

# ComfortStar®

Air Conditioning & Heating Products



## Light Commercial Rooftop Package Unit

208/230V, 3Ph, 60Hz

Model: CRT7-90TT

**ComfortStar®**

Address: 12201 N W 107th Avenue Miami, FL 33178  
1.866.524.9898 Toll Free  
305.500.9898 Office  
305.500.9896 Fax  
<http://www.comfortstarusa.com>



## Submittal Data Sheet

Light Commercial Rooftop Package Unit Capacity:7.5Ton

| Model (AC)                          |                            |          | CRT7-90TT         |
|-------------------------------------|----------------------------|----------|-------------------|
| Power Supply                        |                            |          | 208/230V~60HZ,3Ph |
| Cooling Capacity                    |                            | KBtu/h   | 86                |
|                                     |                            | kW       | 25.2              |
| Power Input                         |                            | kW       | 7.41              |
| EER                                 |                            | Btu/h/W  | 11.6              |
| Max.input consumption               |                            | W        | 8,600             |
| Max.current                         |                            | A        | 28                |
| Indoor fan air flow                 |                            | CFM      | 3,000             |
| ESP                                 |                            | in.wg/Pa | 0-250             |
| Outdoor Sound Rating(BELS)          |                            |          | 8.4               |
| Compressor                          | Type                       |          | Scroll            |
|                                     | Quantity                   |          | 2                 |
| Indoor coil                         |                            |          | Micro-channel     |
| Outdoor coil                        |                            |          | Micro-channel     |
| Indoor fan                          | Type                       |          | Centrifugal       |
|                                     | Drive type                 |          | Belt              |
|                                     | Quantity                   |          | 1                 |
| Outdoor fan                         | Type                       |          | Axial             |
|                                     | Drive type                 |          | Direct            |
|                                     | Quantity                   |          | 2                 |
| Refrigerant Type                    |                            |          | R454B             |
| Refrigerant Volume                  | Circle A/B                 | lbs      | 3.75/3.09         |
| Filters                             | Type<br>Furnished          |          | Disposable        |
|                                     | Number Size<br>Recommended |          | (4)20*20*2        |
| Operation Ambient Temperature       |                            | °F       | 0-125             |
| Net Dimensions(W×H×D)               |                            | inch     | 88.6×48.8×59.1    |
| Packing Dimensions(W×H×D)           |                            | inch     | 89.4×50.2×59.6    |
| Loading Quantity per 20GP/40GP/40HC |                            |          | 3/7/14            |
| Standard motor (weight)             |                            |          |                   |
| Unit weight(lb)                     |                            |          | 917(416kg)        |
| Shipping Weight(lb)                 |                            |          | 979(444kg)        |
| Standard motor (weight)             |                            |          |                   |
| Unit weight(lb)                     |                            |          | 913(414kg)        |
| Shipping Weight(lb)                 |                            |          | 974(442kg)        |
| Oversize motor(weight)              |                            |          |                   |
| Unit weight(lb)                     |                            |          | 919(417kg)        |
| Shipping Weight(lb)                 |                            |          | 981(445kg)        |

## Features:

- Wide operating range:  
Cooling Ambient temp.: -0°F~125°F  
Heating Ambient temp.: -40°F~86°F
- ETL and AHRI certification
- Dual-stage, High efficiency compressor
- DC outdoor Motor
- VFD+pulley design
- Micro-channel heat exchanger
- High static, Oversize motor model can be customized
- Electric heater optional
- Condensation water flow switch option
- High attitude kit option 7-speed fan control.
- Compatible with local 24V wired controller
- Horizontal/vertical air duct connect
- Multi-function PCB, LED display, Error code showing
- Compatible with field accessory: Curb/Economizer/Hail guard

(Unit: in(mm))

(Unit: in(mm))

Diagram illustrating the connection of the rear panel and the rear door. The rear panel is shown being attached to the main unit, and the rear door is shown being attached to the rear panel. The diagram includes labels for the rear panel and the rear door.

### CONDENSATE DRAIN CONNECTION

FRONT VIEW

88-7/16"

48-3/4"

48-5/16"

23-3/4"

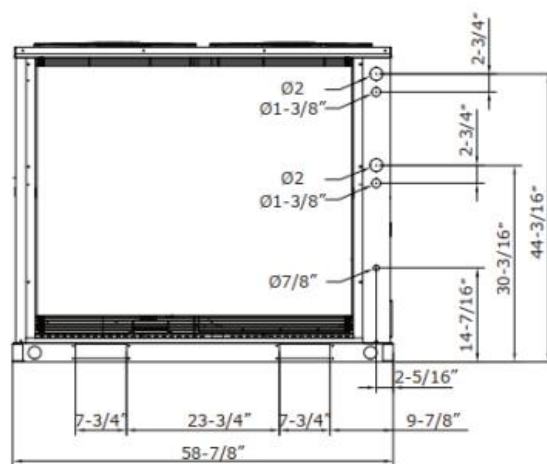
6-5/16"

