



XHBN.HW-D-0224 - 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

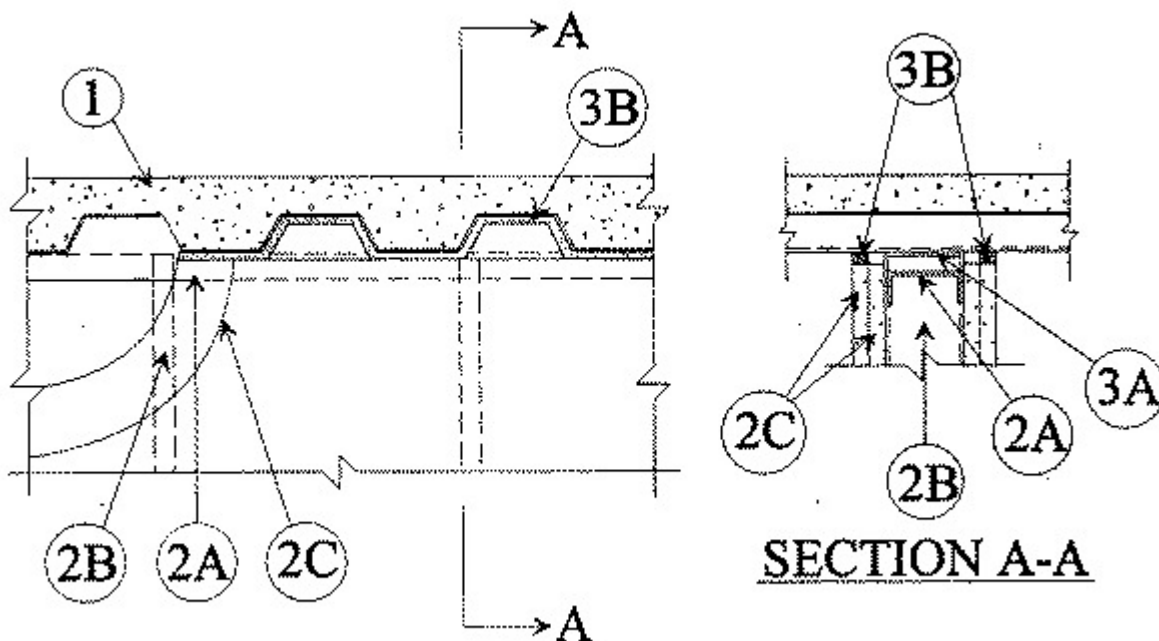
System No. HW-D-0224

June 24, 2011

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

Nominal Joint Width — 1 In.

Class II Movement Capabilities — 25% Compression



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 Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor And Floor 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.

1A. **Roof Assembly — (Not Shown)** — As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck** — Max 3 in. deep galv steel fluted roof deck.

B. **Roof Insulation** — Min 2-1/4 in. thick poured insulating concrete, as measured from the top plane of the roof deck.

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 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 (Item 3A) is used, ceiling runner is installed within the U-shaped deflection channel with 1 in. gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, ceiling runner installed perpendicular to the direction of the fluted steel floor units (Item 1A) or roof deck and secured to valleys of steel floor units (Item 1A) or roof deck with steel fasteners or weld spaced a max 12 in. OC.

A1. **Light Gauge Framing* — Slotted Ceiling Runner** — 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 installed perpendicular to direction of fluted steel floor units or roof deck and secured to valleys 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

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 secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner (Item 2A) with sheet metal screws located 1/2 in. below bottom of deflection channel. When deflection channel is not used, studs to nest in ceiling runners 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. **Wallboard, Gypsum*** — Gypsum board sheets installed to a min total 5/8 or 1-1/4 in. thickness on each side of wall for a 1 or 2 hr fire-rated wall, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that the gypsum board is cut to fit the contour of the steel floor units with a nom 1 in. gap. In addition, the top row of screws shall be installed 1/2 to 1 in. below the bottom edge of the ceiling runner flange.

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 wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 25 percent compression from its installed width.** The joint system shall consist of a material with or without a deflection channel as follows:

A. **Deflection Channel** — (Optional) — Nom 3 in. deep by min 25 gauge galv steel U-shaped channel sized to accommodate ceiling runner (Item 2A). Deflection channel installed perpendicular to direction of the fluted steel floor units (Item 1A) or roof deck and secured to valleys of steel floor units or roof deck with steel fasteners or by welds spaced max 12 in OC. The ceiling runner 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. **Fill, Void or Cavity Material* — Sealant** — Min 5/8 in. thickness of fill material applied on each side of wall between the top of the gypsum board and all surfaces of the steel floor unit, flush with each surface of the wall. In 1 hr fire-rated wall assemblies, bond breaker tape shall be applied to ceiling channel (Item 2A) or deflection channel (Item 3A) prior to installation of fill material on both sides of the wall.

EGS NELSON FIRESTOP — ES1399 Sealant

*** 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.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2020 UL LLC"