Fantech

PB Series
Premium Bath Fans

IMPORTANT: PLEASE READ THIS MANUAL BEFORE INSTALLING UNIT

7 YEAR WARRANTY

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:

a. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact your manufacturer's representative.

b. 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.

c. 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.

d. When cutting or drilling into wall and ceiling, do not damage electrical wiring and other hidden utilities.

e. NEVER place a switch where it can be reached from a tub or shower.

f. If this unit is installed over a tub or shower, it must be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.

g. 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.

h. 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 TCP XR3014 BULBS IN FLUORESCENT MODELS AND PAR 16 IN HALOGEN MODELS

PREMIUM BATH FAN MODELS

PB100 • PB100F • PB100H • PB190 • PB230-2 • PB230F-2 • PB230H-2
PB230FV-2 • PB230HV-2 • PB360-2

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Installing Fan and Bracket

1. When selecting fan mounting location, the following criteria should be considered: *a) mounting to minimize noise generated by fan operation; b) service accessibility*

   a) Mounting the fan as far as possible from the intake point will minimize fan operating noise from being transmitted back through the duct work. Insulated flexible type duct work (recommended for all bathroom exhaust applications) will result in much quieter operation. Fantech recommends minimum 8' of insulated flexible duct between any exhaust grille and fan for low noise level.

   b) Fan location should allow sufficient access for service.

2. Using the wood screws provided, attach the mounting bracket to a support beam at the selected location. Fan mounting can be at any point along the duct and at any angle, however, vertical mounting is recommended to reduce condensation buildup in the fan. If a horizontal installation is necessary and condensation buildup may pose a problem, either wrap insulation around the fan or drill a ¼" hole in the bottom of the housing (along with an NPT insert [by others] and drain tubing) allowing condensation to drain.

Mount Bracket

Mount Fan

3. Attach fan to the mounting bracket with the sheet metal screws provided. Wiring box should be positioned for easy access. Bracket is provided with rubber vibration isolation grommets to prevent the transmission of sound through the structure. Be careful not to overtighten. Also, care should be taken not to strip the plastic housing. Screws are self tapping and do not require pilot holes. However, pilot holes (no larger than ³⁄₃₂") are recommended.

4. Connect duct work to inlet and outlet of fan using plastic ties [by others] or duct tape. When using insulated flexible duct, it is recommended that the inner vinyl core be clamped or taped to the inlet and outlet and that the vapor barrier surrounding the insulation be duct taped to the fan housing. Fantech recommends insulated flexible duct for all bathroom exhaust applications).

NOTE: Steps 2 & 3 may be reversed.

Mount Bracket

Mount Fan

Electrical Connection

1. Remove the screws securing the terminal box cover plate located on the side of the fan. All fan motor connections are pre-wired to an electrical terminal strip. A ⅜" romex type cable restraint connector will be needed to secure the wiring through the knockout provided on the side of the terminal box.

2. 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 two 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". Since the fan motor is isolated within a plastic housing, grounding is not necessary.

3. 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.

Liquid tight wiring Top View (For outside applications).

Romex wiring – Top View

Troubleshooting

If fan fails to operate, please check the following:

1. Consult wiring diagrams (at right) to ensure proper connection.

2. Check motor lead wiring, capacitor leads and incoming supply leads to insure definite contact.

3. 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.

Flexible Duct Installation Hints

Flexible insulated duct is strongly recommended where allowed by local code for bathroom exhaust applications, where ducting passes through unconditioned space or where noise is a factor. Failure to use insulation could result in excessive condensation buildup within the duct, and undesirable sound levels within the room. For the quietest possible installations, Fantech recommends a minimum of 8' of insulated flexible duct between any inlet grille and fan. When using flexible type duct work, duct should be stretched as tight and straight as possible. Failure to do so could result in dramatic loss of system performance. Flexible duct should be connected to the fan with plastic zip ties or duct tape. All connections should be as airtight as possible to maximize system performance
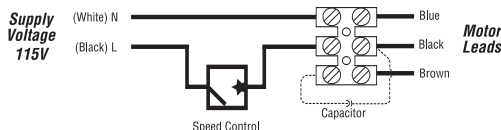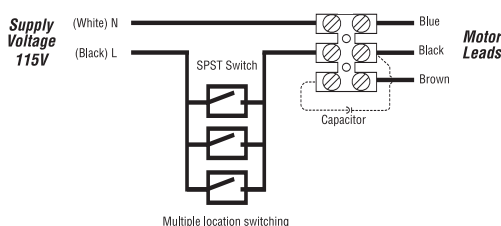
Wiring Diagrams

