

**SECTION 08 5656****GUARDA™ SECURITY WINDOW SCREENS**

*Guarda™ Security Window Screens in this specification are appropriate for use in windows, storefronts, curtain walls, vents, and any other applications requiring a security screens. The system comes in a slim design with mitered corners, together with a frame secured with stainless steel security head screws. These screens provide high security protection, protection from pests and insects, reduction of harmful UV rays, clear views and ventilation, and all without compromising the style or appearance of the building.*

**PART 1- GENERAL***1.01 SUMMARY*

- A. This section includes:
  - 1. Security Screens for use in windows, storefronts, curtain walls, vents, and any other applications requiring protective security screens.
- B. Related work in other sections:
  - 1. Section 08 10 00- Door and Frames
  - 2. Section 08 50 00-Windows
  - 3. Section 08 80 00- Glazing
  - 4. Section 08 88 00- Special Function Glazing

*1.02 SUBMITTALS*

- A. Product Data: Submit Manufacturer's product data for Protective Security Screens including:
  - 1. Manufacturer's standard details and fabrication method.
  - 2. Data on finishes, hardware, and accessories.
  - 3. Recommendations for maintenance and cleaning of finish surfaces.
  - 4. Test data, Knife Shear Test, Dynamic Impact Test, Jimmy Test, and Salt Spray Test.
- B. Shop drawings for each Protective Security Screen are required, including:
  - 1. Layout and installation details.
  - 2. Elevations at 1/4-inch scale.
  - 3. Detail sections.
- C. Samples for approval:
  - 1. Submit pairs of samples of each specified metal color and finish on sections of extrusions, formed shapes, and screen mesh.

*1.03 QUALITY ASSURANCE*

- A. Installer qualifications: Engage an experienced installer who has completed installations of similar protective security screens in design and extent to those required for the

project and whose work has resulted in construction with a record of success in service performance.

- B. Manufacturer's qualifications: Provide Protective Security Screens produced by a firm experienced in manufacturing screens that are similar to those indicated for this project and that have a proven record of success in service performance.
- C. Single source responsibility: Obtain Protective Security Screens from a single manufacturer, to ensure full compatibility and warranty of parts.
- D. Design criteria: The drawings indicate the size, and dimensional requirements of the Protective Security Screens required and are based on the specific types and models indicated.

#### *1.04 DELIVERY, STORAGE, AND HANDLING*

- A. Deliver Protective Security Screens and related components in the manufacturer's original protective packaging. Do not deliver security screens until the work is ready for their installation.
  - 1. Inspect components for damage upon delivery. Unless minor defects in metal components can be made to meet the Architect's specifications and satisfaction, damaged parts should be removed and replaced.

#### *1.05 PROJECT CONDITIONS*

- A. Field Measurements: Check opening by accurate field measurement before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of the work and possible damage to the finished product.

### **PART 2 - PRODUCTS**

#### *2.01 ACCEPTABLE MANUFACTURER'S*

- A. Basis of design: Design is based on Guarda™ Protective Security Screens as manufactured by:

**C.R. Laurence (CRL)**

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## 2.02 MATERIALS

### A. Mesh

1. SUS 316 marine grade 0.0315 inch (0.8 mm) wire diameter, high tensile stainless steel, 10.5 strands per lineal inch weft and 11 strands per lineal inch warp. The wire cloth is woven according to ISO9044/ ASTM E2016-06 standards. The open area space for the mesh is 42.7% (with min. tensile strength >800 lbs/linear inch).
2. The mesh is powder coated (AS4506-2005 Metal Finishing for thermo-set powder coating). These standards set out relevant test procedures and specify Performance Requirements for thermo-set powder coatings applied to metal substrates. Major applications specify for a stainless steel substrate with very high grade of industrial classification.
3. The pre-treatment system incorporates process for the mesh, these process breaks into: Alkaline cleaning, Water Rinsing, Acid cleaning, Water Rinsing, Deionizer, Chromate, Drying and Coating.
4. Independent salt-spray testing has exceeded 10,000 hours under laboratory conditions according to ASTM B117-2009.

