

2023

ARCHITECTURAL EXPANDED METAL PANELS

Functional, Magnificent and Long Lasting



PRODUCTS
BROCHURE

Brief Introduction

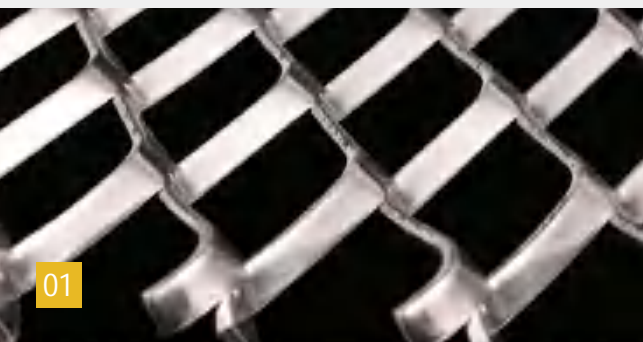
Decorative expanded metal, such as an amazing metal mesh type, is made of a self-contained metal sheet through punching and subsequent stretching process. Thanks to its outstanding appearance, functionality and intrinsic properties, expanded metal panel appears frequently in shopping malls, headquarters, hotels, train stations, hospitals, upscale offices and other establishments, etc. Specific projects involve building facades, internal walls, ceilings, space partitions, balustrades & railings, sunshades and many other uses.

Why Architects Love Expanded Metal ?

- Lightweight and high bearing capacity.
- Tonal harmony with the building design.
- Ventilative, magnificent and long lasting.
- Non-raveling mesh with uniform diamond shaped openings.
- No wasteful of material and recyclable.
- Complete textures, finishes and innovative colors.

As a technical manufacturer, we can provide our customers with a wide range of materials, opening patterns and colors of expanded metal products. This allows the architect to express their own style infinitely possible in various architectural projects.

General Materials



01

Aluminum

Aluminum expanded metal sheets are lightweight and corrosion resistant. Multifarious brilliant colors are available after anodizing.

Aluminum Model: 1060 aluminum, 3003/5005 aluminum alloy.



02

Galvanized steel

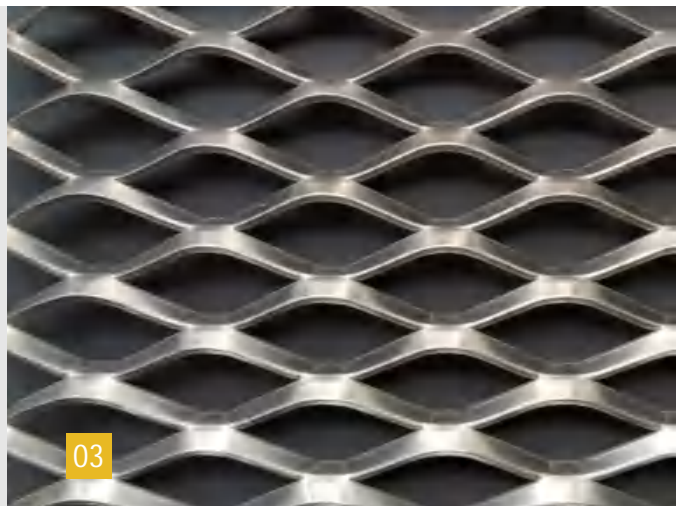
Adopt hot dipped galvanized steel as material, it can keep your facade panel from corrosion damaged for decades.

Steel Model: AISI 1018/1144/12L14/8620, ASTM A36/A653/A366/A513.

Stainless steel

Austenitic stainless steel has the best process properties since its good plasticity. Martensitic stainless steel has a lower technological performance because of its higher hardness.

Stainless Steel Model: 304, 316, 430, 410, 301, 302, 303, 321, 347, 416, 420, 430, 440, etc.

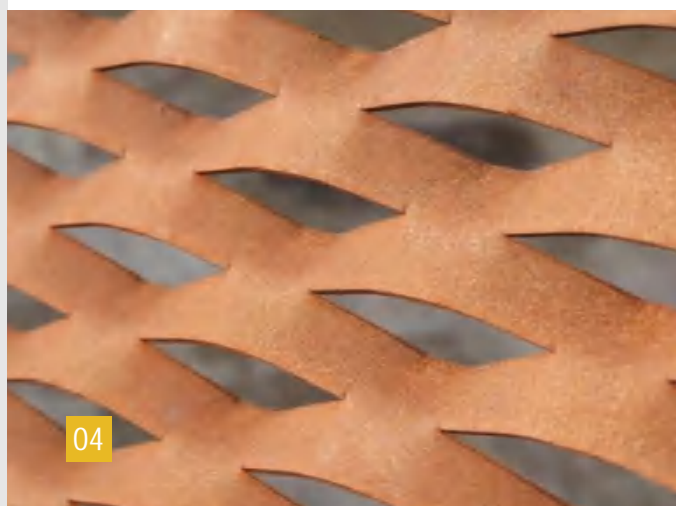


03

Weathering Steel

Weathering steel, also called corten metal, is developed to eliminate the need for painted steel and to ensure that the steel will form a stable rust-like appearance even if the elements are exposed outdoors for a long time.

