



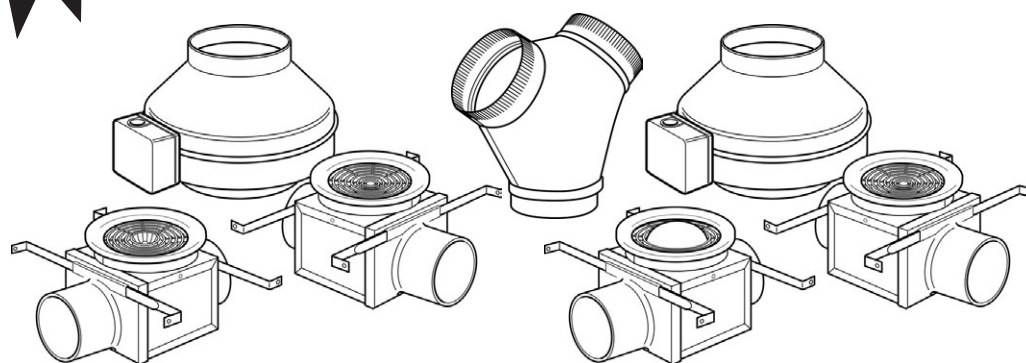
Fantech

**SEVEN-YEAR
WARRANTY**

PB Series PREMIUM BATH FANS

**Single Grille Units
4" Duct**
PB110
PB110F
PB110H

Single and Dual Grille Units 6" Duct
PB190
PB270-2
PB270F-2
PB270H-2
PB270FV-2
PB270HV-2
PB370-2



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."

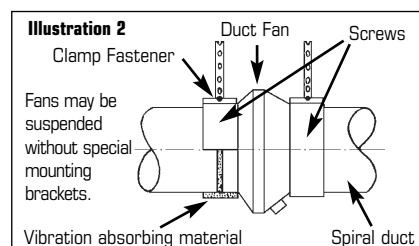
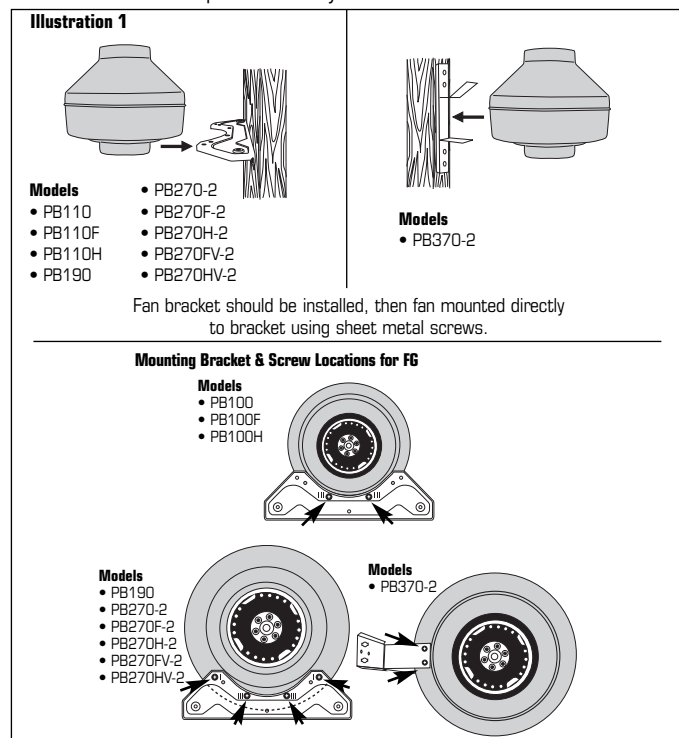
CAUTION: BULB USED IN FLUORESCENT MODELS NOT DIMMABLE

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 $\frac{1}{4}$ " 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

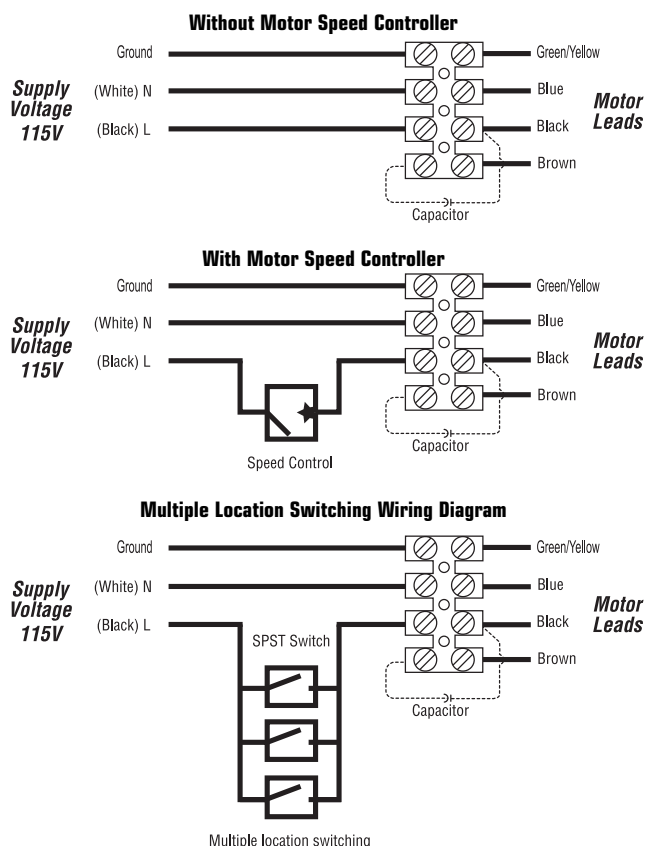
Fantech strongly recommends the use of flexible insulated duct where ducting passes through unconditioned space or where noise is a factor. **Check local code requirements before installing.** Failure to use insulated flexible duct could result in excessive condensation buildup within the duct, and undesirable 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 $\frac{3}{8}$ " 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.

