

# Second Wind Air Purifiers 24 Volt Installation Manual

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2412-FC

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## **PRODUCT**

All Second Wind air purifiers are designed to address Heating and Air Conditioning air handling units. Second Wind air purifiers use ultraviolet germicidal light at a frequency of 254 nanometers to disinfect biological growth in return or supply air stream . Some key features of the Second Wind 24 volt series:

- 24 volt water proof ballast enclosure
- Allows greater installation flexibility
- Multiple lamp lengths (14 inches)
- Electronic start 24 volt power supply
- Improves efficiency, reduces maintenance
- High intensity lamps
- Patented Photo-catalytic oxidation process available
- Over 9000 hours lamp expectancy
- Five (5) year ballast and unit warranty
- One (1) year lamp warranty

## **SAFETY PROCEDURES**

Please read all instructions carefully to help ensure a correct and SAFE installation of your Second Wind purifier (Ultraviolet Germicidal Photo-catalytic Air Purifier). Failure to do so could damage the equipment or cause harm to yourself or others. Only qualified Heating Ventilation and Air Conditioning (HVAC) technicians should perform the installation.

### **WARNING**

Ultraviolet (UV) light can be harmful to eyes and skin, causing loss of sight and sunburn. When installing do not put unit in an area that allows the UV lamp to be visible . Turn off electrical service before servicing unit.

Electrical shock hazard from 24 volt or 120/277 VAC may cause serious injury or death. Disconnect power before starting installation or maintenance.

Each UV lamp contains a small amount of mercury, in case of breakage use proper disposal techniques. (pg.6)

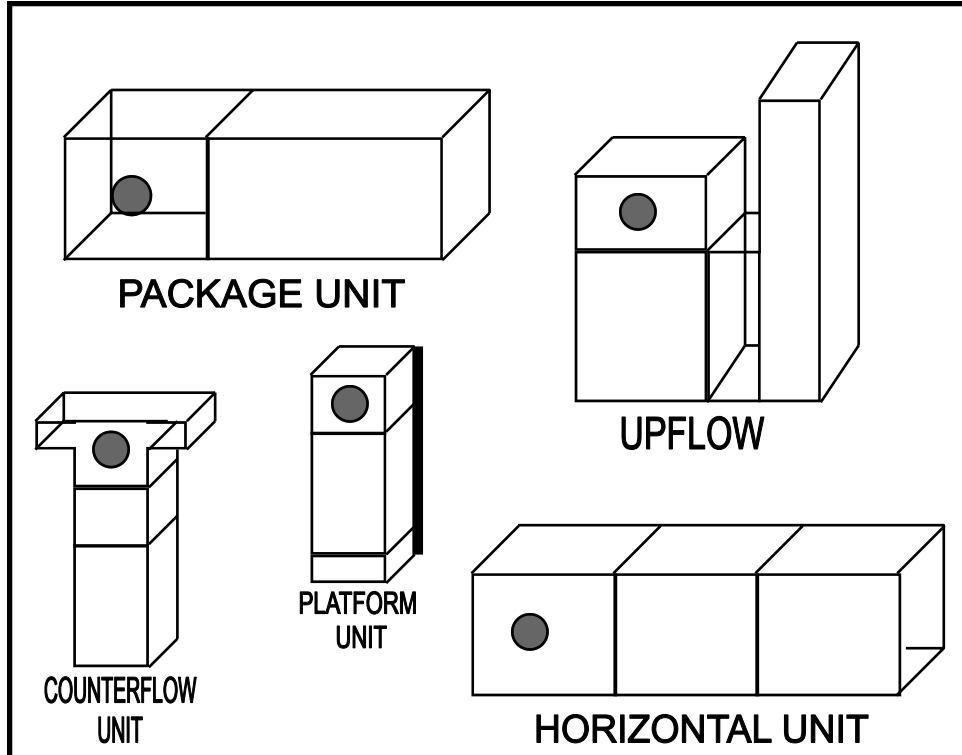
Wear protective gloves and safety glasses when handling lamp. To prevent injury, unplug lamp connector and allow to cool for 10 minutes before servicing.

