

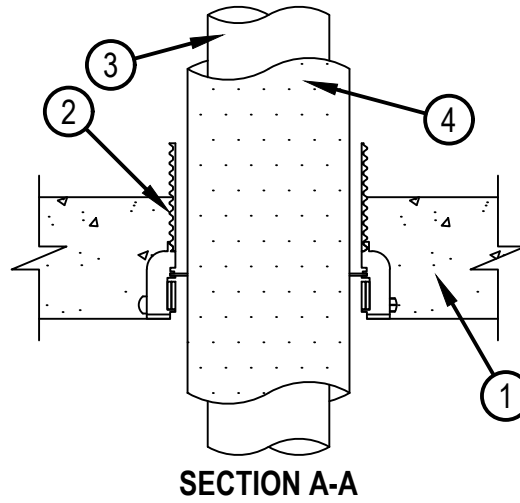
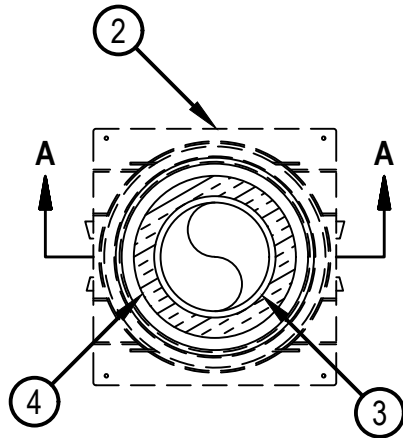


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

## System No. F-A-5016

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

FA 5016



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) 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 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/m<sup>3</sup>) 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-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.

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



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May 14, 2021

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Nom Pipe Diameter*	Nom Pipe Cover-in. (mm)	Firestop	T (FT, FTH) Rating-Hr	L Rating at Ambient CFM/sq ft (L/s/m <sup>2</sup> )	L Rating at 400F (204°C) CFM/sq ft (L/s/m <sup>2</sup> )
1/2 in. (13 mm)	1 (25)	CP 680-M 2", CP 680-P 2", CP 680-PX 2"	3	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
1 in. (25 mm)	1 (25)	CP 680-M 4", CP 680-P 4"	3/4	N/A	N/A
1 in. (25 mm)	1 (25)	CP 680-M 3", CP 680-P 3", CP 680-PX 3"	3/4	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
2 in. (51 mm)	3/4 (19) or 1 (25)	CP 680-P 4", CP 680-M 4"	1	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
2-1/2 in. (63.5 mm)	3/4 (19) or 1 (25)	CP 680-P 4", CP 680-M 4"	3/4	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)
4 in. (102 mm)	3/4 (19) or 1 (25)	CP 680-P 6", CP 680-M 6"	3/4	Less Than 1 (Less Than 5.1)	Less Than 1 (Less Than 5.1)

\* When pipe diameter smaller than shown in above table is used, the insulated pipe shall be installed in conjunction with Item 5 and the T, FT AND FTH Ratings are 0 hr.

4. Tube Insulation - Plastic+ — 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 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.

5. Packing Material — (Not Shown) When pipe sizes are less than those shown in the table in Item 3, min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool insulation shall be firmly packed to the fullest extent possible within the device flush with top surface of 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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