

**HORTON AUTOMATICS - ARCHITECTURAL SPECIFICATIONS, 2/99
SERVICE WINDOW SERIES 8000**

DIVISION 8 - DOORS AND WINDOWS

SECTION 8582 - PASS AND OBSERVATION WINDOWS

Specifier Note: Coordinate and edit Articles and Paragraphs below to suit project requirements. Add section numbers and titles per CSI "MasterFormat" and specifier's practice. Consult with manufacturer regarding performance requirements for window units applicable to project, as well as, related equipment and accessories required.

PART I - GENERAL

1.01 SUMMARY

- A. Section Includes: Horton Automatics Sani-Serve™ aluminum automatic and manual drive-thru serve windows.
- B. Related Work Covered in Other Applicable Sections Include:
 - 1. Masonry: Division 4, applicable sections
 - 2. Electrical: Division 16, applicable sections
 - 3. Storefront; Glass; Hardware: Division 8, applicable sections
 - 4. Perimeter Sealants ; Insulation: Division 7, applicable sections

1.02 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards subsequently referred to herein are referred to by an authority abbreviation and a basic designation.
- B. [American Society for Testing and Materials \(ASTM\)](#):
 - 1. [ASTM B221](#): *Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.*
 - 2. [ASTM C1036](#): *Specification For Flat Glass*
 - 3. [ASTM C1048](#): *Specification For Heat Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass*
 - 4. [ASTM E774](#): *Specification For Sealed Insulating Glass Units.*
- C. [The Aluminum Association \(AA\)](#):
 - 1. AA Aluminum Finishes Manual
- D. [American Architectural Manufacturer's Association \(AAMA\)](#):
 - 1. ANSI/AAMA 101: Voluntary Specs. for Aluminum & Poly Vinyl Chloride Prime Windows & Glass Doors
- E. [Underwriters Laboratory, Inc. \(UL\)](#) and [Underwriters Laboratory of Canada \(ULC\)](#):
 - 1. [UL 325](#): Electrical Door, Drapery, Gate, Louver, and Window Operators and Systems
 - 2. [UL 752](#): Ballistic Resistance Standard, Levels 1-4
- F. [American National Standards Institute \(ANSI\)](#):
 - 1. [ANSI Z97.1](#): Safety Glazing Materials Used in Buildings - Safety Performance Specs & Methods of Test.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide automatic or manual aluminum windows which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with *Conditions of the Contract* and Division 1 Submittal Procedures Section.
- B. Product Data: Submit manufacturer's product data and standard details for automatic and manual windows.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, product components including anchorage, accessories, finish and glazing details (where required).
- D. Quality Assurance Submittals and Closeout Submittals: Submit the following:
 - 1. Manufacturer's Installation instructions and Operation and Maintenance Data.

2. Warranty document as specified herein.

1.05 QUALITY ASSURANCE

- A. Installers Qualifications: Installer experienced (as determined by contractor) to perform work this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.
- B. Manufacturers Qualifications: Manufacturer to have minimum (5) five years successful experience in the fabrication of automatic/manual windows of the type required for this project. Manufacturer capable of providing field service representation during installation, approving acceptable installer and approving application method.

1.06 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: To avoid construction delays comply with ordering instructions and lead time requirements as set out in Horton Automatics Price List, *Terms and Conditions* section.
- C. Delivery: Deliver items in factory's original, unopened, undamaged containers with identification labels intact.
- D. Storage/Protection: Storage to provide protection from exposure to harmful weather conditions and vandalism.

1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions/openings by field measurements before fabrication and record on shop drawings. Coordinate with fabrication and construction schedule to avoid construction delays.

1.08 WARRANTIES

- A. Project Warranty: Refer to *Conditions of the Contract* for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for owner's acceptance, manufacturer's standard warranty document executed by authorized Horton Automatics company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights owner may have under the Contract Documents.
 - 1. Warranty Period: One year warranty shall be provided commencing on Date of Substantial Completion.
- C. Distributor's Warranty: The installing distributor shall provide a one-year warranty covering the labor and transportation charges for defective parts replacement.

