



System No. BW-S-0001
XHBN.BW-S-0001
Joint Systems

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, systems, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

Joint Systems

See General Information for Joint Systems

System No. BW-S-0001

June 12, 2003

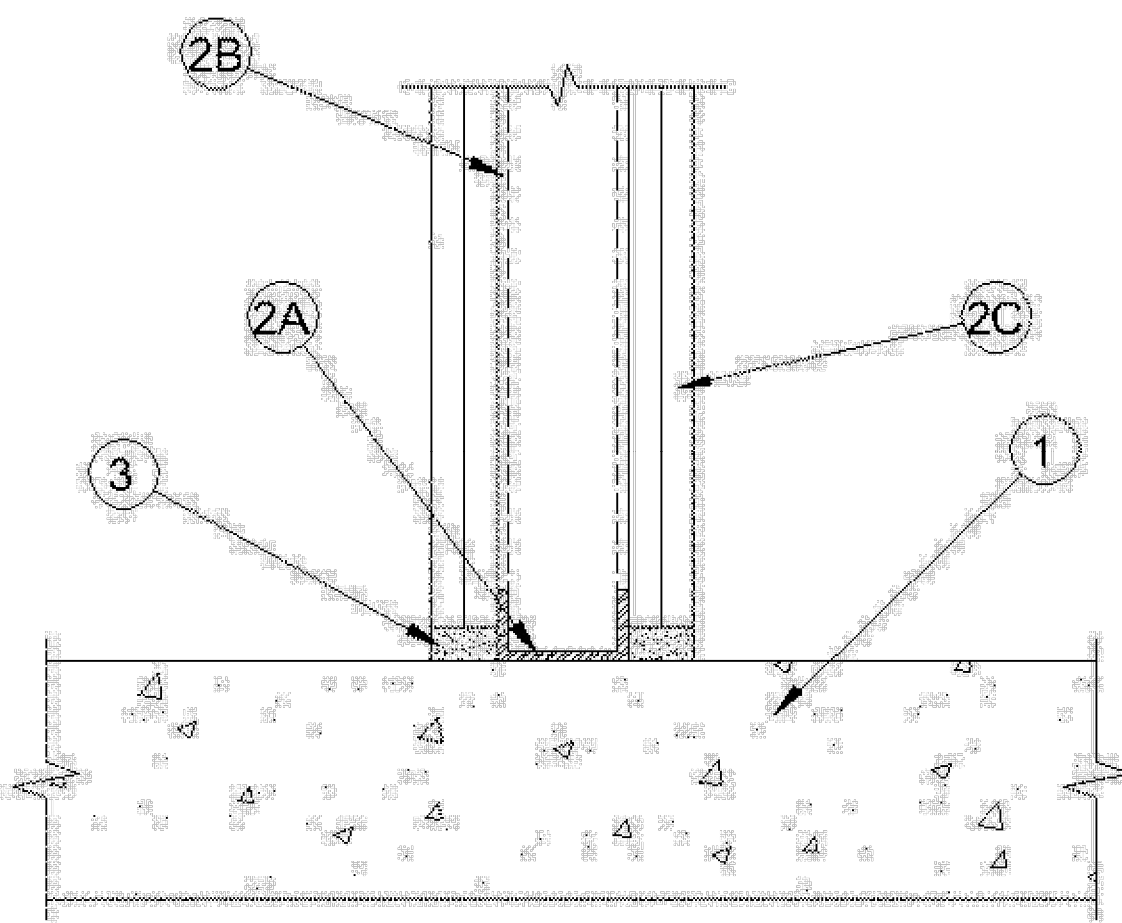
Assembly Ratings — 1 and 2 Hr (See Item 2)

L Rating at Ambient — Less than 1 CFM/Lin Ft

L Rating at 400° F — Less than 1 CFM/Lin Ft

Joint Width — 3/4 In. Max

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1. Floor Assembly — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Floor may also be constructed of any 6 in. thick UL Classified hollow-core **Precast Concrete Units***.

See **Precast Concrete Units** category in the Fire Resistance Directory for names of manufacturers.

2. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. Steel Floor Runner — Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runners to be provided with min 1-1/4 in. flanges. Runners secured with steel fasteners spaced 12 in. OC.

