

## XHBN.HW-D-0554 - 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.

## Joint Systems

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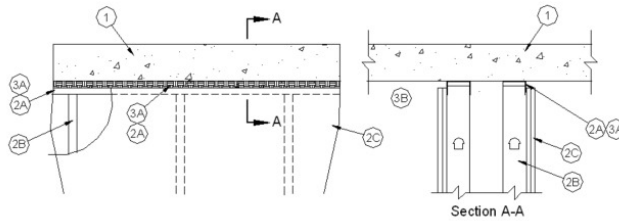
## XHBN7 - Joint Systems Certified for Canada

[See General Information for Joint Systems](#)

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## System No. HW-D-0554

ANSI/UL2079	CAN/ULC 5115
Assembly Ratings — 1 or 2 Hr	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width — 3/8, 1/4, 1/2, 5/8, 3/4, 1, 1-1/2 In.	FT Ratings — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 80% Compression and 33% Extension, or 33% Extension. (See Item 3) Class II Movement Capabilities — 75% Compression, 25% Extension (See Item 3A4) Class III Movement Capabilities - 50% Compression (See Item 3A6 and 3A9) ) Class III Movement Capabilities - 100% Compression (See Item 3A5)	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less Than 1 CFM/Lin Ft	FTH Ratings — 1 and 2 Hr (See Item 2)
L Rating at 400°F — Less Than 1 CFM/Lin Ft	Nominal Joint Width — 6, 13, 16, 19, 25, or 38 mm
	Class II or III Movement Capabilities — 80% Compression and 33% Extension, or 33% Compression or Extension. (See Item 3) Class II Movement Capabilities — 75% Compression, 25% Extension (See Item 3A4) Class III Movement Capabilities - 50% Compression (See Item 3A6) Class III Movement Capabilities - 100% Compression (See Item 3A5)
	L Rating at Ambient — Less Than 1.55 L/s/m
	L Rating at 203°C — Less Than 1.55 L/s/m



1. **Floor Assembly** — Min 4 1/2 in. (114 mm) thick steel reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) structural concrete. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units\***. See **Precast Concrete Units (CFTV)** category in the Fire Resistance Directory for names manufacturers.

The hourly rating of the joint system is equal to the lesser of the hourly ratings of the floor-ceiling assembly and the wall assembly.

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 runners of wall assembly shall consist of min No. 25 ga galv steel channels sized to accommodate steel studs (Item 2B). Floor runner to be provided with min 1-1/4 in. (32mm) flanges. The ceiling runners are provided with a fill, void or cavity material and are described in Item 3. Ceiling runners attached to underside of floor with steel fasteners 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 SLPTRACK 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 2-1/2 in. (64 mm) wide. Studs cut 5/8 to 1-1/4 in (16 to 32 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Steel studs nested in non-slotted ceiling runners without attachment or secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at mid-height of exposed slot.

B.1. **Framing Members — Steel Studs\*** — In lieu of Item B — Proprietary channel shaped studs, 3-5/8 in. wide spaced a max of 24 in. OC. Studs to be cut 5/8 to 1-1/4 in (19 to 32 mm) less than the assembly height with bottom nesting in and secured to floor runner. Steel studs nested in non-slotted ceiling runners without attachment or secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at mid-height of exposed slot.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — ViperStud™

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

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 5/8 in. (16 mm) gap shall be maintained between the top of the gypsum board and the bottom of the concrete floor. 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 legs. 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 1/2 in. (13 mm). **The joint system is designed to accommodate a max 80 percent compression and or 30 percent extension from its installed width. When 3A is used, max separation between bottom of floor and top of gypsum board is 3/8 in. (10 mm) or 3/4 in. (19 mm) (at the time of installation).** The joint system is designed to accommodate a max 80 percent compression and 33 percent extension from its installed width. When 3A1 is used the max nominal joint width is 1/2 in. (13 mm) and the movement is 80 percent compression and 30 percent extension. When 3B or 3A4 is used to fill in the nominal gap, the maximum installed joint width is 3/4 in. (19 mm) and the movement is 80% compression and 33% extension. When Item 3A2 is used, the maximum installed joint width is 3/4 in. (19 mm) and the movement is max 80% compression and 30% extension. When 3A3 is used to fill nominal gap, the maximum installed width is 1/2 in. (13mm) and movement is 75% compression and 25% extension. When item 3A8 is used the joint will accommodate 100% compression/extension for nominal 1/4 in. (6mm) gaps or compression only for 1/2 in. (12mm) gaps. When 3A9 is used, the maximum installed joint width is 3/8 in. (9.5 mm) and the movement is 50% compression only.

A. **Fill, Void or Cavity Material\*** — Min 20 ga steel channel track with 2-3/4 in. (70 mm) legs with slots having nom 1/2 in. (13 mm) wide intumescent strips affixed to the top web along the outer corner on both sides and sized to accommodate steel studs. Track attached to concrete deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — FAS-TRK 1000

A1. **Fill, Void or Cavity Material\*** — As an option to item 3A a min 25 ga composite steel angle with one 5/8 in. (16 mm) leg and one 1-1/4 in (32 mm) leg with a strip of intumescent strip affixed along the inside 1-1/4 in (32 mm) leg. Steel angle is friction fit between the top web of the ceiling runner and the concrete deck.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — DDA-1 (Deflection Drift Angle)

