

**SECTION 08 71 13.11
LOW ENERGY POWER ASSIST DOOR OPERATORS**

SPEC WRITER NOTE: Delete text between // // not applicable to project. Edit remaining text to suit project.
SPEC WRITERS NOTE: Low energy automatic door operators are not recommended for high traffic doors. Coordinate door locations and operations with VHA staff. Doors shall have hardware for manual operation in event of power failure. Door hardware and door operators shall be by manufacturer of existing products where possible. Discuss with the VHA staff for emergency power requirement.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Low-energy, power-assisted automatic swing door operators.

1.2 RELATED WORK

SPEC WRITER NOTE: Update and retain references only when specified elsewhere in this section.

- A. Section 01 91 00, GENERAL COMMISSIONING REQUIREMENTS: Commissioning.
- B. Section 08 11 13, HOLLOW METAL DOORS AND FRAMES: Steel Doors.
- C. Section 08 14 00, INTERIOR WOOD DOORS: Wood Doors.
- D. Section 08 41 13, ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS: Aluminum Frames Entrance Work.
- E. Section 08 71 00, DOOR HARDWARE: Door Hardware.
- F. Section 08 71 13 AUTOMATIC DOOR OPERATORS: Automatic Door Operators.
- G. Section 09 06 00, SCHEDULE FOR FINISHES: Finish Color.
- H. Division 26, ELECTRICAL: Electric General Wiring, Connections and Equipment Requirements.

1.3 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this section.

SPEC WRITER NOTE: Make material and product requirements agree with applicable requirements specified in the referenced Applicable Publications. Update and specify only that which applies to the project.

- B. ASTM International (ASTM):
B209-14.....Aluminum and Aluminum-Alloy Sheet and Plate.

B221-14.....Aluminum and Aluminum-Alloy Extruded Bars,
Rods, Wire, Profiles, and Tubes.

C. Builders Hardware Manufacturers Association, Inc. (BHMA):
156.19-07.....Power Assist and Low Energy Power Operated
Doors.

1.4 PREINSTALLATION MEETINGS

A. Conduct preinstallation meeting // at project site // minimum 30 days
before beginning Work of this section.

SPEC WRITER NOTE: Edit participant list
to ensure entities influencing outcome
attend.

1. Required Participants:

- a. Contracting Officer's Representative.
- b. // Architect/Engineer. // and Interior Designer. //
- c. // VA Interior Designer. //
- d. // Inspection and Testing Agency. //
- e. Contractor.
- f. Installer.
- g. // Manufacturer's field representative. //
- h. Other installers responsible for adjacent and intersecting work,
including electrical wiring installers.

1.5 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA,
AND SAMPLES.

B. Submittal Drawings:

- 1. Show size, configuration, and fabrication and installation details.

C. Manufacturer's Literature and Data:

- 1. Description of each product.
- 2. Maintenance manuals.
- 3. Installation instructions.
- 4. Warranty.

D. //Samples:

- 1. Door Operator: Full sized, complete assembly.
- 2. Approved samples may be incorporated into work.//

E. Certificates: Certify // each product complies // products comply //
with specifications.

- 1. Show door operator is UL Listed for specified application.

F. Operation and Maintenance Data:

- 1. Care instructions for each exposed finish product.
- 2. Start-up, maintenance, troubleshooting, emergency, and shut-down instructions for each operational product.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Regularly manufactures specified products.
- B. Installer Qualifications:
 - 1. Regularly installs specified products.

1.7 DELIVERY

- A. Deliver products in manufacturer's original sealed packaging.
- B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, // color, // production run number, and manufacture date.
- C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.8 STORAGE AND HANDLING

- A. Store products indoors in dry, weathertight // conditioned // facility.
- B. Protect products from damage during handling and construction operations.

1.9 WARRANTY

SPEC WRITER NOTE: Always retain construction warranty. FAR includes Contractor's one-year labor and material warranty.

- A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

SPEC WRITER NOTE: Specify extended manufacturer's warranties for materials only.

- B. Manufacturer's Warranty: Warrant automatic door operators against material and manufacturing defects.

SPEC WRITER NOTE: Specify customarily available warranty period for specified products.

- 1. Warranty Period: // _____ // years.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Power assisted automatic door equipment accommodating normal traffic as well as the weight of the doors; UL approved and comply with applicable codes.

2.2 SYSTEM PERFORMANCE

- A. Opening Force: Maximum 67 N (15 pound force).
- B. Cycle Tests: 300,000 cycles.
 - 1. Use the widest and heaviest door specified as a test specimen. Narrower or lighter doors of the same configurations will be considered to meet the cycle test requirements.

