



**SECTION 083323
UPWARD COILING FIRE DOORS
MODEL 700**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Upward coiling fire doors.

1.02 RELATED REQUIREMENTS

- A. Section << **079200 - Joint Sealants**>>: Sealing joints between frames and adjacent construction.
- B. Section << **083313 - Coiling Counter Doors**>>: Additional types of overhead coiling doors.
- C. Section << **087100 - Door Hardware**>>: Cylinder cores and keys.
- D. Section << **260583 - Wiring Connections**>>: Power to disconnect.

1.03 REFERENCE STANDARDS

- A. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- C. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- D. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- E. FBC TAS 201 - Impact Test Procedures; Testing Application Standard; 1994.
- F. FBC TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure; Testing Application Standard; 1994.
- G. ICC (IECC)-2018 - International Energy Conservation Code; 2018.
- H. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- I. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's standard literature showing materials and details of construction and finish.<< **Include data on electrical operation.**; or **None - N/A**>>
- B. Shop Drawings: Indicate rough and actual opening dimensions, anchorage methods, hardware locations, and installation details.
- C. Manufacturer's Instructions: Indicate installation sequence and installation, adjustment, and alignment procedures.
- D. Manufacturer's qualification statement.

- E. Installer's qualification statement.
- F. Operation and Maintenance Data: Indicate modes of operation, lubrication requirements and frequency, and periodic adjustments required.
- G. Specimen warranty.
- H. Project Record Documents: Include as-built electrical diagrams for electrical operation and connection to fire alarm system.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing work of this section with minimum of << **5 years**; or _____ years>> of<< **documented**; _____; or **None - N/A**>> experience in fabrication and installation of security closures.
- B. Installer Qualifications: Company specializing in performing work of this section with minimum of << **3 years**; or _____ years>> of<< **documented**; _____; or **None - N/A**>> experience and approved by manufacturer.
- C. Products Requiring Electrical Connection: Listed and classified by << **UL (DIR); TUV; testing firm acceptable to authorities having jurisdiction**; or _____>> as suitable for purpose specified.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture.
- C. Store materials in dry, warm, ventilated, weathertight location.

1.07 WARRANTY

- A. Manufacturer Door-Only Warranty: Provide manufacturer warranty for door assembly for duration indicated under individual doors. Complete forms in <<**Owner**>>'s name and register with manufacturer.
- B. Manufacturer Door and Operator Warranty: Provide manufacturer's limited warranty for door and operator system free from material and workmanship defects for duration and cycles indicated under individual doors; counterbalance spring and finish not covered by warranty.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Wayne Dalton; www.wayne-dalton.com; 1 (800) 827-3667.
- B. Substitutions: Not permitted.

2.02 UPWARD COILING FIRE DOORS

- A. Wayne Dalton; FireStar Model 700.
 - 1. Slats: Interlocking, roll-formed, metal slats.
 - 2. Width: << _____>>.

3. Height: << _____ >>.
4. Mounting: << **Surface-mounted on side indicated on drawings; or Between jamb**>>.
5. Opening Speed: Door to operate at variable speed up to << **8 inches (203 mm)**>> per second.
6. Closing Speed: Door to operate at variable speed up to << **12 inches (305 mm)**>> per second.
7. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
8. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.

9. Wind Load: Design door assembly to withstand ultimate static pressure load of << **20 psf (0.96 kPa); 31 psf (1.48 kPa); 26 psf (1.25 kPa); 37 psf (1.77 kPa); 47 psf (2.25 kPa); 36 psf (1.72 kPa); 55 psf (2.63 kPa); 41 psf (1.96 kPa); 50 psf (2.39 kPa); 57 to 130 psf (2.73 to 6.22 kPa); 65 psf (3.11 kPa); or 68.9 psf (3.29 kPa)**>> in accordance with << **ASTM E330/E330M**>>.
10. Wind Load: Not required.

