



## **Bluezone® Model 420**

### **Operation and Service Manual**

Manual Created By:

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## 1. Description

The Bluezone® Model 420 is an air purification device that eliminates airborne contaminants including microbes (fungi, mold and bacteria), odors and ethylene. The Model 420 can be hung or mounted to the ceiling or wall, or located on a shelf. The Bluezone Model 420 draws in air containing impurities that can lead to mold development and eventually crop destruction, and discharges air with a highly reduced concentration of these impurities. The facility, crop, and personnel have no contact with the process that is cleaning the air. The unit is completely self-contained. The Bluezone unit's operation is controlled by a microprocessor-based controller that ensures safe operation at all times and alerts the user to any system faults.

## 2. Specifications

The specifications of the Bluezone Model 420 are shown in Table 1.

**Table 1: Bluezone Model 420 Specifications**

Specification Category	Model 420
Application	Grow facilities, dispensaries and labs
Size	31" X 14" X 13.5"
Weight	25 lbs.
Operating temperature / humidity	34°F – 104°F, up to 95% humidity
Storage temperature / humidity	-4°F – 150°F, up to 95% humidity
Treatment volume	15,000 cubic feet per Bluezone
Input Voltage	120 or 240 VAC 1 Phase
Current	3 amps (at 120VAC) 1.5 amps (at 240VAC)
Power	300 watts
Electrical Connection	Standard 120/240 VAC cord with pig tail for direct wiring or plug on request
Mounting Options:	Hung from ceiling, placed on shelf/rack/cart, or mounted to wall

### 3. Operation

Once the Model 420 is mounted and wired, it can be turned ‘On’ using the power switch on the control panel. In the view shown in Figure 1 below, pressing the switch up is “On”. Pressing the switch down is “Off”.

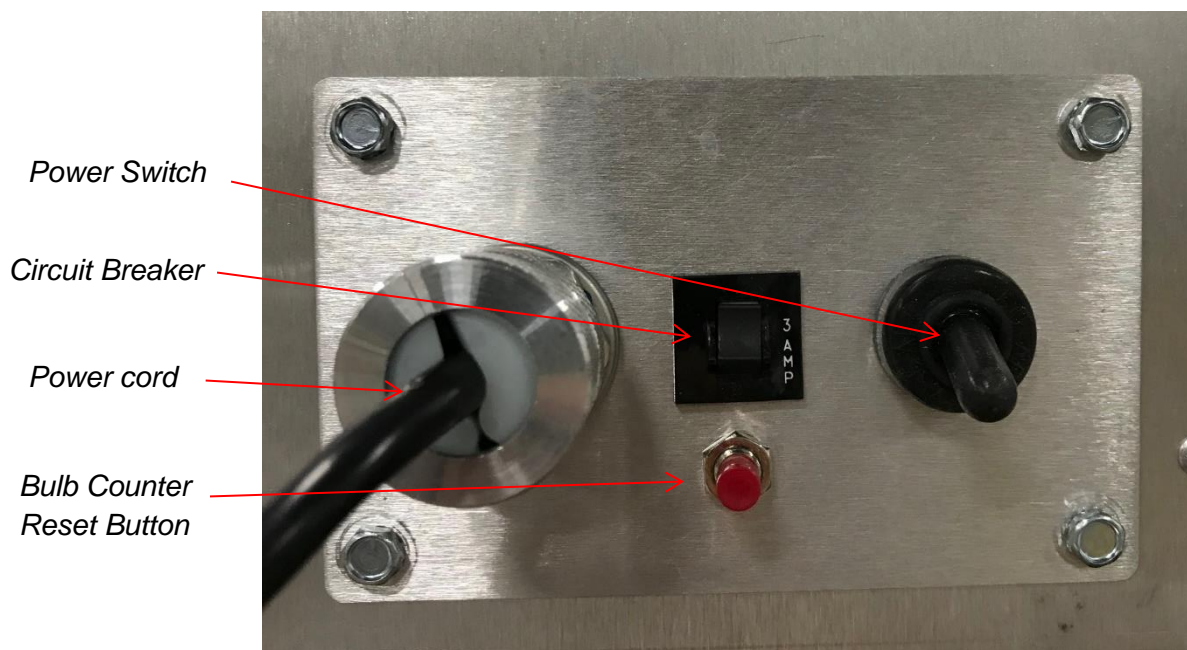


Figure 1: Control Panel on Bluezone® Unit

Toggle the power switch to the “On” position to energize the unit. Once the Bluezone is switched “On”, the Display Screen will indicate “Bluezone M420” on a green background on the top line. The bottom line of the display screen will confirm bulb operation, a bulb life counter, the temperature, humidity and fan speed. Display Screen codes are shown in Table 2. **DO NOT SPRAY WATER OR OTHER CLEANING SOLUTION DIRECTLY ON BLUEZONE.**



