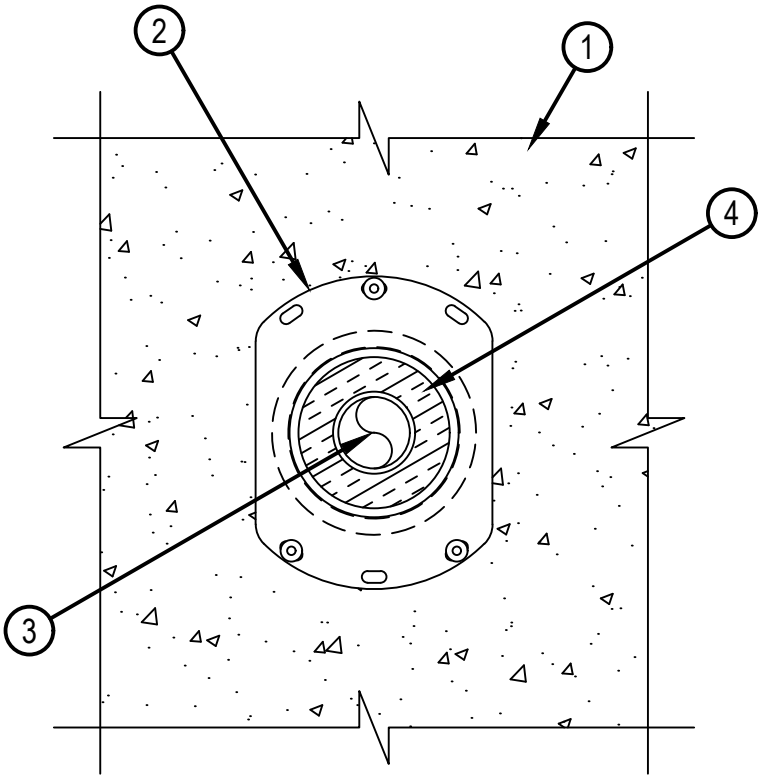
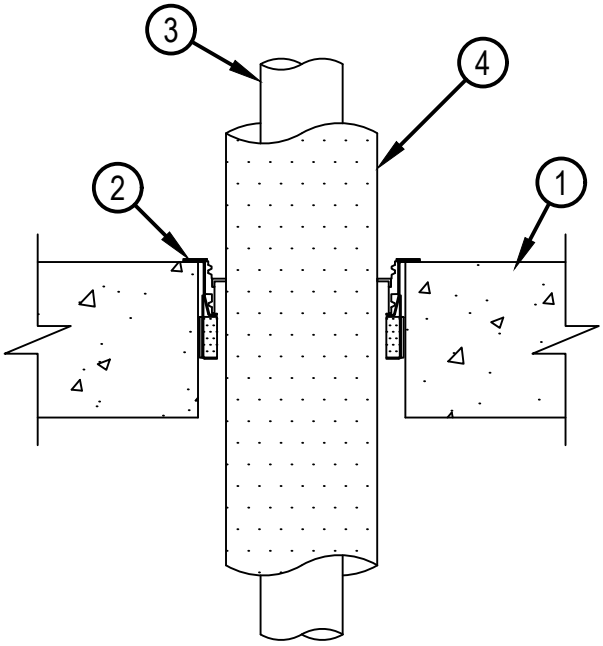
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-A-5061

F Rating — 2 Hr
T Rating — 1-3/4 Hr





SECTION A-A

System No. F-A-5061

1. Floor Assembly — Min 4-1/2 in. (114 mm) to max 12 in. (305 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Max diameter of opening is 6 in. (152 mm).

1A. Floor Assembly — (Optional, Not Shown) — The fire rated concrete and steel deck floor assembly shall be constructed of the materials and in the manner specified in the individual D700, D800 or D900 Series designs in the UL Fire Resistance Directory and as summarized below. Max diameter of opening is 6 in. (152 mm).

A. Concrete — Min 4-1/2 in. (114 mm) to max 12 in. (305 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete, as measured over crest of fluted steel deck.

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* — Drop-in firestop device installed in core-drilled opening in concrete floor assembly in accordance with accompanying installation instructions. The firestop device flange should be secured to the top surface of the floor with three 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel expansion bolts or screw anchors (installed in a triangular fashion through holes provided). As alternates to the anchors specified above, Hilti 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchor, Hilti 1/4 in. (6 mm) diam by 1-3/4 in. (45 mm) long KWIK-BOLT 3 steel expansion anchor or Hilti 1/4 in. (6 mm) by 3/4 in. (19 mm) long Metal HIT Anchor may be used. In addition, for nom 2 in. (51 mm), 3 in. (76 mm) and 4 in. (102 mm) firestop devices, four 11/16 in. (18 mm) long Hilti X-GH P18 MX steel fasteners may be installed through the steel flange, two on each side. The firestop devices shall be installed as detailed in the following table:

Nom Tube (Item 4) Diam, In. (mm)	Insulation (Item 5) Thickness, In. (mm)	Firestop Device	Core Hole Diam, In. (mm)	Min-Max Floor Thickness In. (mm)
1/2 (13)	1 (25)	CFS-DID 2"MD	4 (102)	4-1/2 - 8 (114 - 203)
1 (25)	1 (25)	CFS-DID 3"MD	5 (127)	4-1/2 - 8 (114 - 203)
2 (51)	1 (25)	CFS-DID 4"MD	6 (152)	4-1/2 - 8 (114 - 203)
1/2 (13)	1 (25)	CFS-DID 2"C	4 (102)	6 - 12 (152 - 305)
1 (25)	1 (25)	CFS-DID 3"C	5 (127)	6 - 12 (152 - 305)
2 (51)	1 (25)	CFS-DID 4"C	6 (152)	6 - 12 (152 - 305)

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-DID 2"MD, CFS-DID 3"MD, CFS-DID 4"MD, CFS-DID 2"C, CFS-DID 3"C, CFS-DID 4"C

3. Through Penetrant — One nonmetallic tube to be installed within the firestop device. Tube to be rigidly supported on both sides of floor assembly. The following type of tube may be used:

A. Crosslinked Polyethylene (PEX) Tubing — Nom 2 in. (51 mm) diam (or smaller) SDR 9 Uponor AquaPEX or Wirsbo hePEX PEX tube for use in closed (process or supply) piping systems.

4. Pipe Covering* — Nom 1in. (25 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m^3) glass fiber units, jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied SSL tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product.

See Pipe and Equipment Covering-Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering 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.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.