B. Studs — Steel studs to be min 2-1/2 in. wide. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom resting on, resting on and fastened to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. OC.

C. Gypsum Board* — Gypsum board installed to a min total thickness of 5/8 or 1-1/4 in. on each side of wall for a 1 or 2 hr rated wall, respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory, except that a max 3/4 in. gap shall be maintained between the bottom of gypsum board and top of concrete floor. **The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.**

3. Fill, Void or Cavity Material* Sealant — Max separation between top of floor and bottom of gypsum board is 3/4 in. For 1 and 2 hr rated wall assemblies, min 5/8 in. or 1-1/4 in. thickness of fill material, respectively, installed on each side of the wall between the bottom of the gypsum board and the top of the concrete floor, flush with each surface of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC — CP601S Elastomeric Firestop Sealant, CP606 Flexible Firestop Sealant or FS-ONE Sealant

*Bearing the UL Classification Mark

Last Updated on 2003-06-12

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System No. W-L-3065
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr

SECTION A-A

1. Wall Assembly — The 1 or 2 fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board, with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 5-1/2 in. (138 mm) when sleeve (Item 2) is employed. Max diam of opening is 4 in. (102 mm) when sleeve (Item 2) is not employed.

The F Rating of the firestop system is equal to the fire rating of the wall assembly.

2. Metallic Sleeve — (Optional) - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or Schedule 5 (or heavier) steel pipe or min 0.016 in. thick (0.41 mm, No. 28 ga) galv steel sleeve installed flush with wall surfaces. The annular space between steel sleeve and periphery of opening shall be min 0 in. (0 mm, point contact) to max 1 in. (25mm). When Schedule 5 steel pipe or EMT is used, sleeve may extend up to 16 in. (407 mm) beyond the wall surfaces.

3. Cables — Aggregate cross-sectional area of cable in opening to be max 45 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 0 in. (0 mm, point contact) to max 1 in. (25 mm) Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.

B. Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.

C. Type RG/U coaxial cable with polyethylene (PE) insulation and PVC jacket having a max outside diameter of 1/4 in. (13 mm).

D. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 5/8 in. (16 mm).

E. Through Penetrating Products* — Max three copper conductor No. 8 AWG - Metal-Clad Cable+.

AFC CABLE SYSTEMS INC

F. Max 3/C (with ground) (or smaller) No. 8 AWG copper conductor cable with PVC insulation and jacketing.

G. Max 3/4 in. (19 mm) diam copper ground cable with or without a PVC jacket.

H. Fire Resistive Cables* - Max 1-1/4 in. (32 mm) diam single conductor or multi conductor Type MI cable. A min 1/8 in. (3 mm) separation shall be maintained between MI cables and any other types of cable.

Through Penetrating Product* - Any cables, Metal-Clad Cable+ or Armored Cable+ currently Classified under the Through Penetrating Products category.

See Through Penetrating Product (XHL) category in the Fire Resistance Directory for names of manufacturers.

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T Rating — 0 Hr

4. Fill, Void or Cavity Material* — Sealant or Putty — Fill material applied within the annulus, flush with each end of the steel sleeve or wall surface. Fill material installed symmetrically on both sides of the wall. A min 5/8 in. (16 mm) thickness of sealant is required for the 1 or 2 hr F Rating. An additional 1/2 in. (13 mm) diam bead of fill material shall be applied around the perimeter of sleeve on both sides of the wall when sleeve extends beyond surface of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP606, FS-ONE Sealants or CP618 Putty

*Bearing the UL Classification Mark

*Bearing the UL Listing Mark

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NOTE:

THESE DETAILS ARE INCLUDED FOR REFERENCE PURPOSES AND DO NOT INCLUDE ALL APPLICABLE UL SYSTEM TESTED DETAILING TO BE UTILIZED THROUGH OUT THE PROJECT. PROVIDE APPLICABLE UL SYSTEM TESTED DETAILING FOR ALL FIRE RATED AND SMOKE PARTITION PENETRATIONS, WHETHER INDICATED WITHIN THESE DRAWINGS OR NOT.

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REVISIONS

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