SECTION 12 24 14

Contract Series Specialty Manual or Motorized Single or Dual Roller Shades

PART 1 GENERAL

* 1. GENERAL REQUIREMENTS
		1. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.
	2. SECTION INCLUDES
		1. Manually operated fabric [Bottom up] or [Skylight] roller shades controlled by an appropriate chain driven engineered clutch system to include the operating, installation hardware, brackets, accessories, and fabric.
		2. Motor operated fabric [Bottom up] or [Skylight] roller shades controlled by an electric powered motor to include the operating, installation hardware, brackets, accessories, and fabric.

*Specifier Note\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Indicate appropriate related section below and remove none related sections, as necessary.*

* 1. Related Specification Sections:
		+ 1. Section 050000 - Cold-Formed Metal Framing.
			2. Section 061000 - Rough Carpentry – for in wall blocking as needed.
			3. Section 080000 – Doors and Windows.
			4. Section 095000 – Ceilings.
			5. Section 100000 – Specialties.
			6. Section 260000 – Electrical.
	2. Reference Section:
		1. ASTM International (ASTM):
			1. ASTM E2180 : 2018 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
			2. ASTM C423-17 – Standard Practice for measuring Sound Absorption.
		2. ISO (International Standards Organization)
			1. ISO 9001: Quality Standard.
			2. ISO 14001: 2015 Environmental Management Systems.
			3. ISO 17050-1 : 2014 Allows a manufacturer to self-certify its products when necessary.
		3. LBC Red List Compliant
		4. CE Compliance
		5. FCC Compliance
		6. Other: (Fabric related)
			1. Oeko-Tex Standard 100
			2. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
			3. UL GREENGUARD Gold Certified Products; Current Edition.
			4. ANSI/WCMA A 100.1-2018 - Safety of Window Covering Products.
			5. Health Product Declarations (HPD’s)
			6. CDPH Standard Method V1.2-2017, Section 8
			7. AERC Certified Product Listing
	3. SYSTEM DESCRIPTION
		1. Manually operated fabric window and/or opening [Bottom Up] or [Skylight] roller shade that includes the installation brackets and all respective components to operate a manually operated clutch or spring-assisted shade device to include any fascia, cassette, enclosure system, pocket, decorative or non-decorative bracketing system as per the contract documents.
		2. Motor operated fabric window and/or opening [Bottom Up] or [Skylight] roller shade that includes the installation brackets and all respective components to operate a motor-controlled shade device to include any enclosure, fascia, cassette, pocket, decorative or non-decorative bracketing system as per the contract documents.
	4. PERFORMANCE CRITERIA
		1. Performance Requirements: Provide components that have been manufactured, fabricated, and installed to maintain performance criteria stated by Manufacturer, without defect, damage, or failure.
		2. Manually operated window roller shades shall be attached to the structure of the building in accordance with the Architect, Structural Engineer in accordance with contract documents as it relates to attachment only. Provide Design Calculations certified by a registered professional engineer licensed in the State of \_\_\_\_\_\_\_ shall be submitted to verify load carrying capability of shading system using performance requirements and design criteria as indicated. Shading attachment system shall be capable of resisting a minimum positive and negative wind load per ASCE-7 or building code, whichever is greater.
		3. Design and Structural Properties: Conform to provisions of the most current IBC (International Building Code and/or the building code requirements of any other AHJ where the project is being built)
		4. Deflection Limits: Shading attachment and system components shall be designed in accordance with the Manufacturer’s recommended maximum deflection no greater than the Manufacturer’s allowable spans, based on published criteria.
		5. Design and install all support structure to accommodate expected construction tolerances and misalignment, deflection of building structural components, and openings within the interior envelope as designed.
	5. SUBMITTALS
		1. Product Data: For each system indicated. Include Manufacturer’s written installation instructions, including recommendations for evaluating, preparing, and treating substrate, technical data, material descriptions, and finishes.
		2. Shop Drawings: Show fabrication and installation layouts of shading system, details of support structure attachment and wall structure conditions, anchorages for support structure, attachment system for shading system and accessories, trims, closures, flashings, corner conditions, and accessories as required or specified by the architect, and all special job specific details.
		3. Samples: Submit selection and verification samples for finishes, colors, and textures of shading components and fabric materials. Submit color matched interior steel fasteners for each color specified. If special fastening is selected by architect provide color matched fastener for each shading system color specified.
		4. Manufacturer’s Instructions: Manufacturer’s installation instructions.
		5. Closeout Submittals: Submit the following:
			1. Warranty: Warranty documents specified herein.
	6. QUALITY ASSURANCE
		1. Installer Qualifications: Installer shall be approved by the architect and have a minimum of five (5) years of experience in performing work of similar type and scope.
		2. Fabricator Qualifications: A shop that employs skilled workers who custom fabricate shading and attachment systems to those specified herein and is approved by the architect and have a minimum of ten (10) years of experience in performing work of similar type and scope. If shop drawings are required for the project the shop drawings are to be drawn and coordinated by the approved fabrication company.
		3. Source Limitations: Obtain shading and attachment system and all auxiliary materials from a single source Manufacturer who has a minimum of 25 years of experience in the manufacturing of interior and exterior grade shading components, systems and accessories. All shading systems to be supplied and or manufactured by a single manufacturer.
	7. DELIVERY, STORAGE AND HANDELING
		1. Delivery: Deliver materials to the site by fabricator in the original, unopened, undamaged containers with identification labels intact.
		2. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by Manufacturer. Comply with Manufacturer’s written handling and storage guidelines.
		3. Packaging: The intent of the packaging by the fabricator is to be constructed to withstand the safe transport and storage of the finished contract series shade product so that at time of installation it complies with the manufacturer’s guidelines, performs and is warrantable upon installation.
	8. PROJECT CONDITIONS
		1. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
		2. Environmental Limitations: Install roller shades after finish work, including painting, is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
	9. WARRANTY
		1. Submit Installer’s standard warranty covering defects in supplied material for one (1) year.
		2. Fabrics are warranted for 10 years minimum.
		3. Lifetime Limited Warranty on shade hardware only.
		4. Rollease Acmeda warrants for materials and workmanship when installed properly and operated under normal use from the date stamped or affixed label on each device its:
			1. AC and DC wired motors and electronic accessories to be free from defects in materials and workmanship for 7 years.
			2. Battery powered DC motors to be free from defects in materials and workmanship for 5 years.
		5. 25-year Special Commercial Warranty, transferrable to the building owner, project based, and specified. For further information and a Draft sample warranty please contact Contract@Rolleaseacmeda.com. *(This is a project-by-project warranty offering that is extended by specification only)*
1. PRODUCTS *(This Includes Manual and Motor Operated under Part 2)*
	1. MANUFACTURERS

