



## SECTION 08332

### COILING COUNTER DOORS

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Coiling Metal Counter Doors.
- B. Coiling Counter Fire Doors.

##### 1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
- C. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- D. Section 09900 - Painting: Field applied finish.
- E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator and from door operator to control station.
- F. Section 16150 - Wiring Connections: Power to disconnect.

##### 1.3 REFERENCES

- A. ASTM A 123 - Standard specification for Zinc (hot-dipped galvanized) coating on iron and steel products.
- B. ASTM A 229 - Standard specification for Steel wire, oil-tempered for mechanical springs.
- C. ASTM A 653 - Standard specification for Steel sheet, zinc-coated (galvanized) by the hot-dipped process, commercial quality.
- D. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

- E. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- F. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- G. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- H. NEMA MG 1 - Motors and Generators.
- I. NFPA-80 – Standard for Fire Doors and Fire Windows.

#### 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Fire Rated Assemblies: Provide assemblies complying with NFPA 80 and listed in UL Directory or Intertek Testing Services (Warnock Hersey Listed) Directory.

#### 1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Details of construction and fabrication.
  - 4. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking, adjustment and maintenance of all components.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum three years and approved by manufacturer.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
- C. Store materials in a dry, warm, ventilated weathertight location

#### 1.8 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

#### 1.9 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

#### 1.10 COORDINATION

- A. Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Wayne Dalton; 2501 S. State Highway 121 Business, Suite 200, Lewisville, TX 75067. ASD. Phone: (800) 827-3667; Web Site: [www.wayne-dalton.com](http://www.wayne-dalton.com). Email: info@wayne-dalton.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

#### 2.2 COILING METAL COUNTER DOORS

- A. Coiling Metal Counter Doors: Model 500.
- B. Curtains:
  1. Material: Flat faced, 2 inch, No. 17 slats fabricated of:
    - a. Galvanized, bonderized, steel 20 gauge.

- b. Extruded aluminum 0.050 inch thick, 16 B&S gauge.
    - c. Stainless steel 20 gauge.
  - 2. Provide perforated slats where indicated. Slat perforations are 1/16 inch diameter holes with 20 – 25 percent open area over length of each slat.
  - 3. Alternate slats will be fitted with end locks to hold curtain in alignment.
  - 4. Bottom of curtain finished with an extruded, tubular, or single angle bottom bar fitted with a continuous vinyl bumper to protect counter top.
- C. Guides: Extruded aluminum. Continuous strips of wool pile are inserted into guides to eliminate metal-to-metal contact and to provide dust-seal around curtain.
- D. Brackets: Metal plates with permanently sealed ball bearings designed to enclose ends of coil and provide support for counterbalance pipe at each end. Plated fabricated of:
- 1. Steel 3/16 inch thick minimum.
  - 2. Extruded aluminum 1/8 inch thick minimum.
  - 3. Stainless steel 3/16 inch thick minimum .
- E. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.
- F. Hood: Hood will enclose curtain coil and counterbalance mechanism and is fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provided longitudinal stiffness.
- 1. Galvanized steel minimum 24-gauge
  - 2. Stainless steel minimum 24-gauge
  - 3. Aluminum, 22 gauge B&S
- G. Finish: Curtain, bottom bar, and hood to be finished as follows:
- 1. Gray, white, brown or beige baked-on primer on galvanized steel.
  - 2. Powder coating on galvanized steel with color as selected from the manufacturer's standard colors.
  - 3. Clear anodized aluminum.
  - 4. Bronze anodized aluminum.
  - 5. Stainless steel #4 finish.
- H. Manual Operation:
- 1. Manual push-up.
  - 2. Manual crank.
- I. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot or more than 1 foot per second.
- 1. Sensing Edge Protection:
    - a. Electric sensing edge.
    - b. Pneumatic sensing edge.
  - 2. Operator Controls:
    - a. Push-button operated control stations with open, close, and stop buttons.
    - b. Key operation with open, close, and stop controls.
    - c. Push-button and key operated control stations with open, close, and stop buttons.
    - d. Controls for interior location.

- e. Controls for exterior location.
- f. Controls for both interior and exterior location.
- g. Controls surface mounted.
- h. Controls flush mounted.

- J. Locking
  - 1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide.
  - 2. Provide cylinder lock at jambs or in center of bottom bar.
  - 3. Locks on electric-motor operated doors, shall be provided with electric interlocks to prevent operation when lock bolts are engaged in the guides.
- K. Mounting: Overhead Structure with:
  - 1. Steel jambs.
  - 2. Wood jambs.
  - 3. Masonry jambs.
  - 4. Drywall over 16 gauge minimum steel studs or wood stud jambs.

