

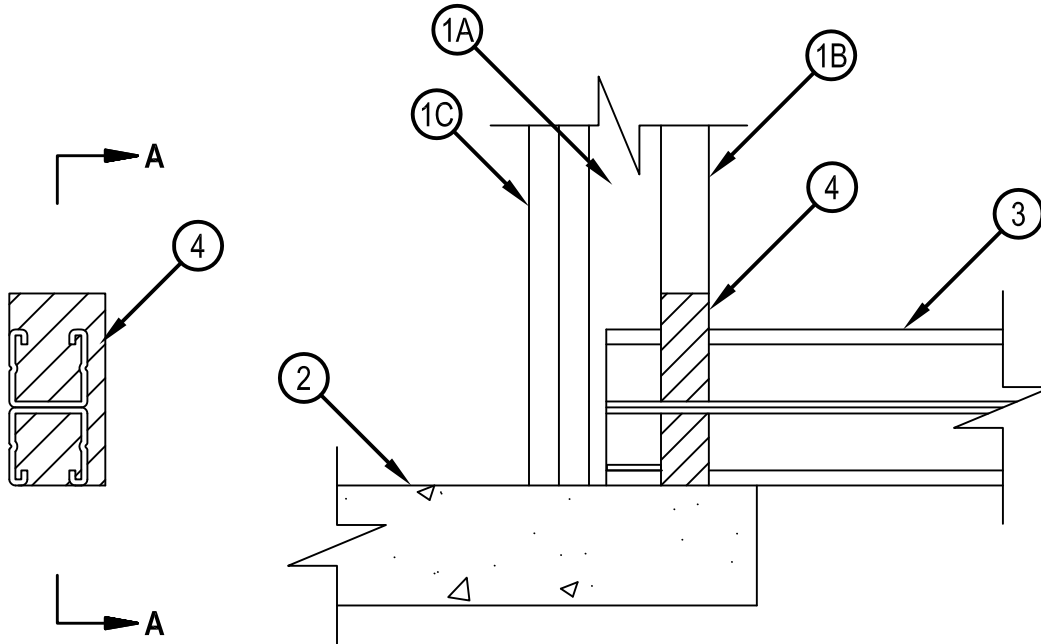


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-7154

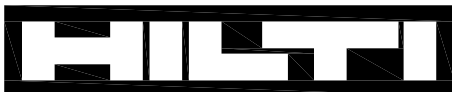
WL 7154

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings - 1 and 2 Hr (See Items 1 and 2)	F Ratings - 1 and 2 Hr (See Items 1 and 2)
T Rating - 0 Hr	FT Rating - 0 Hr
	FH Ratings - 1 and 2 Hr (See Items 1 and 2)
	FTH Rating - 0 Hr



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire rated shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Steel Studs — C-H -shaped studs, 2-1/2 in. (64 mm) wide by 1-1/2 in. (38 mm) deep, spaced 24 in. (610 mm) OC.
 - B. Gypsum Board* — 1 in. (25 mm) thick gypsum board liner panels, supplied in nom 24 in. (610 mm) widths as specified in the individual Wall and Partition Design. Max area of opening is 8.6 sq in. (55 sq cm) with a max dimension of 6-7/8 in. (175 mm). The opening cutout shall follow the contour of the penetrant when steel angle or steel channel is used.
 - C. Gypsum Board* — One or two layers of 5/8 in. (16 mm) thick gypsum board for 1 or 2 hr rated assemblies, respectively, as specified in the individual Wall and Partition Design.



Hilti Firestop Systems

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January 27, 2015

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1A. Alternate Wall Assembly — (Not shown) As an alternate to the shaft wall described above, the 1 or 2 hr fire rated wall assembly shall be constructed of the materials and in the manner specified in the individual 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 min 2-1/2 in. (64 mm) steel channel studs spaced max 24 in. (610 mm) OC.
- B. Gypsum Board* — Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max area of opening is 8.6 sq in. (55 sq cm) with a max dimension of 6-7/8 in. (175 mm). The opening cutout shall follow the contour of the penetrant when steel angle or steel channel is used.

The hourly F and FH Ratings of the firestop system are equal to the hourly rating of the wall.

2. Floor Assembly — Min 2-1/2 and 4-1/2 in. (64 or 114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete for 1 and 2 hr rated assemblies, respectively. Floor may also be constructed of any min 6 in. (152 mm) UL Classified Precast Concrete Units*.

See Precast Concrete Units (CFTV) category in the Fire Resistance Directory for names of manufacturers.

3. Penetrants — One metallic strut, steel angle or steel channel to be installed within the firestop system. An annular space of min 0 in. (point contact) to max 7/8 in. (22 mm) is required within the firestop system. Penetrant to terminate within the stud cavity and shall be secured to floor assembly within 2 in. (51 mm) of the fill material (Item 4) on either side of the fill material with at least one min 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel masonry anchor in conjunction with steel washers or Hilti 1/4 in. diam by 1-3/4 in. long KWIK-BOLT 3 steel expansion anchor. The following types and sizes of metallic struts, angles or channels may be used:

- A. Steel Strut — Max 1-5/8 by 1-5/8 in. (41 by 41 mm) channel strut formed from min 0.105 in. (2.7 mm) thick galv or painted steel.
- B. Steel Strut — Max 3-1/4 by 1-5/8 in. (83 by 41 mm) H strut formed from min 0.105 in. (2.7 mm) thick galv or painted steel.
- C. Steel Angle — Max 2 by 2 in. (51 by 51 mm) by min 1/8 in. (3.2 mm) thick or max 3 by 3 in. (76 by 76 mm) by min 1/4 in. (6 mm) thick steel angle.
- D. Steel Channel — C6 x 8.2 (or smaller) steel channel.

4. Fill, Void or Cavity Material* - Sealant — Fill material to be installed to completely fill the annular space, flush with the surface of the wall. The thickness of the fill material shall be the thickness of the gypsum board(s) in which it is installed. An additional min 1/2 in. (13 mm) diam bead of sealant to be installed at the point contact location at the penetrant/gypsum board interface.

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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