



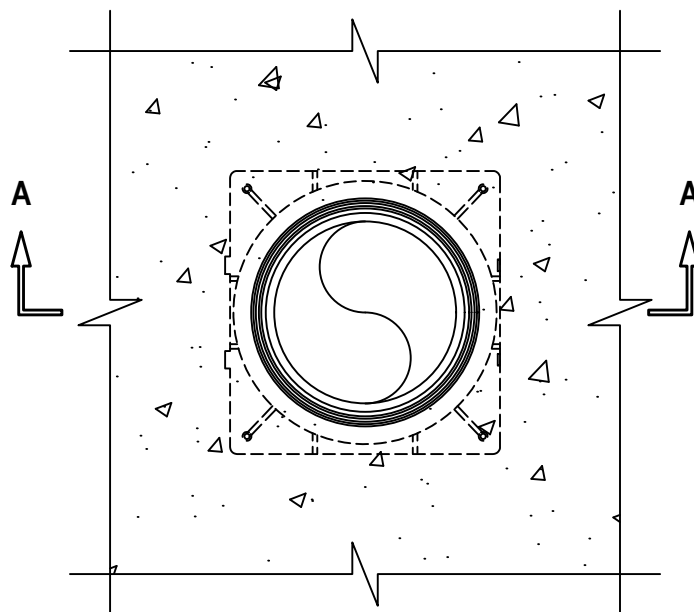
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-A-2411

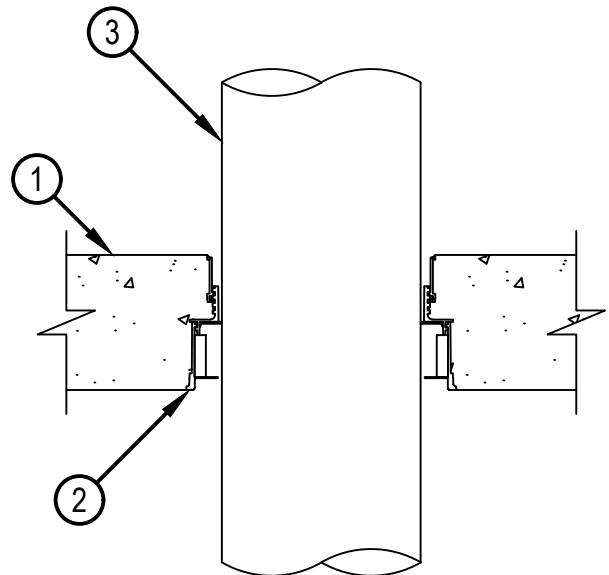
FA 2411

ANSI/UL1479 (ASTM E814)
F Ratings — 2 and 3 Hr (See Item 3)
T Ratings — 0, 2, and 3 Hr (See Item 3, and Table 1)
L Rating (Without Movement) At Ambient — Less Than 1 CFM/sq ft (See Table 2)
L Ratings (Without Movement) At 400 °F — Less Than 1 CFM/sq ft (See Table 2)
W Rating (Without Movement) — Class 1 (See Table 2)
M Rating (Movement) — See Table 3

TOP VIEW



SECTION A-A



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
2. Firestop Device* — Cast in place firestop device, with optional accessories including sleeve extension, permanently embedded during concrete placement or grouted in concrete assembly in accordance with accompanying installation instructions. The devices may extend a max 2 in. (51 mm) above the top surface of the concrete.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CID U 2", CFS-CID U 2" CA, CFS-CID U 3", CFS-CID U 4", CFS-CID U 6"
3. Through Penetrants — One nonmetallic pipe or conduit to be installed within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
 - A. Polyvinyl Chloride (PVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Pipe-Nom 6 in. (152 mm) diam (or smaller) SDR11 or SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - C. Rigid Nonmetallic Conduit+ — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).
 - D. Cross Linked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems.

The firestop devices and nonmetallic penetrants shall be sized as follows in Table 1 below:

Table 1

Nom Pipe Diameter	Firestop Device	F Rating (Hr)	T Rating (Hr)
1-1/4 in. (32 mm)	CFS-CID U 2" CFS-CID U 2" CA	2	2
1-1/2 in. to 2 in. (38 to 51 mm)	CFS-CID U 2" CFS-CID U 2" CA	2	3+
2 in. to 3 in. (51 to 76 mm)	CFS-CID U 3"	3	3
3 in. to 4 in. (76 to 102 mm)	CFS-CID U 4"	3	3
6 in. (152 mm)	CFS-CID U 6"	3	0

+T Rating is 0-HR for firestop systems with M-Rating (Movement)

4. Packing Material – (Optional, Not Shown) – Min 2 in (51 mm) depth of min 4 pcf (64 kg/m³) mineral wool batt insulation tightly-packed into annular space with its top surface flush with the top surface of the device. When Optional Sealant (item 5 is used, top surface of packing material to be recessed min ¼ in (6 mm) or 1/2 in. (12mm) from top surface of device.
5. Fill, Void, or Cavity Material* - Sealant – (Optional, Not Shown) – Min ¼ in (6 mm) thickness of sealant applied within the annulus flush with the top surface of device. A min ½ in. (13 mm) thickness of sealant applied within the annulus, flush with the top surface of device to attain W-rating where required as shown in Table 2.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-S SIL GG or CFS-S SIL SL Sealant



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Table 2

Device size	Penetrant with (IPS) Diam in. (mm)*	Penetrant with (CTS) Diam in. (mm)*	W RATING	L Rating
CFS-CID U 2", CFS-CID U 2" CA	1-1/4 to 2 (32 to 51)	1-1/2 to 2 (38 to 51)	YES	YES
CFS-CID U 2", CFS-CID U 2" CA	N/A	1-1/4 (32)	YES, with Items 4 & 5 Above	YES, with Items 4 & 5 Above
CFS-CID U 3"	2 to 3 (51 to 76)	2-1/2 to 3 (64 to 76)	YES	YES
CFS-CID U 3"	N/A	2 (51)	YES, with Items 4 & 5 Above	YES, with Items 4 & 5 Above
CFS-CID U 4"	3 to 4 (76 to 102)	3-1/2 to 4 (89 to 102)	YES	Yes
CFS-CID U 4"	N/A	3 to 4 (76 to 102)	YES, with Items 4 & 5 Above	YES, with Items 4 & 5 Above
CFS-CID U 6"	6 (152)	6 (152)	YES	YES

*IPS is Iron pipe diameter standard and CTS is copper tube diameter standard

***When W-rating is required – When nominal pipe diameter matches device size, pipe may be installed in any orientation. When nominal pipe diameter is smaller than device size, pipe must be installed from the bottom, unless items 4 and 5 are fulfilled.

The M Rating for the firestop system is dependent on the variables as noted in Table 3.

Table 3

Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Device Size	Movement	Sealant Depth	L Rating	W Rating
Y	3A	2 in.	2 in.	100%**	N/A	N/A	N/A
Z	3A	2 in.	2 in.	3.21 in.	N/A	N/A	N/A

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

+Bearing the UL Listing Mark



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