



**YORK PRED  
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 |   |
|------------------------|---|
| PRED-V                 | ZT/ZR/ZH/ZJ 037, 049, 061, ZF/ZH/ZJ/ZR/XP/DH/DM/DF/DR/BP 078-150; DJ 150  |
| PRED-H                 | ZF,ZH, ZR 102-150; ZJ, XP 078-150; BP 078, 102-150; DJ 150 DH 120, 150; DF 078, 150 DM 078, 120, 150; DR 090-150; |
| PREDS-H                | ZT, ZH, ZR, ZJ 037-061 ZF, ZH, ZR 078, 090 DH 078-102; DF, DM 090, 102; BP 090                                    |

### 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 | Trane     | SCS34   | PRES    |
|                 |              |               | Lennox  | F-BOX |         |           | 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

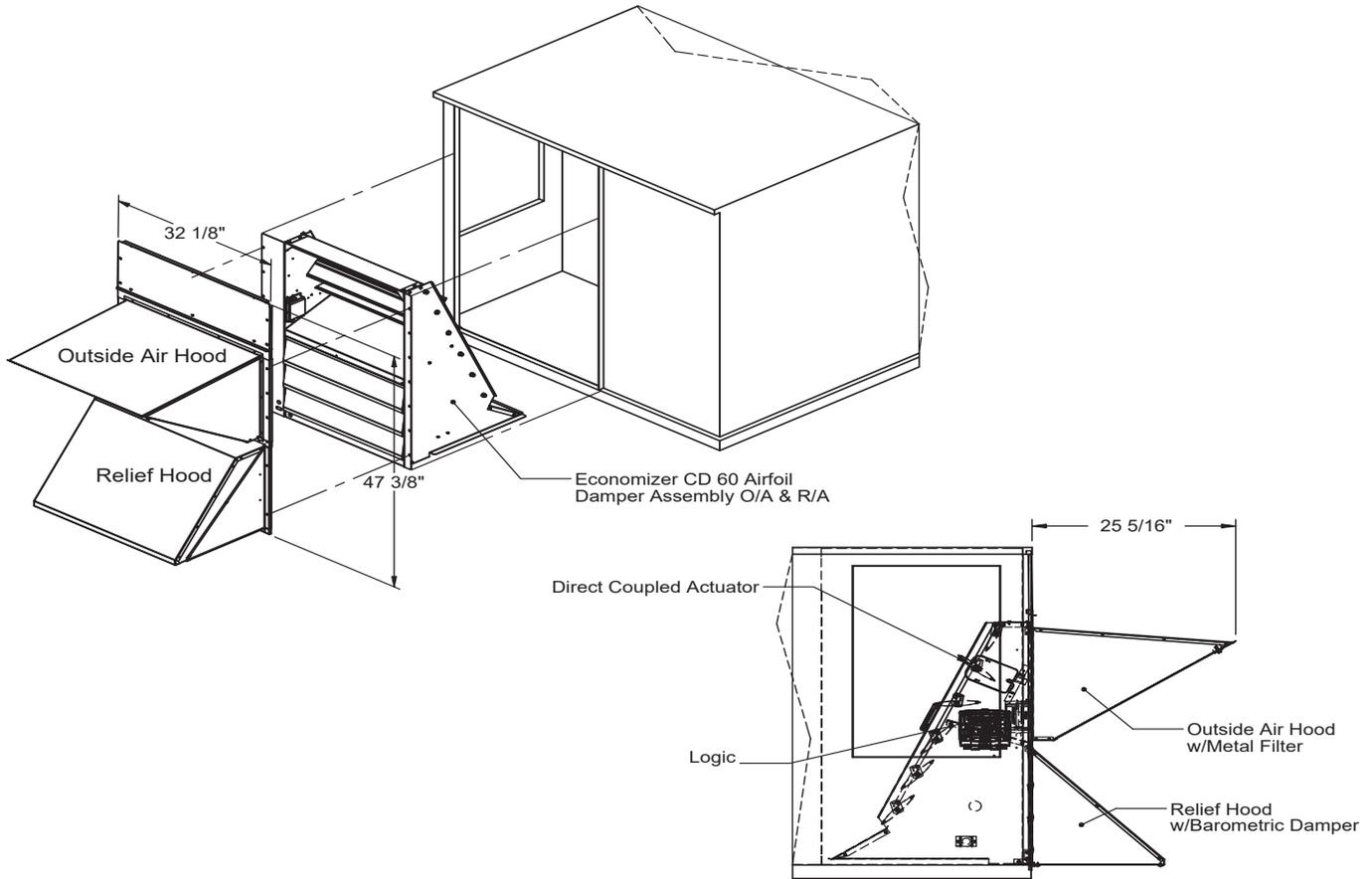
#### options (6)

