

INSTALLATION INSTRUCTIONS FOR UNDER MOUNT IN-LINE DUCT FAN MODEL# 1950103

INSTALLATION

Electrical equipment should be installed by a licensed electrician.

1. The unit can be mounted on round ducts 5" in diameter and larger, or on rectangular or square ducts 4" and wider & as shallow as 3".
2. Locate the PowerAir™ Fan in the BRANCH DUCT supplying the problem room – where the duct is warm to the touch while the furnace is operating. Note : Do not install the PowerAir™ Fan where the temperature of the air within the duct is above 200°F. It is rare that this temperature is found in forced warm air systems, however, it could exist on gravity warm air systems if mounted close to the furnace. It is suggested that the PowerAir™ Fan be located near the outlet end of the branch duct for maximum performance. The same location will also apply to air conditioning.
3. On horizontal and inclined installations, the slot for the PowerAir™ Fan can be cut in the bottom or top of a horizontal duct. On vertical installations, the slot can be cut on any side of the duct. In either horizontal or vertical installations, the motor shaft must be in a horizontal position.
4. NOTE: The motor used on the PowerAir™ Fan is an accepted component of the listed fan unit by C.S.A. This motor is designed as a normally HOT running motor and should feel hot to the touch. Tests indicate that a normal 50-Watt household incandescent light bulb is considerably hotter than the maximum motor temperature of your PowerAir™ Fan. This motor temperature will not affect the performance of your PowerAir™ Fan, provided installation & mounting instructions herein are observed.

MOUNTING INSTRUCTIONS

Once the location for the PowerAir™ Fan is established, you are now ready to mount the unit as follows:

READ THESE INSTRUCTIONS CAREFULLY:

1. Attach the mounting template to duct in desired location. (See No. 2) Place mounting template in the centre of the selected duct for best performance.
2. Cut out the metal duct work along template lines according to the size duct you have.
BE CAREFUL NOT TO CUT OPENING TOO LARGE.
3. After the duct work has been properly cut, insert the PowerAir™ Fan lip **INSIDE** the duct opening, (See Figure 1 & 2) pushing the PowerAir™ Fan housing forward and upward at the same time so that the PowerAir™ Fan housing fits snugly into the opening. The side flanges should be on the **OUTSIDE** of the duct. (See Figure 1 & 2) NOTE : Be certain that the PowerAir™ Fan 'Deflector Plate' (See Figure 1 & 2) , which curves above the blower wheel , is pointing in the direction of airflow.
4. With the housing pushed tightly against the duct, drill or punch four 3/32" holes into the duct using the PowerAir™ Fan side flange mounting holes as locators.

Fasten PowerAir™ Fan to air duct with 4 sheet metal screws, pulling the PowerAir™ Fan up snugly against duct. If necessary, bend the side flanges (See Figures 1 & 2) to conform to your particular duct size and shape.

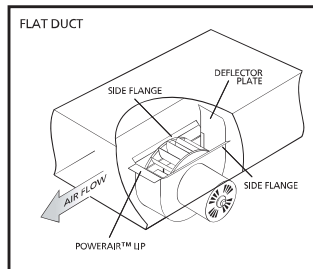


Figure 1

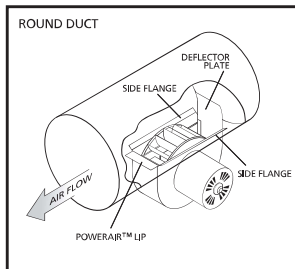


Figure 2

OPERATION

The PowerAir™ Fan can be operated and controlled in several manners:

AUTOMATIC OPERATION:

Wire in parallel with furnace blower motor. With central heating/air conditioning systems, it is recommended that the PowerAir™ Fan be wired in parallel with the furnace blower motor for simultaneous operation. (See Figure 3)

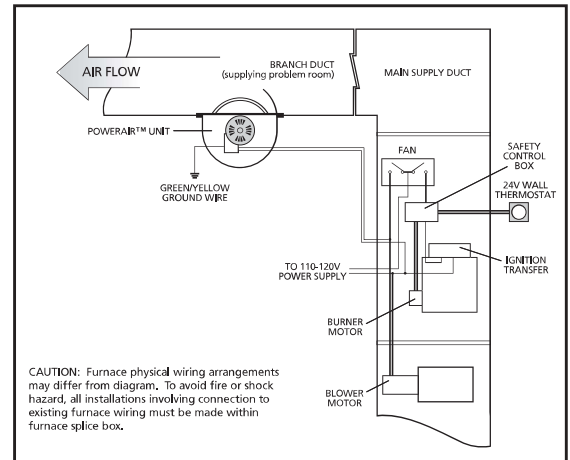
UNIT WIRING INSTRUCTIONS

1. For electrical supply connections , use wires suitable for at least 90°C when PowerAir™ Fan is used on heated duct system.
2. Electrical conduit must be routed away from warm air system ducts. Use adequate supports if necessary.
3. The black and white wires are connected to power source. The green wire is used for grounding purposes only.
4. The existing short circuit and ground fault protection for the furnace blower motor should be of a size and type which will adequately protect the PowerAir™ Fan motor.
5. The wiring from the furnace to the PowerAir™ Fan must be 14 AWG and the furnace should be protected by over current protection (fuses or circuit breakers) rated 15 Amperes or less (as applicable for 14 AWG conductors).

ELECTRICAL DATA

MODEL	VOLTS	AMPS	HZ	WATTS	THERMAL OR IMPEDANCE PROTECTION	C F M
1950103	115 V	.29	60	35	YES	275

*** WARNING :** Never expose your Power Air™ in-line duct fan to temperature over 140° (60°C).



CAUTION: Furnace physical wiring arrangements may differ from diagram. To avoid fire or shock hazard, all installations involving connection to existing furnace wiring must be made within furnace splice box.

Figure 3