

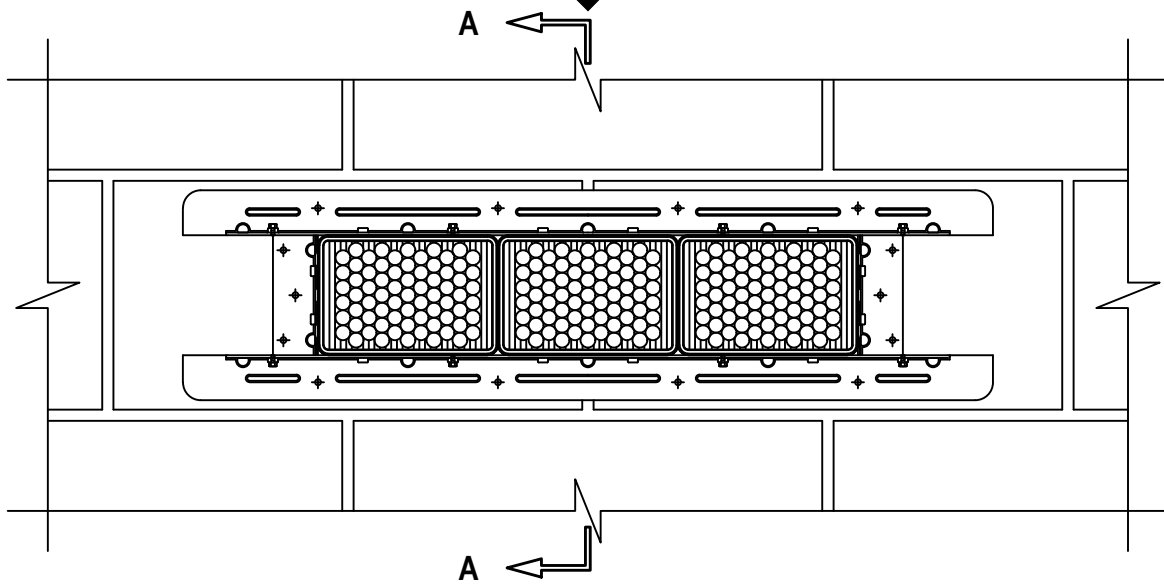
UL/cUL SYSTEM NO. W-J-3298

MULTIPLE CABLE BUNDLES THROUGH CONCRETE WALL ASSEMBLY

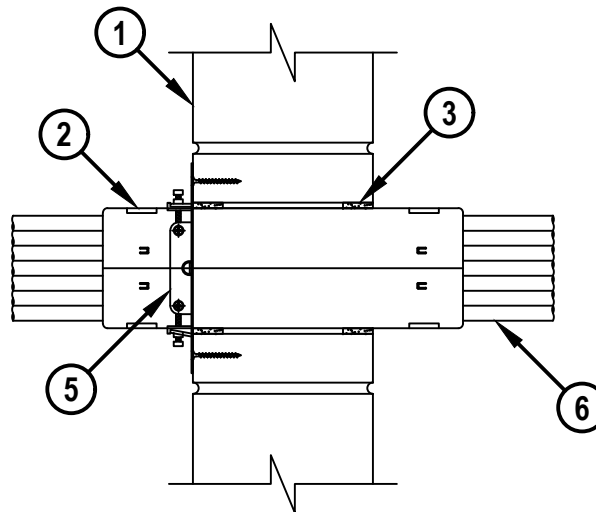
F-RATING = 2-HR.
T-RATING = 1-1/4-HR.

WJ3298b.050825

FRONT VIEW



SECTION A-A



HILTI
Hilti Firestop Systems

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

Sheet	1 of 2
Scale	5/32" = 1"
Date	May 08, 2025

Drawing No.
WJ
3298b

Saving Lives through Innovation and Education

MULTIPLE CABLE BUNDLES THROUGH CONCRETE WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 1-1/4-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/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE HILTI CFS-MSL [S, M, OR L] MODULAR SLEEVES TO BE GANGED TOGETHER WITH GANGING CLIPS AND CENTERED IN THE WALL. DEVICES TO BE SECURED IN FLANGE USING A MINIMUM EVERY OTHER SCREW HOLE IN ADJUSTABLE FLANGE (ITEM 5). WHEN SLEEVES ARE GANGED TOGETHER THEY ARE TO FORM A RECTANGULAR SHAPE.
3. HILTI CP-648E WRAP STRIP (NOMINAL 3/16" THICK, X 1" WIDE) WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE CFS-MSL DEVICE(S), ONE TIME, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. HILTI CP 648E TO BE FLUSH WITH WALL ASSEMBLY SURFACES.
4. [NOT SHOWN] GASKET MATERIAL APPLIED TO BACK OF ADJUSTABLE FLANGE MATERIAL WITH INTEGRATED TAPE PRIOR TO FLANGE BEING INSTALLED TO WALL ASSEMBLY.
5. HILTI CFS-MSL GPA ADJUSTABLE FLANGE [24" x 4" OR 24" x 8"] BOLTED TOGETHER AROUND GANGED DEVICES AND SECURED TO WALL WITH MIN 1-1/2" LONG MASONRY SCREWS OR ANCHORS.
6. CABLE BUNDLE TO BE ANY COMBINATION OF THE FOLLOWING :
 - A. MAXIMUM 100 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET AND INSULATION.
 - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
 - C. MAXIMUM 4/0 AWG TYPE RHH GROUND CABLE.
 - D. MAXIMUM 4 PAIR NO 23 AWG CAT 7 COMPUTER CABLE.
 - E. MAXIMUM RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
 - F. MAXIMUM 1/2" FIBER-OPTIC CABLE WITH PVC OR PE JACKET AND INSULATION.
 - G. MAXIMUM 20/C NO. 22 AWG SHIELDED PRINTER CABLE WITH PVC JACKET.
 - H. MAXIMUM 1/4" DIAMETER S-VIDEO CABLE CONSISTING OF 2 MAX 24 AWG 75 OHM COAX OR TWISTED PAIR CABLE WITH PE INSULATION AND PVC JACKET.
 - I. MAXIMUM 2/C NO. 18 AWG POWER OR NON-POWER LIMITED FIRE ALARM CABLE WITH OR WITHOUT METAL JACKET (MANUFACTURED BY AFC CABLE SYSTEMS, INC.).
 - J. MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
 - K. ANY CABLES, METAL-CLAD CABLES, OR ARMORED CABLES CURRENTLY LISTED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.

NOTES : 1. MAXIMUM SIZE OF OPENING = 18-1/2" x 4-1/2".
 2. ANNULAR SPACE = MINIMUM 3/16", MAXIMUM 5/16".
 3. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF EACH FIRESTOP DEVICE.


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