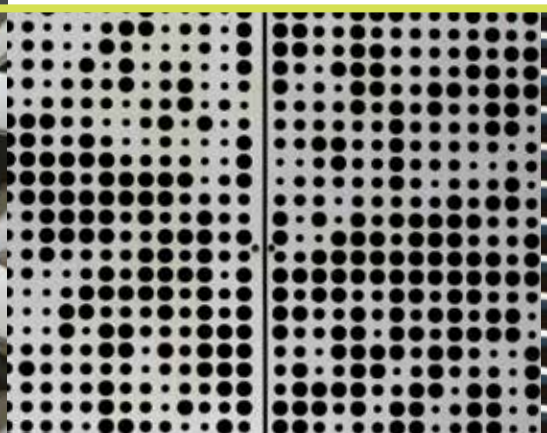
AMICO
ARCHITECTURAL METALS

EXPANDED MESH

PERFORATED METAL

LASER-CUT METAL

PLANK GRATING



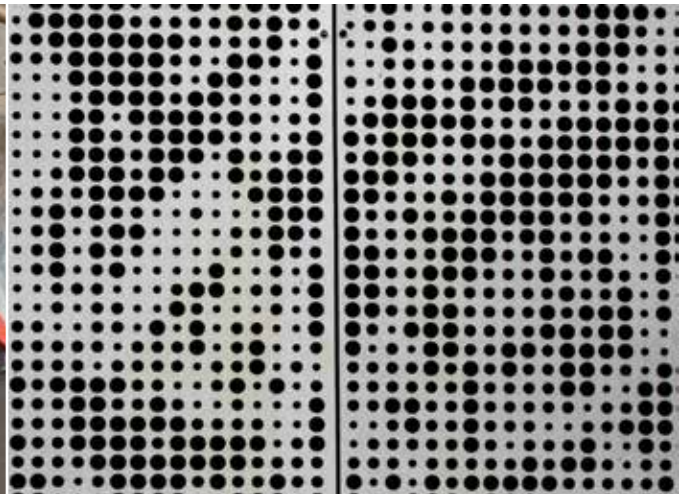
ARCHITECTURAL EXPANDED MESH

STANDARD EXPANDED MESH

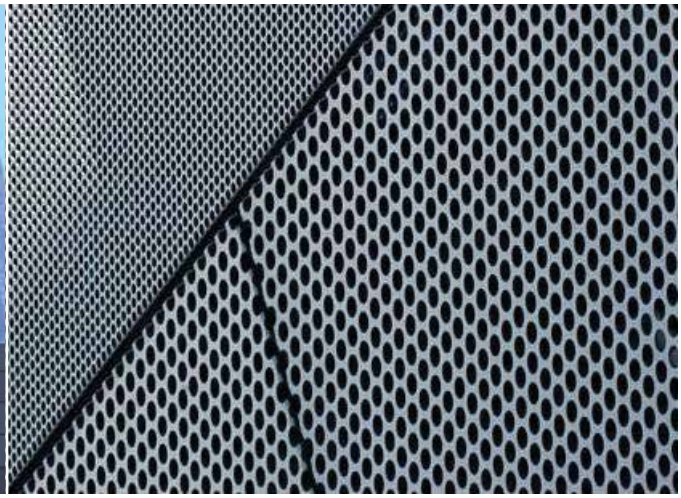
LASER CUT METAL

AMICO
ARCHITECTURAL METALS

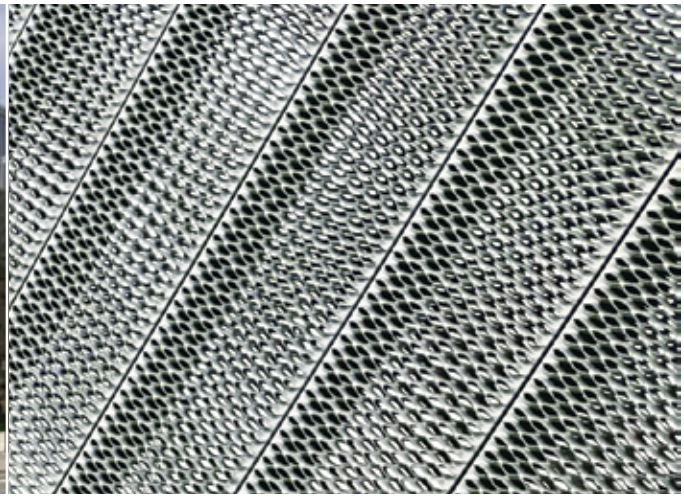
CUSTOM PERFORATION



ALL-ACROSS PERFORATION



PLANK GRATING



PROJECT APPLICATIONS

PARKING GARAGE SCREENS

FACADES & SUNSHADES

CEILINGS & INTERIOR WALLS

LANDSCAPE DESIGN

EQUIPMENT SCREENS

AMICO ARCHITECTURAL METALS

RETAIL DESIGN

RAILING INFILL PANELS

VERTICAL GARDENS

ACOUSTIC PANELS

RESIDENTIAL

SIGNAGE

YUL PARKING GARAGE

Jodoin, Lamarre, Pratte / Montreal, QC / APEX03 Expanded Mesh

AMICO
ARCHITECTURAL METALS

ROSE DES VENTS

ADHOC / Montreal, QC / 3/4" 0.125" Raised Expanded Mesh

SANTANA ROW GARAGE

Stantec / San Jose, CA / APEX03 Expanded Mesh

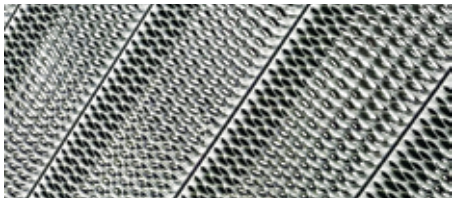
AMICO
ARCHITECTURAL METALS

OTTAWA ART GALLERY

KPMB / Ottawa, ON / APEX03 Expanded Mesh

THE POLYGON GALLERY

Patkau Architects / North Vancouver, BC / Diamond Grip Plank Grating



Install In Progress

AMICO ARCHITECTURAL METALS

CONFIDENTIAL PROJECT

Portland, OR / Laser Cut Metal

SYMMETRY PARTNERS OFFICE

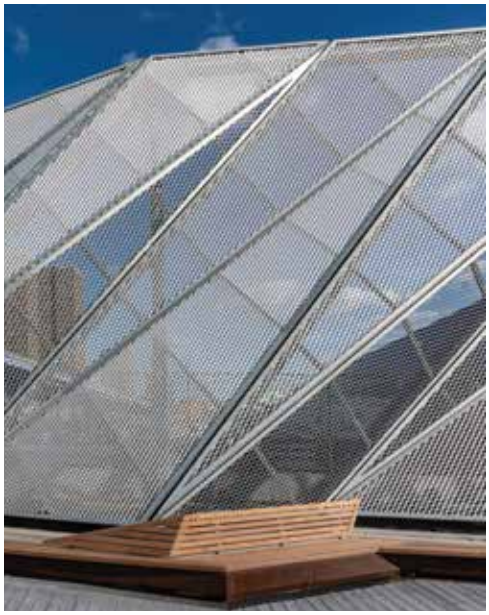
Amenta Emma Architects / Glastonbury, CT / APEX03 Expanded Mesh

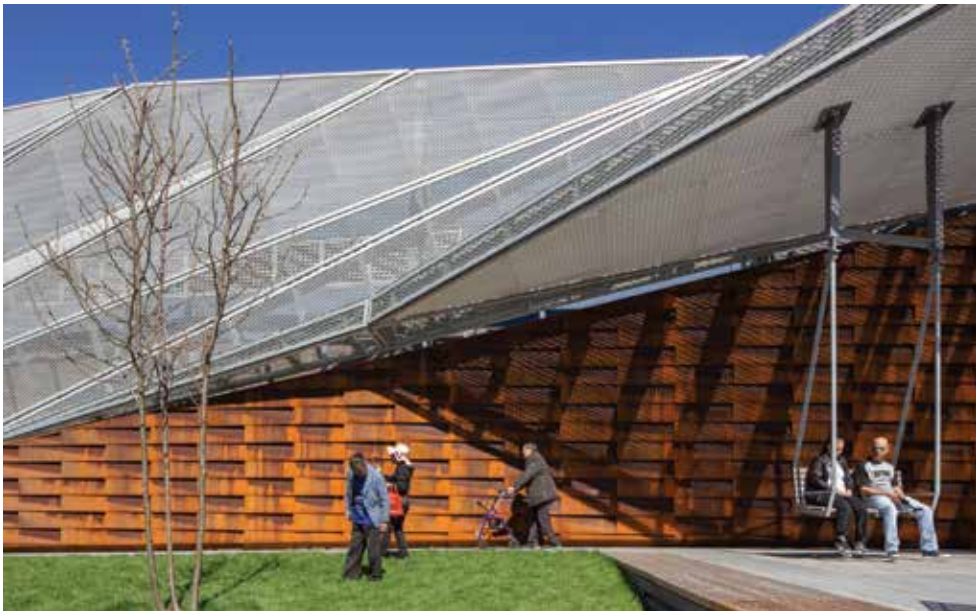
Structure prior to facade remodel

AMICO
ARCHITECTURAL METALS

PIER 35

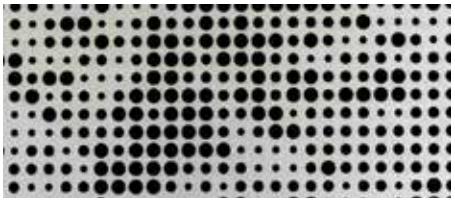
SHoP Architects / New York, NY / APEX03 Expanded Mesh





