



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

System No. HW-D-0004

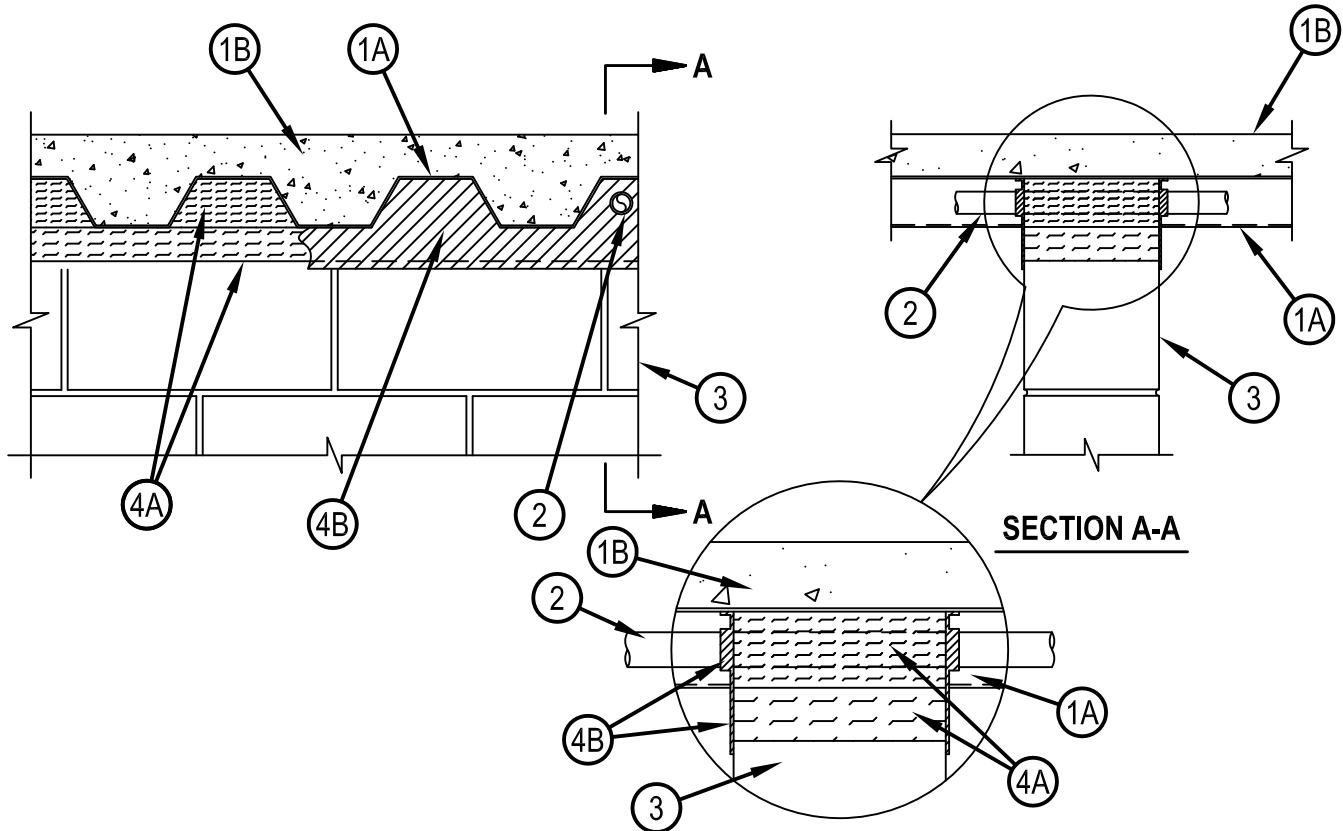
F Rating — 2 Hr
FT Rating — 0 Hr
FH Rating — 2 Hr
FTH Rating — 0 Hr

Nominal Joint Width — 2 In.

**Class II Movement Capabilities — 20% Compression and Extension, or
Class II Movement Capabilities — 20% Compression and 12.5% Extension (See Item 1C)**



HW-D-0004



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 D700 or D900 Series 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 76 mm (3 in.) deep galv steel fluted floor units.
- B. Concrete — Min 64 mm (2-1/2 in.) thick reinforced concrete, as measured from the top plane of the floor units.
- C. Spray—Applied Fire Resistive Materials* — (Optional, Not Shown) - Prior to the installation of the Forming Material and Fill, Void or Cavity Material (Items 4A and 4B), the steel floor units may be sprayed with a fire resistive material to the thickness specified in the individual D700 Series Design.

