



**NABCO SWING Operator - Low Energy
Automatic Entrance System
Suggested Architectural Specifications
Section 8**

**NABCO SWING Operator (630)
Medium Duty- Low Energy - Swing Door Operator
Surface Applied - Non-Handed**

**Division 08 - Openings
Section 08 71 13 -AUTOMATIC DOOR OPERATORS**

Note to Specifier: Articles and paragraphs below may be edited or modified to suit specific project requirements.

Add section numbers and titles per CSI "MasterFormat" and specifier's standard practice. Contact manufacturer's representative to discuss specification modifications, performance requirements, accessories and/or related equipment that may be applicable to this project.

Part 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes the following types of automatic door operators:
 - a. Low-energy door operators for swinging doors.

1.02 REFERENCES

- A. American Association of Automatic Door Manufacturers (AAADM) - www.aaadm.com
- B. American National Standards Institute (ANSI) - www.ansi.org
- C. Builders' Hardware Manufacturers Association (BHMA) - www.buildershardware.com
- D. Underwriters Laboratory, Inc. (UL) - www.ul.com
- E. Standards Council of Canada (ULC) - www.canada.ul.com

1.03 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 10 years of documented experience in manufacturing of doors and equipment of similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. A manufacturer with company certificate issued by AAADM.
- C. Installer Qualifications: Installers with a minimum 5 years documented experience installing and maintenance of units similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- D. Certified Inspector Qualifications: Certified by AAADM.
- E. Source Limitations for Automatic Operators: Obtain each type of door operator and sensor components specified in this Section from a single source, same manufacturer unless otherwise indicated.
- F. Certifications: Operators shall be certified by the manufacturer to meet performance design criteria in accordance with the following standards.
 - a. ANSI/BHMA A156.19 American National Standard for Power Assist and Low Energy Operated Doors.
 - b. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
- G. Emergency Exit door requirements: Comply with requirements of authorities having jurisdiction for automatic entrance doors serving as a required means of egress.

1.04 SUBMITTALS

- A. Comply with Division 01 - Submittal Procedures.
- B. Product Data: Manufacturer's product sheets including installation details, material descriptions, dimensions of individual components and extrusions, fabrication, operational descriptions and finishes.
- C. Shop Drawings: Submit manufacturer's shop drawings, including complete elevations, sections and details, indicating dimensions, materials, operator, motion/presence sensor control device, anchors, hardware, finish, options and accessories.
 - a. Indicate required clearances, and location and size of each field connection.
 - b. Indicate locations and elevations of entrances showing knowing act switch and safety devices (if required).
 - c. Wiring Diagrams: For power, signal, and knowing act / safety device wiring.

1.05 SUBSTITUTIONS

- A. Equipment as manufactured by NABCO Entrances, Inc. has been specified and shall be quoted as the base bid. Proposals for substitution products may be submitted by the bidding contractors a minimum of 10 days prior to bid due date. The proposed substitution shall meet the quality and performance standards described in this specification.



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1.06 JOB SITE CONDITIONS

- A. Site Survey: Verify site conditions including, but not limited to the following; opening sizes, floor conditions, plumb and level mounting surfaces (substrates shall be of proper dimension and material).
- B. Coordinate installation with glass, glazing, hardware and other trades to avoid construction delays.

1.07 WARRANTY

- A. Warranted materials shall be free of defects in material and workmanship for a period of one year from date of substantial completion. During the warranty period the Owner shall request NABCO factory-trained technicians to perform service. Warranty repairs are provided during normal business hours. Owner to receive warranty after completion of installation.

PART 2-PRODUCTS

2.01 APPROVED MANUFACTURER

- A. All door equipment shall be manufactured by:
NABCO Entrances Inc.
582 W18717 Gemini Drive
Muskego, WI 53150
Phone: (877) 622-2694
Fax: (888) 679-3319
Email: info@nabcoentrances.com
Website: NABCOEntrances.com

