



**YORK SCS
HORIZONTAL
ECONOMIZERS
I/O/M MANUAL**

Table of Contents

York Economizer Description.....	3
SCS Horizontal Submittal	4
SCS Horizontal Install	5
Additional Install Notes.....	8

**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

SCS12-H	ZX 04-06; XY, ZY, XQ 04; ZQ 04-05
SCS34-H	ZX 07; XY, ZY, XQ 05-06; ZQ 06; XXA7
SCS12-V	ZX 04-07; ZY 04-06; ZQ 04-06; XY 04-06; XQ 04-06; XXA7
SCS34-V	ZX 08-14; ZY 07-12; XX 08-12; XY 07-09
SCSHE12-V	ZX 04-07; ZY 04-06; ZQ 04-06; XY 04-06; XQ 04-06; XXA7
SCSHE34-V	ZX 08-14; ZY 07-12; XX 08-12; XY 07-09

Part Number

EC - 1 - 2 3 4 5 - 6

type

EC - ECONOMIZER

unit/ton (1)

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	Trane	SCS34	PREDS	
			F-BOX	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

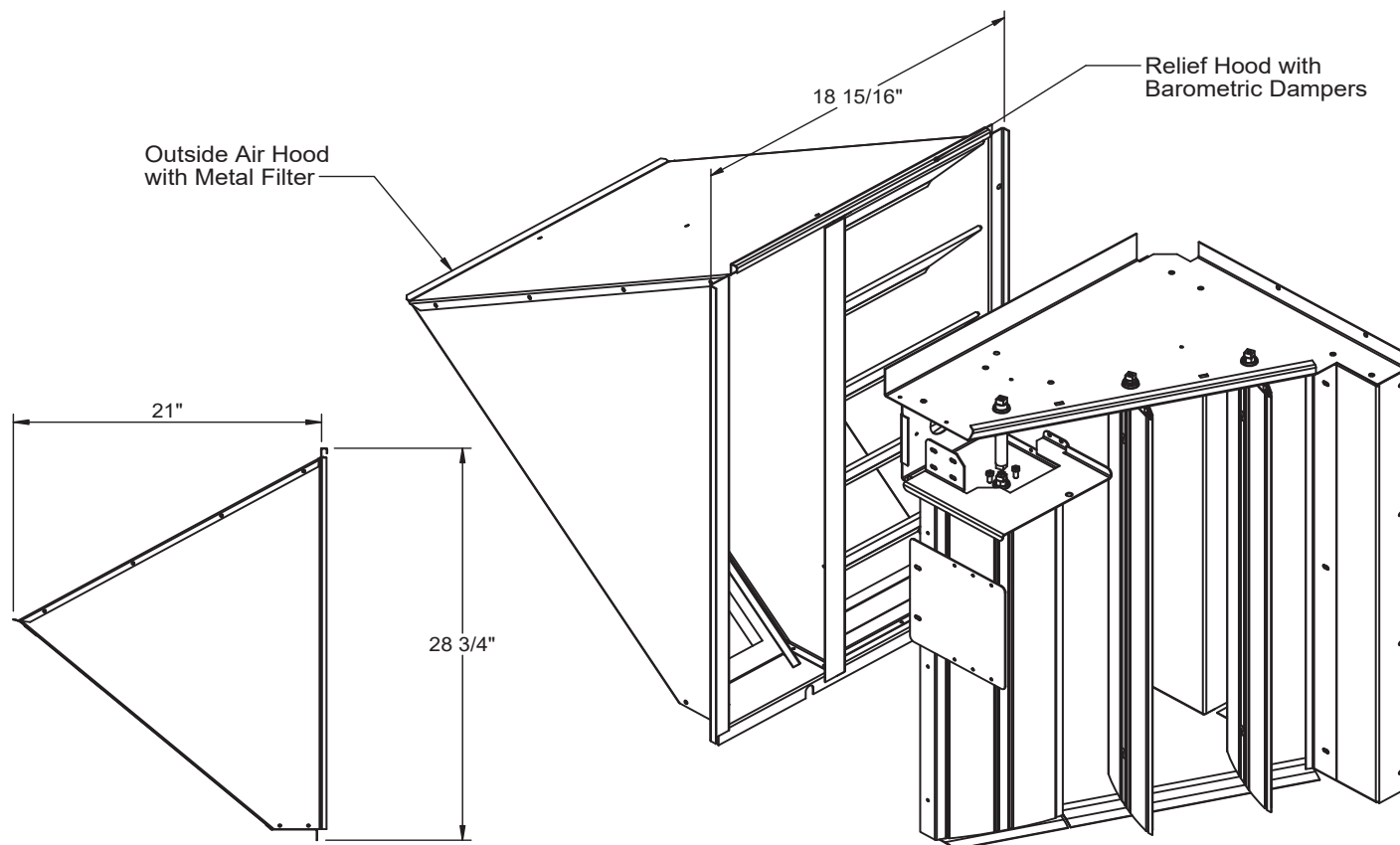
Note: By adding option "D" any powered exhaust will be modulating.

