

# BESAM SW100 SPECIFICATION SURFACE MOUNTED SWING DOOR OPERATOR

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## Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, contained in the *CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

## SECTION 08716

### AUTOMATIC DOOR OPERATORS

Specifier Notes: This section covers Besam SW100 automatic door operators with surface mounted electro-mechanical, microprocessor-controlled operator. If necessary, consult Besam for assistance in editing this section for the specific application.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

A. SW100 low energy automatic swing door operator for use in handicap applications shall consist of aluminum operator housing, electro-mechanical motor, operator assembly, swing arm and electronic control. Installation shall be performed by the local certified Besam Distributor. For the name and number of your local Besam distributor, call toll-free (800) 972-3726 or visit contact us section of [www.besam.com](http://www.besam.com).

##### 1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 08410 - Aluminum entrances & storefronts
- B. Section 08120 - Aluminum doors & frames
- C. Section 08210 - Wood doors & frames
- D. Section 08110 - Hollow metal doors & frames
- E. Section 08710 - Door hardware

- F. Section 08810 - Glass and glazing
- G. Section 07920 - Caulking & sealants
- H. Division 1600 - Electrical

### 1.3 REFERENCES – (Codes & Approvals)

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. Unit described complies with current ANSI A156.19 for Power Assist and Low Energy Power Operated Doors and with ANSI A117.1.
- B. Unit is listed with UL 325 standard for Door, Drapery, Gate, Louver, and Window Operators and Systems and UL991.
- C. Unit is listed with UL991 Tests for Safety-Related Controls Employing Solid-State Devices
- D. CUL approved (for use in Canada).
- E. Unit complies with NFPA 101 Life Safety Code
- F. Unit complies with NFPA 70 National Electrical Code
- G. Unit complies with UBC (1997) Uniform Building Code
- H. Unit complies with BHMA testing - ANSI BHMA A156.19 Section 5 Cycle Testing

### 1.4 PERFORMANCE REQUIREMENTS

- A. Operator to be used on interior or exterior doors and up to 200 pound (91 kg) weight of doors – maximum door width 48" (1219 mm).
- B. Operator capable is capable of operating within temperature ranges of -22°F (-30°C) and 122°F (50°C).

### 1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and standard details for automatic operators.
- B. Shop Drawings: Submit shop drawings for the fabrication and installation of automatic operators and associated components of the work. Include anchors, hardware and other components not included in manufacturer's standard data.

### 1.6 OPERATION AND MAINTENANCE DATA

- A. Spare parts list and owners manual are available from the manufacturer

### 1.7 QUALITY ASSURANCE

- A. Local certified Besam distributor to install operator in accordance with current ANSI A156.19, ANSI 117.1, NFPA 101 and local applicable codes. The system fulfills Americans with Disabilities Act (ADA) requirements for barrier free entrances. All door openings must be at least 36" (914mm) wide to comply.  
**Note: local codes may require greater door opening than ADA requirements.**

### 1.8 QUALIFICATIONS

- A. Company specializing in manufacturing the products specified in this section shall have minimum ten years experience and be a member of the American Association of Automatic Door Manufacturers (AAADM). Prior to placing door(s) in operation, an AAADM technician should inspect the doors to check for compliance with current ANSI/BHMA A156.19 American National Standard for Power Assist and Low Energy Power Operated Doors.
- B. Manufacturer to provide FACTORY owned central dispatch system for warranty service throughout North America. System to be available 24 hours a day, 365 days per year with a factory employee (not

an answering service) to obtain malfunction information and dispatch appropriate service agency to the customer location. Toll free 1-877-BESAM-US to be prominently displayed on header of each operator. To insure quality service dispatching, outside contractors or answering services will not be accepted.

## **1.9 WARRANTY**

- A. Besam's automatic door components are warranted to be free of defects in materials or workmanship under normal use for a period of one year from the date of shipment from Besam's factory when an authorized Besam distributor has installed the components. Abuse, misuse, modification or improper repair or service by unauthorized technicians negates this warranty. During the period of this warranty Besam, at its sole option, will repair or replace any Besam automatic door component or parts thereof found to be defective in material or workmanship if any necessary return charges are prepaid. Components repaired or replaced under this warranty are warranted only for the remainder of the period covered by this warranty. For expanded warranty terms see Besam's warranty certificate.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURER**

- A. Provide SW100 low energy operator as manufactured by Besam US Inc., 1900 Airport Road, Monroe, North Carolina 28110. Toll Free (800) 972-3726. Phone (704) 290-5520. Fax (704) 290-5544. Web Site [www.besam.com](http://www.besam.com). E-Mail [marketing@besam-usa.com](mailto:marketing@besam-usa.com). Installation to be performed by the local certified distributor.

### **2.2 EQUIPMENT**

- A. SW100 automatic swing door operator consisting of operator housing, swing power operator, electronic control, wire harnesses and connecting hardware.

