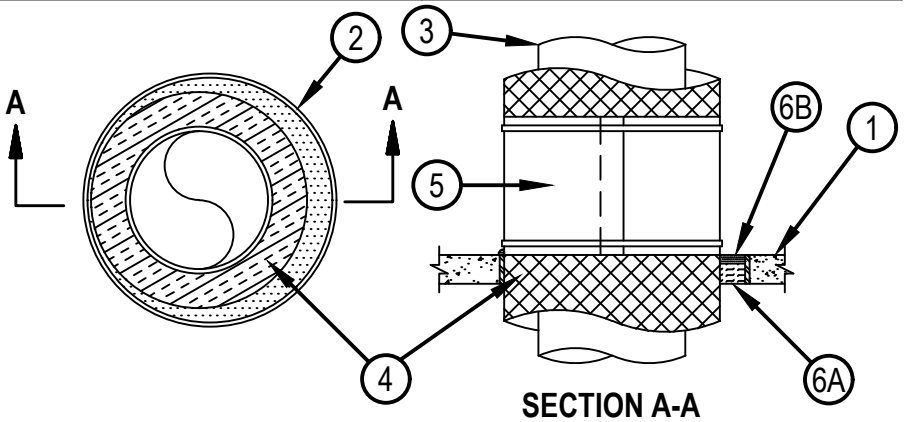
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-5277

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



SECTION A-A

1. Floor or Wall Assembly — Min 2-1/2 in. (64 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 20-5/8 in. (524 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve (Optional) — Nom 20 in. (508 mm) diam (or smaller) Schedule 40 steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces.
3. Through Penetrants — One metallic pipe or tubing to be positioned within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   C. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
4. Pipe Covering Materials* — Cellular Glass Insulation — Nom 1-1/2 in. to 3 in. (38 to 76 mm) thick cellular glass pipe insulation sized to the outside diam of the pipe or tube and installed in accordance with the manufacturer's instructions. The annular space between the insulated pipe and the periphery of the opening shall be min 1/2 in. (13 mm) to max 1-7/8 in. (48 mm). When the metal sleeve (Item 2) is not used, the annular space is min 0 in. (point contact) to max 1-7/8 in. (48 mm).
   PITTSBURGH CORNING CORP — FOAMGLAS
5. Metal Jacket — Min 12 in. (305 mm) long jacket formed of min 0.010 in. (0.254 mm) thick steel or aluminum sheet cut to wrap tightly around the pipe insulation with a min 2 in. (51 mm) lap. Jacket secured with min 1/2 in. (13 mm) wide stainless steel hose clamps or bands located within 2 in. (51 mm) of each end of the jacket and spaced a max of 10 in. (254 mm) OC. Jacket to be installed with abutting surface of sealant (Item 6B) on top of floor or both surfaces of wall.
6. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 1-1/2 in. (38 mm) thickness of min 4.0 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with the top surface of the floor or with both surfaces of the wall. At point contact location, a min 1/2 in. (13 mm) bead of fill material shall be applied at the concrete/insulated pipe interface on top 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.