

# THROUGH-PENETRATION FIRESTOP SYSTEM

[Assembly Usage Disclaimer](#)

## Search Parameters

Manufacturer

Holdrite

## XHEZ - Through-penetration Firestop Systems

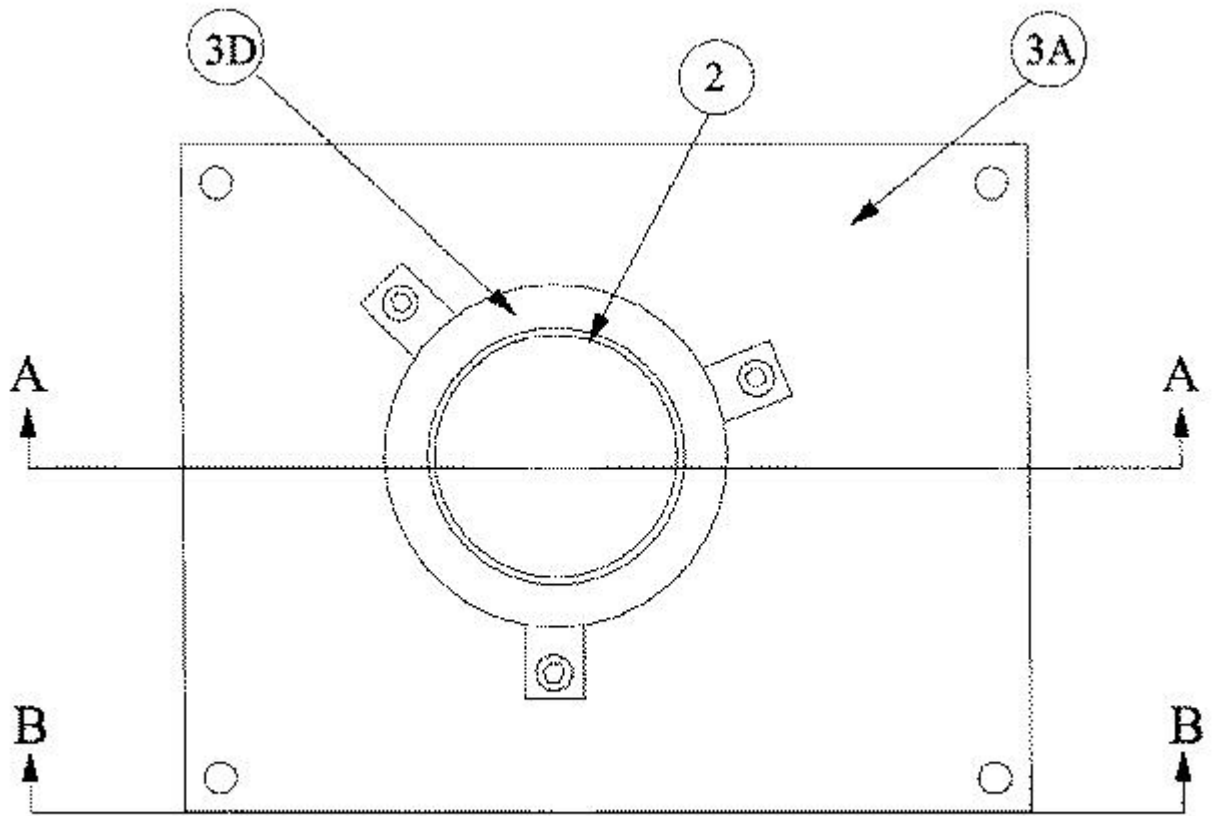
[See General Information for Through-penetration Firestop Systems](#)