## 2.3 COILING COUNTER FIRE DOORS

- A. Coiling Counter Fire Doors
  - 1. Model 540, Galvanized steel.
  - 2. Model 550, Stainless steel.
- B. Label: Provide rolling fire doors certified with the following listing.
  - 1. UL 3-Hour Class A Label for installation on masonry or steel jamb walls (face mounted). Door may be welded to the face of steel jambs.
  - 2. ULC 3-Hour Class A Label for installation on masonry or steel jamb walls (face mounted). Door may be welded to the face of steel jambs.
  - 3. FM 3-Hour Class A Label for masonry or concrete walls, steel wall jambs or with steel tubes set against fire walls (masonry or non-masonry construction).
  - 4. UL 1-1/2-Hour Class B Label for installation in non-masonry walls, face mounted or between jambs.
  - 5. ULC 1-1/2-Hour Class B Label for installation in non-masonry walls, face mounted or between jambs.
  - 6. FM 3/4-Hour Class B Label when installed on fire-rated gypsum dry walls.
- C. Curtain:
  - 1. Material: Flat faced, 2 inch, No. 17 slats fabricated of:
    - a. Galvanized, bonderized, steel 22 gauge, Model 540.
    - b. Stainless steel 22 gauge #4 finish, Model 550.
    - c. Alternate slats shall be fitted with end locks to hold curtain in alignment.
  - 2. Smoke Seal Package: Provide UL Labeled smoke protection including full perimeter seal, flat slat, caulking. Comply with with UL label for "Leakage Rated Assembly" or "S" label.
  - 3. Curtain Finish: Curtain to be finished as follows:
    - a. Galvanized with gray, white, brown or beige baked-on primer, Model 540.
    - b. Galvanized steel, Model 540.
    - c. Powder coating, Model 540 with color as selected from the manufacturer's standard colors.
    - d. Stainless steel #4 finish, Model 550.
  - 4. Glazing: Fire-rated vision panels, four panels 3 inch by 5/8 inch (76 by 16 mm).
  - 5. Bottom Bar:

- a. Galvanized steel single angle.
  - b. Galvanized steel single angle with powder coat finish.
  - c. Stainless steel single angle #4 finish.
  - d. Provide with vinyl astragal.
  
- D. Guides:
  - 1. Steel primed construction with black finish, Model 540.
  - 2. Stainless steel #4 finish, Model 550.
  
- E. Brackets: fabricated of:
  - 1. Steel primed painted black.
  - 2. Galvanized (hot dipped).
  - 3. Powder coating as selected from the manufacturer's standard colors.
  - 4. Stainless steel.
  
- F. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.
  
- G. Hood: Hood will enclose curtain coil and counterbalance mechanism and is fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provided longitudinal stiffness.
  - 1. Galvanized steel with gray baked-on primer minimum 24-gauge.
  - 2. Galvanized steel, 24 gauge.
  - 3. Powder coating as selected from the manufacturer's standard colors.
  - 4. Stainless steel #4 finish, 24-guage material.
  
- H. Manual Operation:
  - 1. Push-up (standard).
  - 2. Awning crank operation.
  
- I. Electric Motor Operation: Provide electric operator as listed in the door UL file, for size as recommended by manufacturer to move door in either direction.
  - 1. Sensing Edge Protection:
    - a. Electric sensing edge.
    - b. Pneumatic sensing edge.
  - 2. Operator Controls:
    - a. Push-button operated control stations with open, close, and stop buttons.
    - b. Key operation with NEMA 1 interior, NEMA 4 exterior, surface and flush mounted open, close, and stop controls.
    - c. Controls for interior location.
    - d. Controls for exterior location.
    - e. Controls for both interior and exterior location.
    - f. Controls surface mounted.
    - g. Controls flush mounted.
  - 3. Automatic Closure:
    - a. Doors will be equipped with FireStar release mechanism, requiring only one cable to be routed to the operated side (cable not required to be routed to adjusting wheel side). Doors will close by a thermally actuated link rated at 165 degrees F, or by an optional listed releasing device, or by manually operating the release handle.
  - 4. Time-delay release mechanism provides an added measure of safety to control the doors' closure.

- J. Locking
  - 1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide (standard on push up).
  - 2. Provide cylinder lock at jambs or in center of bottom bar.
  - 3. Provide thumb turn lock at jambs or in center of bottom bar.
  
- K. Wall Mounting Condition:
  - 1. Face-of-wall mounting.
  - 2. Between jambs mounting.
  
- L. Plastic Laminated Fire Rated Countertops: Provide counter fire doors with laminated fire rated countertops to the size and shape indicated on the Drawings.
  - 1. Label: Plastic laminated fire rated countertops shall bear Warnock Hersey International 1-1/2 hour label for countertops up to 8 feet by 4 feet (2.44 m by 1.22 m). Sizes over 8 feet by 4 feet (2.44 m by 1.22 m) will bear a Warnock Hersey International Oversize Label.
  - 2. Shape: Provide: I or T copable for face mounted doors; Rectangular H (no cope), I or T copable for between mounted doors. No aprons or additional pieces shall be allowed.
  - 3. Core: Interior core of Georgia Pacific Firestop composite and high density particleboard.
  - 4. Finish: Top, bottom and all edges shall be covered with plastic laminate.
  - 5. Color: Top and all edges as selected by the Architect from any color from Formica, Wilsonart or Nevamar brands of plastic laminate.
  - 6. Mounting Hardware: Provide with all necessary mounting hardware.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify opening sizes, tolerances and conditions are acceptable.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

- C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.
- F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.
- G. Install perimeter trim and closures.
- H. Instruct Owner's personnel in proper operating procedures and maintenance schedule.

#### 3.4 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

#### 3.5 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.

#### 3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

#### 3.7 SCHEDULES

- A. :
  - 1.
  - 2.
  - 3.
- B. :
  - 1.
  - 2.
  - 3.

END OF SECTION