



System No. HW-D-0771 XHBN.HW-D-0771 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

[See General Information for Joint Systems](#)

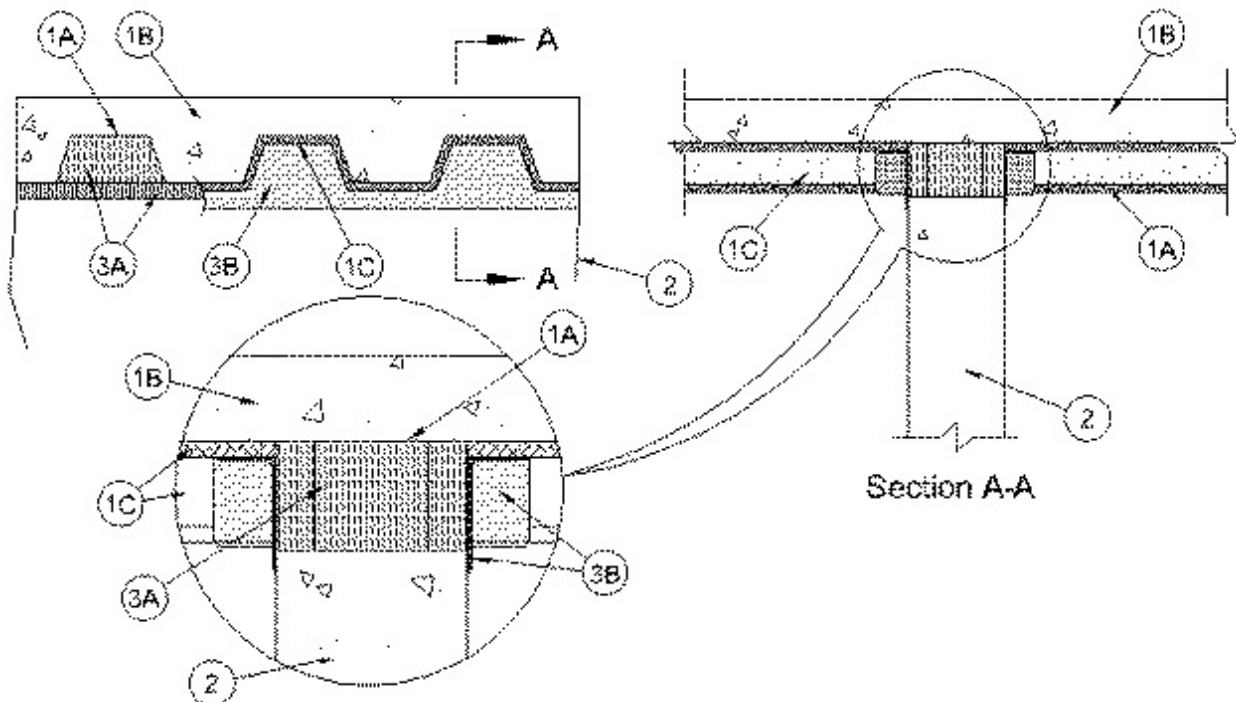
System No. HW-D-0771

June 06, 2016

Assembly Rating - 2 Hr

Nominal Joint Width - 1 in.

Class I and II Movement Capabilities - 25% Compression and Extension



1. Floor Assembly — The 2 hr fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Form Units* — Max 76 mm (3 in.) deep galv steel fluted units.

B. **Concrete** — Min 64 mm (2-1/2 in.) thick reinforced concrete, as measured from the top plane of the floor units.

C. **Spray-Applied Fire Resistive Material*** — Steel floor units to be sprayed with a min 8 mm (5/16 in.) to max 17 mm (11/16 in.) thickness of material in accordance with the specifications in the individual D700 Series Design. The spray-applied fire resistive material shall be excluded from the steel deck in the area immediately above the wall.

GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY

1A. **Roof Assembly** — (Not Shown) As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck** — Max 76 mm (3 in.) deep galv steel fluted roof deck.

B. **Roof Insulation Mineral and Fiber Board*** — Min 19 mm (3/4 in.) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.

C. **Roof Covering*** — Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.

D. **Spray-Applied Fire Resistive Material*** — Steel roof deck to be sprayed with a max 19 mm (3/4 in.) thickness of spray applied fire resistive material as specified in the individual P700 Series Roof-Ceiling design. Spray-applied fire resistive material shall be excluded from the steel deck in the area immediately above the wall.

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2. **Wall Assembly*** — Wall Assembly Min 152 mm (6 in.) thick reinforced lightweight or normal weight 1600-2400 Kg / cu m (100-150 pcf) structural concrete. Wall to be installed perpendicular to the flutes of the steel floor units or roof deck. 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.

3. **Joint System** — **Max separation between bottom of steel floor units or roof deck and top of wall is 25 mm (1 in.). The joint system is designed to accommodate a max 25 percent compression or extension from its installed width.** The joint system consists of a forming material and a fill material, as follows:

A. **Forming Material*** — Min 51 mm (2 in.) thickness of 4 pcf mineral wool batt insulation cut to fit the shape of the fluted steel deck and installed into the flutes of the steel deck between the top of the concrete wall and the steel deck. The mineral wool is to be compressed 33 percent in height and tightly packed such that it is flush with the concrete wall.

ROCK WOOL MANUFACTURING CO — Delta Board

B. **Fill, Void or Cavity Material*** — Min 3 mm (1/8 in.) wet thickness of fill material applied on each side of the wall to completely cover mineral wool and overlap a min of 12 mm (1/2 in.) onto concrete wall and 51 mm (2 in.) onto the sprayed applied material (Item 1C).

A/D FIRE PROTECTION SYSTEMS INC — A/D FIREBARRIER Spray Acrylic

*** 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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