

SECOND WIND AIR PURIFIERS

INSTALLATION and SERVICE MANUAL



MODEL 1000KCS
MODEL 1000KA
MODEL 1001KCS
MODEL 1001KA
MODEL 1002KCS

SAFETY CONCERNS

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

- 1 Do not look directly at the lamps, without UV protective glasses.
- 2 Read instruction manual before operating the units.
- 3 Use recommended accessories (i.e. lamps, ballast)
- 4 Make sure unit is installed so that the UV light **can not** be seen directly through any returns or supplies.
- 5 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.
- 6 Units should not be installed within 12-18 inches of any non UV resistant materials. If materials are in question call manufacturer of said products to see if they are made with UV inhibitors. Prolonged UV exposure will degrade non UV resistant materials. Non UV resistant materials must be shaded or covered.

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

All Second Wind Air Purification portable systems have a (3) year unit and 1 year lamp warranty. (MODELS:1002kcs, 1000 ka-kcs, 1001 ka-kcs)

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.

THREE (3) YEAR COVERAGE UNIT

The covered equipment and covered components are warranted by Second Wind for a period of three (3) years 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 Air 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 portable systems have a (3) year unit and 1 year lamp warranty. (MODELS:1002kcs, 1000 ka-kcs, 1001 ka-kcs)

- 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

711 Park Ave.

Medina, NY 14103

1-800-387-4565

585-798-5751

2ndwind@rochester.rr.com

PHONE

FAX

E-Mail

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UNPACKING

Your new Second Wind Air Purifier is shipped complete in one container. Carefully unpack the unit and all loose items from the shipping container. Figs. 2 illustrate the unit and all loose items packed with the unit.

- 1 Unit
- 2 Warning Labels
- 3 Installation Manual
- 4 Metal template and mounting plate
- 5 Cord
- 6 Business Reply Card

