

# Section 08746 — Dor-O-Matic ADA Operators

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This section is based on the products of Dor-O-Matic, an Ingersoll-Rand business at:

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Dor-O-Matic is one of the oldest and most experienced manufacturers of automatic door equipment. This section covers only a part of their product line: Senior-Swing and Middle-Swing door operators, with accompanying control components, including activators. See other sections for automatic swinging doors, automatic sliding doors, and automatic folding doors.

## Part 1 General

### 1.1 Section Includes

Delete items below that are not required for the project. Paragraph A describes Senior-Swing operators and paragraph B describes Middle-Swing operators.

- A. Electromechanical low-energy powered door operators, opening force not exceeding 14 lb-force (62 N).
- B. Electromechanical low-energy powered door operators, opening force not exceeding 8.5 lb-force (38 N).

### 1.2 Related Sections

Delete any items below that are not relevant to this project; add others as required.

- A. Section \_\_\_\_\_ – \_\_\_\_\_: Wood doors.
- B. Section \_\_\_\_\_ – \_\_\_\_\_: Plastic laminate doors.
- C. Section \_\_\_\_\_ – \_\_\_\_\_: Aluminum doors and frames.

Verify electrical circuit capacity required.

- D. Division 16 – Electrical: 115 VAC (15 amp circuit breaker, one per unit) single-phase, 15 amp fused circuit to door headers, two 24 VAC Class II wires between door headers and remote activation devices, 1/2" (12 mm) conduit and electrical boxes at activators.

### 1.3 References

- A. ANSI/BHMA A156.19 – American National Standard for Power Assist & Low-Energy Power Operated Doors.

B. UL 325 – Standard for Door, Drapery, Gate, Louver and Window Operators and Systems.

#### 1.4 Submittals

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's catalog data, detail sheets and specifications.

C. Shop Drawings: Prepared specifically for this project; show dimensions of operators and interface with other products.

D. Operating and Maintenance Data: Operating and maintenance instructions, parts lists and wiring diagrams.

#### 1.5 Quality Assurance

A. Installer Qualifications: Factory-trained with minimum 3 years experience.

### Part 2 Products

#### 2.1 Manufacturers

A. Acceptable manufacturer: Provide products made by Dor-O-Matic, an Ingersoll-Rand business.

B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

C. Provide all door operators from a single manufacturer.

#### 2.2 Operators

Delete any items below that are not required for the project. Paragraph A describes Senior-Swing operation and paragraph B describes Middle-Swing operation.

A. Operation: Push button, push plate, switch-activated, manual or field-programmable manual/electric power assisted Push 'N' Go opening with Power Boost closing and holding; comply with ANSI A156.19 and UL 325.

1. Close door against stop after each cycle, and hold against drafts, winds and stack pressure.

B. Operation: Push button, push plate, switch-activated, manual or field-programmable manual/electric power assisted Push N' Go opening; comply with ANSI A156.19 and UL 325.

Number 2 is required for Senior-Swing operator and number 3 is required for Middle-Swing operator.

2. Manual opening force: 14 lb-force (62 N) maximum.

3. Manual opening force: 8.5 lb-force (38 N) maximum.

Delete 4, 5 or 6 below that are not required for the project. Number 4 is required for Senior-Swing operators and number 5 for Middle-Swing operators.

4. Closing force: 9 lb-force (26.6 N).
5. Closing force: 5 lb-force (22 N).
6. Factory-set door hold-open voltage.
7. Manual "Off/Auto/Hold-Open" switch.
8. Fail safe: In event of power failure, make door operate manually with controlled spring close as though equipped with a #3 manual door closer, without damage to operator components.

Include the following for both Senior-Swing and Middle-Swing operators.

9. Provide adjustment by microprocessor control in a self-contained housing for:
  - a. Opening speed.
  - b. Backcheck speed.
  - c. Hold-open, from 1 to 30 seconds.
  - d. Closing speed.
  - e. Door will safely stop and reverse if an object is encountered in the opening cycle.
  - f. Delayed activation to provide 1 second delay between reception of the activation signal and actual opening of the door.
  - g. Adjustable latching from 0 to 23 degrees from fully closed position.
  - h. Alternate Action single activation to keep door open until that time activation occurs again.

- i. Logic terminal for interface with accessories, mats, and sensors.