MEDTRONICS OFFICE

Snow Kreilich Architects / Santa Ana, CA / Custom Perforation



AMICO
ARCHITECTURAL METALS

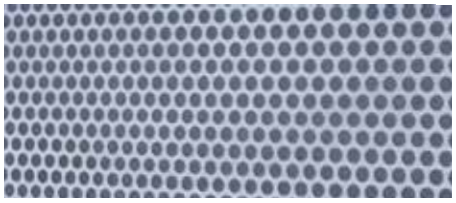
COOKSVILLE GO STATION

NORR / Mississauga, ON / APEX02 Expanded Mesh

UC RIVERSIDE REC CENTER

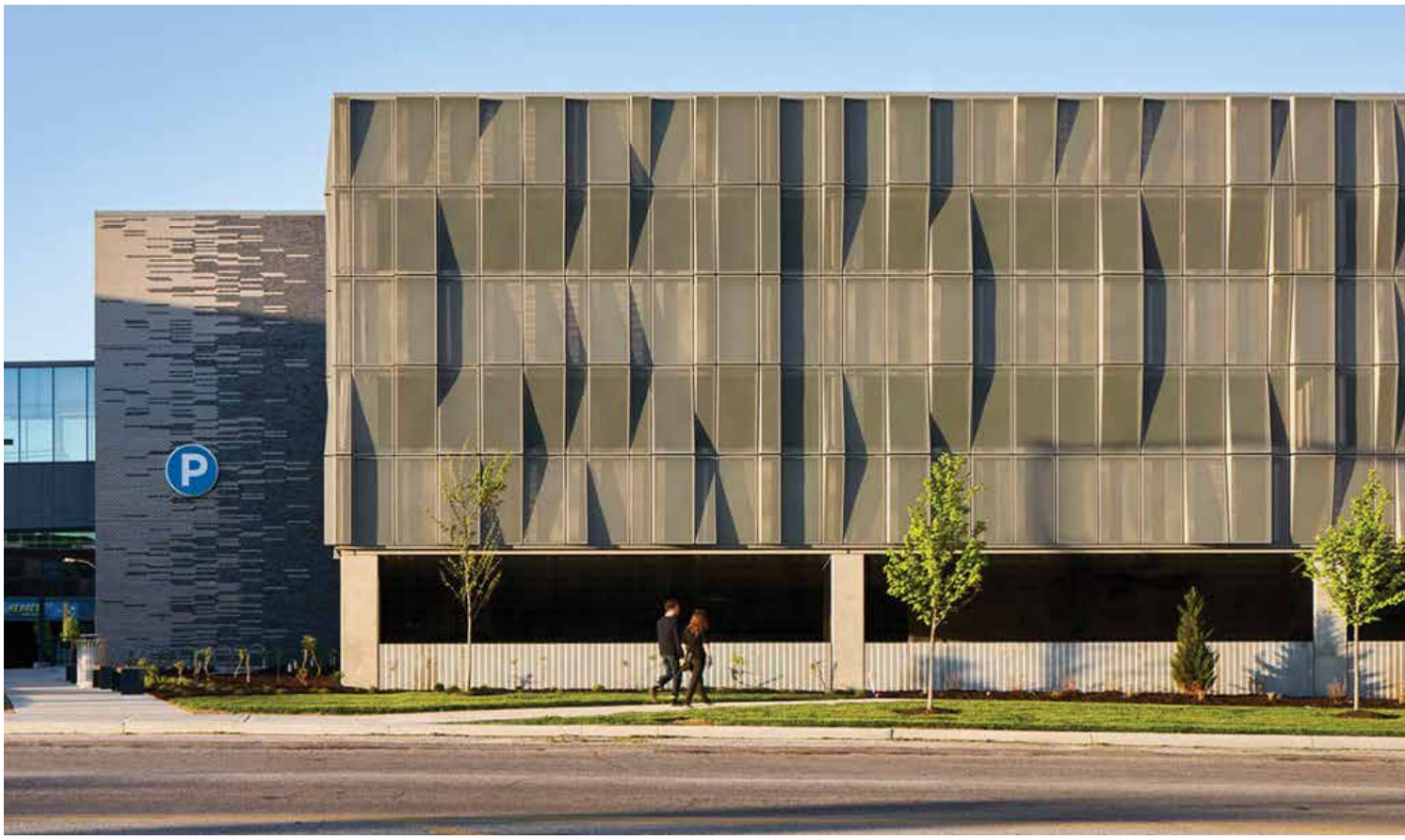
Cannon Design / Riverside, CA / All-Across Perforation

AMICO
ARCHITECTURAL METALS



TRUMAN MEDICAL CENTER

Cannon Design / Kansas City, MO / All-Across Perforation



XCEL ENCLOSURE

Alliance Architects / Minneapolis, MN / Bellesa Expanded Mesh

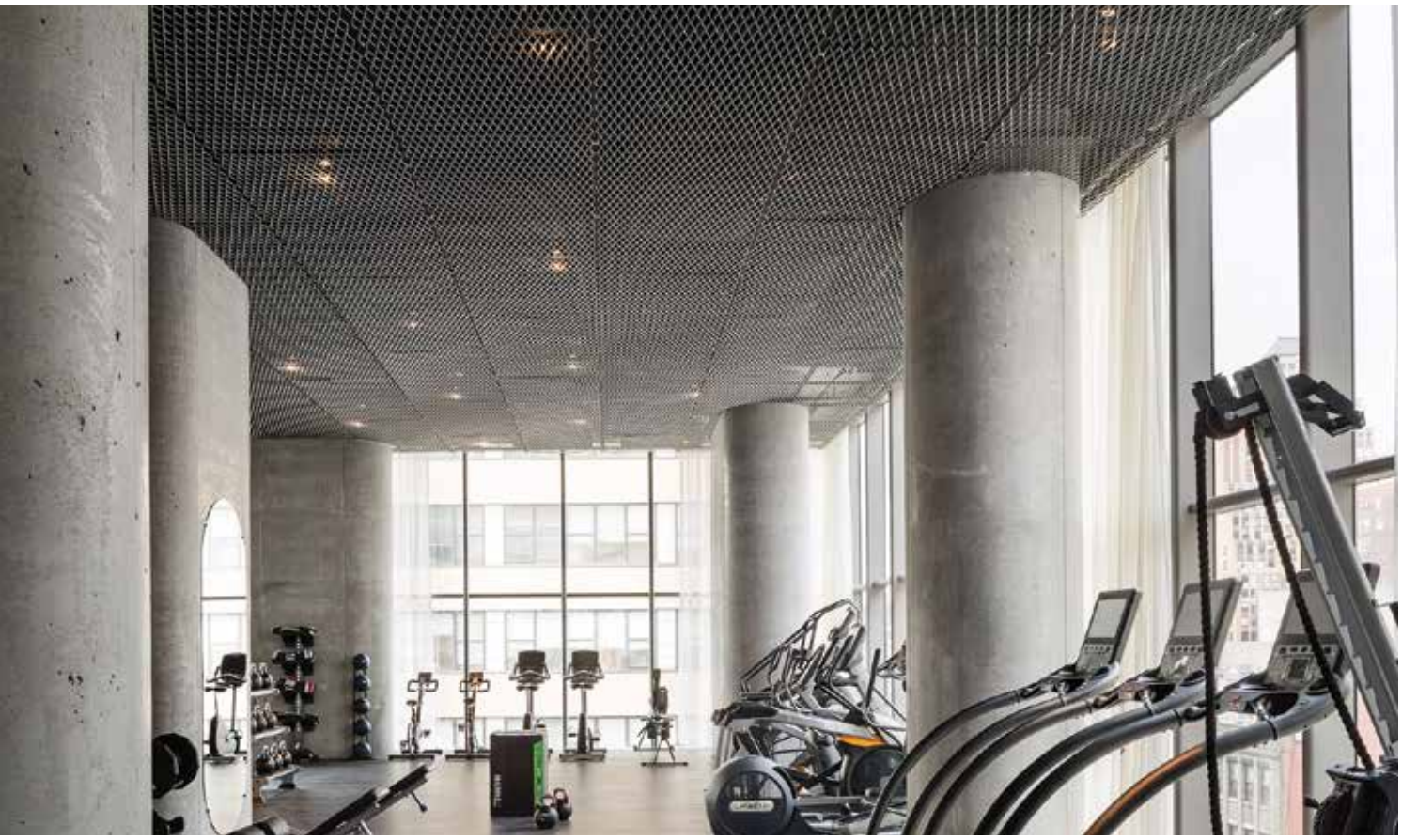
AMICO ARCHITECTURAL METALS

PUMA RETAIL STORE

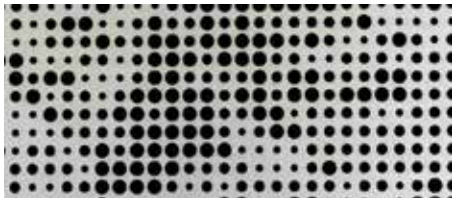
Colkitt Architecture / Various Locations / APEX04 Expanded Mesh