All Models

Without Motor Speed Controller

Supply Voltage 115V — (White) N — Blue / Black / Brown — **Motor Leads** — Capacitor

With Motor Speed Controller

Supply Voltage 115V — (White) N — (Black) L — Speed Control — Blue / Black / Brown — **Motor Leads** — Capacitor

Multiple Location Switching Wiring Diagram

Supply Voltage 115V — (White) N — (Black) L — SPST Switch — Blue / Black / Brown — **Motor Leads** — Capacitor

Multiple location switching

Installation of Ceiling Grille Housing With or Without Light

Step 1 - **Select method for mounting the housing.** The grille housing can be mounted in either of two ways; The housing can be screwed directly to the ceiling joist through the key holes provided or the hanger bars can be used to locate the housing anywhere between two ceiling joists at up to 16" on center.

Step 2 - **Select location for mounting ceiling grille .** If the ceiling drywall is already installed, cut a 6" round hole for the grille only and install the housing from the attic. (Figure 1) Place the steel cabinet along the ceiling joist using the locator tabs to determine the correct position (Figure 2) or align it using the hanger bars. (Figure 3) Punch out the keyhole knockouts (if using) and the electrical knockout if needed.

Continue with steps 3 through 6 to continue installation of Premium Bath Fan models with lights. Otherwise skip to steps 4 and 5 to complete installation of models without lights.

Step 3 - **Make electrical connections to the ceiling grille housing.** Remove the electrical cover inside the steel cabinet using a screwdriver. Connect power by following wiring diagram (Figure 4) and following local electrical codes or National Electrical Code. Replace the electrical cover.

Step 4 - **Secure the housing to the ceiling joists.** Secure the housing to the ceiling joists using either the keyholes on the steel cabinet or the hanger bars with the wood screws provided. Ensure that once the drywall is installed, the bath fan housing will be at the correct depth, using the locator tabs (Figure 2) or hanging bars (Figure 3). If drywall or ceiling material is thicker than 5/8" the locator tabs may be bent even with housing to allow the grille collar to be flush with the finished ceiling material.

Step 5 - **Connect the fan to the housing.** Install the 4" or 6" duct work from the fan to the ceiling grille housing. Insulated flexible type duct work (recommended for all Fantech bathroom exhaust applications) will result in much quieter operation. Secure duct work in place and seal. If using Insulated flexible duct work, seal the inner liner to the duct connector of the and then seal the outer shell over the top of the inner liner. Do not leave the insulation material exposed.

Step 6 - **Installing the bulb.** Install the bulb by gently inserting it into the socket inside the steel cabinet. Install the grille by pushing it firmly into the steel collar until it is shouldered by the ceiling drywall (Figure 3).

