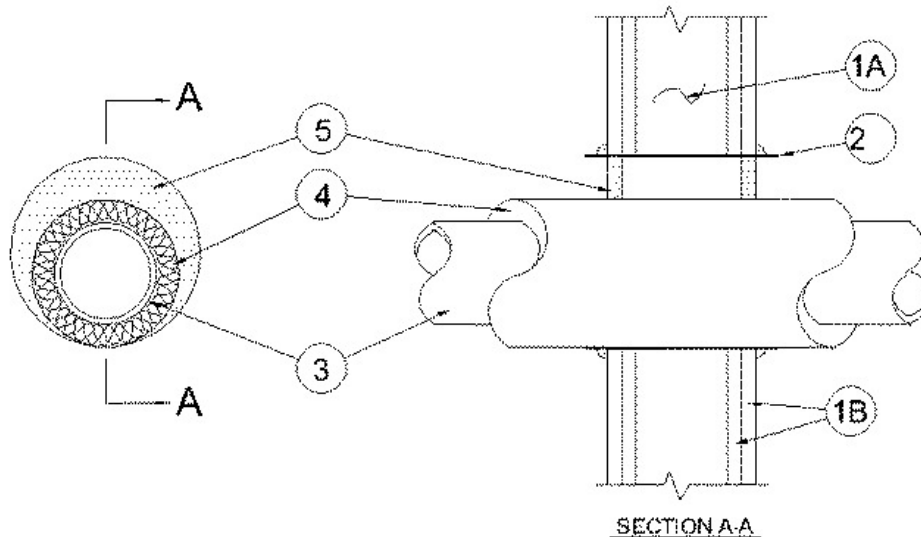


ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 1-3/4 Hr (See Items 2 and 3)	FT Ratings — 1 and 1-3/4 Hr (See Items 2 and 3)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 1 and 1-3/4 Hr (See Items 2 and 3)



**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 or Partition Designs 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 channel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

**B. Gypsum Board\*** — The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 13 in. (330 mm).

**The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly.**

**2. Steel Sleeve** — (Optional) — Max 13 in. (330 mm) diam sleeve fabricated from min 0.018 in. (0.46 mm) thick (28 gauge) galv sheet steel and floor or wall assembly, inserted opening and allowed to uncoil against the circular cutouts. Sleeve to be installed flush with or extending max 1 in. (25 mm) beyond each surface of the wall assembly.

**2A. Steel Sleeve** — (Optional) - As an alternate to Item 2, max 12 in. (305 mm) Schedule 5 (or heavier) steel pipe, rigid steel conduit or EMT, friction-fit into wall assembly, flush with or extending a max 4 in. (102 mm) beyond each surface of the floor or wall assembly.

**When steel sleeve is used, T, FT and FTH Ratings are 0 hr.**

**3. Through Penetrant** — One metallic pipe or tube to be installed either concentrically or eccentrically within the firestop system. Pipe or tube to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubes may be used:

**A. Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

**B. Iron Pipe** — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

**C. Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tube.

**D. Copper Pipe** — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

**When penetrant is 4 in. (102 mm) diam (or smaller), T, FT and FTH Ratings are 1-3/4 hr. Otherwise, T, FT and FTH Ratings are 1 hr.**

**4. Pipe Covering\*** — Nom 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m<sup>3</sup>) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space shall be min 0 in.

(point contact) to max 2-1/2 in. (64 mm).

See **Pipe and Equipment Covering — Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

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

A. **Packing Material** — (Not Shown) — Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from wall surfaces to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Materials\* - Caulk** — For penetrants greater than 4 in. (102 mm) in diam, min 5/8 in. (16 mm) thickness of caulk applied to backer rod within annular space flush with each surface of wall. For penetrants 4 in. (102 mm) diameter or smaller, min 1/2 in. (13 mm) thickness of caulk applied to backer rod within annular space flush with each surface of wall. When steel sleeve is not used or when steel sleeve is flush with the wall surfaces, a min 1/2 in. (13 mm) diam bead of caulk shall be applied to the pipe insulation/gypsum board interface at the point contact location on both sides of wall. When steel sleeve is used, a bead of caulk is applied to the steel sleeve/gypsum board interface on both sides of wall. When sheet metal sleeve (Item 2) is used, fill material to be installed flush with both surfaces of wall within the sleeve. When rigid steel sleeve (Item 2A) is used, fill material may be installed flush with both ends of sleeve in walls.

**RECTORSEAL** — [Metacaulk 1000](#)

\*,+ 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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