

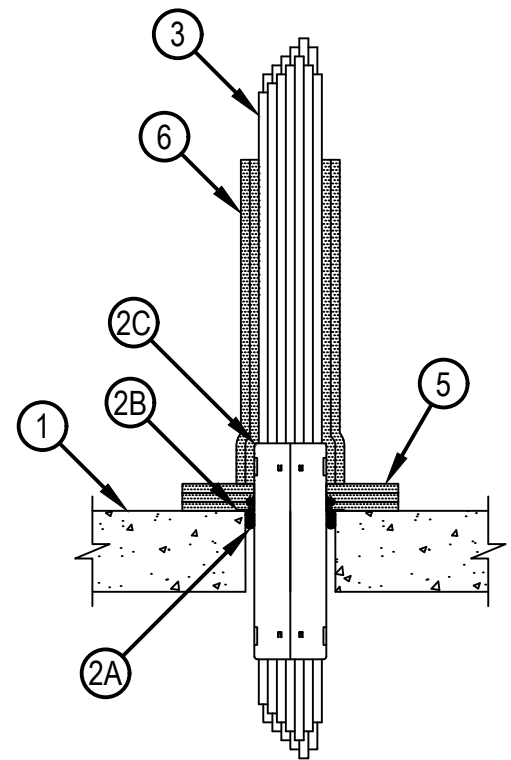
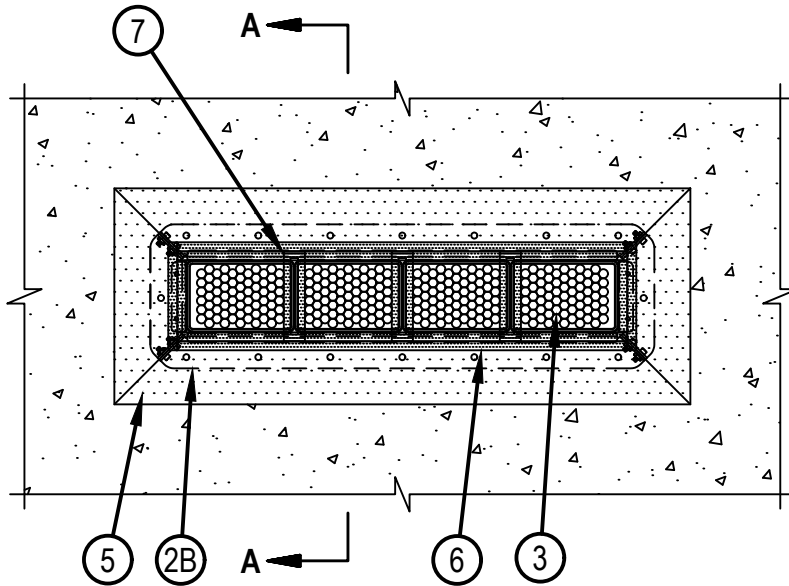


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

# System No. F-A-3087

FA 3087

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
L Rating at Ambient – Less than 1 to 3 CFM/Device (See Item 2)	FH Rating — 2 Hr
L Rating at 400 F - Less than 1 to 1.6 CFM/Device (See Item 2)	FTH Rating — 2 Hr
	L Rating at Ambient – Less than 0.47 to 1.41 L/s/Device (see Item 2)
	L Rating at 400 F – Less than 0.47 to 0.76 L/s/Device (see Item 2)



**SECTION A-A**



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October 12, 2022

# System No. F-A-3087

FA 3087

1. Floor 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. Opening to be max 25 in. by 5 in. (635mm x 127mm)

2. Firestop System: The Firestop System Shall Consist of the following:

A. Fill, Void or Cavity Material\* — Top Track Seal — Factory supplied foam seal cut in half lengthwise at dotted line or tear strip and length cut 1 in. longer than each side of floor opening. Adhesive strip placed on top of floor such that the foam hangs over the edges of the opening and secured underneath floor grid (Item 2B)

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS-OS Firestop Top Track Seal

B. Floor Grid\* — Floor grid fabricated from four steel rails fastened together to form a rectangle. Floor grid is anchored to concrete floor with a minimum of two 1-1/2 in. (38 mm) concrete screws, at pre-drilled holes in each rail.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-MSL FGR 24x4

C. Firestop Device\* — Firestop devices each consist of a rectangular outer steel sleeve formed with two half housings, connected and secured together with metal tabs and metal hooks. Multiple firestop devices are connected together with ganging clips and bolted to a floor grid with provided support brackets, in accordance with accompanying installation instructions. Firestop devices to completely fill across entire width of the floor grid. The annular space between the device and the periphery of the opening shall be min 3/16 in. (4.8 mm) to maximum 9/16 in (14 mm).