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.

|          |   |                     |
|----------|---|---------------------|
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|----------|---|---------------------|

# PRED Vertical Submittal



| PART #         | WEIGHT  |
|----------------|---------|
| EC-PRED-VBA0-* | 90 lbs. |

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

**Electrical Data**

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

### 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.

## PRED 3 to 12.5 Ton Unit - Vertical Install

### 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.

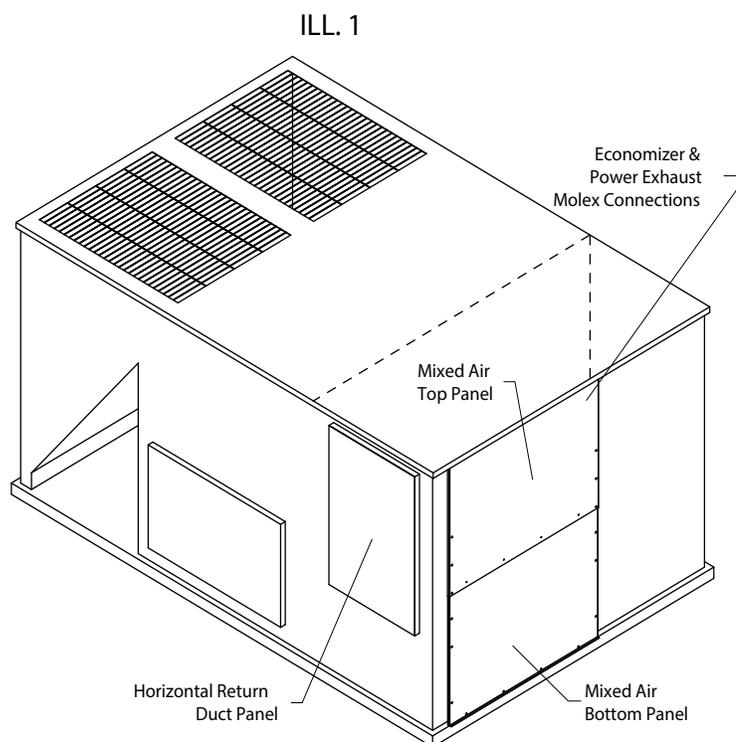
#### Important

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.

### Installation Instructions

1. Turn power off to unit being serviced or worked on.
2. Remove horizontal duct panel on side of unit and both mixed air compartment panels on end of unit. Save the unit screws for securing economizer hood to unit. (ILL. 1)
3. 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 the red wire 842. Connect this harness to the "SA BUS" connections on the economizer controller. Refer to the unit wiring diagram.
4. Reconnect the power to the unit- follow all safety instructions, rules and codes.

See unit installation, Operation and Maintenance manual for instructions to verify the unit controller and the economizer controller are communicating properly.



## PRED 3 to 12.5 Ton Unit - Vertical Install (cont'd)

After communication between the unit controller and the economizer board has been verified, proceed to Step 5.

