UL Product iQ™

XHBN.HW-D-0625 - 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

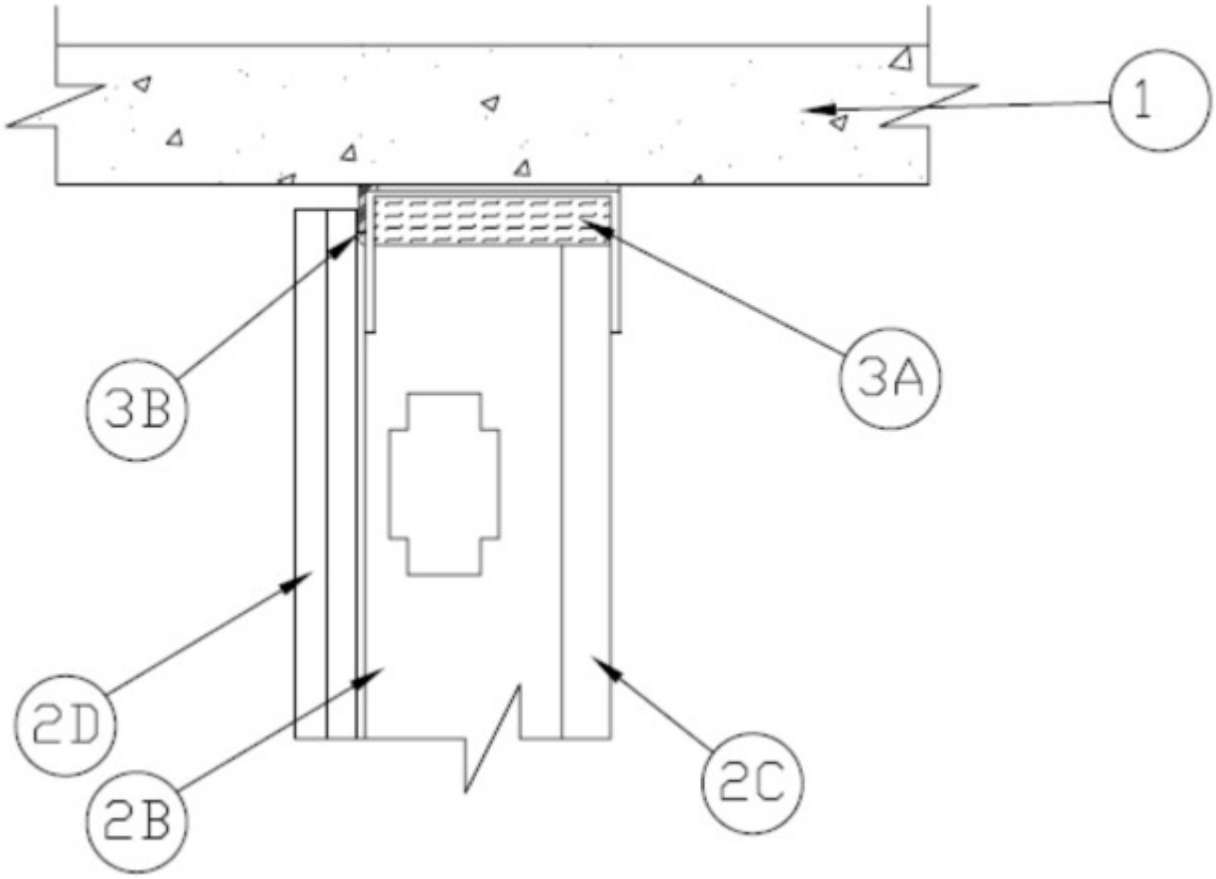
See General Information for Joint Systems Certified for Canada

System No. HW-D-0625

February 18, 2020

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 2 Hr	F Ratings — 2 Hr
Nominal Joint Width — 3/8, 1/2 to 3/4 In.	FT Ratings — 2 Hr
Class II or III Movement Capabilities — 33, 80 or 100% Compression and 33 or 100% Extension (see Item 3) Class II Movement Capabilities - 75% Compression, 25% Extension (See Item 33) Class III Movement Capabilities - 50% Compression (See Item 3)	FH Ratings — 2 Hr
L Rating at Ambient — Less Than 1 CFM/Lin Ft	FTH Ratings — 2 Hr
L Rating at 400°F — Less Than 1 CFM/Lin Ft	Nominal Joint Width — 10, 13 to 19 mm
	Class II or III Movement Capabilities — — 33,80 or 100% Compression and 33 or 100 % Extension (see Item 3) Class II Movement Capabilities - 75% Compression, 25% Extension (See Item 3) Class III Movement Capabilities - 50% Compression (See Item 33)

