KFADC

Downflow Conversion Kit for Fan Coils

Installation Instructions

NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Installing and servicing of heating and air conditioning equipment can be hazardous due to system pressures and electrical components. Only trained personnel should install or service heating and air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils, or cleaning and replacing filters. All other operations should be performed by trained personnel. When working on heating and air conditioning equipment, observe precautions in literature, on tags, and on labels attached to the unit.

Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing, modifying or servicing system, always turn off main power to system. There may be more than one disconnect switch. Lock out and tag switch with a suitable warning label.

⚠ CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

INTRODUCTION

Fan coils are factory-shipped for upflow or horizontal-left applications. This instruction covers the installation of downflow conversion kit on models FA, FB, FC, FE, FK, 40FK, FX, FV, FZ and PF fan coils and FH fan unit. The kit provides a means of installing fan coils in a downflow position.

These kits include low air leak fan coil upgrades. The low air leak conversion also requires KFAHD0101SLP gasket kit.

DESCRIPTION AND USAGE

The downflow conversion kits are available for use on slope and A-coil versions of previously mentioned fan coils. When installed, the kit will provide proper condensate water drainage, as well as a means of supporting the coil. See unit Installation Instructions for proper kit part numbers.

The downflow conversion for slope units requires the following items:

- Coil bracket (1)
- Coil baffle (1)
- Screws (2)
- Foam gasket (1)

The downflow conversion for A-coil units requires the following items:

- Coil bracket (2)
- Support strap (4), only one of appropriate width required
- Gaskets (2)
- Drainage hole plugs (2)
- Angle (2)
- Screws (4)
- Air seal (1)

NOTE: The fan coils are factory shipped for upflow or horizontal-left applications. Installation of the Downflow Conversion Kit should be complete before the fan coil unit is positioned to ensure side access required for installation of the coil brackets.

NOTE: If unit has electric heat with a circuit breaker, refer to electric heater Installation Instructions for repositioning of breaker assembly.

INSTALLATION

NOTE: On low air leak units, the conversion of the fan coil to downflow requires special procedures for the condensate drains on both A-coil and slope units.

The vertical drains have an overflow hole between the primary and secondary drain holes. This hole is plugged for all applications except downflow, but must be used for downflow.

During the conversion process, remove the plastic cap covering the vertical drains only and discard. Remove the plug from the overflow hole and discard. At completion of the downflow installation, caulk around the vertical pan fitting to door joint to retain the low air leak performance of the unit and on the slope coils, plug the one remaining horizontal drain hole.

A-Coil Unit Installation (Only)

1. Remove all panels and expose blower and coil areas.
2. Remove any shipping clips securing coil.
3. Remove complete coil/drain pan assembly.
4. Remove and discard horizontal drain pan from coil assembly.
5. Drill four 1/4-in. holes (2 on each side) in fan coil casing at dimples provided. (See Fig. 1.)

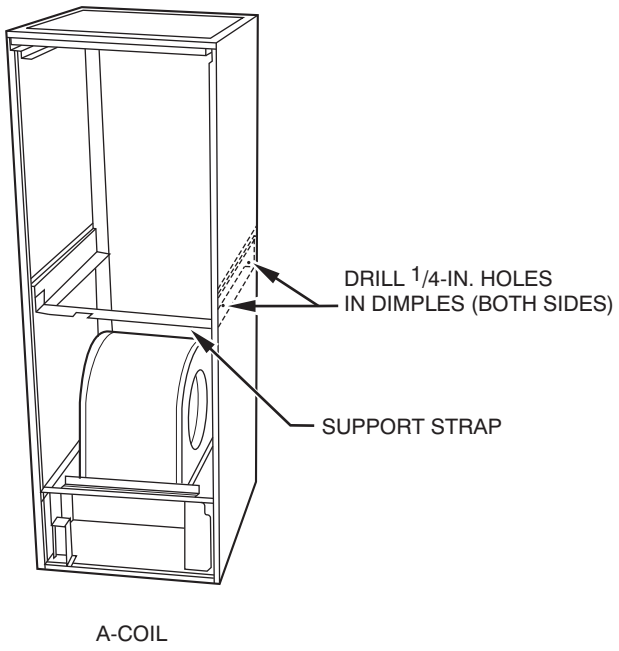

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Fig. 1 - Downflow A-Coil Brackets and Support Strap Location

6. Secure coil brackets (provided in kit) to casing sides. (See Fig. 1.)
7. Install support strap (provided in kit) across front of unit as follows:
   a. Position flange on each end of strap between coil bracket and casing insulation. (See Fig. 1.)
   b. Secure support strap ends to coil brackets. (See Fig. 1.)
8. Remove and discard 4 clips (on corners of coil) securing coil assembly to rails for upflow applications.
9. Remove and discard factory-shipped air seal and drain tube assembly. Install 1-piece sheet metal air seal assembly provided with kit.
10. Tilt coil assembly back and slide angles (provided in kit) over each inside wall of condensate pan. Pop-riveted flange of angles should extend toward coil. (See Fig. 2.)