56 LEONARD

Herzog & de Meuron / New York, NY / APEX03 Expanded Mesh



AMICO ARCHITECTURAL METALS



TORONTO PUBLIC LIBRARY

KPMB / Toronto, ON / Custom Perforation

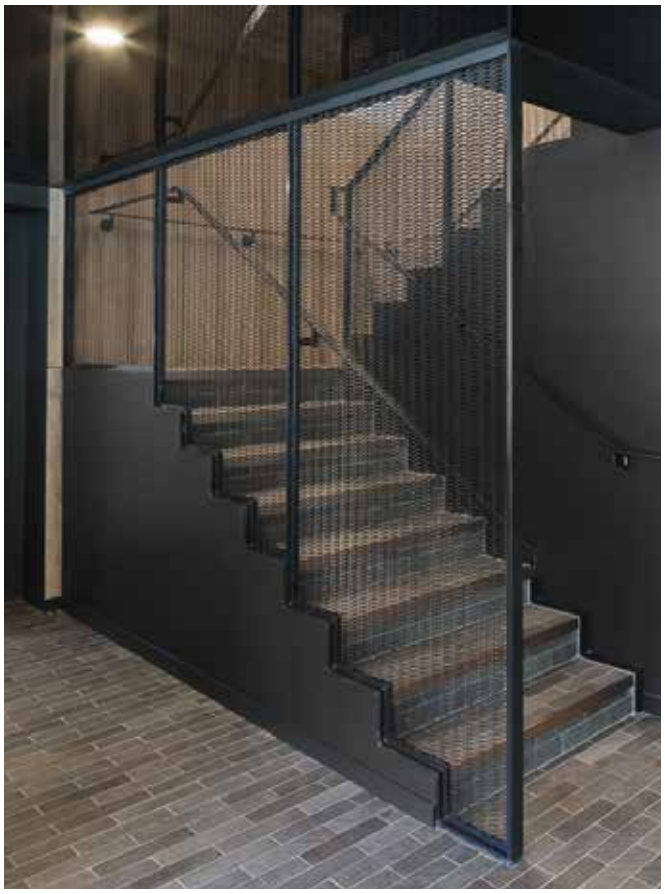
AIR BNB OFFICES

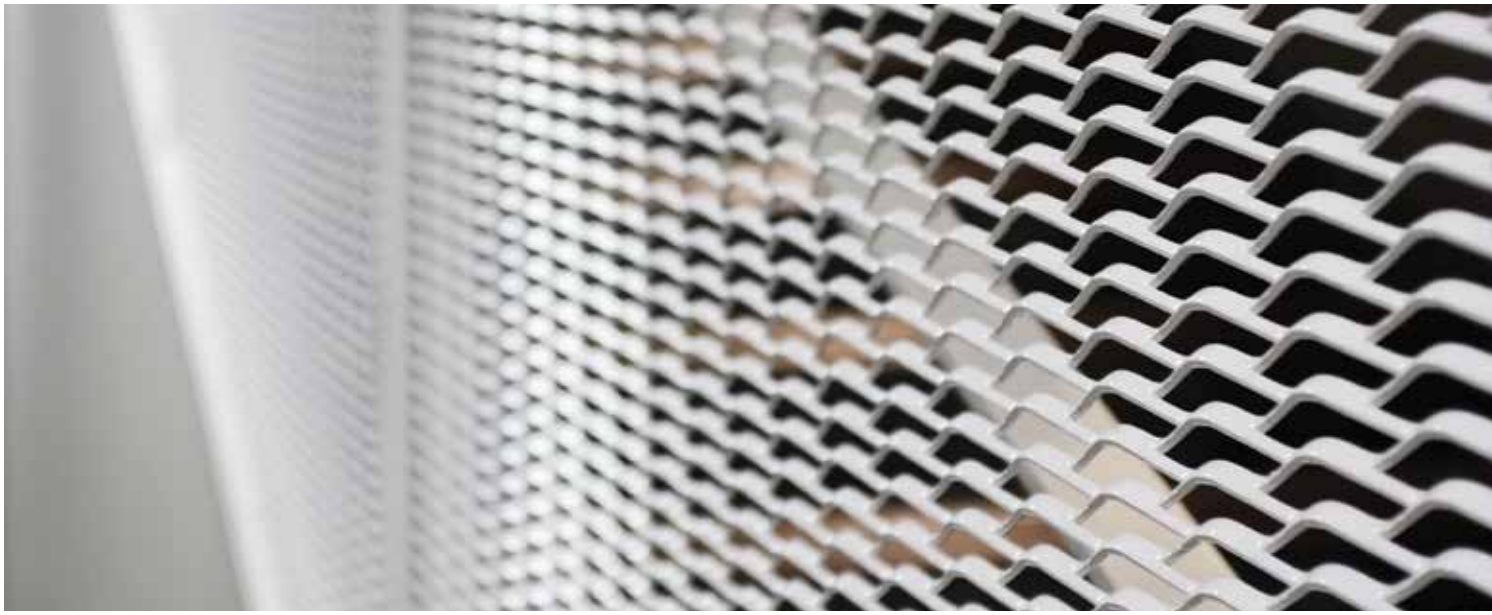
WRNS / San Francisco, CA / 3/4" 9F Flattened Expanded Mesh

AMICO
ARCHITECTURAL METALS

CAIN LAMARRE OFFICE

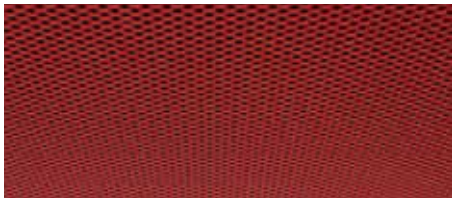
STGM / Sherbrooke, QC / Gracia Expanded Mesh



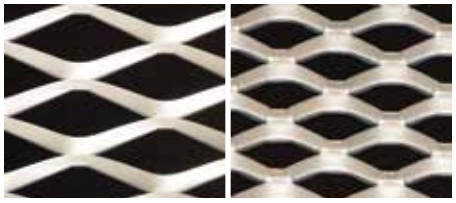


TROIS-RIVIÈRES

Atelier Paul Laurendeau / Trois-Rivières, QC / Perforated



AMICO
ARCHITECTURAL METALS



DISTRICT UNION PAVILION

ACDF / Terrebonne, QC / APEX01 & Bellesa Expanded Mesh

CITY OF HOPE PAVILION

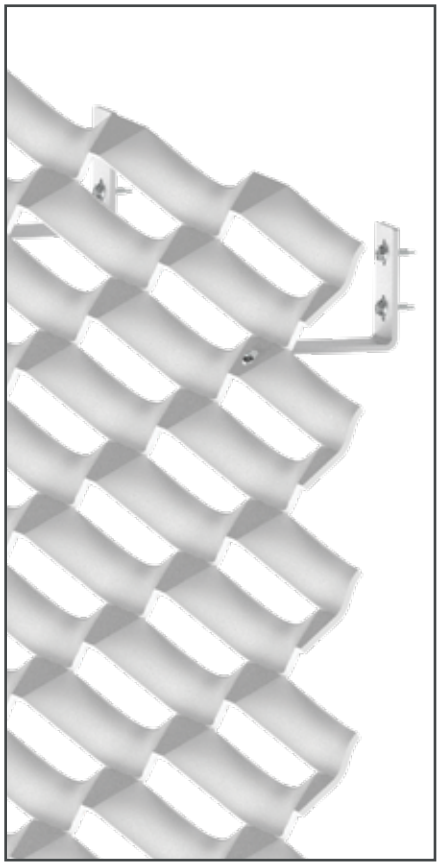
Gensler / Irwindale, CA / APEX03

AMICO
ARCHITECTURAL METALS

DYNAMO STADIUM

Populous / Houston, TX / APEX01

WALL ATTACHMENT METHODS



Continuum

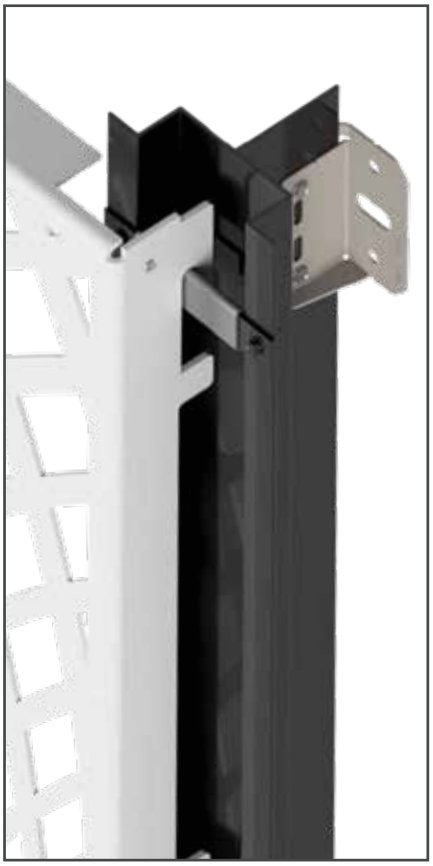
Compatible Materials:
Interior or exterior expanded mesh panels

This attachment approach is for installations of the expanded mesh where the attachment brackets must be as discrete as possible and have a nearly seamless appearance from panel to panel.

Rapid Rail

Compatible Materials:
Exterior flat perforated & and laser cut panels

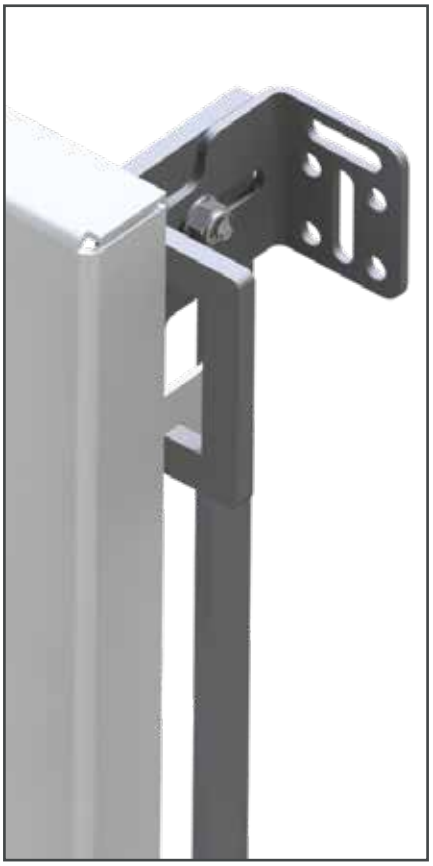
This attachment solution is excellent for providing a flat and level vertical and/or horizontal attachment surface to a façade with minimum wall penetrations.



Quick-Cleat

Compatible Materials:
Exterior framed expanded mesh, cassette-style perforated, & laser-cut panel

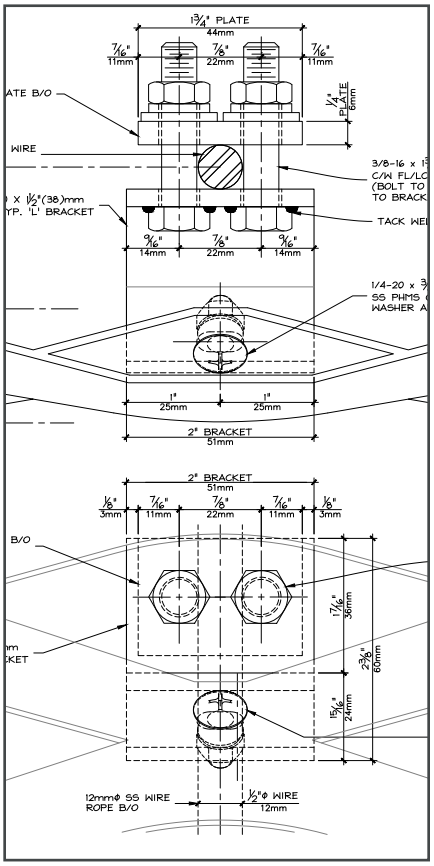
This attachment approach allows for a vertical rail system with quick hanging process.



Panel-Flow

Compatible Materials:
Interior framed expanded mesh and cassette-style perforated & laser-cut panel

This attachment approach is a quick and simple means of interior installation that produces a plumb install even on uneven walls and allows for LED back lit illumination.



Custom Attachment Solutions

Do you have a unique design situation or constraint? AMICO can work with you to develop a custom attachment method for your project. Reach out to start conversations.

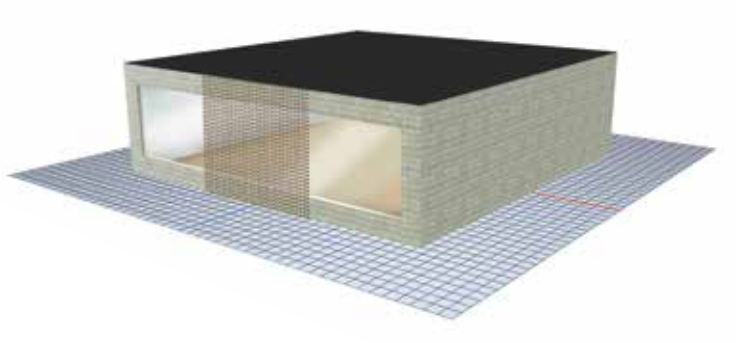
EXPANDED MESH SUNSHADES AND THEIR CARBON AND ENERGY SAVING BENEFITS

A long-standing practice of architects is to utilize expanded mesh or perforated metal as a sunshade element to reduce glare, improve the quality of experience inside a building, and of course, to reduce heat gain.

How effective are these sunshade elements at reducing heat gain?

