

Model GCL FIRE DOOR OPERATOR

Standard-Duty Specifications



COMMERCIAL LINE

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Provide electric fire door operator(s) of size and capacity recommended for door(s) as provided by door manufacturer with electric motor and factory pre-wired motor controls, starter, reduction unit, disc brake, clutch, control devices, integral release device, centrifugal governor, and accessories required for proper operation.

1.02 RELATED WORK

- A. Opening preparation, miscellaneous or structural metal work, access, field electrical wiring, wire conduit, fuses and disconnect switches are in the Scope of Work of other divisions or trades.

1.03 DESIGN / PERFORMANCE REQUIREMENTS

- A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.
- B. Electric Motors shall be alternating-current squirrel-cage motors conforming with NEMA MG 1.
- C. Fire Door Operators: Provide with Factory Mutual approval and complying to and listed in UL Directory.
- D. Wiring Connections: Requirements for electrical characteristics
 - a. 115 volts, 60 Hz single phase.
 - b. 208 volts, 60 Hz single phase or three phase.
 - c. 230 volts, 60 Hz single phase or three phase.
 - d. 460 volts, 60 Hz three phase.
 - e. 575 volts, 60 Hz three phase.

1.04 QUALITY ASSURANCE

- A. In accordance with accepted quality assurance guidelines for motor-operated doors, both the door and electric operator shall be manufactured by a single source producer of door systems.

PART 2 – PRODUCT

2.01 GENERAL

- A. The electric operator shall be the Model GCL Fire Door Operator control system for rolling steel fire door(s) as manufactured by The Genie Company and suitable for the type and size of door specified.
- B. The electric operator shall be (single phase) (three phase) with MultiVolt® - the ability to adjust to the correct voltage of (115/208/230 for single phase) (208/230/460 for three phase) without removal or addition of any parts. (The electric operator shall be 575VAC three phase).
- C. All components to have corrosion resistant coatings.
- D. The operator shall be suited for NEMA ICS 6 Type 1 environment.

2.02 ELECTRIC MOTOR

- A. Electric Motor shall be UL Listed.
- B. Rating
 - a. 1/2 horsepower single phase or three.
 - b. 3/4 single phase or three phase.
 - c. 1 horsepower single phase or three phase.
- C. Motor frame comply with
 - a. NEMA 48 for 1/2 hp single phase.
 - b. NEMA 56 for 1/2 hp three phase.
 - c. NEMA 56 3/4 and 1 hp all phases.
- D. Construction
 - a. Open drip-proof construction.

2.03 REDUCTION

- A. Primary reduction is TensiBelt®, an auto-tensioning poly-V flex belt that does not require adjustment.
- B. Secondary reduction is by chain and sprocket.

2.04 DUTY CYCLE

- A. Duty cycle shall accommodate standard usage, up to 30 cycles per hour, not to exceed 100 cycles per day.

2.05 BRAKE

- A. Brake shall be a DC Disc type with selectable Progressive Braking for smooth stopping.

2.06 CLUTCH

- A. Clutch shall be adjustable friction disc type standard.

2.07 LIMIT SYSTEM

- A. Limit System: EZ Limit® system, magnetic type providing absolute positioning with push to set and remote setting capabilities. Limit System shall remain synchronized with the door during manual operation, supply power interruptions, and fire door release operation.

2.08 DOOR RELEASE CLUTCH

- A. 24VDC solenoid activated clutch that releases up upon loss of primary and battery backup power.

2.09 INTEGRAL CENTRIFUGAL GOVERNOR

- A. Governor shall limit door drop speed during manual test or alarm activated release.

2.10 CONTROL SYSTEM

Microprocessor based with relay motor controls on a single board. System incorporates a 16 character Liquid Crystal Display (LCD) to display the system status. System shall include the following:

