

# Single Package Rooftop Units 12½ to 25 Tons Two-Position Damper Accessory

Cancels: New

IHK 551A-210-2  
6/1/05

## Installation Instructions

Part Number CRTWOPOS006B00

**IMPORTANT:** Read these instructions completely before attempting to install the accessory two-position damper.

The two-position damper accessory is used on the following units:

UNIT	SIZE
48/50HG	014-028
48/50HJ	020-028
48/50PG	20-28
551A/581A	210-300

### GENERAL

Use the accessory two-position damper on units without economizers. The two-position damper accessory will replace the manual damper system or can be installed on units with no outdoor-air intake.

The two-position damper accessory allows the unit to control the outside-air dampers. The damper opens when the indoor fan is operating and closes when the indoor fan is off. The two-position damper does not modulate; it is either open or closed.

**NOTE:** This accessory package contains outdoor air hood parts that may not be required for installation if an outdoor air intake hood has already been installed. In this case, discard the extra hood parts.

### PACKAGE CONTENTS

ITEM	QUANTITY
Hood Side	2
Upper Hood Top	1
Lower Hood Top	1
Filter Track	1
Filter Track Side	2
Filter Track Guide	1
Filter	3
Seal Strip	1
Damper Assembly	1
Wire Tie	5
Screws	29
Speed Nut	3
Wire Harness	1

### 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 air-conditioning equipment.

Untrained personnel can perform basic maintenance functions of cleaning coils and filters and replacing filters. All other

operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for unbrazing operations. Have fire extinguishers available for all brazing operations.

### INSTALLATION

#### ⚠ WARNING

Turn off unit power and install lockout tag. Electrical shock and personal injury could result.

#### Units with Outdoor Air Hood Installed

1. Remove the filter track guide (see Fig. 1, ITEM 1) then remove the unit outdoor air filter and manual dampers (ITEMS 2 and 3). Save all screws.
2. Discard the manual dampers.
3. Remove the lower and upper hood tops. See Fig. 1 (ITEMS 4 and 5). Be careful not to damage the seal strip. Save all screws.
4. Remove the hood sides. See Fig. 1 (ITEM 6). Save all screws.
5. Remove the rear filter track. See Fig. 1 (ITEM 7). Save all screws.
6. Install the damper's wiring harness (supplied) by routing the wires as shown in Fig. 2. Secure the harness away from any moving parts.
7. Connect the wiring harness plug to the damper motor plug.
8. Install the damper assembly into the unit's outdoor air opening, securing the damper assembly on the top and sides only.

**IMPORTANT:** Be sure to connect the wire harness to the damper motor as the damper is lifted into place and before it is installed. See Fig. 1 for damper orientation.

9. Reinstall the rear filter track in its original position, over the damper assembly. Secure both the filter track and the bottom of the damper assembly to the unit using the screws saved in Step 5.
10. Reinstall the outdoor air hood sides using screws saved from Step 4. Be sure to repair any damaged seals. Use silicon sealer to ensure a weatherproof seal.
11. Reinstall the upper and lower outdoor air hood tops using screws saved from Step 3. Be sure to repair any damaged seals. Use silicon sealer to ensure a weatherproof seal.

12. Reinstall filter track guide with the screws saved from Step 1. Reinstall the filter removed in Step 1.
  13. In the manual air damper positions (from Step 1), install two additional filters.
- NOTE: Do NOT operate unit without filters in place.

**IMPORTANT:** Replace manual air dampers with filters. Do not operate unit without filters in place. Proper airflow may not be achieved if manual air dampers are used in conjunction with the two-position damper.

14. The damper harness can now be wired into the unit. In the unit control box, connect the damper harness leads to the blue and brown 24-v indoor fan contactor (IFC) control wires. See Fig. 3.
15. Secure the harness in the control box using wire ties. Check that the wires do not interfere with any moving parts and are not routed near anything that could damage them.
16. Remove lockout tag and return power to the unit.
17. Check two-position damper operation by operating the indoor fan. When the fan is operating, the two-position damper should move to the fully open position. When the fan is off, the damper should return to the fully closed position. If the damper does not open or close, check wiring and check damper for obstructions.

