

# UVC/T-AR, UVC/T-M-AR, UVT-B-AR, UVT-S-AR PCR cabinets



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## 1. About this edition of user instructions

1.1. The current edition of the user instructions applies to the following models:

<b>Model</b>	<b>Version</b>
<b>UVC/T-AR</b> , PCR cabinet	V.5AD and V.6AD
<b>UVC/T-M-AR</b> , PCR cabinet	V.7A02, V.7A03, V.7A04, V.7AI and V.7A12
<b>UVT-B-AR</b> , PCR cabinet	V.5AB, V.5AD, V.5AE, V.5AI and V.5A12
<b>UVT-S-AR</b> , PCR cabinet	V.6AA, V.6AB, V.6A7, V.6AI and V.6A04

1.2. Edition 5.-7.02 – June of 2025.

## 2. Safety precautions

### 2.1. Symbols used in these instructions



**Caution!** Make sure you have fully read and understood present instructions before using the equipment. Please pay special attention to sections marked by this symbol.



**Caution!** The unit contains a source of UV radiation.

### 2.1. Icons used on the unit and packaging.

	CE marking, manufacturer affirms conformity with European health, safety, and environmental protection standards, see <b>11.1</b>
	WEEE directive marking, see <b>11.1</b>
	The front protective screen must be closed while the open UV lamp is switched on. Otherwise, the operator can be exposed to a dangerous level of UV emission.
	Overall consumed power of devices connected through internal mains sockets should not exceed 1000 W for 230V, or 600 W for 100–120 V

### 2.2. General safety



**Caution!** The front protective screen must be closed while the open UV lamp is switched on. Otherwise, the operator can be exposed to a dangerous level of UV emission.



**Caution!** Do not start the unit without the cover of the UV recirculator. Exposure to UV light is harmful and can cause damage to unprotected eyes and skin.



**Caution!** The UV-Cleaner box contains a powerful source of UV radiation, therefore, before operating the unit, ensure all personnel working with the UV-Cleaner box are properly protected. The operator should wear a closed-front lab coat (fully buttoned), UV certified safety glasses and gloves, which should overlap the lab coat or surgical gown cuffs.

- The protection provided by the equipment may be impaired if the equipment is used with accessories (shelves, furniture) not provided or recommended by the manufacturer, or used in a manner not specified by the manufacturer.
- Save the unit from shocks and falling.
- Do not use the unit if it has visible mechanical damage.
- Store and transport the unit as described in the **Storage and transportation** section.
- Before using any cleaning or decontamination methods except those recommended by the manufacturer, check with the manufacturer that the proposed method will not damage the equipment.
- Do not make modifications to the design of the unit.
- When handling hazardous substances, follow the instructions contained in the safety data sheets for the individual substances that are used and observe the relevant accident prevention regulations.

### 2.3. Electrical safety

- Connect only to the mains with voltage corresponding to that on the serial number label.
- Do not plug the unit into an ungrounded power socket, and do not use an ungrounded extension lead.
- Ensure that the power plug is easily accessible during use.
- Disconnect the unit from the mains before moving.
- If liquid penetrates into the unit, disconnect it from the mains and have it checked by a repair and maintenance technician.
- Do not operate the unit in premises where condensation can form. Operating conditions of the unit are defined in the **Specifications** section.

### 2.4. During operation

- Do not operate the unit in environments with aggressive or explosive chemical mixtures. Please contact manufacturer for possible operation of the unit in specific atmospheres.
- Do not operate the unit if it is faulty or has been installed incorrectly.
- Do not use outside laboratory rooms.
- Do not operate the unit without dust filters installed.
- Do not work in the box while the open UV lamp is switched on.

### 2.5. Biological safety

- The user is responsible to carry out appropriate decontamination if hazardous material spills on or penetrates into the equipment.
- The user is responsible for decontamination of the unit before its decommissioning and utilization.

### 3. General information

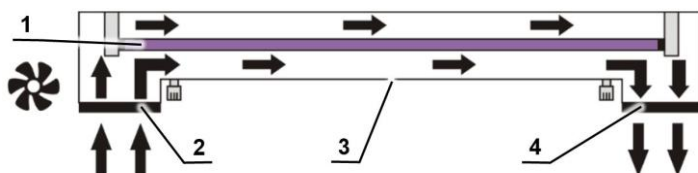
PCR cabinets – **UVC/T-AR**, **UVC/T-M-AR**, **UVT-B-AR** and **UVT-S-AR** – are designed for clean operations with DNA/RNA samples. They provide protection against contamination.

