

UV/Air Circulator

For the UV PCR Workstation

User Instructions



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Introduction

The UV/Air Circulator Module is designed to mount into the UV PCR Workstation to eliminate reduce contamination within the workstation during experiment processing without exposing samples. Connections for mounting and powering the module are built into the workstation. Features of the UV/Air Circulator:

- Easy to install, lightweight design
- High intensity 15 watt shortwave UV
- Recirculating decontaminating airflow
- Antimicrobial coated stainless steel to reduce bacterial growth
- Access port for measuring the UV intensity with a UV sensor
- Easy access for UV tube replacement

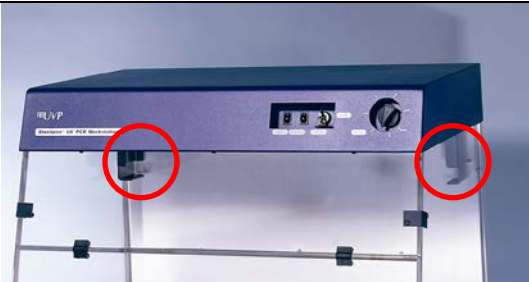


Safety Information

Caution: The unit includes shortwave UV, which is a powerful source of UV radiation that will cause damage to unprotected eyes and skin. Before operation, ensure personnel in the area are protected and that instructions for use of this equipment are followed.

Specifications

Dimensions (W x H x D):	26" x 7" x 4" (660 x 177.8 x 101.6)
Light Source:	One 25 watt, 254nm shortwave tube
Construction:	Formed antimicrobial coated stainless steel
Electrical:	115V / 60 Hz 230V / 50 Hz 100V / 50/60 Hz

Installing the UV/Air Circulator Module

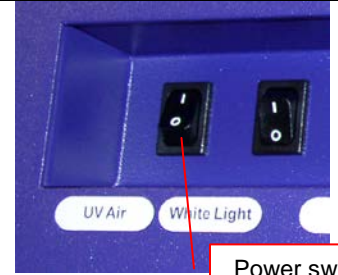
<p>Carefully remove the unit from the packaging materials. Turn off and unplug the PCR workstation from the wall power supply prior to installing the UV/Air Circulator.</p> <p>Locate the two mounting brackets on the PCR workstation. Open the door of the PCR workstation to a fully open position.</p> <p>Lift the module into the workstation and set it onto the brackets.</p>	
<p>Secure the module to the workstation with the thumbscrews.</p>	
<p>Connect the jumper power cable from the circulator to the PCR Workstation.</p> <p>Reconnect the main power source.</p>	

Operating the UV/Air Circulator

The UV PCR Workstation provides a process for reducing contamination by utilizing the germicidal properties of shortwave 254nm ultraviolet light. An UV/Air Circulator module can be mounted into the workstation chamber for continual reduction of contamination during experiment processing. Power switch, outlet, and mounting brackets are pre-installed at the factory.

To use the UV/Air Circulator, push the UV/Air power switch on the panel shown above and the circulator module to the **ON** position. The UV/air is safely decontaminated and recirculated within the chamber.

Warning: Exposure to UV light is harmful. The PCR workstation acrylic door is UV blocking and will not allow UV radiation to pass through the door. The germicidal lamp will shut off if the acrylic door is opened. The PCR Workstation contains a powerful source of UV radiation that will cause damage to unprotected eyes and skin. Before operating any unit, be sure all personnel in the area are properly protected.



Power switch for the UV/Air Circulator

Maintenance, Parts/Accessories

Care and Cleaning

The stainless steel surface of the PCR Workstation and the UV/Air Circulator is manufactured with an antimicrobial coating to reduce bacterial growth. Care in cleaning and use of the equipment is recommended to reduce wear of the coating.



- **Warning:** Unplug the unit before cleaning or in case of accidental fluid spillage
- Wipe excess water from the unit with an absorbent soft cloth or sponge.
- Use a mild detergent on the interior surfaces.
- Do not use abrasive pads or cleansers.

