



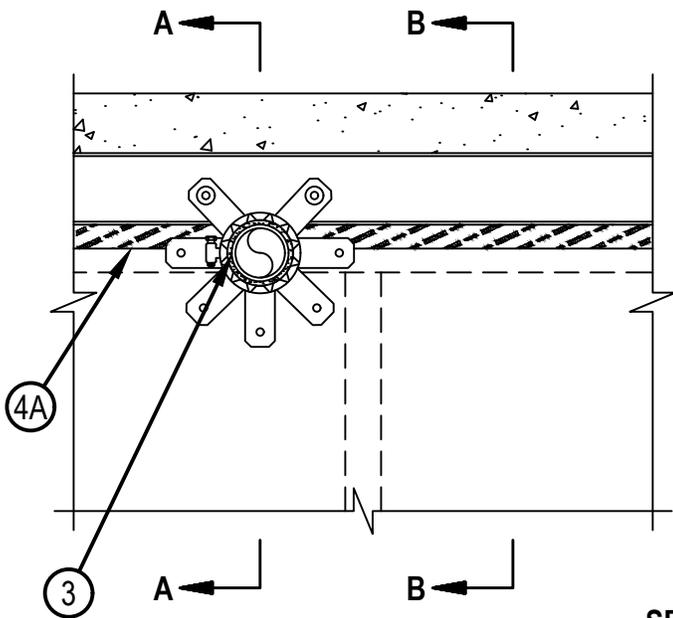
Classified by
Underwriters Laboratories, Inc.
to UL 2079

System No. HW-D-0964

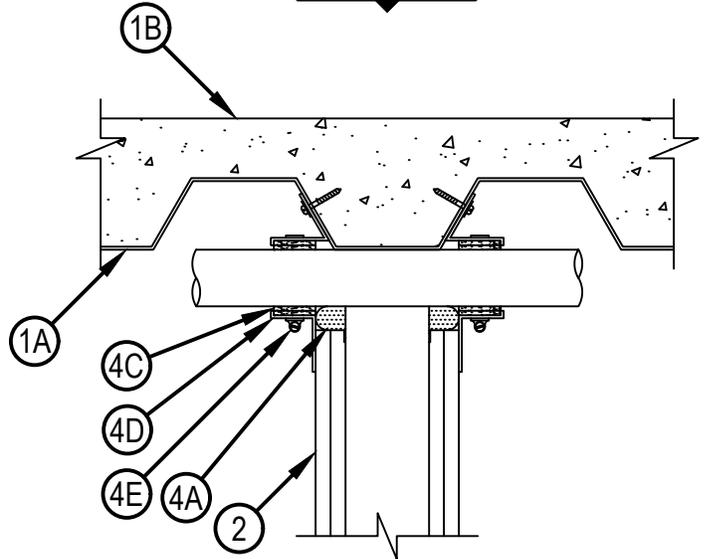
HWD 0964

ANSI/UL2079
Assembly Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width — 1 or 1-1/4 inch (See Item 4)
Class II Movement Capabilities — 25% Compression and or 25% Extension
L Rating at Ambient - 2.63 CFM/Lin Ft
L Rating at 400°F — 2.33 CFM/Lin Ft

