

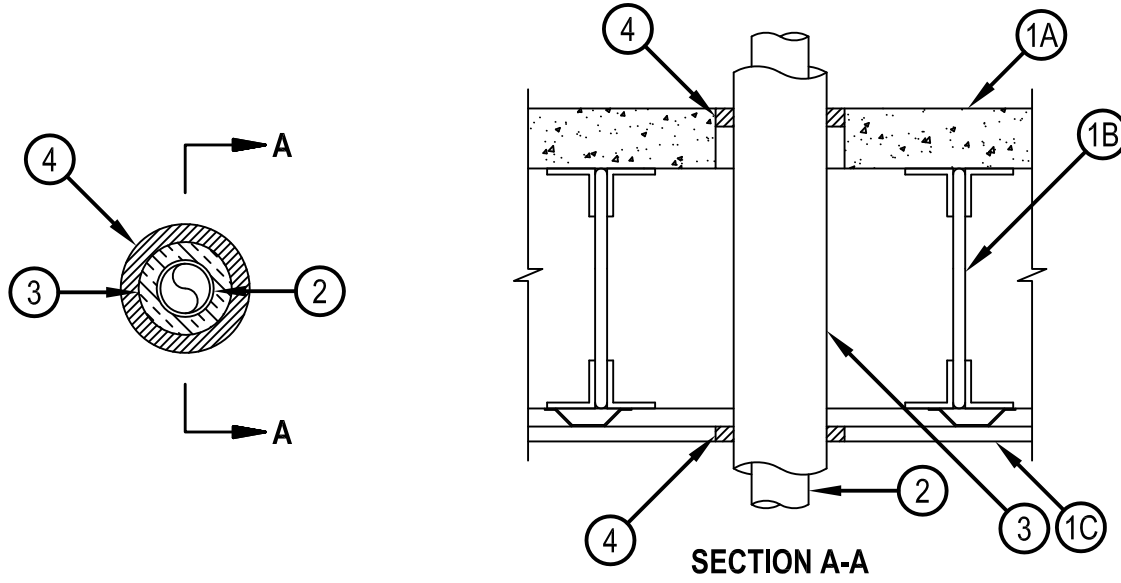


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-E-5004

FE 5004

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



- 1. Floor-Ceiling Assembly** — The 1 hr fire rated concrete and steel joist Floor-Ceiling assembly shall be constructed of the materials in the individual G500 Series Design in the UL Fire Resistance Directory, as summarized below:

 - A. Concrete Floor** — Normal weight or lightweight (100-150 pcf or 1600-2400 kg/m³) concrete over metal lath or steel deck as specified in the individual G500 Series Design. Diam of floor opening to be 5-1/8 in. (130 mm).
 - B. Joists Steel** — Joists or Structural Steel Members* as specified in the individual G500 Series Design.
 - C. Gypsum Board*** — Min 5/8 in. (16 mm) thick, screw-attached to furring channels as specified in the individual G500 Series Design. Diam of ceiling opening to be 1-1/2 in. (38 mm) larger than OD of insulated pipe (Item 2 and 3).
- 2. Through Penetrant** — One metallic pipe or tube to be installed within the opening. Penetrant to be located approx midway between joists and rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic tubes or pipes may be used:

 - A. Copper Tube** — Nom 2 in. (51 mm) diam (or smaller) Type L (or heavier) copper tube.
 - B. Copper Pipe** — Nom 2 in. (51 mm) diam (or smaller) Regular (or heavier) copper pipe.
 - C. Steel Pipe** — Nom 2 in. (51 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- 3 Tube Insulation - Plastics+** — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The annular space between the insulated through penetrant and the periphery of the opening shall be a min of 1/2 in. (13 mm) to a max 1 in. (25 mm).
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 Materials* - Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of gypsum board.
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.



Hilti Firestop Systems

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