

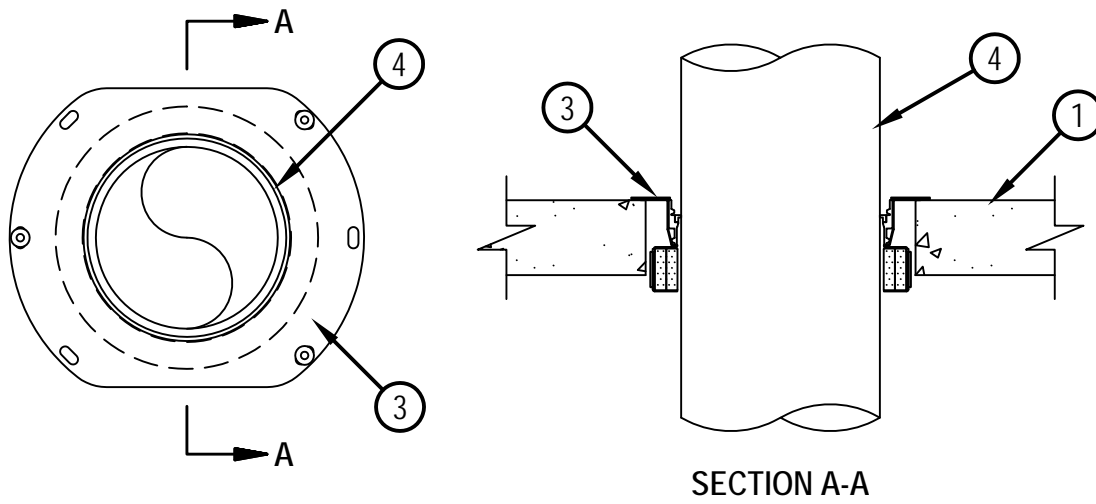


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1128

FA 1128

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



1. Floor Assembly — Min 2-1/2 in. (64 mm) to max 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. When concrete thickness is min 4-1/2 in. (114 mm), the F and FH Ratings are 3 hr.
- 1A. Floor Assembly — (Optional, Not Shown) — The fire rated concrete and steel deck floor assembly shall be constructed of the materials and in the manner specified in the individual D700, D800 or D900 Series designs in the UL Fire Resistance Directory and as summarized below:
 - A. Concrete — Min 2-1/2 in. (64 mm) to max 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, as measured over crest of fluted steel deck. When concrete topping thickness is min 4-1/2 in. (114 mm), F and FH Ratings are 3 hr.
 - B. Steel Floor and Form Units* — Composite or non-composite max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.
2. Metallic Sleeve — (Optional, Not Shown) - Nom 4, 5 or 6 in. (102, 127 or 152 mm) diam Schedule 10 (or heavier) steel sleeve cast or grouted into floor assembly, flush with floor surfaces. When metallic sleeve is used, the T, FT and FTH Ratings are 0 Hr.
- 2A. Sheet Metal Sleeve — (Optional, Not Shown) - Nom 4, 5, 6 or 9 in. (102, 127, 152 or 229 mm) diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. (102 mm) below the bottom of the deck and flush with the top surface of the concrete floor. When sheet metal sleeve is used, the T, FT and FTH Ratings are 0 Hr.



Hilti Firestop Systems

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W Rating — Class 1 (See Item 3A)	L Rating At Ambient — Less Than 1 CFM/sq ft (See Item 3A)
	L Rating At 400 F — Less Than 1 CFM/sq ft (See Item 3A)

3. Firestop Device* — Drop-in firestop device installed in core-drilled or sleeved opening in concrete floor assembly in accordance with accompanying installation instructions. The firestop device flange should be secured to the top surface of the floor with three 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel expansion bolts or screw anchors (installed in a triangular fashion through holes provided). As alternates to the anchors specified above, Hilti 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchor, Hilti 1/4 in. (6 mm) diam by 1-3/4 in. (45 mm) long KWIK-BOLT 3 steel expansion anchor or Hilti 1/4 in. (6 mm) by 3/4 in. (19 mm) long Metal HIT Anchor may be used. In addition, for nom 2 in. (51 mm), 3 in. (76 mm) and 4 in. (102 mm) firestop devices, four 11/16 in. (18 mm) long Hilti X-GH P18 MX steel fasteners may be installed through the steel flange, two on each side. The firestop devices shall be installed as detailed in the following table:

Core Hole or Sleeve Diam, In. (mm)	Firestop Device	Nom Diam of Through Penetrant, In. (mm)
4 (102)	CFS-DID 2"MD	2 (51) or smaller+
5 (102)	CFS-DID 3"MD	3 (76)
6 (152)	CFS-DID 4"MD	4 (102)
9 (229)	CFS-DID 6"MD	6 (152)

+ For pipe smaller than nom 2 in. (51 mm) diam, Adapter and Top Seal Plug is required to be used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-DID 2"MD, CFS-DID 3"MD, CFS-DID 4"MD, CFS-DID 6"MD

3A. Firestop Device* - Water Barrier Module — (Optional, Not Shown) - Used in combination with the CFS-DID device and supplied by device manufacturer. Module is threaded onto top of device.

W Rating and L Rating apply only when water barrier module is used.

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

4. Through Penetrant — 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 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
- C. Conduit — Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
- D. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
- E. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
- F. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular or heavier copper pipe.

*Bearing the UL Classification Mark



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