



# INSTALLATION INSTRUCTIONS

## PECCSUN3672 Series Power Exhaust for York 3 - 6 Ton Units

### Before Starting Installation

#### Warning

Severe injury can result from incorrect servicing. Only qualified HVAC service personnel should install, troubleshoot, repair or service HVAC and related HVAC equipment.

Always disconnect power before servicing. Please note some installation configurations may have more than one disconnect.

#### Important

Always follow all local building electrical codes.

#### 3 to 6 Tons

Voltage	ProVent P/N		External Static Pressure (Inch W.G.)				FLA	Hp
			0.1	0.2	0.3	0.4		
208/230V/3Ph	PECCSUN3672DB25C	PECCSUN3672DB25M	2,400 CFM	2,200 CFM	2,000 CFM	1,800 CFM	3.2	1
	PECCSUN3672EN25C	PECCSUN3672EN25M						
460V/3Ph	PECCSUN3672DB46C	PECCSUN3672DB46M	2,400 CFM	2,200 CFM	2,000 CFM	1,800 CFM	1.6	1
	PECCSUN3672EN46C	PECCSUN3672EN46M						

PARTS INCLUDED	QTY.
#10 x 1/2" Sheet Metal Screw	11
3/16" Dia x 25' Pressure Tubing (w/Modulating Option Only)	1
Pressure Connection Port (w/Modulating Option Only)	1
VFD Instruction Booklet (w/Modulating Option Only)	1
VFD Instruction CD (w/Modulating Option Only)	1
5 PIN Connector- two wires: black and white (w/ Constant Volume with SSE Controller ONLY)	1

# Installation Instructions

## Important

Exhaust hood is shipped loose inside the power exhaust cabinet.  
Remove exhaust hood prior to installing power exhaust.

1. Install economizer per instructions.  
For vertical return, hold off installing economizer outside air hood until power exhaust is mounted on unit. (ILL. 1 & 2)

2. For horizontal return, install power exhaust on the return air duct and secure with #10 screws provided. Based on return air duct supports, power exhaust may require field support. (ILL. 1)

For vertical return, install power exhaust over the lower return air opening on unit and secure with #10 screws provided. To ease handling, a lower support bracket is provided under the power exhaust opening so the cabinet can rest on the unit base rail. (ILL. 2)

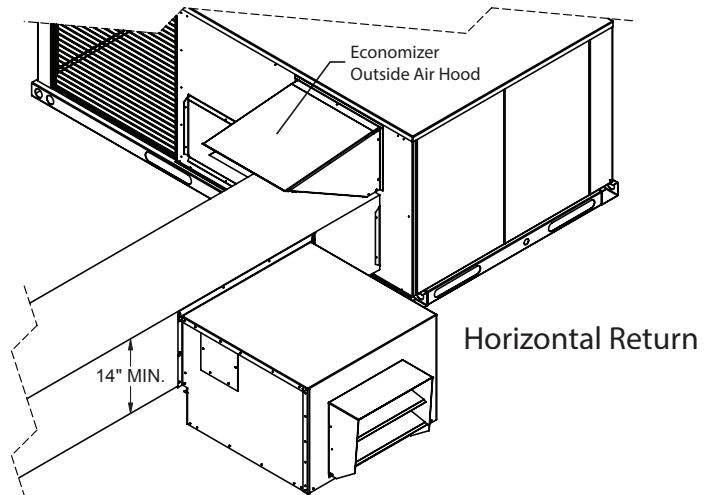
3. Feed the power cord first through the grommet on the economizer damper frame (ILL. 3) then through the knockout in the coil support frame to the unit control panel. (ILL. 2) See wiring diagram notes and follow all electrical codes for connection. (ILL. 4, 5, 6, 7)

4. For constant volume model, feed the 24V yellow wire leads located in the power exhaust cabinet through the economizer damper frame grommet. Connect the two 24V yellow wires to EF and EF1 on the economizer logic. (Not required for modulating option.) (ILL. 3).

