

Automated Door Solutions by La Force - Architectural Specifications
Series 4400-U "Under the Floor"
(Fully Automatic Entrance Swing Doors or Gates)

DIVISION 8 - OPENINGS
SECTION 08 71 13 - AUTOMATIC DOOR OPERATORS

Specifier Note: Coordinate and edit articles and paragraphs below to suit project requirements. Add section numbers and titles per CSI "Master Format" and specifier's practice. Consult with manufacturers regarding performance requirements for units applicable to project, as well as, related safety equipment and accessories which may be required.

PART I - GENERAL

1.01 SUMMARY

A. WORK INCLUDED: Furnish complete automatic 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 04, applicable sections. (Preparation of slab "Block out" for operator housing)
2. Perimeter Sealants; Insulation: Division 7, applicable sections.
3. Openings; Doors, glass, frames; Hardware: Division 8, applicable sections.
4. Electrical: Division 16, applicable sections. (Conduit and wire pull between operator housing, remote control location and activation device location if applicable as well as 110 VAC to control location)

1.02 REFERENCES

A. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION

1. AAMA 101: Appendix Dissimilar Materials

B. AMERICAN ASSOCIATION OF AUTOMATIC DOOR MANUFACTURERS (AAADM)

C. AMERICAN NATIONAL STANDARDS INSTITUTE:

1. ANSI Z97.1: Safety Glazing Materials Used in Buildings - Methods of Test.
2. ANSI A156.10: For Power Operated Pedestrian Doors
3. ANSI A156.19: For Power Assist and Low Energy Power Operated Pedestrian Doors.

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS:

1. ASTM B221: Aluminum-Alloy Extruded Bars, Rods, Shapes and Tubes.

E. NATIONAL FIRE PROTECTION ASSOCIATION:

1. NFPA 101: Code for Safety to Life from Fire in Buildings & Structures.

F. THE ALUMINUM ASSOCIATION:

1. AA Aluminum Finishes Manual.

G. UNDERWRITERS LABORATORY, INC.:

1. UL 325: Electrical Door, Drapery, Gate, Louver, and Window Operators and Systems

H. UNDERWRITERS LABORATORY OF CANADA (ULC)

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. TEMPLATES AND DIAGRAMS: Furnish templates, diagrams and block out dimensions and other pertinent data to fabricators and installers of related work for mounting operators in the floor and the coordination with doors, frames, pivots, hardware, electrical and other work.

D. 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 and/or ANSI A156.19.

1.04 QUALITY ASSURANCE

A. INSTALLER (DISTRIBUTOR'S) QUALIFICATIONS: Installer to be AAADM Certified and have a minimum (5) years successful experience (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 and operators 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 (1) 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. INSTALLERS (DISTRIBUTOR'S) WARRANTY: One year warranty - labor and transportation charges for defective parts replacement during normal business hours.

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

Automatic swing door operator(s) furnished and installed shall be of type(s) and size(s) specified and as indicated on plans and door schedule.

Automatic swing door operator(s) and controls to be manufactured by:

Horton Automatics
4242 Baldwin Blvd
Corpus Christi, TX 78405
Ph 800.531.3111
www.hortondoors.com

and used in conjunction with:

Automated Door Solutions by La Force
4195 Chino Hills Pkwy
Chino Hills, CA 91709
Ph/Fax 866.945.7594
www.automateddoorsolutions.com

2.02 EQUIPMENT

A. MANUFACTURED OPERATOR UNITS:

Type Series 4400-U "Under the Floor" – For Use With Horton Side Load or Bottom Load 4100 Operator: Below the floor mounted operator with pivot shaft and drive arms: The aluminum operator housing shall be mounted and concealed under the floor and/or on the ceiling of the floor below desired door location. For side load operators, a header attachment bracket shall be mounted on ceiling below. System is specifically designed by Automated Door Solutions by La Force. Powder coated top bearing housing shall have a sealed top access cover. 1" door shaft shall be supported by no less than two sealed bearings and one thrust bearing (three in total). Operator and pivot shaft system is handed and shall be confirmed prior to delivery to site. Door connecting hardware shall be a center hung, off-set or independent slide track drive arm system to match specified pivot systems as required for project.

Swing door panel or gate, glass and glazing, perimeter framing, door connecting hardware and commercial door hardware shall be by others.