To answer this, AMICO retained RWDI an international climate engineering and environmental consulting firm specialized in understanding how the built and natural environments interact to perform an independent study using digital simulations to quantify heat gain change for a sunshade mounted parallel to a glass façade. The results shows AMICO's expanded mesh was effective at creating notable heat gain reduction leading to energy and carbon reduction.

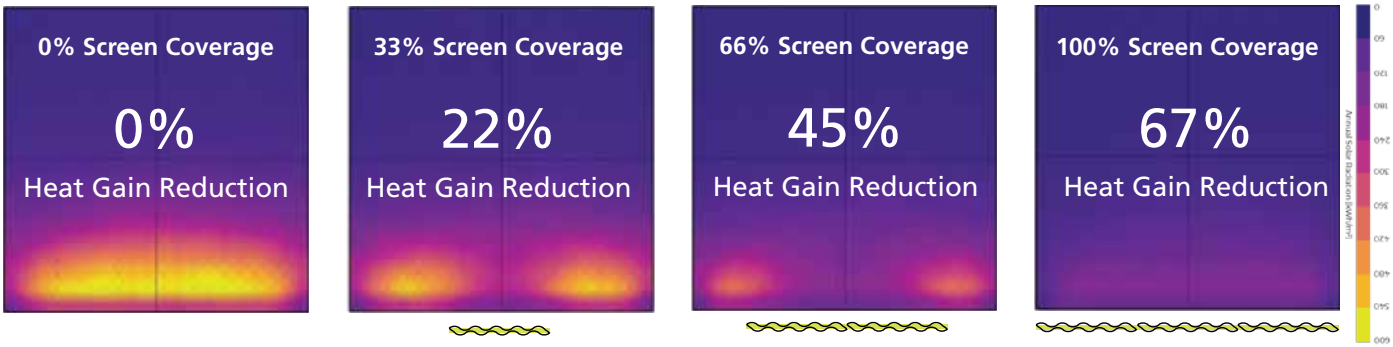
The simulation was run using ClimateStudio software using the industry standard Radiance rendering program and involved the calculation of a Bidirectional Scattering Distribution Function (BSDF) which allows the transmission and reflection characteristics of arbitrarily complex geometries to be defined mathematically. The simulation was then arranged to measure heat gains at each point in the room on an hourly basis over the entire course of a typical Los Angeles meteorological year.



RIGHT-TOP: Example of APEX03 installation with 66% coverage across 9,000 sq ft of curtain wall

RIGHT-BOTTOM: Visualization of simulated digital structure with south-facing window and APEX01 Expanded mesh panels covering 1/3 of the window

Study Results



The floor plan heat maps above show heat-gain changes with different mesh coverage. The study predicted meaningful heat gain reduction using expanded mesh as a sunshade when placed within 5' of the window.

Application of Results

Using these results, an installation like the one pictured at left with 9,000 square feet of south-facing glass facade and 66% covered with APEX03 expanded mesh would yield the following benefits in a Southern California environment:

23.82 kWh

of HVAC electricity demand eliminated per sq. ft. of mesh coverage per year.

2.3M lbs

of coal eliminated due to the electricity saved over the 20-year life of the facade.

1.5M lbs

of CO_2 eliminated due to the elimination of coal needed to produce the electricity.

$767,255

saved in electrical costs to the owner over 20 years assuming constant California average rate.

Other Sunshade Benefits

Access to Windows

For plans where municipalities or project specs are capping energy usage and driving design decisions, expanded mesh sunshades can be a solution for deploying more windows in your design while minimizing heat gain that would otherwise drive down the window count.

Lighting Design

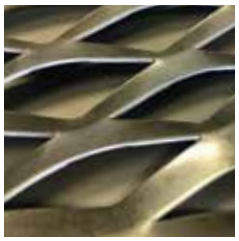
Expanded mesh sunscreens can open the design possibilities of including large expansive south-facing windows that deliver consistent, ample natural light into the facility, further driving down electrical lighting loads while still balancing and controlling heat gain and energy consumption.

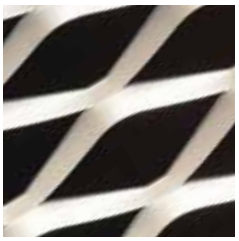
Occupant Satisfaction

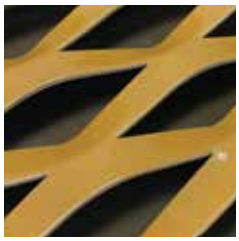
Maximizing equitable access to daylight for all users of a facility is essential. Expanded mesh can be a daylight control tool that still allows natural light deep into a space. Studies suggest that daylight directly impacts the well-being, productivity, and overall sense of satisfaction of users.

Scan the QR code to read the unabridged study.

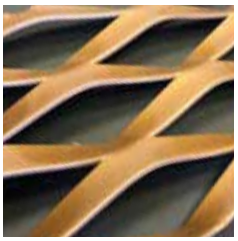
MATERIALS


Mild Steel


Aluminum


Brass

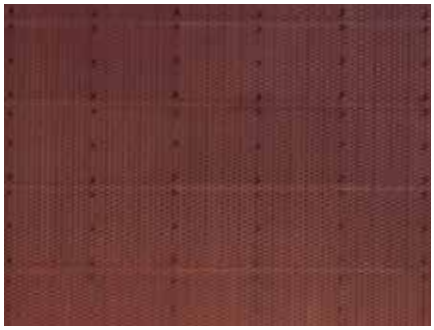

Weathering Steel


Copper

A large majority of AMICO's projects are completed using aluminum because it is light weight, corrosion resistant, and has a wide range of finish options. However, expanded mesh and perforated metal can be manufactured using zinc, brass, copper, steel, bronze and many other materials.

FINISH OPTIONS

Fluoropolymer Paint



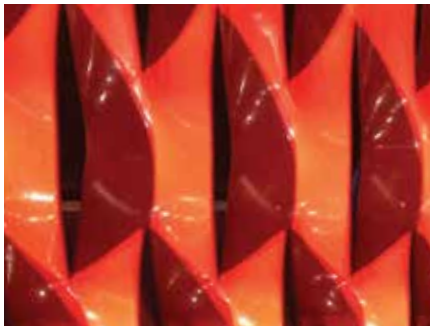
PROS

- Broad color pallet
- Mica and metallic options
- Easy color matching

CONS

- Thin application
- Longer warranty will require 3-4 coat products and thus cost more

Powder Coating



PROS

- Durable, thick covering
- No VOC
- Hides imperfections in metal

CONS

- Bright colors tend to be less color stable
- Limited color pallet

Natural Finishes

PROS

- No added finish
- No fading or damage problems
- Rich natural finishes

CONS

- Higher initial material cost
- Less control of aesthetic details
- Changes over time

AMICO ARCHITECTURAL METALS

BUILD AMERICA BUY AMERICA (BABA) AND MADE IN CANADA

AMICO's extensive manufacturing presence in the US and Canada allows us to produce BABA-compliant products and, for Canadian projects, utilize Made in Canada materials from our facilities in Ontario and Quebec. As you work with AMCIO, mention your sourcing requirements so we can plan our supply chain accordingly and provide you with the necessary certification letters.

BUILD AMERICA
BUY AMERICA
COMPLIANT
Infrastructure Investment and Jobs Act

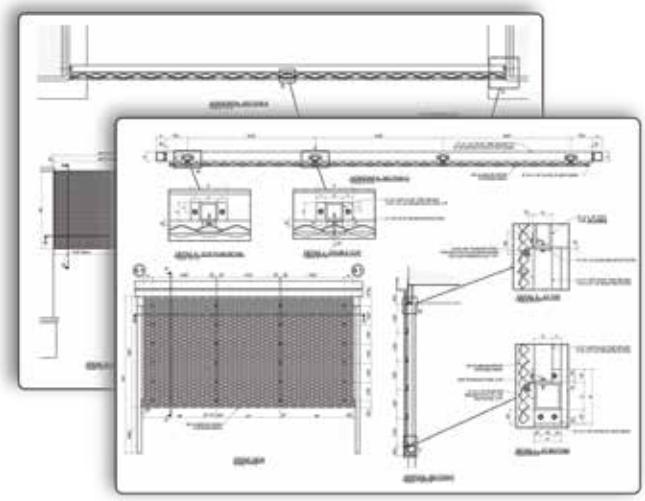
+

MADE IN CANADA

DETAILING, FABRICATION, AND CONSULTING

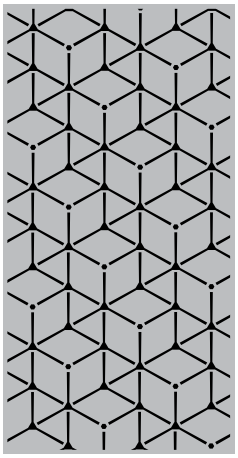
AMICO is a full-service manufacturer. In addition to the material production, we engineer, detail, fabricate, and finish the product along with an attachment system so your product is ready to install on the job site.

During your design process, at any time, feel free to book a call with us to discuss what you are working on (even if all you have is a napkin sketch), and we can chat about design considerations and best practices for an efficient project.

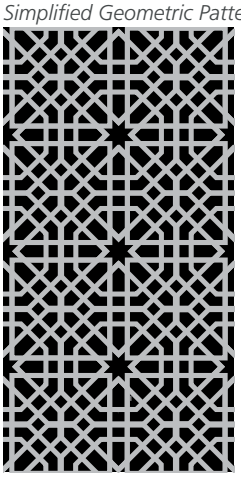


LASER CUT PANELS

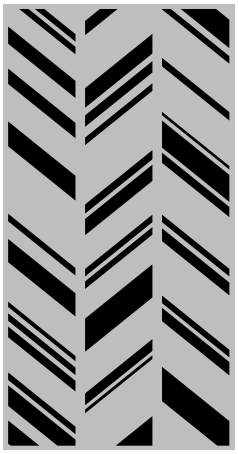
The laser-cutting process provides a broad range of design and aesthetic possibilities; each cut can be customized. You can begin your project by creating your own design, using a pre-existing pattern from AMICO's library, or collaborating with AMICO to develop a pattern that meets your requirements.



