

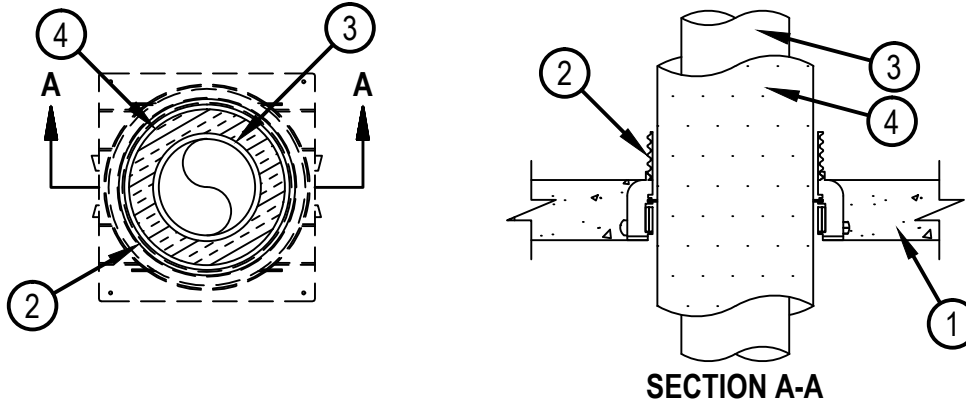


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-5017

FA 5017

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 3/4 and 1 Hr (See Item 3)	FT Rating — 3/4 and 1 Hr (See Item 3)
	FH Rating — 2 Hr
	FTH Rating — 3/4 and 1 Hr (See Item 3)



1. Floor Assembly — Min 2-1/2 in. (38 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
- 1A. Floor Assembly - (Optional - Not Shown) — 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 Fire Resistance Directory and as summarized below:
 - A. Concrete — Min 2-1/2 in. (38 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
 - 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. Firestop Device* — Cast in place firestop device permanently embedded during concrete placement or grouted in concrete floor assembly in accordance with accompanying installation instructions with a max 2 in. (51 mm) projection above the top surface of the concrete.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 680-75/2.5"N, CP 680-110/4"N, CP 680-160/6"N, CP 682-75/2.5", CP 682-110/4", CP 680-M 2", CP 680-M 3", CP 680-M 4", CP 680-M 6", CP 680-P 2", CP 680-P 3", CP 680-P 4", CP 680-P 6", CP 680-PX 2", CP 680-PX 3"
3. Through Penetrants — One metallic pipe or tubing to be installed within the firestop device. Pipe or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe or tubing may be used:
 - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - C. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.



Hilti Firestop Systems

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The firestop device, metallic penetrant and pipe covering shall be sized as follows:

Nom Pipe Diam, in. (mm)	Nom Pipe Covering Thickness, in. (mm)	Firestop Device	T Rating, Hr
1/2 (13)	1 (25)	CP 680-75/2.5"N, CP 682-75/2.5" CP 680-M 2", CP 680-P 2", CP 680-PX 2"	3/4
1 (25)	1 (25)	CP 680-M 3", CP 680-P 3", CP 680-PX 3"	3/4
1 (25) (See Item 5)	1-1/2 (38)	CP 682-110/4" CP 680-M 4", CP 680-P 4"	3/4
2 (51)	1 (25)	CP 680-110/4"N, CP 682-110/4" CP 680-M 4", CP 680-P 4"	1
2 (51)	2 (51)	CP 680-160/6"N CP 680-M 6", CP 680-P 6"	3/4
4 (102)	1 (25)	CP 680-160/6"N CP 680-M 6", CP 680-P 6"	3/4

4. Pipe Covering* — Nom 1, 1-1/2 and 2 in. (25, 38 and 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units, jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied SSL tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product.

See Pipe and Equipment Covering-Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering 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.

5. Packing Material — When using a 1 in. (25 mm) diam pipe with 1-1/2 in. (38 mm) thick glass fiber 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.

* 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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