

**YORK LXS  
VERTICAL  
ECONOMIZERS  
I/O/M MANUAL**

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**For information on iAIRE's Economizer Controls Package,  
please refer to IOM-0014**

## York Economizer Description

**PLEASE NOTE:** Our economizer is a low leak, field installed economizer with the iAIRE patented controls packages and actuator, allowing you to reduce the amount of outside air needed from your rooftop HVAC system by up to 2/3 and will improve indoor air quality.

This reduction in system operation creates on-going utility savings. Payback on capital equipment costs with an iAIRE economizer can be realized in fewer than three years. These packages are designed to work directly on existing rooftop HVAC systems.

These economizers are all low leak and meet the IECC 2015 requirement and are Title 24 compliant by meeting section 120.2(i) for the required controls and the efficiency requirements in 140.4(e).

### Unit to RTU Conversion

LXS-H	PCG4B, PCE4B 048-060 / PHE4B, PHG4B 036-060
LXS-V	P***A ALL MODELS

### Part Number

**EC - 1 - 2 3 4 5 - 6**

type	unit/ton (1)							
EC - ECONOMIZER	26	6075	CHAS12	A-BOX	FND35	PREC810	AFF	SCL34
	712	100	CHAS34	B-BOX	PACK13	VOY12	LXS	SCLHE12
	1525	125	CHAS5	C-BOX	PREC35	VOY12HE	LXL	SCLHE34
	3050	150	CHAS69	D-BOX	PREC48	VOY1525HE	SCS12	PRED
	Controls Only		Carrier	E-BOX	PREC610		SCS34	PREDs
				F-BOX			SCSHE12	SL
				Lennox		Trane	SCSHE34	SLL
							SCL12	SLU
							York	

