

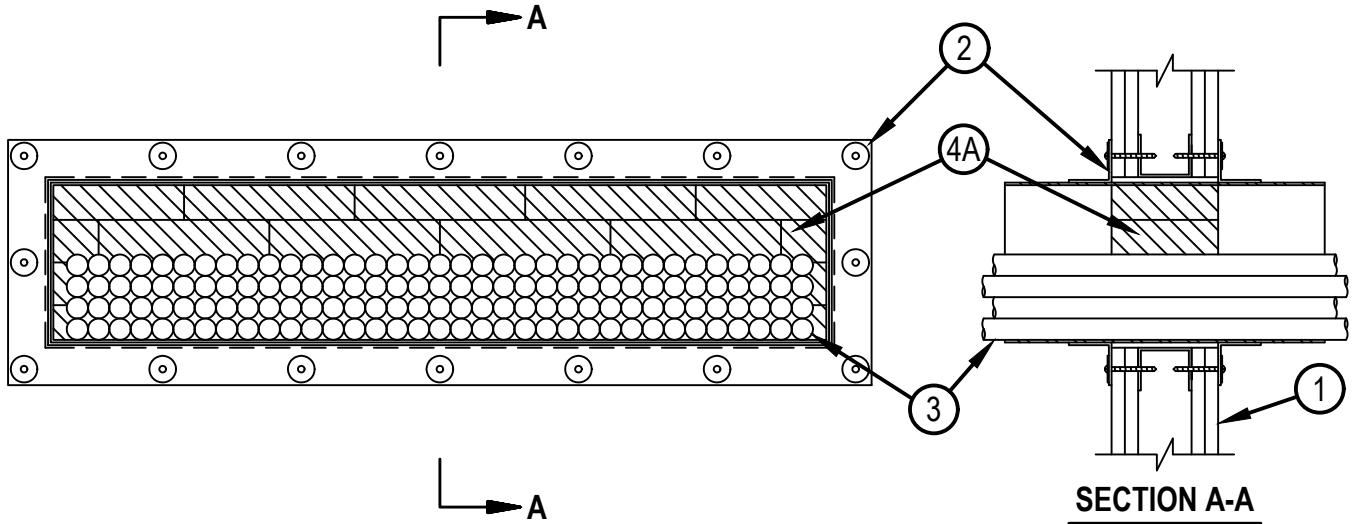


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-3226

WL 3226

| 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 and 1 Hr (See Item 1) | FT Ratings — 0 and 1 Hr (See Item 1) |
| | FH Ratings — 1 and 2 Hr (See Item 1) |
| | FTH Ratings — 0 and 1 Hr (See Item 1) |



- 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 may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. (51 mm) by 4 in. (102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. Additional framing members to be installed horizontally in such a manner to form a max 37 in. (940 mm) wide by 8 in. (203 mm) high opening.
 - B. Gypsum Board*** — Two layers of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Max size of opening is 37 in. (940 mm) by 8 in. (203 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 hourly T, Ft and FTH Ratings of the firestop system are 0 and 1 Hr for 1 and 2 hr rated wall assemblies, respectively.
- 2. Through Penetrating Products* - Metallic Sleeve** — The metallic sleeve consists of a rectangular shaped sleeve and a cover plate both fabricated from 14 MSG (0.072 in.) (1.83 mm) thick galv steel. The annular space between the sleeve and the periphery of opening shall be min 0 in. (point contact) to max 1 in. (25 mm). The rectangular shaped sleeve consists of a 36 in. (914 mm) wide by 7 in. (178 mm) high by 20 in. (508 mm) long sleeve with a 2-3/4 in. (70 mm) wide mounting plate. The plate incorporates 2-3/4 in. (70 mm) wide legs and 1-1/2 in. (38 mm) high flanges. The rectangular shaped sleeve to be inserted into the opening from either side of wall. Cover plate to be surface mounted on opposite side of wall. Both rectangular shaped sleeve and cover plate secured to wall by means of 2-1/2 in. (64 mm) long Type S, self-drilling, self-tapping bugle head steel screws in conjunction with 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers installed in pre-drilled holes spaced 7-1/2 in. (191 mm) OC along the mounting plate and cover plate.

If the metallic sleeve is installed in a wood stud/gypsum board assembly, the max width of the rectangular shaped steel sleeve is 12 in. (305 mm).

CABLOFIL INC — Type P-W



Hilti Firestop Systems

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January 25, 2016

3. Cables — Aggregate cross-sectional area of cables in metallic sleeve to be max 45 percent of the cross-section area of the metallic sleeve. The annular space between the cables and sleeve shall be 0 in. (0 mm) (point contact) to max 5 in. (127 mm). Cables to be rigidly supported on both sides of wall. Any combination of the following types of cables may be used:
- A. Max 300 pr. No. 24 AWG copper conductor communication cables with polyvinyl chloride (PVC) insulation and jacket.
 - B. Max 7/C No. 12 AWG copper conductor control cables with PVC insulation jacket.
 - C. Max 500 kcmil single conductor power cables with PVC insulation.
 - D. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 1/2 in. (12 mm).
 - E. Max 3/C No. 12 AWG steel clad cable with copper conductors and PVC insulation material.
4. Firestop System — The firestop shall consist of the following:
- A. Fill, Void or Cavity Material* - Fire Blocks — For walls incorporating max 3-5/8 in. (92 mm) steel studs or max 2 in. (51 mm) by 4 in. (102 mm) wood studs, fire block installed with 5 in. (127 mm) dimension projecting through and centered in opening. For walls constructed of larger steel or wood studs, fire block installed with long dimension passing through and centered in opening. Blocks firmly packed into opening to fill the annular space between cables and periphery of opening. Either one or a combination of the block types specified below may be used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block
 - B. Fill, Void or Cavity Material* — (Not shown) Fill material to be forced into interstices of cables and in obvious openings between blocks and between blocks and the periphery of the opening to the max extent possible on both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP618 Firestop Putty Stick, CP 660 Firestop Foam or CP 620 Fire Foam

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

