

Heavy Industrial-Duty Door Operator Specifications



PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Industrial-duty single and bi-parting door operators.

1.2 RELATED SECTIONS

- ** Note to Specifier: Please list all applicable CSI Masterformat Sections requiring coordination to Automatic Door Operators.

1.3 REFERENCES

- ** Note to Specifier: Please list all applicable Standards, Codes and other Reference documentation related to the design, functionality, installation and performance of Automatic Door Operators.

1.4 SUBMITTALS

- ** Note to Specifier: Please list all applicable submittal requirements required for approval.

1.5 DELIVERY, STORAGE, AND HANDLING

- ** Note to Specifier: Please list all applicable delivery, storage and handling requirements for Automatic Door Operators that are pertinent to the project site and conditions.

1.6 WARRANTY

- A. Manufacturer's standard 2-year 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. www.chamberlain.com

- B. Substitutions: Not permitted.

- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 INDUSTRIAL-DUTY SINGLE AND BI-PARTING

DOOR OPERATOR

- A. Heavy Industrial-Duty Operator: Continuous-duty high-starting torque motor with overload protection and emergency disconnect for manual operation; Model GSD; Chamberlain, Elmhurst, IL.

- 1. Electric Operator: Model GSD heavy industrial-duty assembly, cULus Listed and cULus Labeled, with electric motor and factory-prewired motor controls, 3-button OPEN/CLOSE/STOP control station, conduit-encased wiring from control circuit to motor, and accessories required for proper operation; door speed of approximately 11 inches (279 mm) to 12 inches (304 mm) per second.

- a. Primary Speed Reduction Device: Wormgear-in-oil-bath gear reducer with synthetic "All Climate" oil with 45:1 speed reduction; sprockets and pulleys shall be drilled and pinned to steel shafts and all shafts shall be plated for resistance to corrosion; operator shall be equipped with adjustable friction clutch, quick disconnect door arm for manual door operation and permanently lubricated ball bearings on output shaft.

- b. Brake: Electric solenoid-actuated brake capable of stopping and holding a door at any position.

- c. Limit Switches: Fully adjustable, driven linear-type switch mechanism synchronizing operator with door; low friction nylon limit nuts fitted on treaded steel shaft that rotates on oil-tight self-lubricating bronze bushings; motor shall be removable with affecting limit switch settings.

- d. Electric Motor: High-starting torque, continuous-duty, industrial-type protected against overload by current sensing and thermal overload devices.

- 1) Motor Specification

- **NOTE TO SPECIFIER**: select one of the following:

- (a) 115V-60Hz-1Phase; 1/2, 3/4, 1, or 1-1/2 HP
- (b) 230V-60Hz-1 Phase; 1/2, 3/4, 1, or 1-1/2 HP
- (c) 208/230V-60Hz-3 Phase; 1/2, 3/4, 1, or 1-1/2 HP
- (d) 460V-60Hz-3 Phase; 1/2, 3/4, 1, or 1-1/2 HP
- (e) 575V-60Hz-3 Phase; 1/2, 3/4, 1, or 1-1/2 HP

- e. Motor Control and Enclosure: LiftMaster LOGIC 4.0 motor control shall be UL approved microprocessor solid-state type and shall include the capability to select one of seven wiring types; additional features shall include a maintenance alert diagnostic system, programmable timer-to-close w/ timer defeat input, mid-stop programming capabilities and a maximum run timer to provide motor overrun protection; motor control shall be housed in a NEMA 1 enclosure integral to the operator and shall conform to ANSI/NEMA ICS6.

- 1) Radio Receiver: LiftMaster LOGIC 4.0 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.

- f. 3-Button Control Station: 3-button station providing OPEN/

- CLOSE/STOP functionality shall be NEMA Type 1 with maintenance alert indicator to signal intervals for routine door and operator maintenance.

- g. Track: Heavy duty, double angle, 11 gauge galvanized steel.

- h. Door Drive: #41 roller chain with emergency disconnect for manual door operation.

- i. Trolley Assembly: 2 inch (51 mm) by 2 inch (51 mm) galvanized steel rails with cast aluminum trolley along with plated steel rail spacers on nylon chain guide assembly; angle brackets provided for wall-mounting.

- j. Optional Operator Modifications

- **NOTE TO SPECIFIER**: select one only if applicable

- 1) Provide Damp Environment Operator Modification for applications where severe moisture, but not direct spray, is present.
- 2) Provide NEMA 4 Operator Modification for applications where operator is subjected to direct water spray and/or water-tight/oil-tight/dust-tight protection is required.
- 3) Provide NEMA4X Operator Modification for applications where operator is subjected to direct water spray, water-tight/oil-tight/dust-tight protection is required and/or corrosion resistance is required.

- 2. Primary Entrapment Protection Safety Devices

- **NOTE TO SPECIFIER** for any type of operating mode other than constant contact on the 'Close' button of the 3-button station to lower the door, one of the following UL-Approved and UL-Listed Monitored Entrapment Protection safety devices must be connected directly to the Logic 4 operator; select one of the following):

- a. Industrial/Commercial Monitored Photo Sensors: CPS-U fully monitored, non-contact, infrared beam photo sensor system shall reverse, in conjunction with the Logic 4 operator, a closing door to the full open position when an obstruction is sensed; photo sensors shall be mounted no higher than 6" maximum above the floor.
- b. NEMA 4 Monitored Photo Sensors: CPS-UN4 fully monitored, non-contact, infrared beam reversing photo sensor system, with NEMA 4 watertight enclosure shall reverse, in conjunction with the Logic 4 operator, a closing door to the full open position when an obstruction is sensed; photo sensors shall be mounted no higher than 6" maximum above the floor.
- c. Monitored Sensing Edge Interface: CPS-EI edge interface shall provide a means to attach a 4-wire monitored sensing edge to a Logic 4 operator for continuous monitoring purposes; the edge, in conjunction with the Logic 4 operators shall reverse a closing door to the full open position when an obstruction is sensed; sensing edge supplied by others.

- 3. Ancillary Entrapment Protection Safety Devices

- ** NOTE TO SPECIFIER** Ancillary Entrapment Protection safety devices are optional and can be used to supplement, but not replace, Primary Entrapment Protection safety devices; select one of the following):
- a. Retro-Reflective Photo Sensors: CPS-RN4 non-monitored, non-contact, infrared beam photo sensor with polarized reflector for use in conjunction with the CPS-EI edge interface and monitored 4-wire sensing edge; shall reverse a closing door to the full open position when an obstruction is sensed; photo sensor shall be mounted no higher than 6" maximum above the floor.
- b. Non-Monitored Electric Sensing Edge: 2-wire non-monitored electric edge shall reverse a closing door to the full open position when an obstruction is sensed
- c. Pneumatic Sensing Edge: Pneumatic (air hose) sensing edge shall reverse a closing door to the full open position when an obstruction is sensed.

PART 3 EXECUTION

3.1 EXAMINATION

- ** Note to Specifier: Please list all requirements regarding examination of the Substrate to which Automatic Door Operators will be mounted.

3.2 PREPARATION

- ** Note to Specifier: Please list all requirements regarding preparation of the Substrate to which Automatic Door Operators will be mounted.

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.

