

Part Numbers: P103-UVLTT1LP1020A01, P103-UVLTT1LP3020A01,  
P103-UVLTT2LP1020A01, P103-UVLTT2LP3020A01

**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 accessory, 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. Lamp must be off before entering HVAC (heating, ventilation, and air conditioning) unit to perform maintenance or service. Personal injury may result.

**⚠ CAUTION**

Do not touch lamp glass without gloves. Wipe lamp clean after handling.

**⚠ CAUTION**

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

**GENERAL**

Totaline's ultraviolet (UV) germicidal lamps are designed to kill odor causing bacteria, viruses and mold that may develop in a HVAC unit. The UV Lamp system is designed to inhibit fungus and microbial growth when applied to the indoor coil/drain pan area of a central cooling system. The lamps will also reduce airborne viruses and bacteria generated in the occupied space. The lamps should be mounted on a flat surface. Lamps are designed to operate for **one year** continuously before replacement is required. The UV Lamps are designed for indoor use only.

On 2-lamp models, the 2 assemblies are connected by a flexible cord which allow the installer to separate the lamps from 4 to 18 inches. Each lamp kit includes cleaning kit and mounting screws.

See Table 1 and Fig. 1 for physical data.

NOTE: The health aspects associated with the use of this product and its ability to aid in disinfection of environmental air have not been investigated by UL (Underwriters' Laboratories).

**INSTALLATION**

**Location** — Make sure site can be supplied with the necessary power receptacle. Ensure that there is adequate clearance for service.

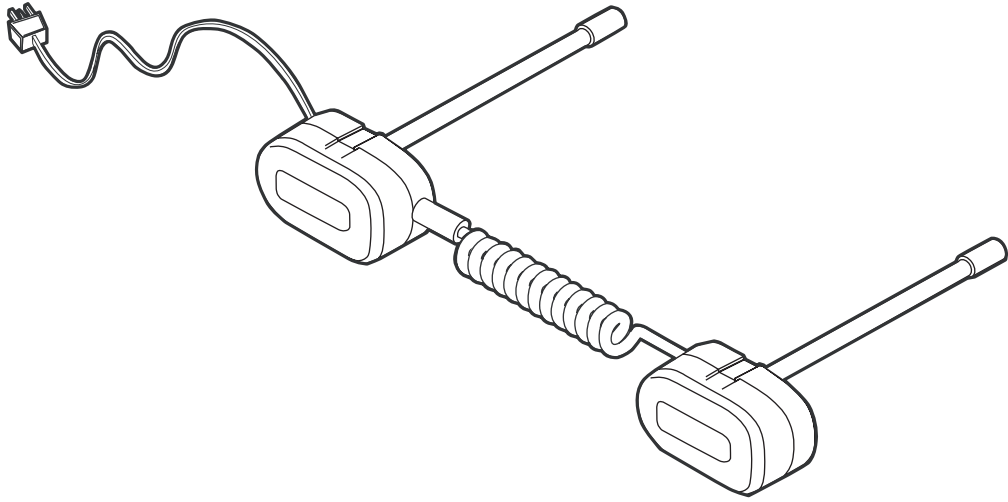
The preferred location for installation is in the coil casing over the evaporator coil. The lamps should be placed above the coil, so the UV rays will cover the entire coil. See Fig. 2-4.

On indoor coils 2 tons or smaller, the UV lamp should be installed in the connecting ductwork above the indoor coil and not in the coil casing itself.

