



**System No. HW-D-0624**  
**XHBN.HW-D-0624**  
**Joint Systems**

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**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**

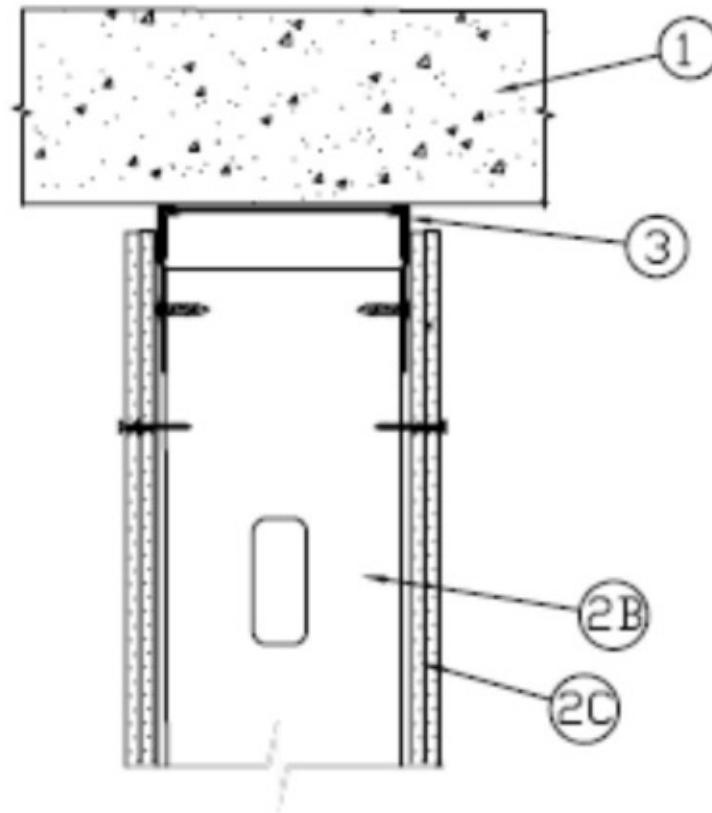
[See General Information for Joint Systems](#)

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

**System No. HW-D-0624**

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 — 3/8, 1/2 or 3/4 In.   | FT Ratings — 1 and 2 Hr (See Item 2)  |
| Class II or III Movement Capabilities — Extension or Extension or 80% compression and 33% extension (See Item 3) Class II Movement Capabilities - 75% Compression, 25% Extension (See Item 3A4) | 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 — 10, 13 or 19 mm   |
|   | Class II or III Movement Capabilities — 80% compression and 33% extension (See Item 3) Class II Movement Capabilities — 75% Compression, 25% Extension (See Item 3A4) |
|   | L Rating at Ambient — Less Than 1 CFM/Lin Ft  |
|   | L Rating at 400°F — Less Than 1 CFM/Lin Ft  |



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. thick UL Classified hollow-core **Precast Concrete Units\***.

See **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names manufacturers.

**The hourly fire rating of the floor assembly shall be equal or greater than the hourly fire rating of 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) legs. Ceiling runners are provided with a fill, void or cavity material and are described in Item 3A.

B. **Studs** — Steel studs to be min 2-1/2 in. (64 mm) wide. Studs cut 1/4 to 3/4 in. (6 to 19 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 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.

B1. **Framing Members - Steel Studs\*** — In lieu of Item B - Proprietary channel shaped studs, 2-1/2 in. (64mm) wide spaced a max of 24 in. (610 mm) OC. Studs to be cut 1/4 to 3/4 in. (6 to 19 mm) less than the assembly height with bottom nesting in and secured to floor runner. For direct attachment of gypsum board only. Steel studs nested in non-slotted ceiling runner 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 1/4 in. (6 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.

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**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 3/8" in. (10 mm) or 3/4 in. The joint system is designed to accommodate a max 100 or 80 percent compression and 100 or 33 percent extension from its installed width. When 3A2 or 3B 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 3A3 is used to fill nominal gap, the maximum installed width is 1/2 in. (13 mm) and movement is 75% compression and 25% extension.

**A. Fill, Void or Cavity Material\*** — Min 20 ga steel channel track with 2, 2-3/4 in. or 3 in (51, 70 or 76 mm) legs with or without 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 Track 1000, FAS Track 1000DL or FAS-CST

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — FAS Track 1000, FAS Track 1000DL

**A1. Fill, Void or Cavity Material\*** — **As an option to A.** Min 20 ga steel channel track with 2-1/2 in. (64 mm) legs with a series of 1 in (26 mm) long slits starting from the open end of the track leg extending vertically up the leg and 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** — TAB FAS Track

**A2. Fill, Void or Cavity Material\*** — (Not Shown) — As an alternate to 3A, 3A.1 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 can then be applied over the hot rod assembly.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — HOTROD Type-X

**A3. Fill, Void or Cavity Material\*** — (Not Shown) — As an alternate to 3A, 3A1, 3A2, 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

**B. Fill, Void or Cavity Material\*** — (Optional, Not Shown) — Non 7/8 in. (22 mm) "Denver Foam" open cell backer rod can 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 open cell backer rod.

**B1. Fill, Void or Cavity Material\*** — (Optional, Not Shown) — When items 3A or 3A1 are used a 1/2" gap between the edge of the drywall and the concrete deck shall be filled with a vinyl deflection bead can be install in the gap and cover with joint compound

**TRIM-TEX INC** — Wall Mounted Deflection Bead

**C. Fill, Void or Cavity Material\* — Sealant** — (Optional, Not Shown) — Sealant may be used to seal any gaps at end joints between ceiling runners to attain L Ratings.

**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

**D. Fill, Void or Cavity Material** — (Not Shown) - Required for use with items 3A, 3A1. 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 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.

**\* 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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