SUB-0027

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PD 09/25/21 V.01.00

SCS Horizontal Submittal



HOOD SIDE DETAIL

Electrical Data

PART #	WEIGHT
EC-SCS-HBA0-*	81 lbs.

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

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

Features

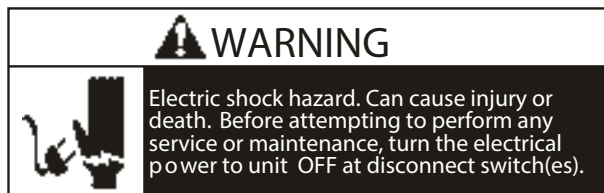
- **iAIRE Patented Controls Scheme Included**
- Low Leak Damper Included
- VOC, CO2 and Ionization included
- Heavy Gauge Galvanized Steel Construction
- American Sterling Grey Paint Finish
- One Piece Assembly
- Gear Driven Dampers
- Uses HVAC Unit Filter Access Door
- Capable of Relieving up to 100%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

SCS - Horizontal Install

Before Starting Installation

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



General

The instruction provides all the necessary information to properly field install the Economizer and Economizer Hood on the above indicated equipment.

Step 1:

Verify all unit parts in box.

- 1 ea. - Economizer (A)
- 1 ea. - Economizer Hood (B)
- 1 ea. - Center Post (C)
- 1 ea. - Filler Panel (D) (For ECOHPRST Only)
- 1 ea. - Filter Access Panel (E)
- 1 ea. - Hardware Bag (Not shown):
 - 12 ea. - Self-tapping #10 - 16 x 1/2 Screws
 - 14 ft. - 1/8 x 1/2 Gasket

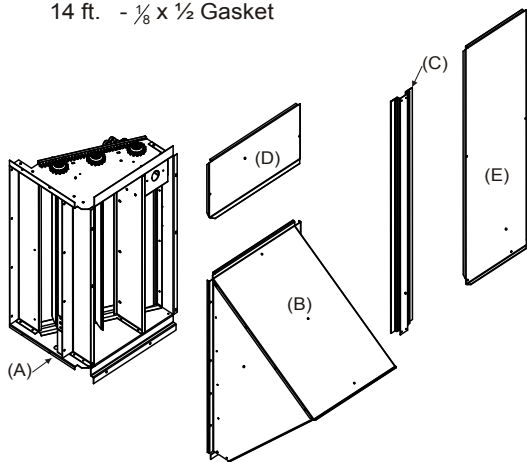


Figure 1

Step 2:

If the unit is connected to a horizontal return duct, the horizontal return duct must be removed to complete the installation of the horizontal flow economizer.

If the unit has never been connected to a horizontal return duct, remove the horizontal return duct, remove the horizontal duct cover. Retain the horizontal duct cover and screws for later use.

Remove the lower access panel and discard. Retain

Important

If supplied with power exhaust option, power exhaust power (Molex) connection is located on economizer next to its power connection. Make sure to plug in power exhaust when connecting economizer power in Step 3 of instructions below.

screws for later use. Remove the filter access panel. See Figure 2.

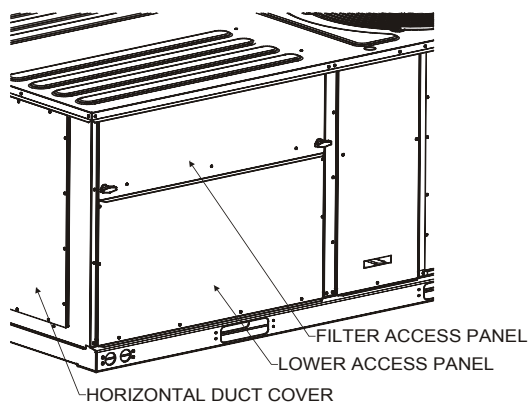


Figure 2

Step 3: (if required)

Remove RAT sensor and bracket as shown in Figure 3. Retain RAT sensor with bracket and screw to install in Economizer.

