UL Product iQ™

# XHBN.HW-D-0578 - Joint Systems

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 Certified products, equipment, system, 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 Certified.

## XHBN - Joint Systems

See General Information for Joint Systems

### System No. HW-D-0578

March 13, 2017

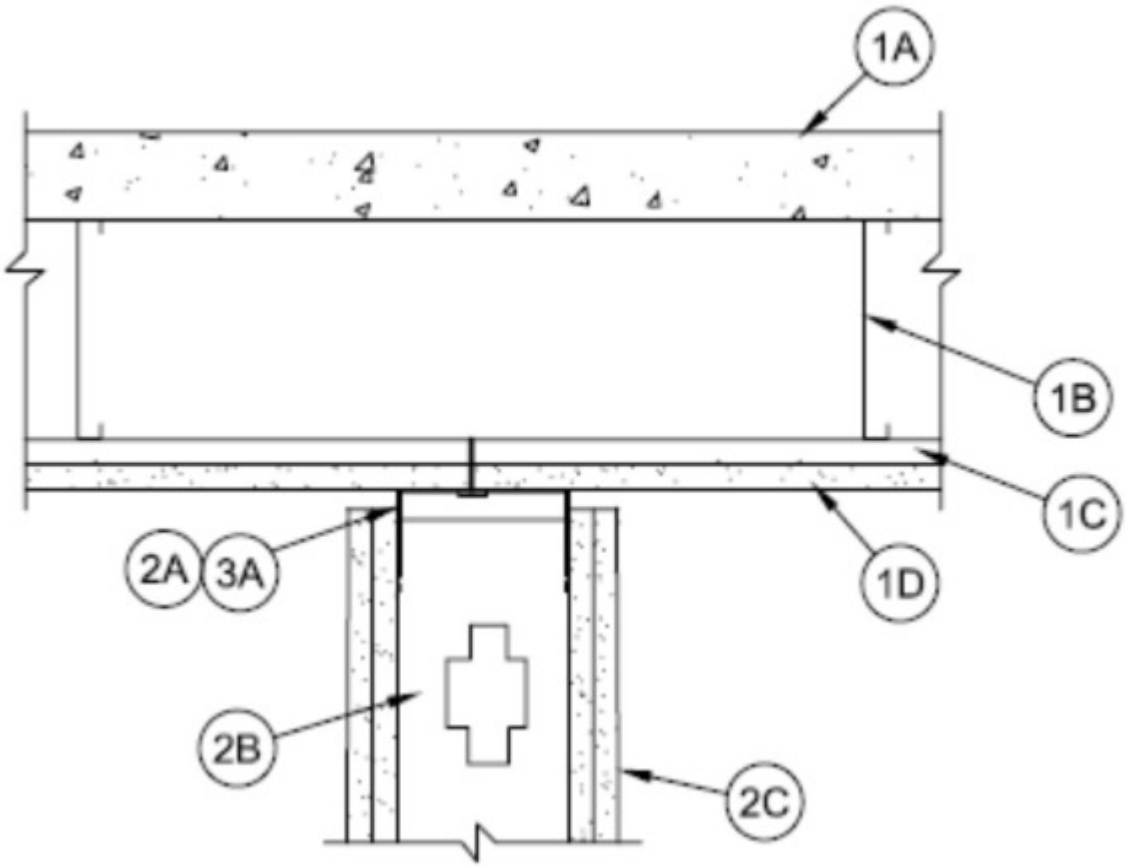
**Assembly Ratings — 1 and 2 Hr (See Item 1)**

**L Rating at Ambient — Less Than 1 CFM/Lin ft**

**L Rating at 400° F — Less Than 1 CFM/Lin ft**

**Nominal Joint Width — 1 In.**

**Class II and III Movement Capabilities — 100% Compression or Extension**




1. **Floor-Ceiling Assembly —** The 1 or 2 hr fire rated concrete and steel joist Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual G500 Series Design in the UL Fire Resistance Directory, as summarized below:

A. **Flooring —** Lightweight or normal weight (100-150 pcf or 1600-2400 kg/$m^3$) concrete as specified in the individual G500 Series Design.

B. **Joists —** Steel joists or Structural Steel Members* as specified in the individual G500 Series Design.

C. **Furring Channels —** Steel furring channels as specified in the individual G500 Series Design, spaced max 16 in. (406 mm) OC.

D. **Gypsum Board* —** Min 5/8 in. (16 mm) thick, screw-attached to furring channels as specified in the individual G500 Series Design.

**The hourly rating of the joint system is equal to the lesser of the hourly ratings of the floor-ceiling assembly and the wall assembly.**

2. **Wall Assembly —** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runner to be provided with min 1-1/4 in. (32 mm) flanges. The ceiling runners are provided with a fill, void or cavity material and are described in Item 3A. Ceiling runner installed perpendicular to furring channels (Item 1C) and secured to each furring channel through gypsum board (Item 1D) with steel fasteners specified in the individual G500 series design for the attachment of the gypsum board to the furring channels.

B. **Studs —** Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 1-1/4 to 1-1/2 in. (32 to 38 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Steel studs nested in non-slotted ceiling runner

without attachment.

B1. **Framing Members - Steel Studs* —** In lieu of Item B - Proprietary channel shaped studs, 3-5/8 in. wide spaced a max of 24 in. OC. Studs to be cut 1/2 to3/4 in (13 to 19 mm) less than the assembly height with bottom nesting in and secured to floor runner. Steel studs nested in non-slotted ceiling runner without attachment.
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — ViperStud™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — ViperStud™

C. **Gypsum Board* —** Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, 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 1in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom of the floor-ceiling assembly. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 to 3-1/2 in. (25 to 89 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner.
**The hourly rating of the joint system is equal to the lesser of the hourly ratings of the floor-ceiling assembly and the wall assembly.**

3. **Joint System — Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1in. (25 mm). The joint system is designed to accommodate a max 100 percent compression or extension from its installed width.**

A. **Fill, Void or Cavity Material* —** Min 20 ga steel channel track, 3-1/4 in. (83 mm) deep, having an intumescent strip affixed to the top of each flange and sized to accommodate steel studs. Gypsum board (Item 2C) to overlap a min of 1in. (25 mm) over the intumescent strip. Track attached to each furring channel through gypsum board as specified in the individual G500 series design.
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — FAS Track DL2

## * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2017-03-13