

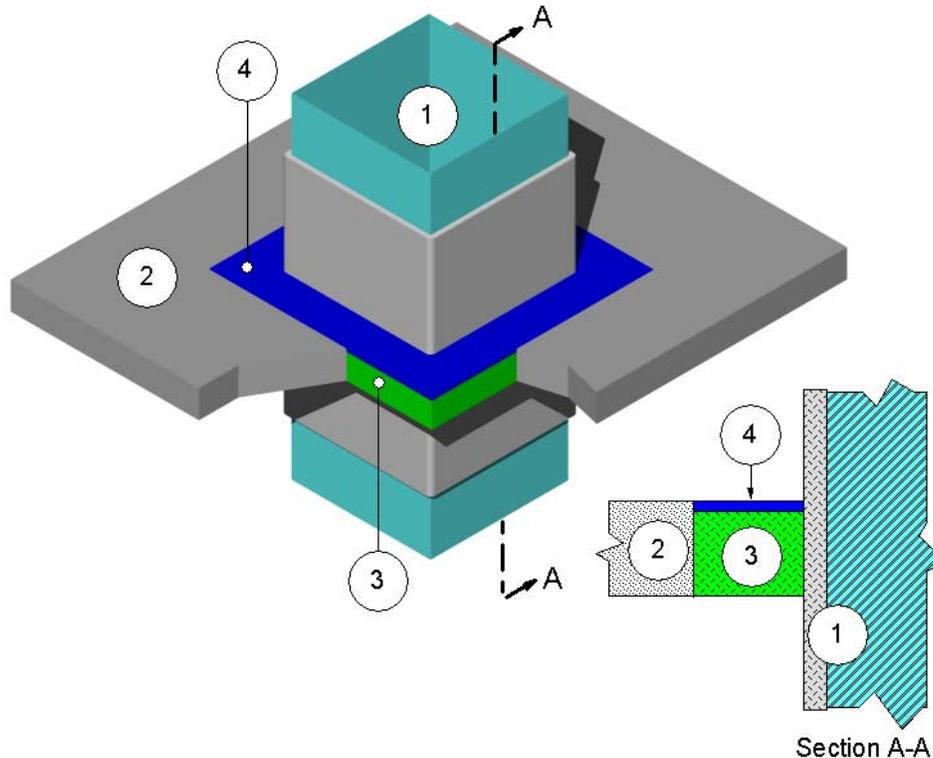
**Design Number TC/PHV 120-03 (OPL FS 587F)  
FIRE PENETRATION SEAL (Grease Duct)**

Thermal Ceramics, Inc.  
FireMaster® FastWrap®+, FireMaster® FastWrap®XL, or Pyroscat® XL

**ASTM E 814**

T-Rating: 2-Hours

F-Rating: 2-Hours



1. **PENETRATING ITEM:** Use a continuously-welded, liquid-tight duct system with horizontal and vertical shafts constructed of 16-GA sheet steel with a maximum 2401-inch<sup>2</sup> cross-sectional area, a maximum 49-inch dimension, and insulated as described in Design Listings TC/FRD 120-03 (GD 544 F), TC/FRD 120-04 (GD 545 F), TC/FRD 120-05 (GD 546 F), and TC/BI 120-01.
2. **FLOOR/CEILING ASSEMBLY:** Use a Two-hour rated, solid concrete floor/ceiling assembly made from

reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Incorporate the following construction features:

- A. **Solid Concrete** – Use minimum 4.6-inch thick carbonate aggregate concrete.
- B. **Opening** - Create an opening in the floor/ceiling assembly. Position the penetrating item (Item 1) concentrically or eccentrically in the opening so that the annular space ranges from minimum 1/2 inch to

maximum 4-3/4 inches. Use an opening size that matches the area of the penetrating item (Item 1) plus the desired annular space but not exceeding a cross-sectional area of maximum 3422.25 inch<sup>2</sup> and a maximum dimension of 58.5 inches.

packing material (Item 3) on top side of the floor/ceiling assembly (Item 2). Smooth (screed) the fill material flush with the surface of the floor/ceiling assembly (Item 2)..

3. CERTIFIED MANUFACTURER:  
Thermal Ceramics, Inc.

CERTIFIED PRODUCT:  
Polypropylene/scrim/foil-encapsulated, nominal 1-1/2-inch, nominal 6-pcf density, calcium-magnesium-silicate wool, thermal insulation blanket.

MODEL:

- FireMaster® FastWrap®+
- FireMaster® FastWrap®XL, or
- Pyroscat® XL

PACKING MATERIAL: Fill the annular space with the core only of the certified thermal insulation blanket (without the encapsulating polypropylene/scrim/foil). Cut the packing material into 4-1/4-inch strips and compress approximately 50%. Insert the compressed packing material into the opening filling the entire annular space. Recess the surface of packing material nominally 1/4 inches from the top surface of the floor/ceiling assembly (Item 2).

4. CERTIFIED MANUFACTURER:  
Tremco, Inc.

CERTIFIED PRODUCT: Sealant

MODEL:

- Fyre-Sil® GG Sealant, or
- Fyre-Sil® S/L Sealant

FILL, VOID OR CAVITY MATERIAL:  
Install minimum 1/4-inch depth of fill material into the recess over the