

INSTALLATION INSTRUCTIONS

Ultra-Violet Germicidal
Natural Air Purifiers
Residential and
Residential/Light Commercial
Duct Installation Applications

Part Numbers: P103-RT1500G (Residential), P103-RT3500G (Residential/Light Commercial)

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 bulbs. All other operations should be performed by trained service personnel. When working on airconditioning 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.

A WARNING

Before installing accessory or performing maintenance or service on germicidal air purifier, turn off main power switch to unit. Electrical shock can cause injury or death. There may be more than one disconnect switch.

A CAUTION

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

A CAUTION

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

A CAUTION

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

A CAUTION

Bulb contains a small quantity of mercury. If a bulb breaks, clean and dispose of with care.

GENERAL

The Totaline® residential and residential/light commercial ultra-violet germicidal air purifiers are designed to kill odor causing mold and fungus that may be transmitted through the air ducts of the HVAC equipment. The germicidal air purifiers are installed in the return air plenum of the HVAC equipment.

The ultra-violet band light inhibits and kills mold, fungus, and microbial growth flowing through the airstream.

Depending on the size of the building and volume of airflow, more than one germicidal air purifier may be needed for light commercial applications.

INSTALLATION

Location — Germicidal air purifiers are installed in the return air plenum ductwork where they will have contact with the airstream. The painted steel power supply section of the germicidal air purifier is installed on the outside of the duct. See Fig. 1.

Make sure site can be supplied with the necessary power requirements. The residential germicidal air purifiers (P103-R1500G) have a power consumption of 15 watts and require a 120 v, 60 Hz power source. The residential/light commercial germicidal air purifiers (P103-R3500G) have a power consumption of 25 watts and require a 120 v, 60 Hz power source. Ensure that there is adequate clearance for service. If a humidifier is present, the germicidal air purifier should be installed in the airstream before the humidifier.

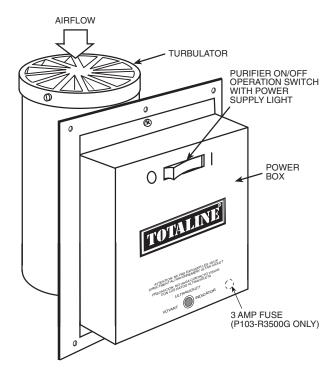


Fig. 1 — Germicidal Air Purifier (P103-R1500G Shown)

The operating temperature range is 50 to 115 F. Operating the germicidal air purifier outside this range will result in decreased performance.

NOTE: The germicidal air purifier is NOT waterproof. If installing outdoors, germicidal air purifier must be installed in a watertight enclosure.

Assembly — Perform the following procedure to assemble the germicidal air purifier:

- 1. Turn off all power to HVAC equipment.
- 2. Remove the germicidal air purifier from its packaging.
- Remove the bulb package from the packaging material.
- 4. Remove clamp assembly from plastic bag. Unscrew the lock nut from the bolt. Insert the clamp assembly into the aluminum tube, keeping it straight and positioning it so the bolt extends through the hole in the tube. Secure the clamp assembly in place by attaching the lock nut to the bolt.
- 5. Loosen wing nut on the clamp inside the aluminum airflow tube.
- 6. Take the bulb out of its packaging. The bulb is fragile. Use extreme care when removing the bulb. Do not touch the glass on the bulb. Finger prints will inhibit the production of ultra-violet light. Handle the bulb on the ceramic ends only.
- 7. Position bulb inside aluminum airflow tube. Route 4-pronged end of bulb through clamp. The rubber gasket should be inside the clamp area. Tighten wing nut on clamp to secure bulb inside airflow tube. Do not overtighten. See Fig. 2.
- Ultra-violet 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.
- 9. Connect the plug to the bulb. The bulb fits in one direction only. If the plug will not connect to the bulb, turn the plug 90 degrees.
- Install the airflow turbulator (round aluminum cap) on the end of the aluminum tube. Fasten with 3 screws provided.

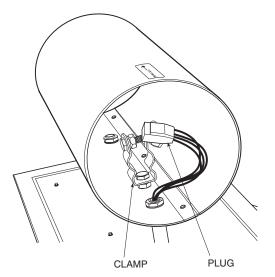


Fig. 2 — Germicidal Bulb Installation

Wiring — Perform the following to install the germicidal air purifier:

NOTE: All field wiring must comply with NEC (National Electrical Code) and all local requirements.

- 1. Turn off main power switch.
- Cut a 6 by 8-in. (P103-RT1500G) or 6 by 11-in. (P103-RT3500G) rectangular hole in the ductwork at the installation location. Check the direction of airflow through the accessory. Air must flow through the turbulator into the aluminum tube.
- 3. Place germicidal air purifier in ductwork in correct position. Refer to Step 2. Mark the 6 mounting holes on the ductwork. Remove germicidal air purifier.
- 4. Drill 6 mounting holes marked in Step 3 (size for no. 8 sheet metal screws).
- Remove power box screws. Save the screws. Remove power box cover.
- 6. Route the wiring from the power source to the knockout hole in the bottom of the cover.
- 7. Connect the white wire on the purifier to the white wire of the power supply using field-supplied wire nut. Connect the black exposed wire on the purifier to the black wire of the power supply using field-supplied wire nut. Add a wire nut to the green ground wire. See Fig. 3.
- Place germicidal air purifier inside hole in ductwork. Mount to ductwork with six no. 8 sheet metal screws provided.
- 9. Replace power box and secure with screws.
- 10. Restore power.

Remote Installation — For remote installation, the remote installation kit is required. Follow instructions included in the accessory kit to install the germicidal air purifier in a remote location.

A CAUTION

Use only specified bulbs with this accessory. Use of an incorrect bulb can result in damage to accessory or bulb.

The following bulbs can safely be used with the germicidal air purifier:

- P103-GERMLAMP004 (P103-R1500G)
- P103-GERMLAMP005 (P103-R3500G)

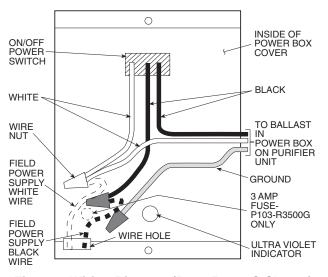


Fig. 3 — Wiring Diagram (P103-R1500G Shown)

GERMICIDAL AIR PURIFIER LIMITED THREE-YEAR WARRANTY

THREE-YEAR BULB & PARTS WARRANTY — This CARRIER CORPORATION product is warranted to be free from defects in material and workmanship under normal use and maintenance for a period of three years from the date of original installation. A new or remanufactured bulb or part to replace the defective bulb or part will be provided without charge for the bulb or part itself, through a qualified servicing CARRIER CORPORATION dealer or service, PROVIDED the defective bulb or part is returned to our distributor. The replacement bulb or 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.

CARRIER WILL NOT BE RESPONSIBLE FOR:

- 1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual including replacement of bulbs.
- 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 CARRIER CORPORATION.
- 6. Parts not supplied or designated by CARRIER CORPORATION.
- 7. CARRIER CORPORATION 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.	
Date of Installation	Installed by	
Name of Owner	Address of Installation	