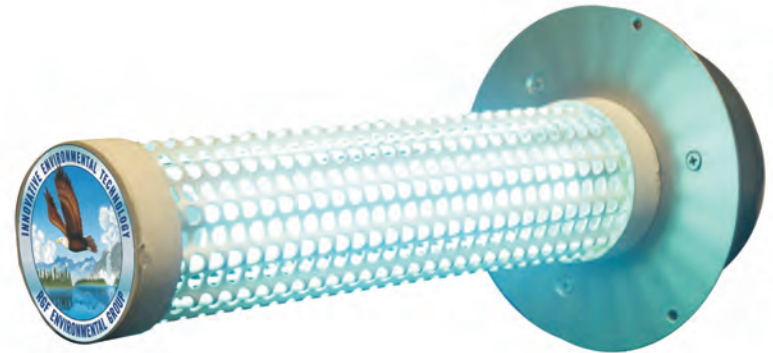




## **Guardian Air** by RGF®

### **New Advanced Environmental Air Treatment System**

Thank you for purchasing the Guardian Air by  
RGF® Environmental Group, Inc.  
We are confident this system will provide you with years of  
Fresh, Clean and Odor-Free Air!!!



NOTE: Please take time to read the attached assembly instructions.  
All instructions and precautions should be adhered to while  
operating this system.

## The PHI CELL by RGF®

The **PHI CELL by RGF Environmental Group** is designed to help eliminate sick building syndrome risks by reducing odors, air pollutants, and cold and virus causing germs through a patent pending Photohydroionization® (PHI) process. The PHI Cells are easily mounted into existing air conditioning and heating systems. When the HVAC system is in operation, the PHI Cell uses an Advanced Oxidation Process to reduce airborne contaminants.

