

Rolling Security Shutters - 3 Part Specs

ARCHITECTURAL SPECIFICATIONS: 083300 COILING DOORS AND GRILLES

PART 1 - GENERAL

1.01 SUMMARY

1. Section includes interior and exterior overhead Roll-Up security shutters

1.02 SUBMITTALS

1. Product Data: Submit manufacturer's product data for all specified components, including specifications, finish information and installation instructions.
2. Shop Drawings: Submit scaled shop drawings showing layout, sizes and types, product materials, components and accessories, fabrication data, wiring diagrams for motor driven operators, finishes, rough-in dimensions, anchorage with installation requirements and location details.
3. Samples: Manufacturer's standard array of colors for selection by Architect.
4. Quality Assurance Submittals:
 - a. Test Reports: Engineer raised seal test reports showing compliance with specified requirements.
 - b. Certificates: Engineering certification that design criteria meets specified requirements.
 - c. Operating and Maintenance Instructions: Submit detailed maintenance requirements and operating instructions.
 - d. Warranty: Submit specified warranty documents.

1.03 QUALITY ASSURANCE

1. Manufacturer Qualifications: Obtain rolling shutters through one source from a single manufacturer with a minimum of 20 years experience in manufacturing products comparable to those specified in this section.
2. Installer Qualifications:
 - a. Use only manufacturer's factory trained installers or qualified installers approved by shutter manufacturer.
3. Regulatory Requirements:
 - a. Comply with all local and governing code requirements.
 - b. Pre-Installation Conference: Conduct a pre-installation meeting to verify project installation and coordination requirements, and field conditions. Tele-conference is acceptable.
 - c. Electrical Certification: ANSI approved and labeled UL325 as a complete shutter system. Individual testing of components will not be acceptable in lieu of system testing.

1.04 DELIVERY, STORAGE AND HANDLING

1. Deliver components in manufacturer's original, unopened, undamaged containers with identification labels intact. Store components protected from harmful weather conditions and damage from other construction activity.

1.05 PROJECT CONDITIONS

1. Field Measurements: Record actual measurements of openings before fabrication. Show recorded measurements on As-Built drawings.

1.06 WARRANTY

1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 - a. Warranty period: one year parts and labor, not including scaffolding, lifts, or other means to reach the inaccessible areas.
 - b. Motors and motor control systems: Manufacturer's standard non-depreciating five-year warranty.

(Specifier Note: Refer to manufacturer's product data and /or consult with manufacturer's representative for warranty information / requirements).

PART 2 - PRODUCTS

(Specifier Note: Typically in the following, where items occur in brackets () select item desired for Project).

2.01 MANUFACTURER

1. QMI
1661 Glenlake Avenue
Itasca, Illinois 60143 USA
phone: 00 1 630 529 7111

2.02 Other Acceptable manufacturers

1. Substitutions: Not permitted.
2. Requests for substitutions will be considered in accordance with provisions of Section 01600.
3. Alternates: The following products and manufacturers may be bid as an alternate product in accordance with Section 01030. Any pricing for alternate products shall be listed separately from the base bid specified product. Any alternate pricing must include line-by-line compliance or non-compliance with the specifications. If the alternate product is acceptable to the Architect, the specified manufacturer will be given the opportunity to provide an equivalent proposal.
 - a. (list other mfr or product here)
 - b. (list other mfr or product here)

2.03 MATERIALS

1. Shutter Components:

a. Slat Type:

- i. Aluminum Single Wall Slats: Extruded aluminum, 6063-T5 alloy. Solid slats with non-slip hinge. Slip hinges with slotted light slits shall not be permitted due to strength compromise.
 1. End Retention: both ends of each slat to contain #8-18 thread 410 stainless steel, Dacromet 320 coated, screws with a 3/16" shoulder bushing and 1/2" diameter head.
 2. Finger pull slat model AL-FP-A-1 integrated with curtain at 32" AFF (with push up/pull down operation only).
 3. Slat perforations for vision (non-typhoon rated) (P51) (P11)

b. Bottom Base or Locking Slat: Extruded aluminum, 6063-T6 alloy. Lock bar operation into mortised side rails at bottom of each side rail.

Polypropylene felt or rubber gasket at underside of bottom lock slat.

