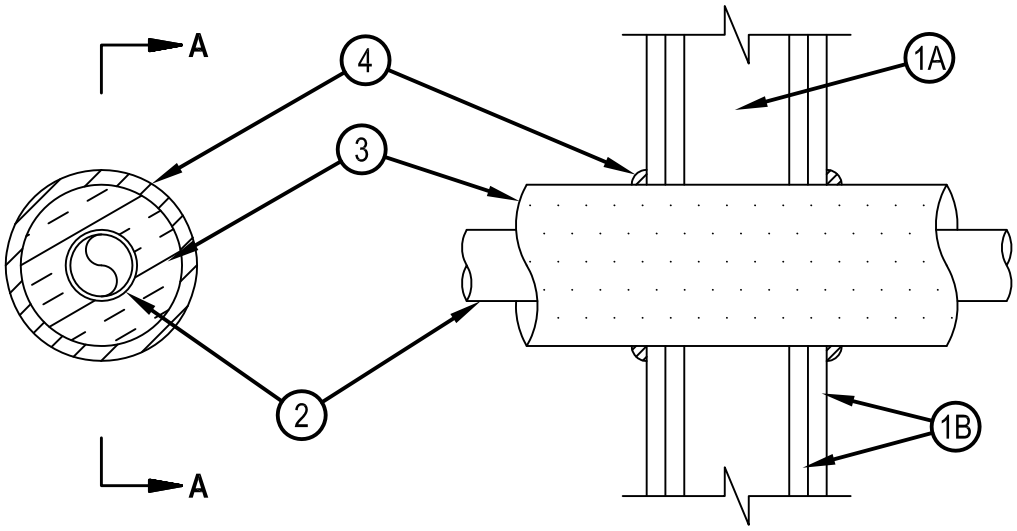
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-5274

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 — 0, 1-1/2 and 1-3/4 Hr (See Items 1 and 3)	FT Ratings — 0, 1-1/2 and 1-3/4 Hr (See Items 1 and 3)
L Rating At Ambient — 4 CFM/sq ft	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Ratings — 0, 1-1/2 and 1-3/4 Hr (See Items 1 and 3)
	L Rating At Ambient — 4 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



SECTION A-A

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 described 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 2-1/2 in. (64 mm) or 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 (1.22 m) 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 U300, U400, V400 or W400 Series Design in the UL Fire Resistance Directory. Max. diam of opening is 6 in. (152 mm).

   The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The T, FT and FTH Ratings are 0 hr for 1 hr rated walls and 1-3/4 hr for 2 hr rated walls. For pipes penetrating the wall at a 45 degree angle, the T, FT and FTH Ratings are 1-1/2 hr for 2 hr rated walls.

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2. Through Penetrants — One metallic pipe or tubing to be installed concentrically or eccentrically within the firestop system. Pipe may be installed at an angle not greater than 45 degrees from perpendicular.. Pipe or tubing to be rigidly supported on both sides of wall 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 tube.
   D. Copper Pipe — Nom 2 in. (51 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Pipe Covering* — Min 1 in. (25 mm) to max 1-1/2 in. (38 mm) thick hollow cylindrical heavy density (3.5 pcf or 56 kg/m3) 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 between insulated penetrating item and the edge of the through opening shall be 0 in. to max. 7/8 in. (22 mm). When pipe is installed perpendicular to wall, insulation may have continuous point of contact. When thickness of pipe covering material is less than 1-1/2 in. (38 mm), the T, FT and FTH Ratings are 0 Hr for both 1 hr and 2 hr fire rated walls.
   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.
3A. Pipe Covering* — (Not Shown) - As an alternate to item 3, Nom 1 in. (25 mm) or 1-1/2 in. (38 mm) thick cylindrical calcium silicate (min 14 pcf) (224 kg/m3) units sized to outside diam of the pipe may be used. Pipe insulation secured with stainless steel bands or min 8 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When thickness of pipe covering material is less than 1-1/2 in. (38 mm), the T, FT and FTH ratings are 0 hr for both the 1 and 2 hr rated walls.
4. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of sealant applied between pipe insulation and gypsum board on both sides of wall assembly, flush with both surfaces of wall. At the point or continuous contact locations between gypsum board and pipe covering, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

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