INSTALLATION INSTRUCTIONS
PEDCPRD Series Power Exhaust for York 3 -12½ Ton Units

Before Starting Installation

Warning

Severe injury can result from incorrect servicing. Only qualified HVAC service personnel should install, trouble-shoot, 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 5 Tons

Voltage	ProVent P/N		External Static Pressure (Inch W.G.)				FLA	Hp
			0.1	0.2	0.3	0.4		
208/230V/3Ph	PEDCPRD3761DB25C PEDCPRD3761EN25C	PEDCPRD3761DB25M PEDCPRD3761EN25M	2,400 CFM	2,200 CFM	2,000 CFM	1,800 CFM	3.2	1
460V/3Ph	PEDCPRD3761DB46C PEDCPRD3761EN46C	PEDCPRD3761DB46M PEDCPRD3761EN46M					1.6	

6½ to 8½ Tons

Voltage	ProVent P/N		External Static Pressure (Inch W.G.)				FLA	Hp
			0.1	0.2	0.3	0.4		
208/230V/3Ph	PEDCPRD7810DB25C PEDCPRD7810EN25C PEDCPRDSCDB25C PEDCPRDSCEN25C	PEDCPRD7810DB25M PEDCPRD7810EN25M PEDCPRDSCDB25M PEDCPRDSCEN25M	3,300 CFM	3,090 CFM	2,930 CFM	2,685 CFM	3.2	1
460V/3Ph	PEDCPRD7810DB46C PEDCPRD7810EN46C PEDCPRDSCDB46C PEDCPRDSCEN46C	PEDCPRD7810DB46M PEDCPRD7810EN46M PEDCPRDSCDB46M PEDCPRDSCEN46M					1.6	

10 to 12½ Tons

Voltage	ProVent P/N		External Static Pressure (Inch W.G.)				FLA	Hp
			0.1	0.2	0.3	0.4		
208/230V/3Ph	PEDCPRD1215DB25C PEDCPRD1215EN25C PEDCPRDLCDB25C PEDCPRDLCEN25C	PEDCPRD1215DB25M PEDCPRD1215EN25M PEDCPRDLCDB25M PEDCPRDLCEN25M	4,200 CFM	4,000 CFM	3,900 CFM	3,800 CFM	5.6	2
460V/3Ph	PEDCPRD1215DB46C PEDCPRD1215EN46C PEDCPRDLCDB46C PEDCPRDLCEN46C	PEDCPRD1215DB46M PEDCPRD1215EN46M PEDCPRDLCDB46M PEDCPRDLCEN46M					2.8	

Installation Instructions

Important

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

1. Remove economizer access panel. (ILL. 1)
2. Install economizer per instructions. The economizer (Molex) plug is located on top of the economizer. Make sure to connect the Molex plug to the unit when installing the economizer. (ILL. 2)
3. Loosely install #12 x 1-1/2" screws provided on each side of the lower opening matching the keyholes on the sides of the power exhaust opening. Hang the power exhaust over the lower opening using the screws for support then tighten the screws. (ILL. 3)
4. Install power exhaust hood using #10 x 1/2" screws provided. (ILL. 3)

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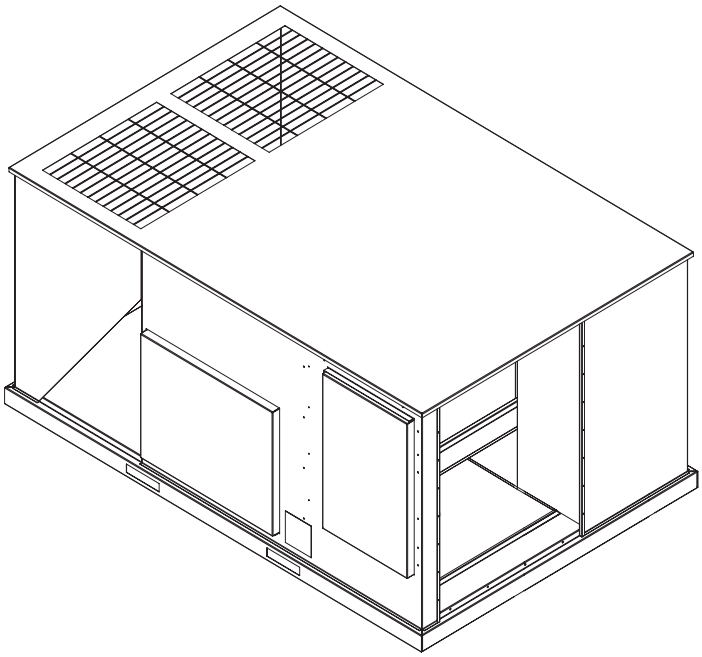
ILL. 1



