

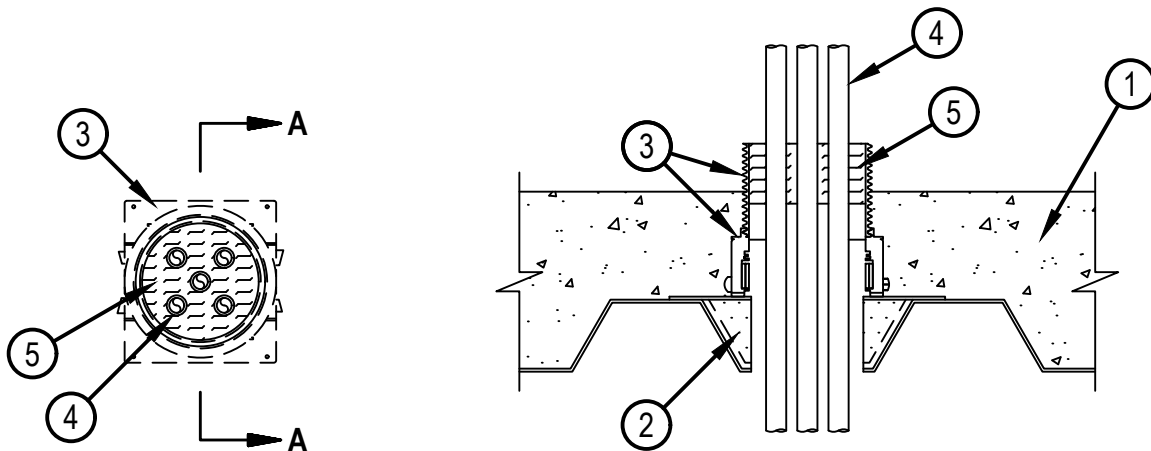


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1193

FA 1193

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 and 3 Hr (See Item 5)	F Ratings — 2 and 3 Hr (See Item 5)
T Ratings — 1/2, 1 and 2 Hr (See Item 5)	FT Ratings — 1/2, 1 and 2 Hr (See Item 5)
	FH Ratings — 2 and 3 Hr (See Item 5)
	FTH Ratings — 1/2, 1 and 2 Hr (See Item 5)



SECTION A-A

1. Floor Assembly — The fire rated unprotected concrete and steel floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. Concrete — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, as measured from the top plane of the floor units.

B. Steel Floor and Form Units* — Max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.

2. Firestop Device* — Cast in place firestop device platform installed prior to concrete placement in floor assembly. The CFS-CID MD PLT firestop device platform is screwed to the fluted deck with one fastener at each corner in accordance with manufacturer installation instructions. The firestop device platform is sized for nominal 2 and 3 in. (51 and 76 mm) deep fluted decks.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CID MD PLT W2" and W3"

3. Firestop Device* — Cast in place firestop device installed over firestop device platform (Item 2) prior to concrete placement in floor assembly. The CFS-CID MD Firestop Device is set onto and screwed to the device platform in accordance with manufacturer installation instructions. The firestop device is sized for the diameter of the through penetrant and for the height of the concrete topping over the fluted deck. The 4" height devices with extension shall be used. The firestop device may extend a max of 2 in. (51 mm) above the top surface of the concrete.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CID MD M 2" / 4", 3" / 4" and 4" / 4"; and CFS-CID MD P 2" / 4", 3" / 4" and 4" / 4" and CFS-CID MD PX 2" / 4", 3" / 4" and 4" / 4"



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4. Through Penetrants — Max five metallic pipes, tubes or conduits to be installed within the firestop systems. The size of the penetrants shall be as specified in the Table under Item 5. In addition, a maximum of one penetrant within the device shall exceed 1-1/2 in. (38 mm) diam. The annular space between the penetrants and the annular space between penetrants and the device shall be as specified in Table below. Penetrants to be rigidly supported on both sides of floor assembly. The following metallic pipes, tubes or conduits may be used.

- A. Steel Conduit — Nom 3 in. (76 mm) diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT).
- B. Steel Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
- C. Iron Pipe — Nom 3 in. (76 mm) diam (or smaller) cast or ductile iron pipe.
- D. Copper Pipe — Nom 3 in. (76 mm) diam (or smaller) Regular (or heavier) copper pipe.
- E. Copper Tubing — Nom 3 in. (76 mm) diam (or smaller) Type L (or heavier) copper tubing.

5. Packing Material — Min 4 in. (102 mm) or 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation, as specified in Table below, firmly packed into device (above smoke seal gasket) to completely fill the space around penetrants, flush with top of device.

The firestop system shall comply with the following:

F and FH Ratings, hr	Max Diam of Penetrants, in. (mm) Penetrant Type (Item 4)		T, FT, FTH Ratings, hr	Thickness of Packing Material, in. (mm)	Annular space between pipes, in. (mm)	Annular space to edge of device, in. (mm)
	A,B,C	D,E				
2	3 (76)	3 (76)	1/2	4 (102)	1/8 (3.2) min	1/2 (13) min, 2 (15) max
3	1 (25)	1 (25)	2	4 (102)	1 (25) min, 2 (51) max	3/4 (19) min, 2 (51) max
3	1.5 (38)	1 (25)	1	2 (51)	1/4 (6) min, 1-1/2 (38) max	1/4 (6) min, 1-1/2 (38) max

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

