***G7 / MGC2 TWINNING KIT**

INSTALLATION INSTRUCTIONS

FOR SINGLE STAGE UPFLOW AND DOWNFLOW GAS FURNACES

IMPORTANT SAFETY INFORMATION

INSTALLER: Please read all instructions before servicing this equipment. Pay attention to all safety warnings and any other special notes highlighted in the manual. Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored.

WARNING - indicates a potentially hazardous situation that if not avoided, could result in personal injury or death.

CAUTION - indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury or property damage.

⚠ WARNING:

This twinning kit must be installed by a qualified service technician in accordance with these instructions and all codes having jurisdiction. Failure to follow these instructions could result in possible damage to equipment, serious personal injury, or death.

ABOUT THE TWINNING KIT

This twinning kit is designed to operate two single stage furnaces with PSC motors, and to have the blower operation synchronized between two identical furnace control boards for installations where two furnaces are fed into the same ductwork. **NOTE:** This kit cannot be used with VSHE or FSHE motors.

- With the use of the twinning boards, two furnaces will operate the blowers at the same speeds all the time whenever the blower is used.
- Each furnace will have a twinning board that is connected to the furnace control board with a wire harness.The twinning boards will have the twin connection on each furnace connected with a field supplied wire. Both furnaces can also be wired in parallel.
- One furnace can be used for one stage of heating and the other furnace can be used for the second stage of heating. The installer also has the choice of running one furnace only or both furnaces.
- This twinning kit requires both furnaces to be equipped with single stage ignition control board (**P/N 624844 or 624742**) and will not operate with earlier versions. Please contact your distributor for the latest control.
- Twinned furnaces must be properly grounded according to local codes. Both furnaces must share the same ground for proper operation. **Do not use gas piping as an electrical ground!**
- Both furnaces must have a common return duct and common supply duct.
- Both furnaces must be electrically in phase and on the same leg of power.

INSTALLING THE TWINNING KIT

1. Turn off all electrical power to the furnaces.
2. Install the twinning board on the control bracket.
3. Mount the board and bracket in each furnace. See Figure 1 for placement of twinning board according to furnace type.
4. Carefully drill a 1 inch hole in the blower decks of both furnaces (upflow furnaces only).
5. Connect the 6 pin harness to the expansion ports on the twin board and the the furnace control board. See Figure 2.
6. Connect the thermostat wires to the furnace control board:

One stage heating

a.) Connect the thermostat wires to the primary furnace control board. Mount the relay on the bracket on the secondary furnace.
b.) Connect **W** from the board on the primary furnace to the coil side of the relay (using field supplied wire and 3/16" terminals).
c.) Connect **C** from the primary furnace to the coil side of the relay (using field supplied wire and 3/16" terminals).

NOTE: Make sure connections are made on opposite sides of the coil.

d.) Connect **R** from the secondary furnace control board to the COM side of the relay (use included **red** wire).
e.) Connect **W** from the secondary furnace control board to **NO** side of the relay (use included **white** wire).

Two stage heating

a.) Connect the thermostat wires to the furnace control board (except **W2**). Mount the relay on the bracket on the secondary furnace.
b.) Connect **W1** from the thermostat to **W** of the primary furnace.
c.) Connect **W2** from the thermostat to the coil side of the relay (using field supplied wire and 3/16" terminals)
d.) Connect **C** from the primary furnace to the coil side of the relay (using field supplied wire and 3/16" terminals).

NOTE: Make sure connections are made on opposite sides of the coil

e. Connect **R** from the secondary furnace control board to the **COM** side of the relay (use included **red** wire).
f. Connect **W** from the secondary furnace control board to NO side of the relay. (use included **white** wire).

8. Attach a wire between the two twin terminals on the twinning control boards (Figure 2). Use field supplied wire and two 3/16" wire terminals supplied with the kit.
9. Insert universal bushing in the hole of the blower deck.

NOTE: Bushing and foam tape are provided to seal the opening in the blower deck. When running wires through the bushing, wrap the wires thoroughly with foam tape to properly seal opening in blower deck.

10. Adjust the blower speed switches (if necessary) on both furnace control boards. **NOTE:** The fan speeds for heating and cooling MUST be the same or the control will not operate properly.
11. Restore electrical power to the furnaces and perform startup procedures as outlined in the furnace installation instructions.
12. Verify the **green** LED on the twinning control board. For normal operation, the light will stay ON. Refer to Table 2 for fault code descriptions.