Weathering Steel Model: ASTM A242/A588/ A606-4, etc.



04

Surface Treatment



01



02



03

Hot Dipped Galvanized

Hot-dip galvanizing is the most widely used and cost-effective steel surface treatment method. It plays an invaluable and irreplaceable role in the corrosion resistance and energy saving of steel. The hot-dip galvanized perforated metal panel will not rust in a few years.

Suitable material: carbon steel.

Anodic Oxidation

This is an electrolytic oxidation process in which the surfaces of aluminum or aluminum alloys are usually converted into an oxide film. Thereby improving the corrosion resistance, wear resistance and hardness of the metal plate. There are a variety of beautiful colors available.

Suitable material: aluminum or aluminum alloys.

Powder Coated

Powder coating, a dry finishing process, is applied as a free-flowing, dry powder. The main categories of powder coating include thermosets and thermoplastics. As a result, it can create a hard finish that is tougher than conventional paint.

Suitable material: carbon steel, aluminum or aluminum alloys.

Fluorine Carbon Spraying

Fluorocarbon coating is a high-grade spray coating. It has excellent performance of anti-fading, anti-blooming and anti-air pollution (acid rain, etc.), as well as strong crack & UV resistance and ability to withstand harsh weather conditions.

Suitable material: aluminum or aluminum alloys.

2B/2D/2R Mill Finish

Mill finish refers to the surface texture (or finish) of metal after it is processed by a rolling mill, extrusion die or drawing. Or rather, it is the basic supply condition for all stainless steel panels products. The 2B surface is a bright cold-rolled surface that is very similar to the 2D surface.

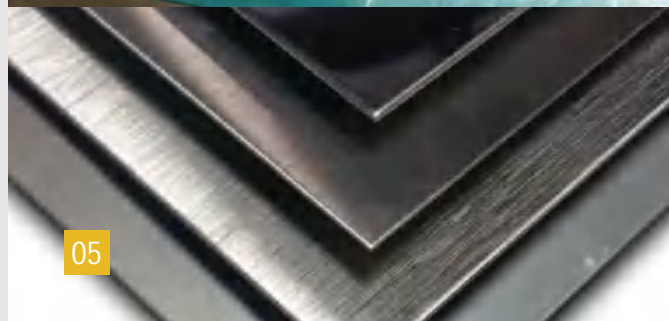
Suitable material: stainless steel.

Rust paint

Rust paint is a retro and fashionable surface treatment method. Finished effect has a fine texture to form a natural texture of real metal corrosion. The rust painted perforated metal sheet has been used in bars, clubs, cafes, stadiums in recent years.



