



**E Fujii Decor**

*Chuyên vật liệu trang trí khách sạn & khu nghỉ dưỡng*

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# **E-Fujii Decor**

-- product catalog

**Welded Wire Mesh**

**Expanded Metal Panel**

**Punching Metal Panel**

**Stainless Steel Rope Mesh**

**Stainless Steel Woven Mesh**

**Gabion Box**

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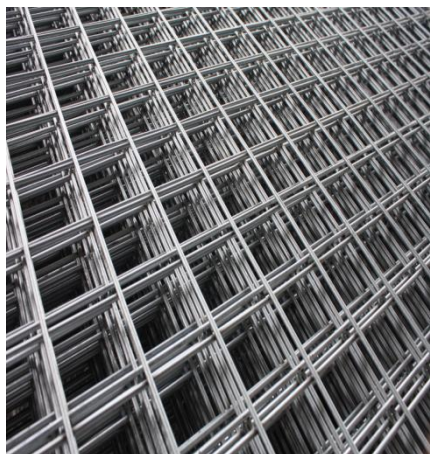
# **E-Fujii** Decor --mesh



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## ▶ Welded Wire Mesh Is the Material of Infill Panels, Cages and Trellis



Welded wire mesh can be divided into 2 types according to different flexibility: welded mesh panel and welded mesh roll. Panel common size is 1800 mm × 3000 mm, we also accept other requirements. Welded mesh roll has better flexibility.

Welded wire mesh is made of low carbon steel wire, which has galvanized and PVC coated surfaces, which have great anti-corrosion, anti-rust and weather resistance.

Firm structure and high tensile strength are also the features of welded wire mesh, which make it be widely used to make gabion, plaster walls, animal cages and plant trellis.

## ▶ Feature

- \* Firm structure.
- \* Aesthetic design.
- \* High tensile strength.
- \* Good flexibility
- \* Corrosion resistance and anti-rust.
- \* Weather resistance.
- \* Long service life.
- \* Appropriate price.

## ▶ Specification

- \* Material: low carbon steel wire, stainless steel wire and aluminum-magnesium alloy wire.
- \* Wire gauge: 12–24 gauge, or other custom size.
- \* Mesh size: 1/4 inch – 2 inch, or other custom size.
- \* Tensile strength: 300–450 N/mm<sup>2</sup>.
- \* Elongation: min. 15%.
- \* Surface treatment: galvanized (electro or galvanized), PVC coated, etc.
- \* Coated thickness: 0.5 mm – 1 mm.
- \* Color: white, green, black, accept customers' special request.

- \* Process: welded after galvanized and galvanized after welding.
- \* Welded mesh roll length: 5 m, 10 m, 30 m or other custom size.
- \* Welded mesh roll width: 0.5 m – 1.8 m or other custom size.
- \* Panel size: 1800 mm × 3000 mm (or more).



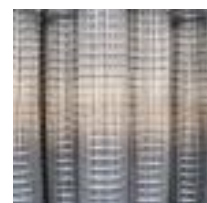
## ▶ Mesh type



Weld mesh panel



Architecture mesh panel



Weld mesh roll

## ▶ Application

- \* Animal cages.
- \* Plant trellis panels.
- \* Floor heating system.
- \* Plaster walls.
- \* Slab reinforcement.
- \* Gridwall panel or display panel.
- \* Stair rail infill panel.
- \* Wire container.
- \* Wire decking.
- \* Welded gabion.



Welded wire mesh plant trellis



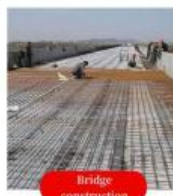
Welded wire mesh gabion landscape



Welded wire mesh wire container



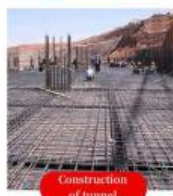
Welded wire mesh zoo cage



Bridge construction



Underfloor heating



Construction of tunnel



Cement crack prevention

**Table 1: Tolerances on Mesh Dimensions**

Mesh dimensions mm	Tolerance mm
< 50	±2.0
≥50 to < 200	±3.0

**Table 2: Mesh Size and Wire Diameter**

Mesh Size		Wire Diameter Before & After PVC Coat		
mm	inch	BWG No.	Before Coated (mm)	After Coated (mm)
6.4	1/4	24-22	0.56-0.71	0.90-1.05
9.5	3/8	23-19	0.64-1.07	1.00-1.52
12.7	1/2	22-16	0.71-1.65	1.10-2.20
15.9	5/8	21-16	0.81-1.65	1.22-2.30
19.1	3/4	21-16	0.81-1.65	1.24-2.40
25.4 × 12.7	1 × 1/2	21-16	0.81-1.65	1.24-2.42
25.4	1	21-14	0.81-2.11	1.28-2.90
38.1	1 1/2	19-14	1.07-2.11	1.57-2.92
25.4 × 50.8	1 × 2	17-14	1.47-2.11	2.00-2.95
50.8	2	16-12	1.65-2.77	2.20-3.61

**Table 3: Welded Wire Mesh Roll Size**

Mesh Inch	Width × Length
1/2	3 ft. × 50 ft.
1/2	4 ft. × 50 ft.
1/2	5 ft. × 50 ft.
1/2	6 ft. × 50 ft.
3/4	3 ft. × 50 ft.
3/4	4 ft. × 50 ft.
3/4	5 ft. × 50 ft.
3/4	6 ft. × 50 ft.
1	3 ft. × 50 ft.
1	4 ft. × 50 ft.
1	5 ft. × 50 ft.
1	6 ft. × 50 ft.

**Table 4: Mesh Panel Common Specification**

Mesh		Wire Diameter	
Expressed in Inches	Millimeters	Diameter	Millimeters
1" × 1"	25 mm × 25 mm	11 G – 14 G	2 mm – 3 mm
2" × 1"	50 mm × 25 mm	8 G – 14 G	2 mm – 4 mm
2" × 2"	50 mm × 50 mm	8 G – 14 G	2 mm – 4 mm
3" × 2"	75 mm × 50 mm	6 G – 14 G	2 mm – 5 mm
3" × 3"	75 mm × 75 mm	6 G – 14 G	2 mm – 5 mm
4" × 2"	100 mm × 50 mm	4 G – 14 G	2 mm – 6 mm
4" × 4"	100 mm × 100 mm	4 G – 14 G	2 mm – 6 mm
5" × 5"	125 mm × 125 mm	4 G – 14 G	2 mm – 6 mm
6" × 6"	150 mm × 150 mm	4 G – 14 G	2 mm – 6 mm

**Note:** Special specifications can be customized.

## ▶ Installing welded mesh fabric reinforcement on site

### Lapping of Welded Mesh

\* It is generally recommended that the following formula be used when calculating required lap lengths applicable to the various mesh specifications

\* Formula:  $25 \times \text{bar diameter} + 15\text{mm}$  or  $300\text{mm}$  whichever the greater



### Laying of Welded Mesh

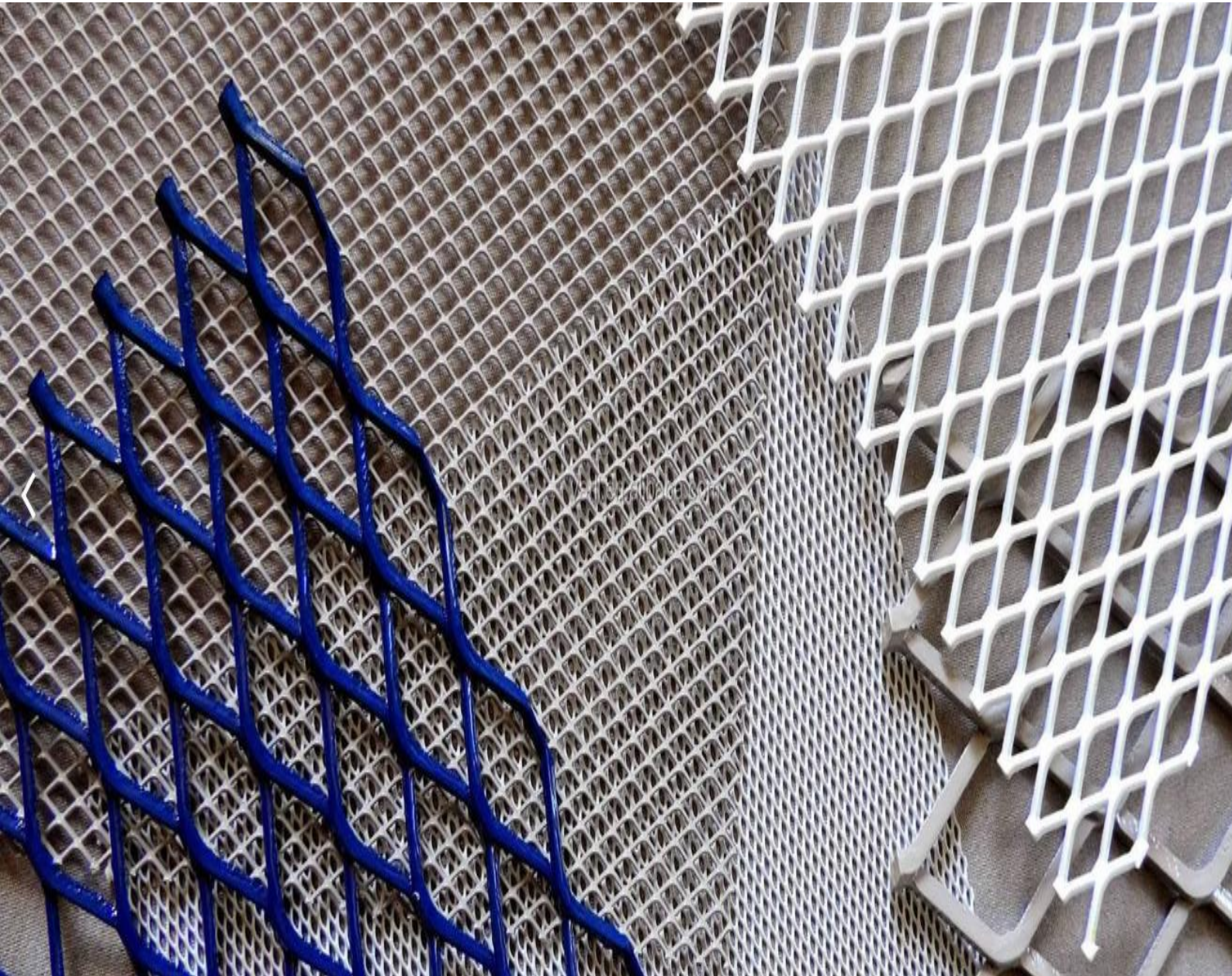
\* Special attention must be given to ensure that the mesh remains correctly positioned at the prescribed level of cover during a concrete pour. This will determine the ultimate effectiveness of the reinforcement

