

SECTION 235123 - GAS VENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Listed double-wall vents.
- B. Reference and Industry Standards

Enterprise Green Communities Criteria

- 1. Mandatory Requirements: See the current edition of the NYC overlay of EGC reference standard for full specifications.
 - a. NYC New Construction projects must achieve at least 60 optional points, and Substantial and Moderate Rehab projects must also achieve at least 55 optional points.
 - b. Combustion Equipment 7.3
- C. Related Requirements:
 - 1. Section 235113.11 "Draft Control Fans" for draft inducer fans, venturi-draft inducer fans, mechanical-draft vent fans, vent exhaust fans, and combustion-air fans.
 - 2. Section 235113.16 "Vent Dampers" for motorized and barometric dampers.
 - 3. Section 235116 "Fabricated Breechings and Accessories" for listed, refractory-lined metal breechings and field-fabricated metal breechings.
 - 4. Section 235133 "Insulated Sectional Chimneys" for listed chimney liners; listed building-heating-appliance chimneys; listed, refractory-lined metal chimneys; and field-fabricated chimneys.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
- B. Sample Warranty: For special warranty.

1.4 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel," for hangers and supports.

2. AWS D9.1/D9.1M, "Sheet Metal Welding Code," for shop and field welding of joints and seams in vents.
- B. Certified Sizing Calculations: Manufacturer shall certify venting system sizing calculations.

PART 2 - PRODUCTS

2.1 LISTED TYPE B AND BW VENTS

- A. Description: Double-wall metal vents tested according to UL 441 and rated for 480 deg F (248 deg C) continuously for Type B or 550 deg F (288 deg C) continuously for Type BW; with neutral or negative flue pressure complying with NFPA 211.
- B. Construction: Inner shell and outer jacket separated by at least a 1/4-inch (6-mm) airspace.
- C. Inner Shell: ASTM B209 (ASTM B209M), Type 1100 aluminum or ASTM B209 (ASTM B209M), Type 3003 aluminum or ASTM B209 (ASTM B209M), Type 3105 aluminum ASTM A666, Type 430 stainless steel.
- D. Outer Jacket: Galvanized or Aluminized steel.
- E. Accessories: Tees, elbows, increasers, draft-hood connectors, terminations, adjustable roof flashings, storm collars, support assemblies, thimbles, firestop spacers, and fasteners; fabricated from similar materials and designs as vent-pipe straight sections; all listed for same assembly.
1. Termination: Stack cap designed to exclude minimum 90 percent of rainfall.
 2. Termination: Round chimney top designed to exclude minimum 98 percent of rainfall.
 3. Termination: Exit cone with drain section incorporated into riser.
 4. Termination: Antibackdraft.

2.2 LISTED TYPE L VENTS

- A. Description: Double-wall metal vents tested according to UL 641 and rated for 570 deg F (300 deg C) continuously or 1700 deg F (926 deg C) for 10 minutes; with neutral or negative flue pressure complying with NFPA 211.
- B. Construction: Inner shell and outer jacket separated by at least a [1/4-inch (6-mm)] 1-inch (25-mm) airspace filled with high-temperature, ceramic-fiber insulation.
- C. Inner Shell: ASTM A666, [Type 304] [Type 316] stainless steel.
- D. Outer Jacket: [Galvanized] [Aluminized] Stainless steel.
- E. Accessories: Tees, elbows, increasers, draft-hood connectors, terminations, adjustable roof flashings, storm collars, support assemblies, thimbles, firestop spacers, and fasteners; fabricated from similar materials and designs as vent-pipe straight sections; all listed for same assembly.
1. Termination: Stack cap designed to exclude 90 percent of rainfall.
 2. Termination: Round chimney top designed to exclude 98 percent of rainfall.

3. Termination: Exit cone with drain section incorporated into riser.

2.3 LISTED SPECIAL GAS VENTS

- A.
- B. Description: Double-wall metal vents tested according to UL 1738 and rated for 480 deg F (248 deg C) continuously, with positive or negative flue pressure complying with NFPA 211.
- C. Construction: Inner shell and outer jacket separated by at least a 1/2-inch (13-mm) airspace.
- D. Inner Shell: ASTM A959, Type 29-4C stainless steel.
- E. Outer Jacket: Stainless steel.
- F. Accessories: Tees, elbows, increasers, draft-hood connectors, terminations, adjustable roof flashings, storm collars, support assemblies, thimbles, firestop spacers, and fasteners; fabricated from similar materials and designs as vent-pipe straight sections; all listed for same assembly.
 1. Termination: Stack cap designed to exclude minimum 90 percent of rainfall.
 2. Termination: Round chimney top designed to exclude minimum 98 percent of rainfall.
 3. Termination: Exit cone with drain section incorporated into riser.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Listed Type B and BW Vents: Vents for certified gas appliances.
- B. Listed Type L Vent: Vents for low-heat appliances.
- C. Listed Special Gas Vent: Condensing gas appliances.

3.2 INSTALLATION OF LISTED VENTS

- A. Comply with minimum clearances from combustibles and minimum termination heights according to product listing or NFPA 211, whichever is most stringent.
- B. Seal between sections of positive-pressure vents according to manufacturer's written installation instructions, using sealants recommended by manufacturer.
- C. Support vents at intervals recommended by manufacturer to support weight of vents and all accessories, without exceeding appliance loading.
- D. Lap joints in direction of flow.
- E. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris, and repair damaged finishes.

END OF SECTION 235123