04

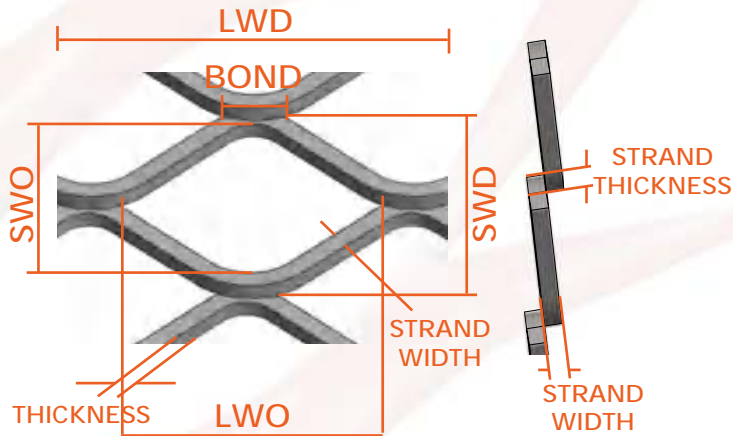


05

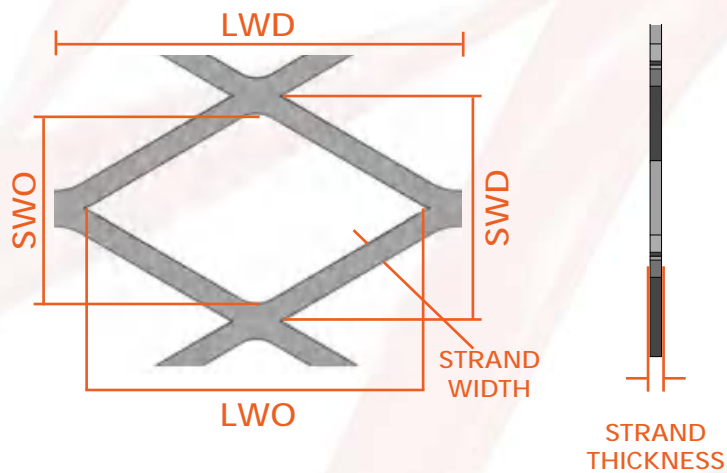


06

Terminology



STANDARD TYPE



FLATTENED TYPE

SWD (Short Way Dimension)

The length of short diamond diagonal from one pitch point center to another pitch point center.

LWD (Long Way Dimension)

The length of long diamond diagonal from one pitch point center to another pitch point center.

SWO (Short Way Opening)

The length of the short diagonal of the hole.

LWO (Long Way Opening)

The length of the long diagonal of the hole.

Bond

The intersection of two strands and it is always the width of two strands. Sometimes referred to as Knuckle.

Overall Thickness

Actual measurement of the thickness of the mesh measured at the bond.

Strands

Individual slit metal strips, or sides of an expanded metal pattern.

Strand Width

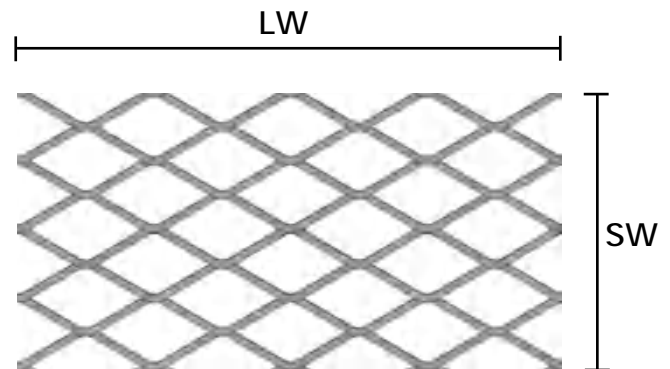
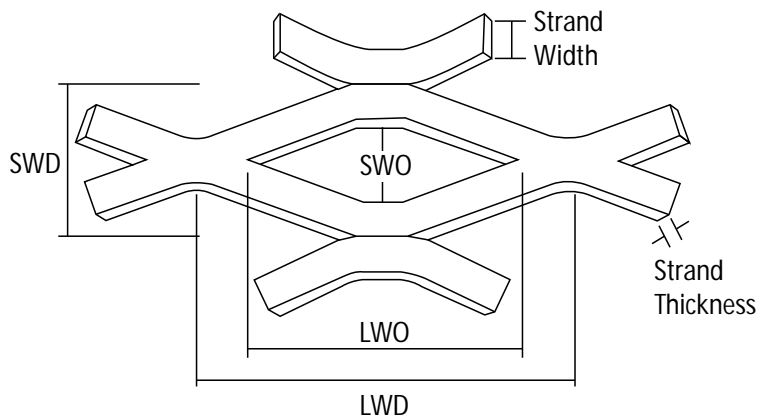
Amount and dimensional length fed between the upper and lower tooling to produce the mesh.

Strand thickness

Gauge or thickness of the sheet or coil from which the expanded metal was produced. It is also the thickness of the material after flattening.

How is it Measured?

$\text{SWD} \times \text{LWD} \times \text{Strand Thickness} \times \text{SW} \times \text{LW}$



LW Long way of expanded metal sheet.

SW Short way of expanded metal sheet.

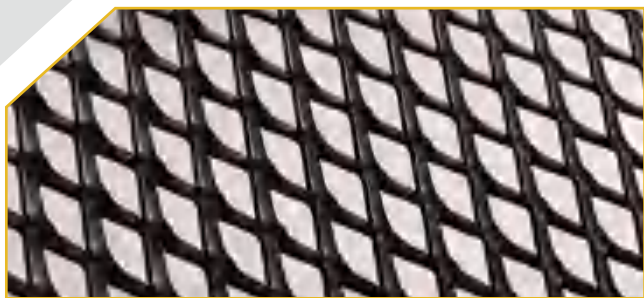
How to order?