7-3/4"

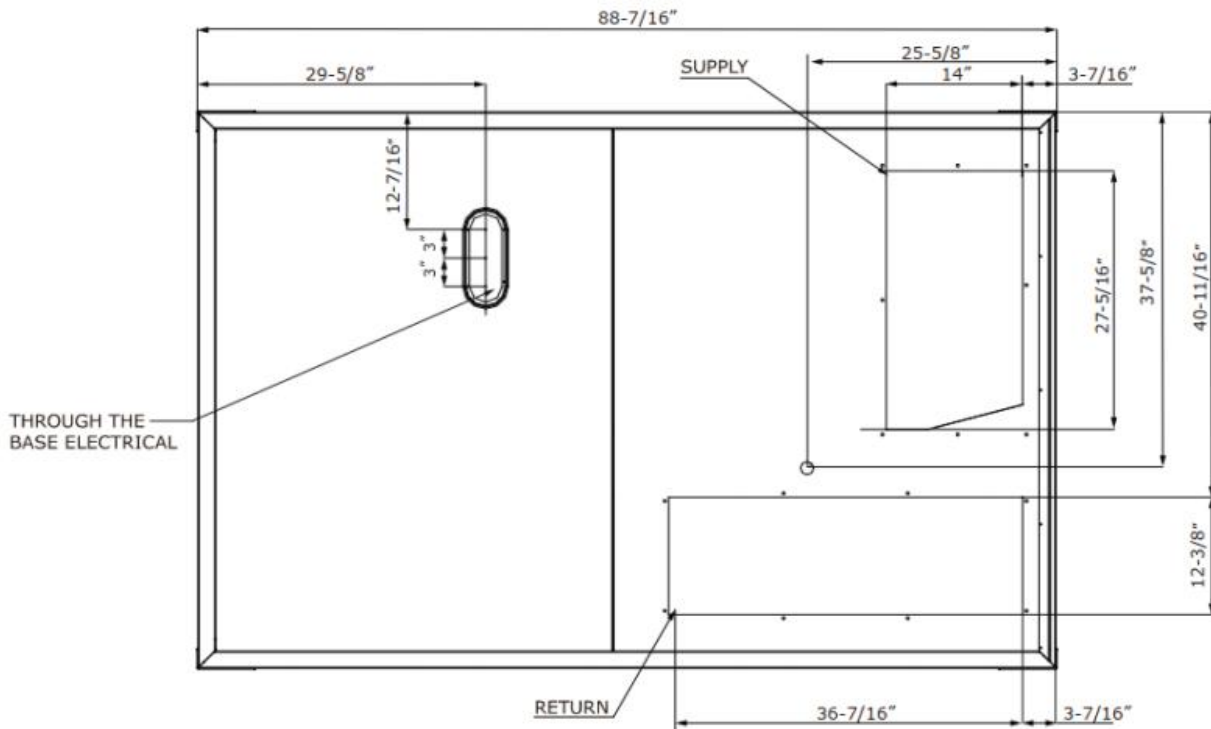
7-3/4"

37-15/16"

(GBC UNIT ONLY)



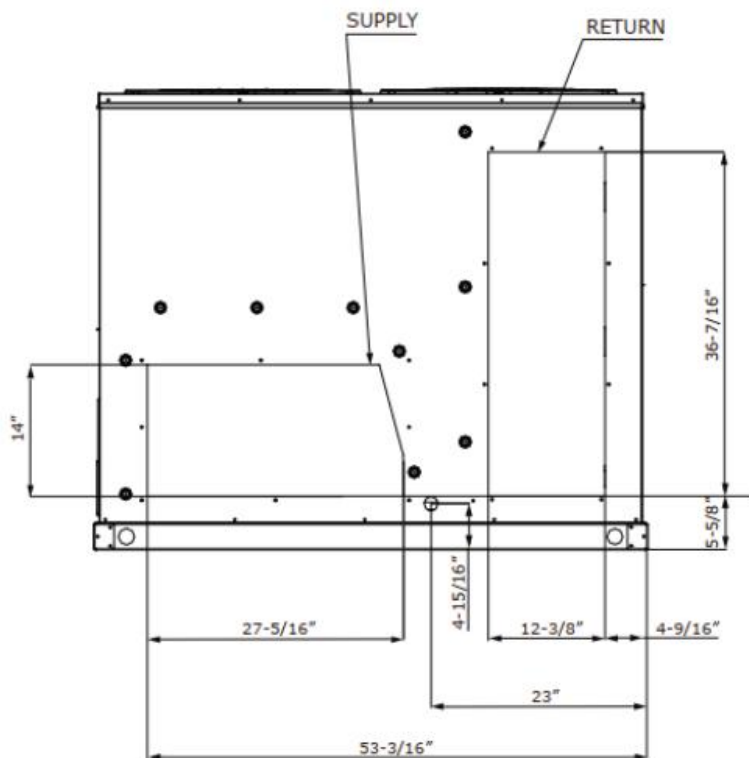
### Units — bottom view (in inches)