- i. Slide lock base slat with manual steel slide and thumb turn lockdown at either end of base slat.
- ii. Key lock (lock CC) base slat with standard key engaging steel slides. Key lock on (non-box or box) side.
- iii. Cylinder lock heavy duty base slat (with or without) thumb turn opposite key (centered or off-center at double doors) engaging steel slides. Key lock on (non-box or box) side.
- iv. Motorized shutters do not require a lock since the motor maintains the shutter curtain in the down position. A separate locking base slat is not required. Provide non-latching AL7-L-X-X base slat.
- v. Gear operated shutters do not require a separate locking base slat. Provide non-latching AL7-L-X-X base slat.
- vi. EZ drive operated shutters do not require a separate locking base slat. Provide non-latching AL7-L-X-X base slat.

c. Operation: (Manual) (110V Motor operated) (14.4V Low Voltage Motor operated).

i. Manual operator type: (choose one)

1. Gear with hand crank: 11:1 drive end gearbox with wall or housing-mounted universal joint with 7mm hex input with (interior-through-the-wall) or (exterior-housing mounted) operation. Removable crank pole with articulating handle.
2. Manual push up/pull down operation with internal drive tube torsion spring lift-assist manufactured to have maximum 35 lbs raise or lower effort.

ii. Electric Motor operator type: Single phase 110V-60Hz, UL recognized. Motor model / size to be determined by manufacturer to provide ample lift for shutter size and weight. (Specifier note: motorized operation cannot be used at exit doors due to egress-recommend push up/pull down)

1. Optional crank-operated motor override 32:1 gear ratio. (Specifier Note: manual override capability above is an optional feature, delete if not required).
 2. Maintained single switch operation
 3. Single switch to multiple motors using relays. Requires line of sight operation.
 4. Wireless remote to control (single motor) (groups up to 16 motors)
- iii. EZ drive low voltage system: DC operated tubular shutter motor utilizing a rechargeable, portable 14.4V power pack/"controller" and fixed wall plate receivers. (Specifier Note: limited shutter size to 65 sq. ft. max)
- d. End Caps: Die-cast Aluminum (square) (45 degree) (round) profile. Color to match slats
 - e. Box Cover (hood): Roll formed aluminum; .036 inch thickness, 3105-H14 alloy. Two-piece assembly-profile to match end caps. Color to match slats.
 - i. Shape: shall be (square) (45°)(round).
 - ii. Size: all shutters for project shall be contained in an (6", 6.5", 7", 8", 10" or 12") sized box housing. Sizes larger than (insert largest housing size for project)_ " shall not be accepted. (Specifier Note: please consult QMI engineering for precise AL7 box housing size as shutter width may affect roll box size -delete this statement from final specification please)
 - f. Track Guides/Side Rails: AL7, Aluminum extrusion, 6063-T5, lined with insulation woven polypropylene runners. Color to match slats. Provide manufacturer's standard (Security 3"x1" retained only rail for motorized) or (Security 3-3/8" x 1" retained and spring stop rail for manual crank or manual push up/pull down).
 - g. Mounting: (Jamb) (Surface/Face) (Build-out).
 - i. Face mount to sides of opening into building structure. No shutter shall be mounted to window frames.
 - ii. Build-out required at door openings (site specific) to clear door hardware.
 - iii. Build-out required and mounted to building structure at trapped openings __ (site specific)_ for jamb mount. No build-out shall be attached to window frames.
 - h. Drive Tube: Manufacturer selected based on shutter specific load calculations from either 60mm octagon steel, 70mm octagon steel, 4" aluminum round, or 5" aluminum round.

2.04 SHOP FINISH

1. Side Frames and Track: (Electrostatically applied - ESP - paint finish AMAA 2603).
2. Color: (To match slats) (As selected by Architect from 7 std QMI colors).
3. Anodized finish: 201-R1 Clear Acid Etch (15 min Velo).

2.05 APPLICATION & DESIGN

1. CODES: Installed shutters shall meet the required building compliance and documentation per section 1.02 SUBMITTALS.

- a. Florida Building Code (FBC) FL 5013-R6 compliant
- b. Miami-Dade NOA
- c. IBC/IRC CODES:

PART 3 - EXECUTION

3.01 EXAMINATION

1. Verify conditions of substrates to determine if acceptable for shutter installation in accordance with manufacturer's instructions. Correct all unsatisfactory conditions prior to commencing shutter installations.

3.02 INSTALLATION

1. Install track and all shutter components to comply with project shop drawings and manufacturer's installation product approvals.
2. After installation, lubricate, test and adjust shutters to operate properly and free from distortion.

3.03 CLEANING

1. Clean installed components in accordance with manufacturer's instructions prior to Owner's acceptance. Properly remove from the site all debris remaining from this installation.
2. Inadequate surface cleaning will result in corrosion formation & potential structural damage.

3.04 PROTECTION

1. Comply with manufacturer recommendations and protect completed shutter installations from damage during remaining construction so as not to void warranty.

END OF SECTION