

## XHBN.HW-D-0111 - 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

## System No. HW-D-0111

December 27, 2019

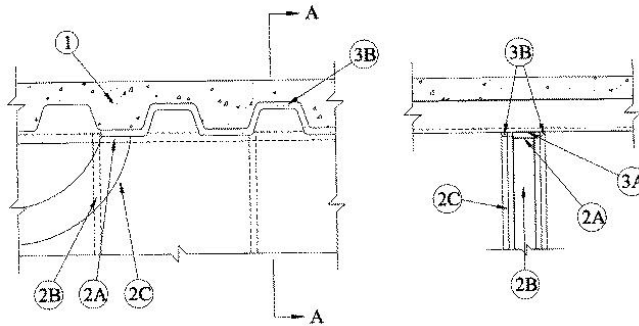
## Assembly Ratings — 1 and 2 Hr (See Item 2)

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

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

## Nominal Joint Width — 3/4 In.

## Class II Movement Capabilities — 17% Compression or Extension



1. **Floor Assembly** — The fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units\*** — Max 3 in. (76 mm) deep galv fluted units.

A1. **Spray Applied Fire Resistive Materials\*** — (Optional, not shown) — After the installation of ceiling runner or deflection channel (Items 2A, 2A1, 3A) and prior to the installation of the Fill, Void or Cavity Materials (Item 3B), the steel floor units may be sprayed with fire resistive material in accordance with the specifications in the individual D700 Series Design.

GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY

B. **Concrete** — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

2. **Wall Assembly** — The 1 or 2 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 min 1-1/4 in. (32 mm) or 2 in. (51 mm) galv steel channels for D900 and D 700 Series Designs, respectively, sized to accommodate steel studs (Item 2B). When U-shaped deflection channel (Item 3A) is used, ceiling runner installed within the deflection channel with 1 in. (25 mm) gap maintained between the top of ceiling runner and top of deflection plate. When deflection channel is not used, ceiling runner is installed perpendicular to direction of fluted steel deck prior to application of the spray-applied fire resistive material and secured to valleys with steel masonry anchors or by welds 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). Slotted ceiling runner installed perpendicular to direction of fluted steel floor deck prior to application of the spray-applied fire resistive material and secured to valleys with steel masonry anchors spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

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

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

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

METAL-LITE INC — The System

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

TELLING INDUSTRIES L L C — True-Action Deflection Track

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 perpendicular to direction of fluted steel floor deck prior to application of the spray-applied fire resistive material and secured to valleys with steel masonry anchors spaced max 24 in. (610 mm) 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. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height. Studs attached to ceiling runner with sheet metal screws a min of 1/2 in. (13 mm) below bottom of deflection channel, when deflection channel is used. When deflection channel is not used, studs shall not be secured to ceiling runner. 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. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board\*** — Gypsum board sheets to be installed to a min total thickness of 5/8 or 1-1/4 in. (16 or 32 mm) on each side of the 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 or the contour of the spray applied material with a nom 3/4 in. (19 mm) gap. The screws attaching the gypsum board to studs at the top of the wall shall be located 1 in. (25 mm) below the bottom of the deflection channel, when deflection channel is not used. The screws attaching the gypsum board to studs at the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner (Item 2A) or slotted ceiling runner (Item 2A1). **The hourly fire rating of the joint system is dependant on the hourly fire rating of the wall.**

3. **Joint System** — Max separation between bottom of floor or spray applied material and top of wall is 3/4 in. (19 mm). The joint system is designed to accommodate a max 17 percent compression or extension from its installed width. The joint system consists of a deflection channel and a fill material, as follows:

A. **Deflection Channel** — (Optional) — A nom 3-1/2 in. (89 mm) wide by min 2 in. (51 mm) deep, min 24 galv steel U-shaped channel. Deflection channel installed perpendicular to direction of fluted steel deck prior to application of the spray-applied fire resistive material and secured to valleys with steel masonry anchors or by welds spaced max 24 in. (610 mm) OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1 in. (25 mm) 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\*** — **Caulk** — Min 5/8 in. (16 mm) thickness of fill material installed on each side of the wall between the top of the gypsum board and all surfaces of the steel floor units or spray applied material, flush with each surface of gypsum board.

3M COMPANY — FD-150+

\* 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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