- A. Provide with an internal battery backup system capable of providing up to 24 hours of battery power to support alarm logic, smoke detector, release capability and audible and visible signaling appliances. Device shall monitor battery charge and announce the need for battery replacement via an integral sounder; an LCD display that indicates battery low condition. Battery backup/power system shall contain a management system providing trickle charge capabilities.
- B. During a power outage, and upon depletion of the battery, the device will initiate door closure by releasing the electric clutch.
- C. Monitoring for an Alarm input while on internal battery backup power.
- D. Initiate gravity door closure through the release of the Door Release Clutch.
- E. Includes LCD display selectable delay settings of 10, 20, 30 or 60 seconds upon alarm activation to allow for passageway clearance before initiating door closure.
- F. Capable of receiving an alarm input from compatible 2-wire normally open smoke detectors, 4-wire normally open smoke detectors, or normally open heat detectors, or input from a fire alarm control panel via a relay module providing a Form C dry contact output to the release device.
- G. Capable of receiving input from a maximum of two smoke detectors requiring use of an End-of-Line (EOL) device to ensure the integrity of the wiring.
- H. Provide with audible and visual signaling appliances to operate during the alarm closing cycle. Device shall be capable of activating and powering up to two (optional) audible/visible notification devices, e.g. strobes, horns or horn/strobes.
- I. Fire door operator shall recognize that the door is in the closed position through monitoring of door position to prevent release of the Door Release Clutch when the door is closed.
- J. Provide with relay and trouble outputs to provide notification to a fire alarm control panel when an alarm or trouble state exists.
- K. Circuit board shall have LCD display and diagnostic LEDs to assist with field installation by indicating alarm or trouble conditions present within the alarm activation device(s) or notification appliance(s).
- L. Operator shall provide remote key test switch to simulate an alarm condition during testing procedures.
- M. Fire door operator shall recognize that the door is in the closed position through monitoring of door position to prevent release of the Door Release Clutch when the door is closed.
- N. Upon alarm, the operator shall attempt motorized door closure.
- O. Upon alarm the operator shall provide release on obstruction selectable through the LCD display on the operator via a monitored sensing edge (by others).
- P. Upon alarm the operator shall provide one or three time obstruction cycling of the door selectable through the LCD display on the operator via a monitored sensing edge (by others).
- Q. Operator shall provide an LCD configurable feature allowing automatic open after routine testing.
- R. One audible and visual signaling appliance shall be provided to announce closure due to alarm, power loss conditions or test mode.
- S. Capable of monitoring and reporting on a variety of operating conditions, including: Current operating status, Current command status, Motor movement status, Current error status (if applicable), Hoist Interlock status, External Interlock status, and 24VDC status.
- T. Maximum run timers in both directions of travel that limit motor run time in the event a clutch slips or some other problem occurs.
- U. Provisions for connection of a 2-wire monitored photo-eye or a 2-wire monitored edge sensor, as well as non-monitored standard 2-wire sensing edges, photo-eyes or other entrapment protection devices.
- V. Control action will be constant contact close until a monitored entrapment device is installed, allowing for selection of momentary contact.

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- W. Provisions for connection of single and/or 3-button control stations.
- X. On board open, close and stop control keys for local operation.
- Y. Intellicode® radio receiver capable of storing 50 single button and/or 50 Open-Close-Stop transmitters with the ability to add and/or delete transmitters individually, identify and store activating transmitter IDs.
- Z. On board non-resettable cycle counter.

2.11 MOUNTING

- A. Mounting for rolling steel fire doors shall be (front of hood) (wall-mount) and chain/sprocket coupling to door.
- B. Mounting for hoist models shall be ordered from factory (left hand) (right hand).

2.12 RELEASE

- A. Release shall be a pull and hold type mechanism with single cable operation and an integrated interlock switch on hoist units.

2.13 HOIST

- A. Chain hoist shall consist of chain pocket wheel, chain guard and smooth hand chain standard.

2.14 ENTRAPMENT PROTECTION

- A. Control system shall have provisions to connect monitored entrapment protection devices such as monitored electric sensing edge or monitored photo-eye and to provide constant contact close control operation in lieu of such devices.
- B. Control system shall have provisions to connect monitored entrapment protection devices such as wireless monitored electric sensing edge and to provide constant contact close control operation in lieu of such devices.
- C. Control system shall have provisions to provide constant contact close control operation in lieu of such devices.

2.15 OPTIONAL CONTROL ACCESSORIES

- A. OPERATOR CONTROLS
 - a. Push-button operated control stations with open, close, and stop buttons.
 - b. Key operation with open, close, and stop controls.
 - c. Push-button and key operated control stations with open, close, and stop buttons.
 - d. Controls for interior location.
 - e. Controls for exterior location.
 - f. Controls for both interior and exterior location.
 - g. Controls surface mounted.
 - h. Controls flush mounted.
- B. SPECIAL OPERATION
 - a. Vehicle detector operation.
 - b. Radio control operation.
 - c. Genie monitored photo-eyes.
 - d. Commercial photo-eyes.
 - e. Timer Close Module for unattended timed door closing. Auxiliary control inputs, safety inputs, timer hold input and automatic door closing feature with selectable time delay. Safety inputs can be configured using on board keypad.
 - f. Visual and/or audible signal devices.
 - g. Auxiliary Output Module for up, down, and mid-stop limit status via several auxiliary sets of dry contacts that are microprocessor controlled. ADA compliant outputs that activate when door is moving up, down, or both directions and can be configured using the on board keypad.