**Table 2: Display Screen Status Indicator Fault Codes**

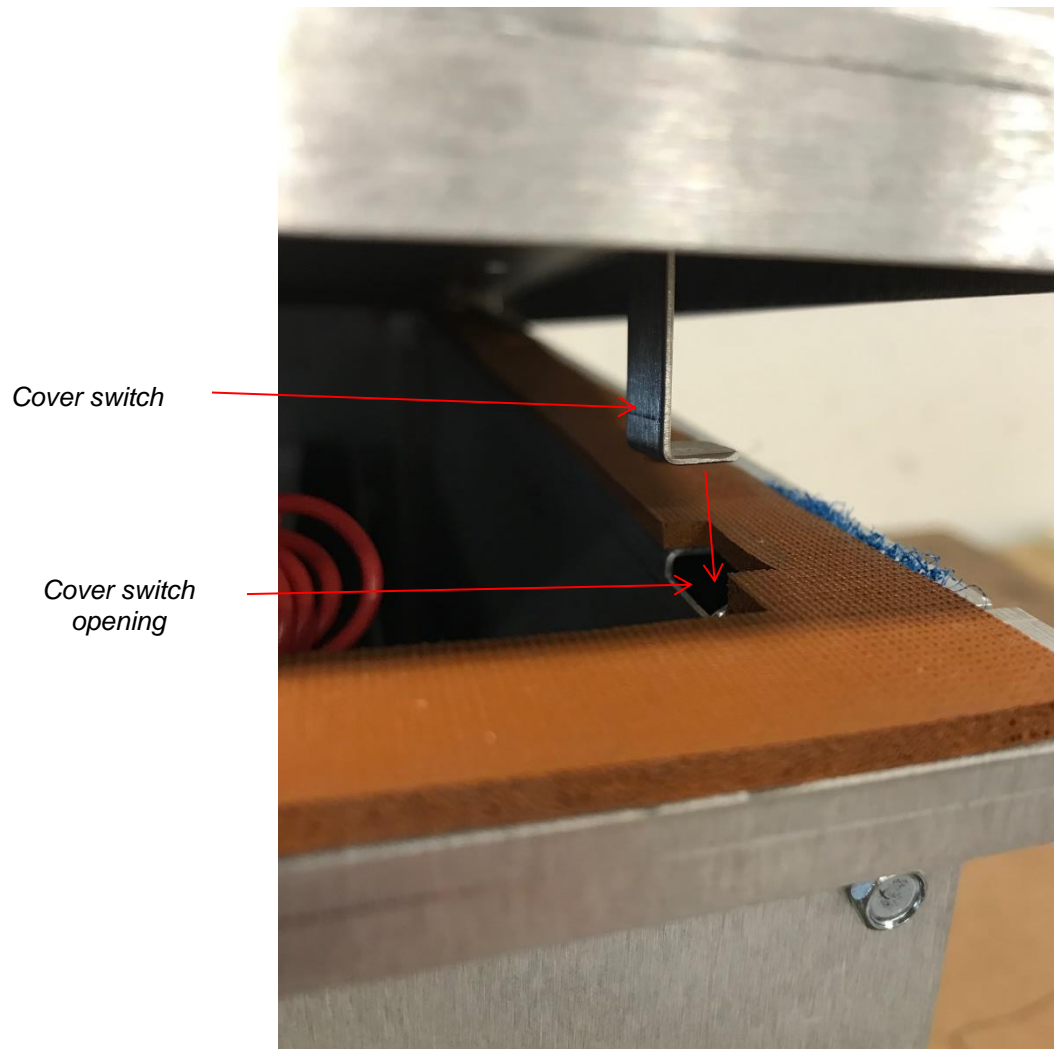
Display	Description	Fault	Operation	Action to Take
<b>Green Background</b>	System operating properly	OK	Operates	None
<b>Flashing Green Background</b>	System operating properly. Operating environment is below -10 C.	Freezing Temperatures	Unit automatically powered down until temperature reaches 0 C.	Do not run unit in a freezing environment.
<b>Yellow Background</b>	Fault Mode 1	Sensor Trip	Fan not rotating or bulbs near end-of-life.	Contact Bluezone Products
<b>Red Background</b>	Fault Mode 2	Sensor Trip	Bulbs are off until sensor resets.	Contact Bluezone Products

