

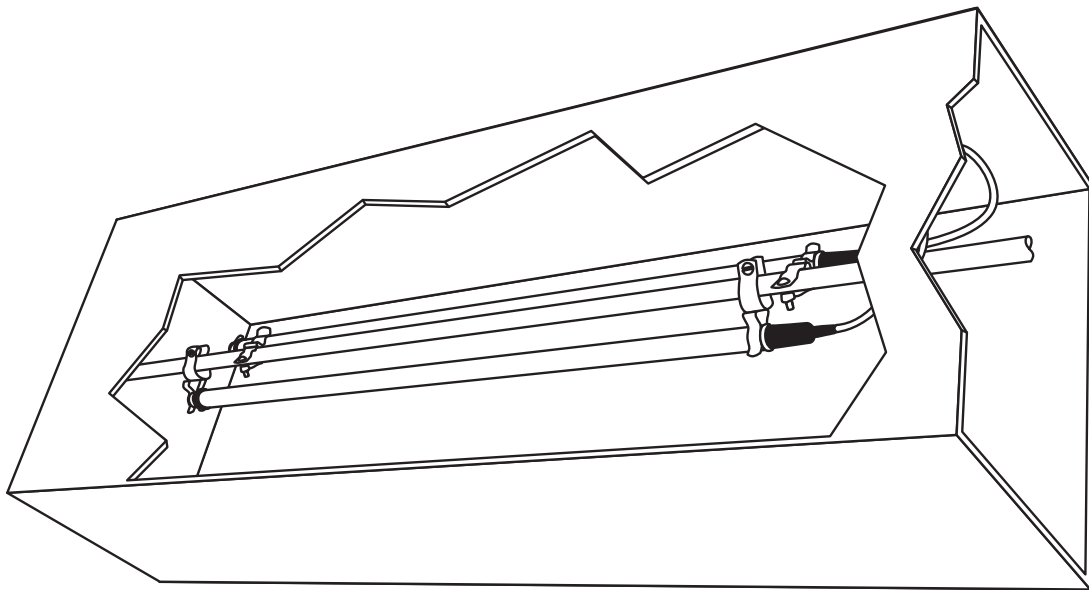
# **FRESH-AIRE**

The Indoor Air Quality Expert

## **COMMERCIAL SERIES EXHAUST ODOR SYSTEM**

### **TUVC-ADS-118D-HO-OS-100**

### **INSTALLATION & MAINTENANCE**



#### **WARNING**

**THIS SYSTEM TREATS EXHAUST AIR ONLY  
DO NOT USE IN OCCUPIED SPACES**



#### **WARNING**

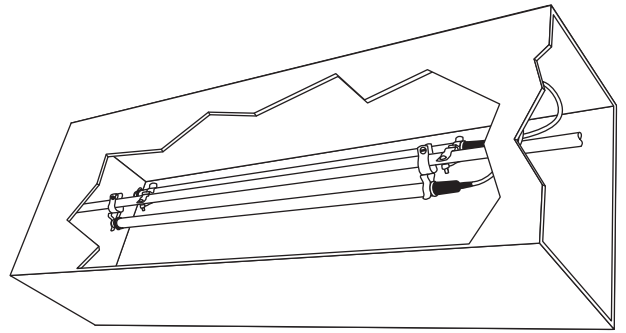
**PROTECT EYES FROM UV LIGHT  
TURN OFF UNIT OR DISCONNECT  
BEFORE SERVICING**



# Installation & Maintenance of the Fresh-Aire UV® Exhaust Odor System for Commercial HVAC Systems

The Fresh-Aire UV® Exhaust Odor System is designed for installation into commercial HVAC system ducts for the purpose of exhaust odor control using Fresh-Aire UV oxidation UV. For maximum installation flexibility and cost-effectiveness the UV lamps are mounted onto a framework of standard 0.5" EMT tubing. The remotely mounted weather resistant power supply can withstand the wet environment found inside of air handlers or the exposed conditions of outdoor packaged air conditioning systems.

The Exhaust Odor System uses dual 18" oxidizing UV lamps that produce ozone to reduce odors in exhaust air.



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**IMPORTANT!**

- Only qualified technicians should install this product\*
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

\*Installation of this product by anyone other than licensed HVAC or electrical contractors voids warranty.

