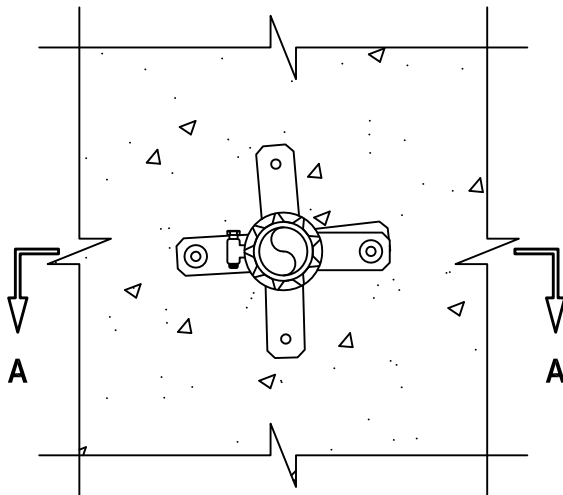


**PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL**

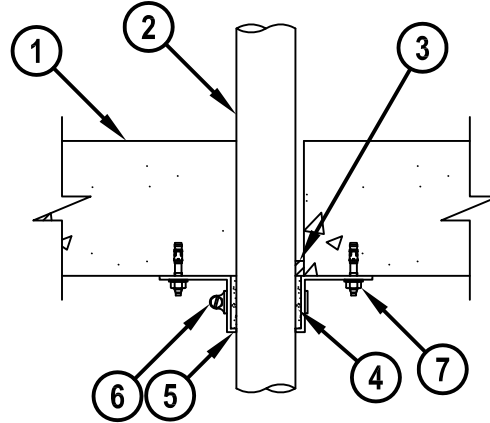
F, FT, FH, AND FTH-RATINGS = 2-HR.

NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

**BOTTOM VIEW**



**SECTION A-A**



cUL CAJ2071b.011715

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.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING (CLOSED OR VENTED PIPING SYSTEM) :
  - A. MAXIMUM 2" NOMINAL DIAMETER FUSIOTHERM® (SDR 7.4 WITH FASER) PP PLASTIC PIPE MANUFACTURED BY AQUATHERM, INC.
  - B. MAXIMUM 2" NOMINAL DIAMETER CLIMATHERM® (SDR 11 WITH FASER) PP PLASTIC PIPE MANUFACTURED BY AQUATHERM, INC.
3. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
4. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING ONE TIME, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.
5. HILTI 1-3/4" RETAINING COLLAR OVERLAPPING MINIMUM 1".
6. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR.
7. SECURE EVERY OTHER TAB TO BOTTOM OF FLOOR WITH 1/4" x 1-1/4" LONG STEEL EXPANSION BOLTS, 1/4" x 1-1/4" CONCRETE SCREW ANCHOR, 0.145 DIAMETER x 1-1/4" LONG POWDER ACTUATED FASTENER WITH 9/16" STEEL WASHER, 1/4" x 1-3/4" HILTI KWIK-BOLT 3 STEEL EXPANSION ANCHOR, 1/4" x 1-1/4" HILTI KWIK-CON II+ CONCRETE SCREW ANCHOR, OR HILTI X-DNI 27 P8 S15 POWDER ACTUATED FASTENER WITH INTEGRATED STEEL WASHER.

**NOTES :** 1. MAXIMUM DIAMETER OF OPENING = 2-1/4".  
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 5/16".  
 3. MINIMUM 1-1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT AND HILTI CP 648E WRAP STRIP WITH RETAINING COLLAR ARE REQUIRED ON BOTH SIDES OF A WALL.



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

Sheet	1 of 1
Scale	5/32" = 1"
Date	Jan. 17, 2015

Drawing No.  
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