PART II - PRODUCTS

2.01 MANUFACTURER

- A. Name: Horton Automatics, a division of Overhead Door Corporation.
- B. Contact: 4242 Baldwin Blvd., Corpus Christi, TX 78405; (800) 531-3111, (361) 888-5591; Fax (800) 531-3108

2.02 EQUIPMENT

- A. Window Unit Components:
 - 1. Header: Aluminum, 4" (102 mm) deep by 6" (152 mm) high with removable face plate. *Transom optional.*
 - 2. Track: Aluminum, 1/4" (6 mm) wide, nylon covered, replaceable.
 - 3. Rollers: Steel, high quality ball bearing wheels 1-1/4" (32 mm) in diameter.
 - 4. Sliding panel(s) and fixed panel(s): Aluminum and glass
 - 5. Concealed guides: To stabilize bottom of sliding panel.
 - 6. Anti-derailing means: A continuous aluminum extrusion full length of travel of slide panel.
 - 7. Mohair weather-strip: On all strike rails as well as on adjoining vertical rails.
 - 8. Jambs: Aluminum, 1-3/4" (44 mm) by 4" (102 mm).
 - 9. Glass: Thickness and glazing as per unit type.
 - 10. Sill or counter (depending on unit type).
 - 11. Electromechanical operator, controls and control switches for automatic units.
 - 12. Hardware:

- a. Manual Locks: Single slide units equipped with Adams Rite® maximum security MS1850 lock, 1-5/32" (29 mm) cylinder, 6410 standard thumbturn and keeper. *Key cylinder optional.* Biparting units equipped with Adams Rite® MS1847-06 lock, escutcheon, spindle and lock knob, and keeper.
 - b. Autolock: All units equipped with automatic locking mechanism that securely locks the window every time it closes. It unlocks only if window unit is activated or if lock release is depressed.
 - c. Manual Recessed Pull: On interior side of strike rails of manual units
- B. Operator Components/Features for Automatic Units:
- 1. 1/2" threadless shaft constructed of induction hardened steel.
 - 2. Linear travel block utilizing six aircraft quality ball bearings with integral clutch and rod lubrication.
 - 3. 1/8 HP DC permanent magnet motor, 1800 RPM.
 - 4. Electronic control module.
 - 5. Fully and independently adjustable open speed, close speed and close check
 - 6. Adjustable time delay from 1 to 20 seconds
 - 7. Adjustable reversing circuit enabling operator to reopen window unit if closing path is obstructed.
 - 8. Circuit breaker (.5 Amp) for current overload protection
- C. Manufactured Window Unit Types: Sliding panels slide along the inside of the fixed panels for all the following:
- 1. Series 8100 (O-X or X-O): Flush-mount, automatic single slide unit with 1" (25 mm) insulated glass. *Option: 1/4" (6 mm) prep. without glass*
 - 2. Series 8100TS (O-X-X-O): Flush-mount, automatic biparting, unit with thin stile rails and 1/4" (6 mm) glass. *Option: 1" (25 mm) prep. without glass*
 - 3. Series 8200TS (O-X-X-O): Projected, automatic biparting unit with thin stile rails and 1/4" (6 mm) glass. Also includes stainless steel counter, 1/4" (6) tinted glass canopy and metal apron. *Option: 1" (25 mm) prep. without glass*
 - 4. Series 8300 (O-X/O-X or X-O/X-O): Projected, security/automatic single slide unit with 1" (25 mm) insulated glass in front panels and (6 mm) glass in projected panels. Sliding interlocking panels synchronized so that one is always in closed position. Also includes stainless steel counter. *Option: Bullet resistant glass.*
 - 5. Series 8900 (O-X or X-O): Single slide, flush-mount manual unit with 1" (25 mm) insulated glass. *Options: 1/4" (6 mm) prep. without glass; 2-1/2" (64 mm) low-profile header*

2.03 RELATED EQUIPMENT AND REQUIREMENTS

- A. Control Switches for Automatic Units: Each of the following is 24 V AC, class II circuit:
- 1. C8420 WinScan™ for Flush-mounted Units: Surface applied, active infrared presence detector factory wired and mounted to header section of unit. Detection pattern is aimed down and in front of the opening and has an adjustable range of 10" - 36" (254 - 914 mm) from sensor. Activation is initiated and maintained with interruption of pattern.
 - 2. C1160-4 Window Scan for Projected Biparting and Flush-mount Units: Surface applied and field installed to interior surface below and in front of opening. Includes stainless steel base and two Lexan enclosures with retroreflective photoelectric transmitter/receiver in one and reflector in other. Activation is initiated and maintained with interruption of beam between two enclosures.
 - 3. C519 Security Pushbutton for Projected Security Units: Three button switch, factory wired and installed, synchronizes two interlocking slide panels allowing only one to be open at any given time. Each button must be pressed once to open then again to close.
 - 4. C521 Pushbutton: Momentary contact switch serves as auxiliary mode of actuation for C8420 WinScan and C1160-4 Window Scan. Factory wired and installed.
- B. Optional Switches for Automatic Units:
- 1. Partial-Open Cut-off: Consult with factory for desired opening. Factory wired and installed.
 - 2. Latch Relay Module: Actuation button must be pressed once to open then again to close. Factory wired and installed.
 - 3. Fly Fan Switch: Magnetic reed switch factory installed in automatic or manual units for actuation of fly/insect suction fan when window is open. Fan and wiring by electrical contractor.

