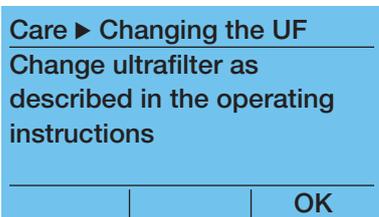
▶ Replace the ultrafilter. To do so, complete the following steps:

▶ Open the door on the unit.
▶ Push the left cartridge to the side (1).

▶ Remove the ultrafilter (2) from the holder.
▶ Unscrew the two upper and the lower screw attachments on the ultrafilter.
▶ Remove the old ultrafilter.
▶ Unpack the new ultrafilter and remove the protective cover from the fittings.

ℹ️   Make sure that the O-ring is seated properly on the left tube connector.

▶ Screw on the lower connection of the ultrafilter (3) and hand-tighten.

▶ Screw on the side connector of the ultrafilter (4) and hand-tighten.

▶ Screw on the upper connection of the ultrafilter (5) and hand-tighten.

▶ Push the ultrafilter back into the holder so that the connection port on the side (4) is pointing up to the left.

▶ Insert the cartridge back in the device. The label must be facing you.

▶ Close the device door.

| Care ▶ Changing the UF |
| Connect the feed water tubing to the device |
| | | OK |

▶ Connect the feed water tubing to your device.

| Care ▶ Changing the UF |
| Start rinsing process |
| | | Start |

▶ Start the rinsing process.

| Care ▶ Changing the UF |
| Rinsing 5 min |
| Cancel | | |

▶ The new ultrafilter will be rinsed for 5 minutes. The remaining rinsing time is shown on the display.

| Care ▶ Changing the UF |
| Remove sampling tubing and attach sterile final filter as described in the operating instructions |
| | | OK |

▶ Release the sampling tubing from the quick connector on the display │ dispenser unit.

▶ Press the final filter into the quick connector of the display │ dispenser unit.

Replacing the ultrafilter is complete. The system switches back to operating mode.

7.4 Rinsing the Ultrafilter (arium® pro UF and VF only)

Under **Care ▶ Ultrafilter** rinse, you can start a one-minute rinse of the ultrafilter.

ℹ️ | It is recommended to perform a "short" UF flush cycle prior to critical applications.

After the rinsing process is completed, the system switches to the operating mode.

7.5 TOC Rinse (for system with UV Lamp & TOC) only

Sartorius recommends regularly rinsing the TOC instrument in the operating mode "off". The rinsing process is started under the **Care ▶ Rinse TOC** menu.

The TOC monitor will be rinsed for 5 minutes. Your arium® pro system then switches to the operating mode.

```
Care ▶ Flush TOC

         Rinsing
         5 min

Cancel
```

7.6 Depressurization

It is necessary to depressurize the system when replacing the UV lamp, for example. Additionally, Sartorius recommends you depressurize your arium® pro system prior to transport. In the latter case, the step "Restart after depressurization" should be carried out at the new place of operation.

The depressurization routine is activated in the menu item **Care ▶ Depressurization**.

> **Care ▶ Depressurization**
> **Disconnect the feed water tubing from the device**
>
> Cancel | | OK

▶ Disconnect the feed water tubing from your arium® pro system.

> **Care ▶ Depressurization**
> **Collect water leaking from dispensing unit in a vessel (1l) and start depressurization**
> | | Start

▶ Place a vessel (1l) under the water outlet and start depressurization.

> **Care ▶ Depressurization**
>
> **Depressurization**
> **0.5 min**
>
> Cancel

▷ The water pressure in the system is reduced. Water flows from the sampling outlet.

> **Care ▶ Depressurization**
>
> **Switch off unit at main switch**

▶ Switch off your arium® pro system at the main switch.

ℹ This message can only be cancelled by switching off the device!

Carry out the pending work (e.g. replace the UV lamp).