### Typical Installation

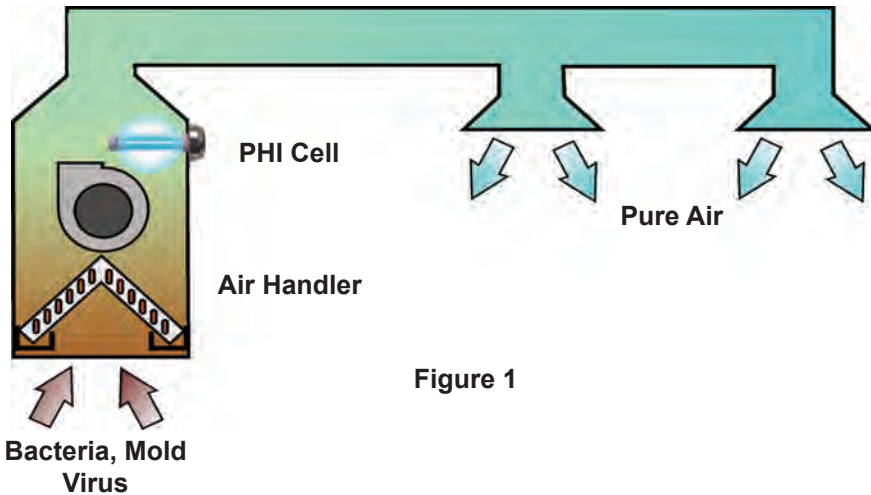


Figure 1

### PHI Cell Features

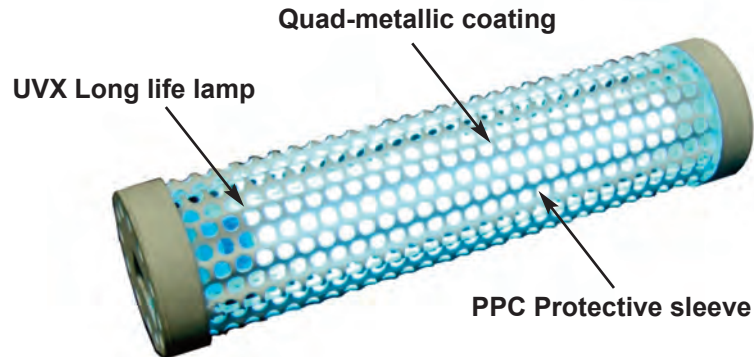


Figure 2

### WARRANTY REQUEST FORM (INCOMPLETE FORMS WILL NOT BE PROCESSED!)

RETURN AUTHORIZATION NO. \_\_\_\_\_

CONTRACTOR:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ FAX \_\_\_\_\_

WHOLESALER:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ FAX \_\_\_\_\_

EMAIL ADDRESS \_\_\_\_\_

UNIT: MODEL # \_\_\_\_\_ SERIAL # \_\_\_\_\_

RGF INVOICE # \_\_\_\_\_ DISTRIBUTOR P.O. #: \_\_\_\_\_

DATE OF SALE: \_\_\_\_\_ OVER THE COUNTER EXCHANGE? YES NO

IF YES, SERIAL # \_\_\_\_\_

ITEM(S) SUBMITTED FOR WARRANTY:

1) \_\_\_\_\_

2) \_\_\_\_\_

REASON(S) FOR RETURN:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(FOR MANUFACTURER USE ONLY)

DATE ITEM(S) RECEIVED: \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_

REPLACEMENT UNIT OR PART SENT

COMMENTS: \_\_\_\_\_

NOTE: THIS COMPLETED FORM MUST ACCOMPANY ALL RETURNED ITEMS.

SHIP TO:

RGF Environmental Group, Inc.

ATTN: CUSTOMER SERVICE DEPARTMENT

3875 FISCAL COURT

WEST PALM BEACH, FL 33404 USA

Tel: (561) 848-1826 • (800) 842-7771 • Fax: (561) 848-1160

**PHI CELL by RGF®  
INSTALLATION INSTRUCTIONS**

**CAUTION: NEVER LOOK DIRECTLY AT AN ILLUMINATED PHI CELL.  
THIS DEVICE PRODUCES GERMICIDAL UV LIGHT AND WILL CAUSE  
DAMAGE TO EYES**

Your kit contains the following:

- Guardian Air PHI CELL and housing with adhesive backed mounting plate and 6' lead
- Adhesive backed foil mounting ring
- Four (4) mounting screws
- Instructions and warranty card

**INSTALLATION INSTRUCTIONS:**

**1. Determine the Mounting Location:**

- To maximize the effectiveness of the PHI cell it is recommended (whenever possible) to install the Guardian Air unit in the air plenum just after the air handling unit (supply side), refer to Figure 1 for clarification.
- As drilling/cutting holes into the duct are required, it is recommended to install the Guardian Air unit outside any existing HVAC air handling unit (this will prevent any possible damages to the HVAC unit during the installation process).
- When locating the unit, always allow for positioning near a suitable power source.
- Once a suitable location is determined, position the Guardian Air midway in your air duct (make sure you have allowed enough room to accommodate the 5-1/2" round mounting plate when finalizing your mounting position).
- Using a 2.25" hole saw (or other suitable means) cut a 2.25" hole into the plenum / duct box AFTER the fan. Cutting into fiberboard is usually easier than metal, and can typically be done with a utility knife (Figure 3). Be sure you are drilling into the ductwork only and not penetrating into the mechanical areas of your HVAC system.

**NOTE: DO NOT USE UNIT IF POWER CORD IS DAMAGED.**



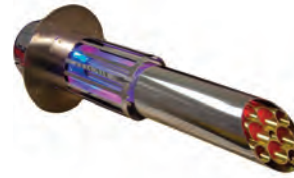
Figure 3

## 2. Mounting Unit:

- Secure the mounting plate to the air duct by first peeling the paper backing off the self-adhesive sealing ring affixed to the back side of the mounting plate (be sure the mating area of the duct surface is clean and dry), refer to Figure 4.