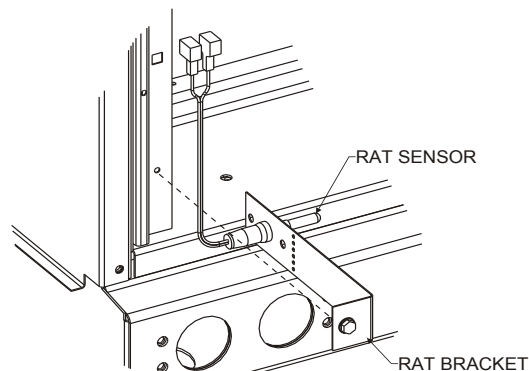


Figure 3

Note: If the unit was originally installed with a horizontal return duct, the return opening in the bottom of the unit will be covered.

SCS - Horizontal Install (cont'd)

Step 4:

If the unit was not originally connected to a horizontal return duct, install horizontal duct cover, removed in **Step 2**, over the return opening in the bottom of the unit (use the screws that originally held the panel in place). Ensure that the edge of the horizontal duct cover facing the coil is under the raised tabs on the side of the opening. The panel must be installed with the insulation facing up.

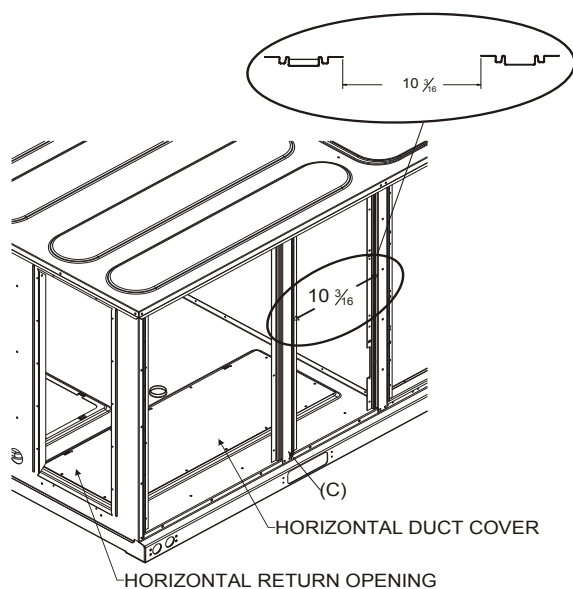


Figure 4

Install center post (C) at the location shown in **Figure 4**. The location is critical to the fit up of the remaining parts. Secure with 4 self-tapping 10-16 x 1/2 screws provided with the economizer.

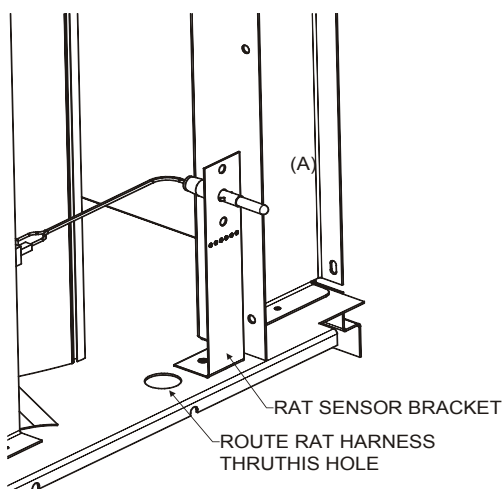


Figure 5

Step 5: (if required)

Disconnect the RAT sensor from the harness removed in **Step 3**. Secure the RAT sensor and bracket removed in **Step 3** to the Economizer in the location shown in **Figure 5**.

Route RAT harness thru the hole shown in **Figure 5** BEFORE completing the installation of the Economizer. Locate the harnesses in **Step 7** and prep/connect before completing the economizer installation.

Step 6:

Slide the Economizer (A) over return opening and into horizontal duct opening as shown below. Secure Economizer at the top and bottom with self-tapping 10-16 x 1/2 screws provided with the economizer as shown in **Figure 6**.

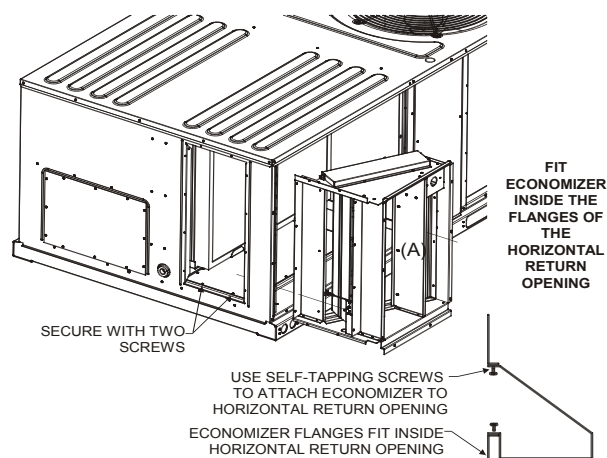


Figure 6

Step 7:

The connection of the wiring harnesses to the economizer controller should be done before the filter access panel is installed. Locate the harness in the return compartment with brown wire 845 and red wire 846. Connect this harness into the "24V-IN" connections on the economizer controller. Locate the harness in the return compartment with the black wire 840, white wire 841 and red wire 842. Connect this harness to the "SA BUS" connections on the economizer controller. Refer to the unit wiring diagram.

