

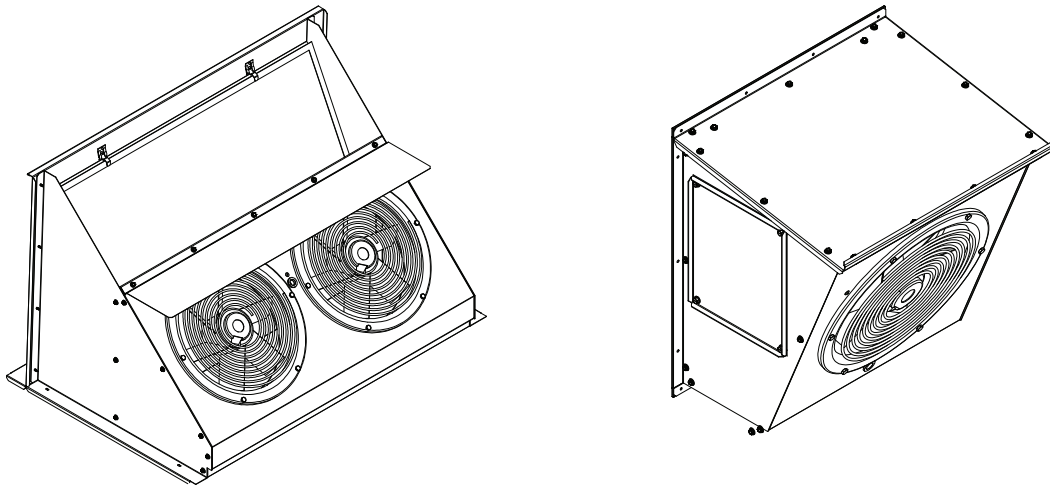
# Installation Instructions

## Vertical and Horizontal Power Exhaust

Foundation™ Packaged Rooftop Units Cooling and Gas/Electric

7.5 to 12.5 Tons

208/230V Single Phase, 460V Three Phase



**Model Numbers:**

BAYPWRX310\*(230V), BAYPWRX313\*(230V)

BAYPWRX311\*(460V), BAYPWRX314\*(460V)

**Used with:**

EDK090-150, GDK090-150

### ▲ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

# Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

**NOTICE**

Indicates a situation that could result in equipment or property-damage only accidents.

## Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

### **⚠ WARNING**

#### **Proper Field Wiring and Grounding Required!**

Failure to follow code could result in death or serious injury.

**All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.**

### **⚠ WARNING**

#### **Personal Protective Equipment (PPE) Required!**

Failure to wear proper PPE for the job being undertaken could result in death or serious injury.

Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:**

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**
- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**
- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

**⚠ WARNING****Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

**⚠ WARNING****R-454B Flammable A2L Refrigerant!**

Failure to use proper equipment or components as described below could result in equipment failure, and possibly fire, which could result in death, serious injury, or equipment damage.

The equipment described in this manual uses R-454B refrigerant which is flammable (A2L). Use **ONLY** R-454B rated service equipment and components. For specific handling concerns with R-454B, contact your local representative.

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# Table of Contents

General Information .....	5	Installation .....	6
Inspection .....	5	Vertical Power Exhaust .....	6
Parts List .....	5	Horizontal Power Exhaust .....	10

# General Information

Power exhaust is designed for downflow applications. An economizer must be installed and functional before installing the power exhaust.