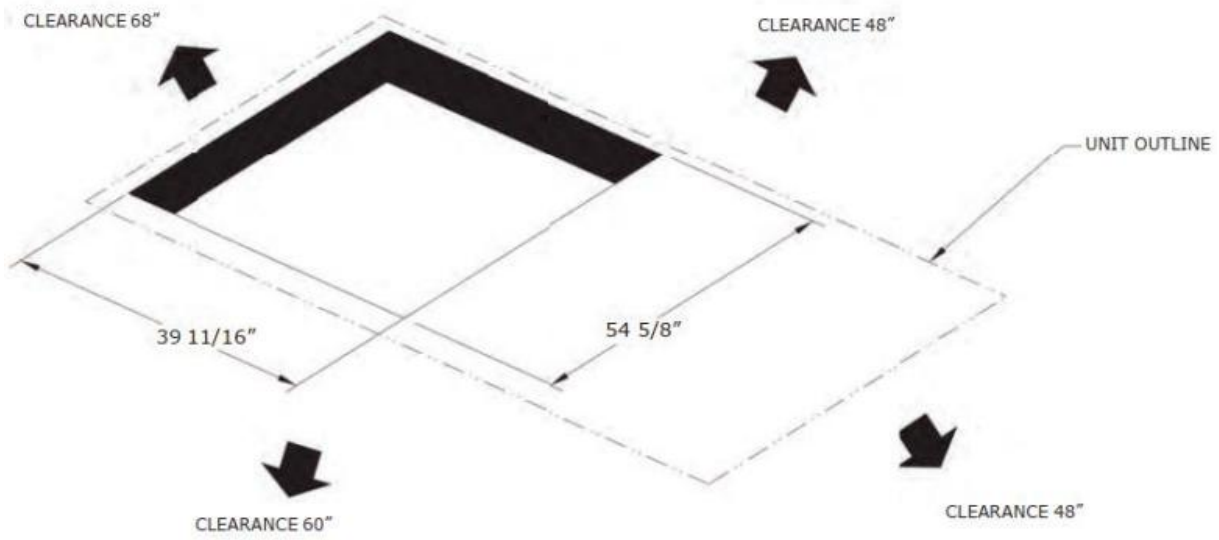
#### NOTES:

- 1.THROUGH THE BASE GAS AND ELECTRICAL IS NOT STANDARD ON ALL UNITS.
- 2.VERIFY WEIGHT, CONNECTION, AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION.

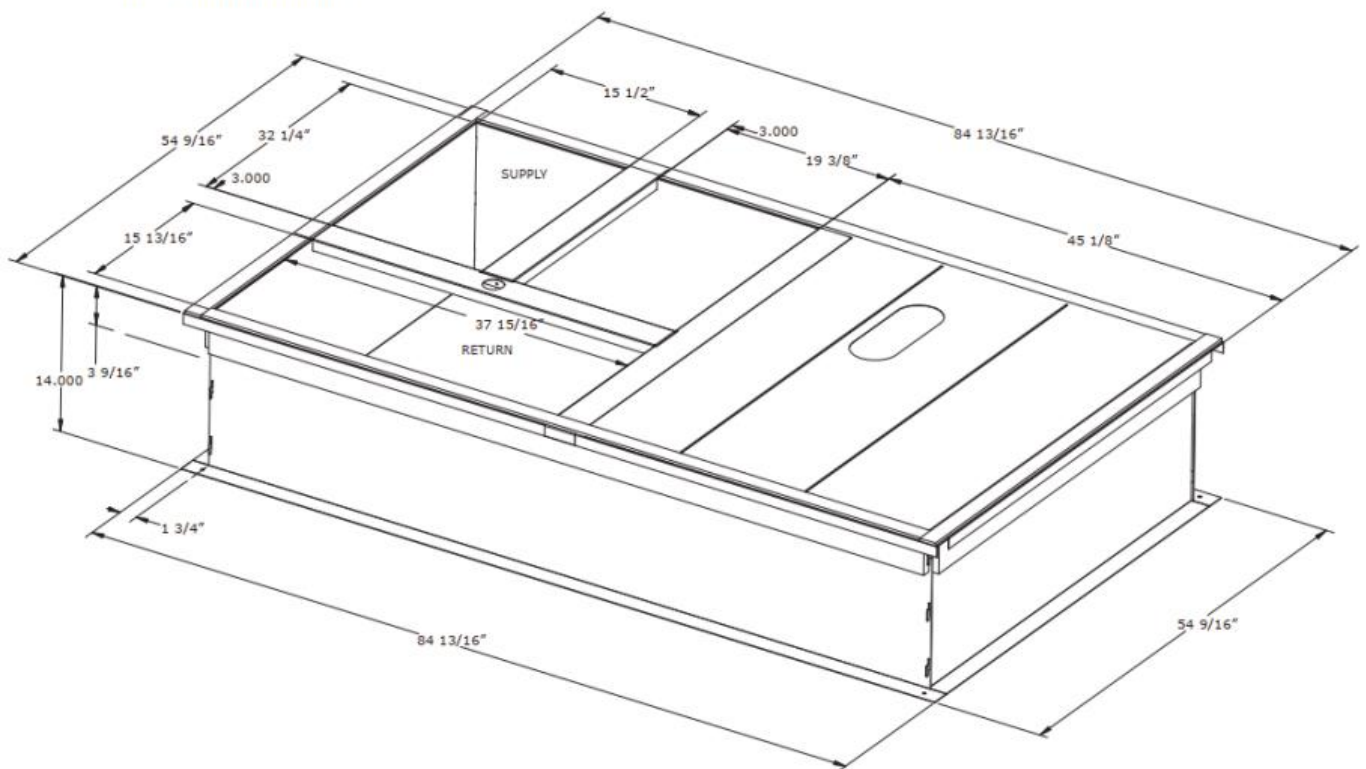
### Foundation units — back view (horizontal configuration) (in inches)