Figure 4



**REME HVAC Cell** REME or Reflective Electro Magnetic Energy utilizes an electromagnetic energy cell to create ionized hydro peroxides™, a friendly oxidizer plasma made from oxygen and humidity. This air purifying plasma is propelled into the HVAC duct or plenum by a silent plasma propulsion module that has no moving parts, yet propels the plasma at 2 cfm. This provides for fan or blower-less operation on a 24-hour basis. The purifying plasma will be propelled through the ducts whether the fan or blower is on or not. This permits a hardwire 110 volt plug-in installation that lets the REME run 24/7 without wiring to the fan/blower circuit.



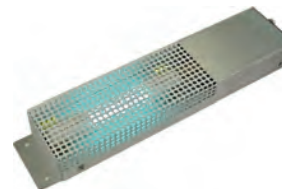
**The Guardian Air Plug In** Natural Air Purification System provides bacteria, mold, odor and VOCs (chemical odors) reduction. The advantage of the Guardian Air Plug In is its ability to be used in any room and be completely inconspicuous. The Guardian Air Plug In plugs directly into a wall outlet and can be used with or without its internal fan. Because it has its own outlets as part of the unit, you do not lose the wall outlet. The Guardian Air Plug In is an air treatment system not a filter.



**The RGF - IMSB** is designed for use on ice machine small compactors and holding tanks. The unit utilizes the PHI Cell to create hydroperoxides, super oxide ions, ozonide ions and hydroxides. This method is far safer and more effective than the traditional ozone generators. Targeted UV ozone generators do not produce nitric oxide gas or nitric acid and they have a very high efficiency rating. The additional oxidizers provide a broader range of applications and redundant oxidation gases.



**RGF's AUV Stick Light+(PCO)** will provide you with years of safe, dependable, economical UV light disinfection and protection of your AC coil surfaces from bacteria, virus, mold growth and odors resulting in a cleaner, more efficient energy-saving system.



**The Mini PHI Cell** by RGF® features the same technology as the Guardian Air but is designed to fit into smaller HVAC systems such as PTAKS – Fan coils and unit ventilators.

### What if I find damage to the equipment after the carrier leaves?

- Claims for concealed shipping damage must be reported to the carrier and a copy sent to your supplier in writing via telefax or certified U.S. Mail within fifteen (15) days from the date of delivery.

**Note:** Please take note that the carrier will not cover the damages if these steps are not adhered to.

### Steps to take when you have determined that your equipment is malfunctioning within the warranty period.

- Call your distributor and notify them of the problem or malfunction. (It may be a simple problem or oversight with a simple solution – See Trouble Shooting Chart).
- If it is determined that a part is malfunctioning due to a defect, ship unit to your supplier or call supplier for other means of return. The Equipment Warranty Form should be completed and included.
- Your supplier will repair or exchange the defective unit with a working replacement.

### Things I should do to avoid problems or injuries when running my GUARDIAN AIR Equipment.

- Thoroughly read and understand all Operating Instructions, Warnings and Precautions before commencing application.
- Place unit in a dry area when possible.

### What service can I expect from my distributor?

- Your distributor will assist you with any problems or questions you may have.
- Sell you optional parts or equipment as needed.
- Assist you with any warranty problems and provide you with a Warranty Request Form (which is required when sending a warranty unit back to the manufacturer for repair or replacement).

- Insert probe into opening with the “system on” indicator positioned at the bottom (6 o’clock position). Once attached to duct, press firmly all around flange to ensure a proper seal, refer to Figure 5.
- In some installations it may be preferred to leave the adhesive paper backing on (old metal ducts or a very rough surfaces), and secure the unit with the screws (provided) via the four mounting holes located on the Guardian Air units mounting plate.

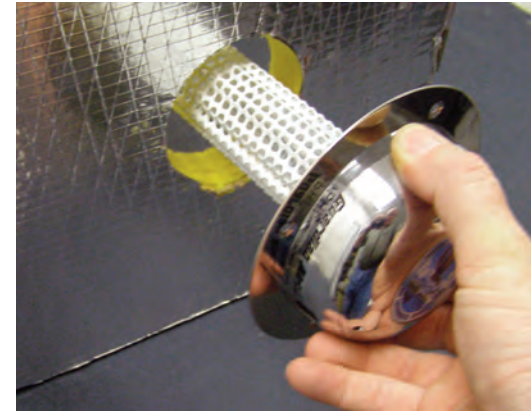


Figure 5

- Once unit is secured, apply the foil sealing ring to ensure an airtight seal. Remove the paper backing, center over unit, smooth and press firmly over entire surface to ensure a good seal (make sure corresponding sealing surface is clean and dry), refer to Figure 6.



