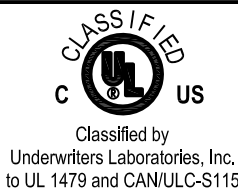
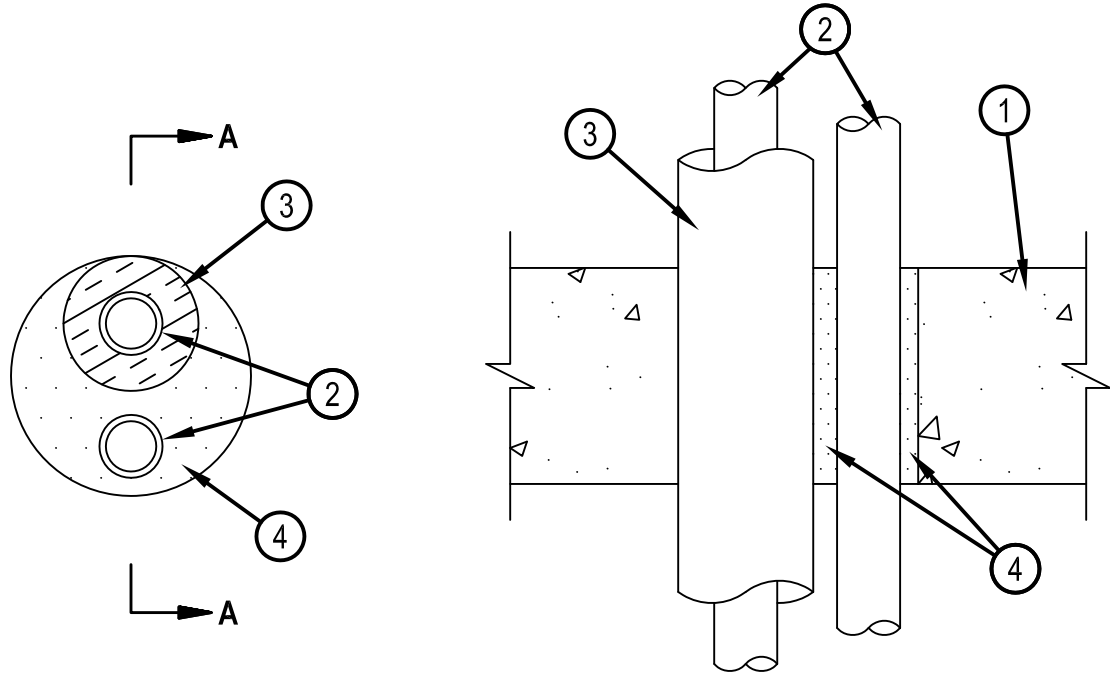


System No. C-AJ-8044



ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 3 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 5 in. (127 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
 2. Through-Penetrants — A max of 2 pipes, conduits or tubing to be installed within the opening. The space between pipes, conduits or tubing shall be min 1-1/8 in. (29 mm). The space between pipes, conduits or tubing and periphery of opening shall be min 3/8 in. (5 mm) to max 2 in. (51 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Copper Tubing — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - C. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.
 - D. Conduit — Nom 1 in. (25 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
 3. Tube Insulation — Plastic+ — (Optional) — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on one pipe, conduit or tube.
See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.
 4. Fill, Void or Cavity Material* — Sealant — Min 4-1/2 in. (114 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with 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.



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January 15, 2015