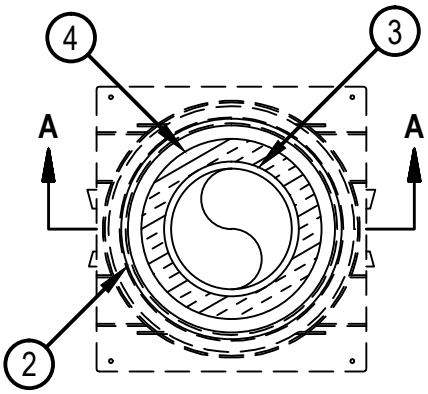
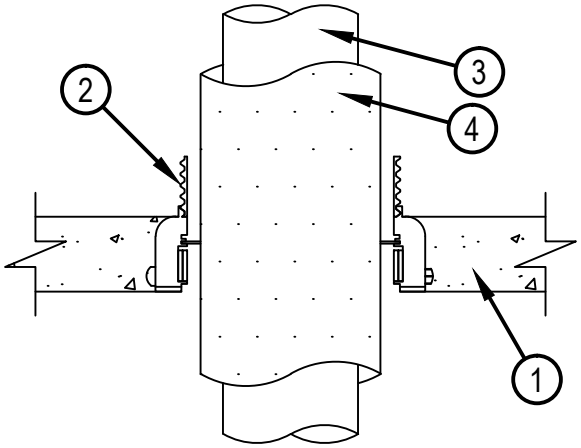
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-5015

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





SECTION A-A

1. Floor Assembly — Min 2-1/2 in. (64 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. 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.

B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete.

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, 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 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.

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

Nom Pipe Diam, in. (mm)	Nom Thick. Of Pipe Insul., in. (mm)	Firestop Device	T-Rating, Hr
1/2 (13)	1 (25)	CP 680-75/2.5"N, CP 682-72/2.5"CP 680-M 2", CP 680-P 2", CP 680-P 2"	3/4
1 (25)	3/4 (19)	CP 680-75/2.5"N CP 680-P 3", CP 680-P 3"	1/2
1 (25)	1 (25)	CP 680-M 3", CP 680-P 3", CP 680-P 3"	1/2
1 (25) (see Item 5)	1 (25)	CP 682-110/4"CP 680-M 4"	1/2
2 (51)	1 (25)	CP 680 110/4"N, CP682 110/4"CP 680-M 4", CP 680-P 4"	1/2
2 (51)	3/4 (19) or 1 (25)	CP 680-100/4"NCP 680-P 4", CP 680-M 4"	1/2
4 (102)	3/4 (19) or 1 (25)	CP 680-160/6"NCP 680-P 6", CP 680-M 6"	1/2

4. Tube Insulation - Plastics+ — Nom ¾ or 1 in. (19 or 25 mm) thick acryonitrile 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.
5. Packing Material — (Not Shown) - 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, and 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 devices, 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.