Installation of Ceiling Grille Housing With or Without Light

1. Plan Location of Inlet Grilles.

Based on the bathroom layout and fixtures, plan the location of the ceiling grilles for the most effective ventilation.

2. Securing the Housing to the Ceiling Joists.

NEW CONSTRUCTION

Mount housing directly to the ceiling joist using screws and keyhole slots. Locator tabs on housing should be flush with the bottom edge of the ceiling joist for correct positioning of the unit once drywall is installed. (Figure 1)

OR

Use the hanger bars to suspend the housing between ceiling joists. For correct positioning, hanger bars should be positioned $\frac{3}{8}$ " up from the bottom edge of the ceiling joist on models with 4" duct connection and $\frac{1}{2}$ " up from bottom edge of joist on models with 6" duct connection. On models with 4" duct, tighten anti-slide screws to keep hanger bars in place. (Figure 2).

Note: Hanger bars on units with 4" duct connection can be used on ceiling joists up to 24" on center. Hanger bars on units with 6" duct connection span ceiling joists up to 16" on center.

Note: If drywall or ceiling material is thicker than $\frac{5}{8}$ " the locator tabs may be removed to allow the grille collar to be flush with the finished ceiling material. When ceiling drywall is being installed, cut hole for ceiling grille.

EXISTING CONSTRUCTION OR WHEN DRYWALL IS IN PLACE.

Cut a 6" round hole for the ceiling grille only and install the housing from the attic. (Figure 3)

Place the housing against the ceiling joist using the locator tabs to determine the correct position (Figure 1) or align it using the hanger bars. (Figure 2).

Punch out the keyhole knockouts (if using) and the electrical knockout if needed.

To complete installation for Bath Fan models with lights, continue with steps 3 through 5. For models without lights, skip to steps 4 and 5.

3. Make Electrical Connections to the Ceiling Grille Housing.

Remove the electrical cover inside the steel housing using a screwdriver. Connect power by following wiring diagram (Figure 5) and following local or National Electrical Codes. Replace the electrical cover.

4. Connect the Fan to the Ceiling Grille Housing(s). Install appropriate diameter duct from the fan to the ceiling grille housing. (Insulated flexible duct is recommended for all Fantech bathroom exhaust applications for quieter operation.) For dual grille models, install duct between fan and wye adapter* (included). Then, attach duct to each leg of the wye and to each ceiling grille housing. Secure duct in place and seal. If using insulated flexible duct, seal the inner liner to the duct connector then seal the outer shell over the top of the inner liner. Do not leave the insulation material exposed.

5. Installing the Bulb. Install the bulb by gently inserting it into the socket in the grille housing. Install the grille by pushing it firmly into the steel collar until it is shouldered by the ceiling drywall (Figure 3).

ADDITIONAL STEPS REQUIRED WHEN INSTALLING A FLUORESCENT MODEL OVER A TUB OR SHOWER.

(Figure 4)

1. Place ring 1 on on socket legs first.
2. Screw metal shield in place over socket.
3. Add rubber gasket
4. Secure ring 2 to socket. Click indicates a secure installation.

Repeat steps 1 through 5 for each additional ceiling grille housing being installed.

*For most efficient operation wye adapter should be positioned the equivalent of three duct diameters away from the fan inlet.

