

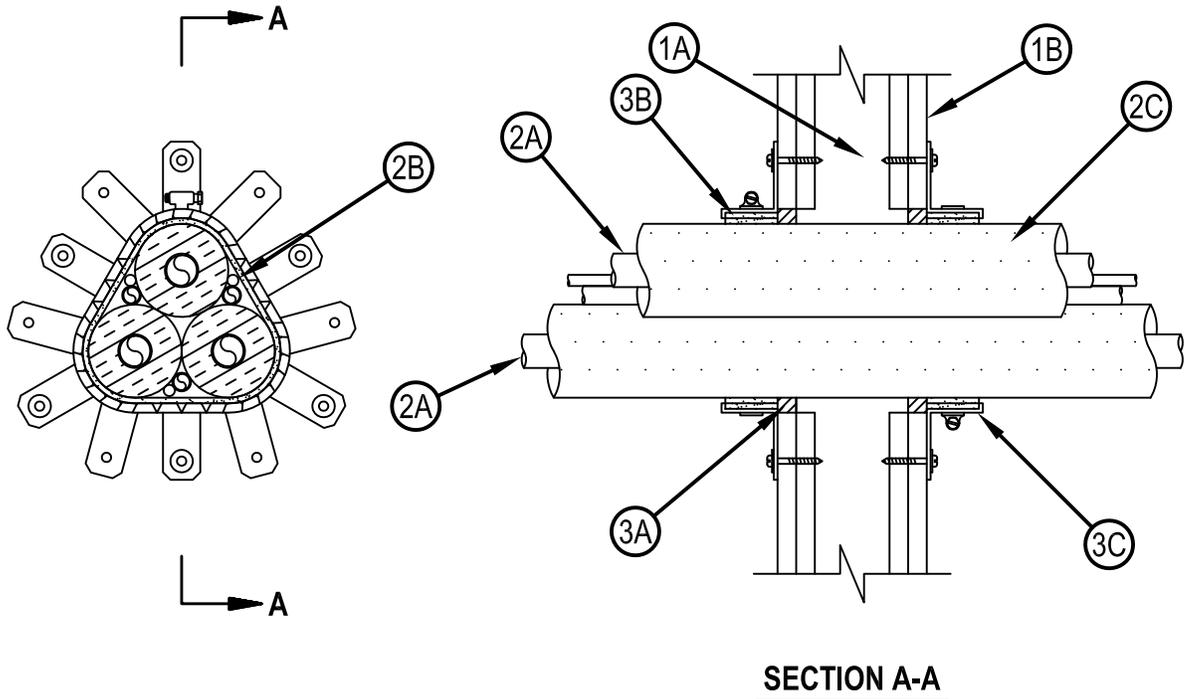


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-8081

WL 8081

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



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 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 6 in. (152 mm).

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

2. Air Conditioning (AC) Line Set — Max of three AC line sets bundled within the opening. Each line set consists of one metallic pipe, one insulated metallic pipe and one electrical cable. The aggregate cross-sectional area of the penetrants does not exceed 84 percent of the cross-sectional area of the wall opening. The annular space between the penetrants and the periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Penetrants to be rigidly supported on both sides of wall assembly.

2A. Metallic Pipes — The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.

B. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 1/2 in (13 mm) diam (or smaller) steel conduit or EMT.

D. Copper Pipe or Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube or Regular (or heavier) copper pipe.



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2B. Cables — Max 4 pair No. 18 AWG (or smaller) thermostat cable with PVC insulation and jacket.

2C. Pipe Covering — The following pipe covering shall be used with the metallic pipes (Types 2A, 2B and 2D only) having a nom diam greater than 1/2 in. (13 mm):

A. Tube Insulation - Plastics# — Nom 1 in. (25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing.

See Plastics (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

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

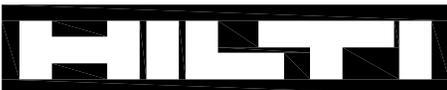
B. Fill, Void or Cavity Material* — Wrap Strip - Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Wrap strip is continuously wrapped around the outer circumference of bundled penetrants two times with ends butted and held in place with tape. Wrap strip installed flush with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



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