Figure 6

### 3. Electrical Connection:

- RGF recommends for optimal performance and maximum cell life that the Guardian Air product line operates when the fan is running. For wiring assistance see installation instructions in this manual.
- The Guardian Air may be connected to any suitable 24 VAC source with an available excess of current of at least 700 mA. When installing a multiple lamp configuration on an HVAC unit it is recommended that a secondary dedicated 24 VAC source be utilized, and sized for at least 700 mA per installed Guardian Air unit. Verify the available volt amps of the unit you are connecting to, prior to any installation. This can be done by checking the current and voltage of the 24 VAC transformer under full load (VA= Volts under load x Amps under load), and comparing this to the ratings listed on the transformer. When using a secondary transformer, ensure it is installed in accordance with all applicable local codes by a qualified installer.
- Locate the control panel of the air handler. Find the 24 VAC transformer or the 24 VAC terminal strip. Allow the 24 VAC power leads to reach the 24 VAC low voltage transformer or terminal strip. Use the provided wire splices for the electrical connections (ensure any connections used conform to local codes), refer to figure 7 for the low voltage electrical schematic.

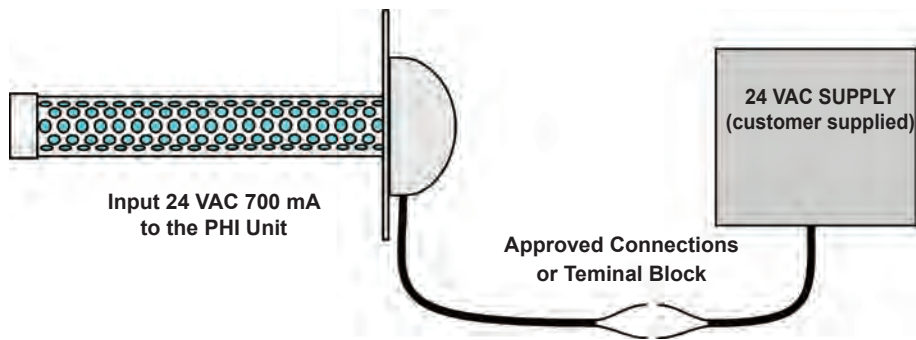


Figure 7

**CAUTION:** ENSURE THAT THE 24 VAC POWER SUPPLY THAT UNIT IS BEING CONNECTED TO, IS CAPABLE OF SUPPLYING AT LEAST 700mA OF CURRENT FOR EACH GUARDIAN AIR BEING INSTALLED ON THE CIRCUIT.

## LIMITED WARRANTY COMMON QUESTIONS

### How long is the warranty?

- For two (2) years from initial start up.

### How do I contact the Manufacturer about my warranty, a question or complaint?

- Your local Sales Representative may answer a question or complaint.
- If they cannot answer the warranty question or complaint, you can contact your local supplier and request the warranty department.

### Are there any parts not covered by this warranty (that the manufacturer will not repair or replace)?

- Yes. Parts damaged by decomposition from chemical action, humidity, moisture, or wear caused by abrasive materials. It does not cover damage resulting from misuse, abuse, or any other use other than its intended use. This warranty does not cover accident, neglect, or from improper operation, maintenance, installation, modification or adjustments.
- Parts not made by Manufacturer. However your supplier will process the claim with the other manufacturer.

