

**HORTON AUTOMATICS - ARCHITECTURAL SPECIFICATIONS, SECTION C11, 10/96
ULTRA CLEAN ATMOSPHERIC AUTOMATIC SLIDING DOOR & 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)
- Air Lines and Air Supply if applicable

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 a technician who is authorized to represent the automatic door manufacturer for both the installation and maintenance of the type 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 include operator, header and track, jambs (if required), sliding door,

threshold and sidelite (if required). All structural aluminum sections shall be 6063T-5 alloy.

OPTIONS: All exposed surfaces of header and door shall be:

- (1) 204R1 Clear or 313R1 Dark Bronze Anodized Aluminum

Continuous extruded header section shall conceal ball bearing wheels on support track and house operator. Concealed guides shall stabilize bottom of door. Anti-derailing shall be provided full length of door travel. Track must be replaceable without having to remove operator.

B. DOOR CONSTRUCTION:

Door panel construction shall be by means of tongue-and-groove key fitted gussets that have two tempered bolts in each corner section to assure against racking failure. An adjustable astragal with double neoprene weather-strip shall be provided on all strike rails. Joining vertical panel rails shall have complementing vinyl weather-stripping, while horizontal rails shall be weather-stripped with vinyl type fabric. All vertical rails shall have safety radius corners. Horizontal rails shall include beveled glass stops. Sliding door with swing feature (and swinging sidelite) shall include a spring to reclose the door if placed in the swing position.

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(s) (SX) shall swing out 90 degrees from any position of slide movement for emergency exit.

- (3) (SO-SX) The swing out sidelite (SO) shall be installed to the exterior of the swing-slide panel (SX). Swing out sidelite(s) is provided to allow the sliding panel to swing out from any point of slide travel. A switch is installed in the sidelite to stop automatic operation when the sidelite is open. (The Series (O-SX) type unit is recommended unless a larger breakout opening is required.)

NOTE: The (SO-SX) is not as airtight as the (O-SX).

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" (26 mm) standard size cylinder. Biparting SX doors are provided with two point dead lock hook bolt for panels and drop bolt into the threshold.

OPTION: Automatic locking is available upon request.

D. OPERATOR: Select (1) ELECTRIC or (2) PNEUMATIC

- (1) ELECTRIC OPERATOR: Horton Series 6-2000 all electromechanical, microprocessor controlled operator shall be header mounted and concealed with a removable cover. It 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 be free to move manually. An ON/OFF power switch shall be located on the side of the header and shall serve as a second function as "hold open" for door.

The operator's closing speed shall be field adjustable to not exceed one foot per second closing speed. A clutch shall be provided to regulate the closing force to a maximum of 30 lbs. (14 kg) as is required by ANSI.

The operator shall include an electronic sensing device that will reopen the door when a maximum force of 28 lbs. (13 kg) is exerted to prevent the door from closing. The reverser shall be field adjustable to meet conditions.

- (2) PNEUMATIC OPERATOR: Horton Series 6-1000 Pneumatic operator with lifetime, noncorrosive, polyvinyl chloride cylinder. The piston rod shall be chrome plated with a dust seal and "U" packing rings. It shall be header mounted with a removable cover. It 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 and 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 be free to manually operate the door. An ON and OFF power switch shall be located on the side of the header and also serve as a "hold open" for door.

The operator shall be so designed and installed so the exhaust air is discharged outside the clean area.

Operator shall seal to jamb or opposing door with a constant force of 28 lbs. (13 kg) to assure a tight seal.

OPTIONS: Pneumatic explosion-proof operator including controls. Electromechanical solenoid valves and master controls shall be located in nonexplosive area within 25' (7620 mm) of operator.

2.03 CONTROL SWITCH

Standard actuation switch shall be by touchless wall mounted switch using diffused scanning technology with an adjustable range of 4" -12" (101-305 mm). (Motion detectors and other switching is available upon request.)

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 control up to ten doors and shall have a memory capable of remembering order of open requests.

Each sliding door opening shall be provided with two photoelectric beams, set at 24" (610 mm) and 48" (1220 mm), that will prevent the door from closing when either beam is interrupted. Beams shall be active while door is closing.

2.04 REQUIREMENTS FOR WORK SPECIFIED IN OTHER SECTIONS

A. ELECTRIC OPERATOR

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.

B. PNEUMATIC OPERATOR ONLY

(1) AIR SUPPLY REQUIREMENT: Shall be complete system with tank, compressor, motor, regulator, safety valve, pressure cutoff switch and automatic air line filter drain. It shall be capable of supplying all operators with 60 PSI air pressure at 1 CFM per door. The air must be filtered.

(2) PLUMBING: The General Contractor shall supply and install the air line to connect the supply tank on the air compressor to the Horton operator with copper tubing of proper size as recommended by the manufacturer. Drain traps shall be furnished and installed by the contractor at all low pocket points in the air line. This plumbing shall conform to local plumbing codes. If air lines are run in the floor slab (not recommended), conduit sleeve must be provided and drain traps shall be installed at all low points in the line. In areas where air lines are subjected to extreme cold, dehydrating equipment should be specified.

(3) ELECTRICAL: The General Contractor or Electrical Contractor shall furnish and install all wiring to operator and compressor. Each operator shall be provided with 120 Volt service to 4" x 4" x 1 1/2" (102 mm x 102 mm x 38 mm) square outlet box where a 120/24 VAC, NEC Class II 55 VA Horton Automatics Transformer shall be mounted. Provision shall be made for the flexible three conductor line provided by Horton Automatics to connect the transformer to the operator. Remote switches (if specified) shall be provided with control wire from switches to operators.

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