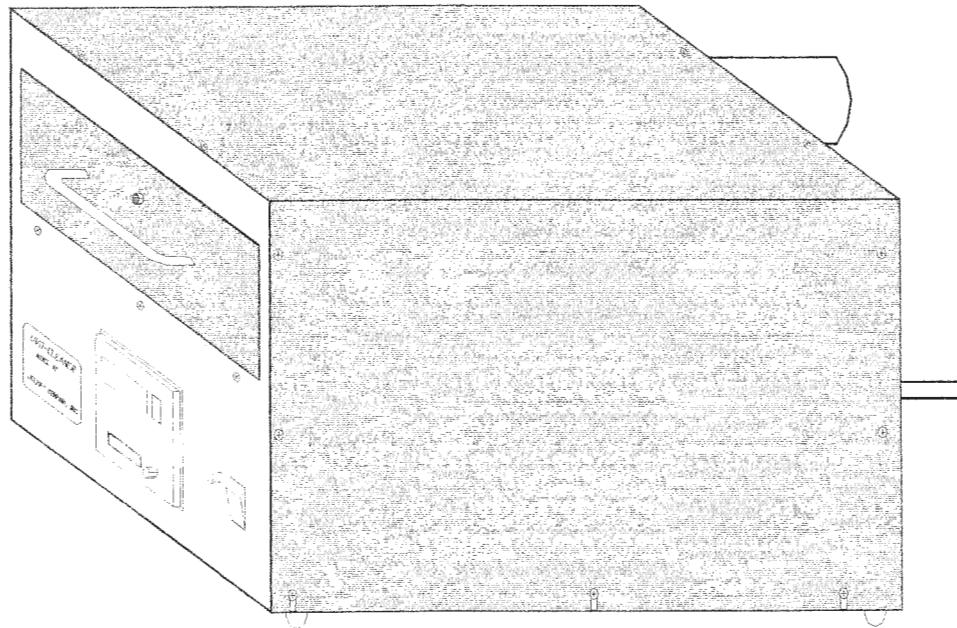


UVO-CLEANER

MODEL 42

INSTRUCTION MANUAL



JELIGHT COMPANY, INC.

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UVO-CLEANER

MODEL 42

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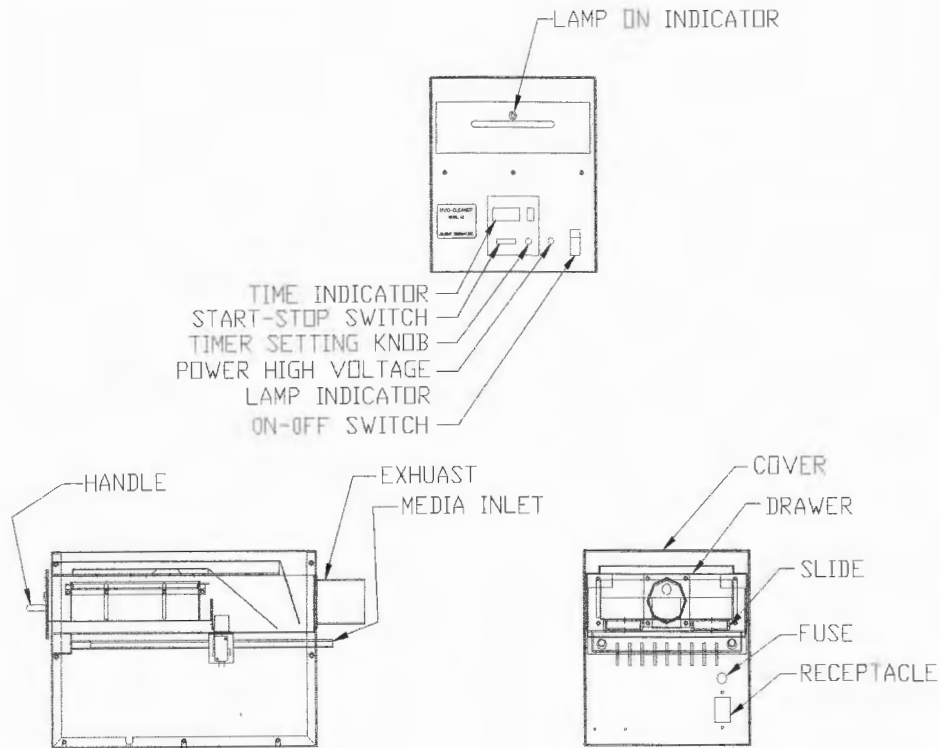
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INTRODUCTION