Simplified Geometric Pattern



Moorish Collection

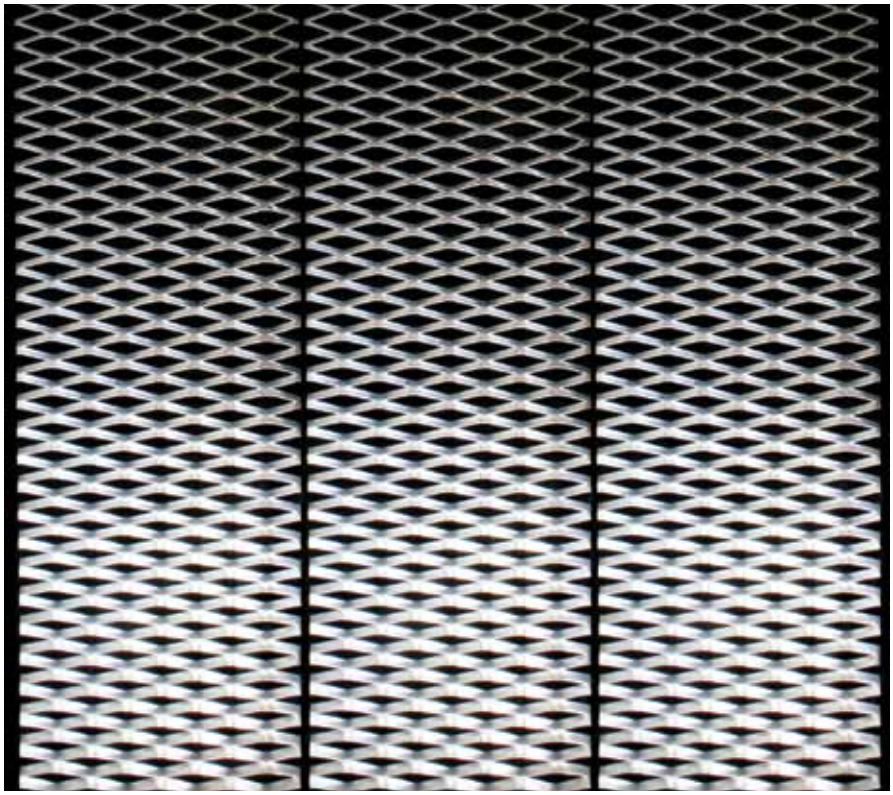


Shuffled Collection

AMICO ARCHITECTURAL METALS

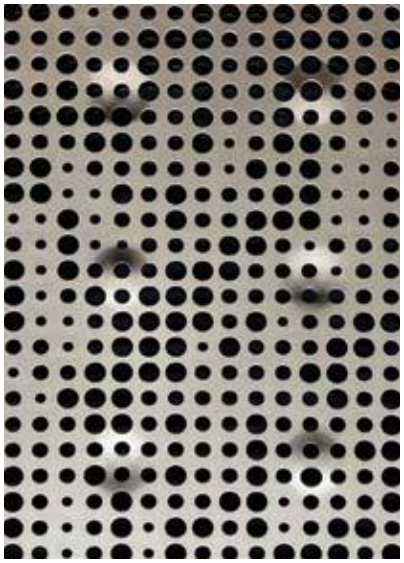
GRADIENT EXPANDED MESH

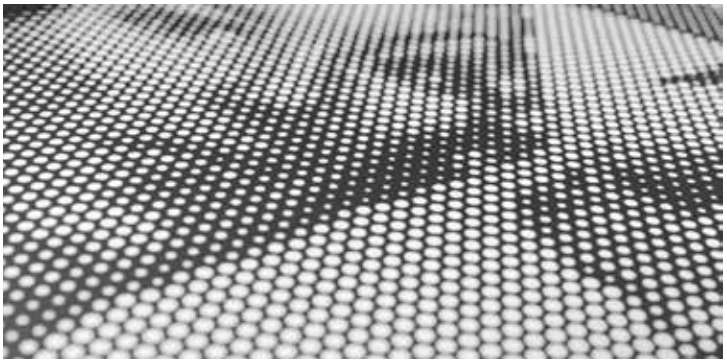
Create a custom expanded mesh by varying the strand width of your architectural expanded metal. This is achieved in production by pushing more or less material through the press between strokes and can result in a one of a kind surface.



PICTURE PERFECT™ - CUSTOM PERFORATION

AMICO's proprietary Picture PERFect™ process allows you to turn your images and custom textures into unique perforated hole patterns with a range of hole sizes and customized placement options. This brings the opportunity to deliver cost effective design features that will be absolutely unique to your project.





AMICO
ARCHITECTURAL METALS

ALL-ACROSS PERFORATION

All-across perforation patterns produce one hole type and repeat it across an entire panel. This is an efficient way to produce perforated surfaces. Customize the panel by defining hole size, spacing, shape, and edge border size to create the perfect panel transparency level.

Variables to designing an all across perforation pattern:

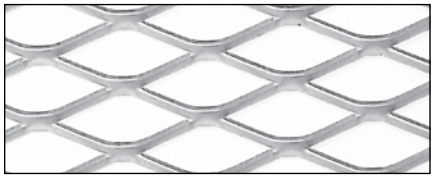
- Hole shape (circle, slot, square, hexagon, rectangle)
- Hole size
- Hole spacing
- Hole alignment (45 degree stagger, 60 degree stagger, or straight)
- Boarder width
- Flat panel or folded panel
- Folded panel depth

Design and visualize your all-across perforated panel with our new on-line configuration tool.

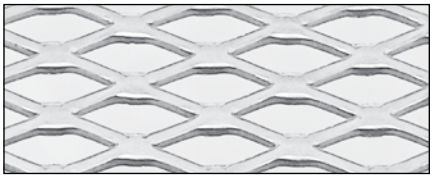
https://tinyurl.com/2j4k8wxy

STANDARD EXPANDED MESH

Standard expanded mesh styles are typically meshes with thin strands. These types of meshes are great for ceilings, railing infills and have even been used on facades. These meshes come in flattened variations or raised where the knuckle of the mesh is turned out slightly.



1/2" #16 Raised Expanded Mesh

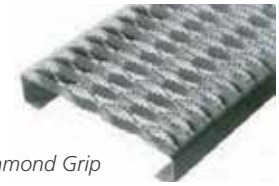


1/2" #16 Flattened Expanded Mesh

AMICO
ARCHITECTURAL METALS

PLANK GRATING

Plank grating is a punched metal surface that is formed on its long sides, creating a board-like form that has been used on some very innovative projects. These planks can be direct mounted or offset from a facade. In the case of the iconic Polygon Gallery, the plank grating was mounted in front of a stainless steel underlay that gave the facade a shimmering effect.



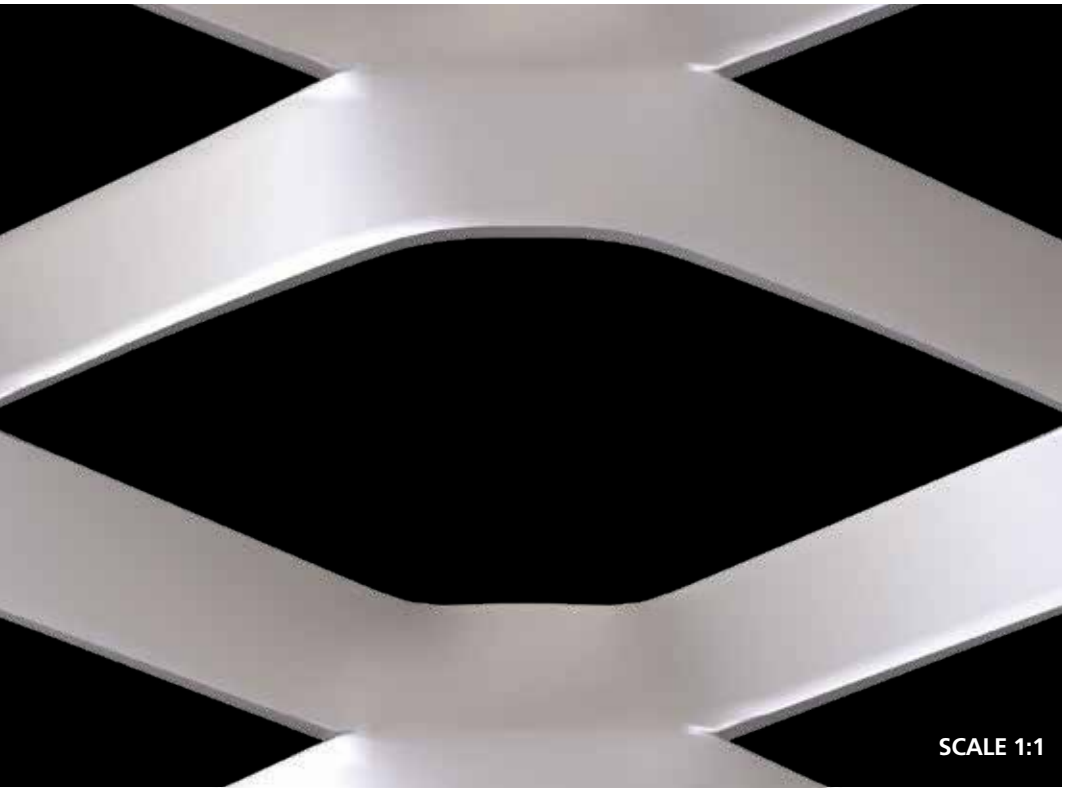
Diamond Grip

Safety-Grip

Polygon Gallery

Institut de Tourisme et d'Hôtellerie

ARCHITECTURAL EXPANDED MESH STYLES



APEX01

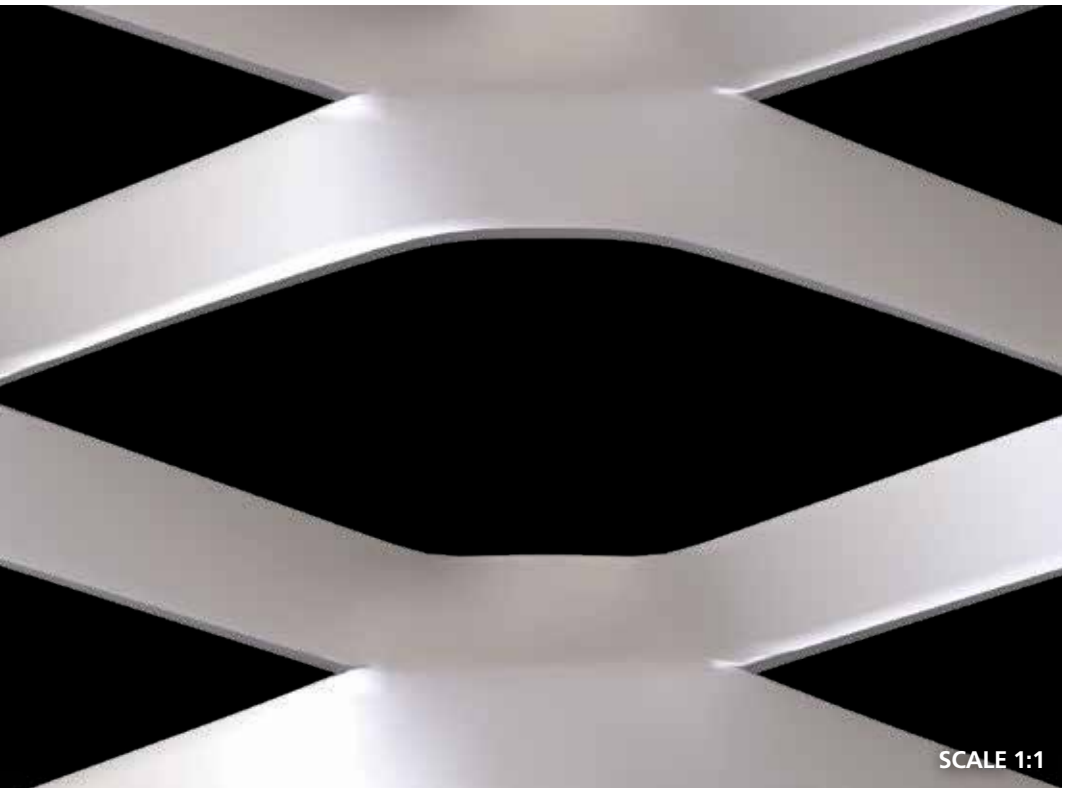
Short Way Diamond
3.5”

