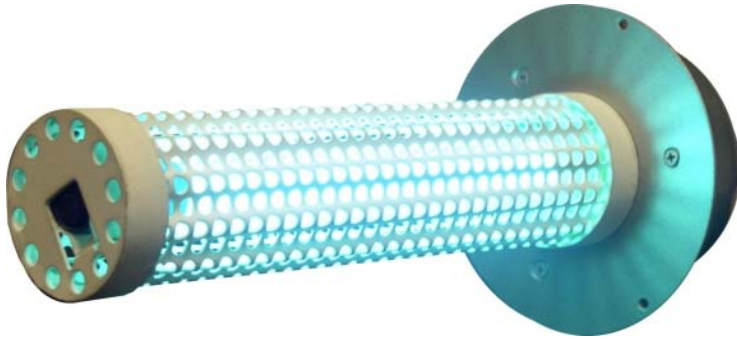


## ENVIRONMENTAL

### Guardian Air AC/Heat Duct Air Purification System A Photohydroionization™ (PHI) Technology

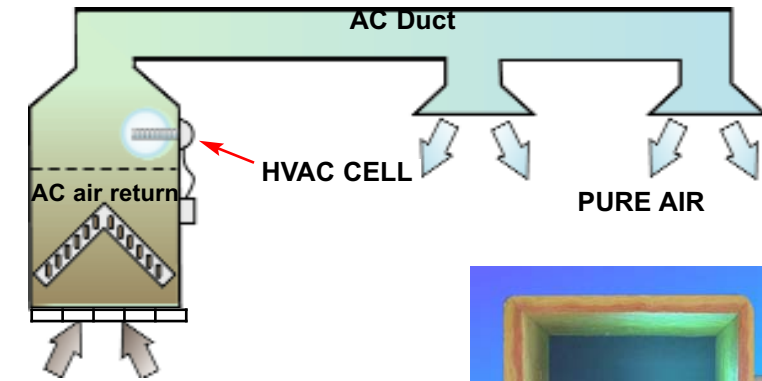


Patent Pending

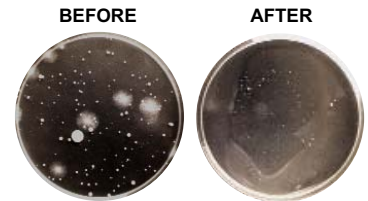
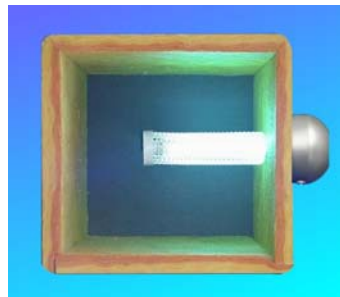
The **Guardian Air by RGF®** is designed to eliminate sick building syndrome risks by reducing odors, air pollutants, VOCs (chemical odors), smoke, mold bacteria and viruses\*. The HVAC-Phi Cells are easily mounted into air conditioning and heating systems air ducts where most sick building problems start. When the HVAC system is in operation the HVAC-Phi Cell creates an Advanced Oxidation Process consisting of: Hydro-peroxides, super oxide ions and hydroxide ions. All are friendly oxidizers. By friendly oxidizers we mean oxidizers that revert back to oxygen and hydrogen after the oxidation of the pollutant.

#### Why Use RGF's Photohydroionization™ Technology ?

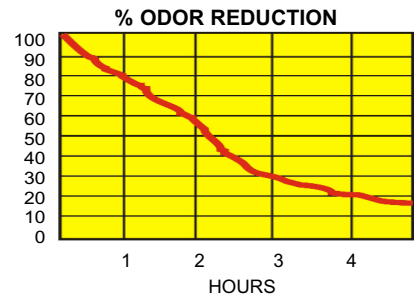
Germicidal UV light rays have been used for decades by the medical industry as a method for destroying micro-organisms (germs, viruses, bacteria). UV light is dependable and can be easily installed in HVAC ducts or a plenum. Germicidal UV light is effective in reducing only the airborne micro-organisms that pass directly through the light rays. However, germicidal UV light has little to no effect on gases, vapors or odors. Photohydroionization Advanced Oxidation, on the other hand, is very effective on gases, vapors, VOCs and odors.



