



XHBN.HW-D-0418 - 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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See General Information for Joint Systems

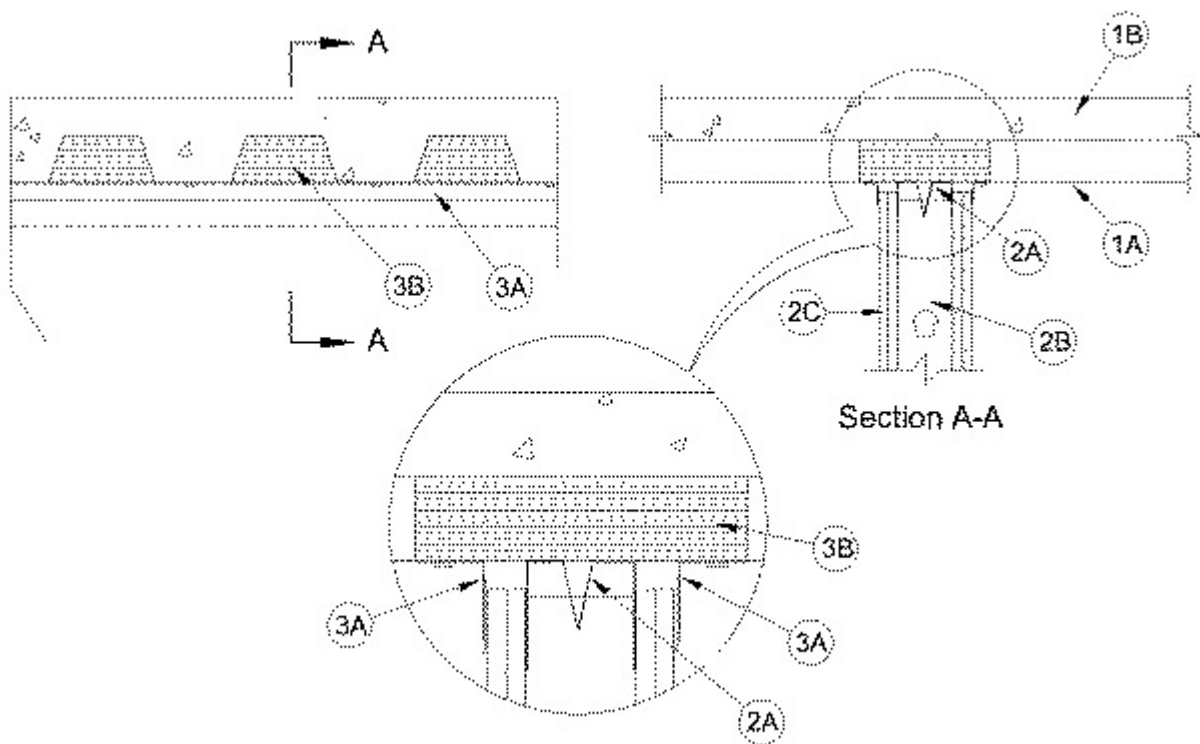
System No. HW-D-0418

October 29, 2007

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

Nominal Joint Width - 1/2 in.

Class II and III Movement Capabilities - 100% Compression & 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 D900 Series 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. (76 mm) deep galv steel fluted floor units.

B. **Concrete** — Min 2-1/2 in. (64 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) 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 roof assembly shall include the following construction features:

A. **Steel Roof Deck** — Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation** — Min 2-1/4 in. (57 mm) 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/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. **Light Gauge Framing*** — M-Track ceiling runner to consist of galv steel with slotted V-section to accommodate steel studs (Item 2B). M-Track ceiling runner installed perpendicular to direction of the fluted steel deck and secured to steel deck valleys with steel masonry anchors spaced max 24 in. (610 mm) OC, alternating the fastenings from one side of M-Track to the other.

CALIFORNIA EXPANDED METAL PRODUCTS CO — CMT

B. **Studs** — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. to 1 in. (13 to 25 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs to nest in M-Track ceiling runner without attachment.

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 1/2 in. (13 mm) gap shall be

maintained between the top of the gypsum board and the bottom plane of the steel deck. 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 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 1/2 in. (13 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* — A nom 20 gauge steel angle provided with a nom 1 in. (25 mm) wide intumescent strip on one leg. Angle to be secured to each valley of steel deck with steel masonry anchors spaced a max 12 in. (305 mm) OC with the intumescent strip against the outer face of gypsum board on both sides of wall.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Firestik

B. Packing Material — Min 4 pcf (64 kg/m³) mineral wool batt insulation cut to the shape of the fluted deck, approx 33 percent larger than the area of the flutes and compressed into the fluted area of the steel floor or roof deck above the ceiling channel. The forming material shall be installed to extend approx 1-1/2 in. (38 mm) beyond both surfaces of the wall, flush with the outer edge of the Firestik.

*** 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 2007-10-29

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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