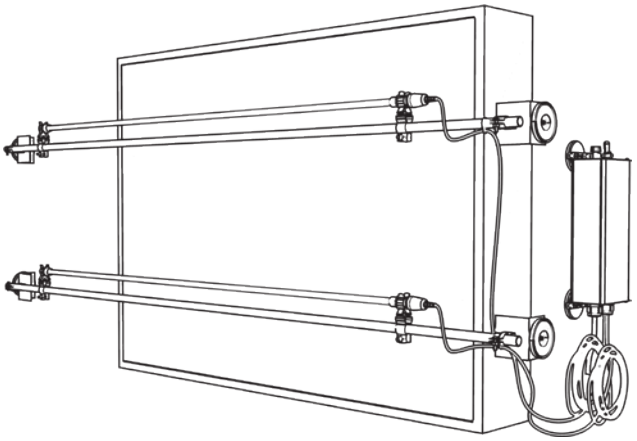
GermZap™

COMMERCIAL SERIES GERMICIDAL UV LIGHT SYSTEM

INSTALLATION & MAINTENANCE

GermZap™ is designed for installation into commercial air handling units and rooftop package units for the purpose of surface or airborne disinfection using ultraviolet germicidal irradiation. For maximum installation flexibility and cost-effectiveness the UV lamps are mounted onto a framework of standard 0.5" EMT tubing (included). 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 number and placement of lamps is determined by several factors including coil dimensions and condition or if airborne disinfection is desired. GermZap™ has everything needed for complete installation in most AHU and RTU equipment.