- **Specify the sheet size (list SW first and then LW).**
Example: 4' SW × 8' LW.
- **Quantity of sheets required.**
- **Specify SWD.**
Example: 3/16", 1/4", 1/2", 3/4", 1", 1-1/2", 2".
- **Type of material.**
Example: aluminum, carbon steel, stainless steel, weathering steel, etc.
- **Thickness or gauge of material.**
- **Specify R (Regular), F (Flattened).**
- **Mesh reference.**
- **Tolerances (if required).**

Technical Data

	Mesh LWD×SWD (mm)	Strand Width (mm)	Strand Thickness (mm)	Overall Thickness (mm)	Dimension Hmax (mm)	Weight Alu. (kg/m ²)	Weight M.G.S.Steel (mm)	Open Area (%)
AF-01-1	62 × 21.5	7.5	1.50	10.0-11.0	3000	2.85	8.25	34
AF-01-2	62 × 21.5	7.5	2.00	10.0-11.0	3000	3.80	11.00	34
AF-01-3	62 × 21.5	7.5	3.00	10.0-11.0	3000	5.70	16.50	34
AF-02-1	85 × 24	11.0	1.50	10.0-11.0	3000	3.70	10.80	10
AF-02-2	85 × 24	11.0	2.00	10.0-11.0	3000	4.95	14.50	10
AF-03-1	100 × 34	10.0	1.50	14.0-16.0	3000	2.30	6.50	52
AF-03-2	100 × 34	10.0	2.00	14.0-16.0	3000	2.95	8.60	52
AF-03-3	100 × 34	10.0	3.00	14.0-16.0	3000	4.65	13.00	52
AF-04-1	100 × 34	25.0	1.50	12.0-15.0	3000	3.40	10.30	23
AF-04-2	100 × 34	25.0	2.00	12.0-15.0	3000	4.50	13.70	23
AF-04-3	100 × 34	25.0	3.00	12.0-15.0	3000	7.15		23
AF-05-1	110 × 31	13.0	1.50	15.0-17.0	3000	3.40	9.90	20
AF-05-2	110 × 31	13.0	2.00	15.0-17.0	3000	4.50	13.20	20
AF-06-1	110 × 52	24.0	1.50	19.0-21.0	3000	3.60	10.60	13
AF-06-2	110 × 52	24.0	2.00	19.0-21.0	3000	4.70	14.10	13
AF-06-3	110 × 52	24.0	3.00	19.0-21.0	3000	7.00	21.00	13
AF-07-1	115 × 48	20.0	1.50	11.0-13.0	3000	3.39	9.80	17
AF-07-2	115 × 48	20.0	2.00	11.0-13.0	3000	4.52	13.07	17
AF-07-3	115 × 48	20.0	3.00	11.0-13.0	3000	6.78	19.60	17
AF-08-1	150 × 62	22.0	1.50	24.0-26.0	3000	3.00	8.75	29
AF-08-2	150 × 62	22.0	2.00	24.0-26.0	3000	4.00	11.70	38
AF-09-1	200 × 73	25.0	1.50	28.0-34.0	3000	2.80	8.00	32
AF-09-2	200 × 73	25.0	2.00	28.0-34.0	3000	3.70	10.80	32
AF-09-3	200 × 73	25.0	3.00	28.0-34.0	3000	5.55	16.20	32
AF-10-1	250 × 83	25.0	2.00	40.0-43.0	3000	3.25	9.50	40
AF-10-2	250 × 83	25.0	3.00	40.0-43.0	3000	4.90	14.20	40
AF-11-1	300 × 120	30.0	1.50	35.0-37.0	3000	2.03	5.88	50
AF-11-2	300 × 120	30.0	2.00	35.0-37.0	3000	2.71	7.84	50
AF-11-3	300 × 120	30.0	3.00	35.0-37.0	3000	4.07	11.76	50

Best Selling Patterns



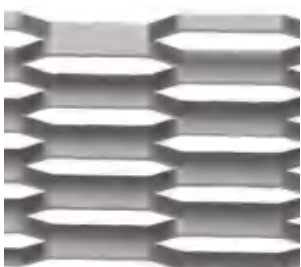
- Model: EP-01
- Material: aluminum
- Strand Thickness: 2 mm
- Strand Width: 5 mm
- SWD: 15 mm
- LWD: 30 mm



