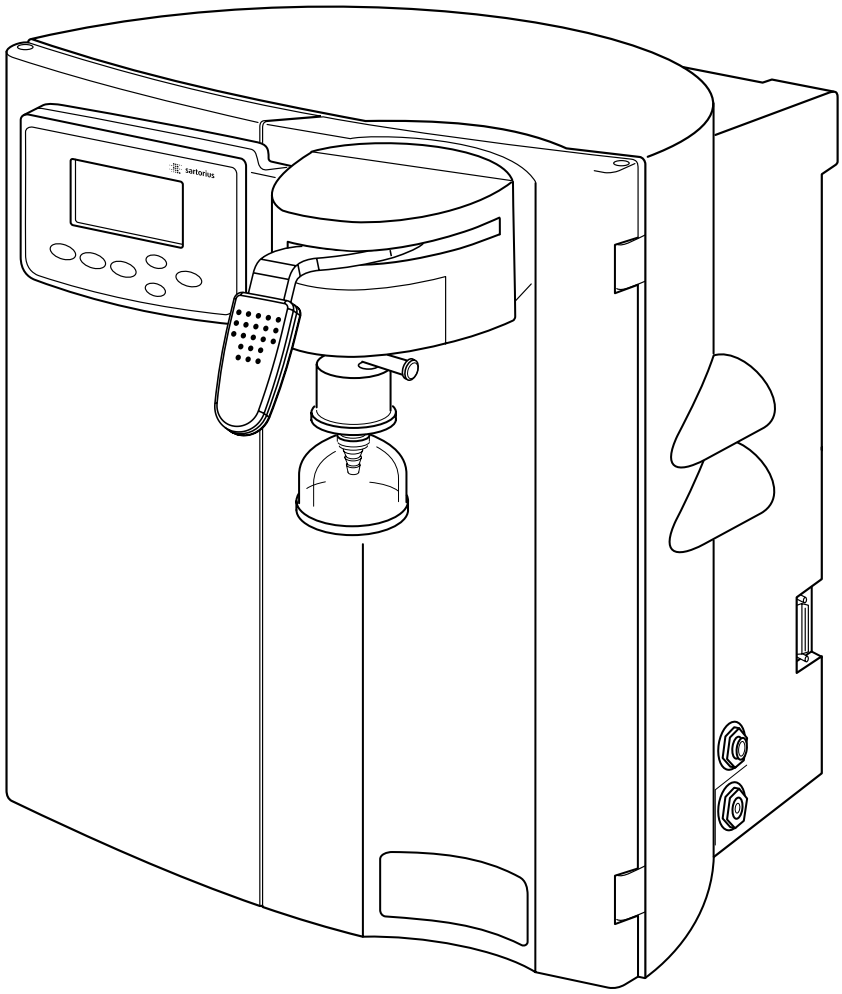
Installation and Operation Manual | Installations- und Bedienungsanleitung |
Installation et mode d'emploi | Istruzioni per l'installazione e l'uso |
Manual de instrucciones

arium® 611UF | 611VF

Water Purification System | Wasseraufbereitungssystem | Système de purification d'eau |
Sistema di purificazione dell'acqua | Sistema de purificación de agua



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About This Manual

This manual instructs you about how to prepare and operate the arium® 611UF and 611VF water purification systems and use them properly for your applications.

Sartorius has designed its arium® 611 water purification system for reliability, economy and safe operation. To ensure this, you must read this instruction manual carefully before operating the system. The manual will give you important instructions that will help you avoid potential hazards and increase the reliability and service life of your arium® system.

For your own safety, please read the Safety Information on page 3.

If you have any questions about the correct use of your arium® system, please contact us at the address below or your local Sartorius office.

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Contents

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® system.

The following symbols are used in this manual:

Warning!
Warnings alert you to the possibility of personal injury or property damage.

Caution!
Caution signs alert you to the possibility of damage to the equipment.

Note!
Notes alert you to pertinent facts and conditions that are important for economic operation of the equipment.

Warning!
Danger of personal injury!
Servicing and repairs may only be performed by trained and qualified personnel.

Warning!
Severe electrical shock hazard or danger of electrocution!

- Use a properly grounded electrical outlet of correct voltage and current handling capacity (100 to 240 V ~ 50/60 Hz) to plug in your arium® system.
- Do not place your arium® system on top of electrical equipment. Routine maintenance of this unit may involve water spillage
- Always remove the plug from the electrical outlet prior to maintenance and servicing of your arium® system.

Warning!
Danger of fire or explosion!

- Do not use your arium® system in the vicinity of flammable or combustible materials; fire or explosion may result. This device contains components which may ignite such materials.
- The arium® system is to be operated with water only. Sanitizing | cleaning agents should only be used according to the instructions given in this manual.

Warning!
Danger of injury to eyes and skin!

- Avoid splashing sanitants on clothing, eyes or skin (wear protective clothing).
- Make sure that all tubing connections are sealed tightly to avoid chemical leakage.
- Turn off feed water and close the draw-off lever by pushing it to the right to depressurize the system prior to changing cartridges, sanitizing or performing service on your arium® system.
- Carefully follow the manufacturer's safety instructions included on the chemical containers and filter cartridges.

Caution!
Danger of irreversible damage to arium® system components!

- Be sure to replace defective fuses with those of the same type and rating.
- Makes sure that the outlet tubing is directed to an open drain.
- Protect against frost.
- When installing a new UV bulb in your arium® system, do not touch the bulb with your bare hands. Fingerprints can cause damage to the bulb.

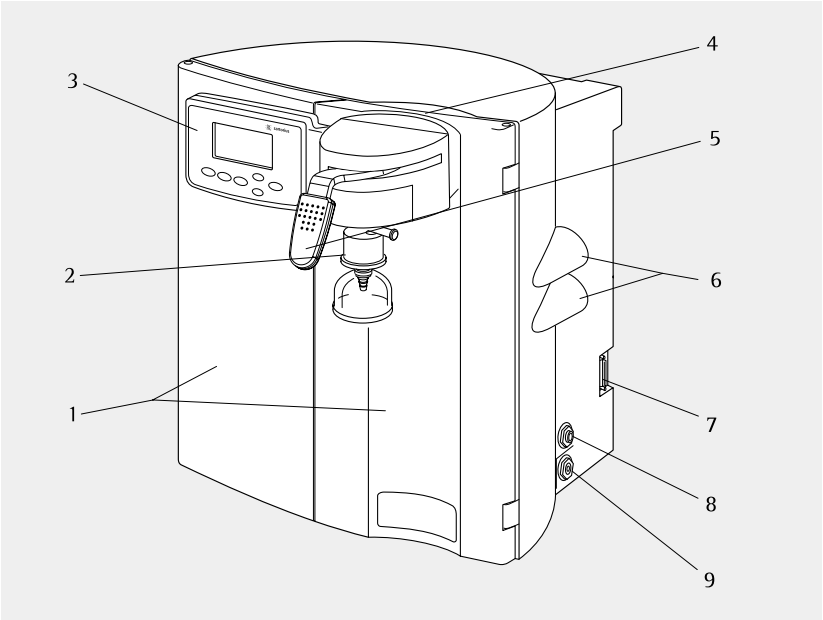
Intended Usage

The arium® 611UF and 611VF water purification systems are designed exclusively to provide reagent-grade 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 other auxiliary media that are listed in this manual. Using these systems for any other purpose shall be considered improper usage.

- arium® systems may only be operated by trained personnel.
- Operate your arium® system only with original accessories or replacement parts. If you modify this water purification system on your own without consulting Sartorius, the performance and operating safety of the system are no longer guaranteed, thus constituting a safety hazard for the operator.
- Do not open the rear panel of the system. If the seal is broken, the warranty claim is null and void. 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, connectors, gaskets, tools and sanitizing agents).

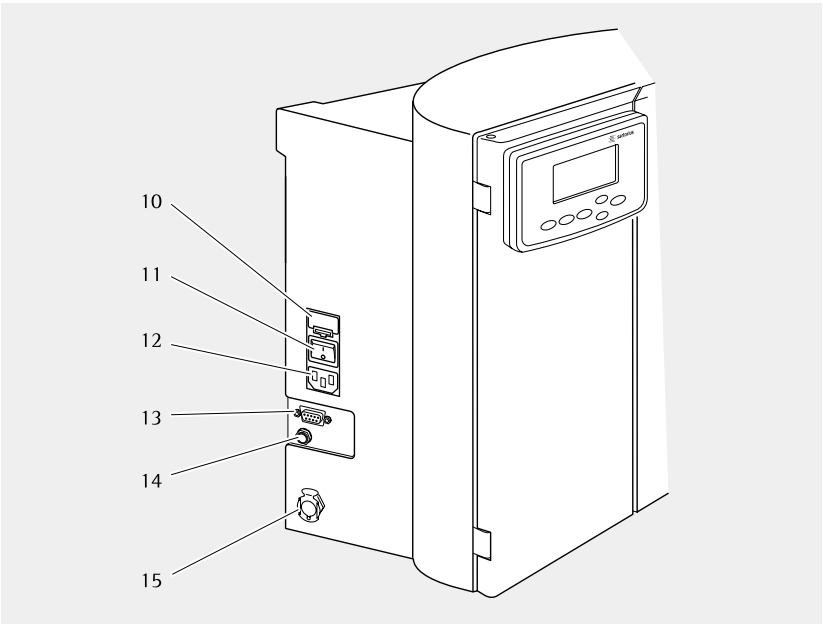
Product Description

arium® 611 system
The Sartorius arium® 611UF and 611VF water purification systems are designed to provide ASTM 1193 and ISO 3696 type 1 water. The systems use a four-stage purification process with mixed bed resins and activated carbon in conjunction with an ultrafilter and a 0.2-micron final filter to further polish water pretreated by distillation, deionization and reverse osmosis. By this process, the system is capable of producing water that is pyrogen-free (< 0.001 EU/ml) and has a resistivity of up to 18.2 MΩ × cm. The water resistivity is continuously monitored by a resistivity cell and displayed on a digital display.



