

**PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR CONCRETE BLOCK WALL ASSEMBLY**

F-RATING = 2-HR.

T-RATING = 0-HR. OR 2-HR. (SEE NOTE NO. 4 BELOW)

FT-RATING = 0-HR. OR 2-HR. (SEE NOTE NO. 4 BELOW)

FH-RATING = 2-HR.

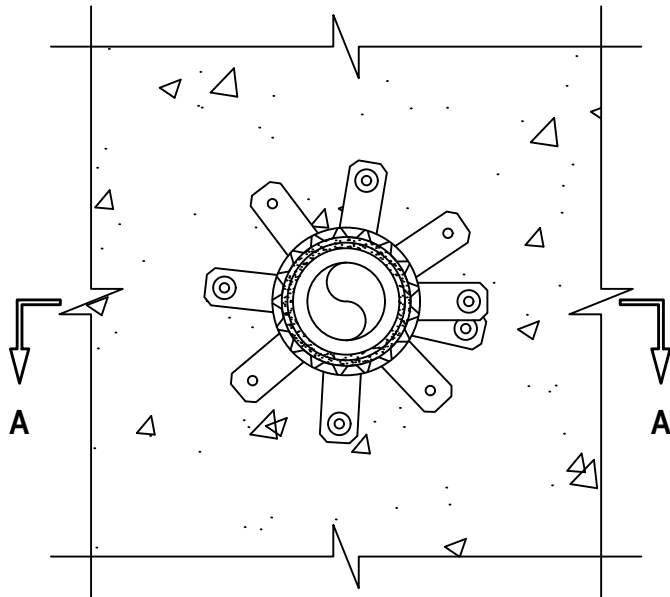
FTH-RATING = 0-HR. OR 2-HR. (SEE NOTE NO. 4 BELOW)

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

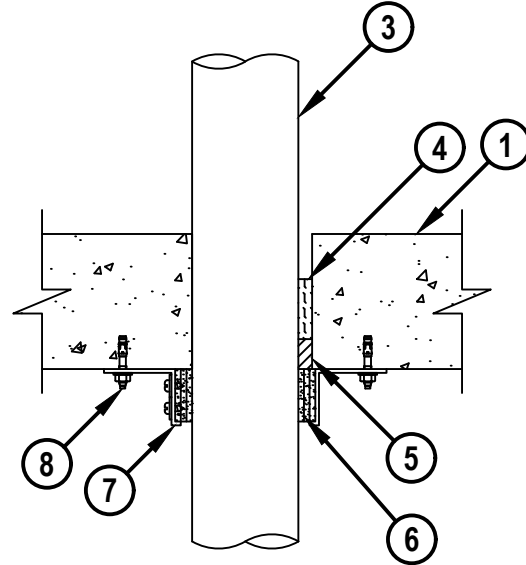
L-RATING AT 400°F = 1 CFM / SQ FT OR LESS

CAJ2830c.040622

**BOTTOM VIEW**



**SECTION A-A**



**SYSTEM TESTED WITH A PRESSURE DIFFERENTIAL OF 50 Pa BETWEEN THE EXPOSED AND UNEXPOSED SURFACES WITH THE HIGHER PRESSURE ON THE EXPOSED SIDE.**

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 CLASSIFIED CONCRETE BLOCK WALL.
2. [OPTIONAL, NOT SHOWN] MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 40 OR THINNER).



**Hilti Firestop Systems**

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

Sheet 1 of 2

Scale 5/32" = 1"

Date Apr. 06, 2022

Drawing No.

**CAJ  
2830c**

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FT-RATING = 0-HR. OR 2-HR. (SEE NOTE NO. 4 BELOW)

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FTH-RATING = 0-HR. OR 2-HR. (SEE NOTE NO. 4 BELOW)

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

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

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**3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :**

A. MAXIMUM 3" (90 MM OD) NOMINAL DIAMETER AQUATHERM GREENPIPE POLYPROPYLENE (PP-R) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED OR VENTED PIPING SYSTEM).

B. MAXIMUM 3" (90 MM OD) NOMINAL DIAMETER AQUATHERM BLUEPIPE POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 9 OR 11) (CLOSED OR VENTED PIPING SYSTEM).

C. MAXIMUM 3" (90 MM OD) NOMINAL DIAMETER NUPI AMERICAS NIRON POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.3, 9, OR 11) (CLOSED OR VENTED PIPING SYSTEM).

D. MAXIMUM 3" (90 MM OD) NOMINAL DIAMETER AQUATECHNIK NA FUSION-TECH POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED OR VENTED PIPING SYSTEM).

E. MAXIMUM 3" (90 MM OD) NOMINAL DIAMETER UPONOR POLYPROPYLENE (PP) PLASTIC PIPE (SDR 9 OR 11) (CLOSED OR VENTED PIPING SYSTEM).

F. MAXIMUM 3" (76 MM) NAPSYS-HR PVC (PVC-HR) PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).

**4. MINIMUM 2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.**

**5. MINIMUM 1" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.**

**6. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING THREE TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.**

**7. HILTI 1-3/4" RETAINING COLLAR OVERLAPPING MINIMUM 1" AND SECURED TOGETHER WITH TWO NO. 8 SHEET METAL SCREWS, OR WITH A NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP SECURED TO THE COLLAR AT ITS MID-HEIGHT.**

**8. EVERY OTHER TAB OF RETAINING COLLAR SECURED TO BOTTOM OF FLOOR WITH 1/4" x 1-1/4" LONG STEEL EXPANSION BOLTS, 3/16" x 1-1/2" LONG CONCRETE SCREW ANCHORS, 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.**

**NOTES :** 1. DIAMETER OF OPENING = 4".  
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2".  
 3. HILTI CP 648E WRAP STRIP WITH RETAINING COLLAR AND HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.  
 4. T, FT, FTH-RATINGS = 2-HR., EXCEPT WHEN STEEL PIPE SLEEVE (ITEM NO. 2) IS USED T, FT, FTH-RATINGS = 0-HR.



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