## Inspection

1. Unpack all components of the kit.
2. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company.

## Parts List

Figure 1. Vertical package

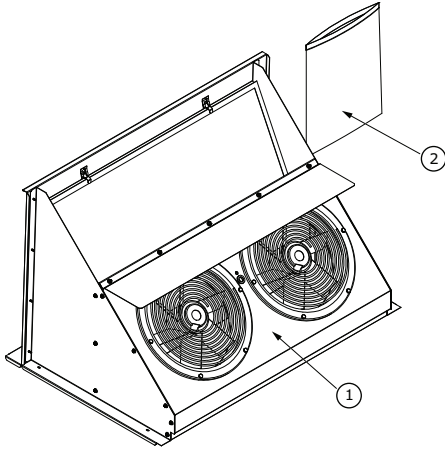


Figure 2. Horizontal package

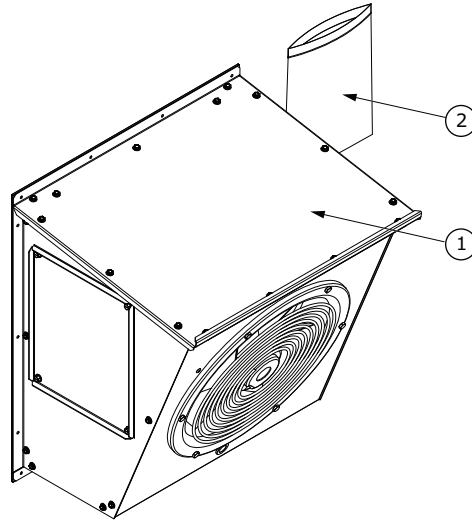


Table 1. Vertical and horizontal component list

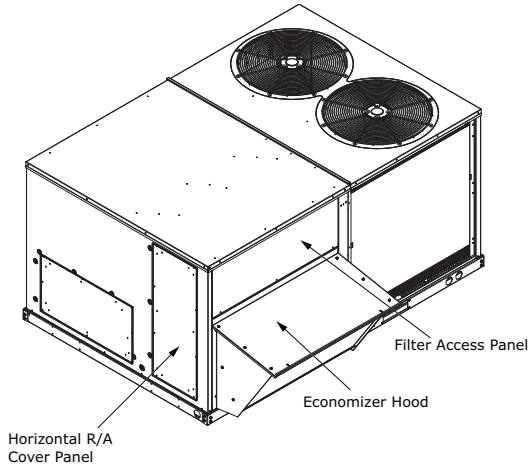
Item	Description	Qty
1	Power Exhaust Assembly	1
2	Parts Bag	1
2a	Installation Instructions	1

# Installation

## Vertical Power Exhaust

1. Open and lock the unit disconnect switch.
2. Remove RTU horizontal return panel, filter access panel, and economizer hood. See [Figure 3, p. 6](#).  
The economizer hood may be discarded.

**Figure 3. Panel identification**



3. Remove RTU control box cover panels. See [Figure 4, p. 6](#).

**Figure 4. Low voltage control box**



4. Remove the 216-inch power whip from the parts bag. Route the bare wire end through the gland in the R/A opening, see [Figure 5, p. 6](#). Fasten this wire in the R/A section where necessary to ensure it does not interfere with economizer operation.

**Figure 5. R/A opening**



5. Route this wire through the condensing section of the RTU and fasten along existing wire run to ensure it does not interfere with unit operation. See [Figure 6, p. 6](#).

**Figure 6. Routed wire**





- Route wire through control box grommet and terminate wires to the RTU terminal block located in the RTU control box.

Remove the finger safe cover and identify L1, L2, and L3 in the RTU. The powered exhaust high voltage connection should be made to the top of the distribution block, see example below. The color code for the high voltage cable is listed below. See [Figure 7, p. 7](#).

**Three Phase unit:**

L1 = Black

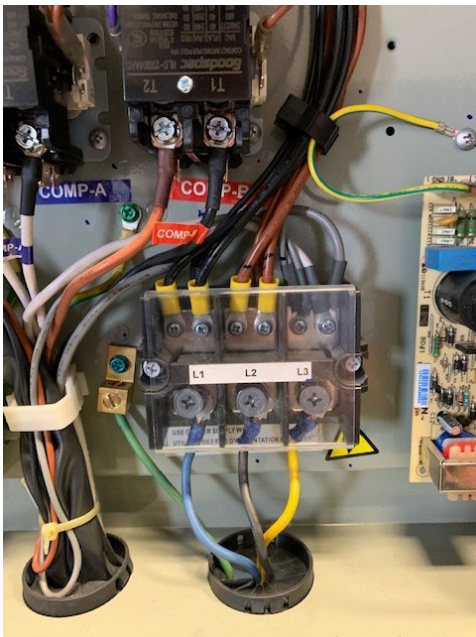
L2 = Red

L3 = White

Ground = Green

**Note:** Check propeller rotation. Correct rotation is clockwise looking from grill side of fan. If three phase motor, interchange two power line connections to reverse rotation.

