

WESTECK WINDOWS and DOORS

SECTION 08565

VINYL (PVC) WINDOWS
HORIZONTAL SLIDING
VERTICAL SLIDING
FIXED

GENERAL

Supply PVC windows as per approved Shop Drawings.

PART 1

1.1 SECTION INCLUDES

- A. Horizontal Sliding Window Units.
- B. Vertical Sliding Window Units.
- C. Fixed Window Units.

1.2 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry
- B. Section 07 62 00- Sheet metal flashing
- C. Section 14 30 00- Quality assurance
- D. Section 08 81 00- Glass and glazing
- E. Section 07 65 26- Self adhering membranes
- F. Section 07 92 00-Sealants

1.3 REFERENCES

- A. CAN/CSA A440-00, WINDOWS –User selection guide to CSA standards A440-00 Windows.
- B. CSA/CAN A440.2.04, Energy Performance of Windows, doors and unit skylights, Thermal Properties.
- C. CSA/CAN A440.2.04, Energy Performance of Windows, doors and unit skylights, Solar Heat Gain,
- D. CAN/CSA A440.4-07 Window and door installation
- E. ASTM D 3656 - Standard Specification for Insect Screening and Louver Cloth Woven from Vinyl-Coated Glass Fiber Yarn.
- F. ASTM D 4726 - 09 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Exterior-Profile Extrusions Used for Assembled Windows and Doors

- G. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
- H. ASTM A123 / A123M - 09 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- I. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals
- J. IGCC/IGMAC and CGSB 12.8-97 - Standard Specifications for Sealed Insulating Glass.
- K. IGCC - Classification of Insulating Glass Units; Insulated Glass Certification Council.
- L. NATIONAL RESOURCES CANADA-NRCAN - Energy Star for Fenestration Products Canada, Office of Energy Efficiency.
- M. BCEEBC Energy Efficiency Act. British Columbia Ministry of Energy, Mines and Petroleum Resources.
- N. SCC – Standards Council of Canada. Certification body for fenestration product testing laboratories.

1.4 SUBMITTALS

- A. Manufacturer's standard details and catalog data demonstrating compliance with referenced standards; include manufacturer's standard installation instructions.
- B. Drawings: Submit British Columbia certified Professional Engineer sealed Shop Drawings indicating window types, sizes, locations, quantities and cross sections. Manufacturer's product drawings showing details of fabrication, hardware, weatherstripping, fasteners, screens, glazing, accessories, and related items.
- C. Submitted shop drawings to be approved in writing by project manager and/or architect prior to fabrication of products.
- D. Samples: Operating sample of each window type specified illustrating fabrication, hardware, glazing, screen, and finish.
- E. Test Reports: For each window series specified, furnish test reports from SCC accredited independent testing laboratory certifying that product meets requirements specified for air infiltration, water penetration and structural performance per CSA/A440-00 WINDOWS. For thermal performance per CAN/CSA A440.2-09 and for seal integrity of insulating glass units by IGCC/IGMAC and CAN/CGSB 12.8-97.
 - 1. Confirmation of participation in IGCC certification program for Insulated glass.
 - 2. Confirmation of compliance to BC Energy Efficiency Act, whole system U value minimum 2.0 (W/(m²*K)).
- F. Closeout Submittals: Warranty documents, Care and Maintenance manual, properly executed. Engineers schedules B1, B2, C-B as required, supplied at project completion. Final walk through sign off by PM.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum ten (10) years experience producing vinyl (PVC) windows.
- B. Product test reports from SCC certified third party independent fenestration testing

laboratory. Intertek, QAI, CSA.

- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and mockup are approved by Architect.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver windows to project site in undamaged condition; handle windows to prevent damage to components and to finishes.
- B. Store windows vertically on level surface, out of contact with ground; protect windows from weather and construction traffic in well-ventilated area.
- C. Do not stack more than five (5) units deep. Do not stack units in direct sunlight.