### **CAUTION**

1. Ultraviolet (UV) light can cause the degradation of plastics, rubber, and other non-metallic materials without uv-inhibitors, used in the HVAC system.
  - Install unit in location that prevents exposure to plastics, rubber, and other non-metallic materials to UV light, or shield such materials with aluminum tape, sheet metal, or metal conduit.
  - If equipment or components are not made of UV resistant materials shield with aluminum tape or sheet metal.
2. Ultraviolet lamps
  - Failure to remove fingerprints from lamp could shorten their lifespan. (clean with denatured alcohol)
  - Dispose of broken and replacement lamps at your local waste management office. For information on local disposal laws refer to [www.lamprecycle.org](http://www.lamprecycle.org)

## Mounting Locations

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## Mounting Location

1. Install the lamp where you have easy access.
2. Make sure before drilling into equipment that there is nothing in the way that would be damaged.
3. The lamp should be installed a minimum of 2-3 inches, maximum 36 inches away from the coil or pan surface.
4. When looking for a mounting location try to install the unit away from non UV resistant plastics, rubber, and other non metallic materials. Shield these components using sheet metal, aluminum tape, or metal conduit.

## Installation Tools

- Electric Drill
- Phillips screwdriver
- Tin snips
- Eye protection
- Tape measure
- Aluminum tape and sealant
- Multimeter

# INSTALLATION

- The installation should be done by a qualified HVAC contractor. Unit must be installed in compliance with all national and local electrical and mechanical codes. Failure to do so will void UL safety listing and Second Wind warranty.
- Read all safety instructions at the beginning of this manual. Failure to do so could lead to personal injury and/or equipment damage.
- In cases where molds are already present on the evaporator coil, it is recommended that a qualified HVAC technician clean the coil before the installation of the UV lamp.
- Protect all non-UV resistant materials from direct UV exposure with aluminum tape or metal conduit.
- CAUTION: Ultraviolet light can be harmful to your sight, do not look at the lamp when it is illuminated.

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1. The 24 volt unit should be mounted in the air handler in a location where the lamp will have the best UV light coverage of the coil and drain pan.
  2. The UV lamp is mounted inside the air handler with a mounting bracket that is supplied with the unit. Use the supplied sheet metal screws to attach the mounting bracket.
  3. Place warning labels (included) on the duct: one on the duct near the UV lamps and the other near the air handler.
  4. Take the lamp from the box being careful not hit the lamp against anything. Slide the lamp on to the mounting bracket or into the UV shield. Use the supplied nuts to attach the lamp to the bracket being careful not to over tighten the nuts. FC model units are equipped with rare earth magnets for mounting
  5. **Wipe lamp with alcohol wipe and clean cloth after installation process.**

## Ballast Mounting

1. The 24 volt ballast should be installed near the 24 VAC transformer/control panel. Feed the UV lamp connection to the lamp. Screw the ballast in place with the supplied screws or magnets if supplied.
2. Use the electrical diagram and connect the ballast to the low voltage connection in accordance with all state and local electrical codes.
3. **Do Not Connect To The High Voltage Power Source.**
4. Connect the power lead for the lamp to the lamp connector from the ballast.
5. Drill hole and insert sight glass, in a location near the lamp installation.
6. Re-install all panels to the air handler.
7. Energize the air handler and check that the lamp is on, looking at sight glass. **Do Not Ever View UV Light DIRECTLY !**

# LAMP REPLACEMENT

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The Second Wind Ultraviolet Germicidal Photo-catalytic 24 Volt Lamp is designed for 9000-11,000 hours of continuous operation. After 9000 hours intensity of the lamp inside the duct diminishes and should be replaced. Even if the lamp is still illuminated replacement of the lamp is recommended, by a qualified HVAC Service Technician.

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1. Disconnect electrical service and turn unit off.
2. Remove screws from remote lamp connector.
3. Disconnect the lamp connector from the lamp base.
4. Remove the nuts from the 24 volt lamp bracket and remove old lamp ( Be careful old lamp may still be hot ! ).
5. Replace the old lamp with the new lamp, making sure the new lamp is clean. If the new lamp is dirty or has fingerprints on it remove with an alcohol wipe.
6. Place lamp bracket over new lamp base and secure with the nuts.
7. Attach lamp connector to the lamp base and use nuts to secure.
8. Turn on electrical service and unit.
9. If lamp does not immediately illuminate, tuen off electrical service and unit. Then rotate bulb 180 degrees to reverse pin contacts in connector.

Model	Replacement Lamp(s)
2414	1082LR
2412-FC	1083LR-FC
2412-O3-FC	1083LR-O3-FC
2414-O3	1082 SIPT
2414-FC	1082R-FC
2414-O3-FC	1082R-O3-FC
2414-S	1082R-PCO
older models may not be shown, contact us for support	

# LAMP DISPOSAL

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UV lamps contain mercury like other household lamps and must be disposed of properly. **State requirements and recycling opportunities vary, go to [www.lamprecycle.org](http://www.lamprecycle.org) for State Regulations & Contacts.** Please contact your county waste collection department for proper disposal details.

