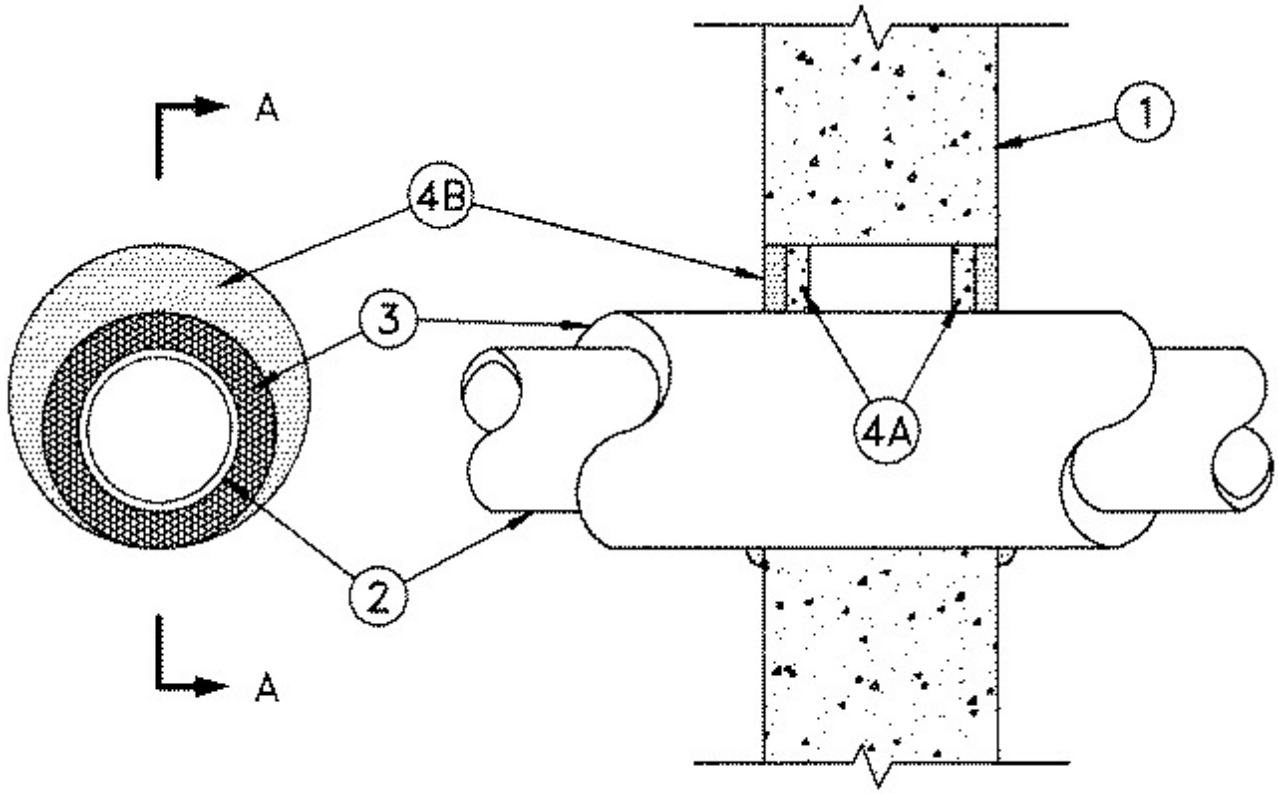
System No. W-J-5081

July 16, 2014

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



SECTION 'A–A'

1. **Wall Assembly —** Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 15-1/4 in. (387 mm). The inside diam of the opening shall be min 1 in. (25 mm) larger than the outside diam of the pipe covering (see Item 3).

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

2. **Through Penetrant —** 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 wall assembly. The following types and sizes of metallic pipes or tubing may be used:

A. **Steel Pipe —** Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe —** Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing —** Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Pipe —** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

The max diam of the through penetrant is dependent upon the type of fill material used, as shown in Item 4B.

3. **Tube Insulation —** Plastics# - Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The annular space between the insulated through penetrant and the periphery of the opening shall be a min of 0 in. (0 mm, point contact) to a max 1 in. (25 mm).

See **Plastics+** (QMFZ2) category in the Plastics Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

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

A. **Packing Material —** Forms used to prevent leakage of fill material during installation. Forms to be rigid sheet or polyurethane backer rod, cut to fit the contour of the penetrating item and friction fitted into opening on both sides of wall. Forms to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Materials* - Sealant —** Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact location between insulated through penetrant and periphery of opening, a min 3/8 in. (10 mm) diam bead of fill material shall be applied on both surfaces of wall. The max diam of through penetrant is dependent upon the type of fill material used as shown in the table below:

Type of Fill Material	Max Diam of Through Penetrant, In. (mm)
FlameSafe 900+, Metacaulk MC 150+, Biostop BF 150+	12 (152)
FlameSafe 1900, Metacaulk 1000, Metacaulk 350i, Biostop 350i or Biostop 500+	4 (102)

RECTORSEAL — FlameSafe® FS900+, FS 1900, Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+

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

#Bearing the UL Recognized Component Mark