



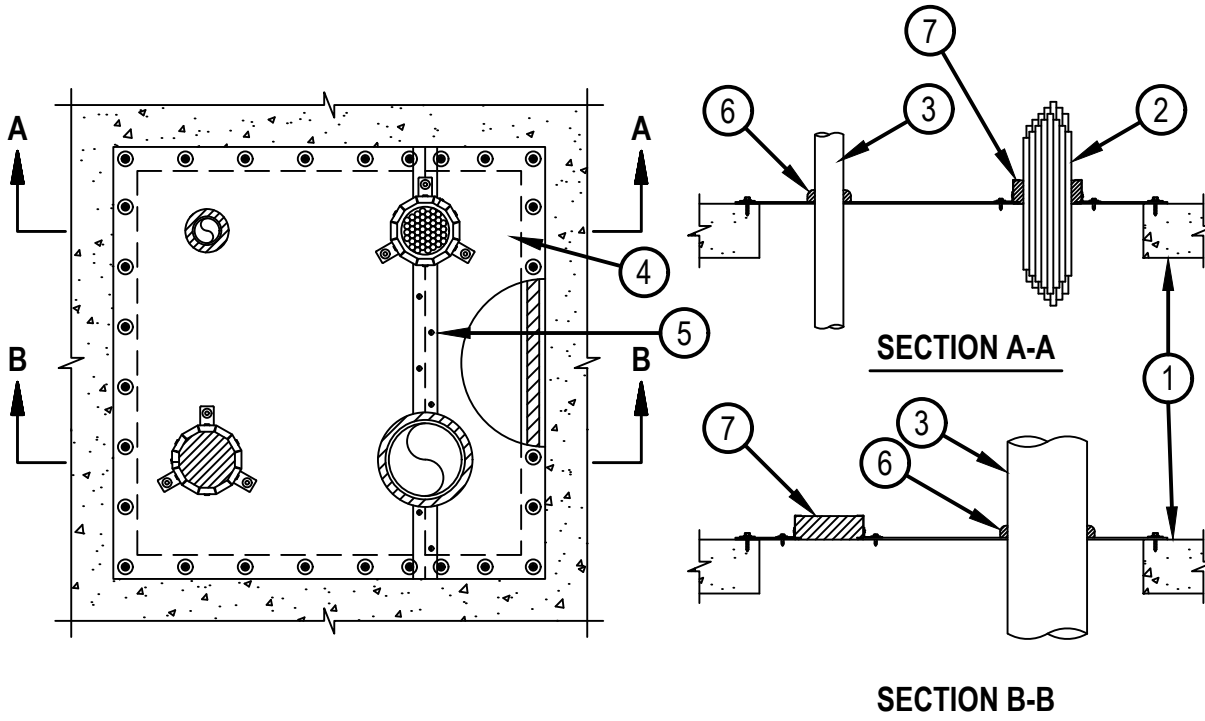
Underwriters Laboratories, Inc.  
to CAN/ULC-S115

# System No. C-AJ-8317

F Rating - 3 Hr  
FT Rating - 0 Hr  
FH Rating - 0 Hr  
FTH Rating - 0 Hr



CAJ 8317



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening 1024 in.<sup>2</sup> (6606 cm<sup>2</sup>) with max dimension 32 in. (813 mm).  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Cables — One or more max 4 in. (102 mm) diam cable bundles installed within the opening. The space between cables and periphery of opening shall be min 1 in. (25 mm). Any combination of the following types and sizes of cables may be used:
  - A. Max 4/0 AWG aluminum conductor type RHH ground cable.
  - B. Max 7/C copper conductor control cable with PVC or XLPE jacket and insulation.
  - C. Max 100 pair No. 24 AWG copper conductor communication cable with polyvinyl chloride insulation and jacket material.
  - D. Max 3/8 in. (10 mm) diam multiple fiber optical communication cable jacketed with polyvinyl chloride.
  - E. Max 25 pr/24 AWG telephone cable with polyethylene insulation and polyvinyl chloride jacket.
  - F. Max 4 pair no.22 AWG Cat 5 or 6 computer cable.
  - G. Max RG 6/u coaxial cable.
  - H. Through Penetrating Product\* — Any max 2/C No. 18 AWG (or smaller) Metal-Clad Cable+ or Armored Cable+ with steel or aluminum jacket currently Classified under the Through Penetrating Products category.  
See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers.



Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.  
June 8, 2023

3. Through Penetrants — One or more of the following pipes or conduits installed within the opening. The space between pipes or conduits, pipes or conduit and cables, and between pipes or conduits and periphery of opening shall be min 1 in. (25 mm). The following types and sizes of metallic pipes or conduits may be used:

- A. Steel Pipe — Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
- B. Iron Pipe — Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
- C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
- D. Conduit — Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
- E. Copper Tubing — Nom 2 in. (51 mm) diam (or smaller) Type L (or heavier) copper tubing.
- F. Copper Pipe — Nom 2 in. (51 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. Fill, Void or Cavity Materials\* — Composite Sheet — Rigid aluminum foil-faced intumescent sheet with steel backer. Sheets cut to tightly follow the contour of the cable bundle and/or through-penetrants with an annular space equal to or less than 1/4 in. (6 mm). Sheets cut to lap a min of 2 in. (51 mm) onto floor or wall surfaces. Only one seam may exist in the composite sheet. Sheet installed on top surface of floor or both surfaces of wall. Sheet to be installed with the steel backer exposed (aluminum foil facing against floor or wall surface) and secured to floor or wall surface with min 3/16 in. (4.8 mm) diam by 1-1/4 in. (32 mm) long steel anchor screws, in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers. Max spacing of fasteners not to exceed 6 in. (152 mm) and max 2 in. (51 mm) from ends with additional fasteners located on each side of butted seams or slits.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Hilti CFS-COS Firestop Composite Sheet

5. Cover Strip — Min 2 in. (51 mm) wide strip of min 0.021 in. thick (26 ga) stainless steel centered over entire length of the butted seam or slit made in the composite sheet (Item 5). Prior to installation of the steel strip, the seam or slit in the composite sheet shall be covered with a nom 1 by 1/8 in. (25 by 3 mm) thick strip of putty or 1/2 in. (13 mm) bead of sealant (Item 7). Steel cover strip secured to steel backer of composite sheet with steel sheet metal screws or steel rivets spaced max 3 in. (76 mm) OC on each side of seam or slit.

6. Fill, Void or Cavity Materials\* — One layer of 1 by 1/8 in. (25 by 3 mm) thick putty strips or 1/2 in. (13 mm) diam bead of sealant positioned under composite sheet around entire perimeter of through opening and under steel cover strip. In addition, Min. 1 in. (25 mm) wide by 1 in. (25 mm) high dome of putty or sealant applied around the penetrating items at their egress from the intumescent sheet on the top surface of the sheet in floors or at both surfaces of each sheet on each side of a wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 619T Firestop Putty Roll, CP 618 Firestop Putty Stick or FS-ONE MAX Intumescent Firestop Sealant

7. Firestop Device\* — Firestop device consisting of a steel collar with plug to be centered over opening and mounted to top surface of composite sheet on top of floor. For walls, one device is required on each side of wall, centered over opening, and mounted to outer faces of composite sheet on both sides. For openings with cables, plug within collar cut to fit tightly around the cable bundle. Collar secured to composite sheet on top side of floor, or on both sides of wall using the anchor hooks provided with the collar. The anchor hooks are to be secured with No. 10 by 3/4 in. (19 mm) long steel sheet metal screws with min 3/4 in. (19 mm) diam steel washers.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CC 4" Firestop Cable Collar

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

