



# XHBN.HW-D-0371 - 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-0371**

June 27, 2011

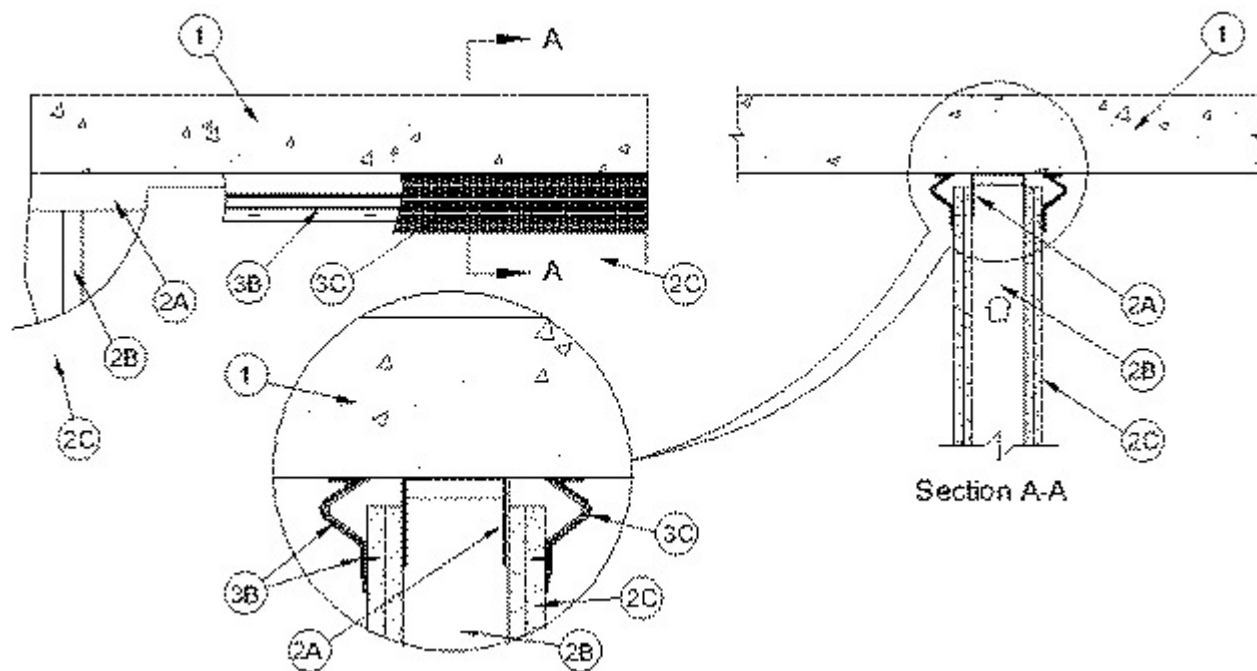
**Assembly Ratings — 1 and 2 Hr (See Item 2)**

**Nominal Joint Width — 3/4 in.**

**L Rating At Ambient — Less Than 1 CFM/Lin Ft**

**L Rating At 400°F — Less Than 1 CFM/Lin Ft**

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



**1. Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete.

**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 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 galv steel channels sized to accommodate steel studs. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a min 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, flange height of ceiling runner shall be min 1 in. greater than nom joint width. Ceiling runner secured to underside of concrete floor with steel fasteners spaced max 24 in. (610 mm) OC.

**A1. Light Gauge Framing\* - Slotted Ceiling Runner** — 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). Ceiling runner secured to underside of concrete floor with steel fasteners spaced max 24 in. (610 mm) 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\* - Vertical Deflection Ceiling Runner** — As an alternate to the ceiling runner in Items 2A and 2A1., vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Vertical deflection ceiling runner secured to underside of concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

**THE STEEL NETWORK INC** — VertiTrack VTD362, VTD400, VTD600 and VTD800

**A3. Light Gauge Framing\* - Clipped Ceiling Runner** — As an alternate to the ceiling runner in Items 2A, 2A1 and 2A2, 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 2-

3/4 in. (70 mm). Clipped ceiling runner secured to underside of concrete floor with steel fasteners spaced max 24 in. (610 mm) 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 3-1/2 in. (89 mm) wide. Studs cut min 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1 in. (25 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest 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. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through the bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board\*** — Gypsum board sheets installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed 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 top of the gypsum board and the underside of the concrete floor. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.

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

**3. Joint System — Max separation between bottom of floor and top of gypsum board (at time of installation of joint system) is 3/4 in. (19 mm). The joint system is designed to accommodate a max 100 percent compression or extension from it's installed width.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 3A), as follows:

A. **Deflection Channel** — (Optional, Not Shown)—Max 2 in. (51 mm) deep min 25 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel secured to underside of concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a min 3/4 in. (19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

B. **Forming Material\*** — Nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed by first marking a line across the top of the wall 3 in. (76 mm) below the underside of the concrete floor. Joint profile material positioned with its top edge against the underside of the concrete floor, in line with the plane of the wall surface, with the bottom edge on the line scribed on the wall assembly. Bottom of the joint profile attached to the gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.  
**SPECIFIED TECHNOLOGIES INC** — SpecSeal Speed Flex Joint Profile

C. **Fill, Void or Cavity Material\* - Sealant** — Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray applied to completely cover forming material on each side of the wall with a min 1/2 in. (13 mm) overlap onto the gypsum board and concrete floor on both sides of the wall.  
**SPECIFIED TECHNOLOGIES INC** — SpecSeal AS200 Elastomeric Spray

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

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