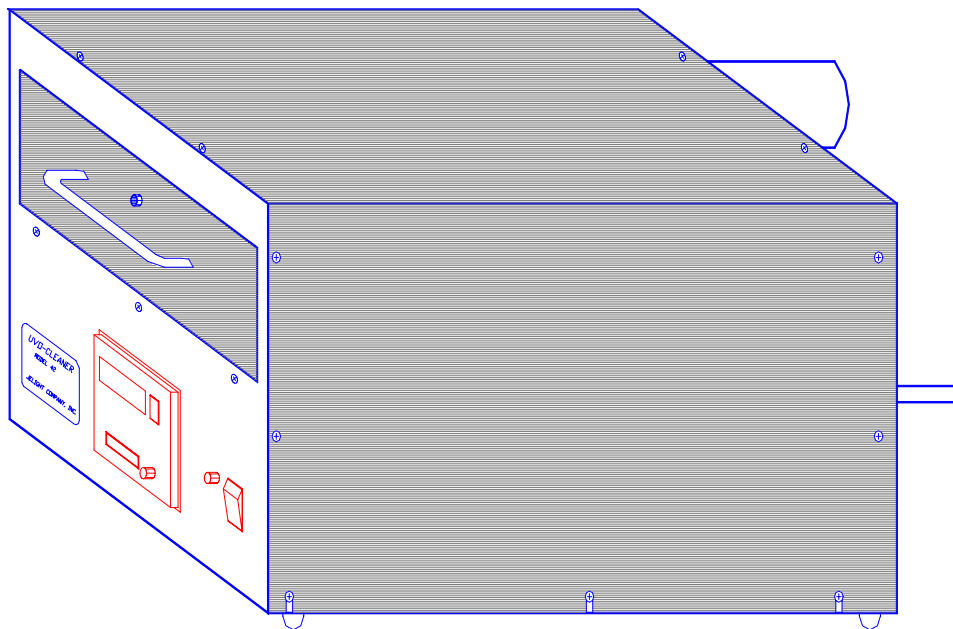


# UVO-CLEANER

## MODEL 42-220

### INSTRUCTION MANUAL





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## **UVO-CLEANER**

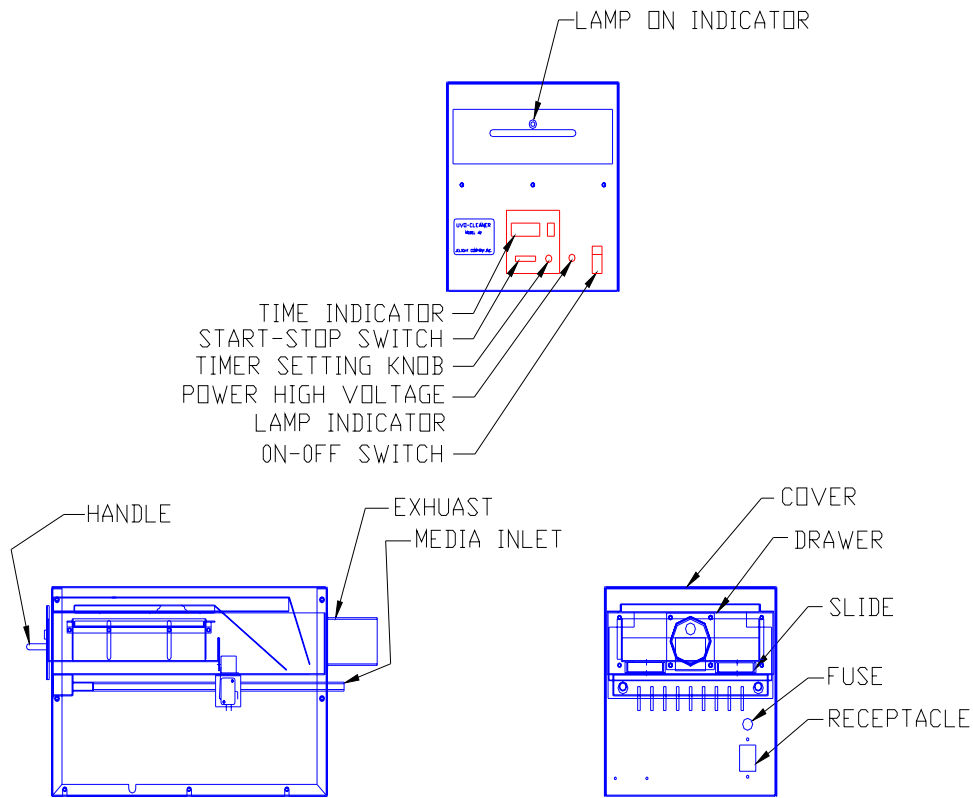
**MODEL 42-220**

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## INTRODUCTION

The UVO-CLEANER, MODEL 42-220 with 6.5" x 6.5" tray capacity is a very rugged unit designed to provide many years of trouble free service. The MODEL 42-220 relies on UV and ozone to clean organics from the surfaces of items processed in the unit. An example is quartz, which is substantially transparent to UV. Due to the transparency, both sides may be cleaned simultaneously.



