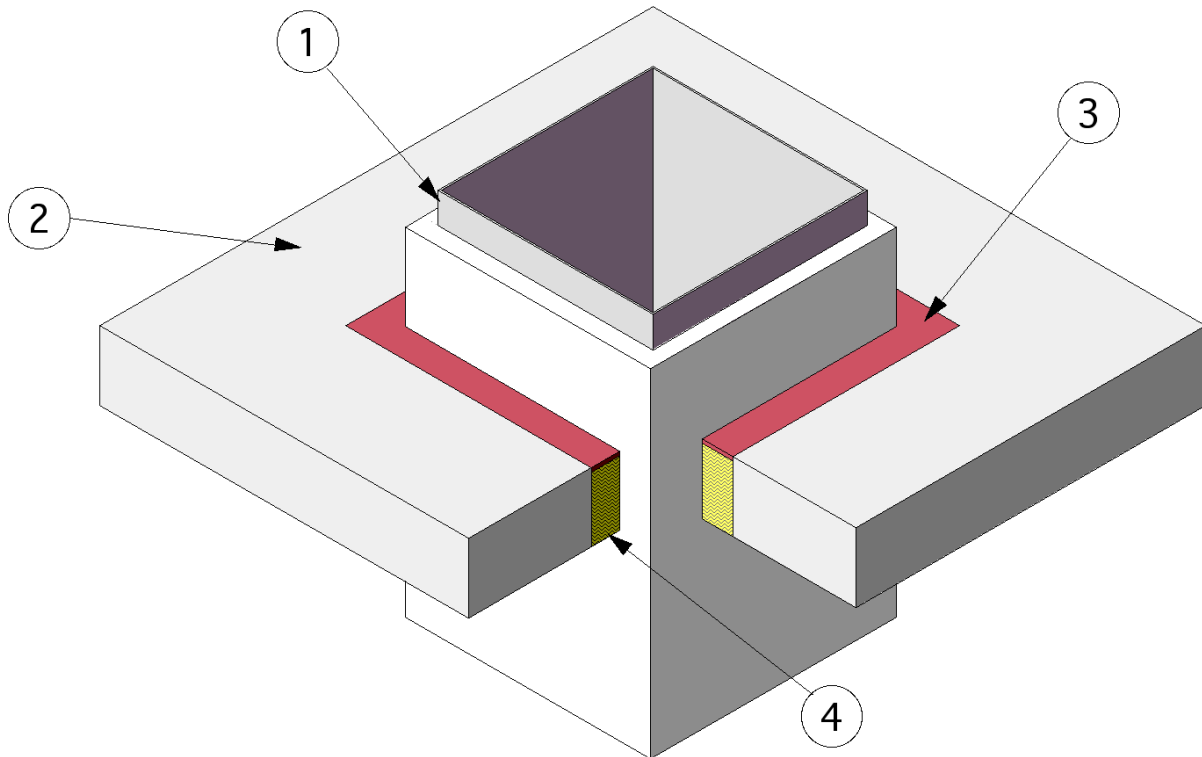

Design No. FS 583 F

FIRE PENETRATION SEAL

Penetrating Item Steel Duct

T-Rating - 2 hr

F-Rating - 2 hr



1. **PENETRATING ITEM:** The ventilation air duct is a continuous system without openings that may have both horizontal and vertical shafts, with and without branches, constructed of min. 20 GA sheet steel. The acceptable ratio of width to height is 4:1 with max. outside dimensions of 40-in. wide x 10-in. high. Reinforce the duct with a min. 1-1/2 x 1-1/2 x 1/8 inch steel angle spaced a maximum of 49-inches on center. Protect the duct with the FireMaster® FastWrap+® system as detailed in Design VAD 541 F.
2. **FLOOR/CEILING ASSEMBLY:** The two-hour fire-rated floor/ceiling assembly shall consist of min. 4-1/2 in. thick normal weight (100-150 pcf) reinforced concrete. The wall assembly may be constructed of similarly rated

concrete masonry units. Size the opening for the penetrating item without exceeding max. dimensions of 47-1/4-in. long x 17-1/4-in. wide. Position the duct assembly in the opening so that the annular space ranges from 1/2-in. min. to a 4-3/4 in. max.

3. **FILL, VOID OR CAVITY MATERIAL:** Min. 1/4-in. depth of sealant fill material is to be applied to the recess around the top surface of the floor through-penetration opening.

Listed Manufacturer:

Tremco Corporation--

Firestopping

Firestopping Sealant

Fyre-Sil® Sealant

Through-Penetration Fire Stop Systems

Fyre-Sil® SL Sealant (Floor application Only)

4. PACKING MATERIAL: Fill the annular space using 8-pcf FireMaster® FastWrap+®. Cut the blanket into strips and compress it a minimum of 50%. (To be compressed 50%, the blanket must be twice as thick as the width of annular space into which it is being installed.) Insert it into the opening to fill the entire annular space. Recess the surface of packing material a min. 1/4 in. from the top

surface of the floor, as required to accommodate the necessary depth of sealant fill material.

Listed Manufacturer:

Thermal Ceramics Inc.--

Applied Fireproofing

Insulation Blanket

FireMaster® FastWrap+®

(nom. 2 in. thick, 8-pcf)