



PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Factory-assembled extruded aluminum-clad wood In-Swing patio door
- B. Glass and glazing
- C. Weatherstripping, hardware, [insect screens],[muntin bars]
- D. Anchorages, attachments, and shims

1.02 RELATED SECTIONS

- A. Section [04200 – Unit Masonry]: Units in Masonry
- B. Section [0610 – Rough Carpentry]: Framed openings
- C. Section [07210 – Building Insulation]: Batt insulation at window perimeter
- D. Section [07900 – Joint Sealers]: Perimeter Joint Sealant and Backer Rod
- E. Section [09900 – Painting]: Finishing interior wood, including removable grilles

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM)\
 - 1. ASTM C 1048-04 – Specification for Heat Treated Float Glass-Kind HS, Kind FT Coated & Uncoated.
 - 2. ASTM C 1036-06 - Specification for Flat Glass
 - 3. ASTM E 1300-09 -Standard Practice for Determining Load Resistance of Glass in Buildings
 - 4. ASTM 2188-02 – Test Method for Seal Durability of Insulating Glass Units
 - 5. ASTM E 2190-08 – Standard Specification For Insulating Glass unit Performance & Evaluation
 - 6. ASTM E 283– Rate of Air Leakage Through Exterior Windows, Curtain Walls andDoors Under Specified Pressure Difference Across the Specimen
 - 7. ASTM E 330– Structural Performance of Exterior Windows, Curtain Walls and Doorsby Uniform Static Air Pressure Difference
 - 8. ASTM 547– Water Penetration of Exterior Windows, Curtain Walls and Doors byCyclic Static Air Pressure Differential
 - 9. ASTM F 588– Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing
- B. Window and Door Manufacturers Association (WDMA)
 - 1. WDMA I.S.-2 – Industry Standard for Wood Windows
 - 2. WDMA I.S.-4– Industry Standard for Water Repellent Preservative Non-Pressure Treatment for Millwork
- C. American Architectural Manufacturers Association (AAMA)
 - 1. AAMA 701-04 & 702-04 – Combined Voluntary Specification for Pile Weatherstrippingand Voluntary Specification for Replacement fenestration Weatherseals
 - 2. AAMA 2603-02 – Voluntary Specification for Pigmented Organic Coatings onAluminum Extrusions and Panels.
 - 3. AAMA 2604-Voluntary Specification Performance Requirements and Test Proceduresfor High Performance Organic Coatings on Aluminum Extrusions and Panels
 - 4. AAMA 2605-Voluntary Specification Performance Requirements and Test Proceduresfor Superior Organic Coatings on Aluminum Extrusions and Panels
- D. National Fenestration Rating Council (NFRC):
 - 1. NFRC 100-2004 – Procedure for Determining Fenestration product U-Factors
 - 2. NFRC 200-2004 – Procedure for Determining Fenestration Product Solar Heat GainCoefficient at Normal Incidence

1.04 PERFORMANCE REQUIREMENTS

- A. Door units shall be rated, certified, and labeled in accordance with NFRC 100-2004.
U-Factors: .30 using Cardinal E270 LowE (Specific glazing options and values may be obtained from the Product Data Sheet on the web)
- B. Door units shall be rated, certified and labeled in accordance with NFRC 200-2004.
Solar Heat Gain Coefficient: .22 using Cardinal E270 LowE (Specific glazing options and values may be obtained from the Product Data Sheet on the web)

1.05 SUBMITTALS

- A. Submit in accordance with conditions of Division 1 requirements and the contract.
- B. Product Data: Submit Manufacturers product data.
- C. Shop Drawings: Typical jamb, head and sill details showing layout and installation of typical and composite members, necessary dimensioning, hardware and mulled unit details. Submit elevations indicating location and type of glazing material.
- D. Samples: Provide (1) complete window assembly for approval of color, glazing systems and Quality of construction.



1.06 QUALITY ASSURANCE

- A. Provide proof of compliance with ASTM E 2190-08 rating for Seal Durability of Insulating Glass Units

1.7 PROJECT CONDITIONS

- A. For renovation projects, all actual door openings will be checked by accurate field measurement before fabrication.
- B. Coordinate door fabrication schedule with construction progress to avoid delays.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in manufacturers packaging undamaged, complete with installation instructions.
- B. Store windows and accessories off ground, under cover, protected from weather and construction activities.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. SunClad In-Swing Patio Door units as manufactured by Sun Windows, Inc., Owensboro, Kentucky: Factory-assembled extruded aluminum-clad wood door with panel installed in the frame.

2.2 COMPONENTS

- A. Frame: Select kiln dried Western Pine, water-repellent, preservative –treated in accordance with WDMA I.S. 4. Interior exposed surfaces finger jointed Western Pine; all exterior surfaces clad with 0.050" extruded aluminum at head and jamb. 0.065" Aluminum sloped sill with internal water management weep system and composite threshold. Incorporates an integral aluminum nail fin as part of the extrusion. Overall frame depth: 5-11/16" (144 mm) for a wall depth of 4-9/16" (116 mm). Optional factory applied frame extensions: 6-9/16" wall depths.
- B. Panel: Select kiln dried Western Pine, water-repellent, preservative –treated in accordance with WDMA I.S. 4. Finger jointed, veneer wrapped, edge glued western pine on rails and hinge stiles. Laminated Veneer Lumber veneer wrapped, edge glued clear western pine on lock stile. Interior exposed surfaces clear Western Pine; all exterior surfaces clad with 0.055" extruded aluminum. Wood corners exposed tongue and groove and secured with metal fasteners. Panel thickness: 1-25/32" (45mm). Glass shall be set to the panel using an AAMA approved silicone glazing material and secured with interior profiled wood stops.
- C. Glazing System: Sealed insulating glass shall be produced using quality float glass complying with ASTM C-1036-06. [clear/clear], [clear/argon filled, Low-E II coated]. Various tints, obscure, tempered and laminated glazing options are also available. Dual glazed insulating glass will have a ½" air space with the revolutionary Duralite™ Warm Edge I.G. Spacer. Insulated glass meets or exceeds standards required by ASTM E 2190-08.
- D. Weatherstripping: Q-LON® foam filled weatherstrip around full perimeter of door. Weatherstrip meets or exceeds standards required by AAMA 702-04.

