

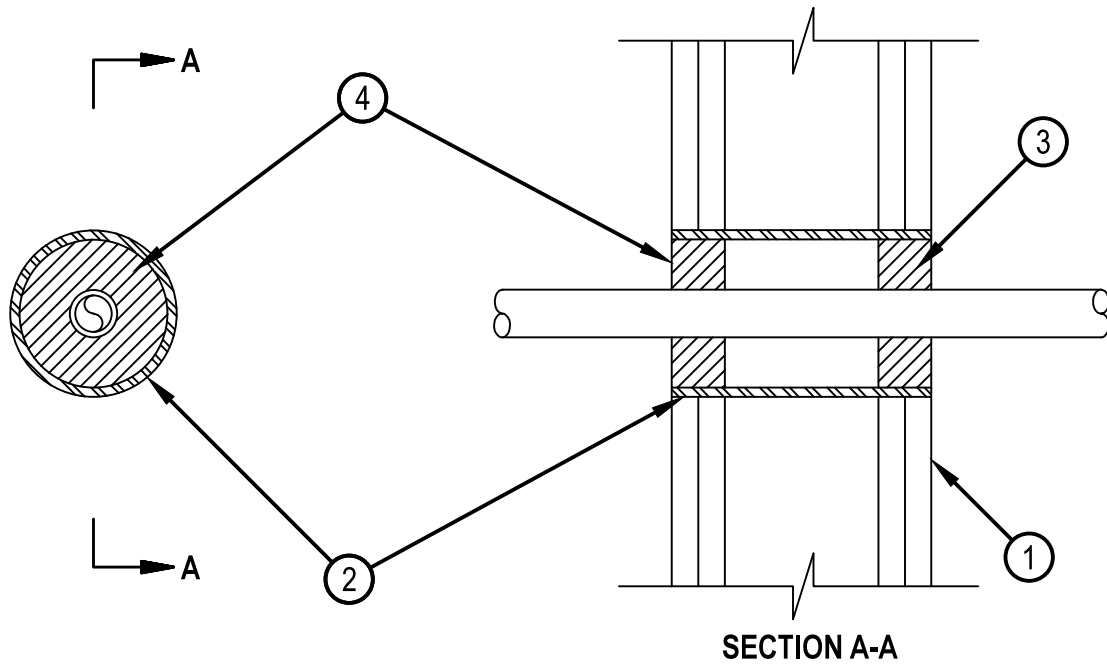


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

## System No. W-L-2186

F Ratings — 1 and 2 Hr (See Items 1 and 4)  
T Ratings — 1/2 and 1 Hr (See Items 3 and 4)  
L Rating at Ambient - Less Than 1 CFM/sq ft  
L Rating at 400 F - 2 CFM/sq ft

WL 2186



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 Designs in the UL Fire Resistance Directory and shall include the following construction features:
    - A. Studs — Wall framing shall 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 max 16 in. (406 mm) . Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
    - B. Gypsum Board\* — For 1 hr assembly, one layer of min 5/8 in. (16 mm) thick gypsum board as required in the individual Wall and Partition Design. For 2 hr assembly, two layers of min 5/8 in. (16 mm) thick gypsum board as required in the individual Wall and Partition Design. Max diam of opening is 3 in. (76 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 — (Optional) - Max 3 in. (76 mm) diam Schedule 40 (or heavier) steel pipe sleeve friction-fit into circular opening core drilled through wall. Length of steel sleeve to be equal to thickness of wall.
  3. Through Penetrant — One nom 1 in. (25 mm) diam (or smaller) SDR 9 cross-linked polyethylene (PEX) tubing for use in closed (process or supply) piping systems. The tubing installed concentrically or eccentrically within the opening. The annular space between the tube and the steel sleeve or wall opening shall be min 1/2 in. (13 mm) to max 1-3/8 in. (35 mm). Tube to be rigidly supported on both sides of wall assembly. When steel sleeve (Item 2) is not provided, tube may be installed at an angle not greater than 45 degrees from perpendicular. The hourly T Rating is 1/2 Hr and 1 Hr for 1 Hr and 2 Hr fire rated wall assemblies, respectively.
  4. Fill, Void or Cavity Material\*-Sealant — Min 5/8 in. (16 mm) and 1-1/4 in. (32 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly for 1 and 2 hr rated walls, respectively. When a steel sleeve (Item 2) is provided for assemblies with L Ratings, sealant shall be applied around periphery of opening to cover the exposed ends of the sleeve and to lap min 1/4 in. (6 mm) onto gypsum board on each side 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.



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