

# Installation Instructions

## iQDrive Blower Kit for Gas Furnace Applications

### **WARNING:**

**To avoid the risk of electrical shock, personal injury, or death, disconnect electrical power before installing this kit or performing maintenance.**

Before beginning installation, read these instructions thoroughly and follow all warning and cautions in these instructions and on the unit. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local codes require licensed installation/ service personnel for this type of equipment. Improper installation, service, adjustment, or maintenance can cause fire, electrical shock or other conditions which may result in personal injury or property damage. Unless otherwise noted in the instructions, only factory authorized kits or accessories may be used when modifying this product.

## 1. SPECIFICATIONS

The variable speed blower kit number 904621 is designed for installation in all "B" and "C" cabinet upflow \*G6 and \*GF1 furnaces only. This kit is not intended for use on downflow furnaces.

## 2. INSTALLATION REQUIREMENTS

Check Equipment - After unpacking, inspect the kit thoroughly for concealed damage. If damage is found, notify the transportation company immediately and file a concealed damage claim. All installations shall be made as described in the installation instructions and in accordance with applicable national and local codes including the requirements of local utilities.

## 3. INSTALLATION

### Conversion of Single Stage Upflow Furnace

1. Disconnect electrical power to the furnace.
2. Remove the upper and lower access doors from the furnace.
3. Remove the electrical plug containing the blower wires from the receptacle located on the left side of the blower deck.
4. Remove the screws that hold the blower assembly and remove the blower.
5. Attach the blower mounting brackets, supplied in the kit, to the blower housing.
6. Slide the variable speed blower kit into the furnace. Be sure that the sides of the blower are captured by all of the blower mounting tabs in the blower deck. Secure with the two screws removed in step 4.

7. Remove the front cover from the control panel. Connect the thermostat wires from the auxiliary board to the integrated control board in the furnace.  
**IMPORTANT NOTE: All wires should be routed through a strain relief bushing. All signal wires (shielded wires) should be routed separately from the single conductor wires.**
8. Connect the pressure transducer from the coil to 4 pin terminal labeled "P3" on the EXV Board.
9. Connect the temperature sensor from the evaporator coil to the 3 pin terminal labeled "P2" on the EXV Board.
10. Connect the 1/4 inch coil thermister leads from the evaporator coil to the indicated location on the auxiliary board.
11. Connect the EXV coil from the evaporator coil to the 6 pin terminal on the EXV Board labeled "P1".
12. Replace the transformer on the furnace with the 60VA transformer (Part No. 622057) that is provided in the kit, and connect to the furnace control board. Self tapping screws may be required to install the transformer.
13. Connect the Black wire from the noise filter to "L1" on the furnace control board, and the White wire to the neutral terminal on the control board. Use the piggy back connector to re-attach the Black wire to the board.
14. Connect the Blue wire that is placed on the "Twin" terminal on the interface board to the "Twin" terminal on the integrated control board on the furnace.
15. A set of thermostat wires is furnished with the kit. These 4 wires are connected to the "Thermostat" terminals on the interface board. These wires include a noise filter ring. **DO NOT REMOVE THE FILTER RING.** This has been supplied by the factory to avoid electrical interference. Field supplied wire shall be used to connect the Red wire to "R" on the thermostat control, the Yellow wire to "A", the White wire to "B", and the Green wire to "C".
16. A set of wires is furnished to connect the outdoor condensing unit to the interface board. These 3 wires are connected to the "O.D. Unit" terminals on the interface board. These wires include a noise filter ring. **DO NOT REMOVE THE FILTER RING.** Refer to the outdoor unit installation instructions for connection.

**IMPORTANT NOTE: The use of shielded cable is required for the connection to the thermostat controller. This wire is field supplied. Ground the shielded cable at the furnace end only on the grounding lug on the interface board bracket.**

## Conversion of 2-Stage Upflow Furnaces with Factory Installed Variable Speed Blower (See Figures 1 & 3)

1. Disconnect electrical power to the furnace
2. Remove the upper and lower access doors from the furnace.
3. Remove the screws that hold the blower assembly.
4. Remove the factory installed variable speed blower including the wires connected to the integrated control board in the furnace.
5. Remove all three wires that are fastened to the closed end connector. Please note that one of the brown wires is secured between the closed end connector and the white wire on pin 13 of the variable speed motor. These wires will not be used with the IQ Drive.
6. Remove the yellow wire from the Y-connector that is attached to the gas valve. These wires will not be used with the IQ Drive.
7. Connect the yellow wire from the W2 terminal of the auxiliary board in the IQ Drive blower kit to the high side terminal of the gas valve. (See Figure 2)
8. Install the IQ Drive blower kit as described in the installation section for single stage furnaces, making the conversions in steps 5 through 16.

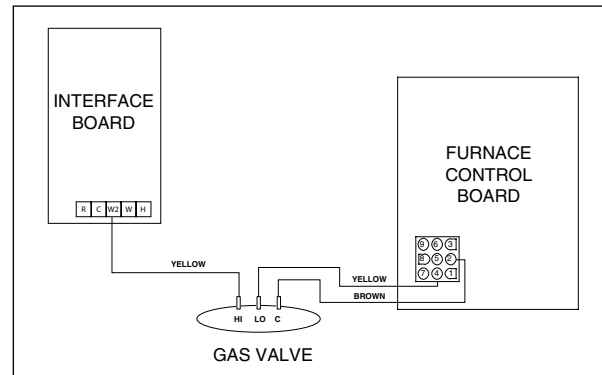


Figure 1. Wiring for furnaces with 2-stage gas valve.

## Conversion of 2-stage Upflow Furnace with Factory Installed Fixed Speed Blower

1. Disconnect electrical power to the furnace
2. Remove the upper and lower access doors from the furnace.
3. Remove the screws that hold the blower assembly and remove the blower.
4. Remove the DPST relay from the furnace and the wires that connect to it. The relay and the wiring will not be used with the IQ Drive.
5. Remove the brown wire that connects between the DPST relay and the closed end connector in the fur-

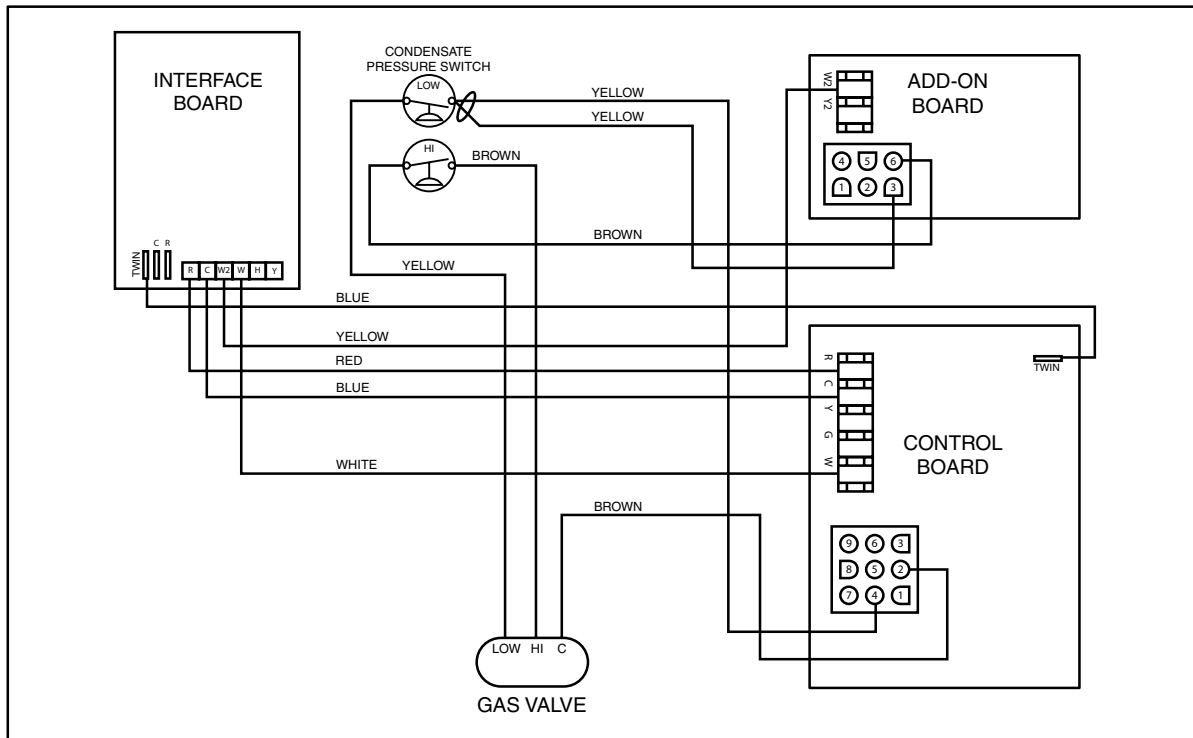


Figure 2. Conversion of 95+ \*TE Furnace

nance. Also remove all three wires that are fastened by the closed end connector. These wires will not be used with the IQ Drive.

6. Remove the yellow Y-connector that is attached to the gas valve. These wires will not be used with the IQ Drive.
7. Install the IQ Drive blower kit as described in the installation section for single stage furnaces, making the conversions in steps 5 through 16.
8. Connect the yellow wire from the W2 terminal of the auxiliary board in the IQ Drive blower kit to the high side terminal of the gas valve. (See Figure 1)

### Conversion of 92+ 2-stage Upflow Furnace Models \*TE Series with Factory Installed Variable Speed Blower (See Figures 2 & 4)

1. Disconnect electrical power to the furnace
2. Remove the upper and lower access doors from the furnace.

3. Remove the screws that hold the blower assembly and remove the blower.
4. Install the IQ Drive blower kit as described in the installation section for single stage furnaces, making the conversions in steps 5 through 16.
5. Find wires that are fastened to the closed end connector. Please note that one of the brown wires is secured between the closed end connector and the white wire on pin 13 of the variable speed motor.
6. Remove the factory installed variable speed blower including the wires connected to the integrated control board in the furnace.
7. Cut and remove the brown wire from the variable speed motor attached to the closed end connector. Insulate the other end brown wire with insulation tape.
8. Disconnect the yellow wire from the low fire side terminal on the gas valve that leads to the variable speed motor.
9. Attach the W2 wire from the Interface board to the W2 terminal on Add-on combustion board. (See Figure 2)

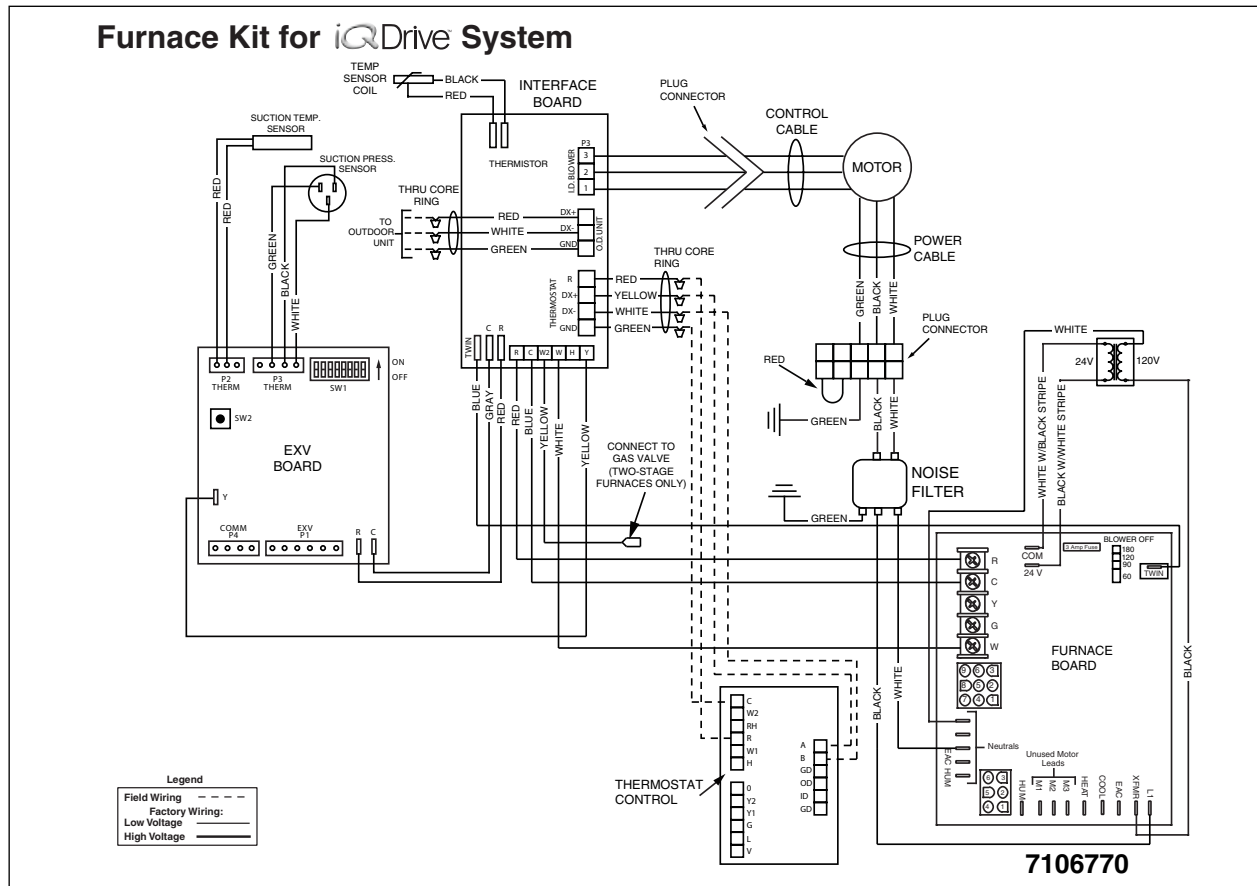


Figure 3. IQ Wiring Diagram

## 4. SELECTING THE GAS HEATING AIRFLOW

To select the airflow, enter into the programming screen on the controller thermostat. Select the input rate of the gas furnace, then select the desired temperature rise. **PLEASE NOTE:** Improper selection of the temperature rise may result in limit operation. It is recommended that a full furnace cycle is witnessed before the furnace is placed in operation.

