

**CABLE BUNDLE THROUGH CONCRETE OR BLOCK WALL ASSEMBLY**

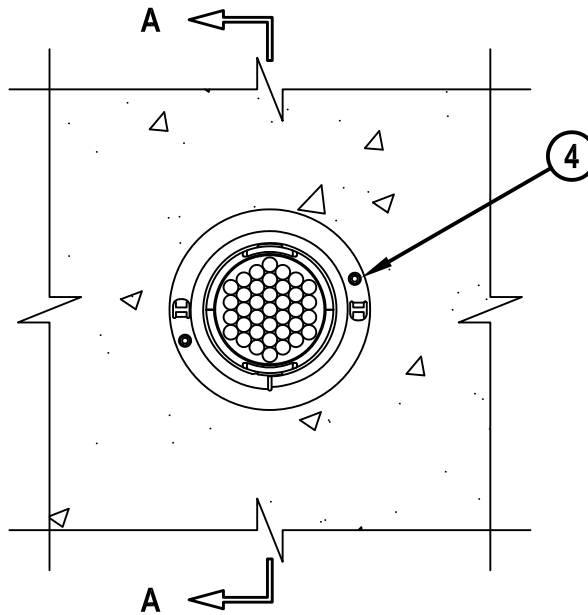
F-RATING = 4-HR.

T-RATING = 2-HR.

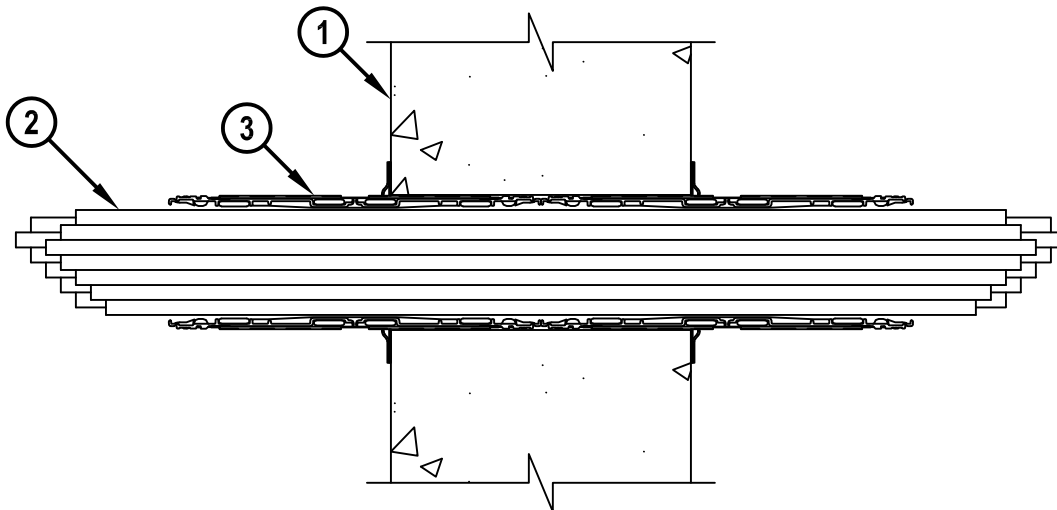
L-RATING AT AMBIENT = LESS THAN 1 CFM (SEE TABLE)

L-RATING AT 400°F = LESS THAN 1 CFM (SEE TABLE)

**FRONT VIEW**



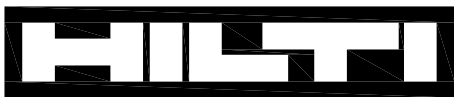
**SECTION A-A**



**1. CONCRETE WALL ASSEMBLY (4-HR. FIRE-RATING) :**

A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 10" THICK).

B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.



**Hilti Firestop Systems**

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

Sheet	1 of 2
Scale	5/32" = 1"
Date	July 31, 2018

Drawing No.

**WK  
3002f**

**CABLE BUNDLE THROUGH CONCRETE OR BLOCK WALL ASSEMBLY**

F-RATING = 4-HR.

T-RATING = 2-HR.

L-RATING AT AMBIENT = LESS THAN 1 CFM (SEE TABLE)

L-RATING AT 400°F = LESS THAN 1 CFM (SEE TABLE)

WK3002f.073118

**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 OR PE JACKET AND INSULATION.
- G. MAXIMUM 20/C NO. 22 AWG SHIELDED PRINTER CABLE WITH PVC JACKET.
- H. 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.).
- I. MAXIMUM 1/4" DIAMETER S-VIDEO CABLE CONSISTING OF TWO MAXIMUM 24 AWG 75 OHM COAX OR TWISTED PAIR CABLE WITH PE INSULATION AND PVC JACKET.
- J. MAXIMUM 3/C NO. 12 AWG MC CABLE.
- K. ANY CABLES, METAL-CLAD CABLE, OR ARMORED CABLE CURRENTLY CLASSIFIED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.

**3. TWO HILTI CP 653 (BA) SPEED SLEEVE [2" OR 4"] OR HILTI CFS-SL GA L SPEED SLEEVE [4"] SLID INTO OPENING ON EACH SIDE OF WALL SUCH THAT ENDS BUTT AT MID-DEPTH OF WALL. DEVICE FLANGES SPUN CLOCKWISE ONTO DEVICE THREADS OVER SMOKE GASKET, BUTTING TIGHTLY TO BOTH SIDES OF WALL. INNER FABRIC SHOULD BE TWISTED CLOSED.**

**4. SECURE DEVICE FLANGES TO BOTH SIDES OF WALL WITH MINIMUM TWO 1-1/4" LONG MASONRY SCREWS OR ANCHORS.**

MAX CABLE FILL	CABLE TYPE	L-RATING, CFM/SQ FT				L-RATING, CFM			
		AMBIENT		400°F		AMBIENT		400°F	
		SEALANT	GASKET	SEALANT	GASKET	SEALANT	GASKET	SEALANT	GASKET
0% FILL	-	LESS THAN 1	1	LESS THAN 1	2.7	LESS THAN 1	LESS THAN 1	LESS THAN 1	LESS THAN 1
100%	ITEM 2D ONLY	4.9	4.9	1.3	3.5	LESS THAN 1	LESS THAN 1	LESS THAN 1	LESS THAN 1
100%	ANY CABLES (ITEM 2) IN ANY COMBINATION	9.2	9.2	9.6	11.8	1.2	1.2	1.3	1.6

**NOTES :** 1. MAXIMUM DIAMETER OF OPENING = 2-1/2" (FOR 2" DEVICE) OR 4-1/2" (FOR 4" DEVICE).  
 2. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF DEVICE.  
 3. ANNULAR SPACE BETWEEN DEVICE AND PERIPHERY OF OPENING = MINIMUM 0".  
 4. [OPTIONAL] AS AN ALTERNATE TO SMOKE GASKET, MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT OR HILTI CP 606 FLEXIBLE FIRESTOP SEALANT FLUSH WITH BOTH SURFACES OF WALL WITH AN ADDITIONAL 1/4" BEAD APPLIED AROUND PERIPHERY OF DEVICE PRIOR TO SECURING DEVICE FLANGES.



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

Sheet	2 of 2
Scale	-
Date	July 31, 2018

Drawing No.  
**WK  
 3002f**