Design No. GD 546 F

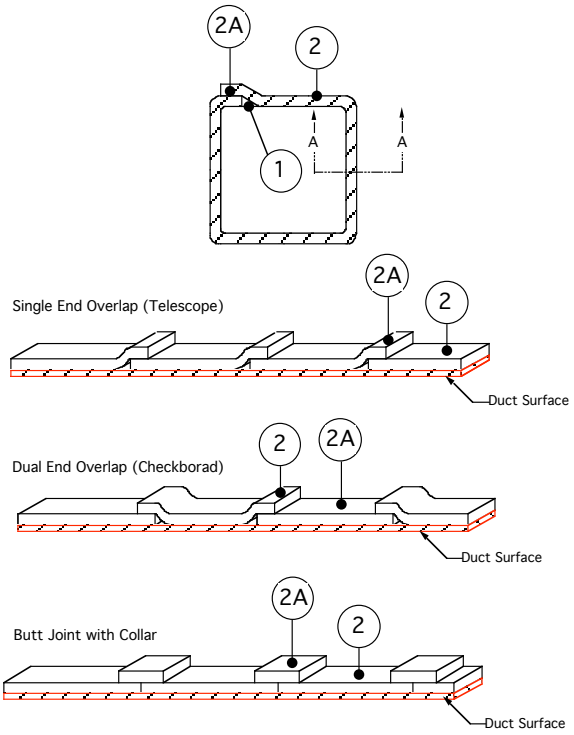
GREASE DUCT PROTECTION

UL 1978 (March 29, 1995)

Sections 12 Pass

Sections 13 Pass

ASTM E 119 2hr. Engulfment Test – Pass



1. GREASE DUCT: A continuously-welded, liquidtight duct system with both horizontal and vertical shafts constructed of 16 GA sheet steel with outside dimensions of max. 49-in. wide x max. 49-in. high. The grease duct may be equipped with a field fabricated access door.
2. INSULATION: FireMaster® FastWrap+® is a nominal 2" thick, 8.0-pcf insulative blanket made of either refractory ceramic fibers or calcium magnesium silicate fibers. FireMaster® FastWrap+® butt splice collars are a nominal 1-1/2" thick, 8.0-pcf insulative blanket made of either refractory ceramic fibers or calcium magnesium silicate fibers. This product is totally encapsulated with a polypropylene/foil scrim. The blanket is available in various widths. FireMaster® FastWrap+® system may be installed with a zero clearance at the overlaps, or in the field between overlaps. The overlap thickness being a nominal 4 inches for checkerboard and telescoping application methods and 3-1/2-inches for butt splice with collar methods. The insulation used was a single layer system. FireMaster® FastWrap+® shall be cut to a length sufficient to wrap completely around the perimeter of the duct, plus provide a min. overlap of 3 in. onto its starting end. The longitudinal overlaps of adjacent blankets (2A) can be accomplished by one of the following three methods as depicted in the drawings:

- A 3-inch overlap telescoping method where each adjacent blanket has one edge exposed and one edge covered by the next blanket,
- A 3-inch overlap checkerboard pattern where both edges of each alternating blanket are covered by each adjacent blanket whose edges are exposed, or
- A butt splice with collar method where the blankets are butted together and a 6-inch wide collar of blanket is centered over the butt splice overlapping each adjacent blanket 3-inches.

Reference Product Section of this Directory for more details.

Listed Manufacturer:

Thermal Ceramics Inc. --

Applied Fireproofing

Mineral Fiber Fireproofing

FireMaster® FastWrap+®

3. PINS: Not shown. For duct sizes greater than 24-inches by 48-inches in cross section, the insulation is attached using steel pins. Weld min. 12 GA, min. 5 in. long, steel insulation pins to the duct. Pins shall be located at all blanket overlaps and meet the following requirements. Space pins in rows max. 12-in. apart and the pins in the rows are max. 10-1/2-inch o.c. Pins are max. 1 in. from the end of a duct and max. 1 in. from any corner (edge of a 90° bend). All overlaps are a minimum of 3-inches for circumferential overlaps going around the duct and for longitudinal overlaps following the length of the duct. Insulation pins are to be located in the middle of the overlap and spaced a maximum of 6-inches apart along the overlap. The blanket is locked into place over the pins with minimum 1.5 in. x 1.5-in. square, or 1.5-in. diameter round, galvanized steel, speed clips or cup head pins. Insulation pins that extend beyond the outer blanket wrap layer shall be turned down to eliminate sharp edges or the excess length cut off. For duct sizes less than or equal to 24-inches by 48-inches in cross section, the insulation can be attached using pins or banding. Insulation pins are to be located in the middle of the overlap and spaced a maximum of 6-inches apart along the overlap.
4. STRAPPING: Not shown. Use min. 1/2-inch wide stainless steel bands, which are nominally 0.015-inches thick or 1/2-inch wide carbon steel banding equivalent. The use of filament tape as a temporary hold for the insulation prior to banding to ease installation is permitted. Place the bands a max. 1.5 in. from each blanket edge and midway between edges. Tension the banding material to hold the FireMaster® FastWrap+® in place without causing any cutting or damage to the blanket or duct.
5. ACCESS DOOR: (Not shown) A 13 in. x 13 in. opening may be cut in the FireMaster® FastWrap+® system to accommodate a field fabricated access door. A 10 in. x 10 in. cleanout access opening may be cut into the duct at midheight along the horizontal section of the duct. Weld Four 4-in. lengths of 1/4 in. diameter all thread to the duct, one at each corner of the opening and on 11 in. centers. Cut a 13 in. x 13 in. access door from 16 GA. sheet steel and drill holes in the door to accommodate the all-thread rod. Cut steel tubing to be used as a spacer for the all-thread. Weld four 5-in. long 12 GA. mild steel impaling pins to the access door at the corners of a square pattern on 9 in. centers. Apply two layers of FireMaster® FastWrap+® blanket over the door. Cut the first 13 in. x 13 in. and place it over the access opening. Cut the second 15 in. x 15 in. and center it over the first piece so that a 1-in. overlap exists around the perimeter. Install the access cover, the apply steel washers on the all-thread and secure wing nuts tightly to the spacers, securing the door to the duct. Apply galvanized steel speed washers to the impaling pins to secure the insulation to the door.
6. SUPPORTS: (Not shown) After the insulation of the FireMaster® FastWrap+® system is complete, add a typical trapeze support system with

horizontal supports a max. 48-in. o.c., starting at the center of the vertical rise portion. The trapeze supports consist of 3/8" all-thread rod bolted to 2" x 2" x 1/4" steel angle. Space the all-thread rods a max. 6" away from the edge of the insulated ducts on each side and cut the steel angle sections to 70" long each, with nom. 3/8" clearance holes drilled 2-1/2" in from each end. Support hanger systems do not need to be wrapped.