All models are bench-top type, with metal framework, glass or acrylic walls and working surface painted with powder enamel or made of stainless steel. Box is equipped with inlet for power cables and built-in power outlets for units inside the box. For availability of the required characteristics, please clarify for each model separately (see 7.1).

UV-Cleaner boxes are equipped with an open UV lamp installed in the upper hood. UV radiation from the open lamps disinfects the working area inactivating DNA/RNA fragments during 30 min of exposure. A digital timer controls duration of the direct UV irradiation. A daylight lamp provides proper illumination of the working surface.

UV-Cleaner box is equipped with a flowing bactericidal UV-cleaner-recirculator AR, which provides constant decontamination inside the box during operation. It is recommended for operations with DNA/RNA amplicons.

UV recirculator consists of an UV lamp (fig. 1/1), a fan and dust filters (fig. 1/2) organized in a plastic case. Operator working in a UV-Cleaner box with a switched on UV recirculator is not exposed to UV radiation. It allows continuous treatment of the airflow with UV light without interrupting working process. Air circulation at a short distance from the UV lamp combined with reflective surfaces in the air duct results in increased density of UV rays leading to higher efficiency of disinfection. UV recirculator generates 100 volumes of PCR box per one hour of airflow exchange ensuring maximally aseptic conditions inside the box.



**Figure 1. Recirculator scheme.**

**1. UV lamp. 2. Fan and input filter. 3. UV indicator. 4. Output filter**

Microbiological studies at the R&D Department of Biosan led by Dr. biol. V. Bankovsky demonstrated a high level of biosafety and efficacy of UV-cleaner box (maximal level of contamination is 1-3 cfu per 100 litres of air)<sup>1</sup>.

UV-Cleaner box is designed to biologically protect the product, but not the operator, therefore, it is not recommended to use the UV-Cleaner box for working with pathogenic microorganisms of biosafety level BSL-II and higher, without specialized protection.

<sup>1</sup> See <http://biosan.lv/eval-en>

Advantages:

- UV-recirculator.
- Ozone free high density UV decontamination.
- Open UV lamp is switched off automatically in case of opening the front screen.
- Long life UV lamps (9000 h).
- Low noise level and energy consumption.
- Compact tabletop model for personal laboratories.
- Shelves for pipettes and reagents (on request)
- Adjustable-height table series **LT**, tables with drawer T-4 / T-4L, laboratory chest of drawers LF-1 (on request).

## 4. Getting started

4.1. **Unpacking.** Remove packing materials carefully and retain them for future shipment or storage of the unit. Examine the unit carefully for any damage incurred during transit. The warranty does not cover in-transit damage. Warranty covers only the units transported in the original package.



**Caution!** Due to the high weight of the unit, its unpacking and installing must be carried out by two persons. Follow the instructions included on the packaging.

4.2. **Complete set.** Package contents:

4.2.1. Standard set:

- PCR cabinet ..... 1 pce.
- Power cable (UVC/T-AR only) ..... 1 pce.
- Spare fuse for control block (see 8.2) ..... 1 pce.
- Spare fuse for built-in power outlet (except UVC/T-AR) ..... 1 pce.
- Spare dust filters ..... 2 pcs.
- User instructions, declaration of conformity ..... 1 copy

4.2.2. Optional accessories, on request:

- P-5, shelf for pipettes ..... 1 set
- F-1, shelf for reagents and samples ..... 1 set
- PDS-250, DNA/RNA decontamination solution spray, 250 ml ..... 1 set
- PDS-10L, DNA/RNA decontamination solution spray, 10 L ..... 1 set
- LT-120 / LT-150 / LT-180 height adjustable table ..... 1 set
- T-4 / T-4L moving table for UV-Cleaner box ..... 1 set
- LF-1, laboratory chest of drawers ..... 1 set



P-5



F-1



PDS-250



LT-120



LT-150



LT-180



T-4



T-4L



LF-1

#### 4.3. Setup.

- If the optional table is used, unpack it carefully and assemble according to the enclosed assembling scheme.



**Note.**

The instructions for the disassembled **UVC/T-AR** model is supplemented by additional assembly pages. Assemble the box before continuing.

- Place the unit upon stable surface. Ensure that the unit is placed on a solid, level surface not less than 720x550 mm (1290x600 mm for UVT-S-AR model), which is able to support its weight and the weight of equipment and materials inside, for instance on the **Biosan LT / T** series table.
- Position the unit with easy access to the power switch and plug.

#### 4.4. Shelf setup. Refer to the instructions included with the shelf.

## 5. Operation

### 5.1. Powering up the unit.



**Note.** For **UVC/T-M-AR** and **UVT-B-AR** boxes, check that the short power cable (fig. 13/1) is connecting the fuse box and the controller top.