PARTS INCLUDED	QTY.
#10 x 1/2" Sheet Metal Screw	14
#10 x 1-1/2" Sheet Metal Screw	15
#12 x 1-1/2" Sheet Metal Screw	5
3/16" Dia x 25' Pressure Tubing (w/Modulating Option Only)	1
Pressure Connection Port (w/Modulating Option Only)	1
5 PIN Connector- two wires: black and white (w/ Constant Volume with SSE Controller ONLY)	1
Support Leg Kits	2

5. Install economizer outside air hood to the unit using #10 x 1-1/2" screws provided along each side. On the remaining holes along the top and bottom of the hood, install the original screws from the factory panel. Caulk all mating flanges watertight. (ILL. 3)

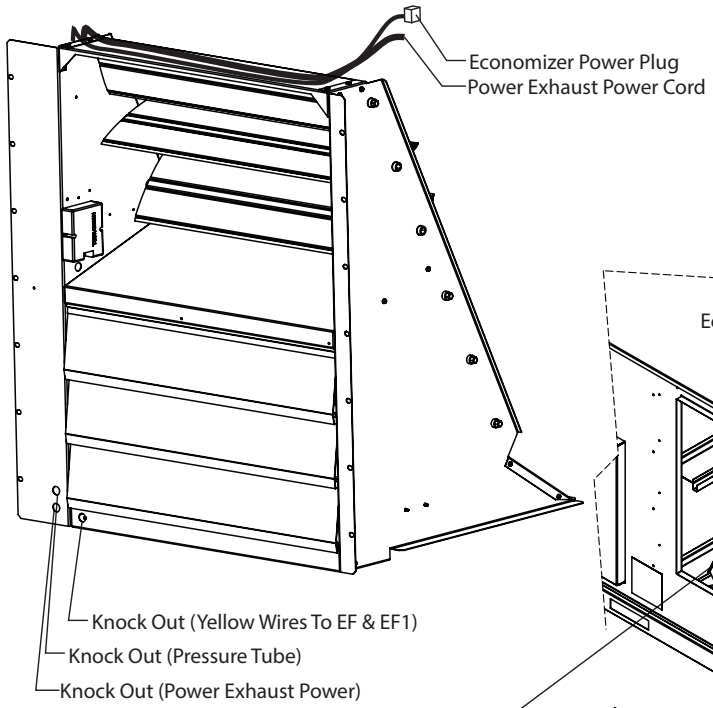
6. Install support leg kits as shown on ILL. 3. (Please note support legs may need additional isolation springs when installing unit on isolation curb).

7. Remove access panel on the side of the power exhaust cabinet. Reach in the power exhaust power cable and feed through the power exhaust power knockout located on the lower flange of the economizer exhaust opening (ILL. 2).