Front view

Item No.	Description
1	Left and right door of the arium® system
2	Product water outlet with 0.2-micron final filter and bell assembly
3	Display and control panel
4	Recessed grip for opening the right door
5	Draw-off lever for opening and closing the outlet valve (shown in closed position)
6	Outlet for a remote display | dispenser unit, TOC instrument (lower connector) or a dispenser
7	15-pin D-sub port for connecting a remote display | dispenser unit
8	Outlet for time | volume dispense
9	Reject water outlet
10	Fuse drawer
11	Main power switch
12	Power cord receptacle
13	Serial interface RS232 with 9-pin D-sub port for connecting a printer
14	Connector for pump interlock that prevents the pump from running dry
15	Feed water inlet



Side view, left

Control Panel
Operate the arium® system using the control panel that features four function keys and two control keys for the cursor.

Standby Key
Press the Standby key to switch the unit into Standby Mode. In this mode the water in the system is recirculated for 15 minutes every hour.

Operate|Stop Key
Press the Operate|Stop key to activate or inactivate the unit. When the system is activated, the water circulates through the system. When the system is inactivated, the pump switches off and the water will stop circulating. “System Inactive” will appear in the display.

Menu Key
This key is used to view the System Menu and all its options.

Cursor Keys
Use these two arrow keys to move within the menu and highlight individual menu items. With the ⌃ key, move the cursor up a line, with the ⌄ key, move the cursor down a line.

Enter Key
Use the Enter key to confirm a menu item you have selected with the cursor.

Display
– During normal operation, the display will show the water quality reading according to the preselected measurement unit options: (MΩ × cm or µS/cm) The letter “c” indicates that the water quality measurement will be automatically compensated to 25°C:

```
18.2 MΩ * cm      c

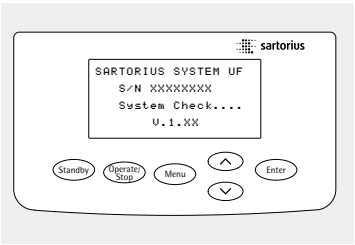
14.32             20.10.05
```

– When the system is in the Standby Mode, the display will show:

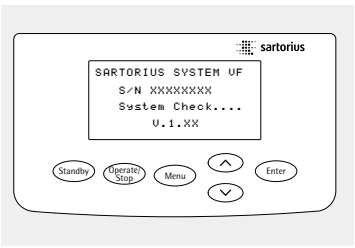
```
STANDBY
```

– The display will show the following when the system is switched off:

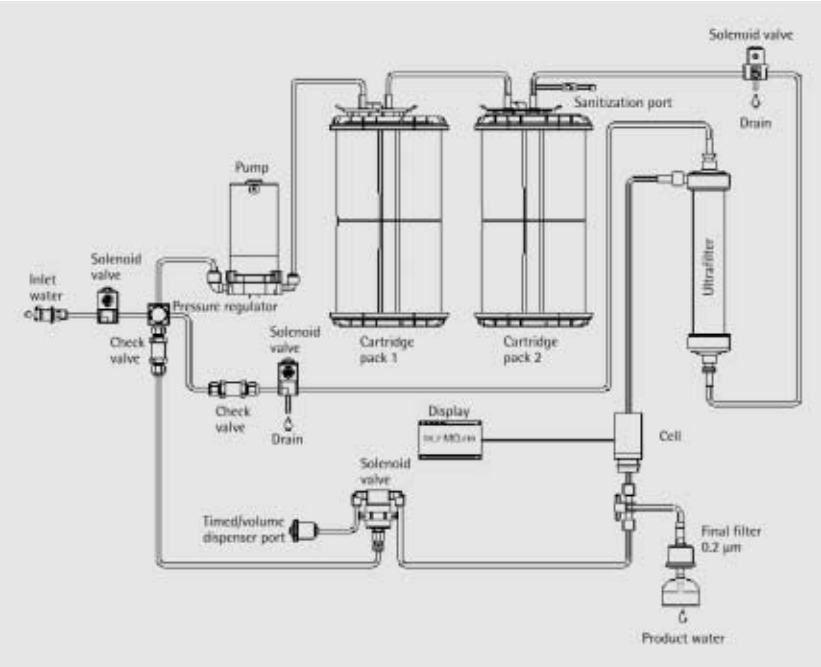
```
System Inactive
```



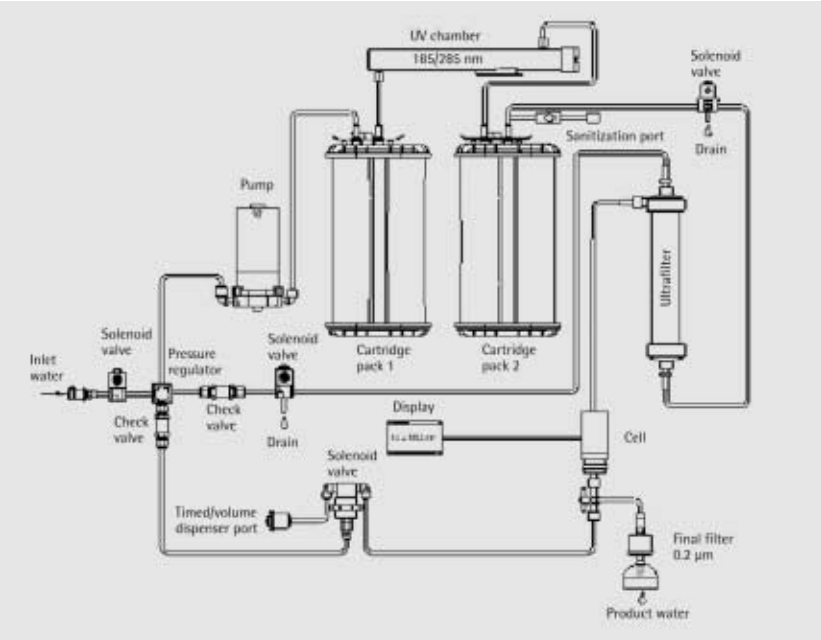
Control panel and display on the arium® 611UF



Control panel and display on the arium® 611VF



Flow chart for arium® 611UF



Flow chart for arium® 611VF

Unpacking and Installation

Unpacking
Remove your arium® 611UF and|or 611VF from its packaging. You will find the accessories inside the arium® housing and in the top cover of the box. The equipment supplied includes the following:

Part Description	Number
arium® system	1
Display|dispenser unit	1
Ultrafilter	1
Inlet water tubing with quick-fit adapter PE, 3/8" outer diameter, length 2.40 m	1
Reject water tubing, PE, 1/4" outer diameter, length 3.05 m	1
Timed dispense tubing, PVDF 1/4" outer diameter, length 2.40 m with adapter for the final filter	1
Sanitization syringe	1
Wall mounting bracket	1
Power cord	1
Installation and operation manual	1
Certificate	1

Plastic Bag with Accessories for Installation	
Screws and washers for installation of the display|dispenser unit	4
Cover with arium® logo for the display|dispenser unit	1
Rubber cover to cover the remaining recess (top or bottom) in the door	1
Tubing adapter for inlet water with 1/2" internal thread and 3/8" outer diameter	1
1 two-part tubing adapter for inlet water with 3/4" internal thread and 3/8" outer diameter	1

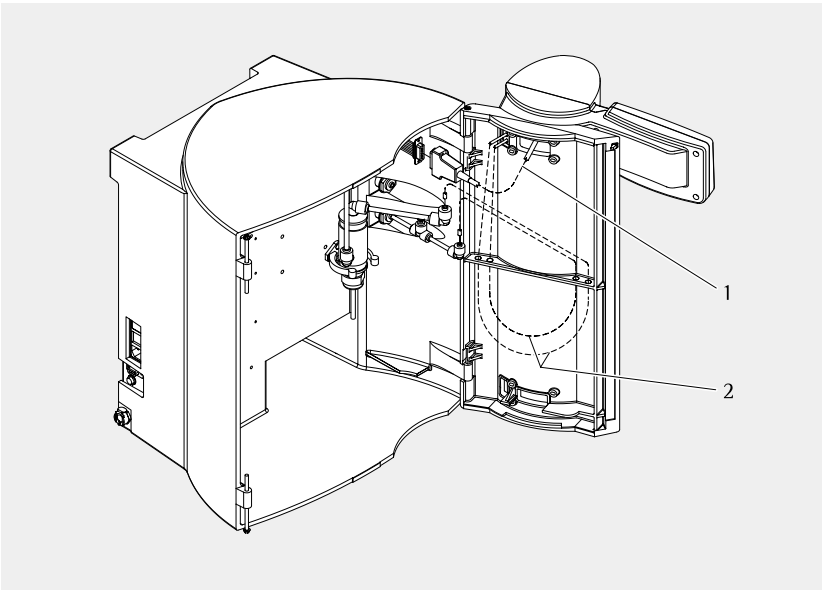
Plastic Bag with Replacement Parts	
Fitting plug (white & transparent)	2
Cartridge adaptor with Luer end cap for sanitization port	1
O-rings for adapter plate	2
O-rings for connecting the ultrafilter	2
T piece 1/4"	1
Elbow 90° 1/4"	1
Elbow 90° 3/8" – 1/4"	1
PVDF tubes for the sanitization port	2

Note!
The cartridges are supplied separately. They are not included in the equipment supplied with your arium® system.

