

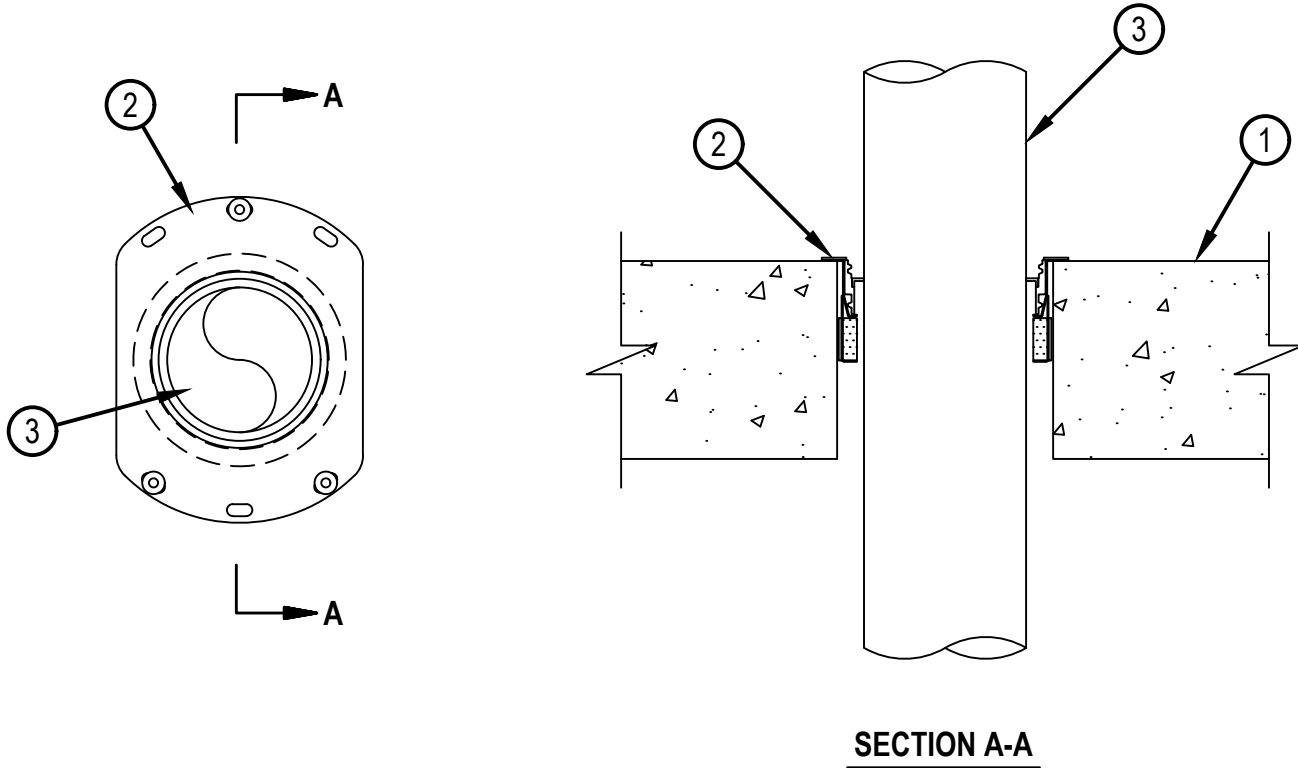


Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-A-2284

F Rating — 2 Hr
T Rating — 2 Hr

FA 2284



SECTION A-A



Hilti Firestop Systems

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November 06, 2017

System No. F-A-2284

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/m³) concrete.
- 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:
 - 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/m³) 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 or sleeved 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. 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 Diam, In. (mm)	Firestop Device	Core Hole Diam, In. (mm)	Min-Max Floor Thickness In. (mm)
2 (51) or smaller +	CFS-DID 2"MD	4 (102)	4-1/2 - 8 (114 - 203)
3 (76)	CFS-DID 3"MD	5 (127)	4-1/2 - 8 (114 - 203)
4 (102)	CFS-DID 4"MD	6 (152)	4-1/2 - 8 (114 - 203)
2 (51) or smaller	CFS-DID 2"C	4 (102)	6 - 12 (152 - 305)
3 (76)	CFS-DID 3"C	5 (127)	6 - 12 (152 - 305)
4 (102)	CFS-DID 4"C	6 (152)	6 - 12 (152 - 305)

+ For pipe smaller than nom 2 in. (51 mm) diam, Adapter and Top Seal Plug is required to be used.

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 pipe to be installed within the firestop device. Pipe to be rigidly supported on both sides of floor assembly. The following types of pipe may be used:
 - A. Cross Linked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 Uponor AquaPEX or Wirsbo hePEX PEX tubing for use in closed (process or supply) piping systems.

* 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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