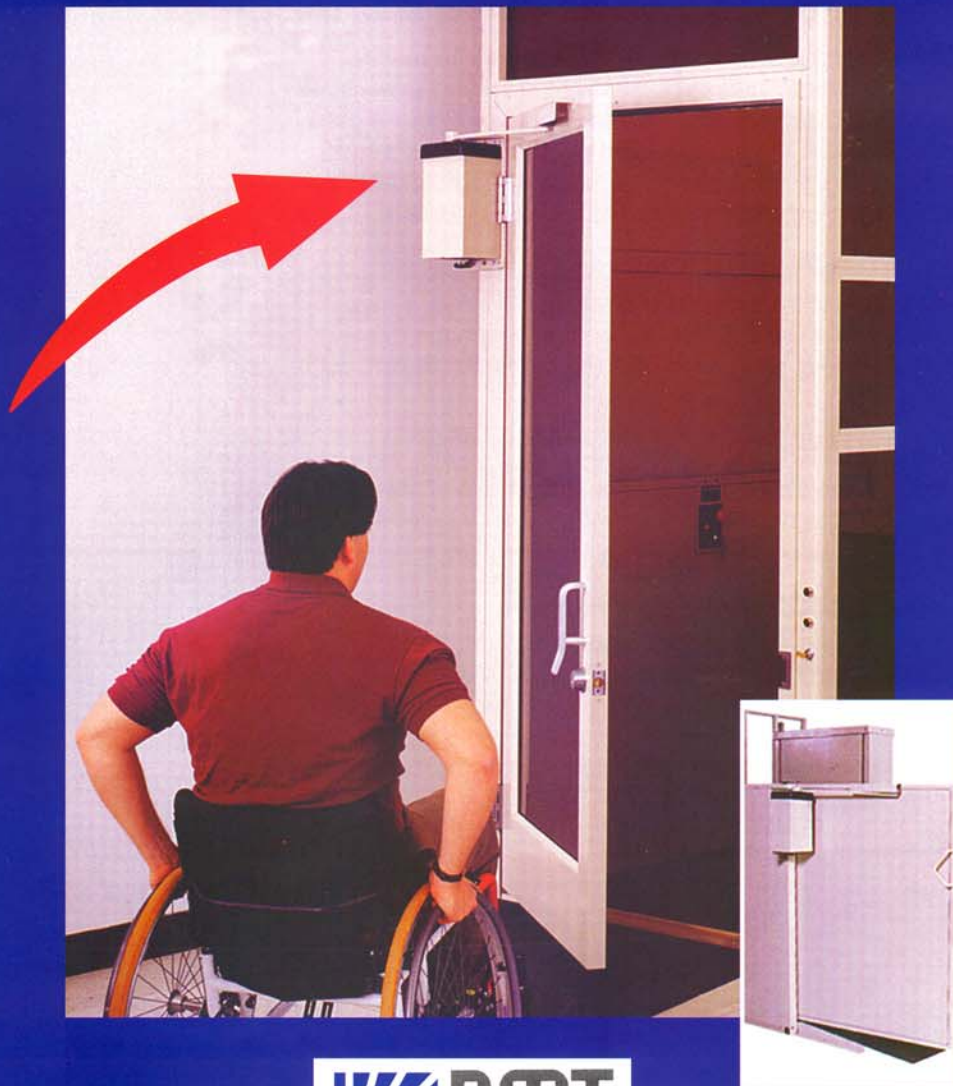


DuraSwing™ DS 4 Series Pat. Pending

• Swing Door Automation Systems •

RESIDENTIAL ELEVATORS • WHEELCHAIR LIFTS • LIMITED USE-LIMITED ACCESS



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DuraSwing™ DS 4 Series Pat. Pending



The DS 4 Series door and gate operators allow disabled riders to enter & exit the elevator or wheelchair lift without assistance.