#### 4. Diagnostics

If the Display Screen has no light or text then the Model 420 is not being powered. Check the following list for possible causes and solutions:

1. Ensure that Cover Switch is Activated. See Figure 2 for proper installation of the cover switch. Controls will not energize if cover is off or if the cover switch is not engaged.
2. Check that unit is powered
  - a. Power “Off” unit using the power switch located on the control panel.
  - b. Plug unit in.
  - c. Turn unit “On” using the power switch located on the control panel.
3. Restart the unit.
  - a. Turn switch “Off” using the power switch located on the control panel.
  - b. Wait 5 seconds.
  - c. Turn switch “On” using the power switch located on the control panel.
  - d. Repeat 3 times
4. Check whether the unit’s circuit breaker has tripped.
  - a. Visually check the circuit breaker located on the control panel. If a white strip is visible, then the breaker needs to be reset.
  - b. Power “Off” unit using the power switch located on the control panel.
  - c. Reset circuit breaker located on the control panel by pushing the visible indicator back into the circuit breaker.
  - d. Turn unit “On” using the power switch located on the control panel.

The Bluezone will not turn on if the cover switch is not engaged. Make sure the cover switch is inside the cover switch opening. **DO NOT** activate the cover switch without the cover on. UV light will be emitted.



**Figure 2: Bluezone cover switch and cover switch hole**

## 5. Service

**BULBS NEED TO BE REPLACED AFTER 7,200 HOURS OF USE. BULB KITS MUST BE PURCHASED DIRECTLY FROM BLUEZONE PRODUCTS AS THEY ARE PROPRIETARY BULBS.**

Bulbs should be replaced at 7,200 hours of operation. The display screen reads total bulbs hours throughout the unit's operation. At 7,200 hours the display screen will turn yellow and read "Replace Bulbs." The bulbs should be replaced immediately. At 8,000 hours, the display screen will turn red and the unit will automatically be powered OFF until bulbs are replaced. Note: the fan will run on low speed, but the bulbs will turn off.

After bulbs are replaced, the bulb counter needs to be reset. To reset the bulb counter please follow the steps below.

- 1) Press and hold the red bulb counter reset button for 5 seconds. The display screen will read "Hold: reset counter" during the 5 second hold.
- 2) After holding for 5 seconds, press the bulb counter reset button again to finalize reset. The display screen will read "push to confirm" after the 5 second hold.

A bulb replacement kit and instructions can be ordered from Bluezone Products, Inc. Please call (781) 937-0202 or email [support@bluezonefresh.com](mailto:support@bluezonefresh.com) for ordering information.

**IMPORTANT:** Each bulb kit satisfies replacement parts for 1 unit. The four bulbs in each replacement kit cannot be replaced with bulbs purchased from anywhere, but Bluezone Products or an Authorized Partner. Installation of the incorrect bulbs results in a voided warranty. Purchase of bulbs from an outside vendor results in a voided warranty. Bluezone will not operate correctly with bulbs purchased from outside vendors.

### **Service Kit includes:**

- (4) U-shaped bulbs
- (2) Nitrile gloves
- Extra 5/16 cover screws

### **Additional tools needed:**

- 5/16 socket

## 5.1 Instructions for Bulb Replacement:

- 1) Toggle the power switch located on the unit's control panel to OFF.
- 2) **WARNING:** Before proceeding to next step, unplug the unit from it's power supply.
- 3) Use the 5/16 socket to unscrew the 14 screws on the cover, see Figure 3 below.
- 4) Slowly, remove the cover and place it on a flat surface.
- 5) Use the gloves provided to remove and replace the bulbs. This will prevent oil on your hand from damaging the new bulbs.
- 6) Unscrew the 5/16 screws on Bulb Support Wires. See Figure 4 below.
- 7) Carefully remove Bulb Support Wires and place aside. See Figure 5 below.
- 8) Unscrew 5/16 screws on Bulb Clips. See Figure 6 below.
- 9) Remove the old bulbs (Note: pull on them at the ceramic base, not on the glass) Put the bulbs to the side for disposal.
- 10) Carefully remove Bulb Clips and place aside. See Figure 7 below.
- 11) Hold replacement bulbs by the ceramic end and push the pins into the slots in the receptacle.  
⇒ They need to be pushed in until a "click" is heard and felt.
- 12) Put Bulb Clips over new bulbs and use screws to tighten Bulb Clips in place.
- 13) Thread Bulb Support Wires through bulbs and use screws to tighten Bulb Support Wires in place.
- 14) Tighten cover back onto the unit.
- 15) Dispose of used bulbs, according to standard practice for florescent bulbs.

