

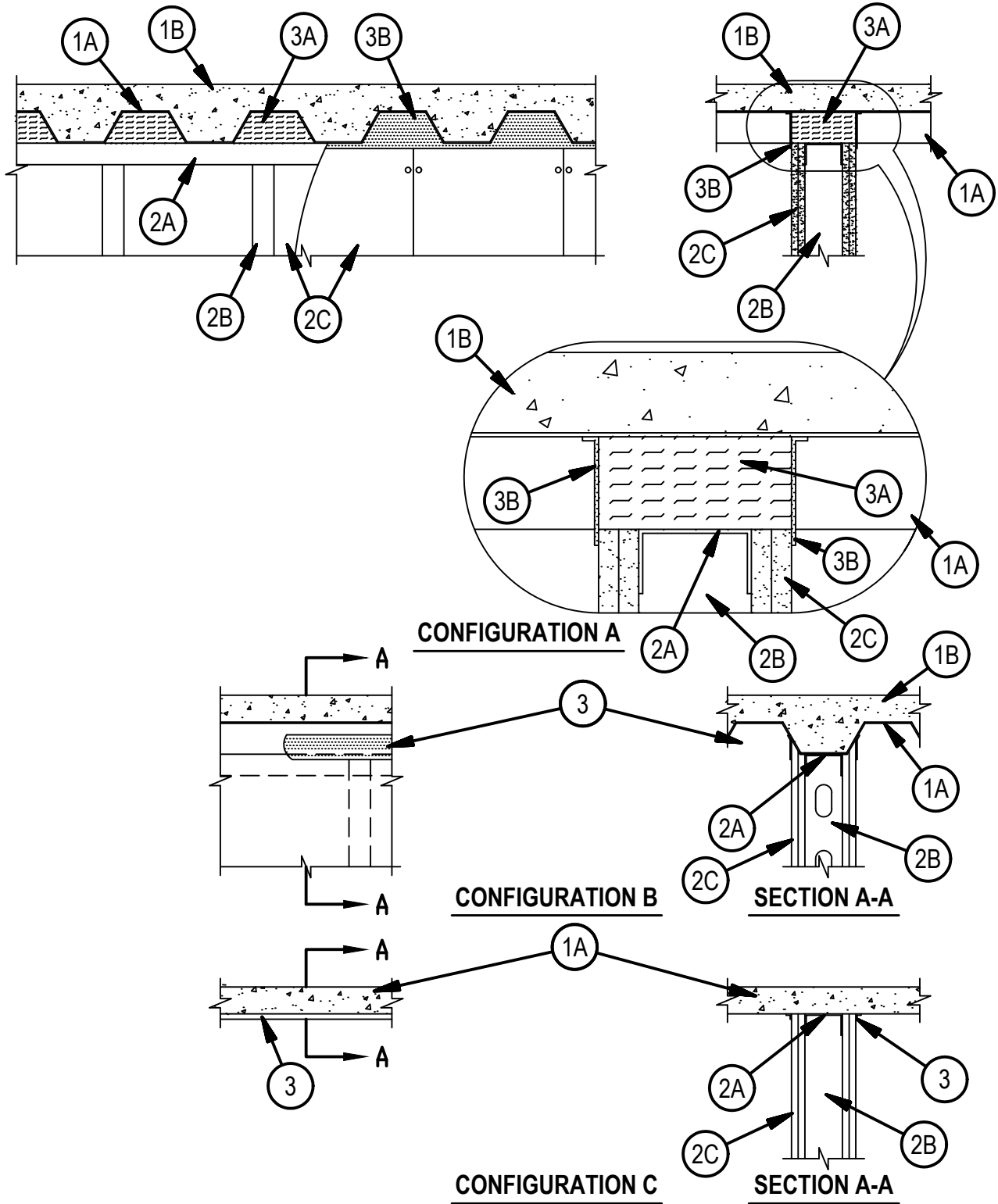


Classified by
Underwriters Laboratories, Inc.
to UL 2079

System No. HW-S-0053

Assembly Ratings — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less than 1 CFM/Lin Ft
L Rating at 400° F — Less than 1 CFM/Lin Ft

HWS 0053



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June 04, 2010

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1. Floor Assembly — The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Steel Floor And Form Units* — Max 3 in. (76 mm) deep galv steel fluted units.
 - B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
- 1A. Floor Assembly — As an alternate to Item 1, min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.
- 1B. Roof Assembly — (Not Shown) — As an alternate to the floor assembly, 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 P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:
 - A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck.
 - B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.
2. Wall Assembly — The 1 or 2 hr fire rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400-Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2 in. flanges. When Configuration A is used, ceiling runner is installed perpendicular to direction of steel floor units or roof deck. When Configuration B is used, ceiling runner is installed parallel to and beneath the valley of steel floor units or roof deck. Ceiling runner secured to valleys of steel floor unit or roof deck with steel fasteners or welds spaced 12 in. (305 mm) OC. When Conguration C is used, ceiling runner is secured to concrete floor slab with steel fasteners spaced 12 in. (305 mm) OC.
 - B. Studs — Steel studs to be min 2-1/2 in. (64 mm) wide by 1-1/4 in.(32 mm) deep corrosion protected min 25 MSG steel channels. Stud spacing not to exceed 24 in. OC (610 mm).
 - C. Gypsum Board* — Gypsum board installed to a min total thickness of 5/8 in. (16 mm) and 1-1/4 in. (32 mm) on each side of wall for 1 and 2 hr rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Gypsum board to be butted tightly to bottom of steel units, concrete floor or roof deck.
The hourly rating of the joint system is dependent on the hourly rating of the wall.



Hilti Firestop Systems

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Joint Configuration A

3. Joint System — The joint system consists of forming material and a fill material in the flutes of the steel roof or floor units, as follows:

A. Forming Material* — Nom 4 pcf (64 kg/m³) density mineral wool batt insulation cut approx 25 percent wider than the flutes and with a length approx equal to the overall thickness of the wall. Multiple pieces stacked on top of each other, as needed, and then compressed 50 percent in thickness and inserted into the flutes of the steel deck above the top of the ceiling runner. The mineral wool batt insulation is to project beyond each side of the ceiling runner, flush with wall surfaces.

ROCK WOOL MANUFACTURING CO — Delta-Board

THERMAFIBER INC — Type SAF

A1. Forming Material*—Plugs (For use with 3-1/2 in. (89 mm) deep studs or larger) — (Optional-Not Shown) Performed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the ceiling channel. The plugs shall project beyond each side of the ceiling runner, flush with wall surfaces.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP777 Speed Plugs

B. Fill, Void or Cavity Material* — Min 1/8 in. (3.2 mm) wet thickness of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. (13 mm) onto gypsum board and steel deck on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP 672 Firestop Spray or CFS-SP WB Firestop Joint Spray

Joint Configuration B

3. Fill, Void or Cavity Material* — Min 1/8 in. (3.2 mm) wet thickness of fill material sprayed or troweled on each side of the wall to overlap a min of 1/2 in. (13 mm) onto gypsum board and steel deck on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP 672 Firestop Spray or CFS-SP WB Firestop Joint Spray

Joint Configuration C

3. Fill, Void or Cavity Material* — Min 1/8 in. (3.2 mm) wet thickness of fill material sprayed or troweled on each side of the wall to overlap a min of 1/2 in. (13 mm) onto gypsum board/concrete floor assembly interface on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP 672 Firestop Spray or CFS-SP WB Firestop Joint Spray

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

