

UL/cUL SYSTEM NO. C-AJ-8335

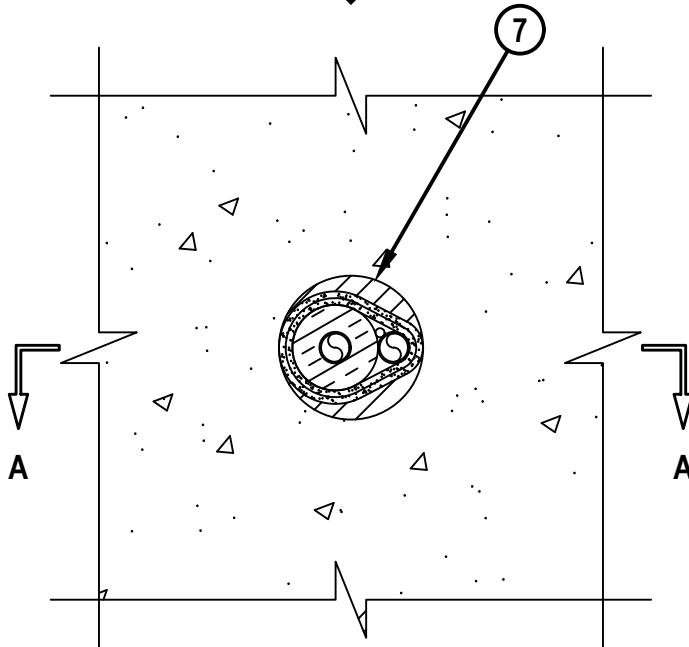
# MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.

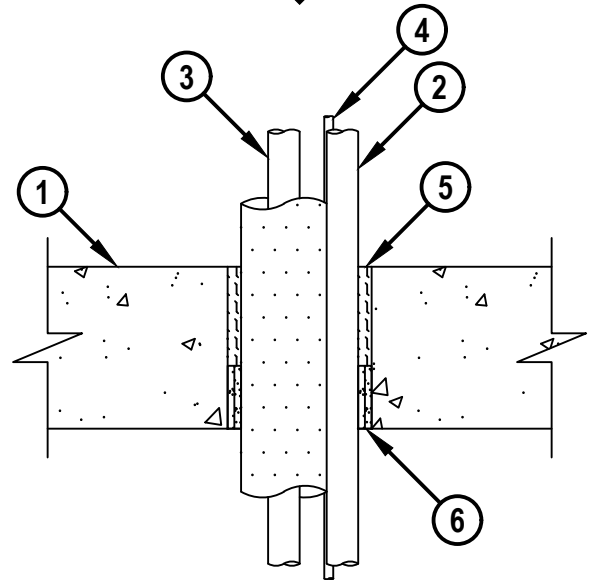
T-RATING = 1/4-HR.

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BOTTOM VIEW



SECTION A-A



**HILTI**  
Hilti Firestop Systems

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

Sheet	1 of 2
Scale	3/16" = 1"
Date	July 20, 2023

Drawing No.

**CAJ  
8335a**

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# **MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY**

F-RATING = 1-HR. OR 2-HR.

T-RATING = 1/4-HR.

CAJ8335a.072023

1. CONCRETE FLOOR OR WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
  - B. PRECAST (HOLLOW-CORE) CONCRETE FLOOR OR WALL (MINIMUM 6" THICK).
2. PENETRATING ITEM (QTY. = 1) TO CONSIST OF ONE OF THE FOLLOWING :
  - A. MAXIMUM 3/4" NOMINAL DIAMETER COPPER PIPE OR TUBING.
  - B. MAXIMUM 3/4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
  - C. MAXIMUM 3/4" NOMINAL DIAMETER STEEL CONDUIT OR STEEL EMT.
  - D. MAXIMUM 3/4" NOMINAL DIAMETER PIPE (SCHEDULE 5 OR HEAVIER).
3. MAXIMUM 7/8" NOMINAL DIAMETER COPPER PIPE OR TUBING WITH MAXIMUM 3/4" THICK LOW DENSITY POLYETHYLENE (LDPE) FLEXIBLE FOAM PIPE INSULATION (MANUFACTURED BY PDM US LLC - GELCOPPER OR GELBLACK) (MAX. QTY. = 1).
4. MAXIMUM 4 PAIR NO. 18 AWG THERMOSTAT CABLE WITH PVC JACKET (MAX. QTY. = 1).
5. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
6. HILTI CP 648E WRAP STRIP WRAPPED CONTINUOUSLY AROUND THE OUTER CIRCUMFERENCE OF THE THE PENETRATING ITEMS, COVERING TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIPS FLUSH WITH UNDERSIDE OF THE FLOOR ASSEMBLY.
7. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 4".

2. ANNULAR SPACE BETWEEN PENETRANTS AND PERIPHERY OF OPENING = MINIMUM 3/8", MAXIMUM 1-1/2".

3. PENETRANTS THROUGH OPENING TO BE TIGHTLY BUNDLED TOGETHER.

4. HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT TO BE APPLIED INTO INTERSTICES OF BUNDLE TO MAXIMUM EXTENT POSSIBLE.

5. HILTI CP 648E WRAP STRIPS AND HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.



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Sheet	2 of 2
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