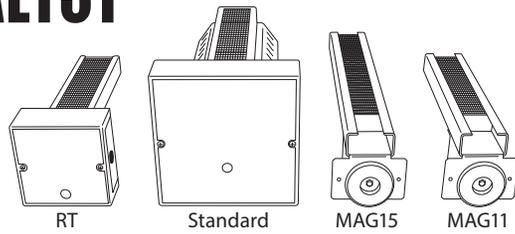


# CARBON CATALYST

## WHOLE-HOUSE AIR PURIFIERS



Carbon Catalyst whole-house air purifiers reduce odor-causing and potentially toxic VOCs, as well as biological contaminants including mold, bacteria, viruses, and allergens in indoor air. This award-winning technology uses a unique combination UV-C light and activated carbon cells to clean the air.



### INSTALLATION INSTRUCTIONS

US patent #7,704,463



#### IMPORTANT!

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

#### WARNING!

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

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

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### Carbon Catalyst Standard Parts List

**A** Main Unit

**B** Power Cord (ER Model)

**C** Duct Mount Plate

**D** Duct Mount Gasket

**Small Parts**

**E** Self-tapping Screws

**F** Machine Screws (for cover)

**G** Quick Nut (plastic)

**H** Tap-in Connector

**I** Spade Connector

**UV Lamps**

**J** PART: TUVL-115 LIFE: 1 Year

**K** PART: TUVL-215 LIFE: 2 Year

**Optional 2nd UV Light (Dual)**

**V** PART: TUVL-115P LIFE: 1 Year

**W** PART: TUVL-215P LIFE: 2 Year

**X** Panel sticker

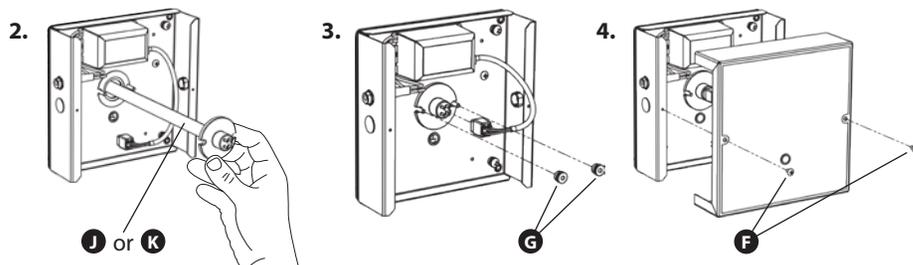
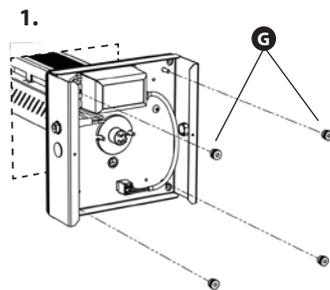
**Y** Sight Glass

**Z** Magnet mount

See back page for lamp replacement info

### STEP 2: Carbon Catalyst Standard Power Unit & UV Lamp Mounting

1. Fit the Carbon Catalyst Standard Main Unit through hole in duct. If attaching directly to metal duct use (4) Self-tapping Screws. If the Backing Plate is used fit the unit over the threaded posts and use (4) Quick Nuts **G** to secure it.
2. Insert UV Lamp.
3. Mount UV Lamp using (2) Quick Nuts and attach lamp connector (be sure to align the four connector pins).
4. Attach the cover with machine screws **F**.



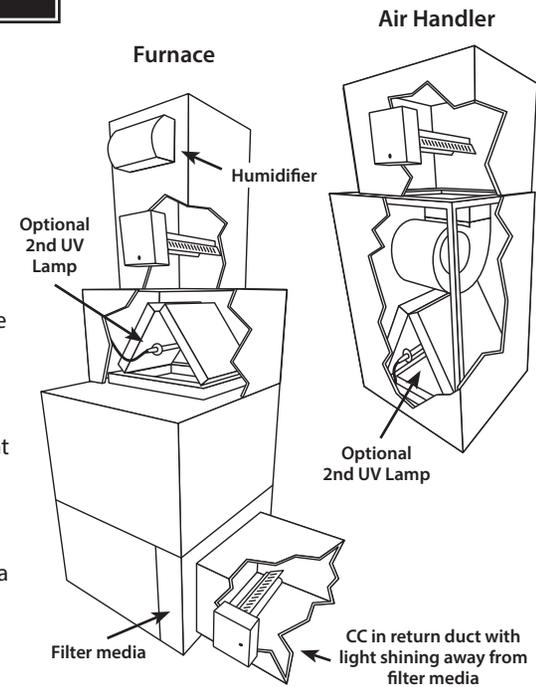
### Carbon Catalyst Standard Installation

Carbon Catalyst Standard is usually installed on the supply side duct just above the air system (upstream of a humidifier). It can also be installed on the return side if necessary.