Restarting after Depressurization

▶ Next, switch your arium® pro system back on via the power switch.
The system starts up. Next, connect the feed water tubing.

```
Care ▶ Depressurization
Connect the feed water
tubing to the device


                      OK
```

▶ Place a vessel (1l) under the water outlet and start the rinsing process.

```
Care ▶ Rinsing
Place vessel (1l) under
the dispenser and start
dispensing water


                    Start
```

▷ The system is rinsed for one minute. Your arium® then switches to the operating mode.

```
Care ▶ Rinsing

        Rinsing
         1 min

 Cancel
```

7.7 Replacing the UV Lamp (arium® pro UV and VF only)

The UV lamp sanitizes the water and eliminates TOC. The UV lamp consists of a quartz glass tube with an integrated mercury lamp. The mercury lamp is subject to ageing and must be replaced at regular intervals. A warning message to replace the UV lamp will automatically appear in the display after the 1-year interval expires.

i	Sartorius recommends replacing the UV lamp once a year. If the replacement interval has been exceeded, specification compliant water quality is no longer guaranteed.
⚠ WARNING	Remove the plug from the electrical outlet prior to changing the UV bulb.
⚠ CAUTION	**Hot lamp** Allow a defective UV lamp to cool off before removing it.
⚠ CAUTION	**Harmful radiation** Ultraviolet radiation is harmful to the eyes and skin. Do not look at the lamp directly when it is energized.

There is no menu item in the Care menu for replacing the UV lamp.
To replace the UV lamp, proceed as follows:

▶ Perform depressurization (see Chapter "7.6 Depressurization", page 59) and then switch off the device.

▶ Open the device door.

▶ Carefully pull out the connection cable to the UV lamp (1) (the cable is extra-long).

▶ Push the ultrapure cartridges to the side and place a large collection vessel (e.g. small bucket) under the black cover of the UV lamp (2) (to collect any draining water).
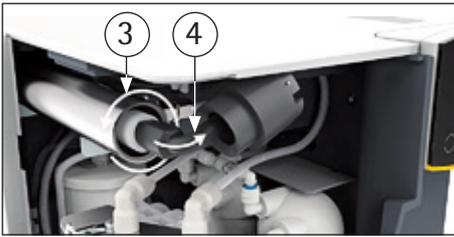
▶ Unscrew the cover cap by turning counterclockwise (3) and push it back along the cable (4).
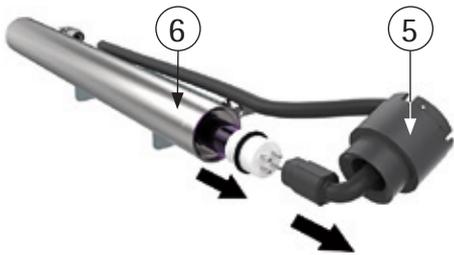
▶ Carefully unplug the adapter from the UV lamp (5).
▶ Carefully remove the old UV lamp unit from the stainless steel chamber (6).
▶ Carefully insert the new UV lamp into the stainless steel chamber.

IMPORTANT	Never touch the glass body with your fingers. Fingerprints will reduce the service life of the lamp. If you touch the lamp, clean it with a damp, lint-free cloth. If required, use isopropanol for cleaning.

▶ Carefully insert the adapter onto the new UV lamp.
▶ Make sure that the adapter is inserted at the proper orientation.
▶ Guide the plastic cover over the lamp socket and carefully screw it into the stainless steel chamber (clockwise), hand-tighten.
▶ Remove the collection vessel.
▶ Push the excess cord of the connection cable back inside the device.
▶ Insert the cartridges back in the device (the labels must be facing you) and close the device door.
▶ Switch your arium® pro system on via the power switch.

▶ Reset the UV lamp timer under menu item **Care ▶ UV lamp timer**.

Care ▶ UV Lamp Timer
Reset UV lamp timer

↵ | | Cancel
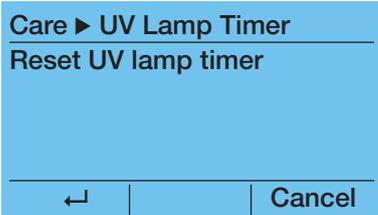
7.8 Changing the Sterile Final Filter

The sterile final filter is designed for the retention of particles and sterile filtration of the ultrapure water. If the final filter is not changed regularly, the sterility of the water cannot be guaranteed.

The replacement intervals for the final filter are factory-set to one month. For a sterile filtration, the final filter should be replaced prior to each sampling. The final filter should be replaced earlier when the following conditions occur:

– The product water flow rate is reduced.

– Bacteria breakthrough is detected.

 Sartorius recommends changing the final filter monthly.

