

3-Part Architectural Specifications

Electric Door Operator

Model: Rapido™ RSH

Part 1 General

1.01 Description

A. Work Included: Supply and installation of a an industrial heavy-duty Jackshaft type Electric Door Operator with chain hoist and solenoid brake, for use on properly counter-balanced Fast Standard, High and Vertical Lift Sectional Doors, of a maximum weight of 750 lbs. Door size and capacity to be recommended by door manufacturer, as specified; as well as the necessary driving hardware and control accessories necessary for proper operation.

B. Mounting: To be wall mounted or shelf mounted on the right (or on the left) of the door. Hoist position on the right of operator (or on the left of operator).

1.02 Related Work

A. Door preparation, miscellaneous or structural metal work, field electrical wiring, wires, disconnect switches, fuses and conduit are in the scope of work of other sections or trades.

1.03 Submittals

A. Submit manufacturer's product data and installation instructions for each type of operator. Include both published data and any specific data prepared for this project.

1.04 Delivery, Storage and Handling

A. Product shall be delivered to the project site in manufacturer's original packaging.

B. Product shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.

1.05 Warranty

A. Operator shall be warranted to be free from defects in material and workmanship for a period of 2 years per our [Terms and Conditions of Sale](#).

Part 2 Product

2.01 Manufacturer

A. Acceptable Product: Operator model Rapido™ RSH as manufactured by 9141-0720 Québec Inc. (DBA Manaras-Opera), part of the Canimex Group: 136 Oneida Drive, Pointe-Claire, Québec, Canada H9R1A8. Tel: (800) 361-2260. Fax: (888) 626-0606. www.manaras.com. Email: info@manaras.com.

B. Substitutions: Not permitted.

2.02 Operator

A. Motor: To be rated ___HP, ___ Volts, ___Phase, 60Hz high starting torque, continuous-duty, three phase switchless motor, open drip proof, protected against overload.

B. Reduction: First step in reduction to be 5L/BX section cogged V-belt drive, additional step by #41 chain and sprockets giving an output shaft speed of 88 rpm. Input steel shaft to be a minimum of 3/4" (19.05mm) in diameter and supported by cast iron flanged pillow block bearings. Output steel shaft to be a minimum of 1" (25.4mm) in diameter with 1/4" keyway and supported by cast iron flanged pillow block bearings.

3-Part Architectural Specifications

Electric Door Operator

Model: Rapido™ RSH

C. Drive: Door to be driven by a #50 roller chain with sprockets selected for an opening door travel between 12" (304.8mm) per second to 24" (609.6mm) per second.

D. Clutch: To be friction type, positioned on input shaft, adjustable from outside.

E. Brake: To be an electrically activated insulated drum-band type solenoid brake.

F. Manual Operation: To be by a chain hoist with electrical cut-off and floor level engagement device for manual operation. Hoist on right standard.

G. Electrical Enclosure: All electrical components to be in a NEMA 1 enclosure. The enclosure's cover to be hinged.

H. Limit Switches: To be rotary-type with oil-impregnated steel cams, commercial grade switches. Systems to be enclosed in electrical control box, and limit shaft to be supported in frame by self-lubricating bronze bushings. System to be provided with Accu-cam® precise and quick one-handed adjustment feature. Limit switches to remain in time when there is a manual operation or after the motor has been removed. Designed to prevent any lever breakage when limits have been exceeded during manual operation.

I. Corrosion Protection: Frame and control enclosure to be protected by baked on, long lasting enamel finish. Polymer control box cover. Internal shafts to be protected by yellow chromate coating.

Option #1: Control Circuit with 5V_{DC} Logic Electronic Control with Speed Managing Features and Monitoring Function ("M" version)

J. Motor Control: To be a 24V_{DC} relaying and 5V_{DC} logic circuit with a 40VA class II transformer, non-volatile memory. Features available: Soft-start/soft-stop, speed management, on-board radio receiver, 1.5s delay on reverse, programmable maximum run timer, mid-stop, timer-to-close (suspension possible from floor level), independent input loop terminal, advance close system, test buttons, reverse wiring detection and door lock sensor. Operating mode selection to be possible on site during or after installation. To provide the monitoring of Primary External Entrapment Protection Devices. To include compatible and approved monitored photo cells. Terminal strip to allow connection of 3-button stations (one supplied with the operator), non-monitored sensing edges, non-monitored photo cells, one push-button radio control (external strip), ceiling pull switches, key switches, loop detectors, external interlocks. 2A fuse protected 24V_{AC} output is available for accessory power supply. Alternate control available with separate control panel. Optional separate brake resistor available.

