



# XHBN.HW-D-0223 - 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-0223**

June 24, 2011

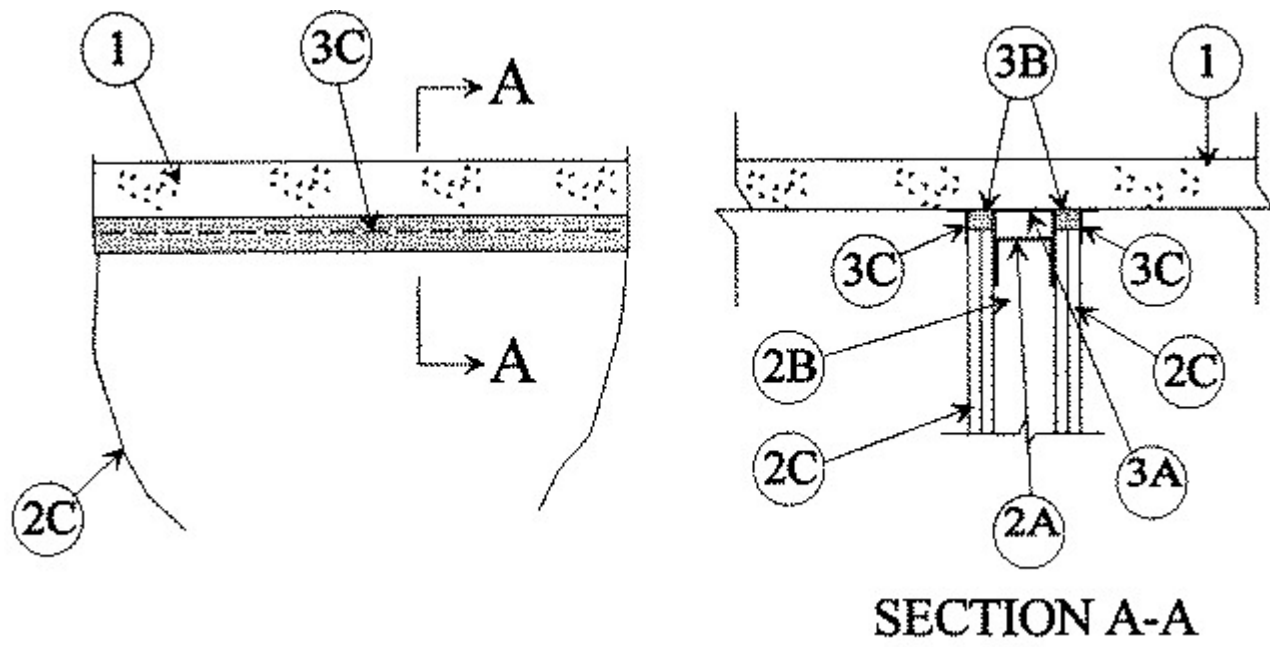
**Assembly Ratings — 1 and 2 Hr (See Item 2)**

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

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

**Nominal Joint Width — 1-1/2 and 2 In. (See Item 3)**

**Class II Movement Capabilities — 25% Compression & Extension**



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

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

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

A. **Steel Floor and Ceiling Runners** — Floor and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 3 in. flanges. When U-shaped deflection channel is used, ceiling runner is installed within the U-shaped deflection plate (Item 3B) with 1 in. gap maintained between the top of ceiling runner and top of deflection plate. When deflection channel is not used, ceiling runner is secured to lower surface of concrete with steel fasteners spaced a max 12 in. OC.

A1. **Light Gauge Framing\* - Slotted Ceiling Runner** — When the nom joint width is less than or equal to 1-3/4 in., slotted ceiling runner may be used as an alternate to the ceiling runner in Item 2A. Slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner secured to floor with steel fasteners spaced max 12 in. OC. When slotted ceiling runner is used, deflection channel (Item 3a) shall not be used.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — CST

**BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS** — SLP-TRK

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Type SLT

A2. **Light Gauge Framing\* - Clipped Ceiling Runner** — As an alternate to the ceiling runner in Item 2A, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 3-1/4 in. Clipped ceiling runner secured to lower surface of concrete floor (Item 1) with steel fasteners spaced max 12 in. OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.

**TOTAL STEEL SOLUTIONS L L C** — Snap Trak

B. **Studs** — Steel studs to be min 3-5/8 in. wide. Studs cut 3/4 in. less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. When slotted ceiling

runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. long wafer head steel screws at midheight of slot on each side of wall. Stud spacing not to exceed 24 in. OC.

**C. Gypsum Board\*** — Gypsum board sheets installed to a min total 5/8 and 1-1/4 in. 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 Series Design in the UL Fire Resistance Directory, except that a nom 2 in. gap shall be maintained between the top of the wallboard and the bottom surface of the steel floor units and the top row of screws shall be installed into the studs 4-3/4 in. below the valleys of the steel floor.

**The hourly fire rating of the joint system is equal to the hourly rating of the wall.**

**3. Joint System — Max separation between bottom of floor and top of wall (at time of installation of joint system) is dependent upon the hourly rating of the wall. Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1-1/2 in. and 2 in. . for 1 and 2 hr fire rated assemblies, respectively. The joint system is designed to accommodate a max 25 percent compression or extension from it's installed width.** The joint system shall consist of a deflection plate, and forming and fill materials as follows:

**A. Deflection Channel** — (Optional) A nom 3-3/4 in. wide by min 3 in. deep min 25 gauge steel U-shaped channel. Deflection channel secured to floor (Item 1) with steel fasteners spaced max 12 in. OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1 in. gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

**B. Forming Material\*** — Nom 5/8 in. or 1-1/4 in. wide sections of min 4 pcf mineral wool batt insulation , for 1 and 2 hr fire rated assemblies, respectively are compressed 50 percent in thickness and installed cut edge first to fill the gap between the top of the wall and bottom of the floor. The forming material shall be recessed from each surface of the wall as required to accommodate the required thickness of fill material.

**The type and manufacturer of forming material used within the joint system is dependent upon the hourly rating of the wall assembly as shown in the table below:**

Rating of Wall, hr	Manufacturer of Mineral Wool	Type of Mineral Wool
1 & 2	Fibrex Insulation Inc	FBX Safing Insulation
1 & 2	Roxul Inc	SAFE Mineral Wool
1	Rock Wool Manufacturing	Delta Safing Insulation

**ROCK WOOL MANUFACTURING CO** — Delta Safing Insulation

**ROCKWOOL MALAYSIA SDN BHD** — SAFE Mineral Wool

**ROCKWOOL** — SAFE Mineral Wool

**C. Fill, Void or Cavity Material\* — Sealant** — Min 1/8 in. wet thickness of fill material spray or brush applied on each side of the wall between the top of the wall and the bottom of the concrete floor and overlap a min 1/2 in. onto the concrete floor and gypsum wallboard on both sides of wall.

**EGS NELSON FIRESTOP** — FSC3 Coating

**\* 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 2011-06-24

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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