

POWER EXHAUST FANS

**INSTALLATION INSTRUCTIONS FOR POWER EXHAUST FANS
USED WITH KG/KC/KH/LG/LC/LH/LD 024-090 PACKAGED UNITS**

Shipping and Packing List

Package 1 contains:

- 1- Power exhaust assembly
- 1- GED Seal
- 1- Bag assembly containing:
 - #10 Sheet metal screws
 - 1-Pink wire (K1-1)
 - 1-Gray wire (K1-2)
 - 2-Terminal adapters

Check packaging for shipping damage. Contact the last carrier immediately if any shipping damage is found.

Application

Power exhaust fans are applied to units equipped with an economizer in downflow air discharge. The power exhaust fan option cannot be used in horizontal air discharge applications. See table 1.

Locate all other accessories to be installed. Install accessories in the following order:

- 1-Economizer Dampers
- 2-Sensors
- 3-Power Exhaust Fans
- 4-Hood assembly
- 5-Gravity Exhaust Dampers

TABLE 1

Unit	Unit Voltage	Cat No.	Assembly No.
LG/LC/LH/LD 036-074 KG/KC 024-090 KH024-072	208/230	21Z13	607212-09
	460	21Z14	607212-10
	575	21Z15	607212-11
	380/420	21Z16	607212-12

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier

Installation

- 1- Disconnect electrical power to unit.
- 2- Remove or open unit end panel. See figure 1.

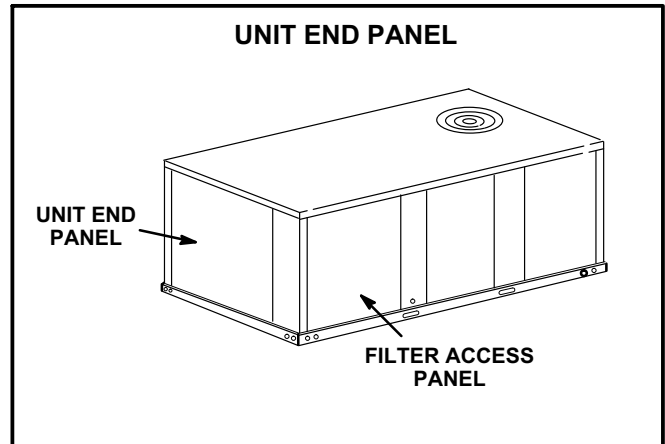


FIGURE 1

- 3- If unit does not already contain an economizer, install using the instructions provided with economizer. Install optional enthalpy sensor(s) if used; refer to instructions provided with sensors.
- 4- Remove gravity exhaust dampers from the economizer assembly. See figure 2.
- 5- Refer to instructions provided with the economizer for hood assembly with power exhaust fan.

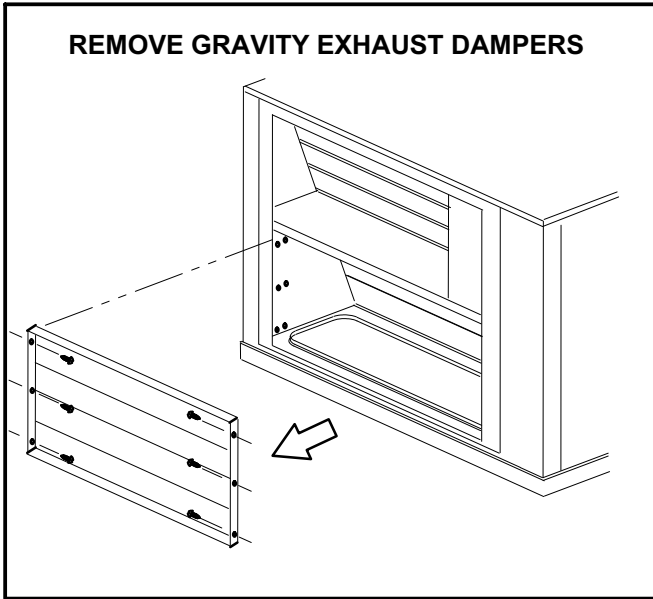


FIGURE 2

6- LG/LC/LH/LD Units -

Remove and discard power exhaust fan jumper harness. See figure 3. Set fan near unit opening and connect J18/P18 and J24/P24 plugs. See figure 4 for location of J18 and J24.

