

UL/cUL SYSTEM NO. C-AJ-8100

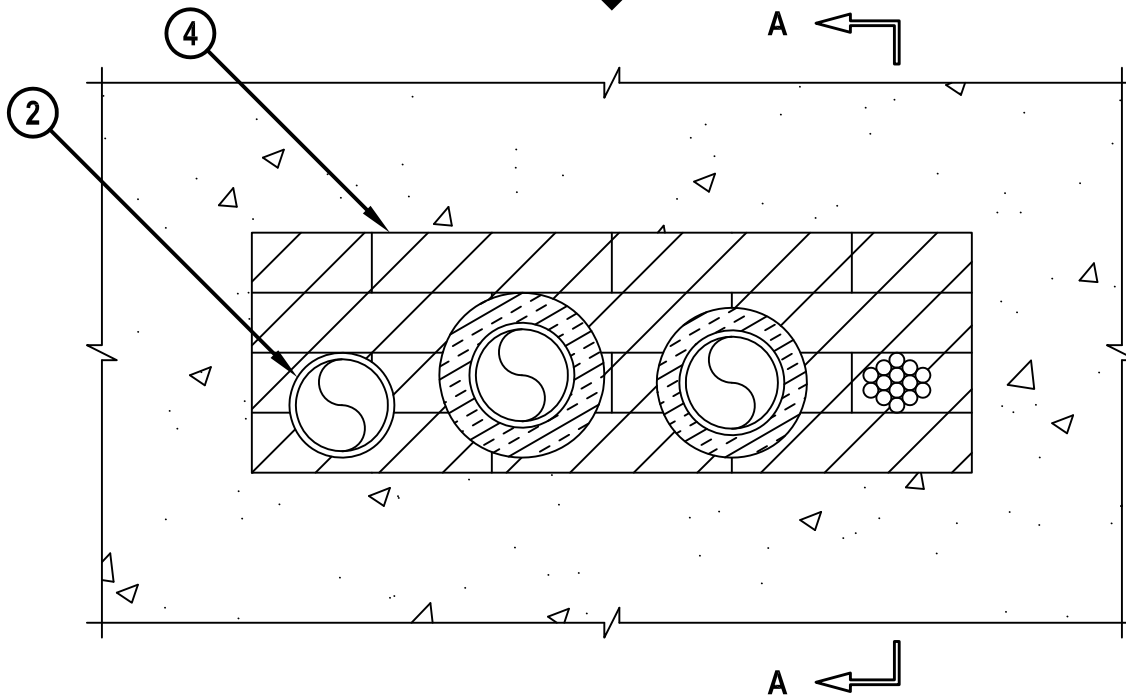
MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 3-HR.

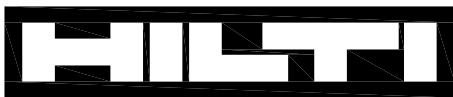
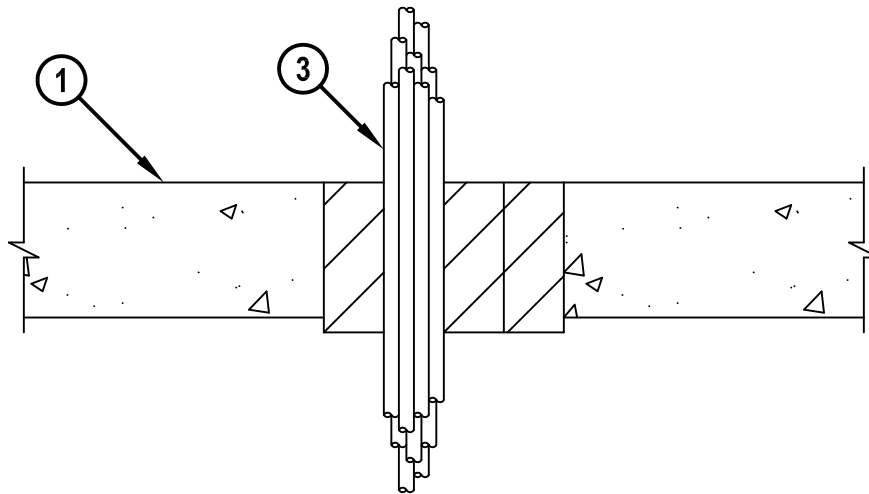
T-RATING = 0-HR., 3/4-HR., OR 1-HR.

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TOP VIEW



SECTION A-A



Hilti Firestop Systems

HILTI, Inc.
Tulsa, Oklahoma USA (800) 879-8000

Sheet 1 of 2

Scale 5/32" = 1"

Date Apr. 06, 2015

Drawing No.

**CAJ
8100d**

Saving Lives through Innovation and Education

MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 3-HR.

T-RATING = 0-HR., 3/4-HR., OR 1-HR.

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1. CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
 - B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 5" THICK).
 - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING PIPES, AND IN ANY COMBINATION MAY BE INSTALLED WITHIN THE OPENING :
 - A. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE.
 - B. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE WITH MAXIMUM 1" THICK GLASS-FIBER PIPE INSULATION.
 - C. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE WITH MAXIMUM 3/4" THICK AB/PVC PIPE INSULATION.
3. MAXIMUM 2" DIAMETER CABLE BUNDLE TO CONSIST OF ANY OF THE FOLLOWING :
 - A. MAXIMUM 300 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
 - B. MAXIMUM 500 KCMIL POWER CABLE WITH PVC JACKET.
 - C. MAXIMUM 7/C NO. 12 AWG POWER CABLE WITH PVC JACKET.
 - D. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER).
 - E. MAXIMUM 3/C NO. 12 AWG METAL-CLAD CABLE.
4. HILTI CFS-BL FIRESTOP BLOCK OR HILTI FS 657 FIRE BLOCK (2" THICK x 8" WIDE x 5" DEEP, REFERENCE : TOP VIEW) FIRMLY PACKED AND FLUSH WITH TOP SURFACE OF FLOOR, OR CENTERED WITHIN WALL. EITHER ONE OR A COMBINATION OF THE BLOCK TYPES MAY BE USED.

- NOTES :**
1. MAXIMUM SIZE OF OPENING = 24" x 8".
 2. ANNULAR SPACE BETWEEN CABLE BUNDLE, PIPES, AND INSULATED PIPES = MINIMUM 1/2", MAXIMUM 3-1/8".
 3. ANNULAR SPACE BETWEEN PIPES/INSULATED PIPES AND PERIPHERY OF OPENING = MINIMUM 1/2", MAXIMUM 5".
 4. ANNULAR SPACE BETWEEN CABLE BUNDLE AND PERIPHERY OF OPENING = MINIMUM 2", MAXIMUM 4".
 5. APPLY HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT OR HILTI CP 618 FIRESTOP PUTTY STICK IN ANY VOID THAT MAY EXIST (AROUND PENETRANTS OR BETWEEN FIRESTOP BLOCKS/FIRE BLOCKS).
 6. FOR BLOCK WALLS, FIRESTOP BLOCKS TO FILL ENTIRE THICKNESS OF WALL UNLESS WALL IS SOLID FILLED.



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Scale	-
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