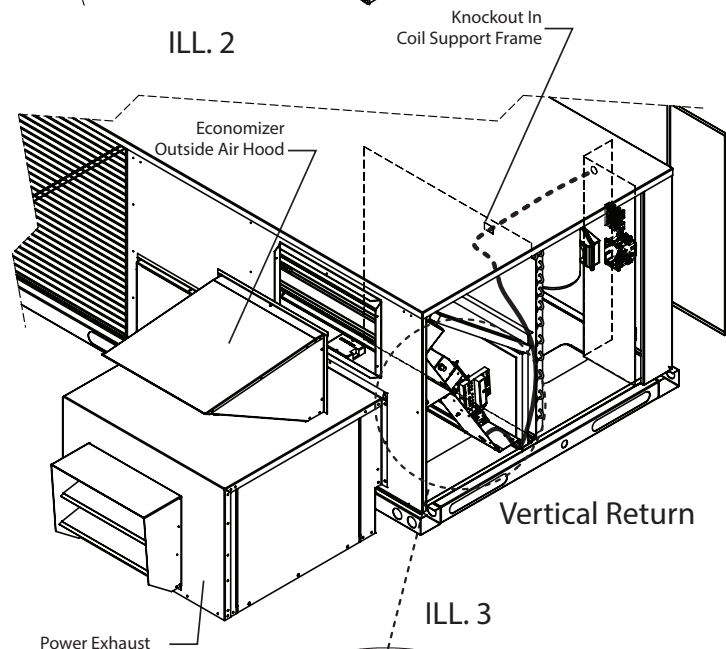
5. For modulating option, feed the pressure tubing located in the power exhaust cabinet to the conditioned space in the building. (Not required for constant volume model.)