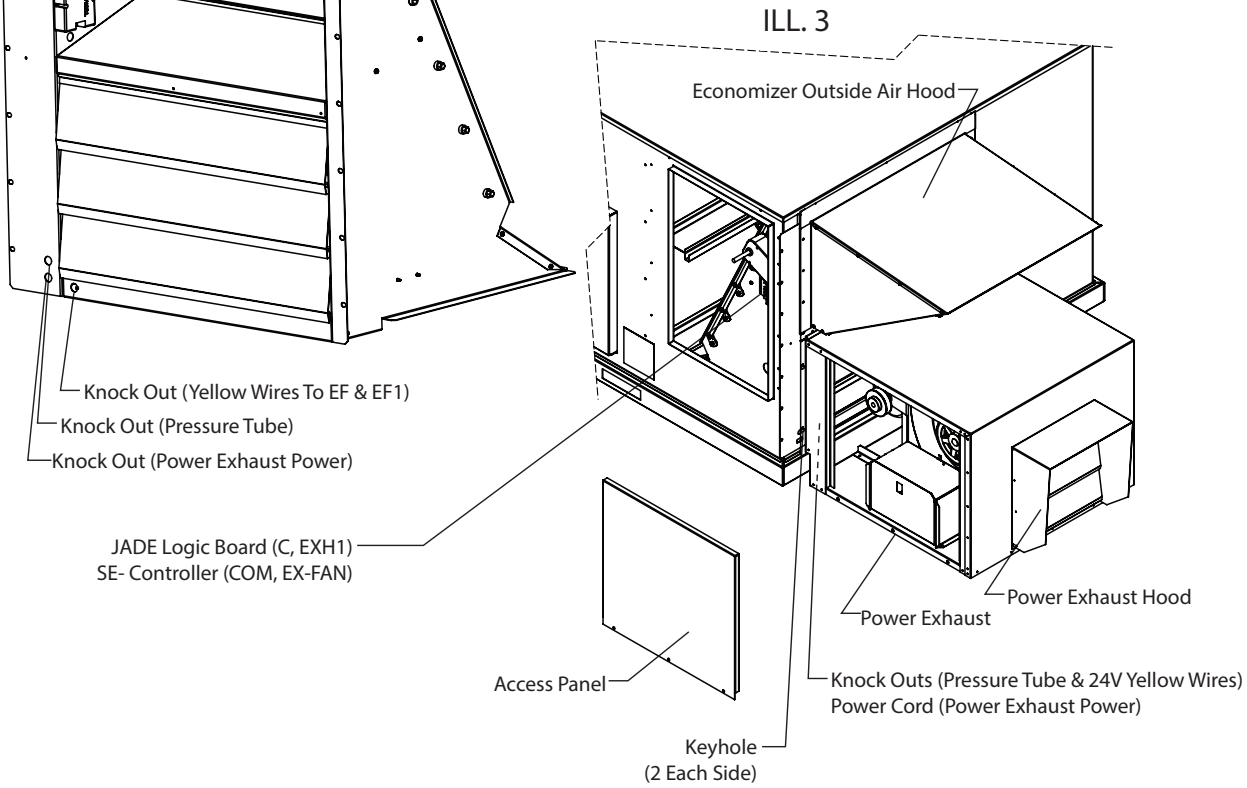
8. For constant volume model, reach in the cabinet and feed the 24V yellow wire leads (ILL. 3) through the economizer exhaust air knockout (ILL. 2). Connect the two 24V yellow wires to EF and EF1 on the economizer logic (ILL. 3).

   For modulating option, feed the pressure tubing located in the cabinet (ILL. 3) through the economizer exhaust air knockout (ILL. 2) to the conditioned space in the building