### Downflow unit clearance (in inches)

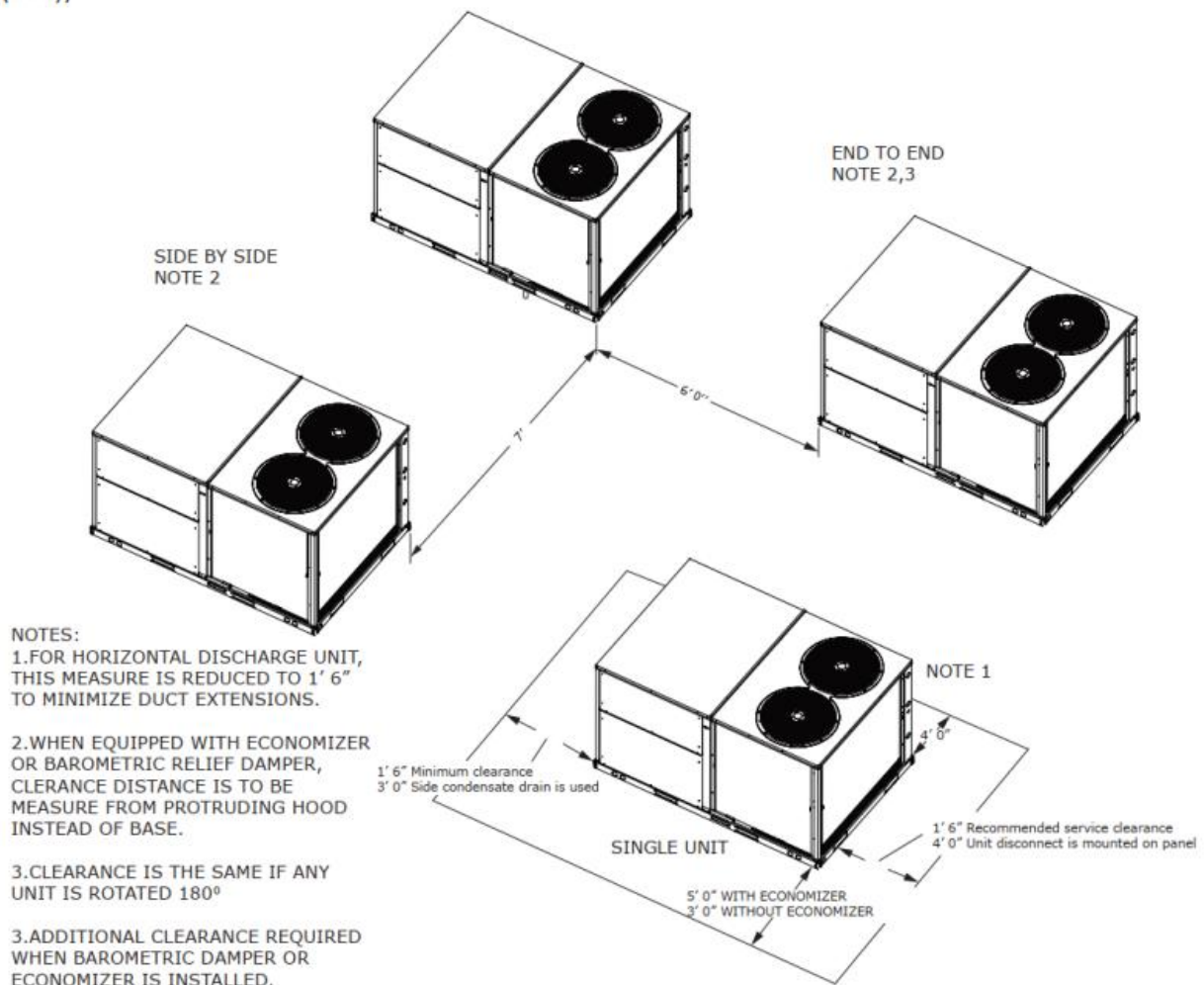


### Roof curb (in inches)



## Installation Space Requirements:

(Unit: inch)