Estimated total bulb replacement time: approximately 30 minutes per unit.

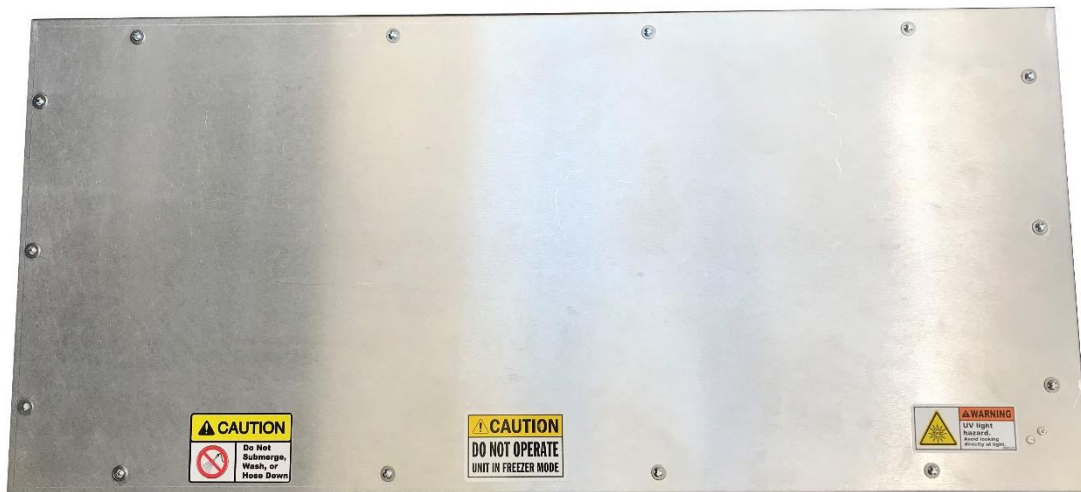
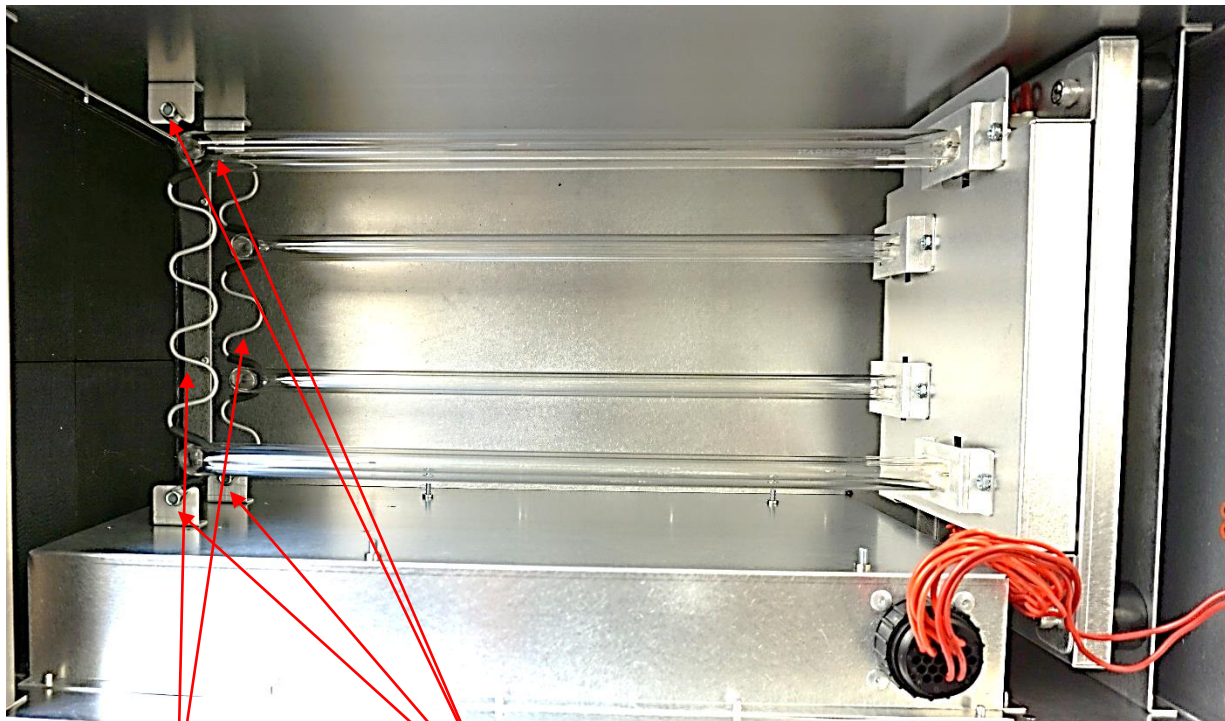


