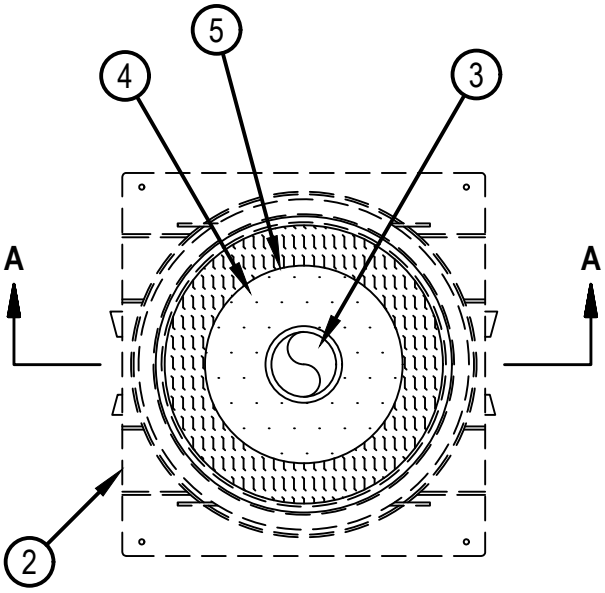
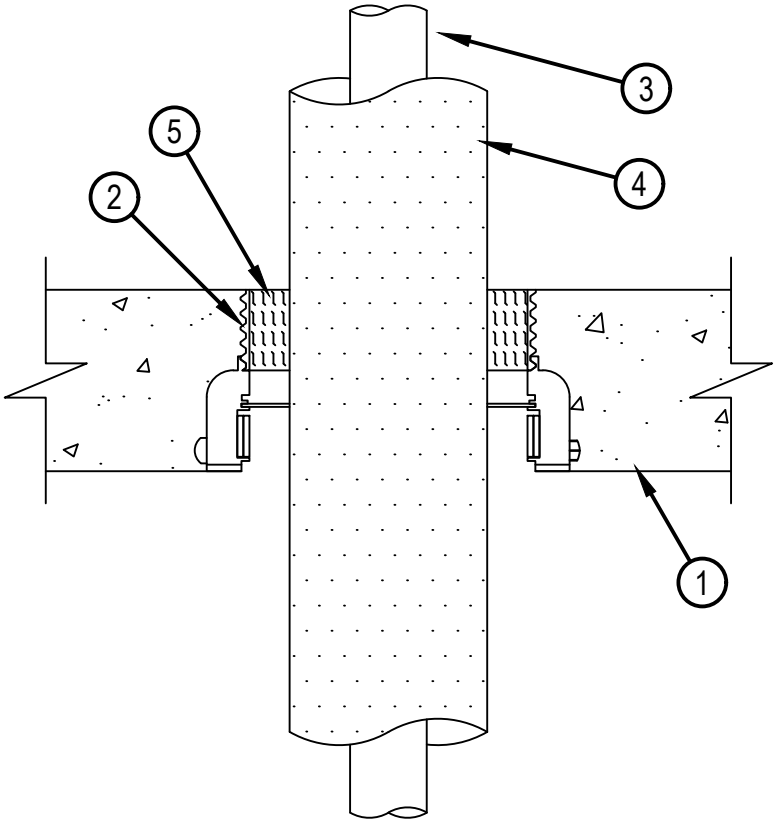
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-5062

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
	FH Rating — 2 Hr
	FTH Rating — 2 Hr





SECTION A-A

System No. F-A-5062

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) 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 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) 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. In concrete and steel floor assemblies (Item 1A), device to be embedded within the min 4-1/2 in. (114 mm) concrete topping (Item 1A(B)). Device installed flush with the top surface of the concrete floor.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 680-P 4", CP 680-P 6"

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 1-1/2 or 2 in. (38 or 51 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Copper Tubing — Nom 1-1/2 or 2 in. (38 or 51 mm) diam (or smaller) Type L (or heavier) copper tubing.

C. Copper Pipe — Nom 1-1/2 or 2 in. (38 or 51 mm) diam (or smaller) Regular (or heavier) copper pipe.

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

Nom Pipe Diameter, in. (mm)	Pipe Insulation (Item 4)	Firestop Device	Packing Material (Item 5)
1/2 (13)	1-1/2 in. (38 mm)	CP 680-P 4"	Yes
1 (25)	1-1/2 in. (38 mm)	CP 680-P 4"	No
1-1/2 (38)	1-1/2 in. (38 mm)	CP 680-P 6"	Yes
2 (51)	1-1/2 in. (38 mm)	CP 680-P 6"	No

4. Pipe Covering* — Cellular Glass Insulation — Nom 1-1/2 in. (38 mm) thick cellular glass units sized to the outside diam of the pipe and supplied in nom 24 in. (610 mm) long half sections or nom 18 in. (457 mm) long segments.

4A. Sheathing Material* — Foil-scrim-kraft or all service jacket material shall be wrapped around the outer circumference of the pipe insulation (Item 4) with the kraft side exposed. Longitudinal joints and transverse joints sealed with metal fasteners or butt tape.
See Sheathing Materials (BVDV) category in the Building Materials Directory for names of manufacturers. Any sheathing 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 specified in the Table in Item 3, a min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m^3) mineral wool batt insulation shall be firmly packed into the 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.