

Part Numbers: P103-R1700G, P103-R4000G

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform basic maintenance functions such as changing lamps. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit or accessory, and other safety precautions that may apply. Follow all safety codes. Wear safety glasses and work gloves.

▲ WARNING

Before installing the P103-R1700G, P103-R4000G Ultraviolet (UV) Air Purifier or performing maintenance or service on the air purifier, turn off main power switch to unit. Electrical shock can cause injury or death. There may be more than one disconnect switch.

▲ CAUTION

Never expose eyes or skin to ultraviolet light from any source. Air purifier must be off before performing maintenance or service. Personal injury may result.

▲ CAUTION

Use only specified replacement lamps with this accessory. Use of an incorrect lamp can result in damage to accessory or lamp.

▲ CAUTION

Do not touch lamp glass without gloves. Reduced performance of lamp may result. Clean lamp after handling.

▲ CAUTION

Lamp contains a small quantity of mercury. If a lamp breaks, clean and dispose of with care.

GENERAL

The Totaline P103-R1700G and P103-R4000G residential ultraviolet air purifiers are designed to kill bacteria, viruses, odor-causing mold and fungus that may be transmitted through the air ducts of the HVAC equipment. The purifiers are installed in the return (preferred) or supply air plenum of the HVAC (heating, ventilation and air conditioning) equipment.

The ultraviolet (UV) band light inhibits and kills mold, fungus, bacteria, viruses and microbial growth on the air flowing through the 6-in. square aluminum tube.

Location — The preferred installation location for the purifier is in the return duct as the air will be treated before the filter and HVAC coil. If it is not possible to install in the return duct, it may be installed in the supply duct. The painted steel power supply control panel section of the purifier is installed on the outside of the duct.

Make sure site can be supplied with the necessary power requirements. The P103-R4000G UV air purifier has a power consumption of 35 watts, the P103-R1700G UV air purifier 26 watts, and both require a 110/220 v, 50-60 Hz power source. Ensure that there is adequate clearance for service. If a humidifier is present, the air purifier should be installed in the airstream before the humidifier and the humidifier must be protected from UV rays.

The operating temperature range is 40 to 150 F. Operating the P103-R4000G and the P103-R1700G UV air purifiers outside this range will result in decreased performance.

NOTE: The P103-R4000G and P103-R1700G UV air purifiers are NOT waterproof. If installing outdoors, the purifiers must be installed in a watertight enclosure.

INSTALLATION**P103-R4000G UV Air Purifier**

IMPORTANT: The P103-R4000G UV air purifier is energized from a pressure differential caused by airflow through the duct. On variable speed fan applications, airflow at LOW setting may not be sufficient to energize the air purifier. Ensure that there is a sufficient differential to activate the switch. The differential will decrease as the air filter loads. **The P103-R4000G control panel must be installed in a vertical upright position for the air sensor to function properly. If the P103-R4000G control panel is to be installed in a horizontal position, or the differential is not sufficient, the air sensor must be bypassed and the P103-R4000G air purifier is to be wired into the fan circuit.**

PREPARATION

1. Turn off all power to HVAC equipment.
2. Remove the P103-R4000G UV air purifier from its packaging.
3. Remove the lamp from the packaging material. The lamp is fragile, use extreme care. Do not touch the glass on the lamp. Use the enclosed gloves when handling the lamp. Handle lamp from the ceramic ends.

