

UL/cUL SYSTEM NO. C-AJ-1630

METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR., 3-HR., OR 4-HR.

T-RATING = 0-HR.

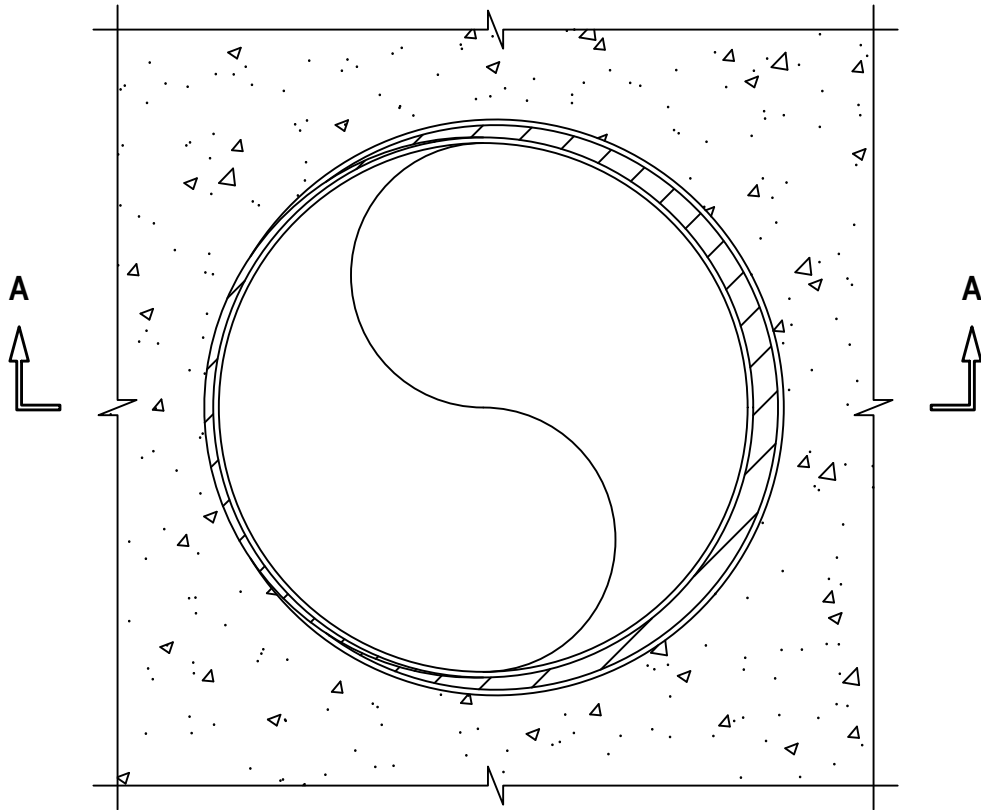
L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT

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

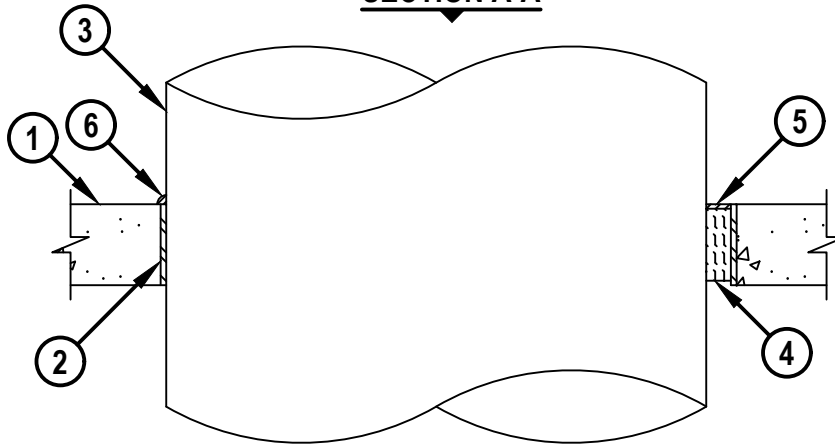
W-RATING - CLASS I (SEE NOTE NO. 3 BELOW)

CAJ1630d.030723

TOP VIEW



SECTION A-A



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

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|-------|---------------|
| Sheet | 1 of 2 |
| Scale | 3/32" = 1" |
| Date | Mar. 07, 2023 |

Drawing No.
CAJ
1630d

Saving Lives through Innovation and Education

METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR., 3-HR., OR 4-HR.

T-RATING = 0-HR.

L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT

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W-RATING - CLASS I (SEE NOTE NO. 3 BELOW)

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1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR., 3-HR., OR 4-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (SEE TABLE BELOW).
 - B. ANY UL/cUL CLASSIFIED PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 6" THICK).
 - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. [OPTIONAL] MAXIMUM 32" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER) CAST OR GROUTED INTO FLOOR. SLEEVE MAY EXTEND MAXIMUM 2" ABOVE TOP SURFACE OF FLOOR OR BEYOND ONE OR BOTH SURFACES OF WALL. STEEL SLEEVE MAY BE USED IN 2-HR. AND 3-HR. SYSTEMS ONLY.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING (SEE TABLE BELOW) :
 - A. MAXIMUM 30" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 30" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
 - E. MAXIMUM 4" NOMINAL DIAMETER EMT.
4. MINERAL WOOL SAFING (MIN. 4 PCF DENSITY) TIGHTLY PACKED (SEE TABLE FOR THICKNESS).
5. HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT OR HILTI CFS-S SIL SL FIRESTOP SILICONE SEALANT (FLOORS ONLY) (SEE TABLE FOR DEPTH).
6. MINIMUM 1/2" BEAD HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT APPLIED AT POINT OF CONTACT.

| F-RATING | MINIMUM FLOOR/WALL THICKNESS | ANNULAR SPACE (MIN. TO MAX.) | MINIMUM MINERAL WOOL THICKNESS | MINIMUM SEALANT DEPTH | MAXIMUM COPPER PIPE OR TUBING DIAMETER | MAXIMUM STEEL/IRON PIPE DIAMETER |
|----------|------------------------------|------------------------------|--------------------------------|-----------------------|--|----------------------------------|
| 2 | 5-1/2" | 0" TO 1-7/8" | 5" | 1/2" | 4" | 16" |
| 3 | 4-1/2" | 0" TO 2-1/8" | 4-1/4" | 1/4" | 6" | 30" |
| 4 | 5-1/2" | 0" TO 1-7/8" | 5" | 1/2" | 4" | 8" |

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 32" (FOR NORMAL CONCRETE) OR 7" (FOR PRECAST (HOLLOW-CORE) CONCRETE).
 2. WHEN PRECAST (HOLLOW-CORE) UNITS ARE USED, HALF OF THE REQUIRED THICKNESS OF MINERAL WOOL SHALL BE INSTALLED FLUSH WITH THE BOTTOM SURFACE OF THE FLOOR AND THE REMAINING HALF INSTALLED AT THE TOP OF THE OPENING RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
 3. W-RATING DOES NOT APPLY WHEN MINERAL WOOL IS SPLIT FOR PRECAST (HOLLOW-CORE) FLOOR APPLICATIONS OR WHEN ANNULAR SPACE EXCEEDS MAXIMUM 1-7/8".
 4. HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.



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