

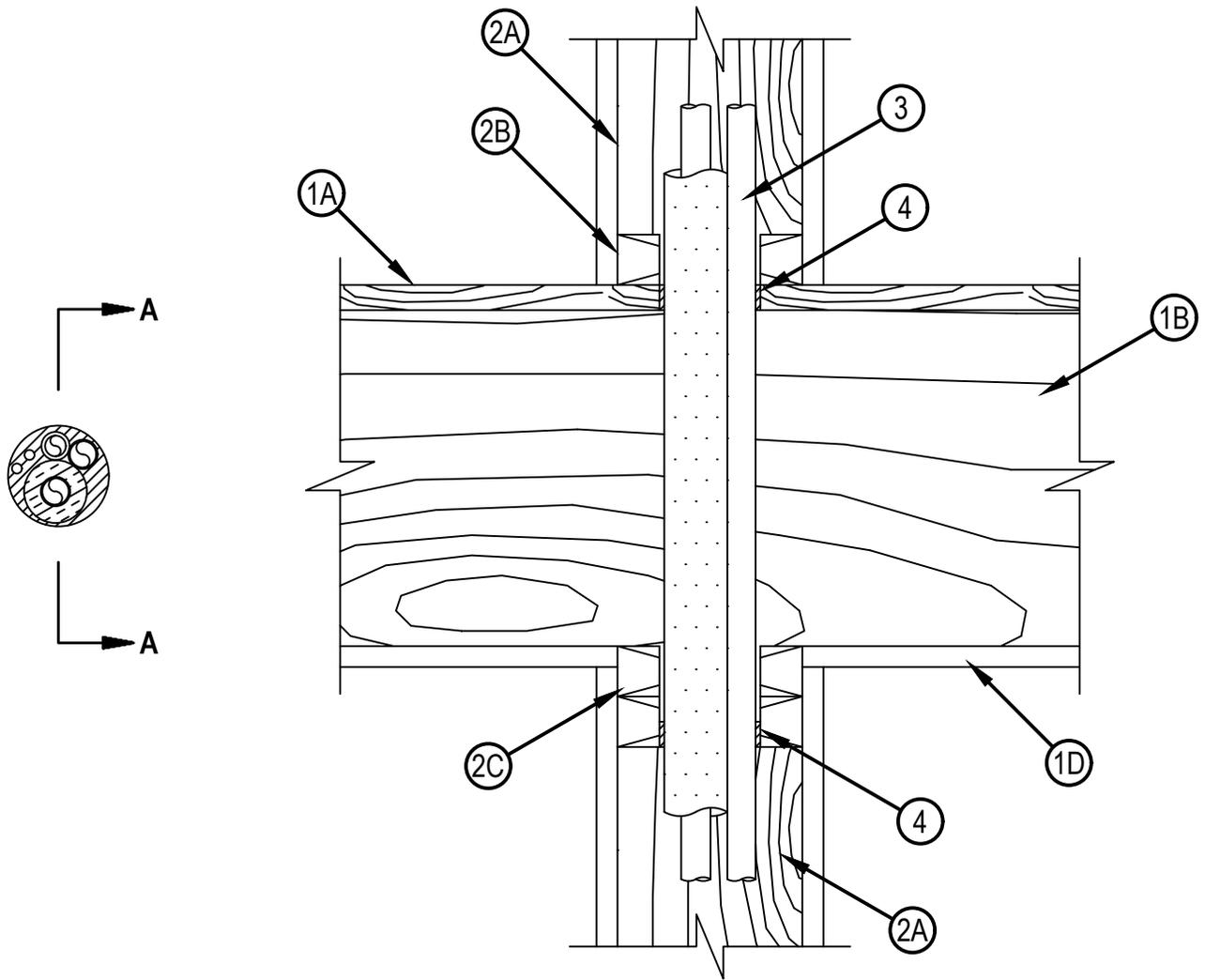


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

# System No. F-C-8014

FC 8014

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



**SECTION A-A**



**Hilti Firestop Systems**

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.  
January 21, 2015

# System No. F-C-8014

FC 8014

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 wood 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, as summarized below:
  - A. Floor System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in individual Floor-Ceiling Design. Max diam of floor opening is 3 in. (76 mm).
  - B. 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 end firestopped.
  - C. Gypsum Board\* — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Max diam of openings is 3 in. (76 mm).
2. Chase Wall — (Optional) - The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - A. Studs — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
  - B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted.
  - C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of openings is 3 in. (76 mm).
  - D. Gypsum Board\* — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.
3. Through-Penetrants — Pipes, conduits, tubing and cables to be bundled and centered in the opening. The space between penetrants and the periphery of the opening shall be min 1/4 in. to max 3/4 in. (6 to 19 mm). Penetrants to be rigidly supported on both sides of the floor-ceiling assembly.
  - A. Metallic Pipes — A max of two metallic pipes, conduits or tubing, (one 3/4 in. diam and one 1/2 in. diam) to be installed within the firestop system. The following types and sizes of metallic pipes, conduits or tubing may be used:
    - A1. Steel Pipe — Nom 3/4 in. (19 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
    - A2. Conduit — Nom 3/4 in. (19 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
    - A3. Copper Tubing — Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing.
    - A4. Copper Pipe — Nom 3/4 in. (19 mm) diam (or smaller) Regular (or heavier) copper pipe.
  - B. Nonmetallic Pipes — A max of one nonmetallic pipe to be installed within the firestop system. The following types and sizes of nonmetallic pipes may be used:
    - B1. Polyvinyl Chloride (PVC) Pipe — Nom 1/2 in. (13 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
    - B2. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 1/2 in. (13 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - C. Cables — A max of two 4/C No. 18 AWG (or smaller) thermostat cables with PVC insulation and PVC/nylon jacketing material.
  - D. Tube Insulation — Plastic+ — Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on a max of one metallic pipe or tubing.

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 of 94-5VA may be used.
4. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of fill material applied within the annulus, flush with the bottom surface of the ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS — ONE Sealant or FS-ONE MAX Intumescent Sealant

\*Bearing the UL Classification Marking

+Bearing the UL Recognized Component Mark



**Hilti Firestop Systems**

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.  
January 21, 2015

Page: 2 of 2