4324 Phil Hargett Court
Monroe, NC 28110
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SECTION 08 42 29.13
ARCHITECTURAL SPECIFICATIONS – record-usa SERIES 4500
SLIDE/FOLD AUTOMATIC ENTRANCES

PART 1: GENERAL

1.1 SUMMARY

A. This specification details the requirements for the fabrication and installation of automatic Slide/Fold doors. Door packages shall be complete including folding door panels, side jambs, header, operator, and bottom door pivots. (Optional activation devices and transom would also be included with this package. Guide rails as required by code.)

B. Related Sections:

1. Division 7 Sections for caulking to the extent not specified in this section.
2. Division 8 Section “Aluminum-Framed Entrances and Storefronts” for entrances furnished separately in Division 8.
3. Division 8 Section “Sliding Automatic Entrances” for single and bi-parting sliding automatic entrance doors with sidelites.
4. Division 8 Section “Door Hardware” for hardware to the extent not specified in this Section.
5. Division 8 Section “Glazing” for materials and installation requirements of glazing for automatic entrance doors.
6. Division 26 and 28 Sections for electrical conne4ctions including conduit and wiring for automatic entrance door operators and access control devices.

1.2 SUBMITTALS

A. PRODUCT DATA: Provide complete product and installation documentation as provided by the manufacturer.

B. SHOP DRAWINGS: Provide details of door construction including profiles, dimensioned layout, and assembly including finish, glazing, electrical, and anchoring requirements.

C. Provide manufacturer’s Warranty documentation and Owner’s Manual.

1.3 QUALITY ASSURANCE

A. Manufacturer must have a minimum of five (5) years experience in the fabrication of aluminum-and-glass door assembly similar to those specified. Door packages shall be warranted against defect in material and workmanship for a period of two years from the date of installation. Installation shall be approved by an AAADM certified inspector.

1.4 REFERENCES

A. UNDERWRITERS LABORATORIES (UL):

1. UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

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B. American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA):
    1. ANSI/BHMA A156.10: Standard for Power Operated Pedestrian Doors.
C. American Society for Testing and Materials (ASTM):
    1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
D. American Association of Automatic Door Manufacturers (AAADM)
E. National Fire Protection Association (NFPA):
    1. NFPA 101 – Life Safety Code.
    2. NFPA 70 – National Electric Code.
F. International Code Council (ICC):
    1. IBC: International Building Council
G. Building Officials and Code Administrators International (BOCA), 1999
H. International Conference of Building Officials (ICBO):
    1. UBC 1997: Uniform Building Code
I. National Association of Architectural Metal Manufacturers (NAAMM):
    1. Metal Finishes Manual for Architectural and Metal Products.
J. American Architectural Manufacturers Association (AAMA):
    1. AAMA 607.1 - Clear Anodic Finishes for Architectural Aluminum.

1.5 PERFORMANCE REQUIREMENTS

A. Temperature change suitable:
    1. minus 30 degree Fahrenheit (minus 34 degree Celsius) to
    2. 130 degree Fahrenheit (54 degree Celsius)

1.6 ON SITE FIELD CONDITIONS REQUIRED PRIOR TO INSTALLATION

A. Approved Shop drawings must be referenced and confirmed by the General Contractor before fabrication.
B. Opening must be verified to be plumb, straight and secure.
C. It is the duty of the General Contractor to make door installer aware of any nonconforming conditions or equipment as indicated on the shop drawings.
D. General Contractor is required to coordinate the layout and installation of the automatic door equipment connection to power supplies.
E. ELECTRICAL: The general contractor or Electrical Contractor shall furnish and install all wiring to header.

1.7 WARRANTY

A. Folding door packages shall be warranted against defect in material and workmanship for a period of two years from the date of installation.

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PART 2: PRODUCT

2.1 MANUFACTURER

record-usa
Monroe, North Carolina, USA
(800) 438-1937

2.2 AUTOMATIC FOLDING DOOR DESIGN

A. **FOLDING DOOR PACKAGE:** Slide/Fold door packages shall be complete including operator mechanism, folding door panels, side jambs, header, control, and bottom door pivots. (Optional activation devices and transom would also be included with this package.)

B. **DOORS AND FRAME:** All structural aluminum sections shall be 6063-T5 alloy with exposed surfaces anodized or painted to match architectural finish. Side jambs (and transom framing) shall be 1-3/4" x 4-1/2" (optional 4-1/2" x 4-1/2" side jambs are also available). Wool double weather-stripping shall run full height of the pivot stile of the FS panel.