\* Concrete spacer blocks, plastic spacers and stools should be used liberally when placing mesh in order to ensure that the mesh is sufficiently supported to maintain its correct positioning and integrity in the concrete slab.



# **E-Fujii** Decor

## -- Expanded metal panel

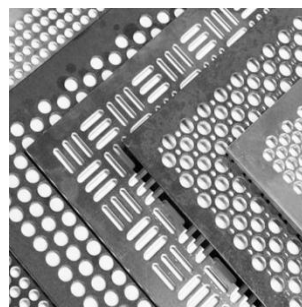
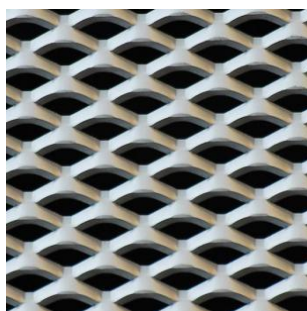


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- ▶ **Expanded metal is a form of sheet metal which has been cut and stretched to form a regular pattern of mesh material – typically this has a diamond pattern.**



## ▶ **Feature**

Mesh of the expanded metal is uniform and does not elongate.

The light and rigid mesh is strong against impact. Handling and execution are very simple, slip stopping is high, and easy execution is economical, assisted by good day lighting and ventilation.

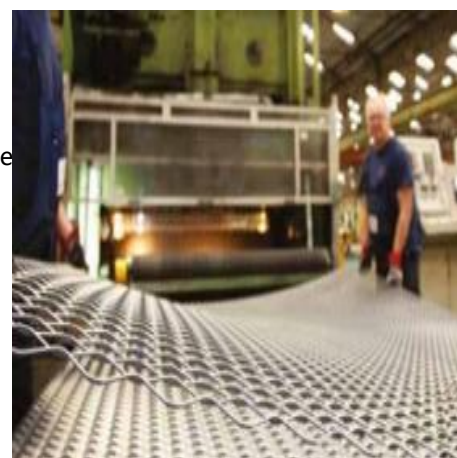
- \* Broad color pallet
- \* Mica and metallic options
- \* Easy color matching
- \* Durable, thick covering
- \* Excellent for coastal projects
- \* No VOC
- \* Cannot flake
- \* Little fading due to UV

## ▶ **Product ING**

Expanded metal mesh has a diverse range of properties, which makes it a versatile material that can be used throughout a variety of industries.

Expanded metal mesh is manufactured with the use of an expanding machine. Metal sheets or coils are fed through the machine to be slit and stretched simultaneously. The result is a mesh product with no joins or welds, formed from a process that produces minimum waste.

Expanded metal mesh comes in two forms: raised mesh and flattened mesh, which offer different properties.



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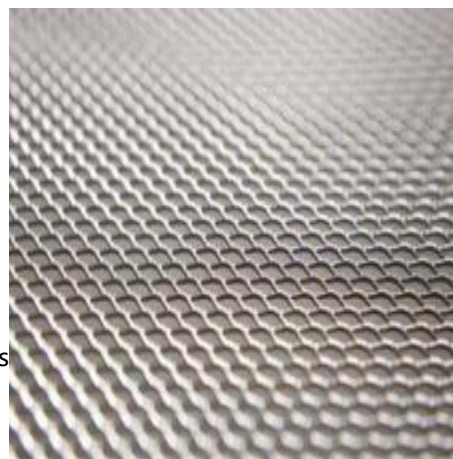
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## Raised Meshes

Our raised meshes are available in materials including steel, stainless steel, pre-galvanised steel, titanium, brass, copper, aluminium, tinsplate, plastic, nickel and incoloy.

As well as standard raised meshes, our range of raised mesh includes heat resistant meshes, grain drying meshes, anti-dazzle meshes, laths and concrete reinforcement meshes.

Shape variations include square, hexagonal, minaret and louvre options as well as standard expanded metal shapes.



## Flatted Meshes

Our flattened meshes are available in a variety of materials including steel, stainless steel, pre-galvanised steel and aluminium.

As well as standard flattened meshes, our range includes filtration products, laths and concrete reinforcement meshes.



## ► Detail shows

Expanded metal panel is a special type of metal mesh structure, usually made of metal materials such as aluminum or galvanized steel or stainless steel. It is characterized by a series of small holes made on the metal plate by punching and other processing processes, and then by expanding treatment to make it a diamond shaped network structure.



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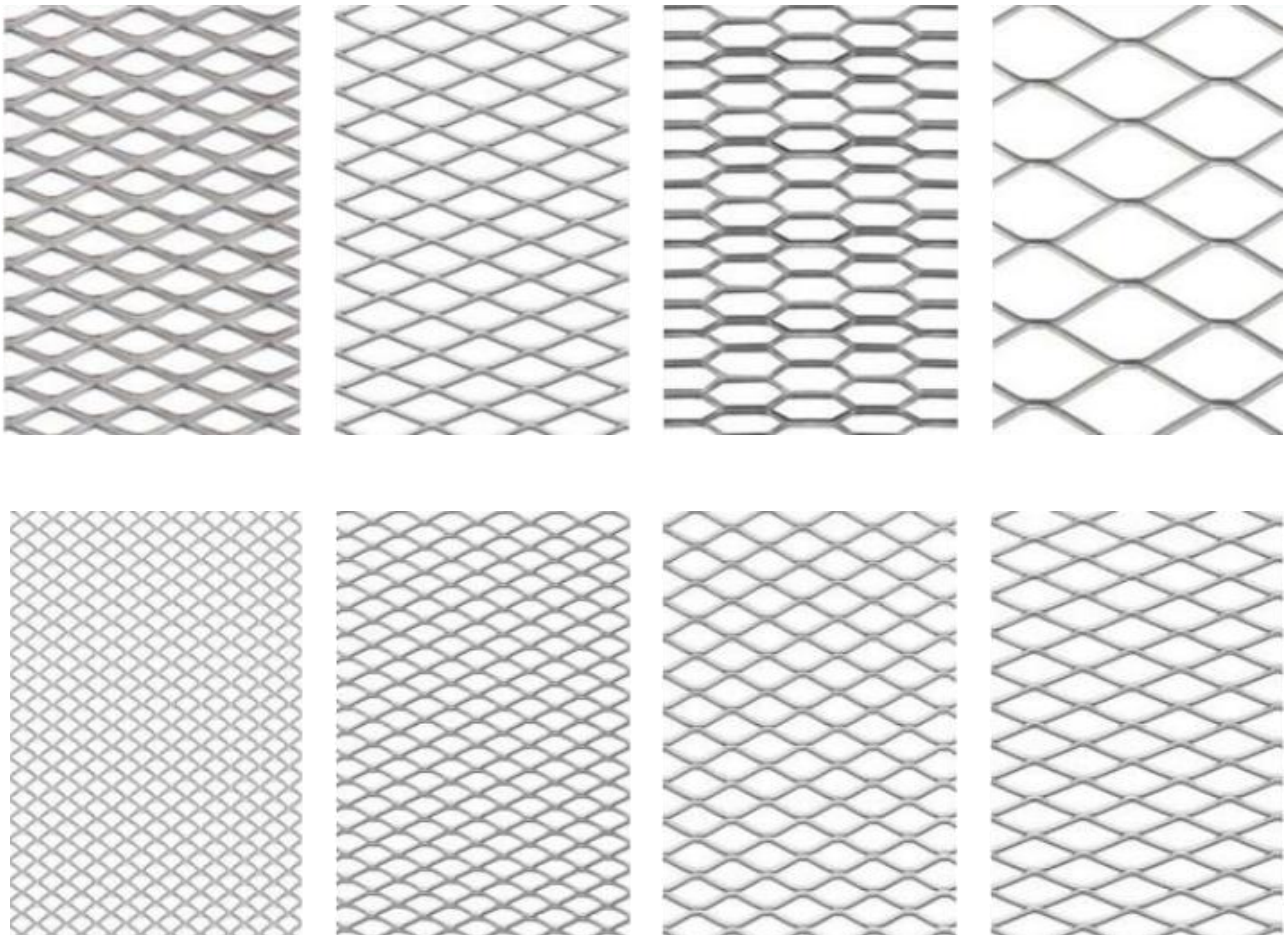


## Mesh Type

We offer You an extensive range of different mesh sizes and types. from micro meshes and small meshes through medium-sized meshes right up to long web and large meshes. A large number of other options are also possible . on request.