11. Fire Rating: Design door assembly to comply with << **1.5-hour; 3-hour; or 4-hour**>> fire rating.
12. Curtain Material: << **Galvanized steel; or Stainless steel**>>. Staking lock system locks end of each slat from lateral movement.
 - a. Galvanized Steel: << **18 gauge, 0.0516 inch (1.31 mm); 20 gauge, 0.0396 inch (1.01 mm); 22 gauge, 0.0336 inch (0.86 mm); or _____ gauge, _____ inch (_____ mm)**>>.
 - 1) Finish:
 - (a) Standard polyester base coat; color: << **gray; beige; white; or brown**>>.
 - (b) Powder coat; color: << _____ >>.
 - (c) << **Galvanized G90 (Z275); or Gray-primed galvanized G90 (Z275)**>>.
 - b. Stainless Steel: << **20 gauge, 0.0359 inch (0.91 mm); or _____ gauge, _____ inch (_____ mm)**>>.
 - 1) Finish: No.4 satin.

- c. Slat Profile: << **No.4, 3-inch (76 mm) tall curved slat; No.14, 3-inch (76 mm) tall flat slat; No.2, 2-inch (51 mm) tall curved slat; or No.17, 2-inch (51 mm) tall flat slat**>>.
- d. Vision Lites: << **Not required; or FireLite Vision Lites**>>.
- 13. Bottom Bar: Galvanized steel.
 - a. Profile: Double angle.
 - b. Finish: << **Hot-dip galvanized; Galvanized, primed black; Powder coat; PowderGuard Zinc powder coat; No.2B mill; or No.4 satin**>>.
 - 1) Color: << **Match curtain; Black; or _____**>>.
- 14. Locking Options to Include: << **None; Slide lock; Cylinder; or Best cylinder**>>.
 - a. Lock Locations: << **Both jambs; Left only; or Right only**>>.
 - b. Lock Access: << **Coil side; or Opposite coil side**>>.
- 15. Weatherstripping and Seals:
 - a. Bottom Seal Astragal: << **Required; or Not required**>>.
 - b. Exterior Guide Seal: << **Required; or Not required**>>.
 - c. Flame Baffle: << **Required; or Not required**>>.
 - d. Lintel Brush Seal: << **Required; or Not required**>>.
 - e. UL-Listed Brush-Type Full Perimeter Smoke Seals: << **Required; or Not required**>>.
- 16. Side Guides, Channels: Constructed of << **steel; or 304 stainless steel**>> with members fully bolted together.
 - a. Finish: << **Hot-dip galvanized; Galvanized, primed black; Powder coat; PowderGuard Textured powder coat; No.4 satin; PowderGuard Zinc powder coat; or No.2B mill**>>.
 - 1) Color: << **Match curtain; Black; or _____**>>.
- 17. Brackets: << **Steel; or 304 Stainless steel**>> to support counterbalance and curtain.
 - a. Finish: << **Galvanized, primed black; Hot-dip galvanized; Powder coat; or Stainless No.4 satin**>>.
 - 1) Color: << **Match curtain; or _____**>>.
- 18. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to << **0.03 inch per foot (1:400 mm/sec)**>> of span. Adjustable spring tension required.
- 19. Hood: << **Not required; 24 gauge, 0.024 inch stainless steel (0.61 mm stainless steel); 24 gauge, 0.028 inch galvanized steel (0.63 mm galvanized steel); 22 gauge, 0.025 inch B&S aluminum (0.64 mm B&S aluminum); or _____ gauge, _____ inch (_____ mm)**>>.
 - a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: << **Galvanized, primed to match curtain; Hot-dip galvanized; Powder coat; _____ color; Clear anodized; Stainless No.4 satin; Bronze anodized; or Mill finish**>>.
- 20. Standard Fire Door Automatic Closure: Release mechanism equipped with 165-degree fusible link listed and labeled in accordance with << **UL (DIR)**>> for purpose specified and indicated on drawings.
 - a. Doors equipped with chain hoist release mechanism, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.

