



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

System No. C-AJ-2035

F Ratings — 2 and 3 Hr (See Items 1 and 2H)

FT Ratings — 1 and 2 Hr (See Item 1)

FH Ratings — 0 and 2 Hr (See Item 2H)

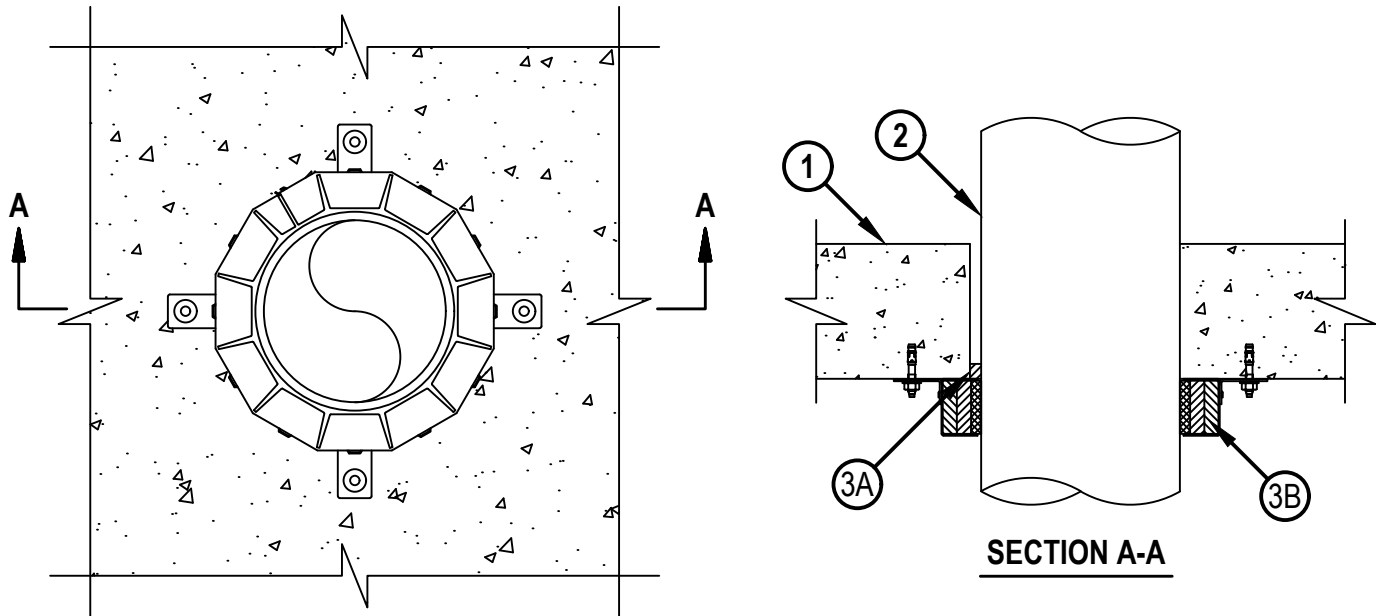
FTH Ratings — 0 and 2 Hr (See Item 2H)

L Rating at Ambient — Less Than 1 CFM/sq ft

L Rating at 400 F — Less Than 1 CFM/sq ft



CAJ 2035



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 64 mm (2-1/2 in.) or min 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight (1600-2400 kg/ m³ or 100-150 pcf) concrete for 2 hr and 3 hr F Rated assemblies, respectively. When penetrant Item 2H is used, the concrete thickness shall be min 114 mm (4-1/2 in.) and F Rating is limited to 2 hr. Wall may also be constructed of any UL Classified hollow core Precast Concrete Units*. Floor may also be constructed of any min 152 mm (6 in.) thick UL Classified hollow core Precast Concrete Units*. See Table under Item 2 for max diam of opening. The hourly FT Ratings are 1 hr and 2 hr for 2 hr and 3 hr F Rated assemblies, respectively.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufactures.

2. Through Penetrants — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min 0 mm (point contact). See Table below for the max annular space required between pipe and periphery of opening. 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) SDR11 or 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 system.
- 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.



Hilti Firestop Systems

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- E. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 152 mm (6 in.) diam (or smaller) IPEX Aquarise SDR 11 CPVC for use in closed (process or supply) piping systems.
- F. 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.
- G. Rigid Nonmetallic Conduit+ — Nom 102mm (4 in.) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).
- H. Chlorinated Polyvinyl Chloride (CPVC) Pipe —Nom 102 mm (4 in.) diam (or smaller) IPEX Aquarise SDR 21 CPVC for use in closed (process or supply) or vented (drain, waste, or vent) piping systems. The F Rating is 2 hr for this penetrant. The FT and FTH Ratings are 2 hr when this penetrant is used in 51 mm (2 in.) diam or smaller.

Nom Pipe Diam, mm (in.)	Max Diam of Opening, mm (in.)	Max Annular Space, mm (in.)
38 (1-1/2)	54 (2-1/8)	5 (3/16)
51 (2)	67 (2-5/8)	6 (1/4)
76 (3)	102 (4)	13 (1/2)
102 (4)	127 (5)	13 (1/2)
152 (6)	178 (7)	13 (1/2)

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

A. Fill, Void or Cavity Material* — 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. For systems with L Rating, min 1/2 in. (13 mm) thickness of FS-ONE MAX Intumescent Sealant shall be applied within the annulus, flush with top or bottom surface of floor.

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

B. Firestop Device* — 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 using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 38 and 51 mm (1-1/2 and 2 in.) diam pipes, 3 anchor hooks for 76 and 102 mm (3 and 4 in.) diam pipes, and 4 anchor hooks for 152 mm (6 in.) diam pipes). The anchor hooks are to be secured with 6 mm (1/4 in.) diam by min 32 mm (1-1/4 in.) long steel expansion bolts, or steel Tapcon® concrete screw anchors, in conjunction with min 19 mm (3/4 in.) diam steel washers with one anchor bolt in each anchor hook. As alternates to the anchors specified above, min 4 mm (0.145 in.) diam by 32 mm (1-1/4 in.) long powder actuated fasteners utilizing a 36 mm (1-7/16 in.) diam by 2 mm (1/16 in.) thick steel washer, Hilti 6 mm (1/4 in.) diam by 32 mm (1-1/4 in.) long KWIK-CON II+ concrete screw anchor, Hilti 6 mm (1/4 in.) diam by 44 mm (1-3/4 in.) long KWIK-BOLT 3 steel expansion anchor or Hilti X-DNI 27 P8 S15 powder actuated floor pin with integral nom 15 mm (9/16 in.) diam washer may be used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643N 50/1.5", CP 643N 63/2", CP 643N 90/3" CP 643N 110/" or CP 643N 160/6" Firestop Collar

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

+Bearing the UL Listing Mark



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