Categories

- Micro meshes
- small meshes
- Medium-sized meshes
- Large meshes
- square meshes
- Long web meshes



 Applications





FACADES



PARKING GARAGE CLADDING



EQUIPMENT SCREENS



CEILINGS & INTERIOR WALLS



RAILINGS

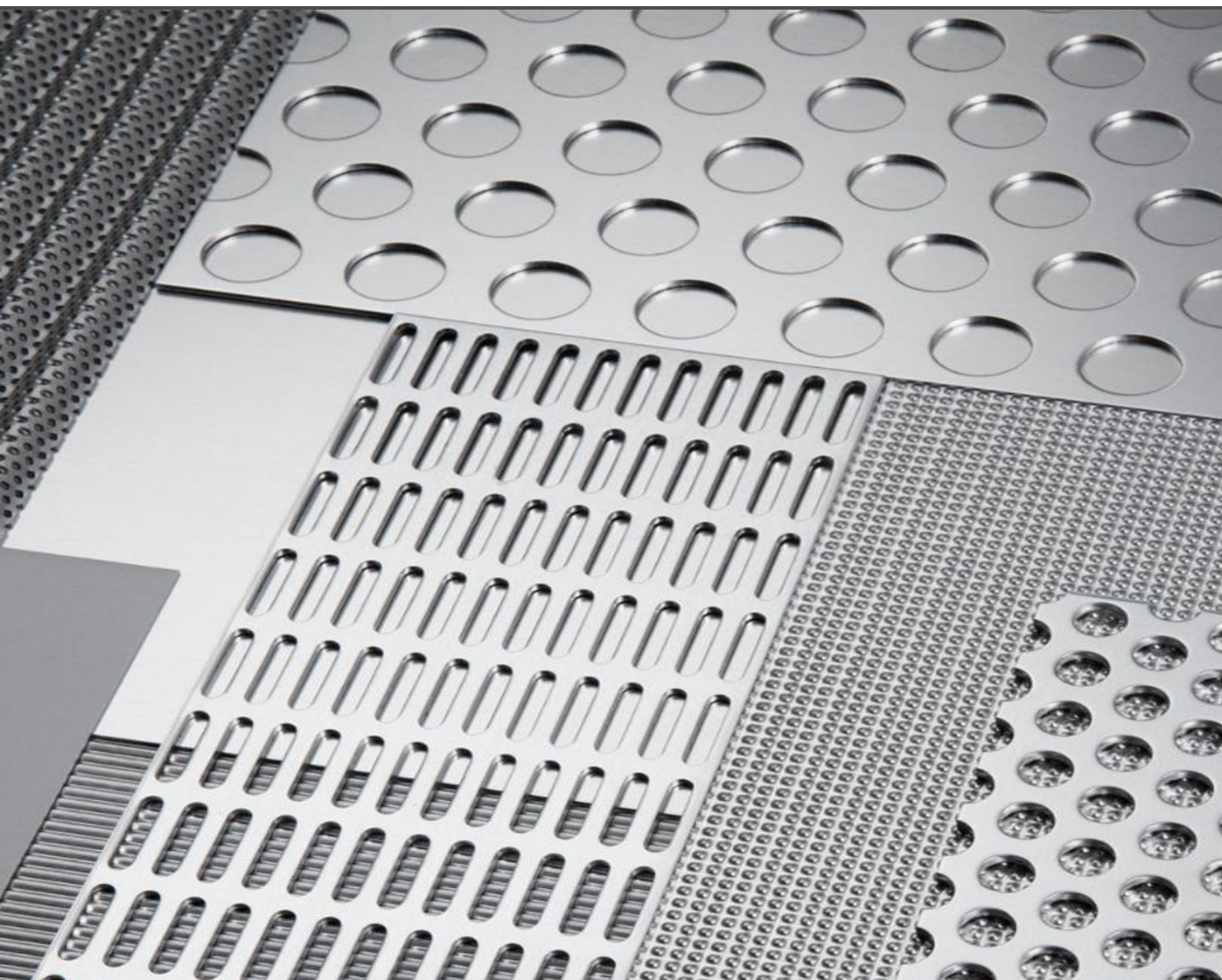


RETAIL DESIGN



# **E-Fujii** Decor

-- punching metal panel

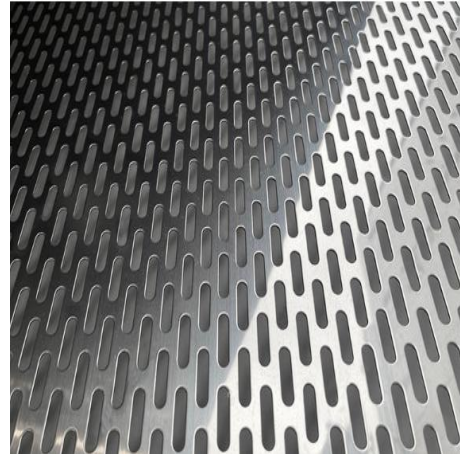
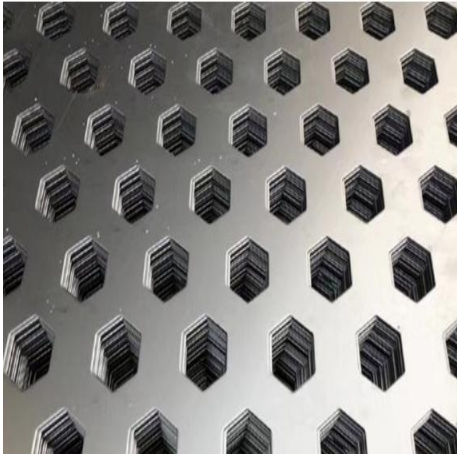


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## Description

Punching mesh is a metal mesh structure, made of metal plate through punching processing. In the production of punching mesh, the metal plate will drill or punch holes to form a series of regular arrangement of small holes. These holes can be round, square, diamond or a variety of other shapes, depending on the specific design requirements.



## Feature

(1)Permeability: Due to the large number of small holes in the net, the punching net has excellent permeability, so that air, water and other fluids can pass freely.

(2)Filtration and screening: The punching mesh can be used to filter and screen solid particles, and different levels of filtration and screening can be achieved according to the different hole sizes.

3)Sound insulation: The perforated mesh has a certain sound insulation effect, which can reduce the noise transmission to a certain extent.

(4)Decorative: The mesh structure of the perforated mesh gives it a unique appearance, which can be used in architecture and interior decoration to increase the beauty and design.

(5)Strength and durability: Due to the use of metal materials, punching mesh has high strength and durability, suitable for a variety of environments.

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## ▶ Materials

- ▶ Stainless steel
- ▶ Aluminum
- ▶ Copper
- ▶ Galvanized steel
- ▶ Iron



## ▶ Hole shape



ellipse



Square



Round



Diamond



Quincunx



Hexagonal



**Non-slip hole**



**Non-slip hole**



**Rectangle**



**Five-pointed star**



**Louver hole**



**Decorative**

## **Application**

(1)Architectural decoration: Used for indoor and outdoor walls, ceilings, railings, etc., to add modern sense and decorative effect.

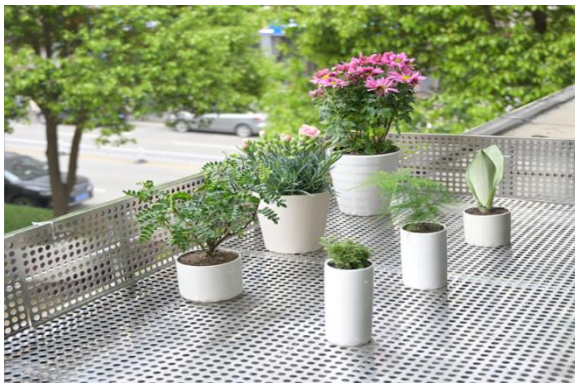
(2)Mechanical equipment: used as filter, filter, baffle, protective cover, etc.

(3)Automotive industry: Used in auto parts, air filters, etc.

(4)Electronic products: Used for computer radiators, audio speakers, etc.

(5)Building partition: used for partition wall, balcony railing, etc.

(6)Kitchen utensils: For ovens, grills, etc.

