



**System No. FW-D-0058
XHBN.FW-D-0058
Joint Systems**

[Page Bottom](#)

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.
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XHBN - Joint Systems

[See General Information for Joint Systems](#)

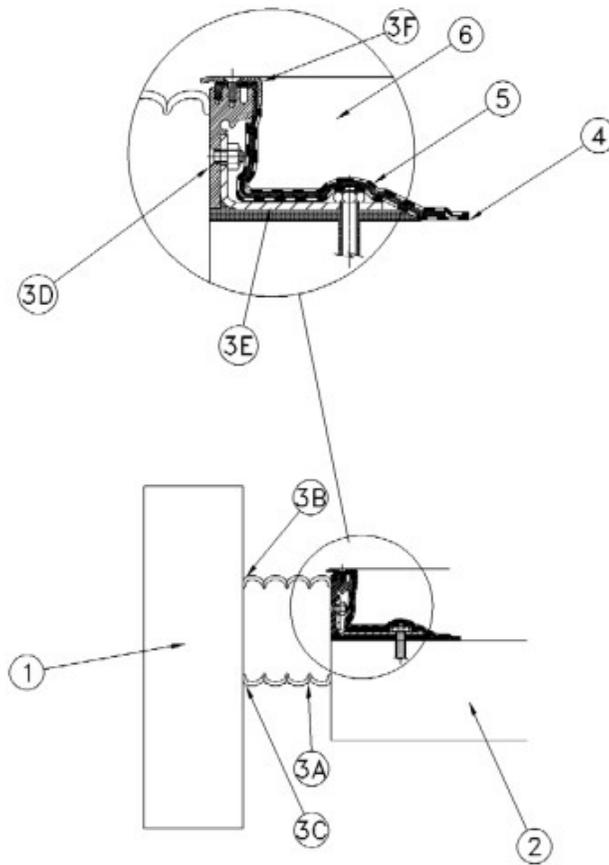
System No. FW-D-0058

August 22, 2014

Assembly Rating — 2 Hr

Nominal Joint Width — ½ in. to 2 in.

Class II & III Movement Capabilities — 50% Compression Or Extension



1. **Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100 - 150 pcf, (1600 - 2400 kg/cu meter) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***.

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100 - 150 pcf, (1600 - 2400 kg/cu meter), structural concrete.

3. **Joint System** — Nominal width of joint is 1/2 in. to 2 in. (13 to 50 mm). The joint system is designed to accommodate a max 50 percent compression or extension from its installed width. The joint system shall consist of the following:

A. **Forming Material*** — Compressed, fire-retardant impregnated, 5 in. (125 mm) deep foam. Top and underside of foam is coated with Silicone. Foam may comprise vertical or horizontal laminations. Foam is installed in joint opening as a permanent form.

EMSEAL L L C — DFR2-FP Mechanical joint system.

B. **Sealant Band** — (Optional) — Watertight 3/4 in. (19mm) deep polyurethane sealant band and corner bead supplied by joint system manufacturer, and installed in accordance with installation instruction.

C. **Epoxy adhesive** — Consists of two parts; part A (base), and part B (hardener). The epoxy is supplied by joint system manufacturer, and installed in accordance with installation instructions.

D. **Aluminum Rail** — 3 in. (75 mm) extruded aluminum as detailed. Bolted to steel mounting angle (item E) using 5/16 in. by 3/4 in. long (7.9 mm by 19 mm long) flat head cap screw 6.625 in. (168 mm) OC.

E. **Steel Mounting Angle** — 1.5 in. (38 mm) by 3.5 in. (89 mm) by 0.164 in. (4.2 mm) thick steel angle placed on a minimum 1/4 in. (6 mm) thick epoxy of cementitious curb. The angle is anchored to the concrete slab using 5/16 in. (7.9 mm) by 2-1/2 in. (64 mm) long expansion anchors, 12 in. (305 mm) OC. The expansion anchor shall have a minimum clear edge distance of 1-1/8 in. (29 mm).

F. **Capping Strip** — Stainless Steel Capping Strip fastened to the Aluminum angle (item E) using

self-tapping minimum 1/8 in. (3.2 mm) diameter steel flat head cap screw at 12 in. (305 mm) OC.

4. **Roofing Membrane** — Roofing Membrane may be PVC, Hot Rubberized Asphalt, or Rubber.

5. **Side Sheet** — PVC Side Sheet tied into the Roofing Membrane (item 4) according to Manufacturer's Installation Instructions.

6. **Roof Topping** — Minimum 3 in. (75 mm) thick poured concrete, precast concrete or masonry pavers installed into mortar.

*** 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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[Page Top](#)

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