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**SV100 PO VENT / PO CASEMENT**  
AAMA/WDMA/CSA 101/I.S.2/A440-11

<b>Rating:</b>	<b>CW-PG90</b>
<b>Air Infiltration:</b>	<b>0.02 cfm/ft at 6.24 psf</b>
<b>Water Resistance:</b>	<b>No Leakage at 12 psf</b>
<b>Structural Performance:</b>	<b>135.00 psf</b>
<b>Thermal Break:</b>	<b>Yes</b>
<b>Main Frame Depth:</b>	<b>3 3/16" nominal</b>
<b>Glazing Thickness:</b>	<b>1"</b>

Boyd Manufacturing Company has prepared this guide specification in printed and electronic media, as an aid to specifiers in preparing written construction documents for commercial aluminum windows. For specification assistance on specific product applications, please contact our offices. Boyd Aluminum Manufacturing Company reserves the right to modify these specifications and details at any time. Updates to these guide specifications and details will be posted to our web site and/or in printed matter as they occur. Boyd Aluminum Manufacturing Company makes no expressed or implied warranties regarding content, errors, or omissions in the information presented

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**SFGS-SV100-1**

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**SECTION 08 51 13 ALUMINUM WINDOWS**

Series SV100 Thermal Grade Projected &lt;OR&gt; Casement Outswing Windows

**PART 1 GENERAL****1.01 Work Included**

- A. Furnish and install aluminum architectural concealed vent as specified in this section that has a removable stop that is finished to match and used; or removed, so the traditional aesthetic silicone look can be field applied.
- B. All windows to be BOYD SV100 Concealed Thermal Projected <OR> Casement Outswing vents. Other manufacturers to bid their product as an equal must submit the following information fifteen days prior to close of bidding.
  - 1. A sample window, as per requirements of architect.
  - 2. Test reports documenting compliance with requirements of Section 1.05.
- C. Glass and Glazing
  - 1. All units shall open for 1" Glazing.  
<OR>
  - 2. All units to be factory glazed.  
<OR>
  - 3. Reference Section 08 81 00 for Glass and Glazing.

**1.02 Laboratory Testing and Performance Requirements**

- A. Test Units
  - 1. Air, water, and structural test unit requirements per ANSI/AAMA/NWDA 101/I.S.2/A440-11 and manufacturer's standard locking/operating hardware and insulated glazing configuration.
- B. Test Procedures and Performances
  - 1. Windows tested to ANSI/AAMA/NWDA 101/I.S.2/A440-11 requirements for the window type referenced in 1.01.B. In addition, the following specific performance requirements shall be met.
  - 2. Air Infiltration Test
    - a. With ventilators closed and locked, tested to ASTM E 283 at a static air pressure difference of 6.24 psf (300 Pa).
    - b. Air infiltration should not exceed .02 cfm/SF (.11 l/s·m<sup>2</sup>) of unit.
  - 3. Water Resistance Test
    - a. With ventilators closed and locked, tested to ASTM E 331/ASTM E 547 at a static air pressure difference of 12.11 psf (580 Pa).
  - 4. Uniform Load Structural Test
    - a. With ventilators closed and locked, tested to ASTM E 330 at a static air pressure difference of 90.0 psf (4309 Pa), both positive and negative.
    - b. There shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, or any other damage that would cause the window to be inoperable after testing was performed.
  - 5. Condensation Resistance Test (CRF)
    - a. Test unit in accordance with AAMA 1503.1.
    - b. Condensation Resistance Factor (CRF) shall not be less than \_\_\_\_ (CRF Class 60)
    - c. With ventilators closed and locked, test unit in accordance with NFRC 500-2010.
    - d. Condensation Resistance (CR) shall not be less than \_\_\_\_ when glazed with \_\_\_\_ center of glass U-Factor

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6. Thermal Transmittance Test (Conductive U-Factor)
  - a. With ventilators closed and locked, test unit in accordance with NFRC 100-2010.
  - b. Conductive thermal transmittance (U-Factor) shall not be more than \_\_\_ BTU/hr•ft<sup>2</sup>•°F ( \_\_\_ W/m<sup>2</sup>•K) when glazed with \_\_\_ center of glass U-Factor. (See chart at end of section).