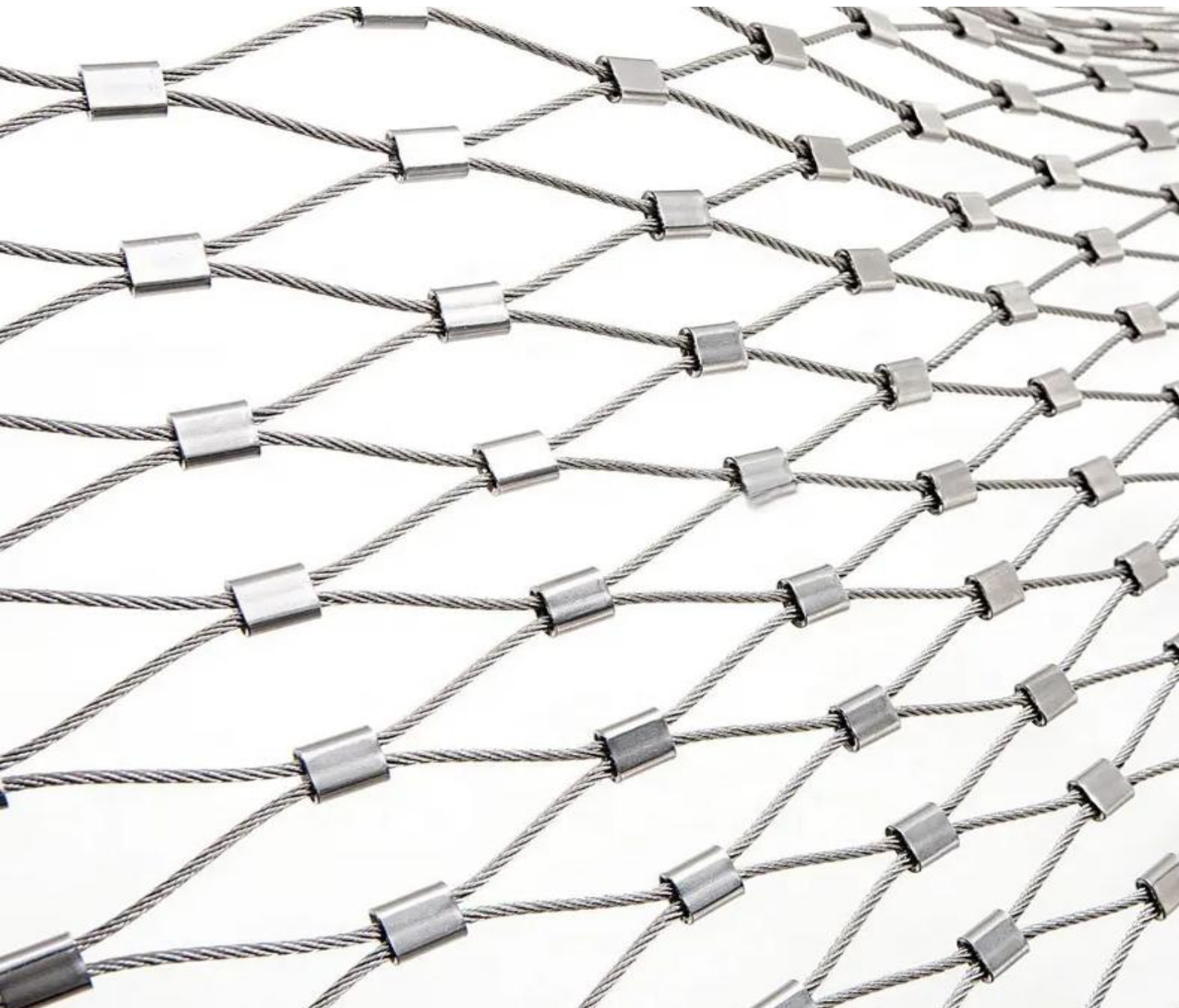


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# E-Fujii Decor

-- stainless steel rope mesh



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## Description

Steel rope mesh, also known as wire rope mesh or stainless steel cable mesh, is a versatile and robust material commonly used in various applications, including architecture, safety, and industrial settings. It is composed of high-quality stainless steel cables woven or knotted together to form a flexible and durable mesh structure.



## Feature

**Material Composition:** Steel rope mesh is primarily constructed from stainless steel cables, which are corrosion-resistant and extremely strong. The cables are typically made from stainless steel alloys such as 304 or 316, which provide excellent resistance to rust and other environmental factors.

**Mesh Configuration:** The stainless steel cables are interwoven or knotted to create a mesh pattern. The mesh can be designed with various opening sizes, allowing for customization to suit specific project requirements. The most common mesh configurations are square and diamond-shaped openings.

**Versatility:** Steel rope mesh is highly versatile and finds applications in various fields, including architectural design, safety netting, animal enclosures, green walls, balustrades, and industrial purposes. Its flexibility and strength make it suitable for both decorative and functional purposes.

**Durability:** Stainless steel cables used in rope mesh are renowned for their durability and longevity. They can withstand harsh weather conditions, UV exposure, and other environmental factors without deteriorating or losing their strength. This makes steel rope mesh an ideal choice for outdoor installations.

**Transparency:** One of the notable features of steel rope mesh is its transparency. It allows for unobstructed views while providing safety and security. This transparency is particularly advantageous in architectural

applications such as facades, bridges, and railing systems.

**Customization:** Steel rope mesh can be customized in terms of mesh size, cable thickness, and overall dimensions to meet specific project requirements. This adaptability makes it suitable for a wide range of design and construction purposes.

**Safety:** In safety applications, such as fall protection and animal enclosures, steel rope mesh provides a high level of safety and security. Its strength and flexibility help prevent accidents and ensure the well-being of individuals or animals within the enclosed area.

**Aesthetic Appeal:** Beyond its functional benefits, steel rope mesh can enhance the aesthetics of a space. It can be used to create stunning architectural elements or artistic installations, adding a unique and modern touch to buildings and landscapes.

## ▶ Producing



Raw Material



Manual installation



Machine stamping



Package and delivery



Finished product display



Check on the quality

## ▶ Application

### ◆ Architectural Design:

**Facade Cladding:** Steel rope mesh can be used as an architectural facade cladding material to create striking and unique building exteriors. It adds a modern and visually appealing touch to structures while allowing for ventilation and light penetration.

**Balustrades and Railings:** It is commonly used for safety railings and balustrades in both interior and exterior settings. The mesh's transparency provides an unobstructed view while ensuring safety.



### ◆ Zoo and Animal Enclosures:

**Aviaries:** Steel rope mesh is ideal for creating aviaries and enclosures for birds and other animals. Its flexibility and strength ensure the safety of the animals while allowing visitors to observe them without hindrance.

**Zoo Enclosures:** Zoos use steel rope mesh for enclosures of various animals, including big cats, primates, and reptiles. It provides a secure and natural-looking environment for the animals.



**◆ Green Walls and Trellises:**

**Green Facades:** Steel rope mesh can serve as a framework for vertical gardens and green facades. Plants can be trained to grow on the mesh, creating living walls that improve aesthetics and air quality.

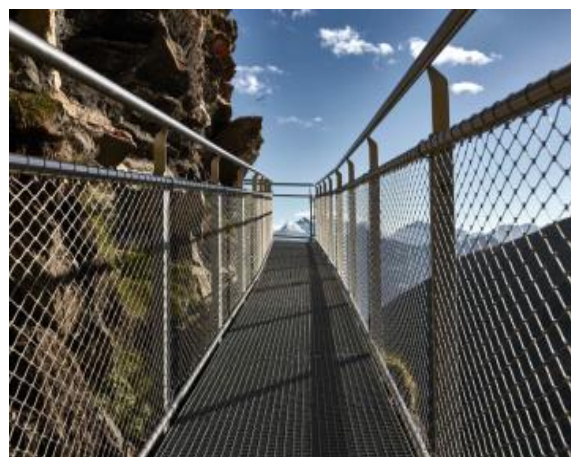
**Trellises:** It is used as trellises for climbing plants in gardens and landscaping, providing support while adding an artistic element to outdoor spaces.



**◆ Safety:**

**Bridge Railings:** Steel rope mesh is utilized as bridge railings, ensuring safety for pedestrians and cyclists while maintaining an unobstructed view of the surroundings.