### System No. F-A-2297

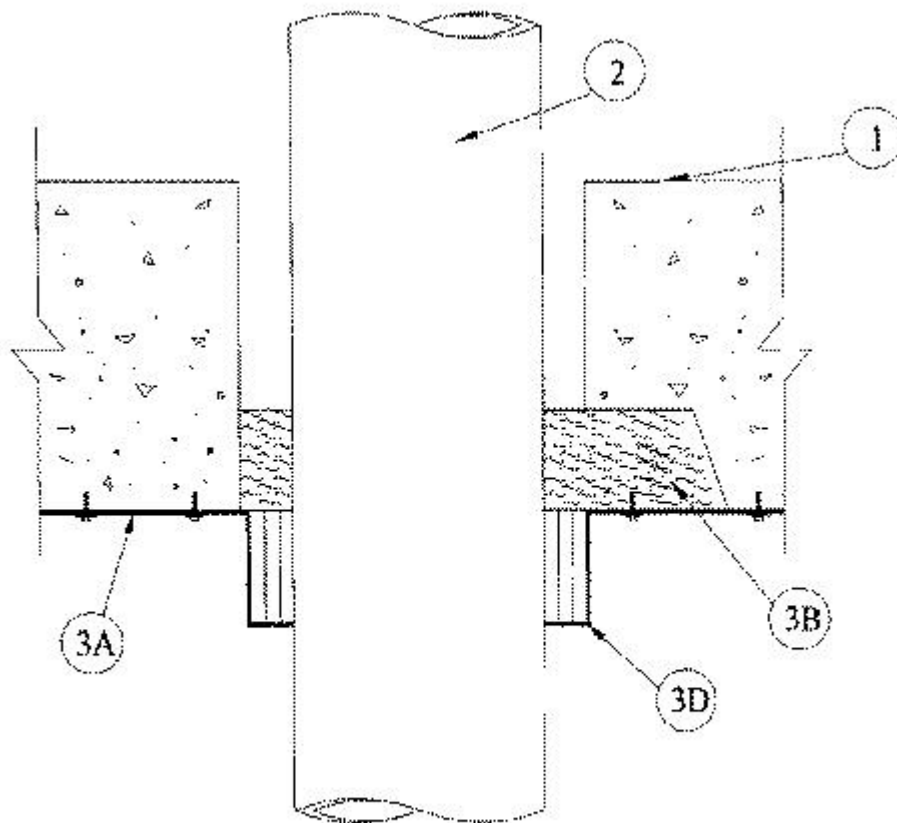
January 08, 2019

**F Rating — 2 Hr**

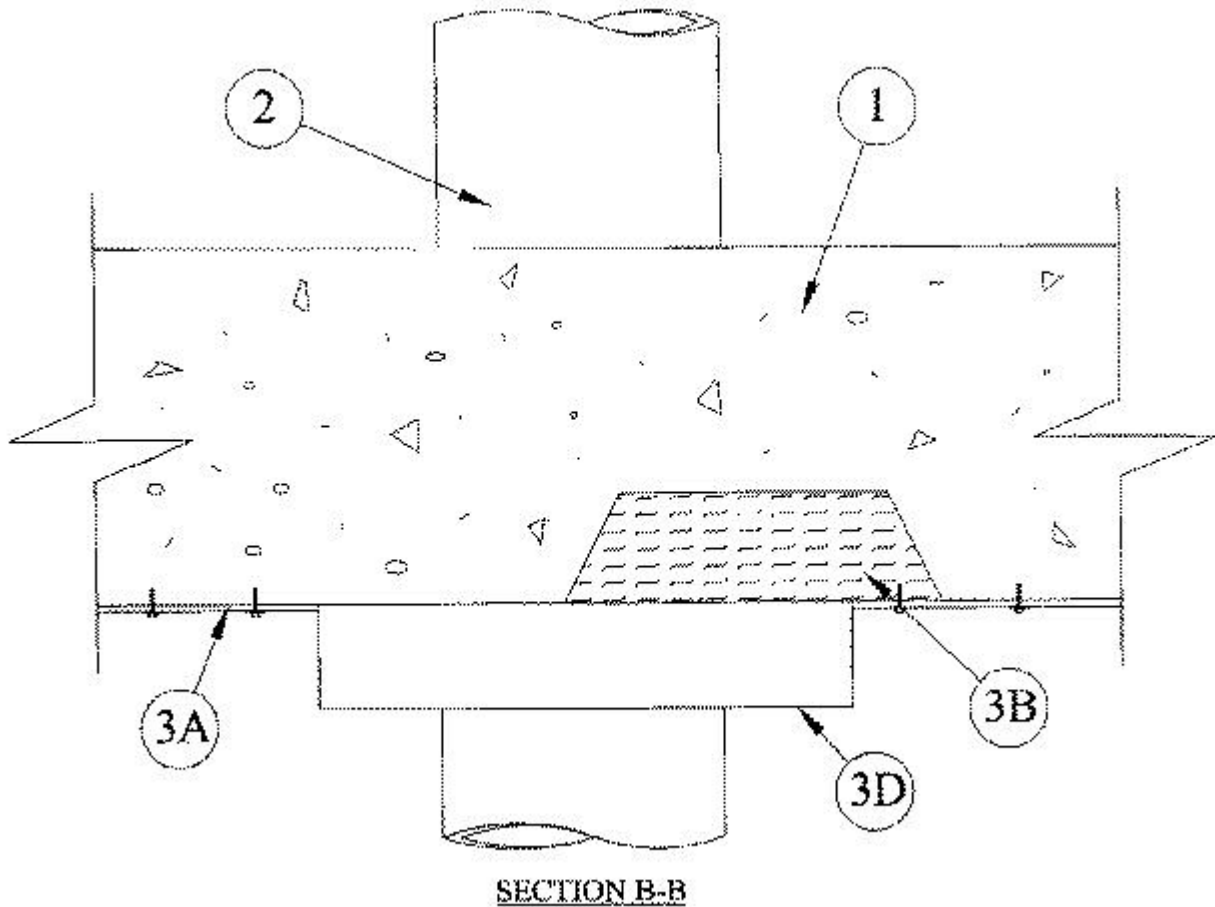
**T Ratings — 1 and 1-1/2 Hr (See Item 3)**