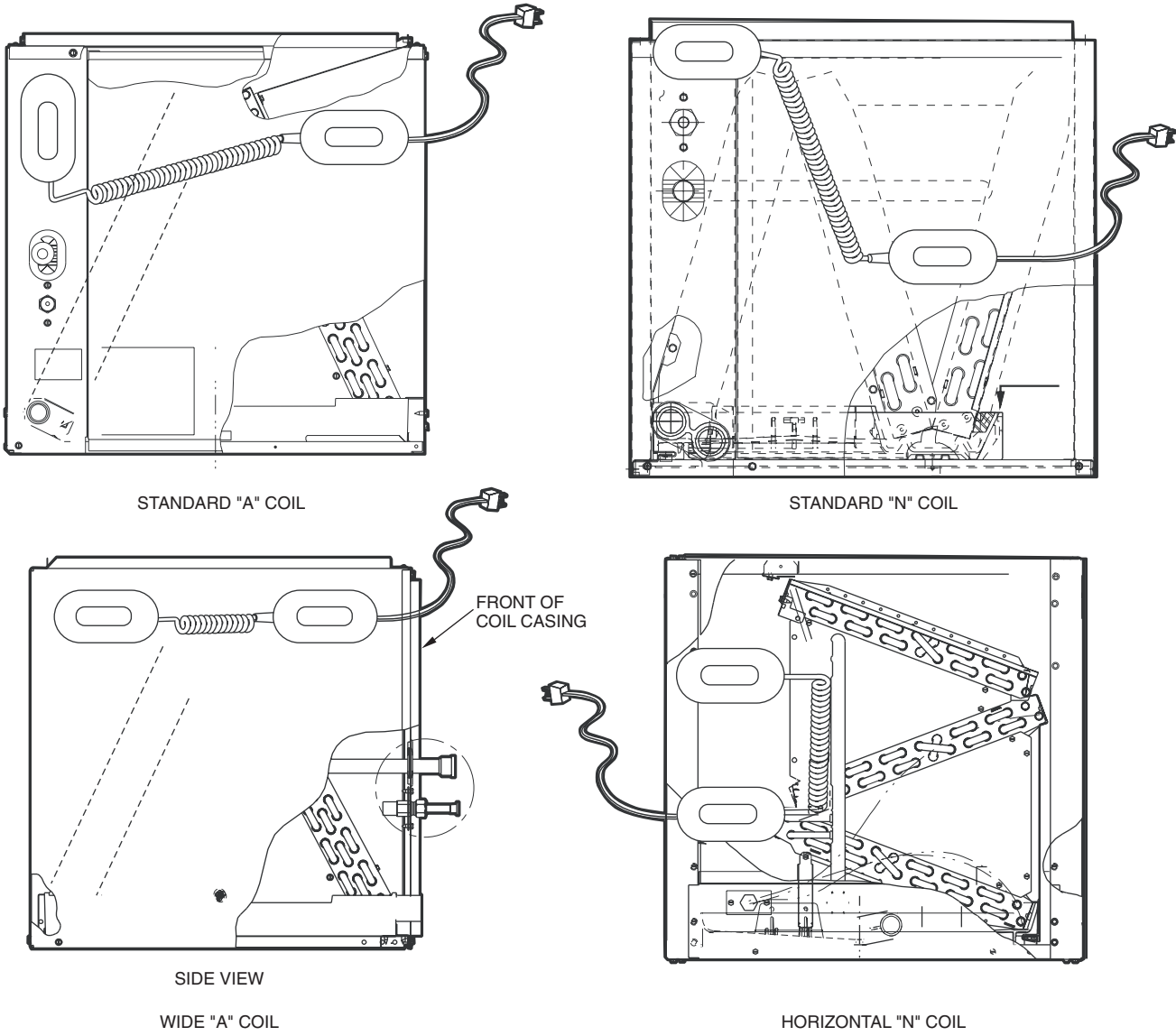
Do not install the UV lamps near duct board or plastic flex duct. Metal duct is recommended. Components contained in the current furnace and fan coil equipment are resistant to UV exposure. Color shift or chalking may occur without affecting structural properties.

**Table 1 — Physical Data**

PART NUMBER	P103-UVLTT1LP1020A01	P103-UVLTT2LP1020A01	P103-UVLTT1LP3020A01	P103-UVLTT2LP3020A01
Electrical Characteristics (V-PH-Hz)	115-1-60	115-1-60	208/230-1-60	208/230-1-60
Number of Lamps	1	2	1	2
Maximum Lamp Amperage Draw	0.6 Amps	1.1 Amps	0.3 Amps	0.6 Amps
Average Power Consumption	27 Watts	53 Watts	27 Watts	53 Watts
Unit Service Cord	6 foot cord with ground pin plug			
Average Lamp Life	Approximately 1 Year or 9,000 Hours of Unit Runtime			
Initial UVC Output at 1 Meter (in $\mu\text{W}/\text{cm}^2$ and 70 Deg F) and 450 fpm Airflow	105	198	105	198
Lamp Length	19 in.			