### configuration (2)

0 - NO ECON  
C - CONVERTIBLE  
H - HORIZONTAL  
V - VERTICAL

### actuator (3)

0 - NO ACTUATOR  
A - 20 IN-LB  
B - 62 IN-LB  
C - 160 IN-LB

### controls (4)

0 - ECON ONLY  
A - IAQ  
B - IAQ (NO IONIZATION)  
D - DCV

### power exhaust (5)

0 - NO POWER EXHAUST  
A - 208/230V 1Φ FIXED PE  
B - 208/230V 3Φ FIXED PE  
C - 460V 3Φ FIXED PE

### options (6)

0 - NONE  
B - HUMIDITY  
C - BACNET  
D - BLDG PRESSURE\*  
R - RTU OPEN  
U - ULTRA LOW LEAK

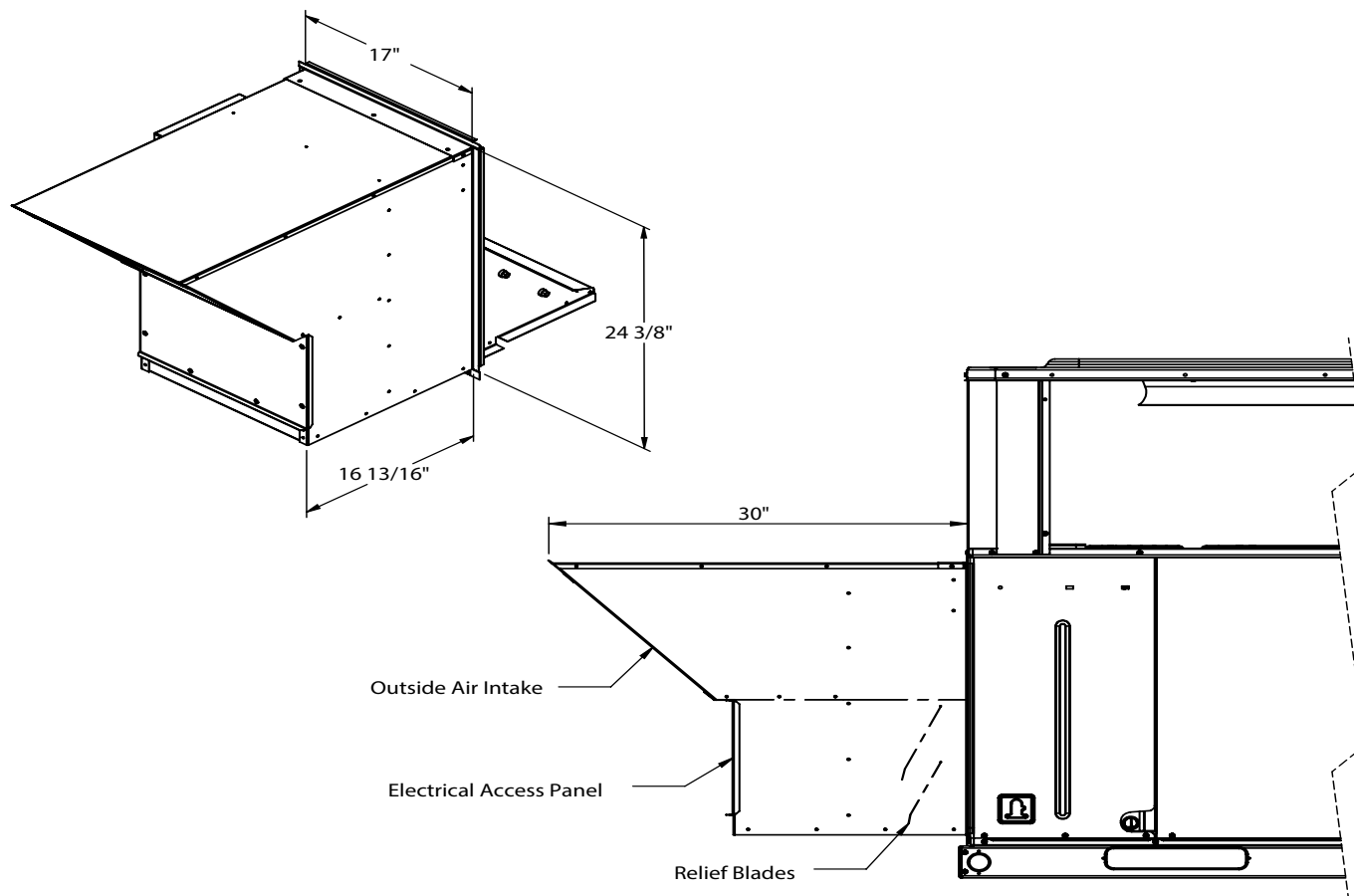
Note: By adding option "D" any powered exhaust will be modulating.

SUB-0027

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## LXS Vertical Submittal



Electrical Data

PART #	WEIGHT
EC-LXS-VBA0-*	50 lbs.

PART	AMPS	PART	AMPS	TOTAL
ACTUATOR	.29A	CONTROLS	.27A	.56A

*OPTIONS
0 - No Options
B - Humidity/Enthalpic
C - BACNet

### Features

- **iAIRE Patented Controls Scheme Included**
- Low Leak Damper Included
- VOC, CO2 and Ionization included
- Heavy Gauge Galvanized Steel Construction
- American Sterling Grey Paint Finish
- One Piece Assembly
- Gear Driven Dampers
- Uses HVAC Unit Filter Access Door
- Capable of Relieving up to 100% of the Outside Air Intake

Economizers with Indoor Air Quality control are Title 24 compliant by meeting section 120.2(i) for the required controls and the efficiency requirements in 140.4(e). They also meet California ozone emissions requirements to be CARB certified.

## LXS Cooling Only & Heat Pumps - Vertical Install

**PLEASE NOTE:** This instruction provides the necessary information to properly field- install the economizer assembly on 2 ton through 5 ton single package rooftop units.

The damper accessory provides the return air and outdoor air dampers and actuator for the economizer operations. Contained in this kit are all rain hood components.

**PLEASE NOTE:** If the unit is 208/230V, single phase, power supply, the installed 40VA transformer needs/must be replaced with a 75VA transformer. All other factory units have the 75VA transformer installed standard.