The L Ratings are dependent on the type and number of devices within the gang plate and the cable type and fill. The L Ratings are expressed in CFM per device. A rating of less than one shall be considered as 1 CFM when more than one module is installed.

Device	Max Cable Fill	Cable Type	L-Rating (CFM)	
			Ambient	400°F
CFS-MSL S	0%	-	Less than 1	Less than 1
CFS-MSL S	1-25%	3B, 3D, 3E	1.1	1.5
CFS-MSL S	26-50%	3B, 3D, 3E	1.1	Less than 1
CFS-MSL S	51-75%	3B, 3D, 3E	1.8	Less than 1
CFS-MSL S	76-100%	3B, 3D, 3E	1.8	1.2
CFS-MSL M	0%	-	1.1	Less than 1
CFS-MSL M	1-25%	3B, 3D, 3E	1.8	Less than 1
CFS-MSL M	26-50%	3B, 3D, 3E	1.9	Less than 1
CFS-MSL M	51-75%	3B, 3D, 3E	1.9	Less than 1
CFS-MSL M	76-100%	3B, 3D, 3E	2.2	1.1
CFS-MSL L	0%	-	1.2	Less than 1
CFS-MSL L	1-25%	3B, 3D, 3E	1.8	1.1
CFS-MSL L	26-50%	3B, 3D, 3E	2.2	1.0
CFS-MSL L	51-75%	3B, 3D, 3E	2.6	1.4
CFS-MSL L	76-100%	3B, 3D, 3E	3.0	1.6



**Hilti Firestop Systems**

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HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-MSL L 6 in. x 4 in., CFS-MSL M 3 in. x 4 in., CFS-MSL S 3 in. x 2 in. Modular Sleeve

3. Cables — Within the loading area for each modular sleeve firestop device (Item 2C), the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled and rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductor cables may be used:
- A. Maximum 100 pair No. 24 AWG telephone cable with PVC jacket.
  - B. Maximum 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.
  - C. Maximum 4/0 AWG type RHH ground cable.
  - D. Maximum 4 Pair No. 23AWG Cat 7 computer cable.
  - E. Maximum RG 6/U Coaxial cable with fluorinated ethylene insulation and jacketing.
  - F. Maximum 3/C No. 12 AWG metal clad cable.
4. Fill, Void or Cavity Material\* — Sealant — (Not shown) 1/2 in. (12.7 mm) bead of sealant on concrete around the perimeter of floor grid prior to application of pipe covering materials.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606 Flexible Firestop Sealant or FS-ONE MAX
5. Pipe Covering Material\* — Nom 1/2 in. (12.7 mm) flexible sheet material. Cut and fit to the contour of the floor grid and overlap the concrete floor by min. 1 in. First layer is to be installed tight to the floor. Second and third layer to be installed above first layer to completely cover floor grid. Seams to be taped together with 3 in. wide FSK tape. FSK tape to cover exposed edges and overlap on to pipe covering material and concrete floor.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFP-ES Endo-Shield
6. Pipe Covering Material\* — Nom 1/2 in. (12.7 mm) flexible sheet material. Two layers of pipe covering extending 18 in. (457 mm) above pipe covering material (ITEM 5). Pipe covering material cut into individual pieces to completely encapsulate row of firestop device. 3 in. (76 mm) wide FSK tape centered on and covering vertical and horizontal seams.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFP-ES Endo-Shield
7. Pipe Covering Material\* - Nom 1/2 in. (12.7mm) flexible sheet material. One layer of pipe covering material cut to fit each void between cable bundles and to extend to the outer edge of pipe covering material (ITEM 6). Material is to be secured to the top of pipe covering material (ITEM 6) with 3" wide FSK tape.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFP-ES Endo-Shield

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

