

AIRFOIL BLADE SUN CONTROL - RECOMMENDED SPECIFICATION

Airolite Airfoil Sun Controls are designed and produced to your custom specification. Cantilevered, horizontal, vertical and inclined applications may be utilized to filter up to 80% of the sun's heat and glare, cut wintertime radiant heat loss and integrate natural light into atriums. Airfoil Sun Controls are produced from extruded aluminum 6" (152.4 mm) airfoil blades. Outriggers are constructed from a minimum 0.25" (6.35 mm) aluminum plate material. Standard fascia is a 4" (101.6 mm) round tube, but optional fascia may be specified. Welded mounting plates by Airolite are standard construction with the option for mounting tee or angles. All materials are available in Airolite's broad array of baked enamel and fluoropolymer for durability and compatibility with adjacent components. Please contact your local Airolite representative or the factory for assistance with the layout and design of support systems when required.

GENERAL

Where indicated on plan drawings or described in schedules, furnish and install Airfoil Blade Sun Controls as designed and manufactured by The Airolite Company LLC, Schofield, Wisconsin. Grilles shall be furnished in the configurations represented on the plan drawings and shall include supports, installation hardware and finishes as specified and required for a complete installation.

SUBMITTALS

Manufacturer shall submit shop drawings incorporating key plans, elevations, sections and details showing profiles, angles and spacing of components and frames; unit dimensions related to wall openings and construction; and, anchorage details and locations. Submit theoretical calculations prepared by a professional engineer specializing in the application of welding technology demonstrating that each fillet weld joining infill elements and frame members will withstand a minimum of 526 pounds of force in shear. Provide samples of manufacturer's finish and color charts showing the full range of finishes and colors available.

PRODUCTS

Architectural Sun Controls shall be Airolite Airfoil Blade Sun Control as follows:

- Blade Material: Extruded Aluminum, Alloy 6063-T5
- Blade Material Thickness: 0.081 in. (2.06 mm)
- Blade Width: 6 in. (152.4 mm); other widths also available
- Outrigger Material: Aluminum Plate, Alloy 5052-H32 or 6061-T6
- Outrigger Material Thickness: 0.250 in. (6.35 mm) minimum
- Standard Fascia: 4 in (101.6 mm) Round Tube
- Optional Fascia: Rectangular Tube, Channel, or Bullnose
- Mounting: Plate, Tee or Angle
- Construction: Mechanically Fastened, Welded Optional

ALL-WELDED ASSEMBLY

All aluminum and frame components shall be assembled with fillet welds concealed from view, unless the size of the grille makes bolted connections between grille sections necessary. Each weld shall be a produced with the Pulsed Gas Metal Arc Welding (GMAW Mig) process. Intermediate connections shall be joined with a 1-inch (25.4 mm) long fillet weld with a minimum 1/8" (3.175 mm) leg. Frames shall be joined at each corner with a full-length GMAW fillet weld with a minimum 1/8-inch (3.175 mm) throat.

STRUCTURAL DESIGN CRITERIA

Manufacturer shall design and furnished all supports required to withstand a wind force of not less than 25 pounds per square foot. Consult factory for higher loading conditions. Maximum section size is 96-inches (3,048 mm) wide x 48-inches (3,048 mm) projection. Consult factory for larger sizes. Sun Control members, blades, outriggers, fascia and anchorages shall be demonstrated to withstand the specified wind design load.