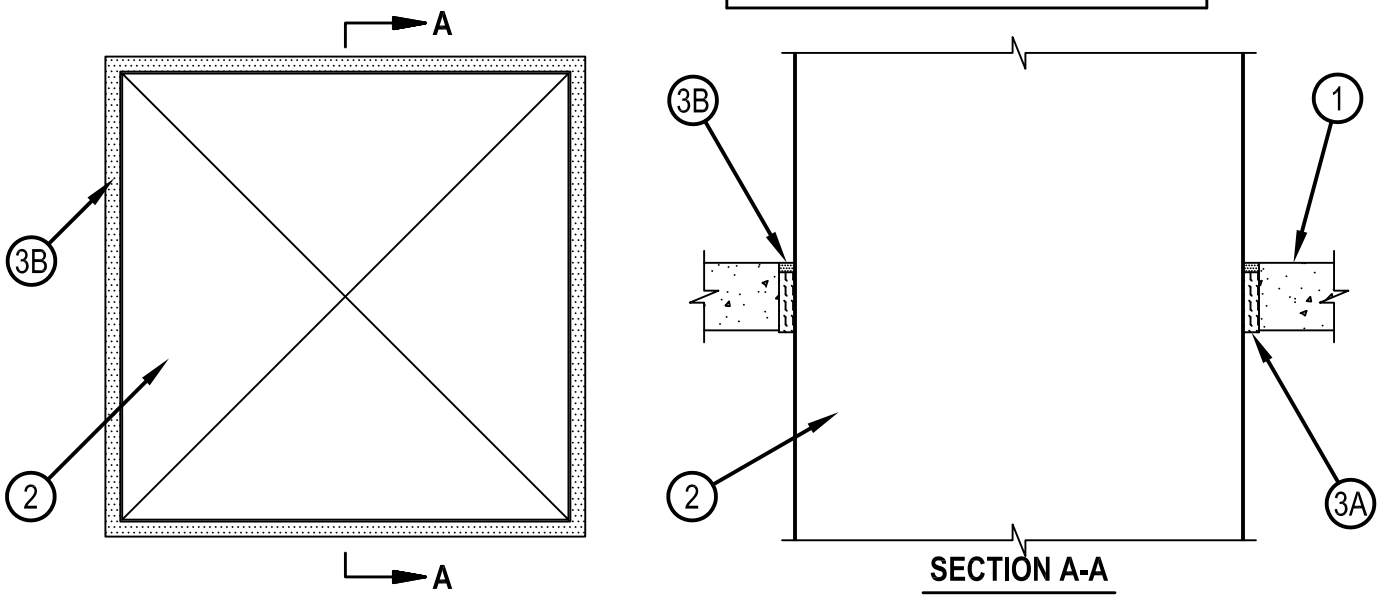
System No. C-AJ-7192

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

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 and 3 Hr (See Item 2)	F Rating — 2 and 3 Hr (See Item 2)
T Rating — 0 and 1 Hr (See Item 2)	Ft Rating — 0 and 1 Hr (See Item 2)
	FH Rating — 2 and 3 Hr (See Item 2)
	FTH Rating — 0 and 1 Hr (See Item 2)



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete floor or min 5-1/4 in. (133 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any min 6 in. (152 mm) thick UL Classified solid Concrete Blocks*. Max area of opening is 1024 in.2 (6606 cm2) with a max dimension of 32 in. (813).
   See Concrete Blocks (CAZT) in the Fire Resistance Directory for names of manufacturers.
2. Steel Duct — Max 30 in. by 30 in. (762 mm by 762 mm), min 22 gauge galv steel duct to be installed either concentrically or eccentrically within the firestop system. For 2 hr F and FH Ratings, the minimum gauge of galv steel duct is 24 ga. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. The space between the steel duct and periphery of opening shall be min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm). Steel duct to be rigidly supported on both sides of the floor or wall assembly. The hourly T, FT and FTH Ratings of the firestop system are 1 hr except that when 24 ga duct is used (2 hr F Rating), the hourly T, FT and FTH Ratings are 0 hr.

2A. Through-Penetrants — Coated Ducts* — As an alternate to Item 2, rectangular steel air duct supplied coated with BW11 coating material. Max 30 by 30 in. (762 by 762 mm) duct size. One duct to be installed within the firestop system with an annular space of min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm). Reinforcement stiffener or transverse joint with bolted flanges shall be located approximately at the mid depth of the annular space. Duct to be rigidly supported on both sides of the floor or wall assembly. Duct sections shall be assembled using bolted flanges or SMACNA approved Transverse Joint Reinforcements.

The hourly T, FT and FTH Ratings of the firestop system are 1 hr when this penetrant is used.

FIRESPRAY INTERNATIONAL LTD — FLAMEBAR BW11 FIRE RATED DUCTWORK

3. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form to completely fill the annular space between duct and periphery of opening to the full thickness of the floor but recessed from top surface of floor or both surfaces of wall to accommodate the required thickness of fill material (Item 3B).
   B. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with top surface of floor or both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606, CFS-S SIL SL or CFS-S SIL GG Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.