



**GT SYSTEM 350, 500, 8350 & 8500
SWING OPERATOR - LOW ENERGY
Suggested Architectural Specifications
Section 8**

**Models GT350, GT500, GT8350 & GT8500
HEAVY DUTY - LOW ENERGY - SWING DOOR OPERATOR
OVERHEAD CONCEALED (OHC) & CONVERSION UNIT (C.U.)**

**Division 08 - Openings
Section 08 42 29.33 SWINGING AUTOMATIC ENTRANCES**

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. Furnish and install manual slide door equipment as indicated on drawings and specifications.
- B. Related work specified elsewhere.
 - 1. Concrete: Division 03, applicable sections.
 - 2. Masonry: Division 04, applicable sections.
 - 3. Thermal and Moisture Protection: Division 07, applicable sections.
 - 4. Openings: Division 08, applicable sections.
 - 5. Electrical Grounding 16, applicable sections.

1.02 REFERENCES

- A. American Architectural Manufacturers Association (AAMA) - www.aamanet.org
- B. American National Standards Institute (ANSI) - www.ansi.org
- C. Builders' Hardware Manufacturers Association (BHMA) - www.buildershardware.com
- D. National Fire Protection Association (NFPA) - www.nfpa.org
- E. International Code Council (ICC) - www.iccsafe.org or Applicable State and Local Codes

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer to have at least (5) five years of experience in the fabrication of automatic and manual entrance systems.
- B. Installer's Qualifications: Products specified shall be represented by a factory authorized and trained distributor. Distributor shall be AAADM Certified, maintain a parts inventory and have trained service personnel with experience installing and maintaining units indicated for this project.
- C. All automatic equipment to comply with UL325 (USA and Canada).
- D. All automatic equipment to comply with ANSI A156.19.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's product and complete installation data for all materials covered in this section.
- B. Shop Drawings: Submit complete elevations, details and methods of anchorage to location; installation of hardware; size, shape, joints and connections; and details of joining with other construction.
- C. Templates and Diagrams: As needed shall be furnished to fabricators and installers of related work for coordination of door system installation with concrete work, masonry, and other related work.
- D. A copy of appropriate manual shall be provided to owner / contractor upon completion of installation.



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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.

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

2.02 AUTOMATIC SWING DOOR SYSTEM - LOW ENERGY - SURFACE APPLIED

Model GT350 & GT500 Bottom Load or GT8350 & GT8500 Side Load Swing Door System as indicated on door schedule and details.

- A. Mode of operation: Spring Close. NABCO swing operator shall open door by energizing motor and shall stop door by electrically reducing voltage and stalling motor against mechanical stop. Door shall close by means of spring energy and closing force shall be controlled by gear system and with motor being used as a dynamic brake without power. System shall operate as a manual door control in event of power failure. Manual operation shall require less than 15 lbs. force applied to door lock-stile. Opening and closing speeds shall be adjustable. Hold open time shall be adjustable from 1-60 seconds. Door operation shall not require any fluids or gases under pressure to be used in opening and closing of door.
- B. Types / Configurations:
 - a. GT350 Overhead Concealed Bottom Load
 - b. GT500 Conversion Unit Bottom Load
 - c. GT8350 Overhead Concealed Side Load
 - d. GT8500 Conversion Unit Side Load
- C. Product Components:
 - 1. Operator Housing
 - 2. NABCO GT350 (OHC), GT500 (C.U.), GT8350 (OHC) & GT8500 (C.U.) Swing Door Operator
 - 3. Microprocessor Control
 - 4. Connecting Hardware

1a) Operator Housing for the GT350 & GT500 Bottom Load shall be, 5 1/2" (140mm) deep by 5" (127mm) high aluminum extrusion with finished end caps and shall be prepared for mounting to new or existing door frames. All structural sections shall have a minimum thickness of .146" (4mm) and shall be fabricated of 6063-T5 aluminum alloys. Housing cover shall be removable to provide service access and shall be extruded from 6063-T5 aluminum alloys to a minimum thickness of .093" (2mm). Plastic covers shall not be acceptable.

1b) Operator Housing for the GT8350 & GT8500 Side Load shall be, 5 1/2" (140mm) deep by 6" (152mm) high aluminum extrusion with finished end caps and shall be prepared for mounting to new or existing door frames. All structural sections shall have a minimum thickness of .166" (4mm) and shall be fabricated of 6063-T5 aluminum alloys. Hinged housing cover shall be able to be raised and secured or removed to provide service access and shall be extruded from 6063-T5 aluminum alloys to a minimum thickness of .100" (3mm). Plastic covers shall not be acceptable.



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1c) Finish: Aluminum shall have a standard finish of AA-M12-C22-A31 (204R1, clear) or AA-M12-C22-A44 (dark bronze). Black and special finishes are available upon request.

2) Motor/Operator: Completely assembled and sealed unit which shall include helical gear-driven transmission, mechanical spring and bearings, all located in cast aluminum housing and filled with special lubricant for extreme temperature conditions. Attached to transmission system shall be a DC shunt-wound permanent magnet motor with sealed ball bearings and motor mounted position encoder for exact door positioning and control. Door systems utilizing mechanical or magnetic position switches in lieu of motor encoder for determining door position shall not be approved. Motor shall operate from 115-volt supply and require less than 5 amps at full stall. Complete unit shall be resilient mounted with provisions for easy replacement without removing door from pivots or frame. Systems that require door panels to be removed for servicing the motor-operator shall not be approved.

3) NABCO Opus Controller: 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 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.

4) Connecting Hardware: Conversion Unit (C.U.) outswing doors shall be connected to operator by a two-piece drive arm with self-aligning rod ends and connecting door bracket for push-type operation. Inswing drive arm with a urethane covered roller, shall ride in a track fabricated of 6061-T6 or A380 aluminum alloy attached to the door rail where required for pull-type operation. Overhead Concealed (OHC) power operator drive arm to door with a pin linkage rotating in a self-lubricated bearing, within a self-adjusting slide block, traveling in an interconnected steel track and top door pivot assembly. The (OHC) unit will independently support the door on heavy-duty steel top and bottom door pivots. To allow for durability and easy serviceability, the door shall not pivot on shaft of operator.

2.03 ACTIVATING 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 and safety sensors are available - See Product Catalog.

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

- A. Preparation of a plumb and square opening to receive sliding door equipment with adequate support.
- B. Glass and glazing shall be described in glazing section of the specifications, door to be glazed square.
- C. CONCRETE INSTALLER shall prepare floor at location of entrance system to be level and smooth without changes in elevation between foundation and associated walkways.

END OF SECTION