

**PART 1**      **GENERAL**

**1.1**      **Scope of Work**

- .1 The work of this section includes the supply and installation of rolling security shutters called for on drawings and herein specified.

**1.2**      **Related Sections**

- .1 Section 05500 – Metal Fabrications. Door opening jamb and head members.
- .2 Section 06100 – Rough Carpentry. Door opening jamb and head members.
- .3 Section 08700 – Door Hardware: Master keyed Cylinder.
- .4 Division 16. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, and installation of control station and wiring.

**1.3**      **Shop Drawings**

- .1 Section 01330 Submittal Procedures.
- .2 Product Data: Provide general construction, component connections and details.
- .3 Shop drawings: Clearly indicate description of components: guide rails, panel box housings, operators, hardware and locking method, and finishes. Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details.
- .4 Sizes shown are nominal and confirmation by field measurement is required.
- .5 Samples: Submit two shutter slats, 200mm x 200mm in size illustrating shape, and standard colors and finish texture for approval.
- .6 Manufacturer's Instructions: Indicate installation sequence and procedures, adjustment and alignment procedures.
- .7 Maintenance Data: Indicate lubrication requirements and frequency, and periodic adjustments required.

**1.4**      **Guarantee**

- .1 Provide a written five (5) year factory guarantee that components will be warranted against defects in material, design and workmanship or they shall be replaced or repaired at no cost to the owner. Installer to provide a written guarantee that there will be no labor charge for warranty repairs for one (1) year from the date of installation.

**1.5**      **Delivery, Handling and Storage**

- .1 Deliver materials to site in shipping crates and packaging. Store off the ground on wood supports spaced to prevent damage. Store inside building under cover to prevent damage from weather or construction activities.

**PART 2**      **MATERIALS**

**2.1**      **Standards of Acceptance**

- .1 Aluminum rolling security shutters by Southwest Solutions Group, Inc. Phone 1-800-803-1083 ext. 3693. Point of Contact: Craig Crock [ccrock@southwestsolutions.com](mailto:ccrock@southwestsolutions.com)

**.2**      **General**

Vertical lift standard electric motor operation.

**.3**      **Curtain – 400 Series**

Double-walled roll-formed aluminum interlocking slat with polyurethane insulating foam core, multiple baked enamel coating based on polyester resin with structural finish.

- .1 Slat width – 48mm.
- .2 Nominal slat thickness – 9mm.
- .3 Cover width – 40mm.
- .4 Number of slats per meter – 25 slats.
- .5 Aluminum Gauge – 0.43mm
- .6 Weight per M<sup>2</sup> - 4.28 kg/m<sup>2</sup> min.  
Weight per Ft<sup>2</sup> - 0.875 lbs/ft<sup>2</sup> min.
- .7 Standard colors – Arctic White, Medium Brown, Ivory Tusk & Aluminum Grey.
- .8 Alternate slats are to fitted with end locks to keep shutter in alignment.

**.2 Bottom Bar**

Extruded double walled 6063-T5 aluminum alloy bar with black compressible rubber insert. Color to match slats unless otherwise indicated by the Architect.

**.3 Guide Rails**

Heavy gauge extruded 6063-T5 aluminum alloy side and center rails with two high grade brush inserts to prevent metal to metal contact. Where curtain exceeds 96" (2440mm) in width, 66mm guide rails must be used. Color to match slats unless otherwise indicated by the Architect.

**.4 Buildout for Guide Rails**

Heavy gauge extruded 6063-T5 aluminum alloy buildout spacers to fit behind the guide rail. Width of buildout to be 1 3/8" or 2", and a depth as shown on drawings and/or as required to provide the necessary clearance to allow for the projection of window frame, build mould, drip trim, etc. Color to match guide rail unless otherwise indicated by the Architect.

**.5 Panel Box Housing**

Roll-formed 3005-H27 aluminum alloy box section. Bottom half to be detachable for future servicing. Panel box end plates to be made from pressure die-casted high grade aluminum alloy. Panel box housing size to suit roll shutter dimensions as indicated on the shop drawings. Color of panel box housing and end plates to match slats unless otherwise indicated by the Architect.

**.6 Sill**

Heavy gauge 6063-T5 aluminum alloy sill to be mounted at the bottom of the guide rails. Sill to match the color of the slats unless otherwise indicated by the Architect.

**2.2**

**Operation**

- .1 The roll shutter to be electrically operated. Provide a Tubular 110 volt motor installed inside the axle. Motor unit shall be constructed with solenoid brakes, thermal overload protection switch with automatic reset and enclosed, permanently lubricated bearings and gears.
- .2 All electrical components to be C.S.A. and U.L. certified.
- .3 Motor shall carry a 5 year comprehensive warranty.
- .4 Each motor shall be controlled by a momentary (or maintained by request) recessed/surface mounted key switch.
- .5 Automatic switch-off at completely up or down, plus stops at any in-between position when key released.
- .6 Key switch cylinder shall be a 1 1/8" mortise type that can be keyed alike to the building.

**2.3 Locking Devices**

- .1 All roll shutters shall be equipped with an auto-locking device which is connected to the top slat of the curtain and the axle. Once the shutter is fully closed, the auto-locking device prevents the curtain from being lifted except by means of the operator.

**PART 3 EXECUTION****3.1 Examination**

- .1 Section 01001 Verification of existing conditions before starting work.
- .2 Verify that opening sizes, tolerances and conditions are acceptable.

**3.2 Installation**

- .1 Install shutter unit assemblies in accordance with manufacturer's instructions by factory approved installer.
- .2 Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- .3 Install and align assembly including hardware; level, true, square and plumb, free from distortion or defects to provide smooth operation.
- .4 Coordinate installation of backing materials at frame perimeter as specified in Section 07900.

**3.3 Erection Tolerances**

- .1 Maintain dimensional tolerances and alignment with adjacent work.
- .2 Maximum variation from plumb: 1.5mm.
- .3 Maximum variation from level: 1.5mm.
- .4 Longitudinal or diagonal warp: Plus or minus 3mm per 3m straightedge.

**3.4 Adjusting**

- .1 Adjust door and shutter, hardware and operating assemblies for smooth and noiseless operation.

**3.5 Cleaning**

- .1 Section 01001: Cleaning installed work.
- .2 Clean shutters and all components.

**3.6 Demonstration**

- .1 Demonstrate proper operation to Owners Representative.
- .2 Instruct Owners Representative in maintenance procedures.