2.3 MATERIALS

- A. Aluminum:
 - 1. Sheet: ASTM B209.
 - 2. Extrusions: ASTM B221.

2.4 PRODUCTS - GENERAL

- A. Provide automatic door operators from one manufacturer.

2.5 LOW-ENERGY AUTOMATIC DOOR OPERATORS

- A. Conform to BHMA A156.19.
- B. Mounting: // Concealed, overhead // Surface-mounted //.
- C. Enclosure: Self-contained within an extruded aluminum housing (alloy 6063-T6) to conceal operator mechanism and mounting brackets and with removable access cover with an overall maximum size of 140 mm (5-1/2 inches) wide by 150 mm (6 inches) deep.
- D. Safety Features:
 - 1. Adjustable time delay.
 - 2. Adjustable speed for // opening // and // closing // operations.
 - 3. Adjustable backcheck.
 - 4. Decals indicating "In" or "Do Not Enter" installed on both faces of each door where shown conforming to the requirements of ANSI/BHMA A156.19.
 - 5. Re-activation sensor mounted on the push-side door face near the top detect any person standing in the door swing path and prevent the door from closing.
 - 6. Motion sensor to detect any person standing in the door swing path and prevent the door from opening.
 - a. Adjustable door sensor system providing complete operation and safety zone coverage.
- E. Power Units:
 - 1. Self-contained electric circuits for automatic operators located on each floor of the building.

2. Interruption or failure of power circuits for operators located on one floor of the building shall not interfere with continuous performance of automatic operated doors located on other floors.
3. Power units designed to not interfere with continuous performance of automatic operated doors located on other floors in the case of power interruption or failure.
4. Capacity and size of power circuits according to automatic operator manufacturer's specifications.

2.6 OPERATION

A. Traffic Operation:

1. Single Door: // One // Two // way.
2. Double Doors: // One // Two // way // Double egress // Double swing //.

B. Operator: Electromechanical; surface-mounted.

1. Operators to have checking mechanism providing cushioning action at last part of door travel, in both opening and closing cycle.
2. Operators to recycle doors instantaneously to full open position from any point in closing cycle when control switch is reactivated.
3. Operators to allow manual door control in event of power failure.

C. Controls: Solid-state type.

D. Activation: // Key // Push-button // Push-plate // switch.

2.7 FINISHES

A. Aluminum Anodized Finish: NAAMM AMP 500.

1. Clear Anodized Finish: AA-C22A41; Class I Architectural, 0.018 mm (0.7 mil) thick.
2. Color Anodized Finish: AA-C22A42 or AA-C22A44; Class I Architectural, 0.018 mm (0.7 mil) thick.
3. Clear Anodized Finish: AA-C22A31; Class II Architectural, 0.01 mm (0.4 mil) thick.
4. Color Anodized Finish: AA-C22A32 or AA-C22A34; Class II Architectural, 0.01 mm (0.4 mil) thick.

B. Aluminum Paint finish:

1. Baked-Enamel or Powder-Coat: AAMA 2603; dry film thickness of 0.04 mm (1.5 mils).

2.8 ACCESSORIES

- A. Signage: BHMA standard for operation and door type specified.
- B. Guide Rails: Aluminum // bar // tubing // with // anodized // baked-enamel or powder-coat // finish.

C. Fasteners: Corrosion-resistant, compatible with adjoining materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions effecting work, including door and frame preparation and electrical rough-ins.

3.2 INSTALLATION - GENERAL

A. Install products according to manufacturer's instructions // and approved submittal drawings //.

1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.

B. Coordinate installation of equipment with other related work.

C. Mount manual controls and power disconnect switches recessed or semi-flush in partitions.

D. Secure operator components to adjacent construction with suitable fastenings. Conceal conduits, piping, and electric equipment in finish work.

E. Install power units and controls in locations indicated.

1. Where units are to be mounted on walls, provide metal supports or shelves for the units.

3.3 ADJUSTING

A. All equipment, including time delay switches, to be accessible for maintenance and adjustment.

B. Adjust operators to function properly for the type of traffic (pedestrians) expected to pass through doors.

C. Adjust each door leaf of pairs of doors to open and close in synchronization.

D. On pairs of doors, adjust operators allowing either door to be opened manually without the other door opening.

3.4 DEMONSTRATION AND TRAINING

A. Instruct VA personnel in proper door operator operation and maintenance.

1. Trainer: Manufacturer approved instructor.

B. Submit training plan and trainer qualifications. See Section 01 91 00 - GENERAL COMMISSIONING REQUIREMENTS.

C. Acceptance Condition: After completing work, operate door operators 15 consecutive calendar days without breakdown.

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