



Door Motion Technologies[®], Inc.

DuraSwing™ MK V+

*High Performance
High Traffic
Header Mount
On-Demand or
Automatic
Door Operator*



 **ADA** Product

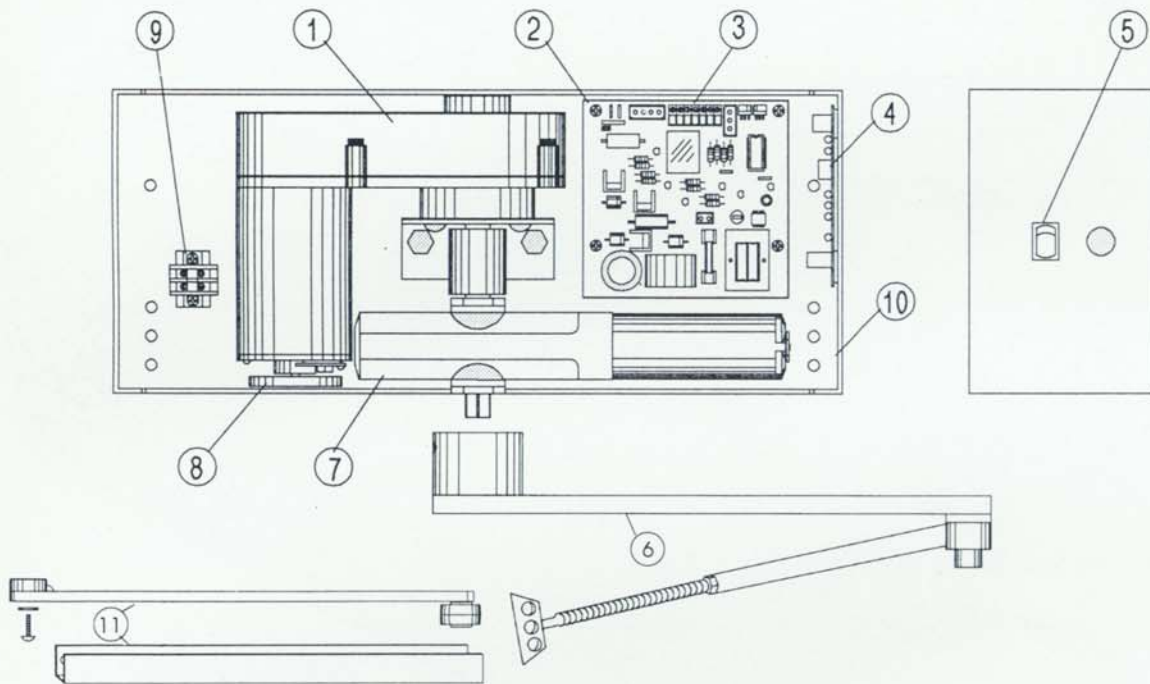
Elegant Door Control Solutions

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DMT DuraSwing™ MK V+ • Heavy Duty •

DuraSwing™ MK V+: GENERAL DESCRIPTION

This swing door operator is ideal for retrofit or new construction, and will automate all swing doors up to 4.0' in width. This header-mount door operator features three modular components for easy installation and service: **A:** a microprocessor based motor and accessory control board, **B:** a drive assembly consisting of a 3" DC motor and a permanently lubricated and sealed gear box; and **C:** a cast-iron hydraulic door closer. The MK V+ can also operate simply as a door closer when power is turned off, or if used as an On Demand door operator with wall switches. An RF receiver is standard for wireless push-button operation. This operator is equipped with an accessory module which provides a terminal bus bar, control and power supply for an electric lockstrike or magnetic lock. Also provided are card reader or keypad trigger inputs as well. For full automatic operation, contacts and sensor power supply are available. A typical installation can be finished in one hour by one person. This operator complies with ADA / BHMA low-energy door operator requirements, and also has been tested to exceed **1 MILLION** full-load cycles. Cycles per minute rating: 4
Microprocessor is Y2K compliant.



CALL-OUT LEGEND

1. Gearhead Motor
2. Motor Control Board
3. Sensor / Access Control Module
4. Wireless Receiver
5. System Turn On / Off Switch
6. Door Control Arm (Standard)
7. Cast-Iron Hydraulic Closer
8. Motor Encoder (Rev Monitor)
9. AC Primary Input Terminal Block
10. Rigid, All-Steel Construction
11. Optional Inswing Arm & Track



• Full Function • High Performance • Header Mt. •

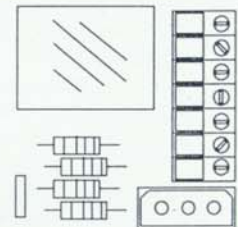
Microprocessor Based Motor Control System.

This state-of-the-art motor control system is the heart of the DS MK V+. It uses a computer chip to monitor door position continuously by processing motor position data transmitted from the encoder attached to the motor. This data (or feedback) includes speed, resistance and time. The SafeTek™ algorithm then processes this information to detect obstructions and environmental variables (such as wind & door system characteristics). The control program is self-adjusting, so there are few set-up controls; Door Open Angle (60 to 120 degrees); Hold Open Time (5 to 45 seconds) and Force Limit, which adjusts the operator to initial door system characteristics. The SafeTek™ program can distinguish a human "obstruction" from a gust of wind, which means the door will stop when encountering a 15 lb. resistance yet will open through windy conditions. Additionally, if a person causes the door to stop, the door will stall and the program will wait 3.5 seconds, then continues its opening cycle to full open. If the person is still obstructing the door, the program will sense the 2nd stall, then it will close the door. Upon activation, power ramp-up provides a "soft start" to extend the life of door system components.