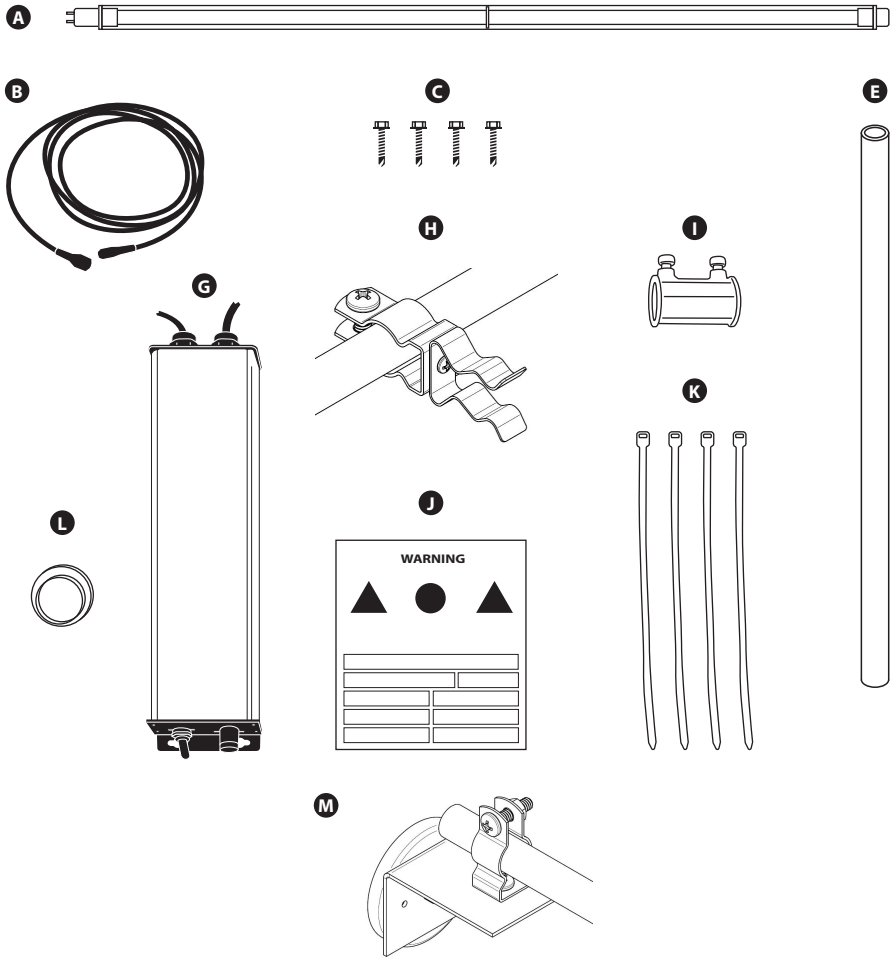


WARNING
PROTECT EYES FROM UV LIGHT
TURN OFF UNIT OR DISCONNECT BEFORE SERVICING

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

Parts Included

- **A** UV Lamp(s) 2 Year
- **B** Lamp Cable
- **C** Sheet-metal Screws
- **E** 1/2" EMT Electrical Conduit
- **G** Power Supply(s)
- **H** Lamp Clip/Conduit Clamps
- **I** 1/2" Pipe Couplings
- **J** UV Warning Sign
- **K** Black Nylon Zip-Ties
- **L** Sight Glass
- **M** L - Mounting Brackets



GermZap™

System Configuration

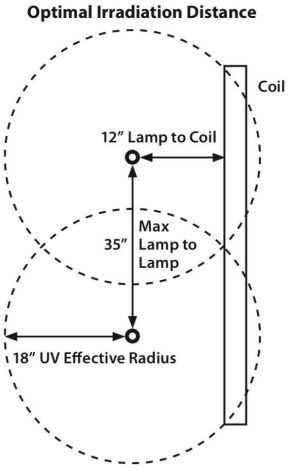
1. Determine the dimensions of the coils or area to be irradiated.

2. Use the Coil Sizing Reference to determine the number of lamps needed for proper coverage.

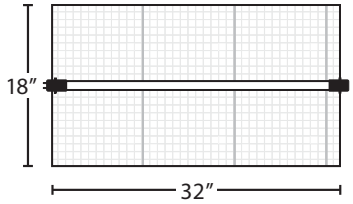
3. Larger coils may require multiple Tubular Rack Kits

UV Lamp Configuration Guidelines

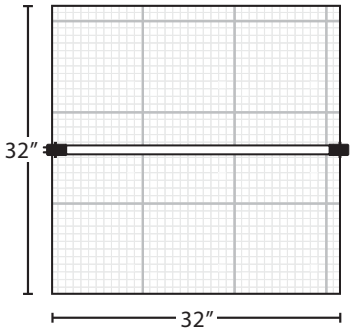
- Maximum germicidal effectiveness is within an 18″ radius from UV lamp center axis
- The distance between UV lamp(s) and the irradiated surface should be between 6″-18″, 12″ is optimal
- The distance between stacked UV lamps should not exceed 35″
- The distance between end to end UV lamps should not exceed 12″
- The distance of UV lamp ends to the edge of irradiated surface should not exceed 6″



Coil Sizing Reference



SINGLE 32″ LAMP



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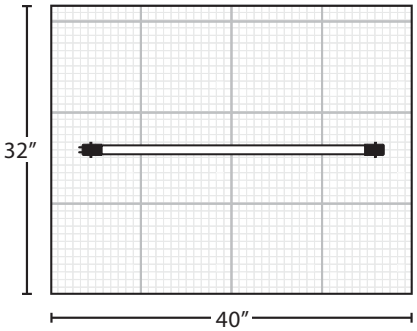

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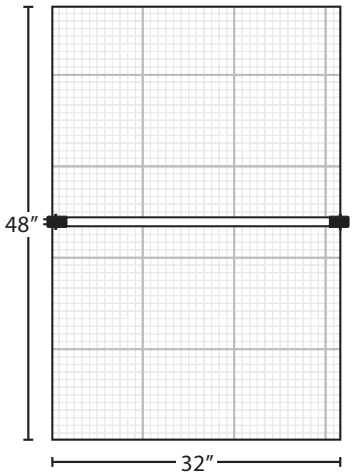

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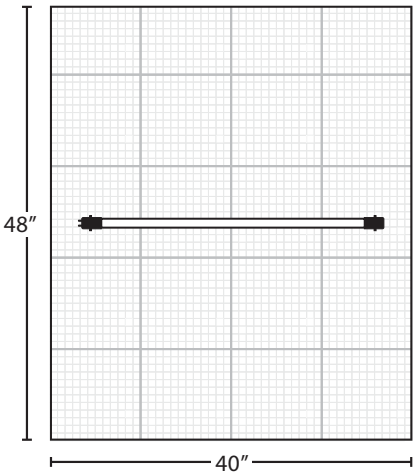