The UVO-CLEANER, Model 42 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 relies on UV and ozone to clean organic 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:

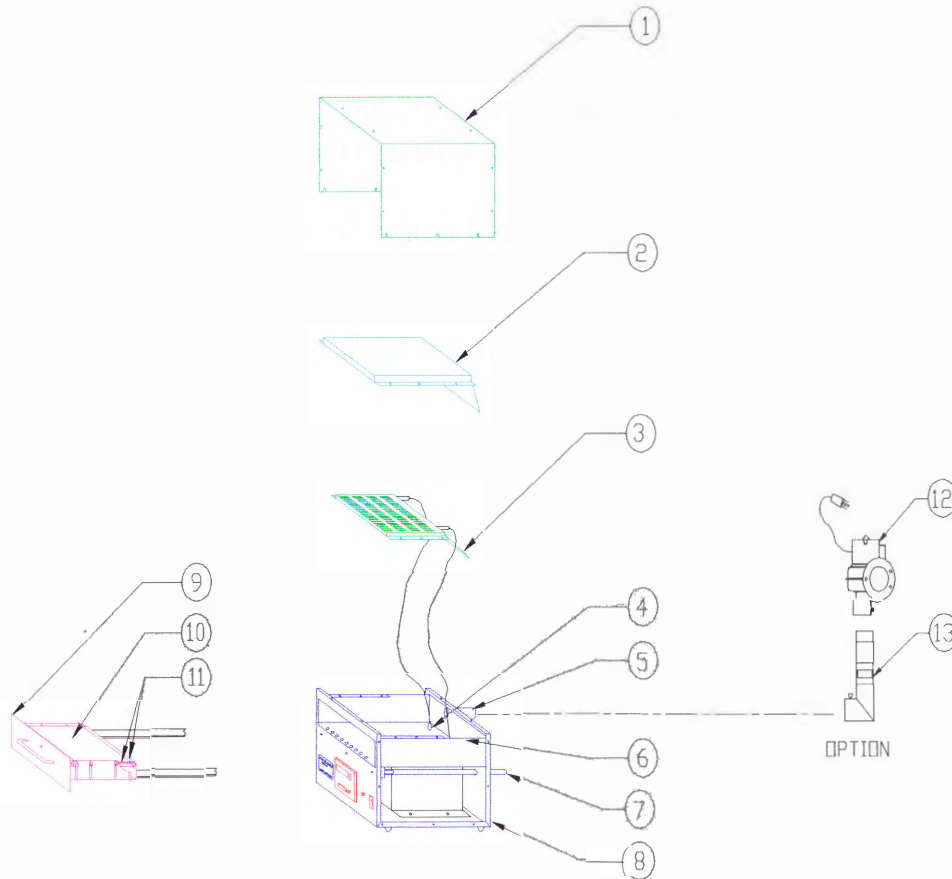
Potentially fatal voltages exist within this machine. Never remove the cover while the unit is plugged in to an electrical outlet.

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. Qualified personnel must do servicing.

DESCRIPTION & ASSEMBLY

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



- | | | | |
|------|-------------------------|------|-------------------------|
| (1) | Cover | (2) | Air Baffle / Lamp Cover |
| (3) | Lamp Assembly | (4) | Ceramic Feed-Thru |
| (5) | Port Exhaust | (6) | Shelf |
| (7) | Media Inlet (2 pls.) | (8) | Base |
| (9) | Face Plate | (10) | Tray |
| (11) | Carrier Guides | (12) | Blower (optional) |
| (13) | Ozone Killer (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; 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 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 backpressure 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 thumbscrews 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 is 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 activate 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 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....