**Figure 7. High voltage terminal block**



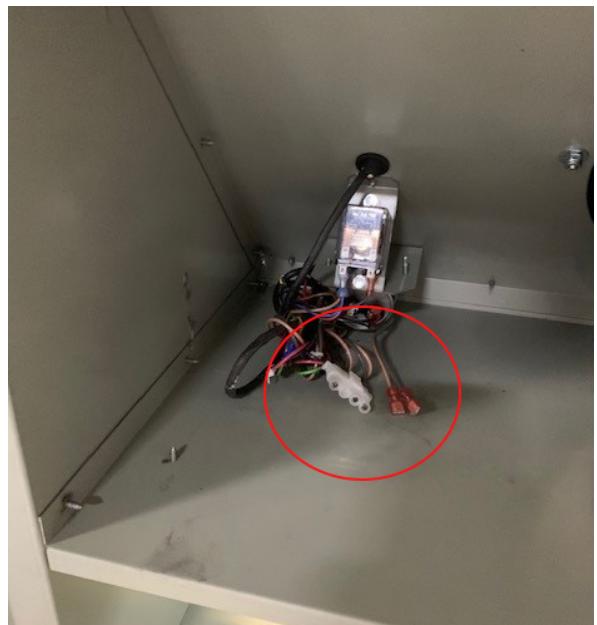
- The opposite end of the power whip has a 4-pin female plug. Fasten this plug to the inside of the knockout on the economizer panel. See [Figure 8, p. 7](#).

**Figure 8. Economizer panel**

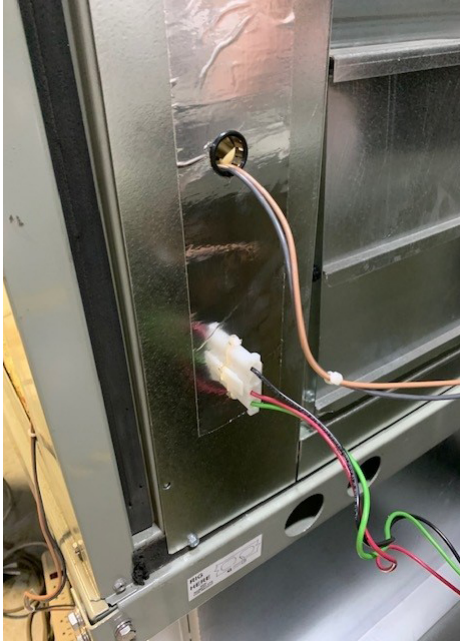


- Inside of the power exhaust there is a 4-pin male plug and two loose wires (tan and gray.) See [Figure 9, p. 7](#). The 4-pin plug connects to the 4-pin female attached to the economizer panel. See [Figure 10, p. 8](#).

**Figure 9. Power exhaust**



**Figure 10. Routing wires to economizer panel**



9. Route the two loose wires through a grommet on the economizer panel. See [Figure 10, p. 8](#).
  - a. For BAYECON310A, install a red jumper extension, included in the parts bag, from TR to EF on the W7212 controller. Terminate the gray wire to EF1 and the tan wire to the brown wire from TR1 on the W7212 controller. See [Figure 11, p. 8](#) and [Figure 12, p. 9](#).
  - b. For BAYECON355A, connect the tan wire to the EXH1 yellow wire from the W7220 and the gray wire to the IAQ common black wire from the W7220 controller. See [Figure 11, p. 8](#) and [Figure 12, p. 9](#).

