

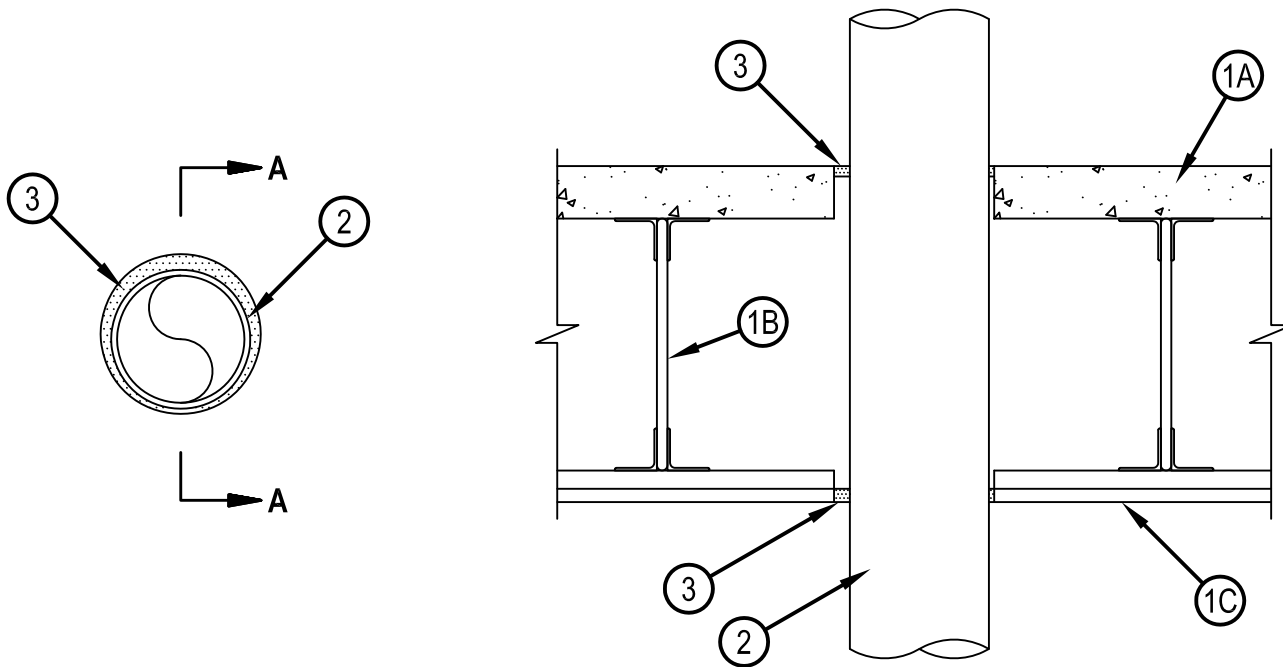


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

# System No. F-E-1004

FE 1004

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**

- 1. Floor-Ceiling Assembly** — The 1 hr fire rated concrete and steel joist Floor-Ceiling assembly shall be constructed of the materials and in the manner described 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/m<sup>3</sup>) concrete over metal lath or steel deck as specified in the individual G500 Series Design. Diam of floor opening to be max 1 in (25 mm) larger than OD of through penetrant.
  - 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 max 1 in. (25 mm) larger than OD of through penetrant.
- 2. Through Penetrant** — One metallic pipes, conduit or tube to be installed either concentrically or eccentrically within the opening. Annular space to be min 1/4 in. (6 mm) to max 3/4 in. (19 mm). 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 pipes, conduits or tubes may be used:

  - A. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
  - B. Iron Pipe — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
  - C. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
  - D. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
  - E. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
- 3. Fill, Void or Cavity Materials\*- Sealant** — Min 1/2 in. (13 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**

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