5.1.1. Connect the power plug to a grounded power socket.

5.1.2. Turn on the **Power** switch:

- **UVC/T-AR** – no switch, the unit powers up directly.
- **UVC/T-M-AR**, **UVT-B-AR** – on the right side of the unit, behind the rear wall (fig. 13/3).
- **UVT-S-AR** – on the left side of the unit, behind the rear wall (fig. 14/1).

5.1.3. **Visible light inside the box.** To toggle it on and off, use the physical **Visible light** button to the left of the display.

5.1.4. **UV-recirculator, UV-light inside the box, display.** Press the physical **UV-recirculator / UV-light** button to the left of the display. This turns on the UV-recirculator. This also turns on the display for access to UV-light inside the box, timers and other functions.



**Note.** To visually check the operation of the covered UV recirculator, in the centre of its cover, look for the indicator (fig. 1/3), it will be lit from inside.

5.1.5. The touch display turns on with a splash screen (fig. 2). If time and date is not set in the unit, it will prompt to do so (fig. 3). Otherwise, the main display screen is shown, see **5.2**.

- < and > buttons to select the parameter to be changed.
- - and + buttons to change the parameter.
- **OK** button to save changes and continue.



Figure 2. Turning on

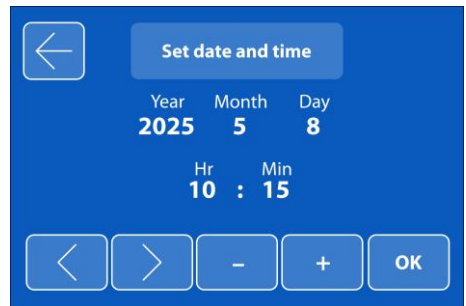


Figure 3. Date and time

### 5.2. Main display screen (figure 4).

- Top middle – two rows of UV exposition timer, see **5.3.1** below.
- Bottom middle – eight buttons for control of UV exposition timer.
- Top left – **Settings** button (cogwheel, see **8.1.6**) and, if present, **Alarms** button (exclamation mark, see **8.1.5**).
- Top right – current time, date, and the statistics button (circled *i*, see **8.1.4**).

### 5.3. Timers and UV exposition of the working place.

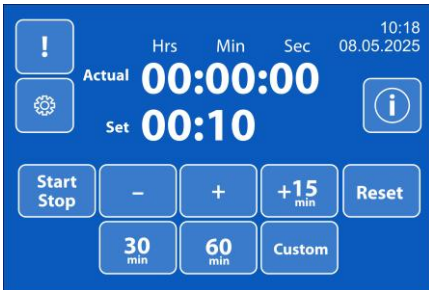


**Caution!** The open UV lamp in the cabinet works only if the protective door is fully closed. Otherwise, the operator can be exposed to a dangerous level of UV emission.

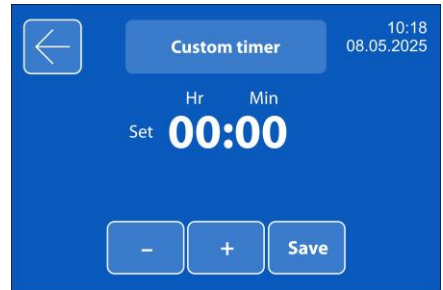
5.3.1. On the main screen (figure 4), set the timer. The buttons do the following:

Button	Short tap	Tap and hold
<b>Start Stop</b>	Starts and stops the UV open lamp and the timer, see <b>5.3.3</b>	
<b>-</b>	Decreases set timer by 1 minute	Decreases faster
<b>+</b>	Increases set timer by 1 minute	Increases faster
<b>+15 min</b>	Increases set timer by 15 minutes	Increases faster
<b>Reset</b>	Nothing	Resets set timer to 00:00
<b>30 min</b>	Nothing	Sets timer for 30 minutes, starts the UV exposition and the timer
<b>60 min</b>	Nothing	Sets timer for 60 minutes, starts the UV exposition and the timer
<b>Custom</b>	Opens custom timer setup, see <b>5.3.2</b>	Sets timer to the custom value, starts the UV exposition and the timer

5.3.2. To set and save a custom timer for UV exposition, short tap the **Custom** button on the main display screen. Set the timer with **-** and **+** buttons, then press **Save**. To return without saving, press the **←** button.



**Figure 4. Main display screen**



**Figure 5. Custom timer**

5.3.3. To start the UV exposition and the timer, press any of the following:

- The **Start Stop** button, timer starts with set values. If the timer is set to zero, the started UV exposition will run until it is stopped manually.
- The long press of **30 min** or **60 min** buttons, timer starts with 30 or 60 minutes, respectively.
- The long press of the **Custom** button, timer starts with the custom set values. If the custom timer is set to zero, the started UV exposition will run until it is stopped manually.

