

2.01 -- MATERIAL OF FABRICATION

A. EXTERIOR SKIN:

1. MILL FINISH EXTERIOR SKIN:

The exterior skin of the enclosure shall be fabricated from 0.050" thick or 0.125" thick 5052-H32 marine grade mill finish aluminum. The aluminum shall meet the following specifications: ASTM B209, AMS 4015 and Federal QQ-A-250/ 8.

2. COLOR-COATED EXTERIOR SKIN:

The exterior skin of the enclosure shall be manufactured from 0.050" thick 3105-H24 aluminum which has been coated with PPG's Duranar full-strength Kynar 500 or Hylar 5000.

3. POWDER-COATED EXTERIOR SKIN:

The exterior skin of the enclosure shall be manufactured from 0.125" thick 5052-H32 aluminum which has been powder coated with polyester powder.

B. STRUCTURAL MEMBERS:

Structural members shall be fabricated from 0.125" thick 5052-H32 marine grade aluminum. The aluminum shall meet the following specifications: ASTM B209, AMS 4015 and Federal QQ-A-250/ 8.

C. INSULATION:

Insulation shall be solid aluminum foil faced cellular polyisocyanurate thermal insulation board manufactured to meet Federal Specification HH-I-1972/1, Class 2 and ASTM C 1289, Type I, Class 2 with a *STABILIZED* R-Value published by the manufacturer.

The insulation board shall be a nominal 1 1/2" (38.1 mm) thick with a *STABILIZED* R-Value of 10.8 based on tests conducted in accordance with ASTM C 236 / C 518 on full-sized aged products.

The thermal properties of the insulation board shall be certified by the NAHB (National Association of Home Builders) Research Foundation through random sampling and monitoring of the manufacturer's plants.

UNDERWRITERS LABORATORIES

The insulation board shall be classified by Underwriters Laboratories for:

1. "Surface Burning Characteristics" (ASTM E-84, UL 723 and UBC 8-1)
2. "Insulated Wall-Ceiling Building Constructions as to Fire Damageability" (UL 1040)
3. "Interior Building Constructions" (UL 1715 and UBC 26-3)

FACTORY MUTUAL

The insulation board shall be approved by Factory Mutual Research Corporation under FMRC Standard 4880, as Class 1 Wall and Ceiling Panels. FM Report J. I. OW1A2.AM.

BUILDING CODE APPROVALS

The insulation board shall be approved under the following building codes:

SBCCI, PST & ESI Evaluation Report No. 9574C Standard Building Code

BOCA International Evaluation Services Research Report No. 98-25 National Building Code

ICBO Evaluation Service, Inc.
Evaluation Report No. ER-3223, Uniform Building Code

ICC International Building Code, Section 2603

TYPICAL PHYSICAL PROPERTIES

Density: Nominal 2 pcf (ASTM D 1622)

Water Vapor Transmission as Permeance: < 0.03 perms (ASTM E 96)

Liquid Water Absorption as Percent Increase by Volume: < 0.3% (ASTM C 209)

Flexural Strength: > 40 psi (ASTM C 203)

Compressive Strength: 25 psi (ASTM D 1621)

Operating Temperature Range: -100°F to +250° F

D. ADHESIVES:

The insulation shall be adhered to the metal outside skin of the enclosure with a silicone based adhesive which remains permanently flexible from -60° F to 400°F. The adhesive shall meet Federal Specifications TT-S-001543A, TT-S-00230C and ASTM C920-86.

2.02 -- COMPONENTS

A. The roof shall be constructed with an exterior skin and two layers of insulation for a nominal R-value of 21.6. The insulation shall be adhered to the skin and shall extend behind and be captured by the structural members. The roof shall be designed with an overlapping pocket for the walls to fit into.

B. The walls shall be constructed with an exterior skin and one layer of insulation for a nominal R-Value of 10.8. The end walls shall be designed with pockets for the side walls to fit into.

C. The access doors shall be constructed with an exterior skin and one layer of insulation for a nominal R-Value of 10.8.

The access doors shall be lockably secured to the structural members of the adjoining side walls by two 3/8" diameter bars made of 304 stainless steel.

The top of the door shall be captured by the roof when in a closed position.

The lock shall consist of a tee handle with integral keyed lock. Keys shall be furnished.

The access panels shall be located and sized to allow easy access for operations, maintenance and testing of the backflow prevention device without removing the enclosure.

D. Drain openings shall be designed to remain closed except when the device is discharging. Openings shall be designed to accommodate the maximum discharge of the backflow prevention device and shall protect against the intrusion of wind, debris and animals by means of a normally closed, gravity operated, stainless steel hinged, insulated door.

2.03 -- HEATING EQUIPMENT

A. Heating equipment shall be furnished and designed by the manufacturer of the enclosure, to maintain an interior temperature of +40°F with an exterior/outside temperature of -30°F and a wind velocity of 15 mph.

1. The factory assembled heating equipment shall be ETL or UL certified for use in wet or damp locations.

2. Field assembled heater parts shall be cause for rejection.

3. Heating equipment shall be installed above the ASSE 1060 defined level of the RPZ discharge.

4. A radiant heater factory wired to a NEMA 4-X thermostat shall be provided.

5. Heater assembly shall be "liquid tight" design, suitable for use in wet or damp locations.

6. Fan operated or open heaters not designed for use in wet locations shall be cause for rejection.

7. The heater shall comply with 424-12 (b) of the 1999 Edition of the National Electrical Code.

B. The electric power source for the heater shall be hard wired to the thermostat/junction box of the heater assembly with liquid tight conduit in accordance with the 1999 Edition of the National Electrical Code and shall be protected by a ground fault circuit interrupter located in the circuit-breaker panel box.

2.04 -- MOUNTING HARDWARE

A. Mounting hardware shall be 304 stainless steel and shall be provided with the enclosure by the manufacturer.

B. Enclosure fasteners shall be made entirely of 304 stainless steel.

C. Enclosures shall be fastened to the concrete base with stud type expansion anchors made entirely of 304 stainless steel and must meet the description in Federal Specification FF-S-325, Group II, Type 4, Class I for concrete expansion anchors.

D. Mounting brackets shall be an integral part of the vertical structural members of the enclosure.