### What do I do in the event the equipment is damaged in shipping?

- Immediately upon receipt of the unit, you as the purchaser should inspect the unit and test it to make sure it is operational.
- If there is visible damage to the equipment:
  1. Notify the carrier shipping office immediately and write on the Bill of Lading the visible damage or part(s), which are broken or missing.
  2. Call your local supplier immediately to specify the damage.
  3. Your supplier should refund the unit at the suppliers cost.
  4. Your unit will be replaced or repaired as soon as possible.

## LIMITED WARRANTY

This warranty supersedes and replaces any warranty statements made orally by the Sales Person, Distributor, or Dealer, or contained in the written instructions or other brochures or informational documents related to this product.

Manufacturer warrants the new Guardian Air by RGF® equipment to be free from defects in material and workmanship under normal use and service when operated and maintained in strict accordance with manufacturer's instructions for a period of twenty four (24) months from the date of receipt of equipment. (For international orders twelve (12) months parts only. Shipping not included.)

Manufacturer's obligation under this warranty is limited to repairing or replacing any part found to its satisfaction to be so defective. The manufacturer at its discretion may replace / exchange the defective unit up to 90 days from the date purchase. Hereafter it will need to be returned under a Returned Materials Authorization (RMA) for review and or repair (if found defective). This warranty does not cover parts damaged by decomposition from chemical action or wear caused by abrasive materials, nor does it cover damage resulting from misuse, abuse, or any other than its intended use, accident, neglect, or from improper operation, maintenance, installation, modification or adjustments.

**THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.**

To obtain warranty service and return authorization number, contact your supplier.

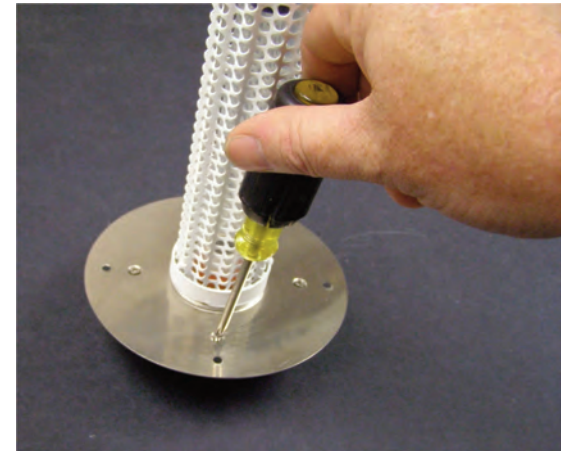
Include a copy of your Bill of Sale, Invoice or Receipt of Purchase, with an explanation of the problem or defect.

Hg- LAMP CONTAINS MERCURY Manage in accord with disposal laws.  
See: [www.lamprecycle.org](http://www.lamprecycle.org)

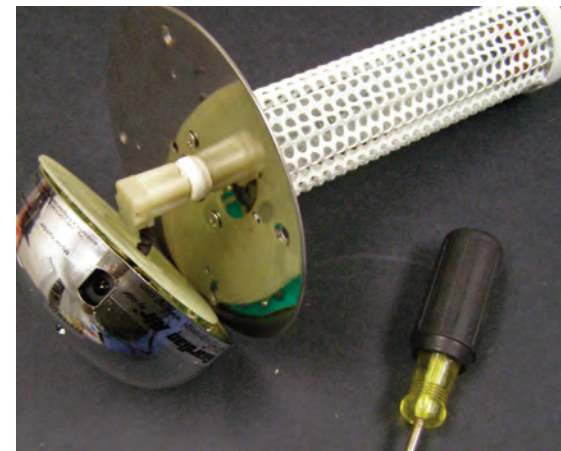
## Replacing PHI Cell: BEFORE CHANGING PHI CELL COMPLETELY DISCONNECT FROM POWER

•Remove unit from duct: Unscrew four mounting screws (if used), cut aluminum sealing ring, and then gently pry away from surface of duct. If mounting adhesive was used, slowly separate mounting plate from duct surface by breaking the adhesive seal with a thin flat object such as a metal putty knife.

