

SECTION 12 24 13

ROLLER WINDOW SHADES

1. PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manually operated roller window shades.
2. Solar screen shade bands.
3. Mounting hardware, brackets, hem bars, and accessories.

B. Related Sections:

2. Section 06 10 00 – Rough Carpentry (blocking).
 3. Section 08 80 00 – Glazing.
 4. Section 09 50 00 – Ceilings (shade pockets where applicable).
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1.2 REFERENCES

- A. NFPA 701 – Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
 - B. WCMA ANSI/WCMA A100.1 – Safety of Corded Window Covering Products.
 - C. ISO 105-B02 – Colorfastness to Artificial Light (Xenon Arc Lamp).
 - D. GREENGUARD GOLD Certification Program.
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1.3 SUBMITTALS

A. Product Data:

Manufacturer's technical data including:

1. Fabric composition and performance properties.
2. Openness factor.
3. UV blockage percentage.
4. Fire test compliance documentation.
5. Installation instructions.

B. Shop Drawings:

1. Shade schedule indicating window locations, sizes, mounting conditions, and control side.
2. Bracket and mounting details.

C. Samples:

1. Minimum 8 x 10 inch fabric samples for each color and openness specified.

D. Certificates:

1. NFPA 701 compliance documentation.
2. GREENGUARD GOLD certification documentation.

E. Warranty documentation.

1.4 QUALITY ASSURANCE

- A. Manufacturer shall specialize in commercial roller shade systems with minimum five (5) years documented experience.
- B. Installer shall be trained and approved by shade manufacturer.
- C. Shade systems shall comply with WCMA safety standards for corded products.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original packaging.
- B. Store in clean, dry, climate-controlled location.
- C. Protect from moisture, dust, and physical damage.

1.6 WARRANTY

- A. Provide manufacturer's standard written warranty:
 - 1. Shade hardware: Minimum five (5) years.
 - 2. Shade fabric: Minimum five (5) years against defects in materials and workmanship.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Basis of Design:

GREEN 2000™ Solar Screen Fabric / OMEGA SCREEN FABRIC and compatible manual roller shade system.

B. Substitutions:

Submit in accordance with Division 01 requirements. Substitutions must meet or exceed all specified performance criteria.

2.2 MANUAL ROLLER SHADE SYSTEM

A. General:

Factory-fabricated manual roller shade assemblies consisting of shade band, roller tube, clutch mechanism, mounting brackets, hem bar, and continuous loop chain control.

2.3 SHADE BAND FABRIC

- A. Fabric Type: PVC-coated polyester solar screen.
 - B. Basis of Design Fabric: GREEN 2000™ / OMEGA SCREEN FABRIC.
 - C. Openness Factor:
 - 1. 1 Percent Open.
 - 2. 3 Percent Open.(As indicated in shade schedule.)
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1. GREEN 2000 / OMEGA – 3% Open

- a. Openness Factor: Approximately 3%.
 - b. UV Blockage: Approximately 97%.
 - c. Composition: 25% Polyester, 75% Vinyl on Polyester.
 - d. Mesh Count: 48 Warp x 50 Fill.
 - e. Fabric Thickness: 0.025 inch.
 - f. Fabric Weight: 13.71 oz/yd².
 - g. Fire Classification: NFPA 701-2015, Test Method #1.
 - h. Colorfastness: Grade 6–7 per ISO 105-B02.
 - i. Environmental Certification: GREENGUARD GOLD Certified.
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2. GREEN 2000 / OMEGA – 1% Open

- a. Openness Factor: 1%.
 - b. UV Blockage: Approximately 99%.
 - c. Composition: 25% Polyester, 75% Vinyl on Polyester.
 - d. Mesh Count: 54 Warp x 48 Fill.
 - e. Fabric Thickness: 0.026 inch.
 - f. Fabric Weight: 15.04 oz/yd².
 - g. Fire Classification: NFPA 701-2015, Test Method #1.
 - h. Colorfastness: Grade 6–7 per ISO 105-B02.
 - i. Environmental Certification: GREENGUARD GOLD Certified.
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D. Standard Colors:

Alabaster, Chalk, Grey, Tobacco, Black.
(Architect to select.)

2.4 ROLLER TUBE

- A. Extruded aluminum tube sized to prevent deflection under full fabric load.
 - B. Tube diameter as required by shade width and manufacturer's engineering standards.
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2.5 CLUTCH AND CONTROL

- A. Heavy-duty commercial clutch mechanism with continuous loop bead chain.
 - B. Chain: Stainless steel or high-strength polyester bead chain.
 - C. Chain tension device complying with WCMA safety requirements.
 - D. Control Location: As indicated on drawings.
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2.6 BRACKETS

- A. Steel or aluminum brackets designed for wall, ceiling, or jamb mounting.
 - B. Finish: Manufacturer's standard powder-coated finish.
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2.7 HEM BAR

- A. Extruded aluminum hem bar fully enclosed in fabric pocket.
 - B. Provide concealed weight for smooth operation.
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2.8 EXPOSED BOTTOM RAIL

A. General:

Provide exposed bottom rail where indicated on drawings or shade schedule.

B. Material:

1. Extruded aluminum.
2. Minimum 1/8-inch wall thickness or manufacturer's standard heavy-duty commercial profile.

C. Profile:

1. Rectangular or elliptical profile as selected by Architect.
2. Sized appropriately for shade width to minimize deflection.

D. Finish:

1. Manufacturer's standard powder-coated finish.
2. Color to match bracket finish, fascia, or Architect's selection.

E. Attachment:

1. Mechanically secured to shade band.
2. Fabric secured with spline or mechanical fastening system to prevent slippage.

F. Weight:

Provide sufficient internal weight to maintain fabric tension and smooth operation

2.9 FABRICATION

- A. Fabricate shades square, true, and free of warp, distortion, or defects.
 - B. Heat-welded or RF-sealed fabric edges where required.
 - C. Provide proper tube sizing to minimize deflection.
 - D. Factory assemble complete shade units.
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PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify window openings are ready to receive shades.
 - B. Verify blocking and mounting surfaces are adequate.
 - C. Do not proceed until unsatisfactory conditions are corrected.
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3.2 INSTALLATION

- A. Install shades level, plumb, and aligned.
- B. Secure brackets to supporting substrate with appropriate fasteners.
- C. Install in accordance with manufacturer's written instructions.
- D. Align multiple shades uniformly at consistent height.

3.3 ADJUSTING

- A. Adjust clutch mechanisms for smooth operation.
 - B. Verify shade limits and alignment.
 - C. Replace damaged components.
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3.4 CLEANING AND PROTECTION

- A. Clean exposed surfaces after installation.
- B. Protect installed shades until Substantial Completion.