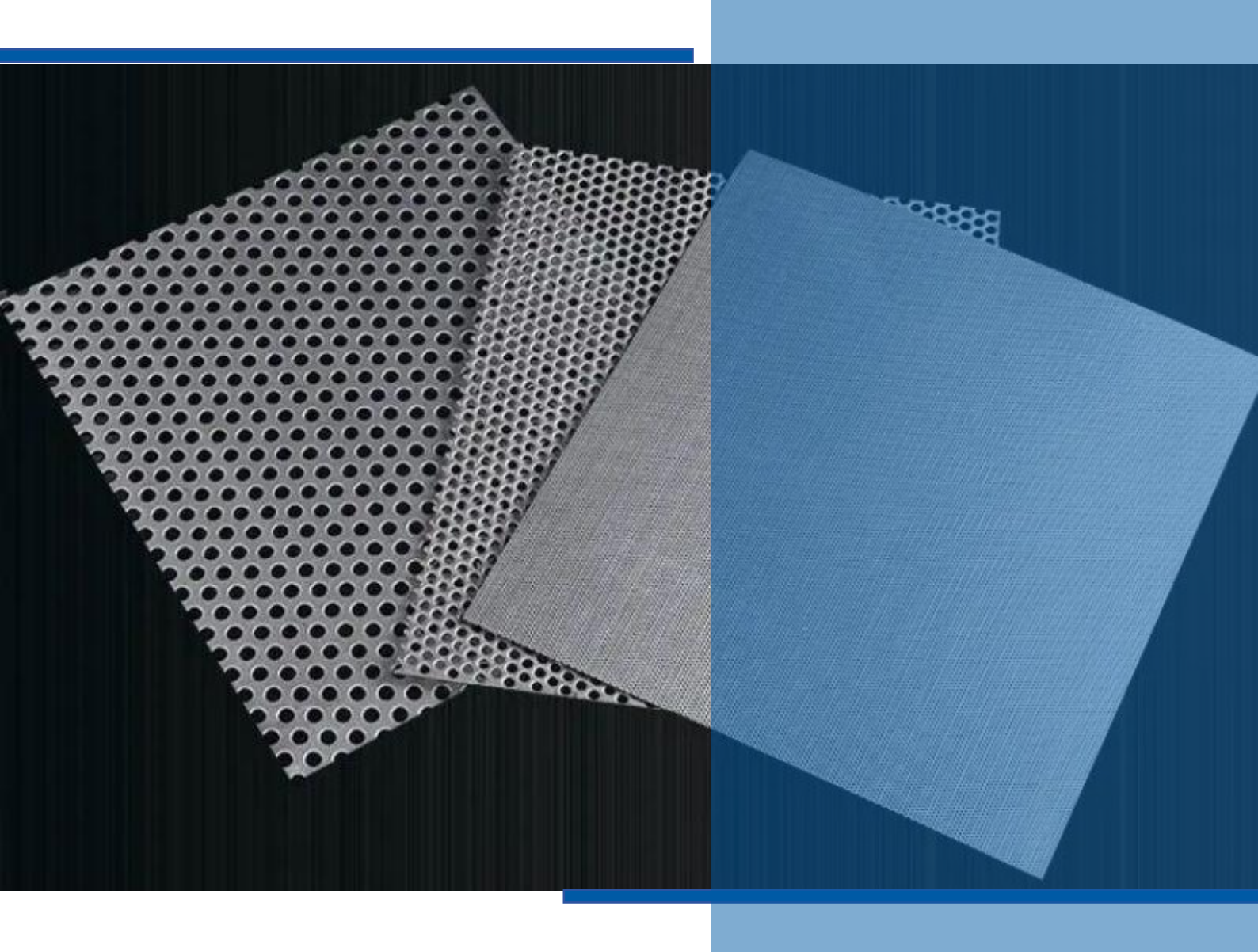




PERFORATED METAL MESH

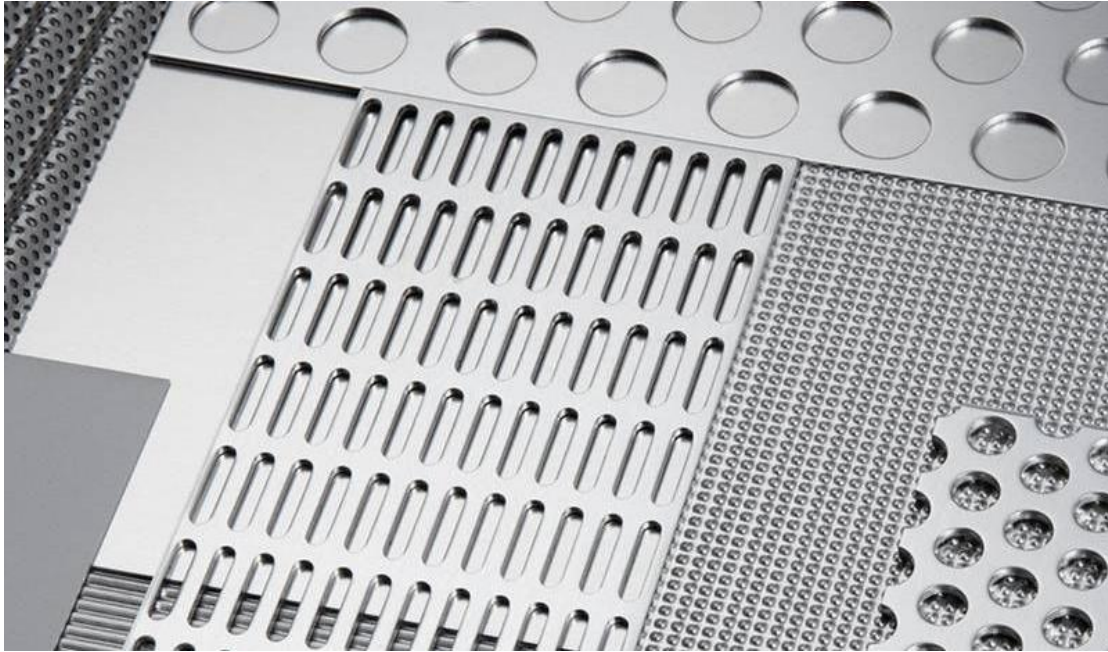


Perforated mesh

Detailed Product Specifications



Perforated mesh is ideal for many architectural and decorative metal applications. Commonly used are round holes, square holes, cross holes, etc. Different shapes give it a unique aesthetic and a wide range of uses.



Surface treatment

We offers multiple surface treatment options for different commercial and industrial applications.

- ◆ Spraying
- ◆ Polishing
- ◆ Anodizing
- ◆ Galvanized
- ◆ Powder coating
- ◆ Ant-rust oil painting
- ◆ PVDF coating

Features

- ◆ Ventilation, light and air penetration and anti-sand property.
- ◆ High strength and security.
- ◆ Perfect anti-corrosion property and rust resistance.
- ◆ Various choices in opening sizes/areas, gauges and materials, hole shapes/patterns.
- ◆ Wide application for architectural and decorative aspects.
- ◆ Aesthetic appearance.
- ◆ Low maintenance.

Specification

General:

- **Metal material:** plain steel, mild steel, carbon steel, stainless steel (302, 304, 304L, 316, 316L), aluminum, copper, brass, pre-galvanized steel, hot or cold galvanized steel, etc.