The final filter is supplied together with a bell assembly. To replace the final filter assembly, proceed as follows:
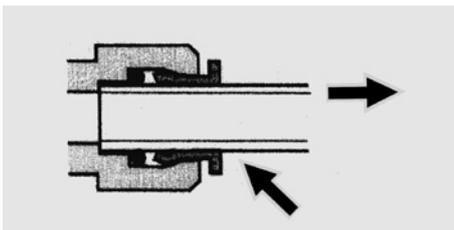
▶ Release the old final filter from the quick connector on the display │ dispenser unit by simultaneously pulling out the filter and pressing the retaining ring.

Quick connector

Vent valve
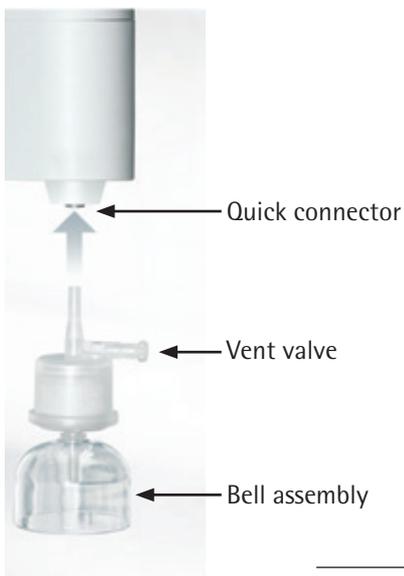
Bell assembly

▶ Press the new final filter into the quick connector of the display │ dispenser unit.

▶ Attach the bell assembly to the final filter.

▶ Allow 6 liters of water to run through the final filter (e.g. using manual and │ or volume-controlled water dispensing); this is done to rinse and vent the final filter.

▶ Vent the final filter using the attached vent valve.

▶ After dispensing ultrapure water, attach the protective cap to the bell assembly.

 If a newly installed final filter clogs rapidly after installation, your arium® system may need to be sanitized to remove bacterial contaminants (see Chapter "7.1 Sanitization (arium® pro UF and VF only)", page 47).
After replacement, install a new final filter.

```
Care
Rinse ultrafilter
Depressurization
UV lamp timer
Sterile final filter timer
    ▲    |    ▼    |    ↵
```
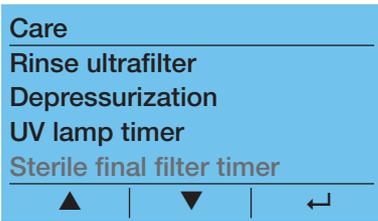
► After you have replaced the sterile final filter, the timer must be reset manually. To reset the timer, select "Sterile final filter timer" in the **Care ▶ main menu**.

```
Care ʀ Sterile final filter
Reset sterile final filter timer



    ↵      |        |  Cancel
```
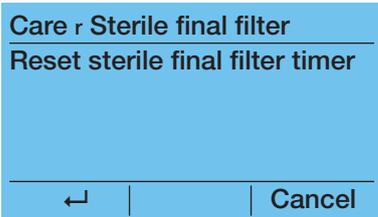
► Confirm the process.

▷ The timer is now reset and the system will then switch to the operation mode.

ℹ️	The warning to change the sterile final filter is not deactivated until the timer is reset.

7.9 Replacing Electrical Fuses

The arium® pro system has two fuses.
These are located in a fuse drawer on the top of the housing, on the right hand side, next to the main power switch (see Chapter "1.5 Electrical Connections", page 11).

⚠️ WARNING	Only trained and qualified personnel may replace defective fuses.
⚠️ WARNING	Always disconnect the arium® advance system from the AC power outlet before replacing defective electrical fuses.
⚠️ WARNING	Remove the old fuses from their sockets and ensure that they are always replaced with fuses of the same type and rating.

► Gently press the locking device of the fuse drawer towards the left and pull out the fuse drawer.
► Replace the defective fuses.
► Push the fuse drawer back into the housing until it clicks into place.

8. Faults

The arium® pro alerts the user to warnings and errors both visually, and, if the function is activated, with acoustic signals.

There is an option that allows you to activate | deactivate the acoustic signals (see Chapter "6.3.12 Acoustic Signals", page 44)

The visual signal with warning and|or error messages (change of the backlighting in the display) is activated as a basic feature and cannot be deactivated.

