

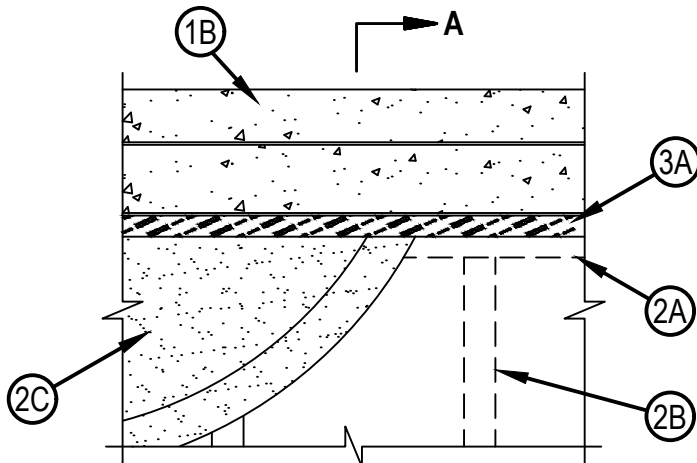


Classified by  
Underwriters Laboratories, Inc.  
to UL 2079 and CAN/ULC-S115

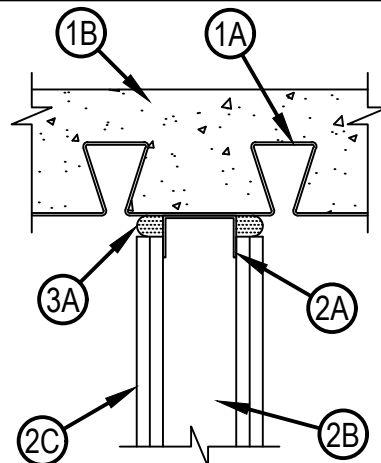
# System No. HW-D-0933

HWD 0933

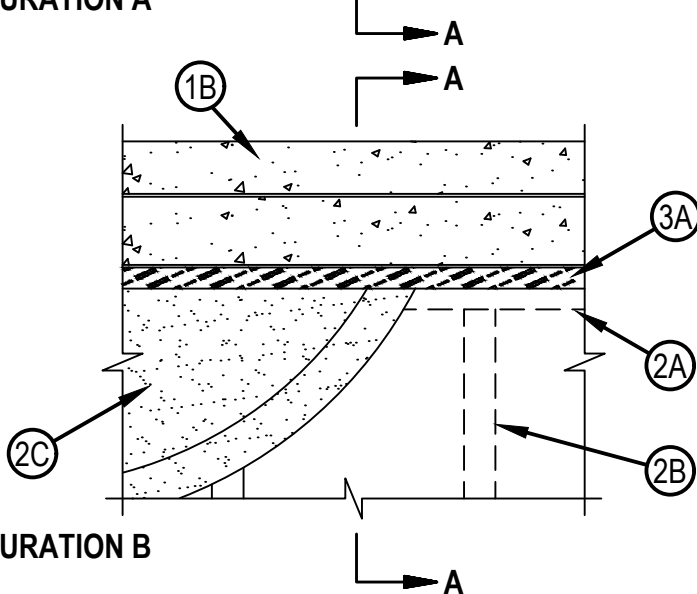
ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Rating — 1 and 2 Hr (See Item 2)
Nominal Joint Widths — 7/8, 1 or 1-5/8 In (See Item 3)	FT Rating — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 62% Compression or Extension, 86 Compression or Extension or 92% Compression only (See Item 3-Table 1)	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less than 1 CFM/Lin Ft	FTH Rating — 1 and 2 Hr (See Item 2)
L Rating at 400°F — Less than 1 CFM/Lin Ft	Nominal Joint Widths – 22, 25 or 41 mm (See Item 3)
	Class II or III Movement Capabilities — 62% Compression or Extension, 86 Compression or Extension or 92% Compression only (See Item 3-Table 1)
	L Rating at Ambient — Less than 1.55 L/s/mt
	L Rating at 204°C — Less than 1.55 L/s/mt



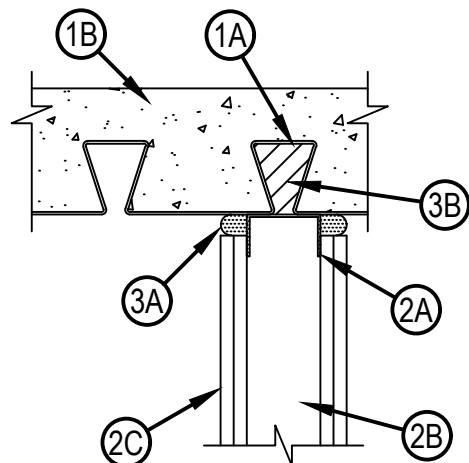
**CONFIGURATION A**



**SECTION A-A**



**CONFIGURATION B**



**SECTION A-A**



**Hilti Firestop Systems**

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.  
October 2, 2024

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. The hourly fire rating of the floor assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The floor assembly shall include the following construction features:

A. Steel Floor And Form Units\* — Composite max 4 in. (102 mm) deep galv steel fluted units.

EPIC METALS CORP — Types “EC” or “Toris C”

A1. Steel Floor And Form Units\* — Composite max 2 in. (51 mm) and max 3.5 in. (89 mm) deep galv steel fluted units.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Versa-Dek®, Versa-Dek® 3.5VLSC

A2. Steel Floor And Form Units\* — Composite max 2 in. (51 mm) and max 3.5 in. (89mm) deep galv steel fluted units.

