



# Second Wind Air Purifiers

## Installation and Maintenance Manual

Model 2000

Model 2018

Model 2000-230

Model 2181

# SAFETY CONCERNS

## WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

- 1 Read instruction manual before operating the units.
- 2 Eye damage may result from directly viewing the light produced by these lamps. To reduce the risk of exposure to UV radiation, take UV-radiation protective measures for personnel during servicing.
- 3 This fixture is designed for use with germicidal UV-C lamps and must be installed in compliance with competent technical directions so that user's eyes and bare skin will not be subjected to injurious rays.
- 4 UV Light Hazard. To prevent exposure to ultraviolet light, be sure the ultraviolet air treatment system is disconnected before servicing any part of the HVAC system or removing any access panel or the equivalent.
- 5 There shall not be any openings in the duct that would emit light.
- 6 There shall not be any duct supply or return air openings or any other openings that are in direct line-of-sight of the UV bulb.
- 7 Check damaged parts: Before further use of the unit, any damaged part should be carefully checked to ensure that the unit will operate properly. Any part that is damaged should be properly repaired or replaced.
- 8 Always service unit with Second Wind replacement parts & recommended accessories (i.e. lamps, ballast).

## CAUTION:

- 1 Personal Injury Hazard. Power supply can cause electrical shock. Disconnect power supply before servicing or beginning installation.
- 2 Risk of exposure to excessive ultraviolet (UV) radiation—Do not operate without complete lamp enclosure in place or if sight lens is damaged.
- 3 Equipment Damage Hazard. Ultraviolet light can cause color shift or surface degradation and sometimes structural degradation of non-metallic components. Select mounting location that prevents exposure to plastic flexible duct components, polyurethane foam insulation material, rubber hoses, wire insulations, etc. If mounting options are limited, items above should be protected with ultraviolet resistant materials such as aluminum foil, aluminum duct tape, or metallic shields.

## INSTALLATION LOCATION:

1. See page 4 for possible installation locations.
2. Products shall be mounted only on to metal air ducts.
3. Mounting shall be such that all surfaces in the duct where appliance forms parts of the duct shall be made of metal.
4. All wiring within adjacent heating and air conditioning equipment, for example, shall be shaded from direct line-of-sight from the UV bulb or shall be UV-rated.

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## **PRODUCT**

All Second Wind Air Purifiers are designed for use in Heating and Air Conditioning or 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. The Second Wind 2000 Series is equipped with High Output Lamps and Custom-matched ballasts for High Intensity UVC light. Key features of the 2000 Series units are:

- Lamp lengths: 9” (2181 only, all others 18”)
- Improves efficiency, reduces maintenance
- High Output intensity lamps
- Odor control through photocatalyst
- Over 9,000 hours lamp expectancy
- Lifetime unit warranty
- 5 year ballast warranty
- 1 year lamp warranty

## **PACKAGE CONTENTS**

Enclosure Assembly  
Lamp assembly (in tube)  
Mounting Hardware  
Installation Manual  
Installation Template



