

Series 4100 HS-C60 Slider w/ Integral Free Air Louver Below

1.01 GENERAL PROVISIONS:

- A. Pre-Bid Qualifications: All bids must be based on pre-qualified products; to qualify, the bidder must furnish one complete window unit and additional information as shown below ten (10) days prior to bid date.
1. This sample must be identical to the model of the window the bid is based on, with the finish being the only exception.
 2. The prospective bidder shall also include in his pre-bid qualification package, copies of the independent laboratory tests which certify that the proposed product meets or exceeds an HS-C60 1808 x 1524 mm (71" x 60") classification in an "OX" configuration as specified herein and shall show continuing compliance by furnishing a Notice of Product Certification from an Administrator of a Certification Program. Test reports from an independent laboratory showing that the insulated glass, if any, has been tested to the CBA Level, will also be required.

1.02 RELATED WORK:

- A. Provide labor, materials and equipment necessary to complete the work of the window portion of the contract, and without limiting the generality thereof shall include:
1. Provide new factory-glazed, thermally broken, aluminum windows with integral louver below, types as specified herein, together with necessary mullions, sub-sills, weep systems, drip edge and operating hardware, all installation hardware and all other accessories as may be required.
 2. Treated wood blocking, shims, fillers and nailers as required for a secure installation.
 3. Field observations and securing measurements of existing openings and conditions.
 4. Bidders shall review Plans and Specifications and become familiar with conditions of proposed sills and jambs prior to bidding. Contractor shall be responsible for providing a positive drainage system to the exterior of any water and/or condensation that may enter or form at the PTAC unit.
 5. Provide and chink fiberglass insulation between window frames and adjacent construction.
 6. Proper field sealing of all exterior joints within each window assembly, per AAMA 800-92.
 7. Sealing of entire exterior perimeter of window units after installation, per AAMA 808.3-92.

1.03 ITEMS FURNISHED BUT NOT INSTALLED:

- A. Architect and/or Specifier: Please add any applicable items to this section as deemed necessary.

1.04 ITEMS INSTALLED BUT NOT FURNISHED:

- A. Architect and/or Specifier: Please add any applicable items to this section as deemed necessary.

1.05 TESTING AND PERFORMANCE REQUIREMENTS:

- A. Performance and Testing: Except as otherwise indicated, comply with air infiltration tests, water resistance tests and applicable load tests specified in AAMA/WDMA/CSA 101/I.S.2/A440-05 for type, rating and classification of the window units required herein.
- B. Specific Requirements: Windows shall conform to specified standards or those specified herein, whichever are the more stringent:
1. Air Infiltration Test: With the sash in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.05 L/s/m² when tested at 75 Pa (0.01 ft³/min/ft² at 1.6 psf).
 2. Water Resistance Test: Using a static pressure of 440 Pa (9.19 psf), a water flow rate equal to five gallons of water per hour, per square foot of window area, should be cycled for five minutes of water on, then one minute off, for a total of four cycles. No water shall pass the interior plane of the window frame and there shall be no uncontrolled leakage.

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3. Louver shall be independently tested pursuant to AMCA 500-L-99 Water Penetration criterion.
4. Uniform Structural Load Test: A minimum exterior and interior uniform load of 4320 Pa (90.23 psf) shall be applied to the entire surface of the test unit. At the conclusion of tests, there shall be no glass breakage, permanent damage of fasteners, hardware, or any other damage causing the window to be inoperable.
5. Condensation Resistance Factor: The window shall be tested in accordance with NFRC 100, 200 & 500 standards and tests of thermal performance and shall yield a condensation resistance (CR) of no less than 38.
6. Coefficient of Heat Transfer, or "U-Value" Test: Thermal Transmittance (U-Value) shall be tested to be 0.61 and satisfy the performance criteria of NFRC 100, 200 & 500 testing.
7. Solar Heat Gain Coefficient: The SHGc shall be 0.59, per NFRC 100, 200 & 500 testing
8. Operating Force: The panel / sash shall have been adjusted to operate, in either direction, with a force not exceeding 79 N (25 lbs.) after the panel / sash is in motion.
9. Forced Entry Resistance: Window shall have successfully passed ASTM F-588 standard and attained a Grade 40.

1.06 QUALITY ASSURANCE:

- A. Provide test reports from an independent laboratory certifying that the performance for air infiltration, water resistance, uniform structural load, and condensation resistance, has been met or exceeds the criterion as set forth herein.

2.01 GENERAL:

- A. Manufacturer: Subject to compliance with Contract Documents and specifications, provide one of the following:
 1. Model 4100 Slider w/ Integral Louver, HS-C60 below as manufactured by SEAL CRAFT.
- B. Thermal Break Construction: Fabricate aluminum window units with an integral low-conductance polyurethane thermal barrier, located mid-frame between exterior and interior of the window, and in a manner, which eliminates direct metal-to-metal contact.
- C. Window Construction: Provide manufacturer's standard construction, which has been in use on similar window units and has been tested to demonstrate resistance to thermal conductance and condensation and has been tested to show adequate strength for this purpose. Utilize a common jamb from slider through louver, stacking the operable over louver will not be acceptable.

