



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

System No. F-C-2007

F Rating — 1 Hr

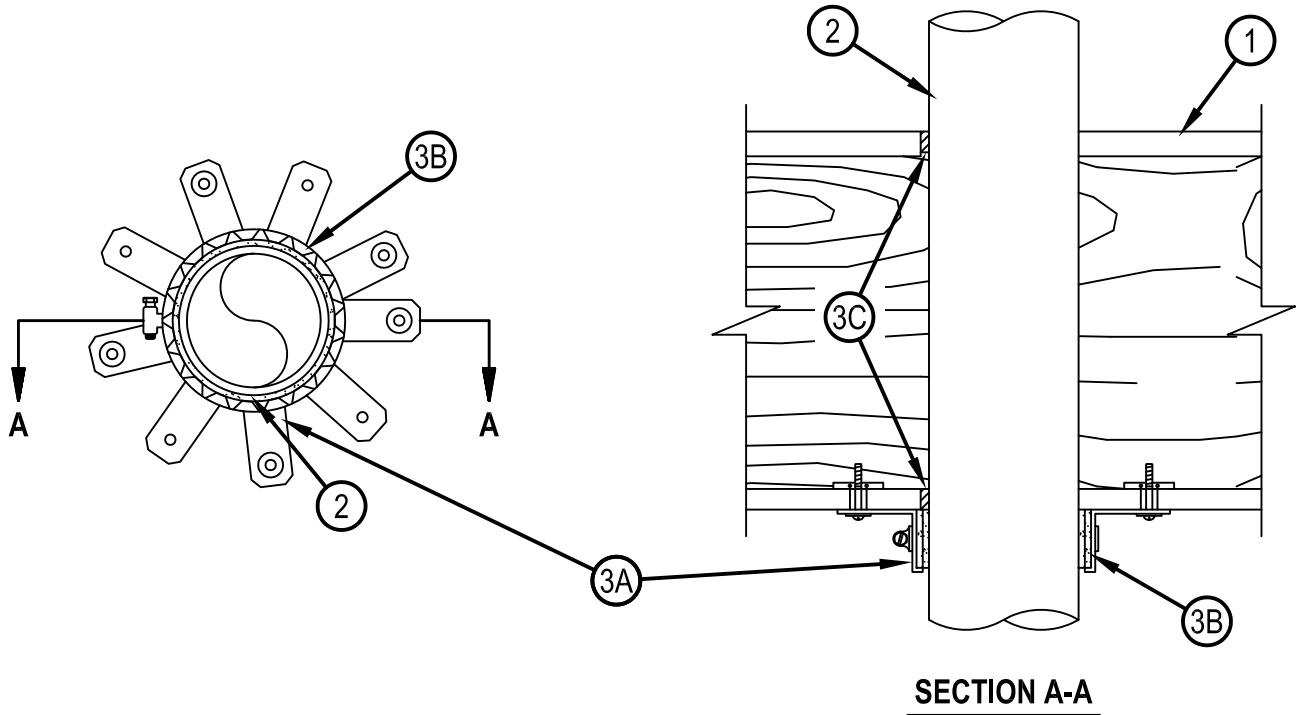
FT Rating — 3/4 and 1 Hr (See Item 2)

FH Rating — 1 Hr

FTH Rating — 3/4 and 1 Hr (See Item 2)



FC 2007



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-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 diam of opening shall be 127 mm (5 in.).
- B. Wood 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 and with ends firestopped.
- C. Gypsum Board* — Nom 16 mm (5/8 in.) thick, 1.2 m (4 ft) wide as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 127 mm (5 in.).



Hilti Firestop Systems

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2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space between pipe and edge of opening to be as specified in the table below. Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:

- A. Polyvinyl Chloride (PVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) SDR11 or SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) SDR 11 CPVC for use in closed (process or supply) piping systems.
- IPEX INC — AquaRise

Nom Diam of Pipe, mm (in.)	Min/Max Annular Space, mm (in.)	T Rating - Hr
51 (2) (or smaller)	0-6 (0-1/4)	1
102 (4) (or smaller)	0-13 (0-1/2)	3/4

3. Firestop System — The firestop system shall consist of the following:

- A. Fill, Void or Cavity Material* — Wrap Strip - Layers of intumescent wrap strip are continuously wrapped around the pipe with ends held in place with tape. Wrap strip butted tightly against bottom surface of floor or both surfaces of wall. Size of wrap strip and number of layers for a given size penetrant are shown in table below.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W25/1" or CP648-E W45/1-3/4" Firestop Wrap Strip

Product Designation	Max Pipe Size mm (in.)	Number of Layers	Nom Wrap Strip Width mm (in.)
CP648-E W25/1"	76 (3)	2	25 (1)
CP 648-E W45/1-3/4"	76 (3)	1	44 (1-3/4)
CP 648-E W25/1"	102 (4)	3	25 (1)
CP 648-E W45/1-3/4"	102 (4)	2	44 (1-3/4)

- B. Steel Collar — Steel collar fabricated from coils of precut min 0.4 mm (0.016 in.) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 25 mm (1 in.) (for 1 in. wide wrap strip) or 44 mm (1-3/4 in.) (for 1-3/4 in. wide wrap strip) deep with 25 mm (1 in.) wide by 51 mm (2 in.) long anchor tabs on 44 mm (1-3/4 in.) centers for securement to the underside of floor or both surfaces of wall. The opposite side incorporates retainer tabs, 12 mm (1/2 in.) wide by 5 mm (3/16 in.) long, prebent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min. 1 in at seam. A nom 12 mm (1/2 in.) wide stainless steel hose clamp shall be secured to the collar at its mid-height. Every other anchor tab of collar secured to gypsum ceiling at every other tab with 6 mm (1/4 in.) diam by 38 mm (1-1/2 in.) long steel toggle bolts in conjunction with 6 mm (1/4 in.) by 19 mm (3/4 in.) diameter steel washers.

- C. Fill, Void or Cavity Materials*-Sealant — Min 16 mm (5/8 in.) thickness of fill material applied within the annulus, flush with the bottom surface of the gypsum board ceiling. Min 16 mm (5/8 in.) thickness of fill material applied within the annulus, flush with the top surface of the floor.

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.