Replacement Parts and Accessories

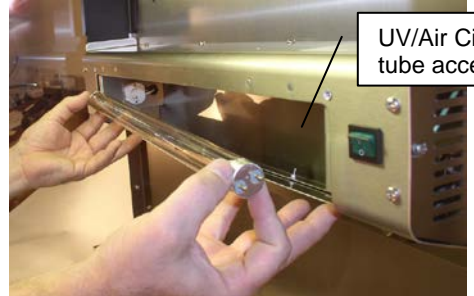
Replacement Part	Part Number
Tube, 25-watt, 254nm shortwave germicidal	34-0073-01
Accessories	
UVX Radiometer	97-0015-02
UVX Sensor (UVX-25)	97-0016-01
MS-100 UV Meter	97-0100-01
MS-100 Sensor (Sen-125)	97-0099-01
J-225 UV Meter (includes sensor)	97-0004-01
Spectacles, UV blocking (UVC-303)	98-0002-01
Goggles, UV blocking (UVC-503)	98-0002-02
Face Shield, UV blocking (UVC-803)	98-0002-04

Measuring the UV Tube Intensity

As the ultraviolet tubes age, the intensity and germicidal destruction rate decreases. It is important to monitor the efficiency of the tubes with a UV intensity meter to ensure the germicidal requirements are met. The germicidal destruction rate is a function of the UV intensity at wavelength 254nm and exposure time. The lower the tube intensity, the longer the lamps must be on to accomplish the same objective. The UV meter using a 254nm sensor will allow the user to measure the 254nm emissions from the tubes.

<p>When it is time to measure the UV intensity of the UV/Air Circulator (recommended weekly or more often if used frequently), the sensors can be positioned in front of the sensor access port located in the center of the module.</p> <p>Remove the sensor access port by unscrewing the two thumb screws.</p>	
<p>CAUTION: UV/Air Circulator must be unplugged or the power switch turned in the off position to avoid UV exposure during removal of the access door. Protective eye/facewear and protective gloves must be worn to avoid exposure to the 254nm UV!</p>	
<p>Turn the UV/Air Circulator ON after removing the access port.</p> <p>Position the UV sensor over the sensor access (UVX Radiometer and Sensor shown).</p> <p>Wait 3 minutes to record the measurement on the UV meter. It is recommended that the user record an initial value upon receipt and assembly of the PCR unit.</p> <p>After the measurement is taken, reposition the sensor access door with the thumb screws.</p>	

Replacing the UV Germicidal Tube

<p>Turn the power off and unplug the unit from the outlet.</p> <p>To change the UV tube in the UV/Air Circulator, unscrew the four thumb screws from the tube access door. The tube has two prongs on each end that fit into a socket. Carefully hold the tube on the end and insert the tube into the socket. Twist the tube 90° until the tube locks into place.</p> <p>Replace the tube access door.</p>	
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Technical Assistance

UVP offers technical support for all of its products. If you have any questions about the product's use, operation or repair, please contact our offices at the locations below. Note: **A Returned Goods Authorization (RGA) number** must be obtained from UVP Customer Service before returning any product. You may contact UVP's Customer Service based on your location:

<p>If you are in North America, South America, East Asia or Australia:</p>	<p>If you are in Europe, Africa, the Middle East or Western Asia:</p>
<p>Call (800) 452-6788 or (909) 946-3197 regular business days, 7:00 am and 5:00 pm PST</p>	<p>Call +44(0) 1223-420022 regular business days, 9:00 a.m. and 5:30 p.m.</p>
<p>E-Mail your message to: info@uvp.com</p>	<p>E-Mail your message to: uvp@uvp.co.uk</p>
<p>Fax Customer Service, and send it to: (909) 946-3597.</p>	<p>Fax Customer Service, and send it to: +44(0)1223-420561.</p>
<p>Write to: UVP, LLC 2066 W. 11th Street, Upland, CA 91786 USA</p>	<p>Write to: Ultra-Violet Products Ltd., Unit 1, Trinity Hall, Nuffield Road, Cambridge CB4 1TG UK</p>

Warranty

UVP, LLC warrants its products to be free of defects in materials and workmanship for a period of one (1) year from date of purchase. The foregoing warranty of UVP shall be of no force and effect if buyer has modified or damaged the product. Tubes and filters are warranted for 90 days. All warranties or merchantability and fitness for any purpose and all other warranties, expressed or implied, except those expressly set forth herein, are deemed waived and excluded. UVP's duty under the warranty is limited to replacement and/or repair of the defective part at the option of UVP, LLC. UVP shall not be liable for any expenses or damages incurred by the purchaser except as expressly set forth herein, and in no event shall UVP be liable for any special, incidental or consequential damages of any kind. This warranty does not supersede any statutory rights that may be available in certain countries.