Basis of Design: Rollease Acmeda Contract Series Specialty as manufactured by Rollease Acmeda, 750 E Main Street, Stamford, CT 06902. Please contact Contract Sales at (800) 552-5100 or email: Contract@Rolleaseacmeda.com. A list of local contract dealers, fabricators and installers that comply with this specification section may be requested from the above contact.

* + 1. Substitution Requests: As specified by Division 01 of the contract documents.
		2. No substitutions will be accepted.

*Specifier Note\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Choose appropriate to your project the applicable Fasteners and Anchors and remove the appropriate sub-sections, as necessary. Please note the attention to each sub-section choice and remove non-used portions for clarity. Section 2.2 is for Manual Shade Systems & Section 2.4 is for Motor Operated Shade Systems.*

* 1. MANUALLY OPERATED SINGLE OR DUAL ROLLER [BOTTOM UP] or [SKYLIGHT] SHADES
		1. Contract Series Control System: Contract Series pulley clutch operating system of self-lubricating, UV stabilized fiberglass reinforced nylon construction and tempered high carbon steel internal springs, designed for smooth, trouble-free operation, precise control, and uniform aesthetics. Adjustment-free continuous #10 qualified stainless steel ball bead chain rated to 120-pound tensile strength. Clutch disengages to 90% of holding capacity. Maximum pull force for manual clutches is 2 - 7 pounds.
		2. Shade Type
			1. Single Roller – Position Regular [spring tension side]
			2. Take up Roller – Position Regular [motor operated] [manually operated]
			3. Dual Roller – Position Regular [spring tension side]
			4. Take up Roller – Position Regular [motor operated] [manually operated]
		3. Shade Mounting Position
			1. Frame – Inside mount.
			2. Width x Length (or cover) \_\_\_\_\_\_\_\_\_\_\_.
			3. As per window details and schedules provided in the Contract Documents.
		4. Shade Mounting Brackets and Hardware
			1. Manufacturer’s standard zinc plated or powder-coated, cold-rolled steel universal brackets. Universal Dual shade brackets available for two-shade applications.
		5. Chain Retainer
			1. Chain tensioning device complying with ANSI/WCMA A 100.1-2018
		6. Spring-loaded idler pin
			1. UV stabilized, self-lubricating nylon outside sleeve and center spring-loaded retractable shaft providing bearing surfaces on which the roller tube rides ensuring smooth, wear-resistant operation and ease of installation.
		7. Spring side tension control:
			+ 1. Tension is provided by a modular spring mechanism for constant tension that is adjustable in the field.
				2. Lift spools made from an engineered polymer that may be repositioned for optimal cord location during installation.
				3. Tension is maintained in the fabric via positive attachment to bottom tube via

Min of 1.2 mm abrasion resistant cord required.

