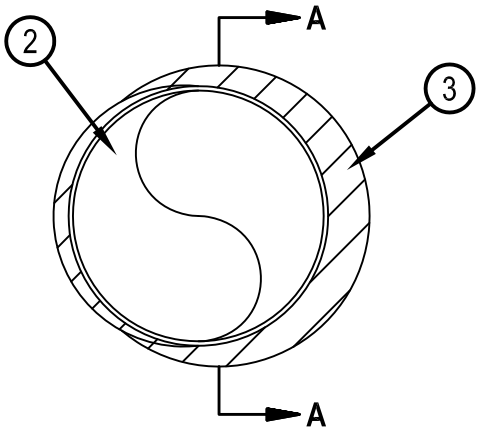
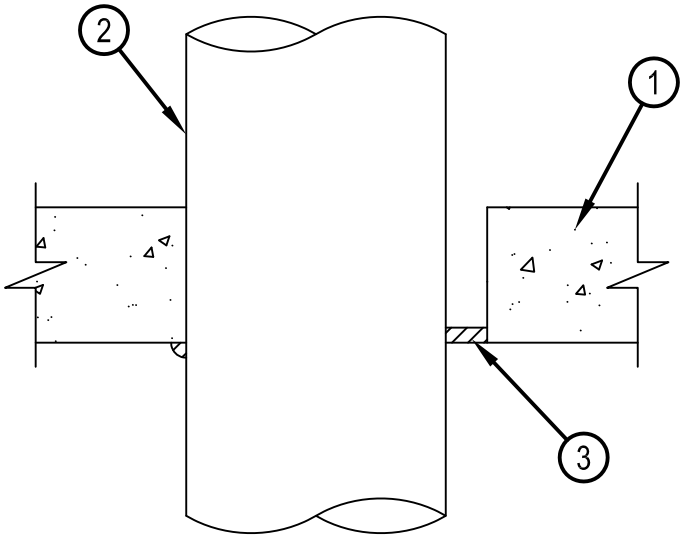
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-1534

F Rating - 2 Hr
T Rating - 0 Hr

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





SECTION A-A

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*. Max diam of opening is 10 in. (254 mm).

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

2. Through Penetrant — One metallic pipe, conduit or tubing to be installed concentrically or eccentrically within opening. The annular space between the through penetrant and the periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). Through penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of through penetrants may be used:
   A. Steel Pipe — Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.
   D. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
   E. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) rigid steel conduit.
3. Fill, Void or Cavity Materials* - Sealant — Min 1/2 in. (13 mm) thickness of fill material within the annulus, flush with bottom surface of floor or with both surfaces of wall. Min 1/2 in. (13 mm) bead of fill material applied at the concrete/through penetrant interface on bottom surface of floor or both surfaces of wall.

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

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