**Figure 11. Single phase power exhaust wiring diagram**

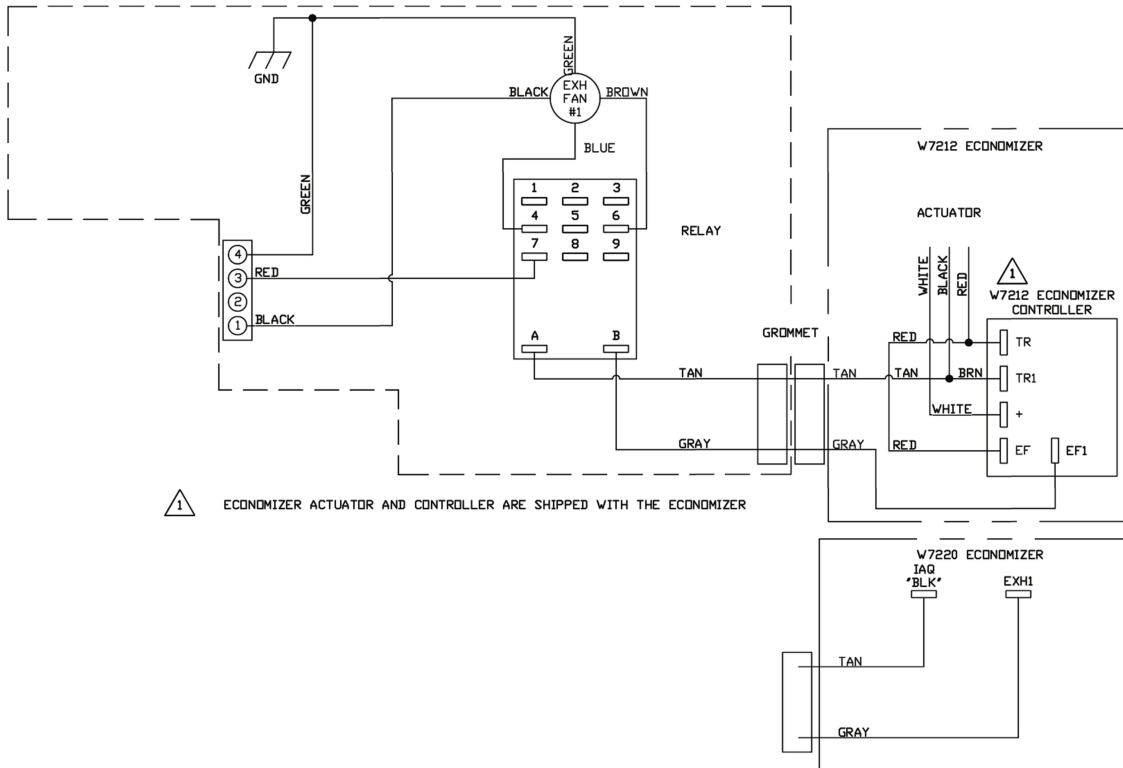
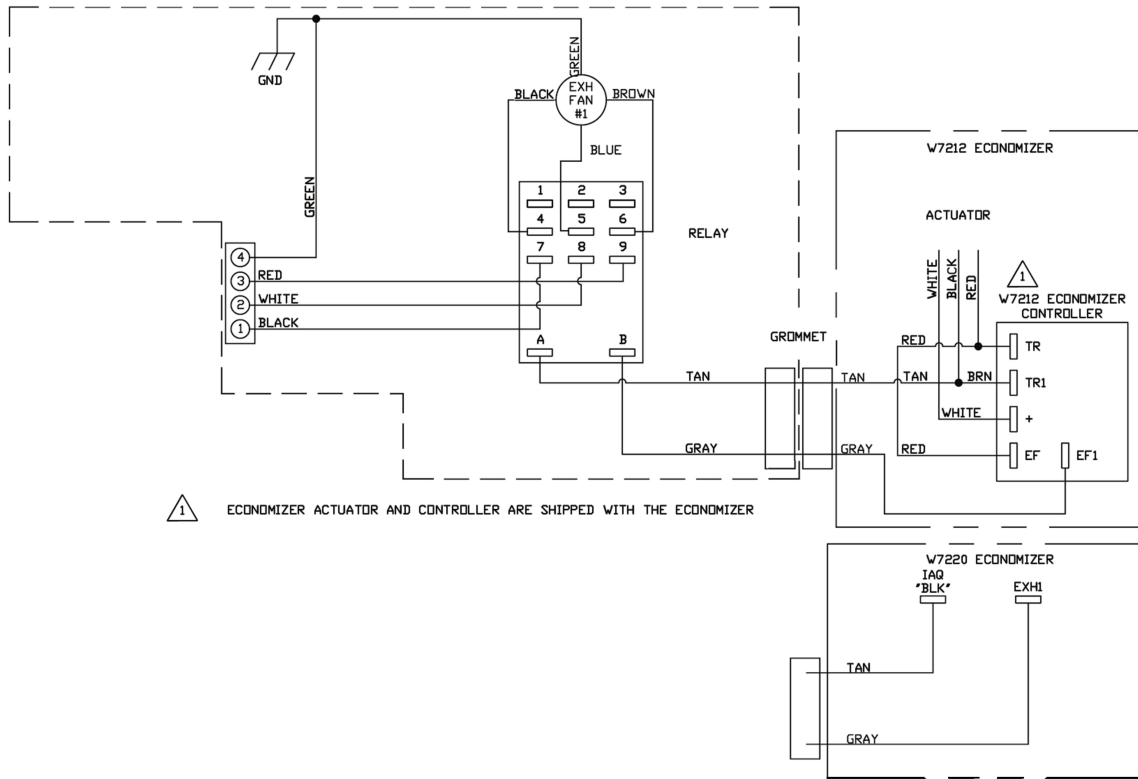




