

UL/cUL SYSTEM NO. F-A-3087

MULTIPLE CABLE BUNDLES THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR.

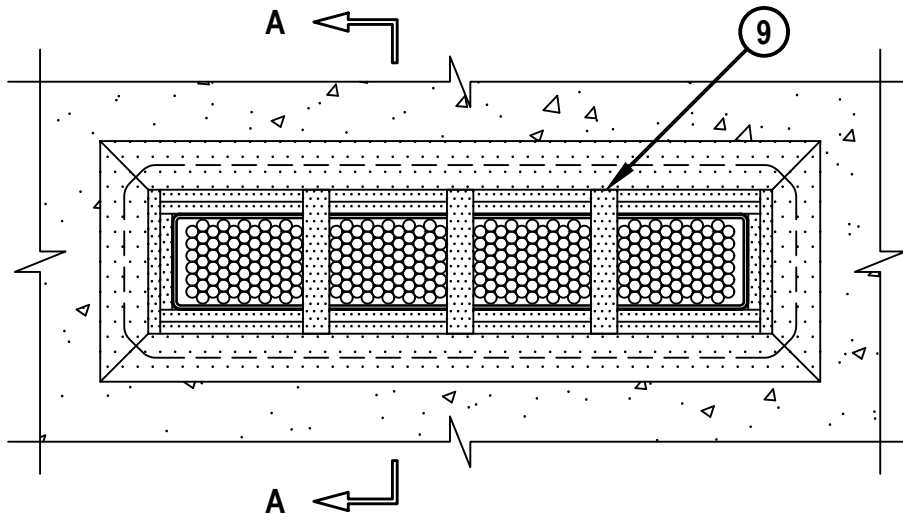
T-RATING = 2-HR.

L-RATING AT AMBIENT = SEE TABLE BELOW

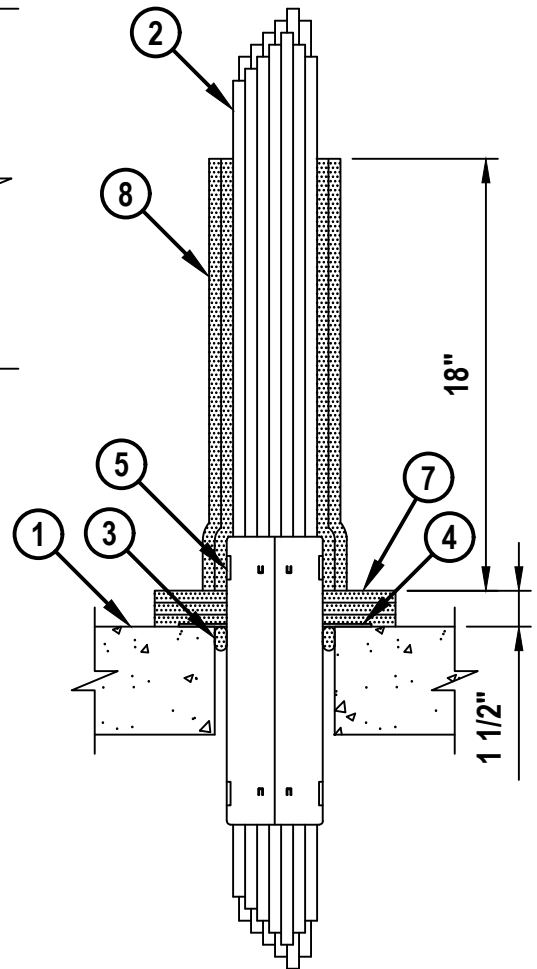
L-RATING AT 400°F = SEE TABLE BELOW

FA3087d.060525

TOP VIEW



SECTION A-A



Hilti Firestop Systems

HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet	1 of 3
Scale	1/8" = 1"
Date	June 05, 2025

Drawing No.