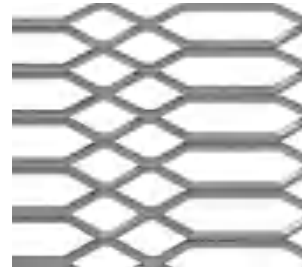
- Model: EP-02
- Material: aluminum
- Strand Thickness: 3 mm
- Strand Width: 8 mm
- SWD: 40 mm
- LWD: 80 mm



- Model: EP-03
- Material: steel
- Strand Thickness: 1.5 mm
- Strand Width: 5 mm
- SWD: 16 mm
- LWD: 160 mm

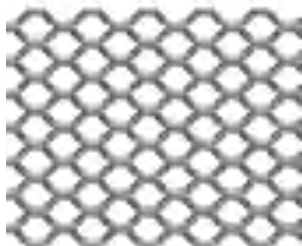


- Model: EP-04
- Material: steel
- Strand Thickness: 4 mm
- Strand Width: 4 mm
- SWD: 23 mm
- LWD: 80 mm





- **Model:** EP-05
- **Material:** aluminum
- **Strand Thickness:** 1.5 mm
- **Strand Width:** 1.5 mm
- **SWD:** 8 mm
- **LWD:** 10 mm



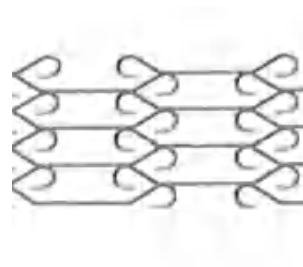
- **Model:** EP-06
- **Material:** steel
- **Strand Thickness:** 2 mm
- **Strand Width:** 3.5 mm
- **SWD:** 33 mm
- **LWD:** 50 mm



- **Model:** EP-07
- **Material:** galvanized steel
- **Strand Thickness:** 2.5 mm
- **Strand Width:** 2.8 mm
- **SWD:** 75 mm
- **LWD:** 116 mm



- **Model:** EP-08
- **Material:** steel
- **Strand Thickness:** 3 mm
- **Strand Width:** 4 mm
- **SWD:** 25 mm
- **LWD:** 90 mm



- **Model:** EP-09
- **Material:** steel
- **Strand Thickness:** 0.5 mm
- **Strand Width:** 0.5 mm
- **SWD:** 3 mm
- **LWD:** 10 mm

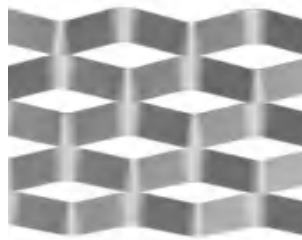


- **Model:** EP-10
- **Material:** copper
- **Strand Thickness:** 3.5 mm
- **Strand Width:** 4 mm
- **SWD:** 30 mm
- **LWD:** 60 mm

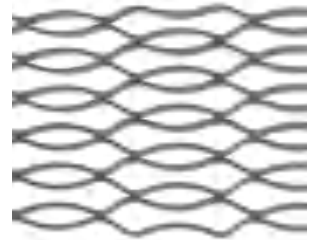




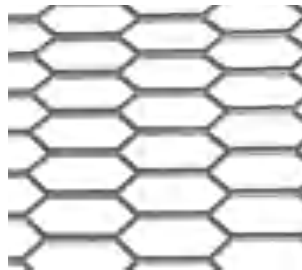
- Model: EP-11
- Material: steel
- Strand Thickness: 2 mm
- Strand Width: 20 mm
- SWD: 68 mm
- LWD: 160 mm



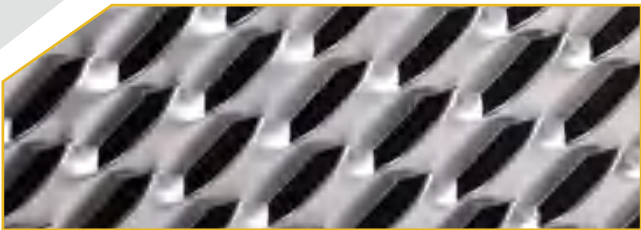
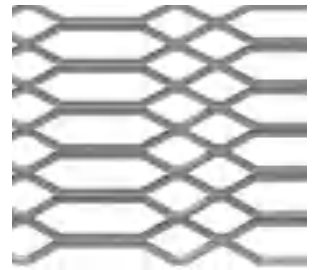
- Model: EP-12
- Material: steel
- Strand Thickness: 2 mm
- Strand Width: 3.5 mm
- SWD: 10 mm
- LWD: 50 mm



