

SECTION 12 24 00
WINDOW SHADES

PART 1 - GENERAL

1.1 DESCRIPTION

Motorized operation, roll-up fabric interior window shades are specified in this section. Window shades shall be furnished complete, including brackets, fittings and operating hardware.

1.2 RELATED WORK

COLOR OF SHADE AND COLOR OF EXPOSED PARTS OF CONTROL MECHANISMS (INCLUDING TAPES AND CORDS):

- A. Section 06100 - Rough Carpentry: Blocking for support of window shade hardware.
- B. Section 07900 - Joint Sealers: Sealants for perimeter of shade system.
- C. Section 09260 - Gypsum Board Assemblies: Suspended gypsum board ceilings to contain recessed window shade pockets.
- D. Section 09510 - Acoustical Ceilings: Suspended acoustical panel ceilings to contain recessed window shade pockets.

1.3 QUALITY CONTROL

Manufacturer's Qualification: manufacturer shall provide evidence that the manufacture of shades are a major product, and that the shades and all components and hardware have performed satisfactorily on similar installations. Motor and Controls are to be warranted for a period of at least 5 years.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
 - 1. Shade fabric, each type, 600 mm (24 inch) square, including cord and ring, showing color, finish and texture.
 - 2. Fascia L-shaped aluminum extrusion showing color and finish.
- C. Manufacturer's literature and data; showing details of construction and hardware for:
 - Window shades and Fascias
 - Motorized operated controls and wiring
 - Mounting hardware and brackets

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced to in the text by the basic designation only.
- B. Federal Specifications (Fed. Spec.):
AA-V-00200B.....Venetian Blinds, Shade, Roller, Window, Roller, Slat, Cord, and Accessories
- C. American Society for Testing and Materials (ASTM):
A167-99(R2009).....Stainless and heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip
B221/B221M-08.....Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
D635-10.....Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position
D648-07.....Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
D1784-08.....Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
- D. FPA 70 - National Electrical Code.
- E. GREENGUARD Environmental Institute Children & Schools
- F. US Green Building Council.

PART 2 - PRODUCTS

2.1 MATERIALS

FABRIC

- E. Light-Filtering Fabrics
1. Sheer translucent
VOC Emissions: GREENGUARD Children & Schools certified as a low emitting fabric. Manufacturer to supply GREENGUARD Children & Schools certificate. 500 denier fiberglass, vinyl coated and woven into a 2 by 2 basket weave. Fire rating: NFPA 701-1999TM#1 (small scale), NFPA 101 (Class A Rating), UBC (Class 1). Bacterial and Fungal Resistance: ASTM G 21 and ASTM G 22. 14.26 oz/sq yd, .019 inches thick. Average 5% and 1% percent open.
 2. Opaque
VOC Emissions: GREENGUARD Children & Schools certified as a low emitting fabric. Manufacturer to supply GREENGUARD Children & Schools certificate. 500 denier fiberglass, vinyl coated.

Fire rating: NFPA 701-1999TM#1 (small scale), NFPA 101 (Class A Rating), UBC (Class 1). Bacterial and Fungal Resistance: ASTM G 21 and ASTM G 22. 14.26 oz/sq yd, .019 inches thick. Sun blocking black out - white or ivory color.

2.6 FABRICATION

ELECTRICALLY MOTORIZED OPERATED WINDOW SHADES

Motorized electrically Operated Window Shades with Independent Control:
Motorized operated, vertical roll-up, fabric window shade with components necessary for complete installation including all controls and hardware. Control location to be located near the Podium, coordinate with VA for final location.

1. Operation: Electric Operator: Tubular motor concealed inside shade roller tube. Standard Motor: 110-120V AC, single-phase, 60 HZ, instantly reversible, lifetime lubricated, and equipped with internal thermal overload protector, electric brake, and pre-set accessible limit switches. (Compatible with Intelliflex Controls.)

