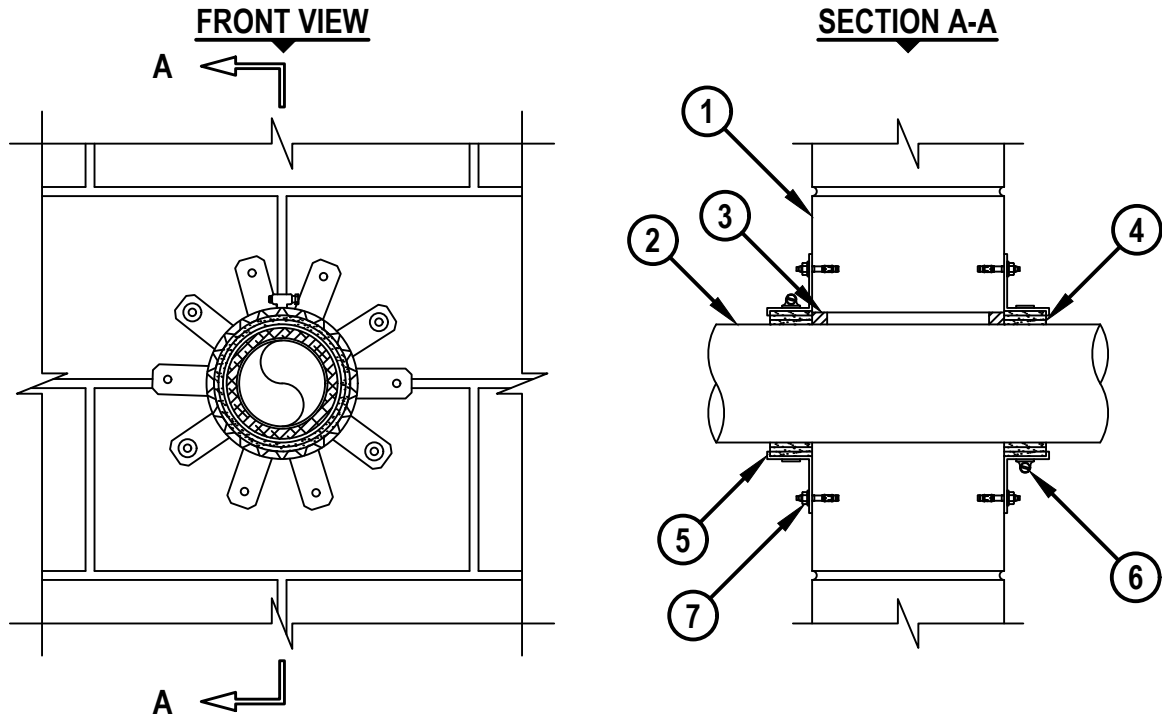


UL SYSTEM NO. W-J-2218

PLASTIC PIPE THROUGH CONCRETE WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 1 1/2-HR. OR 2-HR. (SEE NOTE NO. 3 BELOW)



WJ2218e.081921

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. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. NOMINAL 4" (100 MM OD) DIAMETER POLYPROPYLENE (PP) PLASTIC PIPE (SDR 11) (CLOSED OR VENTED PIPING SYSTEM).
 - B. MAXIMUM 8" (200 MM OD) NOMINAL DIAMETER AQUATHERM GREENPIPE POLYPROPYLENE (PP-R) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED PIPING SYSTEM).



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

Sheet	1 of 2
Scale	1/8" = 1"
Date	Aug. 19, 2021

Drawing No.
WJ
2218e

Saving Lives through Innovation and Education

PLASTIC PIPE THROUGH CONCRETE WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

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- C. MAXIMUM 8" (200 MM OD) NOMINAL DIAMETER AQUATHERM BLUEPIPE POLYPROPYLENE (PP-R) PLASTIC PIPE (SDR 9 OR 11) (CLOSED PIPING SYSTEM).
 - D. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER ORION POLYSTAR™ CT-WHITE POLYPROPYLENE (PP) PLASTIC PIPE (SDR 7.4, 9, OR 11) (CLOSED PIPING SYSTEM).
 - E. MAXIMUM 4" (102 MM OD) NOMINAL DIAMETER UPONOR AQUAPEX OR WIRSBO HEPEX CROSSLINKED POLYETHYLENE (PEX) TUBE (SDR 9) (CLOSED PIPING SYSTEM).
 - F. MAXIMUM 4" (110 MM OD) NOMINAL DIAMETER NIRON POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.3, 11, OR 17) (CLOSED OR VENTED PIPING SYSTEM).
 - G. MAXIMUM 8" (200 MM OD) NOMINAL DIAMETER NIRON POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.3 OR 11) (CLOSED PIPING SYSTEM).
 - H. MAXIMUM 8" (200 MM OD) NOMINAL DIAMETER AQUATECHNIK NA FUSION-TECH POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED PIPING SYSTEM).
 - I. MAXIMUM 8" (200 MM OD) NOMINAL DIAMETER UPONOR POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 9 OR 11) (CLOSED PIPING SYSTEM).
3. MINIMUM 5/8" 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, AS SPECIFIED IN THE TABLE BELOW, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE BUTTED TIGHTLY AGAINST BOTH SURFACES OF CONCRETE WALL.
 5. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER THE WRAP STRIPS, OVERLAPPING MINIMUM 1".
 6. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR OR TWO NO. 8 SHEET METAL SCREWS AT OVERLAP LOCATION USED TO SECURE COLLAR TOGETHER.
 7. MINIMUM FOUR TABS OF RETAINING COLLAR (SYMMETRICALLY SPACED) SECURED ON BOTH SIDES OF CONCRETE WALL WITH 1/4" DIAMETER STEEL EXPANSION BOLTS WITH 3/4" DIAMETER STEEL WASHERS.

NOM PIPE DIAM.	NO. OF LAYERS OF WRAP STRIP REQUIRED
8" (OR SMALLER)	4
4" (OR SMALLER)	3
2" (OR SMALLER)	2

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 9".
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2".
 3. T-RATING FOR 2-HR. WALLS IS 2-HR. FOR PENETRANT TYPES 2A, 2B, 2C, 2F, 2G, 2H, AND 2I.
 T-RATING FOR 2-HR. WALLS IS 2-HR. FOR PENETRANT TYPES 2D (SMALLER THAN 2").
 T-RATING FOR 2-HR. WALLS IS 1-1/2-HR. FOR PENETRANT TYPES 2D (LARGER THAN 2") AND 2E.



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