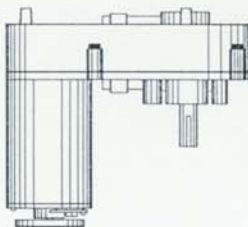
Automatic Sensor and Access Control Module.

Integrated with the motor control system is a complete sensor and access control terminal block and relay module, designed to make easy work of combining various types of sensor triggers for full automatic operation. There is also an inhibit override, in case two persons approach the door from opposite directions. Included are various inputs, outputs and delay to facilitate operation of electric lockstrikes, magnetic locks, card readers, keypads and other types of security/access control systems, including fire alarm circuits. Additionally, there is a 24VDC power take-off sufficient for many commercial electric lockstrikes.



Integral Heavy-Duty Gearhead Motor.

The large 3" DC motor is coupled to an *all-steel geartrain* (no plastic gears) which is permanently lubricated and sealed in an aluminum casting. This provides a long, maintenance-free life of smooth operation. Tested beyond *1 Million Cycles*, it carries a 2 year limited warranty. The High-torque DC motor requires a lower gear ratio than most and only adds a minimal 2 lbs of internal resistance when the door is operating manually. Also, violent door abuse is less likely to damage the gear train. The enclosed gearbox has the added benefit of permanent lubrication and quiet operation and no routine maintenance is required. Should repair become necessary, the compact, clean drive system takes 10 minutes to remove or replace.



Hydraulic Door Closing System.

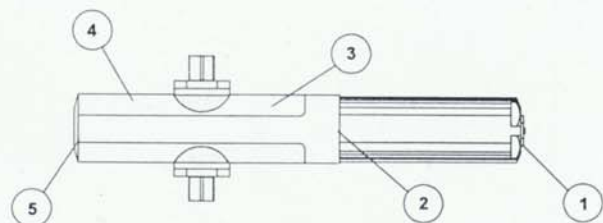
Research has shown hydraulic closing systems in automatic door operators to be the safest and most reliable over extended periods of heavy traffic use. Eventual hydraulic seal failure is gradual and will not simply fail overnight. This gives ample time for servicing before it becomes critical. Motor (or electromagnetic resistance) braking systems can fail suddenly if the plastic pinion gear breaks, thus slamming the door shut, which is a potential hazard to the user. - The DuraSwing™ MK V+ hydraulic closer features a durable cast-iron valve body, *back check*, *sweep speed*, *latch speed* and *spring tension adjustments up to a #5 rating*. This unit is rated beyond **1 million cycles**.

DOOR CLOSER SYSTEM

- Multi-size hydraulic, cast iron closer
- Non-handed
- Actuator arm system: Roller & Track
- Door width range: 3'0" to 4'0"
- Maximum opening angle - 120°

CLOSER ADJUSTMENTS

- | | |
|------------------------|----------------|
| 1. Spring Power | 4. Close Speed |
| 2. Backcheck Intensity | 5. Latch Speed |
| 3. Backcheck Location | |

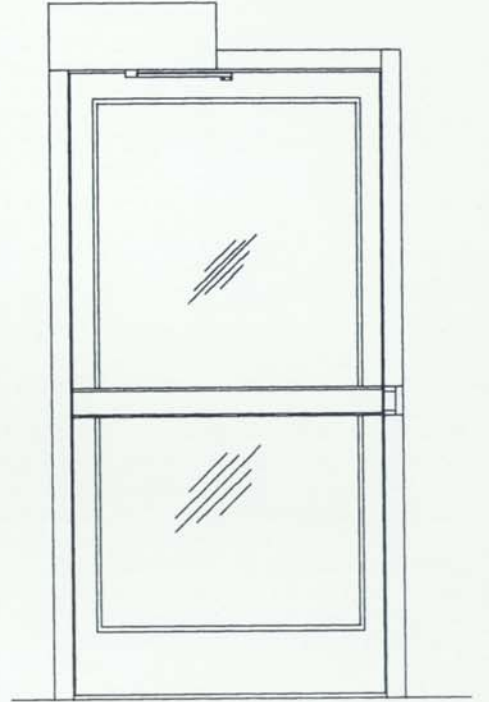


• Full-Time or On-Demand Door Operator •

Operator Features & Benefits

- Choice of *on demand* or *automatic* operation.
- Rugged - does not require a clutch system to protect the geartrain. Rated at 4 CPM.
- Cast-iron, multi-size hydraulic door closer, with 5 adjustments.
- Non-handed. Will convert from right to left-handed in 15 minutes.
- Push-open or pull-open ready (request inswing opt).
- No maintenance required.
- Sensor and access control ready.
- Does not require external safety devices.
- Quiet, smooth & efficient.
- Exclusive SafeTek™ safety control program.
- True microprocessor motor control.
- Hold-open and operator shut-off switches: Standard.
- Available in standard and custom powder coated finishes.
- Wireless operation standard (built-in).
- CSA / NRTL listed.
- Meets ADA / ANSI 156.19 code requirements.
- Two year limited warranty.

For full specifications, phone or fax request to DMT for prompt reply.



LIMITED WARRANTY:

2 YEARS on motor, geartrain and chassis components.
1 YEAR on all electronics. (Call for full specifics.)

ACCESSORIES



DM P3 - Frame switch



DM P2 - Direct-wire wall switch



DM P6 - 4" Round wall Switch



DM P5 - Keychain transmitter



DM P1 - Wireless wall switch



DM IR50C - Infra-red sensor



DM P4 - Hand-held transmitter