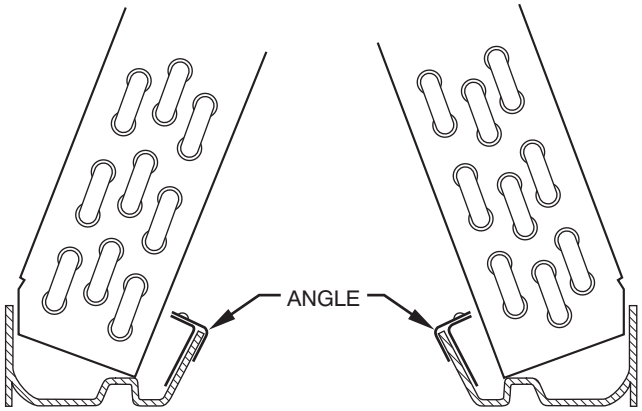

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Fig. 2 - Position of Angles on A-Coil

11. With fan coil in downflow position, slide coil assembly into unit. (See Fig. 3.)

NOTE: NOTE: Steps 12 and 13 are for units built before the low air leak upgrades. Steps 12a, 13a, and 14 are for low air leak units.

12. Reinstall all panels. Align holes in panels with tubing and condensate connections. Casing was designed to allow 180-degree rotation of coil access panel and fitting panel.
    a. On low air leak units, remove 2 tall caps from coil door and fitting door and install 2 short black caps. Snap in from back
13. Install 2 beige plugs that have been provided onto doors to seal unit.
    a. Using the oval insulation patches removed form the coil door, place them over the plugs on the left inside the coil door and fitting door. Using foil tape, tape them in place.
14. On low air leak units, apply gasket kit KFAHD0101SLP.
15. On low air leak units and after reading caution above, reinstall all panels. Align tubing holes in fitting door and the coil door location will be apparent.

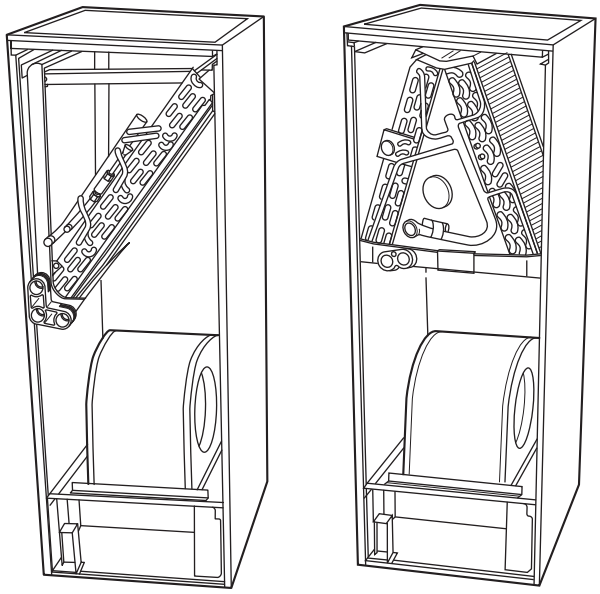

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Fig. 3 - Completed Downflow Conversion

Slope Coil Unit Installation (Only)

NOTE: On low air leak units, the conversion of the fan coil to downflow requires special procedures for the condensate drains on both A-coil and slope units.

The vertical drains have an overflow hole between the primary and secondary drain holes. This hole is plugged for all applications except downflow, but must be used for downflow.

During the conversion process, remove the plastic cap covering the vertical drains only and discard. Remove the plug from the overflow hole and discard. At completion of the downflow installation, caulk around the vertical pan fitting to door joint to retain the low air leak performance of the unit and on the slope coils, plug the one remaining horizontal drain hole.

1. Remove all panels and expose blower and coil areas.
2. Remove screw securing coil assembly to right side flange. Remove complete coil/drain pan assembly.
3. Drill two 1/4-in. holes in right side of casing at dimples provided (unit in upflow position).
4. Place fan coil unit in downflow position.
5. Secure coil bracket to left side of casing with 2 screws provided. (See Fig. 4.)