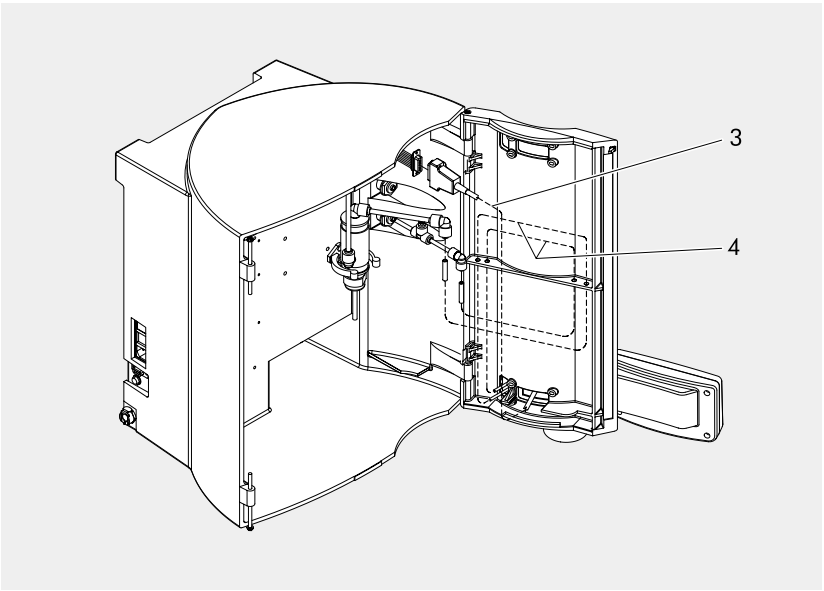
Display | Dispenser Unit Installation
The display | dispenser unit has been designed to be mounted in 3 ways: At the top of the right door for bench systems, at the bottom of the right door for wall-mounted systems or in a remote location from the system (additional kit required).

To install:

- Route the supply cables through the large opening of the right door (top or bottom), and the two water tubes from the outside through the small opening.
- Use the 4 screws and washers provided to mount the display | dispenser unit on the door by routing the screws from inside the door through the holes in the door to the outside and screw to the assembly.
- Route the water tubing through the 4 holes inside the door and connect to the color-coded connectors. Follow the course of dotted lines in the figure:
  Positions (1) and (3):
  data and power cables
  Positions (2) and (4):
  water tubing
- Place rubber cover over the remaining recess (top or bottom) in the door.



Mounting the upper display | dispenser unit



Mounting the lower display | dispenser unit

Bench Mounting

Warning!
Severe electrical shock hazard or danger of electrocution! Do not place the arium® system on top of electrical equipment. Water may spill when using the system.

Warning!
Danger of fire or explosion!
Do not use your arium® system in the presence of flammable or combustible materials; fire or explosion may result. The device contains components which may ignite such materials.

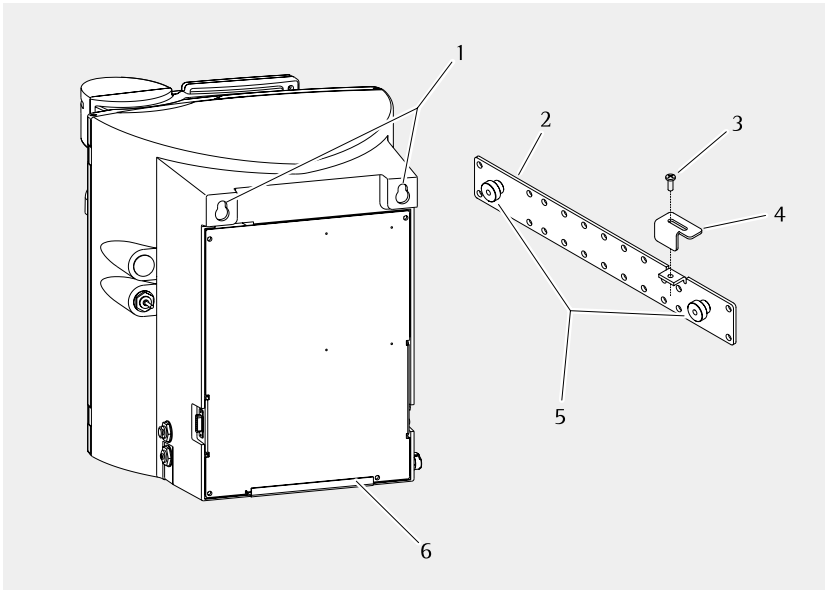
- Place the arium® system on a flat surface.
- Make sure that a feed water supply, a 100–240 V electric socket and an atmospherically vented drain are available.

Wall Mounting

Warning!
When mounting the unit, make sure that the mounting surface and fasteners selected are capable of supporting a minimum of 25 kg. Inadequate support and|or fasteners may result in injury to the operator and|or damage to the equipment.

A wall bracket (2) is included with the equipment supplied 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 63 × 63 cm is required to mount the arium® system. Two sturdy keyhole drill holes (1) are located at the top of the back of the housing enabling you to hang the unit on the two pins (5) on the wall bracket. Use the predrilled holes in the bracket to fasten the bracket to the wall. The lower metal profile (6) on the arium® housing functions as a spacer.

1. Make sure that water and a 100-240 V electric socket are available.
2. Fasten the bracket to the wall with suitable screws and dowels.
3. Loosen the metal support (4) using the screw (3) and slide it to the left.
4. Push the arium® system onto the pins and lower the system to engage the keyholes (1).
5. Slide the metal support (4) to the right until the metal support rests against the arium® housing and lock it using the screw (3).

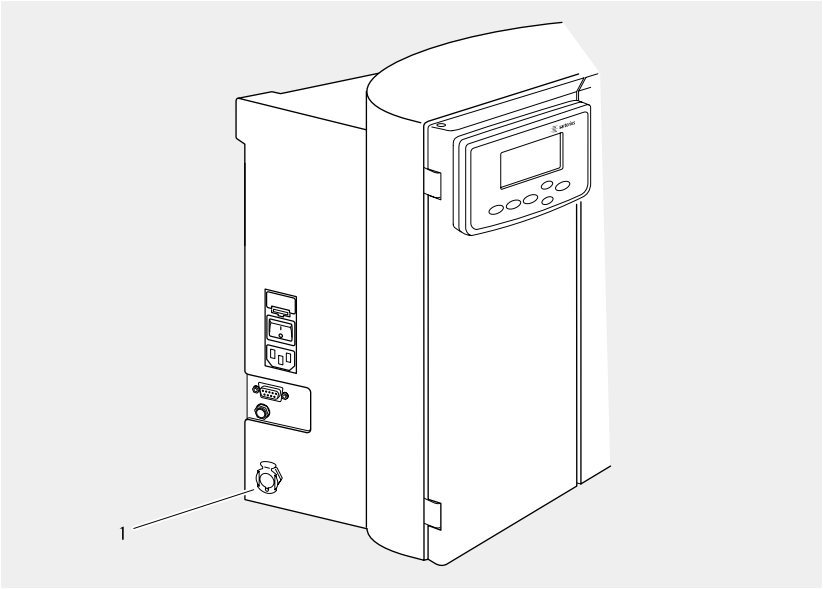


Lower the arium® housing onto the wall mounting bracket

Water Inlet Connection
Feed water is supplied to the system through this inlet (1). The arium® system is supplied with two adapters (see Equipment Supplied in the section **Unpacking and Installation**).

Note!
We recommend that a shutoff valve be installed in your feed water line. If a gravity tank is used to supply feed water to the arium® system, the feed water tube must be connected to the bottom of the tank.

- Connect the free end of the tube to the appropriate adapter. Push the tube all the way into the adapter to seat it properly (approx. 20 mm).
- Connect the tubing adapter to your feed water supply.
- The cartridges must be installed before supplying feed water to the system. See section on **Cartridge Installation**.
- Insert the other end with a quick disconnect insert into the system's counter coupling (1) until it audibly clicks into place.

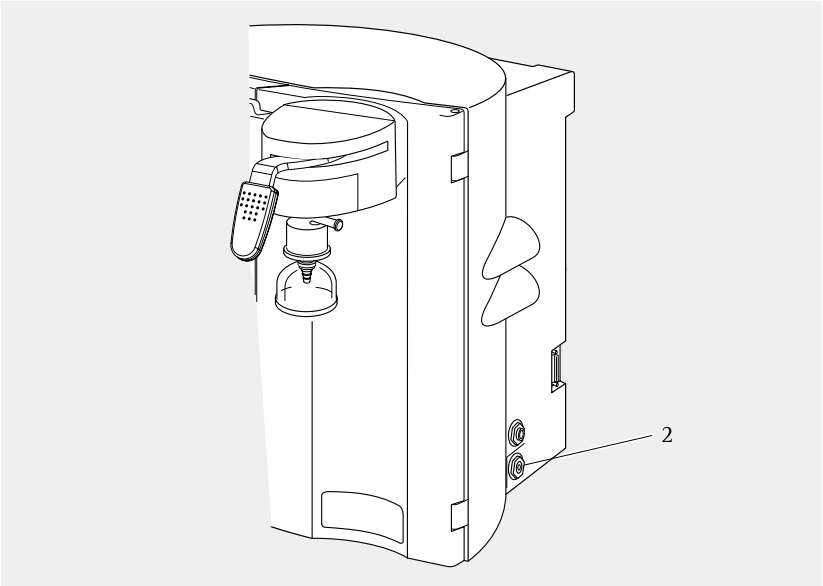


Connector for feed water tubing

Reject Water Connection
The reject water is drained through this outlet (2).

