

SECTION 12 24 00
WINDOW SHADES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Window shades and accessories.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week prior to commencing work related to products of this section; require attendance of all affected installers.
- B. Sequencing:
 - 1. Do not fabricate shades until field dimensions for each opening have been taken.
 - 2. Do not install shades until final surface finishes and painting are complete.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.
- C. Shop Drawings: Include shade schedule indicating size, location and keys to details, head, jamb and sill details, mounting dimension requirements for each product and condition, and operation direction.
- D. Verification Samples: Minimum size 6 inches square, representing actual materials, color and pattern.
- E. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- F. Operation and Maintenance Data: List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of shop drawings.
- G. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of experience.
- B. Installer Qualifications: Company specializing in performing work of this type with minimum five years of documented experience.
 - 1. Factory training and demonstrated experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.
- B. Handle and store shades in accordance with manufacturer's recommendations.

1.06 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Requirements, for additional warranty requirements.
- B. Provide manufacturer's warranty from the Date of Substantial Completion, covering the following:
 - 1. Shade Hardware: 2 years.
 - 2. Fabric: 2 years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manually Operated Roller Shades:
 - 1. Basis of Design: Draper, Inc; Clutch Operated FlexShade including Single and Dual Roller: www.draperinc.com.
 - 2. Hunter Douglas: www.hunterdouglas.com.
 - 3. Graber, division of Springs Window Fashions: www.graberblinds.com.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Source Limitations: Furnish products produced by a single manufacturer and obtained from a single supplier.

2.02 WINDOW SHADE APPLICATIONS

- A. Shades - Type One: Sheer shades.
 - 1. Type: Single Roller shades.
 - 2. Fabric: Phifer SW2400.
 - 3. Color: shown in window schedule on drawings.
 - 4. Mounting: Inside (between jambs).
 - 5. Operation: Manual.
- B. Shades - Type Two: Blackout shades with second shade in same opening.
 - 1. Type: Roller shades.
 - 2. Fabric: Sheer:Phifer SW2400. Blackout: SunBloc SB9000.
 - 3. Colors: shown in Window schedule on drawings.
 - 4. Mounting: Inside (between jambs).
 - 5. Operation: Manual.

2.03 ROLLER SHADES

- A. Roller Shades: Fabric roller shades complete with mounting brackets, roller tubes, hembars, hardware and accessories; fully factory-assembled.
 - 1. Drop: Regular roll.
 - 2. Size: As indicated on drawings.
- B. Fabric: Non-flammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.
 - 1. Sheer Shades: Reduce glare yet still reveal considerable details to the outside; no privacy; Openness Factor: Approximately 3 percent.
 - 2. Blackout Shades: Block virtually all the light; Openness Factor equal to zero (0).
 - 3. Flammability: Pass NFPA 701 large and small tests.
- C. Roller Tube: As required for type of operation, extruded aluminum with end caps.
 - 1. Dimensions: Manufacturer's standard, selected for suitability for installation conditions, span, and weight of shades.
 - 2. Fabric Attachment: Utilize double sided adhesive tape.
 - 3. Finish: Clear anodized.
- D. Hembars and Hembar Pockets: Wall thickness designed for weight requirements and adaptation to uneven surfaces, to maintain bottom of shade straight and flat.
 - 1. Style: Full wrap fabric covered bottom bar, flat profile with closed ends.
- E. Manual Operation: Clutch operated continuous loop; beaded ball chain meeting WCMA A100.1.

2.04 ACCESSORIES

- A. Fascias: Size as required to conceal shade mounting.
 - 1. Style: As selected by Architect from shade manufacturer's full selection.
- B. Brackets and Mounting Hardware: As recommended by manufacturer for mounting configuration and span indicated.
- C. Fasteners: Non-corrosive, and as recommended by shade manufacturer.

2.05 FABRICATION

- A. Field measure finished openings prior to ordering or fabrication.
- B. Fabricate shades to fit openings within specified tolerances.
 - 1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch space between bottom bar and window stool.
 - 2. Horizontal Dimensions - Inside Mounting: Fill openings from jamb to jamb.
- C. Dimensional Tolerances: As recommended in writing by manufacturer.
- D. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine finished openings for deficiencies that may preclude satisfactory installation.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Start of installation shall be considered acceptance of substrates.

3.02 PREPARATION

- A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.
- B. Coordinate with window installation and placement of concealed blocking to support shades.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.
- B. Installation Tolerances:
 - 1. Inside Mounting: Maximum space between shade and jamb when closed of 1/16 inch.
 - 2. Maximum Offset From Level: 1/16 inch.
- C. Replace blinds that exceed specified dimensional tolerances at no extra cost to Owner.
- D. Adjust level, projection and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure shades for smooth operation.

3.04 CLEANING

- A. Clean soiled shades and exposed components as recommended by manufacturer.
- B. Replace shades that cannot be cleaned to "like new" condition.

3.05 CLOSEOUT ACTIVITIES

- A. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.
- B. Training: Train Owner's personnel on operation and maintenance of system.
 - 1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
 - 2. Provide minimum of two hours training by manufacturer's authorized personnel at location designated by the Owner.

3.06 PROTECTION

- A. Protect installed products from subsequent construction operations.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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