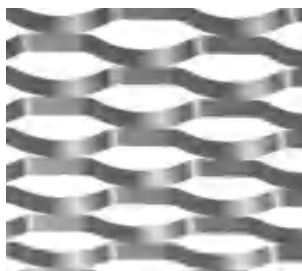
- Model: EP-13
- Material: aluminum
- Strand Thickness: 1.5 mm
- Strand Width: 3 mm
- SWD: 14 mm
- LWD: 50 mm



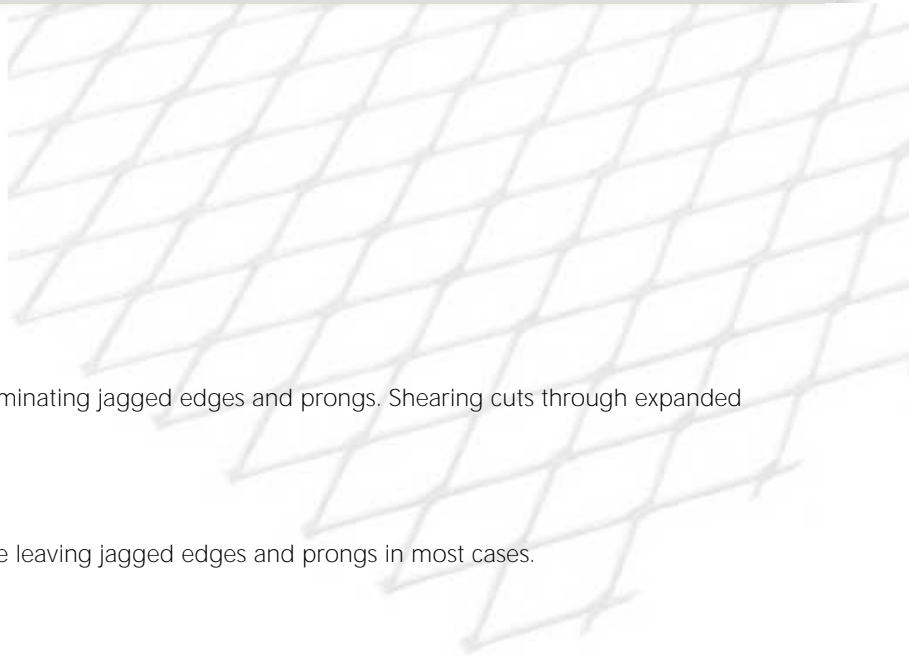
- Model: EP-14
- Material: galvanized steel
- Strand Thickness: 1.2 mm
- Strand Width: 1.2 mm
- SWD: 17 mm
- LWD: 60 mm



- Model: EP-15
- Material: aluminum
- Strand Thickness: 1.5 mm
- Strand Width: 10 mm
- SWD: 23 mm
- LWD: 60 mm



Shearing & Tolerance



Bond Shearing

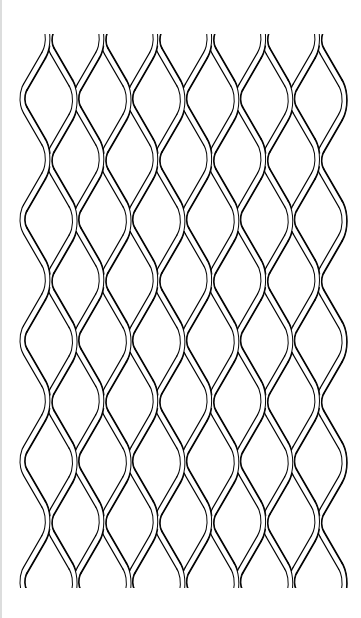
Results in closed diamond configurations and angle, eliminating jagged edges and prongs. Shearing cuts through expanded metal at center of bond, where strands intersect.

Random Shearing

Results in open diamond configurations and angle while leaving jagged edges and prongs in most cases.

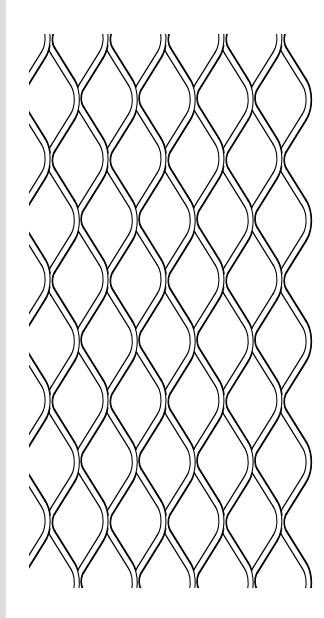
Tolerance

$\leq \pm 1/4$ inch per foot of width/length.



