XHBN.HW-D-0871 - 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

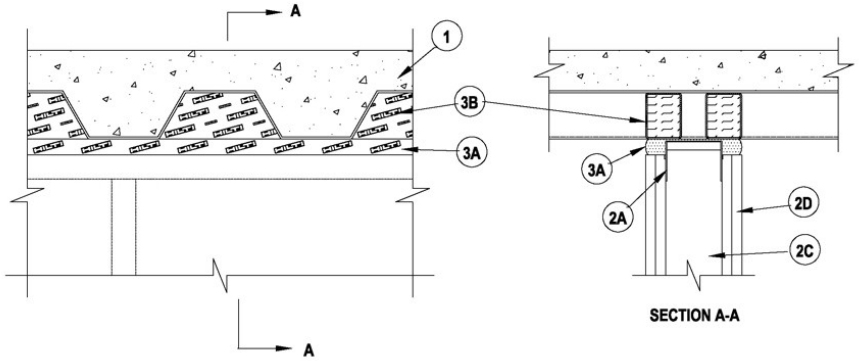
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0871

July 24, 2020

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Rating — 1 and 2 Hr (See Item 2)
Nominal Joint Width — 1 or 1-1/2 In (See Item 3)	FT Rating — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 50% Compression or Extension or 66% Compression only	FH Rating — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less than 1 CFM/Lin Ft (See Item 1C)	FTH Rating — 1 and 2 Hr (See Item 2)
L Rating at 400°F — Less than 1 CFM/Lin Ft (See Item 1C)	Nominal Joint Width - 25 or 38 mm (See Item 3)
	Class II or III Movement Capabilities — 50% Compression or Extension or 66% Compression only
	L Rating at Ambient — Less than 1.55 L/s/m (See Item 1C)
	L Rating at 204°F — Less than 1.55 L/s/m (See Item 1C)



SECTION A-A

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 Floor-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the floor assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The floor assembly shall include the following construction features:

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

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced (100-150 pcf or 1600-2400 kg/m^3) concrete, as measured from the top plane of the floor units.

C. **Spray-Applied Fire Resistive Materials* —** (Optional, Not Shown) — Prior to the installation of the steel ceiling runners and Fill, Void or Cavity Material (Item 3A), the steel floor units may be sprayed with the thickness of material specified in the individual D700 or D900 Series Design. When spray-applied fire resistive material is used, it shall completely fill the flutes above and extending the width of the wall. **L Ratings are not applicable when spray-applied fire resistive material is used.**
GCP APPLIED TECHNOLOGIES INC — Types MK-6-HY or MK-10HB

ISOLATEK INTERNATIONAL — Type 300

2. **Wall Assembly —** The 1 or 2 h fire-rated gypsum board /steel stud wall assembly shall be constructed of the materials and in the manner specified 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 and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Flange height of ceiling runner shall be min 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors or steel fasteners spaced max 24 in. (610 mm) OC. Secure ceiling runner after optional spray-applied fire resistive material is used.

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 deck and secured to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. Secure ceiling runner after optional spray-applied fire resistive material is used.
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Types SLT, SLT-H

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

METAL-LITE INC — The System

SCAFCO STEEL STUD MANUFACTURING CO — Slotted Track

TELLING INDUSTRIES L L C — True-Action Deflection Track

B. **Steel Attachment Clips —** (Optional — Not Shown) — When spray applied fire resistive material is used, ceiling runner may be secured to deck with Z-shaped clips formed from min 1 in. (25 mm) long strips of min 20 ga galv steel. Length of clips should not exceed the width (thickness) of the wall. Clips to be sized to extend through the thickness of the spray-applied fire-resistive material on the bottom of the steel deck with 1-1/2 or 2 in. (38 or 51 mm) long upper and lower legs. Legs of clips fastened to valleys of steel deck (prior to application of spray-applied fire-resistive materials) and top of ceiling runner with steel masonry anchors, steel fasteners or welds. Clips spaced max 24 in. (610 mm) OC.

C. **Studs —** Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 3/4 to 1 in. (19 to 25 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. 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 mid-height of slot on each side of wall. Stud spacing not to exceed 24 in. (610 mm) OC.

D. **Gypsum Board* —** For 1 hr assembly, one layer of 5/8 in. (16 mm) thick gypsum board is required in the individual Wall and Partition Design. For 2 hr assembly, two layers of 5/8 in. (16 mm) thick gypsum board is required in the individual Wall and Partition Design. The screws attaching the gypsum board to studs at the top of the wall shall be located 3-1/2 in. (89 mm) to 5-1/2 in. (138 mm) below the bottom edge of the ceiling runner.
The hourly ratings of the joint system are dependent on the hourly rating of the wall.

3. **Joint System — When max separation between the bottom of steel floor unit, or spray-applied fire resistive material, and top of wall is 1 in. (25 mm), the joint system is designed to accommodate a max 50 percent compression or extension from its installed width. When max separation between the bottom of steel floor unit, or spray-applied fire resistive material, and top of wall is 1-1/2 in. (38 mm), the joint system is designed to accommodate a max 66% compression only from its installed width.** The joint system consists of the following:

A. **Fill, Void or Cavity Material* — Top Track Seal —** Factory supplied foam seal installed over the ceiling runner (Item 2A) prior to attachment to underside of steel floor unit or steel attachment clips (Item 2B) in accordance with the installation instructions.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS MD OS or CFS-TTS MD 600 Firestop Top Track Seal

B. **Forming Material* —** Flute Plugs - When spray-applied fire resistive material (Item 1C) is not used, the fluted area of steel floor is filled with preformed flute plugs, formed to the shape of the flutes. The plug size to match deck height and to be friction fit above the ceiling runner, flush with the outer surfaces of the top track seal on both sides of the wall. Where a partial flute exists, the Flute Plug can be cut to fit the partial flute and the cut side of the Plug sealed with aluminum foil tape. As an option, where steel plates (Item 3C) are used, flute plugs to extend max 1/2 in. (13 mm) beyond steel plate at both sides of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS MD P 1.5, CFS-TTS MD P2, CFS-TTS MD P3 Firestop Top Track Plug

C. **Steel Plates —** (Not Shown. Optional) - Not applicable when spray-applied fire resistive material (Item 1C) is used. Nom 2 in. (51 mm) wide by 10 in. (254 mm) long by min 20 ga steel plate butted against ceiling runner at both sides of wall to span the flute and support the projected Flute Plug (see Item 3B) above. Steel plate to be secured to fluted deck with min one steel fastener at each end.

*** 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 2020-07-24