### **WARNING:**

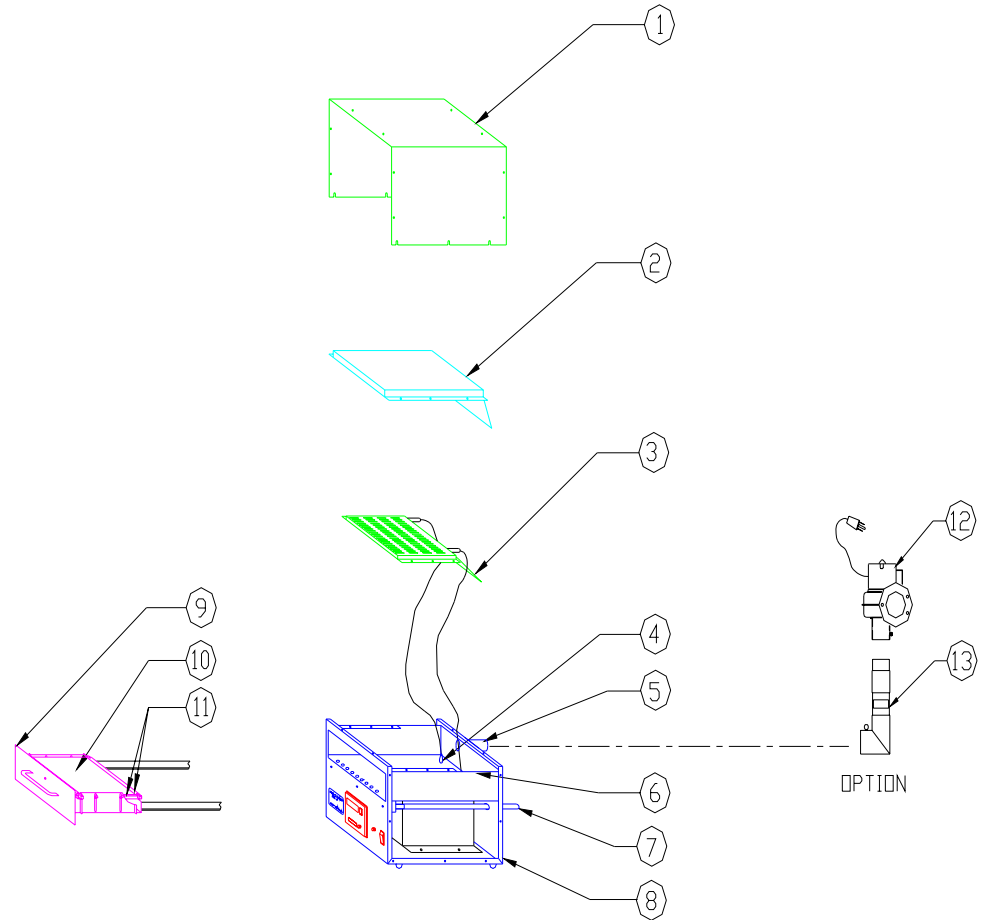
Potentially fatal voltages exist within this machine. Never remove the cover while the unit is plugged in to an electrical outlet.

Ozone is produced by this unit; thus, appropriate ventilation must be provided for the exhaust. Immediately deactivate the unit if ozone is detected.

The lamp in this unit emits harmful UV radiation; under no circumstances is exposure permissible. Servicing must be done by qualified personnel.

## DESCRIPTION & ASSEMBLY

The UVO-CLEANER, MODEL 42-220 is equipped with a stainless steel cover, stainless steel drawer & base, and adjustable stainless steel cleaning tray.



- (#1) Cover
- (#3) Lamp Assembly
- (#5) Port Exhaust
- (#7) Media Inlet(2 pls)
- (#9) Face Plate
- (#11) Carrier Guides
- (#13) Ozone Killer (optional)

- (#2) Air Baffle / Lamp Cover
- (#4) Ceramic Feed-Thru
- (#6) Shelf
- (#8) Base
- (#12) Blower or Clean Room Exhaust (optional)

## **DESCRIPTION & ASSEMBLY (Con't)**

To put the unit together, lay the lamp assembly (#3) next to the body assembly (#8) lamp side DOWN.

Connect the lamp wires to the ceramic feed-thru (#4). Be sure the terminals are parallel to the rear panel of the machine. If the terminals are at any angle, there is a possibility of shorting.

Carefully place the lamp assembly (#3), lamp side DOWN, on top of the lamp bracket.

Place baffle (#2) on top of the lamp assembly (#3). Screw both the lamp assembly (#3) and the baffle (#2) to the lamp bracket using the #8-32 x .30 long screws provided.

