



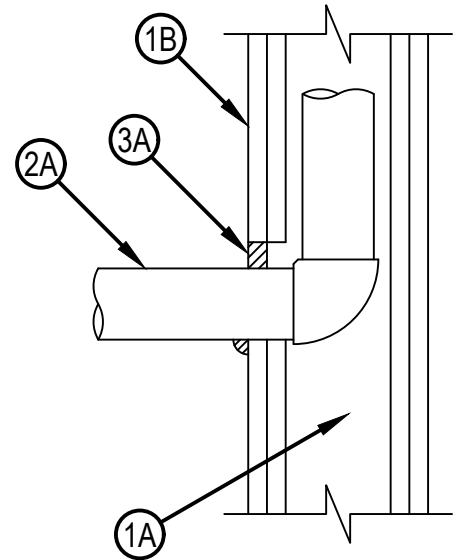
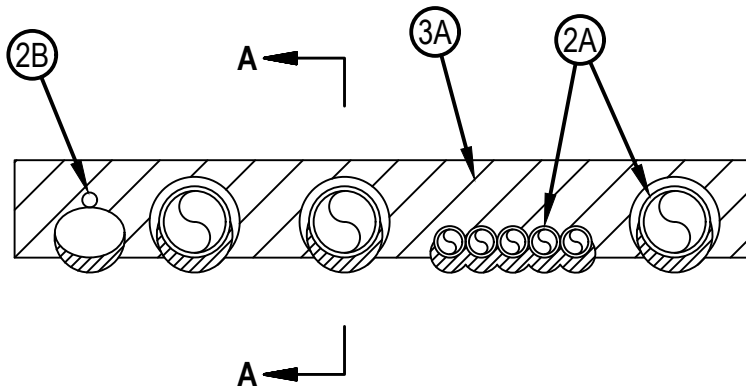
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-8135

WL 8135

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

SECTION A-A



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December 7, 2021

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 described 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 3-5/8 in. (92 mm) wide steel studs spaced max 24 in. (610 mm) OC.
 - B. Gypsum Board* —One or two layers of min 5/8 in. (16 mm) thick gypsum board for 1 and 2 hr rated wall assemblies, respectively, as specified in the individual Wall and Partition Design. Max height of opening is 3 in. (76 mm). Max width of opening is 22-3/4 in. (578 mm).
The hourly F, FT, FH and FTH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrants —Multiple penetrants installed in single layer array within the firestop system. The annular space between the penetrants and the edges of the opening shall be min 0 in. (point contact) to max 2 in. (51 mm). The separation between penetrants to be a min 3/4 in. (19 mm) to a max 2-1/2 in. (64 mm) except that groupings of max five 1 in. (25 mm) diam or smaller penetrants can be installed with 0 in. (point contact) between the metallic penetrants. Penetrants to be rigidly supported on one side of wall assembly and within the wall cavity. The following types and sizes of penetrants may be used:
 - A. Metallic Penetrants — Any combination of the following penetrants may be used:
 - A1. Steel Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - A2. Conduit — Nom 2 in. (51 mm) diam (or smaller) rigid steel conduit.
 - A3. Tubing — Nom 1 in. (25 mm) diam (or smaller) steel electrical metallic tubing (EMT).
 - B. Cable Bundles — One or more cable bundles comprised of one each of the following cables may be used. Cables to be tightly bundled together.
 - B1. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.
 - B2. Max 3/C No 12 AWG steel MC Cable.
3. Fill Void or Cavity Materials* - Sealant —Min 5/8 in. (16 mm) thickness of fill material installed to completely fill annular space between pipes, conduits and cables and gypsum, flush with each surface of wall. Min 1/2 in. (13 mm) diam bead of fill material applied to the through penetrant/wall interface at the point contact locations on both sides of the wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — 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.