## **INSTALLATION TOOLS**

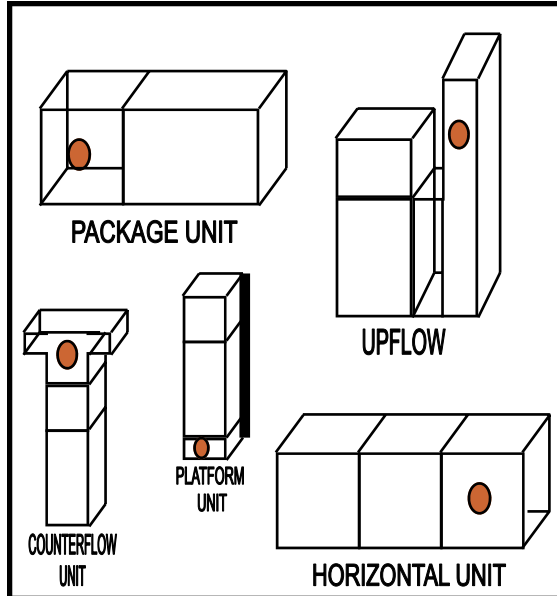
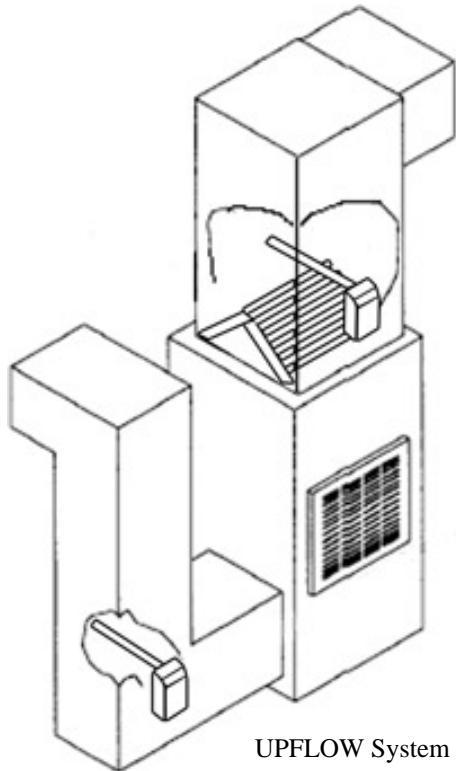
- Electric Drill
- Phillips screwdriver
- 3” dia hole saw (preferred, but not mandatory)
- 1/8” drill bit, 1/2” drill bit
- Eye protection
- Marker
- Installation Template (loose sheet included with manual)
- Tape measure
- Multimeter
- Tinsnips

## **REPLACEMENT PARTS**

- 9” HO replacement lamp (2181 model only).....1068B-R
- 18” HO replacement lamp.....1076R
- Ballast replacement.....1060E-R

## Mounting Locations

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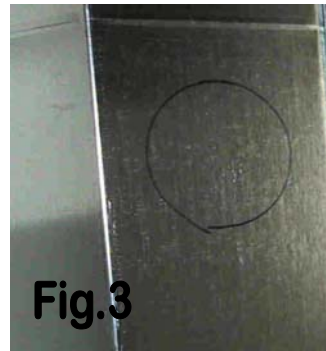
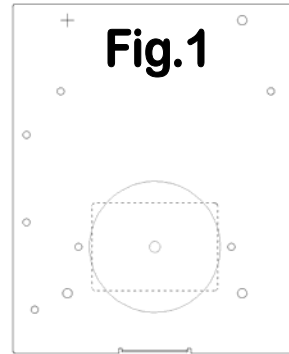


1. Install the lamp where you have easy access.
  2. Make sure before drilling into equipment that there is nothing in the way that would be damaged.
  3. The lamp should be installed a minimum of 2-3 inches, maximum 36 inches away from the coil or pan surface.
  4. When looking for a mounting location, 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 (see page 3, CAUTION notes)
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# INSTALLATION

- Installation should be done by a qualified HVAC contractor.
- Read all safety instructions (Page 2) at the beginning of this manual.
- Make sure unit is installed so that the UV light **can not** be seen directly through any ducts.

- 1 Remove supplied mounting template from packaging (Fig 1). Punch out holes in mounting location with screw tip. Remove hole saw cutout and trace location of lamp opening and mounting holes as shown. **OPTION:** If you will not be using a hole saw, punch  $\text{Ø}1/2$ " hole in center of large diameter on template.
- 2 Remove lamp assembly from packaging and safely set aside, ensuring that it cannot roll off a surface or be stepped on (Fig 2).
- 3 Use  $\text{Ø}1/8$ " drill to drill mounting holes through template into duct wall. Cut Lamp hole with 2-3/4 to 3" diameter hole saw. **OPTION:** if you are not using a hole saw, trace  $\text{Ø}3$ " circle as shown (Fig 3) on template on intended mount surface. Cut-out circular pattern with tinsnips.
- 4 Unscrew the locking screw for the case enclosure and open unit
- 5 Remove adhesive from foam backing on mounting flange (Fig4). Press and hold case against duct until glue holds unit against duct wall. Position unit so all holes align.
- 6 Check that the unit mounting holes line up with the holes in the duct and that the unit base fully contacts the duct. Secure with #10 self tapping screws (supplied).
- 7 Carefully install lamp assembly into Lamp hole (Fig 5) so the lamps penetrate the duct. Secure lamp assembly in position with (2) 8-32 wing nuts. Apply lamp connectors from ballast to 4-pin lamp ends.
9. Close the cover and secure locking screw on case enclosure.
- 10 With the power switch in the off position, connect the Second Wind 2000/2018 unit into 110V outlet. Turn the switch to the "ON" position. **For 2181 and 2000-230 models,** connect the unit to 230V outlet or wire direct to the 240VAC feed. Turn the switch to the "ON" position.
- 11 The air purifier is designed to remain on continuously with the fan of the HVAC system running also. If lamp is operating, the sight glass will illuminate. If it is not see the troubleshooting section of this manual.