## Motorized 2-Position Outside Air Hood Assembly, with Filter

Accessory Submittal | 7.5–12.5 Ton CRT7 Rooftop Units

Job Name: \_\_\_\_\_

Submitted To: \_\_\_\_\_

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_

| PART NUMBER | APPLICATION                     | WEIGHT |
|-------------|---------------------------------|--------|
| COA2-75125  | 7.5–12.5 Ton CRT7 Rooftop Units | 50 lb  |

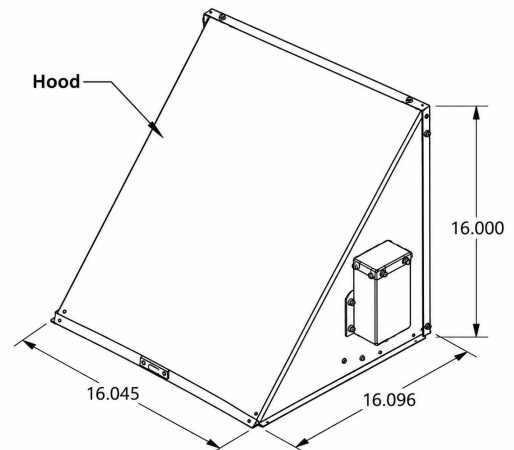
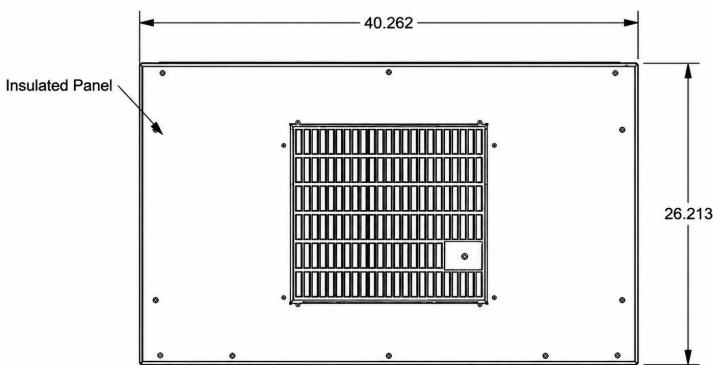
### COMPATIBLE MODELS

CRT7-90TT / CRT7-102TT / CRT7-120TT / CRT7-150TT

### FEATURES

- 25% Motorized Outside Air Damper — field-adjustable to 50%, 75%, or 100% blade-stopper positions
- Aluminum water-entrainment filter, removable for service
- Fully insulated hood and access panel construction

### ASSEMBLY DIAGRAM



Panel: 40.262" W x 26.213" H | Hood: 16.045" x 16.096" x 16.000"

This document is the property of ComfortStar USA and is provided for submittal review and approval purposes. ComfortStar USA reserves the right to discontinue or change specifications and designs at any time without notice and without incurring obligations.

## Installation Instructions — General Information

Outside Air Damper for 7.5–12.5 Ton CRT7 Rooftop Units

### Attention Installing Personnel

As a professional installer, you have an obligation to know the product, all safety precautions and related items before installation. Prior to installation, thoroughly familiarize yourself with these instructions. Pay special attention to all safety warnings. Installation and service work can place personnel in hazardous situations if proper procedures are not followed.

This accessory is intended for field installation on compatible 7.5–12.5 ton CRT7 commercial rooftop units. Installation must comply with national codes and prevailing local codes and regulations.

### Safety Considerations

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service this equipment. Follow all safety codes and use appropriate personal protective equipment.

**WARNING.** Only personnel trained to install, adjust, service, or repair the equipment should perform this work. Improper installation, adjustment, servicing, or repair may result in product damage, property damage, personal injury, or death.