Long Way Diamond
8.0”

Visual % Open Area
46%

Mechanical % Open Area
73%

Max Landscape Panel Size
59.5” SWD x 120” LWD



APEX02

Short Way Diamond
3.05”

Long Way Diamond
8.0”

Visual % Open Area
40%

Mechanical % Open Area
72%

Max Portrait Panel Size
143.38” SWD x 48” LWD

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APEX03

Short Way Diamond
2.5″

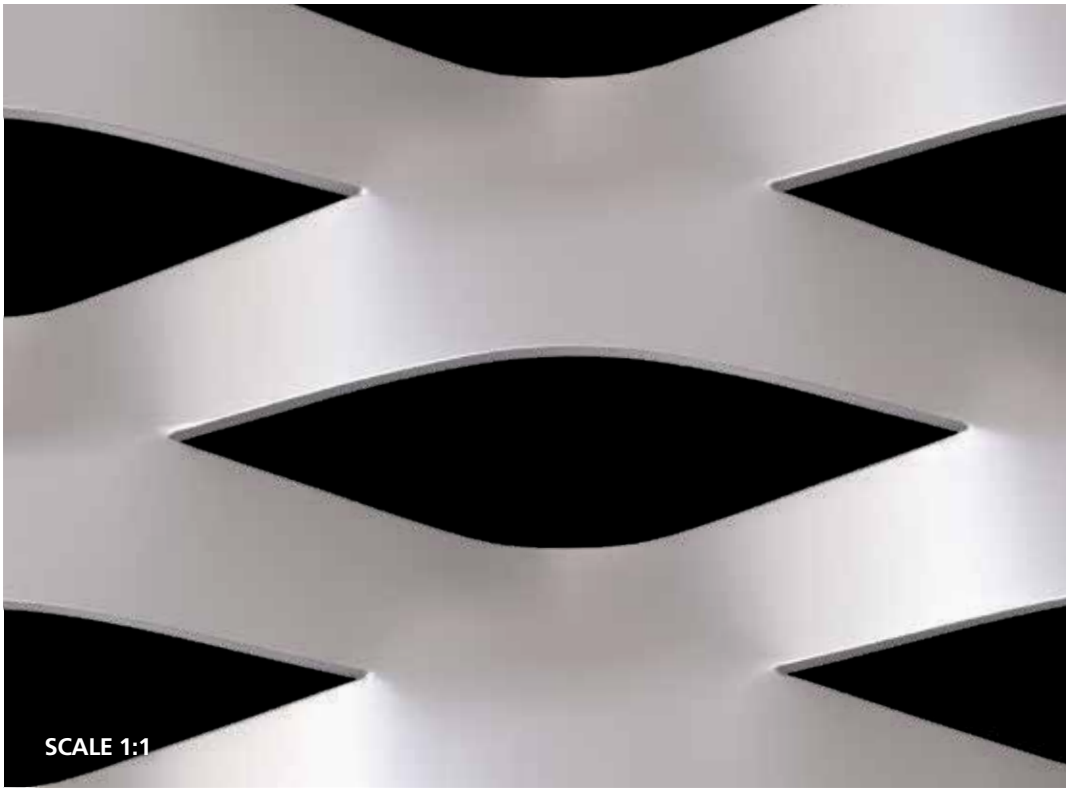
Long Way Diamond
6.0″

Visual % Open Area
26%

Mechanical % Open Area
62%

Max Landscape Panel Size
60″ SWD x 132″ LWD

Max Portrait Panel Size
145″ SWD x 48″ LWD



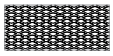
APEX04

Short Way Diamond
1.5″

Long Way Diamond
4″

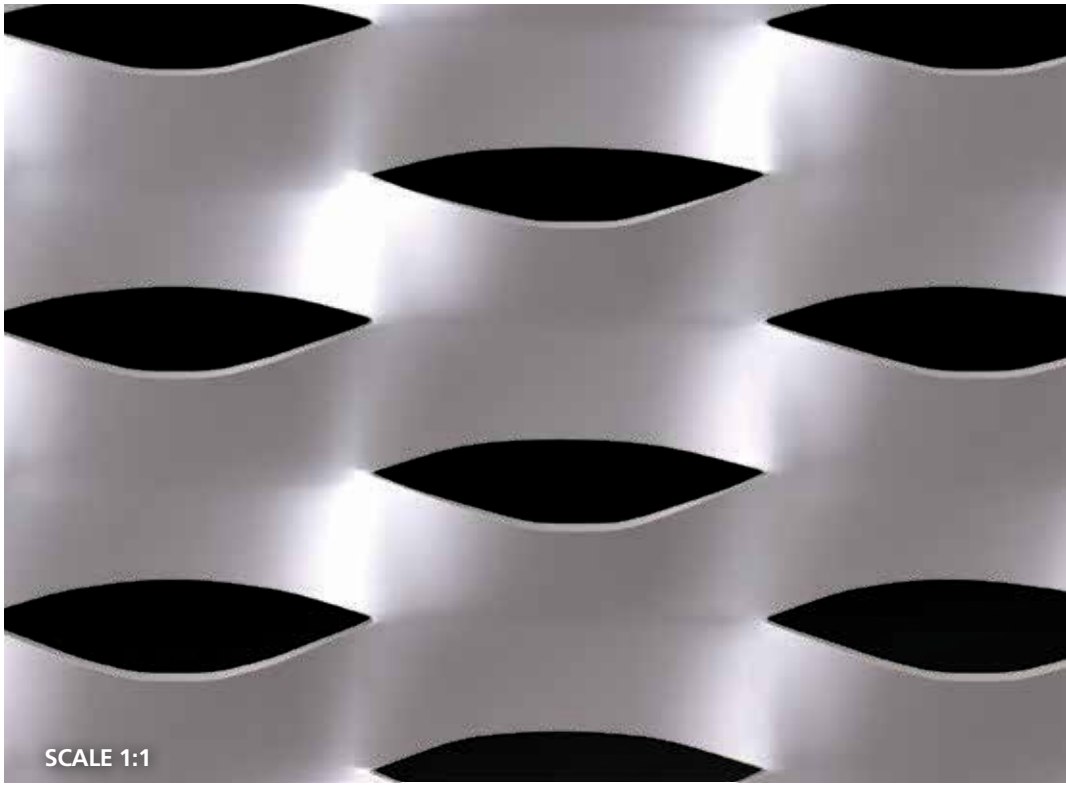
Visual % Open Area
18%

Mechanical % Open Area
37%

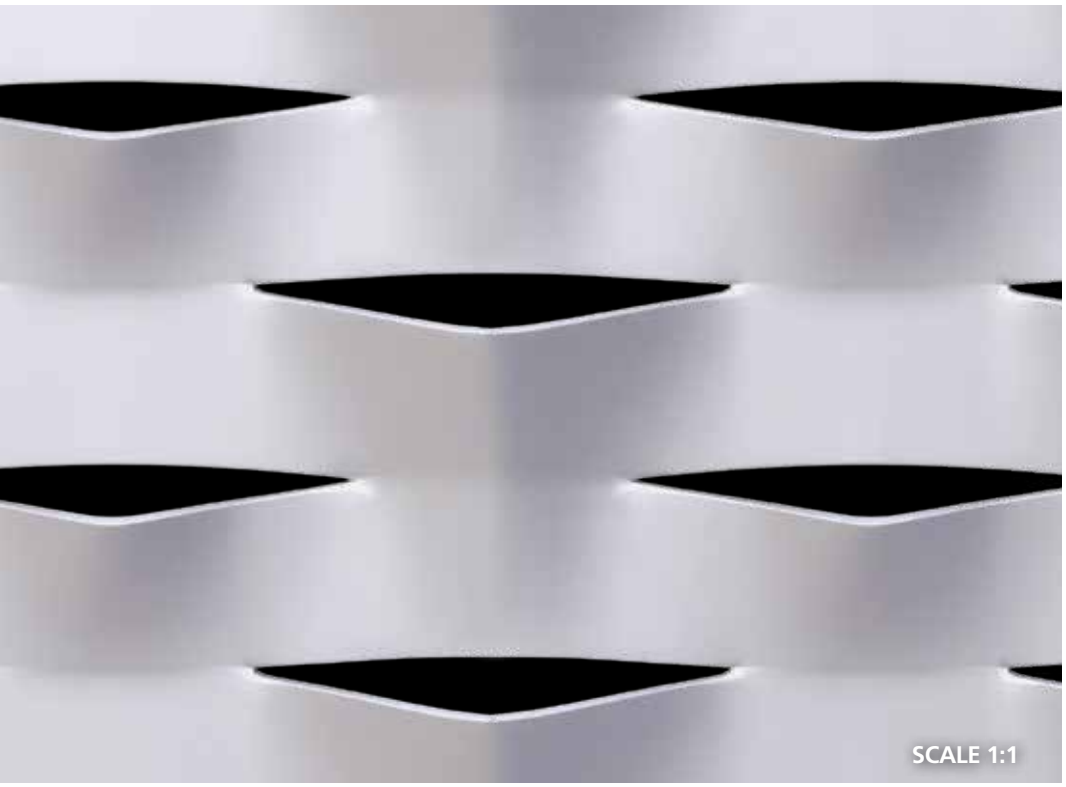


Max Landscape Panel Size
60″ SWD x 120″ LWD

Max Portrait Panel Size
120″ SWD x 60″ LWD



ARCHITECTURAL EXPANDED MESH STYLES



APEX05

Short Way Diamond
2.01

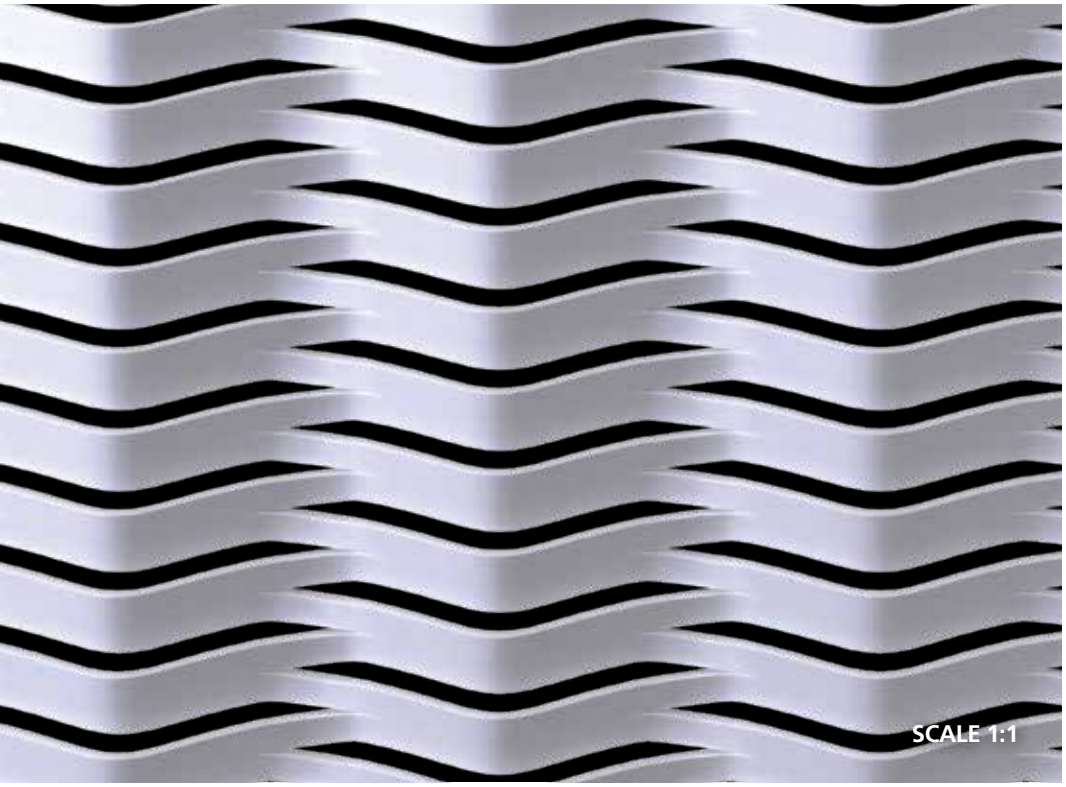
Long Way Diamond
4.0”

Visual % Open Area
10%

Mechanical % Open Area
22%

Max Landscape Panel Size
58.29” SWD x 120” LWD

Max Portrait Panel Size
138.69” SWD x 48” LWD



Da Moda

Short Way Diamond
0.38”

Long Way Diamond
4.0”