5.3.4. On display, the **Actual** timer starts. After reaching the set time, the timer will automatically turn off the open UV lamp.



**Note.** The recommended time for the exposition is two sessions of 30 minutes, once after switching on the box, once before operations inside. When using the **P-5** and **F-1** shelves, extend the exposition time to two sessions of 45 minutes.

5.3.5. The open UV lamp (and the timer) can be switched off by pressing the **Start Stop** button or by pressing the physical **UV-recirculator / UV-light button** to the left of the display.



**Note.** During the UV exposition, all screen buttons are locked, except for **Start Stop** and **Statistics**.



**Note.** Statistics, Settings and Alarms are described in section **Care and Maintenance**.

5.4. The box is ready for operations. Work in the box.



**Note.** Opening the front protective screen will switch off the open UV lamp automatically, but the timer will continue counting the exposition time.

5.4.1. Lift the front protective screen (fig. 6/5) up for work in the box. Models have different maximum opening heights (fig. 6/8), as listed in the **Specifications** section, and may be raised to the following positions:

- Model **UVC/T-AR** has a single opening height.
- Models **UVC/T-M-AR**, **UVT-B-AR** and **UVT-S-AR** has three protective screen positions – one-third, two-thirds and full opening height.



**Note.** Do not block the recirculator openings (fig. 6/2)!

5.4.2. To use electric devices inside the box, pull their power cable through the inlet and close the flap (fig. 6/6) or connect the power cable to a built-in mains socket (fig. 6/7, models with mains socket).



**Caution!** Overall consumed power of devices connected through internal mains sockets should not exceed 1000 W for 230V, or 600 W for 100–120 V.

5.5. After the task is done, close the front protective screen.

5.6. After finishing the operation press physical keys for UV and visible lights. Turn off the **Power** switch, if present. Disconnect the power cable from the mains.

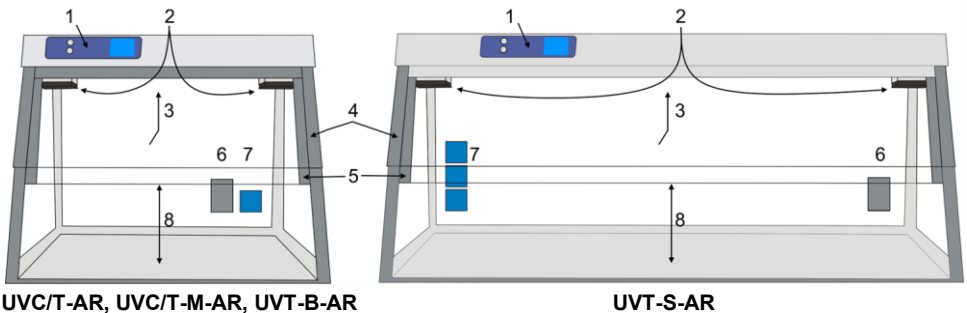


Figure 6. DNA/RNA UV box, frontal view:

1. Control panel. 2. Recirculator openings. 3. Daylight lamp and open UV lamp(s).
4. Upper front panel. 5. Movable front protective screen (opened). 6. Cable inlet.
7. Power outlet(s) (not in UVC/T-AR). 8. Opening height.

## 6. Specifications

6.1. Biosan is committed to a continuous programme of improvement and reserves the right to alter design and specifications of the equipment without additional notice.

### 6.2. General specifications

Model		UVC/T-AR Compact	UVC/T-M-AR Compact	UVT-B-AR Compact	UVT-S-AR Double
Back panel		Steel			
Side panels		PMMA	Glass	Coated steel	Glass
Front panel and screen			Glass		
Working surface		Coated steel	Steel		
Open UV lamp		1x TUV 25W G13 UV-C			2x TUV 30W G13 UV-C
UV intensity		18 mW/cm <sup>2</sup> /s			
Radiation type		Ultraviolet light ( $\lambda=253.7$ nm), no ozone			
Time setting of direct UV exposure		Digital timer, 1 minute - 24 hours / non-stop (increment 1 minute)			
UV recirculator lamp		1x TUV 25W G13 UV-C			1x TUV 30W G13 UV-C
Visible light lamp		1x LED 8W			1x LED 12W
Thickness	side panels	4 mm	4 mm	2 mm	4 mm
	upper front panel	8 mm			
	protective screen	8 mm	4 mm	4 mm	5 mm
Optical transparency		92%	95%		
UV protection		> 99.90%	> 96%		
Noise level		< 45 dB			< 47 dB
Working surface		490x645 mm			500x1210 mm
Opening height		165 mm	190 mm (max 210 mm)		190 mm (max 220 mm)
Opening levels		Full height	1/3, 2/3 and full height		
Dimensions, WxDxH, mm		720x535x555	700x580x555		1250 x 600 x 590
Weight, accurate within $\pm 10\%$	Net	21.4 kg	27.4 kg	28.8 kg	51 kg
	Gross	30 kg	36 kg	37.5 kg	62 kg
Laboratory table		All T & LT models			T-4L, LT-150, LT-180

