



Through-penetration Firestop Systems

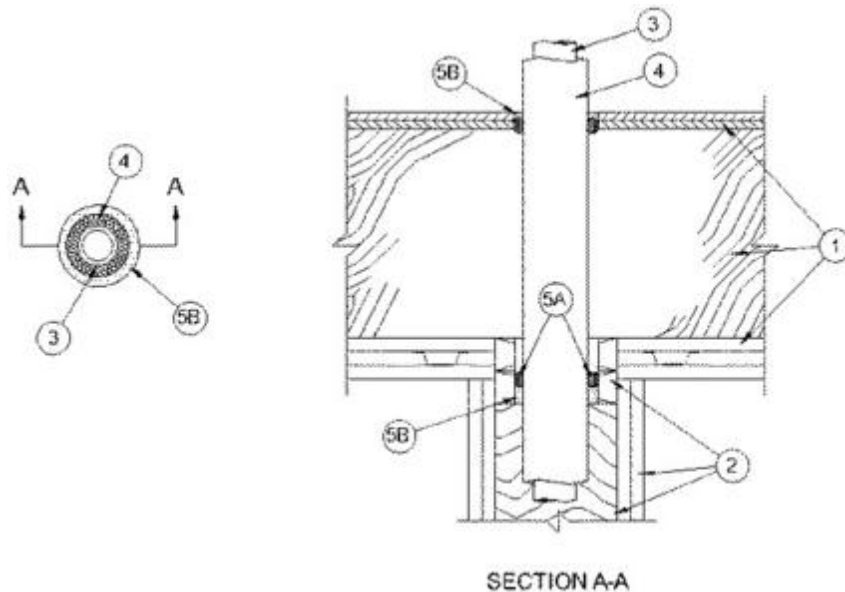
See General Information for Through-penetration Firestop Systems

System No. F-C-5076

September 27, 2005

F Rating 2 Hr

T Rating 0 Hr



1. Floor-Ceiling Assembly The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design No. L505, L511 or L536 in the UL Fire Resistance Directory, as summarized below:

- A. Flooring System** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 4-1/2 in.(114 mm).
- B. Wood Joists** Nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.
- C. Furring Channels** (Not Shown) Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) and spaced max 24 in. (610 mm) OC.
- D. Gypsum Board*** Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attached to furring channels.

2. Chase Wall The through penetrant (Item 3) shall be routed through a 2 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

- A. Studs** Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
- B. Sole Plate** Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted.
- C. Top Plate** The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or two sets of nom 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening is 4-1/2 in. (114 mm).

D. **Gypsum Board*** Thickness, type, number of layers and fasteners shall be specified individual Wall and Partition Design.

3. **Through Penetrants** One metallic pipe or tubing to be installed concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes or tubing may be used:

A. **Steel Pipe** Nom 2 in. (51 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing** Nom 2 in. (51 mm) diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Pipe** Nom 2 in. (51 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. **Tube Insulation - Plastics+** Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The annular space shall be min 1/2 in. (13 mm) to max 7/8 in. (22 mm).

See **Plastics+** (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

5. **Firestop System** The firestop system shall consist of the following:

A. **Packing Material** Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from top surface of subfloor and bottom surface of the lower top plate to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material* - Caulk** Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of subfloor and min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with bottom surface of lower top plate. **RECTORSEAL** Biostop 350i

*Bearing the UL Classification Mark

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