

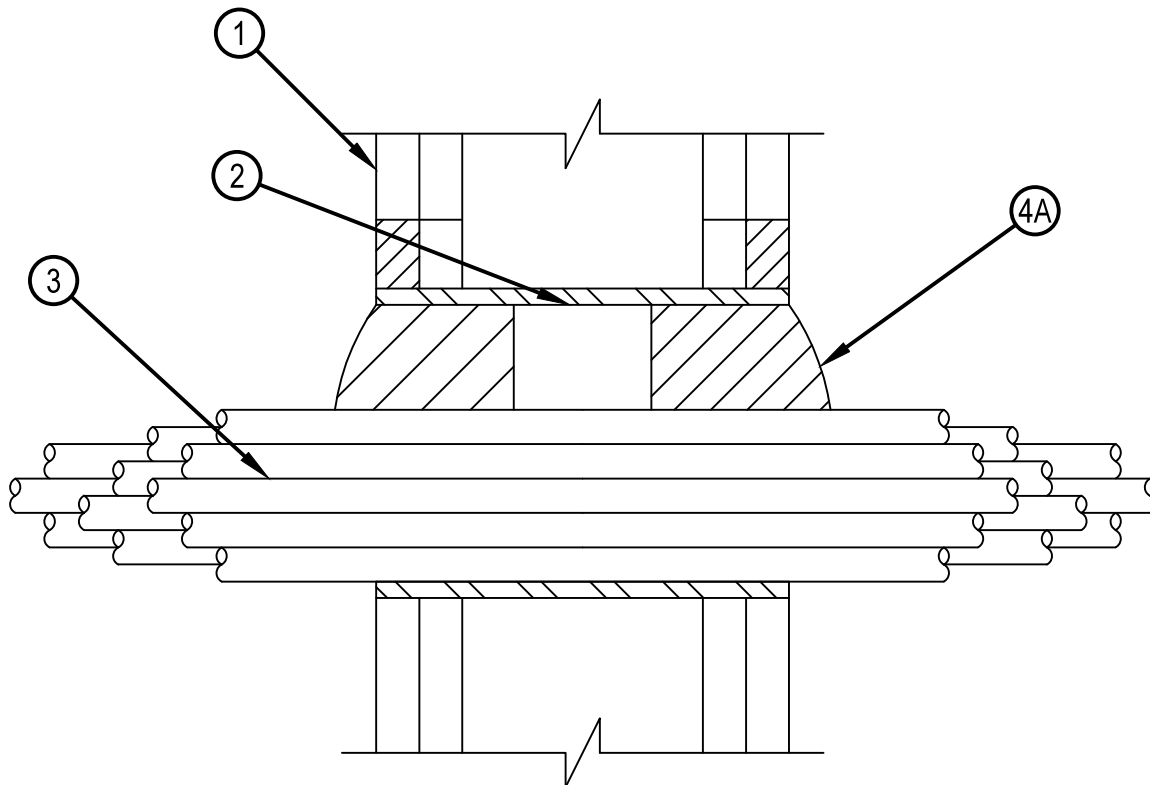


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-3224

WL 3224

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



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 if the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:

- A. Studs — Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 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, fabricated from min 25 MSG galvanized steel, spaced max 24 in. (610 mm) OC.
- B. Gypsum Board* — Nom 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design Number. Diam of opening is nom 2 or 4 in. (51 or 102 mm) when optional sleeve (Item 2) is not used or max 5-1/2 in. (140 mm) when sleeve is used.

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.

2. Steel Sleeve — (Optional)-Nom 2 or 4 in. (51 or 102 mm) diam Schedule 5 (or heavier) steel sleeve or rigid steel conduit or electrical metallic tubing. Sleeve to be flush with wall surfaces or may extend up to 12 in. (305 mm) beyond either or both wall surfaces. The annular space between steel sleeve and periphery of opening shall be min 0 in. (continuous point contact) to max 1 in. (25 mm).



Hilti Firestop Systems

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3. Cables — Aggregate cross-sectional area of bundled cables in opening to be max 60 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening or sleeve to be min 0 in. (point contact) to max 3 in. (76 mm). Cables to be tightly bundled and rigidly supported on both sides of the floor or wall assembly. Any combination of the following types and sizes of cables may be used:

- A. Max 300 pair No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and jacket.
- B. Max 750 kcmil single copper connector power cable with thermoplastic insulation and PVC jacket.
- C. Max 7/C No. 12 AWG multiconductor power and control cable with PVC or cross-linked polyethylene (XLPE) insulation and PVC jacket.
- D. Multiple fiber optical communication cable jacketed with PVC and having a max outside diameter of 1/2 in. (13 mm).
- E. Max 3/C No. 12 AWG with bare aluminum ground, PVC insulated steel Metal-Clad cable.
- F. Max 1 in. diam metal clad TEK cable with PVC jacket.
- G. Max 2/0 aluminum SER cable.
- H. Type RG 59/U coaxial cable with polyethylene (PE) insulation and PVC jacket.

4. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Materials* - Plug — Nom 2, 2.5 or 4 in. (51, 64 or 102 mm) plug sized for the sleeve/opening firmly installed within the sleeve or opening such that the outer circumference of the dome-shaped plug is flush with both surfaces of the wall or both ends of sleeve. Plug cut to fit around the cable bundle and installed tightly within the opening or sleeve.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 658T Firestop 2.5 or 4 in. or CFS-PL Firestop Plug 2 or 4 in.

B. Fill, Void or Cavity Material* — Sealant or Putty — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus between sleeve and periphery of opening, flush with both sides of wall. At point contact, a min 1/2 in. (13 mm) bead of fill material shall be applied at sleeve/wall interface when sleeve extends beyond surface of wall. Additional sealant or putty may or may not be used to fill interstices between cables.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant or CP618 Firestop Putty Stick

* 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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