* + 1. Roller Tube
			1. Extruded aluminum shade roller tube of uniform diameter and varying wall thickness required (for uniform aesthetic) to support shade fabric without excessive deflection, with engineered wall & ribs to lock the clutch and idle end plug into place, providing strength & durability. Extruded tube parameters to be determined by Manufacturer for each shade’s size, weight, and fabric requirement.
		2. Hem Pockets and Hem Weights:
			1. Heavy duty aluminum center bar with self-leveling feature and ceramic cord guides. Color is matched to fascia and brackets.
			2. Hem pocket construction and hem weight per foot shall be consistent for all shades within one room.
			3. Color / finish as selected by Architect from manufacturer’s standard configurations.
		3. Fabric Attachment to Tube:
			1. Provide:
				1. LSE (Low Stress Energy) double-sided adhesive tape to secure the fabric without having to remove shade roller from shade brackets. Adhesive attachment affords minor lateral adjustments to edge clearance dimensions.

Fabric wrap of 2 ½ to 3 times the circumference of the roller tube required for proper tension of fabric-to-tube.

* + - 1. Spline attachment:
				1. PVC spline heat-welded to the shade band and inserted into a channel on the roller tube.

The spline system allows for adjustability on-site and ease in changing fabric panels in the field.

* 1. ROLLER SHADE FABRICATION
		1. Field measure finished openings prior to ordering or fabrication.
		2. Dimensional Tolerances:
			1. Vertical Dimensions.
				1. Fill openings from head to sill with no greater than 1/2” space between bottom bar and [top of the opening].
			2. Horizontal Dimensions: Inside Mounting.
				1. Fill openings from jamb to jamb

Light gap on control side no greater than .5”

Light gap on idler side no greater than .5”

* + - 1. Horizontal Dimensions: Outside mounting.
				1. Cover window frames, trim, and casings completely.
				2. Extend shades beyond jambs [or mullions] on each side: 2 inches.
				3. Extend shades beyond jambs [or mullions] on each side: \_\_\_\_ total.

* 1. MOTOR OPERATED SINGLE OR DUAL SPECIALTY [BOTTUM UP] or [SKYLIGHT] SHADES
		1. Control System: AUTOMATE™ MOTOR SYSTEM
		Shade Motor and Control System – All line and low voltage wiring rough in and termination by others.

*Specifier Note\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Select one of the following motor options (paragraphs 1 through 6 below), and delete the ones not required. General descriptions of each Motor and Control system are included with each option below. Contact Rollease Acmeda for more information concerning motor applications.*

* + 1. Motors
			1. DC Voltage with Internal Lithium-ion battery (Li-ion)
				1. 5 Volt

[2.0 Nm][3.0 Nm][10.0 Nm] *(Choose 1)*

* + - * 1. 12 Volt

[2.0 Nm][3.0 Nm][10.0 Nm] *(Choose 1)*

* + - * 1. 5 Volt Zero

[2.0 Nm]

* + - * 1. 5 Volt Q (Quiet)

[2.0 Nm][3.0 Nm][10.0 Nm] *(Choose 1)*

* + - * 1. 12 Volt Q

[3.0 Nm]

* + - 1. DC Voltage (no Internal Battery)
				1. 12 Volt

[2.0 Nm][3.0 Nm][10.0 Nm] *(Choose 1)*

* + - * 1. 12 Volt Q

[3.0 Nm]

* + - 1. AC Line Voltage 120 Volt
				1. AC

[6.0 Nm][15.0 Nm] *(Choose 1)*

* + - * 1. AC Q

[6.0 Nm][10.0 Nm] *(Choose 1)*

* + - * 1. AC ML (Mechanical Limit)

[6.0 Nm][20.0 Nm] *(Choose 1)*

* + - * 1. AC ML Q

[6.0 Nm][10.0 Nm] *(Choose 1)*

* + - 1. Switch Control
				1. All motors are bi-directional radio frequency technology.
				2. AC ML and AC ML Q motors use hard wired switches only. (no bi-directional communication)
			2. Charging Capability
				1. All Li-ion batteries have charge ports integrated into the motor head.
				2. Mag-dice wireless re-charging.
				3. Low light harvesting solar panel trickle charger.

