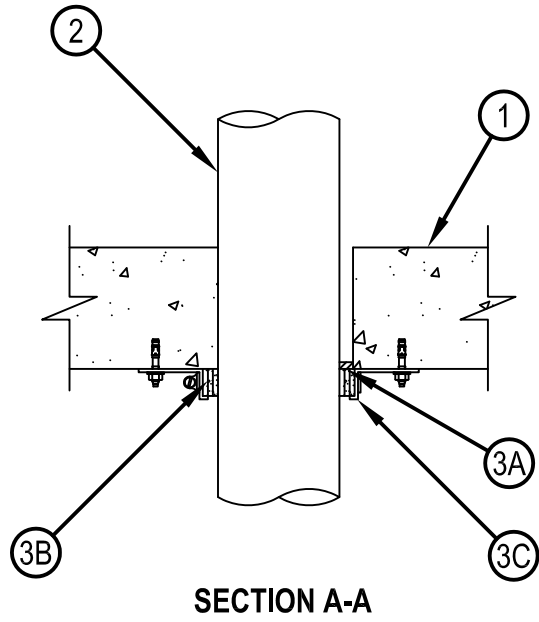
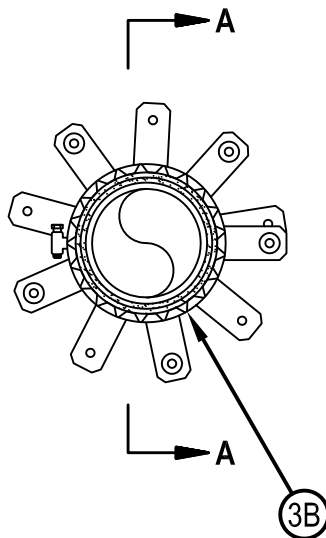




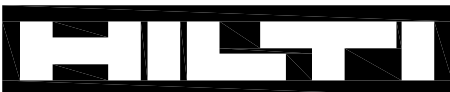
Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

**System No. C-AJ-2435**  
**F Rating - 2 Hr**  
**T Rating - 1-3/4 & 2 Hr (See item 3B)**

CAJ 2435



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf) (1600 -2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diameter of opening is 5 in. (127 mm).  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space between pipe and periphery of opening to be min 0 in. (point contact) and max 1/2 in. (13 mm). Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:
  - A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR 13.5 CPVC for use in closed (process or supply) piping systems.
  - C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



**Hilti Firestop Systems**

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January 09, 2015

## System No. C-AJ-2435

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

A. Fill, Void or Cavity Materials\* - Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with bottom surface of floor or both surfaces of wall.

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

B. Fill, Void or Cavity Material\* — Wrap Strip — Nom 3/16 in. (4.8 mm) thick by 1 in. (25 mm) wide intumescent wrap strip. Layers of wrap strip are continuously wrapped around the pipe with end held in place with tape. Wrap strip butted tightly against bottom surface of floor or both surfaces of wall. T rating is 1-3/4 hour for 3 in. (76 mm) diam. and smaller pipe, and 2 hour for 4 in. (102 mm) diam pipe.

Nom Diam of Pipe, in. (mm)	Number of Wrap Strips
4 (102)	2
3 (and smaller) (76)	2

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648-E-W25/1" Wrap Strip

C. Steel Collar — Collar fabricated from coils of precut min 0.017 in.(0.5 mm) thick (No. 28 MSG) galv steel available from the sealant manufacturer. Collar shall be nom 1 in. deep with 1 in. wide by 2 in. long anchors tabs on 2 in. (51 mm) centers for securement to floor or wall assembly. The anchor tabs shall be bent 90 degree outward for securement to the floor or wall assembly. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in.(4.8 mm) long, prebent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min. 1 in (25 mm) at seam. A nom 1/2 in. (13 mm) wide stainless steel hose clamp shall be secured to the collar at its mid-height. Optional securement of the collar may be accomplished with two sheet metal screws screwed though the overlapping portion of the collar. The length of the sheet metal screws shall not exceed the thickness of the wrap strip. Collar secured to concrete slab at every other tab or with 3 equal angle tabs, with 1/4 in.(6 mm) diam by 1-3/4 in. (44 mm) long steel expansion type masonry fasteners, 1-1/4 in (32 mm)long concrete screw anchors or 0.145 in. (3 mm) diam by 1-1/4 in.(32 mm) long powder actuated fasteners utilizing a 1-7/16 (36 mm) diam by 1/16 in.(1.5 mm) thick steel washer. As alternates to the anchors specified above, Hilti 1/4 in.(6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchor, Hilti 1/4 in. (6 mm) diam by 1-3/4 in. (44 mm) long KWIK-BOLT 3 steel expansion anchor or Hilti X-DNI 27 P8 S15 powder actuated floor pin with integral nom 9/16 in. (15 mm) diam washer may be used. In floor assemblies, one collar to be used at the bottom of the concrete floor only. In wall assemblies, a collar is used on both surfaces.

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

