

UL SYSTEM NO. W-J-8043

**MULTIPLE PENETRATING ITEMS THROUGH CONCRETE OR BLOCK WALL ASSEMBLY**

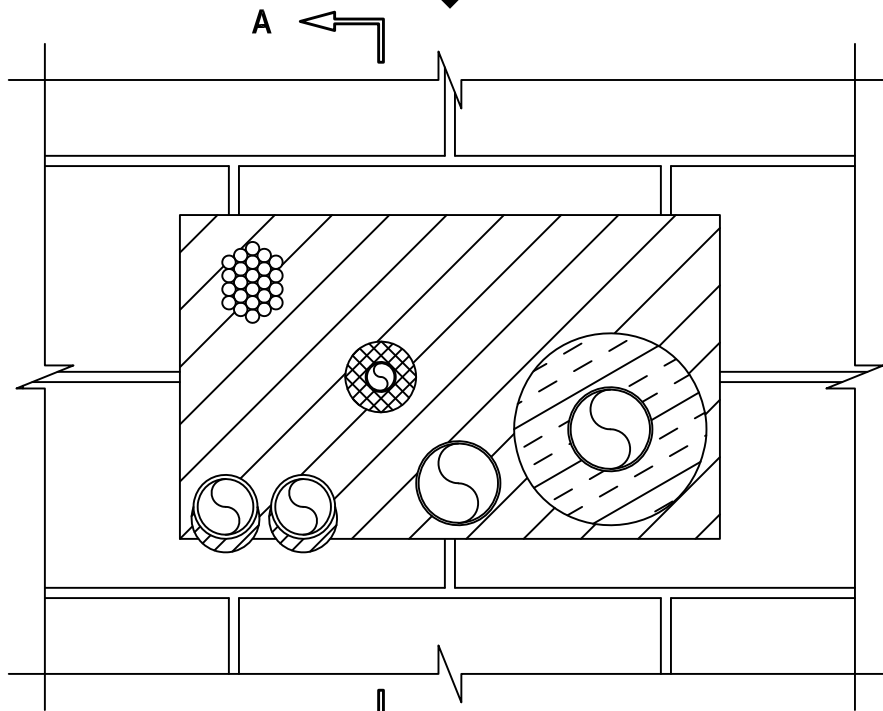
F-RATING = 2-HR.

T-RATING = 0-HR., 1/2-HR., 3/4-HR., 1 1/2-HR., OR 2-HR.

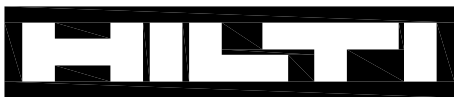
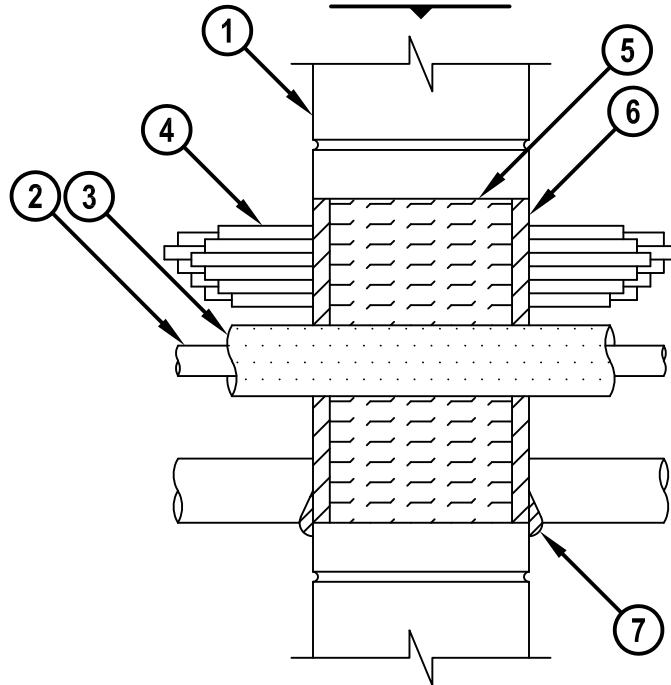
NOTE : TESTED TO A 2.5 PA PRESSURE DIFFERENTIAL

WJ8043d.032118

**FRONT VIEW**



**SECTION A-A**



**Hilti Firestop Systems**

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

|       |               |
|-------|---------------|
| Sheet | 1 of 2        |
| Scale | 9/64" = 1"    |
| Date  | Mar. 21, 2018 |

Drawing No.

**WJ  
8043d**

*Saving Lives through Innovation and Education*

**MULTIPLE PENETRATING ITEMS THROUGH CONCRETE OR BLOCK WALL ASSEMBLY**

F-RATING = 2-HR.

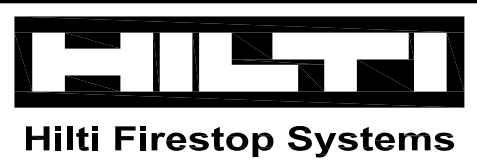
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1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK).
  - B. ANY UL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING PIPES, AND IN ANY COMBINATION MAY BE INSTALLED WITHIN THE OPENING :
  - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE (SCH 10 OR HEAVIER).
  - B. MAXIMUM 4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
  - C. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE OR TUBING.
  - D. MAXIMUM 3" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
  - E. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCH 40, CELLULAR OR SOLID CORE) (VENTED OR CLOSED PIPING SYSTEM).
  - F. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM).
3. [OPTIONAL] ONE OR MORE METALLIC PIPES MAY BE INSULATED WITH THE FOLLOWING TYPES OF PIPE INSULATION :
  - A. MINIMUM 1" TO MAXIMUM 2" THICK GLASS-FIBER PIPE INSULATION (3.5 PCF DENSITY).
  - B. MINIMUM 1/2" TO MAXIMUM 3/4" THICK AB/PVC PIPE INSULATION.
4. ONE MAXIMUM 3" DIAMETER CABLE BUNDLE CONSISTING OF ANY OF THE FOLLOWING :
  - A. MAXIMUM 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
  - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR POWER CABLE WITH PVC JACKET.
  - C. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE WITH PVC JACKET.
  - D. MAXIMUM 3/C NO. 8 AWG, WITH BARE ALUMINUM GROUND, STEEL METAL CLAD CABLE.
  - E. MAXIMUM 3/C (WITH GROUND) NO. 8 AWG NONMETALLIC SHEATHED CABLE (ROMEX) WITH PVC JACKET.
  - F. MAXIMUM 1/2" DIAMETER RG/U COAXIAL CABLE WITH PVC JACKET.
  - G. MAXIMUM 3/4" DIAMETER COPPER GROUND CABLE WITH OR WITHOUT PVC JACKET.
  - H. MAXIMUM 1-1/4" DIAMETER SINGLE OR MULTI-CONDUCTOR MINERAL-INSULATED COPPER-CLAD CABLE.
5. MINIMUM 4-3/4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
6. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
7. MINIMUM 1/2" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES : 1. MAXIMUM AREA OF SQUARE, RECTANGULAR, OR CIRCULAR OPENING IS 240 SQ. IN. WITH A MAXIMUM DIMENSION OF 20".  
 2. ANNULAR SPACE BETWEEN PENETRANTS AND PERIPHERY OF OPENING = MINIMUM 0", MAXIMUM 20".  
 3. ANNULAR SPACE BETWEEN PENETRANTS = MINIMUM 1", MAXIMUM 20".



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