



# Installation and Operation Instructions



## Enhanced UVC Kit

Part Number: 10000180-1

Patents 5,817,276/ 6,245,293/ 6,267,924/ 6,280,686/ 6,313,470/ 6,423,882/ 6,500,267 /6,589,476/ 6,627,000/ 6,783,578/ 7,140,749/ 7,282,728/ 7,459,694 & others pending

Made in the USA

**NOTE:** Read this entire instruction sheet before starting the installation.

### IMPORTANT CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult your supplier or Steril-Aire for information or assistance.

Understand the signal words **DANGER**, **WARNING**, and **CAUTION**. These words are universally used for overall safety. **DANGER** identifies the most serious hazards which will result in severe personal injury or death. **WARNING** signifies hazards which could result in personal injury or death. **CAUTION** is used to identify unsafe practices resulting in minor personal injury or product and property damage.

#### **WARNING:**

Before performing maintenance or service on fixture, ensure unit is unplugged. Electrical shock can cause injury or death.

#### **CAUTIONS:**

- Never expose eyes or skin to UVC light. Wear gloves, face shield/glasses (per ANSI Z87.1) and cover all exposed skin.
- Do not touch UVC Emitter® germicidal lamp without gloves. Damage to Emitter may result. Oil from fingerprints will permanently etch glass of Emitter and

weaken structure. If necessary, clean Emitter using a Steril-Aire cleaning kit, isopropyl alcohol and a lint-free wipe may be substituted.

- UVC Emitters are fragile. To prevent accidental breakage handle the UVC Emitter with care.
- Voltages outside of the range designed for the unit will void the warranty and do permanent damage to the entire unit.
- Emitter contains a small quantity of mercury. If an Emitter breaks, clean and dispose of with the same care as a fluorescent lamp.
- UVC energy may cause damage to non-metallic components. Such components shall be protected with UV resistant material such as aluminum foil, aluminum duct tape, metallic shields, etc.
- The qualified installer or agency must use factory kits and accessories when installing this product.

For your safety ensure that the Kit is electrically connected to a proper power source, on/off switch, interlock switch (or control panel) and fuse.

Upon completing the installation, the UVC Emitters should be operated continuously, 24/7, to preclude the development of mold and bacteria.

Dispose of used Emitters in accordance with local regulations regarding the disposal of fluorescent lamps.

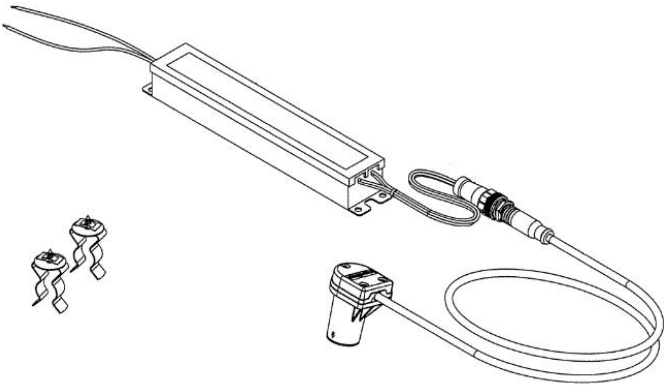
# INSTALLATION & OPERATION

**⚠ NOTE:** Ensure that Emitter is installed before power is applied. Installing Emitter after power has been applied may trigger the “end-of-lamp-life circuit” and the Emitter may fail to light. If this happens, shut off power for 10 seconds and then turn power back on. Emitter will then light..

**⚠ CAUTION:** Do not drill into coil, refrigerant lines or other mechanical equipment. Consult all applicable codes before installing. Check power supply housing label for the correct power requirements. Obtain power from a suitable, protected (fused) and grounded power source.

The Enhanced UVC Kit is comprised of the following components:

A Power Supply with an M12 Receptacle, A 3 foot Emitter Connection Cable (with an IP67 Connector & M12 plug), and two Spring Clips.



*Emitters are not included but sold separately*

## **INSTALLATION SPECIFICATIONS**

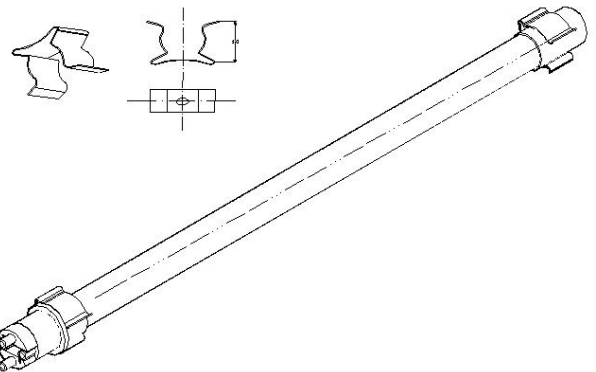
The Enhanced UVC Kit is installed downstream from the coil. If downstream space is unavailable, install upstream.

The Emitter should be at least 1” away from any heating coil and not make contact with the AHU blower.

