

SECTION 08730

AUTOMATIC DOOR OPERATORS



PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Hoist-type door operators for rolling doors, shutters, and grilles.

1.2 RELATED SECTIONS

- A. Section 06100 – Rough Carpentry: Installation and requirements for blocking and nailers.
- B. Section 16050 – Basic Electrical Materials and Methods: Installation and requirements for electrical connections.

1.3 REFERENCES

- A. National Electrical Manufacturers Association (NEMA): NEMA ICS 6 - Industrial Control and Systems: Enclosures.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation Methods.
 - 4. Cleaning Methods.
- C. Shop Drawings: Submit Shop drawings showing layout, profiles, and product components, including anchorage, edge conditions, and accessories.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Schedule delivery of door operator so that spaces are sufficiently complete that door operators can be installed immediately upon delivery.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 WARRANTY

- A. Manufacturer's standard limited lifetime warranty against material and manufacturing defects.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: The Chamberlain Group, Inc.; 845 Larch Avenue, Elmhurst, IL 60126-1196. ASD. Tel: (800) 282-6225. Fax: (630) 516-8412. Email: www.chamberlain.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 HOIST DOOR OPERATOR

- A. Heavy Industrial-Duty Gear-Reduced Operator: Continuous-duty high-starting torque motor with overload protection; Model GH; Chamberlain, Elmhurst, IL.
 - 1. Electric Operator: Model GH heavy industrial-duty assembly, with electric motor and factory-prewired motor controls, wormgear reduction unit, solenoid operated brake, 3-button OPEN/CLOSE/STOP control station, conduit and wiring from control to motor, and accessories required for proper operation.
 - a. Primary Speed Reduction Device: Wormgear-in-oil-bath gear reducer with synthetic "All Climate" oil with 45:1 speed reduction.
 - b. Limit Switches: Fully adjustable, driven linear-type switch mechanism synchronizing operator with door. Low-friction nylon limit nuts fitted on threaded steel shaft, rotating on oil-tight self-lubricating bronze bushings. Motor shall be removable without affecting limit switch settings.
 - c. Electric Motor: High-starting torque, continuous-duty, industrial-type protected against overload by current sensing or thermal overload device.
 - 1) Motor Specification (choose one):
 - (a) 115V-60Hz-1Phase; ½, ¾, 1, or 1-1/2 HP
 - (b) 230V-60Hz-1 Phase; ½, ¾, 1, or 1-1/2 HP
 - (c) 208/230V-60Hz-3 Phase; ½, ¾, 1, 1-1/2 HP, 2, 3, or 5 HP
 - (d) 230-50Hz-3 Phase; ½, ¾, 1, or 1-1/2 HP
 - (e) 380V-50Hz-1Phase; ½, ¾, 1, 1-1/2, 2, or 3 HP
 - (f) 460V-60Hz-3 Phase; ½, ¾, 1, 1-1/2 HP, 2, 3, or 5 HP
 - (g) 575V-60Hz-3 Phase; ½, ¾, 1, 1-1/2, 2, or 5 HP
 - d. Motor Control and Enclosure (choose one):
 - 1) Contactor-style (Mechanical) Motor Starter, Control, and Enclosure: Motor starter shall be an across-the-line, mechanically interlocked, magnetic-reversing contactor. Motor starting device shall be enclosed in a NEMA 1 enclosure and integral with the operator. Motor control device shall be enclosed in NEMA 1 enclosure and shall be integral with operator. Control enclosures shall conform to ANSI/NEMA ICS 6. Control enclosures shall conform to ANSI/NEMA ICS6.
 - 2) Solid-State Motor Control and Enclosure: LiftMaster LOGIC 3 motor control shall be UL approved microprocessor solid-state type, and include the capability to select one of seven wiring types and a maximum run timer for motor protection. Additional features shall include a maintenance alert diagnostic system, timer-to-close w/timer defeat input, and mid-stop programming capabilities. Motor control device shall be

enclosed in a NEMA 1 enclosure and integral with the operator. Control enclosures shall conform to ANSI/NEMA ICS6.

- (a) Radio Receiver: LiftMaster LOGIC 3 on-board, 3-channel receiver with standard external antenna; equipped to accept Security+ Rolling Code Technology remote transmitters and Trinary Dip Switch remote transmitters, with memory for up to 23 Security+ remote transmitters or an unlimited number of Trinary Dip Switch remote transmitters.
- e. 3-Button Control Station: 3-button station providing OPEN/CLOSE/STOP shall be NEMA Type 1 with maintenance alert indicator to signal intervals for routine door and operator maintenance.
- 2. Door Drive: Operator shall be equipped with an electrically interlocked, floor level disconnect, a chain hoist for manual operation and an electric solenoid-actuated brake to stop motor and hold the door in any position. Operator shall be capable of driving door at a speed of approximately 8 inches (203 mm) to 9 inches (229 mm) per second.
 - a. Roller Chain and Sprocket: 50B40 door sprocket and #50 drive chain, motor rated up to 1HP.
 - b. Roller Chain and Sprockets: 50B60 door sprocket and #50 drive chain, motor rated from 1-1/2 to 2HP
 - c. Roller Chain and Sprockets: 80B60 door sprocket and #80 drive chain, motor rated at 3HP
Roller Chain and Sprockets: As required for 5HP based upon door specification
- 3. Optional Operator Accessories:
 - a. Self-Monitoring Safety Operation Application: CPS-LN4 Self-Monitoring Sensor.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the Methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION