

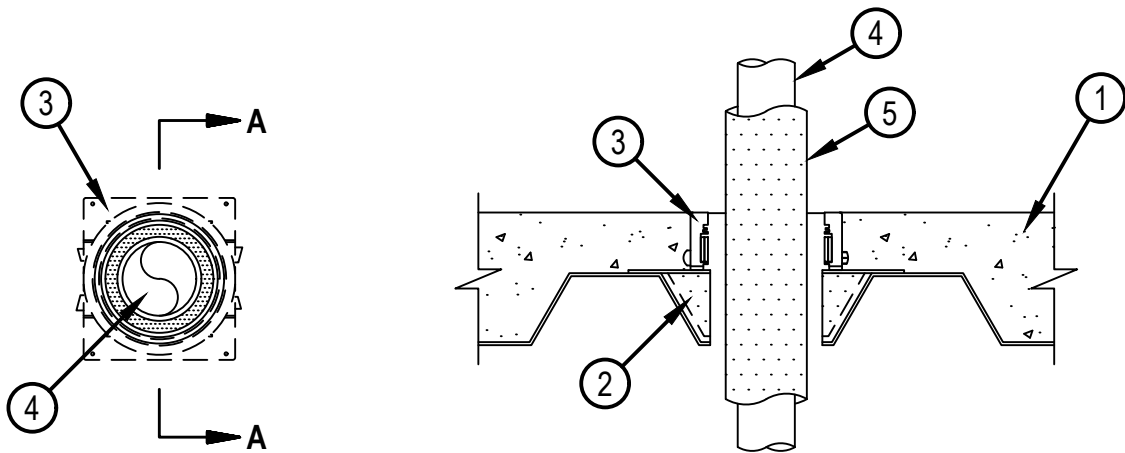


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-5069

FA 5069

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 and 3 Hr (See Item 1)	F Ratings — 2 and 3 Hr (See Item 1)
T Ratings — 0, 1/2, 3/4, 1 and 3 Hr (See Item 4 Table)	FT Ratings — 0, 1/2, 3/4, 1 and 3 Hr (See Item 4 Table)
L Rating at Ambient – See Item 4	FH Ratings — 2 and 3 Hr (See Item 1)
L Rating at 400°F – See Item 4	FTH Ratings — 0, 1/2, 3/4, 1 and 3 Hr (See Item 4 Table)
	L Rating at Ambient – See Item 4
	L Rating at 204°C – See Item 4



SECTION A-A

- 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:
 - Concrete — Min 2-1/2 in. (64 mm) thick for 2 hr F and FH Ratings, or min 4-1/2 in. (114 mm) thick for 3 hr F and FH Ratings, reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
 - Steel Floor and Form Units* — Max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.
- 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"
- 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 2.5" height devices are intended for a 2.5 in. (64 mm) concrete topping and the 4" height devices for concrete toppings greater than 2.5 in. (64 mm) thick. 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"/2.5", 3"/2.5" and 4"/2.5"; CFS-CID MD P 2"/2.5", 3"/2.5" and 4"/2.5"; CFS-CID MD M 2"/4", 3"/4" and 4"/4"; and CFS-CID MD P 2"/4", 3"/4" and 4"/4", CFS-CID MD PX 2"/2.5", 3"/2.5" and 4"/2.5" and CFS-CID MD PX 2"/4", 3"/4" and 4"/4"



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4. Through Penetrants — One metallic pipe, conduit or tubing to be installed within the firestop device. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

- A. Steel Pipe — Nom 2-1/2 in. (63.5 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Copper Tubing — Nom 2-1/2 in. (63.5 mm) diam (or smaller) Type L (or heavier) copper tubing.
- C. Copper Pipe — Nom 2-1/2 in. (63.5 mm) diam (or smaller) Regular (or heavier) copper pipe.

The hourly Ratings, firestop device, metallic penetrant and pipe covering shall comply with the following:

Nom Pipe Diam, in. (mm) (See Footnote)	Nom Pipe Covering Thickness, in. (mm)	Firestop Device	T, FT and FTH Ratings, Hr		L Rating at Ambient CFM/sq ft (L/s/m ²)	L Rating at 400°F (204°C) CFM/sq ft (L/s/m ²)
			Min 2.5 in. (63.5 mm) Concrete Floor Topping (Item 1A)	Min 4.5 in. (114 mm) Concrete Floor Topping (Item 1A) See Footnote		
1/2 (13)	1 (25)	CFS-CID MD M 2", CFS-CID MD P 2"	3/4	3	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
1 (25)	3/4 (19)	CFS-CID MD M 3", CFS-CID MD P 3"	1/2	N/A	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
1 (25)	1 (25)	CFS-CID MD M 3", CFS-CID MD P 3"	1/2	3/4	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
1 (25)	1 (25)	CFS-CID MD M 4", CFS-CID MD P 4"	N/A	3/4	N/A	N/A
1 (25) (See Item 6)	1 (25)	CFS-CID MD M 4", CFS-CID MD P 4"	1/2	N/A	N/A	N/A
2 (51)	1 (25)	CFS-CID MD M 4", CFS-CID MD P 4"	1/2	N/A	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
2 (51)	3/4 (19) or 1 (25)	CFS-CID MD M 4", CFS-CID MD P 4"	1/2	1	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
2-1/2 (63.5)	3/4 (19) or 1 (25)	CFS-CID MD M 4", CFS-CID MD P(X) 4"	N/A	3/4	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)



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* For min 4-1/2 in. (114 mm) concrete floor topping (Item 1A), when pipe diameter smaller than shown in above table is used, the insulated pipe shall be installed in conjunction with Item 7 and the T, FT and FTH Ratings are 0 hr.

5. Tube Insulation - Plastics+ — Nom 3/4 or 1 in. (19 or 25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing.

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.

6. Packing Material — (Not Shown) - For min 2-1/2 in. (64 mm) concrete floor topping (Item 1A), when using a 1 in. (25 mm) diam pipe with 1 in. (25 mm) thick AB/PVC pipe insulation in a 4 in. (102 mm) device, a min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation shall be firmly packed into top of device, flush with the top of the device. Device requires extension provided by manufacturer.

7. Packing Material — (Not Shown) For min 4-1/2 in. (114 mm) concrete floor topping (Item 1A), pipe sizes less than those shown in the Table in Item 4 can be used, provided that a min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool insulation shall be firmly packed to the fullest extent possible within the device above the smoke seal gasket flush with top surface of device. See also Item 4 Table footnote.

* 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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