A2. **Fill, Void or Cavity Material\*** — (Not Shown) — As an alternate to 3A, 3A1 Non 1 in. (25.4 mm) open cell foam plug having a nom 5/16 in. (8 mm) intumescent tape applied to the top surface of the foam profile. The foam is sized for 1 or 2 hour walls and shall be placed in the joint above the top edge of the drywall between the concrete slab. A layer of tape and joint compound shall then be applied over the hot rod assembly.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — HOT ROD Type-X

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — HOT ROD Type-X

A3. **Fill, Void or Cavity Material\*** — (Not Shown) — As an alternate to 3A, 3A1. For 1/2 in. (13 mm) gap, Nom., 1 in. (25.4 mm) open cell foam plug having a nom 5/16 in. (8 mm) intumescent tape applied to the top surface of the foam profile. The foam is sized for 1 or 2 hour walls and shall be placed in the joint above the top edge of the drywall between the floor/ceiling assembly.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — HOT ROD Type-X

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — HOT ROD Type-X

A4. **Fill, Void or Cavity Material\*** — (Not Shown) — As an alternate to DDA-1 or HOTROD (3A1 3A2 and 3A3) for 3/4 (19 mm) gap between the edge of the drywall and the floor/ceiling assembly shall be filled with vinyl deflection bead with 5/16 in. (8 mm) intumescent strip and foam applied to horizontal leg that runs above the edge of the drywall. The perforated leg may be attached to surface of drywall with 1/2 in. (13 mm) staples every 6-8 in. (152-203 mm).  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — HOTROD TYPE XL

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — HOT ROD Type-XL

**TRIM-TEX INC** — Trim Tex-Hot Rod Type XL

A5. **Fill, Void or Cavity Material\*** — (Not Shown) - As an alternate to HOTROD (Item 3A2 and 3A3) at the 1/2 in. (13 mm) gap between the edge of the drywall and the floor/ceiling assembly shall be filled with vinyl deflection bead with 5/16 in. (8 mm) intumescent strip applied to horizontal leg that runs above the edge of the drywall. The horizontal leg is sized at 5/8 in. (16 mm) for 1-hour walls and 1-1/4 in. (32 mm) for 2-hour walls. Joint compound may be applied over perforated flange and drywall.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — FIRE BEAD (Fire Rated Deflection Bead)

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — FIRE BEAD

**TRIM-TEX INC** — Trim Tex-Fire Bead (Fire Rated Deflection Bead)

A6. **Fill, Void or Cavity Material\*** — (Not Shown) - For nominal 1/2 in. (12 mm) gaps 100% compression/ extension or 1 in. (25 mm) compression only. As an alternate to DDA-1 (Item A1) a composite corrugated vinyl profile with a 1-1/2 in. (38 mm) wide leg and a 3/8 in. (10 mm) bubble gasket along the upper edge. A 5/8 in. (16 mm) wide intumescent strip affixed along the inside 1-1/2 in. (38 mm) leg. Composite vinyl profile is attached to the leg of the ceiling runner/track with 1/2 in. (13 mm) No. 8 framing screws or adhesively attached with double sided foam tape.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Fire Gasket 1

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Fire Gasket 1

**TRIM-TEX INC** — Trim Tex-Fire Gasket 1

A7. **Fill, Void or Cavity Material\*** — (Not Shown) - For nominal 3/4 in. (19 mm) gaps 100% compression/extension or 1-1/2 in. (38 mm) compression only. As an alternate to DDA-1 (Item A1) a composite corrugated vinyl profile with a 2 in. (50 mm) wide leg and a 3/8 in. (10 mm) bubble gasket along the upper edge. A 1 in. (25 mm) wide intumescent strip affixed along the inside 1-1/2 in. (38 mm) leg. Composite vinyl profile is attached to the leg of the ceiling runner/track with 1/2 in. (13 mm) No. 8 framing screws or adhesively attached with double sided foam tape.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Fire Gasket 1.5

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Fire Gasket 1.5

**TRIM-TEX INC** — Trim Tex-Fire Gasket 1.5

A8. **Fill, Void or Cavity Material\*** — (Not Shown) - For nominal 1/4 in. (6mm) gaps 100% compression/ extension or 1/2 in. (12mm) compression only. As an alternate to DDA-1 (Item A2) a composite corrugated vinyl profile with a 1-1/8 in. (28 mm) wide leg and a 1/4 in. (6 mm) bubble gasket along the upper edge. A 1/4 in. (6 mm) wide intumescent strip affixed along the inside 1-1/8 in. (28 mm) leg. Composite vinyl profile is attached to the leg of the ceiling runner/track with 1/2 in. (12 mm) No. 8 framing screws or adhesively attached with double sided foam tape.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Fire Gasket 0.5

A9. **Fill, Void or Cavity Material\*** — (Not Shown) - For nominal 3/8 in. (9.5 mm) gaps 50% compression only. As an alternate to DDA-1 (Item A1) a composite corrugated vinyl profile bead with 5/16 in. (8 mm) intumescent strip applied to horizontal leg that runs above the edge of the drywall.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — SUPER SEAL X

B. **Packing Material** — (Not Shown) — When Item 3A or 3A1 is installed A continuous length of 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 concrete slab. Any splices are to be tightly butted. A layer of tape and joint compound can then be applied over the open cell foam.

C. **Fill, Void or Cavity Material\* — Sealant** — (Optional, Not Shown) — Where HOTROD (Item 3A3) or backer rod (Item 3B) is not installed, sealant may be used to seal any gaps at end joints between ceiling runners to maintain L Ratings.  
**UNITED STATES GYPSUM CO** — Type AS

\* 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 2021-06-29

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