Verco Decking Inc – A Nucor Co – Type 2.0D FORMLOK, Type 3.5D FORMLOK

A3 Steel Floor And Form Units\* – Composite max 2 in. (51 mm) and max 3.5 in. (89mm) deep galv steel fluted units.

VULCRAFT, DIV OF NUCOR CORP – Type 2.0D FORMLOK, Type 3.5D FORMLOCK

B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete, as measured from the top plane of the floor units.

1A. 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 Floor And Form Units\* — Composite max 4 in. (102 mm) deep galv steel fluted units.

EPIC METALS CORP — Types “Toris C” or “ER2R”

A1. Steel Floor And Form Units\* — Composite max 2 in. (51 mm) and max 3.5 in. (89 mm) deep galv steel fluted units.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Versa-Dek®, Versa-Dek® 3.5VLSC

A2. Steel Floor And Form Units\* — Composite max 2 in. (51 mm) and max 3.5 in. (89mm) deep galv steel fluted units.

Verco Decking Inc – A Nucor Co – Type 2.0D FORMLOK, Type 3.5D FORMLOK

A3 Steel Floor And Form Units\* – Composite max 2 in. (51 mm) and max 3.5 in. (89mm) deep galv steel fluted units.

VULCRAFT, DIV OF NUCOR CORP – Type 2.0D FORMLOK, Type 3.5D FORMLOCK

B. Roof Insulation — Min 2-1/2 in. (64 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 specified in the individual U400, V400 or W400 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 and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Flange height of ceiling runner shall be min 1 in. (25 mm) greater than max extended joint width. Ceiling runner installed parallel to direction of fluted steel deck and centered under a valley of the deck between flutes (Configuration A) . Alternately, ceiling runner installed centered over flute (Configuration B). Ceiling runner secured to valley of deck with steel masonry anchors or steel fasteners spaced max 24 in. (610 mm) OC. When ceiling runner centered over flute (Configuration B, the fasteners are to be located at max 24 in. (610 mm) OC spacing to each side of the flute.

A1. Light Gauge Framing\* — Slotted Ceiling Runner — As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Flange height of slotted ceiling runner shall be min 1 in. (25 mm) greater than max extended joint width. Slotted ceiling runner to be installed as described in Item 2A. secured to valley of deck with steel masonry anchors or steel fasteners spaced max 24 in. (610 mm) OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Types SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

METAL-LITE INC — The System

SCAFCO STEEL STUD MANUFACTURING CO — Slotted Track

TELLING INDUSTRIES L L C — True-Action Deflection Track



- B. Studs — Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 3/4 to 1 in. (19 to 25 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at mid-height of slot on each side of wall. Stud spacing not to exceed 24 in. (610 mm) OC.
- C. Gypsum Board\* — For 1 hr assembly, one layer of 5/8 in. (16 mm) thick gypsum board is required in the individual Wall and Partition Design. For 2 hr assembly, two layers of 5/8 in. (16 mm) thick gypsum board is required in the individual Wall and Partition Design. The screws attaching the gypsum board to studs at the top of the wall shall be located 3-1/2 in. (89 mm) to 5-1/2 in. (138 mm) below the bottom edge of the ceiling runner.

The hourly ratings of the joint system are dependent on the hourly rating of the wall.

3. Joint System —Max separation between the bottom of steel floor unit and top of wall (Item 2C) is 7/8 in. (22 mm), 1 in (25mm), or 1-5/8 in (41mm). See Item 3-Table 1 for more details.. The joint system consists of the following:

Table 1

Max Nom Joint Width, In. (mm)	Max Movement Capabilities, (% of nominal)		Max Movement, in. (mm)
7/8 (22)	Compression	86%	3/4 (19)
	Extension	86%	3/4 (19)
1 (25)	Compression	62%	5/8 (16)
	Extension	62%	5/8 (16)
1-5/8 (41)	Compression	92%	1-1/2 (38)
	Extension	0%	0

As an alternative to the movement percentages above, the joint system may move freely without restriction to the percentage of movement within the range of a min 1/8 in. (3 mm) to max 1-5/8 in. (41 mm) joint width.

- A. Fill, Void or Cavity Material\* — Top Track Seal — Factory supplied foam seal installed over the ceiling runner (Items 2A, 2A1) prior to attachment to deck in accordance with the installation instructions.  
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS MD OS or CFS-TTS MD 600 Firestop Top Track Seal
- B. Fill, Void or Cavity Material\*— Foam — Applies to Configuration B. Fill material installed to fill flute above wall assembly prior to attachment of ceiling runner.  
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 620 Fire Foam
- B1. Forming Material\*— Applies to Configuration B. As an alternate to the foam (Item 3B), the flute above the wall to be entirely filled with min 4 pcf (64 kg/m<sup>3</sup>) density mineral wool batt insulation firmly packed into the flute.  
 INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing  
 JOHNS MANVILLE – Safing  
 ROCKWOOL MALAYSIA SDN BHD — SAFE  
 ROCKWOOL — SAFE  
 THERMAFIBER/OWENS CORNING — SAF

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

