



Classified by
Underwriters Laboratories, Inc.
to UL 1479

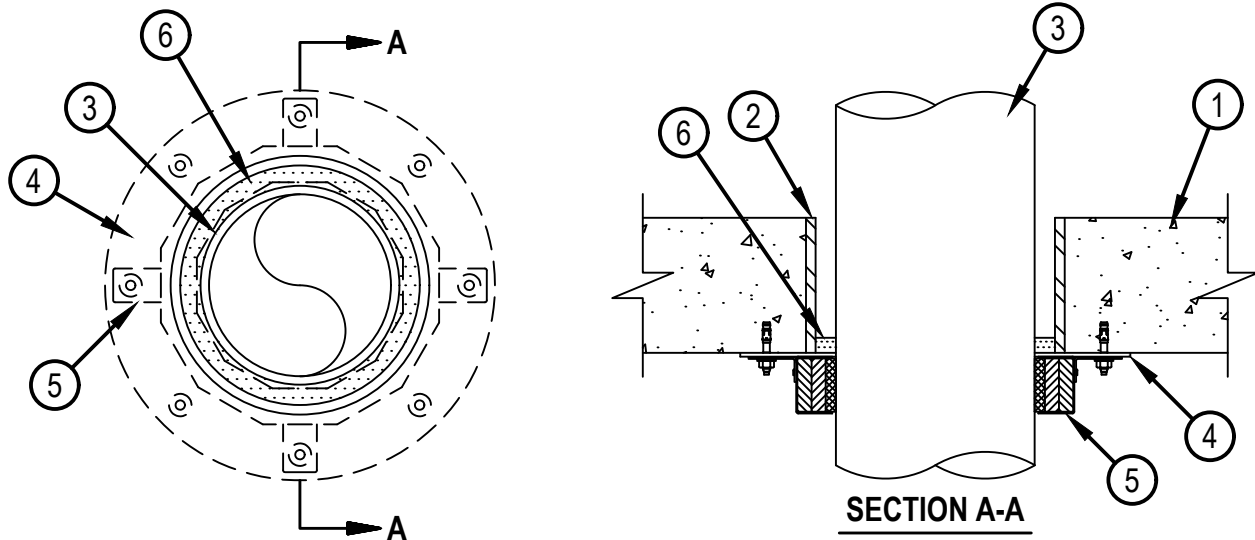
System No. C-AJ-2110

F Rating — 3 Hr

T Rating — 0 Hr

W Rating - Class 1 (See Items 2, 3 and 6)

CAJ 2110



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*. 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 8 in. (203 mm). For hollow core Precast Concrete Unit floors, max diam of opening is 7 in. (178 mm).

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

2. Steel Sleeve — (Optional) Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or thinner) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces. The W Rating does not apply when the steel sleeve is used.
3. Through Penetrants — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and sleeve (Item 3) shall be min 1/4 in. (6 mm) to max 1-1/4 in. (32 mm). For systems with a W Rating, the max annular space is 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. 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



Hilti Firestop Systems

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March 15, 2022

4. Metal Cover Plate — Min 18 ga. steel with max I.D. 1/4 in. (6 mm) larger than O.D. of pipe. Min. O.D. of cover plate to be sized to provide min 1-1/2 in. (38 mm) overlap of plate to floor or wall around periphery of opening. Cover plate can be two pieces with a min 2 in. (51 mm) overlap at the seam. Installed between underside of floor or both sides of wall between collar and floor or wall surfaces. When packing material (Item 7) is used, min thickness of cover plate is 28 ga. Secure cover plate to underside of floor or both sides of wall with same fasteners as specified in Item 5 below such that max distance between fasteners around periphery of cover plate is 5 in. (127 mm). One fastener required at each seam location in plate. Metal cover plate is optional when annular space between pipe and sleeve is max. 1/2 in. (13 mm).
5. Firestop Device* — Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of floor or both sides of wall floor using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes, 3 anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes, and 4 anchor hooks for 6 in. (152 mm) diam pipes). The anchor hooks are to be secured 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. 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-DNI 27 P8 S15 powder actuated floor pin with integral nom 9/16 in. (14 mm) diam washer may be used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 50/1.5"N, CP 643 63/2"N, CP 643 90/3"N, CP 643 110/4"N or CP 643 160/6"N Firestop Collar.
6. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with bottom surface of floor or both surfaces of wall assembly. Additionally, nom 1/4 in. (6 mm) beads of fill material applied between concrete and cover plate and between cover plate and firestop device. W Rating applies only when CP601S, CFS-S SIL GG, CFS-S SIL SL (floors only), Sealant is used. W Rating does not apply when hollow core precast concrete unit floors are used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CFS-S SIL GG, CFS-S SIL SL (floors only), CP606, FS-One Sealant or FS-ONE MAX Intumescent Sealant
Note: CP 606 not suitable for use with CPVC pipes
7. Packing Material (Not Shown. Optional) — Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from bottom surface of floor or both surfaces of wall to accommodate the required thickness of fill material (Item 6).

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