- Push the end of the tubing all the way (approx. 20 mm) into the reject water connector (2) until it is seated properly.
- Direct the other end of the reject water tubing to an atmospheric drain.

Note!
Make sure there are no kinks in the tubing and that it is routed in a slightly downward direction.



Connector for reject water tubing

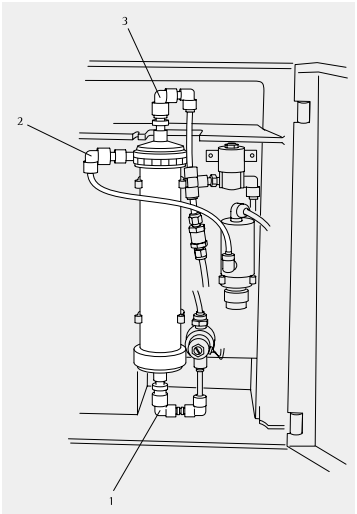
Ultrafilter Installation

Caution!
Danger of irreversible damage to arium® system components! Tighten all plastic cap nuts by hand. Do not use a wrench or pliers.

You must install the ultrafilter in the housing before you start up operation of the arium® system.

To do so, proceed as follows:

- Make sure to unplug the power cord from the electrical outlet (“O”).
- Open both doors of the unit.
- Remove the ultrafilter from its packaging and remove protective covers from the fittings.
- Screw the tubing connectors on the ultrafilter and handtighten as shown in the figure:
- (1): Green connector for feed water – bottom
  (2): Blue connector for product water – upper left
  (3): Red connector for reject water – top
- Push the ultrafilter all the way into the holders so that the connector fitting on the side is facing left.



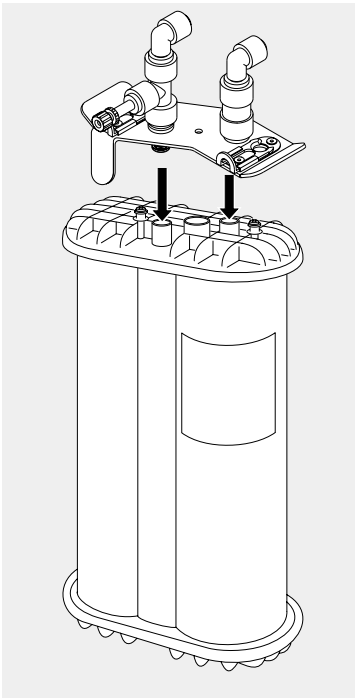
Attach the three tubing connectors to the ultrafilter

Cartridge Installation

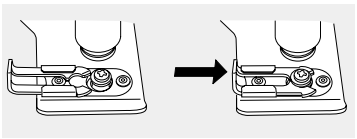
- Remove both cartridges from their packaging. One cartridge has a label with a blue dot and the number 1, the other cartridge has a red dot and the number 2. On the housing to the left side you will find a blue-labeled cartridge adaptor, on the right side a red cartridge adapter.
- Remove the plugs from the top of the cartridge. Open the lock on the blue cartridge adapter, place it on the cartridge with the blue dot and press forcefully. Be sure the label with the blue dot is facing you. The adapter indicates “front”. Two screws are seated in the cartridge cover. The two screw heads must rise from the holes of the safety bar together with the upper ring of the spacers.
- Push both safety bars all the way under the upper ring of the spacers, as shown in the figure, right.
- Insert cartridge No. 1 with the blue dot on the left into the housing and push until properly seated. Be sure the label is facing forward.
- Proceed in the same manner with cartridge No. 2 with the red dot into the right side of the housing and connect the red adapter.
- Close both doors.

Notes!

- Moisten the O-rings of the cartridge adapter with water to facilitate connection.
- Before initial operation the cartridges have to be flushed, see section on **Flushing and Purging Air from the Cartridges**.
- Screw the final filter onto the NPT fitting of the dispensing valve only after running a flush and sanitization cycle on the cartridges and the ultrafilter.
- Make sure that the cartridges have been installed properly; improper installation can result in poor water quality.



Press the adapter onto the cartridge (e.g. red cartridge pack)



Secure the adapter by pushing the two safety bars forward over the spacer screws

System Settings
Prior to initial operation of your arium® system, set the language for the display text, date and time, and the desired measurement units, the set point and the sanitization interval.

To set these functions:

Language
This feature allows the user to select one of six languages for the display texts in the menu. The options are German, English, French, Italian, Spanish and Japanese. The system is factory set to English.

To select a language:

1. The main power switch on the left hand side of the housing must be on ("I").

   The arium® system will then perform a system check. The display will show the following information (in English upon Initial Operation).

   ```
   SARTORIUS SYSTEM XX
      S/N XXXXXXXX
    System Check OK
         V1.XX
   ```

   The display will show the model type of the system (VF or UF), the serial number and the software version.

2. The display will show the following when the system check is complete:

   ```
   MENU>Main Menu
   OPER>Operation
   ENTR>New Cart. Flush
   ```

3. Press **Menu** to activate the Main Menu.

   ```
   MENU        Utilities
               Maintenance
               Setup
   ```

4. Select "Setup". Press **Enter** to confirm.

   ```
   SETUP       Time/Date
               Set Point
               Meas. Units
   ```

5. Use the arrow key ⌄ to scroll down, select "Language" and press **Enter** to confirm. The display will show the following:

   ```
   LANGUAGE    English
               German
               French
   ```

   Use the arrow keys ⌃ or ⌄ to select the desired language and press **Enter** to confirm.

Note!
Not all languages are visible on the display at the same time. Repeatedly press the arrow key ⌄ to display the desired language.

The system will then switch to the previously activated Operation Mode.

Setting the Date and Time
This feature allows the user to enter the current date and time.

Proceed as follows:

1. Press **Menu** to activate the Main Menu.

   ```
   MENU        Utilities
               Maintenance
               Setup
   ```

2. Select "Setup". Press **Enter** to confirm.

   ```
   SETUP       Time/Date
               Set Point
               Meas. Units
   ```

3. Select "Time & Date". Press **Enter** to confirm. The display will show the following:

   ```
   TIME/DATE
               Standard
               U.S.
   ```

   – When "Standard" is selected, the date will be displayed in DD.MM.YY format and time in 24-hour format.

   – When "U.S." is selected, the date will be displayed in MM.DD.YY format and the time in 12-hour format.

4. Choose a format and press **Enter** to confirm.

5. Select Time & Date and use the arrow keys ⌃ or ⌄ to change to current Time & Date settings. Press **Enter** after each digit is set to move to the next digit.

6. Press **Enter** to confirm the Time & Date setting.

   The system will then switch to the previously activated operating mode.

Standby Mode
For economical and ecological operation of the system, we recommend that you switch the system to Standby Mode when no water is being dispensed. This can be done manually using the **Standby** key or automatically by presetting an interval (see instructions in the next column).

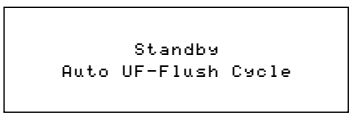
Note!
If you are using a TOC instrument with your arium® system, be sure that the arium® system does not switch to the Standby Mode during measurement.

When the system is in the Standby Mode, water will be recirculated for 15 minutes every hour (and, on 611VF, with the UV bulb switched on).

After 3 hours in the Standby Mode, an automatic UF flush cycle will be performed and repeated every 24 hours.

During automatic flushing, UF enriched water is flushed through the system rapidly for 30 seconds and sent to drain.

During the automatic UF flush cycle, the display will show the following message:

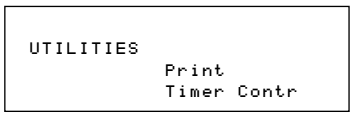


The arium® system has a function which allows the user to program the unit to switch from the Operating Mode to the Standby Mode after a defined period of time. The system is factory set to 0 h and 30 min.

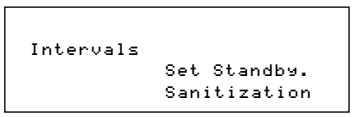
To change the factory settings:

1. Press **Menu** to activate the Main Menu.

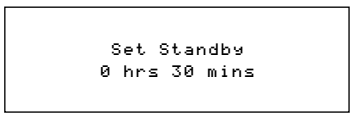
2. Select “Utilities”. Press **Enter** to confirm.



3. Use the arrow key ⌄ to scroll down, select “Intervals” and press **Enter** to confirm. The display will show the following:



4. Select “Set Standby” and press **Enter** to confirm. The display will show the following:



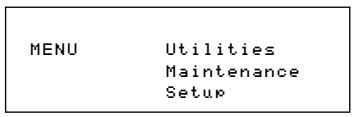
5. The interval is set at 10-minute increments. A maximum of 9 h and 60 min can be set. When 0 h 00 min is entered, the automatic Standby function is stopped. Use the arrow keys ⌃ or ⌄, to select the desired time interval and press **Enter** to confirm.

