



**LENNOX ABOX  
HORIZONTAL  
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).

BOXA to RTU Conversion	
BOXA	KGA/KCA 024-060 LGH/LCH 036-048

### 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		Trane	SCSHE12	SL
				Lennox			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

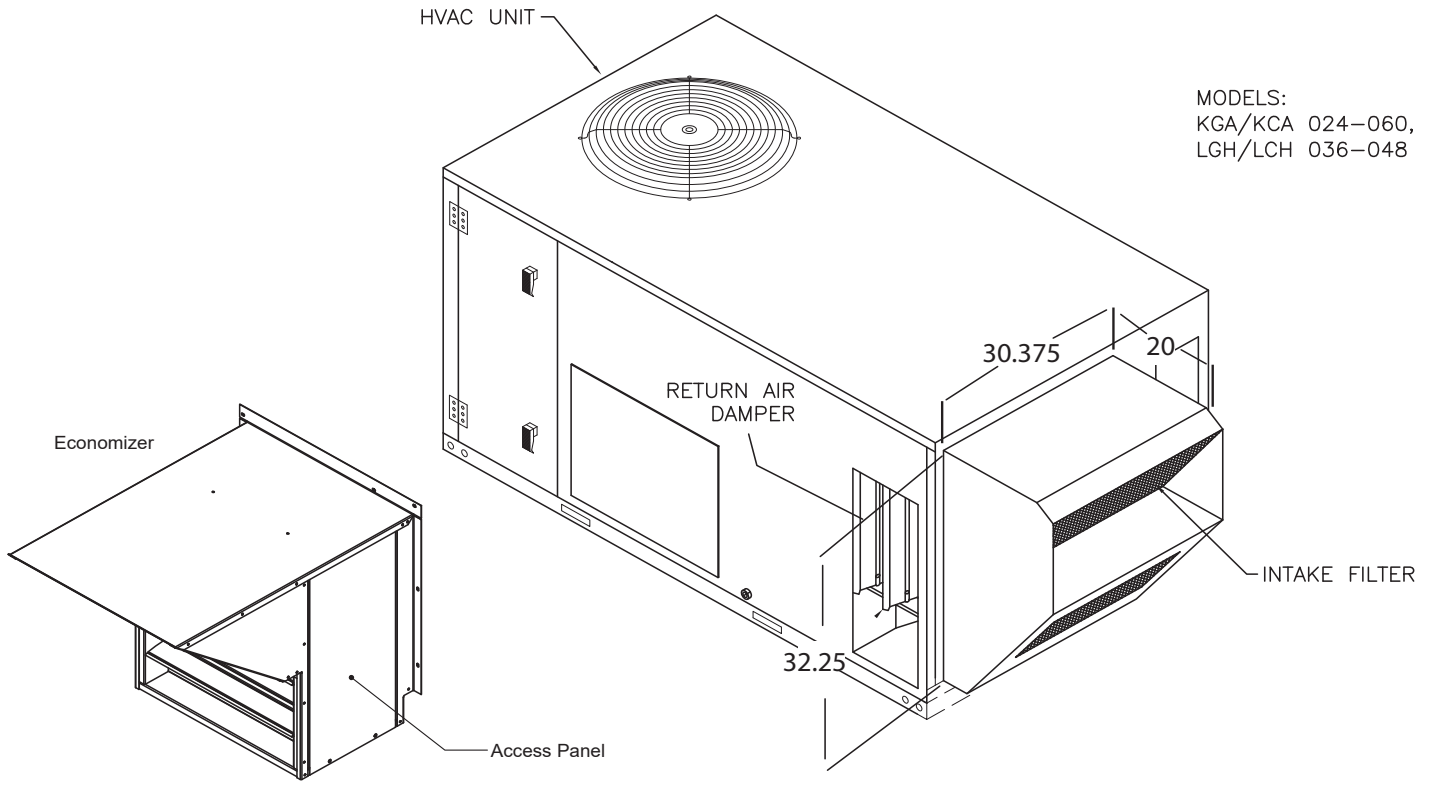
controls (4)
0 - ECON ONLY A - IAQ B - IAQ (NO IONIZATION) D - DCV

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.

# ABOX Horizontal Submittal



MODELS:  
KGA/KCA 024-060,  
LGH/LCH 036-048

### Electrical Data

PART #	Weight
EC-BOXA-HBA0-*	135 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.

## ABOX - Horizontal Install

### Install Economizer - Horizontal

A field fabricated return air duct transition and duct inlet must be installed in horizontal applications.

