

Rolling Shutters - 3 Part Specs

ARCHITECTURAL SPECIFICATIONS: 107100 EXTERIOR PROTECTION

PART 1 – GENERAL

1.01 SUMMARY

1. Section includes exterior overhead Roll-Up hurricane/typhoon 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. Unless required otherwise, fabricate to withstand wind loads that carry same rating as component and cladding.

4. Pre-Installation Conference: Conduct a pre-installation meeting to verify project installation and coordination requirements, and field conditions. Conference may be held via telephone conference call.
5. 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 (800-446-2500)

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. No perforated slip hinge slats allowed.
 1. End Retention: both ends of each slat to contain #10 x 3" truss head torx 410 stainless steel Dacromet-coated screws with shoulder bushings.
 2. Engineered roll-up with slat groupings increasing in size and radius to enable slats to nest around the drive tube to minimize housing size.
- b. Bottom Slat: Extruded aluminum, 6063-T6 alloy, 0.050 inch wall thickness. Modular non-latching 2.05" base slat QMI-690-1 with rubber bottom gasket
 - i. Optional: Finger pull model QMI-691-1 integrated with base slat (with push up/pull down operation only).
 - 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 QMI-690-1 base slat.
 - v. Gear operated shutters do not require a separate locking base slat. Provide non-latching QMI-690-1 base slat.
 - vi. EZ drive operated shutters do not require a separate locking base slat. Provide non-latching QMI-690-1 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.
 1. Optional crank-operated motor override 32:1 gear ratio. (*Specifier Note: manual override capability above is an optional feature, delete if not required*).
- 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: limit shutter size to 65 sq. ft. max with EZ drive*)
- 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.
- f. Track Guides/Side Rails: Compact, Aluminum extrusion, 6063-T5, lined with insulation woven polypropylene runners. Color to match slats. Aluminum extrusions; 6063-T6. Provide manufacturer's standard (3-5/8" retained only rail for motorized) or (4-1/4" retained and 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. Vertical Stormbars: (specifier to choose i. or ii.)
 - i. Aluminum extrusions, 6005-T5 or 6063-T6 alloy. (3.0"), (4.0"), for (fixed) or (removable) application.
 - ii. Stormbars shall not be allowed in either fixed or removable mounts.)
- i. Drive Tube: Aluminum, 6063-T6 alloy – 70mm round with interior splines.

2.04 SHOP FINISH

1. Side Frames and Track: (Electrostatically applied - ESP - paint finish AAMA 2603).
2. Paint Color: (To match slats) (As selected by Architect).
3. Anodized selection only: 201-R1 Clear Acid Etch (15 min Velo) process that meets or exceeds all AAMA 611 specifications.

2.05 APPLICATION & DESIGN

1. Box Housing
 - a. Shape: shall be (square) (45°)(round).
 - b. Size: all shutters for project shall be contained in an (6", 6.5", 7", or 8") sized box housing. Sizes larger than (*insert largest housing size for project*)_ " shall not be accepted. (*Specifier Note: please consult QMI engineering for precise Qcompact box housing size as shutter width may affect roll box size -delete this statement from final specification please*)
2. Locking Mechanism: Lock bar operation into mortised side rails at bottom of each side rail.
 - a. Key lock shall be on (box side or non-box side). Cylinder shall be (centered or off-center) at (single or double) doors.
 - b. 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.
 - c. Gear operated shutters do not require a separate locking base slat.
 - d. EZ drive operated shutters do not require a separate locking base slat.
3. 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

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