

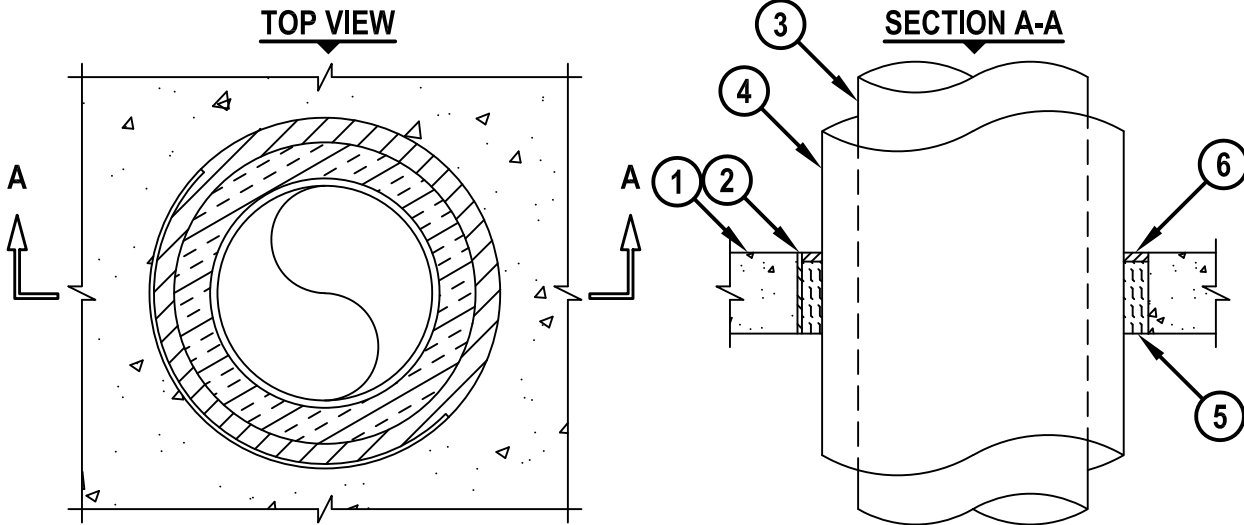
INSULATED METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 0-HR. OR 1-HR. (SEE NOTE NO. 5 BELOW)

L-RATING AT AMBIENT = 4 CFM / SQ FT

L-RATING AT 400° F = LESS THAN 1 CFM / SQ FT



CAJ5091r.011619

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. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL ASSEMBLY.
2. [OPTIONAL] ANY OF THE FOLLOWING STEEL SLEEVES MAY BE USED :
 - A. MAXIMUM 30" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER) MAY EXTEND MAXIMUM 3" ABOVE FLOOR, OR BOTH SURFACES OF WALL.
 - B. MAXIMUM 6" (MIN. 26 GA.) OR 12" (MIN. 24 GA.) DIAMETER GALVANIZED STEEL SLEEVE WITH SQUARE FLANGE SPOT WELDED TO BOTTOM OF SLEEVE AND SIZED MINIMUM 2" LARGER THAN SLEEVE DIAMETER. SLEEVE MAY EXTEND MAXIMUM 1" ABOVE TOP SURFACE OF FLOOR.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 12" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE OR TUBING.
4. MINIMUM 1/2" TO MAXIMUM 2" THICKNESS GLASS-FIBER PIPE INSULATION OR MAXIMUM 2" THICKNESS CALCIUM SILICATE PIPE INSULATION (SEE NOTE NO. 3 BELOW).
5. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT.
6. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 29".
 2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 12".
 3. WHEN CALCIUM SILICATE PIPE INSULATION IS USED, SECURE INSULATION TO PIPE WITH STAINLESS STEEL BANDS OR MINIMUM 8 AWG STAINLESS STEEL WIRE AT MAX. 12" O.C.
 4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.
 5. WHEN PIPE INSULATION THICKNESS IS LESS THAN 2", T-RATING IS 0-HR.



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Sheet	1 of 1
Scale	3/32" = 1"
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Drawing No.
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