



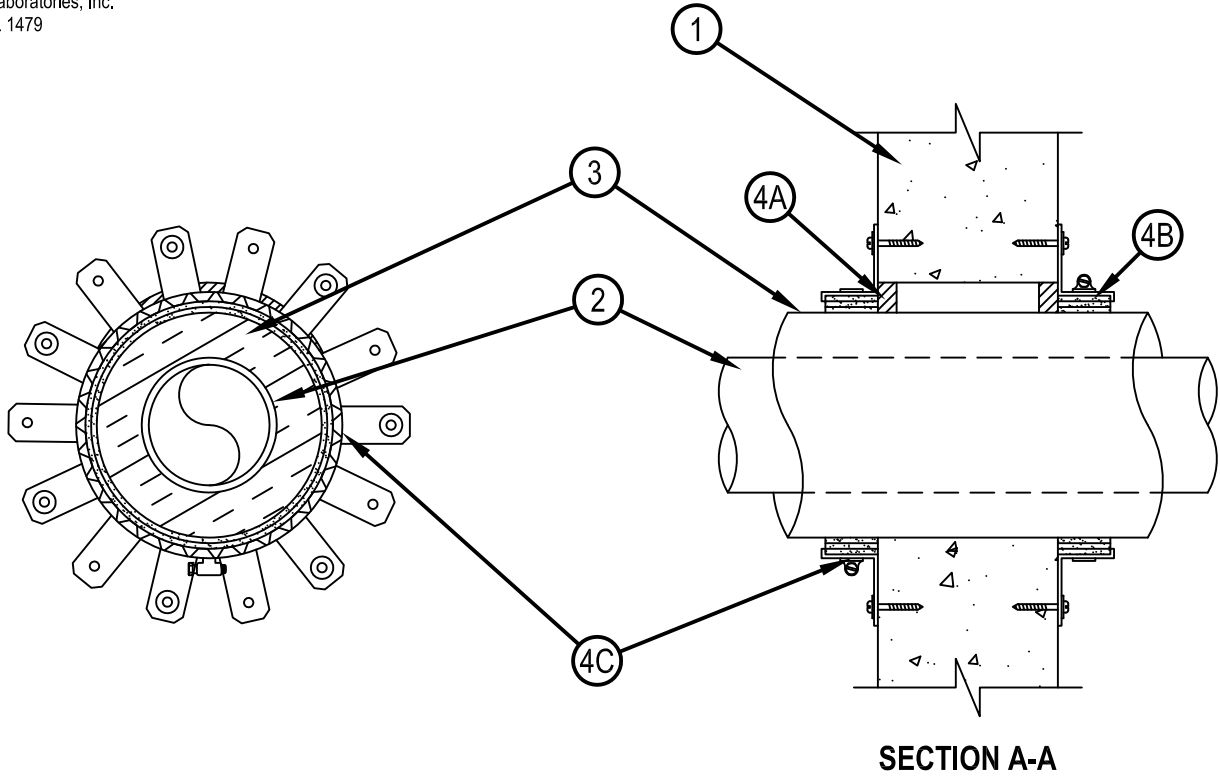
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. W-J-5145

F Rating - 2 Hr

T Ratings - 0, 1-1/2 or 2 Hr (See Item 3)

WJ 5145



1. Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf 160-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8-1/2 in. (178 mm)
See Concrete Blocks (CAZT) in Volume 1 of the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One nonmetallic pipe or conduit to be centered within the firestop system. Pipe to be rigidly supported on both sides of wall. The following types and sizes of pipes may be used:
 - A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.
3. Pipe Covering* — Nom 1-1/2 in. (38 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. A nom annular space of min 0 in. (point contact) to max 1 in. (25 mm) is required within the firestop system.
See Pipe and 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.
- 3A. Tube Insulation — Plastics+ — (Optional, replaces Item 3) Max 1 in. (25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. A nom annular space of min 0 in. (point contact) to max 1 in. (25 mm) is required within the firestop system.
See Plastics+ (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

The T rating is 1-1/2 hr if Item 3 is used. The T Rating is 2 hr if Item 3A is used. The T Rating Is 0 hr if Item 3A is less than 1 in. thick.



Hilti Firestop Systems

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January 23, 2015

System No. W-J-5145

WJ 5145

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

A. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) 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 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Layers individually wrapped around the through-penetrant with the ends butted and held in place with tape. Butted ends in successive layers shall be offset. Each wrap strip layer is to be installed flush with both surfaces of wall. Wrap strips are installed on each surface of the wall.

Product Designation	Max Pipe (Size (in.))	Number of Layers
CP648-E W25/1-3/4"	2	1
CP648-E W25/1-3/4"	4	3

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP-648E Wrap Strip

C. Steel Collar — Steel collar fabricated from coils of precut min 0.016 in. (0.41 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to both surfaces of wall. In addition, collars contain retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be tightly wrapped over the wrap strip, overlapping min 1 in. (25 mm) at seam and compressed with a min 0.028 in. (0.5 mm) thick stainless steel band at collar mid-height. The retainer tabs are folded 90 deg towards the pipe to maintain the annular space around the pipe and to retain the wrap strip. Each tab of collar secured to surface of wall by means of nom 1-1/4 in. (32 mm) long masonry anchors in conjunction with 1-1/4 in. (32 mm) diam steel fender washers.

* 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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