



SECTION 08333

ADVANCED UPCOILING SECURITY GRILLE MODEL 600 ADV

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. 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: 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. 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 UPKOILING 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 of no less than 20 inches/second
 - b. Closing speed of 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: Powder coat enriched with zinc, color as selected by the Architect.
 - d. Finish: Stainless steel.
 5. Bottom Bar:
 - a. Tubular extruded aluminum
 - 1) Finish: Mill finish aluminum
 - b. Double structure steel angle
 - 1) Finish: polyester powder coat in black.
 - 2) Finish: polyester powder coat, color as selected by the Architect.
 - 3) Finish: Powder coat enriched with zinc, color as selected by the Architect.
 - 4) Finish: Stainless steel.
 6. Motor: Direct drive, hypoid gear motor/brake assembly sized for openings. Provide with a manual hand crank for operation during power outages. Operator and drive assembly is factory pre-assembled and provided with low voltage factory wiring with quick connect wiring harnesses where applicable.
 - a. Electrical Characteristics: 208/230V AC, three phase per motor/drive.
 - b. Electrical Characteristics: 460V AC, 3 phase per motor/drive.
 - c. Left hand mount.
 - d. 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, stop lock brake and sprocket from dirt and debris and extending between the support brackets. Fabricated of:
 - a. 24 gauge black painted steel.
 - b. 24 gauge powder coated steel, color as selected by Architect.
 - c. Stainless Steel with brush finish.
 - d. Clear anodized aluminum.
 - e. Powder coated aluminum, color as selected by Architect.
 - f. Provide with sloped top for exterior mounting.
10. Brackets: Provide metal brackets to support motor, curtain, and hood and fabricated of:
 - a. Black powder coated steel.
 - b. Powder coated steel, color as selected by Architect.
 - c. Zinc enriched powder coat, 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. Self-monitoring 2-wire, electric fail-safe sensing edge reverses downward motion upon impact.
 - c. Drop stop device 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