[Single] or [dual] solar panel charging per motor.

* + - 1. Controller Options
				1. Single channel wireless wall switch for radio motor control.

[White only]

* + - * 1. Two channel wireless wall switch for radio motor control.

[White only]

* + - * 1. 15 channel wireless LCD wall switch for radio motor control.

 [White only]

* + - * 1. 5 Channel Flush Mount wall switch. (No need to cut into drywall)

 [White only]

* + - * 1. Single channel wireless handheld transmitter with concealed magnetic wall mounting clip.

 [White][Black] *(Choose 1)*

* + - * 1. 15-Channel wireless handheld LCD transmitter with concealed magnetic wall mounting clip and “Levelling Control” feature. (Allows shade(s) to be operated to 10 aligned positions)

[White][Black] *(Choose 1)*

* + - * 1. Single Channel Dry Contact Interface – Allows for full control of radio motor shade via dry contact interface.

[external 12v power source] [external 24v power source] *(Choose 1)*

ARC Repeater. (Nearly doubles the broadcasting range of a standard hub.)

* + 1. Shade Type
			1. Single Roller – Position Regular [spring tension side]
			2. Take up Roller – Position Regular [motor operated] [manually operated]
			3. Dual Roller – Position Regular [spring tension side]
			4. Take up Roller – Position Regular [motor operated] [manually operated]
		2. Shade Mounting Position
			1. Frame – Inside mount.
			2. Width x Length (or drop) \_\_\_\_\_\_\_\_\_\_\_.
			3. As per window details and schedules provided in the Contract Documents.
		3. Shade Mounting Brackets and Hardware
			1. Manufacturer’s standard zinc plated or powder-coated, cold-rolled steel universal brackets. Universal Dual shade brackets available for two-shade applications. Linking brackets available for multiple shade band configurations.
		4. Spring-loaded idler pin
			1. UV stabilized, self-lubricating nylon outside sleeve and center spring-loaded retractable shaft providing bearing surfaces on which the roller tube rides ensuring smooth, wear-resistant operation and ease of installation.
		5. Spring side tension control:
			- 1. Tension is provided by a modular spring mechanism for constant tension that is adjustable in the field.
				2. Lift spools made from an engineered polymer that may be repositioned for optimal cord location during installation.
				3. Tension is maintained in the fabric via positive attachment to bottom tube via

Min of 1.2 mm abrasion resistant cord required.

* + 1. Roller Tube
			1. Extruded aluminum shade roller tube of uniform diameter and varying wall thickness required (for uniform aesthetic) to support shade fabric without excessive deflection, with engineered wall & ribs to lock the clutch and idle end plug into place, providing strength & durability. Extruded tube parameters to be determined by Manufacturer for each shade’s size, weight, and fabric requirement.
		2. Hem Pockets and Hem Weights:
			1. Heavy duty aluminum center bar with self-leveling feature and ceramic cord guides. Color is matched to fascia and brackets.
			2. Hem pocket construction and hem weight per foot shall be consistent for all shades within one room.
			3. Color / finish as selected by Architect from manufacturer’s standard configurations.
		3. Fabric Attachment to Tube:
			1. Provide for positive mechanical attachment of fabric to roller tube:
				1. LSE (Low Stress Energy) double-sided adhesive tape to secure the fabric without having to remove shade roller from shade brackets. Adhesive attachment affords minor lateral adjustments to edge clearance dimensions.

Fabric wraps of 2 ½ to 3 times the circumference of the roller tube required for proper tension of fabric-to-tube.

* + - 1. Spline attachment: [motor diameter maximum is 28mm when used]
				1. PVC spline heat-welded to the shade band and inserted into a channel on the roller tube.

The spline system allows for adjustability on-site and ease in changing fabric panels in the field.