1.7 WARRANTY

- A. Furnish manufacturer's standard warranty against deficiencies in materials or fabrication. <http://www.westeckwindows.com/resources/>

PART 2

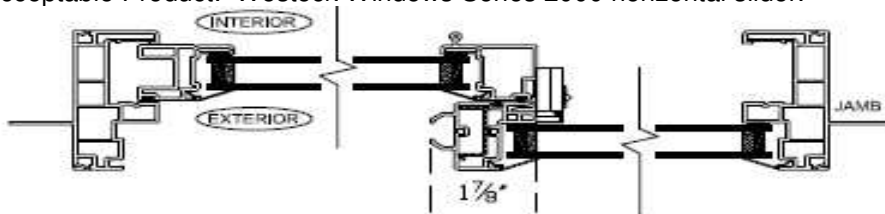
PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Westeck Windows Mfg Inc, located at 8104 Evans Road, Chilliwack, BC V2R 5R8
Tel: 604-792-6700; Toll free Tel: 1-877-606-1166
Web: www.westeckwindows.com
- B. Or approved alternative.

2.2 HORIZONTAL SLIDING WINDOW UNITS

- A. Acceptable Product: Westeck Windows Series 2000 horizontal slider.

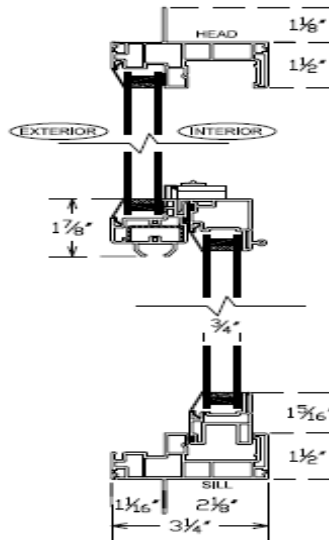


- 1. Grade: CAN/CSA A440-00 WINDOWS, for 63-inch wide by 39.375-inch high window unit; certified independent laboratory test results as follows:
 - a. Air infiltration: A3 75 pa.
 - b. Water infiltration: B3 300 pa
 - c. Wind load: C3 1600 pa
 - d. Forced entry: F20
- 2. Thermal performance in accordance with CAN/CSA.2-09
1.6 U value (W/(m²*K)). (see glazing details and alternate glazing options).
- 3. Solar Heat Gain Coefficient, in accordance with CAN/CSA A440.2-09
63 inch wide by 39.375 inch high window unit shall not exceed 0.29 (see glazing details and alternate glazing options)

4. Energy Star Zone B rating 1.6 U value (W/(m²*K)) or lower. (see glazing).
5. Glazing: typical sealed insulating glass unit, UNO, 3/4" inch overall thickness, with exterior lite PPG Solarban 60 Low E 3mm annealed glass, 1/2" Edgetech Superspacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; **ALTERNATE GLAZING, 3/4" inch overall thickness, with exterior lite Cardinal 270 Low E 3mm annealed glass, 1/2" stainless steel pacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; U-Value 1.49 SHGC .30 or exterior lite Cardinal 366 Low E 3mm annealed glass, 1/2" stainless steel pacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; U-Value 1.46 SHGC .23** BCEE labeled for compliance.
6. Sealed Insulating Glass Units: Conform to IGCC/IGMAC CAN/CGSB 12.8-97 Standard for IGMAC certification.
7. Frame: PVC extrusions, fusion welded construction at corners, multi-chambered with weep system and weep gates, 3.25 inch frame depth, 1.5 inch frame height at fixed section.
8. Sash: PVC extrusions, fusion welded removable operable sash units, full perimeter Ultra-Fab triple fin fabric weatherstrip, with nylon-encased dual-roller system. Fully-interlocking meeting rails, full length Ultra-Fab triple fin fabric weatherstripped. Positive action sash lock, theft-deterrent anti lift blocks, and secondary sash lock.
9. Insect screening: Extruded aluminum channel frames, compatible color, with maximum 17 by 17 fiberglass mesh secured with continuous poly spline gasket, removable for mesh replacement. Premium visibility and airflow Phifer Ultravue "Clearview" fiberglass mesh.

2.3 VERTICAL SLIDING WINDOW UNITS

- A. Acceptable Product: Westeck Windows Series 2000 vertical slider.

