

Installation, Operation, and Maintenance Manual

BFRK 100

Bath Fan Retrofit Kit

PARTS IN THE BOX

Inline Fan FG4, 1 pc
Mounting Bracket, 1 pc
DHS 05 Main Control, 1 pc
3" to 4" Adapters, 2 pcs
Wire Connectors, 2 pcs
Cable Restraint, 1 pc
8' Flexible Insulated 4" Duct, 1 pc
12' 14-2 Insulated Electrical Wire, 1 pc
Installation, Operation, and Maintenance Manual, 1 pc



REGISTER* THIS PRODUCT TO
INCREASE YOUR PRODUCT
WARRANTY BY AN EXTRA YEAR

registration.fantech.app








* in USA only

Technical / Customer Support:

United States Tel.: 800.747.1762

Canada Tel.: 800.565.3548

 **fantech**[®]
a systemair company

				
Note	Warning / Important note	Information	Technical information	Practical tip



Read and Save these instructions for future reference.

Not for use with fan/light, heater/fan, or heater/fan/light combination units

Warnings

DO NOT CONNECT POWER SUPPLY until fan is completely installed. Make sure electrical service to the fan is locked in “Off” position

1. All units are suitable for use with solid-state speed control.
2. This unit has rotating parts and safety precautions should be exercised during installation, operation and maintenance.
3. **CAUTION:** “For General Ventilation Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.”
4. **WARNING:** To reduce the risk of fire, electrical shock, or injury to persons-observe the following:
 - a. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the factory.
 - b. Before servicing or cleaning, switch power off at service panel and lock service panel to prevent fan from being switched on accidentally.
 - c. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
 - d. 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.
 - e. When cutting or drilling into wall or ceiling, do not damage electrical wires or other hidden utilities.
 - f. Exhaust fans must always be vented to the outdoors.
 - g. Acceptable for use over a bathtub or shower.
 - h. NEVER place a switch where it can be reached from a tub or shower.
5. **WARNING!** Check voltage at the fan to see if it corresponds to the motor nameplate.

GUARDS MUST BE INSTALLED WHEN FAN IS WITHIN REACH OF PERSONNEL OR WITHIN SEVEN (7) FEET OF WORKING LEVEL OR WHEN DEEMED ADVISABLE FOR SAFETY.

Installation

Step 1

Switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally.

Step 2

In the bathroom, remove the inlet grille.

Step 3

Unplug the motor and remove the motor plate. If convenient, you may want to remove the motor from the motor plate at this stage.



The motor from your existing fan will not be used when your retrofit installation is complete. However, the motor plate may be essential for attaching the inlet grille.

Step 4

Remove the wiring cover of your existing ceiling mounted bath fan. Disconnect the power wires to your existing fan.

Step 5

Attach the flexible duct provided to the inlet port of the new fan. Tape the black inner liner to the four inch diameter lip and tape the reflective outer shell to the larger diameter shoulder. Do not leave the insulation material exposed.

Step 6

Electrical Connection for new fan

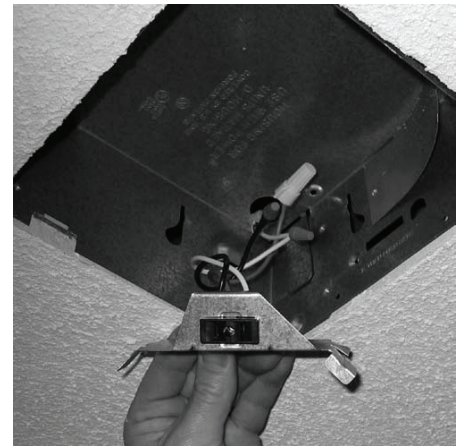
- A Remove the screws securing the terminal box cover located on the side of the fan. All fan motor connections are pre-wired to an electrical terminal strip. Use the cable restraint provided to secure the wiring through the hole on the electrical box.
- B Be sure to place the connector nut over the wiring coming into the electrical 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". 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.
- C Secure the cable restraint. Secure the incoming supply with the cable restraint. Replace the fan electrical box cover. All fan motor and capacitor connections have been pre-wired from the factory. No additional fan wiring is necessary.
- D The other end of the electrical cable will be connected in a later step.

Step 7

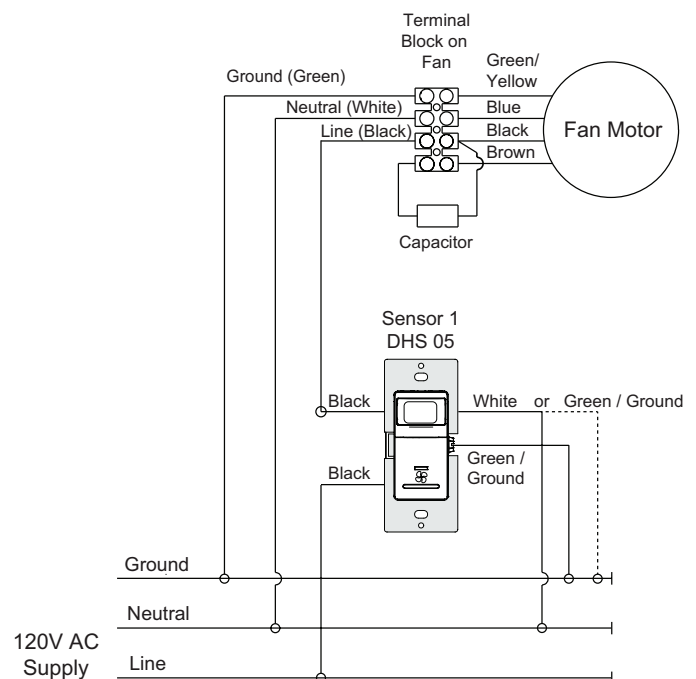
In the attic or crawl space, find the location of the existing bath fan and its exhaust duct. Select a location for the new FG 4 fan. The new fan will be connected to part of the existing exhaust duct so you must plan to locate the new fan along the line of the existing exhaust duct, no greater than seven feet from the existing fan. Fan location should allow sufficient access for service. For applications that require the new FG4 fan to be located more than seven feet from the existing fan, longer lengths of electrical cable and flexible insulated 4" duct can be purchased separately.