**Fig. 1 — UV Lamp (Two-Lamp Version Shown)**



STANDARD "A" COIL

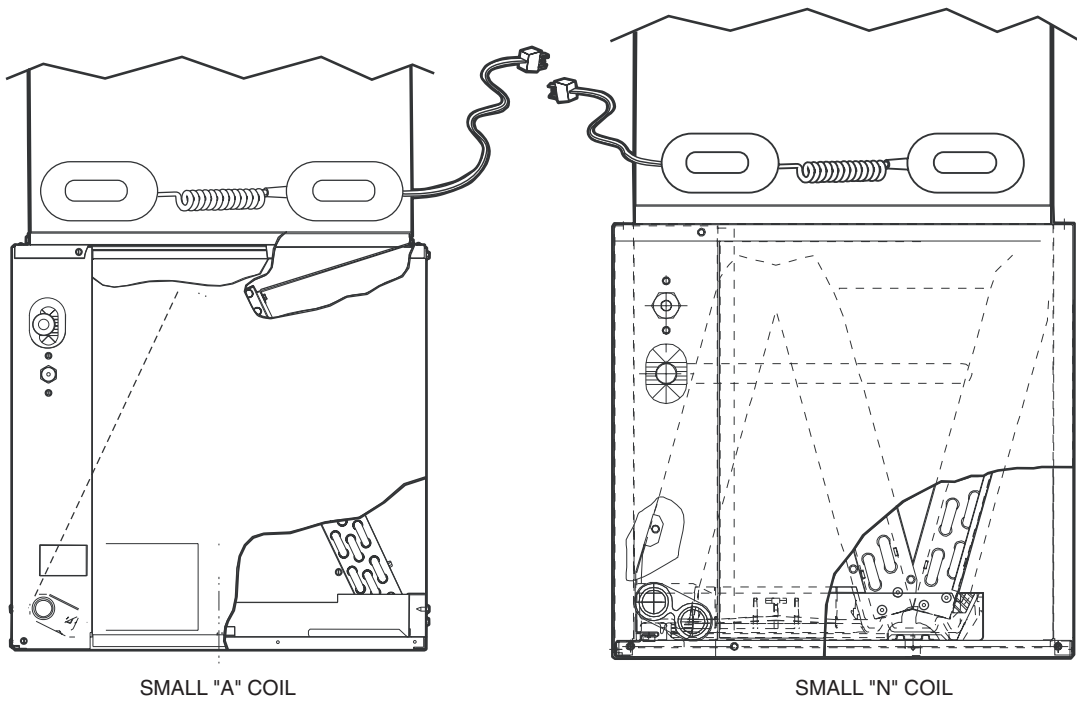
STANDARD "N" COIL

SIDE VIEW

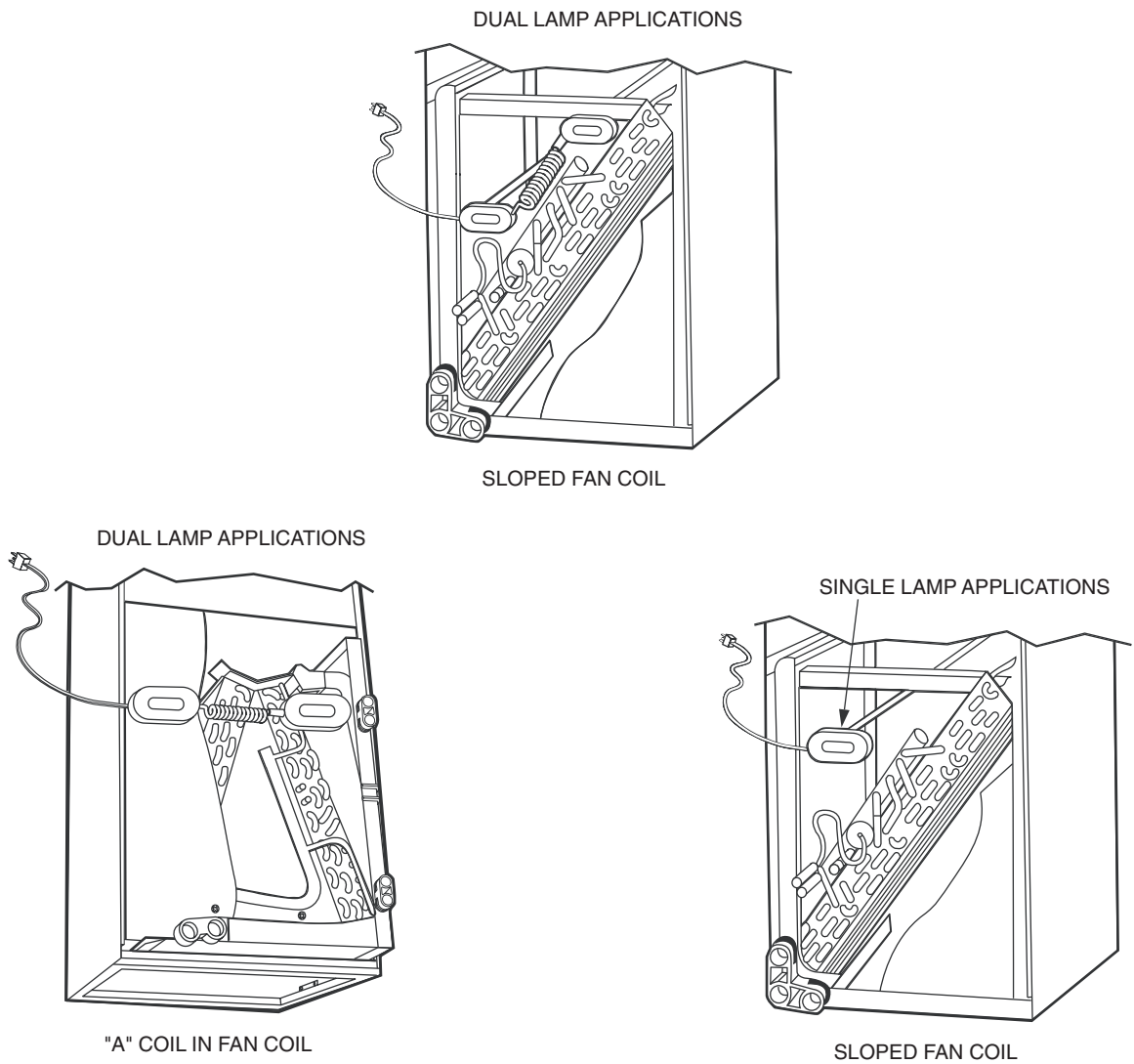
WIDE "A" COIL

HORIZONTAL "N" COIL

**Fig. 2 — Typical Furnace Coil Mounting Locations — 115-V Application**



**Fig. 3 — Alternate Furnace Coil Mounting Locations — 115-V Application**



**Fig. 4 — Fan Coil Mounting Locations — 208/230-V Application**

Select a mounting location that prevents direct exposure to non-fiberglass media filters. A minimum distance of 6 feet is recommended (non-fiberglass media will break down from UV exposure).

**Mounting** — Perform the following procedure to mount the lamp.

1. Turn off all power to unit and install lockout tag.
2. Remove indoor coil casing door and inspect coil casing for proper location of UV lamp mounting holes.
3. Select location for lamp(s) that gives the most exposure to coil/drain pan. Light from the lamp should cover the coil and pan for maximum effectiveness (see Fig. 2-4).