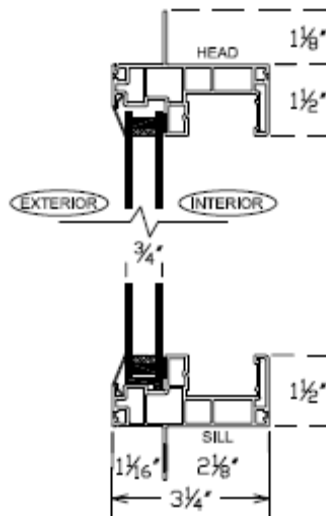


1. Grade: CAN/CSA A440-00 WINDOWS, for 39.375-inch wide by 63-inch high window unit; certified independent laboratory test results as follows:
 - a. Air infiltration: A3 75 pa.
 - b. Water infiltration: B3 300 pa
 - c. Wind load: C3 1600 pa
 - d. Forced entry: F20
2. Thermal performance in accordance with CAN/CSA.2-09 1.6 U value (W/(m²*K)). (see glazing details and alternate glazing options).
3. Solar Heat Gain Coefficient, in accordance with CAN/CSA A440.2-09

- 39.375 inch wide by 63 inch high window unit shall not exceed 0.29 (see glazing details and alternate glazing options)
4. Energy Star Zone B rating 1.6 U value (W(m²*K)) or lower. (see glazing details)
 5. Glazing: typical sealed insulating glass unit, UNO, 3/4" inch overall thickness, with exterior lite PPG Solarban 60 Low E 3mm annealed glass, 1/2" Edgetech Superspacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; BCEE labeled for compliance. **ALTERNATE GLAZING, 3/4" inch overall thickness, with exterior lite Cardinal 270 Low E 3mm annealed glass, 1/2" stainless steel spacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; U-Value 1.49 SHGC .30 or exterior lite Cardinal 366 Low E 3mm annealed glass, 1/2" stainless steel spacer and argon gas fill to 90%, interior lite 3mm clear annealed glass; U-Value 1.46 SHGC .23 BCEE labeled for compliance.**
 6. Sealed Insulating Glass Units: Conform to IGCC/IGMAC CAN/CGSB 12.8-97 Standard for IGMAC certification.
 7. Frame: PVC extrusions, fusion welded construction at corners, multi-chambered with weep system and weep gates, 3.25 inch frame depth, 1.5 inch frame height at fixed section.
 8. Sash: PVC extrusions, fusion welded removable operable sash units, full perimeter Ultra-Fab triple fin fabric weatherstrip Fully-interlocking meeting rails full length Ultra-Fab triple fin fabric weatherstripped. Positive action sash lock, Caldwell side load block and tackle balance springs, and secondary sash lock.
 9. Insect screening: Extruded aluminum channel frames, compatible color, with maximum 17 by 17 fiberglass mesh secured with continuous poly spline gasket, removable for mesh replacement. Premium visibility and airflow Phifer Ultravue "Clearview" fiberglass mesh.

2.4 FIXED WINDOW UNITS

- A. Acceptable Product: Westeck Windows Series 2000 fixed window.



1. Grade: CAN/CSA A440-00 WINDOWS, for 78.75 inch wide by 78.75 inch high window unit; certified independent laboratory test results as follows:
 - a. Air infiltration: Fixed 75 pa.
 - b. Water infiltration: B7 700 pa
 - c. Wind load: C5 5000 pa 70.75" x 70.75"

