

SPECIFICATION:
PRE-FABRICATED, FIRE-RESISTANCE RATED GREASE DUCT FOR REMOVAL OF GREASE AND SMOKE
LADEN VAPORS

PART 1- GENERAL

1.1 SUMMARY

Listed, double-wall, prefabricated, modular, fire-resistance rated grease duct for use with commercial cooking equipment for removal of grease and smoke laden vapors from kitchen hoods (as described in NFPA 96), at a maximum temperature of 500°F under continuous operation.

1.2 REFERENCE STANDARDS

- A. The latest published edition of a reference shall be applicable to this Project unless identified by a specific edition date.
- B. All materials, installation and workmanship shall comply with the applicable requirements and standards addressed within the following references.
- C. Underwriters Laboratories, Inc. (UL):
 - a. Comply with applicable UL safety standards; provide products which have been UL listed and labeled.
 - 1) UL1978 – “Standard for Grease Ducts”
 - 2) UL2221 – “Standard for Tests of Fire Resistive Grease Duct Enclosure Assemblies”
- D. National Fire Protection Association (NFPA):
 - a. Comply with NFPA 96 – “Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations”
- E. International Code Congress (ICC)
 - a. Comply with “International Mechanical Code” and “International Building Code” (if applicable to the project / site)
- F. International Association of Plumbing and Mechanical Officials (IAPMO)
 - a. Comply with “Uniform Mechanical Code” (if applicable to the project / site)

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain listed system components through one source from a single manufacturer.
- B. Must install duct in accordance with terms of NFPA96, local code and manufacturer’s 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 GENERAL

- A. All materials shall meet or exceed all applicable referenced standards, federal, state and local requirements, and conform to codes and ordinances of Authorities Having Jurisdiction.

2.2 AVAILABLE MANUFACTURERS

- A. Listed and Classified (Fire Resistance Rated) Double-Wall insulated grease duct shall be model CIX3Z, as manufactured by Security Chimneys.

2.3 LISTED GREASE DUCT

- A. The grease duct shall be insulated, double-wall factory-built type for use with Type 1 kitchen hoods, as described in NFPA-96 for the transportation of air and grease-laden vapors from commercial cooking operations.
- B. Product Description:
 - a. Zero Clearance, two (2) Hour Fire-Resistance rated model CIX3Z Grease Duct by Security Chimneys.
 - b. All section joints shall incorporate a self-centering feature to ensure proper alignment of mating flanges and proper spacing between the inner wall (flue) and the outer wall (casing).
 - c. The inner wall (flue) shall be laser or plasma welded.
 - d. System shall be rated for continuous operation at 500° F and intermittent operation at 2000° F.
 - e. 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.
 - f. System shall be designed to provide access for inspection and cleaning of each change of duct direction, permit drainage of grease residue through a duct section and enable the system to allow various types of fire suppression equipment to be installed into the grease ductwork.
 - g. Grease duct shall be certified to:
 - i. UL 1978 – “Grease Ducts for Restaurant Cooking Appliances”, and
 - ii. UL 2221 – “Standard for Tests of Fire Resistive Grease Duct Enclosure Assemblies”
 - h. The duct sections shall be constructed of an inner wall and an outer wall with AES fiber blanket insulation between the walls.
 - i. The inner wall shall be constructed of Types 304 or 316 stainless steel.
 - 1. 5 through 36-inch diameter materials: 0.035-inch-thick inner wall.
 - ii. The outer wall shall be constructed of Types 304, 441 stainless steel or Galvalume.
 - 1. 5 thru 36 diameter inch materials: 0.025-inch-thick outer wall.
 - iii. The duct shall include a minimum 3" thickness of 10 pcf density of body-soluble, high temperature capable, non-refractory fiber insulation between the inner and outer walls.

PART 3-EXECUTION

3.1 INSTALLATION OF FACTORY BUILT GREASE DUCT

- A. Locate to comply with minimum clearances from combustibles and minimum termination heights according to product listing or NFPA96, whichever is most stringent.
- B. The installation shall be in accordance with the manufacturer’s installation instructions and shall conform to all applicable state and local codes.
- C. Inner pipe joints shall be held together by means of formed ‘V’ bands and sealed with S650 Sealant.
- D. Connection to the hood shall be made with a round hood collar or a square-to-round transition.
- E. Curb mounted fans shall incorporate a fan adaptor plate.
- F. All construction and supporting of the kitchen ventilation system will be in accordance with Security Chimney installation instructions.
- G. Store grease duct sections inside or covered adequately to protect from weather or accidental damage.
- H. The entire grease duct system from the appliance to the termination, including all accessories, except as noted, shall be from one manufacturer.