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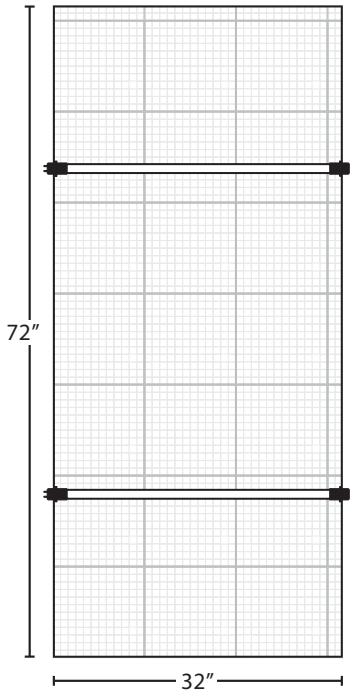
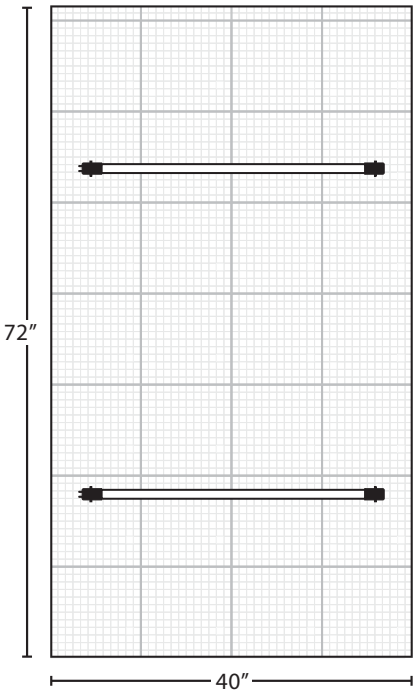
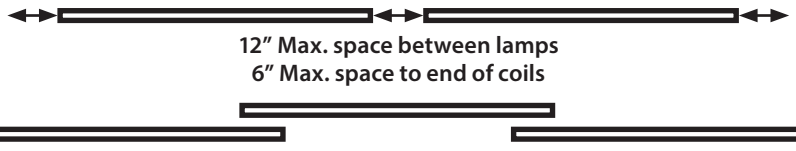


