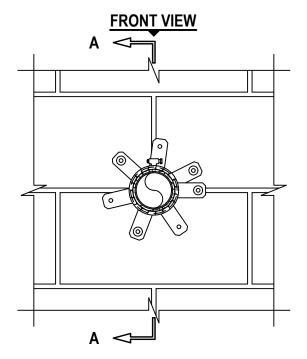


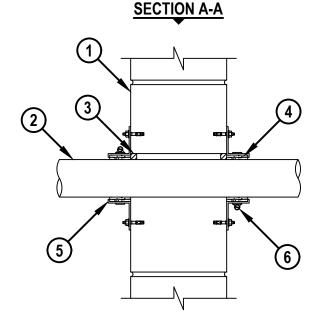
## PLASTIC PIPE THROUGH CONCRETE WALL OR CONCRETE BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

FT, FH, AND FTH-RATINGS = 0-HR.

NOTE: TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL





- 1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK).
  - B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
- 2. MAXIMUM 3" NOMINAL DIAMETER PEX TUBING (SDR 9) (UPONOR AQUAPEX) (CLOSED OR VENTED PIPING SYSTEM).
- 3. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT FLUSH WITH EACH SIDE OF WALL.
- 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 TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE BUTTED TIGHTLY AGAINST BOTH SURFACES OF WALL.
- 5. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 1".
- 6. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR.
- 7. EVERY OTHER TAB OF RETAINING COLLAR SECURED TO WALL WITH 1/4" x 1-1/4" LONG STEEL EXPANSION BOLTS, 1-1/4" LONG CONCRETE SCREW ANCHORS OR MIN. 0.145" x 1-1/4" LONG POWDER ACTUATED FASTENERS WITH 9/16" DIA. STEEL WASHERS, 1/4" x 1-1/4" LONG HILTI KWIK-CON II+ CONCRETE SCREW ANCHOR, 1/4" x 1-3/4" LONG HILTI KWIK-BOLT 3 STEEL EXPANSION ANCHOR, OR HILTI X-U 27 P8 S15 POWDER ACTUATED FASTENER WITH INTEGRAL WASHER.

NOTES: 1. MAXIMUM DIAMETER OF OPENING = 3-5/8".

2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2".



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

Sheet	1 of 1
Scale	1/8" = 1"
Date	Apr. 21, 2017

Drawing No. **cUL**WJ2321a

Saving Lives through Innovation and Education