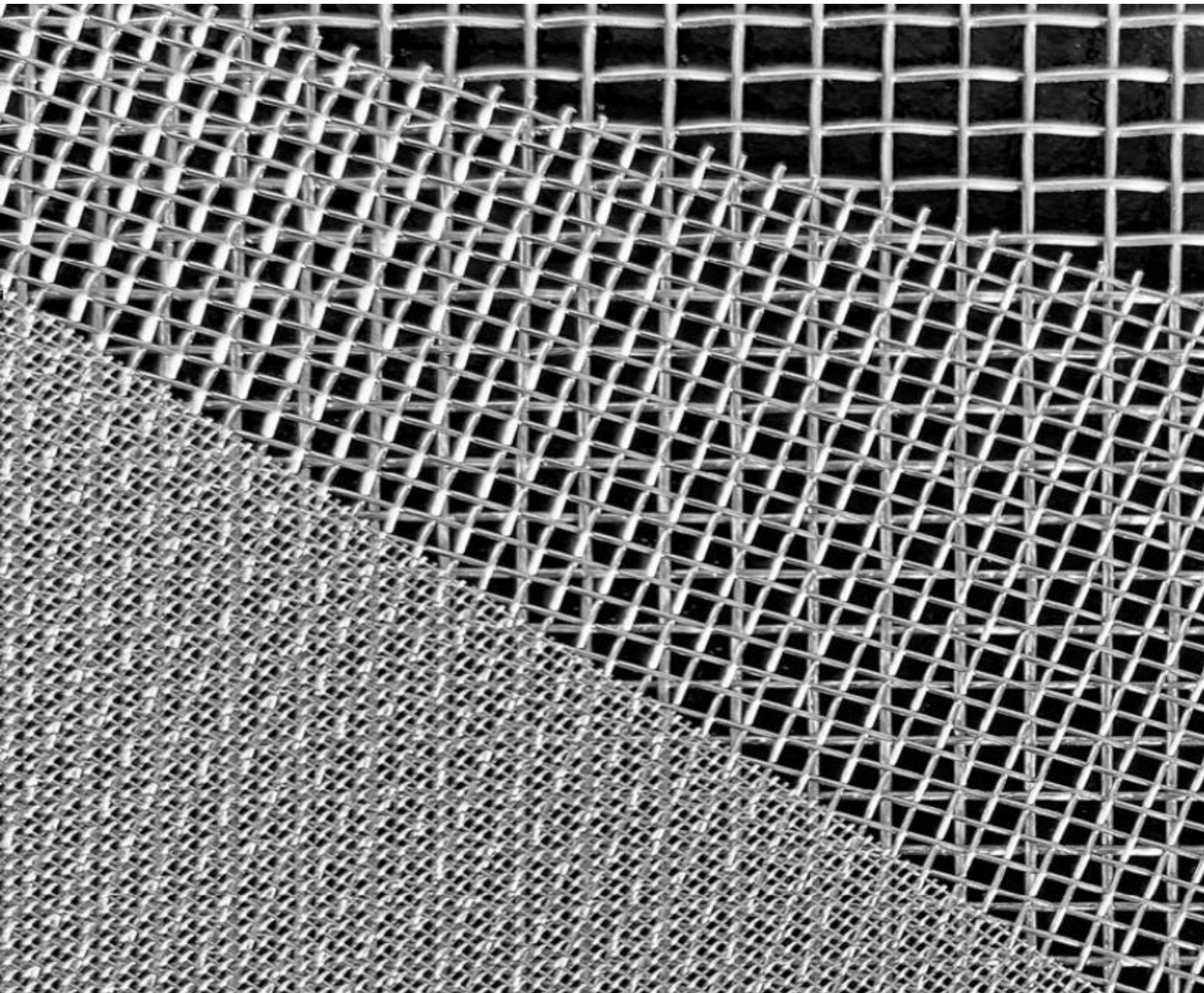
**Construction Safety Nets:** In construction and industrial settings, steel rope mesh is used as safety nets to protect workers from falling objects or working at heights. It helps prevent accidents and ensures worker safety.





# **E-Fujii** Decor

-- stainless steel woven mesh



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## Description

This mesh belongs to the group of screens of simple and plain weave. This weave is characterised by big clearance and durability and they are easy to clean. The particular mesh can be square or rectangular.

Stainless steel wire mesh, specifically Type 304 stainless steel, is the most popular material for producing woven wire mesh products.

Often referred to as 18-8 (18% chromium, 8% nickel), 304 is a basic stainless alloy that offers a combination of corrosion resistance, heat resistance, strength and affordability.

Type 316 is the second-most common form of stainless steel, which is a great option for industrial users seeking a higher level of corrosion resistance, particularly in salt-water environments. It incorporates about 2 to 3 percent molybdenum, which increases corrosion resistance, particularly against chlorides and other industrial solvents.

Stainless steel wire mesh, with extensively excellent properties over other metal materials, is widely used within a lot of industries such as food, chemical, filtering, architectural, industrial, aerospace, oil and gas, biology, etc.

## Feature

- Corrosion and abrasion resistance.
- High temperature resistance.
- Highly aesthetic appeal for architectural applications.
- Hygienic characteristics and clean ability are specifically suitable for food and pharmaceutical industries.
- Cost effective.
- Highly durable and withstand severe conditions.
- Long life cycle



## ▶ **Materials**

Wire cloth or wire mesh can be manufactured from any metal or alloy that can be drawn into wire that is suitable for weaving.

The most commonly utilized materials in wire cloth weaving are listed below:

- Carbon Steel: Low, High, Oil Tempered
- Stainless Steel: Non-Magnetic Types 304, 304L, 309, 310, 316, 316L 317, 321, 330, 347;
- Magnetic Types 410, 430
- Copper and Copper Alloys: Copper, Brass, Bronze, Phosphor Bronze
- Aluminum and Aluminum Alloys: 1350-H19

## ▶ **Crimp styles**

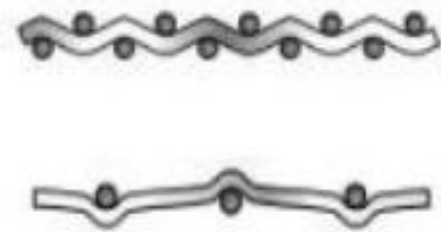
Pre-Crimping is typically found in coarser wire cloth or space cloth specifications. Here, the wires are crimped prior to weaving. The pre-crimp action enables both the warp and shuttle wires to nest securely with each other restricting their random movement and ensuring an accurate and consistent opening size. This weaving technique adds strength and rigidity to the wire cloth.

### **Double Crimp:**

Square pattern wire cloth using warp and fill wires of equal size Warp wires pass over and under fill wires in an alternating pattern at adjacent intersections.

### **Lock Crimp:**

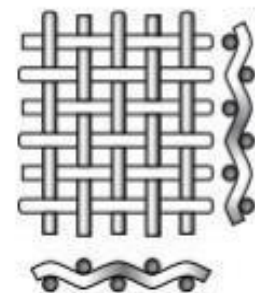
Made to hold accurate openings. Each intersection is formed with straight sections of fill wires woven within straight sections of warp wires. Fill wires are woven in an alternating pattern, top and bottom.



## ▶ **Weave style**

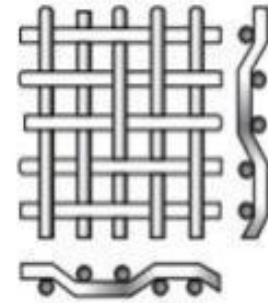
Plain/Double:

Standard type of weave for wire cloth resulting in square openings with wire sizes the same in both directions. Each warp wire passes alternately over and under fill wires at right angles both directions.



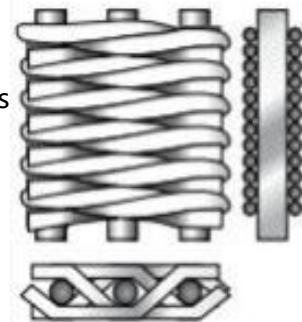
#### Twill Square:

Each warp and shute is woven alternately over two and under two warp wires. This gives the appearance of parallel diagonal lines, allowing it to be used with heavier wires with a particular mesh count (that is possible with the plain weave wire cloth). This ability allows the application of this wire cloth to be used for greater loads and finer filtration.



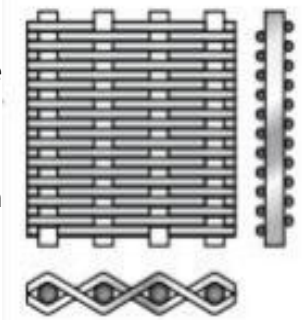
#### Twill Dutch:

A filter cloth that offers higher strength than regular Dutch weaves. It packs even more wires in a given area. Generally, this weave has finer mesh counts and Tower flow than regular Dutch weaves and can be made to filter particles as fine as 2 microns in diameter.



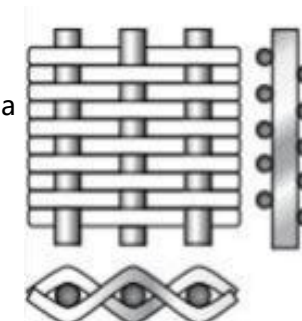
#### Reverse Plain Dutch:

A filter cloth in which the larger count of wires is found in the warp and the smaller count in the shute, thus reversing the method used in plain and twilled Dutch weaves. The warp wires have a smaller diameter than the shute wires and touch each other, while the heavier shute wires are woven as tightly together as possible.



#### Plain Dutch:

Primarily used as a filter cloth. The openings slant diagonally through the cloth and can not be seen by looking directly at the cloth. This weave has a coarser mesh and wire in the shute direction, giving a very compact, firm mesh with great strength



## ► Application

316 stainless steel is commonly used in some industrial applications involving processing chemicals, high-saline environments such as coastal regions.

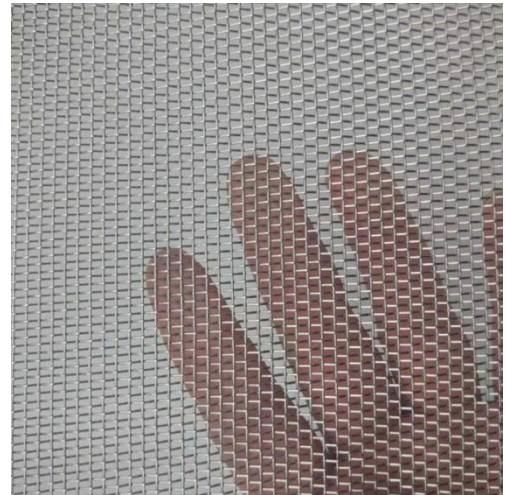
304 stainless steel is an extremely popular option for industrial users seeking corrosion resistance at an economical price point.