**HIGH VOLTAGE.** Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

## Parts List and Packing

COA2-75125 - 7.5-12.5 Ton Outside Air Damper

| Item No. | Part Number | Description                           | Qty. |
|----------|-------------|---------------------------------------|------|
| 1        | 9000-0749   | Carton, 41.5" x 18" x 28"             | 1    |
| 2        | 9100-F7     | Crate Label                           | 2    |
| 3        | 9908-2900   | Parts Bag, COA2-75125                 | 1    |
| 4        | COA2-75125  | 2-Position Hood Assembly, with Filter | 1    |

Table 1 - 7.5-12.5 Ton Motorized Outside Air Hood Assembly Contents

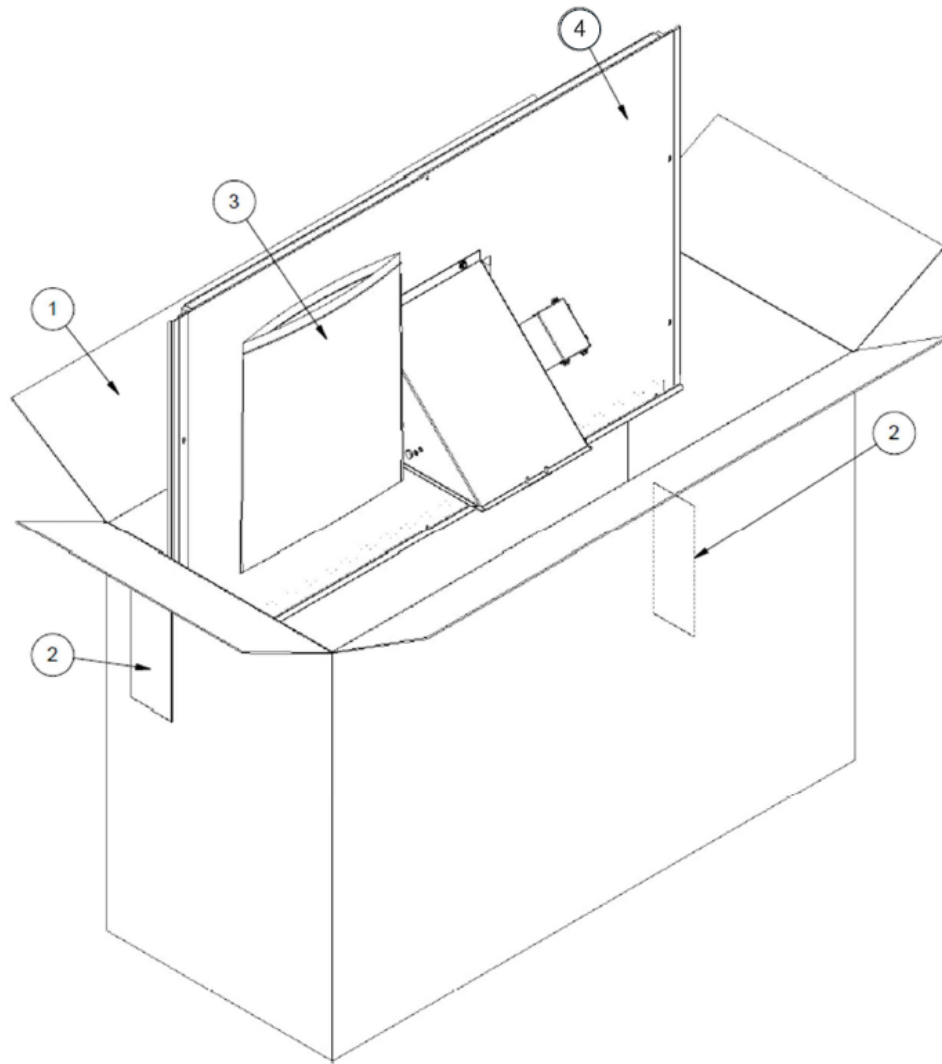


Figure 1 — 7.5–12.5 Ton Outside Air Damper Packing

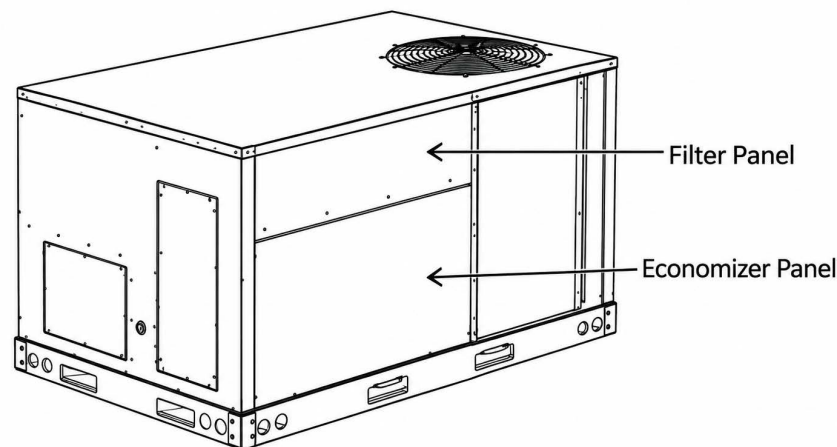
## Outside Air Damper Installation

COA2-75125 / CA-OA2-75125

### PART IDENTIFICATION

Part Number: **COA2-75125** | Accessory Part Number: **CA-OA2-75125**

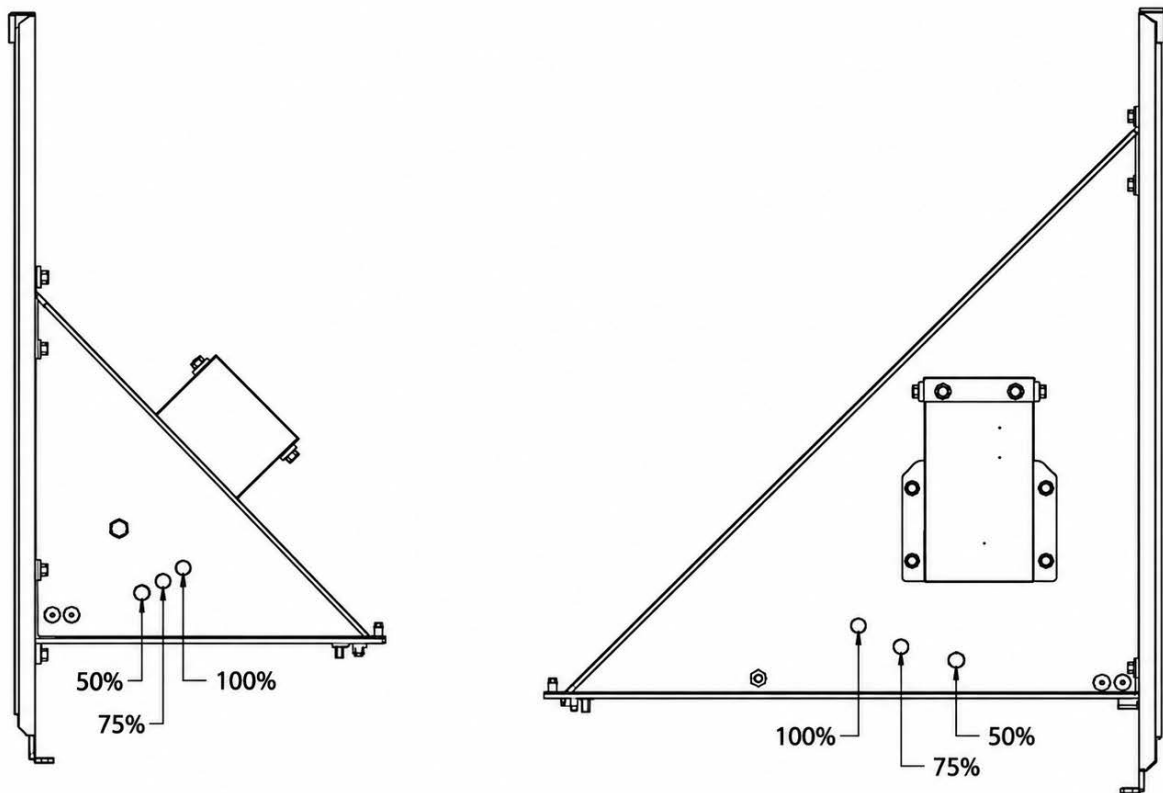
1. Open carton and inspect contents for damaged or missing parts.
2. Remove the filter access panel from the unit. Retain this panel for reinstallation after accessory installation is complete.
