



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

System No. W-L-2744

F Ratings — 1 and 2 Hr (See Item 1)

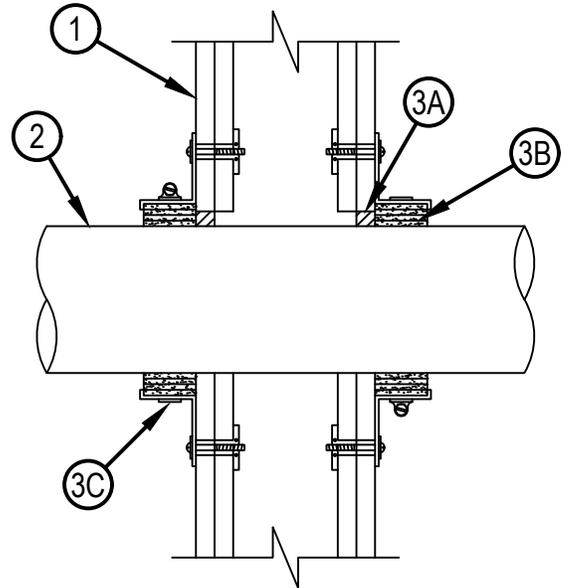
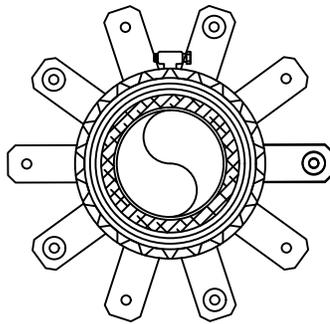
FT Rating — 0, 3/4, 1, 1-1/2 and 2 Hr (See Item 2 Table)

FH Ratings — 0, 1 and 2 Hr (See Item 2 Table)

FTH Ratings — 0, 1 and 2Hr (See Item 2 Table)



W-L-2744



System tested with a minimum pressure differential of 50 Pa between the exposed and unexposed surfaces with the higher pressure on the exposed side.

1. Wall Assembly — The 1 and 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 51 by 102 mm (2 by 4 in.) lumber spaced 406 mm (16 in.) OC. Steel studs to be min 89 mm (3-1/2 in.) wide and spaced max 610 mm (24 in.) OC.

B. Gypsum Board* — The gypsum board type, thickness number of layers, fastener type and sheet orientation shall be specified in the individual Wall and Partition Design. Max diam of opening is 152 mm (6 in.) except that max diam of opening for Item 2F penetrant is 127 mm (5 in.). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

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 29 mm (1-1/8 in.) except that when PVC-HR (Item 2F) penetrant is used, max annular is 16 mm (5/8 in.). Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. Polypropylene (PP-R) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) Aquatherm Greenpipe SDR 7.4 or 11 for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Polypropylene (PP-R) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) Aquatherm Bluepipe SDR 9, 11 or 17.6 for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. Polypropylene (PP-RCT) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) Aquatechnik NA Fusion-Tech SDR 7.4 or 11 pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

D. Polypropylene (PP-RCT) Pipe — Nom 4 in. (110 mm OD) diam (or smaller) Nupi Americas Niron SDR 7.3, 9 or 11 pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. Polypropylene (PP-RCT) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) Uponor SDR 9 or 11 pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

F. HR Polyvinyl Chloride (PVC-HR) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) NAPSYS-HR PVC Sch 40 pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



Hilti Firestop Systems

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Penetrant	F Rating Hr	FT Rating Hr	FH Rating Hr	FTH Rating Hr
2A, 2B, 2C, 2D	1	0	0	0
	2	3/4	0	0
2E	1	1	1	1
	2	2	2	2
2F	1	3/4	0	0
	2	1-1/2	0	0

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 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. Four 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 securement to both surfaces of wall. The opposite side incorporates retainer tabs, 13 mm (1/2 in.) wide by 5 mm (3/16 in.) long, prebent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min. 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. As an alternative to using a hose clamp, the collar shall overlap a min. 2 in at the seam and be secured with two No. 8 sheet metal screws at overlap location. Collar secured to both surfaces of wall by means of min four 6 mm (1/4 in.) toggler 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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