   After the time has been set, the system automatically switches to the Operation Mode. The system remains in the Operation Mode until the time entered has expired or this mode is switched off manually.

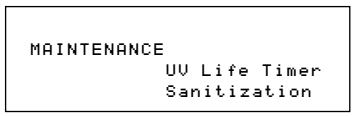
Setting the UV Timer (on arium® 611VF only)
The UV bulb should be replaced once every year. Prior to initial operation, the UV Timer must be reset to make sure that the message on the display does not appear until one year after initial operation.

To activate the timer:

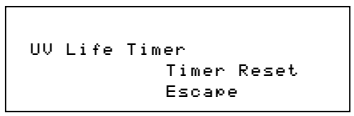
1. Press **Menu** to activate the Main Menu.



2. Select “Maintenance”. Press **Enter** to confirm.



3. Select “UV Life Timer” and press **Enter** to confirm. The display will show the following:

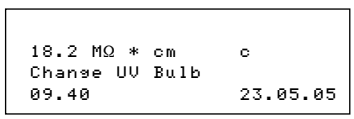


4. Select “Timer Reset” and press **Enter** to confirm. The internal timer is now reset.

   Press “Escape”, to return to the Main Menu without resetting the timer.

   The system will then switch to the previously activated Operation Mode.

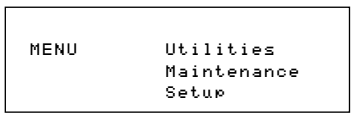
   After 1 year the display will show the following:



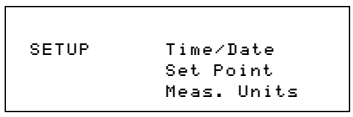
Measurement Units
This feature allows you to select how measurement units are displayed. You can choose between MΩ × cm, µS/cm, with the option to display data compensated to 25°C or uncompensated, and the temperature.

To set the measurement units:

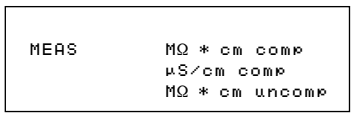
1. Press **Menu** to activate the Main Menu.



2. Select “Setup”. Press **Enter** to confirm.



3. Select “Measurement Units”. Press **Enter** to confirm. The display will show the following:



Use the arrow keys ⌃ or ⌄ to select the desired option and press **Enter** to confirm.

Note!
In some menus, not all menu items are visible on the display. Repeatedly press the arrow key ⌄ to display menu items listed further below.

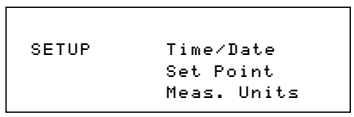
The system will then switch to the previously activated Operation Mode.

Set Point
The option “Set Point” allows the user to select a defined quality level for the product water in MΩ × cm or µS/cm. The factory setting for the Set Point is 10.5 MΩ × cm.

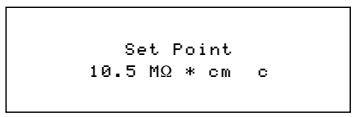
To change the set point:

1. Press **Menu** to activate the Main Menu.

2. Select “Setup”. Press **Enter** to confirm.



3. Select “Set Point” and press **Enter** to confirm. The display will show the following:



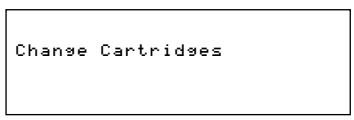
Note!
If you have chosen µS/cm as the measurement unit, the set point will be displayed in µS/cm.

4. Select current set point and use the arrow keys ⌃ or ⌄ to change to the desired set point. Press **Enter** after each digit is set to move to the next digit.

5. Press **Enter** to confirm the set point.

The system will then switch to the previously activated Operation Mode.

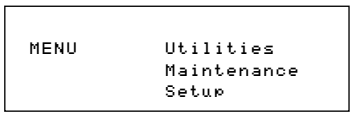
When the water quality drops below the defined set point for 5 minutes, you will be instructed to replace the cartridges. The display will show the following message:



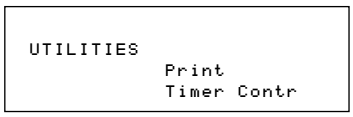
Sanitization Interval
To prevent bacterial growth we recommend that a sanitization be performed once every month. However, you can also select a time interval of between 1 and 6 months. The factory setting is 1 month; this means that once every month the message “Perform Sanitization” will appear on the display as a reminder.

Proceed as follows to change the sanitization interval:

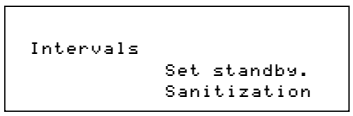
1. Press **Menu** to activate the Main Menu.



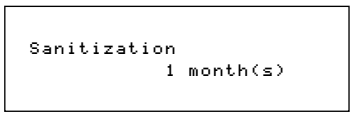
2. Select “Utilities”. Press **Enter** to confirm.



3. Use the arrow key ⌄ to scroll down, select “Intervals” and press **Enter** to confirm. The display will show the following:



4. Select “Sanitization” and press **Enter** to confirm. The display will show the following:



5. Use the arrow keys ⌃ or ⌄ to select the desired interval and press **Enter** to confirm.

The system will then switch to the previously activated Operation Mode.

Flushing and Purging Air from the Cartridges

Note!
Make sure that the water inlet and outlet tubing are installed properly.

Note!
The final filter must not be fitted onto the dispenser port at this time.

Prior to initial operation, the two cartridges and the ultrafilter must be flushed to rinse and purge air from the system.

Proceed as follows:

1. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

2. Select “Maintenance” and press **Enter** to confirm. The display on the arium® 611UF will show the following:

```
MAINTENANCE
            Sanitization
            Calibration
```

The display on the arium® 611VF will show the following:

```
MAINTENANCE
            UV Life Timer
            Sanitization
```

3. Use the arrow key ⌄ to scroll down, select “New Cartr. Flush” and press **Enter** to confirm. The display will show the following:

```
AIRPURGE/FLUSH CYCLE

Press ENTER to Start
```

4. Press **Enter**. The new cartridge flush will begin and the display will indicate the remaining flush time:

```
AIRPURGE/FLUSH CYCLE
        19 min
```

5. When this time has elapsed, the following display will be shown with the word “Finished” blinking

```
AIRPURGE/FLUSH CYCLE
Finished
Push OPER>Operation
```

6. Press **Operate | Stop**.

7. Open the dispensing valve and drain reject water for approx. 3 minutes.

   The new cartridge flush is completed.

System Sanitization
The arium® system must be sanitized prior to initial operation and at regular intervals thereafter; see section on **Sanitization Interval**.

Sanitization is necessary to reduce bacterial growth and to minimize and | or inhibit the build-up of a bio-film within the cartridges or piping. Without Sanitization, the TOC level in the water can increase significantly.

The frequency with which you will need to clean your unit depends on your feed water’s characteristics, your purity requirements and your water consumption.

To remind you to “Perform Sanitization”, this message will appear on the display either once a month (factory setting) or according to your preset sanitization interval.

This message will blink on your display until a complete sanitization cycle has been performed and | or two new cartridges have been flushed.

At the end of the sanitization cycle, this reminder function will reset automatically.

```
18.2 MΩ * cm      c
Perform Sanitization
11.15             11.07.05
```

Have the following ready prior to sanitization:

- Sanitization syringe with Order no. 611CDS
- Container with 100 ml reagent-grade water from the arium® system.

Note!
Because of the length of tubing required when the display | dispenser unit is installed remote to the system or when a remote dispenser is installed, you should use two sanitization syringes. If both options are installed please use three syringes.

To sanitize the system:

1. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

2. Select “Maintenance” and press **Enter** to confirm. The display will show the following on the arium® 611UF:

```
MAINTENANCE
            Sanitization
            Calibration
```

The display will show the following on the arium® 611VF:

```
MAINTENANCE
            UV Life Timer
            Sanitization
```

3. If reguire, use the arrow key ⌄ to scroll down, select “Sanitization” in the menu and press **Enter** to confirm.

Follow the instructions that appear in the display and push **Enter** after each step is completed.

```
Disconnect Feed Line
Remove End Filter

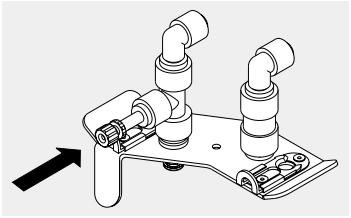
Press ENTER
```

```
Open Product Outlet
Collect Outlet Water
Inject Sanit. Liquid
Press ENTER
```

☞ **Note!**
Make sure system is depressurized before attempting to inject sanitization liquid.

4. Unscrew the Luer end cap from the connection of the red cartridge adapter.

5. Inject the sanitization liquid through the port into the system (see the figure on the next column) and then remove the syringe.



Inject the sanitization liquid into the red adapter.

6. Flush the syringe twice with the water prepared.

7. To rinse the sanitization adapter, inject 10 ml of the prepared water into the sanitization adapter (proceed as when injecting sanitization liquid).

8. Reattach the Luer end cap.

After you press **Enter** the pump will run for some seconds. When the pump stops, the display will show the following:

```
Close Product Outlet
Reconnect Feed Line

Press ENTER
```

After you have pressed **Enter**, the sanitization program will start a 30-minute exposure time for the sanitizing agent. The remaining time can be read off the display.

```
ACTIVE SANITIZATION
in Process
            30 min
```

After the 30 minutes have elapsed, the system will be flushed automatically for 6 minutes. After the flush cycle, a 60-minute recirculation cycle will start automatically. After that, the system will switch to Standby Mode.