### B. Aluminum Extrusion

1. The Extruded Aluminum material is 6063-T5 with high strength and corrosion resistance properties.
2. Extrusions are powder coated (AS 3715-2002 Thermo-set powder coating for architectural applications of aluminum), and American Architectural Manufacturers Association AAMA 2603. The Australian and U.S. standards test procedures and specify performance requirements for thermo-set powder coatings intended specifically for architectural applications.
3. Pre-treatment system for the aluminum. The process includes; Degreasing, Water Rinsing, Chromate, Water Rinsing, Deionizer, Drying, and Coating.

### C. Main Frame (Sash) Materials

1. The main frame (or sash) is 1- $\frac{3}{4}$ " W x  $\frac{3}{4}$ " D and is extruded from aluminum alloys 6063- T5, 0.351 lb/ft. The main frame, bracket installation is 1- $\frac{3}{4}$ " W x  $\frac{3}{4}$ " D and is extruded from aluminum alloy 6063- T5, 0.332 lb/ft. The nominal wall thickness of the main frame is 1/16". The main frame is miter cut on the corners and fitted with the internal solid aluminum corner stake with a dimension of 2" W x 2" H x  $\frac{1}{4}$ " D.
2. The mid rail (horizontal frame) is extruded from aluminum alloys 6063- T5 with 0.838 lb/ft. The nominal wall thickness of the mid rail is 1/8". The mid rail is secured to the main frame by the fastener as detailed in the provided fabrication documentation.

### D. Sub Frame (Bracket) Material

1. Brackets are extruded from aluminum alloys 6063- T5 with 0.336 lb/ft expander brackets and 0.354 lb/ft short-leg brackets. The nominal thickness of brackets is 1/8". Brackets are miter cut on the corners, fitted with screw and bracket dimensions of 5/8" W x 2" L x  $\frac{1}{2}$ " D for expander brackets and width of 5/8" W x  $\frac{3}{4}$ " L x  $\frac{1}{2}$ " T for short leg brackets.

- E. Seals
  1. Seals are produced from Santoprene 591-73W175. Santoprene is a thermoplastic rubber designed to offer chemical resistance equivalent to neoprene. It's resistant to a wide variety of solvents and chemicals.
- F. Screws
  1. Screws are stainless steel in either 302 or 304 grade for corrosion resistance.

## **PART 3 - EXECUTION**

### *3.01 EXAMINATION*

- A. Examine screens with the installer, present for compliance with requirements indicated, installation tolerances and other conditions that affect the installation of the Protective Security Screens. Correct unsatisfactory conditions before proceeding with the installation.
  1. Do not proceed with installation until unsatisfactory conditions are corrected.

### *3.02 INSTALLATION*

- A. Install Protective Security Screens in accordance with approved drawings, instructions, Specifications, and other information depending on the customer's requirements.
- B. After completion of installation, all panels should be cleaned in accordance with the Care Guide.
- C. Installation Tolerances:
  1. Maximum variation from plumb or level: 1/8" in 3 ft or 1/4" in any 10 ft, whichever is less.
  2. Maximum misalignment of members, abutting end to end: 1/16".
  3. Standard Size of fixed panels:
    - Widths: 1'-0" up to 6'-0" (.31 to 1.8 m)
    - Height: 1'-0" up to 17'-0" (.31 to 5.2 m)

### *3.03 CLEANING*

- A. Airborne dust, dirt, and impurities can accumulate over time in the mesh causing visual defects to the Protective Security Screens. In order to prevent this, and ensure enduring quality and extended product lifespan, the following care is recommended: regularly clean the Protective Security Screens every month. Wash down mesh and frame using a soft cloth, mild soap or detergent and water, taking care to remove any excess moisture or water when done. Avoid using any sharp objects or materials when cleaning to prevent visual defects.

3.04 *PROTECTION*

- A. Institute protective measures required throughout the remainder of the construction period to ensure that the Protective Security Screens do not incur any damage or deterioration, other than normal weathering, at the time of acceptance.

**-END OF SECTION-**