8.1 Warning Messages

Warning messages cause the background color of the display to turn yellow.

The following provides an overview of the warning messages displayed on your arium® pro.

Display	Cause
Warning **Limit value exceeded** **LFF > 50 µS/cm** **OK**	Set limit exceeded ▷ LFF (conductivity of feed water) ▷ LFP (conductivity of product water)
Warning **Conductivity LFF outside** **of measuring range** **OK**	Measuring range exceeded (LFF, LFP) ▷ LFF (conductivity of feed water) ▷ LFP (conductivity of product water)
Warning **Maximum permitted** **water temperature** **exceeded** **OK**	Temperature of feed water >35 °C
Warning **TOC Error 0305** **OK**	TOC error Error code 0300 – 0340

Display	Cause
Warning **Change the UV Lamp** OK	UV lamp ▷ Timer has expired
Warning **Change ultrafilter** OK	Ultrafilter ▷ Timer has expired
Warning **Change cartridge set** OK	Ultrapure water cartridges ▷ Timer has expired
Warning **Changing the Sterile Final Filter** OK	Final filter ▷ Timer has expired
Warning **Sanitization required** OK	Sanitization ▷ Timer has expired
Warning **TOC calibration necessary** OK	TOC ▷ Timer has expired ▷ TOC measurement is not possible until after calibration Timer has expired
Warning **Maintenance interval expired** OK	Maintenance interval expired (only if a service │ maintenance contract exists)

▶ Confirm the warning message by pressing OK.

▶ This takes you back to the operating mode display.

▷ Remedy the cause of the warning message. Please contact Sartorius Service if required.

Device water production is still active.

8.2 Error Messages

Error messages cause the background color of the display to turn red.
An error code is displayed in the display header.

Example: Error code 0100

```
Error 0100
Please contact your service
technician.
www.sartorius.com


                              OK
```

▶ Confirm the error message by pressing OK. This takes you back to the restricted operating mode display. Water production is also stopped.

```
Error 0100
Please contact your service
technician.
www.sartorius.com

   Menu  |  Care   |
```

In this operating mode, only the functions "Menu" and "Care" are available.

> As long as an error message is displayed, water dispensing is not possible. Wait 10 minutes to make sure that the error message does not reset automatically. If this is not the case, contact service support.

9. Disposal

9.1   Shipping Instructions

If you return the arium® pro system to Sartorius, you must use the original packaging.

We will be pleased to provide this on request.

9.2   Instructions for Disposal

Attention must be paid to the applicable laws, rules and regulations when disposing of contaminated components.

If the packaging is no longer needed, it can be disposed of by local waste disposal authorities. The packaging is made of environmentally friendly materials that can be used as secondary raw materials.

arium® pro – including accessories – should not be disposed of as regular household waste.
EU legislation requires its Member States to collect electrical and electronic equipment and dispose of it separately from other unsorted municipal waste so that it may be recycled.

In Germany and several other countries, Sartorius itself assumes responsibility for the return and conformant disposal of its electronic and electrical products. Such equipment may not be thrown out with household waste or brought to collection centers run by local public disposal operations – not even by small commercial operators.

For disposal in Germany and in the other member nations of the European Economic Area (EEA), please contact our local service technicians or our Service Center in Goettingen, Germany:

Sartorius Lab Instruments GmbH & Co. KG
Service Center
Weender Landstrasse 94 –108
37075 Goettingen

WEEE reg. no. DE 89907997

In countries that are not members of the European Economic Area (EEA) or where no Sartorius subsidiaries or dealerships are located, please contact your local authorities or a commercial disposal operator.

Prior to disposal and ⏐ or scrapping of the components, any batteries – if present – should be removed and disposed of in local collection boxes.

Instructions for Disposal of UV Lamps

In **Germany,** country-wide, environmentally-friendly disposal of end-of-life lamps is organized using the collection network Lightcycle. To find a collection site in your area, go to the HYPERLINK "http://www.lightcycle.de/index.php" Lightcycle.de Home

European Union

Disposal of waste electrical equipment and end-of-life lamps as domestic waste is prohibited. Our products are business-to-business products (B2B) in the sense of the WEEE Directive (Waste Electrical Electronic Equipment).