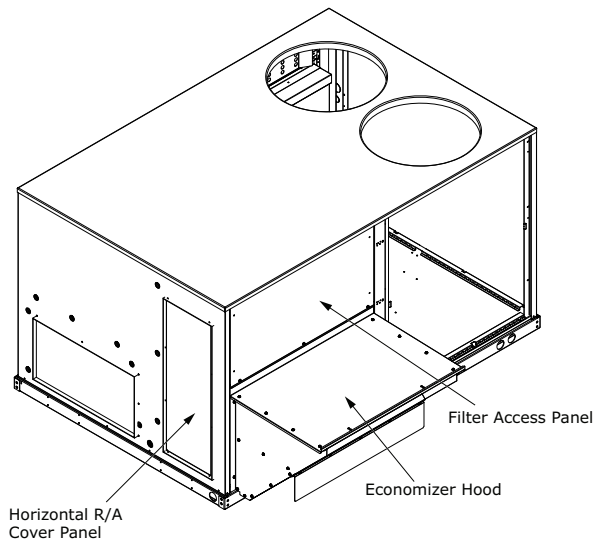
Figure 12. Three phase power exhaust wiring diagram



- Fasten the power exhaust hood assembly over the existing vertical economizer, reattach the horizontal R/A cover panel, and install the filter access door. See Figure 13, p. 9.

- Install the water entrainment filter over the O/A opening of the power exhaust.
- Close the unit disconnect switch.

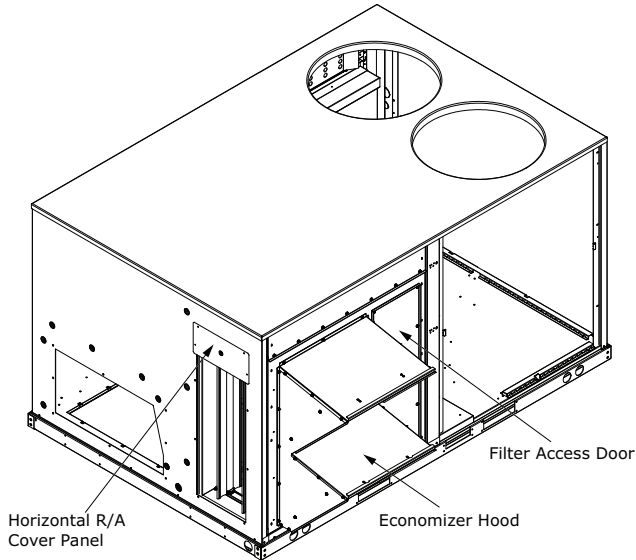
Figure 13. Final assembly



## Horizontal Power Exhaust

1. Open and lock the unit disconnect switch.
2. Remove filter access panel and economizer hood. See [Figure 14, p. 10](#).  
Do not discard. These items will be re-used.

**Figure 14. Panel identification**



3. Remove RTU control box cover panels. See [Figure 15, p. 10](#).

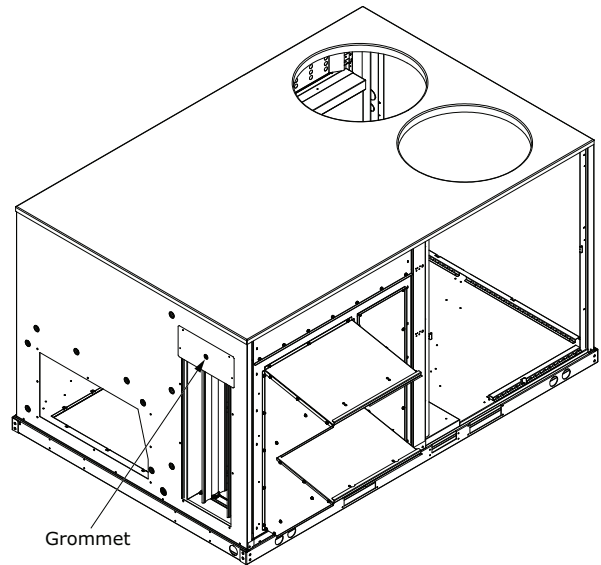
**Figure 15. Low voltage control box**



4. Remove the 216-inch power whip from the parts bag. Route the bare wire end through the grommet on the horizontal R/A cover panel, see [Figure 16, p. 10](#) and then route the wire through the gland in the R/A opening, see [Figure 17, p. 10](#).