- d. Forced entry: Fixed
- 2. Thermal performance in accordance with CAN/CSA.2-09 1.58 U value (W/(m²*K)). (see glazing details and alternate glazing options).
- 3. Solar Heat Gain Coefficient, in accordance with CAN/CSA A440.2-09 78.75 inch wide by 78.75 inch high window unit shall not exceed 0.31 (see glazing details and alternate glazing options)
- 4. Energy Star Zone B rating 1.60 U value (W(m²*K)) or lower. (see glazing details)
- 5. Glazing: typical sealed insulating glass unit, UNO, 3/4" inch overall thickness, with exterior lite PPG Solarban 60 Low E 5mm annealed glass, 3/8" Edgetech Superspacer and argon gas fill to 90%, interior lite 5mm clear annealed glass; **ALTERNATE GLAZING, 3/4" inch overall thickness, with exterior lite Cardinal 270 Low E 4mm annealed glass, 1/2" stainless steel pacer and argon gas fill to 90%, interior lite 4mm clear annealed glass; U-Value 1.43 SHGC .32 or exterior lite Cardinal 366 Low E 4mm annealed glass, 1/2" stainless steel pacer and argon gas fill to 90%, interior lite 4mm clear annealed glass; U-Value 1.40 SHGC .25** BCEEAA labeled for compliance.
- 6. Sealed Insulating Glass Units: Conform to IGCC/IGMAC CAN/CGSB 12.8-97 Standard for IGMAC certification.
- 7. Frame: PVC extrusions, fusion welded construction at corners, multi-chambered with weep system and weep gates, 3.25 inch frame depth, 1.5 inch frame height at fixed section.

2.5 FABRICATION

- A. Window Units: Assemble units completely in factory, including operating hardware and glazing.
- B. Fabricate components with minimum clearances (8/10mm) and shim spacing around perimeter of assembly, enabling installation and dynamic movement of perimeter seal.
- C. Permit internal drainage weep holes and channels to migrate moisture to exterior. Provide internal drainage of glazing spaces to exterior through weep holes. Exterior weep gates.
- D. Supplement frame and/or mullion sections with internal roll formed galvanized steel reinforcement where required for structural rigidity.

PART 3 PERFORMANCE REQUIREMENTS

- A. Design and size components to withstand dead and live loads caused by positive and negative wind loads in accordance with the British Columbia Building Code 2006
- B. Limit member deflection to limit L/175 with full recovery of glazing materials.
- C. Water leakage: None when measured in accordance with ASTM E331 to B3 rating.
- D. Air infiltration: Limit air infiltration through assembly in accordance with ASTM E283-04 to A3 rating.
- E. Thermal resistance to comply with BCBC 2006 and BCEEAA, maximum U

value 2.0 (W/(m²*K)).

- F. Comply with requirements of the following documents:
 - a. CAN/CGSB-12.1-M, Tempered or laminated safety glass.
 - b. CAN/CGSB-12.3-M, Flat, clear float glass.
 - c. CAN/CGSB-12.8-M, Insulating glass units.
 - d. CAN/CGSB-12.20-M, Structural design of glass for buildings.
- G. All IGUs to be manufactured by a Insulating Glass Manufacturer Alliance (IGMA/IGMAC) certified member.

PART 4 EXECUTION

4.1 EXAMINATION

- A. Verification of Conditions: Openings are in correct location, and of correct size, in accordance with approved shop drawings and manufacturer's installation instructions.
- B. Verify wall openings and adjoining air and vapour seal materials are ready to receive work of this section. Refer to Envelope Consultants details for window to wall integration.

4.2 INSTALLATION

- A. Installer's Examination:
 - 1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
 - 2. Transmit two copies of installer's report to Architect within 24 hours of receipt.
- B. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.
- C. Install products specified in this section square, plumb and level, in accordance with approved shop drawings and manufacturer's installation instructions. Reference CAN/CSA A440.4-07 Installation.
- D. Maximum variation from level and plumb, 1/16" every 3' non cumulative, 1/8" every 10', whichever is less.
- E. Beginning construction activities of this section indicates installer's acceptance of conditions

4.3 ADJUSTING

- A. Adjust operating hardware for smooth operation and secure weather tight closure in accordance with manufacturer's installation instructions.

4.4 CLEANING

- A. Remove labels only after final inspection.
- B. Clean interior and exterior surfaces free of labels, mortar, plaster, paint, joint sealers, and other foreign matter to prevent damage to seals and interference with operation of hardware.

- C. Clean glass and frames using only warm water and mild non corrosive cleaners. Contact by corrosive construction cleaners such as ammonia, chlorine, and muriatic acid (brickwash) may void warranty.

4.5 PROTECTION

- A. Protect ventilators and operating parts from dirt and damage caused by subsequent construction activities.
- B. Replace units damaged by subsequent construction activities.

END OF SECTION