

UL/cUL SYSTEM NO. F-A-3093

CABLE BUNDLE THROUGH CONCRETE FLOOR

F-RATING = 2-HR.

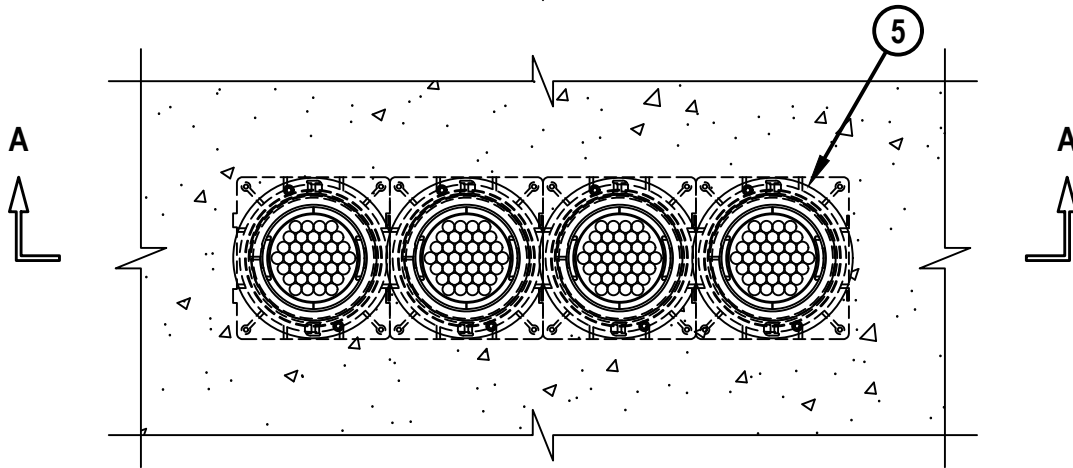
T-RATING = 0-HR., 3/4-HR., OR 2-HR. (SEE NOTE NO. 2 BELOW)

L-RATING AT AMBIENT = 1 CFM PER DEVICE

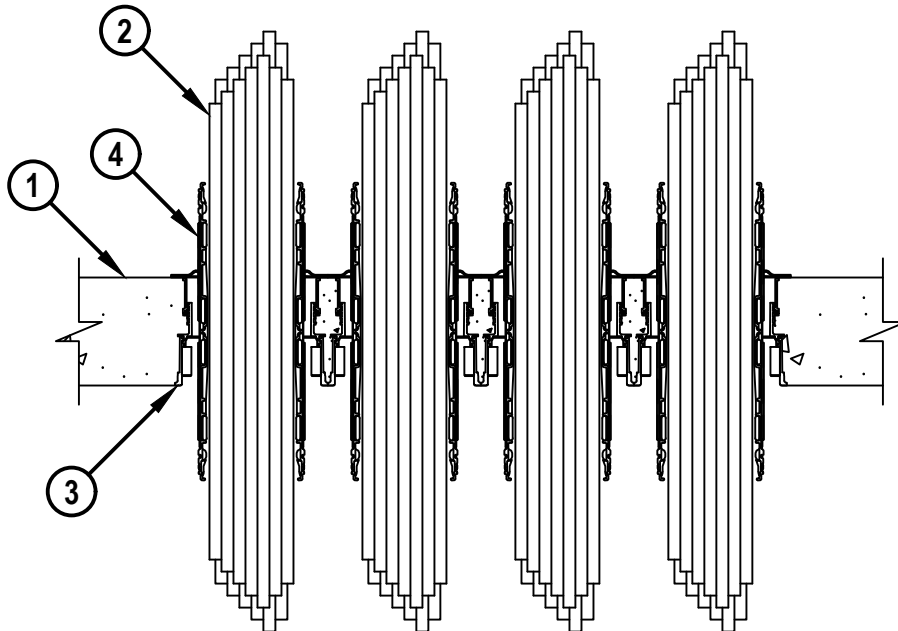
L-RATING AT 400°F = LESS THAN 1 CFM PER DEVICE

FA3093a.092723

TOP VIEW



SECTION A-A



HILTI
Hilti Firestop Systems

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

Sheet	1 of 4
Scale	1/8" = 1"
Date	Sep. 27, 2023

Drawing No.

