



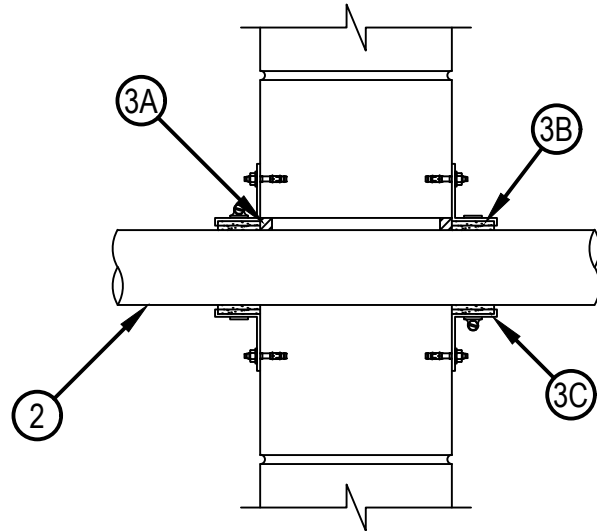
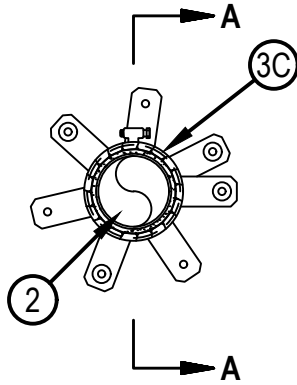
Classified by
Underwriters Laboratories, Inc.
to CAN/ULC-S115

System No. W-J-2321

F Rating - 2 Hr
T Rating - 0 Hr
FH Rating - 0 Hr
FTH Rating - 0 Hr



WJ 2321



SECTION A-A

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 Assembly — Min 152 mm (6 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 92 mm (3-5/8 in.).

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

2. Through Penetrant — One nonmetallic penetrant to be installed within the firestop system. Penetrant to be rigidly supported on both sides of the wall assembly. The annular space between penetrant and periphery of opening shall be min 0 mm (point contact) to max 13 mm (1/2 in.). The following types and sizes of penetrants may be used.

A. Crosslinked Polyethylene (PEX) Tubing — Nom 76 mm (3 in.) diam (or smaller) SDR 9 Uponor AquaPEX-a tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Fill, Void or Cavity Material* — Sealant — The firestop system shall consist of the following:

A. Steel Pipe — Min 13 mm (1/2 in.) thickness of fill material applied within annulus, flush with both surfaces of wall assembly.

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

B. Fill, Void or Cavity Material* — Wrap Strip — Nom 4.8 mm (3/16 in.) thick by 45 mm (1-3/4 in.) wide intumescent wrap strip. Two layers of wrap strip are continuously wrapped around the pipe and held in place with tape. Wrap strips are butted tightly against both sides of the wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Hilti CP 648E/1-3/4 Wrap Strip

C. Steel Collar — Steel collar fabricated from coils of precut min 0.4 mm (0.016 in.) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 44 mm (1-3/4 in.) deep with 25 mm (1 in.) wide by 51 mm (2 in.) long anchor tabs on 44 mm (1-3/4 in.) centers for securement to both sides of wall. The opposite side incorporates retainer tabs, 13 mm (1/2 in.) wide by 5 mm (3/16 in.) long, pre-bent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min 25 mm (1 in.) at seam. A nom 13 mm (1/2 in.) wide stainless steel hose clamp shall be secured to the collar at its mid-height. Every other anchor tab of collar secured to concrete wall with 6 mm (1/4 in.) diam by 32 mm (1-1/4 in.) long steel expansion type masonry fasteners, 32 mm (1-1/4 in.) long concrete screw anchors or 3.5 mm (0.145 in.) diam by 32 mm (1-1/4 in.) long powder actuated fasteners utilizing a nom 9/16 in. (15 mm) diam steel washer. 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 44 mm (1-3/4 in.) long KWIK-BOLT 3 steel expansion anchor, or Hilti X-U 27 P8S15 powder actuated floor pin with integral nom 15 mm (9/16 in.) 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.



Hilti Firestop Systems

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