DUAL 32″ LAMPS



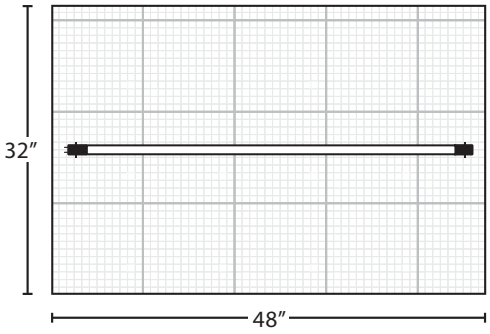
DUAL 32″ LAMPS

Lamp Spacing

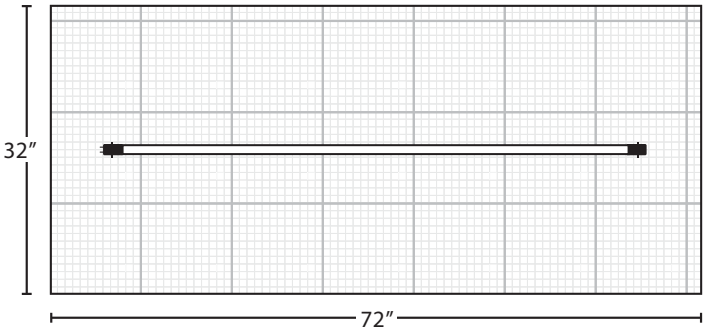


12″ Max. space between lamps
6″ Max. space to end of coils

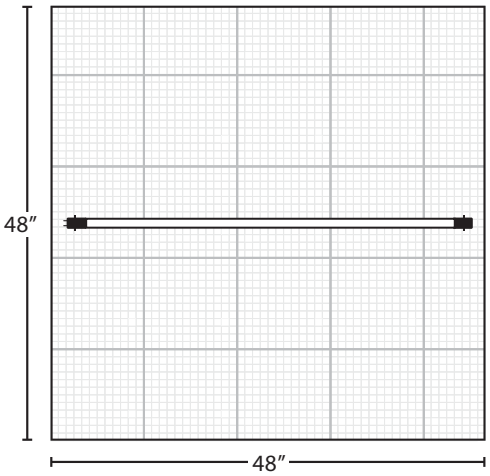
Overlap lamps where necessary



SINGLE 46″ LAMP



SINGLE 60″ LAMP



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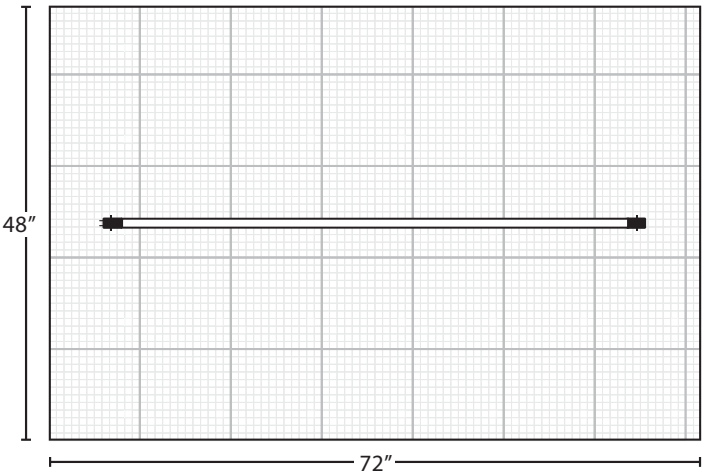

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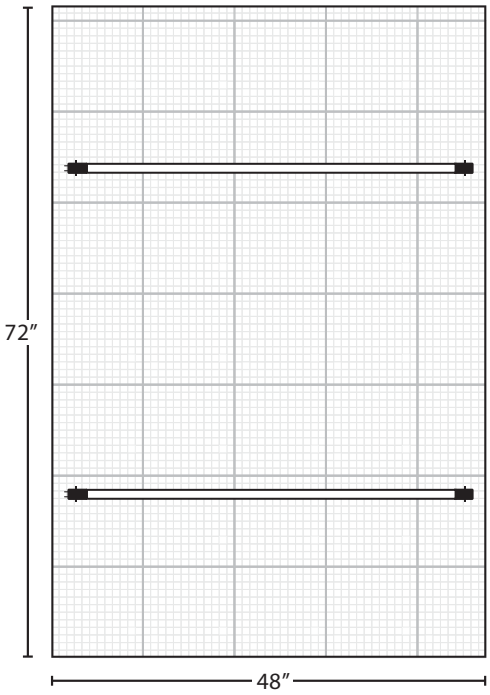

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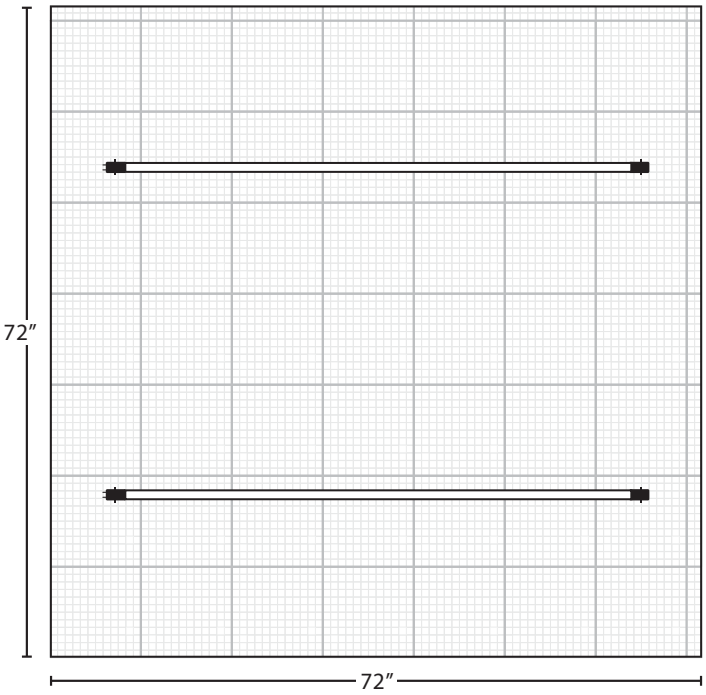


