



# Fantech



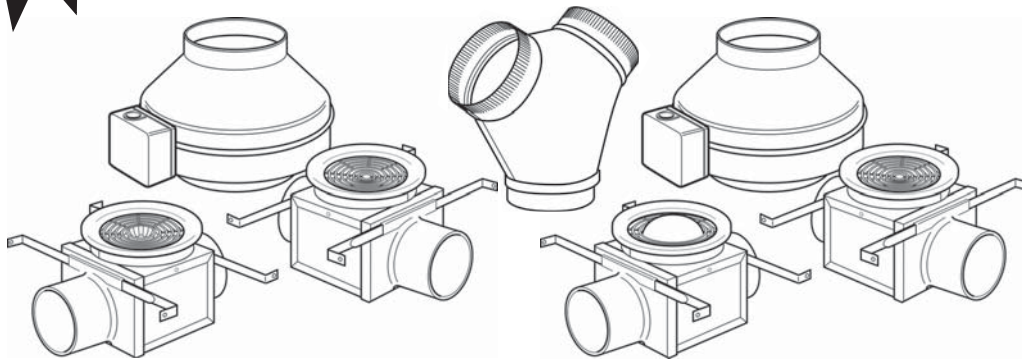
## PB Series PREMIUM BATH FANS

Single Grille Units  
4" Duct

PB110  
PB110F  
PB110H

Single and Dual Grille Units 6" Duct

PB190	PB270FV-2
PB270-2	PB270HV-2
PB270F-2	PB370-2
PB270H-2	



### IMPORTANT: PLEASE READ THIS MANUAL BEFORE INSTALLING UNIT

**WARNINGS:** *DO NOT CONNECT POWER SUPPLY until unit is completely installed.  
Make sure electrical service to the fan and light is locked in "OFF" position.*

**WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS – OBSERVE THE FOLLOWING:

- Use this unit only in the manner intended by the manufacturer. If you have any questions, contact your manufacturer's representative.
- CAUTION:** Before installation, servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as tag, to the service panel.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards. This unit is only for use in non-fire-rated installations.
- When cutting or drilling into wall and ceiling, do not damage electrical wiring and other hidden utilities.
- NEVER place a switch where it can be reached from a tub or shower.
- If this unit is installed over a tub or shower, it must be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
- The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) and the local code authorities.
- Exhaust fans must always be vented to the outdoors.

**CAUTION:** "For General Ventilation Use Only. Do Not Use To Exhaust Hazardous Or Explosive Material and Vapors."

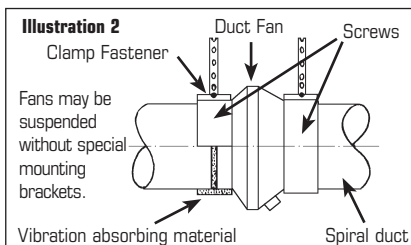
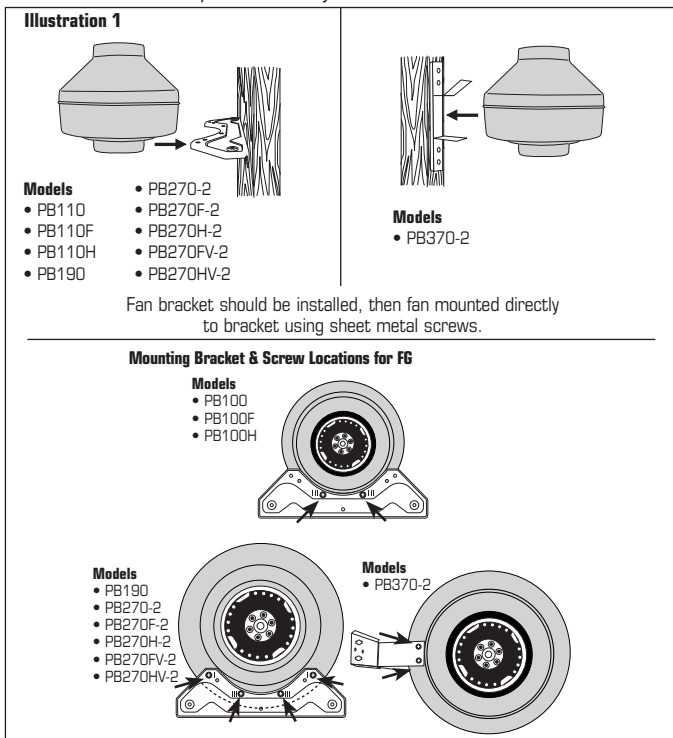
**CAUTION:** BULB USED IN FLUORESCENT MODELS NOT DIMMABLE

**CAUTION:** USE ONLY FANTECH (MODEL PBB14) FLUORESCENT BULBS AND PAR16/MR16 GU10 50W MAX. HALOGEN BULBS (FANTECH MODEL PBB50).