- 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing release handle manually. No tools required to reset release mechanism.
- b. Doors equipped with floor resettable electric motor operation system, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
- 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing by manual activation of release handle. No tools required to reset release mechanism.
 - 5) Resetting alarm system resets door without additional tools required after closing by alarm activation with power on electric motor.
 - 6) Fire sentinel time-delay release mechanism provides added measure of safety to control doors closure.
- c. Governor: If required by size of chain hoist doors, provide viscous governor to regulate rate of descent of door in quiet manner. Use engagement type not engaged during normal door operation, but after cable release, retard speed during automatic door closure to maximum << **24 inches per second (610 mm per second)**>> and minimum << **6 inches per second (152 mm per second)**>> complying with <<**NFPA 80**>>.
21. Manual Operation: << **Push-up; Floor resettable chain hoist; or Crank**>>.
22. Motor Operation: << **Not required; or Provide UL-listed electric operator; size as recommended by manufacturer to move door in either direction at minimum 8 inches (203 mm), maximum 1 foot (305 mm) per second**>>.
- a. Manual Override: << **Hoist; or Crank**>>.
 - b. Timer to Close: << **Not required; or Automatic closing controlled by adjustable hold-open time delay**>>.
 - c. Operation Supply Voltage: << **115/208/230V 1 phase 60Hz; 208/230/460V 3 phase 60Hz; 575V 3 phase 60Hz; 220V 1 phase 50Hz; 220V 3 phase 50Hz; or 400V 3 phase 50Hz**>>.
 - d. Signaling Device: << **Not required; Horn and strobe combination; or Traffic warning light**>>.
 - e. Actuation Device: Provide << **push button; key switch; pull cord; loop detector; and motion detector**>>.
 - f. Motor Mounting: << **Wall-mounted; Front of hood; Bench mount; Through-wall; or Top of hood**>>, << **right-hand side; or left-hand side**>>.
 - g. Motor Enclosure: << **Not required; NEMA 4-12 watertight and oiltight; NEMA 4X corrosion-resistant; Totally enclosed, fan-cooled motor; or Totally enclosed, non-ventilated**>>.
 - h. Obstruction Safety Detection: Constant contact button only.
 - i. Obstruction Safety Detection:

- 1) Primary, Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; NEMA 4X photo-eyes; 2-wire reversing safety edge; or Wireless reversing safety edge**>>.
- 2) Secondary, Non-Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; or 2-wire reversing safety edge**>>.
- j. Time-Delay Release Device: << **Required; or Not required**>>.
- k. Smoke Detectors: << **Required; or Not required**>>.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify << **existing conditions; and _____**>> meet manufacturer's requirements before starting work.
- B. Verify opening sizes, tolerances, and conditions are acceptable.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's written instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building structure without distortion or stress.
- C. Securely and rigidly brace components suspended from structure.<< **Secure guides to structural members only; _____; or None - N/A**>>
- D. Fit and align assembly, including hardware. Level and plumb to provide smooth operation.
- E. Coordinate installation of electrical service; see Section << **260583**>>.
- F. Install enclosure and perimeter trim.

3.03 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation from Plumb: << **1/16 inch (1.6 mm); or ___ inch (___ mm)**>>.
- C. Maximum Variation from Level: << **1/16 inch (1.6 mm); or ___ inch (___ mm)**>>.
- D. Longitudinal or Diagonal Warp: Plus or minus << **1/8 inch per 10 feet (3.2 mm per 3 m); or ___ inch per 10 feet (___ mm per 3 m)**>> straight edge.

3.04 ADJUSTING

- A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

- A. See Section << **017000 - Execution and Closeout Requirements**>> for additional requirements.
- B. Clean installed components.
- C. Remove labels and visible markings.

3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch up damaged finishes after Date of Substantial Completion.

END OF SECTION