Figure 3: Bluezone 420 cover





*Bulb Support Wires to be  
removed*

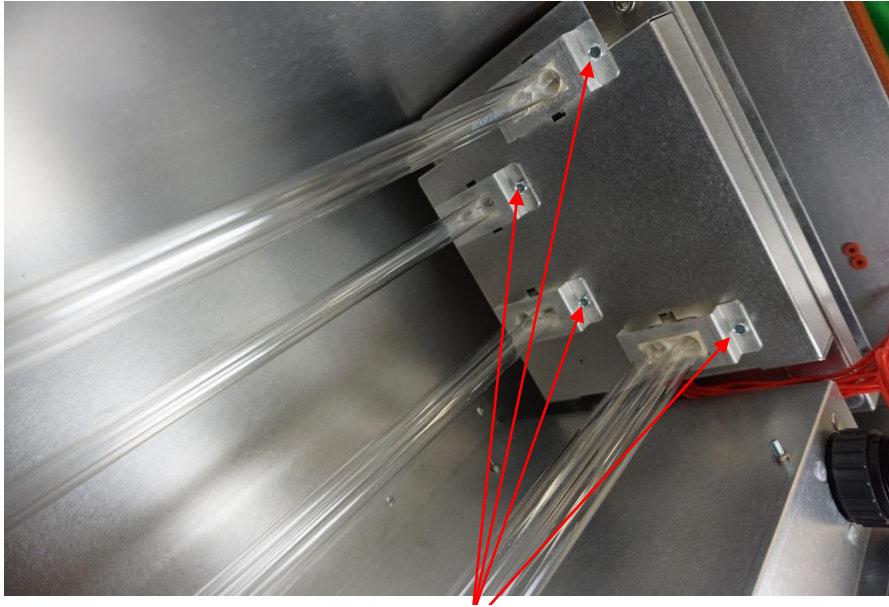
*5/16 screws to be removed*

**Figure 4: Remove 5/16 screws holding bulb support wires**



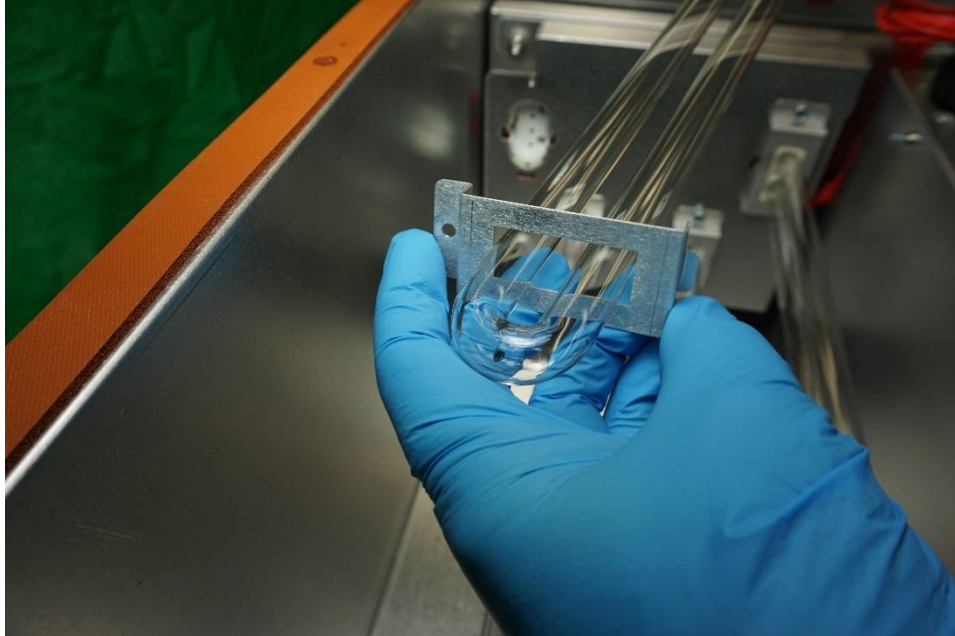
**Figure 5: Remove bulb support wires and place aside**



