

**Part 1      General****1.1      SYSTEM DESCRIPTION**

- .1      Provide for infinite positioning of window shade.
- .2      Noise reduction seals for sound isolation and absorption of mechanism noise.
- .3      Shade Orientation: Shade cloth to roll at window side of roller.
- .4      Degree of Openness: 5% blackout as specified. Refer to drawings.
- .5      Provide for smooth and quiet operation.

**1.2      SUBMITTALS FOR REVIEW**

- .1      Section 01 33 00 Submittal Procedures
- .2      Product Data: Provide manufacturer's data sheets describing components, accessories, dimensions, dimensions, tolerances for window openings required, colours and textures.
- .3      Shop Drawings: Indicate dimensions in relation to window jambs, operator details, top rail, anchorage details, hardware and accessory details, conditions between adjacent blinds, required clearances.
- .4      Samples Submit 2 sets of 300 mm long samples of each visible-to-view component, indicating colour, surface texture and sheen.

**Part 2      Products****2.1      COMPONENTS**

- .1      Horizontal Shade Band:
  - .1      Assembly: Fabric, internal bottom bar, attachment of shade bands to roller tube.
  - .2      Fabric: Single thickness, non-raveling, 0.76 mm thick, PVC Free vinyl fabric, woven from 0.46 mm diameter extruded vinyl yarn.
    - .1      Yarn: 21% polyester and 79% reinforced vinyl.
    - .2      Colour: Grey/White. To be selected by Departmental Representative. Provide samples for selection.
- .2      Shade Roller Tube: Extruded aluminum, 50 mm diameter with reinforced internal ribs to provide maximum span without tube deflection.
- .3      Exterior Oval Hem Bar: 19 mm tubular extruded aluminum with recess to secure fabric, without visible seams.
- .4      Internal Tension Idler: Adjustable to automatically control the amount of torque generated for constant smooth operation of the shade system, with automatic release during down-travel, and automatic engage during up-travel.

- .5 Chain Drive: Heavy duty, commercial grade sprocket, a planetary gear assembly for increased performance, speed ratio, smoothness and balance to the chain and shade assembly.
  - .1 Operating Chain: No.10, heavy duty stainless steel bead chain, 40 kg load test
  - .2 Chain Hold Down: to fully secure shade to chain holder.
- .6 Mounting Brackets: 50 mm galvanized steel, snap on brackets for ceiling, wall or recessed mount in ceiling.
- .7 Closure Box: Extruded aluminum box, closed on all four sides, top, back, sides and bottom return.
  - .1 Closure Section: Round profile of 73 mm
  - .2 Internal groove to accommodate a self cleaning brush.
  - .3 Gap brush on top back side of cassette to provide for a light seal.
  - .4 Wall thickness: 1.52 mm
  - .5 Closure End Caps: 2 mm Delrin plastic with four countersunk flat headed screw holes.

## 2.2 FABRICATION

- .1 Provide manual shade chain drive window shade of:
  - .1 Tension activated lifting mechanism with multi-layer concentric constant tension.
  - .2 Lifting mechanism with a memory tension lock.
  - .3 Shade to not require re-tensioning after removal for cleaning.
  - .4 Internally free floating mechanism along grooved non-corrosive shaft, and reversible for future alterations and maintenance.
- .2 Factory assemble in a one piece container, closed on all four sides with top, back, sides and bottom return of plastic injected-molded end caps.
- .3 Lifting Mechanism to accommodate tension modules for maximum shade performance. Provide memory lock for tension modules to retain torque.
- .4 Mounting detail: Face/wall mounted.

## Part 3 Execution

### 3.1 EXAMINATION

- .1 Verify existing conditions before starting work.
- .2 Examine substrate and conditions for installation.
- .3 Beginning of installation means acceptance of substrate and project conditions.

### 3.2 INSTALLATION

- .1 Install units and their accessories to manufacturer's instructions.
- .2 Securely screw end plugs to conceal exposed cut aluminum of exterior hem bar.

- .3 Securely anchor units plumb and level, using hardware and accessories to provide smooth operation without binding.

### **3.3 INSTALLATION TOLERANCES**

- .1 Maximum variation of gap at window opening perimeter: 6 mm per 2.4 m (plus/minus 3 mm of shade height).
- .2 Maximum offset from level: 3 mm
- .3 Use manufacturer's edge clearance requirements for shades where the width-to-height ratio exceeds 1:3.

### **3.4 ADJUSTING**

- .1 Adjust shade and shade cloth to hang flat without waves, folds or distortion.
- .2 Adjust for smooth operation
- .3 Replace any units or components which do not hang properly or operate smoothly.

### **3.5 CLEANING**

- .1 Site will be occupied during construction. Site to be cleaned daily after work is completed.
- .2 Touch up damaged finishes and repair minor damage in a manner to eliminate evidence of repair. Remove and replace work that cannot be satisfactorily repaired.
- .3 Clean exposed surfaces and edges/ends, including metal and shade cloth, using non-abrasive materials and methods recommended by manufacturer. Remove and replace work which cannot be satisfactorily cleaned.

### **3.6 CLOSEOUT ACTIVITIES**

- .1 Demonstration: Demonstrate operation method and instruct Departmental Representative in the proper operation and maintenance of the window shade assembly.
- .2 Provide all manufacturer's product maintenance/warranty information.

**END OF SECTION**