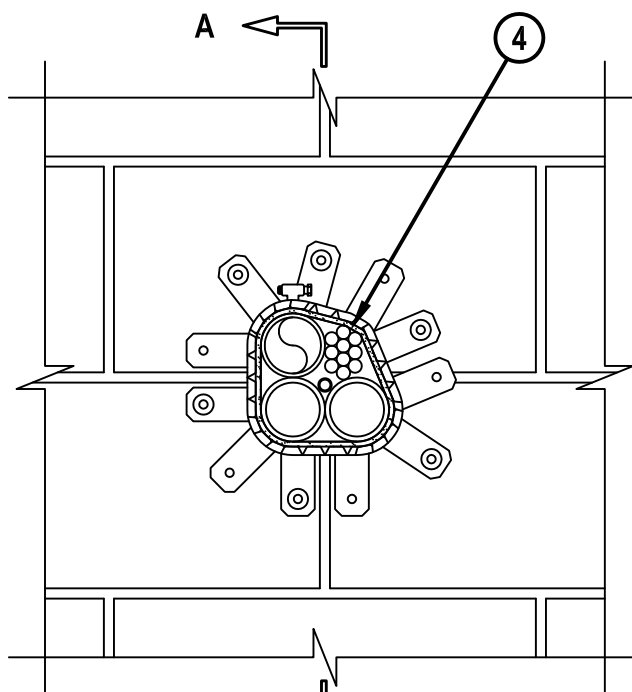


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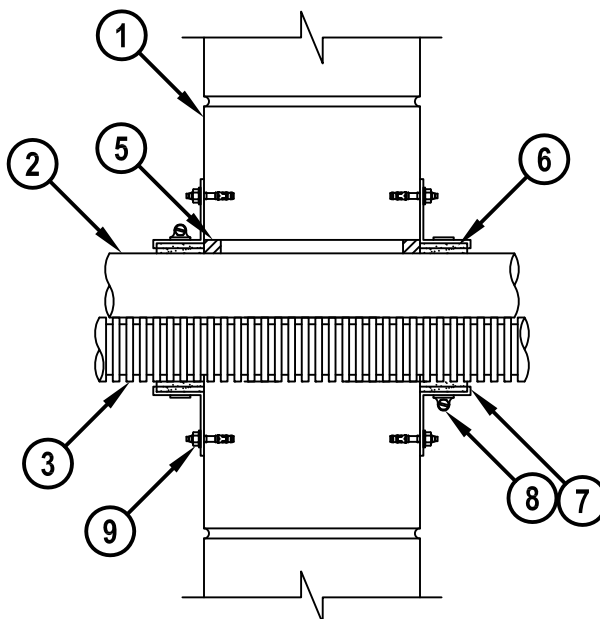
MULTIPLE PENETRATING ITEMS THROUGH CONCRETE OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.
T-RATING = 3/4-HR.

FRONT VIEW



SECTION A-A



WJ8045b.010915



Hilti Firestop Systems

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

Sheet 1 of 2

Scale 9/64" = 1"

Date Jan. 09, 2015

Drawing No.

**WJ
8045b**

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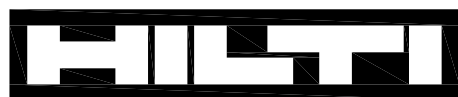
MULTIPLE PENETRATING ITEMS THROUGH CONCRETE OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.
T-RATING = 3/4-HR.

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1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK).
 - B. ANY UL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING PIPES, IN ANY COMBINATION, MAY BE INSTALLED WITHIN THE OPENING :
 - A. MAXIMUM 2" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 5 OR HEAVIER).
 - B. MAXIMUM 2" NOMINAL DIAMETER CAST IRON PIPE.
 - C. MAXIMUM 2" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
3. MAXIMUM 2" NOMINAL DIAMETER ENT (MAX. QTY. = 2).
4. MAXIMUM 2" DIAMETER CABLE BUNDLE TO CONSIST OF ANY OF THE FOLLOWING :
 - A. MAXIMUM 200 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
 - B. MAXIMUM 1/C NO. 500 KCMIL COPPER CONDUCTOR POWER CABLE XLPE JACKET.
 - C. MAXIMUM 3/C NO. 8 AWG COPPER CONDUCTOR METAL CLAD CABLE.
 - D. MAXIMUM RG/U COAXIAL CABLE.
 - E. MAXIMUM 4 PAIR NO. 24 AWG COPPER CONDUCTOR DATA CABLE WITH PVC JACKET.
5. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT (SEE NOTE NO. 4 BELOW).
6. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PENETRANTS, COVERING TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.
7. HILTI 1-3/4" RETAINING COLLAR WRAPPED AROUND WRAP STRIP, OVERLAPPING MINIMUM 1".
8. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE COLLAR CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR.
9. EVERY OTHER TAB OF RETAINING COLLAR SECURED TO WALL WITH 1/4 DIAMETER x 1-1/3" LONG STEEL EXPANSION BOLTS OR MIN. 0.145" DIAMETER x 1-1/4" LONG POWDER ACTUATED FASTENERS WITH 1-7/16" DIAMETER STEEL WASHERS.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 4".
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1".
 3. PENETRATING ITEMS NOT TO EXCEED 66% OF THE CROSS-SECTIONAL AREA OF OPENING.
 4. ADDITIONAL HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT FORCED INTO GROUPED PENETRANT INTERSTICES TO MAXIMUM EXTENT POSSIBLE.



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