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BUILDINGS BULLETIN 2009-027

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Purpose: This document establishes acceptance criteria for factory-built grease duct as an alternative material in the 2008 NYC Construction Codes.

Related Code Section(s):	AC 28-113	MC 304.1	MC 506.3.10
	MC 301.4	MC 506.1	MC 506.3.1.1
	MC 301.6	MC 506.3.6	

Subject(s): Commercial kitchen hood ventilation system duct, grease duct, factory-built grease duct.

Description: A factory-built grease duct consists of a sealed, liquid tight, prefabricated double walled steel with ceramic fiber insulation between the inner flue and outer casing.

Evaluation Scope: 2008 NYC Construction Codes

Evaluation Criteria: Pursuant to AC 28-113, the Office of Technical Certification and Research recognizes factory-built grease duct tested, designed and evaluated in accordance with UL 2221 "Fire Resistive Grease Duct Enclosure Assembly"¹ and UL 1978 "Grease Duct"². Acceptable factory-built grease duct shall be tested and listed to the above referenced standards in accordance with section MC 506.3.1.1 by an approved agency, and shall comply with the conditions of this bulletin.

Uses: Factory-built grease duct is an alternative material to code requirements for minimum duct material thickness (section MC 506.3.1.1), clearance to combustible material (section MC 506.3.6), and the requirement for rated shaft enclosure (section MC 506.3.10).

Conditions of Acceptance: Factory-built grease duct shall be designed and installed in accordance with the 2008 NYC Construction Codes and other applicable provisions including but not limited to the following:

A. Design

1. Factory-built grease duct shall be designed in accordance with the Building Code, manufacturer's recommendation, and the conditions of the required listing agency.

B. Installation Requirements

1. Installation requirements shall be in accordance with the manufacturer's instructions, the applicable listing agency, and the conditions of this bulletin.

2. Leakage test shall be performed on the entire duct, specifically for duct joints assembled in the field. Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed in the presence of a special inspector. Ducts shall be considered to be concealed where installed in shafts or covered by coatings or wraps that

prevent the duct work from being visually inspected on all sides. The permit holder shall be responsible to provide the necessary equipment and perform the grease duct leakage test. The leakage test shall comprise of a light test to determine that all field assembled joints are liquid tight. A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of duct work to be tested. The lamp shall be open so as to emit light equally in all directions perpendicular to the duct walls. A test shall be performed for the entire duct system, including the hood-to-duct connection. The ductwork shall be permitted to be tested in sections, provided that every joint is tested.

3. Pursuant to section BC 1704.13, the installation of factory-built grease duct shall be subject to special inspection requirements of Chapter 17 of the Building Code and 1 RCNY section 101-06. Special Inspectors of factory-built grease duct shall:
 - a. Maintain the same qualification requirements for the “Chimney” category as defined in 1 RCNY section 101-06, Appendix A.
 - b. Have duties and responsibilities in accordance with following:
 - i. Observe the leakage test as mentioned in Item B2 above.
 - ii. Ensure that joint sealant used is supplied by the duct manufacturer and listed by a listing agency.
 - iii. Verify that the duct wrap around a factory-built grease duct is listed by the listing agency.
 - iv. Verify that telescoping duct sections (such as adjustable length and variable length) have inner sleeves pointing in the direction of duct drains.
 - v. Inspect duct passageway to insure it is clear and free of any obstructions.
 - c. Complete the statement of special inspection by referencing this Bulletin under the Special Inspection Item for “Alternative Materials” in section 3.0 of the TR1 form.
4. Factory-built grease ducts shall be labeled as per section AC 28-113.4. All shipments and deliveries of materials shall be accompanied by a label certifying that the materials shipped or delivered are equivalent to those tested and approved.
5. A welded connection shall be used where the duct meets the kitchen hood. The welded hood connector shall be free of gaps and inconsistencies along the entire circumference.
6. Grease duct shall be installed in a fire-rated enclosed shaft where required by the New York City Building Code and the New York City Fire Code.
7. Size and limitations of factory-built grease ducts assembly shall be in accordance with the listing agency and manufacturer’s recommendation as per section AC 28-113.2.3.

**Referenced
Standards:**

1. *UL 2221-01 “Fire Resistive Grease Duct Enclosure Assembly”*
2. *UL 1978-95 “Grease Ducts”*