**FA
3087d**

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L-RATING AT AMBIENT = SEE TABLE BELOW

L-RATING AT 400°F = SEE TABLE BELOW

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1. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK) (2-HR. FIRE RATING).
2. CABLE BUNDLES TO BE A COMBINATION OF ANY OF THE FOLLOWING :
 - 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 23 AWG CAT 7 COMPUTER CABLE.
 - E. MAXIMUM RG 6/U COAXIAL CABLE.
 - F MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
3. HILTI CFS-TTS OS FIRESTOP TOP TRACK SEAL CUT IN HALF LENGTHWISE AT DOTTED LINE OR TEAR STRIP, AND CUT 1" LONGER THAN FLOOR OPENING ON EACH SIDE. ADHESIVE STRIP PLACED ON TOP OF FLOOR WITH FOAM EDGE HANGING OVER EDGE OF CONCRETE INTO OPENING PRIOR TO INSTALLATION OF FLOOR GRID.
4. HILTI CFS-MSL [18" x 4" OR 24" x 4"] TO BE PLACED AROUND OPENING OVER CFS-TTS (ITEM 3) AND ANCHORED TO FLOOR WITH A MINIMUM OF TWO 1-1/2" LONG CONCRETE SCREWS PER SIDE INSTALLED AT PRE-DRILLED HOLES IN RAIL.
5. HILTI CFS-MSL [S, M, OR L] MODULAR SLEEVES TO BE GANGED TOGETHER WITH GANGING CLIPS AND BOLTED TO FLOOR GRID WITH PROVIDED SUPPORT BRACKETS, IN ACCORDANCE WITH ACCOMPANYING INSTALLATION INSTRUCTIONS. FIRESTOP DEVICES IN ANY CONFIGURATION TO COMPLETELY FILL ACROSS ENTIRE WIDTH OF FLOOR GRID.
6. [NOT SHOWN] 1/2" BEAD OF HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT OR HILTI CP 606 FLEXIBLE FIRESTOP SEALANT APPLIED ON CONCRETE AROUND THE PERIMETER OF FLOOR GRID PRIOR TO APPLICATION OF HILTI CFP-ES ENDO-SHIELD.
7. HILTI CFP-ES ENDO-SHIELD CUT TO FIT THE CONTOUR OF THE FLOOR GRID WITH 1" OVERLAP ONTO CONCRETE FLOOR. 3 LAYERS OF HILTI CFP-ES ENDO-SHIELD TO BE STACKED TO COMPLETELY COVER FLOOR GRID. SEAMS AND EXPOSED EDGES TO BE TAPED TOGETHER WITH 3" WIDE FSK TAPE OVERLAPPING ONTO CFP-ES ENDO-SHIELD AND CONCRETE FLOOR.
8. TWO LAYERS OF HILTI CFP-ES ENDO-SHIELD CUT INTO PIECES EXTENDING 18" ABOVE CFP-ES ENDO-SHIELD (ITEM 7) TO COMPLETELY ENCAPSULATE ROW OF FIRESTOP DEVICES. 3" WIDE FSK TAPE TO BE CENTERED ON AND COMPLETELY COVER HORIZONTAL AND VERTICAL SEAMS.
9. ONE LAYER OF HILTI CFP-ES ENDO SHIELD CUT TO STRIPS SIZED TO FIT EACH VOID BETWEEN CABLE BUNDLES AND TO EXTEND TO THE OUTER EDGE OF CFP-ES ENDO-SHIELD (ITEM 8). STRIPS OF CFP-ES ENDO-SHIELD SECURED TO THE TOP OF CFP-ES ENDO-SHIELD (ITEM 8) WITH 3" WIDE FSK TAPE.

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DEVICE	MAX CABLE FILL	CABLE TYPE	L-RATING CFM/DEVICE	
			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

NOTES : 1. MAXIMUM SIZE OF OPENING = 19" x 5" (FOR CFS-MSL FGR 18" x 4") OR 25" x 5" (FOR CFS-MSL FGR 24" x 4").
 2. ANNULAR SPACE = MINIMUM 3/16", MAXIMUM 9/16".
 3. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF EACH FIRESTOP DEVICE.



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