### **2.3 AUTOMATIC SWING DOOR OPERATOR**

- A. Operator: Electro-mechanical operator, powered by 24 volt, 1/8 hp motor. Operator is non-handed to insure maximum versatility in adapting to varying field conditions and shall include a replaceable internal door stop. Spring shall be adjustable to compensate for different manual push forces required on varying door widths.
- B. Operator Housing: Non-handed operator is completely contained in a 5-3/16" (132mm) deep x 4 -5/16" (110mm) high extruded aluminum housing. All aluminum sections are 6063-T5 alloy and all structural walls have a minimum thickness of .156" (4mm).
- C. Electronic Controls: Microprocessor controlled unit shall control the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. No external or auxiliary low voltage power source will be allowed. The controls include time delay (1.5 to 30 seconds) for normal cycle.
- D. Connecting Hardware: Surface mounted operator is connected to the door by means of a steel door arm. The door arm is secured to the top rail of the swing door using one piece threaded tubular inserts for aluminum doors, 1/4-20 binding head and post screws (sex bolts) for wood and hollow metal doors. The knurled door arm adaptor is broached for positive engagement with the shaft and requires no additional linkage, slide blocks or tracks.
- E. Power Open: When an opening signal is received by the control unit, the door shall be opened at the operator-adjusted opening speed. Before the door is fully open at back check, it slows automatically to low speed. The motor stops when the selected door opening angle has been reached. The open position is held by the motor. If the door is obstructed while opening, it will either stop or reverse.
- F. Power Close: Closing shall be provided by means of clock spring and motor. When the hold open time has elapsed, the operator will close the door automatically, using spring force and motor. The

door will slow to low speed at latch check before it reaches the fully closed position. The door is kept closed by spring power or extended closing force by the motor.

- G. Power Assist: Operator can be adjusted to lower the open forces when used manually. Power Assist will be active only while pushing or pulling the door and will allow the door to close when an opening force is no longer applied to the door.
- H. Electronic Dampening: Operator to include standard electric dampening system which automatically counteracts additional forces applied to the door during the opening or closing cycle by reducing door speed.
- I. Stack Pressure Consumption: Electronic control allows for increases of forces to overcome minor stack pressures. The control automatically compensates for lower manual push forces when the door is used in manual mode in order to comply with ANSI A156.19.
- J. Lock retry circuit: If locking is unsuccessful when the door reaches the closed position, the operator will automatically reverse open 10 degrees and reclose in an attempt to successfully lock the door.
- K. Test of Safety Sensors: If optional safety sensors are specified, SW100 operator monitors the sensors before opening and closing the door when equipped with optional external safety sensors. If sensors are not functioning properly, automation is deactivated and the door will function as a manual swing door with a door closer.

## **2.4 OPTIONAL FEATURES**

- A. Battery Back-up: During power failure, battery back-up system provides automatic cycling. Battery back-up is equipped with a battery conservation system to limit the amount of drain on the battery.
- B. Battery Convenience Mode: Operator can be activated by battery power for continuous operation. Battery is continuously monitored and control unit will output an electronic indication if the battery is not working properly.

## **2.5 PUSH PLATE CONTROL DEVICE**

Actuation device is either:

- A. Besam part #75-02-102 - hard wired, 6" round stainless steel push plate switches engraved with "Push to Open" with a blue handicap logo.
- B. Besam part #75-15-251 - radio controlled, 6" round stainless steel push plate switches engraved with blue handicap logo.

Control causes door to open instantly when press wall switch is pushed. Door can be used as a manual door with no damage to the operator.

Option: Push to Activate - is a programmable feature. Push or pull the door open from any position, and the door will gently power open, time out and slowly close.

## **2.6 ELECTRICAL CHARACTERISTICS AND COMPONENTS**

- A. ELECTRICAL CHARACTERISTICS: Nominal current draw 75 watts (.625 amps at 120 VAC).
- B. OVERLOAD PROTECTION: Electric motor is equipped standard with a built-in thermal overload protection and cannot exceed 10 amps current draw.
- C. ELECTRICAL CONTRACTOR NOTE: provide two low voltage 18 gauge stranded wires from automatic operator to remote (50 feet max.) activation devices (if required).
- D. LOW POWER CONSUMPTION: Average electrical power required to open and close a 36" (914mm), 200 lb (90 kg) door is 25 W. Control unit has a high efficient power supply and optimized door control with a maximum power consumption of 75 W.

## **2.7 GUIDE RAILS**

- A. Are not necessary for this application.

## **2.7 FINISHES**

Specifier Notes: Specify Dark Bronze or clear anodized finish. Consult Besam for availability of custom finishes such as stainless steel clad and powder coat painted to match Kynar colors.

- A. All exposed aluminum surfaces are dark bronze anodized (AAC23A44) or clear anodized (AAC22A31). Custom finishes such as stainless steel clad are available, if specified. Powder coat painted finish is available with match to Kynar colors.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify the openings are plumb and are dimensioned properly. Insure adequate support has been provided at the operator header. Proceed with the installation only after conditions are deemed satisfactory.

### **3.2 INSTALLATION AND ADJUSTMENT**

- A. Install equipment in accordance with Besam installation instructions. Adjust equipment per instructions and current ANSI/BHMA 156.19 American National Standard for Power assist and low energy power operated doors.

Besam reserves the right to make product improvements and change specifications without notice.

**End of Section**