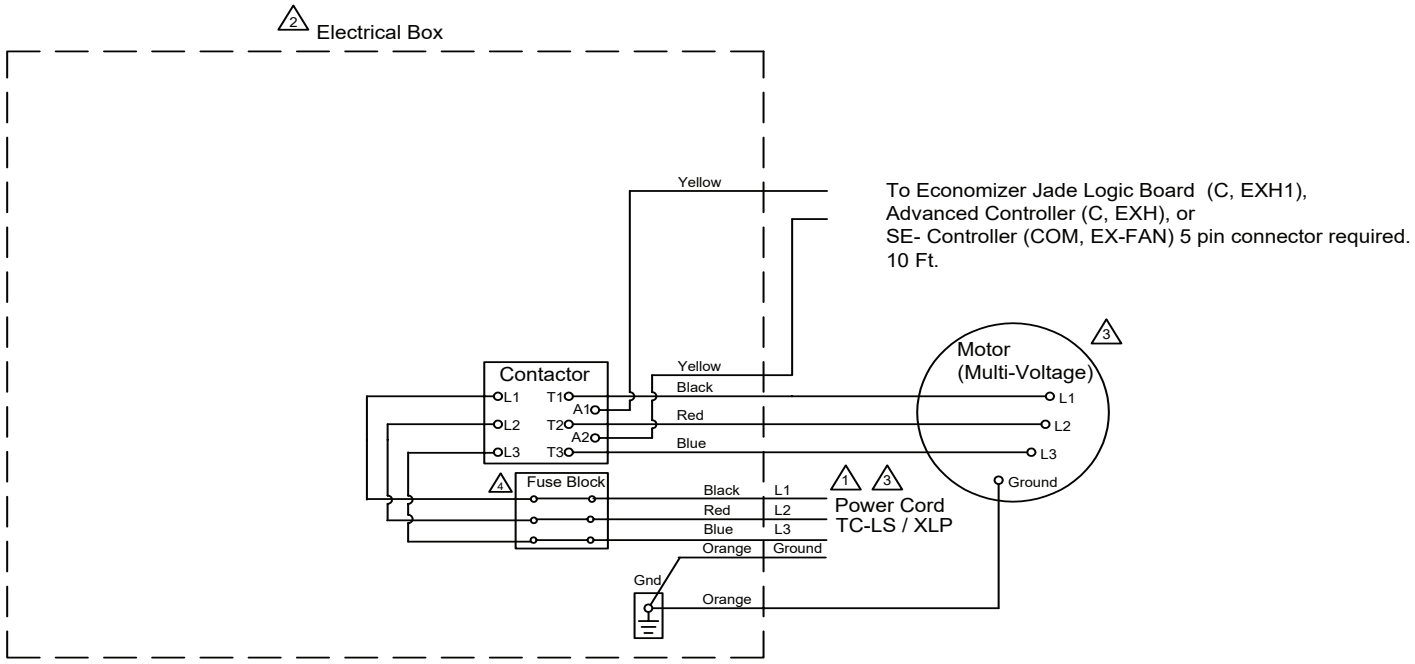
ILL. 2



ILL. 3



ILL. 3 - Constant Volume Power Exhaust Wiring



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: New MCA = MCA of Unit Only + 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, 6 amp KTK fuses (460V-3PH). 7, 8, 10 amp KTK fuses (230V-3PH). 10, 15 amp KTK fuses (230-1PH)

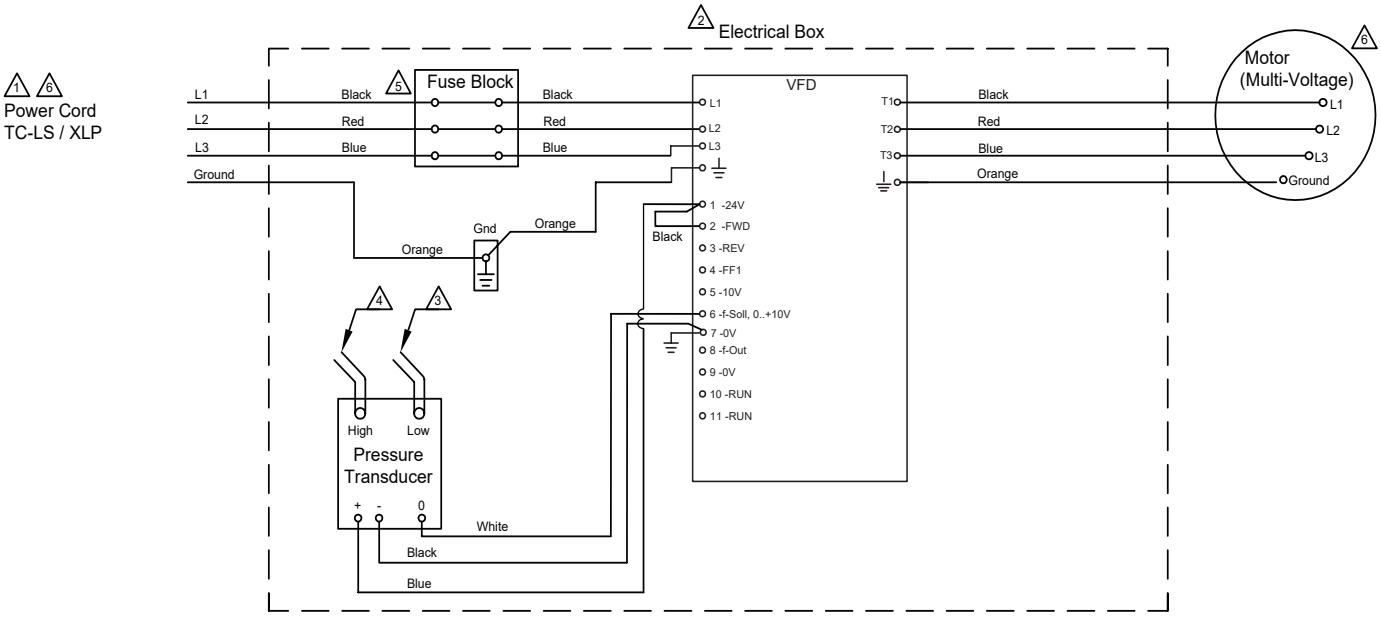
Example: With a unit that has MCA=22.5 amps and MOCP=30 amps,

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. 4 - Modulating Power Exhaust Option Wiring



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: New MCA= MCA of Unit Only+ MCA of Power Exhaust

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

3 Factory mounted 3/16" low pressure tubing.

4 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.)

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

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

7 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.		