6. Install economizer outside air hood. (ILL. 1 & 2)

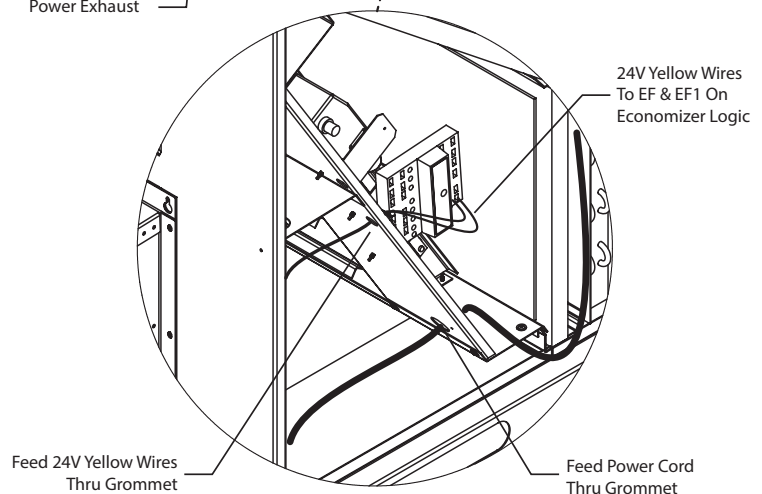
ILL. 1



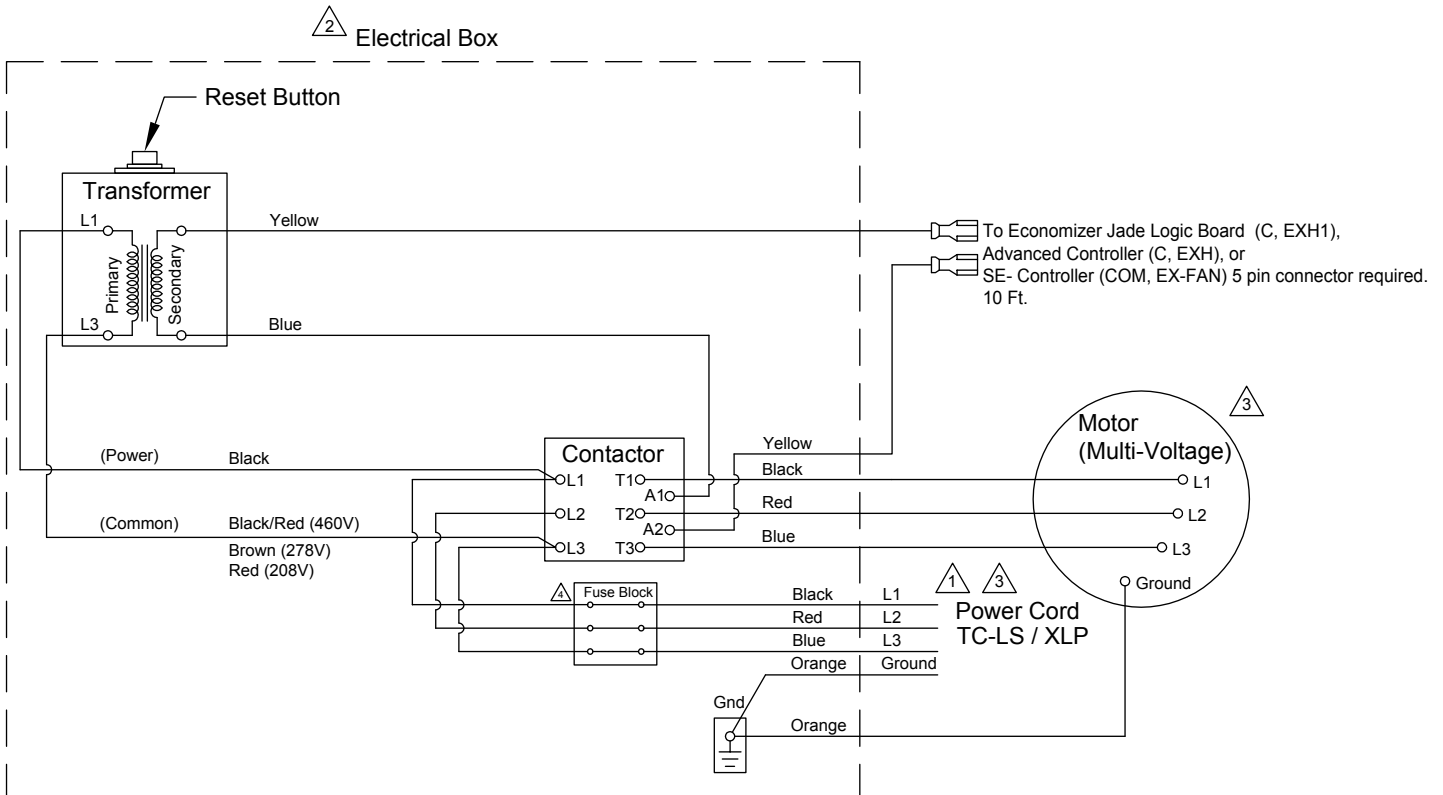
ILL. 2



ILL. 3



## ILL. 4 - Constant Volume Power Exhaust Wiring (3 Phase)



1 Power Supply. Provide disconnect means and circuit protection as required. See power exhaust name plate for electrical ratings. If local codes allow connecting to the HVAC unit power, make sure the disconnect and incoming wiring are sized to handle the load of both the HVAC unit and the power exhaust.

To determine MCA with power exhaust:  $\text{New MCA} = \text{MCA of Unit Only} + \text{MCA of Power Exhaust}$

2 Transformer, contactor and fuses are to be in a NEMA type electrical enclosure.

3 For voltage, refer to label on exterior of power exhaust cabinet.

4 3 amp KTK fuses (460V-3PH). 7 amp KTK fuses (230V-3PH). 10, 15 amp KTK fuses (230-1PH)