### 6.3. Electrical specifications.

Model		UVC/T-AR	UVC/T-M-AR	UVT-B-AR	UVT-S-AR
Power supply inside (see 7.1)		Cable inlet	Cable inlet, 1 socket		Cable inlet, 3 sockets
Operating voltage, frequency		100–240 V, 50–60 Hz			
Power consumption		64 W			113 W
Fuse specifications (see 8.2)		Size $\varnothing 5 \times 20$ mm			
		For control box: M 3.15 A			
		–	For sockets: M 5 A		

#### 6.4. Workroom requirements

Workroom description	Indoors, cold rooms and closed laboratory rooms
Temperature range	+4 °C ... +40 °C
Humidity requirements	Maximum of 80% RH at 31 °C, decreasing linearly to 50% RH at 40 °C. Non-condensing atmosphere.
Operating height, maximum	2000 m ASL
Overvoltage category	II
Pollution degree	2

#### 6.5. Used materials.

- PMMA – polymethylmethacrylate (acrylic) glass, Altuglas® EX.
- Glass – clear film (0.1 mm) coated glass, Euroglas®.
- Steel – stainless polished steel.
- Coated steel – white enamel powder coated steel.

#### 6.6. Box dimensions (figure 7). Outer and inner dimensions, opening heights.

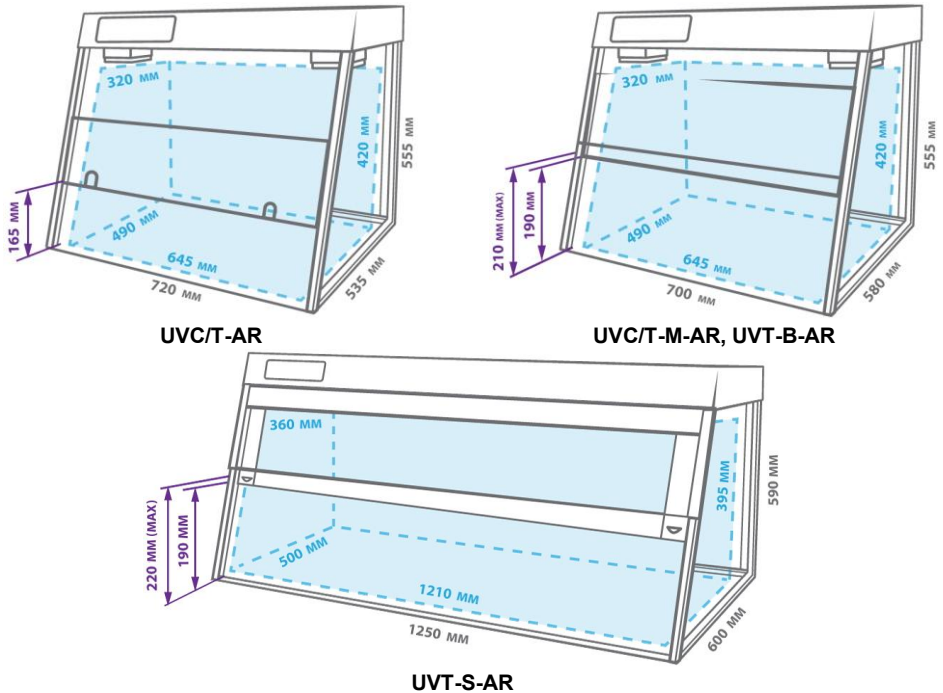


Figure 7. Box dimensions

## 7. Ordering information

### 7.1. Models and versions available:

Model	Version	Power cable plug and in-box socket(s)	Catalogue number
UVC/T-AR	V.5AD (assembled); V.6AD (disassembled)	EU (type E/F)	BS-040102-A13 (V.5AD); BS-040102-A22 (V.6AD)
		UK (type G)	BS-040102-A14 (V.5AD); BS-040102-A23 (V.6AD)
		US (type B)	BS-040102-A16 (V.5AD); BS-040102-A24 (V.6AD)
		AU (type I)	BS-040102-A15 (V.5AD)
UVC/T-M-AR	V.7A02	EU (type E/F)	BS-040104-A30
	V.7A03	UK (type G)	BS-040104-A31
	V.7A04	US (type B)	BS-040104-A32
	V.7A12	AU (type I)	BS-040104-A33
UVT-B-AR	V.5AD	EU (type E/F)	BS-040109-A20
	V.5AE	UK (type G)	BS-040109-A21
	V.5AB	US (type B)	BS-040109-A23
	V.5A12	AU (type I)	BS-040109-A24
UVT-S-AR	V.6AA	EU (type E/F)	BS-040107-A07
	V.6AB	UK (type G)	BS-040107-A08
	V.6A7	US (type B)	BS-040107-A10
	V.6A04	AU (type I)	BS-040107-A11



**Note.**

All devices have 1 inlet for cables.

Number of power sockets in the box depends on the model: none in **UVC/T-AR**, 1 in **UVC/T-M-AR** & **UVT-B-AR**, 3 in **UVT-S-AR**. By default, power cables and in-box sockets match.



**Caution!**

Overall consumed power of devices connected through internal mains sockets should not exceed 1000 W for 230V~, or 600 W for 100–120 V~.

7.2. To inquire about or order the optional accessories, contact Biosan or your local Biosan representative.

#### 7.2.1. Optional accessories:

Optional accessories	Catalogue number
<b>PDS-250</b> , DNA/RNA decontamination solution spray, 250 ml	BS-040107-DK
<b>PDS-10L</b> , DNA/RNA decontamination solution spray, 10 L	BS-040107-FK