Fasten this wire in the R/A section where necessary to ensure it does not interfere with economizer operation.

**Figure 16. R/A cover panel**



**Figure 17. R/A opening**



- Route this wire through the condensing section of the RTU and fasten along the existing wire run to ensure it does not interfere with unit operation. See Figure 18, p. 11.

**Figure 18. Routed wire**



- Route wire through control box grommet and terminate wires to the RTU terminal block located in the RTU control box.

Remove the finger safe cover and identify L1, L2, and L3 in the RTU. The powered exhaust high voltage connection should be made to the top of the distribution block, see example below. The color code for the high voltage cable is listed below. See Figure 19, p. 11.

**Three Phase unit:**

- L1 = Black
- L2 = Red
- L3 = White
- Ground = Green

**Note:** Check propeller rotation. Correct rotation is clockwise looking from grill side of fan. If three phase motor, interchange two power line connections to reverse rotation.

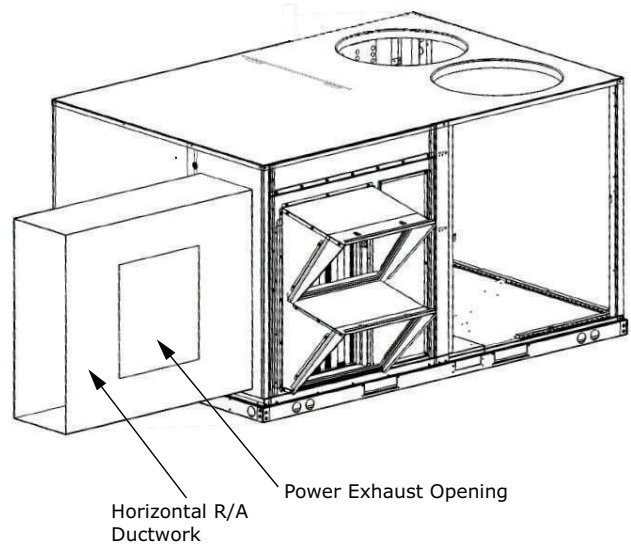
**Figure 19. High voltage terminal block**



- Install R/A ductwork over the RTU horizontal R/A opening and cut an opening for the power exhaust to mount. See Figure 20, p. 11.

The ductwork should cover the horizontal R/A cover panel, see Figure 16, p. 10.

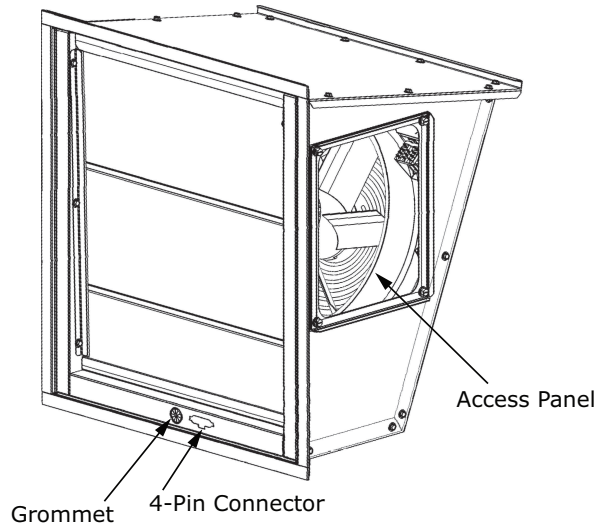
**Figure 20. Horizontal ductwork**



## Installation

8. The opposite end of the power whip has a 4-pin female plug. Pull through the opening made in the horizontal return ductwork and then, plug to the existing 4-pin connector in the power exhaust assembly. See [Figure 21, p. 12](#).

**Figure 21. Economizer panel**



9. Inside the power exhaust access panel there are two loose wires (tan and gray). Route these through the grommet of the power exhaust, see [Figure 21, p. 12](#).
10. Route the two loose wires through the grommet located on the horizontal cover panel. See [Figure 22, p. 12](#).

- a. For BAYECON310A, install a red jumper extension included in the parts bag, from TR to EF on the W7212 controller. Terminate the gray wire to EF1 and the tan wire to the brown wire from TR1 on the W7212 controller. See [Figure 23, p. 13](#) and [Figure 24, p. 13](#).
- b. For BAYECON355A, connect the tan wire to the EXH1 yellow wire from the W7220 and the gray wire to the IAQ common black wire from the W7220 controller. See [Figure 23, p. 13](#) and [Figure 24, p. 13](#).