## 5. SELECTING BLOWER-OFF TIME DELAY.

The blower off time delay can be adjusted through the programming screen. The time delay can be adjusted from 60 to 180 seconds. To enable this feature, the blower off delay on the furnace board must be positioned to 60 seconds in order for the desired delay to be active. The default setting on the thermostat is 120 seconds.

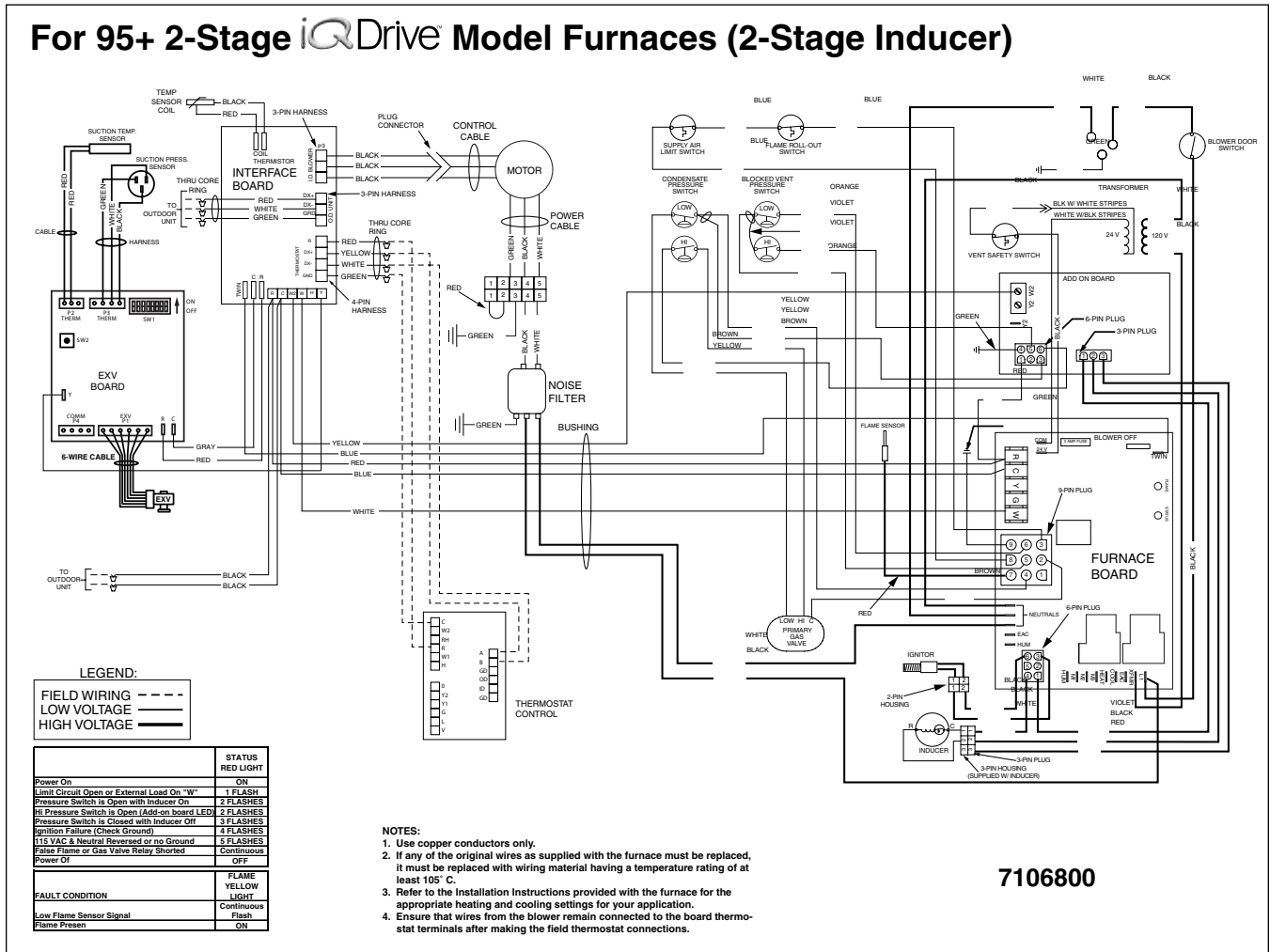


Figure 4. Wiring for 95+ 2-Stage Furnace