4. Drill or cut a  $\frac{7}{8}$ -in. hole for each UV lamp into the coil casing, casing door or the connecting ductwork.
5. Separate lamp base, lamp/ballast assembly, and plastic cover. See Fig. 5. Securely mount UV lamp base assembly using screws provided.
6. Replace coil casing door and slide lamp/ballast assembly into the mounted base, making sure the locating stud and Molex connectors are aligned (see Fig. 5).

7. Install fastener screw to hold lamp/ballast to base.
8. Replace plastic cover(s) on UV lamp assembly base to complete the installation.
9. On furnace applications, use a 115-v power source other than the furnace motor circuit. On fan coil applications, use 208/230-v power source other than the fan coil motor circuit. Connect electrical cord to suitable electrical receptacle.

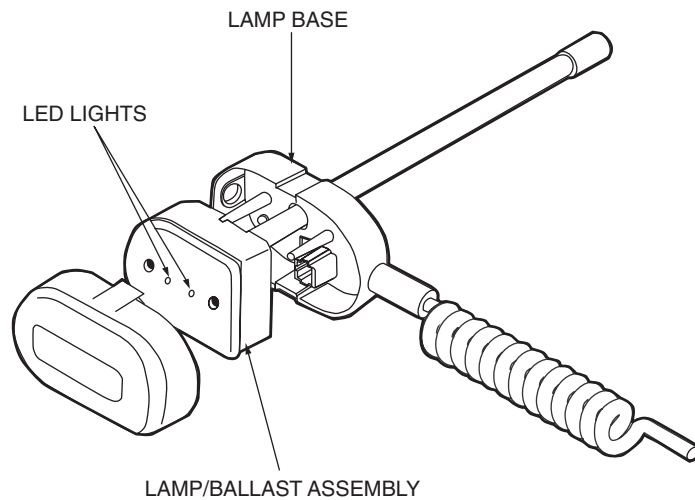
## OPERATION

After power is supplied to lamp(s), make sure the LEDs behind the logo are illuminated. If not, verify the supply voltage.

