

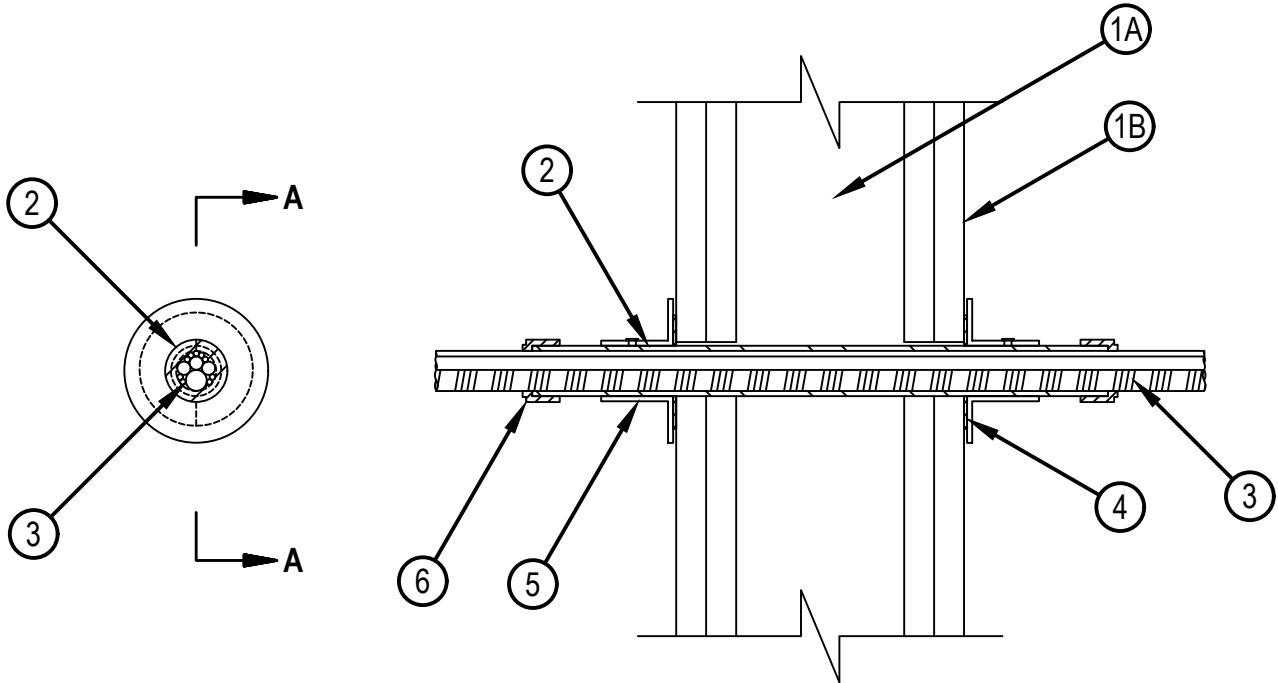


Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

# System No. W-L-3447

WL 3447

| 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 Rating — 1 and 2 Hr (See Item 1)            | FT Rating — 1 and 2 Hr (See Item 1)                             |
| L Rating at Ambient — Less than 1 CFM/Opening | FH Rating — 1 and 2 Hr (See Item 1)                             |
| L Rating at 400 F — Less than 1 CFM/Opening   | FTH Rating — 1 and 2 Hr (See Item 1)                            |
|   | L Rating at Ambient — Less than 5.1 L/s/m <sup>2</sup> /Opening |
|   | L Rating at 204 C — Less than 5.1 L/s/m <sup>2</sup> /Opening   |



**SECTION A-A**



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1. Wall Assembly — The 1 or 2 fire-rated gypsum wallboard/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 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\* — Nom 5/8 in. (16 mm) thick gypsum board, 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 and Partition Design in the UL Fire Resistance Directory. Diam of opening max 1-1/2 in. (38 mm).

The Ratings of the firestop system are equal to the fire rating of the wall assembly.

2. Metallic Sleeve Assembly — Nom 1 in. (25 mm) diam rigid steel conduit or EMT sleeve with flanged coupling (Item 5) available from fill material manufacturer installed within the opening. The annular space between steel sleeve and periphery of opening shall be min 0 in. (point contact) to max 1/8 in. (3 mm). The sleeve shall extend up to 3 in. (76 mm) beyond both wall surfaces. As an option, the sleeve may be provided with a plastic grommet at the ends of the sleeve.

3. Cables — Within the sleeve (Item 2), the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled within the sleeve and rigidly supported on both sides of wall assembly. Any combination of the following types of cables may be used:

- A. Max 3/C No. 8 AWG NM copper conductor cable (Romex) with PVC insulation and jacket.
- B. Type RG 6/U coaxial cable with fluorinated ethylene or PVC insulation and jacketing.
- C. Max 24 fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation.
- D. Max 4 pr No. 22 AWG (or smaller) Cat 5 or Cat 6 computer cables with PVC or plenum rated insulation and jacketing.
- E. Maximum 3/C No. 10 AWG copper conductor metal-clad cable.
- F. Through Penetrating Product\* — Max two copper conductor No. 18 AWG (or smaller) Power or Non-Power Limited Fire Alarm Cable with or without a jacket under a metal armor.

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G. Max 7/C-No. 12 AWG copper conductor control cable with PVC or XLPE insulation and jacket.

H. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC or plenum rated insulation and jacketing.

4. Fill, Void or Cavity Material\* — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the sleeve at each surface of wall to lap min 5 mm onto sleeve and firmly pressed to lap onto the wall around periphery of opening. Disc seams to be firmly pressed and sealed tight, Discs to be installed at both sides of wall opening.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-D 1" Firestop Putty Disc

5. Steel Flanged Coupling — Coupling sized to accommodate conduit with nom 3 in. (76 mm) diam flange and overall length of 1-1/2 in. is installed over conduit, tightly against cable disc on each wall surface and secured to conduit with steel set screw on both sides of wall.

6. Fill, Void or Cavity Material\* — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the cable/cable bundle at exit from each end of sleeve, lapping min 5 mm onto cables to completely cover opening and firmly pressed to lap onto the sleeve periphery. Disc seam to be firmly pressed and sealed tight, Discs to be installed at both sides of wall opening.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-D 1" Firestop Putty Disc

7. Fill, Void or Cavity Material\* — Sealant — (not shown) - As an alternate to Item 4, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the sleeve/wall interface. Fill material installed symmetrically on both sides of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 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.