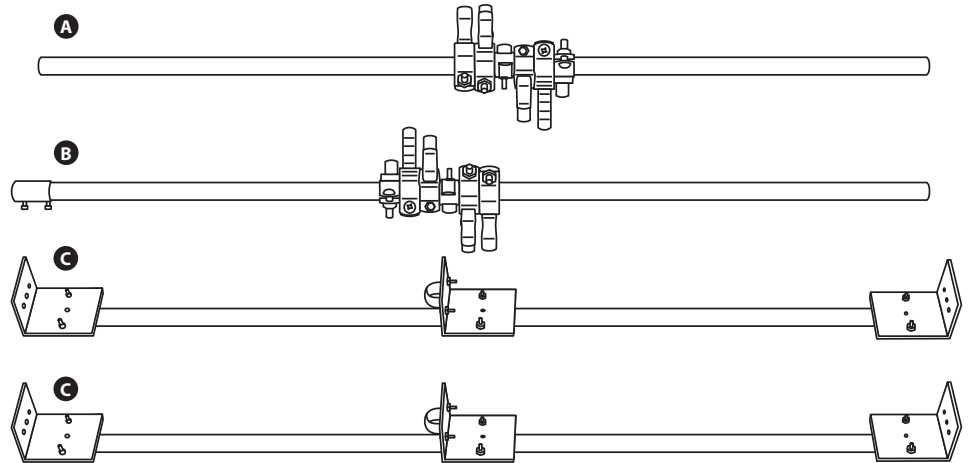
## Parts Included

- A** Lamp Support Tubing
- B** Lamp Support Tubing with Coupling
- C** Perpendicular Braces
- D** UV-C Lamps
- E** Power Supply(s)
- F** L - Mounting Brackets
- G** Sight Glass
- H** Sheet-metal Screws
- I** Lamp Cables
- J** UV Warning Sticker
- K** Nylon Zip-Ties

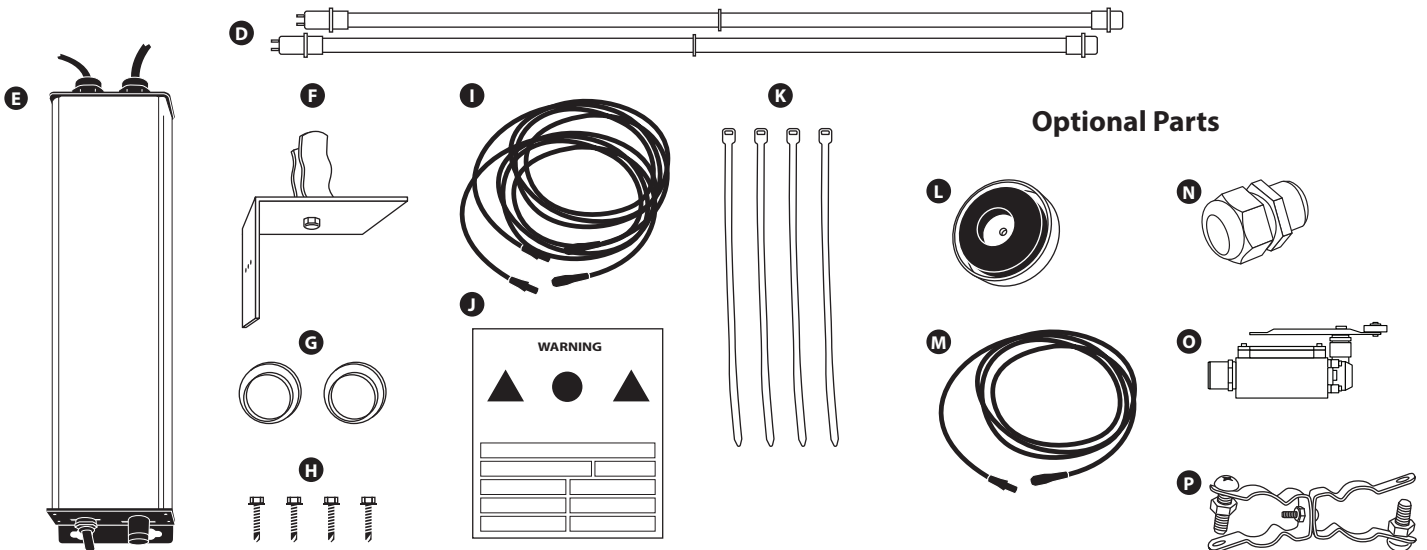
## Optional Parts

- L** Mounting Magnet
- M** Cable Extensions 5' or 10'
- N** Cable Strain Relief ¾" or 1"
- O** Door Interlock Switch
- P** Conduit/Conduit Clamp