9. To complete the sanitization procedure, press the **Operate**|**Stop** button and flush 0.5 liters of water to drain through the dispensing valve.

10. The final filter can now be installed. See section on **Final Filter Installation**.

Ultrafilter Flush
The system features a short (1 min) and a long (5 min) UF flush cycle. During Normal Operation with an ultrafilter, you should flush the ultrafilter once a week for 5 min to prevent scaling and bacterial growth on the membrane. The short flush option can also be used prior to critical applications.

Proceed as follows:

1. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

2. Select “Maintenance” and press **Enter** to confirm. On the arium® 611UF, the display will show the following:

```
MAINTENANCE
            Sanitization
            Calibration
```

On the arium® 611VF, the display will show the following:

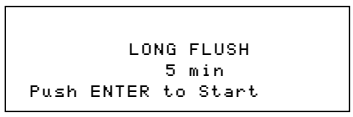
```
MAINTENANCE
            UV LifeTimer
            Sanitization
```

Use the arrow key ⌄ to scroll down, select “UF Flush” and press **Enter** to confirm. The display will show the following:

```
UF Flush
            Short
            Long
```

When “Short” is selected, the flush runs for 1 minute. When “Long” is selected, the flush runs for 5 minutes.

3. Select “Long” and press **Enter** to confirm. The display will show the following:



Press **Enter** to start the flush cycle. The display will indicate the remaining flush time.

After the flush time has elapsed, the system will return into its original operation mode.

Final Filter Installation

1. Unpack a new final filter.
2. Wrap Teflon tape approx. 2 times around the threaded NPT fitting of the final filter.
3. Screw the final filter hand-tight onto the NPT fitting of the dispensing valve and handtighten in a clockwise direction.
4. Vent the final filter using the vent valve.
5. Remove the protective cap from the bell assembly and flush 6 liters of water through final filter.

   After this step, the system is now ready for operation.

Note!
Discard an additional 50 ml of water prior to collecting water for analysis.

Further Options

Printing Data on a Printer
If you have connected an appropriate printer to the printer port (1) on your arium® system, the following information will be printed:

- Model number
- Serial number
- Date and time
- Conductivity or resistivity readings

Note!
The arium® system has an RS232 serial interface with a 9-pin sub-D port for a serial printer or PC. The ported printer must use a separate power supply and be configured as follows: 19,200 baud, 8-bit, no parity.

To select a print option:

1. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

2. Select “Utilities” and press **Enter** to confirm.

```
UTILITIES
            Print
            Timer Contr
```

3. Select “Print” and press **Enter** to confirm.

```
Print
            Interval
            Print Screen
```

If you have selected “Print Interval”, you can use the control keys for the cursor to set the desired interval in minutes when prompted by the display. In Normal Operations a printout of the current data is generated after each interval.

After you have selected “Print Screen” you can generate a printout of the screen by pressing **Enter** once. After printing, the system returns to the previously activated Operation Mode.

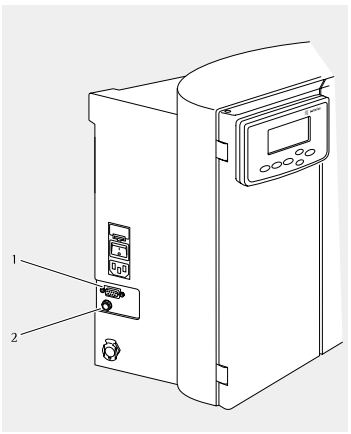
Transferring Data to a PC
Using a standard interface cable you can connect a PC to the RS232 interface (1) and transfer the data.

The data can be displayed on your PC with the Hyperterminal software included in your Windows operating system or with any equivalent program.

Pump Protection
If you are using an arium® pressure tank for the feed water supply, you can connect the water tank and the arium® system via port (2) with a signal cable for tank feed systems. When the tank is empty, the pump on the arium® system is turned off.

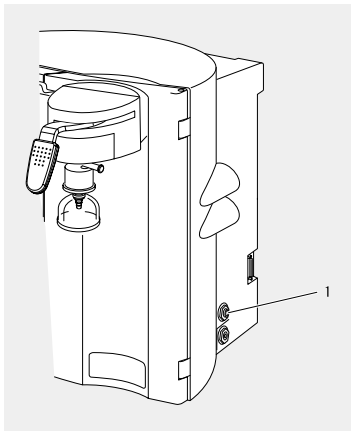
The display will show the following:

```
SYSTEM INACTIVE
Check Feed Water
```



Printer port (1) and pump interlock (2)

Timed Dispense



Timed dispense port (1)

Caution!
Make sure that an ¼” outlet tubing is connected to the timed dispense port (1) located on the right side of the system. When Timed Dispense is activated, water will exit the system via this port. The end of the outlet tubing should be placed in a filling container.

Note!
If needed, you can connect a sterile final filter to end of the tube using the preinstalled adapter.

Note!
To dispense a defined volume using the timer, please take the flow rate of your system into consideration.

To use the time|volume dispense proceed as follows:

1. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

2. Select “Utilities” and press **Enter** to confirm.

```
UTILITIES
            Print
            Timer Contr
```

3. Select “Timer Contr.” Press **Enter** to confirm.

```
Timer Contr.
10.0 min
```

4. Use the arrow keys ⌃ or ⌄ to set the desired time. Press **Enter** after each digit is set to move to the next digit.

   After the time has been entered, the following will be displayed:

```
Timer Contr
To Start Filling
Press ENTER
```

5. Be sure an outlet tube is connected to the timed dispense port on the right side of the system (1). To begin timed dispense press **Enter**.

6. The system will begin to dispense water through the timed dispense port.

7. When time expires, the timed dispense port will close and water will continue to recirculate through the system. Filling is now finished. The following screen is displayed:

```
Filling Finished
18.2 MΩ * cm      c
11.25             10.06.05
```

Caution!
Please make sure that the time set for the Standby Mode is longer than the time set for timed dispense.

Calibration of the System
The system can be calibrated using an optional N.I.S.T. calibration module available from Sartorius. The calibration module checks whether the electronics exactly reproduce the data produced by the cell.

Proceed as follows:

1. Turn the power switch on the arium® system to off (“O”) and disconnect the power cord from the unit.

2. Open the housing doors and move the red cartridge (red dot, #2) to the side.

3. Pull up the sealing sleeve on the gray cable of the resistivity cell.

4. Loosen the plug connection that has now become visible by pressing the upper lock. Connect the calibration module to the upper cable. Plug the unit into the wall outlet. Turn the power switch on (“I”) – wait for the unit to complete the system check.

5. Press **Menu** to activate the Main Menu.

```
MENU        Utilities
            Maintenance
            Setup
```

6. Use the cursor to select “Maintenance”. Press **Enter** to confirm. The display will show the following on arium® 611UF:

```
MAINTENANCE
            Sanitization
            Calibration
```

   The display will show the following on arium® 611VF:

```
MAINTENANCE
            UV Life Timer
            Sanitization
```

7. Use the Down arrow ⌄ to scroll down to select “Calibration”. Press **Enter** to confirm.

```
See Owners Manual
for Details.

Press ENTER to Start
```

8. After pressing **Enter**, the calibration will begin. This will take a few minutes to complete:

```
Calibration
in Process
```

   When calibration is successful, the display will show the following:

```
Calibration
Finished
```

9. Turn the power switch on the arium® system to off (“O”) and remove the power cord.

10. Remove the calibration module, reconnect both cables disconnected earlier and secure the plug connection using the sealing sleeve.

11. Place the cartridge on the right back into its position in the system, close the housing doors.

12. Turn the power switch on (“I”).

    The calibration is now complete. The unit is ready for normal operation.

    If the calibration module is not installed properly the following message will appear:

```
Error Communication
```

    To delete the message turn the system off and back on again.

Normal Operation Mode
Once the new cartridge flush procedure and the sanitization procedure are completed, you can start water purification. Turn on the power switch (“1”) and connect the feed water source.
When the internal system check is complete, the display will show the following options:

```
MENU>Main Menu
OPER>Operation
ENTR>New Cart. Flush
```

Start water purification by pressing the **Operate | Stop** button.

Dispensing Product Water
In Normal Operation Mode the display will show the quality of the treated water according to the preselected measurement units:

```
18.2 MΩ * cm      c

14.32             10.06.05
```

If the system is in the Standby Mode, press the **Operate | Stop** button and wait until the system produces the desired water quality (MΩ × cm or µS/cm).

If you want to manually switch the system to the Standby Mode after dispensing the water, press the **Standby** button.

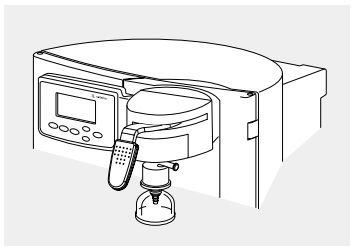
```
STANDBY
```

To dispense product water proceed as follows:

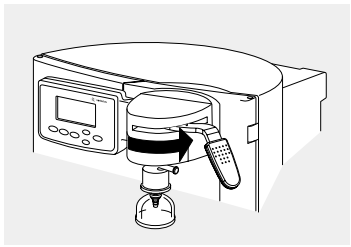
1. Place the water collection container under the product outlet.
2. Remove the protective cap on the bell assembly of the final filter.
3. Slide the draw-off lever to the right to dispense the purified water.
4. After dispensing the water, push the draw-off lever to the left to close the valve.
5. Replace the protective cap back on the filling bell assembly.

