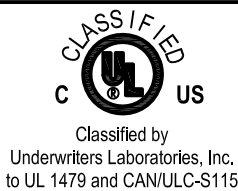
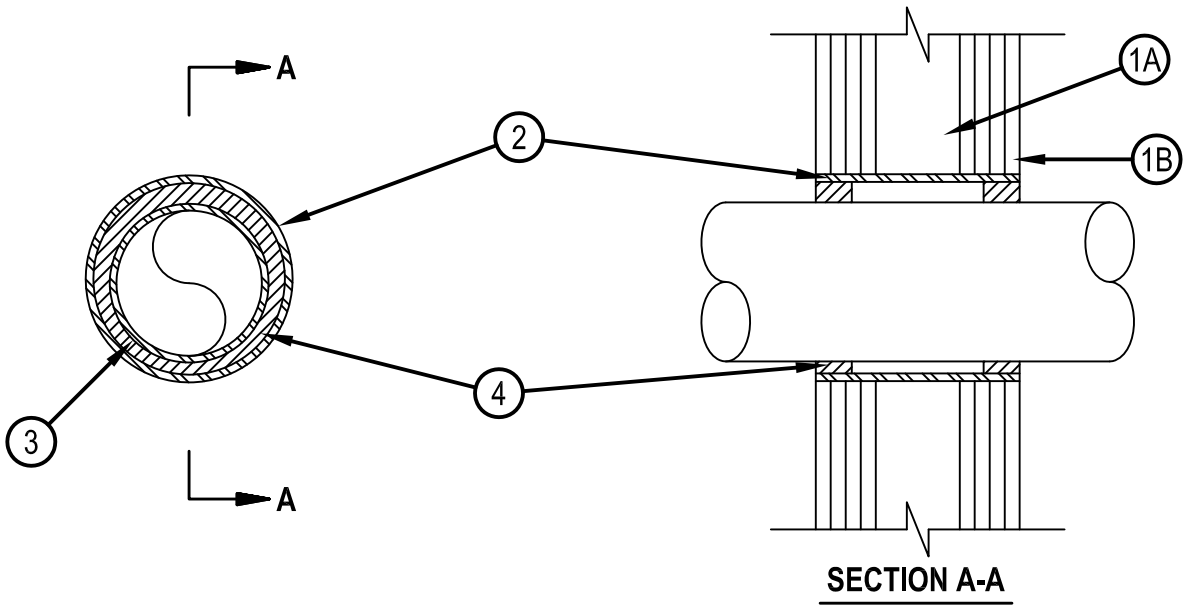


System No. W-L-1165



ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 4 Hr	F Rating — 4 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 4 Hr
	FTH Rating — 0 Hr



- Wall Assembly** — The 4 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** — Wall framing shall consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
 - Gypsum Board*** — The gypsum walboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 8 in. (203 mm).
- Steel Sleeve** — Nom 8 in. (203 mm) (or smaller) diam Schedule 40 (or heavier) steel pipe sleeve friction fit in nom 8 in. diam circular opening cut through gypsum wallboard layers. Length of steel sleeve to be equal to thickness of wall.
- Through-Penetrant** — One metallic pipe or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe or tubing and the steel sleeve shall be min of 1/2 in. (13 mm) to max 1-1/4 in. (32 mm) 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:
 - Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Steel Conduit** — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
 - Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe** — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
- Fill, Void or Cavity Material*-Sealant** — Min 1-1/2 in. (38 mm) thickness of fill material applied within annulus, flush with both surfaces of the wall
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 22, 2015