Orient so the air flows past the UV light first before the carbon. Position the unit so the UV light does not shine directly on non-uv-resistant materials (filters, humidifiers, flex duct, etc.). Ideally the UV light shines on the coil.

For dual systems select a remote UV light location that shines on the greatest surface area or the area with the most microbial growth. Refer to the Optional Remote UV Light section for installation instructions.

### Typical Installation Locations



### STEP 1: Carbon Catalyst Standard Duct Mounting

1. Use gasket **D** to trace cut-line onto duct.
2. Cut hole in sheet metal or duct board.
3. For sheet metal duct secure mounting plate **C** to sheet metal ducts using self-tapping screws **E**.\*
4. Remove paper backing from one side of gasket and fix gasket to the back of the mounting plate.
5. Remove paper backing from back of gasket then fix mounting plate and gasket to the duct.
6. Bend mounting plate flanges around the edges of the hole to secure mounting plate. For duct board use tape on edges of mounting plate for air leaks and additional hold.

**IMPORTANT! Remove and dispose of cut-out piece of material.**

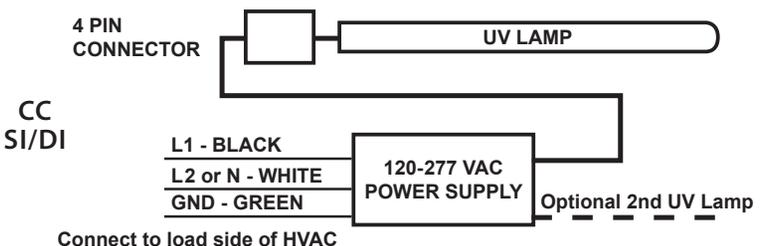
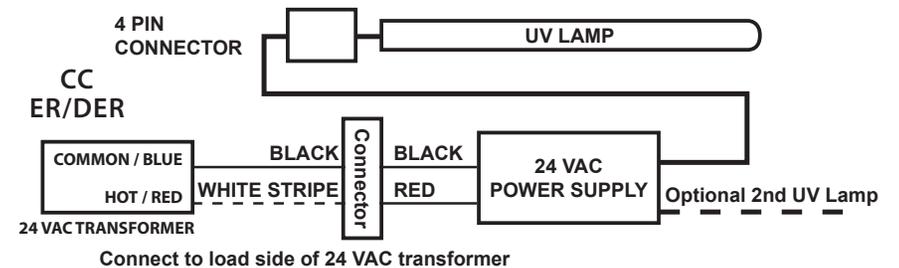
\* To install without backing plate use (4) self-tapping screws.

### STEP 3: Carbon Catalyst Standard Connecting to Power

#### IMPORTANT

Before connecting to power confirm which model is being installed. Turn off main power source before installation. Always use proper conduit fittings and terminations. Model information is printed on the Power Unit cover.

**IMPORTANT! Must be wired to constant power - do not connect to blower relay.**



## Carbon Catalyst RT Installation

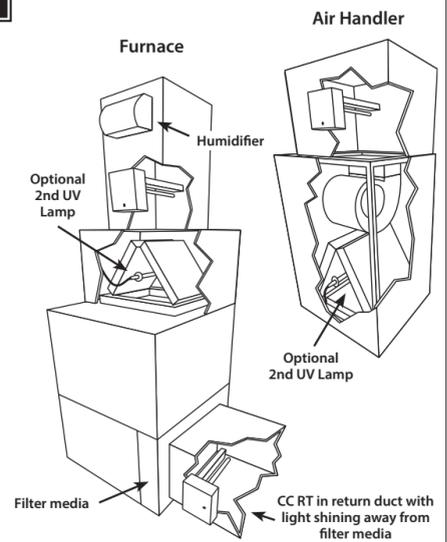


Carbon Catalyst RT is usually installed on the supply side duct just above the air system (upstream of a humidifier). It can also be installed on the return side if necessary.

Orient so the air flows past the UV light first before the carbon. Position the unit so the UV light does not shine directly on non-uv-resistant materials (filters, humidifiers, flex duct, etc.). Ideally the UV light shines on the coil.

