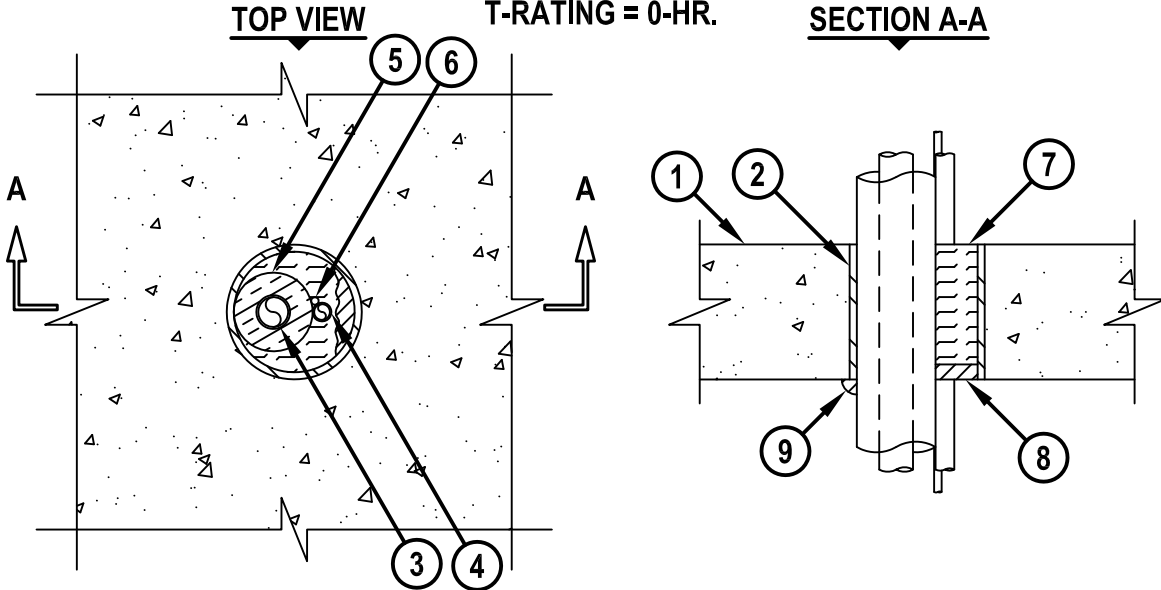


HVAC LINE SET THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 3-HR.
T-RATING = 0-HR.



CAJ8166b.011515

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. PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 6" THICK).
 - D. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. [OPTIONAL] MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER).
3. MAXIMUM 2" NOMINAL DIAMETER COPPER PIPE.
4. MAXIMUM 1/2" NOMINAL DIAMETER COPPER PIPE.
5. NOMINAL 1/2" TO 3/4" THICK AB/PVC PIPE INSULATION INSTALLED ON ONE COPPER PIPE.
6. MAXIMUM 4-PAIR NO. 18 AWG THERMOSTAT CABLE WITH PVC JACKET.
7. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
8. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
9. MINIMUM 1/2" BEAD HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

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

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 4".
2. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.



HILTI, Inc.
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Sheet	1 of 1
Scale	5/32" = 1"
Date	Jan. 15, 2015

Drawing No.
**CAJ
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