

MATRIX GRILLE - RECOMMENDED SPECIFICATION

Airolite Matrix Grilles are designed and produced to your custom specification to function as architectural accent elements or entire facades that yield sight and solar screening or serve as security barriers. Matrix Grilles feature a diagonal grid configuration that presents a distinct, rigid, grille profile that is especially suitable for security applications. Matrix Grilles are produced in configurations from 2" (50.88 mm) to 6" (152.4 mm) deep and with extruded aluminum members that range in thickness from 0.081" (2.06 mm) to 0.250" (6.35 mm). Major and minor diagonal bar spacing can be configured from minimum 2" (50.8 mm) to maximum 12" (304.8 mm) center spacing to achieve desired sightlines. All materials are available in Airolite's broad array of baked enamel, fluoropolymer and clear or color anodize coatings 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 Matrix Grilles as designed and manufactured by The Airolite Company LLC, Schofield, Wisconsin. Louver screens shall be furnished in the configuration represented on the plan drawings and shall include 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 louver screen blades 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 blade 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 colors available.

PRODUCTS

Architectural grilles shall be Airolite Matrix Grilles as follows:

- o Material: Extruded Aluminum, Alloy 6063-T5
- o Material Thickness: Specify 0.081" (2.06 mm) to 0.250" (6.35 mm), or as indicated.
- o Grille Depth: Specify 2" (50.8 mm) to 6" (152.4 mm), or as indicated.
- o Perimeter Frame: Specify Aluminum Bar, Channel or Tube, or as indicated.
- o Major Diagonal Bar Spacing: Specify 2" (50.8 mm) to 12" (304.8 mm), or as indicated.
- o Minor Diagonal Bar Spacing: Specify 2" (50.8 mm) to 12" (304.8 mm), or as indicated.

WELDED ASSEMBLY

Join stationary blade, head and jamb frames with fillet welds concealed from view, unless the size of the louver makes bolted connections between louver sections necessary. Louver blades shall be joined to each jamb frame with a minimum of two fillet welds produced with the Pulsed Gas Metal Arc Welding (GMAW/Mig) process. Each weld shall be a minimum of 1-inch (25.4 mm) in length with a minimum 1/8-inch (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) leg.

STRUCTURAL DESIGN CRITERIA

Manufacturer shall design and furnish all supports required to withstand a wind force of not less than 25 pounds per square foot. Grilles larger than 72-inches wide (1,828.8 mm) x 120-inches high (3,048 mm) or 120-inches (3,048 mm) wide x 72-inches (1,828.8 mm) high will be fabricated and installed in multiple sections. Grille members, frames, mullions and anchorages will be demonstrated to withstand the specified wind design load.