

# SECTION 12492 – Automated RB 500 Roller Shade – Intelligent Wireless RTS

Part I – GENERAL

1. SUMMARY
2. Section Includes
3. RB 500 Roller Shade
4. Related Work includes the following
5. Section 06100 Rough Carpentry
6. Section 08520 Aluminum Windows
7. Section 079200 "Joint Sealants" for sealing the perimeters of installation accessories for light-blocking shades with a sealant.
8. Section107113 "Exterior Sun Control Devices" for exterior shade systems.
9. Section122200 "Curtains and Drapes" for wired-, radio-, and networked-motor-operated soft window coverings.
10. Section122509 "Window Treatment Motors, Controls, and Networked Automation Systems" for other motor operators and motor controls.
11. Section260519 "Low-Voltage Electrical Power Conductors and Cables" for power cables.
12. Section260523 "Control-Voltage Electrical Power Cables" for balanced twisted pair cabling.
13. Section260943.16 "Addressable-Luminaire Lighting Controls" for lighting integration into digital shading systems.
14. Section260943.23 "Relay-Based Lighting Controls" for lighting integration into digital shading systems.
15. Section262726 "Wiring Devices" for accessory electrical wiring devices.
16. REFERENCES
17. National Fire Protection Association (NFPA) 701
18. Department of Transportation Motor Vehicle Safety Standard 302 Flammability of Interior Materials
19. California Administrative Code Title 19
20. Federal Standard 191 Method 5903 (used by Port Authority of New York and New Jersey for drapery, curtain, and upholstery material)
21. Boston Fire Department Test BFD IX-1
22. New York State Uniform Fire Prevention and Building Code
23. SUBMITTALS
24. Subject under provisions of Section 01330 – Submittal Procedures
25. Product Data: Manufacturer’s data sheets shall be submitted for each product specified, including:
26. Preparation instructions and recommendations
27. Finishes, material descriptions, dimensions of individual components
28. Construction and installation instructions
29. Manufacturers recommendations for maintenance and cleaning
30. Drawings and Diagrams: Product details, installation details, working and assembly drawings shall be supplied as requested
31. Sample: Responsible contracting officer or agent shall supply one sample shade of each type specified in this contract for approval. Supplied units shall be furnished complete with all required components, mounting and associated hardware, instructions and warranty.
32. Electric shade motors shall comply with UL standards. Copy of compliance available for submission upon request.
33. QUALITY ASSURANCE
34. Supplier: Manufacturer, subsidiary, or licensed agent shall be approved to supply the products specified, and to honor any claims against product presented in accordance with warranty.
35. Installer: Installer or agent shall be qualified to installed specified products by prior experience, demonstrated performance and acceptance of requirements of manufacturer, subsidiary, or licensed agent. Installer shall be responsible for an acceptable installation.
36. Uniformity: Provide product of only one manufacturer for entire project.
37. Mock up: Provide one (1) mock-up shade for each roller shade type/assembly specified.
38. DELIVERY, STORAGE, AND HANDLING
39. Product shall be delivered to site in manufacturer’s original packaging.
40. Product shall be handled and stored to prevent damage to materials, finishes, and operating mechanisms.
41. JOB CONDITIONS
42. Prior to shade installation, building shall be enclosed.
43. Interior temperature shall be maintained between 60 degrees Fahrenheit and 90 degrees Fahrenheit during and after installation; relative humidity shall not exceed 80%. Wet work shall be complete and dry.
44. WARRANTY
45. Provide a limited manufacturer’s warranty from date of Substantial Completion covering the following periods.
46. Lifetime Limited Warranty on all hardware components, fabrics warrantied for 5 years by Hunter Douglas, and most fabrics warrantied for 10 years by the fabric manufacturer. Specific and custom product warranties available from manufacturer or its authorized agent.