<b>P-5</b> , shelf for 5 pipettes	BS-040104-CK
<b>F-1</b> , shelf for samples and reagents, work area 400x140 mm	BS-040104-DK
<b>LT-120</b> , height adjustable desk, dimensions 1200x600x(625–1280) mm	BS-040107-EK
<b>LT-150</b> , height adjustable desk, dimensions 1500x600x(625–1280) mm	BS-040107-JK
<b>LT-180</b> , height adjustable desk, dimensions 1800x600x(625–1280) mm	BS-040107-HK
<b>T-4</b> , movable table with a drawer and wheel locks, dimensions 800x600x770 mm	BS-040101-BK

Optional accessories	Catalogue number
T-4L, movable table with a drawer and wheel locks, dimensions 1290x600x770 mm	BS-040107-BK
LF-1, laboratory chest of drawers with 5 drawers	BS-050101-BK



**Note.** P-5 & F-1 shelves are not available for **UVC/T-AR**.  
**UVT-S-AR** is not compatible with **LT-120** and **T-4** tables.


## 8. Care and maintenance

### 8.1. Service.

8.1.1. If the unit is disabled (e.g., lamps not working, no reaction on key and switch presses) or requires maintenance, disconnect the unit from the mains and contact Biosan or your local Biosan representative.

8.1.2. All maintenance and repair operations (except listed below) must be performed only by qualified and specially trained personnel.

8.1.3. Operating integrity check. If the unit follows the procedure described in section **Operation**, then no additional checks are required.

8.1.4. **UV lamp statistics.** Information is available by pressing the **Statistics** button (the circled *i*, figure 4). In this separate screen (figure 8), usage is shown in hours and minutes. Two buttons below lead to screens with QR codes: **User manual** links to this manual, **Consumables** – to available consumable resources. Press the  button to return to the previous screen.

8.1.5. **Alarms** raised by the unit are available by pressing the **Alarm** button (exclamation mark, figure 4). Alarms notify that UV lamp useful time is nearing its end (see 8.3) and dust filters need replacement or cleaning (see 8.4). Press the **OK** button to return to the previous screen. Sample alarms can be seen in figure 9.

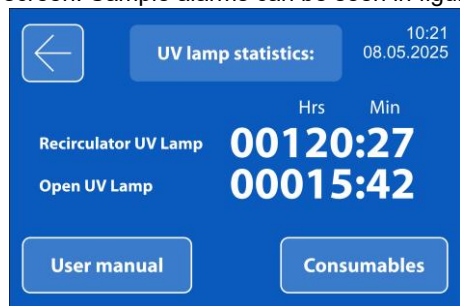


Figure 8. UV lamp statistics

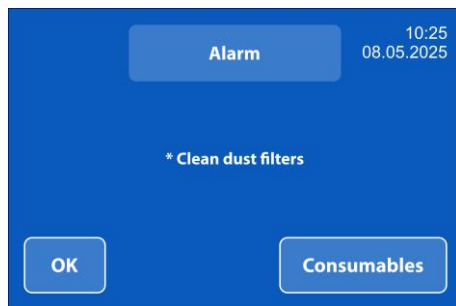


Figure 9. Sample alarms

8.1.6. **Settings menu** (figure 10) can be accessed by pressing the **Settings** button (cog-wheel, figure 4). Available options are:

- **Date and Time** button, for setting correct date and time, see **5.1.5**.
- **Service menu** button, accessed by pressing and holding for 8 seconds. In this submenu (figure 11), there are buttons for resetting UV lamp life timers, also activated by pressing and holding for 8 seconds. These actions reset statistics timers and relevant alarms.

