

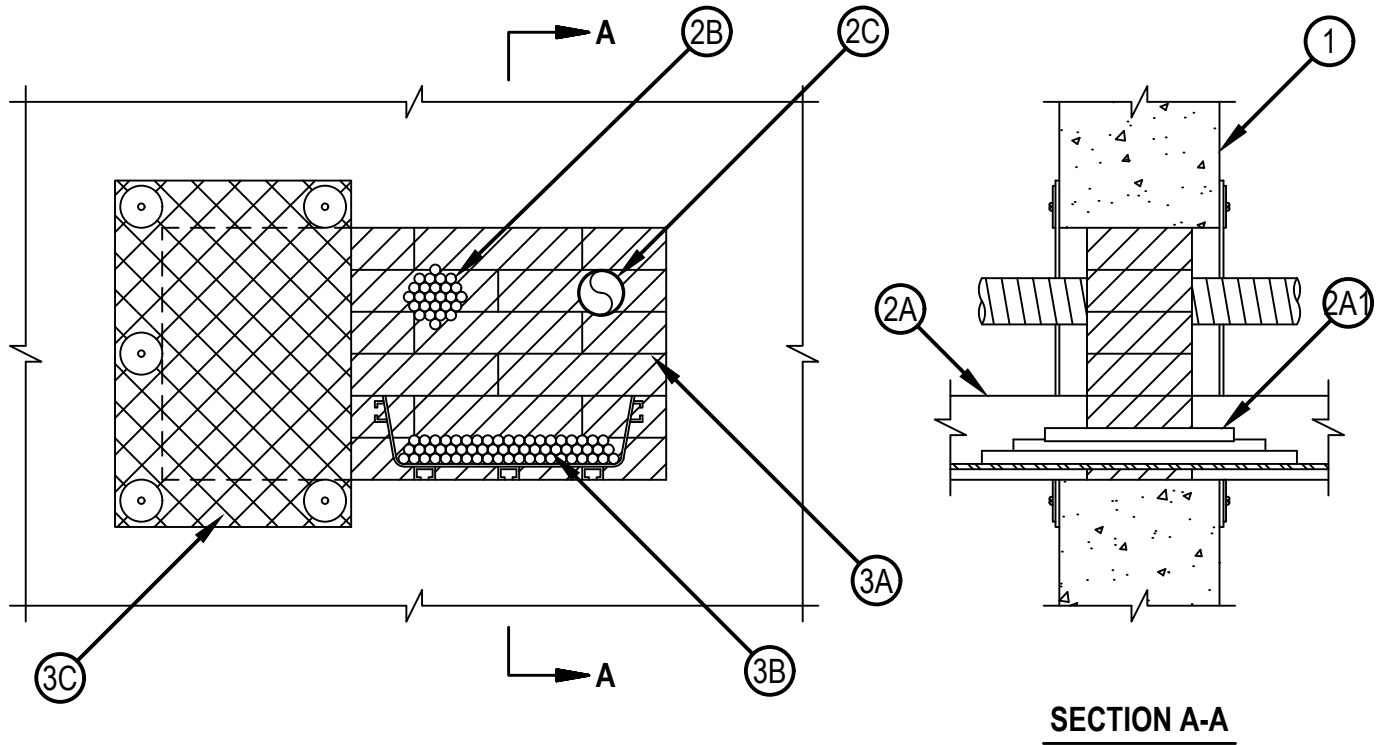


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-J-8016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Ratings - 1/2, 1, 1-1/2 and 2 Hr (See Item 2)	FT Ratings - 1/2, 1, 1-1/2 and 2 Hr (See Item 2)
	FH Rating — 2 Hr
	FTH Ratings - 1/2, 1, 1-1/2 and 2 Hr (See Item 2)

WJ 8016



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January 25, 2016

System No. W-J-8016

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System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Wall Assembly — Min 5 in. (127 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any solid or filled UL Classified Concrete Blocks*. Max area of opening is 288 sq in. (1858 cm²) with max dimension of 24 in. (610 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — Max three of the following penetrants, limited to one of each type in any combination:

A. Optical Fiber/Communications Cable Raceways+ — Max 12 in. (305 mm) wide by 4 in. (102 mm) deep communications cable raceway formed from Acrylonitrile Butadiene Styrene (ABS). The annular space between the cable raceway and the periphery of the opening shall be min 0 in. (point contact) to max 12 in. (305 mm). Raceway to be rigidly supported on both sides of wall assembly. The min space between adjacent penetrants shall be 3-1/2 in. (89 mm). The raceway may or may not incorporate a cover plate, sized to accommodate the raceway, formed from Acrylonitrile Butadiene Styrene (ABS). When cover plated extends through the firestop system, Fire Blocks shall be tightly packed within the raceway to completely fill the annular spaced and all voids filled, prior to the installation of the cover plate.

See Optical Fiber/Communication Cable Raceways (QAZM) category in the Electrical Construction Materials Directory for names of manufacturers.

A2. Fiber Optic Cables — Multiple fiber communication cable jacketed on the outside with polyvinyl chloride (PVC) and having a max outside diam of 1/2 in. (13 mm). Aggregate cross-sectional area of cables in raceway not to exceed 40 percent of the cross-sectional area of the raceway.

B. Cables — Max 3 in. (76 mm) diam tightly bundled cable bundle. The annular space between the cable bundle and the periphery of the opening shall be min 1-3/4 in. (44 mm). The min space between adjacent penetrants shall be 3-1/2 in. (89 mm). Raceway to be rigidly supported on both sides of wall assembly. Cable bundle may be any combination of the following types and sizes of cables:

1. Max 100 pair No. 24 AWG copper telephone cable with polyvinyl chloride (PVC) insulation and jacket materials.

2. Max 7/C No. 12 AWG cable with PVC insulation and jacket materials.

3. Multiple fiber optical communication cables with PVC jacket material and having a max outside diameter of 1/2 in. (13 mm).

C. Optical Fiber/Communication Cable Raceways+ — Nom 2 in. (51 mm) diam (or smaller) optical fiber raceway, formed from polyvinyl chloride (PVC). Raceway to be installed in accordance with the National Electrical Code (NFPA No. 70). The annular space between the raceway and periphery of the opening shall be min 2 in. (51 mm). The min space between adjacent penetrants shall be 3-1/2 in. (89 mm). Raceway to be rigidly supported on both sides of wall assembly.

See Optical Fiber/Communication Cable Raceways (QAZM) category in the Electrical Construction Materials Directory for name of manufacturers.

The T Rating of the firestop system is dependent upon the type of cable or penetrant within the firestop system as shown in the following table:

Penetrant Type	T-Rating Hr
A	2
A2	2
B1	1/2
B2	1
B3	1-1/2
C	2



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3. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Material* — Fire Blocks — Blocks installed with 5 in. (127 mm) dimension projecting through and centered in opening or flush with one surface of the wall. Blocks to be firmly packed and completely fill height and width of opening. When optional cover plate is used with communications raceway, blocks shall be placed within the raceway at the point of the penetration to fully fill the void between cables and cover plate. Either one or a combination of the block types specified below may be used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block

B. Fill, Void or Cavity Material* — Fill material to be forced into interstices of cables, between cables and cable tray and in obvious openings between blocks and between blocks and the periphery of the opening to the max extent possible on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP618 Firestop Putty Stick, CP 660 Firestop Foam or CP 620 Fire Foam

C. Wire Mesh — When the annular space exceeds 4 in. (102 mm) to the periphery of opening, a nom 2 in. (51 mm) by 2 in. (51 mm) wire fencing shall be used to keep the blocks in place. The wire fencing shall be fabricated from min No. 16 SWG (0.060 in.) (1.52 mm) galv steel wire. The wire mesh shall begin 2-1/2 in. (64 mm) from the penetrant and overlap min 3 in. (76 mm) beyond the periphery of the opening. Wire fencing secured to both surfaces of the wall assembly by means of 1/4 in. (6 mm) diam by 1 in. (25 mm) long steel concrete anchors and 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam fender washers spaced max 8 in. (203 mm) OC.

When Fire Blocks are installed with the long dimension projecting through the opening in min 8 in. thick solid or filled concrete block walls, the use of wire mesh is optional.

* 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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