

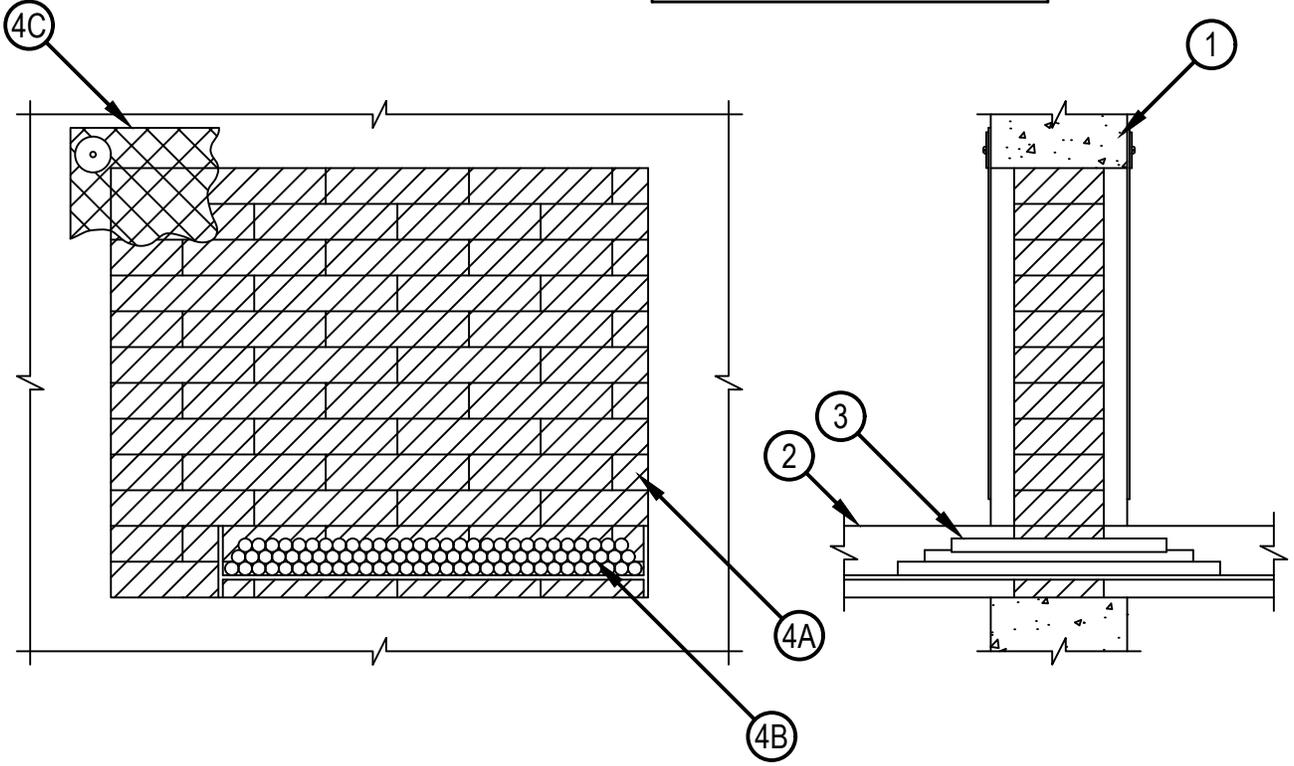


Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-J-4029

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 2 Hr
	FTH Rating — 0 Hr

WJ 4029



SECTION A-A



Hilti Firestop Systems

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System No. W-J-4029

WJ 4029

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 900 sq in. (5806 cm²) with max dimension of 30 in. (762 mm).

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

2. Cable Tray* — Max 24 in (610 mm) wide by 4 in. (102 mm) deep open-ladder or solid-back cable tray with channel-shaped side rails formed of 0.10 in. (2.54 mm) thick aluminum or 0.060 in. (1.52 mm) thick steel and with 1 in. (25 mm) wide by 1 in. (25 mm) deep tubular channel-shaped rungs spaced 9 in. (229 mm) OC or a 0.029 in. (0.74 mm) thick steel solid back, respectively. The annular space between the periphery of the opening shall be min 0 in. (point contact) to max 26 in. (660 mm). Cable tray to be rigidly supported on both sides of wall assembly.
3. Cables — Aggregate cross-sectional area of cables in cable tray to be max 45 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
 - A. 1/C, 750 kcmil (or smaller) power cable with EPR insulation and polyvinyl chloride (PVC) jacket.
 - B. 300 pair - No. 24 AWG telephone cable with PVC insulation and jacket.
 - C. 24 fiber optic cable with PVC outer and subunit jacket.
 - D. 3/C No. 12 AWG PVC insulated steel Metal Clad+ cable with PVC insulation.
4. Firestop System — The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Material* - Fire Blocks — Fire blocks installed with 5 in. (127 mm) dimension projecting through and centered or flush with one surface of the wall in the opening. Blocks to be firmly packed to completely fill the entire height and width of opening. 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 Materials* — 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, CP 618 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 above or below the cable tray, or 6 in. (152 mm) between tray and the side 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 max 2-1/2 in. (64 mm) above, below or to the sides of the cable tray 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.
 - C1. Steel Plate/Steel Strut System — (Not Shown)—As an alternative to wire mesh, when the annular space exceeds 4 in. (102 mm) to the periphery above or below the cable tray, or 6 in. (152 mm) between tray and the side of opening, a min 22 MSG steel plate shall be used to keep the blocks in place. The steel plate is attached to nom 13/16 in. (21 mm) deep, 12 MSG steel struts with 1/4 in. (6 mm) diam strut nuts, spaced 8 in. (203 mm) OC. The plate shall begin max 2-1/2 in. (64 mm) above, below or to the sides of the cable tray and overlap min 3 in. (76 mm) beyond the periphery of the opening. The struts shall be 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 with steel nuts spaced max 12 in. (305 mm) OC.

+Bearing the UL Listing Mark

* 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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