- Position lamp inside the aluminum tube. Route 4-pronged end of lamp through clamp. Clamp is tightened by moving lever perpendicular to the clamp.
- Connect the female plug to the lamp. The plug fits in one direction only. If the plug will not connect to the lamp, turn the plug 90 degrees.
- The aluminum tube can be rotated in 90-degree increments in order for the backplate and control panel front cover to face upward. To rotate the aluminum tube, open the front cover of the purifier. Loosen the hex head nut. Grasp the aluminum tube and rotate it in 90-degree segments. The tube will lock at each 90-degree segment. When the correct rotation is found, tighten the hex nut.
- Install the turbulator (square aluminum cap) on the end of the aluminum tube. Fasten with screws provided.
- Ultraviolet light may damage certain plastics and exposed non-UVC protected wires. If any plastic or wires are within the light exposure area, wrap exposed plastic and wiring with aluminum tape or metal conduit.
- The air sensor tube is located on the backplate of the P103-R4000G UV air purifier. The end of the tube is cut on a 45-degree angle. Loosen the nut that holds the sensor. Rotate sensor so that it will face the airflow. Tighten the nut.

RETURN OR SUPPLY AIR PLENUM INSTALLATION — Perform the following to install the P103-R4000G UV air purifier:

- Cut a 6.5-in. by 10-in. rectangular hole in the ductwork at the installation location.
- Place the P103-R4000G UV air purifier in ductwork in correct position. Mark the 8 mounting holes on the ductwork. Remove the P103-R4000G UV air purifier.
- Drill 8 mounting holes marked in Step 2 (size for no. 8 sheet metal screws).
- Place the P103-R4000G UV air purifier inside hole in ductwork. Mount to ductwork with eight no. 8 sheet metal screws provided.
- Plug in the power cord. If outlet is connected to a light switch, make sure switch is on.

P103-R1700G UV Air Purifier

PREPARATION

- Turn off all power to HVAC equipment.
- Remove the P103-R1700G UV air purifier from its packaging.
- Remove the lamp from the packaging material. The lamp is fragile, use extreme care. Do not touch the glass on the lamp. Use the enclosed gloves when handling the lamp. Handle lamp from the ceramic ends.
- Position lamp inside the aluminum tube. Route 4-pronged end of lamp through clamp. Clamp is tightened by moving lever perpendicular to the clamp.
- Connect the female plug to the lamp. The plug fits in one direction only. If the plug will not connect to the lamp, turn the plug 90 degrees.
- The aluminum tube can be rotated in 90-degree increments in order for the backplate and control panel front cover to face upward. To rotate the aluminum tube, open the front cover of the purifier. Loosen the hex head nut. Grasp the aluminum tube and rotate it in 90-degree segments. The tube will lock at each 90-degree segment. When the correct rotation is found, tighten the hex nut.

- Install the turbulator (square aluminum cap) on the end of the aluminum tube. Fasten with screws provided.
- Ultraviolet light may damage certain plastics and exposed non-UVC protected wires. If any plastic or wires are within the light exposure area, wrap exposed plastic and wiring with aluminum tape or metal conduit.

RETURN OR SUPPLY AIR PLENUM INSTALLATION — Perform the following to install the P103-R1700G UV air purifier:

- Cut a 6.5-in. by 8-in. rectangular hole in the ductwork at the installation location.
- Place the P103-R1700G UV air purifier in ductwork in correct position. Mark the 6 mounting holes on the ductwork. Remove the P103-R1700G UV air purifier.
- Drill 6 mounting holes marked in Step 2 (size for no. 6 sheet metal screws).
- Place the P103-R1700G UV air purifier inside hole in ductwork. Mount to ductwork with 6 no. 8 sheet metal screws provided.
- Connect the 110 or 220 volt line as per code to the HVAC EAC terminals or to the blower control. Open cover of the purifier. Secure the line conduit through the purifier knock out provided next to the power switch with the appropriate cable connector.

OPERATION

P103-R400G UV Air Purifier — The P103-R4000G UV air purifier has an on-off switch and a circuit breaker located at the bottom of the front cover. To operate, press the switch to the “on” position. The switch has a light to indicate that there is power. If there is no indicator light, check the outlet for power, and check the P103-R4000G UV air purifier circuit breaker. Start the HVAC fan. The P103-R4000G UV air purifier detects airflow with the pressure sensor. The P103-R4000G UV air purifier will only operate when the fan is on (airflow through plenum) and there is a pressure differential of at least 0.04 inches.

LED INDICATORS — There are 4 LED indicators on the front panel. When the P103-R4000G UV air purifier is plugged in and the on/off switch is “on”, the Power LED will be lit. If the sensor light does not come on when the fan is energized, either the pressure switch is defective, or there is not enough of a pressure differential in the duct to “pull in” the diaphragm. When the pressure switch energizes, the “Sensor On” LED light will be lit. There are two LED lights for the UV lamp. The blue LED indicates that the ballast is on; the green LED indicates that the UV lamp is functioning. If the ballast (blue) LED is on, and the lamp (green) LED is off, the UV lamp is defective. If both LED lights are off, the ballast is not functioning.

P103-R1700G UV Air Purifier — The P103-R1700G UV air purifier has an on-off switch and a circuit breaker located at the bottom of the front cover. To operate, press the switch to the “on” position. The switch has a light to indicate that there is power. If there is no indicator light, check the outlet for power, and check the P103-R1700G circuit breaker. Start the HVAC fan. The 2 LED lights will come on.

LED INDICATORS — There are two LED lights for the UV lamp. The blue LED indicates that the ballast is on; the green LED indicates that the UV lamp is functioning. If the ballast (blue) LED is on, and the lamp (green) LED is off, the UV lamp is defective. If both LED lights are off, the ballast is not functioning.

**P103-R4000G, P103-R1700G AIR PURIFIER
LIMITED PARTS AND LAMP WARRANTY**

FIVE-YEAR WARRANTY — Except for the UV Lamps and Ballasts, this Totaline product is warranted to be free from defects in material and workmanship under normal use and maintenance for a period of five years from the date of original installation. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through a qualified servicing Totaline dealer or distributor, PROVIDED the defective part is returned to our distributor. The replacement part assumes the unused portion of the warranty.

12,000 HOUR COMMERCIAL LAMP WARRANTY — The Totaline Ultraviolet Lamps are warranted to be free from defects and operate for 12,000 hours after installation, under normal use and maintenance in a commercial application. A new lamp to replace the defective lamp will be provided without charge for the part itself, through a qualified servicing Totaline dealer or distributor, PROVIDED the defective part is returned to our distributor. The replacement part assumes the unused portion of the warranty.

THREE-YEAR RESIDENTIAL LAMP WARRANTY — The Totaline Ultraviolet Lamps are warranted to be free from defects and operate for Three (3) years after installation, under normal use and maintenance in a residential application. A new lamp to replace the defective lamp will be provided without charge for the part itself, through a qualified servicing Totaline dealer or distributor, PROVIDED the defective part is returned to our distributor. The replacement part assumes the unused portion of the warranty.

THREE-YEAR BALLAST WARRANTY — The Totaline Electronic Ballasts are warranted to be free from defects and operate for Three (3) years after installation, under normal use and maintenance in a residential or commercial application. A new ballast to replace the defective ballast will be provided without charge for the part itself, through a qualified servicing Totaline dealer or distributor, PROVIDED the defective part is returned to our distributor. The replacement part assumes the unused portion of the warranty.

THIS WARRANTY DOES NOT INCLUDE ANY ADDITIONAL LABOR ALLOWANCE OR OTHER COSTS incurred for diagnosis, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts. SUCH COSTS MAY BE COVERED BY a separate warranty provided by the installer.

LIMITATIONS OF WARRANTIES — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

TOTALINE WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operations.
5. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of Totaline.
6. Parts not supplied or designated by Totaline.
7. Totaline products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

Model No.:

Unit Serial No. (from inside of cover):

Date of Installation:

Installed by:

Name of Owner:

Address of Installation:

TOTALINE®

Your Assurance of Quality

ALL Totaline® products are backed with a one-year warranty by Carrier Corporation, the world's largest manufacturer of air conditioning, heating, and refrigeration products.