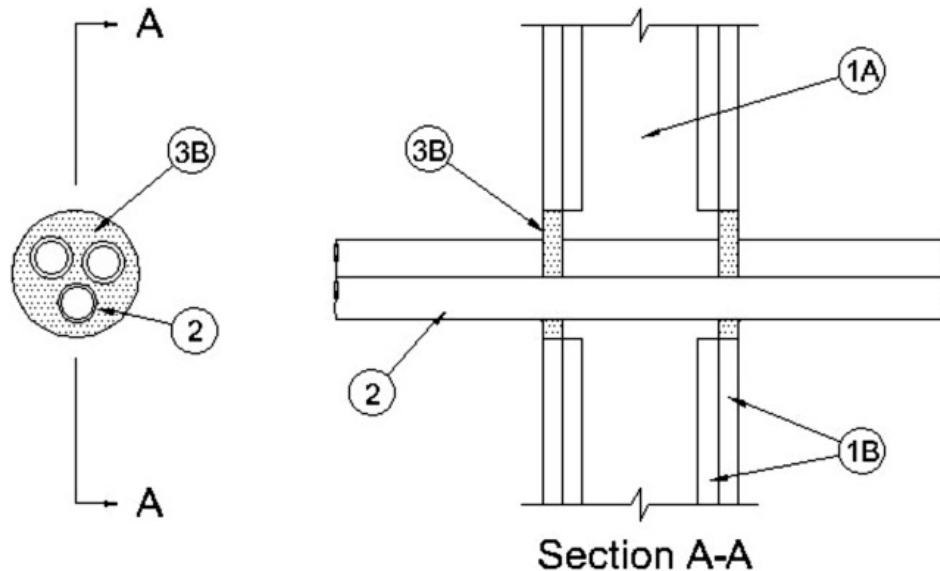


ANSI/UL1479 (ASTM E814)
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1 and 1-1/2 Hr (See Item 1)
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (1.2 mm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall or Partition Design in the UL Fire Resistance Directory. Max diam of opening is 4 in. (102 mm).

The hourly F and T Ratings of the firestop system are dependent on the hourly fire rating of the wall assembly in which it is installed as shown in the table below:

Rating of Wall, Hr	F Rating, Hr	T Rating, Hr
2	1	1-1/2
1	1	1

2. Through Penetrant — Nom 1 in. (25 mm) diam (or smaller) SDR 9 (or heavier) cross-linked polyethylene (PEX) tubing for use in closed (process or supply) piping systems. A max of three tubes to be bundled together and installed eccentrically or concentrically within the firestop system. Of the three tubes, a max of one shall have a nom diam greater than 3/4 in. (19 mm). The annular space between the tubing and the periphery of the opening shall be min 5/8 in. to max 1-1/4 in. Separation between the tubing shall be a min 0 in. (point contact) to max 3/8 in. (10 mm). Tubing to be rigidly supported on both sides of the wall assembly.

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

A. Packing Material — (Optional, Not shown) - Polyethylene backer rod or foam plastic sheets friction fitted into annular space for 2 hr fire-rated wall assemblies only. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall. Additional fill material to be forced within tubing bundle to max extent possible.

RECTORSEAL — FlameSafe FS 900+, FS 1900, Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+

*,+ 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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