3. Remove the lower panel from the return-air section of the unit. This panel can be discarded.
4. Detach the sensor from the horizontal bar.
5. Remove the horizontal bar. This bar can be discarded.
6. Connect the female connectors on the wiring harness supplied in the parts bag to the male connectors on the outside-air damper actuator.
7. Connect the wiring harness from the previous step to the plug in the rooftop unit.
8. Install the outside-air damper on the return-air section using the screws supplied in the parts bag. The holes in the rooftop unit should align with the holes in the damper assembly.
9. The blade stopper is factory set at the 50% opening position. If necessary, remove the blade-stopper bolt and nut and reinstall them in the 75% or 100% opening position.



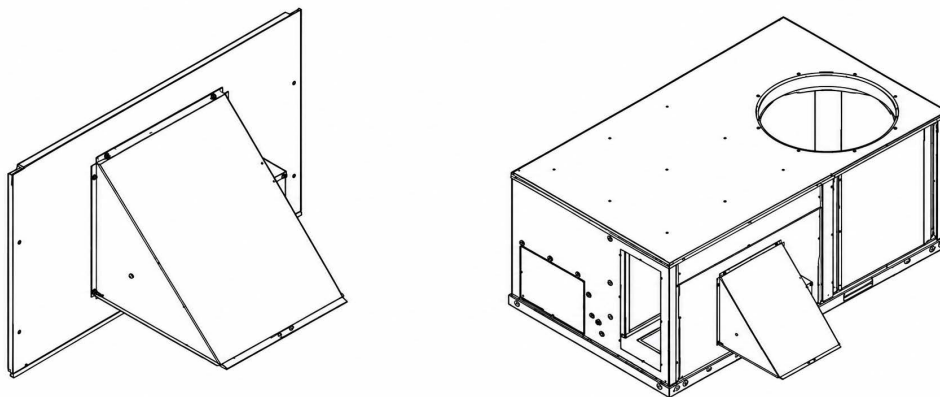
**Figure 2 — Remove Panels**

| Blade Stopper Position     | Outside Air (% of Total Airflow) |
|----------------------------|----------------------------------|
| 100% open                  | 25%                              |
| 75% open                   | 18.75%                           |
| 50% open (factory default) | 12.5%                            |