## Installing Fan and Bracket

- Before selecting mounting location for fan, consider the following:
  - Mounting the fan as far as possible from the intake point will assure quiet operation. A minimum of 8' of insulated flexible duct is recommended between exhaust grille and fan.
  - Place fan where it can be easily accessed for service.
- Attach the mounting bracket to a support beam with wood screws provided. Fan can be mounted at any point along the duct and at any angle. Vertical mounting is recommended to reduce condensation in the fan. For horizontally mounting, either wrap insulation around the fan or drill a 1/4" hole in the bottom of the housing. Add NPT insert and drain tube (purchased separately) for drainage of condensation.
- For PB Series fans, if bracket is used to mount fan, refer to illustration 1. If suspending fan with hanger straps, refer to illustration 2.
- Connect duct to inlet and outlet of fan using plastic ties or duct tape (purchased separately). When using insulated flexible duct, the inner vinyl core should be clamped or taped to the inlet and outlet and the vapor barrier surrounding the insulation should be duct taped to the fan housing. **Fantech recommends insulated flexible duct for all bathroom exhaust applications.**

**Please Note:** Steps 2 & 3 may be reversed.



## Flexible Duct Installation Hints

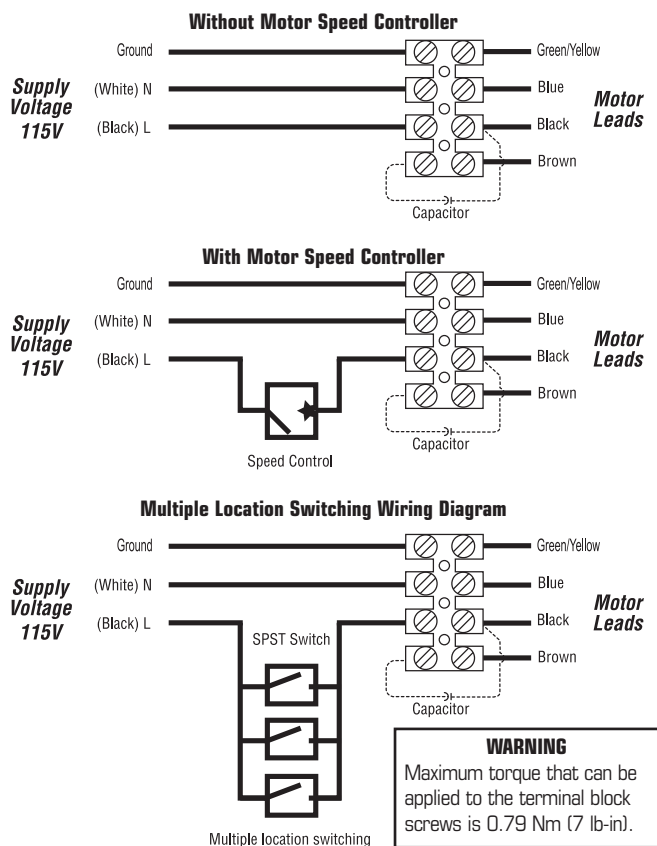
Fantech strongly recommends the use of flexible insulated duct where ducting passes through unconditioned space or where noise is a factor. **Check local code requirements before installing.** Failure to use insulated flexible duct could result in excessive condensation buildup within the duct, and undesirable sound levels within the room.

A minimum of 8' of insulated flexible duct is recommended between the fan and any inlet grille. Duct should be stretched as tight and straight as possible. Failure to do so could result in dramatic loss of system performance. Connect flex duct to the fan with plastic zip ties or duct tape. Connections should be airtight as possible for maximize performance.

## Electrical Connection

- Remove the screws securing the terminal box cover located on the side of the fan. All fan motor connections are pre-wired to an electrical terminal strip. A 3/4" romex type cable restraint connector will be needed to secure the wiring through the knockout on the side of the terminal box.
- Bring incoming electrical service through the romex connector and the fan knockout. Be sure to place the connector nut over the wiring coming into the terminal box. There are three open ports on the terminal strip. Using a small regular screwdriver, tighten the neutral (white) wire of the incoming supply under the open terminal strip port labeled "N". Tighten the line (black) wire of the incoming supply under the open terminal strip port labeled "L". Tighten the ground (green) wire of the incoming supply under the open terminal strip port labeled with the Ground symbol. If the terminal strip is not labeled, follow the wiring diagram found on the inside of the electrical cover.
- Secure the romex connector. Secure the incoming supply with the romex connector. Replace the fan terminal box cover. All fan motor and capacitor connections have been pre-wired from the factory. No additional fan wiring is necessary.

## Wiring Diagrams



## Troubleshooting

If fan fails to operate, please check the following:

- Consult wiring diagrams (above) to ensure proper connection.
- Check motor lead wiring, capacitor leads and incoming supply leads to insure definite contact.
- If possible, use a meter to test for continuity across the fan motor leads. In order to do this, the capacitor must be disconnected (do not test the capacitor - it will not meter continuity). If motor leads show continuity, consult factory for a replacement capacitor.

## Maintenance Instructions

Since fan bearings are sealed and provided with an internal lubricating material, no additional lubrication is necessary.