### Pre-assembled Kit Parts

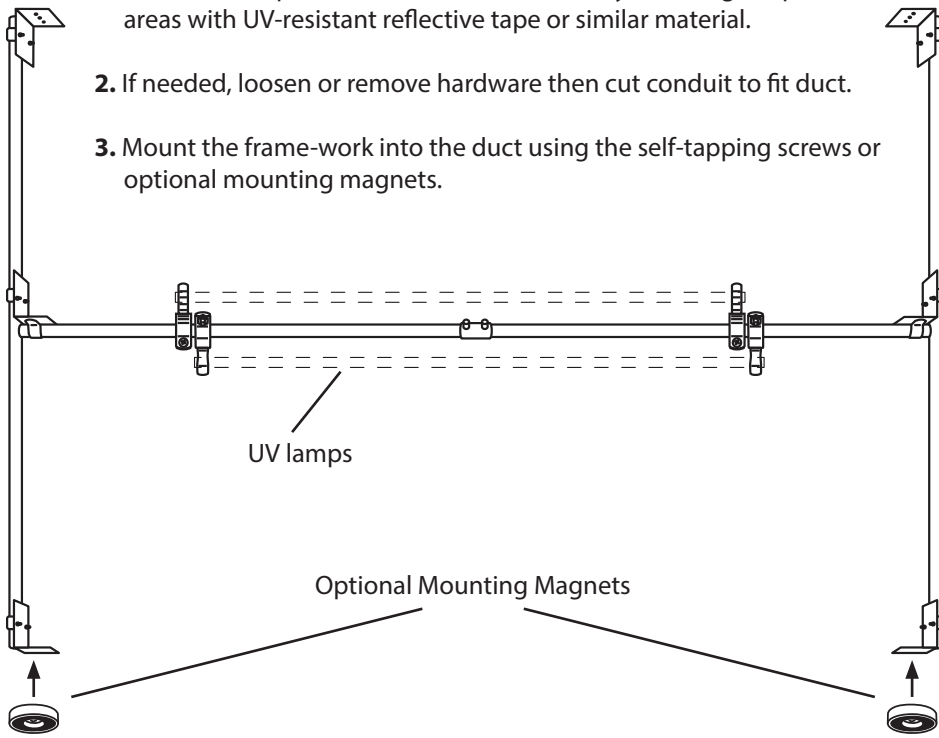


### Individual Parts

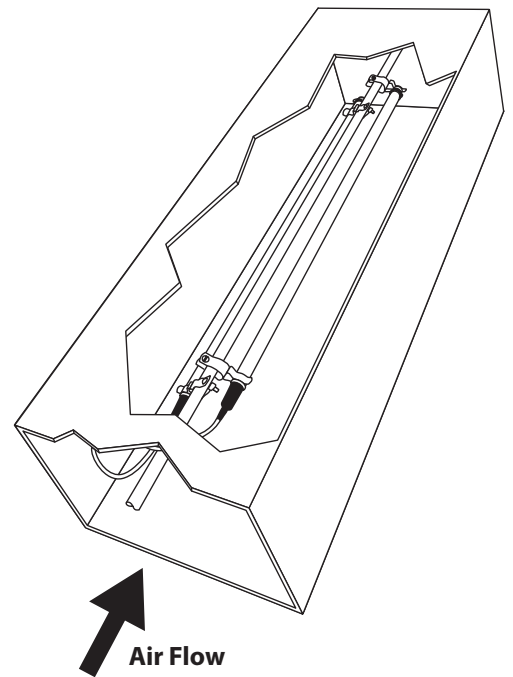


## System Configuration A: In-Line With Air Flow (pre-assembled parts are ready for this configuration)

1. Cut an access panel into the duct. If necessary cover high exposure areas with UV-resistant reflective tape or similar material.
2. If needed, loosen or remove hardware then cut conduit to fit duct.
3. Mount the frame-work into the duct using the self-tapping screws or optional mounting magnets.