**NOTE:** Too much outside air could trigger high- or low-indoor-coil temperature protection.



**Figure 3 — 7.5–12.5 Ton Blade Stopper Holes**



**Figure 4 — 7.5–12.5 Ton Outside Air Damper**

### Installation Check

- ☐ Damper is seated flush against the return-air section.
- ☐ All mounting screws are installed and tightened.
- ☐ Actuator wiring harness is fully connected.
- ☐ Blade stopper is positioned for the required outdoor-air percentage.
- ☐ Filter and hood are clear of shipping material and obstruction.
- ☐ Filter access panel is reinstalled after completion.

## 2-Position Wiring Harness

Harness Reference: 9962-0560

Use the supplied harness to connect the outside-air damper actuator to the designated rooftop-unit plug.

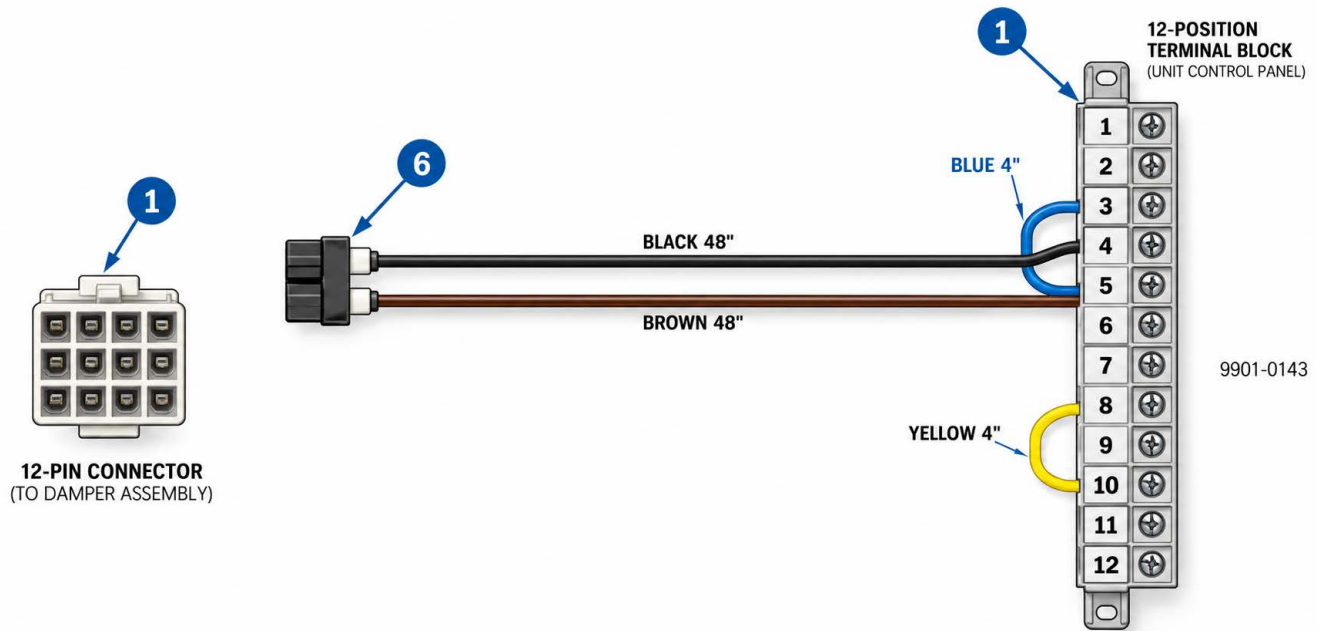


Figure 4 — 2-Position Harness Schematic

| Item | Part Number | Description                | Length | Qty. |
|------|-------------|----------------------------|--------|------|
| 10   | 9968-0054   | Blue wire, 18 GA           | 4 in   | 1    |
| 9    | 9968-0009   | Yellow wire, 18 GA         | 4 in   | 1    |
| 8    | 9968-0006   | Brown wire, 18 GA          | 48 in  | 1    |
| 7    | 9968-0016   | Black wire, 18 GA          | 48 in  | 1    |
| 6    | 9901-0862   | Terminal, 1/4 in male, red | —      | 2    |
| 5    | 9901-0505   | Female plug terminal       | —      | 6    |
| 1    | 9901-0143   | Power connector            | —      | 1    |