Installation Instructions for Power Exhaust Fans
used with ZC, ZG, ZH 036, 048, 060 Packaged Units

Shipping and Packing List
- Power Exhaust Assembly
- High Voltage Harness (3 pin)
- Hardware Bag
  - Instructions
  - 8 - #10 x 5/8” screws
  - Terminal Adaptor (Z1PWRE10A-1P only)
  - 7/8” Webbed Snap Bushing

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

Power exhaust fans are applied to units equipped with an economizer in down flow 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. 575 volt transformer (if required)
5. Filter Door
6. Side Economizer Panel

Table - 1

<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Voltage</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZC,ZG,ZH</td>
<td>208/230v 1ph</td>
<td>Z1PWRE10A-1P</td>
</tr>
<tr>
<td>036,048,060</td>
<td>460v 3ph</td>
<td>Z1PWRE10A-1G</td>
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1. For 575 applications, a field-supplied and installed transformer (Cat no. 59E02) must be used with a 208/230V power exhaust assembly.

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 qualified installer, service agency or the gas supplier.

![Diagram of packaged unit](image)

**Figure 1**

6. Set power exhaust in front of installed economizer, close enough to make wiring connections.

7. Connect the 5 pin plug (P18) from power exhaust into plug (J18) on bottom right corner of economizer. (See Fig. 2 and 5.) The 5 pin plug contains 2 wires for the low voltage connection to the economizer controller for power exhaust setpoint activation, and 2 or 3 (depending on voltage) high voltage wires.

![Diagram of connections](image)

**CAUTION**

Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.

8. Secure wires from power exhaust in place so they do not interfere with gravity exhaust dampers.

9. Lift power exhaust in place over economizer. Bottom of power exhaust will rest on unit. Screw power exhaust to unit and economizer through pre-punched holes in power exhaust side flanges. (See Fig. 5 and 6.)

10. Through the side access opening in the unit (See Fig. 2), connect the 3 pin high voltage harness (P24) shipped with the power exhaust, to the 3 pin high voltage plug on the side of economizer (J24). See Fig. 3 and 5 for plug location.

11. Remove 7/8” knock out from indoor top coil seal. Insert 7/8” webbed snap bushing into place. (See Fig. 2)

12. Route the high voltage harness through bushing (see Fig. 2) into the supply air section. Then, continue to route the harness through the igniter wire port at the top of the panel on left side of supply air section, and to unit electrical control box. Secure wires in place.
13. Connect high voltage harness to power connections. (See Fig. 7 and 8.) NOTE: On 575 volt units a separate transformer (Cat no. 59E02) must be purchased and installed.

   a. 208/230V - 1 and 3 PH
   1. Temporarily remove pink and yellow wires from the transformer T1-240 and C terminals
   2. Attach Y-terminal adaptor to 240V terminal on the transformer.
   3. Attach High Voltage Power Exhaust (P24) red and yellow wires to open terminals T1-240 and C
   4. Reattach unit pink and yellow wires onto the open Y terminal on T1-240 and T1-C, resp.

   b. 460 - 3 PH
   1. Temporarily remove pink and yellow wires from the transformer T1-480 and C terminals.
   2. Attach High Voltage Power Exhaust (P24) red and yellow wires to open terminals T1-480 and C terminals.
   3. Attach High Voltage Power Exhaust (P24) blue wire onto K3-L3 terminals.
   4. Reattach unit pink and yellow wires onto the open terminal on T1-480 and T1-C, resp.

   c. 575V - 3 PH
   1. Temporarily remove pink and yellow wires from transformer T1 terminals 600V and C.
   2. Attach the red and yellow wires from the 575V transformer T10 to the transformer T1 terminals 600V and C.
   3. Insert T10 black wire into P24 red wire.
   4. Attach P24 yellow wire onto T1 transformer terminal C.
   5. Reattach unit pink and yellow wires to open T1-600V and C terminals.


15. Adjust power exhaust setpoint on economizer control module. (See Fig. 3.)

16. Reinstall filter door above economizer, and side panel to the right of the economizer. (See Fig. 6.)

17. Reapply power to unit.
Figure 4 - Power Exhaust

Install aluminum filter from economizer hood into power exhaust hood

Power Exhaust Harness with Low and High Voltage (P18)

Power Exhaust High Voltage Harness Shipped with Power Exhaust (P24)

Figure 5

Figure 6 - Power Exhaust

Filter Access Door
Power Exhaust Package
Side Panel
HVAC Unit
Igniter Wire Port for High Voltage Power Exhaust Wire
Control Box
Figure 7 - Wiring Diagram for 460v 3PH

Figure 8 - Wiring Diagram for 230 volt and 575 volt

Note: 575 volt transformer ordered separately from power exhaust.