BOTTOM VIEW



SECTION A-A



**1. Floor Assembly** — The fire-rated unprotected concrete and steel floor assembly shall be constructed of the material and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

**A. Concrete** — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete.

**B. Welded Wire Fabric** — 6 x 6 (152 x 152 mm) - W1.4 x W1.4.

**C. Steel Floor and Form Units\*** — Composite or noncomposite 3 in. (76 mm) deep fluted galv units as specified in the individual Floor-Ceiling design. Diam of opening through floor shall be 1/2 to 5/8 in. (13 to 16 mm) larger than the outside diam of the through penetrant (Item 2). Max diam of opening core-drilled through floor assembly is 5 in. (127 mm).

**2. Through Penetrant** — One nonmetallic pipe to be centered within the firestop system. The annular space between pipe and periphery of opening shall be min 1/4 in. (6 mm) to max 5/16 in. (8 mm) Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic 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. Acrylonitrile Butadiene Styrene (ABS) Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**C. Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 4 in. (102 mm) diam (or smaller) SDR 17 or schedule 40 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**3. Firestop System** — The details of the firestop systems shall be as follows:

**A. Metal Plate Enclosure** — Min 12 by 12 by 0.024 in. (305 by 305 by 0.5 mm) thick galv steel plate. Width of plate to extend a min of 3 in. (76 mm) beyond both sides of opening. Length of plate (transverse to steel floor unit direction) to extend to steel floor unit valley beyond each side of core-drilled hole with a min lap of 2-1/4 in. (57 mm) on the floor unit valley at each end. Circular cutout in plate to be 1/4 in. (6 mm) larger than the outside diameter of the through penetrant. Max diam of opening to be 4-3/4 in. (120 mm) Plate to be cut in half along the length of plate to permit installation around the nonmetallic pipe and secured to valley of floor units using min 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long steel expansion bolts or steel Tapcon® concrete anchors. Fasteners to be located approximately 1/2 in. (13 mm) from edges of plate at each corner, at each plate/valley intersection and at max 11 in. (279 mm) OC along width. When plate seam is located beneath the crest of the steel deck, a 2 in. (51 mm) wide by 0.024 in. (0.61 mm) thick galv steel plate to be centered over seam and attached to plate with min No. 10 sheet metal screws, max 3 in. (76 mm) O.C. on both sides of seam.

**B. Packing Material** — Mineral wool batt insulation having min density of 4 pcf (64 kg/m<sup>3</sup>) firmly packed into flutes of steel floor units above metal plate enclosure to completely fill cavities. When mineral wool packing material is used, T Rating is 1 hr.

**C. Fill, Void or Cavity Material - Caulk** — (Optional - Not Shown) A 1/16 in. (1.6 mm) thick layer of sealant (wet) may be applied to the exposed surfaces of mineral wool (Item 3B).

**RELIANCE WORLDWIDE CORPORATION DBA HOLDRITE HYDROFLAME** — HydroFlame 200

**D. Firestop Device\*** — Galv steel collar lined with an intumescent material sized to fit specific diam. of the through penetrant. Device to be installed around through penetrant in accordance with accompanying installation instructions. Device incorporates anchor tabs for securement to underside of the metal plate enclosure. Device secured at each tab. Where anchor tabs are beneath the valley or the steel deck or the mortar, the anchor

tabs are to be secured with min 1/4 in. (6mm) diam by 1-1/4 in. (32 mm) long steel expansion bolts or steel Tapcon® concrete anchors in conjunction with min 5/16 (8 mm) by 5/8 in. (16 mm) diam washers. Where anchor tabs are beneath the packing material, the anchor tabs are to be secured with min 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long self-drilling, self-tapping steel sheet metal screws in conjunction with min 5/16 (8 mm) by 5/8 in.(16 mm) diam washers.

**RELIANCE WORLDWIDE CORPORATION DBA HOLDRITE  
HYDROFLAME — HydroFlame Pipe Collar**

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

Last Updated on 2019-01-08

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- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

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