	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^3) 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. **Shaft Wall Assembly —** The 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 runner U-shaped, sized to accommodate steel studs (Item 2B), fabricated from min 24 ga galv steel. Runners attached to floor with steel fasteners located not greater than 2 in. from ends and not greater than 24 in OC. The ceiling runners are provided with a fill, void or cavity material and are described in Item 3.

B. **Studs —** "C-T", "I" or "C-H" shaped steel studs to be min 2 1/2 in. (64 mm) wide and formed of min 24 ga galv steel. Studs cut 1 to 1-1/4 in (25 to 32 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Steel studs secured to slotted leg of ceiling runner on finished side with No. 8 by 1/2 (13 mm) long wafer head steel screws at mid-height of exposed slot. Studs spaced max 24 in. (610 mm) OC.

C. **Gypsum Board* —** 1 in. (25 mm) thick by max 24 in. (610 mm) wide gypsum board liner panels. Panels cut max 1-1/4 in. 32 mm) less in length than floor to ceiling height. Vertical edges inserted into "T" shaped section of "C-T" studs, into holding tabs of "I" studs or into "H"-shaped section of "C-H" studs.

D. **Gypsum Board* —** Gypsum board 1/2 or 5/8 in. (13 or 16 mm) thick, applied on finished side of wall as specified in the individual Wall and Partition Design. The boards cut a max 1-1/4 in. (32 mm) less in length than the floor to ceiling height. The screws attaching the gypsum board layer(s) to the "C-T", "I" or "C-H" studs shall be located between 3 and 4 in. (76 -102 mm) down from ceiling surface.

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. (6 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 B1 is used the nominal gap is 3/8 (6 mm) and the movement is 100% extension and compression. When 3B2, 3B4 or 3C 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 3B3 is used to fill nominal gap, the maximum installed width is 1/2 in. (13mm) and movement is 75% compression and 25% extension. When 3B is used to fill in the nominal gap, the maximum installed joint width is 1/2 in. (13 mm) and the movement is 50% compression and 0% extension.

A. **Forming Material* —** Min 2 in. (51 mm) thick min 4 pcf (64 kg/m3) mineral wool batt insulation cut to friction fit 33% compression in width and installed into ceiling runner between leg of track and gypsum liner board.

B. **Fill, Void or Cavity Material* —** (Not Shown) - As an alternate to HOTROD (Item 3B3 and 3B4) 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)

B1. **Fill, Void or Cavity Material* —** Nom 20ga J-shaped track having a one 1-1/2" in. solid leg and one 2-1/2 in. leg nom 1/2 in. (13 mm) wide intumescent strip affixed to the top outer web along the outside corner facing the finish side of the wall. Track to be secured to bottom side of floor assembly with steel masonry or powder actuated fasteners spaced at a max of 24 in. (610 mm) OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Fire Rated J-Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Fire Rated J-Track

UNITED STATES GYPSUM CO — USG Sheetrock® Brand Firecode® J-Runner

B2. **Fill, Void or Cavity Material* —** (Not Shown) — As an alternate to 3B1 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 — HOTROD Type-X

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

B3. **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

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

B4. **Fill, Void or Cavity Material* —** Fill, Void or Cavity Material* — (Not Shown) — As an alternate to HOTROD (3B2 or 3B3) 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 XL

MARINO/WARE, DIV OF WARE INDUSTRIES INC — HOTROD Type-XL

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

C. **Fill, Void or Cavity Material* —** (Optional, Not Shown) — For use with items 3B1, Non 7/8 in. (22 mm) open cell backer rod, trade name "Denver Foam" 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.

D. **Fill, Void or Cavity Material* — Sealant —** (Optional, Not Shown) — Where HOTROD (Item 3B2, 3B3 or 3B4) 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 2020-02-18