

# Engineering Specifications

## FasNSeal® Single Wall AL29-4C® Special Gas Vent

### PART 1 GENERAL

#### 1.1 SCOPE

- A. All work in this section shall comply with the Mechanical General Specifications for this job, if any.
- B. This section includes specifications for furnishing and installing Single Wall Positive Pressure Vent systems for Condensing and Non-Condensing applications.

#### 1.2 SUBMITTALS

Submit the following in accordance with this section:

- a. Sizing Calculations
- b. Product Catalogs
- c. Installation Instructions
- d. Installation Drawings
- e. Material List
- f. Warranty

#### 1.3 CODES AND APPLICABLE STANDARDS

All products furnished under this Section shall conform to the requirements of The National Fuel Gas Code, ANSI Z223.1 / NFPA-54 where applicable and shall comply with and be listed to UL 1738, the U.S. Standard for Venting Systems for Gas –Burning Appliances, Category II, III and IV and ULC-S636-95, the Canadian Standard for Type BH gas vent systems. Components coming in direct contact with products of combustion shall carry the appropriate UL or ULC.

#### 1.4 WARRANTIES

The Manufacturer shall warrant the Positive Pressure Vent System against defects in material and workmanship for a period of 15 years from the date of original installation. Any portion of the vent repaired or replaced under the warranty shall be warranted for the remainder of the original warranty period.

### PART 2 PRODUCTS

#### 2.1 POSITIVE PRESSURE SPECIAL GAS VENT

- A. Vent shall be of the single-wall, factory-built special gas vent type, engineered and designed for use in conjunction with Category II, III, and IV condensing or non-condensing gas fired appliances or as specified by the heating equipment manufacturer.
- B. Maximum continuous flue gas temperature shall not exceed 480°F (249°C) for gas burning appliances.
- C. Vent shall be constructed as follows:
  - a. with a tube (flue gas conduit) constructed of AL29-4C® superferritic stainless steel with a minimum thickness of 0.016" for diameters 3"-7", 0.019" for diameters 8"-12", .024" for diameters 14"-24".
- D. Vent shall be listed for an internal static pressure of 15" w.g. and tested to 37" w.g.
- E. All conduit components shall be manufactured from AL29-4C® or UL-1738/ULC-S636 Listed Material. The joint closure system shall be a Mechanical Locking Strap design. Joints shall not use screws or other fasteners that penetrate the inner conduit.
- F. Vent shall be constructed with a factory installed silicone gasket used to seal the joint for 3"-24" diameters.

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- G. Wall joints shall be designed with a male and female overlapping metal-metal connection to maintain condensate on the AL29-4C stainless steel. Proper ¼" per foot pitch must be maintained at all times and condensate should flow back toward the appliance to the required number of drains.
- H. Fittings that increase vent diameter shall be asymmetric in construction with a flat wall that maintains a straight line with adjoining parts in order to facilitate the unobstructed flow of all condensate.
- I. All parts shall be compatible with other single wall and double wall products of the same manufacturer.
- J. System is to be sized in accordance with the appliance manufacturer's specifications, NFPA 54-National Fuel Gas Code (ANSI Z223.1), ASHRAE recommendations, and other applicable codes.

## 2.2 AVAILABLE MANUFACTURERS

Vent shall be FasNSeal® by M&G DuraVent Inc. [www.duravent.com](http://www.duravent.com)

## PART 3 EXECUTION

### 3.1 VENT SYSTEM LAYOUT

- A. The vent system shall be routed to maintain minimum clearance to combustibles as specified by the manufacturer.
- B. All components shall be installed in strict compliance with the manufacturer's instructions and all pertinent local, regional, national, and international building and mechanical codes and regulations.
- C. The vent system and breechings shall be inspected and cleaned before final connections to an appliance. A listed appliance adapter must be used to make the connection between the appliance and vent system.

### 3.2 MECHANICAL EQUIPMENT

- A. If dampers or fans are installed in conjunction with the vent system, such equipment shall be supported independently from the vent system. Protect the vent system from twisting or movement due to fan torque or vibration.