

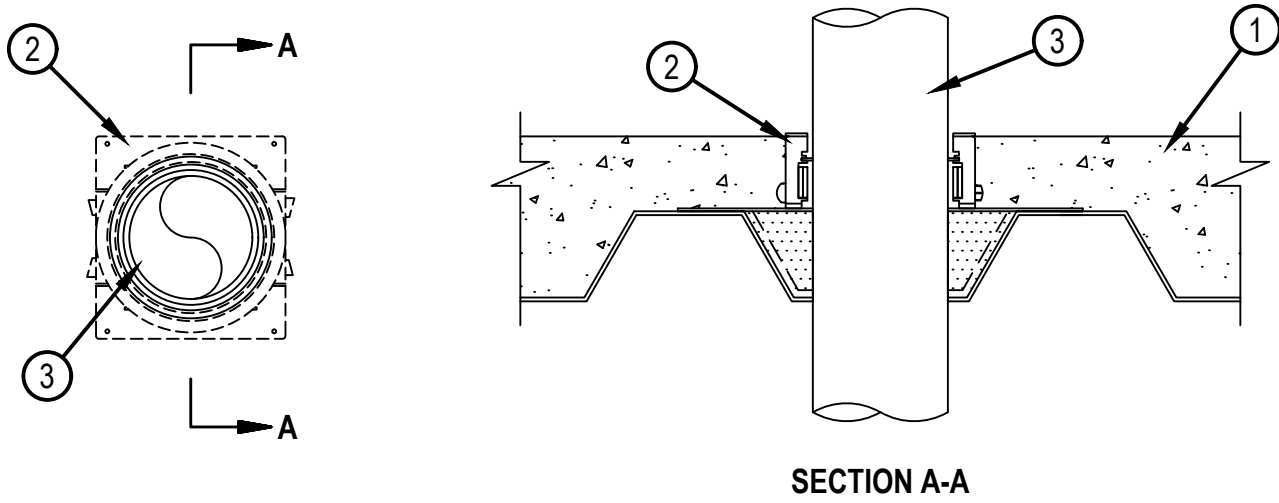


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-2310

FA 2310

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 and 3 Hr (See Items 1 and 4)	F Ratings — 2 and 3 Hr (See Items 1 and 4)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/ft ² (See Item 4)	FH Ratings — 2 and 3 Hr (See Items 1 and 4)
L Rating At 400°F — Less Than 1 CFM/ft ² (See Item 4)	FTH Rating — 0 Hr
W Rating — Class 1 (See Items 4 and 5)	L Rating At Ambient — Less Than 5.2 L/s/m ² (See Item 4)
	L Rating At 204°C — Less Than 5.2 L/s/m ² (See Item 4)



System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

- 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, and 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 prior to concrete placement in floor assembly. The CFS-CID MD Firestop Device is set onto and screwed to the firestop device platform (Item 2) 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 P 2"/2.5", 3"/2.5" and 4"/2.5"; 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"



Hilti Firestop Systems

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4. Through Penetrants — One nonmetallic pipe or conduit to be installed within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor assembly. For W Rating with Water Barrier Module, pipe shall be installed from bottom of device. The following types and sizes of nonmetallic pipes or conduits may be used:
- A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR11 or SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - C. Rigid Nonmetallic Conduit+ — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code.
 - D. Cross Linked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems. Not applicable to CAN/ULC S115 Ratings.
 - E. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - F. Fire Retardant Polypropylene (FFPP) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - G. Polyvinylidene Fluoride (PVDF) Pipe — Nom 2 or 4 in. (51 or 102 mm) diam SDR 32.5 PVDF pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
 - H. Polypropylene (PP) Pipe — Nom 4 in. (102 mm) diam Schedule 40 PP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

The firestop devices, nonmetallic penetrants and hourly F and FH Ratings shall comply with the following:

Nom Pipe Diameter ++	Firestop Device	F/FH Rating, Hr			
		Penetrant Type A, B, C	Penetrant Type D	Penetrant Type E, F	Penetrant Type G, H
1/2 in. to 2 in. (19 mm to 51 mm)	CFS-CID MD P(X) 2"	3	3	2	N/A
2 in. (51 mm)	CFS-CID MD P(X) 2"	3	3	3	2
3 in. (76 mm)	CFS-CID MD P(X) 3"	3	3	3	N/A
3 in. to 4 in. (76 mm to 102 mm)	CFS-CID MD P(X) 4"	2	N/A	3	N/A
4 in. (102 mm)	CFS-CID MD P(X) 4"	3	3	3	2

++ L Rating applies only when the nom diam of pipe equals size of device (2 in. diam pipe in 2" device etc.)

5. Firestop Device* — (Not shown) - Installed in top of device around the through penetrant in accordance with the manufacturer's instructions. The Top Seal Plug is optional for nom 1-1/2 in. (38 mm) pipes and conduits. Top Seal Plugs are required for all pipes and conduits less than nom 1-1/2 in. (38 mm). For 2.5" height devices, a Hilti provided extension shall be screwed into top of device to accommodate the installation of the Top Seal Plug. W Rating applies only to the IPS Top Seal Plug and nom 2 in. diam penetrants, and to CPS Top Seal Plugs with nom 1/2 to 2 in. (13 to 51 mm) diam penetrants. For penetrant types 4E and 4F, W Rating applies only to the IPS Top Seal Plug and nom 2 in. diam penetrants. For W Rating, device extensions if used must be cast-in.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CPS and IPS Top Seal Plugs

5A. Firestop Device* - Water Barrier Module — (Optional, Not Shown) - Used as an alternate to the top seal plug (Item 5). Applies to nom 2", 3" and 4" water barrier modules used in combination with the 4" height CFS-CID MD-P(X) 2", 3" and 4" devices, respectively. Supplied by device manufacturer. Module is threaded onto top of device after the hole in fluted deck for the penetrant is made. W Rating applies only when water barrier module is used and nom diam of penetrant equals size of device and device extensions (if used) are cast-in.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Water Barrier Module

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

+Bearing the UL Listing Mark



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