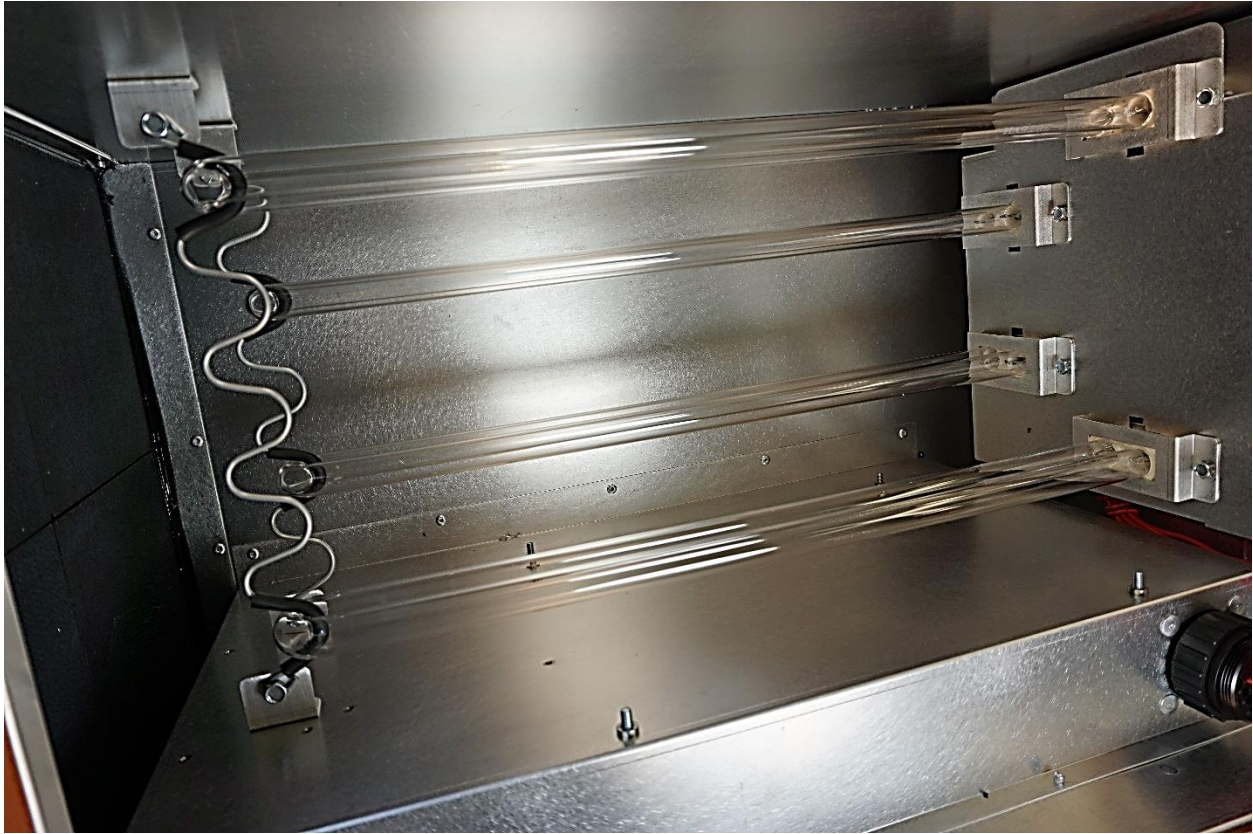


*5/16 screws to remove*

**Figure 6: Remove 5/16 screws on bulb support clips**



**Figure 7: Carefully slide off bulb clips using nitrile gloves**



**Figure 8: Completed bulb assembly**

**Vendor Contact Information:**

Technical Support is provided by:

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