Sartorius has labeled all devices subject to the WEEE Directive with a crossed-out waste bin with a white bar underneath. This symbol indicates that disposal of the product as domestic waste is prohibited. Different European member countries have complied with the WEEE Directive by implementing their own national laws, which makes it impossible for Sartorius to offer consistent disposal solutions throughout Europe.

The local distributor (importer) from each country is responsible for complying with these national laws. For proper disposal of waste equipment and end-of-life lamps in accordance with the respective national regulations in the European Union countries mentioned (except Germany), please contact your local dealer or our Service Center.

All Other Countries

For disposal of waste equipment and end-of-life lamps in accordance with the respective national regulations in countries other than those mentioned above, please contact your local dealer our Service Center or the local authorities.

10. Technical Specifications

Dimensions W × H × D:	Without head	With head
	350 × 492 × 451 mm	435 × 501 × 476 mm
Empty weight	Without TOC monitor approx. 18 kg	With TOC monitor approx. 19 kg
Operating weight	Without TOC monitor approx. 28 kg	With TOC monitor approx. 29 kg
Clearance requirements	Sides	Left (door): min. 150-230 mm
		Right: min. 80 mm
	Front	100 mm minimum for opening the doors
Feed Water Requirements	Water must be pretreated by: – Distillation – Deionization – Reverse osmosis	
	Distilled water	> 250 KΩ cm (< 4 µS/cm)
	RO water	TDS < 25 ppm $CaCO_3$ > 10 KΩ cm (< 100 µS/cm)
	Deionized water	TDS < 10 ppm $CaCO_3$ > 50 KΩ cm (< 20 µS/cm)
	All	Turbidity < 1 NTU
		Silica < 1000 ppb
		TOC < 1000 ppb
	Pressure	From depressurized atmospheric tank inlet to a maximum inlet pressure of 6.9 bar (100 PSI)
Product water	18.2 MΩ cm at 25 °C	
	RNase level	< 0.004 ng/ml (detection limit)
	DNase level	< 0.024 pg/µl (detection limit)
	Bacteria	< 1 CFU/ml
	TOC at 50 ppb feed water[1]	≤ 2 ppb @ 25 °C (on arium® pro VF)[1]
		< 5 ppb @ 25 °C (on arium® pro UF)[1]
	Endotoxin content	< 0.001 EU/ml
Flow rate	Up to 1.7 l/min at a minimum inlet feed water pressure of 2 bar (without final filter)	
	Up to 1.4 l/min at a minimum inlet feed water pressure of 2 bar (with final filter)	
TOC monitor	Working environment: 1...300 ppb TOC	
	Digits: Steps of 0.5 for 1 to 9.5 ppb; steps of 1 for > 10 ppb	
Ambient Conditions	Operation	5°C–30°C; 80% relative humidity, non condensing
	Storage	5°C–45°C; 80% relative humidity, non condensing
Power Supply	100–240 V AC (± 10%) 50–60 Hz, 80 W (max.) 130 VA (max.)	
Connections	Serial interface	RS232C
	Character-coded	
	Plug connection	9-pin D-sub port
	Transmission rate	19200 baud
	Data bits	8
	Parity	None (space for Sartorius data printer)
	Stop bits	1
	SD card	Standard SD card, max. 4 GB, FAT formatted
	Display port	Alternative port for connecting the dispenser unit (on below-bench units)
	arium® Exchange interface	For communication with arium® advance
	Ethernet	For servicing
	Terminal block	Connection for foot switch and level sensors
Fuse	2 fuses 5x20 mm at power inlet, time lag, 250 V, 2 A/T	
Installation	Installation Category II (over-voltage) in accordance with IEC 664	
	Pollution degree 2 in accordance with IEC 664	
	Altitude limit: 2000 m	

[1] Values can vary depending on the quality of the feed water and the content of impurities in the feed water, as well as the type of cartridge used.