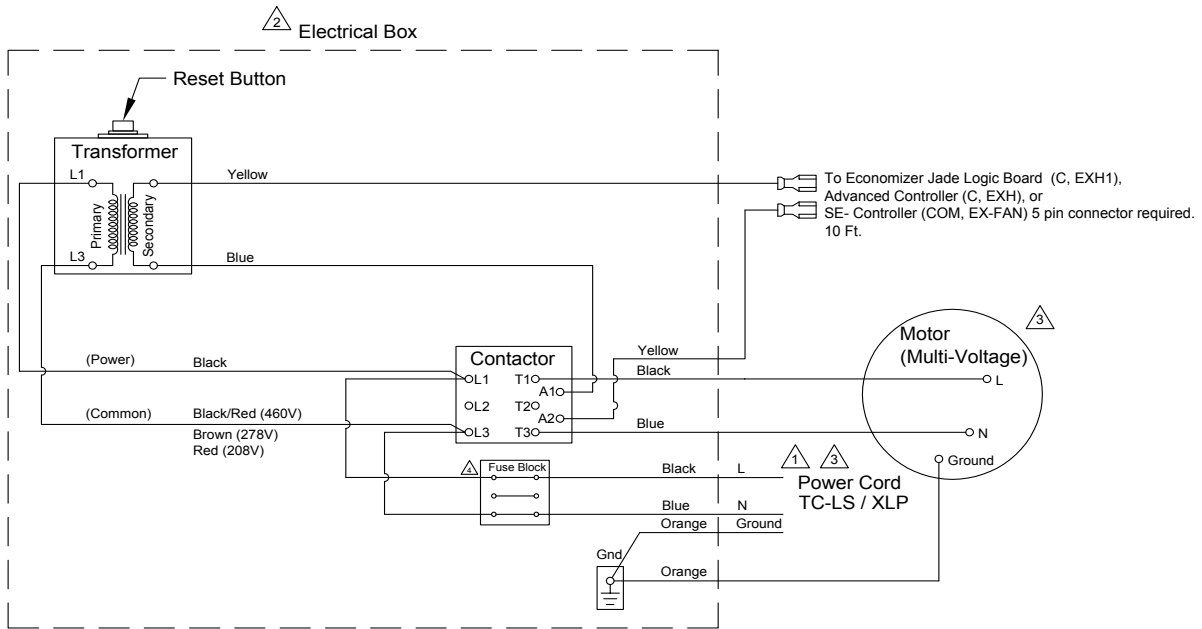
Example: With a unit that has  $\text{MCA}=22.5$  amps and  $\text{MOCP}=30$  amps,

$\text{New MCA} = 22.5 \text{ amps} + 3 \text{ amps (example for power exhaust)} = 25.5 \text{ amps}$

If New MCA is less than MOCP for the HVAC unit, you can tie the power wire to the HVAC contactor terminal strip, if local code allows. Make sure tap off terminal block is capable for handling more than one unit.

If new MCA is greater than MOCP or local code requires, you must run power wire for the power exhaust to an external disconnect. Make sure the disconnect is sized properly for the power from the power exhaust as well as the HVAC unit.

## ILL. 5 - Constant Volume Power Exhaust Wiring (1 Phase)



1 Power Supply. Provide disconnect means and circuit protection as required. See power exhaust name plate for electrical ratings. If local codes allow connecting to the HVAC unit power, make sure the disconnect and incoming wiring are sized to handle the load of both the HVAC unit and the power exhaust.

To determine MCA with power exhaust:  $\text{New MCA} = \text{MCA of Unit Only} + \text{MCA of Power Exhaust}$

2 Transformer, contactor and fuses are to be in a NEMA type electrical enclosure.

3 For voltage, refer to label on exterior of power exhaust cabinet.

4 3 amp KTK fuses (460V-3PH). 7 amp KTK fuses (230V-3PH). 10, 15 amp KTK fuses (230-1PH)