Step 8:

Reconnect power to the unit - follow all safety instructions, rules and codes.

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

SCS - Horizontal Install (cont'd)

Step 9:

Secure Filter Access Panel (E) using 2 screws retained in **Step 2** and 2 self-tapping 10-16 x ½ screws provided with Economizer, as shown in **Figure 7**.

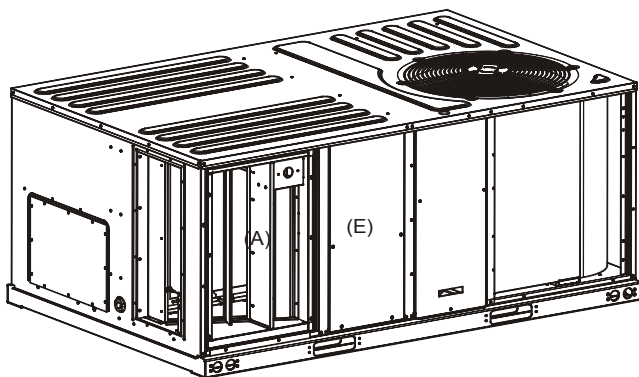


Figure 7

Step 10:

Install the Economizer Hood (B) onto the unit. The top flange of the hood will fit under the roof of the unit - ECOHPRSS only .

Note: If installing ECOHPRSS skip Step 11 and go to Step 12

Step 11:

Install Filler Panel (D) under top of RTU and over top of Economizer Hood (B). Secure the right side of Filler Panel (D) with 1 self-tapping 10-16 x ½ screw provided with Economizer and secure the left side with 1 screw that was retained in **Step 2**. See **Figure 9**.

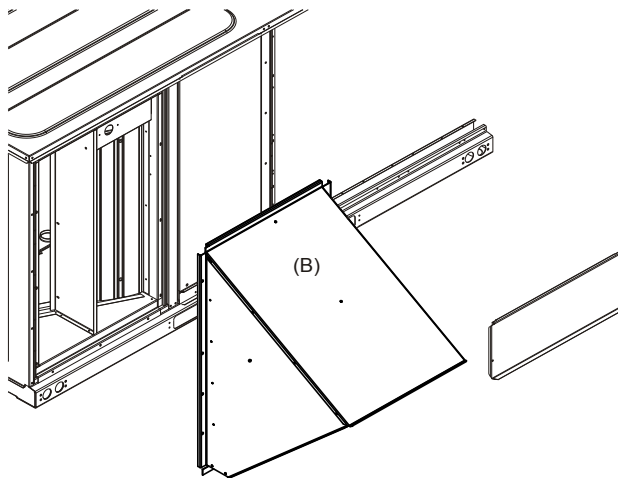


Figure 9

Step 12:

Install/Reinstall the horizontal return duct. Ensure the duct is completely air and water tight.

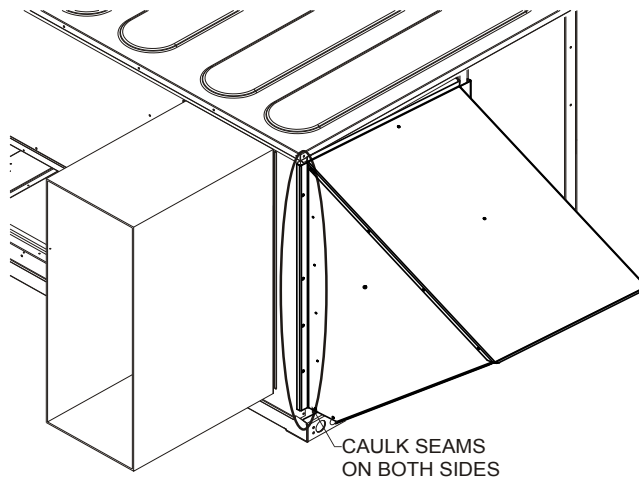


Figure 10

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).