For dual systems select a remote UV light location that shines on the greatest surface area or the area with the most microbial growth. Refer to the Optional Remote UV Light section for installation instructions.

## Typical Installation Locations



## Carbon Catalyst RT Parts List

**Main Unit**

**A** Main Unit

**B** Power Cord (ER Model)

**C** Duct Mount Plate

**D** Duct Mount Gasket

**Small Parts**

**E** Self-tapping Screws

**F** Machine Screws (for cover)

**G** Quick Nut (plastic)

**H** Tap-in Connector

**I** Spade Connector

**UV Lamps**

**J** PART: TUVL-111 LIFE: 1 Year

**K** PART: TUVL-211 LIFE: 2 Year

**Optional 2nd UV Light (Dual)**

**V** PART: TUVL-115P LIFE: 1 Year

**W** PART: TUVL-215P LIFE: 2 Year

**Power Supply**

**N** ER Power Supply

**O** ST Power Supply

**P** SI/DI Power Supply

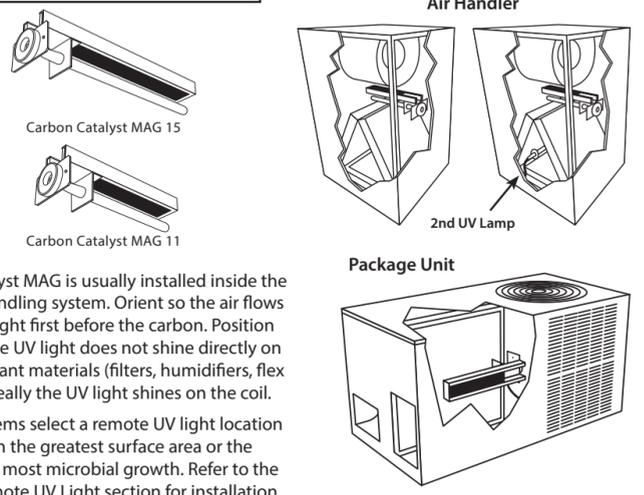
**X** Panel sticker

**Y** Sight Glass

**Z** Magnet mount

## Carbon Catalyst MAG Installation

## Typical Installation Locations



Carbon Catalyst MAG is usually installed inside the central air handling system. Orient so the air flows past the UV light first before the carbon. Position the unit so the UV light does not shine directly on non-uv-resistant materials (filters, humidifiers, flex duct, etc.). Ideally the UV light shines on the coil.

For dual systems select a remote UV light location that shines on the greatest surface area or the area with the most microbial growth. Refer to the Optional Remote UV Light section for installation instructions.

## Carbon Catalyst MAG Parts List

**Main Unit**

**A** Main Unit

**Small Parts**

**E** Self-tapping Screws

**G** Tap-in Connector

**H** Quick Nut (plastic)

**I** Spade Connector

**MAG15 UV Lamps**

**J** PART: TUVL-115 LIFE: 1 Year

**K** PART: TUVL-215 LIFE: 2 Year

**MAG11 UV Lamps**

**L** PART: TUVL-111 LIFE: 1 Year

**M** PART: TUVL-211 LIFE: 2 Year

**Power Supply**

**N** ER Power Supply

**O** ST Power Supply

**P** SI/DI Power Supply

**Optional 2nd UV Light (Dual)**

**V** PART: TUVL-115P LIFE: 1 Year

**W** PART: TUVL-215P LIFE: 2 Year

**X** Panel sticker

**Y** Sight Glass

**Z** Magnet mount

### STEP 1: Carbon Catalyst RT Duct Mounting

- Use gasket **D** to trace cut-line onto duct.
- Cut hole in sheet metal or duct board.
- For sheet metal duct secure mounting plate **C** to sheet metal ducts using self-tapping screws **E**.\*
- Remove paper backing from one side of gasket and fix gasket to the back of the mounting plate.
- Remove paper backing from back of gasket then fix mounting plate and gasket to the duct.
- Bend mounting plate flanges around the edges of the hole to secure mounting plate. For duct board use tape on edges of mounting plate for air leaks and additional hold.

**IMPORTANT! Remove and dispose of cut-out piece of material.**

\*To install without backing plate use (4) self-tapping screws.

