

SECTION 12 21 13  
MARIAK 2" ALUMA-TECH ALUMINUM HORIZONTAL BLIND SYSTEM

*Notes to Specifier:*

*Text in italics is information for specifiers and should be deleted in project specifications.*

*This specification covers the following aluminum blind:*

*2 1/4" deep, Aluma-Tech Series, 2 1/4" x 1-1/2" headrail with 2" wide, 8-gauge aluminum slats*

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

*Note to specifier: Select appropriate series:*

1. 2 1/4" deep, Aluma-Tech Series, 2 1/4" x 1 1/2" headrail with 2" wide, 8-gauge aluminum slats

B. Related Sections:

*Note to specifier: Edit the following. Coordinate section numbers with those used on the project. Add others as appropriate.*

1. Section 06 10 00 - Rough Carpentry: Blocking and backing for attachment of aluminum blinds to wood substrate.
2. Section 09 22 00 - Supports for Plaster and Gypsum Board: Blocking and backing for attachment of aluminum blinds to metal substrate.
3. [Sections specifying other window treatment as appropriate].

1.2 REFERENCES:

Glass Association of North America:

## Glazing Manual.

### 1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type aluminum blind provided under this Section. Include construction details, dimensions of each aluminum blind, and description of each component.
- B. Shop Drawings: Provide shop drawings, prepared after field measurements are taken, showing location and extent of aluminum blinds. Provide elevations, sections, and details. Show bracket sizes for each condition. Show size and location of blocking and backing required for installation of aluminum blinds. Show mounting details and method of attachment of aluminum blind brackets to backing.
- C. Schedule: Provide schedule of aluminum blinds. Use the same designations as indicated on drawings.
- D. Samples:
  - 1. Blind Material: Not less than 12 inches long, with specified finish applied. Illustrate complete range of colors and textures available for selection.

*Note to specifier: Delete the following if no valance.*

- 2. Valance: Submit 12" long samples of specified type.

*Note to specifier: Add samples of accessories, brackets, and valance if size of project justifies.*

- E. Installation Instructions: Submit complete manufacturer's installation instructions.
- F. Qualification Data: If required, submit a letter indicating that installer is authorized by the manufacturer to install specified product.
- G. Installer's Experience Record: Submit a list of at least five 5 installations that have been installed for a minimum of 3 years of aluminum blinds similar in size, type and scope as described in this document. Include contact names and phone numbers.
- H. Maintenance Data: Submit manufacturer's recommended cleaning and maintenance data as specified in Section 01 74 00 [                    ]. Include maintenance procedures and recommended maintenance materials. Include precautions about cleaning materials that could damage or discolor the aluminum blinds.

### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm specializing in manufacturing aluminum blinds with at least 10 years experience.
- B. Installers shall be specially trained in the installation of aluminum blinds. Installers shall have

completed at least 5 commercial installations of aluminum blinds similar to those specified in this Section.

## 1.5 SUBSTITUTIONS:

- A. Refer to Section 01 25 00 [ ] for procedures.
- B. Substitutions: Not permitted.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in manufacturer's unopened packages, labeled to show manufacturer's name and product name.
- B. Storage:
  - 1. Store materials in a clean area, free of corrosive fumes, dust, and away from construction activities.
  - 2. Stack aluminum blinds horizontally using plastic or wood shims such that drainage and ventilation are provided for, and such that water cannot accumulate in, about or upon containers.
  - 3. Cover stacks with tarpaulins or plastic such that ventilation is provided for, and such that contaminants are prevented from contacting surfaces.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install aluminum blinds until construction and wet and dirty finish work in spaces, including painting, is complete. Air conditioning system shall be operating, and ambient temperature shall be between 60 degrees F. and 85 degrees F. Relative humidity shall be between 45 percent and 65 percent.
- B. Field Measurements: Verify dimensions of adjoining construction by field measurements before fabrication. Allow clearances for operable glazed units' operation hardware.
- C. Before Installation Begins of Aluminum blinds
  - 1. Roof shall watertight, windows and frames installed and glazed, and interior doors hung.
  - 2. Wet work including concrete, masonry, plaster, stucco, and terrazzo, shall be complete and dry.
  - 3. Application of gypsum wallboard, joint treatment, taping and sanding shall be complete and dry.
  - 4. Ceilings, window pockets, electrical, and mechanical work above the product shall be complete.
  - 5. Flooring materials such as carpet, tile, etc. shall be completed.
- D. Electrical power (110 volt AC) shall be available for installer's tools within 500 feet of product installation areas.

1.8 WARRANTY

- A. Manufacturer's Limited Warranty: Provide manufacturer's 25 year limited warranty against product defects.

