

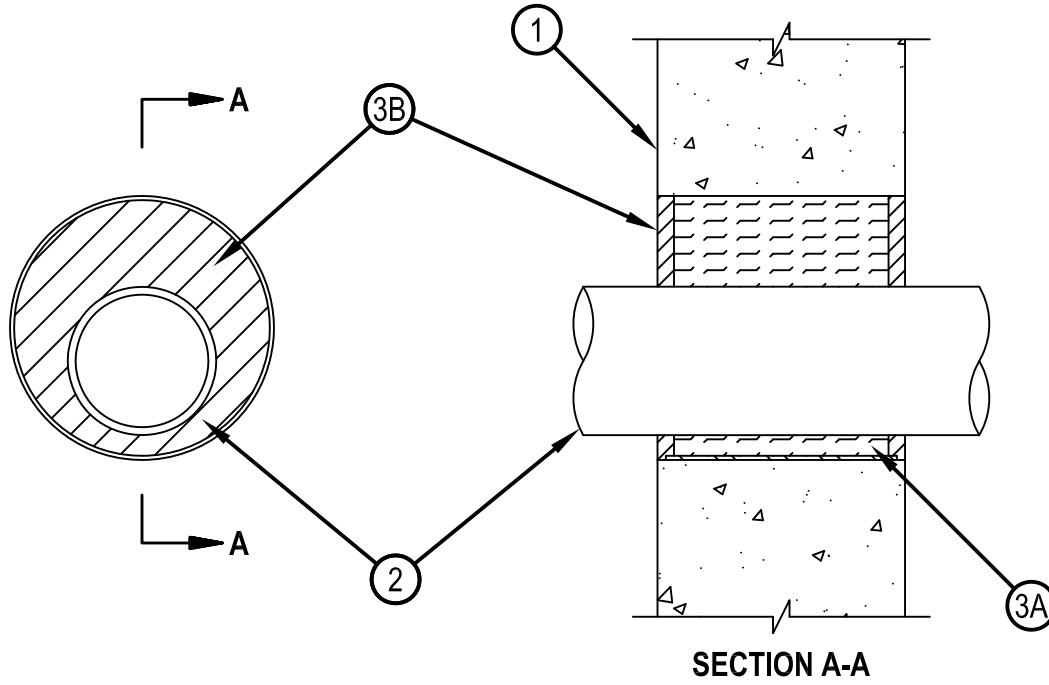


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-J-1020

WJ 1020

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
T Rating — 0 and 1/4 Hr (See Item 3B)	F Rating — 2 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FT Rating — 0 and 1/4 Hr (See Item 3B)
L Rating At 400 F — 4 CFM/sq ft	FH Rating — 2 Hr
	FTH Rating — 0 and 1/4 Hr (See Item 3B)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



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 UL Classified Concrete Blocks*. Max diam of opening is 8 in. (203 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The annular space between pipe, conduit or tubing and periphery of opening shall be min 3/4 in. (19 mm) to max 3-1/2 in. (89 mm). The following types and sizes of metallic pipes, conduits or tubing may be used:
 - A. Conduit — Nom 4 in. (102 mm) diam (or smaller) electrical metallic tubing or steel conduit.
 - B. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - C. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.



Hilti Firestop Systems

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January 22, 2015

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3. Firestop System — The hourly Ratings for the firestop systems are dependent upon the type and size of pipe, annular space, fill material thickness and fill material type as described in the table below. When the annular space in the table shows a range of distances, the penetrating item may be installed either concentrically or eccentrically within the firestop system. The firestop systems shall consist of the following:

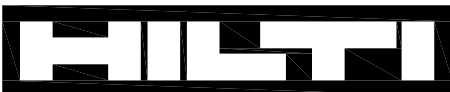
A. Packing Material — Mineral wool batt insulation firmly packed into opening as a permanent form. As an option to the above, backer rod and/or foamed plastic backer material may be used. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material — Sealant* — Applied within the annulus, flush with both surfaces of wall as shown in the table below:

Pipe Type	Min Fill Mtl Thkns In. (mm)	F Rating Hr.	T Rating Hr.
2A	1/4 (6)	2	1/4
2B	1/2 (13)	2	0

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

* 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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