Stainless steel wire mesh serves the industries such as architectural, pharmaceutical, food, agricultural, industrial and commercial, catering, construction, health care, mining, horticulture, automotive, oil and gas industries, etc.

Typical applications include: railing system, bakery baskets, cages, fan guards, tree guards, insect screens, greenhouse benches, air vents, covers, spark arrestors, food drying racks, room dividers, security enclosures, fencing, wall cladding, basket fabrication, gabions, decorative signage, ceiling panels, reinforcement, and for gardens and crafts for the yard or house.



 **Wire mesh shows**



Mesh	Weaving	Wire diameter mm	Wire No.	Opening mm	Open area %
2	Plain weave	φ 2.0	# 14	10.70	71.0
	Plain weave	1.9		10.80	72.3
	Plain weave	1.6	16	11.10	76.4
	Plain weave	1.5		11.20	77.8
2.5	Plain weave	2.0	14	8.16	64.5
	Plain weave	1.9		8.26	66.1
	Plain weave	1.6	16	8.56	71.0
	Plain weave	1.5		8.66	72.7
	Plain weave	1.2	18	8.96	77.8
	Plain weave	1.1		9.06	79.5
3	Plain weave	2.0	14	6.47	58.4
	Plain weave	1.9		6.57	60.2
	Plain weave	1.6	16	6.85	65.4
	Plain weave	1.5		6.97	67.7
	Plain weave	1.2	18	7.27	73.7
	Plain weave	1.1		7.37	75.7
3.2	Plain weave	1.9		6.04	57.9
	Plain weave	1.6	16	6.34	63.8
	Plain weave	1.5		6.44	65.8
	Plain weave	1.2	18	6.74	72.1
	Plain weave	1.1		6.84	74.2
3.5	Plain weave	1.9		5.36	47.9
	Plain weave	1.6	16	5.66	53.4
	Plain weave	1.5		5.76	55.3
	Plain weave	1.2	18	6.06	61.2
	Plain weave	1.1		6.16	63.3
4	Plain weave	1.9		4.45	49.1
	Plain weave	1.6	16	4.75	56.0
	Plain weave	1.5		4.85	58.3
	Plain weave	1.2	18	5.15	65.8
	Plain weave	1.1		5.25	68.4
	Plain weave	1.0	19	5.35	71.0
	Plain weave	0.85		5.55	75.0
	Plain weave	0.9	20	5.45	73.7
	Plain weave	0.8	21	5.55	76.4
4.2	Plain weave	1.2	18	4.85	64.3
	Plain weave	1.1		4.95	66.9
	Plain weave	1.0	19	5.05	69.7
4.5	Plain weave	1.6	16	4.04	51.3
	Plain weave	1.5		4.14	53.9
	Plain weave	1.2	18	4.44	62.0
	Plain weave	1.1		4.54	64.8
5	Plain weave	1.5		3.58	49.7
	Plain weave	1.2	18	3.88	58.3
	Plain weave	1.1		3.98	61.4
	Plain weave	1.0	19	4.08	64.5
	Plain weave	0.95		4.13	66.1
	Plain weave	0.85		4.23	69.3
	Plain weave	0.8	21	4.28	71.0

Mesh	Weaving	Wire diameter mm	Wire No.	Opening mm	Open area %	
5	Plain weave	φ 0.75	#	4.33	72.7	
5.5	Plain weave	1.5		3.12	45.6	
	Plain weave	1.2	18	3.42	54.8	
	Plain weave	1.1		3.52	58.0	
	Plain weave	1.0	19	3.62	61.4	
6	Plain weave	1.5		2.73	41.7	
	Plain weave	1.2	18	3.03	51.3	
	Plain weave	1.1		3.13	54.8	
	Plain weave	1.0	19	3.23	58.3	
	Plain weave	0.95		3.28	60.1	
	Plain weave	0.9		3.33	61.9	
	Plain weave	0.85		3.38	63.9	
	Plain weave	0.8	21	3.43	65.8	
	Plain weave	0.75		3.48	67.7	
	6.5	Plain weave	1.1		2.81	51.6
Plain weave		1.0	19	2.91	55.4	
Plain weave		0.85		3.06	61.2	
Plain weave		0.8	21	3.11	63.3	
Plain weave		0.75		3.16	65.3	
Plain weave		0.65		3.26	69.5	
7	Plain weave	0.8	21	2.83	60.8	
	Plain weave	0.75		2.88	62.9	
	Plain weave	0.7	22	2.93	65.2	
8	Plain weave	1.2	18	1.98	38.8	
	Plain weave	1.1		2.08	42.8	
	Plain weave	1.0	19	2.18	47.0	
	Plain weave	0.95		2.23	49.2	
	Plain weave	0.9	20	2.28	51.4	
	Plain weave	0.85		2.33	53.6	
	Plain weave	0.8	21	2.38	56.0	
	Plain weave	0.75		2.43	58.4	
	Plain weave	0.7	22	2.48	60.8	
	Plain weave	0.65		2.53	63.3	
	Plain weave	0.57		2.61	67.4	
	9	Plain weave	0.9	20	1.92	46.4
		Plain weave	0.8	21	2.02	51.3
10	Plain weave	1.1		1.44	32.1	
	Plain weave	1.0	19	1.54	36.8	
	Plain weave	0.95		1.59	39.2	
	Plain weave	0.9	20	1.64	41.7	
	Plain weave	0.85		1.69	44.3	
	Plain weave	0.8	21	1.74	46.9	
	Plain weave	0.75		1.79	49.7	
	Plain weave	0.7	22	1.84	52.5	
	Plain weave	0.63	23	1.91	56.5	
	Plain weave	0.57		1.97	60.2	
	Plain weave	0.5	25	2.04	64.5	

Mesh	Weaving	Wire diameter mm	Wire No.	Opening mm	Open area %
12	Plain weave	φ 0.80	# 21	1.32	38.8
	Plain weave	0.75		1.37	41.8
	Plain weave	0.70	22	1.42	44.9
	Plain weave	0.65		1.47	48.0
	Plain weave	0.57		1.55	53.5
	Plain weave	0.50	25	1.62	58.4
	Plain weave	0.47		1.65	60.6
	Plain weave	0.45	26	1.67	62.1
	Plain weave	0.43		1.69	63.5
	Plain weave	0.40	27	1.72	65.8
14	Plain weave	0.70	22	1.11	37.6
	Plain weave	0.63	23	1.18	39.7
	Plain weave	0.57		1.24	46.9
	Plain weave	0.50	25	1.31	52.4
	Plain weave	0.47		1.34	54.8
	Plain weave	0.45	26	1.36	56.5
	Plain weave	0.43		1.38	58.1
	Plain weave	0.40	27	1.41	43.0
	Plain weave	0.37		1.44	63.3
	Plain weave	0.35	28	1.46	65.1
16	Plain weave	0.57		1.02	41.2
	Plain weave	0.50	25	1.09	47.0
	Plain weave	0.47		1.12	49.6
	Plain weave	0.45	26	1.14	51.4
	Plain weave	0.43		1.16	53.2
	Plain weave	0.40	27	1.19	56.0
	Plain weave	0.37		1.22	58.9
	Plain weave	0.35	28	1.24	60.8
	Plain weave	0.29	31	1.30	66.8
	Plain weave	0.20		1.39	76.4
18	Plain weave	0.57		0.84	35.5
	Plain weave	0.50	25	0.91	41.7
	Plain weave	0.47		0.94	44.4
	Plain weave	0.45	26	0.96	46.4
	Plain weave	0.43		0.98	48.3
	Plain weave	0.40	27	1.01	51.3
	Plain weave	0.37		1.04	54.4
	Plain weave	0.35	28	1.06	56.5
	Plain weave	0.29	31	1.12	63.1
	20	Plain weave	0.50	25	0.77
Plain weave		0.47		0.80	39.7
Plain weave		0.45	26	0.82	41.7
Plain weave		0.43		0.84	43.7
Plain weave		0.40	27	0.87	46.9
Plain weave		0.37		0.90	50.2
Plain weave		0.34		0.93	53.6
Plain weave		0.29	31	0.98	59.5
Plain weave		0.25	33	1.02	64.5

