

Heavy Industrial-Duty Door Operator Specifications



PART 1 GENERAL

1.1 SECTION INCLUDES

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

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 HOIST DOOR OPERATOR

- A. Heavy Industrial-Duty Gear-Reduced Operator: Continuous-duty high-starting torque motor with overload protection and emergency chain hoist with electric interlock; Model GH; Chamberlain, Elmhurst, IL.

1. Electric Operator: Model GH heavy industrial-duty assembly, cULus Listed and cULus Labeled, with electric motor and factory-prewired motor controls, wormgear reduction unit, electric solenoid-actuated brake, manually operated chain hoist, 3-button OPEN/CLOSE/STOP control station, conduit-encased wiring from control circuit to motor, and accessories required for proper operation; operator shall be capable of driving door at a speed of approximately 8 inches (203 mm) to 9 inches (229 mm) per second

- a. Primary Speed Reduction Device: Wormgear-in-oil-bath gear reducer with synthetic "All Climate" oil with 45:1 speed reduction; permanently lubricated ball bearings on output shaft; and, output and door driven sprockets.

- 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 (choose one):

- (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, 1-1/2 HP, 2, 3, or 5 HP
(d) 460V-60Hz-3 Phase; 1/2, 3/4, 1, 1-1/2 HP, 2, 3, or 5 HP
(e) 575V-60Hz-3 Phase; 1/2, 3/4, 1, 1-1/2, 2, or 5 HP

- e. Motor Control and Enclosure

- ** NOTE TO SPECIFIER ** - LOGIC 4.0 motor control circuit available on all models except 5 HP versions; Mechanical contactor-style circuit available only on 5 HP versions

- 1) 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.
(a) 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.
2) Contactor-style (Mechanical) Motor Starter, Control, and Enclosure: Motor starter shall be an across-the-line,

mechanically interlocked, magnetic-reversing contactor; motor control shall be housed in a NEMA 1 enclosure integral to the operator; control enclosures shall conform to ANSI/NEMA ICS 6; control enclosures shall conform to ANSI/NEMA ICS6.

- 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. Door Drive: Operator shall be equipped with appropriate roller chain and sprockets as noted below, 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:
1) Roller Chain and Sprocket: 50B40 door sprocket and #50 drive chain, motor rated up to 1HP
2) Roller Chain and Sprockets: 50B60 door sprocket and #50 drive chain, motor rated from 1-1/2 to 2HP
3) Roller Chain and Sprockets: 80B60 door sprocket and #80 drive chain, motor rated at 3HP
4) Roller Chain and Sprockets: As required for 5HP based upon door specification

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.

LiftMaster
ELITE SERIES™
LOGIC 4.0

Chamberlain reserves the right to make design or specification changes without notice.

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GARAGE DOORS

Form LM SPEC GH