

**HORTON AUTOMATICS - ARCHITECTURAL SPECIFICATIONS, SECTION C8, 10/96
ULTRA CLEAN STERILE SLIDING DOOR AND ELECTRIC OPERATOR**

DIVISION 8 - DOORS AND WINDOWS

SECTION 8342 - INDUSTRIAL AND HANGER 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 industrial door units applicable to project, as well as, related equipment and accessories required..

PART I - GENERAL

1.01 DESCRIPTION

This section covers the furnishing and installation of a complete automatic industrial sliding door system. It includes operator, track, doors and activating devices all as required for installation as shown and specified.

1.02 RELATED WORK COVERED BY OTHER APPLICABLE SECTIONS OF SPECIFICATION

SHALL INCLUDE:

- Preparation of Opening
- Floor Preparation
- Electrical Supply and Termination (120 VAC, 20 amp Dedicated Circuit)

1.03 QUALITY ASSURANCE

- A. [ANSI A156.10](#) STANDARD: Provide automatic entrance doors to comply with applicable requirements of Power Operated Pedestrian Door Standard where applicable to door type.
- B. [UL 325](#): Provide powered door operators to comply with UL 325, Electrical Door, Drapery, Gate, Louver and Window Operators and Systems.
- C. MANUFACTURER'S QUALIFICATIONS: Provide units produced by a firm with not less than five years successful experience in the fabrication of automatic doors of the type required for this project.
- D. INSTALLER'S QUALIFICATIONS: Engage an installer who is an authorized representative of the automatic door manufacturer for both the installation and maintenance of the type of units required for this project.

1.04 SUBMITTALS

- A. PRODUCT DATA: Submit manufacturer's product data and standard details for automatic industrial doors, including fabrication, finishing hardware, operators, accessories and other components of the work. Include rough-in diagrams, wiring diagrams, parts lists and maintenance instructions, as well as certified test data (where required).
- B. TEMPLATES AND DIAGRAMS: Furnish templates, diagrams and other data to fabricators and installers of related work, as needed for coordination of automatic entrance installation.
- C. SHOP DRAWINGS: Submit shop drawings for the fabrication and installation of automatic industrial doors and associated components of the work. Indicate anchors, joint system, expansion provisions, hardware and other components not included in manufacturer's standard data. Include glazing details (where required).

1.05 WARRANTY

Units to be warranted against defect in material and workmanship for a period of one year from the date of installation.

PART II - PRODUCT

2.01 MANUFACTURER

Automatic sliding door(s) shall be of type(s) and size(s) as indicated on plans and manufactured by Horton Automatics, a division of Overhead Door Corporation.

2.02 EQUIPMENT

- A. DOOR UNITS: Shall be Ultra Clean- Series and include operator, header and track, jambs (if required), sliding door and sidelite if required.
OPTIONS: All exposed surfaces of header shall be:

- (1) 204R1 Clear or 313R1 Dark Bronze Anodized Aluminum
- (2) Stainless Steel cladding to match door material

Continuous extruded header section shall conceal the ball bearing wheels on support track and house operator. All structural aluminum sections shall be 6063T-5 alloy. Concealed guides shall stabilize bottom of door. Anti-derailing shall be provided full length of door travel.

B. DOOR CONSTRUCTION: Shall be: (Select desired construction)

- (1) Stainless steel — Shall be #4 (304) brushed stainless steel in 18 gauge. The core shall be honeycomb for rigidity.
- (2) Fiberglass — Shall be door panels with face sheets using a corrosion resistant isophthalic polyester resin system with light stabilizing additives. The resin shall be reinforced with fiberglass mat which is layered to give the laminate optimal bidirectional strength. (Where deemed necessary by either the client or the factory, one of the following resin systems shall be substituted to meet the corrosive conditions: vinylester, high temp vinylester, bisphenol polyester, halogenated polyester.)

The finish of the face sheet shall be a 15 mil. gel coat with a color impregnation in (a) white or (b) gray.

A 1 1/2" (38 mm) thick rigid block of polyurethane shall be the core. The K factor is .14BTU in/hr/sq.ft./1.

OPTION: View Panel - Lites shall be (a) wireglass or (b) polycarbonate. Snap-in aluminum kits shall be the glass trim.

Doors shall be full perimeter weather-stripped with Buna-N on verticals and polyurethane on horizontal members.

Unit shall be type: (Select desired type)

- (1) (O-X) The sliding panel shall be installed to inside of sidelite. Sliding panel slides along sidelite. (No swing panels in this Series.)
- (2) (O-SX) The swing-slide panel (SX) shall swing out 90 degrees from any position of slide movement for emergency exit.
- (3) (O/SO-SX) Swing pocket panel applies to the outside of the unit. No locks shall be applied to swing pocket panel.