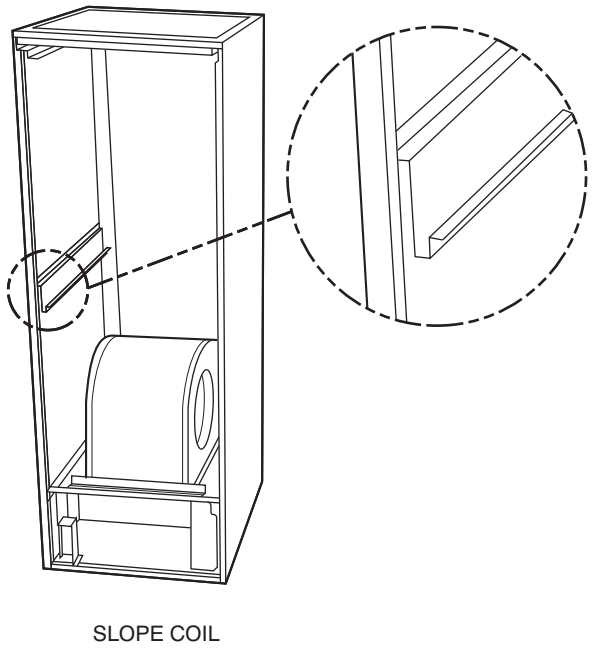

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Fig. 4 - Downflow Slope Coil Bracket

a. Remove top coil bracket from coil (2 screws).
b. Align holes in gasket with holes in top coil bracket.
c. Remove only half of the backing from the gasket.
d. Apply exposed half of foam gasket to under side of top coil bracket. (See Fig. 5.)

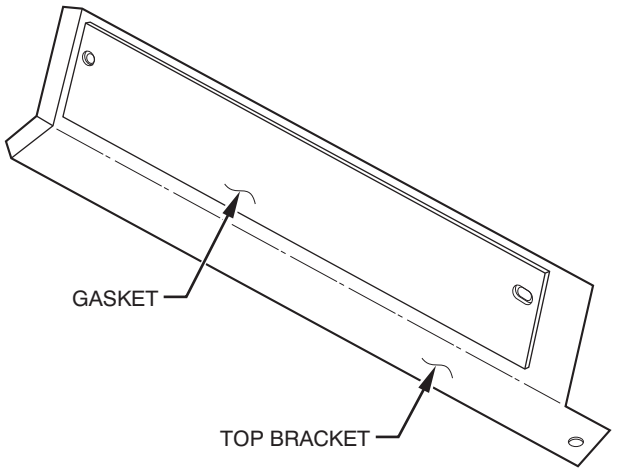

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Fig. 5 - Top Coil Bracket Gasket for Slope Coil Only

e. Remove remaining piece of backing from gasket and press gasket into place.
f. Replace top bracket onto coil. The 2 screws must engage the lanced holes.

6. Install remaining coil baffle at coil end opposite the coil headers. (See Fig. 6.)

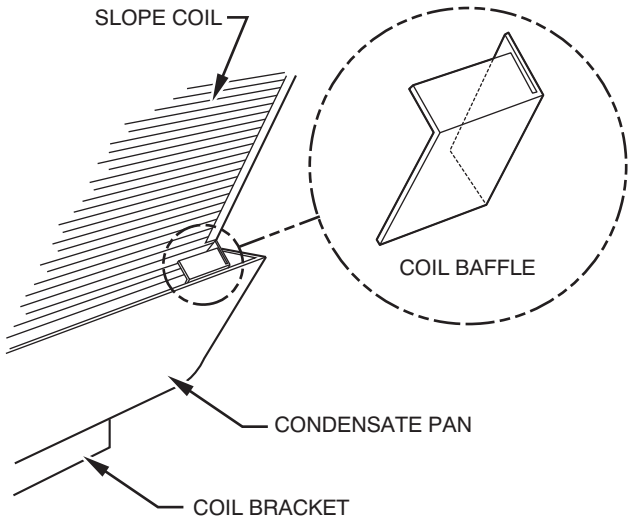

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Fig. 6 - Coil Baffle Location (At End Opposite Header)

a. Slide the longer flange of baffle between tube sheet and end of condensate pan. Be sure notch in baffle is fully seated below notch in tube sheet.

7. Invert coil assembly and slide it into unit with drain pan to left side of fan coil. Secure coil assembly with screws. (See Fig. 3.)

NOTE: Step 8 is for pre low air-leak units. Steps 8a, and 9 are for low air leak units.

8. Reinstall fitting panel, blower panel, and coil access panel. Align holes in panels with tubing and condensate connections.
   a. On low air leak units, apply gasket kit KFAHD0101SLP.
9. On low air leak units and after reading the caution, reinstall all panels. Align fitting over tubing and coil door location will be apparent.

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