Note!
For all low detection level work, i.e. with a low content of TOC or endotoxins, flush an additional 50 to 100 ml water to drain prior to collecting water for analysis. (This corresponds to the supply volume to the final filter and the final filter capsule).

Note!
If necessary, vent the final filter. See section on **Final Filter Installation**.



Closed product outlet valve



Push the draw-off lever to the right to open the product outlet valve.

System Inactive Mode
If the **Operate | Stop** button is pressed while the system is in Normal Operation Mode the arium® system is deactivated. This mode is intended purely for troubleshooting and should not be used over several hours. Otherwise the entire system will have to be flushed and sanitized or the cartridge replaced.

When the system is inactive, the display will show:

```
System Inactive
```

If you need to shut down your arium® system for an extended period of time, you should drain it completely, and remove both cartridges and the ultrafilter to prevent the growth of bacteria.
If the system has remained inactive and full of water for more than 96 hours, you must drain it, install new cartridges and sanitize the system prior to use.

Warning!
Severe electrical shock hazard or danger of electrocution!

- Only trained qualified personnel may carry out service and repair work.
- Always disconnect the arium® system from power supply outlet before maintenance and servicing.
- Avoid splashing sanitants on clothing, eyes or skin (wear protective clothing).
- Ensure that all tubing connections are tight to avoid chemical leakage.
- Turn off feed water and depressurize the system by pushing the draw-off lever to the right. Only then should the housing doors be opened.
- Carefully follow the manufacturer's safety instructions on chemical containers and material safety data sheets.
- Allow a defective UV bulb to cool off before removing it (on the arium® system 611VF only). Be sure to wear protective gloves when removing the lamp to avoid leaving fingerprints on bulb or socket.
- Sanitize the arium® system at regular intervals to extend cartridge life and to keep water quality stable (See section on **System Sanitization** in the Chapter "Initial Operation").

Cartridge Replacement
The service lifetime of the cartridges depends on the quality and volume of the inlet water treated. The cartridges should be changed if the water quality falls below the user's set requirements.

To replace the cartridges:

1. Turn off your arium® system using the **Operate**|**Stop** button and the main power switch on the rear panel ("O") and remove the power plug.

2. Make sure the inlet water is disconnected from the feed water supply or from the arium® unit disconnect valve.

3. Push the draw-off lever to the right to release the system pressure and collect any water escaping in an approx. 500-ml beaker.

4. When water flow stops, push the draw-off lever back to the left again and open the housing doors.

5. Pull the safety bar on the blue adapter.

6. Lift the adapter up out of the cartridge.

7. Remove the cartridge.

8. Place a 500-ml container under the adapter to collect any water escaping.

9. Repeat steps 5 to 7 for the cartridge connected to the red adapter.

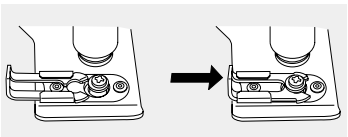
10. Unpack the new cartridges.

    One cartridge is marked with a blue label (#1), the other with a red label, (#2). In the housing you will find a blue lock on the lower left side and a red lock on the right, which guarantee secure positioning of the cartridges in the system.

    To facilitate connection of the adapter, moisten O-rings on the adapter for the cartridge.

11. Open the lock on the blue adapter, place the blue adapter on the blue-labeled cartridge (#1) and push firmly into place. Two screws are seated in the cover of each cartridge. The two screw heads must rise from the holes of the safety bar together with the upper ring of the spacers (see figure below).

12. Push both safety bars all the way under the upper ring of the spacers.



13. Place the blue-labeled cartridge in the housing on the left, push it until it locks. The label must be facing you.

14. Connect the red adapter to the red-labeled cartridge (#2) in the same manner on the right side of the housing.

15. Close both doors.

16. Open the feed water line or connect the line to the arium® system.

17. Connect the arium® power cable and switch on the main switch on the left side of the housing ("I").

    The new cartridges have to be flushed prior to initial use (see section on **Flushing and Purging Air from the Cartridges**).

Note!
Do not attach the final filter to the NPT fitting of the dispensing valve until after the cartridge flush has been completed.

