UL Product iQ™

XHBN.HW-D-0583 - 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
XHBN7 - Joint Systems Certified for Canada

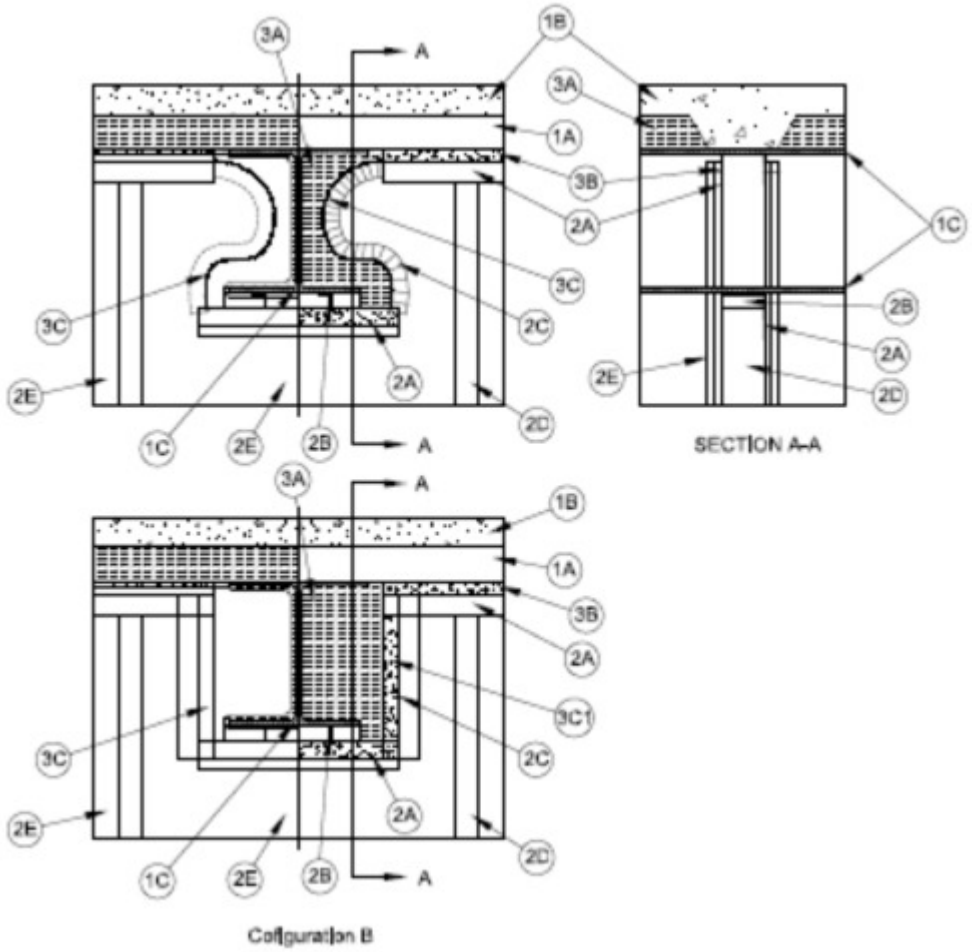
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0583

January 30, 2018

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width — 1/2, 3/4 In. (See Item 2 and 3)	FT Ratings — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 80% Compression and or 30% Extension	FH Ratings — 1 and 2 Hr (See Item 2)
	FTH Ratings — 1 and 2 Hr (See Item 2)
	Nominal Joint Width — 13 or 19 mm (see Item 2 and 3)
	Class II or III Movement Capabilities — 80% Compression and or 30% Extension



Configuration B

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 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 steel fluted floor units.

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

C. **Structural Steel Support —** Steel Beam or open web steel joist, as specified in the individual D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented perpendicular to wall assembly.

D. **Spray-Applied Fire Resistive Material* —** (Not shown) - As specified in the D700 or D900 Series Floor-Ceiling Design after installation of the steel floor units, ceiling runner (Item 3), attachment clips (Item 2B), and track frame (Item 2C), all surfaces of the structural steel support to be sprayed with the thickness of material specified in the individual design. The area between the structural steel support, track frame (Item 2C), and surrounding both sides of the attachment clips (Item 2B) are to be filled with material to a combined thickness of the wall framing when forming material (Item 3A) is not used.

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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 shall by constructed of the materials and in the manner described in the individual P700 or P900-Series Roof-Ceiling designs 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. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Roof insulation to consist of min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the roof deck.

C. **Structural Steel Support —** Steel Beam, as specified in the individual P900 Series Roof-Ceiling Design, used to support steel floor units. Steel Beam oriented perpendicular to wall assembly.

