

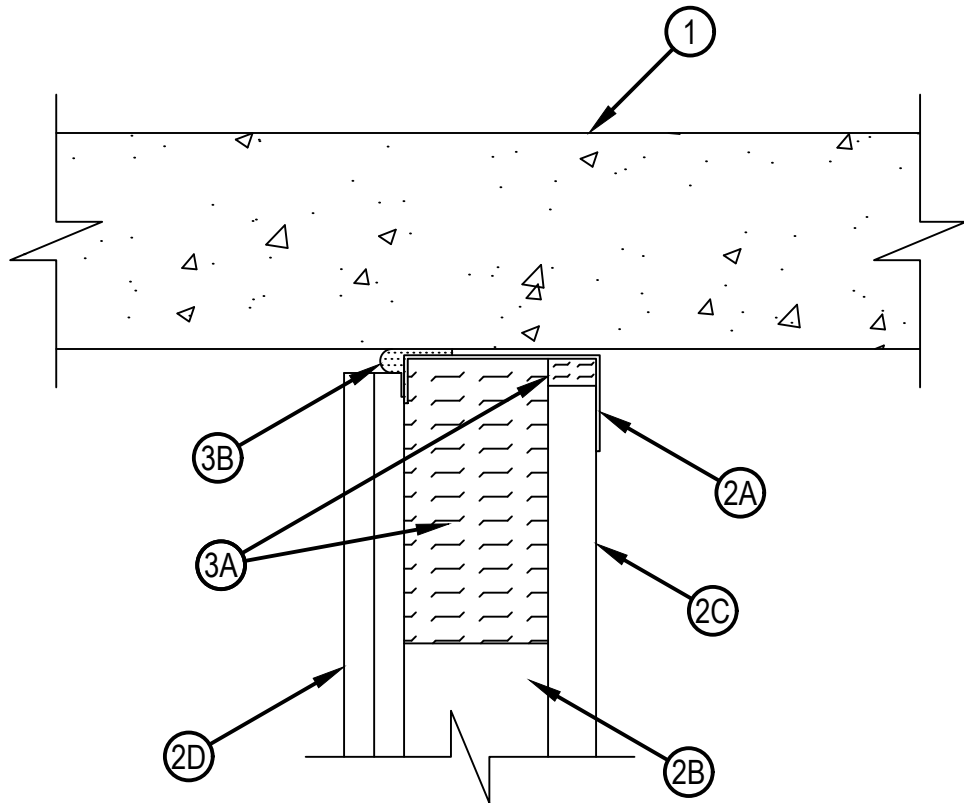


Classified by
Underwriters Laboratories, Inc.
to UL 2079 and CAN/ULC-S115

System No. HW-D-0824

HWD 0824

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 Width — 1/2 In.	FT Rating — 1 and 2 Hr (See Item 2)
Class II Movement Capabilities — 25% Compression or Extension	FH Rating — 1 and 2 Hr (See Item 2)
	FTH Rating — 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 13 mm
	Class II Movement Capabilities — 25% Compression or Extension



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1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units*. See Precast Concrete Units category in the Fire Resistance Directory for names of manufactures.
2. Shaft Wall Assembly — The 1 or 2 hr fire rated shaft 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 — "J"-shaped runner, min 4 in. (102 mm) wide with unequal legs of min 1-1/4 in. (32 mm) and 2-1/4 in. (57 mm), fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. As an alternate to the "J"-shaped floor runner, a min 4 in. (102 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used.
 - B. Steel Studs — "C-H"-shaped steel studs to be min 4 in. (102 mm) wide and formed of min 25 MSG galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 2D), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws.
 - C. Gypsum Board* — 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels. Panels cut 3/4 in. (19 mm) less in length than floor to ceiling height. Vertical edges inserted in "H"-shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runner (Item 2A) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.
 - D. Gypsum Board* — Gypsum board sheets, 5/8 in. (16 mm) thick Type C, applied vertically or horizontally in two layers on finished side of wall as specified in the individual U400, V400 or W400 Series Wall and Partition Design. A max 1/2 in. (13 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor. The screws attaching the gypsum board layers to the C-H studs at finished side of wall shall be located 1 to 1-1/2 in. (25 to 38 mm) below the bottom of the ceiling runner. No gypsum board attachment screws are to penetrate the ceiling track.

The hourly Assembly, F, FT, FT and FTH ratings of the joint system are dependent on the hourly rating of the wall.
3. Joint System — Max separation between bottom of floor and top of finished side of wall is 1/2 in. (13 mm) at time of installation. The joint system is designed to accommodate a max 25 percent compression and extension from its installed width. The joint system consists of the following:
 - A. Forming Material* — Min 4 pcf (64 kg/m³) mineral wool insulation. Min 1-1/4 in. (32 mm) wide pieces of forming material to be cut to a thickness 50% greater than the gap above the shaft liner board, compressed and installed within the ceiling runner above the shaft liner board. In addition, min 6 in. (152 mm) wide pieces of forming material shall be cut to a thickness equal to the width of the ceiling runner, compressed in thickness and installed cut edge first into the top of ceiling runner between leg of track and gypsum liner board.
 - A1. Forming Material* - Strips — As an alternate to the mineral wool packed within joint above shaft liner board as described in Item 3A, the strips are stacked to a height twice larger than gap, compressed 50%, and tightly packed within the space within the ceiling runner above the shaft liner board.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 Speed Strips
 - B. Fill, Void or Cavity Material* — Top Track Seal — Factory supplied foam seal installed over the ceiling runner (Item 2A) on finished side of wall prior to attachment to underside of concrete floor in accordance with the installation instructions.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS-OS or CFS-TTS R OS

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