

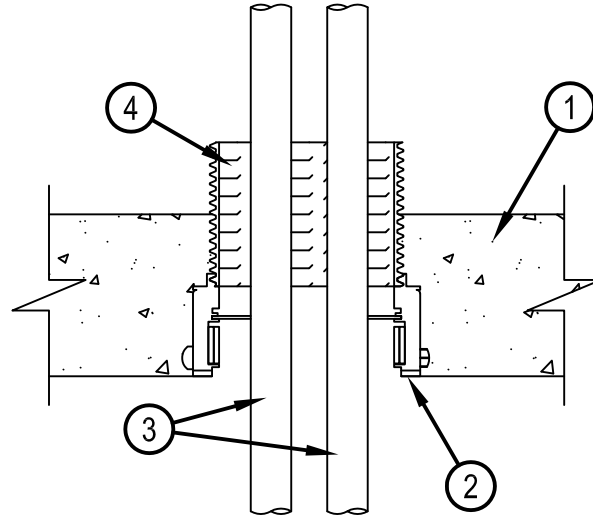
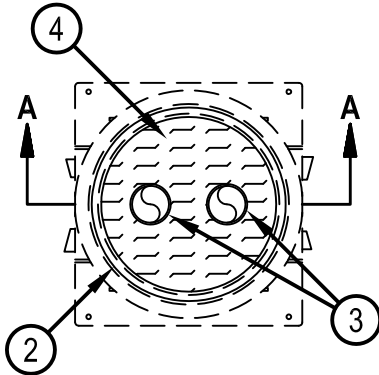


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

## System No. F-A-1022

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

FA 1022



**SECTION A-A**

1. Floor or Wall 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. Steel Floor Unit/ Floor Assembly — (Not Shown)- As an alternate to Item 1, the floor assembly may consist of a fluted steel floor unit/ concrete floor assembly. The floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:
  - 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, as measured from the top plane of the floor units.
  - B. Steel Floor and Form Units\* — Composition or non-composite 1-1/2 in. to 3 in. (38 to 76 mm) deep fluted galv steel 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 min. 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 — Max five nom 1 in. (25 mm) diam metallic pipes, tubes or conduits to be installed within the firestop system. The annular space between the penetrants shall be min 1 in. (25 mm) to max 2 in. (51 mm). The annular space between penetrants and the device is min 3/4 in. (19 mm) to max 2 in. (51 mm). Penetrants to be rigidly supported on both sides of floor assembly. The following metallic pipes, tubes or conduits may be used.
  - A. Steel Conduit — Nom 1 in. (25 mm) diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT).
  - B. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - C. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.
  - D. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.
  - E. Copper Tubing — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tubing.
4. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into device completely filling the space around conduits to fullest depth allowed by 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.



**Hilti Firestop Systems**

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