

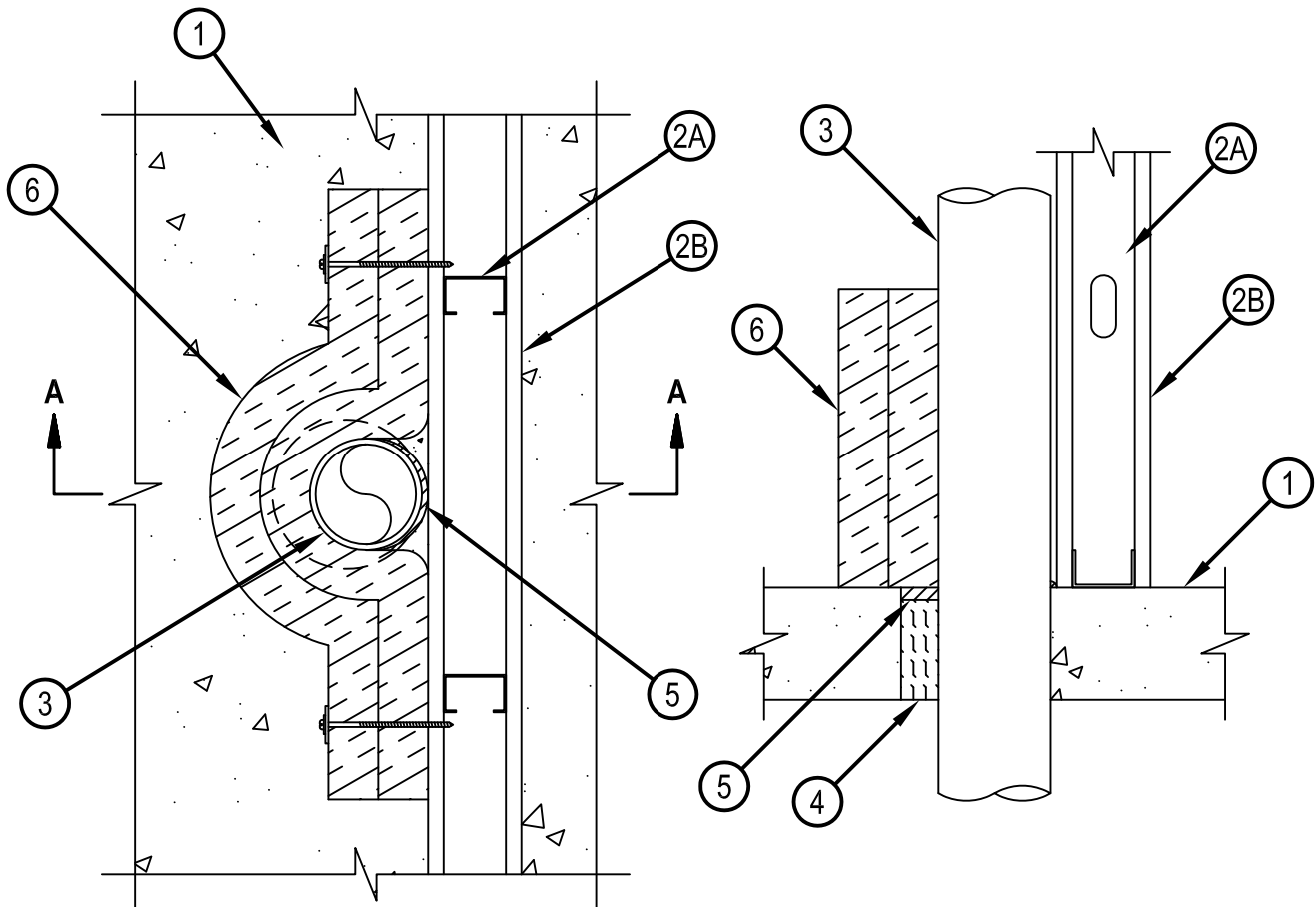


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

# System No. F-A-1134

FA 1134

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating - 2 Hr	F Rating - 2 Hr
T Rating - 2 Hr	FT Rating - 2 Hr
L Rating At Ambient - Less than 1 CFM/ft2	FH Rating - 2 Hr
L Rating At 400F - 4 CFM/ft2	FTH Rating - 2 Hr
	L Rating At Ambient - Less than 1 CFM/ft2
	L Rating At 400F - 4 CFM/ft2



**SECTION A-A**



**Hilti Firestop Systems**

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January 15, 2015

## System No. F-A-1134

FA 1134

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. As an alternate, any min 2 hr fire rated D700, D800 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory having a min 2-1/2 in. (64 mm) thickness of lightweight or normal weight concrete topping over the steel deck may be used. Max diam of opening is 6 in. (152 mm).
2. Wall Assembly — A 1 or 2 hr fire rated gypsum board/stud wall assembly located in close proximity to the penetrant (Item 3) shall be constructed of the materials and in the manner described within the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
  - A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
  - B. Gypsum Board\* — Nom 5/8 in. (16 mm) thick gypsum board as specified in the individual Wall and Partition Design.
3. Through Penetrant — One metallic pipe to be installed either concentrically or eccentrically through the opening in the floor. The annular space between the through penetrant and the periphery of floor opening shall be min 0 in. (point contact) to a max of 1-1/2 in. (38 mm). The space between the penetrant and the face of the gypsum wall (Item 2) shall be 1/4 to 1/2 in. (6 to 13 mm). Through penetrant to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipe or conduit may be used:
  - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
  - B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
  - C. Steel Conduit — Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit or steel electrical metallic tubing.
4. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool firmly packed into opening as a permanent form. Packing material to be recessed min 1/2 in. (13 mm) from top surface of floor to accommodate the required thickness of fill material (Item 4).
5. Fill, Void or Cavity Material\* — Sealant — Fill material applied to a min depth of 1/2 in. (13 mm) flush with top surface of floor. A min 1/4 in. (6 mm) bead of fill material to be applied at area of point contact.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
6. Batts and Blankets\* — Two layers of nom 2 in. (51 mm) thick fiberglass duct wrap, min 1 pcf (16 kg/m<sup>3</sup>), tightly butted to the top surface of the floor to extend min 12 in. (305 mm) above floor. Duct wrap to be tightly wrapped around exposed portion of penetrant and bent 90deg at face of wall to extend min 6-3/4 in. (171 mm) from each side of pipe. Each end of the duct wrap is secured to the gypsum wall with min two No. 12 by 5 in. (127 mm) steel screws and 1-1/4 in. (32 mm) diam washers located max 2 in. (51 mm) from edges of duct wrap and max 8 in. (203 mm) on center.

See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers. Any batts and blankets material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- 6A. Duct Wrap Material\* — As an alternate to Item 6, two layers of encapsulated duct wrap tightly butted to the top surface of the floor to extend min 12 in. (305 mm) above floor. Duct wrap to be tightly wrapped around exposed portion of penetrant and bent 90deg at face of wall to extend min 6-3/4 in. (171 mm) from each side of pipe. Each end of the duct wrap is secured to the gypsum wall with min two No. 12 by 5 in. (127 mm) steel screws and 1-1/4 in. (32 mm) diam washers located max 2 in. (51 mm) from edges of duct wrap and max 8 in. (203 mm) on center. One of the following types and thicknesses of duct wrap may be used:
  - 6A1. Nom 1-1/2 in. (38 mm) or 2 in. (51 mm) thick encapsulated duct wrap.

UNIFRAX I L L C — Fyrewrap Duct Insulation or FireWrap Duct 1.5 Insulation  
THERMAL CERAMICS INC — FireMaster FastWrap XL Duct Insulation.

\* 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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