



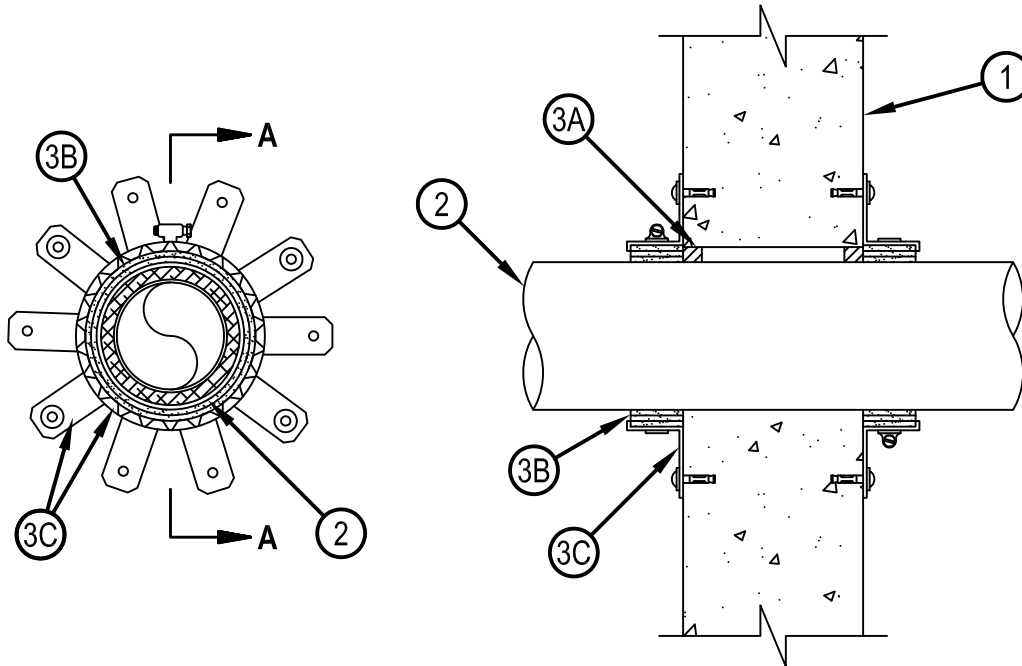
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Underwriters Laboratories, Inc.  
to CAN/ULC-S115

## System No. W-J-2029

F Rating — 2 Hr  
FT Rating — 2 Hr  
FH Rating — 2 Hr  
FTH Rating — 2 Hr



WJ 2029



**SECTION A-A**

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Wall Assembly — Min 152 mm (6 in. thick) reinforced lightweight or normal weight (1600-2400 kg/m<sup>3</sup> or 100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 140 mm (5-1/2 in.).  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space between pipe and periphery of opening to be min 0 in. (point contact) and max 13 mm (1/2 in.). Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:
  - A. Polypropylene (PP) Pipe — Nom 100 mm (4 in.) diam (or smaller) SDR11 PP pipe for use in closed (process or supply) piping systems.
  - B. Polypropylene (PP) Pipe — Nom 125 mm OD (or smaller) Fusiotherm® SDR11 PP pipe or Faser® SDR7.4 PP pipe for use in closed (process or supply) piping systems.



**Hilti Firestop Systems**

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

A. Fill, Void or Cavity Materials\* — Sealant — Min 16 mm (5/8 in.) thickness of fill material applied within the annulus, flush with both surfaces of wall.

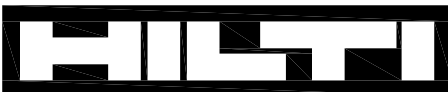
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

B. Fill, Void or Cavity Material\* — Wrap Strip — Nom 5 mm (3/16 in.) thick by 44 mm (1-3/4 in.) wide intumescent wrap strip. Three layers of wrap strip are continuously wrapped around the through-penetrant with ends butted and held in place with tape. Wrap strip butted tightly against both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W45/1-3/4" Firestop Wrap Strip

C. Steel Collar — Steel collar fabricated from coils of precut min 0.4 mm (0.016 in.) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 44 mm (1 3/4 in.) deep with 25 mm (1 in.) wide by 51 mm (2 in.) long anchor tabs on 44 mm (1-3/4 in.) centers for attachment to both surfaces of wall. The opposite side incorporates retainer tabs, 13 mm (1/2 in.) wide by 5 mm (3/16 in.) long, which are bent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min 25 mm (1 in.) at seam. A nom 13 mm (1/2 in.) wide stainless steel hose clamp shall be secured to the collar at its mid-height. Collar secured to both surfaces of wall with a min of four 6 mm (1/4 in.) diam steel expansion bolts along with min 19 mm (3/4 in.) diam steel washers symmetrically spaced.

\* 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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Page: 2 of 2