2.02 AUTOMATIC SWING DOOR OPERATOR

- A. Model: Swing Door System as indicated on door schedule and details.
 - a. NABCO SWING Operator
- B. Mode of Operation:
 - a. Automatic Operator: DC brush motor, non-handed operator, operating voltage of 110-120VAC 50/60Hz. Operator shall be adjustable to compensate for different manual push forces as required.
 - b. Automatic operator shall be capable of operating and controlling up to a 330-pound (149.6 kg) door, 48 inches (1219mm) in width.
 - c. Operator can be field adjusted to comply with ANSI/BHMA A156.19 American National Standard for Power Assist and Low Energy Operated Doors. To comply with ANSI/BHMA A156.19 a knowing-act activation device is required.
 - d. Opening Cycle: The adjustable speed operator mechanically powers the drive shaft, and the torque controls maintain constant speed throughout the opening cycle regardless of stack pressures or wind speed. Operator shall allow manual door operation with operational forces as indicated to fully open the door applied at 1" (25 mm) from the latch edge of the door.
 - e. Hold Open: The operator shall stop and hold the door open at the selected door opening angle for an adjustable period of time (0 seconds to 60 seconds).
 - f. Obstruction Control: The operator will stop and reverse the door movement. This function is achieved during the opening or closing cycle. Control shall be adjustable to compensate for wind or stack pressures on opening and closing.
 - g. Electric Lock Management: Built in relay for controlling electric lock.
 - h. Electric Lock Output: 12 VDC ($\pm 10\%$) 750mA, or dry contact. Lock monitoring prevents operator(s) from opening door(s) until release of electrified lock. Operator pulls door closed before opening, automatically unjamming electric latch hardware. Sequenced operation between operators for pairs of doors allowing lock release and astragal coordination.
 - i. Programmable Emergency Input: When input receives a signal, the door can be programmed to close under spring power, or stop, or open, or close slowly under motor power.
- C. Types / Configurations
 - a. NABCO SWING Surface Applied Swing Door Operator
- D. Product Components
 - a. Operator Housing
 - i. Surface Mounted Operator:
 - ii. Side access surface applied operator is contained in a 4- $\frac{3}{4}$ " (120mm) deep x 3" (76.2mm) high aluminum housing with a snap and click removable cover.
 - iii. Surface mounted housing available with continuous header to full door width when custom ordered. Standard width is 39-1 $\frac{1}{2}$ ".
 - b. NABCO SWING Operator Motor
 - c. NABCO Opus Controller
 - i. Controller shall be equipped with multiple programmable inputs and outputs to enable custom door performance to meet specific jobsite requirements. Controller be microprocessor based with LCD on



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board programming display and rotary dial. LCD display to indicate current operational status of inputs and outputs and history data in real time. To facilitate remote control and ease of programming controller shall also be Bluetooth compatible. The microprocessor control shall allow the opening speed, closing speed; back check speed, latch check speed and back check and latch check positions to be adjusted separately and independently from each other to meet specific door widths and site conditions. The control system shall also be capable of providing transistor output signals at the door closed or door open positions to facilitate interaction with security and access control systems. Normally open or normally closed activation and safety signal inputs shall be available and able to be switched programmatically. Non-critical error resetting to be accomplished via cycling of On/Off Mode Switch. The processor shall be capable of providing information on the number of operations and error codes for maintenance purposes. Adjustable opening and closing speeds shall be set in accordance with ANSI 156.19. Control shall include time delay, Push-N-Go functionality and sequential mode operation. All adjustments shall be specific and reproducible.

E. Product Components:

a. Control Switch:

- i. NABCO Connect IOT controller with scheduling and open/close control or
- ii. Automatic door operators shall be equipped with the following type of function switch: On, off, hold-open, night mode and exit.

b. Operator Interface: Safety sensor inputs for all types of safety sensors with programmable and adjustable lock-out functions.

2.03 Activation Devices

A. General: Provide activation devices in accordance with ANSI/BHMA A156.10 standard for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation devices with door operation and door operator mechanisms.

B. Knowing Act Activation Devices

- a. Wall Switches: 6". 4 1/2" diameter stainless steel surface or flush mounted, engraved, or plain, as provided by NABCO Entrances, Inc.
- b. Optional activators are available.
- c. Secondary activation is required by ANSI/BHMA A156.10

PART 3-EXECUTION

3.01 INSTALLATION

A. Door equipment shall be installed by manufacturer-approved, factory-trained installers in compliance with manufacturer's recommendations and approved shop drawings.

3.02 CLEANING AND PROTECTION

A. After installation, clean framing members as recommended by manufacturer. Aluminum surfaces in contact with masonry, concrete, or steel shall be protected from contact by use of neoprene gaskets where indicated or a coat of bituminous paint to prevent galvanic or corrosive action. Advise general contractor to protect unit from damage during subsequent construction activities.

***COVER NOTE TO SPECIFICATION WRITER**

- ELECTRICAL INSTALLER shall furnish and install all conduit and electrical wiring for activating devices and door operators. A minimum of 5 amperes, 115 volts, A/C, 1-phase circuit shall be furnished for each door operator, terminate and connect to operator control panel, in operator housing.
- CONCRETE INSTALLER shall prepare floor at location of automatic entrance system to be level and smooth without changes in elevation between foundation and associated walkways.

END OF SECTION