C. HARDWARE: If locking is required, sliding panel (X or SX) shall have Adams Rite Maximum Security Lock MS 1853A 505 31/32" (25 mm) with 1 5/32" (29 mm) standard size cylinder. Biparting SX doors are provided with two point dead lock hook bolt for panel and drop bolt into the threshold.

D. ELECTRIC OPERATOR: Shall be a Horton Series 6-7020 electromechanical, utilizing a 1/8 Hp, DC permanent magnet motor with gear transmission and belt drive (1/4 Hp motor required on biparting doors weighing more than 160 lb. each), shall be header mounted and concealed with a securely attached, hinged cover. The belt shall be steel stranded polyurethane and nylon, 1" (25 mm) wide. The operator shall have a time-delay adjustable from 1 to 28 seconds. The opening speed, closing speed, back check and latch check shall be fully and independently adjustable. Braking or checking shall be an integral function of the operator for deceleration of the moving panel. For protection in case of electrical power failure, operator shall revert to free manual operation of the door. A power ON/OFF switch shall be located on the inside of the header and shall serve a second function as "hold open" for door when in off position.

The operator's microprocessor control shall include programming on open/close check speed and time-delay and shall include a digital readout for diagnostics. An encoder shall be used to memorize and continuously recheck the door's position and to issue instruction for the functions of partial opening (optional) and check the door's speed.

Door opening speed shall be capable of opening a biparting door at a rate of 60" (1524 mm) per second if total door weight is less than 400 lbs. (181 kg.). Doors weighing between 400-600 lbs. (181-272 kg) must be operated at a slower rate of speed.

The operator shall reverse when maximum force of 28 lbs. (13 kg.) is exerted to prevent the door from closing. The reverser shall be field adjustable to meet job conditions.

OPTION: An auxiliary power supply for emergency opening in a power failure and a selection switch for traffic control, auto lock and partial opening.

CONTROL FUNCTION:

- (1) Signal to open; closes automatically after adjustable time-delay expires. Recycles at any point of closing.
- (2) Signal to open; signal to close. Recycles at any point of closing.
- (3) Combination of (1) and (2).
- (4) Partial opening cutoff for pedestrian traffic. Activation inputs are provided to allow the door to partially open to a 36" (914 mm) net opening when full opening is not necessary.

2.03 CONTROL SWITCH

Shall be by: (Select required method)

- (1) Motion Detector placed on each side of door
- (2) C1260 Push Plate Switch
- (3) C499 Pull Cord Switch
- (4) Touchless wall mounted switch using diffused scanning technology with adjustable range of 4"-12" (102-305 mm).

Multiple doors entering a clean room and/or vestibule area shall include a microprocessor based interlock control to prevent two doors from being open at the same time. The control shall keep track of the order of request from the activation switch. Design shall handle up to ten doors and shall have a memory capable of remembering order of open requests.

Each sliding door opening shall be provided with a Quadbeam threshold photoelectric safety system. The system shall consist of four transmitters, four receivers and one microprocessor based circuit board. Each of the transmitters and receivers shall be 15/32" (12 mm) in diameter and 1" (25 mm) in length. The four standard beam heights for industrial doors shall be 5", 24" 39" and 54" (127 mm, 610 mm, 991 mm, 1372 mm) above the finished floor. When any single beam is broken the system shall actuate the door and initiate an extended time-delay of 10 seconds. When any two subsequent beams are broken, the delay shall be reduced to an adjustable time-delay of 1 to 10 seconds.

2.04 REQUIREMENTS FOR WORK SPECIFIED IN OTHER SECTIONS

ELECTRICAL: The Electrical Contractor shall furnish and install all wiring to the operators. Provide each with 120 VAC, 60 cycle, 1 phase, 20 amp circuit.

NOTE: Operator draws 3 amps and is protected by internal circuit breaker.

PART III - EXECUTION

3.01 INSPECTION

Installer must examine the areas and conditions under which automatic doors are to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of work. Do not proceed with the work until all unsatisfactory conditions have been corrected in a manner acceptable to the installer and in accordance with approved shop drawings.

3.02 INSTALLATION

- A. Comply with manufacturer's specifications and recommendations.
- B. Set track and operator plumb, level and true to line, without warp or rack of doors. Anchor securely in place. Isolate aluminum and other corrodible materials from sources of electrolytic action at points of contact.
- C. Door system must be installed by a qualified Horton Automatics distributor/technician and in accordance with manufacturer's instructions, including drive mechanism, controls and control switches.

3.03 ADJUST AND CLEAN

- A. Adjust operator and controls for optimum condition and safety. Lubricate operating equipment.
- B. Clean surfaces promptly after installation, exercising care to avoid damage of the protective coating (if any).
- C. Advise contractor of protective treatment and other 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