**Figure 22. Horizontal cover panel**

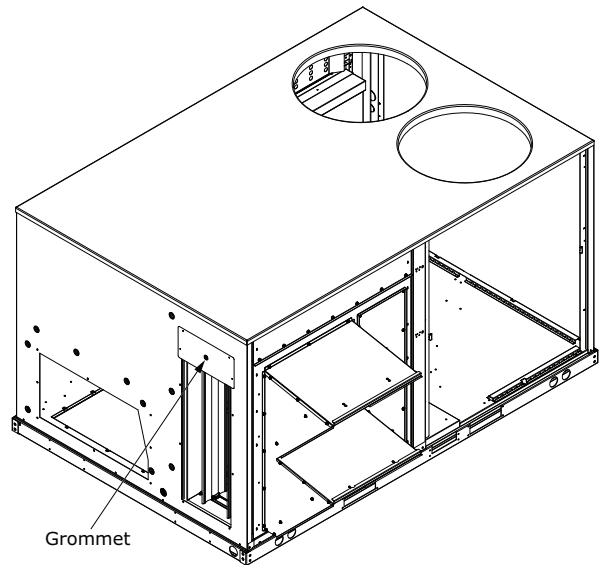


Figure 23. Single phase power exhaust wiring diagram

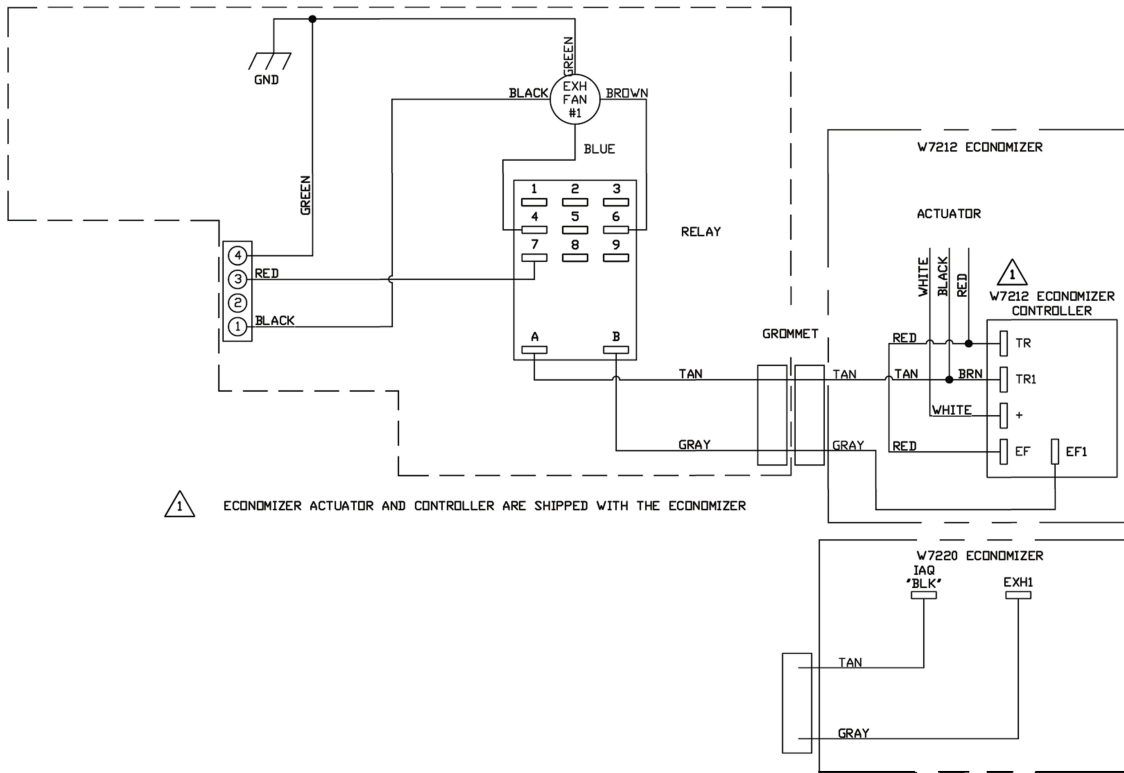
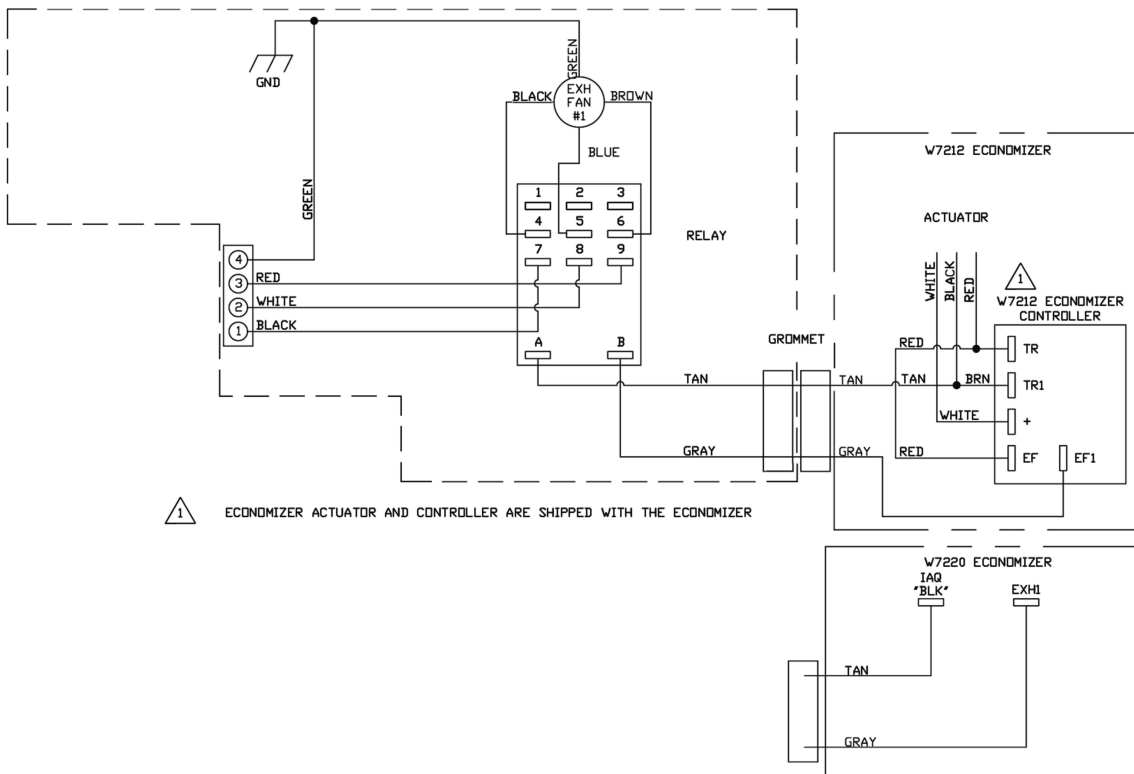


