



**LENNOX CBOX  
VERTICAL  
ECONOMIZERS  
I/O/M manual**

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

## Lennox 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).

### BOXC to RTU Conversion

BOXC

KGA/KCA 180-300  
LGH/LCH 156-300

### 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	F-BOX	PREC610	Trane	SCS34	PREDS
			Lennox				SCSHE12	SL
							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

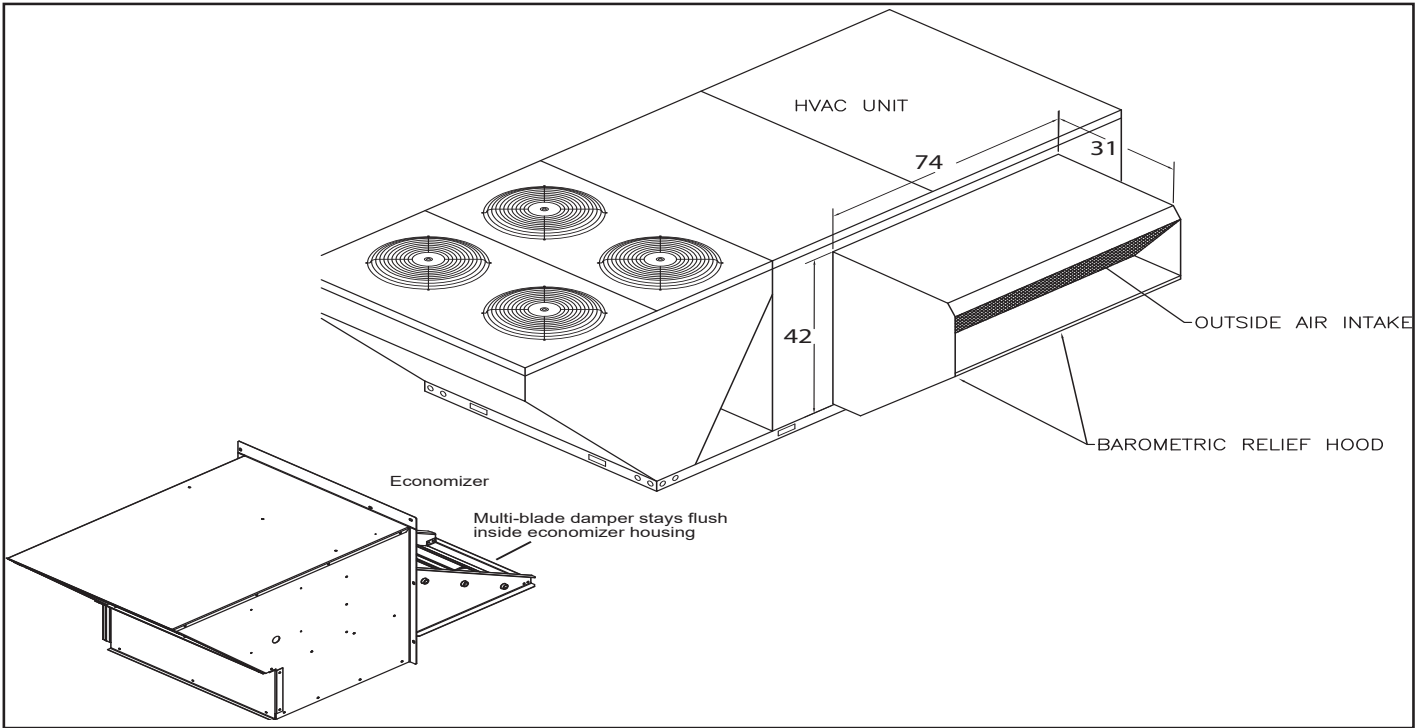
Note: By adding option "D" any powered exhaust will be modulating.

SUB-0025

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# CBOX Vertical Submittal



### Electrical Data

PART #	Weight
EC-BOXC-VBA0-*	350 lbs.

PART	AMPS	PART	AMPS	TOTAL
ACTUATOR	.29A	CONTROLS	.44A	.73A

*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.

## CBOX - Vertical Install

### ECONOMIZER INSTALLATION

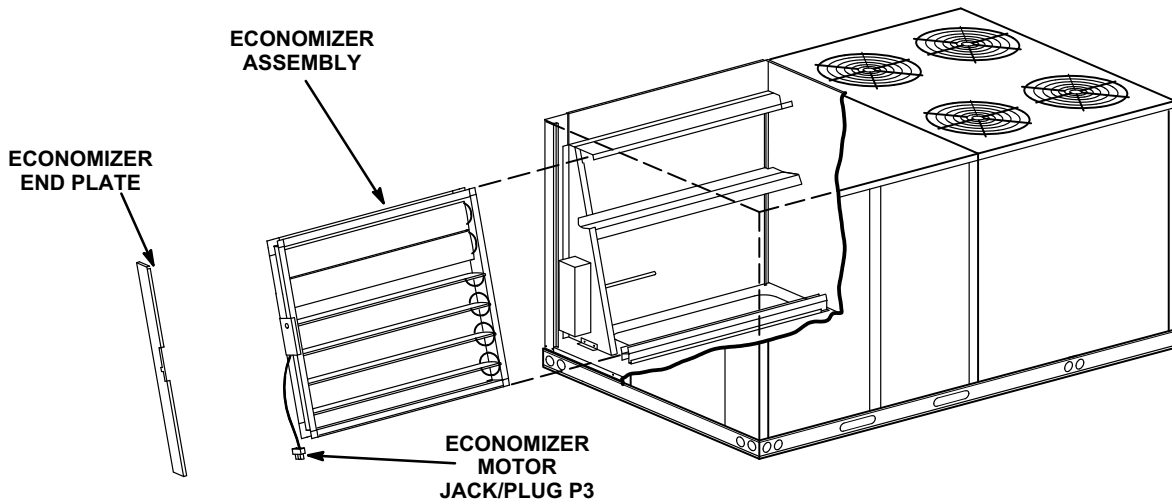


FIGURE 2

### DAMPERS

- 1- Disconnect all power to unit and open filter access panel.
- 2- Remove horizontal return air panel.
- 3- Align bottom of economizer with economizer support bracket and slide economizer into unit. See figure 2. Make sure the flanges align as shown in figure 3.
- 4- Fit economizer end plate over end of economizer and secure end plate with #10 self drilling screws.

### ALIGN FLANGES

#### FILTER SECTION

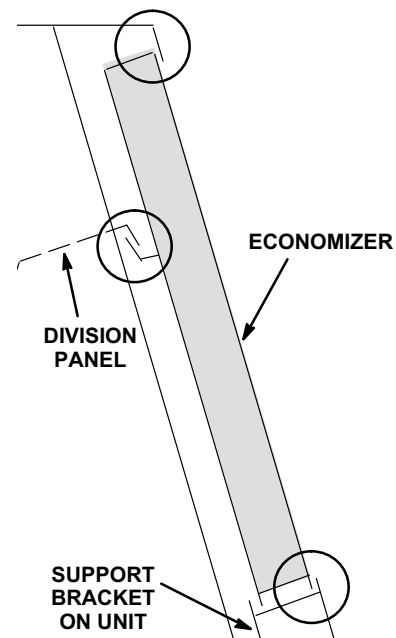


FIGURE 3

## Lennox 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).