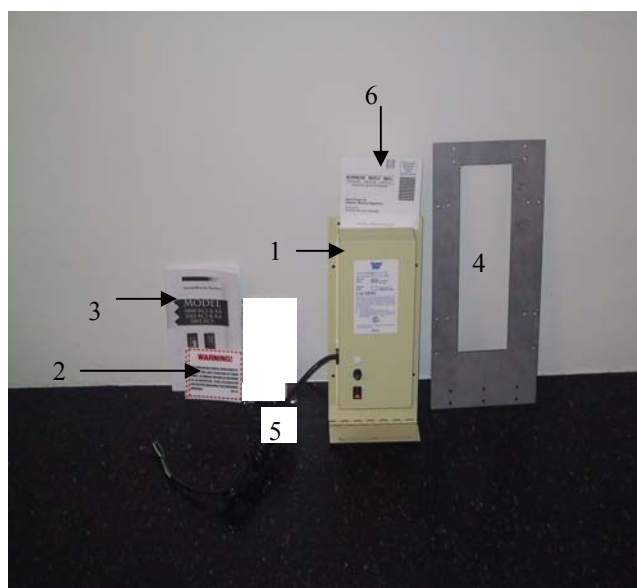


Fig.2

POSSIBLE INSTALLATION LOCATIONS 1000KCS, 1000KA, 1001KCS, 1001KA, 1002KCS

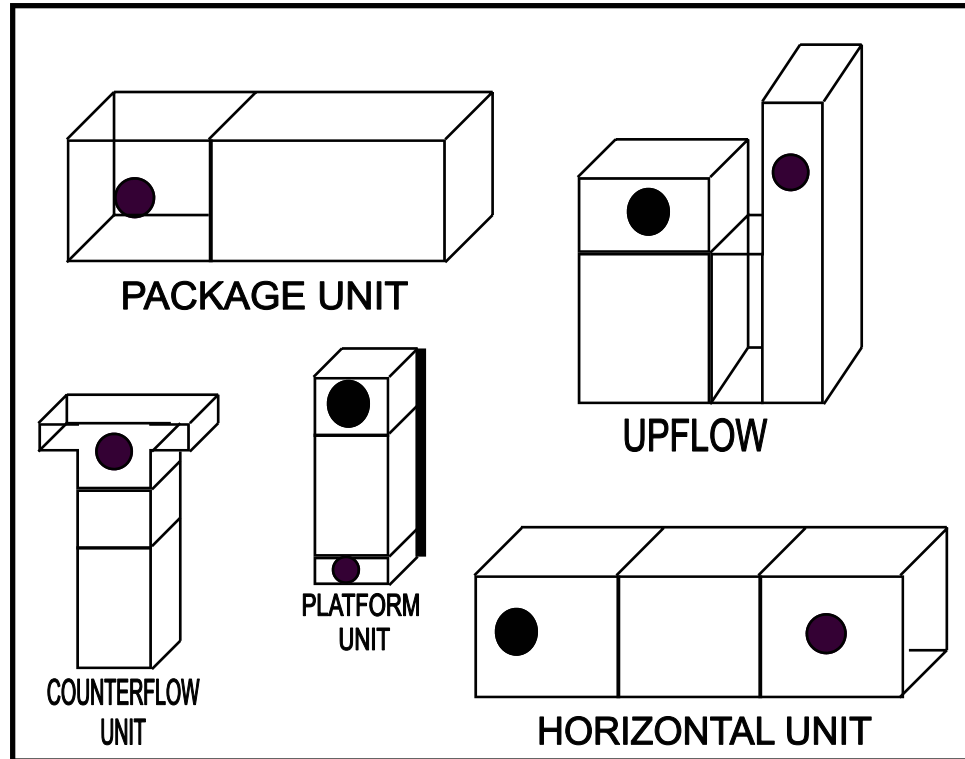


Fig.3

The Second Wind Air Purifier has been tested effective in the destruction and reduction of bacteria, viruses and fungus under various conditions. The effectiveness of this device may vary depending upon room area and rate of circulation. The health aspects associated with this product were not investigated by U.L.

WARNING!!!

DO NOT LOOK AT THE ULTRA-VIOLET LIGHT

DO NOT OPERATE UNTIL IT IS INSTALLED IN THE RETURN OR SUPPLY.

TO DETERMINE AN INSTALLATION LOCATION SEE: FIG.3

Installation 1000ka, 1000kcs, 1001ka, 1001kcs and 1002kcs

- Installation should be done by a qualified HVAC contractor.
- Read all safety instructions at the beginning of this manual.
- Make sure unit is installed so that the UV light **can not** be seen directly through any returns or supplies.
- Units should not be installed within 12-18 inches of any non UV resistant materials. If materials are in question call manufacturer of said products to see if they are made with UV inhibitors. Prolonged UV exposure will degrade non UV resistant materials. Non UV resistant materials must be shaded or covered .

- 1 Using the metal template/mounting bracket pencil out rectangle to cut out. (Fig.4)
- 2 Using the drill with a 1/2 inch drill bit drill a hole along the inside of the marked circle. (Fig.5)
- 3 Then using tinsnips cut out the rectangle (Fig.6).
- 4 Make sure lamps on the 1000 series units are pointed in the direction of the airflow. There are arrows pointing to the direction the air must pass across the lamps. If not remove the lamps from the brackets and turn them around.
- 5 Install mounting plate around opening in duct with zip screws. (Fig.7)
- 6 Use the self tapping sheet metal screws to secure the unit to mounting template. (Fig.8)
- 7 Make sure the power is off to the blower before wiring unit.
- 8 With the switch in the off position wire the unit direct to a 120/240 vac blower, the EAC terminal or use pressure switch, sail switch. Turn the switch to the on position.
- 9 The air purifier is designed to turn on and off with the forced air blower. (Fig.9) If lamp is operating the sight glass will illuminate. If it is not see the troubleshooting section.