On 2-lamp models, both lamp/ballast assemblies need to be installed before lamps will illuminate.

If at any time the LED (light-emitting diode) lights behind the logo are dim this is an indication that one of the UV lamps is not working. Disconnect power and inspect for proper lamp operation.

Lamp/Ballast assembly should be removed when mounted on indoor coil casing door, if door is to be removed for system maintenance.



NOTE: LED lights are not lamp change indicators. Lamps should be changed annually.

**Fig. 5 — UV Lamp Assembly (Detail View)**

## Lamp Replacement

### **⚠ CAUTION**

Allow lamp to cool before opening UV lamp casing or HVAC unit cabinet. Failure to follow this caution will result in minor personal injury.

The recommended life of the lamp assembly in this UV lamp product is 1 year of constant operation or a maximum of 9,000 hours of unit runtime.

When replacement of lamp is needed, order proper lamp assembly (See Table 2) from a local dealer or distributor.

To replace a lamp, perform the following procedure:

1. Disconnect power supply from UV lamp by unplugging the electrical cord.
2. Remove protective cover from UV lamp assembly. See Fig. 5.
3. Remove fastener screw(s) that holds lamp/ballast to base.

4. Gently pull lamp assembly from mounted base assembly.
5. Place old lamp assembly in a safe area before proceeding. Treat the disposal of these lamps as you would a standard fluorescent lamp.
6. Carefully slide new lamp/ballast assembly into base assembly until fully seated, retighten fastener screw(s) to hold new lamp in base.
7. Replace protective cover.
8. Reconnect unit power to UV lamp.
9. Observe that LEDs behind logo brightly illuminate and that the lamp(s) are operational.

**Table 2 — Replacement Lamp Ordering Information**

QUANTITY	LAMP VOLTAGE	PART NUMBER
1 Lamp/Ballast Assembly	115-1-60	P103-UVLTTRPL1020-A01
1 Lamp/Ballast Assembly	208/230-1-60	P103-UVLTTRPL3020-A01

## LIMITED WARRANTY

FOR SERVICE OR REPAIR, FOLLOW THESE STEPS IN ORDER:

FIRST: Contact the installer. You may find their name on the product or in your Homeowner's Packet. If the installer's name is not known, call your builder or home retailer if yours is a new residence.

SECOND: Contact the nearest distributor. (See telephone yellow pages.)

THIRD: Contact:

CAC/BDP

Consumer Relations

P.O. Box 4808

Syracuse, New York 13221

Phone: 1-800-227-7437

Model No.	Unit Serial No.
Date of Installation	Installed by
Name of Owner	Address of Installation

### ULTRAVIOLET LAMP (Model UVL)

**FIVE-YEAR LIMITED WARRANTY** — CAC/BDP (hereinafter referred to as "Company") warrants the unit Base and Power Cord against defects in material and workmanship for a period of Five years from the date of original installation. The Company's obligation for these parts shall be, at its sole option, to provide a new part without charge for the part itself or allow a credit in the amount of the then current factory-selling price of an equivalent part toward the purchase price of a new unit.

**90-DAY LIMITED WARRANTY** — The Company warrants certain parts of this product to be free from defects in material and workmanship. If a defect is found in the Lamp (Bulb) or Ballast within 90 Days from date of original installation of product (whether or not actual use begins on that date) Company will provide a new or remanufactured part, at Company's sole option, to replace any defective part, without charge for the part itself.

None of these warranties include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.

#### WARRANTY CONDITIONS:

1. Warranties apply only to products in their original installation location.
2. Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the unit literature and Company's service information.
3. Defective parts must be returned to the distributor through a registered servicing dealer for credit.
4. All work shall be performed during normal working hours.

**LIMITATION OF WARRANTIES** — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE HEREBY LIMITED IN DURATION TO ONE YEAR. SOME STATES TO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

#### COMPANY WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or Owner's Manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of Company.
5. Parts not supplied or designated by Company, or damages resulting from their use.
6. Company products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever, including additional or unusual use of supplemental electric heat.
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.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



**TOTALINE®**

**Your Assurance of Quality**

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