1. Make sure power supply is off.
2. Carefully remove the blank panel from return end of unit. Save the 6 screws removed.
3. Install the wiring harness by routing the wires as shown in Fig. 2. Secure the harness away from any moving parts.
4. Connect the damper wiring harness plug to the damper motor plug.
5. Install the damper assembly into the unit's outdoor air opening, securing the damper assembly on the top and sides only.

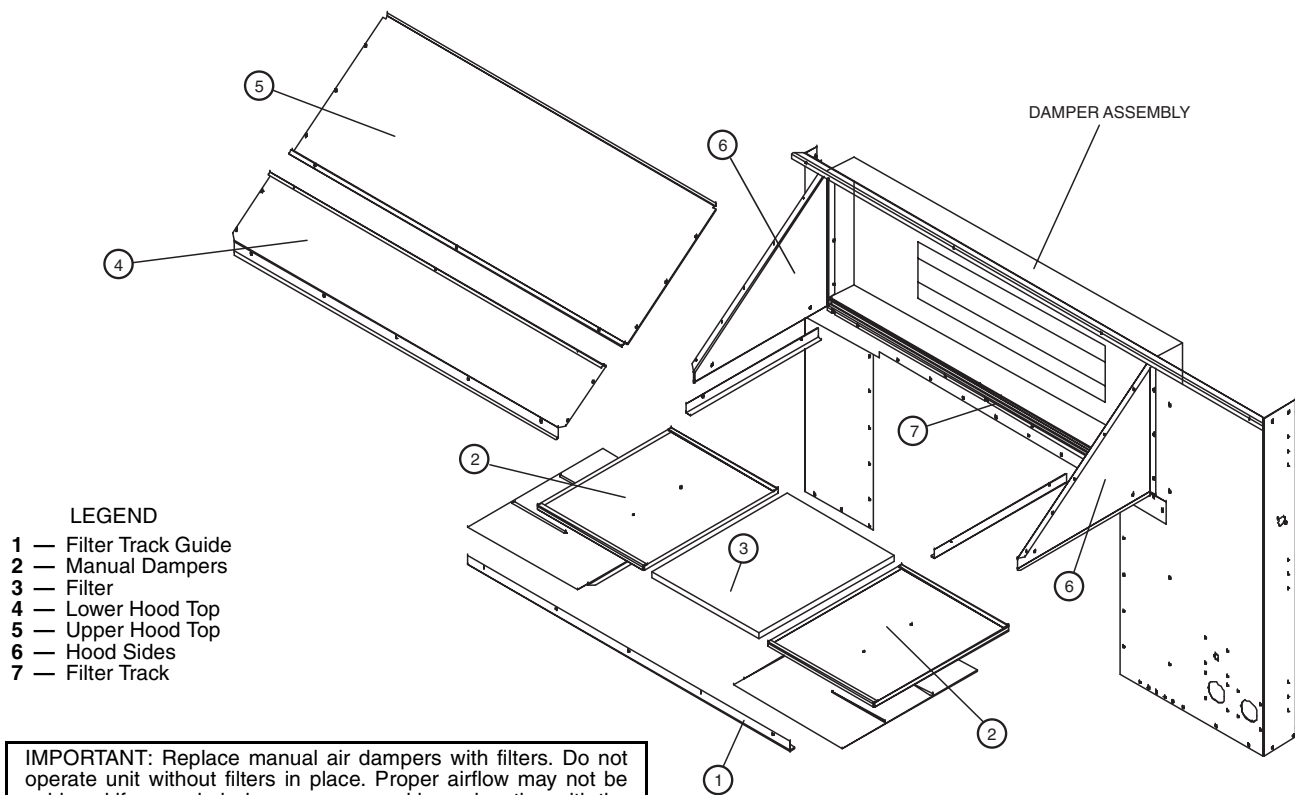
**IMPORTANT:** Be sure to connect the wire harness to the damper motor as the damper is lifted into place and before it is installed. See Fig. 1 for damper orientation.