**FA
3093a**

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CABLE BUNDLE THROUGH CONCRETE FLOOR

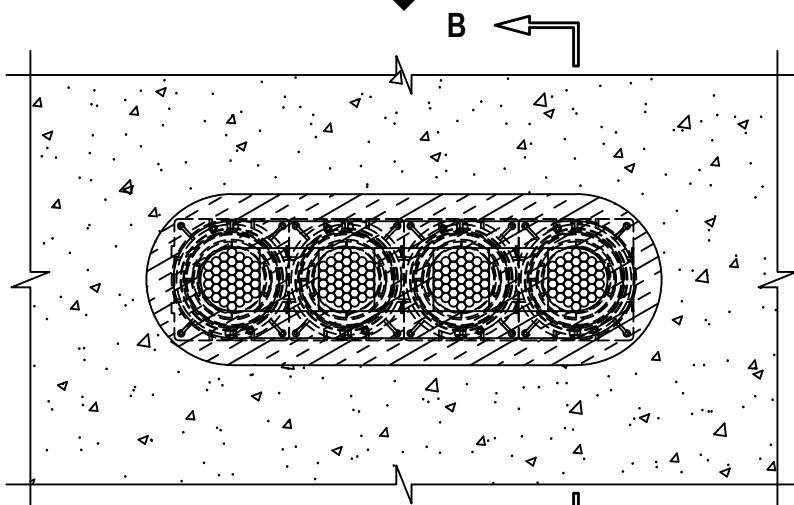
F-RATING = 2-HR.

T-RATING = 0-HR., 3/4-HR., OR 2-HR. (SEE NOTE NO. 2 BELOW)

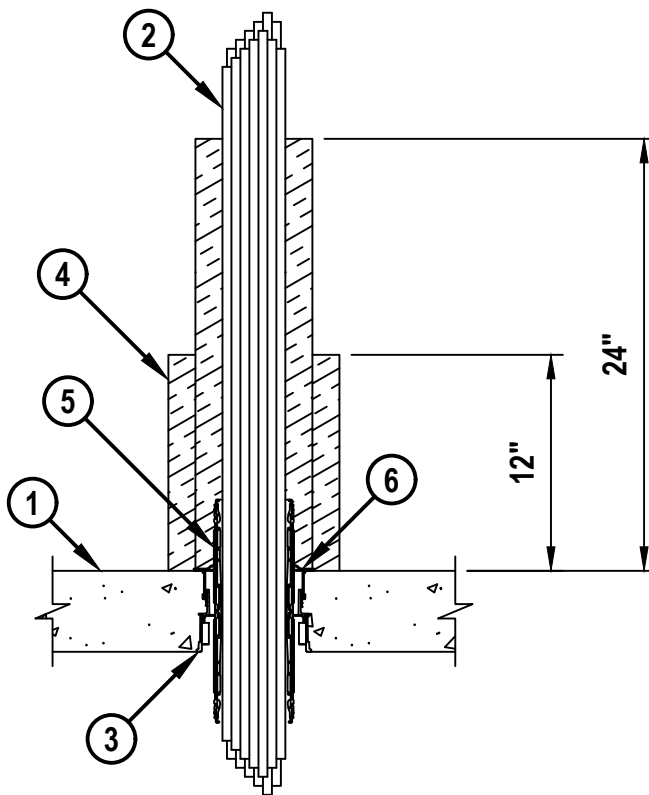
L-RATING AT AMBIENT = 1 CFM PER DEVICE

L-RATING AT 400°F = LESS THAN 1 CFM PER DEVICE

TOP VIEW



SECTION B-B



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Sheet 2 of 4

Scale 3/32" = 1"

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CABLE BUNDLE THROUGH CONCRETE FLOOR

F-RATING = 2-HR.

