



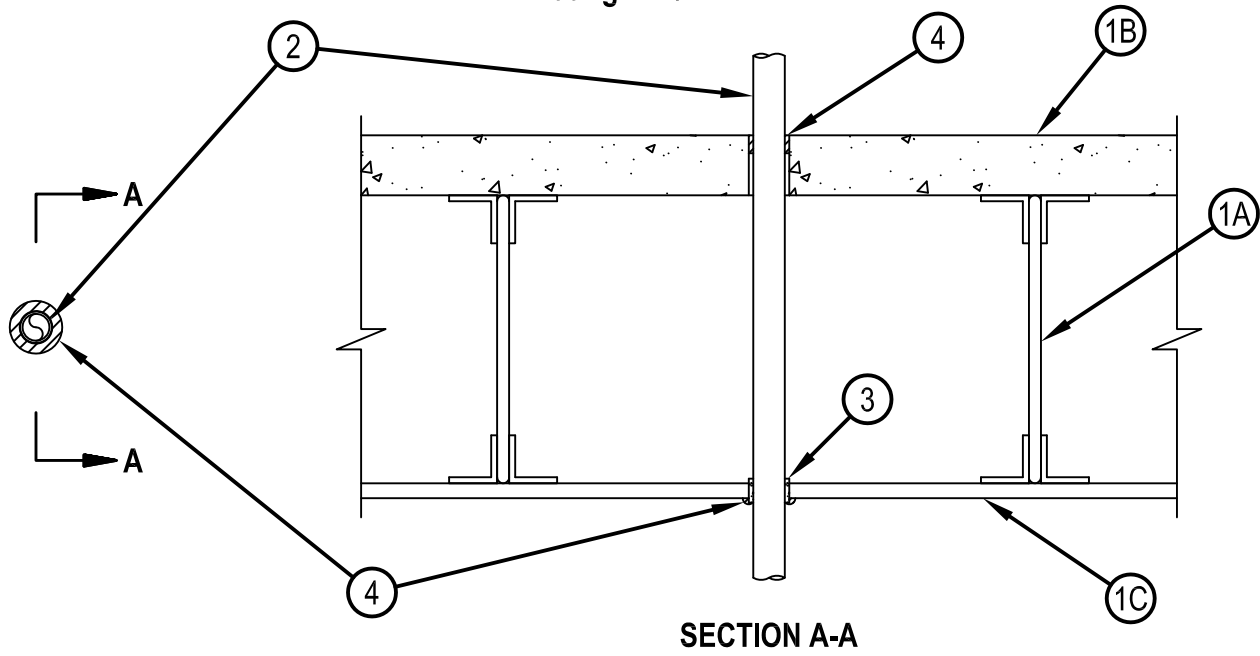
Classified by  
Underwriters Laboratories, Inc.  
to CAN/ULC-S115

## System No. F-E-2005

F Rating — 1 Hr  
FT Rating — 1/4 Hr  
FH Rating — 1 Hr  
FTH Rating — 1/4 Hr



FE 2005



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 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 1600-2400 kg/m<sup>3</sup> (100-150 pcf) concrete over metal lath or steel deck as specified in the individual G500 Series Design. Diam of floor opening to be max 1 in 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 16 mm (5/8 in.) thick, screw-attached to furring channels as specified in the individual G500 Series Design. Diam of ceiling opening to be max 25 mm (1 in.) larger than OD of through penetrant.
2. Through Penetrants — One non-metallic tube to be installed concentrically within the firestop system. Annular space between tube and periphery of opening shall be minimum 6 mm (1/4 in.) to max 13 mm (1/2 in.) Tube to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of non-metallic tubes or pipes may be used:
  - A. Crosslinked Polyethylene (PEX) Tubing — Nom 25 mm (1 in.) diam (or smaller) SDR9 PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 25 mm (1 in.) drain (or smaller) SDR 11 CPVC for use in closed (process or supply) piping systems.

IPEX INC — AquaRise
3. Fill, Void or Cavity Materials\* - Wrap Strip — Nom 5 mm (3/16 in.) thick by 25 mm (1 in.) wide intumescent wrap strip. One layer of wrap strip tightly wrapped around tube and held in place with tape. Wrap strip centered in annular space extending from both sides of gypsum board.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W25/1" Wrap Strip
4. Fill, Void or Cavity Materials\* - Sealant — Min 19 mm (3/4 in.) depth of fill material applied within the annulus, flush with the top surface of floor. A 6 mm (1/4 in.) diam bead of fill material shall also be applied at the wrap strip/gypsum board interface.  
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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