

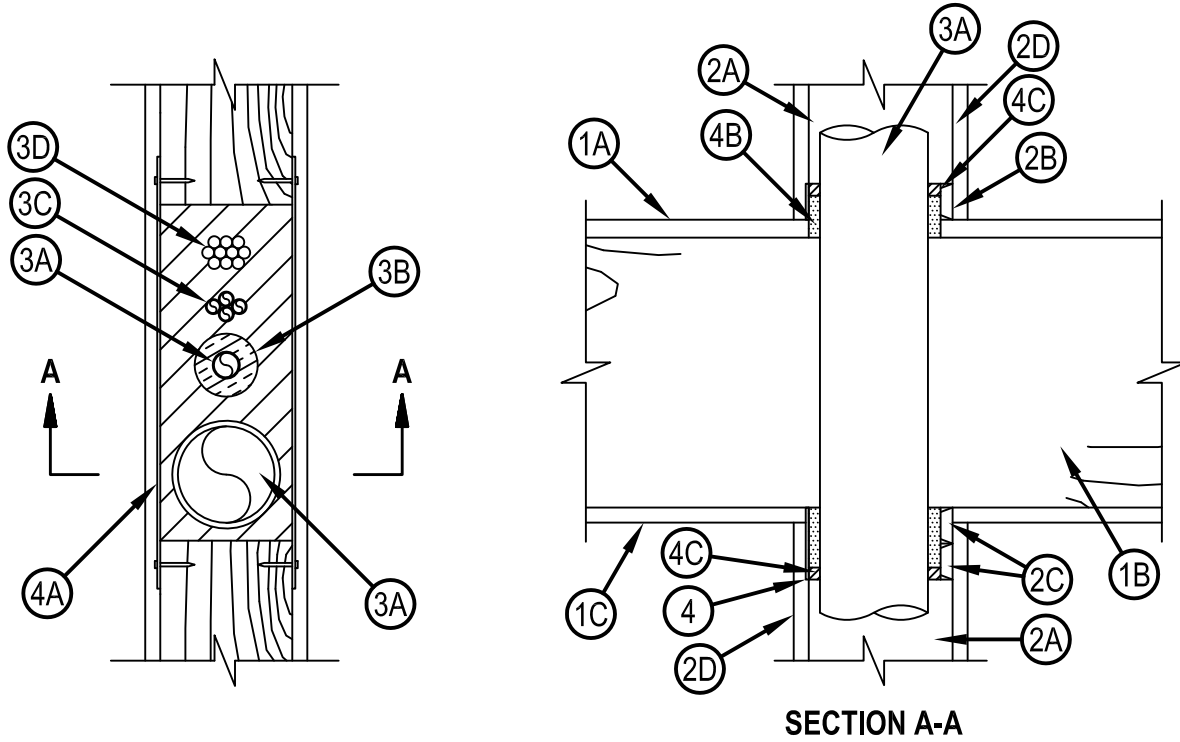


Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-C-8038

FC 8038

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



System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Floor-Ceiling Assembly — The 1 hr fire rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

- A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max area of opening shall be 77 sq in. (497 cm²) with max dimension of 14 in. (356 mm).
- B. Wood Joists* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
- C. Gypsum Board* — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design.

2. Chase Wall — The through-penetrants shall be routed through a single, double or staggered wood stud/gypsum board chase wall and shall include the following construction features:

- A. Studs — Nom 2 by 6 in. (51 by 152 mm) lumber studs.
- B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) lumber plates. Sole plate may be discontinuous across opening. Max size of opening is 5-1/2 in. (140 mm) by 14 in. (356 mm).
- C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. lumber plates. Double top plate may be discontinuous across opening. Max size of opening is 5-1/2 in. (140 mm) by 14 in. (356 mm).
- D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.



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3. Through-Penetrants — One or more metallic or nonmetallic pipes, conduits, tubing or cables, in any combination, to be installed either concentrically or eccentrically within the opening. Separation between penetrants to be min 1/4 in. (6 mm) to max 1-1/2 in. (38 mm). Annular space between the penetrants and the periphery of the 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 floor-ceiling assembly. The following types and sizes of through penetrants may be used:
- A. Metallic Penetrants — A maximum of one metallic penetrant within the system shall have a nom diam greater than 1 in. (25 mm). The following types and sizes of metallic pipes, conduits or tubes may be used.
 - A1. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - A2. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
 - A3. Copper Pipe or Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube or Regular (or heavier) copper pipe.
 - A4. Conduit — Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT).
 - B. Pipe Covering - Tube Insulation - Plastics+ — (Optional) - Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Pipe covering may be installed on metallic pipe or tube penetrants (Items 3A1, 3A2, and 3A3) not exceeding nom 1 in. (25 mm) diam.
See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification may be used.
 - C. Cross Linked Polyethylene (PEX) Tubing — Nom 1/2 in. (13 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems. A max of four tubes can be bundled together and installed within the opening.
 - D. Cables — Nom 2-1/2 in. (64 mm) diam (or smaller) tight bundle of cables. Any combination of the following types and sizes of cables may be used:
 - D1. Max 25 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC insulation and jacketing.
 - D2. Max 3/C No. 8 AWG (or smaller) steel metal clad cable.
 - D3. Max RG/U coaxial cable with copper conductor and fluorinated ethylene insulation and jacket.
- When bare (non-insulated) metallic penetrant is used, T Rating is 1/4 hr. Otherwise, T Rating is 1 hr.
4. Firestop System — The firestop system shall consist of the following:
- A. Steel Straps — Min 1-1/2 in. (38 mm) wide by 30 gauge (0.4 mm) (or heavier) steel straps used to bridge opening on both sides of wall at sole plate when sole plate is removed at opening in plywood floor. Steel straps to be cut to overlap a min of 2 in. (51 mm) onto sole plate on each side of opening and secured to sole plate with a min of two nails or screws on each side of opening on both sides of wall. Min 3 in. (76 mm) wide by 30 gauge (0.4 mm) (or heavier) steel straps used to bridge opening on both sides of wall at double top plate when top plates are removed at opening. Steel straps to be cut to overlap a min of 2 in. (51 mm) onto top plates on each side of opening and secured to top plates with a min of two nails or screws on each side of opening on both sides of wall.
 - B. Packing Material — Min 1-1/2 in. (38 mm) thickness of min 0.5 pcf (8 kg/m³) fiberglass batt insulation firmly packed into the opening within the sole plate/plywood subfloor and a min 2-1/2 in. thickness of min 0.5 pcf (8 kg/m³) fiberglass batt insulation firmly packed into the opening within the double top plate. The packing material to be recessed from top surface of sole plate and bottom surface of top plates to accommodate the required thickness of fill material.
 - C. Fill, Void or Cavity Materials* - Sealant — Min 1/2 in. (13 mm) thickness of sealant applied within annular space, flush with top surface of sole plate and flush with bottom surface of double top plate
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606, 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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