Part II – PRODUCTS

1. ACCEPTABLE MANUFACTURER
2. Hunter Douglas Architectural Window Coverings – 13915 Danielson Street, Suite 100, Poway, CA 92064; Phone 800.727.8953 x1; Fax 800.205.9819; Website [www.hunterdouglasarchitectural.com/windowcoverings](http://www.hunterdouglasarchitectural.com/windowcoverings); or architect approved equivalent.
3. Request for substitutions must be approved by architect minimum of 30 days prior to close of bid.
4. Find a representative: [http://www.hunterdouglasarchitectural.com/contacts/index.jsp#](http://www.hunterdouglasarchitectural.com/contacts/index.jsp)
5. AUTOMATED RB 500 ROLLER SHADE – Intelligent Wireless RTS
6. Provide factory-assembled, shade-operator system of size and capacity and with features, characteristics, and accessories suitable for conditions indicated, complete with electric motor, enclosures protecting controls and operating parts, and accessories required for reliable operation without malfunction. Include wiring from motor controls to motors. Coordinate operator wiring requirements, radio control requirements and electrical characteristics with building electrical system.
7. Standard motor lead is 18” terminating with the male end of an Anderson Quick Disconnect Plug, female J-box lead comes standard with a 102” length terminating with the female end of an Anderson Quick Disconnect Plug. Custom lengths available for the female J-box lead.
8. 120VAC Motor to connect to power via exposed 3 wire lead, Anderson Plug (standard), or a standard household outlet 3-prong plug.
9. 24DVC Motor to connect to power via a transformer.
10. 12DVC Motor is powered through an internal Li-ion battery.
11. While most motors come standard with Quieting Technology (~47 dBa), optional Ultra Quiet Technology (~38 dBA) is available in both 120VAC and 24VDC options, minimum ordered width of 45” is required.

*Specifier please note that this section requires editing to meeting specific project requirements. All items not required should be edited or deleted.*

1. FABRICS: Inherently anti-static, flame retardant, fade and stain resistant, light filtering, room darkening, and blackout fabrics providing 0% to 20% openness, 5 oz/sq. yd to 20.70 oz/sq. yd, containing fiberglass, PVC, polyester, acrylic, vinyl laminates, cotton, and vinyl coatings (based upon fabric choice). *Finish selected by architect from manufacturer’s available contract colors.*
2. Horizontal stabilizing battens are not required, nor will they be accepted.
3. CONTROL SYSTEMS:

*Specifier to choose one or more of the following control options, there is no limit for multiple devices working together.*

1. DECOFLEX Wirefree RTS Wall Switch
2. Single-, Two-, Three-, Four-, and Five-channel wireless transmitter.
3. Electrical Characteristics: Battery; CR 2450 Lithium 3V
4. Open Air Range: 65ft radius through concrete walls 12” thick or less, or 100ft through open air.
5. Can be expanded to 130ft range with RTS Repeater (one per range)
6. Control Functions: Open, Close, My (stop)
7. FCC Approval: Part 15, Class B.
8. TELIS Wirefree RTS Handheld Remote
9. 433.32 MHz communication
10. Electrical Characteristics: Battery; 2-AAA LR3 Lithium, CR2430 Lithium 3V
11. Do not use rechargeable batteries
12. Transmitter: Single-, Five-, or Sixteen-channel
13. Open Air Range: 65ft radius through two concrete walls 12” thick or less, or 100ft through open-air.
14. Index Protection Rating: IP 30
15. Control Functions: Open, Close, My (stop), optional timer, optional enable/disable sensor
16. Timer Control (*OPTIONAL, must be requested)*: Telis Timer for Control; Clock timer based based on astronomic timeclock with a 60-minute offset, 24-hour, 7-day, programmable for regular events.
17. Accessories: Wall mount holder
18. myLINK for Wi-Fi Control over a Smart Phone or Tablet; NEMA ICS 6, Type 1 enclosure mounting.
19. Radio / Wi-Fi Control Interface: 433 MHz / 2.4 GHz network with WEP, WPA2, open and mixed mode encryption; single-zone unit may be joined to create a multi-zone system; capable of serving as an internet protocol (IP) to radio bridge for a third party system.
20. Enclosure: ABS; UL listed; UL 94V-0 flame rating; RoHS compliant
21. Electrical Characteristics: 110V-220Vac; 50-60 Hz; plugs into AC outlet.
22. Control Interface: [iPhone and iPad version 6 and higher] [Android and Android Tablet version Jelly Bean and higher].
23. Controllable over open application program interface (API).
24. Control Functions: [Open, Close, My] [Timer] [enable/disable sensor] [Scene].
25. Timer Control: Clock timer based on astronomic timeclock with 60-minute offset, [24-hour] [seven-day] <Insert period> programmable for regular events.
26. SUNIS Indoor Sun Sensor
27. Lowers/closes the shade when a programmable amount of light is detected, uninterrupted, for several minutes. Raises/opens when a programmable lack of light is detected, uninterrupted, for several minutes.
28. Battery powered
29. 65ft range
30. EOLIS Outdoor Wind Sensor
31. Raises/opens when a programmed amount of wind is detected to protect the product and its installation.
32. Powered through a 24VDC transformer
33. URTSI II – Universal RTS Interface
34. Integration device that allows third party integration.
35. Can control up to 16 RTS channels individually or in a group
36. Communicates through RS232, RS485, and IR.
37. Multiple URTSIs can be cascaded to control up to 256 channels, using RS485 expansion port.
38. Maximum range 65ft
39. SOMFY CONNECT
40. Expands the capabilities automated RTS motors providing a centralized logic center and communication bridge.