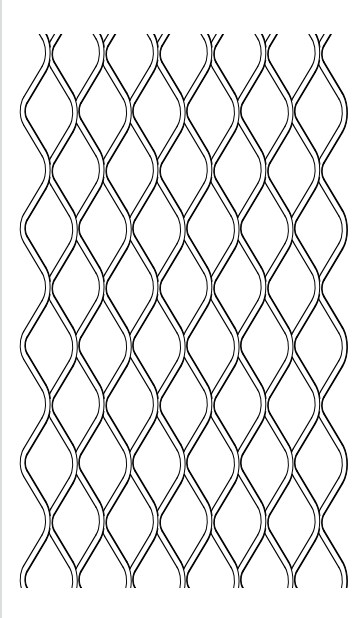
Standard sheets

Bond sheared all four sides.



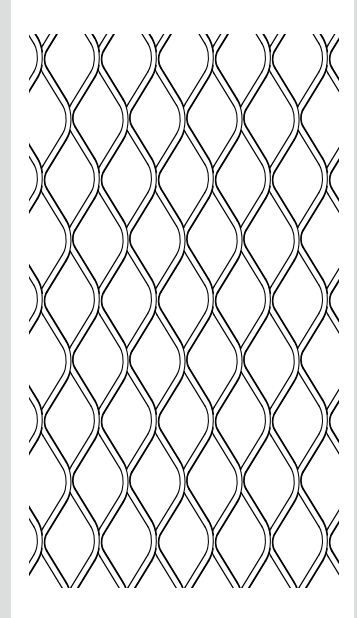
LWD one side bond,
one side Random.

SWD one side bond,
one side Random.



LWD Random sheared.

SWD Bond sheared.

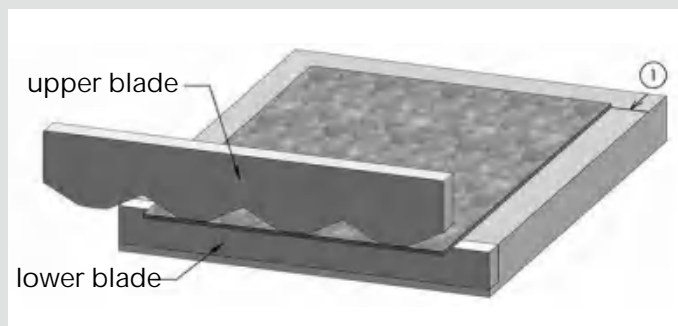


LWD Random sheared.

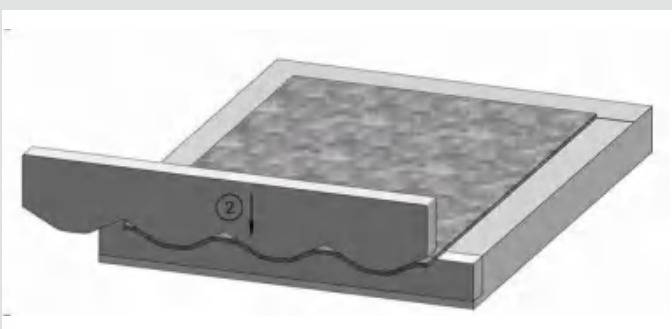
SWD Random sheared.



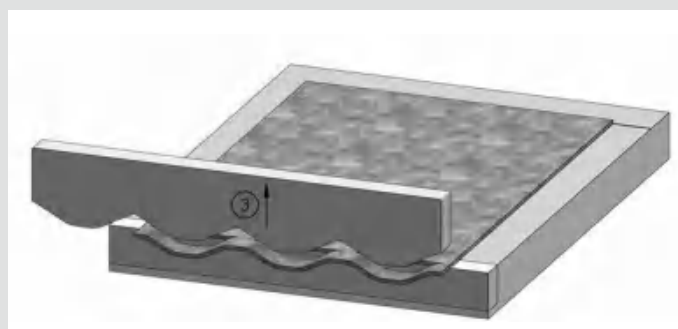
We adopt high performance metal sheet as material.



