

(2) Tools must not be required to connect or remove the flexible connector quick-disconnect.

(c) *Testing procedures.* The gas system must be inspected and tested for leaks after completion at the site. The installation instructions must provide testing requirements that are consistent with § 3280.705 of this chapter.

#### § 3285.606 Ductwork connections.

(a) Multi-section homes with ductwork in more than one section require crossover connections to complete the duct system of the home. All ductwork connections, including duct collars, must be sealed to prevent air leakage. Galvanized metal straps or tape and mastics listed to UL 181A (incorporated by reference, see § 3285.4), for closure systems with rigid air ducts and connectors, or UL 181B (incorporated by reference, see § 3285.4), for closure systems with flexible air ducts and connectors, must be used around the duct collar and secured tightly to make all connections.

(b) If metal straps are used, they must be secured with galvanized sheet metal screws.

(c) Metal ducts must be fastened to the collar with a minimum of three

galvanized sheet metal screws equally spaced around the collar.

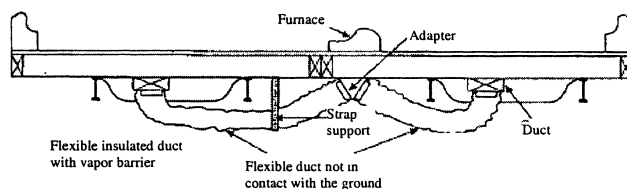
(d) Air conditioning or heating ducts must be installed in accordance with applicable requirements of the duct manufacturer installation instructions.

(e) The duct must be suspended or supported above the ground by straps or other means that are spaced at a maximum distance not to exceed 4'-0" or as otherwise permitted by the installation instructions. When straps are used to support a flexible type duct, the straps must be at least  $\frac{1}{2}$ " wider than the spacing of the metal spirals encasing the duct. The ducts must be installed such that the straps cannot slip between any two spirals and arranged under the floor to prevent compression or kinking in any location, as shown in Figures A and B to this section. In-floor crossover ducts are permitted, in accordance with § 3285.606(g).

(f) Crossover ducts outside the thermal envelope must be insulated with materials that conform to designs consistent with part 3280, subpart F of this chapter.

(g) In-floor or ceiling crossover duct connections must be installed and sealed to prevent air leakage.

**Figure A to § 3285.606 – Crossover Duct Installation with Two Connecting Ducts.**

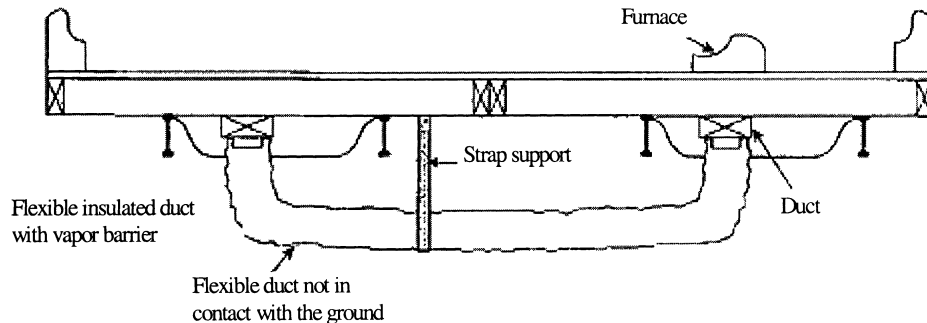


NOTES: 1. This system is typically used when a crossover duct has not been built into the floor and the furnace is outside the I-Beam. With this type of installation, it is

necessary for two flexible ducts to be installed.

2. The crossover duct must be listed for exterior use.

Figure B to §3285.606 Crossover Duct Installation with One Connecting Duct.



NOTES: 1. This system is typically used when a crossover duct has not been built into the floor and the furnace is situated directly over the main duct in one section of the home. A single flexible duct is then used to connect the two sections to each other.

2. The crossover duct must be listed for exterior use.

### Subpart H—Electrical Systems and Equipment

#### § 3285.701 Electrical crossovers.

Multi-section homes with electrical wiring in more than one section require crossover connections to join all sections of the home. The crossover must be designed in accordance with part 3280, subpart I of this chapter, and completed in accordance with the directions provided in the installation instructions.

#### § 3285.702 Miscellaneous lights and fixtures.

(a) When the home is installed, exterior lighting fixtures, ceiling-suspended (paddle) fans, and chain-hung lighting fixtures are permitted to be installed in accordance with their listings and part 3280, subpart I of this chapter.

(b) *Grounding.* (1) All the exterior lighting fixtures and ceiling fans installed per §3285.702(a) must be grounded by a fixture-grounding device or by a fixture-grounding wire.

(2) For chain-hung lighting fixtures, as shown in Figure A to this section, both a fixture-grounding device and a

fixture-grounding wire must be used. The identified conductor must be the neutral conductor.

(c) Where lighting fixtures are mounted on combustible surfaces such as hardboard, a limited combustible or noncombustible ring, as shown in Figures A and B to this section, must be installed to completely cover the combustible surface exposed between the fixture canopy and the wiring outlet box.

(d) *Exterior lights.* (1) The junction box covers must be removed and wire-to-wire connections must be made using listed wire connectors.

(2) Wires must be connected black-to-black, white-to-white, and equipment ground-to-equipment ground.

(3) The wires must be pushed into the box, and the lighting fixture must be secured to the junction box.

(4) The lighting fixture must be caulked around its base to ensure a watertight seal to the sidewall.

(5) The light bulb must be installed and the globe must be attached.

(e) *Ceiling fans.* (1) Ceiling-suspended (paddle) fans must be connected to junction box listed and marked for ceiling fan application, in accordance with Article 314.27(b) of the National Electrical Code, NFPA No. 70-2005 (incorporated by reference, see §3285.4); and

(2) The ceiling fan must be installed with the trailing edges of the blades at least 6 feet 4 inches above the finished floor; and