

## **5.2. Replacing the radiator**

Basically, the lamp should be replaced after a service life of about 10,000 hours.

**Radiator's removal/replacement should be performed by duly trained personnel.**

Procedure: Disconnect the UV equipment (detach power plug from safety power outlet)

### Removing the UV lamp:

- Use a screwdriver for loosening polyethylene-made protecting cap's safety screw
- Loosen cable screwing
- Withdraw polyethylene-made protecting cap
- Pull UV lamp by its cable
- Detach the lamp from 4-contact plug
- In doing so, touch UV radiator at the socket only

*(caution: may be hot!)  
(glass-breaking danger!)*

Cleaning: Wipe off any existing fingerprints on the lamp's tube with an alcohol-soaked rag. Depositions on the quartz tube's inner side may be removed with a commercial window-cleaning agent.

### Reinstalling the UV lamp:

- Introduce UV radiator to the 4-contact cut-in unit's cable holder on lampside (remove fingerprints with an alcohol-soaked rag)
- Introduce UV radiator through the stainless steel head into the quartz-made cladding tube until the bottom has been reached
- Push transparent polyethylene-made protecting cap up to the immersion tube's head sealing
- Fasten lamp's cable by means of cable screwing and implement traction relief
- Push transparent polyethylene-made protecting cap into the sealing of the immersion tube's head as far as it will go
- Adjust safety screw on the polyethylene-made protecting cap by using a screwdriver

### Restart the equipment

Hint: Independent of lamps' aging, the UV radiator's socket will turn into a brownish color under the influence of UV light. This will not affect its functioning whatsoever.

## **6. Liability and Warranty**

- For warranty claims, we shall only be liable under the national legal warranty
- The general terms and conditions of PURION® GmbH are holding
- We explicitly point out that the warranty does not apply to damage caused by:
  - Operating failure in consequence of insufficient following this user information
  - Operating with spare parts such as Lamps and ballasts which are no PURION® original parts.
  - Installation of incompliant accessories
  - Incorrect operation / installation
  - Removing, manipulating or non-insertion of protective devices
  - Improper execution of maintenance
  - Wear and non- exchanging of wear agents

### Summary of materials:

Reactor: 1.4571 stainless steel  
Distribution box: ABS

### Contact data:

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## **PURION UV disinfection equipment, 500 110-240 E series**

### **Installation and operating instructions**

#### **0. Safety instructions**

**!!! This device is not to be operated by people with reduced physical, sensorial or mental capabilities or lack of experience and / or knowledge (including children) !!!**

**This device is a technical tool to be used in closed areas or receptacles.**

**Protect your eyes and skin from UV light. In a very short period of time UV-C radiation generates severe sunburn and painful conjunctivitis in the eyes.**

**The unintentional use of the device or a damaged housing may cause the spill of dangerous UV-C radiation.**

**Devices showing evident damages must not be operated.**

**Please contact the manufacturer!  
The radiator is not to be operated outside the flow reactor.**

**Before opening the device, present operating and maintenance instructions should be read.**



**!!! Caution: Areas which can only be opened by using a tool must to be considered as maintenance areas. Unauthorized opening may be dangerous for the operator !!!**

### **1. Scope of delivery:**

- Flow reactor made of stainless steel with fitted immersion pipe system; waterside connection R1/2" external thread
- 110-240 V AC 50/60Hz power supply for UV ray supply voltage
- 10 W UV radiator



### **2. Installation and operation**

Installation should be performed in accordance with valid regulations and by properly trained and specialized personnel. Contents of present instructions must be made available to that specialized personnel and duly implemented.

UV equipment's utilization is meant for water disinfection purposes only.

The flow reactor may be installed in a vertical or horizontal position.

***Warning:*** *In order to ensure steady ventilation of the reactor, please make sure that the exhaust port is always turned upwards.*

The distribution box has to be fitted on an even surface (e.g. a wall or panel). For that purpose its lid has to be opened. The ready-made holes in the corners outside the lid's sealing are meant for installation and should be used accordingly.

### **3. Switching the UV radiator on**

Stick the cut-in unit's power plug into a 110-240 V safety power outlet. After the UV radiator has been switched on, its function is to be monitored through the transparent and UV-absorbing polyethylene-made protecting cap.

**Connection type:** Safety plug (protective earth conductor is not attached)  
VDE 0100 part 410, 412.2.2.4

**Protection Class:** I



Cable laying should be buckling-free; bending radii to be observed.

Connection to be established in accordance with polarity as indicated on cables.

When connected, the UV radiator's function is to be monitored through the transparent and UV-absorbing polyethylene-made protective cap.

***Warning:*** *The UV lamp should only be connected while being inside the reactor's receptacle!*

#### **4. Failure descriptions**

In case of insufficient disinfecting performance or functioning, equipment will have to be tested.

##### **Possible causes:**

- Dirty quartz-made cladding tubes
- Equipment overheating due to interrupted water flow
- Lamp aging
- Air accumulation within the system

##### **Measures to be taken:**

- Cleaning
- Water flow to be tested
- Lamp replacement
- System to be ventilated

In case of faulty power connection or a faulty lamp cable, the manufacturer has to be contacted.

#### **5. Maintenance**

##### **5.1. Cleaning of quartz-made cladding tubes**

Cleaning of the quartz-made protecting tube, as well as the radiator's removal/replacement should be performed by duly trained personnel.

Any coatings originated by hardness components on the lamp's protective tube are to be removed. ***Cleaning should be performed at least once a year.***

Procedure:

- a) Disconnect UV equipment (detach power plug from safety power outlet)
- b) Empty the flow reactor

##### **Removing a UV lamp:**

- Use a screwdriver for loosening the polyethylene-made protecting cap's safety screw
- Loosen cable screwing
- Move the polyethylene-made protective cap back
- Withdraw UV lamp by its cable (***Caution: may be hot!!***)

##### **Disassembling the quartz tube insert:**

- Loosen the grooved nut
- Disassemble the quartz tube insert
- Place the complete quartz tube insert into a receptacle (cuvette or similar) containing a cleaning agent
- Allow for the cleaning agent to take effect, then rinse. (Alternatively, the quartz tube may be wiped off with a rag soaked with a cleaning agent. ***Warning: in this case, wearing safety gloves becomes mandatory!***)
- Dirt on the quartz tube's inner side may be removed with a commercial glass-cleaning agent or with alcohol. ***Basically, any approved commercial acid cleaning agent may be used.***

##### **Installing the quartz tube's insert:**

- Caution: During reinstallation, attention must be paid to the quartz tube being introduced in a frontal position to the 4-side spring on the housing's bottom
- Fasten the quartz tube's insert with the grooved nut

##### **Reassembling the UV lamp:**

- Introduce UV radiator and cable through the stainless steel head into the quartz-made cladding tube until the bottom has been reached
- Push the transparent polyethylene-made protecting cap forward until the sealing of the immersion pipe's head has been reached
- Fasten the lamp's cable by means of cable screwing and implement traction relief
- Push transparent polyethylene-made protecting cap above the immersion tube's head as far as it will go
- Use a screwdriver for adjusting the safety screw of the polyethylene-made protecting cap

##### **Restart the equipment**