TROUBLE SHOOTING

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

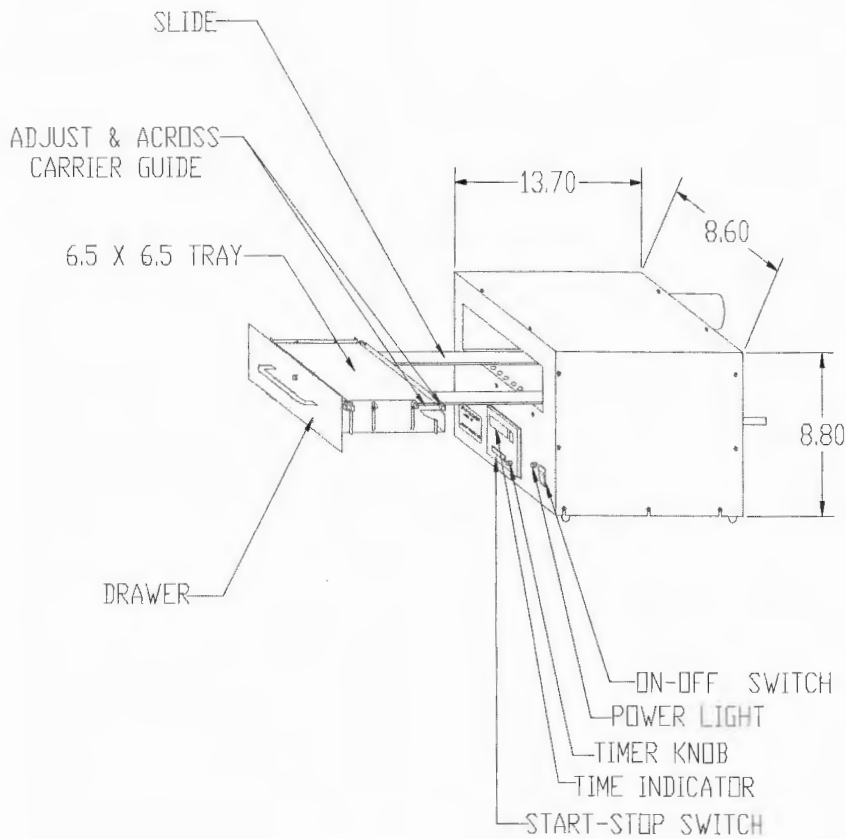
Size (Max). 9" Wide X 18" Long X 9.5" High

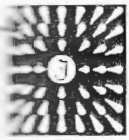
Power Requirements 115 Volts, 60 Hz., 3 Amps

Lamp Type Low Pressure Mercury Vapor Grid

Lamp Output . . 28,000 Micro Watts Per Cm² @ 254 Nm (From 6mm Dist.)

Tray Size. 6.5" X 6.5" Ozone Cleaning Area





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MATERIAL SAFETY DATA SHEET LOW PRESSURE MERCURY VAPOR LAMPS

Low pressure mercury vapor lamps manufactured by Jelight Company, Inc. are exempted from the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) because they are articles. The following information is provided by Jelight Company, Inc. as a courtesy to its customers.

PRODUCT IDENTIFICATION

Trade Name (as labeled) Low Pressure Mercury Lamps (Ultraviolet Lamps)

Manufacturer JELIGHT COMPANY, INC.
2 Mason, Irvine, CA 92618
Tel: (714) 380-8774
Fax: (714) 768-9457

HAZARDOUS INGREDIENTS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMP MATERIALS THAT ARE INTACT. If the lamp is broken, the following materials may be released.

Chemical Name	CAS Number	% by wt.	Exposure Limits in Air (mg/cubic m.)	
			AGCIH (TLV)	OSHA (PEL)
Quartz (Silica)	60676-86-0	80	0.8	0.1
Mercury	7439-97-6	< 0.05	0.025	0.1 Ceiling

PHYSICAL PROPERTIES: Not applicable to intact lamp.

