

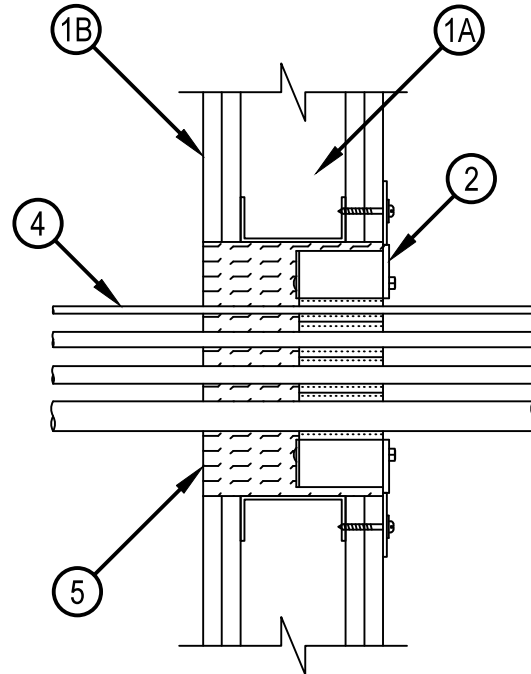
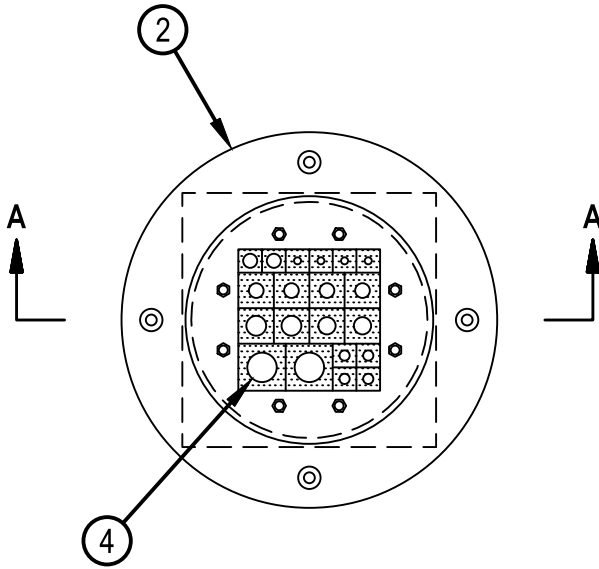


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-3392

WL 3392

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



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 specified in the individual 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 to consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional stud members shall be used to completely frame a square opening. Width and height of opening in wall to equal outer diameter of CFS-T sleeve (Item 2A) excluding sleeve flange with a tolerance of + 1/8 in. (+ 3 mm). Maximum area of opening to be 75 in² (484 cm²) with a maximum dimension of 8-3/4 in. (220 mm).
- B. Gypsum Board* — Thickness, type, number of layers, orientation and fasteners shall be as specified in the individual Wall and Partition Design.

The hourly F and FH Rating of the firestop system is equal to the hourly fire rating of the wall assembly. The T, FT and FTH Rating of the firestop system is 1/2 hr (for 2 hr fire rating) and 0 hr (for 1 hr fire rating).



Hilti Firestop Systems

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2. Firestop Device* — The circular firestop device consists of a flanged circular sleeve, an elastomeric plug with metal trim, elastomeric cable modules and lubricant. The firestop device shall be inserted into the framed opening on one side of wall assembly. After securement of the sleeve into the wall opening and installation of the plug seal within the sleeve and the modules into the plug seal, the nuts of the plug seal trim plate are tightened to compress the elastomeric plug and form an effective seal around the cables and within the sleeved opening. The device shall be installed in accordance with the accompanying installation instructions and shall include the components as described below.

- A. CFS-T SLF GS Sleeve — Sleeve size to be same as plug seal (Item 2B) size. The following sleeve sizes are covered: SLF 200, SLF 150, SLF 125, SLF 100. The circular steel sleeve of the firestop device shall be inserted into the framed square wall opening on one side of wall. The flange of the steel sleeve shall rest against the surface of the gypsum board and be secured to the steel studs framing the wall opening, through the gypsum board layers, by means of No. 8 by min 3 in. (76 mm) long self-drilling, self-tapping steel screws and 1-7/16 in. (36 mm) diam steel washers. Fasteners shall be approx equally spaced in center of flange around periphery of opening at a max spacing of 4 in. (102 mm) with a minimum of four fasteners (one in each side of opening).
- B. CFS-T RR GS Plug Seal — CFS-T RR GS Plug Seal. Plug seal size to be same as sleeve (Item 2A) size. The following plug seal sizes are covered: RR 200, RR 150, RR 125, RR 100.
- C. CFS-T Cable Modules — The rectangular annular space within the firestop device plug seal is completely filled with elastomeric cable modules, one specifically sized for the outer diameter of each cable penetrant. The cable modules are installed in uniform rows within the device. The total number of modules required within the device is specified by Hilti based on the device size and cable diameters.
- D. CFS-T LUB — Lubricant is applied to each cable module prior to installation within the device frame.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-T RR Plug Seal

3. Fill, Void or Cavity Material* — (Not Shown) - Prior to the installation of the flanged sleeve (Item 2A), a min 1/2 in. (13 mm) diam bead of putty or sealant is installed beneath the sleeve flange around periphery of opening to seal the flange to the gypsum board.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 619T Putty Roll or FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

4. Cables — Cables to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of copper conductor (unless otherwise noted) cables may be used, except that the total number of cables of types E, F and G below shall not exceed six (6). Within each firestop device, cables shall be used for a total visual cable fill of min 0 percent to max 100 percent (one cable in each cable module within the device).

- A. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.
- B. Max 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.
- C. Max 24 fiber fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/2 in. (13 mm).
- D. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
- E. Max 4/0 AWG 600V aluminum Type XHHW-2 ground cable with XLPE jacket and insulation.
- F. Max 150 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.
- G. Max 7/C with ground, 600 V, No. 10 AWG (or smaller) copper conductor, aluminum armor TECK 90 cable with XLPE insulation and PVC inner/outer jacket.

5. Packing Material — Min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening to completely fill the annular space remaining in the wall opening, including between and around cables, from the firestop device (Item 2) to flush with opposite face of wall.

* 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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Page: 2 of 2