D. **Spray-Applied Fire Resistive Material* —** As specified in the individual P700 or P900 Series Floor-Ceiling Design after installation of the ceiling runner (Item 3B), attachment clips (Item 2B), track frame (Item 2C), all surfaces of the structural steel support to be sprayed with the thickness of material as specified in the individual design. The area between the structural steel support, track frame (Item 2C), and surrounding both sides of the attachment clips (Item 2B) are to be filled with material to a combined thickness of the wall framing when forming material (Item 3A) is not used.
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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. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of min No. 25 ga galv steel channels sized to accommodate steel studs (Item 2D). Floor and ceiling runner to be provided with min 1-1/4 in. (32mm) legs. Legs are to be min 1/4 in. (6 mm) longer than the maximum joint width. The floor or ceiling runners are provided with a fill, void or cavity material and are described in Item 3B. Floor or ceiling runner to be attached to steel deck (after spray-applied fire resistive material is applied, if used) with steel fasteners spaced a max of 24 in. (610 mm) O.C. Ceiling runner to be attached to steel attachment clips (Item 2B) with steel fasteners or welds spaced a max of 6 in. O.C.

B. **Steel Attachment Clips —** Min two Z-shaped clips formed from min 20 ga galv steel. Clips are to be attached along the bottom flange of beam (prior to application of spray-applied fire-resistive materials) with steel fasteners or welds.

C. **Steel Track Frame —** Length of Flexible track (Item 3C) shaped to profile the structural steel support such that the horizontal section is located max 3 1/2in. (89 mm) from any point of the structural steel support. Track is to be fastened to ceiling runners on floor /ceiling assembly and runner attached to bottom of structural steel support with sheet metal fasteners. Steel track frame are provided with a fill, void or cavity material and are described in Item 3C.

D. **Studs —** Steel studs to be min 3 5/8 in. (92 mm) wide. Studs cut 1-1/4 to 1-1/2 in. (32 to 38 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs are not to be attached to the vertical sections of the steel track frame (Item 2C) or runner on the bottom flange of the structural steel support.

D1. **Framing Members - Steel Studs* —** (As an alternate to Item 2D,) - Proprietary channel shaped studs, 3-5/8 in. wide Steel studs to be min 3 5/8 in. (92 mm) wide. Studs cut 1-1/4 to 1-1/2 in. (32 to 38 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs are not to be attached to the vertical sections of the steel track frame (Item 2C) or runner on the bottom flange of the structural steel support.
CALIFORNIA EXPANDED METAL PRODUCTS CO — ViperStud™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — ViperStud™

E. **Gypsum Board* —** Gypsum board sheets installed to a min total 5/8in. (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 in. (25 mm) gap shall be maintained between the top of the gypsum board, the steel floor units. The gypsum board shall be cut to profile the structural steel support with a maximum separation of 1/2 in. (13 mm) between the lowest surface point of the spray applied

material on the steel. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25mm) below the bottom of the ceiling runner legs. No gypsum board attachment screws shall be driven into the ceiling runner or the steel track frame (Item 2C).
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System —** Max separation between steel floor unit, spray applied material on bottom flange of structural support, and top of gypsum board (at time of installation) is 1/2 in. (13 mm). The joint system is designed to accommodate a max 80 percent compression and or 30 percent extension from its installed width.

A. **Forming Material —** Nom 4 pcf mineral wool batt insulation cut into strips having a thickness of the wall stacked to maintain a sufficient 50 percent compression between the structural steel support web and the steel track frame (Item 2C). Mineral wool to cover entire area between the structural steel support and the steel track frame.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Safing Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — SAF

B. **Fill, Void or Cavity Material* —** Min. 25 ga composite steel angle with one 5/8 in. (16 mm) leg and one 2-1/2 in (64 mm) leg with a 5/8 in. (16 mm) strip of intumescent strip affixed along the inside 2-1/2 in (64 mm) leg. Steel angle is friction fit between the top web of the ceiling runner and the fluted steel deck and attached to vertical framing members around beam.
CALIFORNIA EXPANDED METAL PRODUCTS CO — DDA (Deflection Drift Angle)

D. **Fill, Void or Cavity Material* —** (Not Shown) when item 3B is utilized a min 1/16 in. (1.6 mm) dry thickness (min 1/8 in. or 3.2 mm wet thickness) of fill material sprayed or brushed on one side of the joint system, completely covering item 3A mineral wool forming material of the joint system and overlapping a min of 1/2 in. (13 mm) onto the steel deck and item 3B DDA on one side of the wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP672 Firestop Spray or CFS-SP WB. Firestop Joint Spray

SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

UNITED STATES GYPSUM CO — Type AS

E. **Fill, Void or Cavity Material —** (Not Shown) - A continuous length of Denver Foam®, open cell polyurethane foam with a nominal diameter of 1/8 in. (3.2 mm) greater than the max width of the joint. The foam shall have a nominal density of 1.7 pcf. The foam is to be placed in the joint above the top edge of the drywall between the deck or beam. Any splices are to be tightly butted. A layer of tape and joint compound can then be applied over the open cell foam.

* 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 2018-01-30

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.