1305.0717 SECTION 717, DUCTS AND AIR TRANSFER OPENINGS.

Subpart 1. **IBC section 717.5.3.** IBC section 717.5.3 is amended by adding exception 6 as follows:

> 6. Fire dampers, smoke dampers, and combination fire/smoke dampers are not required in laboratory hood exhaust duct penetrations of shaft enclosures where laboratory ventilation systems are installed in accordance with Chapters 1 to 4, 7, and 8 of NFPA 45.

Subp. 2. **IBC section 717.6.1.** IBC section 717.6.1 is amended to read as follows:

717.6.1 Through penetrations. In occupancies other than Groups I-2 and I-3, a duct constructed of approved materials in accordance with the International Mechanical Code that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two stories is permitted without shaft enclosure protection, provided a listed fire damper is installed at the floor line or the duct is protected in accordance with Section 714.5. For air transfer openings, see Section 712.1.9.

Exceptions:

1. A duct is permitted to penetrate three floors or less without a fire damper at each floor, provided the duct complies with paragraphs a through e:

a. The duct shall comply with either item (i) or (ii):

i. the duct shall be contained and located within the cavity of a wall above and below the horizontal assembly, the duct shall be constructed of steel having a minimum wall thickness of 0.0187 inches (0.4712 mm) (No. 26 gage), and the annular space around the duct shall be protected with an approved noncombustible material that resists the passage of flame and products of combustion; or

ii. the annular space around the duct shall be protected by an approved through-penetration firestop system that: (1) is installed and tested in accordance with ASTM E 814 or UL 1479; and (2) has an F rating and T rating equivalent to the required rating of the horizontal assembly being penetrated.

b. The duct shall open into only one dwelling or sleeping unit and the duct system shall be continuous from the unit to the exterior of the building.

c. The duct shall not exceed 4-inch (102 mm) nominal diameter and the total area of such ducts shall not exceed 100 square inches (0.065 m^2) in any 100 square feet (9.3 m^2) of floor area.

d. The annular space around the duct is protected with materials that prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E 119 or UL 263 time temperature conditions under a minimum positive pressure differential of 0.01 inch (2.49 Pa) of water at the location of the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated.

e. Grille openings located in a ceiling of a fire-resistance-rated floor/ceiling or roof/ceiling assembly shall be protected with a listed ceiling radiation damper installed in accordance with Section 717.6.2.1.

2. In Groups I-2 and I-3 occupancies, a duct constructed of approved materials in accordance with the International Mechanical Code that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two stories is permitted without a shaft enclosure protection, provided a listed smoke/fire damper is installed at the floor line.

Subp. 3. **IBC section 717.6.3.** IBC section 717.6.3 is amended to read as follows:

717.6.3 Non-fire-resistance-rated floor assemblies. Duct systems constructed of approved materials in accordance with the Minnesota Mechanical Code, Minnesota Rules, chapter 1346, that penetrate non-fire-resistance-rated floor assemblies shall be protected by any of the following methods:

1. A shaft enclosure in accordance with Section 713.

2. The duct connects not more than two stories, and the annular space around the penetrating duct is protected with an approved non-combustible material that resists the free passage of flame and the products of combustion.

3. The duct connects not more than three stories, the annular space around the penetrating duct is protected with an approved non-combustible material that resists the free passage of flame and the products of combustion, and a fire damper is installed at each floor line.

Exception to item 3: Fire dampers are not required in ducts within individual residential dwelling units.

Statutory Authority: *MS s 326B.02; 326B.101; 326B.106*

History: *39 SR 1605; 44 SR 609*

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