5. Locate relief hood (without filter). Install relief hood first at bottom of opening. Then attach outside air hood on top.

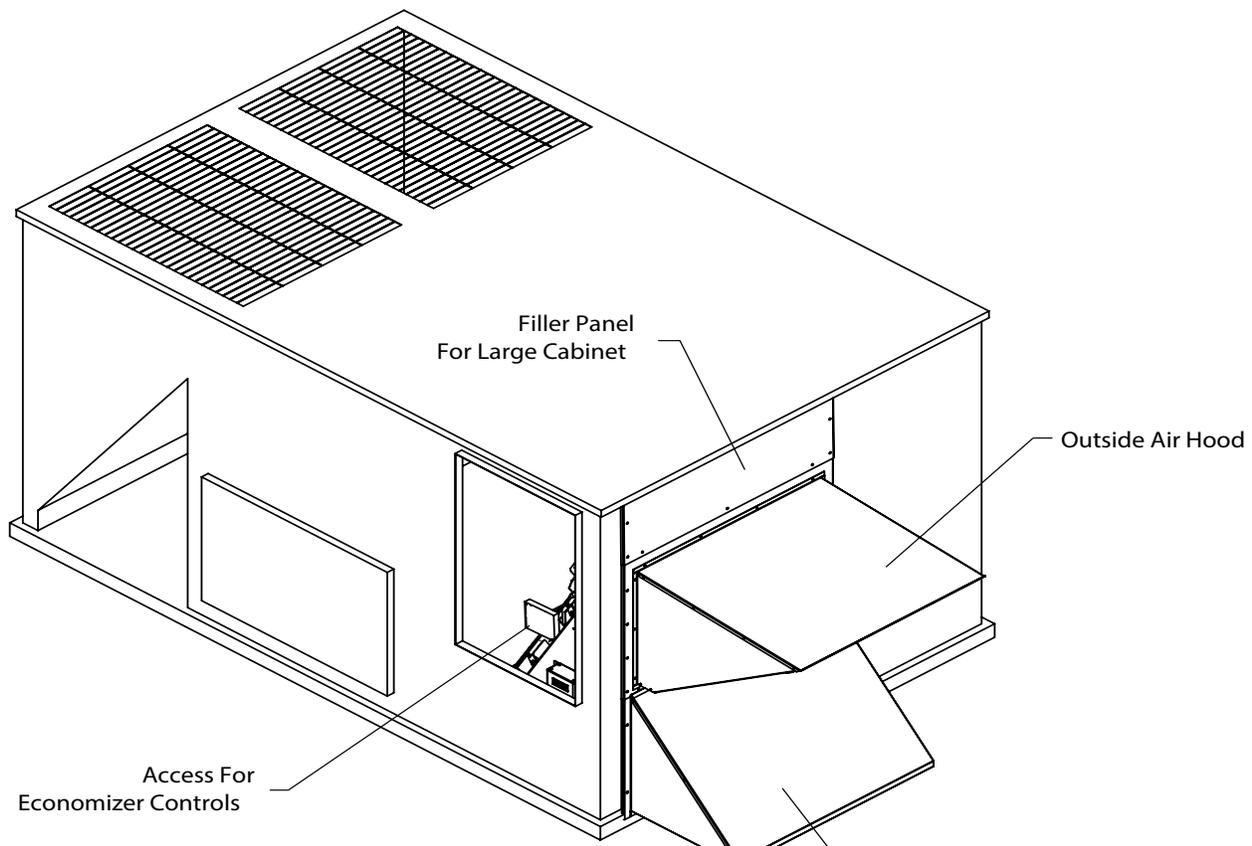
For large cabinet units, an additional filler panel is provided. Install this panel at top.

(Please note: This panel is not used on small cabinet units). (ILL. 3)

6. Use horizontal return duct panel for access to controls. Reattach this panel when completed. The two end unit panels are no longer needed.

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

ILL. 2



## 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).