7- KG/KC/KH Units -

Set fan assembly near unit opening and connect J132/P132 plugs. See figure 5.

8- KG/KC/KH Units - Field-Installed Economizers Only-

Locate economizer harness wires marked K1-L1 and K1-L2 (already installed and hanging near the economizer control A6). Connect the hanging K1-L1 wire to the pink kit wire marked K1-L1. Connect the hanging K1-L2 wire to the gray kit wire marked K1-L2. Wires hanging in unit may be pink and gray, red and black, or red and blue.

Route the other end of the pink and gray kit wires to the control panel. Connect pink kit wire to K1 contactor L1 terminal. Connect gray wire to K1 contactor L2 terminal using the terminal adapter provided in kit. See figure 6.

Note - Older economizers may be equipped with longer pink and gray wires coiled in the same area. One end of the pink and gray wires are already connected. Connect the other end according to the previous step. Discard kit wires.

9- Install fan assembly and secure with screws provided.

10- Install gravity exhaust in exhaust air hood as shown in economizer installation instruction.

Set Prodigy M2 Unit Controller

Use the Unit Controller manual provided with each unit to enable the exhaust fan.

Use the following menu:

*Settings>Install>New M2>Exhaust Stages>
1 Exhaust Stage*

M3 Unit Controller Setup

The M3 Unit Controller has power exhaust fan control options that include support for both single-stage and two-stage equipment. The power exhaust is controlled based on the damper position. Refer to the Power Exhaust section of the 2.0 M3 Unit Controller Application Guide.

Go to **SETUP / INSTALL** and set **Configuration ID 1**, position **3** to (**S = Single Stage** or **D = Dual Stage**).

Go to **SETUP / INSTALL** and set **Configuration ID 1**, position **4** to **A = Damper Position**

M4 Unit Controller Setup

The M4 Unit Controller has power exhaust fan control options that include support for both single-stage and two-stage equipment. The power exhaust is controlled based on the damper position. Refer to the Power Exhaust section of the M4 Unit Controller Application Guide.

Go to **RTU MENU > SETUP INSTALL** and navigate through various setup questions until **Configuration ID 1**; set position **3** to (**S = Single Stage** or **D = Dual Stage**).

Go to **RTU MENU > SETUP INSTALL** and navigate through various setup questions until **Configuration ID 1**; set position **4** to (**A = Damper Position**).

Operation

Power exhaust fans are energized when economizer dampers reach 50% (default).

