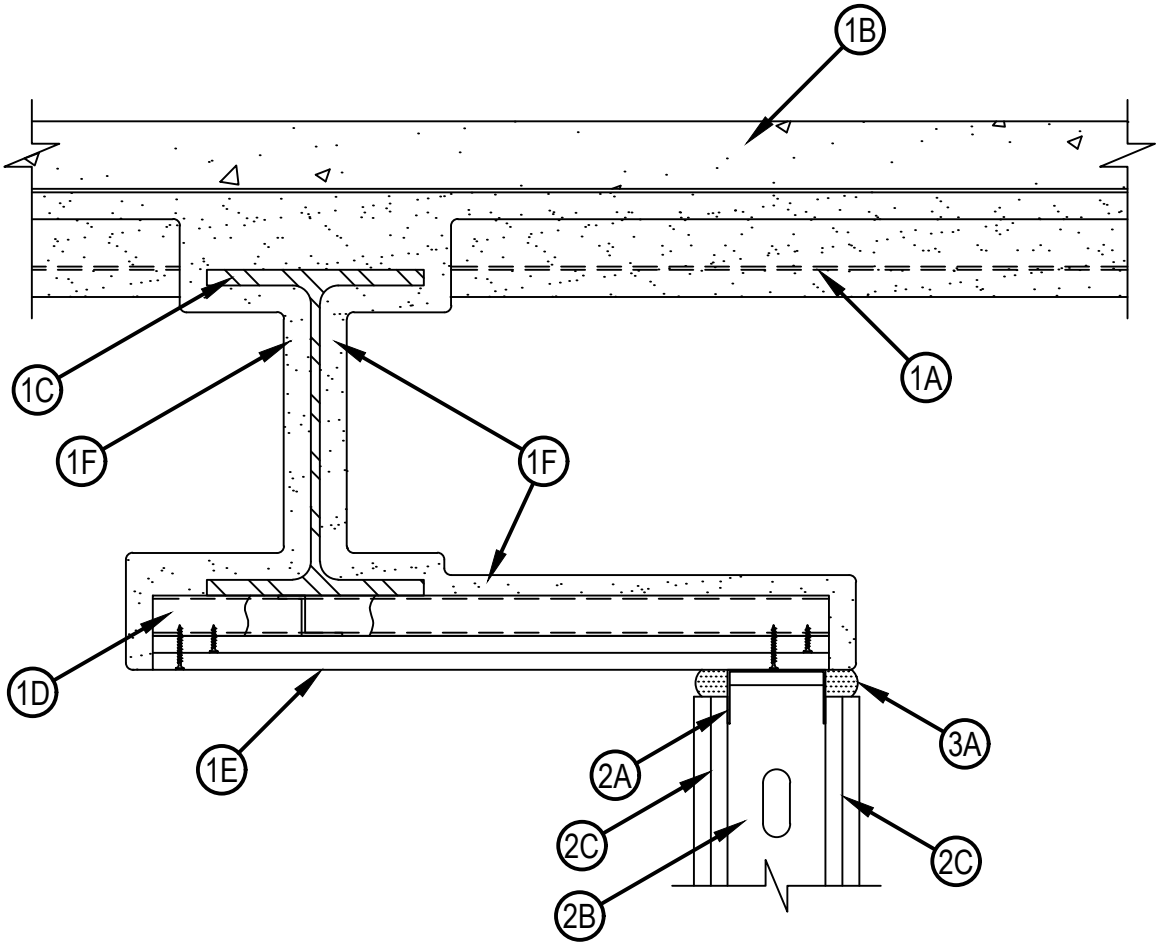
Classified by
Underwriters Laboratories, Inc.
to UL 2079 and CAN/ULC-S115

System No. HW-D-0876

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Items 1 and 2)	F Ratings — 1 and 2 Hr (See Items 1 and 2)
Nominal Joint Widths — 7/8, 1 or 1-1/2 in. (See Item 3)	FT Ratings — 1 and 2 Hr (See Items 1 and 2)
Class II or III Movement Capabilities — 62% Compression and 50% Extension, 86% Compression and 83% Extension or 92% Compression only (See Item 3-Table 1)	FH Ratings — 1 and 2 Hr (See Items 1 and 2)
L Rating At Ambient — Less Than 1 CFM/lin ft	FTH Ratings — 1 and 2 Hr (See Items 1 and 2)
L Rating At 400°F — Less Than 1 CFM/lin ft	Nominal Joint Widths — 22, 25 or 38 (See Item 3)
	Class II or III Movement Capabilities — 62% Compression and 50% Extension, 86% Compression and 83% Extension or 92% Compression only (See Item 3-Table 1)
	L Rating At Ambient — Less Than 1.55 L/s/m
	L Rating At 204°C — Less Than 1.55 L/s/m