B. HEADER:

HD-SWING® HEADER: Shall be available in the following configurations:

1. Side Access: Shall be extruded aluminum case 6" x 6" (152 mm x 152 mm)
2. Bottom Access: Shall be extruded aluminum case 4 1/2" x 6" (114 mm x 152 mm). This configuration will allow for bottom of header to be flush with ceiling.
3. Type 4100: Surface Applied Operator with Connecting Arms: The operator header shall be mounted to the Header attachment bracket as provided with the ADS 4400-U. Connecting hardware shall be a double arm arrangement that can either push the door or pull the door open to suit the job condition.

C. OPERATOR:

The Electric Operating Mechanism shall be Series 4000: Operator shall be isolation mounted and concealed in an extruded aluminum case for smooth and quiet operation. Maximum current draw shall not exceed 3.15 amps.

1. Opening action shall be accomplished by a 1/8 HP D.C. permanent magnet motor working through reduction gears to the output shaft. Gear train bearings shall be sealed ball bearing types.

2. Closing action shall be accomplished by a maximum-duty Quadracoil™ spring (four independent coil springs separated by teflon discs and enclosed in an external spring box) with a lifetime warranty. Close speed control shall be supplied by dynamic braking of the motor and shall be fully adjustable. Operator to act as a manual closer when power is off or when the master control unit is removed. An On/Off/Hold Open switch shall be supplied.
3. Master Control: Shall incorporate the following features:
 - a. Adjustable time delay of 1 to 28 seconds.
 - b. Infinite adjustment to opening and open check speeds including adjusting the opening force without affecting the opening speed.
 - c. Immediate reversal of door motion without undue strain on the drive train. This will be accomplished by supplying stepped voltage to the motor. The door shall reverse when closing if an object stops the door.
 - d. Motor Protection Circuit: A locked door motor protection circuit will be supplied that will shut off current to the motor when the door is inadvertently locked or otherwise prevented from opening.

2.03 RELATED EQUIPMENT

- A. BASIC SENSOR SYSTEM: Shall be 24 VAC, class II circuit Vista™ package and shall incorporate the following:
 1. Activation sensor: Shall be one of the following:
 - a. Microwave unidirectional/bidirectional motion sensor shall activate the door (approach side).
 - b. Active infrared motion/presence sensor shall activate the door (approach side).
 2. Swing Side safety sensor: Overhead-mounted active infrared sensor shall utilize diffused technology.
 - a. Sensor shall keep a closed door from opening or an open door from closing when safety zone (swing door area) is occupied.
 - b. When door is in open position the swing side safety sensor shall provide threshold protection covering the full width of door overlapping into activating zone.
 3. Pulsed infrared Sentinel™ photo beam shall be mounted beyond the swing of the door for ANSI compliance.
- B. ENHANCED SENSOR SYSTEM: Shall be 24 VAC, class II circuit. Enhanced Vista™ system shall utilize same activation sensor and swing side safety sensor as basic Vista™ system but shall include additional door mounted presence sensors for each side of the swinging door panel. The door mounted presence sensors shall be an advanced presence sensor utilizing focused active infrared technology to provide safety zone protection for swing doors. It shall incorporate distance measurements and shall be insensitive to reflections from the door surface.
- C. GUIDE RAILS: Shall be provided on swing side of door unless protected by adjacent wall.

2.04 RELATED WORK REQUIREMENTS

- A. ELECTRICAL: North America -120 VAC, 60 cycle, 1 phase, 15 amp circuit.
Non-North American voltages can be 240 VAC (operator must have special order 240 volt power supply)
- B. GLASS AND GLAZING: Glazing Materials: Glass stops, glazing vinyl and setting blocks for field glazing as per Safety Glazing standard ANSI Z97.1.2. General contractor to coordinate acquisition of glass in thickness and type in accordance with manufacturer's recommendations for prescribed design.

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 operator housing in concrete and seal threshold cover (provided by others) with sealant or with joint filler or gaskets. Coordinate installation with wall flashings and other components of construction for proper drainage.

D. ELECTRICAL: General or electrical contractor to install all wiring to operator on a separate circuit breaker routed into remote control panel located no further than 100 feet from door opening.

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: 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.

Automated Door Solutions by La Force reserves the right to make product improvements and change specifications without notice.

END OF SECTION