While pushing the interlock switch in, place the cover on the unit.  
Secure the cover with the #8-32 screws.

Be sure to remove the vinyl caps from the two media inlet tubes at the rear of the machine.

## OPERATION

To operate the UVO-CLEANER, MODEL 42-220, first install the lamp assembly. Refer to Description & Assembly on Page 4. Once the main power cord is plugged into an electrical outlet, the main power switch can be turned on. The switch will light indicating power to the unit.

The exhaust of the MODEL 42-220 must be attached to a suitable exhaust system capable of maintaining minus 0.1 to minus 0.5 inches of water static pressure while in operation. It is recommended that a flexible metal 2 inch duct be used to attach this unit to your exhaust system; a 2 inch PVC pipe may be substituted.

Note: The flow rate of the input media should be equal to or less than that of the exhaust in order to maintain a positive flow of the media through the system. Using a greater flow rate of the input media will cause a back pressure in the unit forcing the exhaust gases to leak into the operating environment.

Next, load the substrate onto the removable cleaning tray. The parts must be pre-cleaned since removing large amounts of contamination will take longer periods of time. Normal cleaning times should be determined through experimentation.

Adjust the side thumb screws on the drawer to the appropriate settings for the desired height. The actual height of the tray varies according to the height of the product being cleaned. For optimum results, the surface of the parts being cleaned should be placed approximately 5mm away from the bottom of the lamp.

Once the drawer is shut completely, the safety interlock switch engages. If either the drawer or the cover are removed, the safety interlock mechanism automatically shuts off the UV light. Thus, accidental exposure to harmful UV radiation is prevented.

To set the cleaning time, turn the knob to the right of the display until the desired time is indicated. Push the start/stop button to active the timer. The power indicator will light acknowledging that the lamp is receiving power, and the UV light is operating.

A clock built into the timer may be set by holding down the button with clock graphics, while turning the knob to the right of the display. It is functional all the time as long as the unit is plugged in. To display the time, when the timer is not in use, press the clock button.

When the cleaning cycle is complete, the timer will sound an audible alarm and automatically extinguish the UV lamp. The drawer can then be opened, the tray removed, and the parts unloaded.

## MAINTENANCE

The maintenance of the UVO-CLEANER, MODEL 42-220 requires the user to remove and clean the lamp assembly once every 100 hours. For optimum results, replace the lamp assembly every 5,000 to 10,000 hours of operation.

**To remove the lamp assembly**, disconnect the main power cord first. Remove the screws retaining the cover, and carefully lift off. Next, loosen the top portion of the feed-thru screws. Disconnect the lamp connectors from the feed-thrus. Remove the screws that secure the lamp assembly in place. Carefully lift the lamp assembly out, using caution not to break off the electrodes.

**To install the new lamp assembly**, disconnect the main power cord first. Remove the screws retaining the cover. Loosen the top portion of the feed-thru screws. Insert the lamp on the shelf using the provided screws. Tighten the screws to secure the lamp assembly in place. Attach the lamp connector to the appropriate feed-thru. Replace the machine cover and be sure the interlock switch is inside the cover.

### **WARNING:**

**USE EXTREME CAUTION WHEN CHANGING LAMPS. BE SURE THE PLUG IS OUT OF THE UNIT AT ALL TIME WHEN THE UNIT IS OPEN. NEVER LOOK DIRECTLY INTO THE LAMP WHEN IT IS BURNING. BE VERY CAUTIOUS NOT TO BREAK THE LAMP WHEN YOU ARE INSTALLING OR REMOVING IT....**

## **TROUBLESHOOTING**

SYMPTOM: No Power To The Unit.

Check the power cord, it could be loose or bad.  
Check the fuse to ensure it hasn't blown out.  
Check the cover interlock switch to make sure it is totally inset..

SYMPTOM: Power To The Unit But Timer does Not Function.

Check the drawer interlock switch by listening while closing and opening the drawer to make sure it is engaging properly..

SYMPTOM: UV Indicator Does Not Light.

Check to see if the power indicator lamp is lit.  
Check the UV lamp assembly for breaks or any other damage..

SYMPTOM: Ozone Is Present Outside Of The Unit During Operation.

Check the exhaust connections to make sure they are tight.  
Check the exhaust the unit is attached to.

**IF THESE PROBLEMS PERSIST OR IF THE MACHINE DOESN'T WORK, CALL THE FACTORY IMMEDIATELY.**

## SPECIFICATIONS

Size(Max) . . . . . 9" Wide X 18" Long X 9.5" High

Power Requirements . . . . .220 Volts, 60 Hz., 3 Amps

Lamp Type . . . . .Low Pressure Mercury Vapor Grid

Lamp Output . . 28,000 Micro Watts Per Cm<sup>2</sup>@ 254 Nm(From 6mm Dist.)

Tray Size. . . . .6.5" X 6.5" Ozone Cleaning Area