W R GRACE & CO - CONN — Type MK-6-HY

ISOLATEK INTERNATIONAL — Type 300

When Type 300 spray is used, the movement cycling for the joint is Class II Movement Capabilities with 20% Compression and 12.5% Extension.



Hilti Firestop Systems

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- 1A. Roof Assembly — (Not Shown) - As an alternate to the floor assembly (Item 1), 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 fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
- A. Steel Roof Deck — Max 76 mm (3 in.) deep galv steel fluted roof deck.
 - B. Roof Insulation — Min 57 mm (2-1/4 in.) thick poured insulating concrete, as measured from the top plane of the steel roof deck.
- 1B. Roof Assembly — As an alternate to Items 1 and 1A, a fire rated protected 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 P700 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 Roof Deck — Max 76 mm (3 in.) deep galv steel fluted roof deck.
 - B. Spray—Applied Fire Resistive Materials* — (Not Shown)—Prior to the installation of the Forming Material and Fill, Void or Cavity Material (Items 4A and 4B), the roof assembly shall be sprayed with a fire resistive material to the thickness specified in the individual P700 Series design.
W R GRACE & CO - CONN — Type MK-6-HY
ISOLATEK INTERNATIONAL — Type 300
When Type 300 spray is used, the movement cycling for the joint is Class II Movement Capabilities with 20% Compression and 12.5% Extension.
2. Through Penetrant — (Optional) - Nom 38 mm (1-1/2 in.) diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT) may be installed parallel with and within the flutes of the steel floor or roof deck. A max of two through penetrants is permitted in an individual flute. The conduit or EMT shall be located anywhere within flute of steel deck, except that when the nom diam of through penetrant exceeds 13 mm (1/2 in.), a min clearance of 13 mm (1/2 in.) is required between the penetrant and the steel deck. A min clearance of 13 mm (1/2 in.) is required between the penetrants.
3. Wall Assembly — Min 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight (1600-2400 kg/cu meter or 100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
4. Joint System — Max separation between bottom of floor or roof deck and top of wall (at time of installation of joint system) is 51 mm (2 in.). The joint system is designed to accommodate a max 20 percent or 12.5 percent (see Item 1C) compression or extension from its installed width. The joint system shall consist of forming and fill materials as follows:
- A. Forming Material* — Nom 64 kg/m³ (4 pcf) density mineral wool batt insulation cut approx 25 percent wider than the flutes and with a length approx equal to the overall thickness of the wall. Multiple pieces stacked on top of each other, as needed, and then compressed 50 percent in thickness and inserted into the flutes of the steel deck above the top of the wall. The mineral wool batt insulation is to be flush with wall surfaces. Additional 16 and 32 mm (5/8 in. and 1-1/4 in.) wide strips for 1 and 2 hr rated assemblies, respectively, of nom 64 kg/m³ (4 pcf) mineral wool batt insulation are to be cut to fill the gap between the top of the wall and bottom of the floor. The strips of mineral wool are compressed 50 percent and tightly packed, cut edge first, into the gap between the top of the wall and bottom of the floor on both sides of the wall.
ROCK WOOL MANUFACTURING CO — Delta- Board
THERMAFIBER INC — Type SAF
 - A1. Forming Material*—Plugs — (Optional, Not Shown) Preformed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the wall. The plugs shall be flush with wall surfaces. Additional forming material, described in Item 3A, to be used in conjunction with the plugs to fill the gap between the top of wall and bottom of floor.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP777 Speed Plugs
 - A2. Forming Material* - Strips — (Optional) - Nom 16 and 32 mm (5/8 in. and 1-1/4 in.) wide by 51 mm (2 in.) high precut mineral wool strips for 1 and 2 hr rated assemblies respectively. The strips are compressed 50 percent and firmly packed, cut edge first, into the gap between the top of the wall and bottom of the floor on both sides of the wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 Speed Strips
 - B. Fill, Void or Cavity Material* — Min 1.6 mm (1/6 in.) dry thickness (3.2 mm or 1/8 in. wet thickness) of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 13 mm (1/2 in.) onto wall, steel (or sprayed) deck and through penetrants on both sides of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 672 Firestop Spray or CFS-SP WB Firestop Joint Spray

*Bearing the UL Classification Mark



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