C. Electrical Requirements for Automatic Units:

1. General or electrical contractor shall furnish all wiring to operator. 120 VAC, 60 cycle, 1 phase, 15 amp service shall be provided. Actual amperage drawn per operator is less than 2 amps (average).

2.04 GLASS AND GLAZING

- A. General: Glass and glazing provided by manufacturer in thickness and type recommended for particular unit type; otherwise, general contractor to coordinate acquisition of glass in thickness and type in accordance with manufacturer's recommendations for prescribed design (manufacturer to provide corresponding glass stops for field glazing).
- B. Glass Materials (thickness as per unit type):
 1. Insulating Glass: ASTM E774, ASTM 1036.90, Dual-Seal.
 2. Tempered Glass: ASTM C1048, ASTM 1036.90,
 3. Safety Glazing: ANSI Z97.1.2.
 4. Security Glass: ASTM 1036.90, UL 752, polycarbonate and glass-clad polycarbonate

2.05 MATERIALS - STRUCTURAL WINDOW SECTIONS

- A. Extruded Aluminum with safety radius corners: ASTM B221, 6063-T5 alloy and temper, anodized:
 1. Structural Header Sections: Minimum 3/16" (5 mm) thickness
 2. Structural Frame Sections: Minimum 1/8" (3 mm) thickness
 3. Structural Panel Sections: Commercial grade

2.06 FABRICATION

- A. Panel Construction: Mortise and tenon type joints, neatly and mechanically secured. Sash consists of snap-in glass stops, snap-in glazing beads and vinyl gaskets.
- B. Frame Construction: Butt joints, neatly and mechanically secured by means of screws and formed aluminum corner brackets.
- C. Operator for Automatic Units: Electromechanical, modular type construction.

2.07 ACCESSORIES.

- A. Fasteners: Manufacturer's standard fasteners and anchors.

2.08 FINISHES.

- A. Standard Stock Finishes (for all exposed aluminum surfaces):
 1. 204-R1 Clear: Architectural Class II Clear (natural) Anodic Coating, AA-MI2C22A31
 2. 313-R1 Dark Bronze: Architectural Class II Anodic Coating with Integral Color, AA-MI2C22A32
- B. *Optional Finishes (for all exposed aluminum surfaces):*
 1. 312-R1 Light Bronze: Architectural Class II Anodic Coating with Integral Color, AA-MI2C22A32.
 2. 315-R1 Black: Architectural Class II Anodic Coating with Integral Color, AA-MI2C22A32.
 3. *Special Paint Coating: Color as selected.*

PART III - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with factory product data, technical bulletins, and installation and carton instructions.

3.02 EXAMINATION

- A. Site Verification of Conditions: Installer must verify that base conditions previously installed under other sections are acceptable for product installation according to with manufacturer's instructions. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of work. Do not start work until all negative conditions are corrected in a manner acceptable to the installer and manufacturer.

3.03 INSTALLATION

- A. General: Install window units plumb, level and true to line, without warp or rack of frames or sash with manufacturer's prescribed tolerances. Provide support and anchor in place.

1. Dissimilar Materials: Comply with AAMA 101, Appendix *Dissimilar Materials* by separating aluminum materials and other corrodible surfaces from sources of corrosion electrolytic action contact points. or
2. Weather-tight Construction: Install sill and other members in a bed of sealant or with joint filler or gaskets. Coordinate installation with wall flashings and other components of construction.
 - a. Refer to Division 7, Joint Sealers, Perimeter Sealants, and Building Insulation sections.
 - b. Refer to Division 4, Masonry, applicable sections.
 - c. Refer to Division 8, Storefront and Glass sections.
3. Electrical (for automatic units): General or electrical contractor to install all wiring to operator. Up to five units may be connected to single circuit. Refer to article 2.03, paragraph 'C' of this specification.
 - a. Refer to Division 16, Electrical, applicable sections.

3.04 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon owner's request, provide field service consisting of product use recommendations and product installation in accordance to manufacturer's instructions.

3.05 CLEANING, ADJUSTMENT AND PROTECTION

- A. Cleaning: After installation, installer to take following steps:
 1. Remove temporary coverings and protection of adjacent work areas.
 2. Remove construction debris from construction site and legally dispose of debris.
 3. Repair or replace damaged installed products.
 4. Clean product surfaces and lubricate operating equipment for optimum condition and safety.
- B. Adjustment (for automatic units): Installer to adjust operator and controls for optimum condition and safety.
- C. Advise contractor of precautions required through the remainder of the construction period, to ensure that doors will be without damage or deterioration (other than normal weathering) at the time of acceptance.

END OF SECTION