FIRE & EXPLOSION HAZARDS

Flammability	Non-combustible
Fire Extinguishing Materials	Use extinguishing agents suitable for surrounding fire
Special Firefighting Procedure	Use a self-contained breathing apparatus to prevent inhalation of dust and/or fumes that may be generated from broken lamps during fire-fighting activities.
Unusual Fire and Explosion Hazard	When exposed to high temperature, toxic fumes may be released from broken lamps.

HEALTH HAZARDS THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMP MATERIALS THAT ARE INTACT. See additional bulletin on health hazards and safety related to lamp operation. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. The major hazard from broken lamps is the possibility of sustaining glass cuts.

EFFECTS OF OVEREXPOSURE TO BROKEN LAMPS BY INHALATION INGESTION OR CONTACT WITH SKIN OR EYE.

Mercury	Exposure to high concentrations of vapors for brief periods can cause acute symptoms such as pneumonitis, chest pains, shortness of breath, coughing gingivitis, salivation, and possibly stomatitis. Chronic exposure may cause tremors and neuropsychiatric problems. May cause redness and irritation as a result of contact with skin and/or eyes.	
Quartz	Inhalation	Chronic excessive exposures to fused silica dust may produce lung injury. Fused silica appears amorphous when subjected to x-ray diffraction, but one report suggests it may contain micro-crystals of quartz and could be fibrogenic. Prolonged excessive exposure to the condensed vapors reportedly can produce transient pulmonary lesions which are reversible upon cessation of exposure. Although the evidence is limited and conflicting, crystalline silica is listed by IARC as possible human carcinogen. The status of fused silica has not been determined.
	Ingestion	No adverse effects anticipated since material is insoluble and non-toxic.
	Skin contact	No adverse effects anticipated.
	Eye contact	Irritation due to mechanical abrasion.

EMERGENCY AND FIRST AID PROCEDURES

Glass cuts	Perform normal first aid procedures. Seek medical attention as required.
Inhalation	If discomfort, irritation or symptoms of pulmonary involvement develop, remove from exposure and seek medical attention.
Contact Skin	Thoroughly wash affected area with mild soap or detergent and water and prevent further contact. Seek medical attention if irritation occurs.
Contact Eye	Wash eyes, including under eyelids immediately with copious amounts of water for 15 minutes. Seek medical attention.

REACTIVITY DATA

Stability	Stable
Conditions to avoid	None for intact lamps
Incompatibility (materials to avoid)	Dissolves in hydrofluoric acid.
Hazardous Decomposition Products (including combustion products)	None for intact lamps
Hazardous Polymerization Products	Will not occur

I. PROCEDURES FOR DISPOSAL OF LAMPS

If lamps are broken, ventilate area where breakage occurred. Clean up with mercury vacuum cleaner or other suitable means that avoid dust and mercury vapor generation. Take usual precautions for collection of broken quartz. Clean up requires special care due to mercury droplet proliferation. Place materials in closed containers to avoid generation dust.

It is the responsibility of the waste generator to ensure proper classification of waste products. To that end, TCLP tests should be conducted on all waste products, including this one, to determine the ultimate disposition in accordance with applicable federal, state, and local regulations.

SPECIAL HANDLING INFORMATION –FOR BROKEN LAMPS

Ventilation	Use adequate general and local exhaust ventilation to maintain exposure levels below PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below.
Respiratory Protection	Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the pertinent PEL or TLV limits. All appropriate requirements set forth in 29 CFR 1910.134 should be met.
Eye Protection	OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken
Protective Clothing	OSHA specified gloves are recommended for dealing with broken lamps.
Hygiene Practices	After handling broken lamps, wash thoroughly before eating, smoking or using toilet facilities.

Although JELIGHT COMPANY, INC. attempts to provide current and accurate information herein, it makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, or injury of any kind which may result from, or arise out of, the use of/or reliance on the information by any person.

Issued Date: April 28, 1995