

Listed Kitchen Ventilation System Exhaust Ducts

Section 233533 · Sample Specification

Part 1 — General

1.1 SUMMARY

Factory built, double wall rectangular grease duct, UL listed for 2-hr fire-resistance and zero-clearance to combustibles.

1.2 REFERENCE STANDARDS — Comply with latest edition

- A. Underwriters Laboratory Inc. (UL)
 - 1. UL 1978 – Standard for Grease Ducts
 - 2. UL 2221 – Standard for Safety for Tests of Fire Resistive Grease Duct Enclosure Assemblies
- B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems
- C. NFPA 96 – Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
- D. International Mechanical Code (IMC)
- E. International Building Code (IBC)
- F. International Association of Plumbing and Mechanical Codes (IAPMO) Uniform Mechanical Code

1.3 QUALITY ASSURANCE

- A. Obtain listed system components from a single manufacturer.
- B. Comply with NFPA 96, unless otherwise indicated, or comply with local authority having jurisdiction.
- C. Grease duct system shall be installed in accordance with the manufacturer's listings and written instructions.

1.4 WARRANTY

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

Part 2 — Products

2.1 AVAILABLE MANUFACTURERS

- A. Van-Packer Company

2.2 LISTED GREASE DUCT

- 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 grease laden vapors from commercial cooking operations.
- B. Product Description:
 - 1. Factory prefabricated, double-wall type, listed and labeled to UL 1978 and UL 2221.
 - a. Systems not successfully tested to UL 2221 are not permitted.
 - 2. 2-hr fire resistance rated with zero clearance to combustibles.
 - 3. Rated for continuous operation at 500°F and for intermittent operation at 2000°F.
 - 4. All components of the grease duct system, including duct supports, guides, fittings, cleanouts, expansion joints and through penetration firestops, shall be provided by a single manufacturer to ensure the system meets the requirements of the UL listing.
 - 5. The grease duct system, along with its supports and through penetration firestops, shall have an "F" rating of at least 2-hrs and a "T" rating of at least 2-hrs as proven by test to ASTM Standard E814.
 - 6. Access doors shall be provided, spaced and located in accordance with the requirements of NFPA 96.
 - 7. The grease duct sections shall be constructed of a stainless steel liner and metal shell with ceramic fiber insulation in the annular space.

- a. The liner (inner wall) shall be constructed of Type (304 or 316) stainless steel.
- b. The liner (inner wall) thickness for all sizes is 0.035".
- c. The shell shall be constructed of (Aluminized Steel or Type 304, 316 or 430) stainless steel.
- d. Shell (outer wall) thickness, where all sides are 36" or less, are 0.025".
- e. Shell (outer wall) thickness, where any side exceeds 36", are 0.035".
- f. The duct shall include a 3" thickness of ceramic fiber insulation between the liner and shell.
 - i. Systems with exposed duct insulation are not permitted.

Part 3 — Execution

3.1 INSTALLATION OF FACTORY BUILT GREASE DUCT

- A.** Inner Pipe Joints shall be held together by formed bolted flanges and sealed with P/N 101087A sealant.
- B.** Connection to hood will be made with a hood collar provided to hood manufacturer to assure proper fit with duct.
- C.** Connection to curb mounted fans shall be by means of a fan adapter plate provided by the duct manufacturer.
- D.** Support duct in accordance with Van-Packer's installation instructions.
- E.** All supports and guides shall be designed for installation with no required welding.
- F.** Store grease duct components inside or covered adequately to protect them from weather or accidental damage.

END OF SECTION 233533