Group Control: Standard or 120V, UL listed controls and input devices with automatic recalibration and simplified wiring, packaged together for seamless installation.

Basis-of-Design: Intelliflex® Control System as manufactured by Draper, Inc.

Control:

Group Control: A low voltage controller which can control different groups of four motors, with six changeable sub-grouping functions. Fully programmable. No dipswitches required.

Basis-of-Design: IntelliFlex® SGC4

Input Devices:

a. IntelliFlex® Switches: Appropriate low voltage switch to provide control via bus cable, dry contacts, and / or wireless remote control.

1) Dry Contact Switch: Switch is clearly marked for intended function. Site-specific overlay may be provided. Only one button must be activated for each function.

2) Fully Programmable Bus Interface Wall Switch: Switch is clearly marked for intended function. Site-specific overlay may be provided. Only one button must be activated for each function. Switch must be capable of being reprogrammed to allow for various control scenarios. Switch may act as a group switch, an individual motor switch or any combination thereof.

3) Wall Mountable Keypad: Only one button must be activated for each function. Keypad may act as a group control, an individual motor control or any combination thereof.

2. Mounting:

a. End caps and fascia.

3. Roller Tube: Fabricated from extruded aluminum, galvanized steel, or enameled steel. Diameter, wall thickness, and material selected by manufacturer to accommodate shade type and size. Fabric connected to the roller tube with LSE (low surface energy) double sided adhesive specifically developed to attach coated textiles to metal. Adhesive attachment to eliminate horizontal impressions in fabric.

4. Shade slat: Slat encased in heat seamed hem.

5. Fascia: L shaped aluminum extrusion to conceal shade roller and hardware.

a. Attachment: Snaps onto end caps without requiring exposed fasteners of any kind. Fascia can be mounted continuously across two or more shade bands.

b. Finish: Ivory powder coat.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Window Shades: Mount window shades on end of face brackets, set on metal gussets, or casing of windows as required. Provide extension face brackets where necessary at mullions.

1. Locate rollers in level position as high as practicable at heads of windows to prevent infiltration of light over rollers.

2. Where extension brackets are necessary, on mullions or elsewhere, for alignment of shades, provide metal lugs, and rigidly anchor lugs and brackets.

3. Place brackets and rollers so that shades will not interfere with window and screen hardware.

4. Mount shades at wire mesh window guards on head rails of hinged frame.

5. Mount shades at detention, or protection screens on head rail (room side) of hinged frame, with face brackets located approximately 38 mm (1-1/2 inches) from outside edges.

6. Shade installation methods not specifically described, are subject to approval of COR Interior Designer or COR Project Engineer of project.

7. Install in accordance with manufacturer's instructions.

8. Install roller shades level, plumb, square and true. Allow proper clearances for window operation hardware in accordance with manufacturer's recommendations and instructions.
9. Install the following items to conceal roller and operating mechanism. Do not use exposed fasteners.
 - a. Fascias.
10. Test window shades to verify that operating mechanism, fabric retainer, and other operating components are functional. Correct deficiencies.
 - a. Chair and clutch.
 - b. Demonstrate operation of shades to VA Interior Designer or COR prior to leaving job site.
11. Protect installed products until completion of job.
12. Touch-up, repair or replace damaged products before Substantial Completion.
13. Refer to Drawings for shade types and locations.
14. Window Treatment Schedule: For all roller shades. Use same room designations as indicated on the Drawings, field verified window dimensions, quantities, type of shade, controls, fabric and color and include opening sizes and key to typical mounting details.
15. Install roller shades after finish work and ambient temperature, humidity and ventilation conditions are maintained at levels recommended for project upon completion.
16. Do not deliver window shades until building is enclosed and construction within spaces where shades will be installed is substantially complete.

PART 4 - WARRANTY

1. Hardware and Shade Fabric: Manufacturer's standard twenty-five year limited warranty.

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