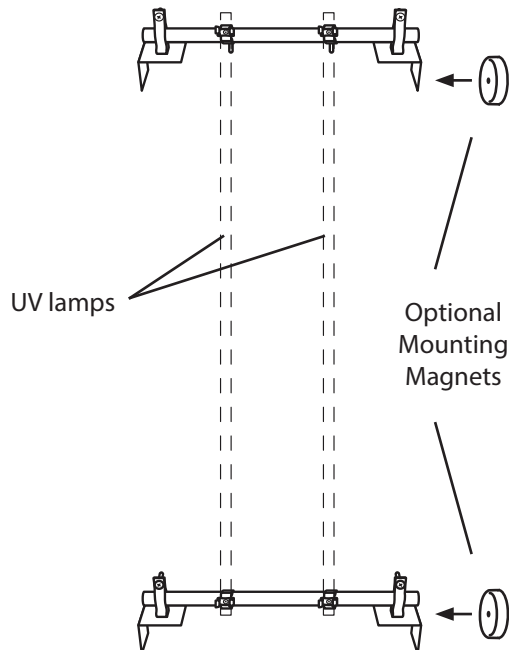


Configuration A Assembled

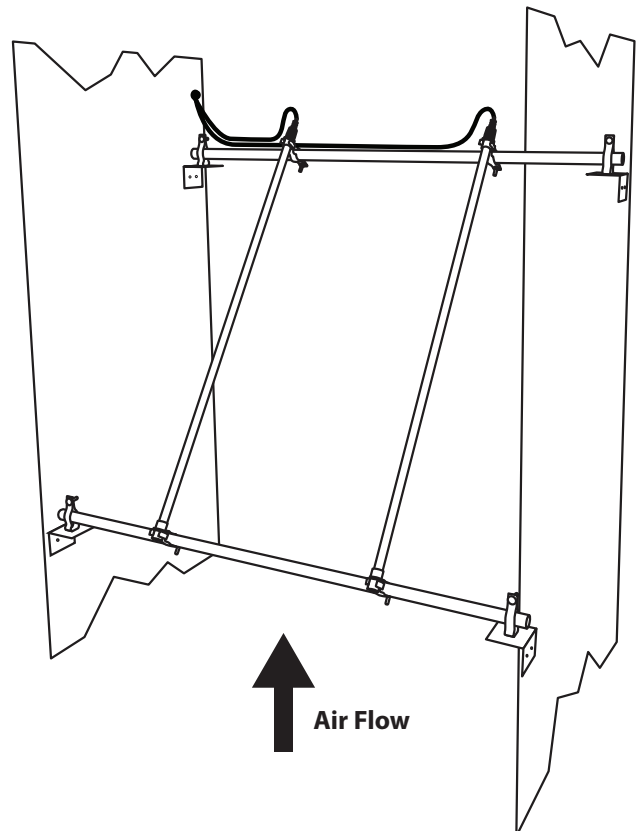


## System Configuration B: Diagonal To Air Flow

1. Cut an access panel into the duct. If necessary cover high exposure areas with UV-resistant reflective tape or similar material.
2. Remove hardware then cut conduit to fit duct.
3. Re-attach hardware in the configuration below.
4. Adjust the angle of the mounting brackets so the UV lamps will cross the air-stream diagonally. Mount the frame-work into the duct using the self-tapping screws or optional mounting magnets.

