

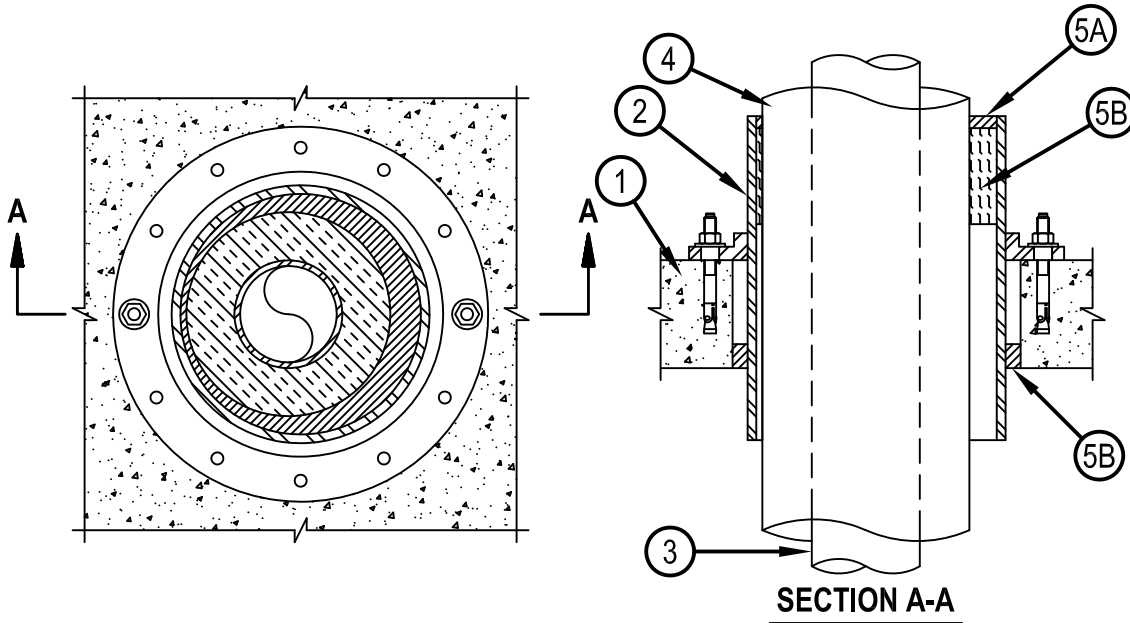


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

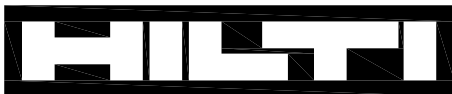
System No. C-AJ-5230

CAJ 5230

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



1. Floor or Wall Assembly — Min 4-1/2 in. (114 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 12 in. (305 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance directory for names of manufacturers.
2. Steel Sleeve — Nom 10 in. (254 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe with welded flange. Sleeve installed concentrically or eccentrically within opening to extend max 6 in. (152 mm) beyond each surface of floor or wall. Sleeve bolted to the top side of the floor or one side of wall assembly to completely cover opening. The annular space between sleeve and periphery of opening shall be min 1/4 in. (6 mm) to max 1 in. (25 mm).
3. Through Penetrants — One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
 - D. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.



Hilti Firestop Systems

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4. Pipe Covering — Max 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied, self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edge of the periphery of the opening shall be min 1/2 in. (13 mm) to a max 1-7/8 in. (48 mm).

See Pipe Equipment Covering - Materials - (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

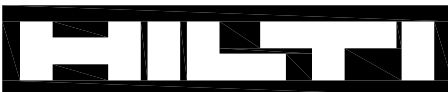
5. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top end of sleeve for floors or from both ends of sleeve for walls as required to accommodate the required thickness of fill material.

B. Fill Void or Cavity Materials* - Sealant — Min 1 in. (25 mm) thickness of fill material applied within the annulus between sleeve and periphery of opening, flush with the bottom side of floor or with one side of wall. Min 1/2 in. (3 mm) thickness of fill material applied within the annulus, flush with the top end of the sleeve for floors, or with both ends of the sleeve for walls.

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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