T-RATING = 0-HR., 3/4-HR., OR 2-HR. (SEE NOTE NO. 2 BELOW)

L-RATING AT AMBIENT = 1 CFM PER DEVICE

L-RATING AT 400°F = LESS THAN 1 CFM PER DEVICE

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1. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK) (2-HR. FIRE-RATING).
2. CABLE BUNDLE 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. 22 AWG CAT 5 OR CAT 6 COMPUTER CABLE.
 - E. MAXIMUM RG 6/U COAXIAL CABLE.
 - F. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER) WITH PVC JACKET AND INSULATION.
 - G. MAXIMUM 2/C NO. 18 AWG POWER OR NON POWER LIMITED FIRE ALARM CABLE WITH OR WITHOUT METAL JACKET (MANUFACTURED BY AFC CABLE SYSTEMS, INC.).
 - H. ANY CABLES, METAL CLAD CABLES, OR ARMORED CABLES CURRENTLY LISTED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
 - I. MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
3. HILTI CFS-CID U [2" OR 4"] OR CFS-CID U 2" CA CAST-IN FIRESTOP DEVICE CUT FLUSH WITH TOP SURFACE OF FLOOR. MAXIMUM FOUR DEVICES OF SAME SIZE ARE SNAP FIT TOGETHER AND PERMANENTLY CAST INTO FLOOR. CONCRETE TO FILL BETWEEN DEVICES.

FIRESTOP CONFIGURATION A-A

4. HILTI CP 653 (BA) SPEED SLEEVE [2" OR 4", SIZED TO MATCH CAST-IN FIRESTOP DEVICE] SLID INTO AND CENTERED WITHIN FLOOR. INNER FABRIC TO BE TIGHTLY TWISTED TO CLOSE OFF THE DEVICE.
5. DEVICE FLANGES SPUN CLOCKWISE ONTO DEVICE THREADS, OVER SMOKE GASKET, BUTTING TIGHTLY TO TOP SIDE OF FLOOR. SECURE EACH DEVICE FLANGE TO CONCRETE FLOOR WITH MINIMUM ONE 1-1/4" LONG CONCRETE SCREW ANCHOR.

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FIRESTOP CONFIGURATION B-B

4. WHEN A 2-HR T-RATING IS REQUIRED, MIN 1-1/2 IN. (38 MM) THICK DUCT WRAP TIGHTLY WRAPPED AROUND DEVICES (ITEM 5) AND PENETRANTS (ITEM 3) TO EXTEND 24 IN. (610 MM) ABOVE FLOOR. AN ADDITIONAL LAYER OF MIN 1-1/2 IN. (38 MM) THICK DUCT WRAP TIGHTLY WRAPPED AROUND THE FIRST LAYER OF DUCT WRAP TO EXTEND 12 IN. (305 MM) ABOVE FLOOR. THE SPACES BETWEEN PENETRANTS AT THE TOP OF THE DUCT WRAP ARE TO BE TIGHTLY PACKED WITH A NOMINAL 2 IN. (51 MM) DEPTH OF DUCT WRAP MATERIAL, FLUSH WITH THE TOP OF THE INNER LAYER OF DUCT WRAP. ALL LONGITUDINAL SEAMS OF BOTH LAYERS OF DUCT WRAP ARE SEALED WITH FOIL TAPE. (FIREMASTER FASTWRAP+, FIREMASTER FASTWRAP XL, OR PYROSCAT DUCT WRAP XL MANUFACTURED BY THERMAL CERAMICS INC, OR FYREWAP DUCT INSULATION OR FYREWAP DUCT 1.5 INSULATION MANUFACTURED BY UNIFRAX LLC).
5. HILTI CP 653 (BA) SPEED SLEEVE [2" OR 4", SIZED TO MATCH CAST-IN FIRESTOP DEVICE] SLID INTO AND CENTERED WITHIN FLOOR. INNER FABRIC TO BE TIGHTLY TWISTED TO CLOSE OFF THE DEVICE.
6. DEVICE FLANGES SPUN CLOCKWISE ONTO DEVICE THREADS, OVER SMOKE GASKET, BUTTING TIGHTLY TO TOP SIDE OF FLOOR. SECURE EACH DEVICE FLANGE TO CONCRETE FLOOR WITH MINIMUM ONE 1-1/4" LONG CONCRETE SCREW ANCHOR.

NOTES : 1. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF DEVICE.
2. THE T-RATING FOR THE FIRESTOP SYSTEM IS 3/4-HR. EXCEPT THAT WHEN CABLE TYPES 3H OR 3I ARE USED, THE T-RATING IS 0-HR., WHEN FIRESTOP CONFIGURATION A-A IS USED.
THE T-RATING FOR THE FIRESTOP SYSTEM IS 2-HR., WHEN FIRESTOP CONFIGURATION B-B IS USED.



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