



# XHBN.HW-D-0129 - 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.

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## XHBN - Joint Systems

See General Information for Joint Systems

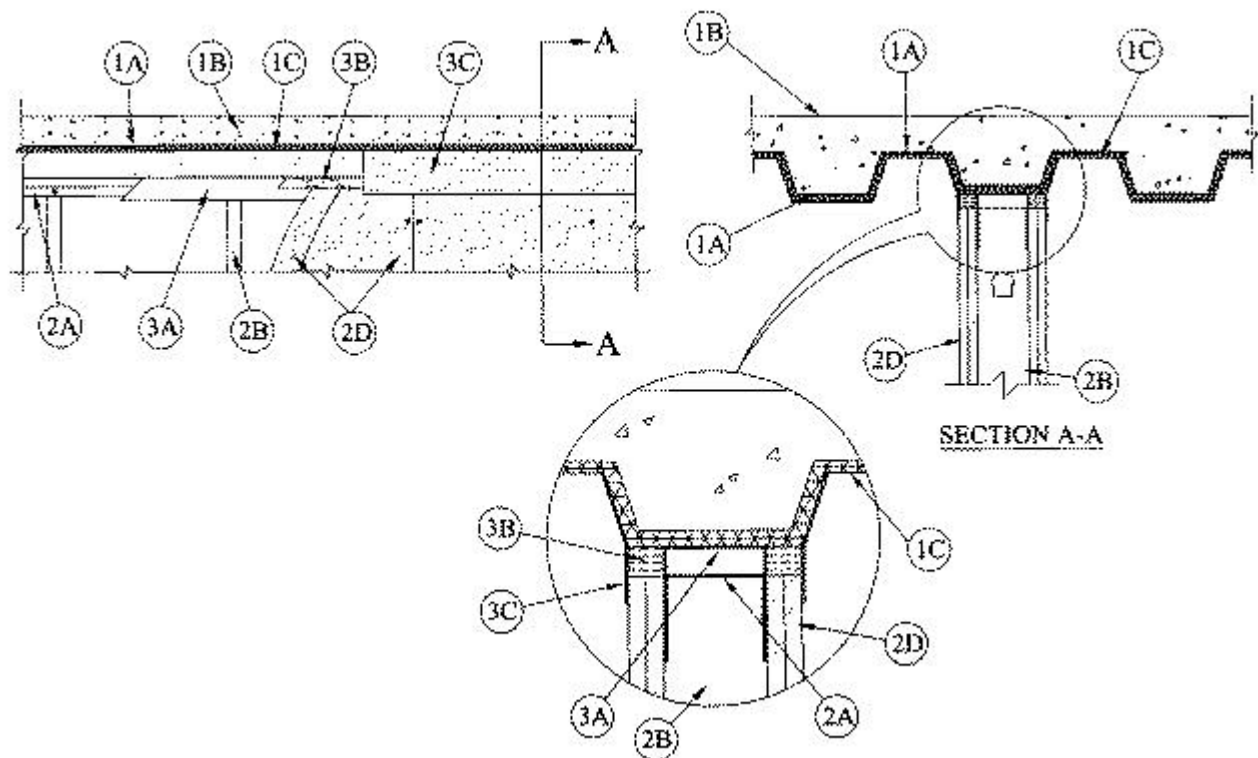
### **System No. HW-D-0129**

June 24, 2011

**Assembly Ratings — 2 and 3 Hr (See Item 2)**

**Nominal Joint Width — 1 in.**

**Class II and III Movement Capabilities — 25% Compression or Extension**



**1. Floor Assembly** — The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the floor assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The floor assembly shall include the following construction features:

A. **Steel Floor And Form Units\*** — Max 3 in. deep galv steel fluted floor units.

B. **Concrete** — Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

C. **Spray-Applied Fire Resistive Material\*** — Prior to the installation of the deflection channel, forming material and fill material (Items 3A, 3B and 3C, respectively), steel floor units to be sprayed with a min 1/2 in. to max 1-3/4 in. thickness of material in accordance with the specifications in the individual D700 Series Design.

**GCP APPLIED TECHNOLOGIES INC** — MK-6/HY

**2. Wall Assembly** — The 2 or 3 hr fire rated gypsum board/steel 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 and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 1 in. flanges. When U-shaped deflection channel (Item 3A) is used, ceiling runner installed within the U-shaped deflection channel (Item 3A) with a 1 in. gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, the ceiling runner shall have min. 2-3/4 in. flanges. Ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, and secured through spray-applied fire resistance material with steel masonry anchors spaced a max 12 in. OC.

A1. **Light Gauge Framing\*** — As an alternative 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 installed parallel to direction of fluted steel deck, centered beneath valley, and secured through spray-applied fire resistance material with steel masonry anchors spaced max 24 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\*- Notched Ceiling Runner** — As an alternate to the ceiling runners in Items 2A through 2A2, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, and secured through spray-applied fire resistive material with steel masonry anchors spaced max 24 in. OC. When notched ceiling runner is used, deflection channel (Item 3A) shall not be used.

**OLMAR SUPPLY INC — Type SCR**

**B. Studs** — Steel studs to be min 3-1/2 in. wide. Studs cut 1-1/2 in. less in length than assembly height. When deflection channel is used, studs shall be installed with bottom nesting in and resting on floor runner and with top nesting in ceiling runner. Studs secured to floor and ceiling runners with sheet metal screw. As an alternate to securing the studs to the ceiling runner, the ceiling runner may be notched with the Snip N' Slide™ tool used to provide positive securement of the studs within the ceiling runner without the screws. When deflection channel is not used, studs shall not be secured to ceiling runner, however, the ceiling runner may be notched with the Snip N' Slide™ tool. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 x 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. Batts and Blankets\*** — (Not Shown) —Mineral wool or fiberglass insulation batts, friction-fitted between studs and ceiling and floor runners, as required in the individual Wall and Partition Design.

**D. Gypsum Board\*** — Gypsum board sheets installed to a min total thickness 1-1/4 or 1-1/2 in. on each side of wall for 2 or 3 hr rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 1 in. gap shall be maintained between the top of the gypsum board and the bottom of the spray-applied fire resistive material and the top row of screws shall be installed into the studs 4 to 4-1/2 in. below the top edge of the gypsum board.

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

**3. Joint System — Max separation between bottom of spray-applied fire resistive material and top of wall at time of installation of joint system is 1 in. The joint system is designed to accommodate a max of 25 percent compression or extension from its installed width.** The joint system consists of an optional deflection channel forming material and a fill material, as follows:

**A. Deflection Channel** — (Optional) A nom 3-11/16 in. wide by 3 in. deep min No. 22 gauge steel U-shaped channel. Deflection channel installed parallel to direction of fluted steel deck, centered beneath valley, and secured through spray-applied fire resistive material with steel masonry anchors 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\*** — Min 8 pcf mineral wool batt insulation shall be cut into strips to fill the gap between the top of the gypsum board and bottom of the protected steel floor units. The width of the strips shall be equal to the total thickness of the gypsum board. The strips of mineral wool are compressed 50 percent in thickness and firmly packed into the gap between the top of the gypsum board and bottom of the spray-applied fire resistive material flush with wall surfaces.

**ROCK WOOL MANUFACTURING CO — Delta-8A**

**C. Fill, Void or Cavity Material\*** — Min 1/4 in. wet thickness of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. onto gypsum board and 3 in. onto spray-applied fire resistive material on both sides of wall.

**RECTORSEAL — Metacaulk 1200 Spray, Metacaulk 1200 Caulk Grade**

**\* 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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