# TROUBLESHOOTING

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- 1 For 2000 & 2018 Models, make sure that the unit is plugged into an outlet that is always on. For 2000-230 and 2181 Models, make sure that the unit is plugged or wired into a 240VAC feed that is always on.
- 2 Check the on/off switch to make sure it is on.
- 3 If the lamp is still not on, switch the unit off, unplug the power cord and check the fuse.
- 4 Make sure the lamp is not broken and that it 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 still does not light, rotate the lamp connector 180°, re-attach to lamp., close cover and turn power back on. If the lamp is broken read the 'Lamp Disposal' section of this manual.
- 5 If the lamp is still not on, check the ballast (2000 & 2018 models only).
  - Check the input power by testing the outlet for 110 VAC (230V for 2181 & 2000-230 models).
  - Test the resistance of the ballast. Unplug the power cord. Measure the resistance from the black lead on the input side of the ballast to the blue lead on the output side of the ballast. To contact the blue lead you may need to remove the lamp and put the multi-meter probe into the corresponding socket opening. The resistance should be 7-12 ohms. If the resistance is less than 7 ohms, replace the ballast.
  - If everything else has been checked and is fine, but the lamp is still out, the ballast starter is blown and the ballast should be replaced.

# LAMP REPLACEMENT

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The Second Wind 2000 Series Ultraviolet Germicidal Lamp is designed for 9,000 hours of continuous operation. After 9,000 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.

- **The lamp replacement should be done by a qualified HVAC contractor.**

1. Disconnect or turn off electrical service
2. Open enclosure cover.
3. Disconnect the lamp connector from the lamp base.
4. Unscrew the wing nuts for the lamp assembly bracket ( **Be careful old lamp may still be hot !** ).
5. Stabilize lamp by holding 4-pin base with one hand and release lamp from lamp clip at other end of assembly. Replace the old lamp with the new lamp, making sure the new lamp is clean. Remove fingerprints and dirt with an alcohol wipe.
6. Secure lamp with wing nut. Return lamp assembly to duct and secure with wing nuts. Attach lamp connector to the lamp base.
7. Close cover and secure with screw.
8. Turn on electrical service.



# 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.

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

Your Second Wind Air Purification product that is attached to your Heating, Ventilation and Air Conditioning System (HVAC) has a Limited Lifetime unit warranty. **Units must be registered through [www.secondwindairpurifier.com](http://www.secondwindairpurifier.com) or contact Customer Service at 800-387-4565 to register your product.** Unregistered products will not receive warranty consideration.

## **ONE (1) YEAR COVERAGE LAMPS AND FIVE (5) YEAR COVERAGE BALLAST**

The lamps are warranted by Second Wind for a period of one (1) year from the date of the original installation. The ballast is warranted for a period of five (5) years from the date of the original installation. This is effective only when installed and operated in accordance with Second Wind guidelines. If during this period a lamp or ballast 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 hours, the intensity of the lamps will diminish over time.

## **LIFETIME COVERAGE UNIT**

The covered equipment and covered components are warranted by Second Wind for a Lifetime from the date of the original unit 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.

## **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, 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 Air Purifiers 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 Air Purifiers 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 Air Purifiers shall not be liable for any default or delay in performance under this warranty caused by any contingency beyond their control.

**SECOND WIND AIR PURIFIER LIMITED WARRANTY  
APPLIES IN U.S.A. AND CANADA (cont'd)**

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## **WARRANTY PROCEDURES**

If you intend to submit a warranty request to Second Wind Air Purifiers, please be follow the instructions below and be prepared to furnish the following information:

- 1 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 unit from.
- 3 If the installing dealer is unable to provide warranty parts, contact:  
Second Wind Air Purifiers  
255 Great Arrow Avenue, Unit 20C  
Buffalo, NY 14207  
Phone: 800-387-4565  
Fax: 716-875-5751  
Email: [service@secondwindairpurifier.com](mailto:service@secondwindairpurifier.com)