

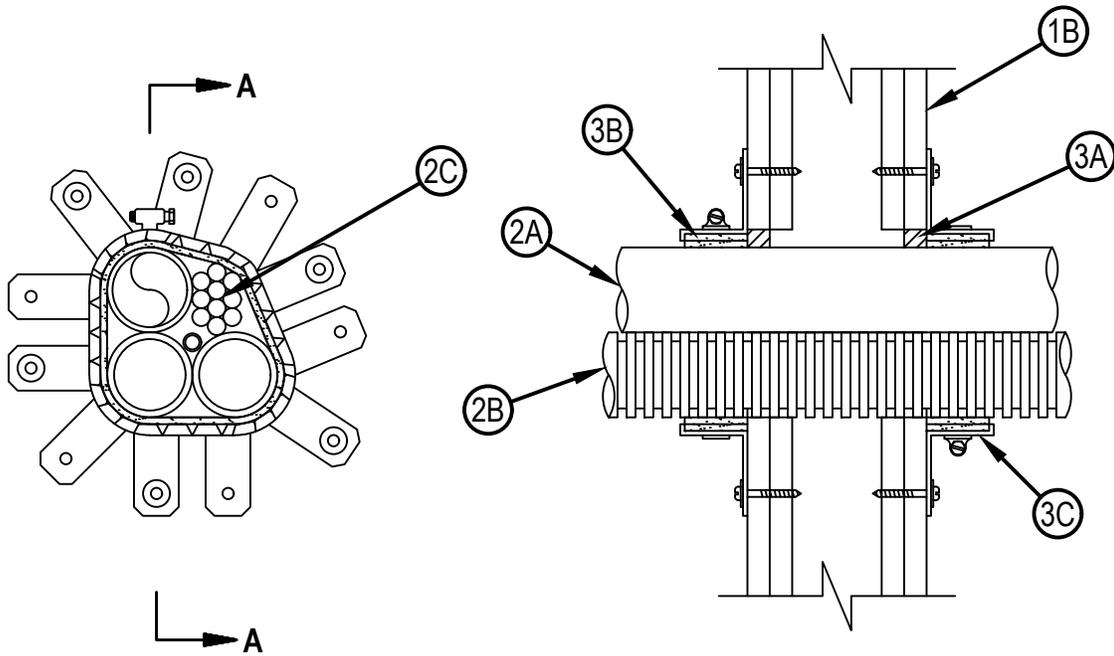


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Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

# System No. W-L-8082

WL 8082

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Items 1 and 2B)
T Rating — 0 and 3/4 Hr (See Item 1)	FT Rating — 0 and 3/4 Hr (See Items 1 and 2B)
	FH Rating — 1 and 2 Hr (See Items 1 and 2B)
	FTH Rating — 0 and 3/4 Hr (See Items 1 and 2B)



**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 U300 or U400, V400 or W400 Series Wall or Partition Design 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\* — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 4 in. (102 mm).

The hourly F, FH Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT, FTH Rating of the firestop system is 0 hr for 1 hr fire rated wall assemblies and 3/4 hr for 2 hr fire rated wall assemblies.



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2. Through Penetrants — One or more of the following types of through penetrants shall be installed within the opening. The aggregate cross-sectional area of the penetrants does not exceed 66 percent of the cross-sectional area of the wall opening. The annular space between penetrants, and between penetrants and the periphery of opening, shall be min 0 in. (point contact) to max 1 in. (25 mm). Penetrants to be rigidly supported on both sides of wall assembly.

2A. Metallic Penetrants — Any combination of the following types and sizes of metallic pipes, conduits or tubing may be installed within the opening:

- A. Steel Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
- B. Iron Pipe — Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.
- C. Conduit — Nom 2 in. (51 mm) diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT).

2B. Electrical Nonmetallic Tubing (ENT)+ — Nom 2 in. (51 mm) diam (or smaller) ENT formed of PVC, installed in accordance with National Electrical Code (NFPA No. 70). Max two tubes may be installed within opening. Canadian F, FT, FH and FTH Ratings do not apply when this penetrant is used.

See Electrical Nonmetallic Tubing (FKHU) in UL Electrical Construction Materials Directory for names of manufacturers.

2C. Cables — Nom 2 in. (51 mm) diam (or smaller) tight bundle of cables. Any combination of the following types and sizes of cables may be used:

- A. Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacket materials.
- B. Max 1/C No. 500 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
- C. Max 3/C No. 8 AWG (or smaller) copper conductor metal clad cable.
- D. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
- E. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with PVC jacket and insulation.

3. Firestop System — The details of the firestop system shall be as follows:

A. Fill, Void or Cavity Material\* - Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Fill material forced into grouped penetrant interstices to max extent possible within opening.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

B. Fill, Void or Cavity Material\* — Wrap Strip - Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Wrap strip is continuously wrapped around the outer circumference of bundled penetrants two times with ends butted and held in place with tape. Wrap strip installed flush with both surfaces of wall assembly.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E- W25/1-3/4" Wrap Strip

C. Steel Collar — Steel collar fabricated from coils of precut min 0.016 in. (0.41 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be min 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to both surfaces of wall. In addition, collars contain preformed retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be tightly wrapped over the wrap strip, overlapping min 1 in. (25 mm) at seam and compressed with a min 1/2 in. (13 mm) wide by 0.028 in. (0.71 mm) thick stainless steel band at collar mid-height. Every other anchor tab of collar secured to surface of wall with min 1-1/2 in. (38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

+ Bearing the UL Listing Mark