Fig.4



Fig.5



Fig.6



Fig.7



Fig.8

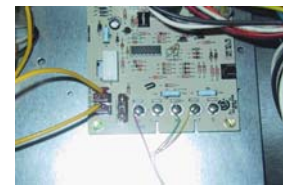


Fig.9

TOOLS FOR INSTALLATION

- 1 Marker
- 2 Tinsnips
- 3 Drill
- 4 Drill Bits
- 5 5/16" & 11/32 "Nut driver
- 6 Tape Measure
- 7 Metal Template and Mounting Bracket

Lamp Replacement

Second Wind Air Purifier lamps are designed to be on all the time. After approximately 9000-11000 hours of operation the lamps intensity will decrease. Installation of a replacement lamp is best handled by a HVAC Contractor.

- 1 Turn unit off and make sure the power is off to the unit.
After lamp has cooled proceed.
- 2 Remove screws from around the unit, do not remove the screws from the hinge. (Fig.13)
- 3 Drop unit down, it will remain attached to the duct via the hinge. (Fig.14)
- 4 Carefully remove lamp from brass lamp holders. (Fig.15)
- 5 Remove lamp connector from end of lamp. (Fig.16 & Fig.17)
- 6 Install new lamp into socket and snap into brass holders.
- 7 Return unit to upright position against duct and re-attach with screws.
- 8 Power unit up and turn on.

NOTE

UV Lamps contain mercury like other fluorescent lamps and must be disposed of properly. Do not throw old lamps in the trash. Contact your local waste collection agency for proper disposal procedures.

If the lamps are dirty or have fingerprints on them, use alcohol to remove.



Fig.13

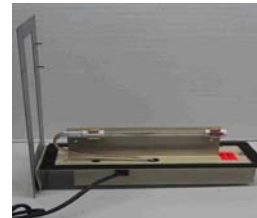


Fig.14



Fig.15



Fig.16



Fig.17

TROUBLESHOOTING

- 1 Make sure that the unit is wired properly and is turned 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, disconnect power and check the fuse.
- 4 Make sure the lamp is not broken and that it is in the socket.
- 5 If the lamp is still not on check the ballast 1000ka and 1000kcs.
 - Check the input power by testing the outlet for 120 VAC.
 - Then test the resistance of the ballast .
Disconnect 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.
 - For the 120 vac ballast (#SSGPH287P) measure the resistance the same as above. The ohms should be 16-30 ohms, if the ohms are below 16 ohms replace the ballast.
- For the 240 vac units 1001ka, 1001kcs and 1002kcs the ballast resistance should be tested like before.
Disconnect power. For the 240 vac ballast (#SSGPH28746RC) the resistance should be 35-45 ohms. If below 35 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.**



Replacement Parts

1	Ballast 240 vac	1056
1	Ballast 120 vac	1059
2	Interlock Switch	1050
3	On/Off Switch 120 V	1061
	On/Off switch 240 V	1057
4	Fuse Assembly	1054
5	Fuse	1055
6	Power Cord	1124
7	Lamp Connector	1014
8	9 " Lamp 1000-1001	1068
9	Brass lamp holder	1013
10	Sight Glass	1078
11	18 " Lamp 1002kcs	1067

Second Wind Air Purifier

Models:

1000KA

1000KCS

1001KA

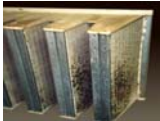
1001KCS

1002KCS

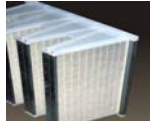
Ultraviolet Germicidal Units for Heating Ventilation and Air Conditioning Systems

Since the first ultraviolet irradiation system was used successfully in 1909, ultraviolet irradiation has had a 94 year performance history. Second Wind uses the ultraviolet wavelength at 253.7nm, ultraviolet radiation lethal to microorganisms. Second wind air purifiers can reduce mold, bacterial, or viral airborne microbes in all areas of a Heating Ventilation and Air Conditioning system (HVAC).

Return Before



Return After



Second Wind air purifiers can also address Volatile Organic Compounds (VOC's), through the addition of Singlet oxygen molecules (O1). Singlet oxygen in this case is achieved by the use of our high intensity ultraviolet lamps. There are two different wavelengths of light that work together to produce singlet oxygen. Gas contaminants are oxidized in a reaction that takes place with the singlet oxygen, changing the contaminates molecular structure.



