

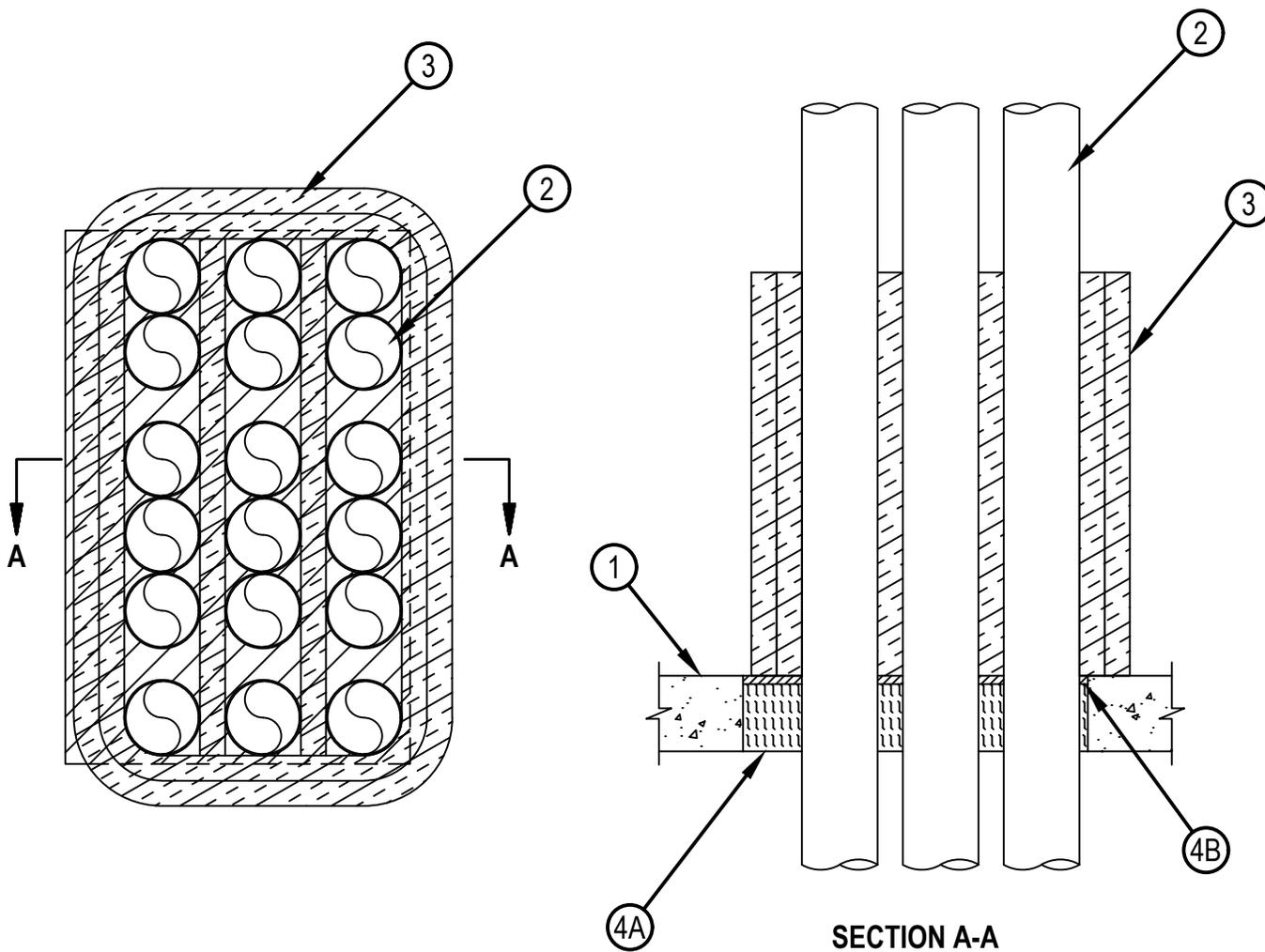


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1168

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

FA 1168



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Floor may also be constructed of any min 6 in. (152 mm) thick hollow core UL Classified Precast Concrete Units*. Max area of opening is 600 in² (3871 cm²) with a max dim of 30 in. (762 mm). Max area of opening in floor constructed of hollow-core precast concrete units is 49 in.2 (316 cm²) with a max dim of 7 in. (178 mm).

See Precast Concrete Units (CFTV) category in Fire Resistance Directory for names of manufacturers.



Hilti Firestop Systems

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September 29, 2017

2. Through-Penetrant — One or more metallic pipes, conduits or tubing installed concentrically or eccentrically within opening. Rows of pipes, conduits, or tubing spaced min 1-1/2 in. (38 mm) to max 3-1/2 in. (89 mm) apart. Annular space between penetrants within each row shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Annular space between penetrant and periphery of opening shall be min 1/2 in. (13 mm) to max 3-1/2 in. (89 mm). Penetrants to be rigidly supported on both sides of floor assembly. The following types and sizes of penetrants may be used:
 - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Conduit — Nom 4 in. (152 mm) diam (or smaller) steel conduit or steel electrical metallic tubing (EMT) or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.
3. Duct Wrap Material* — Min two layers of min 1-1/2 in. (38 mm) thick duct wrap tightly wrapped around penetrants to extend 24 in. (610 mm) above floor. The spaces between penetrants at the top of the duct wrap are to be tightly-packed with a nominal 2 in. (51 mm) depth of duct wrap material, flush with the top of the duct wrap layers. All longitudinal seams of both layers of duct wrap are sealed with foil tape.
THERMAL CERAMICS INC — FireMaster FastWrap+, FireMaster FastWrap XL, or Pyroscat Duct Wrap XL.
UNIFRAX I L L C — FyreWrap Duct Insulation or FyreWrap Duct 1.5 Insulation
4. Firestop System — The details of the firestop system shall be as follows:
 - A. Packing Material — Min 4 in. (102 mm) thick min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed at top surface of floor to accommodate the required thickness of fill material. In hollow-core floors, mineral wool batt insulation firmly packed into opening shall be flush with the bottom of the floor.
 - B. Fill, Void or Cavity Materials* - Sealant — Min 1/2 in. (13 mm) thickness of sealant applied within the annulus, flush with top surface of floor.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — 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.