DISCONNECT HARNESS - LG/LC/LH/LD UNITS

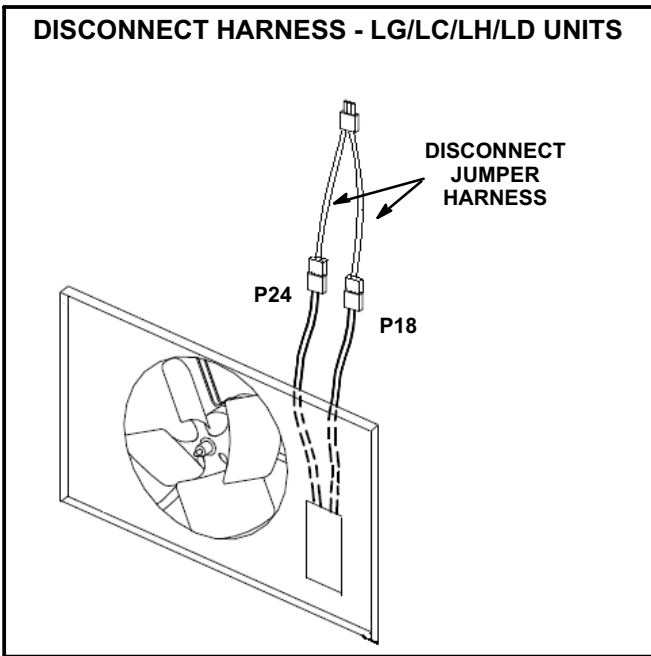


FIGURE 3

INSTALL POWER EXHAUST FAN - LG/LC/LH/LD UNITS

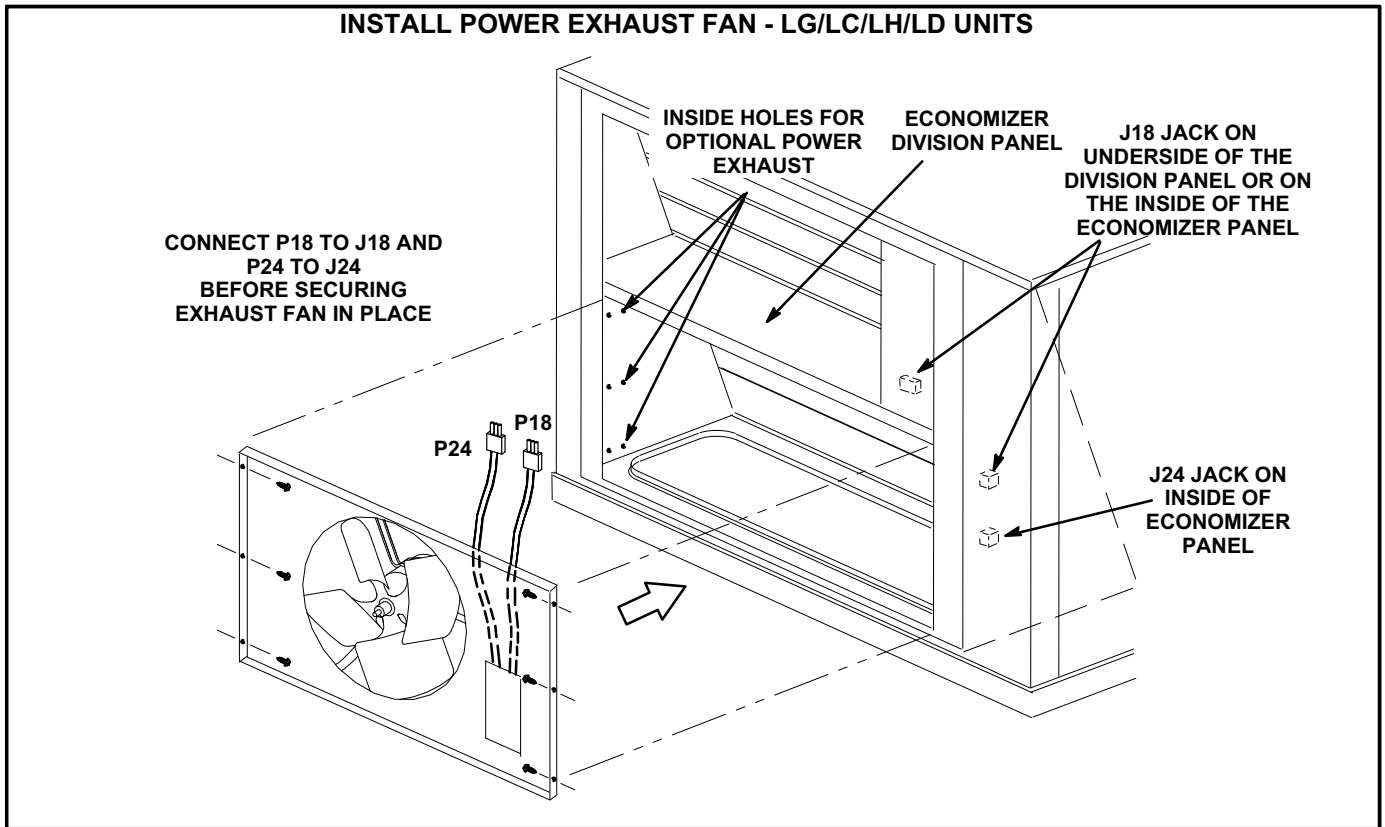


FIGURE 4

INSTALL POWER EXHAUST FAN - KG/KC/KH UNITS

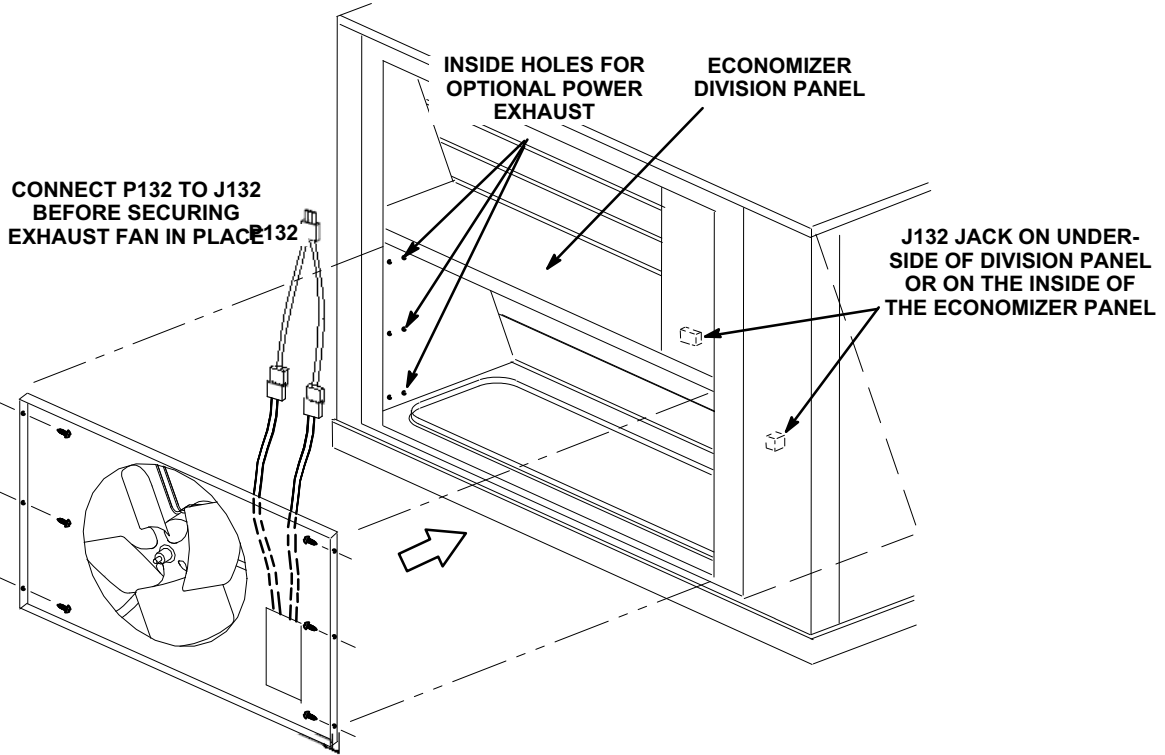
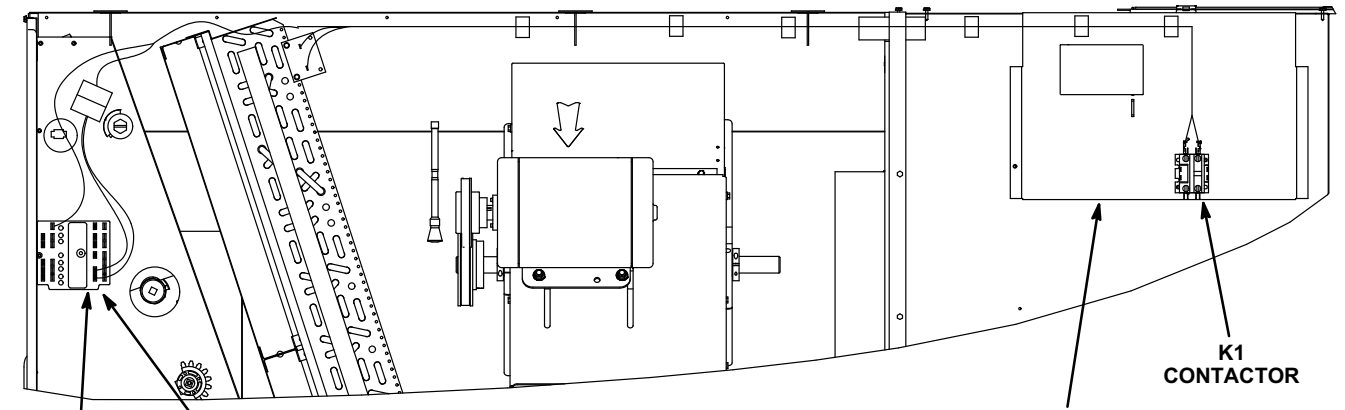


FIGURE 5

CONNECT POWER WIRES - KG/KC/KH UNITS WITH FIELD-INSTALLED POWER EXHAUST FANS



Note - Older economizers may be equipped with longer pink and gray wires coiled in the same area. One end of the pink and gray wires are already connected. Connect the other end in the control box as shown. Discard kit wires.

FIGURE 6