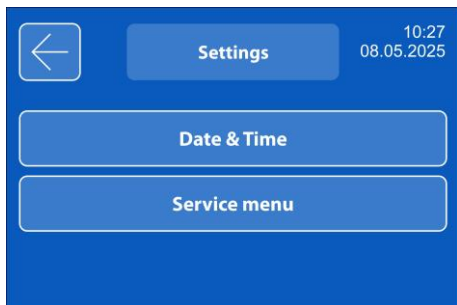


Figure 10. Settings menu

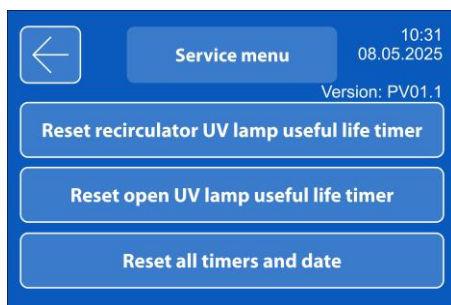


Figure 11. Service menu

## 8.2. Fuse replacement.

8.2.1. Fuse for the control box. Disconnect the unit from the electric circuit. Remove the power cable from its socket on the rear side of the unit. Open the fuse holder by pulling out the holder (fig. 12, compact models) or by screwing off the holder lid marked FU2 (fig. 14, model **UVT-S-AR**). Check the fuse and replace, if necessary, see **6.3**.

8.2.2. Fuse for the mains outlets (for models with built-in mains outlets). Disconnect the unit from the electric circuit. Open the fuse holder by screwing off the holder lid (fig. 13/2 or 14/FU1). Check the fuse and replace, if necessary, see **6.3**.

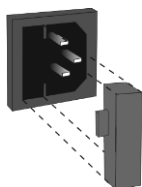


Figure 12.

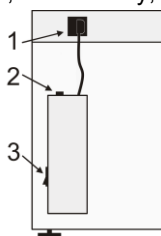


Figure 13.

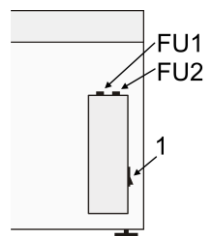


Figure 14.

8.3. **UV lamp replacement.** The average lifetime of UV lamps supplied is 9000 hrs. Replacement is necessary after the lamp stops functioning or at the end of manufacturer specified lifetime.



### Note.

To visually check the operation of the covered UV recirculator, in the centre of its cover, look for the indicator (fig. 1/3), it will be lit from inside.

8.4. **Dust filter replacement.** The dust filters (fig. 6/2) on either end of the UV recirculator with the hidden UV lamp should be checked monthly and cleaned or replaced when they become clogged. To check, replace or clean the filters, simply unclip the covers, fit a new filter if necessary or rinse current filters in water, dry and place back. Clip covers back in place.

8.5. **Cleaning and decontamination.** Disconnect from the mains before cleaning.



**Caution!** Do not let liquid get into the control box.

8.5.1. Touchscreens have a soft membrane. Do not use organic or abrasive cleaners. Wipe dry the excess water with clean, soft cloth or sponge.

8.5.2. Model **UVC/T-AR** and shelves **P-5** and **F-1**, full cleaning. Transparent panels and shelves are made of acrylic glass (polymethylmethacrylate Altuglas® EX) and are prone to scratches and optical transmission capacity decrease if improperly cleaned. Use mild soap and water with a soft cloth or sponge for cleaning the panels. Rinse the remaining washing solution with distilled water. Wipe dry the excess water with clean, soft cloth or sponge.

8.5.3. For decontamination, we recommend a special DNA/RNA removing solution (e.g. Biosan **PDS-250**). After washing the inside parts of the box, it is necessary to rub them dry.



**Caution!** Never use organic solvent-based compounds, pure alcohol, alcohol-containing cleaners (more than 20%) or ammonia containing cleaners for acrylic glass. Do not use abrasives. The table below shows the interaction of acrylic glass with ethyl alcohol and other solutions.

