



DMT.
Door Motion
Technologies, Inc.

DuraSwing™ MK IV On-Demand Door Operator

Date: 3-1-96

By: DEC

Scale: None

Electrical: 115VAC, 15A At Header (Electrical Contractor)

Non-Handed, Low Energy Type Operator.

* Door Closer Not Shown For Clarity Purposes.

Application Notes: Ceiling Clearance Requirements

Above Header: Minimum - 8.50" Maximum - 10.00"

Inverted Installation: (Motor Shaft Up) Zero Clearance

Features: Access control Interface Ready • Sensor Ready

In-swing Capability • Wireless Activation Options

DuraSwing™ MK IV Power Door Operator

SALIENT SYSTEM FEATURES

Safety Program: Core to the versatility of DuraSwing™ door operators is the patent pending SafeTek™ microprocessor program that controls the drive system. This proprietary circuit and program monitors the door's position and speed, as well as other forces acting on the door. In this way it can identify an obstruction or resistance of 15lbs or more. If this resistance or obstruction is sensed, opening power will be immediately interrupted for 3 seconds, allowing the doorway to be cleared. The operator will then attempt to power-up a second time, if resistance continues to be met, the operator will then automatically "kick out", and the door will close normally, ready to be reactivated. The program also is effective in mild wind conditions, by not "reading" wind as an obstacle. *In the event of a power failure, the door will operate manually with no additional resistance.*

On Demand: The DuraSwing™ unit functions as a **true on demand door operator system, functioning only when activated, and only as needed.** This means that under normal (or manual) door use, the operator receives no wear at all. This is because the activator arm is not connected to the door and remains passive during the 80% of the door use that the automatic function is not engaged. A side benefit of this is that there is no additional resistance felt to opening the door manually, in contrast with other brands. Tested to 1M cycles, rated at 4 cycles per minute.

Security & Access Control: The control board is factory ready to accommodate a variety of functions and accessories, which adds to the operator's versatility. The relay function relay terminal strip allows for ready integration with **security systems, magnetic locks, electric lockstrikes & sensor operation.** A power supply take off is available with 24VDC @ 300Ma; sufficient to power a variety of security and access control devices. **Push and go** and **hold-open** are available options.

Multi-Install Options: Non-handed, inswing or outswing, zero-headroom clearance. 12 installation position options. Will operate all-glass pivot doors, balance doors, center pivot doors, wood or metal doors up to 4' wide.

SUGGESTED SPECIFICATIONS

A. General

1. The DuraSwing MK IV swing door power operator is manufactured and engineered by Door Motion Technologies, Inc., Kalamazoo, Michigan. The product system includes an electromechanical controller, steel mounting plate and welded cover, connecting and installation hardware.

B. Scope

1. Work Included: Furnish all material and hardware necessary for the proper installation of The DuraSwing Mark IV low energy swing door power operator. The on-demand power door access system will meet ANSI/BHMA A156.19 requirements. Handicap access decals, visible from both door sides, for user identification.
2. Work Not Included: Door and frame, as described in the doors and frames Section of Division 8. Electrical service of 120 VAC, 60 Hz, single phase 15 A to the door header and N.E.C. Class 2 wiring to actuation controls, if wireless controls are not used. Installation labor and services.

C. Construction

1. The chassis shall be welded steel with slots/holes for mounting to the door frame. The cover shall be of welded steel and fully enclose the operating components of the unit. The chassis shall be non-handed and the total size shall not exceed 6X5X12 inches.
2. The motor shall be a gearhead type, with all steel gears, having a power requirement of 120 VAC, 60 Hz, single phase, 15 A circuit. The average draw shall be 3 A, and shall have a duty cycle of four times per minute.
3. The actuator arm shall be 27 inches long, with a rubber roller located at the end, which shall roll freely on the door frame. The actuator arm shall not be attached to the door.
4. The standard finish shall be a polyester powder coat paint, in dark bronze or silver as selected. Custom colors shall be available at an additional cost.

D. Operation

1. The door frame installation shall have the operator mounted vertically on the hinge side, having a variety of optional mounting positions. Optional installation shall allow the operator to pull the door inward.
2. Adjustment potentiometers shall be concealed within the mounting chassis and will control operator force, open speed, hold open time and closing speed to ensure compliance with handicap access door operating system code requirements.
3. Activation touch controls shall be wireless or hard-wired, as directed. Infrared or microwave sensors may be used as required. Controls shall consist of a properly marked box to activate the operator motor. Multiple doors can be controlled simultaneously.

E. Warranty

1. The operator shall be guaranteed against all defects in workmanship and will have a limited three year warranty on the gear-motor and one year on the actuator arm, chassis and electronics.