The GEDH kit contains exhaust dampers and exhaust hood parts. The kit also contains the outdoor air only hood sides and bottom filter bracket.

Refer to the *Install Economizer - Horizontal* section and the instructions provided in the GEDH kit. The GEDH has a lower profile than the downflow GED and is installed in the horizontal return duct.

- 1- Remove unit end panel. See figure 11.
- 2- Install the downflow return air cover in horizontal airflow applications. Secure with #10 sheet metal screws provided in kit. See figure 11.
- 3- Make sure the horizontal return air cover on the back side of the unit remains in place. The opening is used when an economizer is not installed. See figure 12.
- 4- Install the economizer and R1 mixed air sensor and connect wiring as shown in appropriately named sections of this manual.

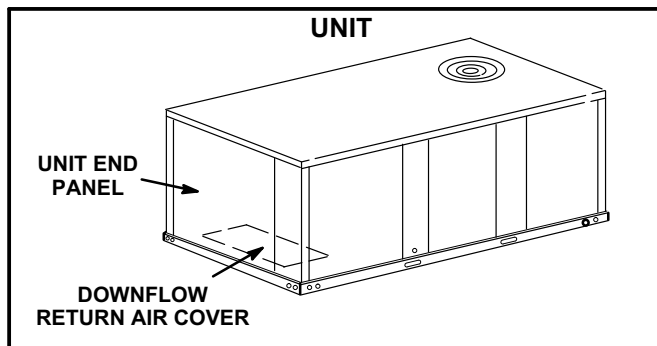


FIGURE 11

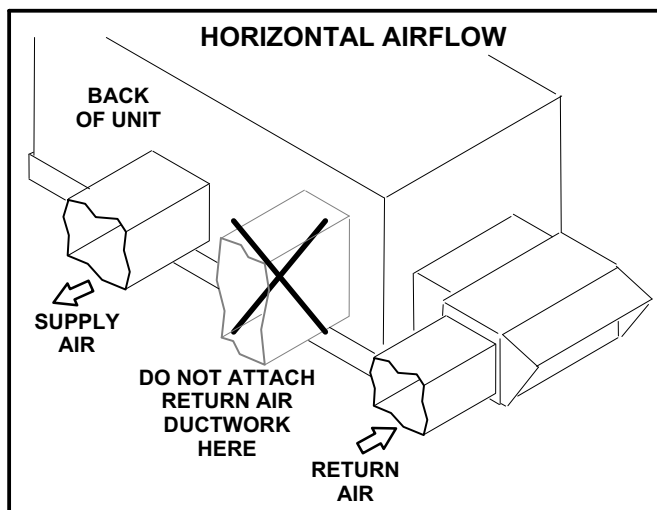


FIGURE 12

- 5- Install the field-fabricated return air duct transition and duct inlet on the unit end. See figure 14. Support the transition and duct inlet as needed.
- 6- Install the lower (exhaust) hood on the return air duct as shown in the GEDH kit instruction.
- 7- Install the upper hood on the unit as shown in figure 13.

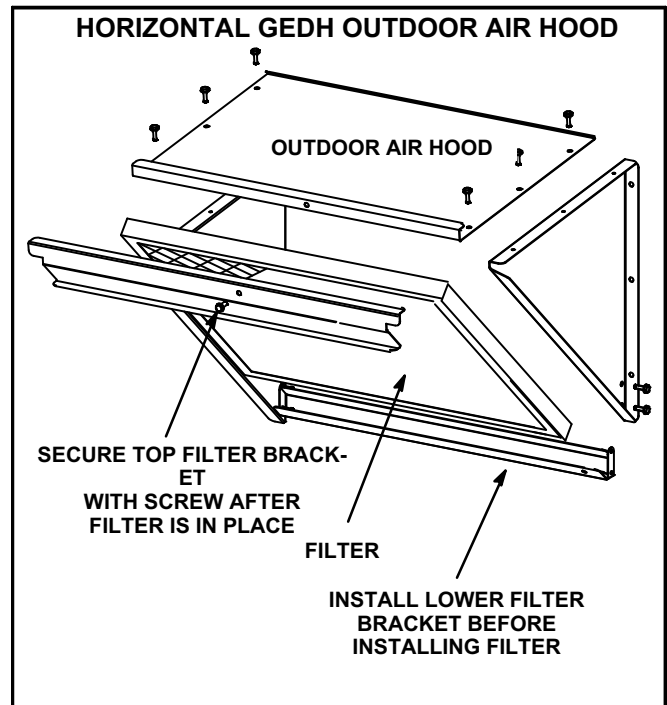


FIGURE 13

## 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).