

UL/cUL SYSTEM NO. C-AJ-8178

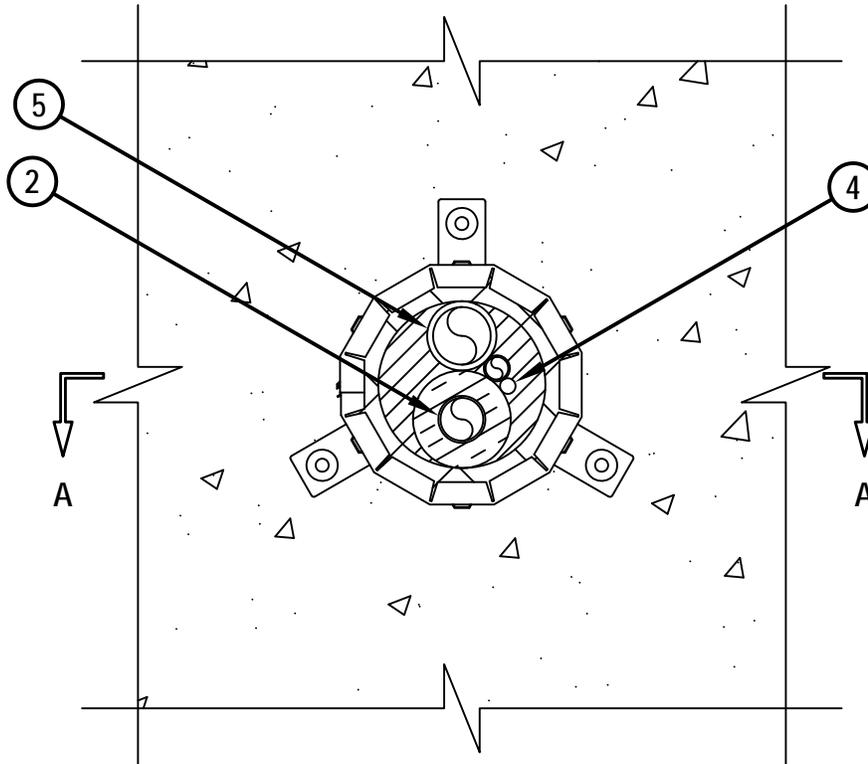
HVAC LINE SET THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

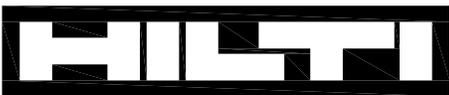
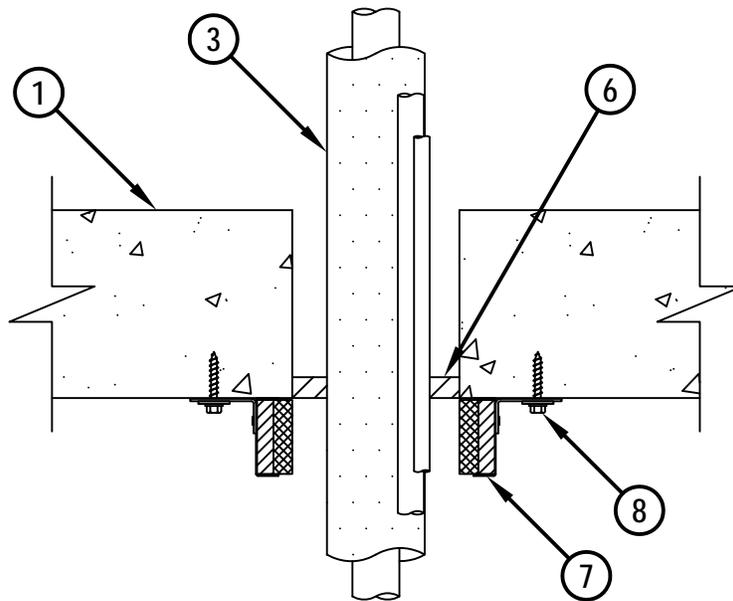
T-RATING = 1/4-HR., 1/2-HR., 1-HR. OR 1-3/4-HR.

CAJ8178c.010615

BOTTOM VIEW



SECTION A-A



Hilti Firestop Systems

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

Sheet	1 of 2
Scale	7/32" = 1"
Date	Jan. 06, 2015

Drawing No.

**CAJ
8178c**

Saving Lives through Innovation and Education

HVAC LINE SET THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 1/4-HR., 1/2-HR., 1-HR. OR 1-3/4-HR.

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1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 - B. PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 6" THICK).
 - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEM TO BE ANY OF THE FOLLOWING (MAX. QTY. = 2) :
 - A. MAXIMUM 1" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 1" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 1" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - D. MAXIMUM 1/2" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
3. NOMINAL 3/4" THICK AB/PVC PIPE INSULATION INSTALLED ON METALLIC PIPES LARGER THAN NOMINAL 1/2" DIAMETER.
4. MAXIMUM 4 PAIR NO. 18 AWG THERMOSTAT CABLE WITH PVC JACKET.
5. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 1-1/4" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - B. MAXIMUM 1-1/4" NOMINAL DIAMETER CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
6. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED FLUSH WITH BOTTOM OF FLOOR AND APPLIED WITHIN INTERSTICES OF PENETRANTS TO MAXIMUM EXTENT POSSIBLE.
7. HILTI CP 643N FIRESTOP COLLAR WITH FASTENING HOOKS.
8. EACH FASTENING HOOK SECURED TO BOTTOM OF FLOOR WITH 1/4" x 1-1/4" LONG STEEL EXPANSION BOLTS, MIN. 0.145" x 1-1/4" POWDER ACTUATED FASTENERS WITH 1-7/16" DIAMETER STEEL WASHER, 1/4" x 1-1/4" HILTI KWIK-CON II+ CONCRETE SCREW ANCHOR, 1/4" x 1-3/4" HILTI KWIK-BOLT 3 STEEL EXPANSION ANCHOR, OR HILTI X-DNI 27 P8 S15 POWDER ACTUATED FASTENER WITH INTEGRATED WASHER.

ANNULAR SPACE	MINIMUM	MAXIMUM
BETWEEN METALLIC PIPES AND PERIPHERY OF OPENING	1/2"	1"
BETWEEN INSULATED PIPES AND PERIPHERY OF OPENING	0"	1"
BETWEEN CABLE AND PERIPHERY OF OPENING	1/2"	1"
BETWEEN NONMETALLIC PIPE AND PERIPHERY OF OPENING	0"	1"
BETWEEN PENETRANTS	0"	1"

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 4".
 2. MAXIMUM DIAMETER OF OPENING TO MATCH DIAMETER OF COLLAR USED.
 3. CLOSED OR VENTED PIPING SYSTEM (PVC = SCHEDULE 40; CPVC = SDR 13.5).
 4. HILTI CP 643N FIRESTOP COLLARS AND HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.



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