10. Include the following for Senior Swing only:

- a. Power Boost latching which applies an additional 25 pounds closing force.

D. Equipment: Completely electromechanical; comply with ANSI A156.19 and UL 325.

1. Control box and motor/gear box: Contained in aluminum housing; precision-machined gears and bearing seats and all-weather lubricant, mounted on vibration isolators. No exposed gears.

Delete any of the following applications that are not required.

If more than one type application is required, be sure that drawings give enough information to determine application required for each door.

2. Enclosure: Extruded header concealing all operating parts except arms and manual control switches.
  - a. 4-1/2" x 5-3/4" aluminum housing that allows for bottom loading.
  - b. Design for overhead concealed application.
  - c. Overhead concealed with butt hung hinges – maintain a 3-3/4" pivot point for clearance of arm concealing channel.
  - d. Design for surface-applied application.

Delete any of the following applications that are not required.

If more than one type application is required, be sure that drawings give enough information to determine application required for each door.

- e. Design for interior application.
  - f. Design for exterior application.
3. Gears: Manufactured by operator manufacturer specifically for operators.
  - a. Gears enclosed in gearbox.
4. Motor: DC permanent magnet motor with shielded ball bearings. Stop motor when door stops or is fully open and when breakaway is operated.
5. Door operating arm: Forged steel, attached at natural pivot point of door.
  - a. Exposed arms: Factory-painted and finished to match operator enclosure.
  - b. Overhead concealed butt hung. Provide concealing arm channel.
6. "Off/Auto/Hold-Open" switch: Three-position rocker or key type and slide arm for top of door.
7. Control circuits for actuators and safeties: Low-voltage, NEC Class II.
8. Service conditions: Satisfactory operation between -30 degrees F (-34 degrees C) and 160 degrees F (71 degrees C).
9. Power supply required: 115 VAC (15 amp circuit breaker, one per unit).

Include the following for both Senior-Swing and Middle-Swing operators.

10. Microprocessor control: 115 VAC. Do not use microswitches.

Delete any of the following mounting types that are not required.

If more than one mounting is required, be sure that drawings give enough information to determine mounting required for each door.

11. Concealed Overhead Mounting: In ceiling or frame header, accessed through cutout; conceal door arm when door is closed.
12. Surface-Applied Mounting: On surface of door frame/wall, mounted 1" (25.4 mm) above top of door.
13. Provide bottom loading header for access to controls and removable components Without removal of door or operator.

Delete any or all of the following four finishes that do not apply. Anodized aluminum is the standard finish. Clad finish applies to installations where the adjacent finish is bronze or stainless steel. If coated or painted finishes are required, the color should be specified, especially if it must match the doors.

14. Finish of Exposed Headers: Anodized aluminum.
15. Finish of Exposed Headers: Dark bronze anodized.
16. Finish of Exposed Headers: Painted.
17. Finish of Exposed Headers: Clad.

### 2.3 Activators

Delete any of the following activators that do not apply. Other activators are optional.

- A. Jamb-Mounted Push Button Switch: No. 1211-900; two recommended per opening.
- B. Wall-Mounted Push Button Switch: No. 1204-900; two recommended per opening.
- C. Push Plate: Formed metal plate, satin finish; approximately 5" (127 mm) square with Depressed marking; two recommended per opening.

Choose one of the following two push plate materials.

1. Material: Stainless steel.
2. Material: Brass.

Choose one of the following three push plate markings.

3. Marking: "Push to operate door."
4. Marking: Wheelchair logo.
5. Marking: Plain face.

- D. Wireless Remote Switch: \_\_\_\_\_.
- E. Motion Detector: \_\_\_\_\_.
- F. Key Switch: \_\_\_\_\_.

G. Card Reader: By others.

## 2.4 Markings

A. Decals: Visible from either side, instructing the user as to the operation and function of the door.

## Part 3 Execution

### 3.1 Examination

A. Verify that door openings and doors are properly installed and ready for installation of door operators.

B. Verify that electrical service is available, properly located and of proper type.

### 3.2 Installation

A. Install in accordance with manufacturer's instructions; comply with ANSI A156.19.

B. Verify that electrical connections are made correctly and with dedicated grounding.

### 3.3 Adjust

A. Adjust door operators for proper operation, without binding or scraping and without excessive noise.

B. Supply Owner/Contractor with keys if required.

End of Section