Figure 1

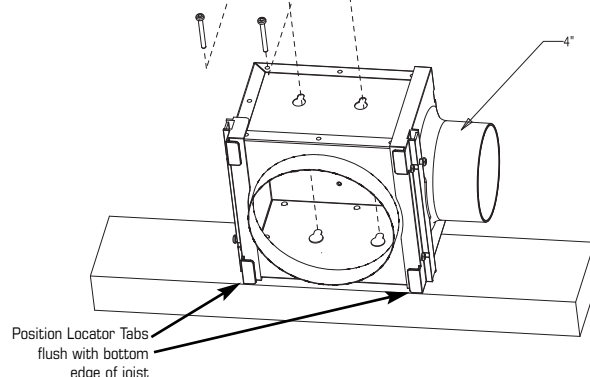


Figure 2

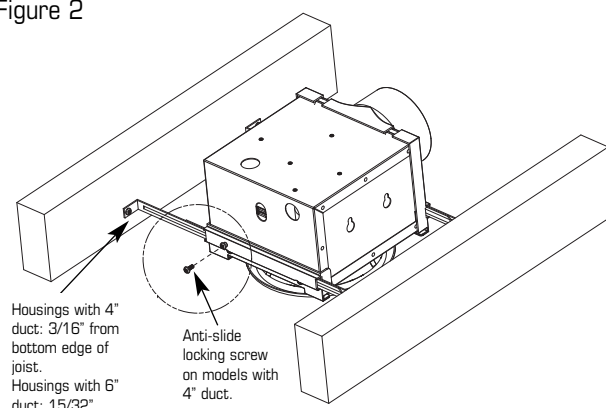


Figure 3

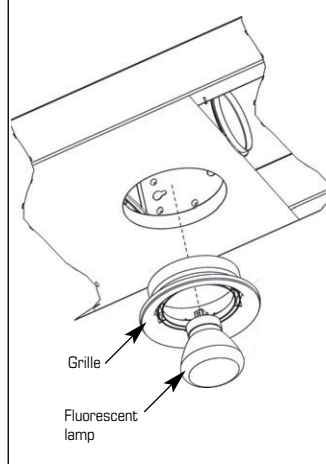


Figure 4

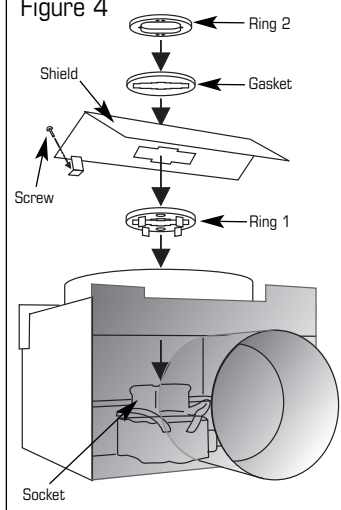
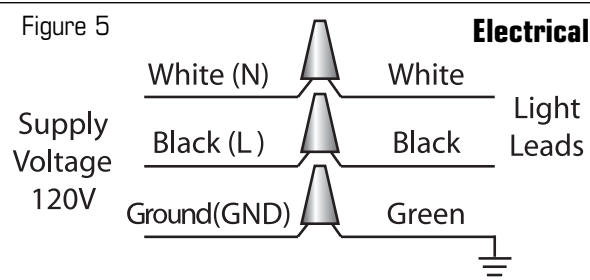
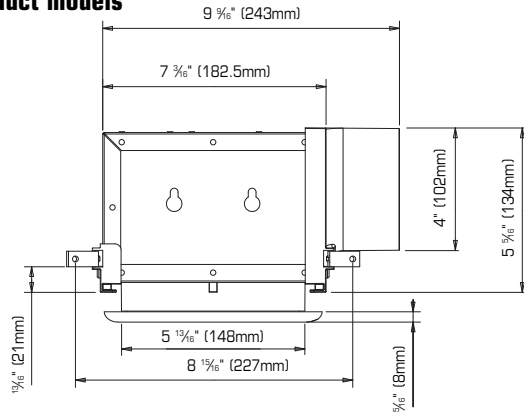


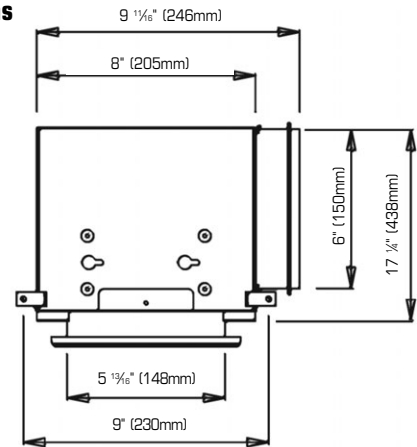
Figure 5



Housing Dimensions of 4" duct models



Housing Dimensions of 6" duct models



Seven (7) Year Warranty

DURING ENTIRE WARRANTY PERIOD:

FANTECH will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

Limitation of Warranty and Liability

This warranty does not apply to any FANTECH INC. product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve for payment any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged negligence, defect incorrect advice or other causes, shall FANTECH be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. FANTECH neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

Warning

FANTECH, INC. products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free from defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are used in a life support ventilation system where failure could result in loss or injury, the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
 1. Improper maintenance
 2. Misuse, abuse, abnormal use, or accident, and
 3. Incorrect electrical voltage or current.
- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

United States

10048 Industrial Blvd.,
Lenexa, KS 66215
Phone: 800.747.1762; 913.752.6000
Fax: 800.487.9915; 913.752.6466
www.fantech.net; info@fantech.net

Canada

50 Kanalfakt Way,
Bouchouche, NB E4S 3M5
Phone: 800.565.3548; 506.743.9500
Fax: 877.747.8116; 506.743.9600
www.fantech.ca; info@fantech.ca

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