



BISFWK-1
HCTW

Forced Hot Air System

Installation Options

The forced hot air system offers two installation options: a wall, ceiling or floor installation in a room or a hook-up to a central heating system. Each option offers the following advantages:

Installation in Another Room

- Allows for the transfer of heat in another room.
- Can install up to 50 ft of flexible pipe.
- Can heat a basement, garage or attic.
- Possibility of controlling via a wall thermostat.

Central Heating

- Mass diffusion of heat.
- Secondary system allowing for savings in oil, gas or electricity.

Components for the Connection Kit for Forced Hot Air System

The starter kit is comprised of a variable speed fan (BISZY), an adaptor for flexible pipe (BISAF), fan to flexible pipe adapter (BISAVF), a variable speed control for the fan (VRUW) and a thermostatic control (VTU). The following optional parts are also available: wall thermostat with control box (HCTW) and a back draft damper (BISBD).

Mechanical Installation

1. Locate the hot air outlet, make sure it respects the maximum distances, plan for the passage through walls, ceilings etc., when mapping out the path the duct will take.
2. Locate the area where the flexible pipe will hook up to the appliance.
3. Remove the corresponding 5-inch plate and screw in the flexible pipe adaptor (Figure 1). These plates are located in the following places:
 - On the HE43, on the upper left and right hand sides of the unit.
 - On the BIS Ultima, BIS Ultra and BIS Panorama, on the upper left and right hand sides as well as the back of the unit.

CAUTION: the 9-inch plates on the top of the unit are for gravity vent kit only.

4. Using a tightening collar, install the flexible pipe to the adaptor (Figure 2). **CAUTION:** make sure the plastic casing of the flexible pipe does not touch the fireplace.
5. Bring the flexible pipe to the desired room; this room may be located on an upper or a lower floor. Please note that the maximum allowable length of flexible pipe is 50 feet from the fireplace. Seeing that the pipe is insulated, it may be installed with zero clearance to combustible materials.
6. To install the fan, place the four (4) anti-vibration rubbers in the holes of the support plate of the fan and screw the fan to a solid base. The fan may be installed either horizontally or vertically but must be easily accessible for maintenance as well as for the electrical installation (Figure 3).
7. With the second tightening collar, install the flexible pipe to the round central inlet of the fan (Figure 3).
8. To install the back draft damper (BISBD), please refer to the back draft damper installation sheet.

Mechanical Installation (con't)

9. Install the flexible adaptor (BISAVF) to the square outlet of the fan using four self-tapping screws and use a tightening collar to install the pipe (Figure 4). Bring the second flexible pipe to the hot air outlet and install it in one of the three following options.
 - 9.1 If installing in a wall outlet, purchase from your hardware store an adapter from $\varnothing 5$ in. flexible pipe to wall grille/register (Figure 5). Install the pipe with a tightening collar
 - 9.2 To install the hot air exit in a furnace, purchase from your hardware store an angled adapter from $\varnothing 5$ in. flexible pipe to fit your furnace duct. Connect the second pipe to the boot using a tightening collar. Warning: you must always install to the hot air duct of the furnace and never to the return air (Figure 5).



Figure 1



Figure 2



Figure 3



Figure 4

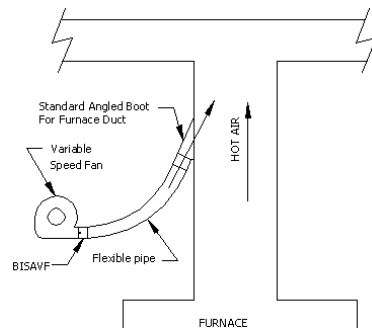


Figure 5

Thermostat

If you are using a thermostat, install it in the room where the hot air is being sent. It is preferable to install the thermostat at the opposite end of the room so that the thermostat is not in direct contact with the hot air. Do not install the thermostat in the same room as the fireplace unless you are using it as a cooling thermostat. This may be useful to activate the fans to send the hot air towards another room once the temperature is too high in the room where the fireplace is installed (see **Note for Installing a Cooling Thermostat**).

Thermostatic Control

The thermostatic control (VTU) allows for the fan to work when fireplace temperatures reach a certain point. This control is easy to install: because of its magnets, all you need to do is place it on the bottom right hand side of the firebox (figure 6).

Note: for visual purpose, the right side panel has been removed.