The Second Wind Purifier is the perfect choice for small or large applications. Second Wind uses ultraviolet germicidal light and singlet oxygen process to disinfect mold, bacteria, infectious disease, and decrease volatile organic compounds in the air stream. Second Wind air purifiers are designed for surface and air disinfection.

Features and Benefits

- Available for all applications
- Disinfects mold
- Inexpensive to operate
- Surface and Air Indoor Air Quality Control
- Proven effectiveness through independent test data
- High intensity Ultraviolet Lamps
- Singlet oxygen process to reduce VOC levels
- 1 year lamp warranty
- Over 9000 hours lamp expectancy
- Electronic start power supply ranges from 110/277 VAC
- Registered as a Class II medical device #k980745
- Registered with the EPA #73112

SPECIFICATIONS

Second Wind Air Purification 1000KA, 1000KCS, 1001KA, 1001KCS and 1002KCS units are mounted in the return to accommodate most HVAC systems. The units install anywhere in the system to disinfect molds, bacteria or reduce VOC contamination. The housing is steel and comes in 2 sizes (9" and 18" lamps). All units are manufacturer assembled and tested.

Models 1001KA, 1001KCS and 1002KCS:

The power source is a electronic, Class P, Sound rated A, Type HL, NO PCB's, type 1 outdoor ballast meeting EMI requirements of CFR Title 47 Part 18 consumer. The operating range is 240VAC and the current is 425ma@240vac. The ballast is designed to operate at any airflow and relative humidity.

Models 1000KA and 1000KCS:

The power source is a electronic, Class P, Sound rated A, Type HL, NO PCB's, type 1 outdoor ballast meeting EMI requirements of CFR Title 47 Part 18 consumer. The operating range is 120 VAC and the current is 425ma@120vac. The ballast is designed to operate at any airflow and relative humidity.

Second Wind lamps operate at 253.7 nm, ideal for air disinfection, good for use at any velocities, temperatures ranging from 30 - 170 F. Every lamp has an extended lamp life coating which helps maintain intensity levels at 85% even after a year of operation. They are a High Output (HO), T5 (15mm) diameter, lamp yielding 2/3 more output than standard lamps of the same length. Base of the type "L" quartz glass is ceramic, with triple-coiled electrodes made of molybdenum lead in a clamped filament design. Lamp connectors are 4-pin single ended circling sockets. Lamp life shall not be less than 9000 hours.

Submitted device shall be tested under typical HVAC conditions and in accordance with the general provisions of IES Lighting Handbook, 1981 applications Volume. Total output per one inch arc length shall be not less than 10uW/cm2 at 1 meter in air of 45 F and 400 fpm

Dimensions:

1000KA - 6"W x 3.25" H x 14"L x 1-9" Lamps
 1000KCS- 6"W x 3.25" H x 14"L x 2-9" Lamps
 1001KA - 6"W x 3.25" H x 14"L x 1-9" Lamps
 1001KCS - 6"W x 3.25" H x 14"L x 2-9" Lamps
 1002KCS - 6"W x 3.25"D x 23"L x 2-18" Lamps

Weight

1000KA - 5 lbs.
 1000KCS - 6 lbs.
 1001KA - 6 lbs
 1001KCS - 7 lbs.
 1002KCS - 10 lbs.

Power Electronic Ballast

1000KA: 120 VAC
1000KCS: 120 VAC
1001KA: 240 VAC
1001KCS: 240 VAC
1002KCS: 240 VAC

Lamps

	18"	9"
Base Face in. -	17.2	8.4
Length mm -	436.0	212.0
Arc Length in.-	14.2	5.2
mm -	360	131
Current mA-	425	425
Wattage W-	40	25
Voltage @60Hz-	86	32
UV Output W-	10	5
UV Output @1M		
uW/cm2 -	75	35
Lamp life hours-	9000	9000

Wiring

Number 18 teflon coated wire 600V, 105C.

Warranty

3-Years Fixture 1-Year Lamps

DEALER IMPRINT:

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