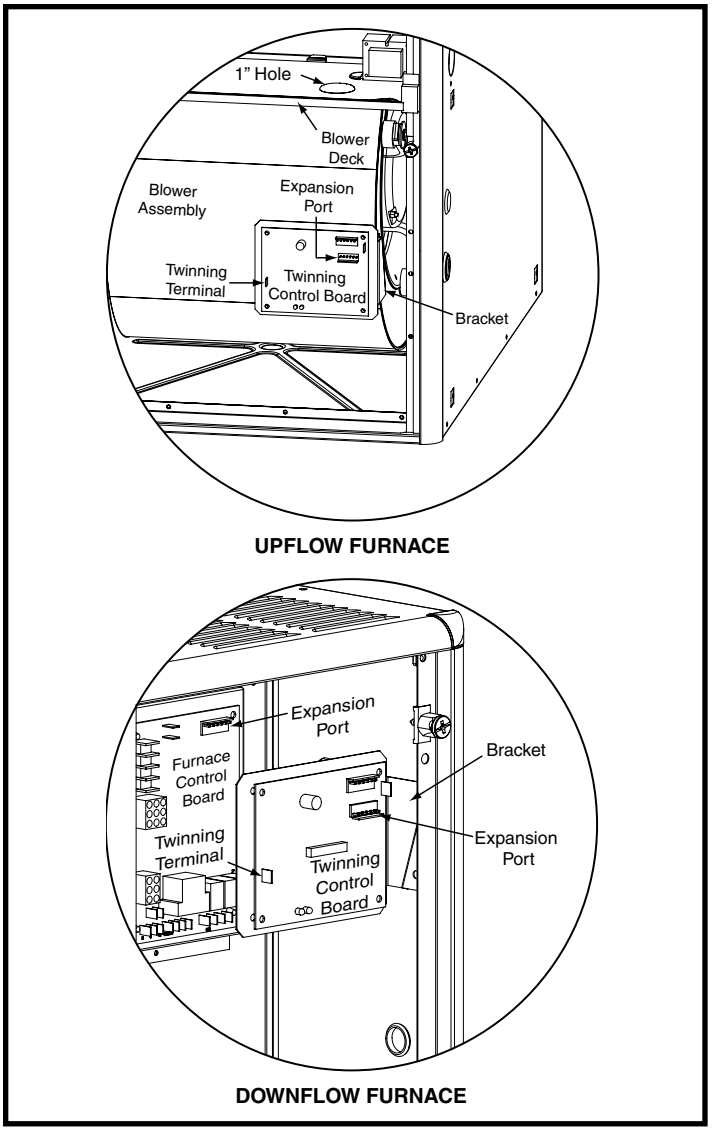


Figure 1. Installation of Twinning Control Board

COMPONENT	PART #	QTY
Twinning Control Board	624731	2
Bracket	1009899	2
Harness	2B3701	2
3/16" Terminals	631662	6
Kit Installation Instructions	709050	1
Universal Bushing	632650	2
Screws	600255	6
Relay	624843	1
4' Red Wire	161098	1
4' White Wire	1009909	1
Foam Tape (18")	689889	2

Table 1. Materials List

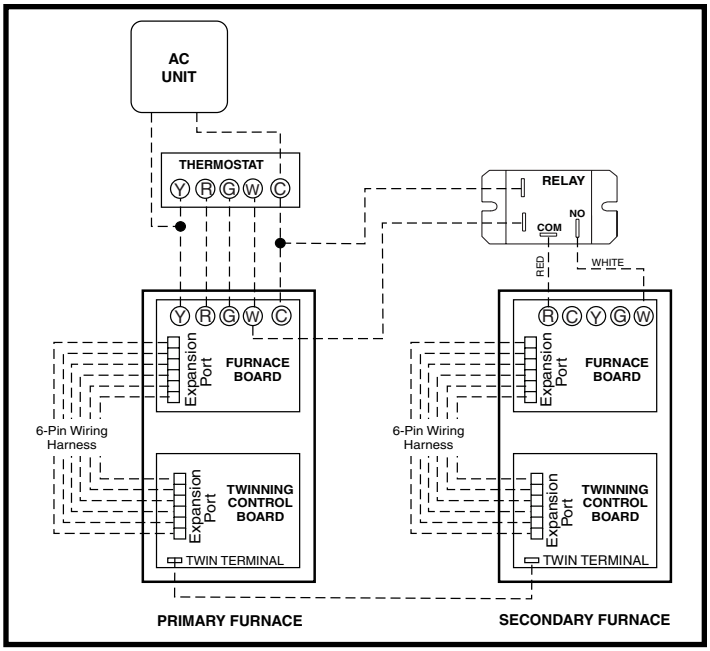


Figure 2. Single Stage Twinning (Normal operation)

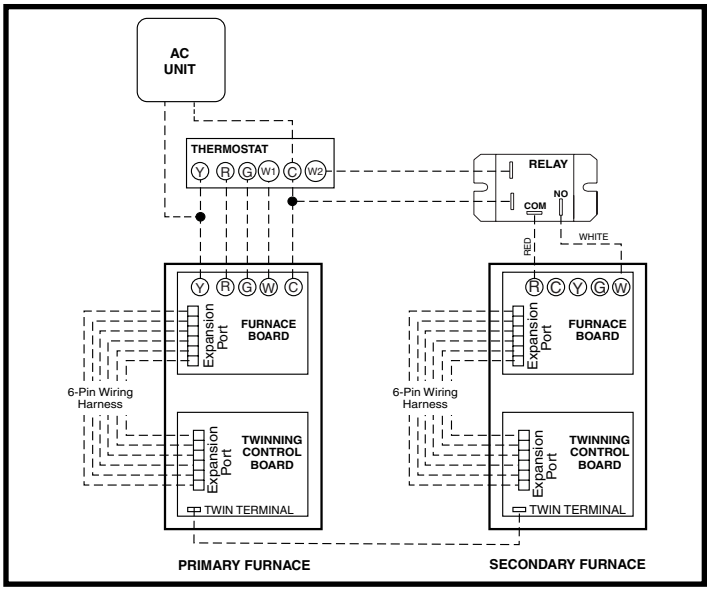


Figure 3. Two-Stage Twinning (Staged Operation)

DIAGNOSTIC DESCRIPTION	GREEN LED
Control Fault (or no power)	Off
Normal Operation	On
Twin Fault	Flash
Communications Fault	Flash

Table 2. Fault Codes

The installer performing this work assumes all responsibility for this sub-base kit. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of these components. Some local codes require licensed installation/service personnel for this type of equipment. Safety should always be the deciding factor when installing this product and using common sense plays an important role as well. Improper installation of the components or failure to follow safety warnings could result in serious injury, death, or property damage. After completing the installation, return these instructions to the Homeowner's Package for owner-user's future reference.

Specifications & illustrations subject to change without notice or incurring obligations (03/16).
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10100370 (Replaces 709050C)