Mesh	Weaving	Wire diameter mm	Wire No.	Opening mm	Open area %
24	Plain weave	φ 0.34	#	0.72	46.1
	Plain weave	0.29	31	0.77	52.8
	Plain weave	0.25	33	0.81	58.4
28	Plain weave	0.29	31	0.62	46.4
30	Plain weave	0.34		0.51	36.0
	Plain weave	0.29	31	0.56	43.3
	Plain weave	0.26		0.59	48.0
	Plain weave	0.25	33	0.60	49.8
	Plain weave	0.22	35	0.63	54.8
32	Plain weave	0.29	31	0.50	40.1
	Plain weave	0.22	35	0.57	52.2
35	Plain weave	0.25		0.48	43.0
40	Plain weave	0.29		0.35	29.5
	Plain weave	0.25	33	0.39	37.1
	Plain weave	0.22	35	0.42	42.7
	Plain weave	0.18		0.46	51.7
	Plain weave	0.14		0.50	61.0
42	Plain weave	0.26	33	0.34	32.5
45	Plain weave	0.2		0.36	41.7
50	Plain weave	0.22		0.29	32.1
	Plain weave	0.2	36	0.31	36.8
	Plain weave	0.18		0.33	41.9
	Plain weave	0.14		0.37	52.6
60	Plain weave	0.18		0.24	32.7
	Plain weave	0.16		0.26	38.7
	Plain weave	0.14		0.28	44.4
70	Plain weave	0.14		0.22	37.3
	Plain weave	0.12	40	0.24	44.4
80	Plain weave	0.14		0.18	31.6
	Plain weave	0.12	40	0.20	39.1
	Plain weave	0.10	42	0.22	47.3
90	Plain weave	0.12	40	0.16	32.7
	Plain weave	0.10	42	0.18	41.3
100	Plain weave	0.11	41	0.144	32.1
	Plain weave	0.10	42	0.154	36.8
120	Plain weave	0.08	44	0.132	38.8
130	Plain weave	0.08	44	0.115	34.8
150	Plain weave	0.060	46	0.109	41.6
165	Plain weave	0.050	47	0.104	45.6
180	Plain weave	0.050	47	0.091	41.7
200	Plain weave	0.050	47	0.077	36.8
250	Twilled weave	0.040	48	0.062	36.9
270	Twilled weave	0.040	48	0.054	33.0
300	Twilled weave	0.040	48	0.045	28.0
325	Twilled weave	0.035	48.5	0.043	30.4
350	Twilled weave	0.030	49	0.043	34.7
400	Twilled weave	0.030	49	0.034	28.2
500	Twilled weave	0.025	50	0.026	26.0
635	Twilled weave	0.020		0.020	25.0



Nominal size: Mesh per inch	Weaving	Mesh		Wire diameter mm		Filtering grain size $\mu$ (Value for reference)
		Vertical	Horizontal	Vertical	Horizontal	
50	Plain Dutch weave	10	50	0.75	0.55	350
60	Plain Dutch weave	10	60	0.57	0.43	
64	Plain Dutch weave	12	64	0.58	0.42	
80	Plain Dutch weave	14	80	0.50	0.35	
	Plain Dutch weave	16	80	0.43	0.34	
88	Plain Dutch weave	14	88	0.50	0.33	305
100	Plain Dutch weave	14	100	0.38	0.30	250
	Plain Dutch weave	18	100	0.29	0.26	
110	Plain Dutch weave	24	110	0.38	0.28	155
	Plain Dutch weave	24	110	0.35	0.25	
120	Plain Dutch weave	20	120	0.38	0.25	
	Plain Dutch weave	20	120	0.26	0.22	
150	Plain Dutch weave	22	150	0.25	0.18	
	Plain Dutch weave	30	150	0.23	0.18	
160	Plain Dutch weave	30	160	0.23	0.18	120
	Plain Dutch weave	30	160	0.22	0.14	200
	Plain Dutch weave	30	160	0.21	0.17	
180	Plain Dutch weave	20	180	0.20	0.16	
200	Twilled Dutch weave	16	200	0.36	0.25	130
	Twilled Dutch weave	16	200	0.28	0.25	
	Twilled Dutch weave	20	200	0.29	0.25	
	Plain Dutch weave	40	200	0.18	0.14	73
250	Twilled Dutch weave	20	250	0.25	0.22	80
	Twilled Dutch weave	30	250	0.26	0.21	75
	Plain Dutch weave	50	250	0.14	0.11	65
300	Twilled Dutch weave	20	300	0.28	0.18	
	Twilled Dutch weave	25	300	0.26	0.14	
	Plain Dutch weave	30	300	0.10	0.09	
325	Twilled Dutch weave	30	325	0.18	0.17	
350	Twilled Dutch weave	20	350	0.18	0.15	68
360	Twilled Dutch weave	32	360	0.23	0.15	

Nominal size: Mesh per inch	Weaving	Mesh		Wire diameter mm		Filtering grain size $\mu$ (Value for reference)
		Vertical	Horizontal	Vertical	Horizontal	
400	Twilled Dutch weave	30	400	0.19	0.10	68
	Twilled Dutch weave	40	400	0.19	0.14	
	Plain Dutch weave	60	400	0.12	0.07	
	Twilled Dutch weave	150	400	0.07	0.053	
450	Twilled Dutch weave	40	450	0.27	0.13	
500	Twilled Dutch weave	28	500	0.18	0.11	60
	Twilled Dutch weave	30	500	0.20	0.11	
	Twilled Dutch weave	50	500	0.14	0.11	
600	Twilled Dutch weave	50	600	0.18	0.09	65
	Twilled Dutch weave	60	600	0.12	0.09	
700	Twilled Dutch weave	50	700	0.15	0.077	50
	Twilled Dutch weave	80	700	0.10	0.077	
800	Twilled Dutch weave	80	800	0.10	0.070	35
	Twilled Dutch weave	100	800	0.10	0.070	
	Twilled Dutch weave	150	800	0.07	0.053	
	Twilled Dutch weave	165	800	0.066	0.041	
1000	Twilled Dutch weave	100	1,000	0.10	0.053	28
	Twilled Dutch weave	120	1,000	0.08	0.053	
	Twilled Dutch weave	150	1,000	0.07	0.053	
1200	Twilled Dutch weave	120	1,200	0.08	0.046	
1300	Twilled Dutch weave	200	1,300	0.053	0.041	16
1400	Twilled Dutch weave	165	1,400	0.066	0.041	21
1450	Twilled Dutch weave	165	1,450	0.07	0.040	
2000	Twilled Dutch weave	270	2,000	0.04	0.028	10
2400	Twilled Dutch weave	325	2,400	0.035	0.023	5

\* For more info, please contact our sales engineer.

# **E-Fujii** Decor

-- Gabion box



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## ► Description

Gabions are wire mesh boxes, containers or baskets filled with rock to prevent soil erosion and to retain/contain soil particles.

Gabions and geotextiles are normally used together to reduce water velocities and re-capture river bed sediment in streams. Flat Gabions, called River or Reno Mattresses are widely used in river courses where soil erosion is a problem over a large flat or sloped area needing protection against soil loss or scour.

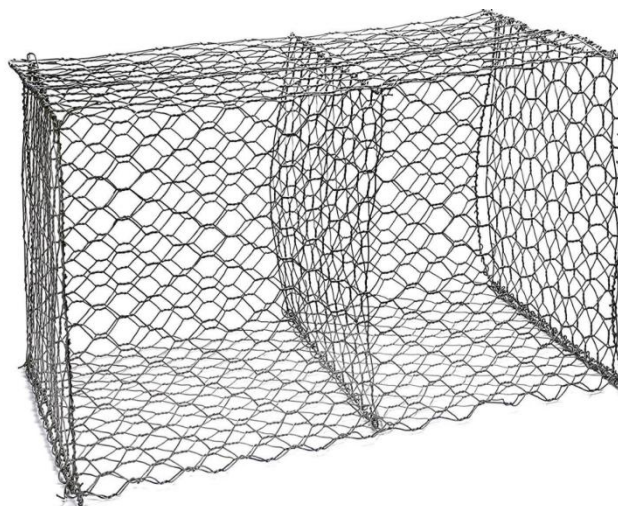
They are used mostly in the civil engineering industry especially in the construction of roadway drainage structures, however recently due to their environmental benefits are being used in many various applications and industries.

## ► Type 1 : Hexagonal Gabion Box

It' s a container that made by weaving the wire into hexagonal mesh. It is divided into several cells by inserting diaphragms every meter. The different parts of it are connected by the lacing wire. And the hexagonal mesh is reinforced by the thicker selvedge wires for higher bearing capacity and longer lifespan.

In addition, hexagonal mesh gabion mesh has huge deform ability, so it can be easily amended on site to suit project requirements.

Hexagonal mesh gabion box is mainly used for protecting river and dam from the losing of soil and water. Because compared with welded gabion box, there are no welding point on hexagonal mesh gabion box, which can resist the erosion from flood and sea water. Additional, the twisted structure can supply higher tensile strength to be used in the heavy duty application.



## Specification

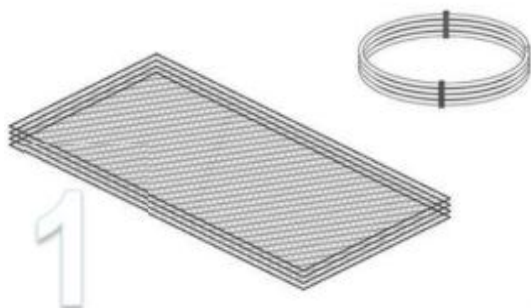
Regular specification of Hexagonal Gabion Box					
Item	Materials				
	Galvanized PVC coated		Galvanized PVC coated		
Mesh(mm)	60*80,80*100,100*120		60*80,80*100,100*120		
Mesh Wire(mm)	2.2,2.7,3.0,3.2,3.7		2.2,2.7,3.0,3.2,3.7		
Selvedge Wire(mm)	3.0,3.4,3.8		3.0,3.4,3.8		
Lacing Wire(mm)	2.2		2.2		
Regular size of Hexagonal Gabion Box					
Item	Length	Width	Height	Cell Nos.	Volume
	m	m	m		m <sup>3</sup>
HMGB-01	2	1	1	2	2
HMGB-02	3	1	1	3	3
HMGB-03	4	1	1	4	4
HMGB-04	2	1	0.5	2	1
HMGB-05	3	1	0.5	3	1.5
HMGB-06	4	1	0.5	4	2
HMGB-07	2	1	0.3	2	0.6
HMGB-08	3	1	0.3	3	0.9
HMGB-09	4	1	0.3	4	1.2

## Feature

- Easy and quick installation
- High bearing capacity, edges will not unravel or unzip.
- Huge deform ability to suit special space.
- Excellent performance in accommodating different settlements
- Galvanized wire makes it possible exposed to water without rusting.

