

Part Number: P103-QUATTRO**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 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.

▲ 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® residential and commercial Quattro ultraviolet germicidal air purifiers are designed to kill odor-causing mold, fungus, bacteria and viruses that may be transmitted through the air ducts of the HVAC (heating, ventilation and air conditioning) equipment. The Quattro air purifier is installed in the return (preferred) or supply air plenum of HVAC

equipment. The ultraviolet band light inhibits and kills mold, fungus, bacteria, viruses and microbial growth on 100% of the air flowing through the airstream. The actual percentage of destruction depends on the size of the duct, the velocity of the air, and the pollutant(s) treated. Depending on the size of the building, the volume of airflow and the size of the duct, more than one Quattro air purifier may be needed for commercial applications.

INSTALLATION

IMPORTANT: The Quattro 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 Quattro air purifier must be installed in a vertical position for the air sensor to function properly. If the Quattro air purifier is to be installed in a horizontal position, or the differential is not sufficient, the air sensor must be bypassed and the Quattro air purifier is to be wired into the fan circuit.

Location — As the Quattro air purifier treats 100% of the air, it can be installed in either the supply or the return plenum ductwork where it will have contact with the airstream. The preferred location is in the return plenum, as the air will be treated before the filter and HVAC coil. The painted steel power supply section of the Quattro air purifier is installed on the outside of the duct.

Make sure site can be supplied with the necessary power requirements. The Quattro air purifier has a power consumption of 160 watts and requires a 110/220 v, 50-60 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 and the humidifier must be protected from UL (ultraviolet) rays.

The operating temperature range is 40 to 150 F. Operating the Quattro air purifier outside this range will result in decreased performance.

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

Preparation

1. Turn off all power to HVAC equipment.
2. Remove the Quattro air purifier from its packaging. The lamps are factory installed in the unit. Be careful. Lamps are fragile.
3. 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.

4. The inside of the duct where the Quattro air purifier will be installed is to be lined with pure aluminum to reflect the UV back onto the air. Either aluminum sheeting or aluminum foil can be used. Aluminum sheeting is available from others, or aluminum foil can be supplied by Carrier RCD (part no. sanx271).
5. The air sensor is located on the backplate of the Quattro 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 Quattro air purifier.

1. Cut a 7 by 24-in. rectangular hole in the ductwork at the installation location.
2. Install the aluminum sheeting or foil to the inside of the duct. See Step 4 in the Preparation section on this page.
3. Adjust the lamps so that they will be in the middle of the duct. The arms that support the lamps have a clutch on each arm that allows the lamps and extrusions to be set at a distance from 10 to 15 inches from the backplate. Loosen the clutch by turning it counterclockwise. The lamps and extrusion can then be positioned to the desired distance from the backplate. Rotate the clutch clockwise to tighten.
4. Place the Quattro air purifier in ductwork in correct position. Mark the 8 mounting holes on the ductwork. Remove the Quattro air purifier.
5. Drill 8 mounting holes marked in Step 4 (size for no. 8 sheet metal screws).
6. Place the Quattro air purifier inside hole in ductwork. Mount to ductwork with eight no. 8 sheet metal screws provided.
7. Plug in the power cord. If outlet is connected to a light switch, make sure switch is on.

OPERATION

The Quattro 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 Quattro circuit breaker. Start the HVAC fan. The Quattro air purifier detects airflow with the pressure sensor. The Quattro 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.

When operating, the LED (light-emitting diode) lights will be lit. There are two LED lights for each of the 4 UV lamps. 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. If none of the eight (8) LED lights are on, then there is not enough of a pressure differential to activate the pressure switch, or the pressure switch is defective.

Fiberglass or paper filter media are recommended for operation of HVAC when filters are exposed to ultraviolet rays. Polyester or cotton filters are subject to ultraviolet degradation and are not recommended.

MAINTENANCE

Disconnect all power before performing any maintenance or service.

Lamps need periodic replacement to maintain design specifications. In residential applications, replace lamps after 3 years of operation. In commercial applications, replace lamps after 17,000 hours of operation.

The following lamps are used with the Quattro air purifier:

Quattro G:

(4) P103-GERMLAMP015

Other lamps may plug into the Quattro air purifier, but they should not be used.

**QUATTRO 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 Carrier 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 WARRANTY — 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.
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.