C. **DOOR OPERATOR(S) AND CONTROL:** Slide/Fold door operator mechanism shall be electro-mechanical, completely self-contained, and comply with ANSI/BHMA A156.10 and UL325. Operator mechanism and control shall be completely concealed above the doors in an extruded aluminum header (alloy 6063-T6) with removable access cover with an overall size of 9" deep x 7" high. Door movement shall be driven by a sealed DC gear-motor and steel reinforced drive belt. The multifunction microprocessor control shall provide fully adjustable open, close, and check speeds. An adjustable hold open time delay (1-30 seconds) shall be provided. The microprocessor shall provide a safety-first recycle/stop feature if closing/opening is obstructed. The control shall provide self-monitor system that compensates each cycle for changes in temperature, wind load, pressure, mechanical drag, and checks for proper internal operation. The control shall be provided as standard and shall have the following modes: Automatic, Off, Exit Only, Full Open, and Partial Open, and shall allow authorized service personnel to make door performance adjustments to the control. The reduced opening distance shall be field adjustable and can be constant or a function of traffic frequency. Selectable ratchet mode shall keep the door in the open position until a second activation signal is fired. The operator shall allow the door to be opened manually in power off conditions. Optional battery pack shall either: automatically open or close the door(s) after power is lost.

D. **SECURITY:** The Slide/Fold door packages shall be fitted with an Adams Rite Maximum Security hookbolt deadlock with threshold bolt for two-point locking.

E. **LOCKING:** The following configurations are available based upon design:

1. **PEDESTAL LOCK ASSEMBLY:** Infold units only. This prevents the rotation of the belt pulley which dis-allows movement of the doors.
2. **BREAKOUT LOCK ASSEMBLY:** Outfold or infold. Locking is in the panel and locks against the fold of the door panels as well as allowing for breakout of folding doors.

-ONLY ONE OF THESE OPTIONS IS NECESSARY

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F. FINISH: All exposed surfaces shall be integral color anodized to one of the following finishes:
1. 204-R1 Clear
2. Class 1 two-step, hard-coat dark bronze
3. Other anodized or painted finish as specified.

G. ACTIVATION AND SAFETY DEVICES: Opening cycles shall be activated by a motion sensor, or press wall switch installed in a location in compliance with ANSI A156.10 and all local codes. Safety device(s) shall be installed and protect the fold area of the door in compliance with ANSI A156.10.

H. GUIDERAILS: The Slide/Fold door packages that require guiderails in order to comply with ANSI A156.10 will need to include: 9-90-0002-CL/DB (clear or dark bronze) Wall Mounted, L-shaped w/ single horizontal bar. 36" high x 36" long.

2.3 MASTER CONTROL

A. The master control shall be capable of being programmed by either the S.M.A.R.T. panel installed as standard on all 4500 Series slide/fold doors or by an application loaded a smart device, accessed with a dongle plugged into the operator. Both the S.M.A.R.T. panel and the Application will be capable of programming all swinging, sliding and folding doors within the record product offering. The master control shall have only digitally adjustable parameters (for repeatability purposes, employing potentiometers as a method of setting parameters shall not be allowed). The master control shall be a microprocessor capable of being programming, but not limited to control settings:

1. Opening and Closing speeds
2. Acceleration
3. Door open time delay
4. Remote door open time delay
5. Partial opening size
6. Reverse adjust sensitivity
7. Control of Emergency battery back-up utilities
8. Fire alarm signals
9. Directional traffic flow
10. Locking
11. Remote volt free input commands.

B. The microprocessor shall also have the capability of, but not limited to: Detect faults and deal with them according to method of programming including sending data to the S.M.A.R.T. panel, indicating that there is a fault, what the fault is from one of the 30 stored error screens, it will also provide a user programmed telephone contact on the display. Any updates to the software can be uploaded and updated, using the Application and dongle.

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PART 3: EXECUTION

3.1 INSPECTION
Inspect frame opening for correct size, plumb and square and level floor for safe and reliable performance. Provide written notification to the appropriate personnel of conditions not acceptable to the installer and/or manufacturer. Proceed with installation only after necessary corrections are made by the general contractor to insure a suitable opening**.**

3.2 INSTALLATION
Install sliding door unit plumb, square, and level in properly prepared and supported opening, using specified fasteners, as required by installation instructions and as detailed on the shop drawings.

3.3 INSTRUCTION
Following the installation and final adjustments, the installer shall fully instruct the facility manager as to correct operating procedure and safety requirements of the sliding door package.

3.4 FINAL CLEANUP
After installation and adjustment for smooth, reliable operation, clean the door package and remove all surplus material, equipment, and debris incidental to this work.

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Specification Notes

Should sensors and guiderails not be conducive to design application, this door can be fabricated to meet low energy standards A156.38.

The term Slide/Fold is relevant to the Series 4500 because this door uses the mechanics of a sliding door, while having panels that fold. The industry as a whole typically uses swing door operators to power folding door. record-usa has had great success with the Slide/Fold application resulting in a point of egress that requires less maintenance and allows for a greater clear opening by only decreasing the size of the finished opening by 14-1/4”.

In the specification you will notice red highlighted sections. These are propriety technologies of record-usa that are unavailable elsewhere or options that can be added that we would like to bring to your attention.

Should you require a custom 3-part spec, please contact us:
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