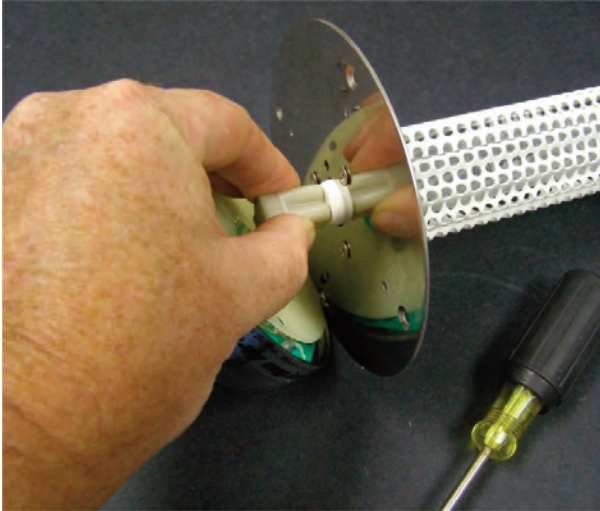
•With the Guardian Air Assembly removed, remove four (4) Philips screws from back of mounting plate and remove the domed housing (if adhesive sealing ring was used, this will need to be scraped away with a putty knife to reveal screws).



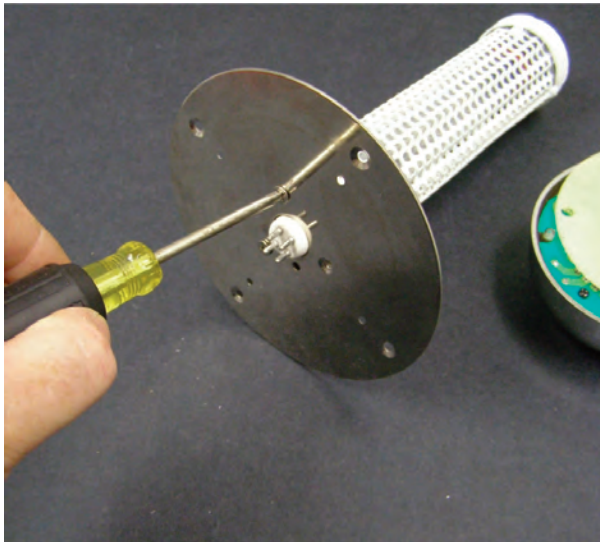
•Once housing is free from mounting plate, carefully free lamp connector from PHI cell lamp.



- Firmly grip lamp connector and with a gentle rocking motion remove connector from lamp pins.



- Remove three (3) Phillips screw attaching PHI cell to mounting plate



- Replace with new PHI Cell and reassemble unit.

## FAQ (Frequently Asked Questions):

### **Q. Is it O.K. to run the unit all the time, or is it better to cycle with the fan?**

**A.** The Guardian Air unit treats your home when the HVAC unit fan is on, it is recommended to leave your fan on continually when possible to provide maximum benefit. However, cycling the unit on and off with the fan is acceptable, but be aware that excessive repeated cycling may degrade the useful life of the lamp elements.

### **Q. Can the unit be installed on the return air side of the HVAC?**

**A.** The best location for your Guardian Air unit is in the plenum, just after the air handler. This allows for full distribution and extended air treatment. In situations where it is somehow impossible to locate the unit after the HVAC unit, it is acceptable to locate the Guardian Air unit before the HVAC unit, however the high moisture content of the cooling coils, as well as the high temp of the heating coils will reduce the effective treatment capacity of the unit.

### **Q. Is it normal to have a fogged (white) appearance in the lamp itself and the surrounding protective coating (PPC)?**

**A.** The white “foggy” appearance in the lamp is actually a result of the long life feature and is normal. Overtime, the PPC coating will also become clouded and this too is a completely normal occurrence.

### **Q. After 25,000 hours my Guardian Air unit indicator light still glows blue, so it is still working right?**

**A.** The blue indicator light does in fact let you know if the unit is operating or not. However, the blue visible light is not an indicator of the relative output of UV energy. The UV output of the unit reduces with time, and after 25,000 hours of operation it is recommended to replace the PHI cell to maintain optimum effectiveness.