A door or landing gate on any model wheelchair lift can be readily equipped with a DuraSwing™ operator, removing a serious accessibility barrier for physically impaired riders. This durable, silent door & gate operator will make the use of any wheelchair lift or residential elevator more user-friendly. The **DS 4H** (hall door) and **DS 4S** (safety gate) door operators offer the user excellent safety, reliability and value.

Applications Versatility

The **DS 4H** is designed to be installed in a number of ways, so the installer can choose the most appropriate method, given the existing architectural requirements. Integration with most elevator/lift controls is straight forward.

Just press the button

When integrated with the lift/elevator control, just a push of the call button will trigger the door or gate. The rider needs to only roll into the cab or platform and the door will smoothly and silently close behind.

SafeTek™ obstruction sensing program

The **DS 4** continuously monitors position and swing rate, and the sophisticated software program can detect changes in opening or closing rate, and when obstructed, will reverse. If obstructed while opening, it will reverse and shut down. If obstructed while closing, it will reopen, go into the hold-open cycle, then attempt to close. It will repeat until the door can close.



Shown: DS 4S (gate) & DS 4H (door)



Shown: DS 4H (lift gate)



Shown:
DuraSwing DS 4H

FEATURES

- Automate all "swing" doors & gates
- Non-handed (left or right swing)
- Adjustable hold-open time (5-45 sec.)
- Invertible (motor shaft up or down)
- Multiple mounting options
- Customizable trigger options
- Customizable processor parameters
- Weather proofing option (exterior use)
- Wireless activation options
- Sturdy steel construction, powdercoat finish
- Power requirements: 110VAC @ 2A



DuraSwing™ MK 4H,4S & 4C PAT.PEND.

Power Open - Power Closing Electrical Door Operators For
BFLD, SED, WED, Residential & LULA Elevators

GENERAL DESCRIPTION

Known for its versatility, the DuraSwing™ MK IV series door operator has many applications, one of which is the "R" or reversing series variations of which have specific elevator door automation uses. This sheet describes applications for hatch and safety gates, and a novel application where **a single operator can be used to operate a hatch door, (or more)** and a second unit can be installed to operate the safety gate.

The DS-4 has three essentially different elevator door applications:

A: Safety-or slide gate automation (4S), **B:** Hatch door operation from the cab (4C), and **C:** Hatch door operation from the outside of the elevator shaft (4H).

When ordering these versions of the DS-4 the correct microprocessor will be installed depending on application type, and appropriate hardware will be bundled with the operator. It differs from the **Standard** program IC (MK4R) in that the program "ramps" up power *lightly* to ensure full close in the case of the 4H, and full open in the case of the 4S. Also, in the case of the 4H, the Timer function initiates the close part of the cycle. The 4S, has a *trigger to open* and *trigger to close* feature. In this form the automatic close time is bypassed-except in the case of the 4H, where the door closes automatically. Also, the door will automatically reclose if the door is left open manually after the timer times out. The program has other variable parameter choices. Also, the actuator arm needed is specific to the application: A safety gate arm is a long, offset arm used in conjunction with a roller track. A hatch door arm is straight and needs no track *if cab mounted*. Some hatch doors do have a door latch and need ramp-up power options (L,M,H). Program options are available at no extra cost, at time of order. **The most cost effective full-automation** application, particularly for a LULA elevator is to have both safety gate and hatch door operators mounted on the cab, so that all in-line gates and doors can be operated by the cab mounted equipment. A two-stop LULA normally may have one gate operator on board and one at each hatch door. This system reduces cost by 1/3.

Note: For cab mounted hatch door operation, the doors must have **spring loaded hinges** to close the door, which will follow the actuator roller until the door reaches the door stop. The actuator arm will continue swinging inward until it reaches a limit switch and shuts down. Order LULA program.

True Microprocessor Control: This means that the motor is acting in servo mode, has an encoder feedback system that apprises the microprocessor of actuator arm position, resistance, time elapsed and other essential information. This keeps installation adjustment down to one or two controls for both open and close functions. Installation for either cab mounted control is under 30 minutes. Operation is extremely quiet and smooth. Breakaway and "bump" sensitivity is programmable, force and opening width are adjustable.