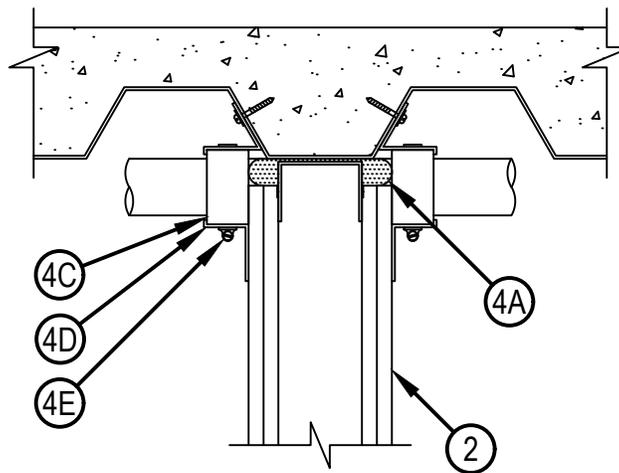
FRONT VIEW



SECTION A-A



SECTION B-B



Hilti Firestop Systems

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June 23, 2023

System No. HW-D-0964

HWD 0964

1. Floor Assembly — The fire-rated fluted steel deck/concrete floor assembly shall be constructed in parallel to the ceiling runner of the materials and in the manner described in the individual D700 or 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* — Max 3 in. (76 mm) deep galv fluted floor units.
 - B. Concrete — Min 2-1/2 in. (64 mm) thick concrete, as measured from the top plane of the floor units. 2-HR Fire rating.
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 1-1/4 in. (32 mm) greater than max extended joint width. Ceiling runner installed parallel to direction of fluted steel deck and secured to valleys with steel masonry anchors or steel fasteners spaced max 24 in. (610 mm) OC. Secure ceiling runner after optional spray-applied fire resistive material is used.
 - 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 ceiling runner shall be min 1-1/4 in. (32 mm) greater than max extended joint width. Slotted Ceiling runner installed parallel to direction of fluted steel deck and secured to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. Secure ceiling runner after optional spray-applied fire resistive material is used.
 - BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK
 - 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 2-1/2 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 2-1/2 in. (64 mm) to 4-1/2 in. (114 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. Through Penetrant — (Optional) One penetrant to be installed perpendicular to wall against the valley of the steel floor and form units (Item 1A). Ceiling runner to be discontinuous and terminate nom ¼ in. (6 mm) from each side of penetrant and each end of ceiling runner secured to valley of steel deck. Gypsum board cut to contour with an annular space of 3/4 in. (19 mm) maintained between the penetrant and the gypsum board cutout. Penetrant to be rigidly supported and secured tight to the floor, on both sides of the joint system. Pipe to extend 12 inches beyond unexposed and exposed side of wall assembly. The following types and sizes of penetrant may be used:
 - A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



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- C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - D. Rigid Nonmetallic Conduit (RNC)+ — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70.)
4. Joint System — When max separation between the bottom of steel floor unit and top of wall is 1 in. (25 mm), the joint system is designed to accommodate a max 25 percent compression or extension from its installed width. When max separation between the bottom of steel floor unit and top of wall is 1-1/4 in. (32 mm), the joint system is designed to accommodate a max 25% compression only from its installed width. The joint system consists of the following:
- A. Fill, Void or Cavity Material* — Top Track Seal —Factory supplied foam seal installed over the ceiling runner (Item 2A) prior to attachment to underside of steel floor unit or steel attachment clips (Item 2B) in accordance with the installation instructions. Top track seal to be compressed min 1/2 in. (13 mm) at butted seams. Seams at penetration opening (Item 3) to be butted against penetrant. Seams at penetration opening (Item 3) to be butted against penetrant.
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* — Top Track Seal —Required when Item 3 is used. Factory supplied foam seal installed within annular space between penetrant (Item 3) and gypsum board at each side of wall. Top track seal installed as a single piece with ends butting tightly to the bottom of metal deck. Flap of top track seal to overlap gypsum board and be held in place with two staples or screws equally spaced.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS MD OS or CFS-TTS MD 600 Firestop Top Track Seal
 - C. Fill, Void or Cavity Material* — Wrap Strip —Required when Item 3 is used. Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Two layers of wrap strip are wrapped around the penetrant continuously with end held in place with tape. Wrap strip installed at both sides of wall, butting tightly against Top Track Seal (Item 4C) and gypsum board.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648E Wrap Strip
 - D. Steel Collar — Required when Item 3 is used. Steel collar fabricated from coils of precut min 0.016 in. (0.4 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be min 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers. In addition, collars contain preformed retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be wrapped over the wrap strip, overlapping min 1 inch (25mm) at seam with two anchor tabs (one to each side of penetrant) bent toward underside of metal deck and secured to floor with min 1-1/4 in. (19 mm) long steel screws with min 3/4 in. (19 mm) steel washers. Remaining anchor tabs bent flush against Top Track Seal flap (Item 4C) and gypsum wall.
 - E. Stainless Steel Hose Clamp – Nominal 1/2 in. wide. Fastened at the mid height of the retaining Collar

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