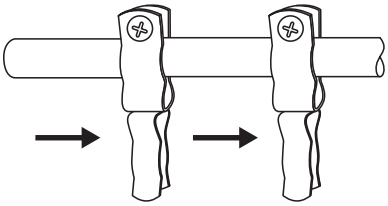
DUAL 60″ LAMPS

❶ Assemble Conduit Framework

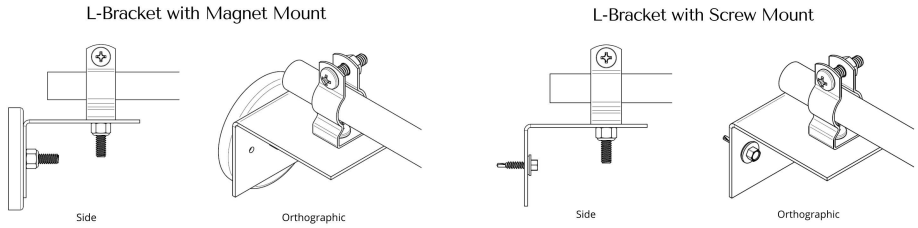
1. Measure and cut tubing to length then slide on conduit/ lamp clamps (do not fully tighten bolts yet).

2. Mount the L-bracket and tubing as shown. Mount L-bracket to air handler wall using screws or magnet (galvanized metal only).

1. Slide On Hardware



2. Mount L-bracket and Tubing



❷ 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 ceramic lamp tip on the other end. **DO NOT clamp onto the lamp glass.** Use **Black Nylon Zip-Ties** to secure lamp cables to Tubular Rack components and/or supports.

IMPORTANT! Install in accordance with all state and local electrical and building codes.

Proper voltage is automatically selected by the unit between 120–277 VAC Single Phase 50/60 hz. Direct from circuit or for 460 VAC use a step-down transformer.

IMPORTANT! An external power suppressor is suggested if power surges occur often.

❸ Mount Power Supply

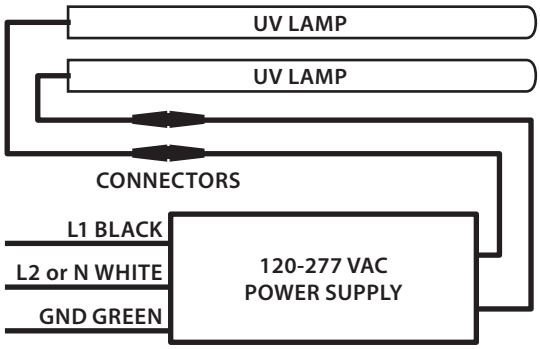
Mount the power supply in a location (inside or outside of the HVAC system) that is convenient for access to the main power supply and for connection to the UV lamps. The power supply is weather resistant and is suitable for mounting inside or outside of the air handler.

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 or another sealing method to pass the power cord and lamp cables into the interior of the air handler for connections. We also offer an **Optional 3/4" or 1" Cable Strain Relief**

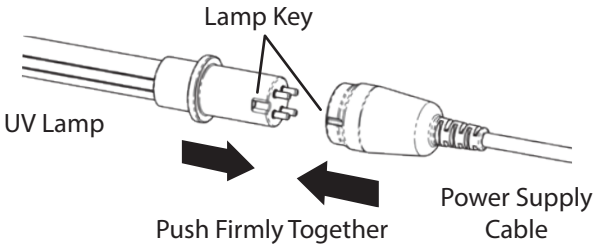
2. IMPORTANT! Turn off main power before making electrical connections. Refer to the **Electrical Diagram** for proper connection of the power supply to the main power.

3. An **Optional Door Interlock Switch** is available 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.

Electrical Diagram

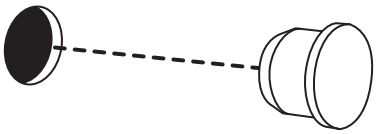


Align Pins & Lamp Key



❹ Connect Lamps & Cables

Arrange cables as needed for installation. When UV lamps, power supplies, and cables are in place join the lamp and power supply cables by aligning the electrical pins and flanges on the rubber connectors and pushing them firmly together. **When adding lamp extensions, 20 ft. is the maximum distance from power supply to the lamp.**



❺ Sight Glass Installation

1. The sight glass allows safe viewing of the UV light system when in operation. Find a suitable location such as a door to the HVAC system for the sight glass.

