

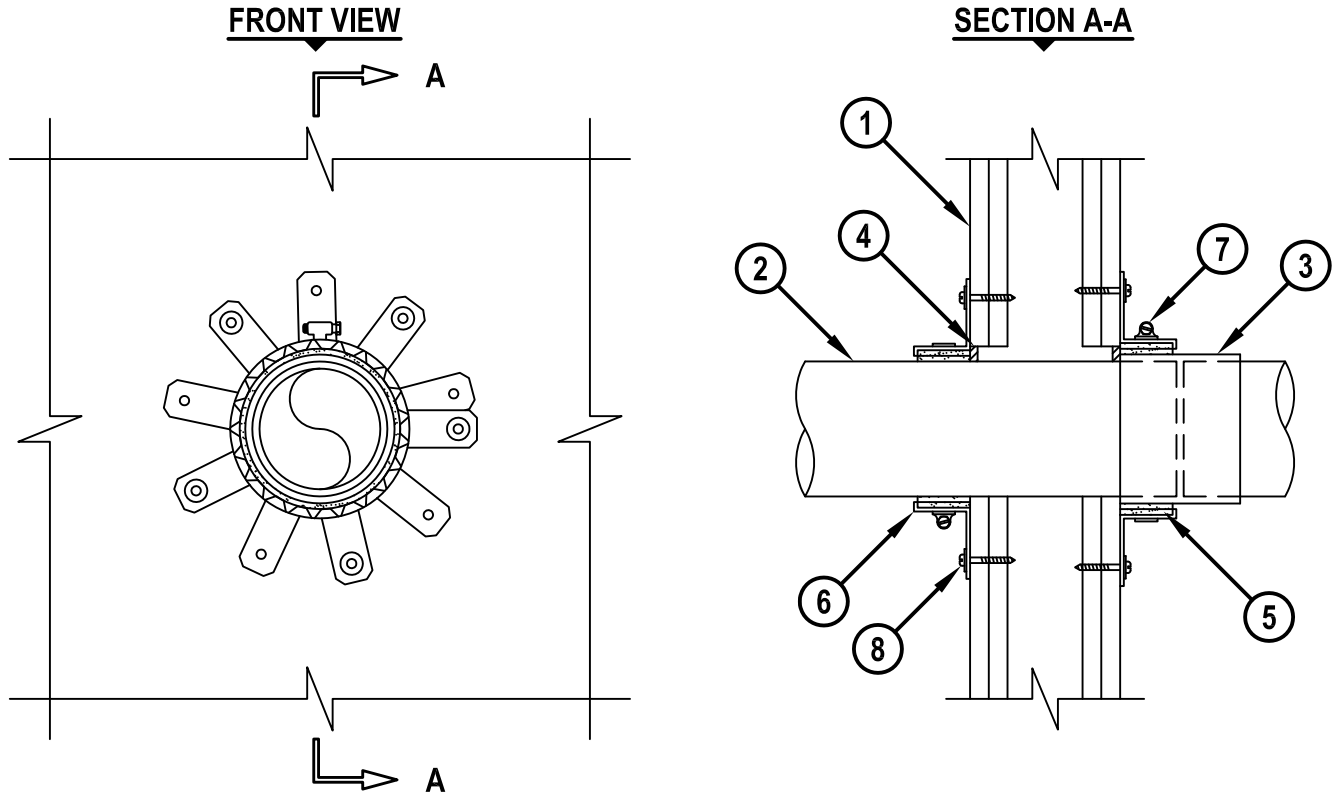
PLASTIC PIPE THROUGH GYPSUM WALL ASSEMBLY

F AND FH-RATINGS = 1-HR. OR 2-HR.

FT AND FTH-RATINGS = 3/4-HR., 1-HR., OR 1-1/2-HR.

NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

cUL WL2018g.011715



1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN) TO INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :
 - A. [NOT SHOWN] STEEL STUDS TO BE MINIMUM 2-1/2" WIDE (SPACED MAXIMUM 24" OC).
 - B. NOMINAL 5/8" THICK GYPSUM WALLBOARD. TYPE, NUMBER OF LAYERS, AND SHEET ORIENTATION AS SPECIFIED IN THE INDIVIDUAL UL DESIGN.



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

Sheet	1 of 2
Scale	5/32" = 1"
Date	Jan. 17, 2015

Drawing No.
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2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING (ALSO SEE NOTE NO. 3 BELOW) :
 - A. MAXIMUM 4" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - B. MAXIMUM 4" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 11 OR SDR 13.5) (CLOSED PIPING SYSTEM ONLY).
 - C. MAXIMUM 4" NOMINAL DIAMETER ABS PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - D. MAXIMUM 4" NOMINAL DIAMETER FRPP PLASTIC PIPE.
 - E. MAXIMUM 4" NOMINAL DIAMETER AQUARISE CPVC PLASTIC PIPE (SDR 11) MANUFACTURED BY IPEX, INC. (CLOSED PIPING SYSTEM ONLY).
 - F. MAXIMUM 4" NOMINAL DIAMETER RIGID NONMETALLIC CONDUIT (SCH 40 PVC).
3. [OPTIONAL] PIPE COUPLING TO BE SAME SIZE AND TYPE OF PIPE (SEE NOTE NO. 5 BELOW).
4. MINIMUM 1/4" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
5. HILTI CP 648E WRAP STRIP CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, AND HELD IN PLACE WITH TAPE (SIZE OF WRAP STRIP AND NUMBER OF LAYERS ARE SHOWN IN THE TABLE BELOW) (ALSO SEE NOTE NO. 4 BELOW).
6. HILTI RETAINING COLLAR (SIZED TO MATCH WRAP STRIP) WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 1".
7. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP(S) SECURED AT MID-HEIGHT OF STEEL RETAINING COLLAR.
8. FASTEN EVERY OTHER TAB OF RETAINING COLLAR TO GYPSUM WALL WITH 1-1/2" LONG STEEL LAMINATE DRYWALL SCREWS AND 1-1/4" DIAMETER FENDER WASHERS.

MAXIMUM PIPE SIZE	FIRESTOP PRODUCT	NUMBER OF LAYERS
3"	CP 648E W25/1"	2
3"	CP 648E W45/1-3/4"	1
4"	CP 648E W25/1"	3
4"	CP 648E W45/1-3/4"	2

- NOTES :**
1. MAXIMUM DIAMETER OF OPENING = 5".
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2".
 3. CLOSED OR VENTED PIPING SYSTEMS (PVC, ABS & FRPP = SCH 40; CPVC = SDR 11 OR 13.5).
 4. AS AN ALTERNATE TO HILTI CP 648E WRAP STRIPS, ON NOMINAL 3" AND 4" DIAMETER PIPES ONLY (WITHOUT PIPE COUPLING), HILTI CP 648S/3" AND CP 648S/4" MAY BE USED. SINGLE LAYER OF HILTI CP 648S TO BE WRAPPED AROUND THE THE OUTER CIRCUMFERENCE OF THE PIPE AND HELD IN PLACE WITH INTEGRATED TAPE PRIOR TO FASTENING RETAINING COLLAR.
 5. PIPE COUPLING MAY BE INSTALLED FLUSH WITH EITHER SIDE OF WALL OR RECESSED SUCH THAT THE COUPLING EXTENDS 1/4" BEYOND THE RETAINING COLLAR ON EITHER SIDE OF THE WALL.



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