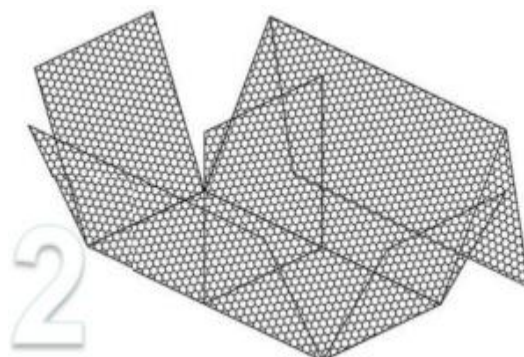


## Installation process



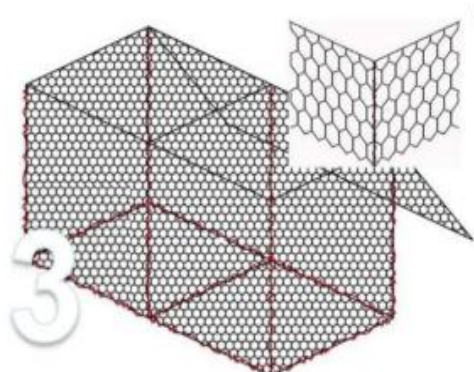
### Prepare materials

All needed gabion panels and lacing wires



### Erect each section up

Erect front, back and all diaphragms vertically



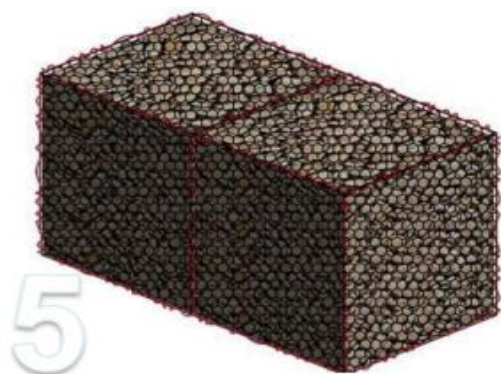
### Fasten with lacing wire

Fasten and secure each panels together with lacing wires



### Fill gabion with stone

Gabion box is filled with stones by hand or with a shovel



### Cover lid with lacing wire

When it filled with stones, covered



### Continue construction

Step by step to build your project

## Application

Hexagonal mesh gabion mesh is widely used in the coastal embankment works and hydraulic, such as dams and culverts to do the following things:

- ◆ Flood control
- ◆ Protect the roadway and bridge
- ◆ Soil erosion control to strength soil structure
- ◆ Retaining wall
- ◆ Protect the engineering of seaside area
- ◆ The control and guide of water



River bank protection



Road protection



Coastal protection



Bridge protection



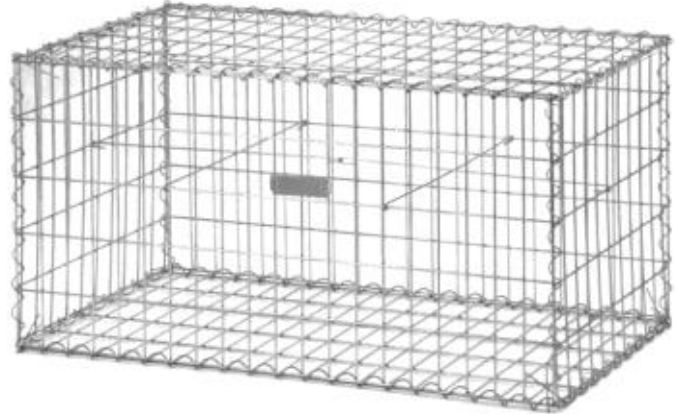
Retaining wall



Dam protection

## ▶ Type 2: Welded Gabion Box

Welded gabion box is made of steel wire with high tensile strength, then the wires are welded into a panel. Afterward we can use some mounting connections, spiral joints connection, U clip connection and hook connection, The use of these accessories can reinforce the welded gabion box, making it not easy to deform.



Because of this reason, compared with hexagonal mesh gabion box, welded gabion box is able to keep its shape and fit well with the target. In recent years, welded gabion box has become more and more popular in the decoration of garden landscape, it can be used as a flowerpot, fireplace, decorative wall and various landscape architecture.

### Feature

- Stable structure, and it is not easy to deform or crack
- Corrosion resistance and rust resistance, can be used in all weathers
- Modular structure makes installation quick and simple
- Low cost, recycle and friendly to environment
- Can be made into various shapes for decoration
- High security



## Specification

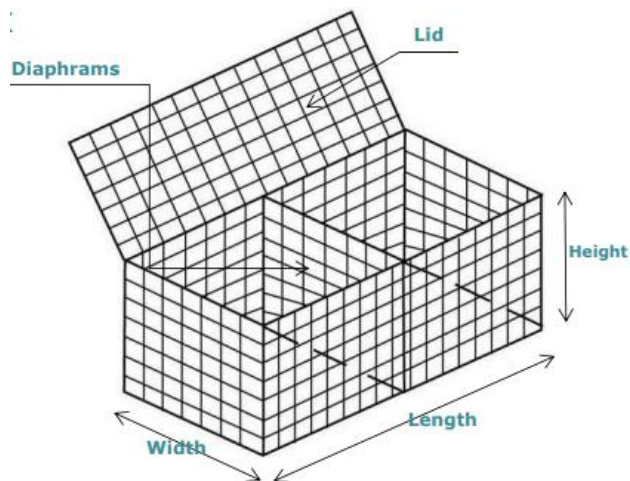
**Materials:** Galvanized wire, Galfan coated wire, PVC coating wire

**Tensile strength:** 380-550 N/mm<sup>2</sup>

**Wire diameter:** 3mm, 4mm, 5mm, 6mm

**Mesh size:** 50\*50mm, 75\*75mm, 50\*100mm, 100\*100mm

**Box size:** 2\*1\*1m, 2\*1\*0.5m, 1\*1\*1m, 1\*1\*0.5m, 1.5\*1.1m

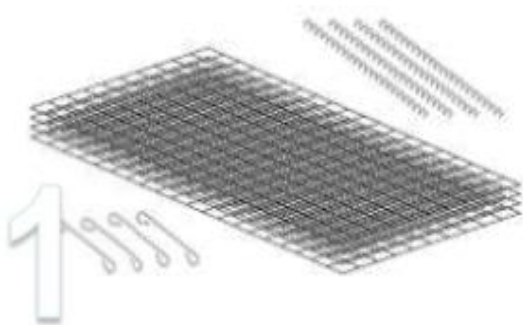


Specifications and volume of welded gabion box

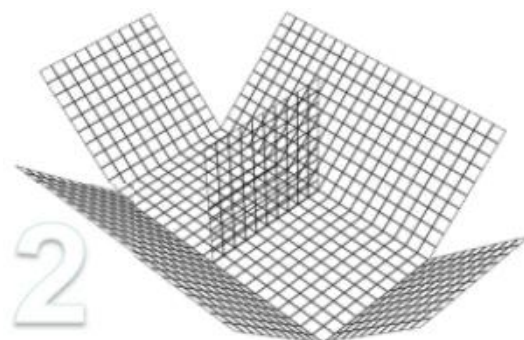
Nominal box sizes	No. of diaphragms	Capacity per box
m	No.	m <sup>3</sup>
1.0*1.1*0.5	-	0.5
1.0*1.0*1.0	-	1.0
1.5*1.0*0.5	-	0.75
1.5*1.0*1.0	-	1.5
2.0*1.0*0.5	1	1
2.0*1.0*1.0	1	2
3.0*1.0*0.5	2	1.5
3.0*1.0*1.0	2	3
4.0*1.0*0.5	3	2
4.0*1.0*1.0	3	4



## Installation process



**Prepare all needed gabion panels**  
Spiral wires and stiffeners



**The ends, diaphragms, front and back panels**  
are placed on the bottom section of gabion box vertically



**Secure panels by screwing spiral binders**  
through the mesh openings in adjacent panels



**Stiffeners shall be placed across the corners**  
Providing a diagonal bracing, and crimped over the  
line and cross wires on the front and side faces



**Filed with stones**  
Then close the lid and secure with spiral binders at  
the diaphragms, ends, front and back



**Finished**  
The lid of the lower tier may serve as the  
base of the up

## Application

Welded gabion box is widely used in the architecture and landscaping, such as:

- Free standing walls
- Cladding
- Garden and landscape
- Other features within the built environment



Gabion architecture



Coastal protection



Landscape wall



Retaining wall



Garden fence



Erosion control