

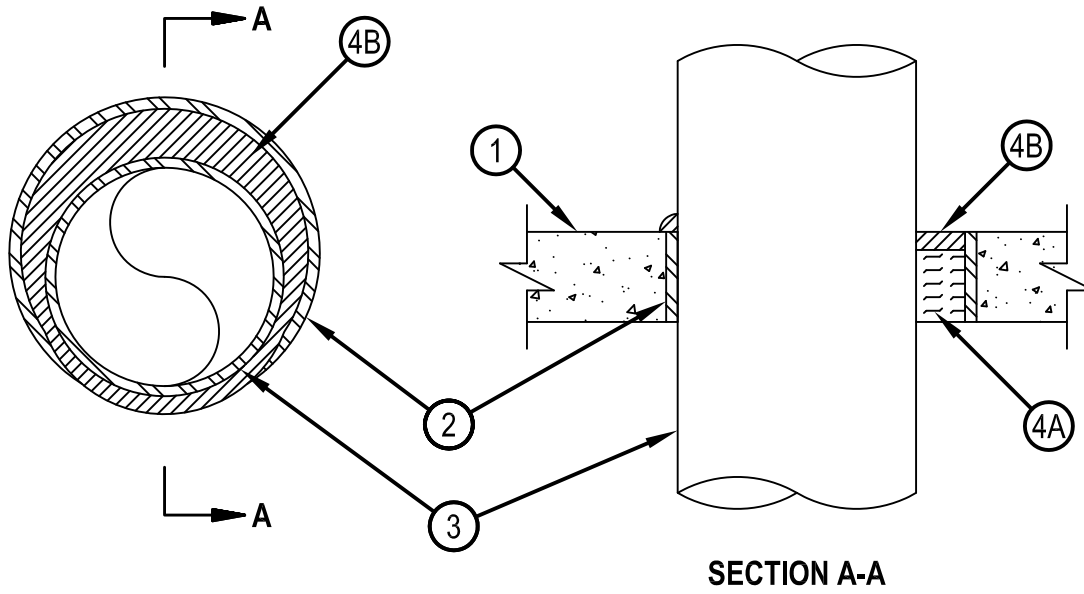


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1028

FA 1028

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 2 Hr
	FTH Rating — 0 Hr



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. Max diameter of opening is 31-7/8 in. (810 mm).

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 2-1/2 in. (64 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. Max diam of opening is 31-7/8 in. (810 mm).

2. Steel Sleeve — (Optional) - Nom 32 in. (813 mm) diam (or smaller) Schedule 40 steel pipe cast or grouted into floor assembly, flush with floor surfaces.

2A. Sheet Metal Sleeve — (Optional) - Max 6 in. (152 mm) diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. (102 mm) below the bottom of the deck and a max of 1 in. (25 mm) above the top surface of the concrete floor.

2B. Sheet Metal Sleeve — (Optional) - Max 12 in. (305 mm) diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place may extend a max of 4 in. below the bottom of the deck and a max of 1 in. (25 mm) above the top surface of the concrete floor.



Hilti Firestop Systems

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3. Through Penetrants — One metallic pipe, conduit or tubing to be installed concentrically within the firestop device. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The annular space between pipe conduit or tubing and the periphery of the opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm).

The following types of pipe, conduit or tubing may be used:

Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.

Conduit — Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.

Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic conduit.

Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 2. (51 mm) in thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation tightly packed into the opening as a permanent form. Packing material to be recessed from top surface of floor as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Materials* - Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor. At point contact, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the concrete/sleeve/pipe interface on top surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.

* 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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