PART 3 – EXECUTION

- 3.01 The Model GCL Fire Door Operator shall be installed in accordance with The Genie Company instructions and standards. Installation will be by trained and authorized Genie Company distributors or dealers.

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Note to specifier:

This specification is a suggested guide. Available options are shown in parentheses.

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COMMERCIAL LINE

SALES INFORMATION

Job Name: _____

Architect: _____

Contractor: _____

APPLICATION INFORMATION

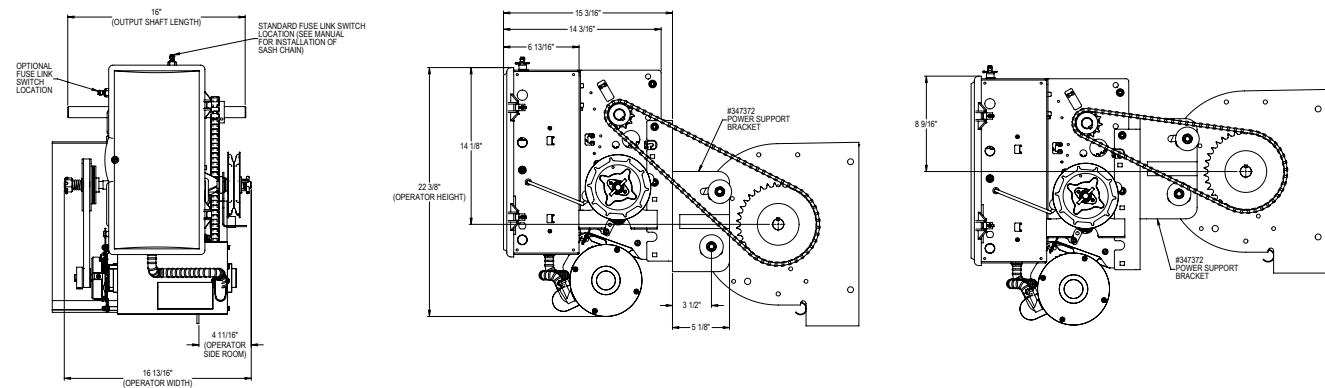
Door Type: _____ **Door Size - Width:** _____ **Height:** _____ **Drive Side:** _____

Standard-Duty Model: _____ **HP:** _____ **Voltage:** _____ **Phase:** _____ **Hertz:** _____

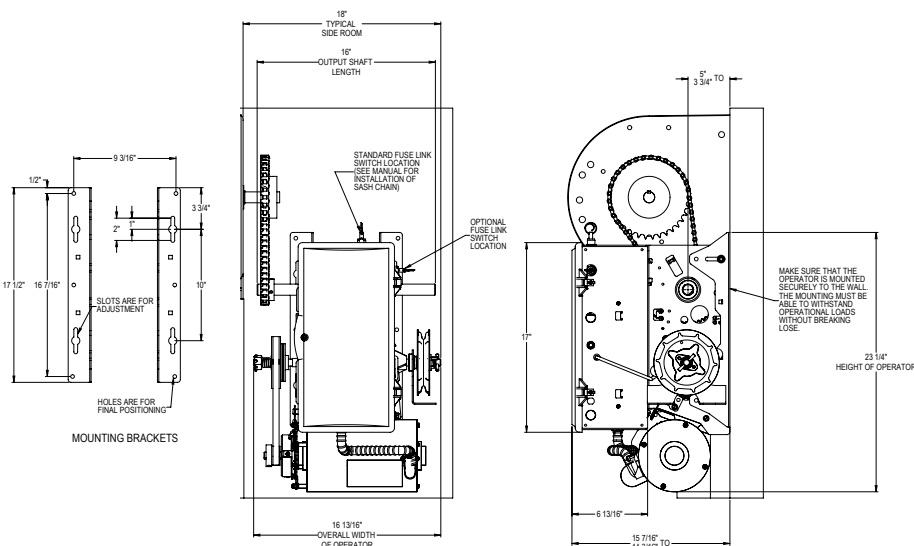
Monitored Entrapment Device: _____

DIMENSIONS

GCL FIRE DOOR OPERATOR - FRONT OF HOOD



GCL FIRE DOOR OPERATOR - WALL MOUNT



AMPERAGE RATING 60Hz							
HP	115V 10	208V 10	230V 10	208V 30	230V 30	460V 30	575V 30
1/2	10	5	5	3	3	3	2
3/4	11	6	6	3	4	3	2
1	14	7	7	4	4	3	2

