

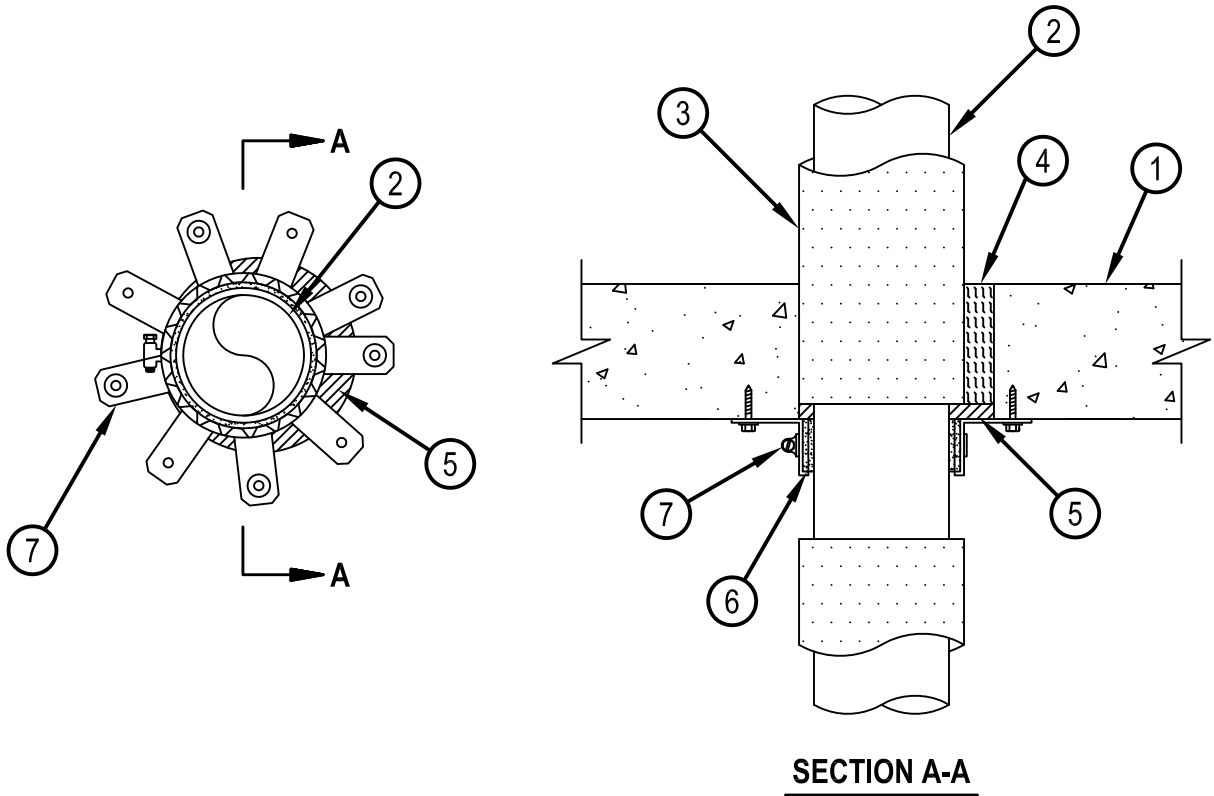


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-2674

CAJ 2674

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Ratings — 0 and 2 Hr (See Item 1)	FT Ratings — 0 and 2 Hr (See Item 1)
	FH Rating — 2 Hr
	FTH Ratings — 0 and 2 Hr (See Item 1)



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 or Wall Assembly — Min 4-1/2 in. (114 mm) thick floor or min 5 in. thick (152 mm) wall of lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Floor may also be constructed of any 6 in. (152 mm) thick UL Classified hollow core Precast Concrete Units*. Max diam of opening is 6 in. (152 mm).

The T, FT and FTH Rating of the firestop system is 2 hr for floor openings and 0 hr for wall openings.

See Concrete Blocks* (CAZT) in the Fire Resistance Directory for names of manufacturers.

See Precast Concrete Units* (CFTV) category in the Fire Resistance Directory for names of manufacturers.



Hilti Firestop Systems

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2. Through Penetrant — One nonmetallic penetrant to be installed within the firestop system. Penetrant to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of penetrants may be used.
 - A. Crosslinked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 Uponor AquaPEX or Wirsbo hePex PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
3. Pipe Covering* — Nom 1/2 in. (13 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all service jacket. Pipe covering is discontinuous at the firestop device(s). In floors, the pipe covering abutts the top of the sealant (Item 5) and the bottom of the wrap strip/firestop collar (Items 6 and 7). In walls, the pipe covering within the opening abutts the sealant (Item 5) at both sides of wall, and the pipe covering abutts the wrap strip/firestop collar (Items 6 and 7) at both sides of wall. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The space between the insulated penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 7/8 in. (22 mm).

See Pipe and Equipment Covering-Materials — (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool firmly packed into annulus between insulated penetrant and opening, recessed from bottom surface of floor or both sides of wall to accommodate the sealant (Item 5).
5. Fill, Void Or Cavity Material - Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus between nonmetallic pipe and periphery of opening, flush with bottom surface of floor or both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS One Sealant or FS-ONE MAX Intumescent Sealant
6. Fill, Void or Cavity Material* — Wrap Strip — Nom 3/16 in. (5 mm) thick by nom 1-3/4 in. (44 mm) wide intumescent wrap strip is continuously wrapped around the outer circumference of the pipe three times with ends held in place with tape. Wrap strip butted flush against surface of sealant (Item 5) at bottom of floor or both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E Wrap Strip
7. Steel Collar — Steel collar fabricated from coils of precut min 0.016 in. (0.4 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 the underside of floor or both sides of wall. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, pre-bent 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. Every other anchor tab of collar secured to concrete floor or wall with 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long steel expansion type masonry fasteners, 1-1/4 in. (32 mm) long concrete screw anchors or 0.145 in. (3.5 mm) diam by 1-1/4 in. (32 mm) long powder actuated fasteners utilizing a nom 9/16 in. (15 mm) diam 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 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-U 27 P8S15 powder actuated floor pin with integral nom 9/16 in. (15 mm) diam steel washer may be used.

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

