

HORTON AUTOMATICS - ARCHITECTURAL SPECIFICATIONS, 2/2005

ELEGANT™ SERIES 2500 ELECTRIC BELT DRIVE OPERATOR WITH ALL GLASS DOOR PANELS

DIVISION 8 - DOORS AND WINDOWS SECTION 08460 - AUTOMATIC ENTRANCE DOORS

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 units applicable to project, as well as, related equipment and accessories required.

PART I - GENERAL

1.01 SUMMARY

- A. WORK INCLUDED: Furnish complete automatic aluminum door system, as specified, that has been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.
- B. RELATED WORK:
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. [AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION \(AAMA\) 101: Appendix Dissimilar Materials.](#)
- B. [AMERICAN ASSOCIATION OF AUTOMATIC DOOR MANUFACTURERS \(AAADM\).](#)
- C. [AMERICAN NATIONAL STANDARDS INSTITUTE \(ANSI\):](#)
1. [ANSI Z97.1:](#) Safety Glazing Materials Used in Buildings - Methods of Test.
 2. [ANSI A156.10:](#) For Power Operated Pedestrian Doors; Sliding Doors section.
- D. [AMERICAN SOCIETY FOR TESTING AND MATERIALS \(ASTM\):](#)
1. [ASTM B221:](#) Aluminum-Alloy Extruded Bars, Rods, Shapes and Tubes.
 2. [ASTM C1036.90:](#) Flat Glass
 3. [ASTM C1048:](#) Heat Treated Flat Glass, Kind HS, Kind FT Coated and Uncoated Glass
- E. [NATIONAL FIRE PROTECTION ASSOCIATION \(NFPA\) 101:](#) Code for Safety to Life from Fire in Buildings & Structures.
- F. [THE ALUMINUM ASSOCIATION \(AA\)](#) Aluminum Finishes Manual.
- G. [UNDERWRITERS LABORATORY, INC.\(USA & CANADA\) UL 325:](#) Electrical Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.03 SUBMITTALS

- A. PRODUCT DATA: Submit manufacturer's complete product and installation data.
- B. SHOP DRAWINGS: Submit drawings showing layout, profiles, product components including anchorage, accessories, finish and glazing details (where required).
- C. QUALITY ASSURANCE AND CLOSEOUT SUBMITTALS: Submit the following:

1. Manufacturer's Operation and Maintenance Data.
2. Warranty document as specified herein.
3. AAADM inspection compliance form completed and signed by certified AAADM inspector prior to doors being placed in operation as proof of compliance with ANSI A156.10.

1.04 QUALITY ASSURANCE

- A. **INSTALLERS QUALIFICATIONS:** Installer experienced (as determined by contractor) to perform work of 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. **MANUFACTURER'S QUALIFICATIONS:** Manufacturer to have minimum (5) five years successful experience in the fabrication of automatic doors of the type required for this project. Manufacturer capable of providing field service representation during installation, approving acceptable installer and approving application method.

1.05 WARRANTIES

- A. **MANUFACTURER'S WARRANTY:** Units to be warranted against defect in material and workmanship for a period of one year from the Date of Substantial Completion. Manufacturer's warranty is in addition to, and not a limitation of, other rights owner may have under Contract Documents.
- B. **DISTRIBUTOR'S WARRANTY:** One year warranty: Labor and transportation charges for defective parts replacement.

1.06 PROJECT CONDITIONS

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.

1.07 DELIVERY, STORAGE AND HANDLING

- A. **ORDERING AND DELIVERY:** Comply with factory's ordering instructions and lead time requirements. Delivery shall be in factory's original, unopened, undamaged containers with identification labels intact.
- B. **STORAGE AND PROTECTION:** Provide protection from exposure to harmful weather conditions and vandalism.

PART II - PRODUCTS

2.01 MANUFACTURER

HORTON AUTOMATICS, a division of Overhead Door Corporation, shall manufacture automatic sliding door(s) of type(s) and size(s) specified on plans and door schedule.

2.02 EQUIPMENT

- A. **MANUFACTURED DOOR UNITS:** Shall include operator, header and track, jambs, sliding door panel(s), and sidelite(s). Units shall be mounted within rough opening with sliding panel(s) sliding along sidelite. Units will be either single-slide or bipart and will be one of the following unit types:
 1. Type 010: Sliding panel(s) shall slide along interior side.
 2. Type 110: Slide-swing panel(s) shall slide along exterior side.
- B. **OPERATOR:** The Electric Operating Mechanism shall be Series 2001 Belt Drive. Maximum current draw shall not exceed 3.15 amps. The heavy duty operator shall be mounted and concealed within the header.

1. Operating force shall be accomplished through a 1/8 HP DC permanent magnet motor with heavy duty worm gear transmission and 1800 RPM working with drive belt, attached door hangers, and idler pulley (1/4 HP motor required for door panels weighing 500 lbs). Drive belt to be steel reinforced nylon, 1" (25.4 mm) wide. Idler pulley to be reinforced, metallic material.
2. Microprocessor Master Control shall have Version 2 software and have dual on-board seven-segment diagnostic display. The control shall have minimum of 28 programmable parameters including those functions required by ANSI A156.10. Control shall include separate day and night modes of operation with security over-ride. Adjustable Reversing Circuit will reopen door unit if closing path is obstructed. Maximum force required to prevent sliding panel from closing = 28 lbf.
3. On/Off Switch shall be supplied. When switched OFF, unit reverts to free manual operation (likewise during electrical power failure).