The cartridges should be changed or at least flushed every six months. The message below "Recommended Cartridge Change" will appear when 6 months have expired since the last cartridge flush.

```
Recommend Ctrg.Chg.
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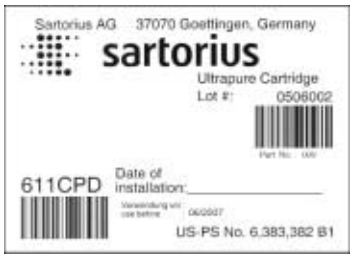
Note!
Please write the date of installation of the cartridges under "Date of Installation" on the label to document the change (see Figure below).



Replacing the Final Filter
Replace the final filter whenever the following conditions occur

- Every 30 days
- The product water flow rate is reduced
- Bacteria breakthrough is detected

The final filter is shipped assembled with a bell. To replace the final filter assembly:

1. Remove the old final filter assembly by turning it counterclockwise.
2. Remove the new final filter assembly from its bag.
3. Wrap teflon tape approx. 2 times around the threaded NPT fitting of the final filter.
4. Screw the final filter handtight onto the NPT fitting of the dispensing valve and handtighten in a clockwise direction.
5. Vent the final filter using the vent valve.
6. Remove the protective cap from the bell assembly and rinse approx. 6 liters of water through the filter.

Note!
If a newly installed final filter clogs rapidly after installation, your arium® system may need to be sanitized to remove bacterial contaminants and a new final filter may have to be installed.

Replacing the Ultrafilter
The length of your ultrafilter's life will partly depend on how you use the system. Whenever you are unable to completely sanitize your system (i.e. you can no longer obtain pyrogen-free water even after a sanitization cycle), you must replace the ultrafilter cartridge.

Proceed as follows:

1. Turn off arium® system at the main power switch ("O") and disconnect it from the AC power outlet.
2. Disconnect the inlet water from the feed water supply or from the arium® unit.
3. Push the draw-off lever to the right to depressurize the system and to collect any water escaping.
4. When water stops escaping, pull the draw-off lever to the left and open the housing doors.
5. Slide both cartridges to the side.
6. Remove the ultrafilter from the holder.
7. Unscrew both upper screw attachments.
8. Lay down the ultrafilter.
9. Unscrew the lower screw attachment.
10. Remove the ultrafilter.
11. Unpack the new ultrafilter and remove the protective cover from the fittings.
12. Screw the tube connectors hand-tight onto the ultrafilter:
    - Green connector for the feed water – bottom
    - Blue connector for the product water – upper left
    - Red connector for the reject water – top

Caution!
Danger of leaks. Make sure that the O-ring on the blue adapter is seated in a vertical position before connecting the ultrafilter.

13. Push the ultrafilter back into the holder so that it engages. The connection fitting on the side should be on the upper left.
14. Place both cartridges into the housing.
15. Close the two doors.
16. Open the inlet water and/or reconnect the arium® system to the feed water supply.
17. Plug the arium® power cable into the wall outlet and switch on the main switch on the left side of the housing ("I").
18. Perform a "long" UF flush cycle (5 minutes) (for details see section on **UF Flush**).

Note!
It is recommended to change the ultrafilter once every year.

UV Bulb Replacement (arium® 611VF only)
The UV bulb consists of a quartz glass tube with an integrated mercury bulb. The quartz glass tube and the mercury bulb glass age from exposure to UV radiation and will eventually absorb the most desirable wavelengths.

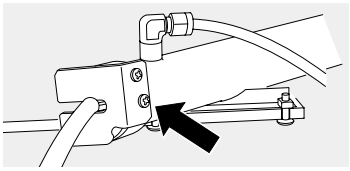
Warning!
Danger of personal injury!

- Depressurize the system prior to opening housing doors.
- Allow a defective UV bulb to cool off before removing it. Fingerprints can cause damage to the bulb,
- Ultraviolet radiation is harmful to the eyes and skin. Do not look at the lamp directly when it is energized.

Caution!
Danger of irreversibly damaging UV bulb!
The glass portion must be free of fingerprints, perspiration, etc. A single fingerprint will significantly reduce the service life of the lamp. Clean the lamp with isopropyl alcohol and a damp lint free cloth as needed.

To replace the ultraviolet bulb:

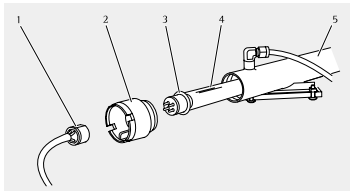
1. Turn off the arium® system at the main power switch ("O") and disconnect it from the AC power outlet.
2. Disconnect the inlet water from the feed water supply or from the arium® system.
3. Push the draw-off lever to the right to depressurize the system and to collect any water escaping in an approx. 500-ml beaker.
4. When water stops draining, pull the draw-off lever to the left and open the housing doors.
5. Take the left cartridge pack with adapter connected out of the housing or slide it to the right towards the center.
6. Remove the lower screw from the metal spacer.



7. Remove the power plug (1) from the black plastic cap (2).
8. Hold a beaker (300 ~ 500 ml) under the black plastic cap (2) and slowly unscrew the cap from the stainless steel chamber (by turning it counterclockwise)(5); collect any draining water in the beaker. If the plastic cap (2) is seated too tightly, loosen it carefully with pliers.
9. Then remove the old lamp unit (4) from the stainless steel chamber.
10. Insert a new lamp with new O-Ring (3) into the stainless steel chamber.

Note!
Make sure that the O-Ring on the new lamp is not dislocated.

11. Guide the black plastic cover over the bulb socket and carefully screw it into the stainless steel chamber. As soon as you notice resistance of the O-ring, only turn it ¼" further!
12. Insert the power plug (1) into the bulb socket in the black plastic cap (2).
13. Push the recessed shield over the power cord and screw it onto the stainless steel chamber.
14. Put the cartridges back into the housing.
15. Close the doors.
16. Open the Inlet water line or reconnect it to the arium® system.
17. Plug in the AC power cable and turn the unit back on at the main power switch on the left side of the housing ("I").
18. Perform a 5-minute flush cycle for venting the system. See "**Ultrafilter Flush**" in the section on "**Initial Operation**".
19. Reset the Timer. See "**Activate the UV Timer**" in the section on "**Initial Operation**".



Removing UV bulb (4) from stainless steel chamber

Changing the Fuses
The arium® system has two fuses.

Warning!
Severe electrical shock hazard or danger of electrocution!

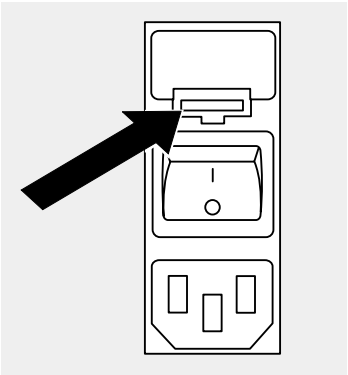
- Only trained and qualified personnel may carry out service and repair work.
- Always disconnect the arium® system from the AC power outlet before maintenance and servicing.
- Ensure that all tubing connections are tight to avoid leakage.
- Turn down the water pressure on the system, by pushing back the draw-off lever to the right.

To change the fuses, proceed as follows:

1. Turn off your arium® system at the main power switch (“O”) and unplug power cord from the AC power outlet.

   The fuse drawer with two safety fuses is located on the left side of the housing above the main power switch.

2. Gently press the locking device of the fuse drawer upwards and pull out the fuse drawer (see figure below).



3. Remove the old fuses from their sockets and replace with fuses of the same type and rating.

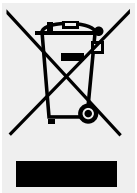
4. Push fuse drawer back into the housing until it clicks into place.

5. Reconnect the unit to the AC power outlet and turn the unit back on at the main power switch (“I”).

   Your arium® system is now ready to operate again.

Appendix

Information and Instructions on Disposal and Repairs



Packaging that is no longer required must be disposed of at the local waste disposal facility. The packaging is made of environmentally friendly materials that can be used as secondary raw materials.

The equipment, including accessories and batteries, does not belong in your regular household waste. The European legislation requires that electrical and electronic equipment be collected and disposed of separately from other communal waste with the aim of recycling it.

In Germany and many other countries, Sartorius AG takes care of the return and legally compliant disposal of its electrical and electronic equipment on its own. These products may not be placed with the 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 Service technicians on location or our Service Center in Goettingen, Germany:

Sartorius AG
Service Center
Weender Landstrasse 94-108
37075 Goettingen, Germany

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 equipment, any batteries should be removed and disposed of in local collection boxes.

Sartorius AG will not take back equipment contaminated with hazardous materials (ABC contamination) – either for repair or disposal. Please refer to the accompanying leaflet/manual or visit our Internet website (www.sartorius.com) for comprehensive information that includes our service addresses to contact if you plan to send your equipment in for repairs or proper disposal

Troubleshooting Guide
Immediately after you discover any malfunction, turn off your arium® system at the main power switch. Then use the troubleshooting chart below to try to find out what the problem is and take the suggested action.

Problem	Possible Causes	Solutions
Pump not operating, display not lit.	The arium® system is not receiving any electrical power.	Ensure that the arium® system power cord is connected to a live power source and completely plugged into electrical outlet.
	The power entry plug fuse is defective.	Replace the fuse.
	The internal AC adapter fuse is defective.	Contact Sartorius Customer Service.
Pump is running, but no display.	Connector from main PCB to display PCB not plugged in properly.	Disconnect unit from AC power. Check and reconnect, if necessary.
	The display cable is not plugged in properly.	Reconnect the display cable.
Pump is not running. Display lit.	Pump worn out or defective.	Contact your service technician.
System leakage.	Fitting is not tight or broken.	Change or tighten fitting.
TOC too high	UV bulb (for 611VF) is not working.	Replace the UV bulb.
	Exhausted cartridges.	Replace the cartridges.
	The system is contaminated.	Sanitize the system.
Resistivity too low.	Exhausted cartridges.	Replace the cartridges.
	The system is contaminated.	Replace the cartridges and sanitize the system.
	The system is not calibrated.	Calibrate the system.
High endotoxin level is too high.	The system is contaminated.	Replace the cartridges and the ultrafilter and sanitize the system.
	The ultrafilter is contaminated or defective.	Replace the ultrafilter.
Reduced or no product water flow from the final filter.	The final filter is clogged.	Replace the final filter.
	Air in the final filter.	Vent the final filter.
	The system is contaminated.	Replace the cartridges and the ultrafilter and sanitize the system.
	Pump defective.	Replace pump.
Very short cartridge life.	Feed water quality is low.	Check the quality of your feed water source.
	Increased water consumption.	Replace worn out cartridges with fresh ones. Check all outlets on the system, and if appropriate, also check the TOC instrument for any continuous water leaks.

Specifications

Dimensions W × D × H	43.2 × 48.3 × 34.3 (cm)	
Empty weight	Approx. 17 kg	
Operating weight	Approx. 26 kg	
Clearance requirements	Sides:	10 cm minimum for cable and tubing connections
	Front:	40 cm minimum for opening the doors
Inlet water requirements	Water must be pretreated by:	
	– Distillation	
	– Deionization	
	– Reverse osmosis	
	Distilled water:	> 250 KΩ × cm (< 4 µS/cm)
	RO water:	TDS < 25 ppm $CaCO_3$ > 20 KΩ × cm (< 50 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 7 bar
Product water	18.2 MΩ × cm at 25°C	
	Free of RNase/DNase, RNA/DNA	
	Bacteria:	< 1 CFU/1000 ml
	TOC at 100 ppb inlet water:	< 1 ppb (arium® 611VF), < 4 ppb (arium® 611UF)
	TOC at 1000 ppb inlet water:	< 10 ppb (arium® 611VF), < 20 ppb (arium® 611UF)
	Endotoxin:	< 0.001 EU/ml
Flow rate	Up to 1.5 l/min at a minimum inlet feed water pressure of 2 bar (at 50 HZ and with a new final filter)	
Environmental conditions	Operating:	5°C – 28°C; 80% relative humidity, non condensing
	Storage:	5°C – 45°C; 80% relative humidity, non condensing
Electrical requirements	100 – 240 V~, 50/60 Hz, 1 phase	
PC | Printer connections:	Serial interface RS232	
	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
	Hardware handshake (DTR/CTS)	
Fuses	2 fuses 5 × 20 mm at power inlet, time lag, 250 V, 1 A	
	Installation Category II (over-voltage) in accordance with IEC 664	
	Pollution degree 2 in accordance with IEC 664	
	Altitude limit: 5,000 meters	
Complies with the standards:	EMV:	EN 50081-1, EN 50082-1
	Safety:	IEC 1010-1-92

Accessories and Replacement Parts

When requesting any customer service or replacement parts or in any correspondence about the arium® system, be sure to state the complete model number and the serial number indicated on the specification plate label and the housing on your arium® system. You can obtain any replacement parts listed in this manual from Sartorius or from your local Sartorius dealer.

Order No.	Description
611CDU5	Ultrafilter
5441307H4--NO--B	Sartopore 2 150 final filter (pack with 5 pcs.)
611CEL1	UV bulb for arium® 611VF
611CDS2	Sanitization kit with 2 syringes (per syringe: 50 ml, < 0.5% active chlorine and < 0.5% hydrogen peroxide)
611CDS6	Sanitization kit with 6 syringes (per syringe 50 ml, < 0.5% active chlorine and < 0.5% hydrogen peroxide)
611AEC1	Calibration module
611AMDG1	Remote dispenser
611APR1	Printer
611ATOC1	TOC instrument

Cartridge kits

Each kit includes:

- 1 inlet cartridge used on the left (blue) side of the system
- 1 polishing cartridge used on the right (red) side of the system
- 2 Sartopore 2 150 final filters, Order no. 5441307H4--NO

Cartridge kits for the arium® 611UF system

Order No.	Description
611CKDI	For DI feed water and inorganic applications
611CKDO	For DI feed water and low TOC level applications
611CKRI	For RO or distilled feed water and inorganic applications
611CKRO	For RO or distilled feed water and low TOC level applications
611CKHI	For RO|DI feed water, high-capacity, and for inorganic applications
611CKTI	For potable tap water feed and inorganic applications
611CKTO	For potable tap water feed and for low TOC level applications

Cartridge kits for the arium® 611VF System

Order No.	Description
611CKDU	For DI feed water and low TOC level applications
611CKRU	For RO or distilled feed water and low TOC level applications
611CKTU	For potable tap water feed and low TOC level applications

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specifications and illustrations in
this manual is indicated by the
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changes to the technology,
features, specifications, and
design of the equipment
without notice.

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