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RESEARCH REPORT: RR 22645 (CSI #08715)

BASED UPON ICC EVALUATION SERVICE LEGACY REPORT NO. ER-1812

REEVALUATION DUE DATE: December 1, 2007

GENERAL APPROVAL - Reevaluation - Stanley's Dura-Glide 2000 and 3000 Series; Magic-Swing and Magic-Force Operators and Related Equipment.

DETAILS

The above assemblies and/or products are approved when in compliance with the description, use, identification and findings of Legacy Report No. ER-1812, dated March 1, 2003, of the ICC Evaluation Service, Incorporated. The report, in its entirety, is attached and made part of this general approval.

For each installation, the door emergency breakaway feature shall be tested. The doors shall also conform to impact hazard glazing and security requirements.

DISCUSSION

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revisions to the report must be submitted to this Department, with appropriate fee, for review in order to continue the approval of the revised report.

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Stanley Access Technologies

RE: Stanley's Dura-Glide 2000 and 3000 Series;

Magic-Swing and Magic-Force Operators and related equipment

For this General Approval to be valid on any individual construction project in the City of Los Angeles, an engineer or inspector of the Department of Building and Safety must make a determination that all conditions of the General Approval required to provide equivalency have been met in the case of each construction project under consideration.

The parts of Legacy Report No. ER-1812 which are excluded on the attached copy have been removed by the Los Angeles Building Department as not being included in this approval.

The status of the referenced Legacy Report No. ER-1812 dated March 1, 2003, which is currently beyond its re-examination date is still valid. The validity of the report was verified with ICC.

YEUAN CHOU, Chief

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YC:elcm RR22645/wp8.0 R10/24/05 7E/1003.3.1

Attachments: ICC ES Legacy Report No. ER-1812 (2 Pages).

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Legacy report on the 1997 Uniform Building Code™

CATEGORY: EXITS

STANLEY POWER OPERATORS FOR DOORS AND POWER-OPERATED EXIT DOOR ASSEMBLIES

STANLEY ACCESS TECHNOLOGIES, DIVISION OF THE STANLEY WORKS 65 SCOTT SWAMP ROAD FARMINGTON, CONNECTICUT 06032

1.0 SUBJECT

Dura-Glide 2000, 3000 and 5000 Series Doors; Dura-Glide Models with Access Control 3000//C and 5000//C; Magic-Swing, Magic-Force and Magic-Access Operators; and Magic-Gwing and Magic-Force Bi-Fold Door Systems.

2.0 DESCRIPTION:

2.1 Dura-Glide Automatic Sliding Doors:

The Dura-Glide 3000 Series automatic sliding doors consist of single or biparting assemblies for use as emergency exits. The individual leaves slide behind swinging sidelights when the mechanism is activated by an electronic carpet or other automatic means, capable of being operated from one or either side of the door, depending upon the installation. The single doors are available in opening widths of 36 through 48 inches (914 through 1219 mm), with a nominal 6-foot 11-inch (2057 mm) opening height. The biparting doors are available in widths of 48 through 72 inches (1219 through 1829 mm), with the same opening height. The swinging sidelights are the same widths as the respective sliding door leaf, but overlap the door width approximately 2 inches (51 mm). The sidelights are equipped with a standard door-holding mechanism which does not impede the breakaway operation. Sidelights are maintained in the closed position by a springloaded ball detent during normal door operation.

The doors and sidelights are constructed of 6063-T5 or -T6 aluminum extrusions, with each sliding leaf suspended from a sliding hanger assembly. The hanger assembly is ball-bearing roller mounted on a continuous aluminum header track the full width of the door unit. An operator belt connects the single door, or both leaves of the biparting door, directly to the door operator.

Each door leaf is suspended at its pivot stile by an adjustable cantilever support and pivot assembly which allows the leaf to swing outward for emergency egress. A corrosion-resistant ball detent holds the leaf in normal position, releasing when pressure is applied during emergency operation. A metal threshold-door guide is used in the swinging sidelight area, and accommodates a spring-loaded guide in the base of the sliding leaf.

Under emergency exiting conditions, the sliding leaf may be swung outward at any point in its travel by a force of less than 20 pounds (89 N) applied at the mid-height of its leading edge. The unit is equipped with an adjustable mechanism that would permit field adjustment of the operating force to a maximum of 40 pounds (178 N). Upon rotation, the sliding leaf contacts the swinging sidelight stile and forces it to open and provide the necessary rotational clearance, irrespective of the position of the sliding door. The sliding door leaf is capable of being rotated outwardly at a full 90 degrees. When the sliding leaf is in the fully closed position, a pair of security tabs located on the heel of the sliding leaf automatically lock the swinging leaf. Under emergency exiting conditions, as the sliding leaf rotates, the security tabs also rotate to permit the swinging leaf to move and provide necessary rotational clearance. The pushing out of any leaf or sidelight cuts the power to the operator by means of special electrical switches permitting a safe egress. The doors are capable of having the swinging sidelights opened, with the sliding leaves swung open and pushed to the sides of the opening, providing approximately double the normal entrance opening.

The operating mechanism is all-electric, powered directly from 115 VAC. The safety actuating mechanism is connected to a low-voltage electrical system, set to instantaneously recycle to full open position from any point in the closing cycle.

The Dura-Glide 2000 Series automatic sliding doors are similar to the 3000 Series doors except that the slide/swing door slides on the breakout side of the side panels. The change in construction allows the side panels to be fixed while allowing the slide/swing door to break away at any point in its sliding cycle.

The Dura-Glide 5000 Series are telescoping versions of the 2000 and 3000 series. There is an extra sliding panel, for a total of three panels (including sidelight) for a single or six panels for bi-parting assemblies.