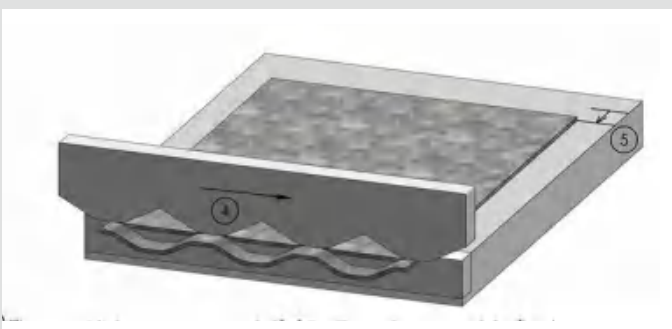
The feed sheet is placed in a position that is one strand width passed the outer edge of the lower blade. ①



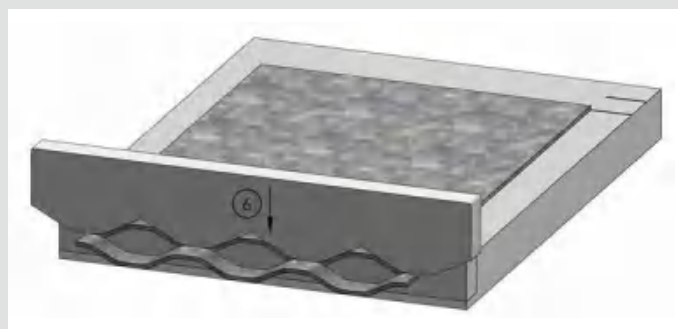
The upper blade moves down and forms diamond pattern in a half-open state. ②



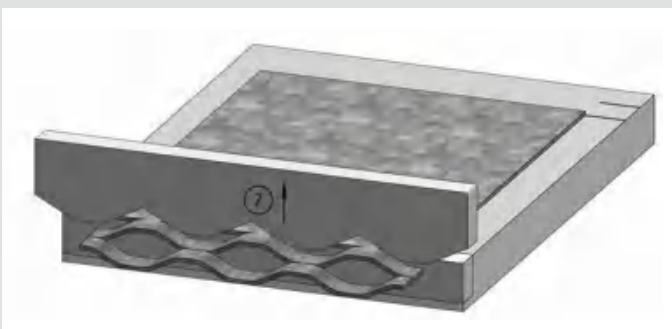
The diamond pattern is completely cut when the blade is raised. ③



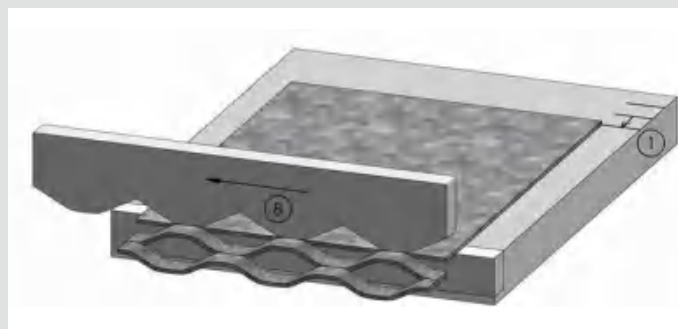
The upper blade transverses one half of the diamond pattern. The feed sheet advances another one strand width passed the outer edge of the lower blade. ④ ⑤



The upper blade moves down again and forms another row of diamond pattern in a half-open state. ⑥



The diamond pattern is completely cut when the blade is raised again. ⑦



The upper blade transverses back to its original starting position. Then repeat the previous procedure from ① to ⑦. ⑧

Building Facade

Application Field



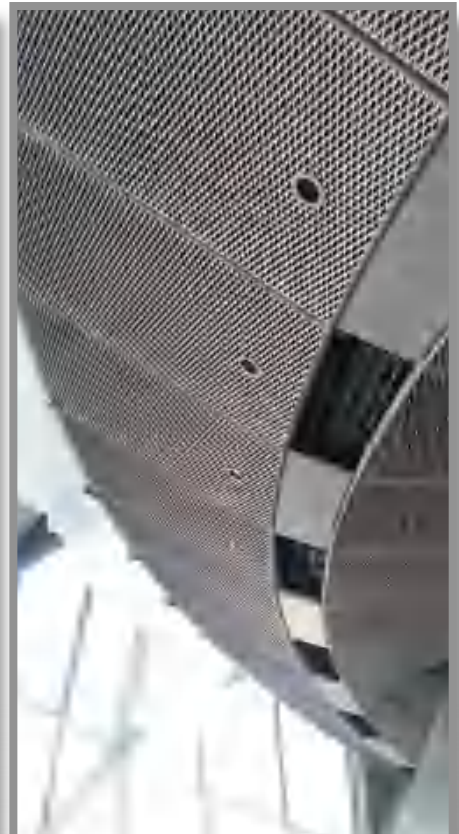
Internal Wall

Application Field



Ceiling

Application Field



Partition Wall

Application Field



Balustrade & Railing

Application Field



Sunshade

Application Field

