



SECTION 08333 [08 33 14]

## SECURITY GRILLES

Display hidden notes to specifier. (Don't know how? [Click Here](#))

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Upcoiling Security Grilles, manually operated.
- B. Upcoiling Security Grilles, power operated.
- C. Advanced Upcoiling Security Grilles, power operated.

#### 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-Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM A 229 - Standard Specification for Steel Wire, Quenched and Tempered for Mechanical Springs.
- C. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- 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. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
- H. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- I. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
- J. NEMA MG 1 - Motors and Generators.

#### 1.4 SYSTEM DESCRIPTION

- A. Security Grille: Wayne–Dalton 600 Series Upcoiling Security Grilles.
  - 1. Mounting: Door mounting can be self-supporting, using structural tubes, or directly to the building structure.
  - 2. Operation:
    - a. Manual push-up with lift handles.
    - b. Chain and gear maximum pull of 35 lbs.
    - c. Fully enclosed awning type crank gearing and removable crank arm,
    - d. Motor operated with control station.

#### 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. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, required clearances, anchors, and accessories. Include relationship with adjacent materials.
- 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: 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 material

#### 1.11 WARRANTY

- A. Provide Advanced Upcoiling Security Grilles with limited 2 Year or 300,000 cycle Warranty and an Electric Motor limited Warranty of 60 month.

### 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 ADVANCED UPCOILING SECURITY GRILLE

- A. Model 600 with Advanced Grille System Option:
  - 1. Curtain: Horizontal 5/16 inch (7.8 mm) diameter rods with network of vertically interlocking links to form a pattern. Vertical rod 2 inch (51 mm) on center spacing. Bottom bar extruded aluminum tubular shape.
    - a. Material:
      - 1) Stainless Steel Link, Galvanized Steel Rod, and Stainless Steel Spacer: No. 4 finish.
      - 2) Stainless Steel Link, Galvanized Steel Rod, and Stainless Steel Spacer: No. 2B finish.
      - 3) Galvanized w/ Rust Inhibitor Steel Link, Rod, and Mill Aluminum Spacer.
      - 4) Mill Aluminum Link, Galvanized Steel Rod, and Mill Aluminum Spacer
      - 5) Clear Anodized Aluminum Link, Galvanized Steel Rod, and Clear Anodized Aluminum Spacer
    - b. Pattern:
      - 1) Straight; horizontal spacing 9 inches (228 mm) on center.
      - 2) Brick; horizontal spacing 4-1/2 inches (114 mm) on center.
  - 2. Performance:
    - a. Opening speed up to 24 inches/second
    - b. Closing speed no higher than 12 inches/second
    - c. Springless direct drive mechanism without chain and sprocket connecting the drive mechanism to the door.
    - d. System cycle of no less than 300,000 cycles.
  - 3. Finish:
    - a. Prime all non-galvanized, exposed ferrous surfaces with one coat of rust-inhibitive primer
    - b. Powder coat: polyester powder coat, color as selected by the Architect.
  - 4. Guides: Three angle structural steel high usage guide.
    - a. Finish: polyester powder coat in black color.
    - b. Finish: polyester powder coat, color as selected by Architect.
    - c. Finish: polyester powder coat enriched with zinc, color as selected by the Architect.
  - 5. Bottom Bar: Reinforces curtain in guides and incorporates a wireless, monitored safety edge.
    - a. Tubular extruded aluminum.
      - 1) Finish: Mill finish aluminum
    - b. Double structure steel angle.
      - 1) Material:
        - (a) Steel.
        - (b) Stainless steel with a brushed finish.
      - 2) Finish:
        - (a) Finish: polyester powder coat in black.

- (b) Finish: polyester powder coat, color as selected by the Architect.
  - (c) Finish: polyester powder coat enriched with zinc, color as selected by the Architect.
- 6. Motor: Direct drive, integrated gear motor/brake assembly sized for openings. Provide with a manual hand chain for operation during power outages. Operator and drive assembly is factory pre-assembled and provided with all wiring harnesses required.
  - a. Electrical Characteristics: 220V AC, single phase per motor/drive.
  - b. Electrical Characteristics: 208/230V AC, three phase per motor/drive.
  - c. Electrical Characteristics: 460V AC, 3 phase per motor/drive.
  - d. Electrical Characteristics: 575V AC, 3 phase per motor/drive
  - e. Left hand mount.
  - f. Right hand mount.
- 7. Control Panel: Provide electronic Variable Frequency drive controller with microprocessor self-diagnostics. LCD readout indicates door action, alarm conditions, and fault conditions. Timer to close programming options and non-resettable cycle counter are included. Enclosure is NEMA 4X rated. Control system is UL508A certified. The junction box is IP67 rated.
- 8. Door Roll: Directly driven, springless roll shall be steel tube with integral shafts, keyed on the Drive End and supported by self-aligning greaseable sealed bearings. Door shall not require any counterbalance device.
- 9. Hood: Protecting drive motor, barrel, chain, and sprocket from dirt and debris and extending between the support brackets.
  - a. Material:
    - 1) Steel.
    - 2) Aluminum.
    - 3) Stainless steel with a brushed finish.
  - b. Finish:
    - 1) Polyester paint in black (steel only).
    - 2) Polyester powder coat, color as selected by the Architect.
    - 3) Clear anodized (aluminum only).
  - c. Provide with sloped top for exterior mounting.
- 10. Brackets: Provide steel brackets to support motor, curtain, and hood and fabricated of:
  - a. Black powder coated steel.
  - b. Polyester powder coat steel, color as selected by Architect.
  - c. Polyester powder coat enriched with zinc, color as selected by Architect.
- 11. Safety Devices: Provide door with following safety devices:
  - a. Photoelectric sensors that cast an invisible beam across the door opening and reverses the downward motion of the door when an object enters the path of the beam.
  - b. Wireless, monitored safety edge reverses downward motion upon impact.
  - c. Built-in (to motor assembly) brake mechanism eliminates uncontrolled curtain travel independent of other safeties.
- 12. Actuators:
  - a. One Open/Close/Stop push button station incorporated into Control Panel.
  - b. Loop detectors.
  - c. Radio control.
  - d. Interior Push buttons.
  - e. Exterior Push buttons.
  - f. Interior Key switch.

- g. Exterior Key switch.
- h. Motion detectors.
- i. Warning light.
- j. Horns and/or strobes.
- k. Second set of photoelectric sensors.

## 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.

C. Touch-up, repair or replace damaged products before Substantial Completion.

### 3.6 PROTECTION

A. Protect installed products until completion of project.

### 3.7 SCHEDULES

A. :  
1.  
2.  
3.

B. :  
1.  
2.  
3.

END OF SECTION