### Before Starting Installation

#### Warning

**Shut power to unit prior to any work being done. Personal injury or death could result.**

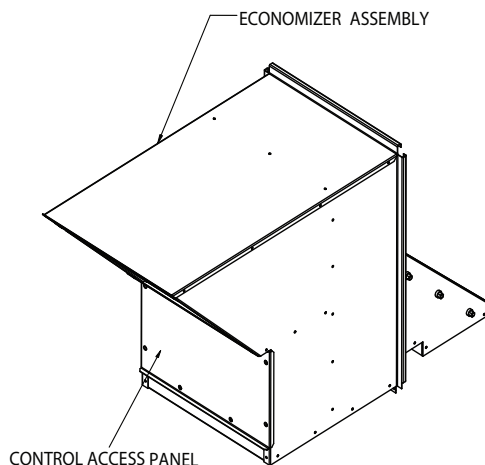
Only qualified HVAC service personnel should install, troubleshoot, repair or service HVAC and related HVAC equipment.

### Installation of Cooling Only & Heat Pumps

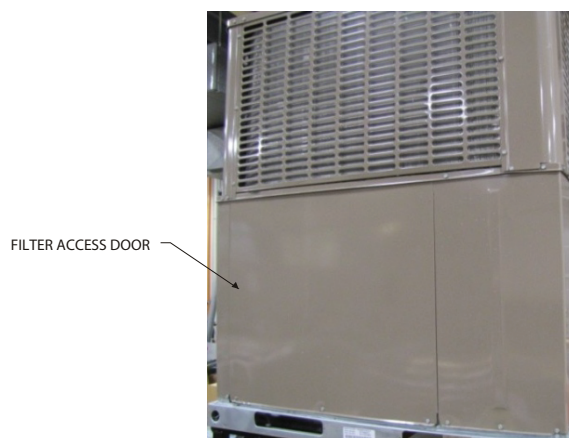
1. Disconnect the power supply.
2. Remove the filter access door. (ILL. 2)
3. Remove screws in immediate area on mid pan. (ILL. 3)
4. Remove top plate of economizer assembly. (ILL. 4)
5. Before installing economizer into the unit, make sure the duct cover has been removed. (ILL.5) Place the economizer into the unit and support the economizer from underneath until step 6 is complete. Place gasket as needed.
6. Replace top panel of economizer assembly, with front flange under mid pan and place screws back into place. (ILL. 6)
  - 6a. **Only for 4 & 5 Ton Units-** Use the side door provided to close gap between economizer and compressor panel.
7. Replace screws in mid pan to secure economizer to unit.
8. Drill a 1/2" hole in compressor barrier as needed to route wiring to main control board and sensors. Tightly seal opening around wires.
9. Route wiring through existing openings to control panel.

PARTS INCLUDED	QTY.
#10 x 1/2 Sheet Metal Screw	12
Terminal Block with Wire Harness	1
Tie Wraps	5
Gasket 1/8" x 1/2"	6 ft.
Gasket 3/4"x 1-1/4"	7 ft.
Discharge Air Sensor	1