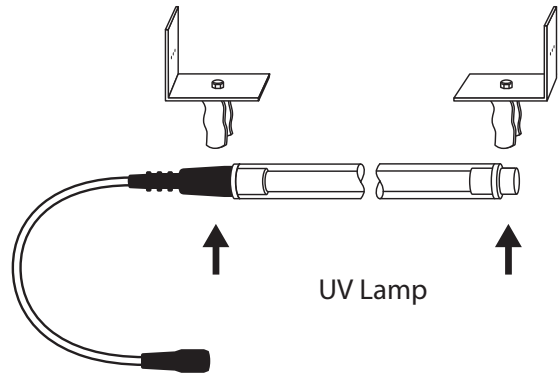


Configuration B Assembled



## 2 Install UV Lamps

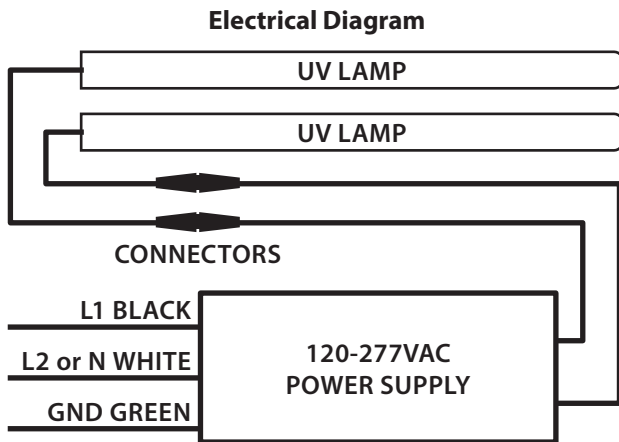
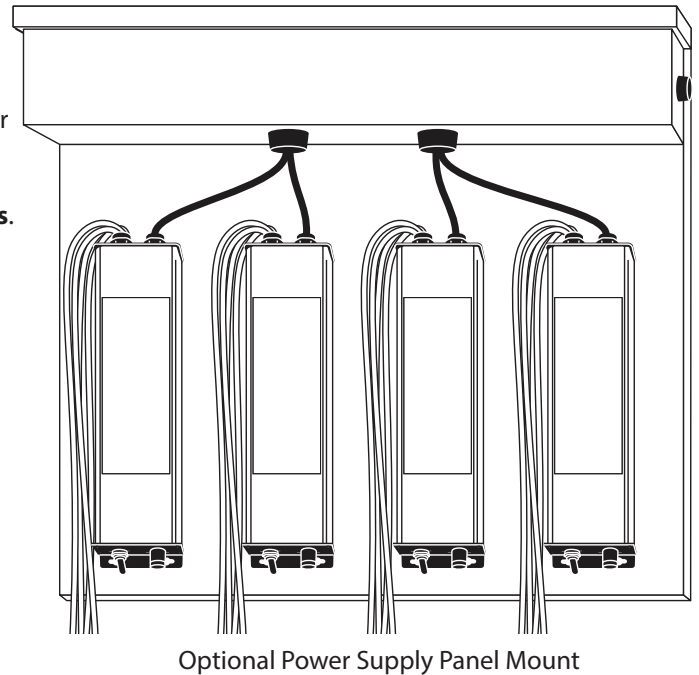
Snap **UV Lamps** into the **Lamp/conduit Clamps**. Be sure to clamp to the rubber lamp connector on one end and the plastic lamp tip on the other end. **DO NOT clamp onto the lamp glass.**



## 3 Mount Power Supply(s)

Mount the power supply in a location (inside or outside of the HVAC system) that is convenient for access to the main power supply and for connection to the UV lamps. An **Optional Power Supply Panel Mount** (part # TUVCP-P) is available for mounting two or more power supplies.

1. Use the supplied self-taping sheet metal screws to mount the power supply in place through the mounting holes on the sides of the base. It is recommended to use wire boxes, our **Optional 3/4" or 1" Cable Strain Relief**, or other sealing methods in order to pass the power cord and lamp cables into the interior of the air duct for connections.
2. **IMPORTANT! Turn off main power before making connections.** Refer to the **Electrical Diagram** for proper connection of the power supply to the main power.



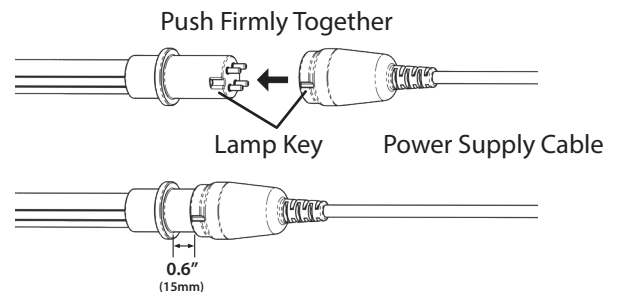
**IMPORTANT! Connect in accordance with all state and local electrical and building codes.** Proper voltage is automatically selected by the unit between 120-277VAC Single Phase 50/60 Hz. **IMPORTANT! External power suppressor may be needed if power surges occur.**

3. Use of **Optional Door Interlock Switches** is highly recommended to prevent accidental exposure to UV Light. Interlock switches are mounted on the access panels and doors so the UV lights turn off when the entryway is opened.
4. Use the **Optional UV Output Monitor**, to alert maintenance personnel when UV lamps should be replaced.

