



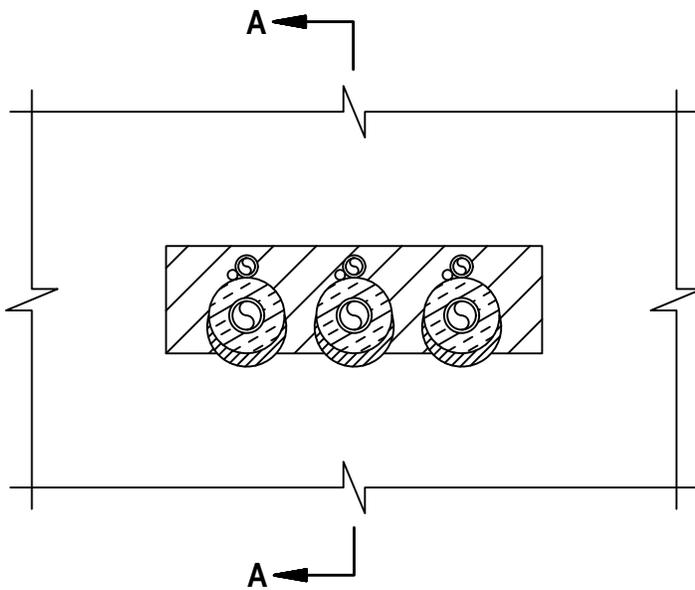
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

# System No. W-L-8142

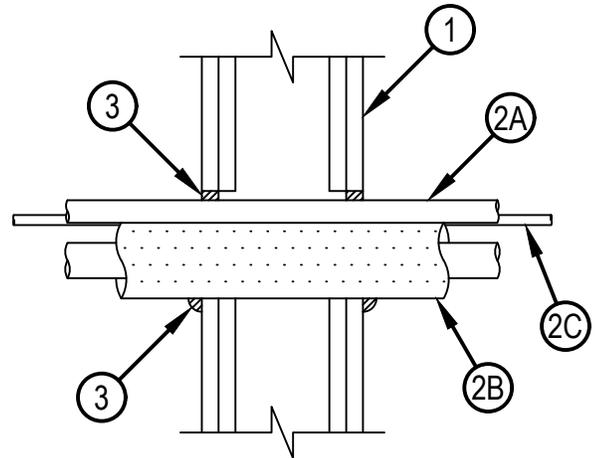
WL 8142

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating – 1 and 2 Hr	F Rating – 1 and 2 Hr
T Ratings – 0 and 1/4 Hr (See Item 1)	FT Ratings – 0 and 1/4 Hr (See Item 1)
L Rating at Ambient — Less Than 1 CFM/Sq Ft	FH Rating – 1 and 2 Hr
L Rating at 400°F — Less Than 1 CFM/Sq Ft	FTH Ratings – 0 and 1/4 Hr (See Item 1)
	L Rating At Ambient — Less Than 5.1 L/s/m <sup>2</sup>
	L Rating At 204°C — Less Than 5.1 L/s/m <sup>2</sup>

**FRONT VIEW**



**SECTION A-A**



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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 U300, 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 shall 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 max 16 in. (406 mm) OC. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board\* — The gypsum board type, thickness number of layers, fastener type and sheet orientation shall be specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max opening size is 10 in. (254 mm) by 3 in. (76 mm).

The T, FT and FTH Ratings are 0 and 1/4 hr for 1 and 2 hr rated assemblies, respectively.

2. Air Conditioning (AC) Line Set — One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be min 1/2 in. (13 mm) to max 3/4 in. (19 mm). The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm) to one side of opening.

2A. Through Penetrants — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. (13 mm) Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:

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

2. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.

2B. Tube Insulation — Plastics+ — Max 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. (13 mm) diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 3/4 in. (19 mm). The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).

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.

2C. Cables — Max of one 4 pair No. 18 AWG (or smaller) cable with PVC insulation and jacket materials.

3. Fill, Void or Cavity Material - Sealant\* — Min 5/8 in. (16 mm) thickness of fill material applied within annulus between penetrants and gypsum board, flush with both surfaces of wall. At point contact, a 1/2 in. (5 mm) bead of fill material shall be applied at the penetrant/gypsum board interface on both sides of wall.

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.