

XHBN.HW-D-0577 - 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.

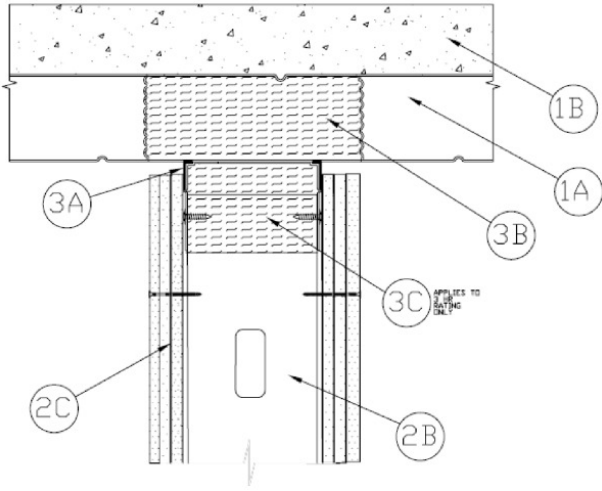
XHBN - Joint Systems  
XHBN7 - Joint Systems Certified for Canada

[See General Information for Joint Systems](#)  
[See General Information for Joint Systems Certified for Canada](#)

System No. HW-D-0577

October 20, 2015

ANSI/UL2079	CAN/ULC S115
Assembly Ratings - 1, 2 and 3 Hr (See Items 2 and 3)	F Ratings - 1, 2 and 3 Hr (See Items 2 and 3)
Nominal Joint Width - 3/4 or 1 In.(See Item 3)	FT Ratings - 1, 2 and 3 Hr (See Items 2 and 3)
Class II or III Movement Capabilities - 100% Compression or Extension	FH Ratings - 1, 2 and 3 Hr (See Items 2 and 3)
L Rating At Ambient - Less Than 1 CFM/sq ft	FTH Ratings - 1, 2 and 3 Hr (See Items 2 and 3)
L Rating At 400 F - Less Than 1 CFM/sq ft	Nominal Joint Width - 3/4 or 1 In.(See Item 3)
	Class II or III Movement Capabilities - 100% Compression or Extension
	L Rating At Ambient - Less Than 1 CFM/sq ft
	L Rating At 400 F - Less Than 1 CFM/sq ft



**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. Spray-Applied Fire Resistive Material\*** — (Not shown) — As specified in the D700 or D900 Series Floor-Ceiling Design. No Spray-applied material shall be applied to the flanges of the ceiling runner.  
**ISOLATEK INTERNATIONAL** — Type 300
- GCP APPLIED TECHNOLOGIES INC** — Type MK-6/HY

**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. Spray-Applied Fire Resistive Material\*** — As specified in the P700 or P900 Series Floor-Ceiling Design. No Spray-applied material shall be applied to the flanges of the ceiling runner.  
**ISOLATEK INTERNATIONAL** — Type 300
- GCP APPLIED TECHNOLOGIES INC** — Type MK-6/HY

**2. Wall Assembly** — The 1, 2 or 3 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 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 runners of wall assembly shall consist of min No. 25 ga galv steel channels sized to accommodate steel studs (Item 2D). Floor runner to be provided with min 1-1/4 in. (32mm) flanges. Legs are to be min 1/4 in. (6 mm) longer than the maximum joint width. The ceiling runners are provided with a fill, void or cavity material and are described in Item 3B. Ceiling runner installed perpendicular to steel deck direction and attached to steel deck after spray-applied material (Item 1C) if used, with steel fasteners or welds spaced max 24 in. (610 mm) OC.
- A.1. Light Gauge Framing\* — Slotted Ceiling Track** — (Not Shown) - As an alternate to the Item 2A, a ceiling track consisting of galv steel channel with slotted flanges may be used when Item 3A.1 fill material is utilized. Slotted ceiling track sized to accommodate steel studs (Item 2B). Legs are to be min 1/4 in. (6 mm) longer than the maximum joint width. Attached to steel deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.  
**BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS** — SLP-TRK
- CALIFORNIA EXPANDED METAL PRODUCTS CO** — CST, CST 325
- MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Type SLT
- B. 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. Steel studs nested in non-slotted ceiling runner without attachment.
- B1. Framing Members - Steel Studs\*** — In lieu of Item B - Proprietary channel shaped studs, 3-5/8 in. (92 mm) wide spaced a max of 24 in. (610 mm) OC. Studs to be cut 1-1/4 to 1-1/2 in. (32 to 38 mm) less than the assembly height with bottom nesting in and secured to floor runner. Steel studs nested in non-slotted ceiling runner without attachment.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — ViperStud™