## 4 Connect Lamps & Cables

Arrange cables as needed for installation. If necessary use the Optional 3/4" or 1" Cable Strain Relief to pass cables through cabinets, air system walls, etc. Optional 5', 10', 20' Cable Extensions are available for longer runs. **When adding lamp extensions, 20 ft. is the maximum distance from power supply to the lamp.**

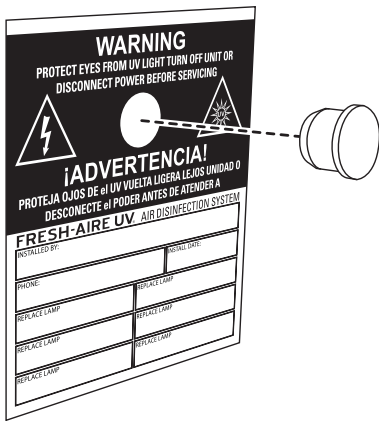
**Align pins with lamp key then push firmly together.**



### IMPORTANT!

Make sure connection is firmly seated with maximum 0.6" (15mm) gap between cable and ridge.

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## 5 Sight-Glass Installation

1. Find a suitable location such as a door to the HVAC system and apply the UV warning/lamp replacement sticker.
2. Drill a 1/2" hole through the orange circle on the sticker. Press the sight glass into hole.

## 6 Power-up System

**Caution: UV-C light** that can cause **Serious Eye Burns** and **Temporary Blindness**, Ensure all access panels have been replaced and doors closed before powering-up the system.

Turn on the main power then switch on the UV light power supply(s). Use the sight glass to confirm that the UV Lamp(s) is operating.

## 7 UV System Maintenance

Periodically wipe the UV lamps with a clean cloth or alcohol swab to remove any accumulated dust or dirt. This should be performed at least every 6-9 months or during routine maintenance intervals. Fouling could occur if lamps are installed under chilled water lines. Wipe clean or install optional shield.

## 8 UV Lamp Replacement

Fresh-Aire UV® lamps are rated for either one or two years germicidal effectiveness. The lamps will continue to glow after they have expired but their germ-killing effectiveness diminishes with time so they must be replaced on schedule for the system to function properly. **Contact your local dealer for replacement lamps.**

Part# TUVCL-118HO-OS-100 (high-output 100% oxidation 1 year lamp)

**Important!** Use only Fresh-Aire UV® replacement lamps. Use of replacement lamps from other manufacturers voids the warranty.

## 9 Trouble Shooting

Problem	Solution
UV Lamp(s) Not Lighting	<ol style="list-style-type: none"> <li>1. Check that power is applied.</li> <li>2. Check that the unit is turned ON.</li> <li>3. Ensure the remote lamp cables are properly connected.</li> <li>4. Check the fuse. Replace only with same size and type.</li> <li>5. Reset power switch on power supply (off then on).</li> <li>6. Install New UV Lamp(s).</li> <li>7. Consult Factory.</li> </ol>
UV Lamp(s) Flickering	<ol style="list-style-type: none"> <li>1. UV Lamp(s) have reached end of effective service life. Install new lamp(s) of same type.</li> <li>2. If unit is new, check remote cables to ensure they are properly connected.</li> <li>3. Reset power switch on power supply (off then on).</li> <li>4. If new lamps still flicker, consult factory.</li> </ol>
UV Lamps Have burned Out Prematurely	<ol style="list-style-type: none"> <li>1. Defective power supply, Consult Factory.</li> </ol>
Power Supply Will Not Light UV Lamps even after new lamps are installed	<ol style="list-style-type: none"> <li>1. Defective power supply, Consult Factory.</li> <li>2. External power suppressor may be needed if power surges occur.</li> </ol>