

## **PART-1 BREECHING, CHIMNEY & STACKS**

### 1:1 POSITIVE PRESSURE FLUE

- A. Provide factory-built modular connector, manifold and stack system that is tested and listed by the Underwriters' Laboratories, Inc. for use with building heating equipment and appliances which produce exhausted flue gases at a temperature not exceeding 1000°F (Fahrenheit) under continuous operating conditions, and not exceeding 1400 °F (Fahrenheit) under intermittent operating conditions (see UL103) when burning gaseous, solid or liquid fuels as described in NFPA-211.
- B. The U.L. listed air insulated flue gas vent system shall have skin temperatures that have been obtained by Underwriters Laboratories (UL) test procedures. The published surface temperatures shall be the result of the UL-103 1000° Fahrenheit chimney test.

### 1:2 CONSTRUCTION

- A. The double wall flue system shall have a 304 stainless steel inner liner and a aluminized steel outer jacket. The materials and construction of the modular sections and accessories shall be as specified by the terms of the product's U.L. listing.

1. Air insulation between the inner liner and outer jacket shall be a nominal one-inch thick.

- B. Aluminized steel surfaces exposed to the elements shall be protected by a minimum of one base coat of primer and one finish coat of corrosion resistant paint suitable for outer jacket skin temperatures of the given application. All primer and paint to be supplied by the installing contractor and shall be equivalent to series 4100 or 9400 as manufactured by Rust-Oleum. Alternatively, an outer jacket constructed of 304 or 316 stainless steel may also be considered in lieu of painting.

(If you are using a 304 stainless outer jacket this section can be removed)

- C. This stack system shall be designed and installed to be gas tight and thus prevent leakage of combustion products into a building. Additionally, the vent system shall also be U.L. tested and listed to 50 inches internal water column pressure.
- D. Inner pipe joints shall be securely connected and sealed with factory supplied V-bands and appropriate sealant as specified in the manufacturer's installation instructions.
- E. The vent system shall be designed to compensate for all flue gas induced thermal expansion.

## **PART-2 EXECUTION**

### 2:1 INSTALLATION

- A. When installed according to the manufacturer's installation instructions, the flue system and its supporting system shall resist side loads at least 1.5 times greater than the weight per foot of the piping for both horizontal and vertical portions of the system.
- B. The prefabricated flue system shall be installed according to the manufacturer's installation instructions and shall conform to all applicable state and local codes.
- C. Provide all modular straight sections, fittings, supports, guides, expansion joints, guy sections, guy tensioners, roof thimbles, roof flashings, storm collars and stack cap terminations as required to provide a complete system per the manufacturer's installation instructions.

- D. The entire flue system from the appliance outlet to the termination point, including all accessories, except as noted, shall be from one manufacturer.
- E. The vertical stack termination shall be no less than two feet above any portion of the building within ten feet of the stack penetration (see NFPA-211).
- F. Roof penetrations shall be suitable for the specified roof construction and shall comply with the manufacturer's installation instructions.

### **PART-3 WARRANTY**

#### **3:1 WARRANTY**

- A. The prefabricated flue system shall be warranted against functional failure due to defects in material and manufacturer's workmanship for a period of ten years from date of installation.
- B. The inner diameter of the flue system shall be verified by the manufacturer's venting computations. The computations used shall be technically sound, follow ASHRAE calculation methods and shall incorporate the specific flow characteristics of the inner pipe. The contractor shall furnish the exact operating characteristics of all equipment to the factory representative.
- C. The manufacturer shall provide "to scale" drawings depicting the actual layout. The prefabricated flue system shall be installed as designed by the manufacturer and in accordance with the terms of the manufacturer's 10-year warranty and in conjunction with sound engineering practices.
- D. The factory built modular flue system shall be furnished by a vendor organization that assures design, installation and services coordination. As well as, providing "in-warranty" and "post-warranty" unified responsibility for owner, architect, consulting engineer and contractor.

### **PART-4 PRODUCTS**

#### **4:1 MANUFACTURERS**

- A. Product specification requirements shall be met by using Selkirk Metalbestos "Model-PS" exhaust flue or equivalent as approved by the engineer. Equivalent submittals shall specify manufacturer's model number, and other pertinent identification, and attest that the alternate material is in compliance with all specification requirements.

END OF SECTION 15575