



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

System No. C-AJ-2053

F Ratings — 2 and 3 Hr (See Item 3F)

FT Ratings — 0 and 2 Hr (See Item 2)

FH Ratings — 0, 2 and 3 Hr (See Items 3E and 3F)

FTH Ratings — 0 and 2 Hr (See Items 2, 3E and 3F)

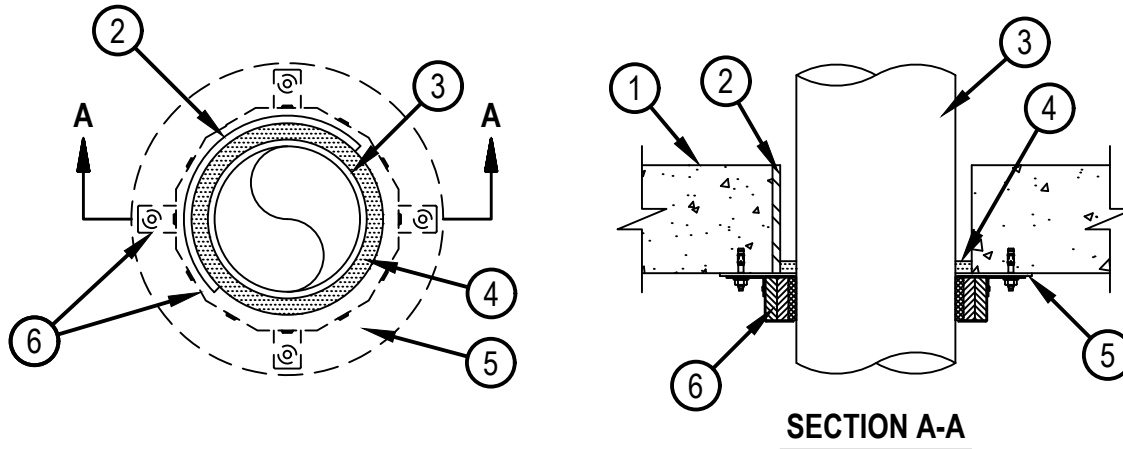
L Rating At Ambient — Less Than 1 CFM/ft²

L Rating 400 F — Less Than 1 CFM/ft²

W Rating — Class 1 (See Items 2, 3 and 4)



CAJ 2053



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 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight (1600-2400 kg/m³ or 100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 203 mm (8 in.).

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

2. Steel Sleeve — (Optional) - Nom 203 mm (8 in.) 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 and the 2 and 3 hr FT and FTH Ratings do 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 6 mm (1/4 in.) to max 32 mm (1-1/4 in.) except that for penetrant 3F, the max annular space is 13 mm (1/2 in.). For systems with a W Rating, the max annular space is 13 mm (1/2 in.). 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. 152 mm (6 in.) 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 152 mm (6 in.) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 152 mm (6 in.) 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 152 mm (6 in.) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. XFR 15/50 Polyvinyl Chloride (PVC) Pipe — Nom 152 mm (6 in.) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems. The FH and FTH Ratings are 0 hr when XFR PVC pipe is used in the system.

F. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4) diam (or smaller) IPEX Aquarise SDR21 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. The F Rating is 2 hr when this penetrant is used in the system. The FH Rating is 0 hr for this penetrant when it exceeds 52 mm (2 in.) diam. The FH Rating is 2 hr for this penetrant in 52 mm (2 in.) diam (or smaller).



Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of
Underwriters Laboratories, Inc.
October 26, 2021

System No. C-AJ-2053



CAJ 2053

4. Fill, Void or Cavity Material* — Sealant — Min 13 mm (1/2 in.) thickness of fill material applied within the annulus, flush with bottom surface of floor or both surfaces of wall assembly. Additionally, nom 6 mm (1/4 in.) beads of fill material applied between concrete and cover plate (Item 5) and between cover plate and firestop device (Item 6). W Rating applies only when CP601S or CFS-S SIL GG Sealant is used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP606, CFS-S SIL GG, FS-ONE MAX Intumescent Sealant

Note: CP 606 not suitable for use with CPVC pipes

5. Metal Cover Plate — Min 18 ga steel with max I.D. 6 mm (1/4 in.) larger than O.D. of pipe. Min. O.D. of cover plate to be 152 mm (6 in.) larger than O.D. of pipe. Installed between underside of floor or both sides of wall between collar and floor or wall surfaces.

6. 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 two anchor hooks for nom 38 and 51 mm (1-1/2 and 2 in.) diam pipes, three anchor hooks for nom 76 and 102 mm (3 and 4 in.) diam pipes, and four anchor hooks for nom 152 mm (6 in.) diam pipes. The anchor hooks are to be secured with min 6 mm (1/4 in.) diam by min 32 mm (1-1/4 in.) long steel expansion bolts. As alternates to the anchors specified above, Hilti 6 mm (1/4 in.) diam by 32 mm (1-1/4 in.) long KWIK-CON II+ concrete screw anchor or Hilti 6 mm (1/4 in.) diam by (45 mm) 1-3/4 in. long KWIK-BOLT 3 steel expansion anchor 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

7. Packing Material — (Not Shown) — Required only when XFR PVC pipe (Item 3E) is used with steel pipe sleeve (Item 2). Mineral wool batt insulation having min density of 4 pcf (64 kg/m³), firmly packed into annular space between steel sleeve and pipe flush with top surface of floor.

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



Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of
Underwriters Laboratories, Inc.
October 26, 2021

Page: 2 of 2