2. Drill a 0.5" hole and screw the sight glass through it.

❻ 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.

❼ 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.

❽ UV Lamp Replacement

High output lamps are rated for two years germicidal effectiveness. The lamps will continue to glow after they have passed their rated life span 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# UVC04-232HO	32" High Output 2 Year Lamp
Part# UVC04-246HO	46" High Output 2 Year Lamp

Important! Use only GermZap replacement lamps. Use of replacement lamps from other manufacturers voids the warranty.

❾ Trouble Shooting

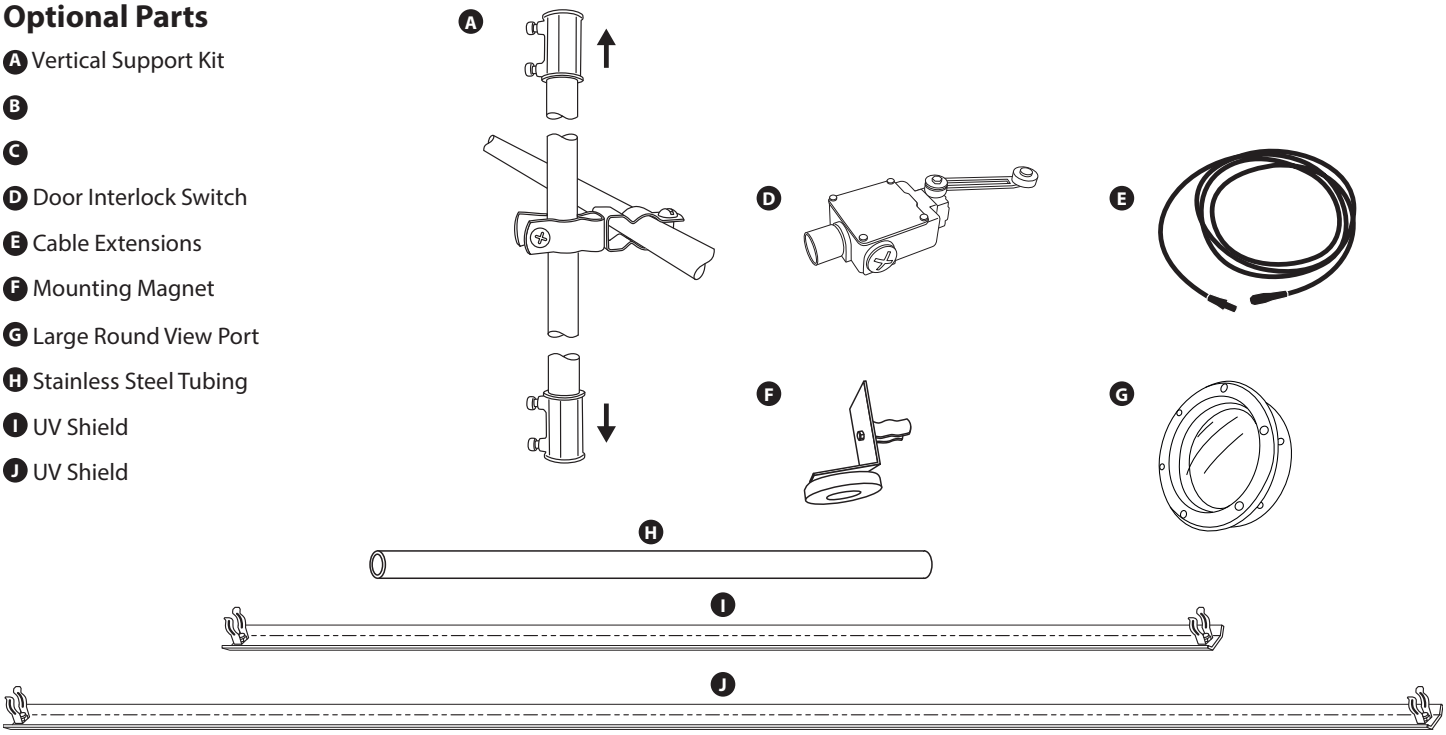
Problem	Solution
UV Lamp(s) Not Lighting	1. Check that power is applied. 2. Check that the unit is turned ON. 3. Ensure the remote lamp cables are properly connected. 4. Check the fuse. Replace only with same size and type. 5. Reset power switch on power supply (off then on). 6. Install New UV Lamp(s). 7. Consult Factory.
UV Lamp(s) Flickering	1. UV Lamp(s) have reached end of effective service life. Install new lamp(s) of same type. 2. If unit is new, check remote cables to ensure they are properly connected. 3. Reset power switch on power supply (off then on). 4. If new lamps still flicker, consult factory.
UV Lamps Have burned Out Prematurely	1. Consult Factory.
Power Supply Will Not Light UV Lamps even after new lamps are installed	1. Consult Factory. 2. External power suppressor may be needed if power surges occur.