K. Operating Mode: To be C2 (or B2 or D1 or E2 or T or TS, see appendix for description).

Note to Architects:

Motorized doors can cause serious injuries or death. Manaras-Opera strongly recommends the use of entrapment protection systems, especially in case of momentary contact to close as in B2, T or TS operating modes.

3-Part Architectural Specifications

Electric Door Operator

Model: Rapido™ RSH

Option #2: Control Circuit with 5V_{DC} Logic Electronic Control with Speed Managing Features and without Monitoring Function (“E” version)

J. Motor Control: To be a 24V_{DC} relaying and 5V_{DC} logic circuit with a 40VA class II transformer, non-volatile memory. Features available: Soft-start/soft-stop, speed management, on-board radio receiver, 1.5s delay on reverse, programmable maximum run timer, mid-stop, timer-to-close (suspension possible from floor level), independent input loop terminal, advance close system, test buttons, reverse wiring detection and door lock sensor. Operating mode selection to be possible on site during or after installation. Does not provide monitoring function. Terminal strip to allow connection of 3-button stations (one supplied with the operator), non-monitored sensing edges, non-monitored photo cells, one push-button radio control (external strip), ceiling pull switches, key switches, loop detectors, external interlocks. 2A fuse protected 24V_{AC} output is available for accessory power supply. Alternate control available with separate control panel. Optional separate brake resistor available.

K. Operating Mode: To be C2 (or B2 or D1 or E2 or T or TS, see appendix for description).

Note to Architects:

Motorized doors can cause serious injuries or death. Manaras-Opera strongly recommends the use of entrapment protection systems, especially in case of momentary contact to close as in B2, T or TS operating modes.

Part 3 Execution

3.01 Installation

A. Installation: To be in accordance with Manaras-Opera instructions and in compliance with federal, state or local regulations.

Appendix: Wiring Type Descriptions

C2 Wiring (0): Function: Factory preset as per UL325. Momentary contact to open and stop, constant-pressure-to-close with a 3-push-button station. Activation of entrapment protection devices⁽¹⁾ will reverse the door while closing. Auxiliary devices function as an open control and to reverse the door during closing.

B2 Wiring (1): Function: Momentary contact to open, close, and stop, with a 3-push-button station. Activation of entrapment protection devices⁽¹⁾ will reverse the door while closing. Auxiliary devices function as open-close controls and reverse the door during closing⁽²⁾.

D1 Wiring (2): Function: Constant-pressure-to-open and constant-pressure-to-close. Activation of entrapment protection devices⁽¹⁾ will stop the door during closing.

E2 Wiring (3): Function: Momentary contact to open and constant-pressure-to-close. Release of close button or activation of entrapment protection devices⁽¹⁾ will reverse the door to the fully opened position.

T Wiring (4): Function: Momentary contact to open, close and stop. Only applicable with the timer-to-close. If the entrapment protection devices⁽¹⁾ are activated while the door is closing, the door

3-Part Architectural Specifications

Electric Door Operator

Model: Rapido™ RSH

will reverse and will not close by the timer-to-close (TTC). TTC will also be disabled if the chain hoist is engaged or if the stop is activated before the elapsed time. TTC will resume its normal operation only after the door is fully closed. During TTC timer count down, any input from the radio, open, loop or a power outage will reset the timer. During TTC count down, the close button or SBC will close the door immediately⁽²⁾.

TS Wiring (5): Function: Momentary contact to open, close and stop. Only applicable with the timer-to-close. If the entrapment protection devices⁽¹⁾ are activated while the door is closing, the door will reverse and will close by the timer-to-close (TTC). During TTC timer count down, any input from the radio, open, loop, stop, entrapment device⁽¹⁾, or chain hoist engagement, or a power outage will reset the timer. During TTC count down, the close button or SBC will close the door immediately⁽²⁾.

⁽¹⁾ Applies to monitored or non-monitored entrapment protection devices.

⁽²⁾ If the monitored entrapment protection device or loop input remains activated, the door can be closed by constant-pressure on the close button.