Dura-Glide models with access control (3000AC and 5300AC) are the same models as Dura-Glide 3000 and 5000, respectively, except they include a push bar and panic bardware.

2.2 Automatic Swing Door Operator: Magic-Swing Operator:

The Magic-Swing operator is an electromechanical swing door operator designed to operate a pedestrian swing door. The system consists of the electromechanical operator with a microprocessor control enclosed in an aluminum header along with additional connecting hardware and actuating controls. The operator uses a fractional horsepower, direct current motor through reduction gears and the appropriate

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linkage to open the door. The drive train has a positive, constant engagement. The door operator control box stops the door in the full open position by electrically reducing the motor voltage and stalling against an adjustable 90-degree stop. The operator then closes the door with spring energy. Closing speed is controlled by using the motor as a dynamic brake. The closing spring is a helical compression spring, preloaded for positive closing action. The door will close with or without power.

The operator can be used on swinging doors requiring a maximum of 75 lbf.-ft. (101.7 N m) of torque to open.

2.3 Automatic Swing Door Operator: Magic-Access Operator:

The Magic Access operator is an electromechapical swing door operator designed to operate a pedestrian swing door. The operator and control box are installed in a header above the door and the entire operator is removable from the header as a unit. The door is powered open by a fractional horsepower direct current motor through reduction gears, splined spindle, door arm and linkage assembly. The door operator control box stops the door in the open position by electrically reducing the motor voltage and stalling against a 90-degree stop. The operator closes the door by spring energy. Closing speed is controlled by employing the motor as a dynamic brake. The closing spring is preloaded for positive closing action. The door will close with or without power.

The operator can be used on swinging doors weighing a maximum of 125 pounds (56.7 kg).

2.4 Automatic Swing Door Operator: Magic-Force Operator:

The Magic-Force operator is an electromechanical swing door operator designed to operate a pedestrian swing door. The system consists of the operator with a microprocessor control enclosed in an aluminum header along with additional connecting hardware and actuating controls. The operator uses a fractional horsepower, direct current motor through reduction gears, and a linkage to open the door. The drive train has positive, constant engagement. The door operator control box stops the door in the full open position by electrically reducing the motor voltage and stalling against an adjustable 90-degree stop. The operator then closes the door with spring energy from either the open or breakout position. Closing speed is controlled by using the motor as a dynamic brake. The closing spring is a helical compression spring, preloaded for positive closing action and adjustable to accommodate various application requirements. The door will close with or without power.

The operator can be used on swinging doors having a maximum weight of 350 pounds and maximum dimensions of 48 inches (1219 mm) wide by 92 inches (2337 mm) high.

2.5 Magic-Swing Bi-Fold Door System:

The Magic-Swing Bi-fold Door System is a fully automatic folding door system for pedestrian traffic. The system is available in two panel and four-panel configurations and is a combination of a swinging door and a sliding door. The Magic-Swing operator is used for automatic door operation. The swinging portion of the door can be pivoted on the left or the right and can be in-swing or out-swing, depending on the application. Four-panel single-pane glass doors are available in widths between 6 and 10 feet (1829 and 3048 mm), and heights from 7 feet 6 inches to 9 feet (2886 to 2743 mm); maximum height for double-pane glass doors is 8 feet (2438 mm). Two panel doors are available in widths between 4 and 5 feet (1219 and 1524 mm), and heights from 7 feet 6 inches to 8 feet 6 inches (2286 to 2591 mm).

Under emergency exiting, the door panels may be swurg outward at any point in their travel by a maximum applied force of 40 pounds (178 N). When the door is in emergency release mode, a disconnect switch prevents powered operation.

2.6 Magic-Force Bi-Fold Boor System:

The Magic-Force Bi-Fold Door System is the same as the Magic-Swing System described in Section 2.5 of this report, except the Magic-Force operator is used in place of the Magic-Swing operator.

2.7 Identification:

The doors and operators bear a nameplate indicating the name and address of Stanley Access Technologies, the model number and the evaluation report number (ER-1812), and also bear a label with the name of the quality control agency (Underwriters Laboratories Inc.).

3.0 EVIDENCE SUBMITTED

Construction details and reports of tests conducted in accordance with UBC Standards 10-1 and 10-4, installation brochures and quality control manual are submitted.

4.0 FINDINGS

That the Stanley power operated doors and door operators described in this report comply with the 1997 *Uniform Building Code™* (UBC), subject to the following conditions:

- 4.1 All provisions in Chapter 10 of the UBC apply except that the sliding doors may be used in lieu of arranging the doors to swing in the direction of egress.
- 4.2 The doors are not used where panic hardware is required, except as follows:
 - 4.2.1 Doors are model Dura-Glide 3000AC or Dura-Glide 5300AC as described in Section 2.1 of this report.
 - 4.2.2 When installed as a required exit from Group A, Division 3, Occupancies, panic hardware may be omitted on the main exit, provided locking devices and signs comply with the exception to Section 1007.2.5 of the UBC.
- 4.3 A sign is placed on the door stating, "To Open in Case of Emergency, PUSH."
- 4.4 Glazing conforms with Section 2406 of the UBC.
- 4.5 The activating control carpets, when used, must comply with Section 10.103.6 of UBC Standard 10-1.
- 4.6 When used as an exit door, the net width of the door opening is measured with the door swung out in the minimum breakaway position.
- 4.7 Power-operated in-swinging doors are not recognized for determining exit width opening required to swing in the direction of egress unless the conditions of Section 1003.3.1.2 of the code are met.
- 4.8 The products are manufactured at the Stanley Access Technologies facility located at 65 Scott Swamp Road, Farmington, Connecticut, with follow-up inspections by Underwriters Laboratories Inc. (AA-668).

This report is subject to re-examination in two years.