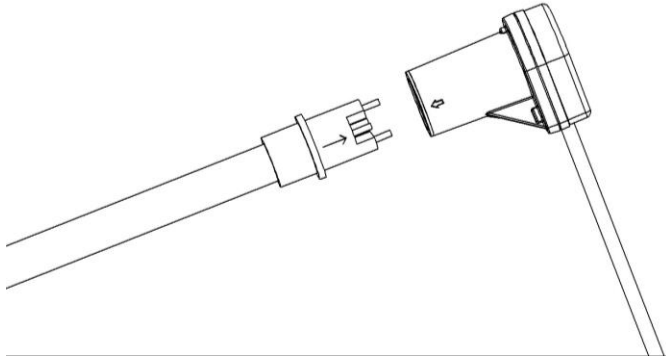
## **INSTALLATION INSTRUCTIONS**

**WARNING:** Before performing maintenance or service on fixture, ensure unit is unplugged. Electrical shock can cause injury or death.

1. The Emitter access door or panel should be interlocked (interlock switch P/N 90000120) with the power source to turn Emitter(s) off when the Air Handler is opened. It should have signs (provided) alerting maintenance personnel to the possible hazard of looking at or exposing skin to UVC energy. Service accesses may be equipped with a glass or Lexan® window to view Emitters; viewports are available as an accessory. UVC energy does not penetrate common glass or Lexan®.
2. If applicable, remove outer cover of air handler.
3. UVC energy may damage some plastics. Wrap suspect items with aluminum tape; use metallic conduit or use other appropriate shielding where these items may be in "line of sight" of the UVC energy.
4. Determine an appropriate flat-surfaced location for mounting the power supply. Make sure that the Emitter Connection Cable (with extension cord, if applicable) can reach the pins of the Emitter and that M12 Plug can reach the M12 Receptacle at the power source; mount the power supply. The recommended maximum extension wire length from Emitter to power supply is 35' (10.67m).
5. If using the Spring C-Clips, mount the two (2) spring C-clips on an existing panel or framing structure facing the coil. The clips should be attached to the Emitter on both ceramic ends. Install Emitter ceramic into the spring clips provided.



6. Using a qualified electrician, make the electrical connection to the electrical cable coming from power supply housing. **Don't turn on power.**
7. Connect lead socket to Emitter by aligning arrows.



8. Screw in the M12 Plug on the wire lead to the M12 Receptacle on Power Supply enclosure aligning the tab & slot.
9. Complete all power connections.
10. Reconnect power to the air conditioner and toggle the installed switch, if applicable, to the "On" position. The Emitter should emit a bright blue hue, indicating that it is properly powered.
11. Attach the Caution Label and Lamp Change Date Label to air handler access panel so they are clearly visible.

## MAINTENANCE

Emitters need to be periodically replaced with Genuine Steril-Aire Emitters to maintain design output. Emitters should be replaced after 9000 hours of use (1-year).

## TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
<b>Emitter does not light</b>	Momentary loss of power.	Reset Power Turn off power for 10 Seconds, and then turn power on.
	Poor connection	Check connection to Emitter. Check wiring connections. Reset Power
	Incorrect wiring	Inspect circuit to wiring diagram.
	Dirty pins	Clean pins. Reset Power
	System malfunction	Check system components, interlock door switches, relays, motion detectors, etc.
	Emitter reaching end of life	Replace with new Emitter. Reset Power
	Defective Power supply	Replace Power Supply.
	Broken Filament	Replace with new Emitter. Reset Power
<b>Visibly Weak Emitter Light</b>	Bad Wiring	Check wiring to Emitter
	Emitter reaching end of life	Replace Emitter
	Emitter too Cold	If Emitter is at or below 35°F(1°C), Emitter is too cold to operate properly.
<b>Red/Orange Emitter</b>	Emitter reaching end of life	Replace Emitter
	Contamination in Gas Mixture	

## EMITTERS, REPLACEMENT PARTS & ACCESSORIES

<b>Steril-Aire Enhanced Emitters</b>	
<u>Part Number</u>	<u>Description</u>
21000310	EGTS 24 VO - Enhanced 24" Single Ended Emitter
21000410	EGTS 30 VO - Enhanced 30" Single Ended Emitter
21000510	EGTS 36 VO - Enhanced 36" Single Ended Emitter
21000610	EGTS 42 VO - Enhanced 42" Single Ended Emitter
21000910	EGTS 50 VO - Enhanced 50" Single Ended Emitter
21000810	EGTS 61 VO - Enhanced 61" Single Ended Emitter
<b>Replacement Parts</b>	
<u>Part Number</u>	<u>Description</u>
10000180	Power Supply Replacement for UVC Kit & RIK
90000812	Spring Clips Kit
50000130-03	Enhanced Emitter Connection Cable – 3 ft.
<b>Accessories</b>	
<u>Part Number</u>	<u>Description</u>
50000135-10	M12 Extension Cable for Enhanced UVC Kit & RIK - 10ft
50000135-20	M12 Extension Cable for Enhanced UVC Kit & RIK - 20ft
50000135-30	M12 Extension Cable for Enhanced UVC Kit & RIK - 30ft
11002209	Short Hooks Kit
90000222	Flat Plate Lamp Holder Kit (for metal)
90000220	Flat Plate Lamp Holder Kit (for plastic)
90000120	Push Rod Actuator Interlock Switch Kit 16A-12 V, 10A-250V
11005003	Toggle Switch
15000160	Quick Slip Fitting

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