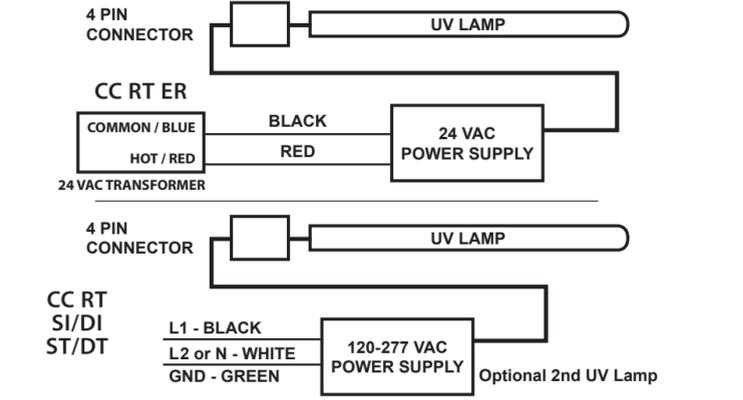
### STEP 2: Carbon Catalyst RT Power Unit & UV Lamp Mounting

- Fit the Carbon Catalyst RT Main Unit through hole in duct. If attaching directly to metal duct use (4) Self-tapping Screws. If the Backing Plate is used fit the unit over the threaded posts and use (4) Quick Nuts to secure it.
- Insert UV Lamp.
- Mount UV Lamp using (2) Quick Nuts and attach lamp connector (be sure to align the four connector pins).
- Attach the cover with machine screws.

### STEP 3: Connecting Carbon Catalyst RT to Power

**IMPORTANT**  
Before connecting to power confirm which model is being installed. Turn off main power source before installation. Model information is printed on the Power Unit cover.

**IMPORTANT! Must be wired to constant power - do not connect to blower relay.**



### STEP 1: Carbon Catalyst MAG Surface Installation

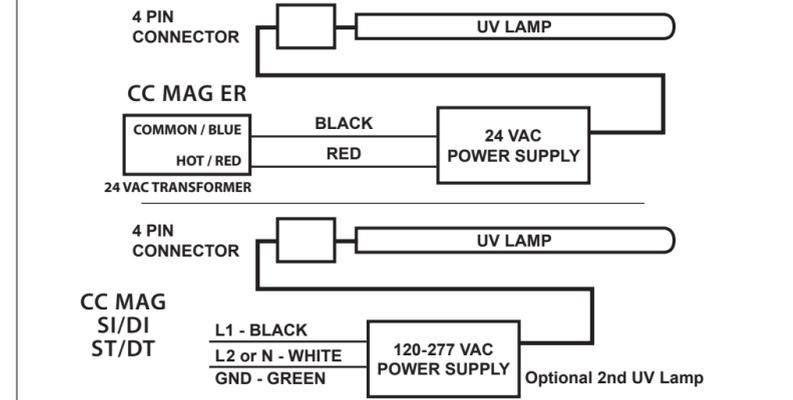
- Determine the optimal position for placement of MAG unit inside the air system.
- Use a utility knife to cut a slit in the insulation on the interior surface.
- Place the magnetic mounting bracket directly on the metal surface or remove the magnet and hard-mount the bracket using the self-tapping screws provided. Use foil tape to close the cut in the insulation.
- Mount the UV Lamp to the MAG unit as shown using 2 quick nuts.
- Connect lamp: make sure the flanges are aligned and then push the connectors firmly together. A tight connection ensures a proper water-resistant seal.

**Important!** do not install the mounting magnet within 12" of digital signal devices as this may cause interference.

### STEP 2: Connecting Carbon Catalyst MAG to Power

**IMPORTANT**  
Before connecting to power confirm which model is being installed. Turn off main power source before installation. Model information is printed on the Power Unit cover.

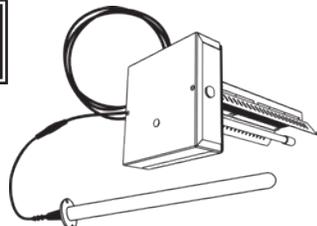
**IMPORTANT! Must be wired to constant power - do not connect to blower relay.**



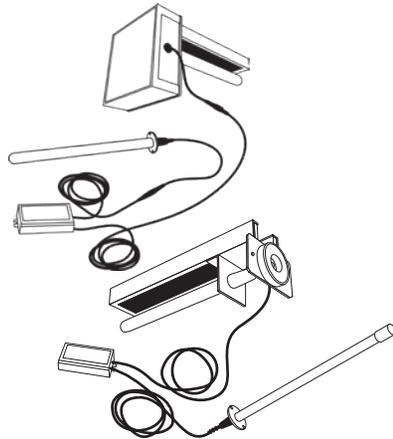
## Remote UV Light Installation (Dual Systems)



Carbon Catalyst Dual systems (Standard, RT, Mag) include a second, remote mounted UV light for additional HVAC disinfection, usually at the coil. Dual systems include a second power supply for the remote UV lamp. To add a second UV light to an CC system that is not a dual purchase an additional UV light with its own power supply.