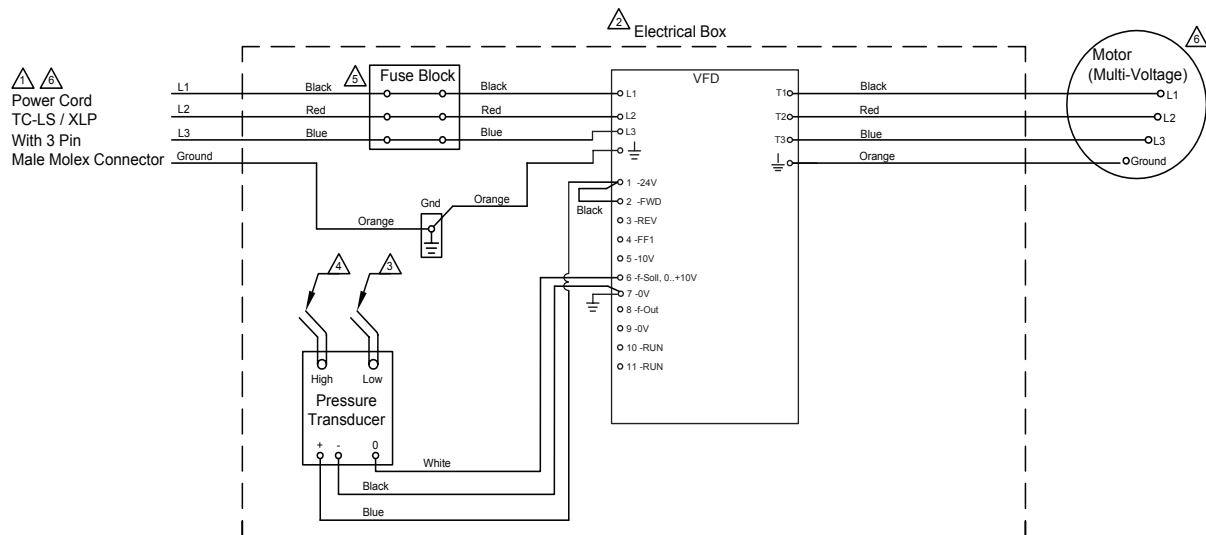
Example: With a unit that has  $\text{MCA}=22.5$  amps and  $\text{MOCP}=30$  amps,

$\text{New MCA} = 22.5$  amps + 3 amps (example for power exhaust) = 25.5 amps

If New MCA is less than MOCP for the HVAC unit, you can tie the power wire to the HVAC contactor terminal strip, if local code allows. Make sure tap off terminal block is capable for handling more than one unit.

If new MCA is greater than MOCP or local code requires, you must run power wire for the power exhaust to an external disconnect. Make sure the disconnect is sized properly for the power from the power exhaust as well as the HVAC unit.

## ILL. 6 - Modulating Power Exhaust Option Wiring ( 3 Phase)



**⚠** Power Supply. Provide disconnect means and circuit protection as required. See power exhaust name plate for electrical ratings. If local codes allow connecting to the HVAC unit power, make sure the disconnect and incoming wiring are sized to handle the load of both the HVAC unit and the power exhaust.

To determine MCA with power exhaust:  $\text{New MCA} = \text{MCA of Unit Only} + \text{MCA of Power Exhaust}$