C. SECURITY AND SAFETY POWER FAIL OPTIONS:

1. Automatic lock: Automatically locks slide function of door when in closed position. Additional power supply for autolock not acceptable.
 - a. Autolock Fail Secure: If power fails the lock engages.
 - b. Autolock Fail Safe: If power fails the lock disengages.
2. Monitored Power Fail Options (battery back-up):
 - a. Software Selectable Power Fail Open: If power fails the door slides open.
 - b. Software Selectable Power Fail Close: If power fails the door slides closed.

D. HEADER: Shall be 6" (152 mm) deep by 8" (203 mm) high aluminum construction with removable face plate.

E. HEADER TRACK: Shall be aluminum and replaceable. Rollers will be non-metallic, high quality ball bearing wheels 2" (51 mm) diameter. Anti-Derailing shall be accomplished by means of a separate adjustable roller.

F. ELEGANT™ SLIDING PANEL(S) AND SIDELITE(S): Shall be 1/2" (13 mm) thick tempered glass mounted in upper and lower aluminum rails. Weather-stripping along adjoining vertical panels, retained in upper and lower aluminum rails and in clear acrylic extrusions mounted along edge of glass panel. Weather-stripping also along horizontal bottom rail of sliding panel(s).

1. Total weight limit per panel shall be:
 - a. 500 lbs. (226.8 kg) for slide panel (non-breakout)
 - b. 156 lbs. (70.7 kg) for UL listed slide-swing panel
2. Option: Additional and/or extra wide sidelites of size and type indicated.

G. EMERGENCY EGRESS: Slide-swing panels can swing out 90° from any position of slide movement and require no more than 50 lbf. (222 N) of force applied at the strike edge to open.

1. Breakout mechanism shall provide support across full width of the door, in normal operating mode. In breakout mode, torsion assembly shall support weight of the door to minimize drop during emergency egress.
2. Units with emergency egress feature are UL listed as an exit way and are compliant with NFPA 101.

H. JAMBS/FRAME: Shall be aluminum. Jamb dimensions to be:

1. 1 3/4" (44 mm) deep by 4" (102 mm) wide for Types 010 and 110
2. Frame Option: Transom: of size and type indicated, mounted on header

I. THRESHOLD: Shall be aluminum, 1/2" (25 mm) tall by 4" (102 mm) wide. Optional: to be 7" (178 mm) wide.

J. HARDWARE: Provided and installed in bottom rail shall be Maximum Security Lock with 31/32" (25 mm) backset and Two-point keyed 1 5/32" (29 mm) standard size cylinder. Deadlock dropbolt into threshold.

2.03 RELATED EQUIPMENT

BASIC SENSOR SYSTEM: Shall be 24 VDC, class II circuit and shall be adjusted and installed in compliance with ANSI A156.10. System shall include the following:

- A. Activation sensors: Microwave or active infrared sensor shall be header-mounted each side of door unit for detection of traffic from each direction.
- B. Threshold presence sensors:
 - 1. Header mounted sensors shall provide active infrared presense detection on each side of the door unit and shall remain active throughout the entire door opening and closing cycle.
 - 2. Hold-open beams: Two pulsed infrared photoelectric beams to be mounted in jambs. Sender/receiver arrangement parallels door opening.

2.04 RELATED WORK REQUIREMENTS

- A. ELECTRICAL: 120 VAC, 50/60 cycle, single phase, dedicated 20 amp circuit per operator. Non-North American voltages can be 240 VAC 50/60 cycle (operator must have 240 volt power supply).
- B. GLASS AND GLAZING: Shall be provided by manufacturer in thickness and type recommended for particular unit type. Tempered glass as per ASTM C1048, ASTM 1036.90.

2.05 MATERIALS, FINISHES AND FABRICATION

- A. EXTRUDED ALUMINUM: 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 (top and bottom rails): Minimum 1/8" (3 mm) thickness.
- B. FINISHES (for all exposed aluminum surfaces): Standard shall be 204-R1 Clear: Arch. Class II Clear Anodized Coating, AA-MI2C22A31.
Optional finishes can be:
 - 1. 313-R1 Dark Bronze: Arch. Class II Anodized Coating, AA-MI2C22A32.
 - 2. 312-R1 Light Bronze: Arch. Class II Anodic Coating, AA-MI2C22A32.
 - 4. 315-R1 Black: Arch. Class II Anodic Coating, AA-MI2C22A32.
 - 5. Special Paint Coating: Color as selected.
 - 6. Clad with stainless steel or muntz metal (brass alloy): #7 or #4 finish.
- C. FRAME CONSTRUCTION: Butt joints, mechanically secured by means of screws and formed aluminum corner brackets.
- D. OPERATOR CONSTRUCTION: Electromechanical, modular type construction.

PART III - EXECUTION

3.01 EXAMINATION

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.

3.02 INSTALLATION

- A. GENERAL: Install door 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.

- B. DISSIMILAR MATERIALS: Comply with AAMA 101, Appendix Dissimilar Materials by separating aluminum materials and other corrodible surfaces from sources of corrosion or electrolytic action contact points.
- C. WEATHER-TIGHT CONSTRUCTION: Install header and framing members in a bed of sealant or with joint filler or gaskets. Coordinate installation with wall flashings and other components of construction.
- D. ELECTRICAL: General or electrical contractor to install all wiring to operator on a separate circuit breaker routed into header.

3.03 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: AAADM certified technician shall inspect and adjust installation to assure compliance with ANSI A156.10.
- 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