### 1.03 Quality Assurance

- A. Provide test reports from AAMA accredited laboratories certifying the performance as specified in 1.05.

### 1.04 Submittals

- A. Contractor shall submit shop drawings; finish samples, test reports, and warranties.
  1. Reasonable samples of materials as may may be requested without cost to owner.
- B. (Optional) The NFRC Component Modeling Approach (CMA) generated label certificate shall be provided by the manufacturer.

### 1.05 Warranties

- A. Complete Window Installation:
  1. This is the responsibility of the contractor to assume full responsibility and warrant for one year the performance of the total storefront installation. This is not limited to but includes the glass, glazing, anchorage and setting system, sealing, flashing, etc., as it relates to air, water and structural adequacy as called for in the specifications and approved shop drawings.
  2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at their expense during the warranty period.
- B. Window Material and Workmanship
  1. Provide written guarantee against defects in material and workmanship for \_\_\_ years from the date shipment is complete.
- C. Glass
  1. Provide written warranty for insulated glass units.
- D. Finish
  1. Warranty period shall be for \_\_\_ years from the date shipment.
  2. Provide organic finish warranty based on AAMA standard 2604 <OR>2605

## PART 2 PRODUCTS

### 2.01 Materials

- A. Aluminum
  1. Extruded aluminum shall be 6063-T6 alloy and tempered.
- B. Hardware
  1. Locking handles to be cam type and manufactured from a white bronze alloy with a US25D brushed finish.
  2. Operating hardware shall be 4-bar stainless steel arms or equal.
- C. Weather-Strip
  1. All weather-strip shall be Santoprene, EPDM or Equal.

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- D. Glass
  - 1. Ship open for 1" Glazing. (Please Supply Full Glazing make up regardless of open option for performance evaluation.)  
<OR>
  - 1. Supply 1" Glazing: (Define all layers and surfaces.)

E. Thermal Barrier

All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. Barrier material shall be poured-in-place, two-part polyurethane. A nonstructural thermal barrier is unacceptable.

**2.02 Fabrication**

A. General

- 1. All aluminum frame and vent extrusions shall have a minimum wall thickness of .080" (2 mm).
- 2. Depth of frame and vent is a nominal 3 1/16" (77 mm).

B. Frame

- 1. Frame components shall be miter cut and crimped in place with corner key joinery.

C. Ventilator

- 1. All vent extrusions shall be tubular.
- 2. Each corner shall be miter cut and crimped in place with corner key joinery.
- 3. Each vent shall utilizing two rows weather.

D. Screens

- 1. Screen frames shall be extruded aluminum.

E. Glazing

- 1. All units shall be glazed with a preset spacer, silicone cap seal, and extruded snap-in aluminum glazing bead, with vinyl gasket.

F. Finish

1. Anodic

Finish all exposed areas of aluminum windows and components with electrolytically deposited color in accordance with Aluminum Association Designation AA-M10-C22-\_\_\_ Color shall be \_\_\_.

AA Description	Description	Arch. Class	AAMA Guide Spec.
AA-M10-C22-A41 (215-R1)	Clear Anodized	1	611-98
AA-M10-C22-A44	Color Anodized	1	611-98

2. Organic

Finish all exposed areas of aluminum windows and components with \_\_\_\_. Color shall be \_\_\_ in accordance to AAMA 2604 <OR> AAMA 2605.

**PART 3 EXECUTION****3.01 Inspection****A. Job Conditions**

1. All openings to be prepared by others to the proper size and be plumb, level and the proper location as shown on the architect's drawings.

**3.02 Installation**

- A. Use Qualified and Skilled installers in accordance with approved shop drawings and specifications.
- B. Install plumb and square as per project documents.
- C. Adjust windows for proper operation after installation.
- D. Furnish and apply sealants to provide a weather tight installation at all joints and intersections and at opening perimeters per sealant manufacturers instructions.

**3.03 Protection and Cleaning**

The general contractor shall protect the aluminum materials and finish against damage from adjacent construction and harmful chemicals and substances. The general contractor shall remove any protective coatings, and shall clean the component and aluminum surfaces as recommended.

End of Section 08 51 13