**⚠** Transformer, contactor and fuses are to be in a NEMA type electrical enclosure.

**⚠** Factory mounted 3/16" low pressure tubing.

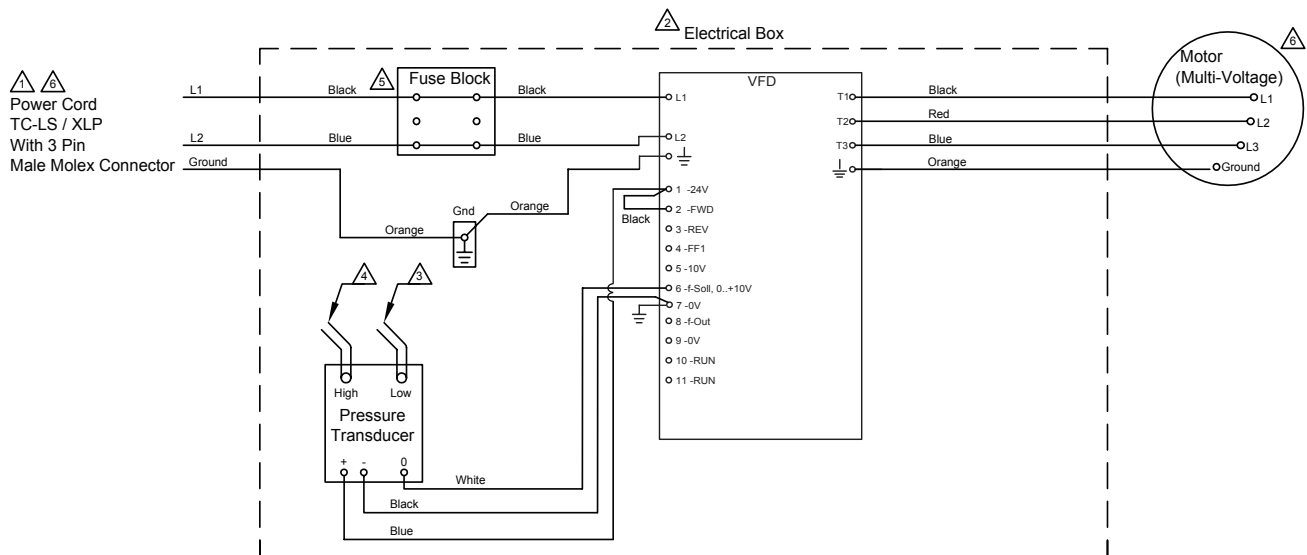
**⚠** 25 feet of 3/16" high pressure tubing and connection port provided for field mounting in conditioned space. Architectural finishing field provided. (Follow local codes.)

**⚠** For fuse size, refer to label on the exterior of power exhaust cabinet.

**⚠** For Voltage, refer to label on exterior of power exhaust cabinet.

**⚠** Field Required.

## ILL. 7 - Modulating Power Exhaust Option Wiring ( 1 Phase)



**⚠** Power Supply. Provide disconnect means and circuit protection as required. See power exhaust name plate for electrical ratings. If local codes allow connecting to the HVAC unit power, make sure the disconnect and incoming wiring are sized to handle the load of both the HVAC unit and the power exhaust.

To determine MCA with power exhaust:  $\text{New MCA} = \text{MCA of Unit Only} + \text{MCA of Power Exhaust}$

**⚠** Transformer, contactor and fuses are to be in a NEMA type electrical enclosure.

**⚠** Factory mounted 3/16" low pressure tubing.

**⚠** 25 feet of 3/16" high pressure tubing and connection port provided for field mounting in conditioned space. Architectural finishing field provided. (Follow local codes.)

**⚠** For fuse size, refer to label on the exterior of power exhaust cabinet.

**⚠** For Voltage, refer to label on exterior of power exhaust cabinet.

**⚠** Field Required.

If the Power Exhaust is installed with the Simplicity Smart Equipment (SSE) board, please change the following fan type settings:

Details <enter>

Control <enter>

Power Ex <enter>

Ex FType <enter>

"select" Non- Modulating <enter>

To change the setpoints for "ON" and "OFF"

EconDmpPos- FanOn <60% default>

EconDmpPos- FanOff <20% default>

The motor/blower is connected to a motor controller (VFD) that varies the speed to maintain an acceptable conditioned space pressure. The power exhaust system includes a low pressure transducer that compares room pressure to atmospheric. This transducer sends a signal to the motor controller (VFD) which varies the motor frequency in order to provide pressure relief.

1. Install 3/16" pressure tubing as per wiring diagram making sure it is not located near any S/A or R/A diffuser or door.
2. The VFD is factory preprogrammed to accept the 0 to 10 VDC signal through the pressure transducer.

Table 1 - Pressure vs. VFD Frequency

Transducer Output Signal (VDC)	Conditioned Space Pressure (Inch W.G.)	VFD Setting (Hz)
0	0	0
1	0.01	10
2	0.02	20
3	0.03	30
4	0.04	40
5	0.05	50
6	0.06	60
7	0.07	70
8	0.08	80
9	0.09	90
10	0.10	100

VFD is factory set at 0.04 inches w.g. To change setting, press and hold "OK" to access the programming menu; up/down to display P-45, hit "OK" move arrows up/down to set desired frequency that determines pressure requirement, then press "OK" to save parameter.