11. Accessories and Replacement Parts

Order number	Part Description
5441307H4--CE--B	Sartopore® 2 150 final filters (pack with 5 pcs.)
611CEL1	UV lamp for arium® pro VF
611CDS1	Sanitization kit with 1 syringe
H2Opro-AMDG1	Remote dispenser including height-adjustable stand foot
H2Opro-AMDG2	Remote dispenser including wall mounting kit
H2Opro-ADM1	Display mounting kit including height-adjustable stand foot
YDP30	Printer
H20 – AFS1	Foot switch
H20 – ALS1	Level sensor (2 pcs.)
611CDU5	Ultrafilter
H2O-ADD	arium® multifunctional stand (display mounting kit with adjustable stand and dispense gun)

Cartridge Kits

Each kit includes:
2 water purification cartridges

Cartridge kits for arium® pro systems

Order number	Product name	Description
H2O-A-PACK	Analytical Kit	Cartridge kit for arium® pro VF, UV ultrapure water systems
H2O-B-PACK	Biological Kit	Cartridge kit for arium® pro UF, DI ultrapure water systems
H2O-U-PACK	Universal Kit *	Cartridge kit for arium® ultrapure water system for use on feed water with potable water quality
H2O-E-PACK	Elemental Kit	Cartridge kits for arium® pro UF ultrapure water systems

* Tap water cartridges should only be used after verification of the feed water specifications
  and in consultation with the competent Sartorius application specialist.

12. EC Declaration of Conformity

CE

EG-/EU-Konformitätserklärung
EC / EU Declaration of Conformity

sartorius

Hersteller	**Sartorius Lab Instruments GmbH & Co. KG**
Manufacturer	**Weender Landstrasse 94 – 108, D-37075 Goettingen, Germany**

erklärt in alleiniger Verantwortung, dass das Betriebsmittel
declares under own responsibility that the equipment

Geräteart	**Reinstwassersystem arium basic, arium pro**
Device type	*Ultrapure water treatment system arium basic, arium pro*
Baureihe	**H2Obasic-B, H2Obasic-T**
Type series	**H2Opro-DI-x, H2Opro-UF-x, H2Opro-UV-x-y, H2Opro-VF-x-y**
	x = B, D oder/or T; y = TOC oder/or blank

in der von uns in Verkehr gebrachten Ausführung mit den grundlegenden Anforderungen der
folgenden Europäischen Richtlinien übereinstimmt und die anwendbaren Anforderungen folgender
harmonisierter Europäischer Normen erfüllt:

*in the form as delivered complies with the essential requirements of the following European Directives
and meets the applicable requirements of the harmonized European Standards listed below:*

2004/108/EG	**Elektromagnetische Verträglichkeit**
2004/108/EC	*Electromagnetic compatibility*
	EN 61326-1:2013
	Elektrische Mess-, Steuer-, Regel- und Laborgeräte - EMV- Anforderungen – Teil 1: Allgemeine Anforderungen
	Electrical equipment for measurement, control and laboratory use - EMC requirements – Part 1: General requirements
2006/95/EG	**Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen**
2006/95/EC	*Electrical equipment designed for use within certain voltage limits*
	EN 61010-1:2010
	Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte – Teil 1: Allgemeine Anforderungen
	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements
2011/65/EU	**Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten (RoHS)**
2011/65/EU	*Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)*
	EN 50581:2012
	Technische Dokumentation zur Beurteilung von Elektro- und Elektronikgeräten hinsichtlich der Beschränkung gefährlicher Stoffe
	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Jahreszahl der CE-Kennzeichenvergabe | *Year of the CE mark assignment:* **14**

Sartorius Lab Instruments GmbH & Co. KG
Goettingen, 2014-02-12

i.V. _____   i.V. _____
Dr. Reinhard Baumfalk   Dr. Dieter Klausgrete
Vice President R&D   Head of International Certification Management

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten EG- und EU-Richtlinien, ist jedoch keine
Zusicherung von Eigenschaften. Bei einer mit uns nicht abgestimmten Änderung des Produktes verliert diese
Erklärung ihre Gültigkeit. Die Sicherheitshinweise der zugehörigen Produktdokumentation sind zu beachten.

*This declaration certifies conformity with the above mentioned EC and EU Directives, but does not guarantee
product attributes. Unauthorised product modifications make this declaration invalid. The safety information
in the associated product documentation must be observed.*

Doc: 2014018	SLI14CE002-00.de,en	1 / 1	PMF: 2013992	OP-113-fo1

The information and figures contained in these
instructions correspond to the version date
specified below.
Sartorius reserves the right to make changes
to the technology, features, specifications and
design of the equipment without notice.

Last updated:
08 | 2015