## PART 2 PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURER:

Mariak Contract  
575 West Manville Street  
Rancho Dominguez, CA 90220.  
(800) 562-7425  
FAX (800) 459-6999  
www.mariak.com

### 2.2 FABRICATION

#### A. General:

1. Aluminum blinds shall be free of sharp edges, burrs or other defects.
2. Size Limitations:
  - a. Maximum width: 120 inches (single blind on one headrail). Blinds up to 120 inches are available as two blinds on one headrail.
  - b. Maximum drop: 120 inches.

B. Colors: Colors of aluminum blind slats shall be as selected from manufacturer's standard colors. Colors of headrail, bottomrail, ladder, and cord shall be color coordinated to match slat color unless otherwise specified.

C. Prior to fabrication, verify actual opening dimensions by on-site measurement. Calculate blind dimensions to fit within specified tolerances.

D. Fabricate blinds to fill openings from head to sill and jamb-to-jamb. The minimum clearance blind-to-blind shall be 1/4 inch. Locate blind divisions at mullions.

E. Steel Headrail Channel: Headrail shall be 1-1/2 inch high by 2-1/4 inches deep. Design of the headrail to include rolled edges at top. Headrail to be fabricated from 0.024 inch thick (before coating) phosphate treated steel and finished with vinyl primer and a top coat of polyester baked coating.

F. Headrail Channel Hardware: Hardware shall be acetal low friction thermoplastic and guide lift cords and ladders in the head channel. Operating hardware shall be mechanically locked into headrail channel, by means of snap-in fittings.

Metal Bottomrail: Bottomrails are contoured shaped steel materials. Bottomrails shall be attached to the end of the cord ladders, fully supporting the weight of the blind. All bottomrail colors are available to compliment Mariak Contract's 2" aluminum slat sample deck. Round polyurethane plugs snap over the lift cord holes in bottomrails to secure the lift cords.

*Note to specifier: Add the following if hold-down pins are required to secure aluminum blind to window sill or frame.*

- H. Provide hold-down bracket pins [for each aluminum blind] [where indicated].
- I. Slats: Slats shall be 5086-H19 aluminum alloyed for maximum strength, flexibility and resistance to corrosion. Slats shall be nominally 2 inch wide. Thickness of slats shall be 0.008 inch. Slats shall have a pre-coating that features an anti-static performance to help repel dust and a smoother, harder less porous surface. A properly formed contour shall create the finished crown with corner radii of 3/16 inch tangent to edge of slat. The end clearance of each slat shall not exceed 1/4 inch from each side of the window opening for jamb installation. Slat thickness and ladder support distances shall be such that there is no visible sag.

*Note to specifier: Select from the following valance options, or delete if no valance.*

- 1. Valance shall consist of a single 2 inch slat attached to the headrail with polycarbonate brackets.
- 1. Valance shall consist of two 2 inch slats attached to the headrail with polycarbonate brackets.
- J. Tilt Rod Support: Tilt rod support shall be acetal low friction thermoplastic and shall support tilt rod. It shall provide a smooth bearing surface and center the ladder drum over ladder hole. Incorporated with tilt rod support shall be metal lift cord rollers to guide lift cords when entering and exiting headrail for smoother lifting and lowering operation. Acetal grommet shall have beveled edges to prevent cord and braided ladder wear and discoloration.
- K. Ladder Drum: Durable steel with smooth hole edges to position ladder. Ladders shall be securely attached by means of a bend-down top, including braided ladder clips.
- L. Cord Lock: Cord lock shall be of snap-in design and incorporate a stainless steel wear guard over which cords pass and a floating shaft-type locking pin. Locking pin shall be free of abrasive teeth and offer minimum wear to cord. Cord lock shall incorporate a "crash-proof" safety feature that shall lock blind automatically upon release of cord. End of lift cords shall be finished separately with plastic tassels.
- M. Cord Guide: Shall be steel to guide and center lift cords into cord lock opening.

*Note to specifier: Select from the following tilt contract options.*

- N. Shaft Type Wand Tilter: The tilter shall be of a worm and gear arrangement in a totally enclosed gear case (housing). The worm (tilter shaft) shall be heavy-duty clear polycarbonate for increased strength eliminating breakage; the gear of nylon and the gear housing of acetal thermoplastic. The tilter shall be designed for smooth, low friction operation and shall have a safety clutch feature that prevents over-rotation. The tilt wand shall be a clear polycarbonate rod with a hexagonal shape measuring approximately 3/8 inch in diameter. The wand shall hang vertically by its own weight and shall be of sufficient length for easy access and operation. Wand shall be attached to the tilter shaft by means of a spring clip and shall be easily detached and reattached in the field.

or

- O. Cord Tilter: The cord tilter shall be a wheel made of acetal thermoplastic. Pulling the cord will tilt