ILL. 1



ILL. 2



## LXS Cooling Only & Heat Pumps - Vertical Install (cont'd)

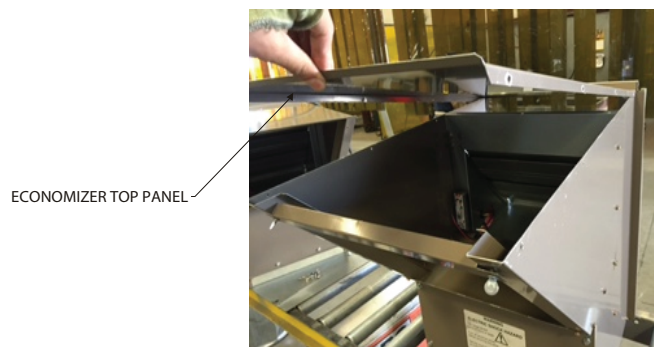
ILL. 3



MID PAN

ECONOMIZER TOP PANEL

ILL. 4



ECONOMIZER TOP PANEL

ILL. 6

FRONT FLANGE



ILL. 5

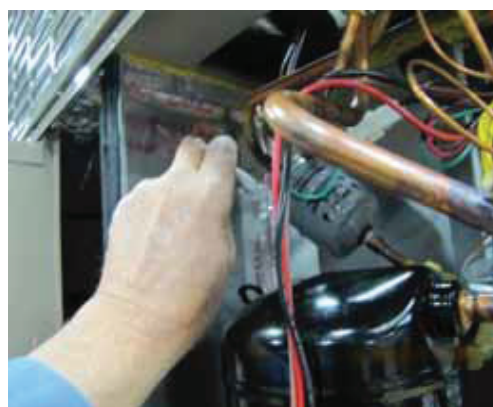


DUCT COVER

ILL. 7



BOTTOM DUCT OPENING

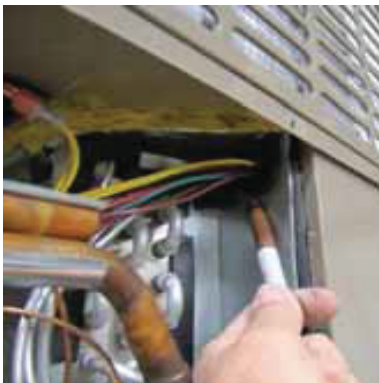


## LXS Cooling Only & Heat Pumps - Vertical Install (cont'd)

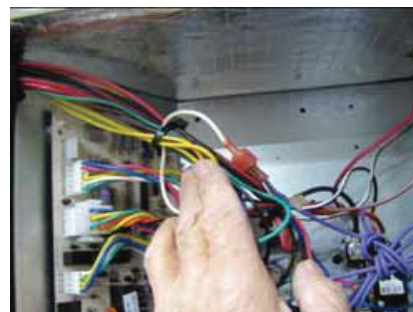
ILL. 8



ILL. 9



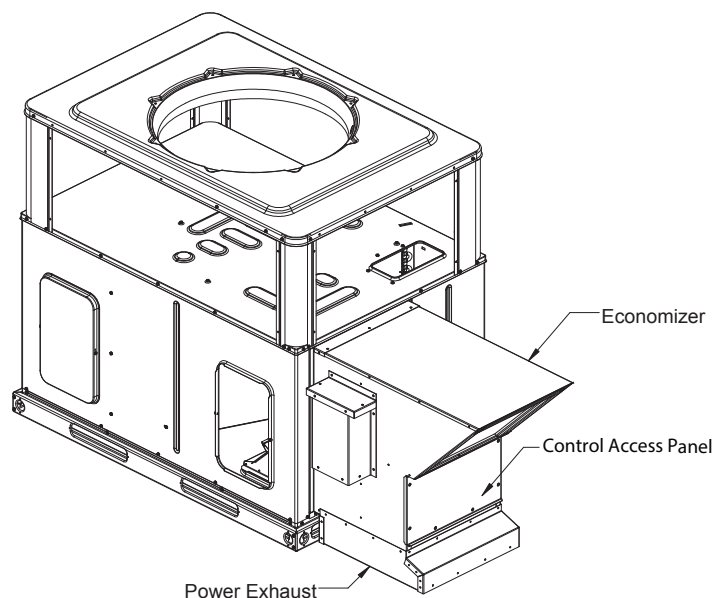
ILL. 10



10. The discharge air sensor should be mounted on the blower wheel wrap. Use only #8 screws shorter than 1/2" in length to avoid hitting blower wheel.
11. For economizers with optional power exhaust, route the power cord through the unit following step 8 and 9.

For wiring information refer to page 8 in IOM-0014.

ILL. 11



## York Economizer Install Notes

### Additional Notes

1. Power Supply. Provide disconnect means and overload protection as required.
2. Motor Spring>Returns closed when unit is not running.
3. Ensure that equipment transformer is sized to handle the extra load of the economizer and actuator.
4. When using a heat with defrost feedback, add an isolation relay between O and C. (Field provided and installed).