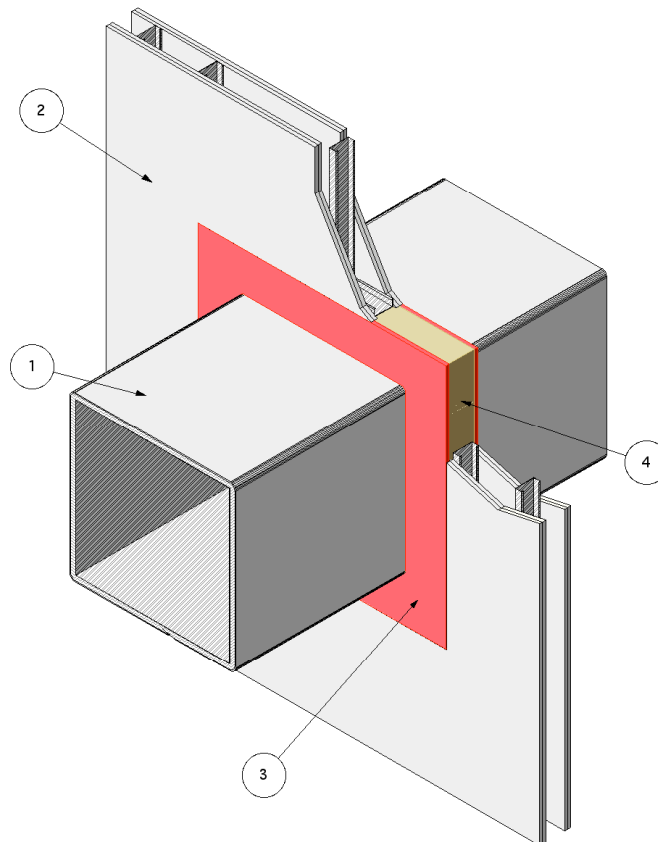

Design No. FS 589 W

FIRE PENETRATION SEAL

Penetrating Item Steel Duct

T-Rating - 2 hr

F-Rating - 2 hr



1. **PENETRATING ITEM:** A liquidtight duct system constructed of min. 16 GA (0.028 in.) sheet steel with max. 2500-in. area and max. 50-in. width (max. dim. 50-in. x max. 50-in.) and insulated with 1 layer of Unifrax Corporation FyreWrap EZ® 1.5 Duct Insulation as detailed in Designs GD 561 F, or CFD 505 F.
2. **GYPSUM WALL ASSEMBLY:** A two-hour rated wall assembly constructed of the following: 25 GA galvanized steel studs spaced 24 in. o.c. measuring 3-5/8 in. wide with 1-1/4-in. legs. Studs attached with min.

#6 x 3/8-in. steel stud framing screws to channel shaped floor and ceiling runners measuring 1/2-in. deep by 3-5/8-in wide, which are secured to floor and ceiling with 1-in. long fasteners, suitable for the mounting substrate, spaced max. 18-in. o.c. Studs and runners covered with two layers of 5/8 in. thick, Type X gypsum wallboard on each face. The base layer of gypsum wallboard fastened to steel studs with #6 1-1/8 in. bugle head phillips drywall screws spaced 12 in. o.c. The face layer of gypsum wallboard fastened with #6, 1-5/8 in. long bugle phillips drywall screws spaced 8 in. o.c. Joint Tape and

Through-Penetration Fire Stop Systems

Compound - vinyl or casein, dry or premixed joint compound applied to face layers of gypsum wallboard in two coats to all exposed screw heads and gypsum wallboard joints. A min. 2 in. wide paper, plastic or fiberglass tape embedded in first layer of compound over joints in gypsum wallboard. A min. wall depth of 6-1/8 in. created from face layer of gypsum wallboard to face layer of gypsum wallboard. Create an opening in the wall assembly having a max. 3163 in² cross-sectional area and a max. dimension of 57-1/2-in. Position the duct assembly concentrically or eccentrically in the opening so that the annular space ranges from min. 3/4 in. on one side to max. 3 in. on the other.

3. FILL, VOID OR CAVITY MATERIAL: Min. 3/8-in. depth of silicone base firestop sealant fill material is to be applied to the recess of the packing material on both sides of the wall through-penetration opening. The sealant material is to overlap onto the gypsum wallboard and the duct insulation nom. 1/2-in.

Listed Manufacturer:

Tremco, Inc.

Firestopping

Firestopping Sealant

Tremco Fyre-Sil S/L

Tremco Fyre-Sil Gun Grade

4. PACKING MATERIAL: Fill the annular space with leftover unfaced 6 pcf soluble fiber blanket. Compress the fiber 25% and insert into the annular space around the penetrating item, filling the annular space. Recess the surface of packing material a min. 3/8 in. from both surfaces of the wall, as required to accommodate the necessary depth of fill void or cavity material.

Listed Manufacturer:

Unifrax Corporation

Applied Fireproofing

Insulation Blanket

FyreWrap EZ® 1.5 Duct Insulation

- 4B. OPTIONAL PACKING MATERIAL – As an option, Min 4pcf 4 in. thick mineral wool insulation** compressed to 25% may be substituted for the soluble fiber blanket as the packing material. (**Listed with Omega Point Laboratories)