2.02 FABRICATION:

- A. Aluminum Extrusions: All extruded sections shall be of 6063-T5 aluminum alloy and temper recommended by window manufacturer for strength, corrosion resistance, and application of required finish.
- B. Fasteners: Aluminum, stainless steel, or other materials warranted by fastener manufacturer to be non-corrosive and compatible with aluminum window members, and related components of window units.
- C. Sash / panels shall have replaceable roller assemblies which have unitized full race ball bearing roller and axel assemblies. Roller shall be adjustable and of a bronze alloy no plastic rollers will be accepted.
- D. Glazing with cured rubber tape, expanded cellular glazing tape or units may be wet glazed with a high quality bedding compound. Both operable panel and fixed light shall be glazed using re-useable glazing beads.

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- E. Mainframe and rolling panel members shall have aluminum thickness as allowed by AAMA/WDMA/CSA 101/I.S.2/A440-05. The standard wall thickness tolerance as defined by the Aluminum Association shall apply. The master frame shall be no less than 63.5mm (2-1/2") in depth.
- F. Window / louver shall have integral nail-fin frame and incorporate a tank type sub-sill. The sub-sill shall have mechanical end dams, which also utilize a nail-fin that is in alignment with the windows' fin. The sub-sill shall accommodate being anchored without breaching the sill itself and allow base of louver to be of ample height above the finished floor line.
- G. Integral Free-air louver unit shall be prepared to accept standard PTAC units and shall be tested per AMCA 500-L Air Performance / Pressure Drop test. The Contractor shall insure that the PTAC manufacturers free-air and external drain requirements are met.
- H. Blank-off panels, either full or prepped for PTAC may be required. Review Plans for location and type of each. Such panels shall have aluminum skins both sides, finished to match, over styrofoam core. These blank-off panels shall be set on setting blocks just as insulated does.
- I. All insulated glass shall be glazed at the factory as follows:
 - 1. All units shall be constructed to an overall minimum thickness of 15.8 mm (5/8") with two lights of 3mm (1/8), or as unit size, loading and/or local codes may require.
 - 2. All insulated glass units shall be tested, certified and carry the respective CBA level certification.
- J. Screens: If drawings indicate screens, supply half insect screens for windows in accordance with manufacturer's standard product. Provide aluminum mesh screen cloth.

2.03 ALUMINUM FINISHES:

- A. Provide organic coating of type and color indicated or selected by Architect. Comply with AAMA 2603. Application of finish must be by window manufacturer for all components to ensure match.
 - 1. Manufacturer's standard electrostatically applied powder coating of manufacturer's standard color(s) as selected by the Architect and applied over manufacturer's standard substrate preparation including cleaning, degreasing, and appropriate pre-treatments.

PART 3 – EXECUTION

3.01 - PREPARATION

- A. Prepare openings and chink with insulation, if necessary, to avoid excessive air infiltration from wall cavity; and to be in tolerance, plumb, level, and block as necessary to provide for secure anchoring in accordance with industry standards and the approved shop drawings.

3.02 - INSTALLATION

- A. Install windows in accordance AAMA 2400-02 and per ASTM E 2112, per approved shop drawings and using skilled craftspeople that have demonstrated a successful history of installing commercial window systems for at least five years. If units are to be installed in EIFS veneer, it shall be the General Contractor's responsibility to insure that openings are properly back-wrapped, prepared per EIMA guidelines and current procedures prior to window installation.

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- B. Provide required blocking and support, securely fasten and set windows plumb, square, and level without twist or bow. For horizontal sliding windows, care must be taken to insure that jambs are not bowed inward or outward. Block and anchor jambs to insure they remain in tolerance, plumb and that locks function properly.
- C. Apply sealant per AAMA 800-92 and pursuant with sealant manufacturer's recommendations, at all exterior joinery. Wipe off any excess sealant and tool all sealant leaving exposed surface clean and smooth.

3.03 - ADJUSTING AND CLEANING

- A. Installing contractor shall clean all aluminum surfaces promptly after installation, following either AAMA 609-93 and/or 610.1-79 standards. Comply with AAMA CW-10-82. Report any shipping damages, in writing, to window manufacturer and General Contractor with 72 hours of receipt.
- B. Installing contractor shall make all final adjustments to locks, rolling panels and/or hardware, to insure proper operation, weather-ability and shall touch up any minor blemishes.
- C. Installing contractor shall clean glass, after installation, to remove any glazing labels, excess glazing compound or other sealant and any other foreign substances. Initiate protection and precautions as required insuring that windows are not misused or abused by other Trades. Special care must be taken to insure that debris is removed and kept out of sill track and that weep holes remain open / unblocked on all sliding windows.

END OF SECTION