



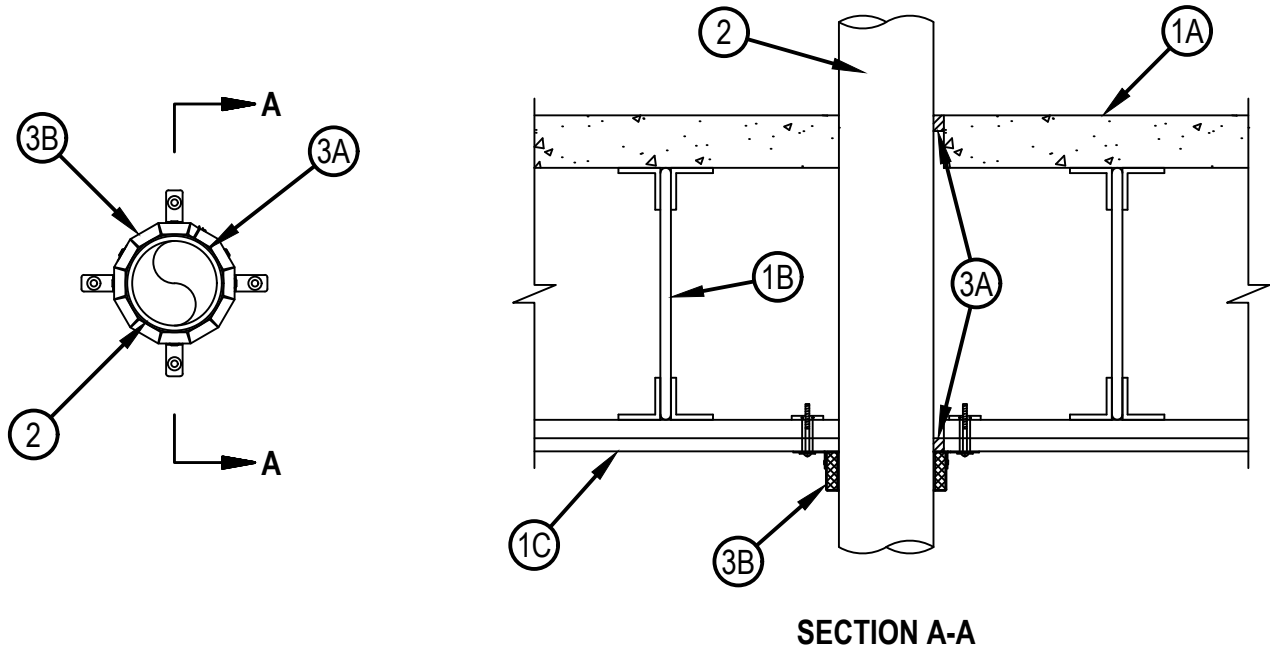
Classified by  
Underwriters Laboratories, Inc.  
to CAN/ULC-S115

## System No. F-E-2006

F Rating — 1 Hr  
FT Rating — 1 Hr  
FH Rating — 0 Hr  
FTH Rating — 0 Hr



FE 2006



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 13 mm (1/2 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 13 mm (1/2 in.) larger than OD of through penetrant.
2. Through Penetrants — One nonmetallic pipe to be installed approx midway between joists and installed either eccentrically or concentrically within the firestop system. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be nom 13 mm (1/2 in.) larger than the outside diam of through-penetrant. The annular space between the through penetrant and the periphery of the opening shall be a min. 0 in. (point contact) to a max of 13 mm (1/2 in.). Pipe to be rigidly supported on both sides of the 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 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - B. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - C. 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) or vented (drain, waste or vent) piping systems.
  - D. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) SDR 11 IPEX AquaRise CPVC for use in closed (process or supply) piping systems.
  - E. XFR Polyvinyl Chloride (PVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 XFR-PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.



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

- A. Fill, Void or Cavity Material\* — Sealant — Min 19 mm (3/4 in.) thickness of fill material applied within the annulus, flush with top surface of floor. Min 16 mm (5/8 in.) thickness of fill material applied within annulus, flush with underside of gypsum board ceiling. When Through-Penetrant Item 2E is used in the firestop system, the FS-ONE MAX Intumescent Sealant must be used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 or FS-ONE MAX Intumescent Sealant.

Note: CP 606 not suitable for use with CPVC pipes

- B. Firestop Device\* — Galvanized steel collar lined with an intumescent material sized to fit the specific diam of through-penetrant. Device shall be installed around the through-penetrant in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to bottom surface of gypsum board ceiling using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 38 and 51 mm (1-1/2 and 2 in.) diam pipes, 3 anchor hooks for 76 and 102 mm (3 and 4 in.) diam pipes.) The anchor hooks are to be secured to the gypsum board ceiling with 5 mm (3/16 in.) diam by 64 mm (2-1/2 in.) long toggle bolts along with min 32 mm (1-1/4 in.) diam steel washers.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP643 50/1.5"N, CP643 63/2"N, CP643 90/3"N, CP643 110/4"N Firestop Collar

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