Hilti Firestop Systems

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System No. HW-D-0876

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 Series Floor-Ceiling Design in the UL Fire Resistance Directory and as noted below. 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 Floor Units* — Max 3 in. (76 mm) deep galv steel fluted floor units.
   B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
   C. Structural Steel Support — Steel beam, as specified in the individual D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented parallel to and max 12 in. (305 mm) from wall assembly.
   D. Steel Attachment Clips — Min 1 in. (25 mm) wide Z-shaped clips or channels formed from min 16 ga galv or painted steel. Clips to be sized to extend through the thickness of the spray-applied fire-resistive material on the bottom flange of the steel beam with 1-1/2 in. (38 mm) long upper and lower legs. Legs of clips fastened to bottom of beam (prior to application of spray-applied fire-resistive materials) with steel fasteners or welds and to ceiling runner of wall with bolts or screws. Clips spaced max 16 in. (406 mm) OC and extend from steel support beam to flush with non-beam face of wall.
   E. Gypsum Board* — Two layers of 5/8 in. (16 mm) thick glass mat faced (moisture resistant) gypsum board applied to bottom of steel attachment clips. The boards are cut to the length of steel attachment clips and secured to each clip. Base layer attached to the clips using 1 in. (25 mm) long Type S bugle-head steel screws spaced 12 in. (305 mm) OC, 1 in. (25 mm) max from ends. Outer layer attached to the clips using 1-5/8 in. (41 mm) long Type S bugle-head steel screws spaced 12 in. (305 mm) OC, 1 in. (25 mm) max from ends. Butted joints are centered over clips and joints in base and outer layers to be offset. Joints and screw heads in outer layer covered with two coats of joint compound.
   F. Spray-Applied Fire Resistive Material* — After installation of the steel attachment clips and the structural steel support are to be sprayed with the min thickness of material specified in the individual D900 Series Design. Each steel attachment clip to be covered with spray applied fire resistive material after the attachment of the gypsum board (Item 1E), to the minimum thickness of material required on the flanges of the steel beam and the spaces between the clips shall also be fully filled from beam and over the entire thickness of the wall. Additional material shall be applied to the web of steel beam on each side of wall. The min total thickness of material applied to each side of steel beam web shall be 13/16 in. (21 mm) for 1 hr fire rating and 1-1/2 in. (38 mm) for 2 hr fire rating. When Item 3A is not used, the flutes of the steel floor units are to be filled with material across the entire top flange of the steel beam.
      GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY, Type MK-10HB
      ISOLATEK INTERNATIONAL — Type 300, Type 400
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, 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 galv steel channels sized to accommodate steel studs (Item 2B). Flange height of ceiling runner shall be min 1/4 in. greater than the extended joint width. Ceiling runner to be installed parallel with structural steel support and located such that a max clearance of 12 in. (305 mm) is present between the finished wall and the flange of the steel beam (Item 1C). Ceiling runner to be secured through gypsum board material to steel attachment clips with min 2 in. (51 mm) long steel fasteners spaced at a max spacing of 16 in. (406 mm) OC (min one fastener into each clip).
   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 3-1/4 in. (83 mm) high slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner to be installed parallel with structural steel support and located such that a max clearance of 12 in. (305 mm) is present between the finished wall and the flange of the steel beam (Item 1C). Slotted ceiling runner to be secured through gypsum board material to steel attachment clips with min 2 in. (51 mm) long steel fasteners spaced at a max spacing of 16 in. (406 mm) OC (min one fastener into each clip).

CEMCO, LLC — CST, CST325
CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT
RAM SALES L L C — RAM Slotted Track
SCAFCO STEEL STUD MANUFACTURING CO
TELLING INDUSTRIES L L C — True-Action Deflection Track
THE STEEL NETWORK INC — VertiTrack VT series, 250VT, 362VT, 400VT, 600VT and 800VT

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. to 1 in. (13 to 25 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs to nest in ceiling runner without attachment.

C. Gypsum Board* — Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual U400, V400 or W400 Series Design in the UL Fire Resistance Directory except that a max 1 in. (25 mm) or 1-1/2 in. (38 mm) gap shall be maintained between the top of the gypsum board and the bottom plane of the gypsum board (Item 1E) secured to Z clips, on both sides of the wall assembly.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. Joint System — Max separation between the bottom of gypsum board below beam (Item 1E) and top of wall (item 2C) is7/8 in. (22 mm), 1 in (25mm), or 1-1/2 in (38 mm). See Item 3-Table 1 for more details. The joint system consists of a fill material installed on the ceiling runner as follows:

A. Fill, Void or Cavity Material* — Top Track Seal — Factory supplied foam seal installed over the ceiling runner (Item 2A) prior to attachment of the runner, 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

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	83%	5/8 (16)
1 (25)	Compression	62%	5/8 (16)
	Extension	50%	1/2 (13)
1-1/2 (38)	Compression	92%	1-3/8 (35)
	Extension	0%	N/A

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 min1/8 in. (3.2 mm) to max 1-1/2 in. (38 mm) joint width.

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