Step 3



Step 4



Installation (Cont'd)

Step 8

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 in 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 1/4" hole in the bottom of the housing (along with an NPT insert [by others] and drain tubing) allowing condensation to drain.

Step 9

Cut the existing duct 8" above the mounting bracket. Make a second cut in the duct at approximately 12" from the existing fan, and then remove this middle section of the existing duct.

Step 10

Attach fan to the mounting bracket with the sheet metal screws provided. Wiring box should be positioned for easy access. Screws are self tapping and do not require pilot holes. However, pilot holes (no larger than 3/32") are recommended.

Step 11

Connect the section of the existing duct (from the roof cap, wall cap or soffit vent) to the outlet port of the new fan using duct tape. If your existing exhaust duct is 3" diameter, use one of the 3" to 4" adapters (supplied in the kit). (Seal ducts adhering to local and national codes.)

Step 12

Connect the section of the existing duct (from the discharge of the existing fan) to flexible duct (from the inlet on the new fan) using duct tape. If your existing exhaust duct is 3" diameter, use one of the 3" to 4" adapters (supplied in the kit). Tape the black inner liner to the four inch diameter lip and tape the reflective outer shell over the top of the inner liner. Do not leave the insulation material exposed.

Step 13

Uncoil the new electrical cable from the new fan. Loosen the cable restraint on the existing fan and feed 4" of the new cable through the restraint, next to the existing electrical cable. Tighten the screws on the cable restraint of the existing fan.

Step 14

In the bathroom, connect the new cable to the existing power supply (black wire to black wire, white wire to white wire) using the wire nuts provided.

Step 15

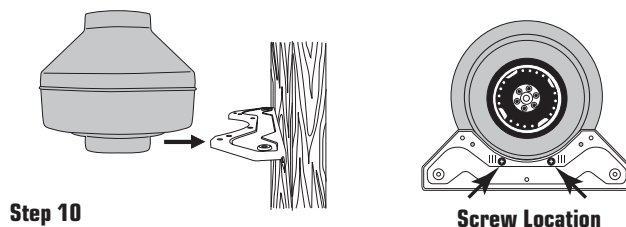
Carefully push the new connections back into the fan housing (or wiring box within the fan housing) making sure that no wires will be pinched before putting the wiring cover and motor plate back into position. Reattach the fan grille.

Step 16

Install the DHS05 fan controller in an electrical box upstream of the fan. See also the instructions included with the DHS05 controller.

Step 17

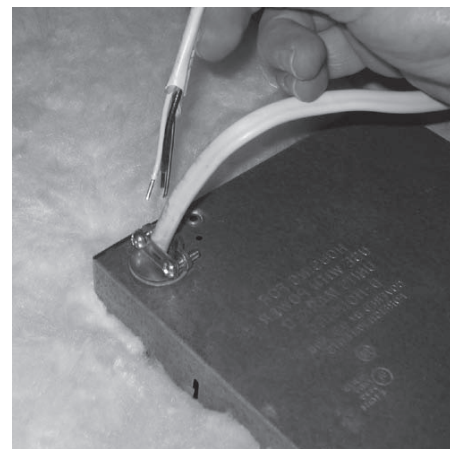
Restore electrical service, switch on and verify airflow



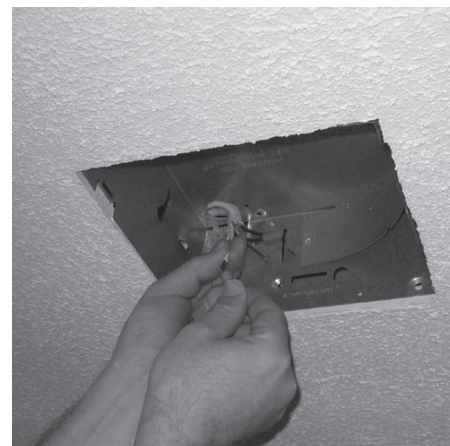
Step 10



Step 11 & Step 12



Step 13



Step 14

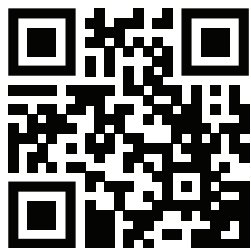
Notes

Notes

Notes

Fantech reserves the right to make technical changes.
For updated documentation please refer to www.fantech.net

Fantech®



**Make a scan of the QR code above to access
Fantech's warranty in English, French, or
Spanish. Includes a 5y warranty.**

If additional support is needed to retrieve the warranty, visit fantech.net; call (800) 747-1762 (US), (800) 565-3548 (Canada), or +52 55 1328-7328 (Latin America); email support@fantech.net; or mail us at 10048 Industrial Blvd, Lenexa, KS 66215 United States or at 50 Kanalläkt Way, Bouctouche, NB E4S 3M5 Canada.



fantech®
a systemair company