Visual % Open Area
25%

Mechanical % Open Area
31%

Max Portrait Panel Size
120” SWD x 48” LWD

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Bellesa

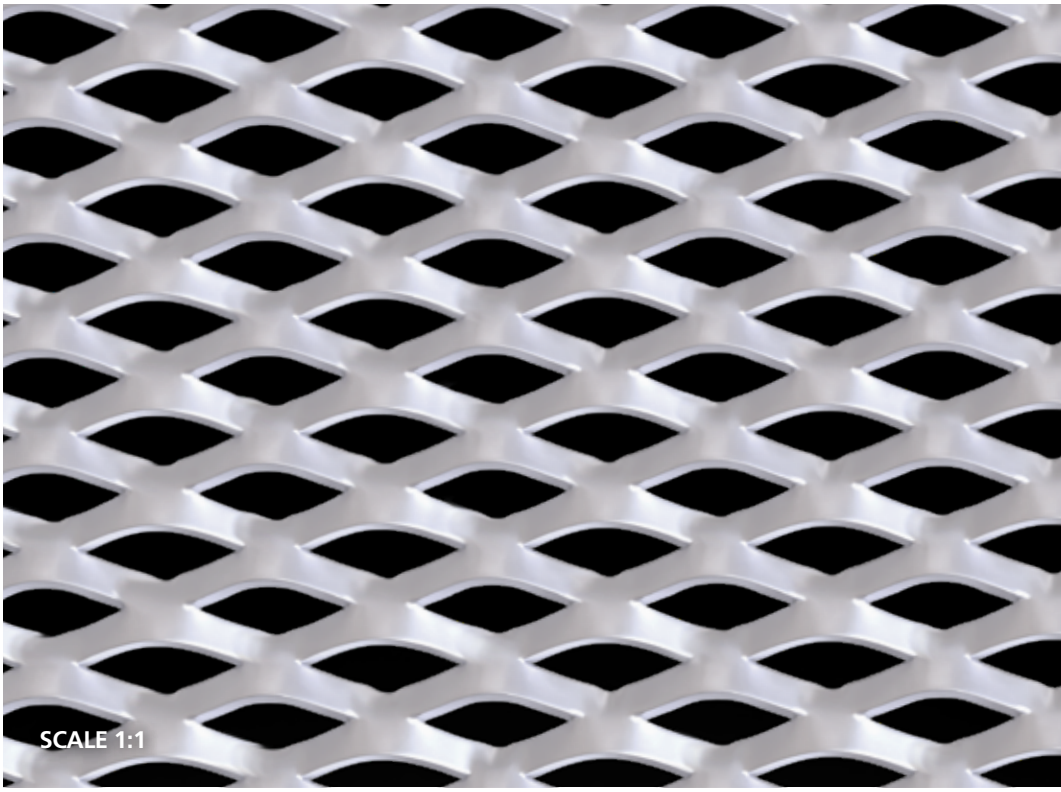
Short Way Diamond
0.63″

Long Way Diamond
1.2″

Visual % Open Area
36%

Mechanical % Open Area
59%

Max Portrait Panel Size
120″ SWD x 48″ LWD



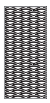
Luxos

Short Way Diamond
0.4″

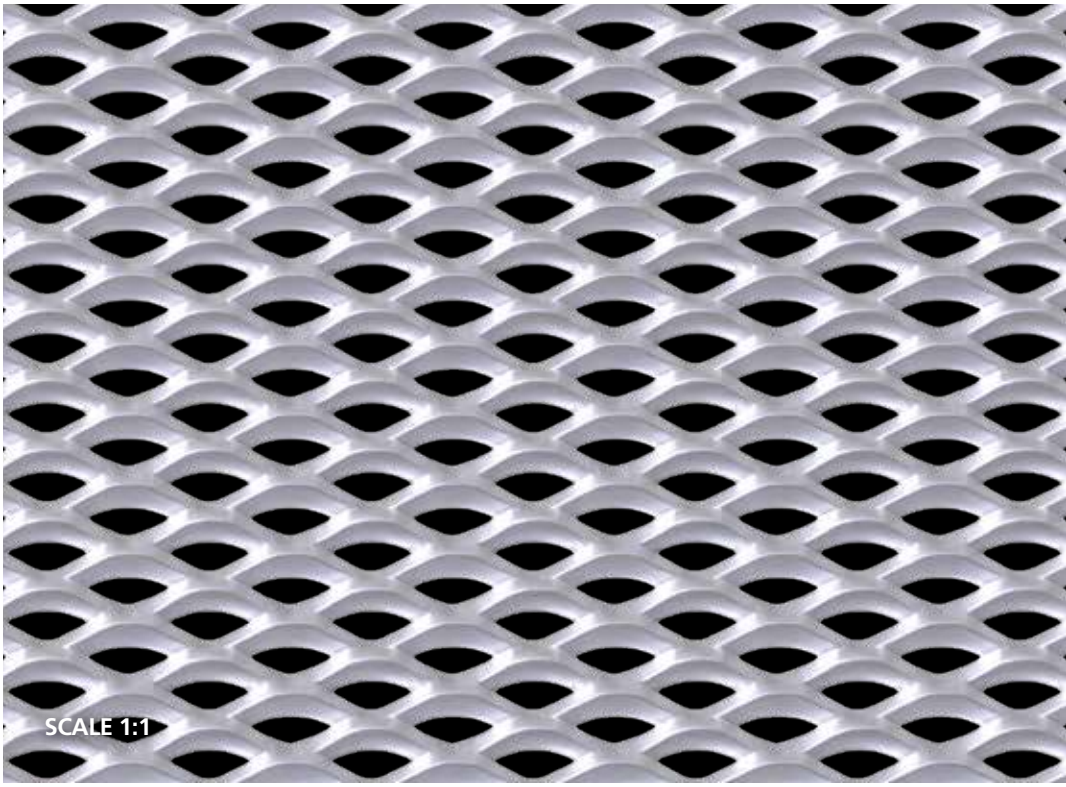
Long Way Diamond
0.64″

Visual % Open Area
23%

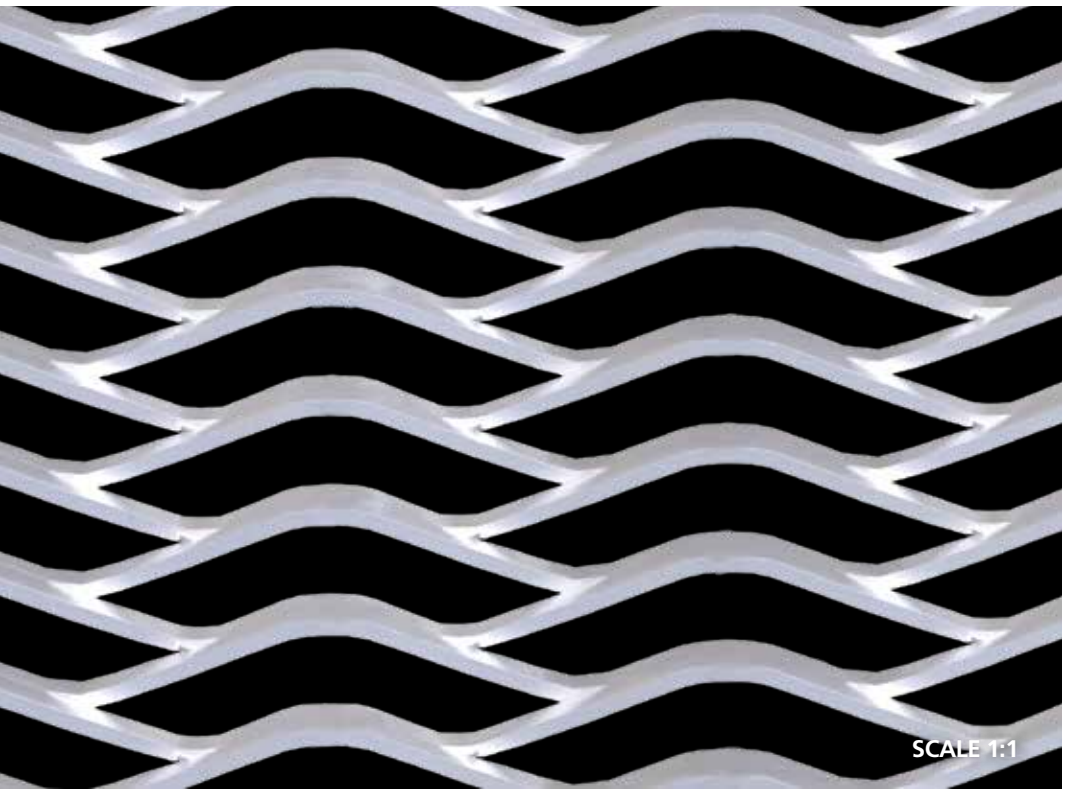
Mechanical % Open Area
31%



Max Portrait Panel Size
120″ SWD x 48″ LWD



ARCHITECTURAL EXPANDED MESH STYLES



Gracia

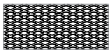
Short Way Diamond
0.59″

Long Way Diamond
4″

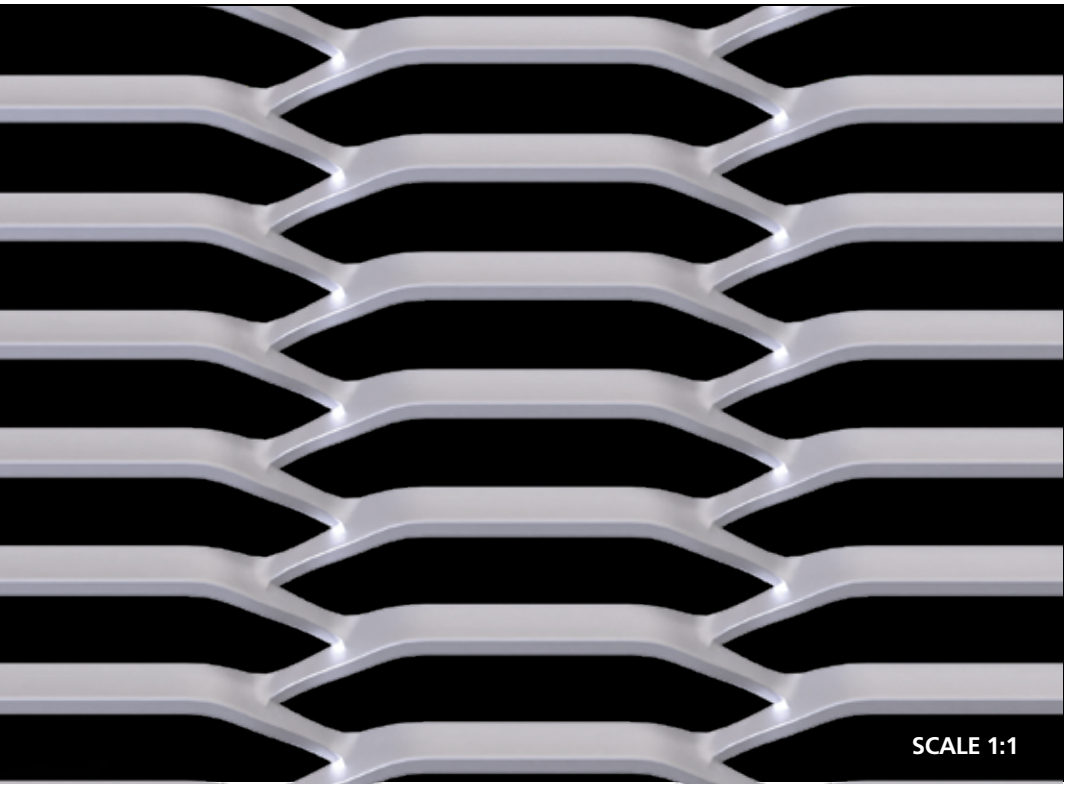
Visual % Open Area
52%

Mechanical % Open Area
73%

Max Landscape Panel Size
59.63″ SWD x 120″ LWD



Max Portrait Panel Size
120″ SWD x 48″ LWD



Cativar

Short Way Diamond
0.51″

Long Way Diamond
5.33″

Visual % Open Area
55%

Mechanical % Open Area
74%

Max Portrait Panel Size
120″ SWD x 48″ LWD

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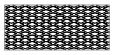
Hinter

Short Way Diamond
2.18″

Long Way Diamond
4″

Visual % Open Area
8%

Mechanical % Open Area
9%



Max Landscape Panel Size
58.725″ SWD x 120″ LWD

Max Portrait Panel Size
139.52″ SWD x 48″ LWD

Siro

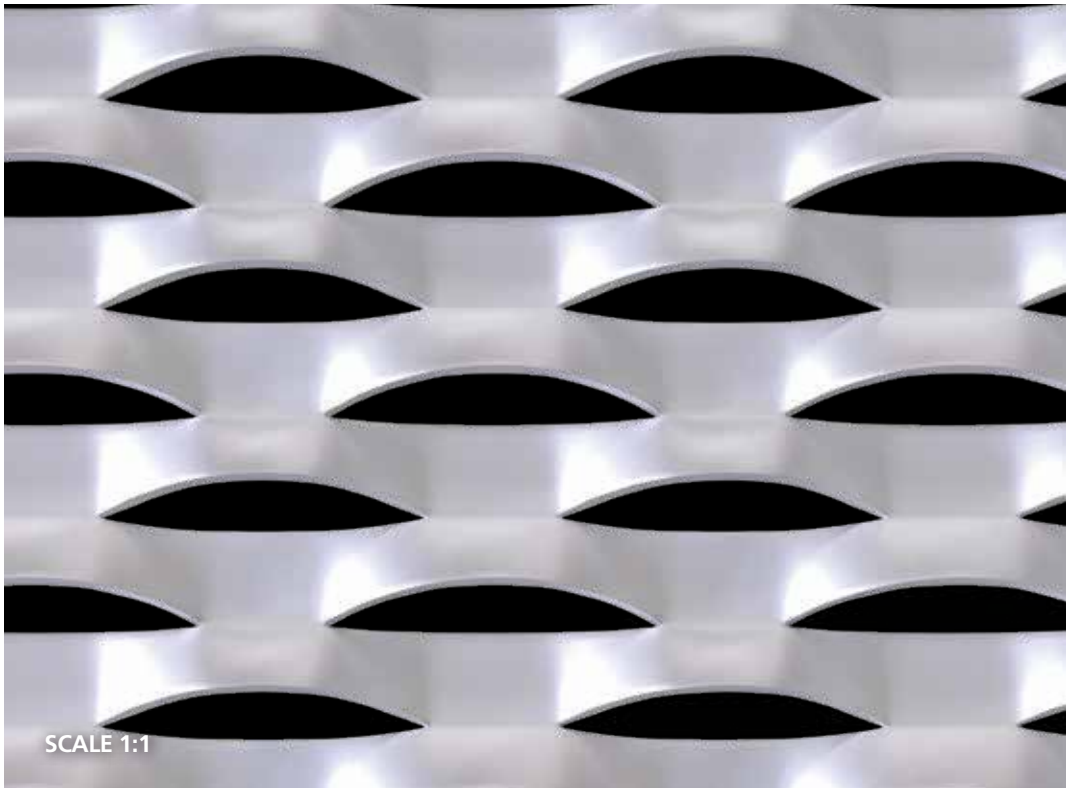
Short Way Diamond
1.38″

Long Way Diamond
3″

Visual % Open Area
25%

Mechanical % Open Area
45%

Max Portrait Panel Size
96.63″ SWD x 48″ LWD



ARCHITECTURAL EXPANDED MESH STYLES

Modig

Short Way Diamond
2.13”

Long Way Diamond
