

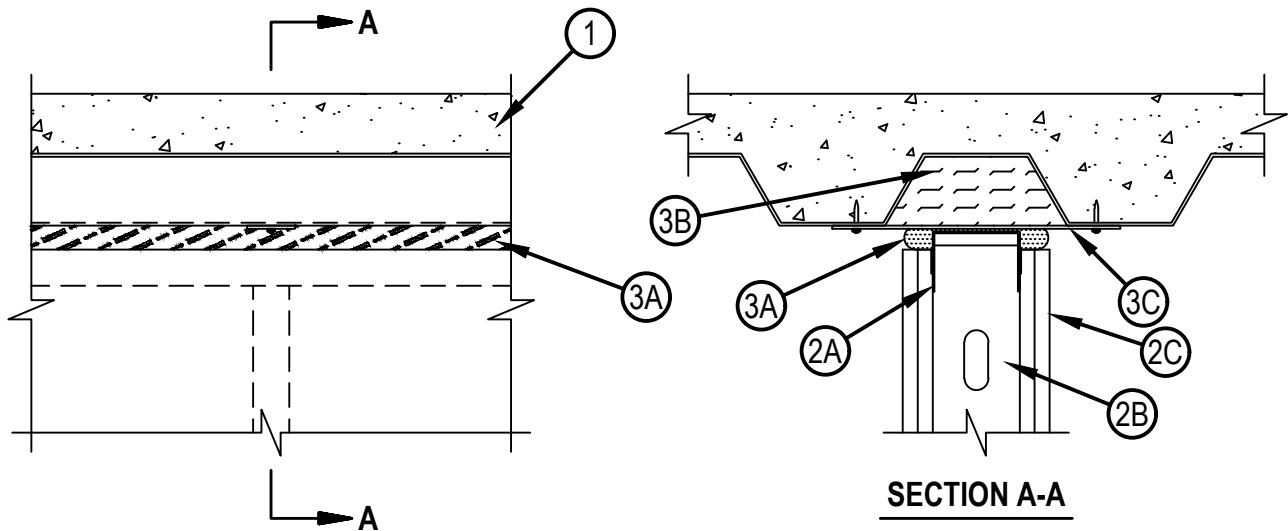


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Underwriters Laboratories, Inc.  
to UL 2079 and CAN/ULC-S115

# System No. HW-D-0873

HWD 0873

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 Rating — 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°F — Less than 1.55 L/s/mt



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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 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\* — Max 3 in. (76 mm) deep galv fluted floor units.
  - 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.
2. Wall Assembly — The 1 or 2 h 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 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner installed parallel to direction of fluted steel deck and secured to steel straps (Item 3C) with two steel min No. 10 by 3/4 in. (19 mm) steel screws spaced max 24 in. (610 mm) OC.
  - 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). Slotted ceiling runner secured to steel straps (Item 3C) with two steel min No. 10 by 3/4 in. (19 mm) steel screws spaced max 24 in. (610 mm) OC.
    - CEMCO, LLC — 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 3-1/2 in. (89 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.

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3. Joint System — Max separation between the bottom of steel floor unit, or flute cover, 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 (Item 2A) prior to attachment to steel straps 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. Forming Material\* — Flute Cover - The fluted area of steel floor is fitted with preformed flute covers, formed to the shape of the flutes and are friction fit to into the flutes to completely fill the area of the flute above the ceiling runner.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS MD C1.5, CFS-TTS MD C2, CFS-TTS MD C3 Firestop Top Track Cover

B1. Forming Material\* - Plugs — (Optional, Not Shown) — As an alternate to Item 3B, preformed mineral wool plugs, formed to the shape of the fluted floor units or roof deck, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of plugs to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP777 Speed Plugs

C. Steel Straps — Min 20 ga, 2 in. (51 mm) wide by 10 in. (254 mm) long galvanized steel straps attached to steel deck with masonry anchors or steel fasteners on each side of the flutes, max 24 in. (610 mm) OC.

\* 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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