



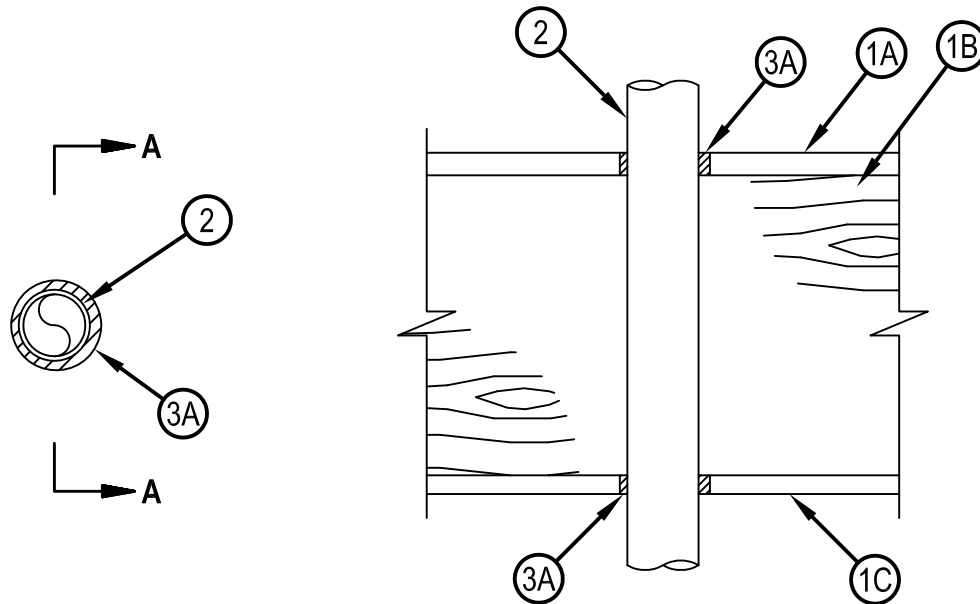
Classified by
Underwriters Laboratories, Inc.
to CAN/ULC-S115

System No. F-C-2416

F Rating - 1 Hr
FT Rating - 0 Hr
FH Rating - 0 Hr
FTH Rating - 0 Hr



FC 2416



SECTION A-A

System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Floor or Wall 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 individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details 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. Diam of floor opening to be nom 16 mm (5/8 in.) larger than the outside diam of through-penetrant.
- B. Wood Joists — Nom 51 by 254 mm (2 by 10 in.) lumber joists spaced 406 mm (16 in.) OC with nom 25 by 76 mm (1 by 3 in.) lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 254 mm (10 in.) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required with ends firestopped.
- C. Gypsum Board* — Nom 122 cm (4 ft) wide by 16 mm (5/8 in.) thick as specified in the individual Floor-Ceiling Design. Diam of ceiling opening to be nom 16 mm (5/8 in.) larger than the outside diam of through-penetrant.

1.1. Chase Wall — (Not shown, Optional) — The through penetrants (Item 2) may be routed through a single, double or staggered wood stud/gypsum board chase wall and shall include the following construction features:

- A. Studs — Nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber studs.
- B. Sole Plate — Nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber studs. Max diam of opening is 76 mm (3 in.)
- C. Top Plate — The double top plate shall consist of two nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber plates. Max diam of opening is 76 mm (3 in.)
- D. Gypsum Board* — Min 1/2 in. (13 mm) rated or non-rated gypsum board.



Hilti Firestop Systems

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January 20, 2015

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2. Through Penetrants — One nonmetallic pipe to be installed eccentrically or concentrically within the firestop system. The annular space between the through penetrant and the periphery of the opening shall be a min 6 mm (1/4 in.) to a max of 9.5 mm (3/8 in.) Pipe to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:
- A. Polyvinyl Chloride (PVC) Pipe — Nom 51 mm (2 in.) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 51 mm (2 in.) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 51 mm (2 in.) diam (or smaller) SDR11 or SDR13.5 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems
 - D. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 51 mm (2 in.) diam (or smaller) IPEX AquaRise SDR 11 CPVC for use in closed (process or supply) piping systems.
 - E. Cross Linked Polyethylene (PEX) Pipe — Nom 38 mm (1-1/2 in.) diam (or smaller) PEX pipe for use in closed (process or supply) piping systems.
3. Firestop System — The firestop system shall consist of the following:
- A. Fill, Void or Cavity Material* - Sealant — Min 19 mm (3/4 in.) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 16 mm (5/8 in.) thickness of fill material applied within annulus, flush with underside of gypsum board ceiling or lower top plate.
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.



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