***USE GLOVES AND EYE PROTECTION***

If a lamp is broken, **do not use a vacuum cleaner to pick up the waste** . Instead, sweep up the waste into a plastic bag and seal. Contact your county waste collection department for proper disposal details.

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# TROUBLESHOOTING

If the unit does not work, check the following:

**Electrical Supply/Wiring**—Verify that the electrical service is operating correctly.

**Ballast**—If lamp still is not illuminating check the wiring to the ballast. If the ballast is wired properly and the lamp still does not illuminate, replace the ballast. With a fully electronic ballast there is no resistance testing.

**Transformer**—If a transformer is employed to provide power to the unit (not provided by Second Wind), it should be tested in accordance with instructions provided with unit when installed.

**Lamp**—Verify that the lamp is not broken and is properly seated in the lamp connector. To check this, follow steps in the 'Lamp Replacement' section with one exception : you should not remove and replace the lamp. If the lamp is broken read the 'Lamp Disposal' section of this manual.

## SECOND WIND AIR PURIFIER LIMITED WARRANTY APPLIES IN U.S.A. AND CANADA

All Second Wind 24 volt Air Purification systems that are attached to your Heating, Ventilation and Air Conditioning System (HVAC) have the following warranty

### ONE (1) YEAR COVERAGE LAMPS

The lamps are warranted by Second Wind for a period of one (1) year from the date of the original installation, when installed and operated in accordance with Second Wind recommendations. If during this period a lamp fails, Second Wind will provide a free replacement. You must pay shipping charges and all other costs of warranty service. Second Wind will not pay labor involved in diagnostic calls or in removing, servicing, or replacing parts. Second Wind recommends replacement of the UV lamp every 9,000-11,000 hours, the intensity of the lamps will diminish over time.

### FIVE (5) YEAR COVERAGE BALLAST

The ballast is warranted by Second Wind for a period of five (5) years from the date of original installation, when installed and operated in accordance with Second Wind recommendations. If during this period a covered component fails, Second Wind will repair or replace the part. You must pay shipping charges and all other costs of warranty service. Second Wind will not pay labor involved in diagnostic calls or in removing, servicing, or replacing parts.

EXCEPTION TO ABOVE: 2414-S model air purifiers have a lifetime warranty on ballast

### REPAIRS

All repairs of covered components must be made with authorized service parts. Labor charges resulting from diagnostic calls or service are not covered by this warranty.

### CARE OF EQUIPMENT

Your new Second Wind Purifier must be properly installed, operated and maintained in accordance with the unit installation, operation, and maintenance instructions provided with each unit. Failure to provide maintenance per Second Wind instructions will void warranty.

## WARRANTY LIMITATIONS

This warranty will be voided if the covered equipment (only Second Wind replacement parts or units are warranted) is removed from the original installation site. This warranty does not cover damage or defect resulting from:

- 1 Accident, or neglect or unreasonable use or operation of the equipment, including operation of electrical equipment at voltages other than the range specified on the unit name plate.
- 2 Modification, change or alteration of the equipment, except as directed by Second Wind The furnishings of replacement parts under terms of this warranty will apply to the original warranty period and will not extend the warranty.

**Second Wind makes no express warranties other than the warranty specified above. All implied warranties, including the implied warranty of merchantability and fitness for a particular purpose, are limited to the duration of the warranty specified above. Liability for incidental and consequential damages is excluded and is not covered by this warranty. Some States do not allow limitations on the duration of an implied warranty or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions may not apply to you.**

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Second Wind shall not be liable for any default or delay in performance under this warranty caused by any contingency beyond their control.

## WARRANTY PROCEDURES

All Second Wind Air Purification systems that are attached to your Heating, Ventilation and Air Conditioning System (HVAC) have a limited lifetime unit warranty. Ballast and Lamp warranty information is on page 7.

- 1 Be prepared to furnish the following information:
  - a- Complete model number and serial number
  - b- Proof of installation date if warranty claim is made by other than a qualified service dealer who maintains records of your installation date and service history.
  - c- An accurate description of the problem.
  - d- Date of failure.
- 2 Call the installing dealer that you purchased your Second Wind from.
- 3 If the installing dealer is unable to provide warranty parts, contact:

Call, write, fax or e-mail:	Second Wind Air Purifiers	
	255 Great Arrow Avenue, Unit 20C	
	Buffalo, NY 14207	
	1-800-387-4565	PHONE
	716-798-5751	FAX
	service@secondwindairpurifier.com	E-Mail