6. Apply seal strip provided to back flange of both hood sides where the hood side connects to the unit back panel. See Fig. 1.
7. Apply seal strip provided to top flange of both hood sides where hood sides connect to the hood top panels. See Fig. 1.
8. Install hood sides to the back panels using the screws provided. The sloped flanges point outward. The drip edges of the side panels should face outward as well. The filter guides attach to the hood sides. The flanges should face inward to hold the filters in place. See Fig. 1.

### Units Without Outdoor Air Hood

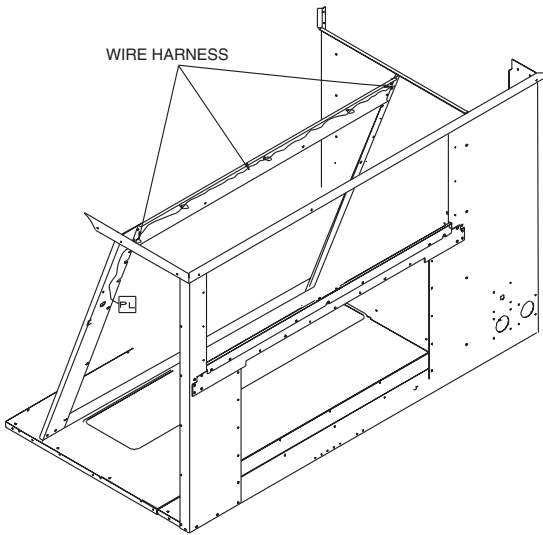
**⚠ WARNING**

Disconnect all power to the unit before installing this accessory. Electrical shock and personal injury could result.

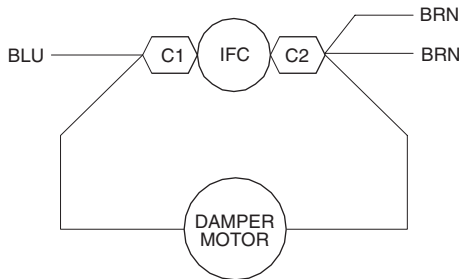


**IMPORTANT:** Replace manual air dampers with filters. Do not operate unit without filters in place. Proper airflow may not be achieved if manual air dampers are used in conjunction with the two-position damper.

**Fig. 1 — Outdoor Air Hood**



**Fig. 2 — Wire Harness Routing**



**Fig. 3 — Two-Position Damper Wiring Diagram**

9. Apply seal strip along the entire length of the bottom flange of the hood top. See Fig. 1.
10. Install the bottom part of the hood top using 4 screws provided. See Fig. 1.
11. Install the top part of the hood top using the 6 screws removed in Step 2. See Fig. 1.
12. Install the filters in the outdoor air opening between the damper assemblies. See Fig. 3.
13. Install the filter retainer track along the bottom edge of the outdoor air hood using 4 screws provided. For filter removal, remove the four screws holding the filter retainer. The filters can then be removed, cleaned, or replaced. Install the filters by reversing the procedure. See Fig. 1.
14. The damper harness can now be wired into the unit. In the unit control box, connect the damper harness leads to the blue and brown 24-v indoor fan contactor (IFC) control wires. See Fig. 3.
15. Secure the harness in the control box using wire ties. Check that the wires do not interfere with any moving parts and are not routed near anything that could damage them.
16. Remove lockout tag and return power to the unit.
17. Check two-position damper operation by operating the indoor fan. When the fan is operating, the two-position damper should move to the fully open position. When the fan is off, the damper should return to the fully closed position. If the damper does not open or close, check wiring and check damper for obstructions.