C. **Gypsum Board\*** — Gypsum board sheets installed to a min total 5/8 in. (16 mm), 1-1/4 (32 mm) or 1-7/8 in. (48 mm) thickness on each side of wall for 1, 2 and 3 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual U400, V400 or W400 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 and the bottom of the floor assembly. The screws attaching the gypsum board to the studs along the top of the wall shall be located 4 to 5 in. (102 to 127 mm) down from deck at time of installation. 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 gypsum board (at time of installation) is 1 in. (25 mm). The joint system is designed to accommodate a max 100 percent compression or extension from its installed width. When item 2A.1 is used max nominal width is 3/4 in. (19 mm).

A. **Fill, Void or Cavity Material\*** — Min 20 ga steel channel track, 3-1/4 in. (83 mm) deep, having an intumescent strip affixed to the top of each flange and sized to accommodate steel studs. Gypsum board to overlap a min of 1in. (25 mm) over the intumescent strip. Track attached to steel deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — FAS Track DL2

A.1. **Fill, Void or Cavity Material\*** — (Not Shown) as an alternate 3A a 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 Item 2A and the fluted steel deck.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — DDA (Deflection Drift Angle)

8. **Forming Material\*** — Min 4 in. (102 mm) thick min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation cut to the width of the ceiling runner and compressed 33 percent in thickness, installed into flutes above ceiling runner. **In joints with a 3 hr Assembly rating, the mineral wool batt insulation shall be cut to a width not less than the full wall thickness such that the entire fluted area above the thickness of the wall is filled with mineral wool.** When gaps are present above the ceiling runner at steel deck seams or embossments in the steel deck valleys, a sliver of mineral wool batt insulation shall be used to seal each gap above the ceiling runner on both sides of wall to attain L Ratings.

**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

B1. **Forming Material\*-Plugs** — (Not Shown) As an alternate to the forming material (Item 3B), mineral wool plugs preformed to the shape of the fluted floor units or roof deck, may be used within the flutes. Plugs shall be friction fitted to completely fill the flutes.

**ROCK WOOL MANUFACTURING CO** — Delta Deck Plugs

C. **Forming Material\*** — **Required for joints with an Assembly Rating of 3 hr.** Min 2 in. (51 mm) thick min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation cut to a width 25 percent greater than width of ceiling runner and friction-fitted (33 percent compression) into ceiling runner between legs of track.

**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

D. **Fill, Void or Cavity Material\* — Sealant** — (Not Shown) - As an alternate to the slivers of mineral wool batt insulation in Item 3B, a dab of sealant may be used to seal each gap above the ceiling runner on both sides of wall to attain L Ratings.

**UNITED STATES GYPSUM CO** — Type AS

E. **Fill, Void or Cavity Material\*** — (Not Shown) when item 3A.1 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 3B mineral wool forming material of the joint system and overlapping a min of 1/2 in. (13 mm) onto the steel deck and item 3A.1 DDA on one side of the wall.

**RECTORSEAL** — Metacaulk 1200, Biostop 750, FlameSafe FS3000, Metacaulk 1500, or Biostop 800 Spray.

**\* 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 2015-10-20

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