ODORS, MOLD,  
BACTERIA,  
VIRUS, VOCs

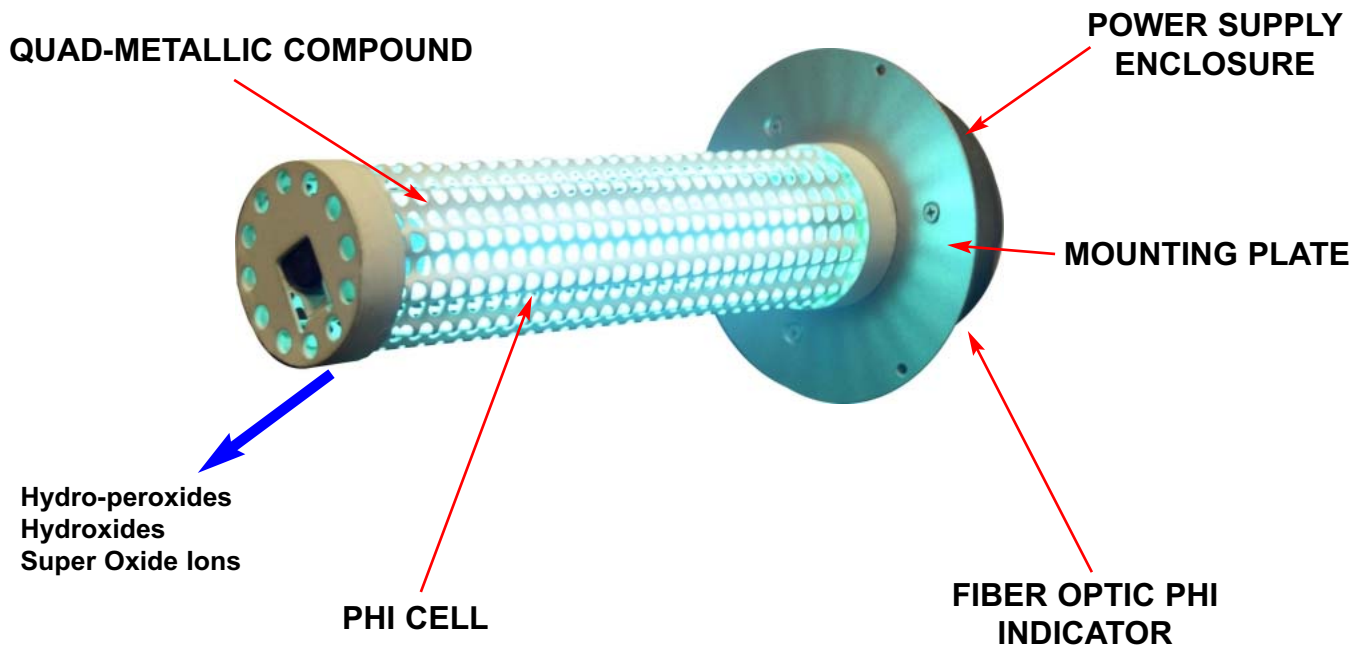


Actual lab tests showing up to 97% reductions of airborne bacteria and mold



UV light enhanced by a hydrated quad-metallic compound target develops an advanced oxidation reaction that creates an Advanced Oxidation Process. This process also produces hydro-peroxides, super oxide ions and hydroxides. By engineering the proper UV light wavelength, in combination with a triple function, no maintenance unit, The PHI Cell provides safe AOP to purify the air.

With the RGF HVAC-Phi Cell Advanced Oxidation System, micro-organisms can be reduced by over 95%. Gases, VOCs and odors can also be reduced significantly, and the room will have hydro-peroxides, super oxide ion and hydroxides which will help give your room fresh, clean and odor free air.



- Hydro-peroxides distribution:** distributed thru air handler
- Super Oxide Ion distribution:** distributed thru air handler
- Hydroxide Ion distribution:** distributed thru air handler
- Installation:** installed in hvac duct or plenum
- Electrical:** 100-240 VAC 50/60 Hz Auto switching power supply or 24VAC
- Materials:** Polymers
- PHI Cell Replacement** Recommended after 2 years

The **Guardian Air** unit size is scaled to accommodate the various air flow rates of different HVAC systems. Locate the air blower size in cubic feet per minute (CFM) of the HVAC system you are intending to install the system in, then pick the model number that corresponds to that flow rate. **Note:** It is recommended these units be installed by a licensed electrician.

<i>Item #</i>	<i>HVAC Air Blower Size</i>	<i>Dimensions</i>	<i>Electrical</i>	<i>Ship Wt.</i>
HVAC-PHI-118-GA-VSF	Up to 1,000 CFM	5" probe / 5.5 Dia." plate	115 VAC 60Hz	3 lbs
HVAC-PHI-212-GA	1,000 to 6,500 CFM	9" probe / 5.5 Dia." plate		3 lbs.
HVAC-PHI-212HO-GA	6,500 to 10,000 CFM	9" probe / 5.5 Dia." plate		3 lbs.
HVAC-PHI-357-GA	10,000 to 18,000 CFM	14" probe / 5.5 Dia." plate		4 lbs.
HVAC-PHI-357HO-GA	18,000 to 26,000 CFM	14" probe / 5.5 Dia." plate		4 lbs.
			<b>24V</b>	
HVAC-PHI-118-GA-VSF-24	"	"		"
HVAC-PHI-212-GA-24	"	"		"
HVAC-PHI-357-GA-24	"	"		"



**RGF Environmental Group, Inc.**

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