

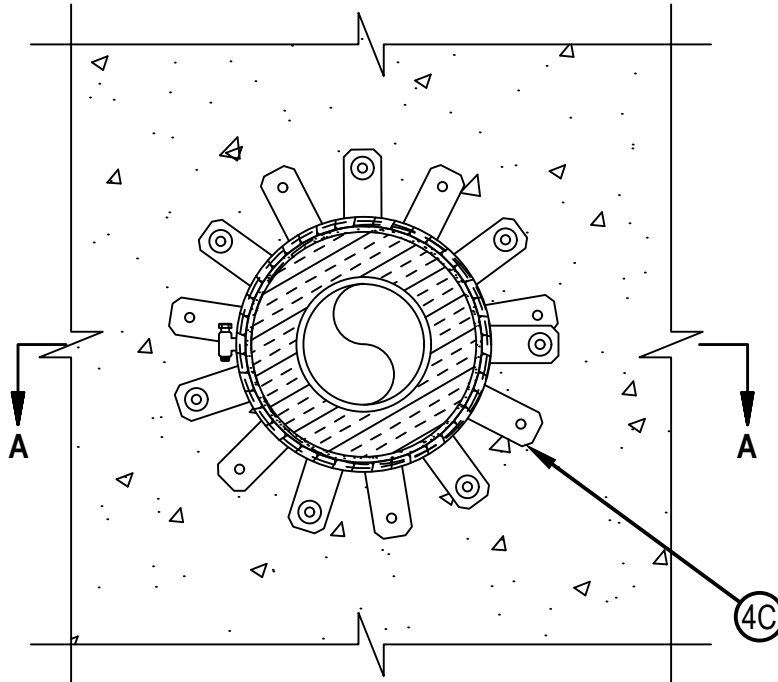


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

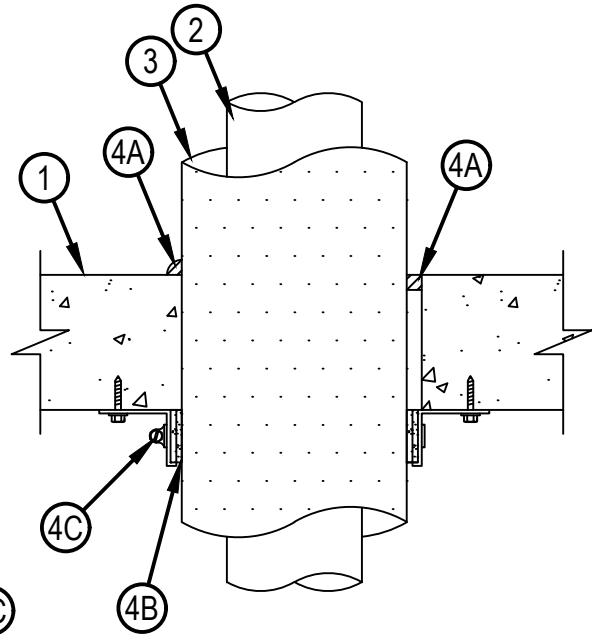
System No. C-AJ- 5457

CAJ 5457

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T RATING — 1-3/4 HR	FT Rating — 1-3/4 Hr
	FH Rating — 2 Hr
	FTH Rating — 1-3/4 Hr



BOTTOM VIEW



SECTION A-A



Hilti Firestop Systems

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July 03, 2024

1. Floor or Wall Assembly —Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in. (203 mm). Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units*, Max diam of opening is 7 in. (178 mm) when installed in a precast concrete unit.

See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. Through-Penetrant —One metallic pipe, conduit or tubing to be installed within the firestop device. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types of pipe, conduit or tubing may be used.
 - A. Steel Pipe—Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Cooper Tubing—Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - D. Copper Pipe—Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Pipe Insulation —Nom 1-1/2 in. (38 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing with skin. Annular space between pipe insulation and periphery of opening to be min 0 in. (point contact) and max 5/8 in. (16 mm).

See Plastics (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

4. Firestop System —The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Material - Sealant* —Min 1/2 in. (13 mm) thickness of fill material applied within annulus, at point contact, a min 1/2 in. (13 mm) bead of fill material shall be applied at the concrete/insulated pipe interface on top surface of floor or both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Intumescent Sealant or FS-ONE MAX Intumescent Sealant
 - B. Fill, Void or Cavity Material* — Wrap Strip —Nom 3/16 in. (4.8 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. The wrap strip is continuously wrapped around the outer circumference of the insulated pipe covering two times, with the ends to be butted end to end and held in place with (masking or aluminum) tape. The top edge of the wrap strip shall be butted tightly against the bottom surface of the concrete floor. In walls, the wrap shall be installed on both surfaces of the wall such that the wrap strip is butted tightly against the surface on each side of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E Wrap Strip

- C. Steel Collar —Steel collar fabricated from coils of precut min 0.016 in. (0.41 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to bottom of floor or both surfaces of wall. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (4.8 mm) long, pre-bent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min 2 in. (51 mm) at seam and held together by two #8 by 3/16 in. (4.8 mm) or 1/4 in. (6 mm) long sheet metal screws installed at the center of the 2 in. (51 mm) overlap. Optional securement of the collar may be accomplished with a nom 1/2 in. (13 mm) wide stainless steel hose clamp secured to the collar at its mid-height. Every other tab of collar secured to bottom of floor or both surfaces of wall with min 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel expansion bolts or min 0.145 in. (3.7 mm) diam by 1-1/4 in. (32 mm) long powder actuated fasteners utilizing a 1-7/16 in. (36 mm) diam by 1/16 in. (1.6 mm) thick steel washer or Hilti 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchor, or 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. (14 mm) diam washer.

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