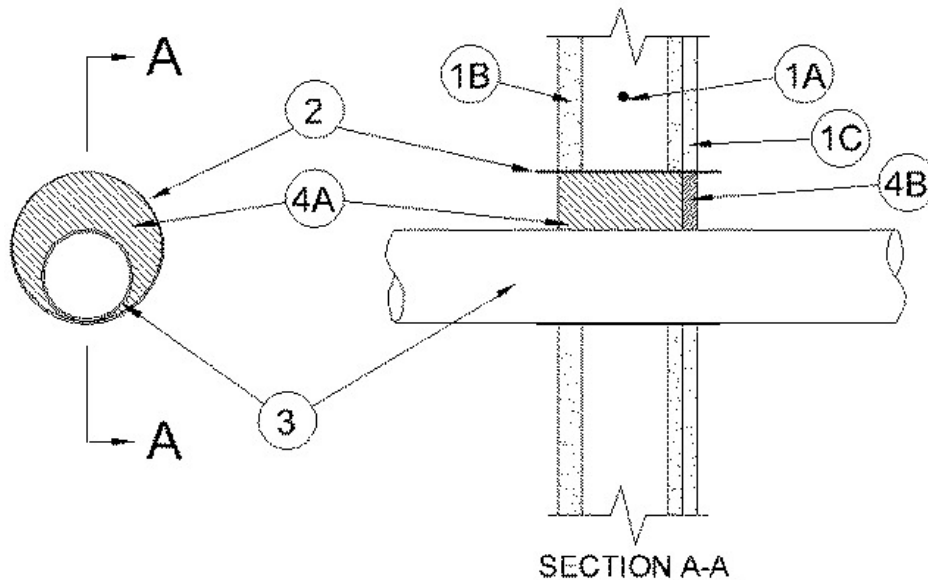


F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 and V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:

A. **Steel Studs** — "C-H" shaped studs, min 2-1/2 in. (64 mm) wide by 1-1/2 in. (38 mm) deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. (610 mm) OC.

B. **Gypsum Board*** — 1 in. (25 mm) thick, 24 in. (610 mm) wide gypsum liner panels installed vertically. Max diam of opening is 6 in. (152 mm).

C. **Gypsum Board*** — One or two layers of nom 1/2 or 5/8 in. (13 or 16 mm) thick gypsum board as specified in the individual Wall and Partition Design. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6 in. (152 mm).

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Steel Sleeve — Cylindrical sleeve fabricated from min 0.019 in. (0.49 mm) thick (28 gauge) galv sheet steel and having a min 1 in. (25 mm) lap along the longitudinal seam. Steel sleeve to be 2 in. (51 mm) longer than the thickness of wall such that, when installed, the ends of the sleeve will project 1 in. (25 mm) beyond the surface of each wall. Sleeve installed by coiling the sheet steel to a diam smaller than the opening, inserting the coil through the opening and releasing the coil.

3. Through Penetrants — One metallic pipe, tubing or conduit installed within the firestop system. Penetrant to be rigidly supported on both sides of wall assembly. Annular space between the penetrant and sleeve shall be min 0 in. (point contact) to max 1-7/8 in. (0 to 48 mm). The following types of metallic pipes or conduits may be used:

A. **Steel Pipe** — Nom 4 in. (102 mm) schedule 5 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 4 in. (102 mm) cast or ductile iron pipe.

C. **Copper Tubing** — Nom 4 in. (102 mm) Type L (or heavier) copper tubing.

D. **Copper Pipe** — Nom 4 in. (102 mm) Regular (or heavier) copper pipe.

E. **Conduit** — Nom 4 in. (102 mm) (or smaller) steel electrical metallic tubing or rigid steel conduit.

4. Firestop System — The firestop system shall consist of the following:

A. **Packing Material** — Min 4 pcf mineral wool batt insulation tightly packed into the sleeve flush with the gypsum liner panels and recessed 5/8 in. (16 mm) from the finished surface of gypsum board to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* — Caulk — Min 5/8 in. (16 mm) thickness of caulk applied within annulus, flush with finished surface of wall assembly. At the point contact location between penetrant and sleeve, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the penetrant/sleeve interface on the finished side of wall.

RECTORSEAL — [Metacaulk 1000](#)

+ Bearing the UL Listing Mark

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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