Figure 6

Electrical Installation

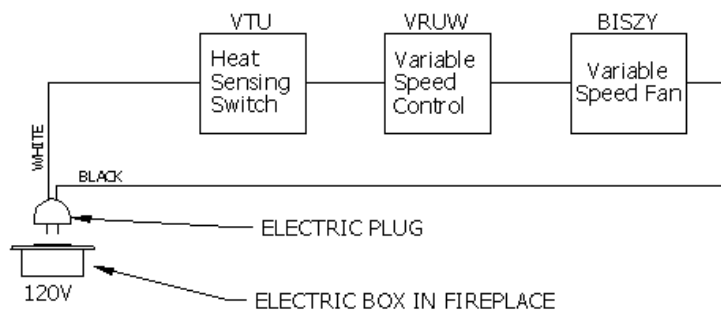
WARNING: All electrical connections and grounds must be in accordance with local codes and regulations, and, in absence of these, the CSA C22.1 Canadian code, or in the United States, the ANSI/NFPA 70 national electrical code.

WARNING: 1. In order to avoid electrical shock, all connections between 2 wires must be placed in a metallic box. It is preferable to use one electric conductor between each element of the system.

2. Unless otherwise indicated, every electrical wiring not supplied by the manufacturer must be 14-gauge minimum.

3. All electrical wiring coming in or out of the fireplace must pass through the fireboxes electrical box.

1. Basic Electrical Connection



For a basic electrical connection, use any terminal in the following order:

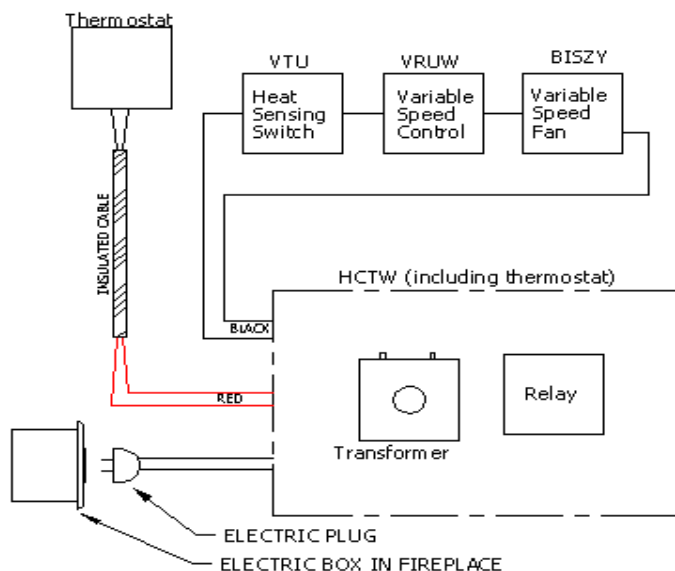
- A. Install a standard 110V receptacle in the fireplace's electrical box.
- B. Starting with the white wire provided in the starter kit, connect a wire to the terminal of the thermostatic control.

Warning: in order to prevent electrical shock, completely finish and verify the connections of the electrical system before plugging it in.

Basic Electrical Connection (con't)

- C. Connect the second terminal of the thermostatic control (VTU) to one of the two wires of the variable speed control (VRUW).
- D. Connect the second wire of the variable speed controls (VRUW) to the fan (BISZY).
- E. Finally, from the fan (BISZY), go back into the fireplace and connect that wire to the black wire of the electrical plug.
- F. Make sure that no wires are in contact with the hearth and that the whole system is safe prior to plugging in the wire.

2. Electric Connection with Thermostat



When installing a thermostat, you have received a control box including a transformer and a relay. This electrical box will allow you to make a 24V system that is parallel with the 110V system; it is essential that the following steps be followed in order to avoid an electrical surcharge on the system.

- A. Install an electrical socket of 110V in the fireplace's electrical box.
- B. Open the cover of the control box. Connect the red wires of the control box to an insulated container with 18-2 wire minimum. The connections must be inside the control box. Pass the insulated conductor through the metallic grommet. Pass the conductor through the electrical box of the fireplace, and then connect the other end to the thermostat terminals.
- C. Connect the black wire with quick connect to a terminal of the thermostatic control (VTU) (figure 6).
- D. From the second terminal of the thermostatic control, pass a single conductor wire, through the fireplace's electric box up to a wire of the variable speed control (VRUW) (Figure 7).
- E. From the second wire of the variable speed control (VRUW) to the fan (BISZY).
- F. Finally, from the fan (BISZY), return to the fireplace and connect that wire to the second black conductor. The connection must be made inside the box.
- G. Securely fasten the control box to the exterior of the fireplace (figure 6).
- H. Make sure that no wires are in contact with the hearth and that the whole system is safe prior to plugging in the wire.



Figure 7



Figure 8

3. Note for Installing a Cooling Thermostat

In order for the thermostat to work as a cooling thermostat, you must:

- A.** Ensure that all connecting electrical sources with this system are unplugged.
- B.** Open the control box by removing the four screws on the side of the box.
- C.** Locate the wire connected to terminal #3 of the relay (the terminal numbers are etched in the relay box).
- D.** Disconnect this wire from the terminal #3 and reconnect it to the terminal #2 (Figure 8).
- E.** Ensure that no other wire was disconnected while completing this operation.
- F.** Close the cover of the control box.



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