GermZap® Commercial Series Accessories

Customize your UVGI installation with genuine GermZap® Commercial Series Accessories. Available where you purchased your kit.

Optional Parts

- **A** Vertical Support Kit
- **B**
- **C**
- **D** Door Interlock Switch
- **E** Cable Extensions
- **F** Mounting Magnet
- **G** Large Round View Port
- **H** Stainless Steel Tubing
- **I** UV Shield
- **J** UV Shield



Manufacturer's Warranty:

This warranty supersedes and replaces any warranty statements orally made by the Sales Person, Distributor or Dealer or contained in the written instructions or other Brochures or informational documents in relation to this product. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

What Does This Warranty Cover? This limited manufacturer warranty covers any defects or malfunctions in material and workmanship under the normal use and service when operated and maintained in strict accordance with manufacturer's instructions for the Lifetime of the equipment.

How Long Does The Coverage Last? 1) GermZap Power Supply: For ten years from when the product is installed. 2) Lamps are warranted for germicidal output for two (2) years from the date of installation. This warranty is not transferable.

What Will Warranty Cover? Replacement of any defective or malfunctioning part at no charge.

What Does This Warranty Not Cover? THIS PRODUCT IS NOT INTENDED TO BE PURCHASED AND INSTALLED BY UNLICENSED HVAC OR ELECTRICAL CONTRACTORS. This warranty does not cover products or parts purchased from any source other than licensed HVAC or electrical contractors. This warranty does not cover parts installed by unlicensed HVAC or electrical contractors. This warranty does not cover parts damaged as a result of misuse, abuse, or any use other than its intended use, accident, acts of god, neglect, or from improper operation, maintenance, installation, modification or adjustments. Triatomic Environmental, Inc. shall have no responsibility for charges incurred by the customer for installation or removal of warranted items.

This warranty does not cover parts or equipment used with the GermZap system not provided by GermZap.

**This warranty shall be void if UV lamps from manufacturer's are used with this equipment.

Consequential and incidental damages are not recoverable under this warranty. Manufacturer assumes no liability for any harm, which may occur as a result of the use of the equipment herein and shall not be liable for consequential or any other damages whether or not caused by manufacturer's negligence or resulting from any express or implied warranty or breach thereof. Consequential damages for the purpose of this warranty shall include, but not be limited to, loss of use, income or profit, or loss of or damages to property or injury or death to persons or animals occasioned by or arising out of operation, use, the operation, installation, repair or replacement of the equipment or otherwise. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

There are no Warranties which extend beyond the description of the face hereof.

How Do You Get Service? In order to be eligible for service under this warranty you MUST provide original purchase order to GermZap. If something is wrong with your product, call your installing contractor to receive a Return Merchandise Authorization (RMA) and instructions for returning the product to a licensed distributor in your area or the manufacturer.

Once the product is returned, we will inspect your product and contact you within 10 business days of our receipt of the product to give the results of our inspection. If we determine that the product is covered under this warranty, we will ship to you at no additional cost a replacement part. Replacement parts may be refurbished. If we determine that the product is not covered under this warranty, or that this warranty is void, the product will be returned to you COD. There is no charge for inspection.

How Does State Law Apply? This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GermZap™

Made in USA