

Section 08746 — Low-Energy Operators – Benchmark Swing

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

7350 W. Wilson Avenue
Harwood Heights, IL 60706
Tel: (708) 867-7400
Tel: (800) 543-4635
Fax: (708) 867-0291

Dor-O-Matic is one of the oldest, most experienced and most innovative manufacturers of automatic door equipment in the world. This section covers only the Benchmark Swing door operator with accompanying control components, including activators. See other sections for automatic swinging doors, automatic sliding doors, automatic folding doors and fire door operators.

Part 1 General

1.1 Section Includes

Electromechanical low-energy powered door operators, opening force not exceeding 5 lb-force.

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 _____ – _____: Plastic laminate doors.
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Verify electrical circuit capacity required for operator and all its actuators and safeties.

- D. Division 16 – Electrical: 115 VAC, single-phase, 50/60 Hz, 15 amp fused circuit, 3-wire power supply that must be brought to the hinge side jamb tube. UL approved type flexible 1/2" (12 mm) conduit is recommended. Electrical boxes at activators if activation switches are remote.

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: Drawings prepared specifically for this project will show specific “build to” package dimensions and interface with other product’s Operating and Maintenance Data: Operating and maintenance instructions, parts lists, wiring diagrams.
- 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.

1.6 Warranty

- A. Standard one-year manufacturer’s warranty on material.

Part 2 Products

2.1 Manufacturers

- A. Acceptable manufacturer: Provide products manufactured by Dor-O-Matic, a Division of Ingersoll-Rand, 7350 West Wilson Avenue, Harwood Heights, IL 60706. Tel: (708) 867-7400 or (800) 543-4635; Fax: (708) 867-0291.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 Operators

Each Benchmark unit shall be completely electromechanical with microprocessor control requiring no microswitches on the operator. The operator is offered as follows:

- A. Motor Gear Box (part# 95364-000 w/switch or 95365-000 without switch)
- B. Control Box (part# 95229-900 standard or 95329-900 premium)
- C. Cover Assembly with End Caps (part# 95210-9xx)
- D. Push Arm Assembly (part# 95005-9xx)
- E. Pull Arm Assembly (part# 95085-9xx)

Delete any items below that are not required for the project.

- A. Operation: Push button, push plate, manual or manual/electric power assisted Push N’ Go; comply with ANSI A156.19 and UL 325.
- B. Operation: Push button, push plate or manual opening; comply with ANSI A156.19 and UL325.
 - 1. Close and center door against stop after each cycle, and hold against drafts, winds and stack pressure.
 - 2. Manual opening force: 5 lb-force maximum.
 - 3. Closing force: 3 lb-force.

4. Manual "On/Off" switch.
5. Fail safe: In event of power failure, make door operate manually with controlled spring close as though equipped with a #3 sized manual door closer, without damage to operator components.

6. Provide adjustment by microprocessor control for:
 - a. Opening speed.
 - b. Backcheck.

- C. 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.
 - a. Design for surface-applied application.

Delete any of the following applications that are not required. The same model number operator may be installed for use in interior or exterior applications.

- b. Design for interior application.
- c. Design for exterior application.

Delete either of the following designs that are not required. If more than one design is required, be sure that drawings give enough information to determine design required for each door.

2. Gears: Manufactured by operator manufacturer specifically for operators.
3. Motor: DC permanent magnet motor with shielded ball bearings. Stop motor when door stops or is fully open and when break-away is operated.
4. Door operating arm: Forged steel, attached at natural pivot point of door; do not use slide block in top of door.
5. Exposed arms: Factory-polished and finished to match operator enclosure.
6. "On/Off/Hold-Open" switch: Three-position rocker type.
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.
10. Microprocessor control: 115 VAC. Do not use microswitches.
11. Enclosure: Extruded header concealing all operating parts except arms and manual control switches. The operator header must be 4-3/4" wide x 4-1/2" high x 27" long. For access to the operator, the cover must be removed from the front of the unit.
12. Surface-Applied Mounting: On surface of door frame/wall, maximum of 1/8" (3 mm) above top of door.
13. No exposed fasteners.

Delete any or all of the following two finishes that do not apply.

14. Finish of Exposed Headers: Anodized aluminum.
15. Finish of Exposed Headers: Dark bronze anodized.

2.3 Activators

A. Shall be one or a combination of the following; selected to suit the existing traffic conditions and conform to the opening limits of the control. Control box shall have as standard a 2-30 second adjustable time delay.

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

Choose one of the following push plate materials.

4. Material: Stainless steel.
5. Material: Brass.

Choose one of the following three push plate markings.

6. Marking: "Push to operate door"
7. Marking: Wheelchair logo.
8. Marking: Plain face.

B. Motion Detector: Dor-O-Matic supplied #74600-900.

2.4 Markings

A. Decals: Visible from either side, instructing the user 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.

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.
- C. Supply Owner/Contractor with keys.

End of Section