CC Standard has an internal power supply for the second lamp. CC RT & MAG have external power supplies with a cable for the second lamp.

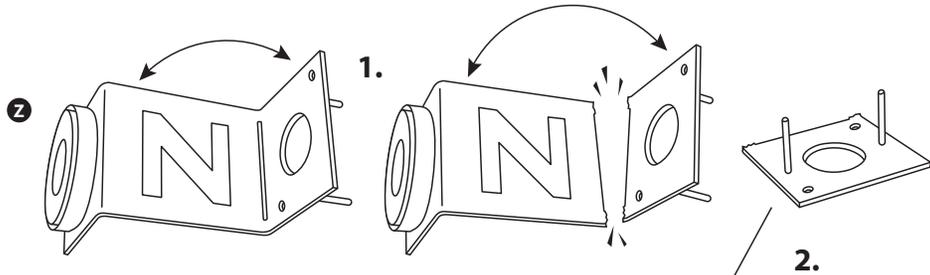


**WARNING**  
PROTECT EYES FROM UV LIGHT  
TURN OFF UNIT OR DISCONNECT  
BEFORE SERVICING

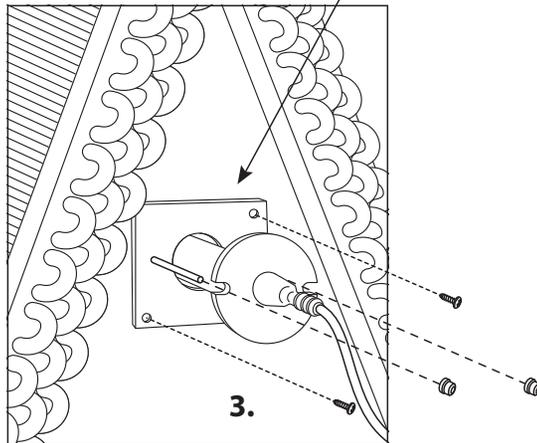
### IMPORTANT!

- Dual lamps are wired in series - both must be connected for lamps to light
- Only qualified technicians should install this product
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

## STEP 2: Coil "A" plate or Duct Installation

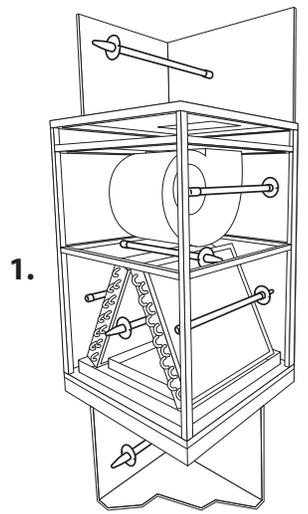
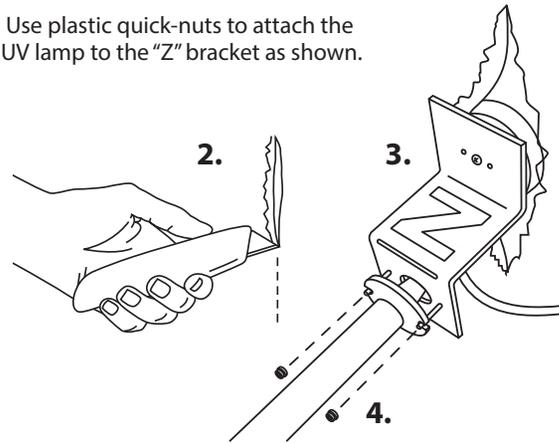


1. Snap the "Z" bracket apart by bending.
2. Drill a 1" hole in the "A"-plate or duct then attach the smaller piece of the bracket using the self-tapping screws.
3. Insert the UV lamp into the hole then use the plastic quick-nuts to attach the UV lamp to the "Z" bracket as shown.



## STEP 1: Remote UV Surface Installation

1. Determine the optimal position for placement of the UV lamp.
2. Use a utility knife to cut a slit in the insulation on the interior surface.
3. Place the magnetic "Z" bracket directly on the metal surface or remove the magnet and hard-mount the bracket using the self-tapping screws provided. Use foil tape to close the cut in the insulation.
4. Use plastic quick-nuts to attach the UV lamp to the "Z" bracket as shown.