*Specifier to choose to add or delete the following option for Dual Roller Shades*

1. DUAL ROLLER SHADES: Universal mount steel brackets with 2 separate solar and room darkening blackout roller shades operating independelty of each other.
2. ROLLER TUBE: Circular-shaped aluminum tube extruded from alloy and temper 6063 T-6. Extruded tube to have a .063” wall thickness (2.5” outside diameter to have a 0.79” wall thickness). Heavily reinforced with minimum of six internal ribs and flutes providing additional tensile strength and allows for secure placement of clutch and end plug.
3. SPRING-LOADED IDLE END: Reinforced idler assembly containing spring loaded end plug with positive locking wheel allowing for up to 7/8” adjustment and provides for a secure installation and removal of shade. Locking tube bearing plug contains minimum 6 ribs and flutes and inserted a minimum of 2 3/8” into roller tube on heavy duty systems.

*Specifier to choose which option desired for Bottom Bar*

1. BOTTOM BAR: Industry standard sealed hembar with weight sewn into pocket providing for tracking adjustments and uniform look of the hanging fabric panel. Options include: RB500 Bottom Bar, Flat Bottom Bar, or Fabric Wrapped Extruded Hembar.
2. MOUNTING HARDWARE: Manufacturer’s standard or heavy duty bracket constructed of hardened 1/8” thick steel to support full weight of shade with bracket and screw hole covers to provide uniform look. Locking mechanism on bracket adapter provides for a secure installation and removal of the shade.
3. Cradle-seated hardware without a locking mechanism will not be accepted.

*Specifier to choose to add or delete the option for Integrated Leveling Device*

1. INTEGRATED LEVELING DEVICE: Built into the idle-end bracket (or intermediate bracket of a coupled shade) allowing for the vertical height adjustment of +/- one-half inch direction up or down, allowing the easy leveling of a fabric panel on its mounting surface. This assists to keep the fabric rolling square to the tube, minimizing the chance of the fabric rolling into its hardware causing creases and damage to the ends of the fabric.
2. Adjusting fabric skewing through means of tape, paper, or cardboard tucked up inside the fabric at the tube is not acceptable.

*Specifier to choose one or more of the following options for Top Treatment*

1. FASCIA: L-shaped removable aluminum extrusion valance that attaches to brackets and conceals roller shade. Fascia at the bottom enclosure must allow a maximum of 1” gap to allow fabric to come through. Exposure underneath greater than 1” is not to be accepted.
2. SURFACE OR CEILING-RECESSED POCKET: Extruded aluminum alloy U-shaped housing for recessed mounting in acoustical tile or drywall ceilings. 5.25” (9” for Dual Shades) x 5.25” profile with removable bottom aluminum closure. Ceiling-recessed pockets include an integrated tile support protrusion of ¾”.
3. NO TOP TREATMENT: Color-coordinated brackets with endcaps designed for an aesthetically-pleasing exposure, removing the need to extruded aluminum fascia or pocket.

*Specifier to choose to add, delete, or edit all of the following options*

1. BLOCKOUT SYSTEM: Extruded aluminum side channel with concealed mounting brackets. Bottom bar with Nylon wool pile to prevent light leakage.
2. REVERSE ROLL: Fabric falls off the front of the roll, rather than the industry-standard backside of the roll, also known as “waterfall”.
3. COUPLING OR BANDING: Coupling is utilized when more than one fabric tube assembly is mechanically linked with adjacent panels, allowing a single operator to move multiple panels of fabric. Banding is utilized when multiple panels of fabric are placed on the same tube.
4. FABRICATION
5. Shade measurements shall be accurate to within +/- 1/8” or as recommended in writing by manufacturer.

*Specifier to choose appropriate fabric*

1. FABRICS: *Fabric and color to be choosen by specifier, including PVC-coated fiberglass, PVC-coated polyester, and/or PVC-free fabrics.*

Part III – EXECUTION

1. Inspection
2. Subcontractor shall be responsible for inspection on site, approval of mounting surface, installation conditions, and field measurement for this work.
3. Other interacting trades shall receive drawings of shade systems, dimensions, assembly, and installation methods from subcontractor upon request.
4. Installation
5. Installation shall comply with manufacturer’s specifications, standard and procedures as detailed on contract drawings
6. Adequate clearance shall be provided to permit unencumbered operation of shade and hardware.
7. Clean finish installation of dirt and finger marks. Leave work area clean and free of debris.
8. Demonstration
9. Demonstrate operation method and instruct owner’s personnel in the proper operation and maintenance of the roller shades.
10. Schedule
11. Exterior Windows
12. Interior Relights

**END OF SECTION 12492**