Figure 24. Three phase power exhaust wiring diagram



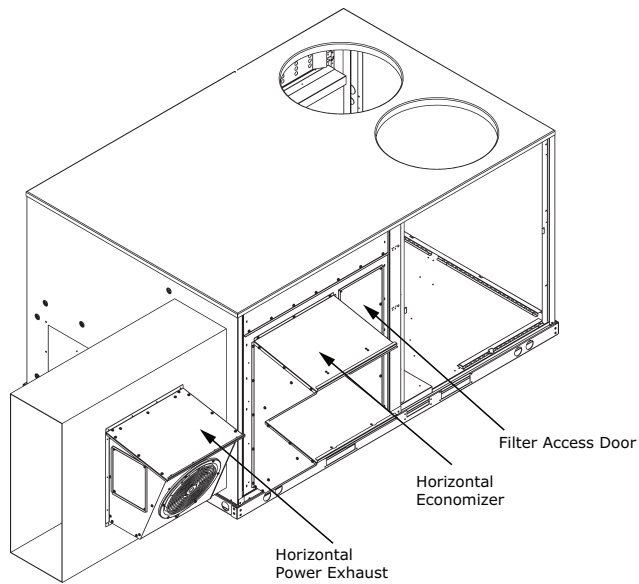
## Installation

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11. Fasten the power exhaust hood assembly over the opening cut in the return air ductwork. Reattach the horizontal economizer hood, and install the filter access door. See [Figure 25, p. 14](#).

12. Close the unit disconnect switch.

**Figure 25. Final assembly**







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