Solution	Interaction with acrylic glass
Biosan PDS-250	No effect
DNA-Exitus Plus™	No effect
RNase-Exitus Plus™	No effect
Hydrogen peroxide H <sub>2</sub> O <sub>2</sub> 6%	No effect
Ethanol C <sub>2</sub> H <sub>5</sub> OH ≤ 20%	No effect
Ethanol C <sub>2</sub> H <sub>5</sub> OH > 20%	Increasing effect. Do not use.



**Note.** Crazeing is a normal process for acrylic glass panels exposed to open UV light. Crazeing will occur over time. Crazeing may occur within the warranty period and is regarded as normal wear and not covered by the warranty. Acrylic glass panels can be replaced.

8.5.4. Models **UVC/T-M-AR**, **UVT-B-AR** and **UVT-S-AR**, external cleaning. Glass panels on the outside are coated in 0.1 mm (4 mil) clear film for UV protection. Use mild soap and water with a soft cloth or sponge for cleaning the panels. Rinse the remaining washing solution with distilled water. Wipe dry the excess water with clean, soft cloth or sponge. Do not use ethanol or other organic solvents.

8.5.5. Models **UVC/T-M-AR**, **UVT-B-AR** and **UVT-S-AR**, internal cleaning and decontamination. The following substances are recommended to use for decontamination: 75% ethanol, sodium hypochlorite solution, DNA/RNA removing solution (e.g. Biosan **PDS-250**). After washing the inside parts of the box, it is necessary to wipe them dry.

8.5.6. **Autoclaving.** The unit and its accessories are not autoclavable.

8.6. **Disposal of the unit.** The user is responsible for decontaminating the unit when it is taken out of service. Dispose of the unit as electronic equipment in accordance with the relevant national laws.

## 9. Storage and transportation

9.1. Store and transport the unit in a horizontal position (see package label) at ambient temperatures between -20°C and +60°C and maximum relative humidity of 80%.

9.2. After transportation or storage and before connecting it to the electric circuit, keep the unit under room temperature for 2-3 hrs.

9.3. Extended storage of the unit does not require special procedures.

## 10. Warranty

10.1. The Manufacturer guarantees the compliance of the unit with the requirements of Specifications, provided the Customer follows the operation, storage and transportation instructions.

10.2. The warranted service life of the unit from the date of its delivery to the Customer is 24 months. For extended warranty, see **10.5**.

10.3. Warranty covers only the units transported in the original package.

10.4. If any manufacturing defects are discovered by the Customer, an unsatisfactory equipment report shall be compiled, certified and sent to the local distributor address. To obtain the claim form, visit **Technical support** page on our website at link below.

10.5. Extended warranty.

- For **UVC/T-M-AR & UVT-S-AR**, the *Premium* class model, one year of extended warranty is available free of charge after registration, during 6 months from the date of sale. Online registration form can be found in section **Warranty registration** on our website at the link below.
- For **UVC/T-AR & UVT-B-AR**, the *Basic Plus* class model, extended warranty is a paid service. Contact your local Biosan representative or our service department through the **Technical support** section on our website at the link below.

10.6. Description of the classes of our products is available in the **Product class description** section on our website at the link below.

### Technical support



[biosan.lv/en/support](https://biosan.lv/en/support)

### Registration



[biosan.lv/register-en](https://biosan.lv/register-en)

### Product class description



[biosan.lv/classes-en](https://biosan.lv/classes-en)

10.7. The following information will be required in the event that warranty or post-warranty service comes necessary. Complete the table below and retain for your records.

Model	Serial number	Date of sale
UVC/T-AR, UVT-B-AR, UVC/T-M-AR, UVT-S-AR, PCR cabinet		

10.8. **Production date.** Production date is placed in the serial number, on the label of the unit. Serial number consists of 14 digits styled XXXXXYYMMZZZZ, where XXXXXX is model code, YY and MM – year and month of production, ZZZZ – unit number.

# 11. EU Declaration of conformity

11.1. PCR cabinets **UVC/T-AR**, **UVC/T-M-AR**, **UVT-B-AR** and **UVT-S-AR** are in conformity with the following relevant Union legislations:

<b>LVD 2014/35/EU</b>	<b>LVS EN 61010-1:2011 + A1:2019</b> Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements.
<b>EMC 2014/30/EU</b>	<b>LVS EN 61326-1:2021</b> Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements.
<b>Directive 2011/65/EU</b> <b>RoHS3 2015/863/EU</b>	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
<b>WEEE 2012/19/EU</b>	Directive on waste electrical and electronic equipment.

11.2. Declaration of Conformity is available for download on the page for the relevant model on our website by links below, in the **Downloads** section:



[UVC/T-AR](#)



[UVC/T-M-AR](#)



[UVT-B-AR](#)



[UVT-S-AR](#)



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