The following six paragraphs specify optional products sold separately. Consult manufacturer and edit accordingly.

- E. Extruded Insect Screen: [Full] size with charcoal vinyl-coated BetterVue® mesh fiberglass screen cloth, set in 0.040" extruded aluminum frame fitted to outside of door, supplied complete with all necessary hardware. [optional: UltraVue® mesh]
- F. Interior Removable Wood Surround Grilles: [1" profile], [1-1/4" profile] removable solid wood bars dado and notched at joints and fitted to panel with snap fit clips. Surfaces unfinished [optional: white], ready for site finishing.
- G. Grilles-Between-Glass (GBG): [3/4" contour profile], [1/4" profile] Roll form aluminum bars fitted between the panes of glass in the specified insulated glass unit. 3/4" internal contour grille (GBG) finish shall be baked enamel, 1-color options [white], [sand], [bronze], [vanilla], and [special]. 2 color options [white/sand], [sand/white], [bronze/white], [white/bronze].
- H. Simulated Divided Lite Grilles (SDL): Exterior muntin bars shall be 1/8" thick by 1" wide [optional 1-1/4" wide] [optional: 2-1/4" wide] profile, solid extruded aluminum bars. Bars shall be adhered to exterior glass surface with black VHB acrylic adhesive tape and will align with interior muntin. Interior muntin bars shall be of 1" [optional 1-1/4" wide] [optional: 2-1/4" wide] Wood grilles adhered to interior of glass with acrylic adhesive tape and align with exterior muntin. Exterior surfaces finished to match door cladding. Interior surfaces unfinished, ready for site finishing, [optional: white].
- I. Kick Panels: [Standard], [1/4 kick panel], [1/3 kick panel], [1/2 kick panel] Aluminum exterior with raised wood interior kick panel. Kick panel glazed into pocket using silicone glazing material. Optional raised look with 1" or 1-1/4" sdl bars adhered to kick panel using VHB acrylic adhesive tape.



2.1 HARDWARE

- A. Multi Point Lock: Multi point locking system uses 1" throw deadbolt, two beveled latches constructed of hardened steel, latches automatically engage at three points when door is closed, US design with deadbolt located above lever, lever controlled releasing of beveled latches and center latch, lock cylinder with 90 degree thumb turn that activates deadbolts without having to lift the handle, non-handed latch for reversibility and heavy duty mortise construction with reinforced lever return spring system.
- B. Single point Lock: Single point hardware uses a 1" throw deadbolt. 90 degree thumb turn engages dead bolt and locks door. There is no need to lift the handle to activate the dead bolts. US design with deadbolt located above the lever, lever controlled releasing of dead bolt and latch, non-handed latch for reversibility and heavy duty mortise construction with reinforced lever return spring system.
- C. Hinges: Uses Ferco three way adjustable hinge frame leaf with rounded corners. Hinge constructed of stainless steel and utilize an internal ball bearing system.
- D. Trim kit: Escutcheon plates and handles constructed of solid brass and use a US cylinder for keyed entries with a schlage "C" keyway.

2.2 CERTIFICATIONS

Sun Windows are certified to the following programs, using Independent Testing Laboratories.

- A. WDMA Hallmark Certification Program
- B. NFRC (National Fenestration Rating Council)

2.3 FINISH

- A. Exterior Finish: Finish shall meet specifications in accordance with AAMA 2604. As selected by customer from manufacturer's full range. Optional AAMA 2605.
- B. Interior Finish: Unfinished and ready for site finishing. Optional [white],[primed]

PART 3 EXECUTION

3.1 INSTALLATION

- A. Inspect door openings prior to beginning installation. Verify that the openings are level and plumb and that the minimum opening dimension (width or height) is 1/4" larger than the door unit. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Install door units in accordance with manufacturer's recommendations, installation & finishing instructions and approved shop drawings.
- C. Secure assembly to framed openings, plumb, level and square, without distortion. Provide proper support and anchor securely in place.
- D. Place batt insulation in shim spaces around door perimeter to maintain continuity of building insulation. Do not use expanding foam insulation.
- E. Apply sealant and related backing materials at the exterior perimeter of the door units.
- F. Leave door units closed and locked.

3.2 PROTECTION AND CLEANING

- A. Clean door frames, panels and glass promptly following installation. Avoid damaging protective coatings and finishes. Remove excess sealants, dirt and other substances.
- B. Protect door surfaces and hardware from contact with contaminating substances, such as masonry cleaning solutions. Contact with certain substances can cause damage to the glass surface and/or could cause seal failure of the insulating glass unit. These substances could also cause discoloration or damage to painted surfaces. Clean contaminated surfaces immediately after contact.
- C. Remove nonpermanent labels from glass surfaces per manufacturer's installation finishing instructions.
- D. Remove and replace glass that has been broken, chipped, cracked, abraded or damaged during the construction period.

END OF SECTION

Specifications subject to change without notice