



Manufacturer

Sierra Pacific Windows
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Product Description

ViewMax Plus Wall – Insulated glass in various configurations, incorporated into a high-performance, 3-part glazing system, mounted to a glue-laminated beam structure. This structure may be a glue-laminated wood wrap of a steel structure if needed for code compliance. Structural capacity is considered for each application.

Product Overview

Sierra Pacific Windows specializes in the custom design and production of glazed structural systems for residential and commercial applications. Data is collected from the end-user or the architect/designer, providing the general concepts or specific needs. This information is coordinated with existing or new engineering requirements in order to generate a comprehensive shop drawing.

Once the CAD shop drawing is approved, Sierra Pacific Windows craftsmen produce the unit as per the specifications. They combine expertise in carpentry and glazing systems to fabricate the materials. The all-wood interior integrates with a low-maintenance, weather-tight exterior for long-term performance and beauty. Over 70 standard colors in a powder coated finish are available.

Structural System

Material

Beams

- Douglas Fir glue-laminated, 2400 psi fiber stress
- Premium (STK) grade.
- Alaskan Yellow Cedar glue-laminated, for high-moisture conditions, tight-knot grade.
- AITC (or equal) certified laminator

Beam Sizing

- 3 1/8", 5 1/8" or 6 3/4" widths, various depths to accommodate load required.
- Planing and sanding reduce finish size by approximately 1/8"

Wood Treatment

- Light coat of wood sealer protects wood during shipment and installation. Final stain/clear coats/paint by others.

Alternate Structure

- Steel tube with a glue-laminated wrap can be considered for conditions requiring non-combustible structure or to reduce the member size for loading capacity.

Connection Materials

- Bolts – zinc plated, hot dipped galvanized if required, sizing varies.
- Screws – zinc plated, sizing varies.
- Plates – galvanized, hot dipped galvanized, painted, or powder coated steel; size and thickness as required.
- Exposure – no interior/exterior exposure unless approved for decorative purposes.

Engineering

- Standard Engineering – Extensive engineering data is maintained to provide initial member sizes and connection requirements related to wind, seismic and gravity loads.
- Special Engineering – Specific data is provided for loads or connections outside standard parameters.
- Stamps – A 3rd party engineering firm maintains stamps in many states. Additional stamps can be secured with sufficient time allowed.
- Peripheral engineering – Sierra Pacific Windows declines to be involved in engineering beyond the structure it manufactures.
- Costs – The savings to the client can be considerable with engineering already in place for both standard and special applications.

Glazing System Material

- Aluminum extrusions: Alloy 6063, ASTM B21. Paint meets / exceeds AAMA 2605 or Textured finish AAMA 2604.
- Flashings: 26 gauge or thicker as needed, zincalume coated, PV2 paint or alternate. Stainless steel, powder coated, for corrosive environments.
- Gasket: EPDM, .1875 x .6875, 11 ribs to contact glass.
- Setting blocks: Neoprene, 85 durometer.
- Foam: reticulated foam baffle, foam mullion plug
- Fasteners: C1018 carbon steel, 9-16 shank, 1800 lbs. tensile, 1100 lbs. shear, 56 case hardness (37 core), zinc plating (.0006) min.) and polyvinyl ultraseal coating.
- Glass: insulated to 1" or 1 1/4" overall thickness; various types as required by code and energy needs.

Testing

- Uniform Load Design Pressure and Structural Test, ASTM E330.
- Permanent Set was 0.033, maximum allowed 0.272.
- Air Infiltration – ASTM E 283
 - Result – At 1.57 psf infiltration rate was .00 cfm/sf.
 - Result – At 6.24 psf infiltration rate was .01 cfm/sf.
- Water Resistance – ASTM E547 & ASTM E331
 - Result – No leakage at 10.5 psf.
- Structural Rating DP 70
- Thermal
 - NFRC certification
 - Approved simulations provide U-factors to .19; other data based on glass unit make-up.

Pressure-Equalized System

- Each glazing chamber is isolated from others.
- Each glazing chamber contains its own baffled drain systems.
- Each glazing chamber is designed to equalize air pressure between itself and the exterior.

Features for LEED / other programs

- Regional Sourcing
- Recycled Content
- Daylighting
- SFI Materials
- FSC Materials
- Energy Conservation
- Indoor Environmental Quality