8”

Visual % Open Area
6%

Mechanical % Open Area
28%

Max Portrait Panel Size
138.45” SWD x 48” LWD

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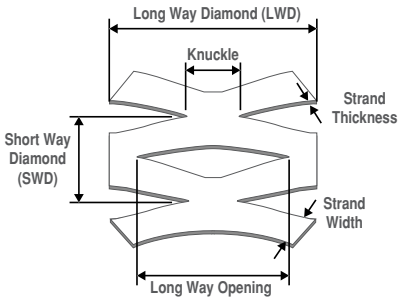
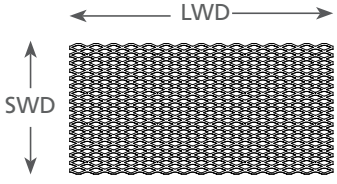
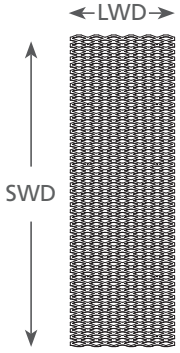
ARCHITECTURAL EXPANDED MESH SPECS

Mesh Name	Available Aluminum Alloy	Max Portrait, SWDx LWD	Max Landscape, SWD x LWD	Visual Open %	Mech. Open Area %	Weight, lbs/sf	(SWD) Short Way Diamond, Inches	(LWD) Long Way Diamond, Inches	Strand Width, Inches	Standard Strand Thickness, Inches
APEX01	5005		59.5" x120"	46%	73%	0.98 lbs/sf	3.50″	8.00″	0.93″	0.125″
APEX02	5005	143.38" x 48"		40%	72%	1.09 lbs/sf	3.05″	8.00″	0.93″	0.125″
APEX03	3003, 5005	145"x 48"	60" x 132"	26%	62%	1.34 lbs/sf	2.50″	6.00″	0.93″	0.125″
APEX04	3003, 5005	120"x 60"	60" x 120"	18%	37%	1.48 lbs/sf	1.50″	4.00″	0.62″	0.125″
APEX05	5005	138.69" x 48"	58.29" x 120"	10%	22%	1.59 lbs/sf	2.01″	4.00″	0.93″	0.125″
Bellesa	3003, 5005	120" x 48"		36%	59%	0.74 lbs/sf	0.63″	1.20″	0.21″	0.081″
Luxos	3003, 5005	120" x 48"		23%	31%	0.9 lbs/sf	0.40″	0.64″	0.10″	0.081″
Gracia	3003, 5005	120" x 48"	59.63" x 120"	52%	73%	0.85 lbs/sf	0.59″	4.00″	0.14″	0.125″
De Moda	3003, 5005	120" x 48"		25%	31%	1.34 lbs/sf	0.38″	4.00″	0.14″	0.125″
Cativar	3003, 5005	120" x 48"		55%	74%	0.81 lbs/sf	0.52″	5.33″	0.12″	0.125″
Hinter	5005	139.52" x 48"	58.73" x 120"	8%	9%	1.58 lbs/sf	2.18″	4.00″	0.50″	0.125″
Siro	3003, 5005	96.63" x 48"		25%	45%	1.69 lbs/sf	1.38″	3.00″	0.63″	0.125″
Modig	5005	138.45" x 48"		6%	28%	1.6 lbs/sf	2.13″	8.00″	1.00″	0.125″





Landscape Panel



Portrait Panel

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