Repeat steps 1 through 6 for each additional ceiling grille housing being installed.
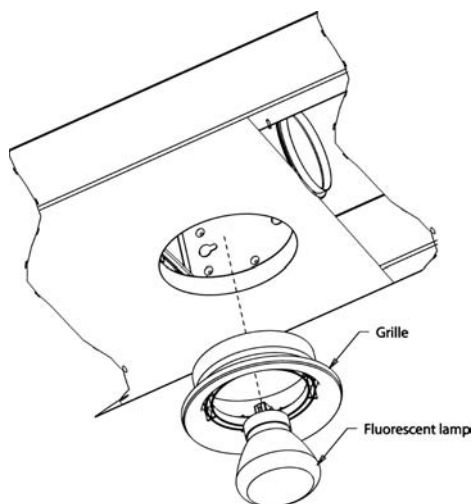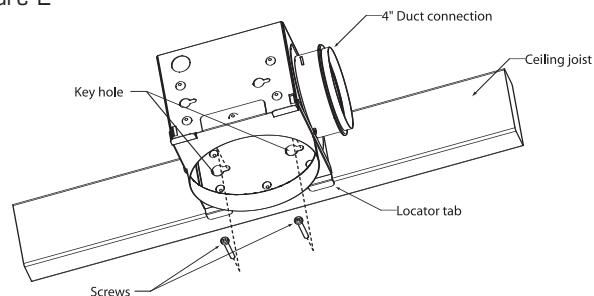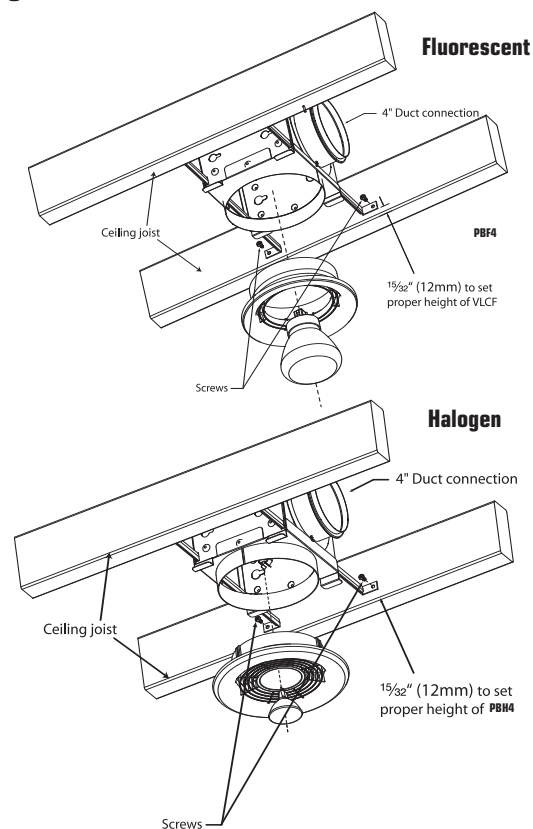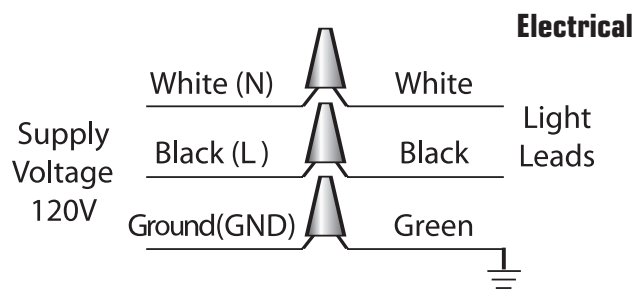

Figure 1

Figure 2

Figure 3

Fluorescent

Halogen

Figure 4

Electrical

Supply Voltage 120V

White (N) — White
Black (L) — Black
Ground(GND) — Green

Light Leads

Housing Dimensions of 4" duct models

7 ²³⁄₃₂" (196mm)
6" (154mm)
6" (154mm)
1 ¾" (44mm)
7 ³⁄₃₂" (180mm)
1 ¾" (44mm)
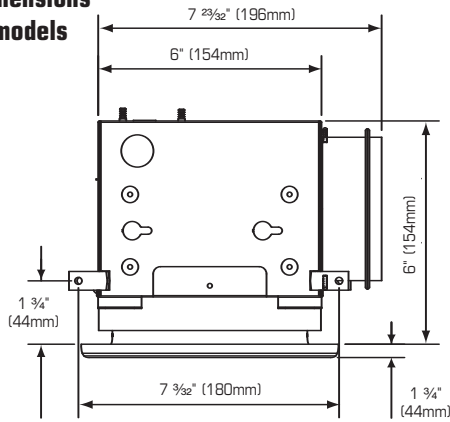
Housing Dimensions of 6" duct models

9 ¹¹⁄₁₆" (246mm)
8" (205mm)
6" (150mm)
5 ¹³⁄₁₆" (148mm)
9" (230mm)
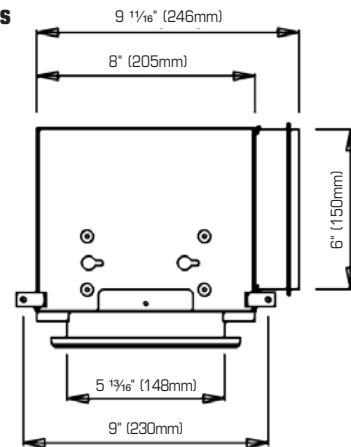
Seven (7) Year Warranty

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.

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.

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.

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