

**SECTION 12 49 20**  
**MANUAL ROLLER SHADES**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

Manually operated roller shades are specified in this section. Roller shades shall be furnished complete, including brackets, fittings and hardware.

**1.2 RELATED WORK**

- A. Section 06 10 00 Rough Carpentry

**1.3 QUALITY CONTROL**

Manufacturer's qualification: roller shades manufacturer shall provide evidence that the manufacture of shades are a major product, and that the blinds have performed satisfactorily on similar installations.

- A. Installer: Installer or agent shall be qualified to install 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.
- B. Uniformity: Provide Manual Roller Shades of only one manufacturer for entire project.
- D. Mock up: Provide (1) mock-up shade for each roller shade type/assembly specified.

**1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23 - Shop drawings, product data, and samples
- B. Product Data: Manufacturer's data sheets shall be submitted for each product specified, including:
  - 1. Preparation instructions and recommendations
  - 2. Finishes, material descriptions, dimensions of individual components
  - 3. Construction and installation instructions
  - 4. Manufacturers recommendations for maintenance and cleaning
- C. Drawings and Diagrams: Product details, installation details, working and assembly drawings shall be supplied as requested.
- D. 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.

## **1.5 APPLICABLE PUBLICATIONS**

- A. National Fire Protection Association (NFPA) 701
- B. New York State Uniform Fire Prevention and Building Code

## **1.6 DELIVERY, STORAGE AND HANDLING**

- A. Product shall be delivered to site in manufacturer's original packaging.
- B. Product shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.

## **1.6 JOB CONDITIONS**

- A. Prior to shade installation, building shall be enclosed.
- B. Interior temperature shall be maintained between 60° F. and 90° F. during and after installation; relative humidity shall not exceed 80%. Wet work shall be complete and dry.

## **PART 2 - PRODUCTS**

### **2.1 MANUAL ROLLER SHADES**

#### **A. MATERIALS:**

1. FABRICS: Inherently anti-static, flame retardant, fade and stain resistant, light filtering, room darkening, & blackout fabrics providing 0% - 14% openness factors. Fabric weights to range between 6.00 oz/sq.yd. - 20.70 oz/sq.yd., containing fiberglass, PVC, polyester, acrylic, vinyl laminates, cotton, & vinyl coatings. Finish selected by architect from manufacturer's available contract colors.
2. CONTROL SYSTEM: CLUTCH OPERATED: Engineered heavy duty chain drive pulley operating system consisting of metal clutch housing and locking plug containing minimum 6 ribs and inserted at minimum of 2-1/4" into roller tube. Lift torque enhancement provided by Counter Balance System with integrated spring support module. Utilization of adjustment-free continuous qualified T304 stainless steel ball chain with 110 lbs breaking strength for precise control, smooth operation and ensuring a uniform look. Chain tensioner to be compliant with WCMA safety standard A100.1-2010 and must prevent the clutch system from moving the roller shade through lowering and raising if not properly installed as specified in ANSI Standard Section 6.5.2. Components will be maintenance free from adjustments or lubrication for trouble-free operation.
3. ROLLER TUBE: Circular-shaped aluminum tube extruded from alloy and temper 6063 T-6. 2" outside diameter extruded tube to have a .063" wall thickness (2.5" outside diameter to have a .079" wall thickness). Heavily reinforced with minimum six internal ribs providing additional tensile strength and allows for secure placement of clutch & end plug.

4. HEAVY DUTY TUBE BEARING PLUG: Die cast metal and reinforced idler assembly containing spring loaded end plug with positive locking wheel allows 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 inserted a minimum of 2-3/8" into roller tube.
5. BOTTOM BAR: Extruded aluminum weight in a Sealed Pocket Hem Bar, or RB Bottom Bar for fabrics that are not seamable. Bottom bar is for tracking adjustments and provides uniform look.
6. MOUNTING HARDWARE: Manufacturer's standard heavy duty bracket constructed of hardened 1/8" thick steel to support full weight of shade with bracket & screw hole covers to provide uniform look. Integrated leveling device for enhanced level adjustment of overall shade. Locking mechanism on bracket adapter provides for a secure installation and removal of the shade.
7. FASCIA: L shape removable aluminum extrusion valance that attaches to brackets and conceals roller shade.
8. ROLLER SHADE POCKET: Extruded aluminum alloy U shape housing for recessed mounting in acoustical tile or drywall ceilings. 5.25" (or 9") in diameter with aluminum closure mount.
9. BLOCKOUT SYSTEM: Extruded aluminum side channel with concealed mounting brackets. Bottom bar with nylon wool pile to prevent light leakage.
10. ADDITIONAL AVAILABLE OPTIONS: RB500 Bottom Bar, Reverse Roll, Detachable Spline, Internal Auto Stop Mechanism, Coupled and Banded

## **2.2 FABRICATION**

- A. Shade measurements shall be accurate to within ± 1/8" or as recommended in writing by manufacturer.

## **PART 3 - EXECUTION**

### **3.1 INSPECTION:**

- A. SUBCONTRACTOR shall be responsible for inspection on site, approval of mounting surfaces, installation conditions and field measurement for this work.
- B. OTHER INTERACTING TRADES shall receive drawings of shade systems, dimensions, assembly and installation methods from subcontractor upon request.

### **3.2 INSTALLATION:**

- A. INSTALLATION shall comply with manufacturer's specifications, standards and procedures as detailed on contract drawings.
- B. ADEQUATE CLEARANCE shall be provided to permit unencumbered operation of shade and hardware.
- C. CLEAN finish installation of dirt and finger marks. Leave work area clean and free of debris.

**3.3 DEMONSTRATION:**

- A. Demonstrate operation method and instruct owner's personnel in the proper operation and maintenance of the roller shades.

**END OF SECTION 12 49 20**