- the blind in a smooth, low friction operation. The gear and housing shall be made of steel.
- P. Hexagonal Tilt Rod: Tilt rod shall be electro-zinc coated solid steel. Tilt rod shall be hexagonal in cross-section measuring 0.25 inch at its widest points. Tilt rod shall limit torsional deflection to 6 degrees in a 30 inch test length with a torque application of one-foot pound.
- Q. Braided Ladders (Slat Supports): Shall have braided ladder, which will assure proper control with adequate overlap of slats in the closed position. Distance between end ladder and end of slats will not exceed 6 inches; distance between braided ladders shall not exceed 20 inches.
- R. Braided Ladder Material: 100 percent high tenacity polyester yarn. Vertical component shall be not less than 0.045 inch diameter nor greater than 0.066 inch diameter, and shall provide maximum strength and flexibility with minimum stretch. Horizontal component, or rungs, shall be not less than four threads and shall be approximately 31.0mm long. Standard ladder will provide 44.0mm distance between slats. Ladders shall be of sufficient length for bottom of blind to hang with a tolerance of plus one-half/minus zero inches of the specified length. Ladders shall be dyed to Mariak Contract color standard.
- S. Lift Cords: Lift cords shall be braided with polyester jacket and center core or approved equal. Size of cord shall be 1.8mm. Cords shall be detachable, if required, and shall be of sufficient length to properly control the raising or lowering of the blind. Lift cords shall be equipped with plastic tassels. Cord ends shall be securely anchored to the bottomrail and it shall be possible to detach and attach cords. Cording arrangements shall comply with assembly standards set for the size and weight of the blind. Cords shall be color coordinated.
- T. Cord Lock and Tilter Operation Locations: Provide the following cord lock and tilter location options when viewed from within the room:

*Note to specifier: select cord lock and tilter locations, or show on schedule, or say, as shown on approved submittals. On blinds less than 18 inches wide, only the first two options below apply.*

1. Tilter at left, cord lock at right (standard)
  2. Cord lock at left, tilter at right (reverse)
  3. Tilter and cord lock at left (both left)
  4. Tilter and cord lock at right (both right)
- U. Blinds less than 12 inches in width, but more than 7 inches in width shall have a tilter only, which will be centered.
- V. Installation Brackets: Brackets shall be of adequate size to facilitate installation. The brackets shall facilitate easy installation and removal of headrail channel. End support box brackets shall be made of steel in color to match aluminum blinds. Face of bracket shall be hinged to lock headrail in place or allow installation and removal.
- W. Intermediate Support Brackets shall be furnished for blinds over 60 inches wide. Maximum spacing for intermediate support brackets shall be 48 inches.

*Note to specifier: Specify extension brackets if required to support aluminum blinds away from the window frame.*



X. Extension Brackets: Provide if required.

Y. Headrail End Stiffener: Provide steel end stiffener at each end of the headrail.

*Note to specifier: Specify side edge channels if required to protect the ends of the aluminum slats. Available in 112 – Alabaster or 205 – White Satin only.*

Z. Optional Side Edge Channel: Side channel shall be 2 inch wide by 2-7/8 inches deep. Design of the side edge channel to include rolled edges at opening. Side channel to be fabricated from 0.024 inch thick (before coating) phosphate treated steel and finished with vinyl primer and a top coat of polyester baked coating. Please note that side edge channel is only available in 112 – Alabaster or 205 – White Satin colors.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

A. Inspect substrates and conditions affecting work of this Section. Do not proceed until unsatisfactory conditions have been corrected.

- B. Verify that room temperature is a minimum of 65 degrees F. and that painting and other dust-producing operations are complete.

### 3.2 INSTALLATION

- A. Install aluminum blinds in accordance with manufacturer's recommended installation procedures except as otherwise specified herein.
- B. Install blinds with adequate clearance to permit smooth operation of blinds and any sash operators. Hold blinds 1/4 inch clear from each side of window opening on inside mount unless other clearance is indicated.

*Note to specifier: Verify clearance from glass with GANA "Glazing Manual" for glass types used on project to avoid heat buildup and possible damage to glass.*

- 1. Install aluminum blinds so that clearance between aluminum blind and glass is in accordance with the GANA "Glazing Manual" for types of glass used on the project.

*or*

- 1. Install located so aluminum blind is not closer than 2 inches to interior face of glass. Allow proper clearances for window operation hardware.
- C. Install intermediate support brackets and extension brackets as required to prevent deflection in headrail.
- D. Set tilt and lift controls. Demonstrate blinds to be in smooth, uniform working order.

### 3.3 CLEANING

- A. Clean soiled aluminum blind surfaces with a mild soap solution. Do not use steam, hot water, bleach or any abrasive or solvent-based cleaners. Do not machine wash. Do not wash metallic colors.
- B. To ensure proper drying, provide adequate ventilation for blinds, remove bottomrail plastic end caps, and tip headrail and bottomrail to drain water.

### 3.4 PROTECTION

- A. Protect aluminum blinds as required to assure that they will be without damage at substantial completion.
- B. Replace damaged and defective aluminum blinds to satisfaction of Architect.

END OF SECTION

2" Aluma-Tech Aluminum Horizontal Blind System  
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