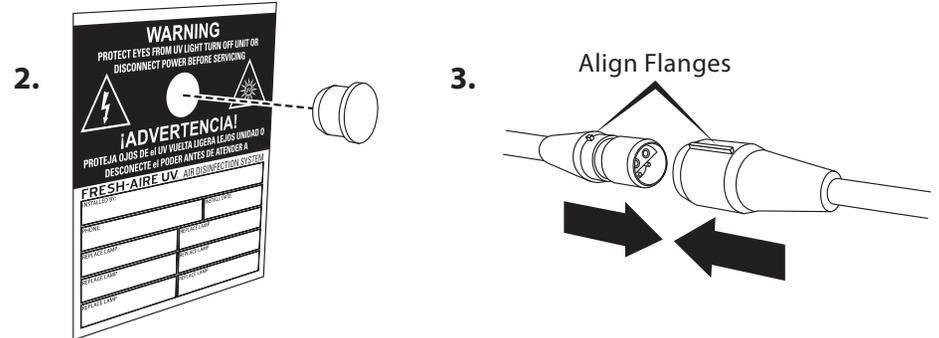


Typical remote UV locations

**Important:** some materials inside the air system (including filter media, flex duct, wiring etc.) may not be UV light resistant. Use the optional UV shield (part #TUV-SHIELD-LPC) or cover the materials with reflective tape.

## STEP 4 : Remote UV Configuration

1. Find a suitable location on the outside of the duct-work near the UV Lamp installation and apply the warning/lamp replacement sticker
2. Drill a 1/2" hole through the orange circle on the sticker. Press the UV safety viewport into hole.
3. Connect lamp: make sure the flanges are aligned and then push the connectors firmly together. A tight connection ensures a proper water-resistant seal.
4. Turn on the power and use the sight glass to confirm that the UV Lamp is operating.



## Lamp Replacement

Germicidal UV lamps need to be replaced periodically. Systems will include one-year (TUVL-1xx), or two-year (TUVL-2xx) UV-C lamps.

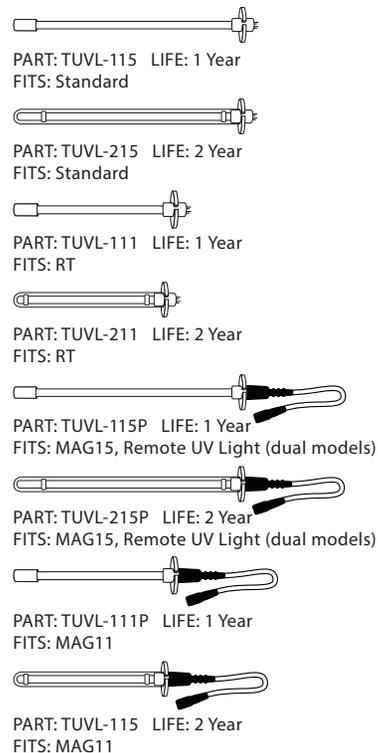
Note: UV lamps will continue to emit visible light but they lose germicidal effectiveness over time. One-year and two-year lamps are interchangeable, you can upgrade to a two-year lamp with your existing power supply.

### CAUTION!

UV lamps contain small amounts of mercury - dispose of lamps in accordance with local environmental regulations.

For more information visit [www.lamprecycle.org](http://www.lamprecycle.org)

Note: Use of replacement UV lamps other than those listed voids warranty.



## 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 lifetime 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) Power Supply: For as long as you own the real property where the product is installed. 2) TUVL-1XX Series Ultraviolet Lamp is warranted for germicidal output for one-year from the date of installation. 3) TUVL-2XX Series Ultraviolet Lamp is warranted for germicidal output for two (2) years from the date of installation. This warranty is not transferable.

**What Will Triatomic Environmental, Inc. Do?** Triatomic Environmental, Inc. will replace any defective or malfunctioning part at no charge. You must pay any labor charges and shipping charges of defective product to our warranty department.

**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 Carbon Catalyst system that are not manufactured by Triatomic Environmental, Inc.

**\*\*This warranty shall be void if UV lamps from manufacturer's other than Triatomic Environmental, Inc. 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 return the warranty registration card or register online at [www.freshaireuv.com](http://www.freshaireuv.com). 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.