

## DUCTWORK FOR REMOVAL OF GREASE AND SMOKE LADEN VAPORS

### PART 1- GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Ductwork for removal of grease and smoke laden vapors.

#### 1.2 REFERENCES

- A. Underwriters Laboratories (UL) and American Society for Testing and Materials (ASTM) per SBCCI acceptance criteria:
  - 1. UL1978 Test Standard -Grease Ducts for Restaurant Cooking Appliances.
  - 2. ASTM E119-Fire Engulfment Test.
  - 3. ASTM E814-Fire Rated Penetration Test.
- B. National Fire Protection Association (NFPA):
  - 1. NFPA 96 - Ventilation Control And Fire Protection Of Commercial Cooking Operations

#### 1.3 QUALITY ASSURANCE

- A. Comply with NFPA 96 unless otherwise indicated.
- B. Must install duct in accordance to manufacturers listings and installation instructions.

#### 1.4 WARRANTY

- A. Listed grease duct shall have a limited lifetime warranty to begin at the date of installation.

### PART 2- PRODUCTS

#### 2.1 AVAILABLE MANUFACTURERS

- A. Listed Double-Wall Insulated grease duct shall be model 2G V value manufactured by Metal-Fab, Inc.

#### 2.2 LISTED DUCTWORK FOR REMOVAL OF GREASE AND SMOKE LADEN VAPORS

- A. The grease duct shall be insulated double-wall factory –built type for use with type I kitchen hoods, as described in NFPA-96 for the transportation of air and grease-laden vapors from commercial cooking operation.
- B. Product Description:
  - a. Metal-Fab Series 2G V value Grease Duct.
  - b. Factory prefabricated, double wall type, listed for venting of grease laden air from kitchen hoods requiring grease duct as described in NFPA 96.
  - c. Rated for continuous operation at 500 F and intermittent operation at 2000 F.
  - d. All components of the grease duct system shall be provided by the manufacturer to ensure the system meets the requirements of the listing including duct supports, guides, fittings, cleanouts, and expansion joints required to install the duct.
  - e. Grease duct shall conform to requirements of ASTM E119, 2-hour fire engulfment with subsequent hose stream test, ASTM E814 2 or 3-hour Fire Stop Test, and shall be listed by the following agencies with the associated listed reports:
    - i. UL 1978 (File MH8251) - Grease Ducts for Restaurant Cooking Appliances.
    - ii. SBCCI Tested as an alternate to a 2 hour fire rated shaft.
    - iii. Classified as a 2-hour fire rated enclosure per SBCCI acceptance criteria (Category HNKT)
  - f. The duct sections shall be constructed of an inner wall and an outer wall with ceramic fiber insulation between the walls. The inner wall shall be constructed of stainless steel, 0.035 inch thickness for sizes 6 to 32 inch diameters. The outer wall shall be constructed of aluminized steel at a minimum 0.024 inch thickness. The duct shall include a 2" thickness of body soluble ceramic fiber insulation between the inner and outer walls. The duct wall assembly shall be tested and Listed to 1 inch clearance to combustibles in diameters 6 inch to 18 inch, and 2 inches clearance to combustibles in diameters 20 to 32 inch.

### PAR 3-EXECUTION

#### 3.1 CONSTRUCTION OF FACTORY BUILT GREASE DUCT

- A. Inner pipe joints shall be held together by means of formed vee bands and sealed with P080 Grease Duct Sealant.
- B. Connection to the hood will be made with a round hood collar or a square-to-round transition.
- C. Curb mounted fans will incorporate a fan adaptor plate
- D. All construction and supporting of the kitchen ventilation system will be in accordance with Metal-Fab, Inc. installation instructions.
- E. Store grease duct sections inside or covered adequately to protect from weather or accidental damage.