XHBN.HW-D-0596 - 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

XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

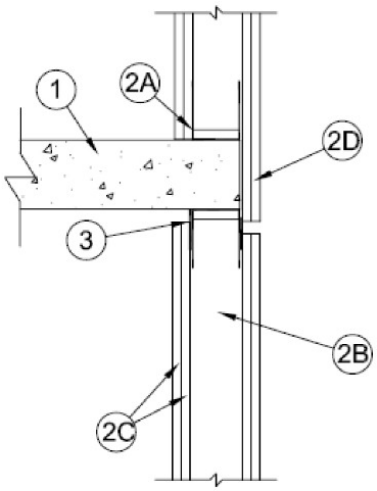
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0596

June 2, 2021

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 — 1/2, 3/4 (See Item 3)	FT Ratings — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 80% Compression and or 30% Extension	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 — 1/2, 3/4 In. (see Item 3)
	Class II or III Movement Capabilities — 80% Compression and or 30% Extension
	L Rating at Ambient — Less than 1.55 L/s/mt
	L Rating at 204°C— Less than 1.5 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^3) 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 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 Runners —** Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runner to be provided with min 1-1/4 in. (32 mm) legs. Legs are to be min 1/4 in. (6 mm) longer than the maximum joint width. Ceiling runners to be as described in Item 3.

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). Attached to concrete deck and spaced max 24 in. (610 mm) OC. Legs are to be min 1/4 in. (6 mm) longer than the maximum joint width.
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 1/2 to 3/4 in (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs to nest in ceiling runner without attachment.

C. **Gypsum Board* —** Gypsum board sheets installed to a min total 5/8in. (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 1/2 in. (13 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 1 in. (25mm) below the bottom of the ceiling runner legs. No gypsum board attachment screws shall be driven into the ceiling runner.

D. **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 shaft side gypsum board to extend a max of 1/2 in. (13 mm) below the upper floor line overlapping the ceiling runner (Item 3) a min of 1/2 in. (13 mm) so that gypsum board is in contact with intumescent strip and attached with typical steel fasteners to the ceiling runner (Item 3) of the lower level.

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 wall sheathing (non-shaft side) and gypsum board panels (shaft side) 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 Item 3A is used the max nominal width is 3/4 in. (19 mm). When item 2A.1 is used max nominal width is 3/4 in. (19 mm).
A. **Fill, Void or Cavity Material* —** 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 concrete deck.
CALIFORNIA EXPANDED METAL PRODUCTS CO — DDA (Deflection Drift Angle)

B. **Fill, Void or Cavity Material** –As an alternate to Item 3A (not shown), fire barrier material adhered to corrugated metal or plastic and provided with flanges of same material. Assembly to be installed on one side between gap in Item 2D where gypsum board extends below the bottom of floor, in accordance with the installation instructions provide with the product.

CALIFORNIA EXPANDED METAL PRODUCTS CO — FAS-093X or FAS-093V

C. **Fill, Void or Cavity Material** –As an alternate to Item 3A (not shown), when Item 3B is used, n, 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 — HOTROD Type X

D. **Fill, Void or Cavity Material* —**Fill, Void or Cavity Material* — (Not Shown) — As an alternate to HOTROD (3C) 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

E. **Fill, Void or Cavity Material* —**(Not Shown) - For nominal 1/2 in. (12 mm) gaps. As an alternate to HOTROD (Item 3C) 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

F. **Fill, Void or Cavity Material* —**(Not Shown) - As an alternate to HOTROD (Item 3C) 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)

G. **Fill, Void or Cavity Material —** — (Not Shown) - 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.**

Last Updated on 2021-06-02