* 1. ROLLER SHADE FABRICATION
		1. Field measure finished openings prior to ordering or fabrication.
		2. Dimensional Tolerances:
			1. Vertical Dimensions.
				1. Fill openings from head to sill with no greater than 1/2” space between bottom bar and [top of opening]. *(Choose 1)*
			2. Horizontal Dimensions: Inside Mounting.
				1. Fill openings from jamb to jamb

Light gap on control side no greater than .5”

Light gap on idler side no greater than .5”

* + - 1. Horizontal Dimensions: Outside mounting.
				1. Cover window frames, trim, and casings completely.
				2. Extend shades beyond jambs [or mullions] on each side: 2 inches.
				3. Extend shades beyond jambs [or mullions] on each side: \_\_\_\_ total.
	1. SHADE CLOTH FABRIC –
		1. Inherently anti-static, flame retardant, fade and stain resistant, light filtering, room darkening, or blackout fabrics as selected by the architect from Texstyle a division of Rollease Acmeda. Solar Control and Shade Color from available contract colors.
			1. Ambient Renew Screen: Sustainable Closed loop recyclable solar screen. CPDH tested, PVC free, Oeko-Tex Standard 100 Certified, FR Rated, Lead, phthalate, formaldehyde, and fragrance free. LBC Red List Compliant. Light filtering options and color selections to be chosen using the manufacturers standard selections.
			2. Mesa blackout fabric: GreenGuard Gold Certified, CPDH tested, ISO 9001 Certified, Oeko-Tex Standard 100 Certified, FR Rated, Lead free, PVC free, Phthalate free, fragrance free, Eco-Friendly, LBC Red List Compliant. blackout options and color selections to be chosen using the manufacturers standard selections.
			3. All fabrics to include current Health Product Declarations (HPD’s) issued by the HPD Collaborative, <https://www.hpd-collaborative.org/hpd-public-repository/>
			4. Texstyle 3000 Net, Mesa blackout and Mesa light filtering meeting the AERC product certification meeting an average EPc value between 0.4539 and 0.2942 and Eph value between -0.2359 and -0.747. <https://aercenergyrating.org/product-search/residential-product-search/>
			5. Other fabric selection can be made by visiting: [http:www//texstyle.com](http://Texstyle.com)
	2. ACCESSORIES
		1. Enclosures:
			1. Fascia:
				1. “L”-shaped Snap-On aluminum extrusion. Square profile option only

3”

4”

5”

* + - * 1. Inside mount no bracket end covers.
				2. Color

Pure White

Black

Anodized

Sandstone

Silver Frost

* + 1. Other Accessories:
			1. Edge Side Channels:
				1. Extruded aluminum channels generally used to eliminate light infiltration (or leakage) at side or bottom clearances to jambs and/or sills.
				2. Finish color as selected by architect from manufacturer’s full range.
			2. Wire Guided Mount: [for use with standard or skylight configurations]
				1. Top and bottom anchors for 1.2mm steel wire guide cables. Must have tension adjustment and integral wire guides in hem bar end caps. Must be corrosion resistant zinc plated, or powder coated.
			3. Zipscreen: [preferred system for skylight applications]
				1. Provide for positive mechanical attachment of fabric utilizing a number 6 zip heat-welded to the shade fabric and inserted into a receiver channel.
				2. One (1) Aluminum “U” channel extrusion mounting to the substrate.
				3. One (1) Aluminum extrusion with the receiver channel for the number 6 zipper allows tension and field alignment and adjustable.
				4. Light brush for the extruded channels.
				5. Bubble gasket for ground contact and pitched openings.
1. EXECUTION
	1. MANUFACTURERS INSTRUCTIONS
		1. Compliance: Comply with manufacturer’s product data, including product technical bulletins, product installation instructions and published technical guidelines.
	2. EXAMINATION
		1. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
		2. Review areas of potential interference and conflicts, and coordinate layout and support provisions for interfacing work.
		3. Adjust and perform work as necessary for plumb and true alignments.
		4. Proceed with installation only after unsatisfactory conditions have been corrected.
	3. INSTALLATION
		1. Conform to Manufacturer's instructions and provisions of Contract Documents.
		2. Install shades level, plumb, square, and true per manufacturer's instructions and approved shop drawings. Locate so shade band is at least 2 inches (51 mm) from interior face of glass. Allow proper clearances for window operation hardware. Use mounting devices as indicated.
		3. Replace shades outside the specified tolerances at no extra cost to Owner.
		4. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric.
		5. Clean roller shade surfaces after installation, per manufacturer's written instructions.
		6. Demonstrate operation and maintenance of window shade system to Owner's personnel.
		7. Manufacturer's authorized personnel are to train Owner's personnel on operation and maintenance of system.
			1. Use operation and maintenance manual as a reference, supplemented with additional training materials as required.
	4. FIELD QUALITY CONTROL
		1. Manufacturer’s Field Technical Service: Make intermittent and final inspection to verify installation in conformance to Manufacturer instructions and suitable as framing assembly for subsequent cladding installations.
			1. Confirm framing members installed in correct orientation and as per the approved Shop Drawings.

END OF SECTION 12 24 13