

## Section 08 42 29

### AUTOMATIC FOLDING DOOR SYSTEMS

#### SERIES 4000 *ULTRA-FOLD™* FOLDING DOORS

#### PART 1: GENERAL

##### 1.01 SCOPE

This specification details the requirements for the fabrication and installation of automatic folding doors. Door packages shall be complete including folding door panels, side jambs, finger guards, header, operator, control, and bottom door pivots. (*Optional activation devices, guide rail(s) and transom would also be included with this package.*)

##### 1.02 RELATED WORK

The following exclusions are covered in Section(s) \_\_\_\_\_:

1. Preparation of the plumb and square masonry opening
2. Floor preparation
3. Electrical supply and connection (dedicated 120 VAC, 15 amp circuit for each single operator; 20 amp circuit for each pair): Section \_\_\_\_\_
4. Electrical wiring, conduit and supplies for remote switching (if required): Section \_\_\_\_\_
5. Glass and glazing: Section \_\_\_\_\_

##### 1.03 QUALITY ASSURANCE

Folding door packages to be provided by authorized distributor of record-usa Provide automatic folding door package(s) that meet the requirements of the following standards:

ANSI/BHMA A156.10: American National Standard for Power Operated Doors

UL Standard 325: Standard for Electric Door, Drapery, Gate, Louver, and Window Operators and Systems

##### 1.04 SUBMITTALS

Installing Record-usa distributor shall provide the following submittal information:

1. Product Data: Submit record-usa product data and standard details.
2. Shop Drawings: Submit five prints and one reproducible shop drawing for fabrication and installation approval.
3. Templates and diagrams: Submit templates, wiring diagrams, fabrication details, and other information to providers of related work to coordinate the proper installation of the automatic doors.

##### 1.05 WARRANTY

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

#### PART 2: PRODUCT

##### 2.01 MANUFACTURER

Series 4000 *Ultra-Fold™* folding door packages as detailed shall be supplied by record-usa, Monroe, N.C.

##### 2.02 DESIGN

- A. FOLDING DOOR PACKAGE:** Folding door packages shall be complete including operator(s), folding door panels, side jambs, finger guards, header, control, and bottom door pivots. (*Optional activation devices, guide rail(s) 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 (*painted*) to matching architectural finish. Side jambs (*and transom framing*) shall be 1¾" x 4½" (*optional 4½" x 4½" side jambs are also available*). Wool double weatherpile shall run full height of the lock stile and hinge stile of the FX panel and the catch stile and hinge stile of the FX (dual units only). Wool weatherpile shall run full height of the pivot stile of the FS panel(s). 1" vinyl fingerguard shall be installed on pivot jambs and hinge stiles of FS panel(s).
- C. DOOR OPERATOR(S) AND CONTROL:** Folding door operator(s) shall be electromechanical, completely self-contained, and comply with ANSI/BHMA A156.10 and UL325. Operator(s) 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 4½" deep x 6" high. The door opening force shall be generated by a 1/8 H.P. permanent magnet DC motor driving a combination spiral bevel/spur gear reducer and transmitted to the

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door through an arm linkage. Opening speed shall be adjustable and features dual backcheck control allowing adjustment of backcheck speed and position. Closing shall be by spring force generated by two high quality compression springs. Adjustable closing speed and fixed latch speed shall control the doors in the closing cycle. The doors shall be operable manually at any time, without damage to the operator or components. The system shall include a multi-function microprocessor control providing adjustable hold open time (1 - 30 sec.), LED indications for actual position unknown, system status, open obstruction shutdown, activation signal, safety mat/sensor signal, "Stop-and-Hold" signal, and mode selector switches providing a means for easy field selection of the following functions: Open obstruction shutdown, ratchet activation mode, and stack pressure. Control shall be capable of receiving activation signals from any device with N.O. dry contact output. The unit can operate in standard time-delay mode allowing the door to close from the full open position, after the hold time is satisfied, or in ratchet mode, where an activation signal initiates the open cycle and a second activation signal initiates the close cycle. All activation modes shall provide fully adjustable opening speed. The door shall be held open by low voltage applied to the continuous duty motor. The control shall include an adjustable "SafetyWatch" circuit that monitors door operation and shuts the motor off if an open obstruction is sensed. The control shall include a "SafetyFirst" recycle feature that reopens the door if an obstruction is sensed at any point during its closing cycle. The control shall include a standard 3-position toggle switch with functions for ON, OFF, and HOLD OPEN.

- D. SECURITY:** The folding door packages shall be fitted with an Adams Rite Maximum Security hookbolt deadlock. Dual units shall include a threshold bolt for two-point locking. *(Option: Single units to be provided with a cylinder-operated flush bolt installed in the FS panel to lock the FS panel into the breakaway catch assembly. Dual units to be provided with two (2) cylinder-operated flush bolts installed in the FS panels to lock the FS panels into the breakaway catch assembly).*
- E. FINISH:** All exposed surfaces shall be integral color anodized (*painted*) to one of the following finishes:
1. 204-R1 Clear
  2. Class 1 two-step, hardcoat dark bronze
  3. Other anodized or painted finish as specified.
- F. ACTIVATION AND SAFETY DEVICES:** Opening cycle shall be activated by a floor mat, 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.

### **2.03 REQUIREMENTS FOR WORK SPECIFIED IN OTHER SECTIONS**

**ELECTRICAL:** The General Contractor or Electrical Contractor shall furnish and install all wiring to header. Provide 120VAC, 60 Hz, 1 phase, 15 amp service to each single operator (20 amp service to each pair) on a separate, dedicated circuit routed into the header.

## **PART 3: EXECUTION**

### **3.01 INSPECTION**

Inspect frame openings for correct size, plumb and square, suitable structural support for installation of the folding door package, and level floor for safe and reliable performance. Proceed with installation only after necessary corrections are made by the general contractor to insure a suitable opening.

### **3.02 INSTALLATION**

Install the door package plumb, square, and level in properly prepared and supported opening as required by record-usa instructions and as detailed on the shop drawings.

### **3.03 INSTRUCTION**

Following the installation and final adjustments, the installer/record-usa distributor shall fully instruct the facility manager/supervisor as to correct operating procedure and safety requirements of the automatic folding door package.

### **3.04 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.