- **Surface treatment:** electric galvanized, hot dipped galvanized, PE/PVC coated, powder coating, oxidation treatment etc.
- **Thickness:** 0.2 – 25 mm.
- **Width by length:** 1000 × 2000 mm to 2000 × 6000 mm or according to customer's requirements.
- **Standard sizes (mm):** 1000 × 2000, 1000 × 2400, 1200 × 2400.
- **Hole patterns:** round hole, square hole, slotted hole, hexagonal hole, decorative hole.
- **Hole diameter:** 0.2 – 100 mm.
- **Margin types:** safe margins or no-margins.
- **SKU Type:** sheet, plank, panel, coil, piece and each.
- **Tolerances:** see table 1 – 5.

Round hole:

- **Hole size:** 0.027" – 1.0".
- **Hole centres:** 0.05" – 1.25".
- **Hole pattern:** staggered and straight row.
- **Sheet width:** 24" – 60".
- **Sheet length:** 24" – 144".
- **Open area:** 5% – 63%.

Square hole:

- **Thickness:** 11–22 gauge.
- **Hole size:** 0.2" – 0.75".
- **Hole centres:** 0.5" – 1".
- **Hole pattern:** staggered or straight row.
- **Open area:** 11% – 56%.
- **Width:** 36" – 48".
- **Length:** 24" – 120".

Slotted hole:

- **Thickness:** 14–22 gauge.
- **Hole pattern:** side staggered and straight row.
- **Slot width:** 0.125" – 0.2".
- **Slot length:** 0.1" – 0.75".
- **Slot shape:** round end and square end.
- **Slot side bar:** 0.125" – 0.25".
- **Slot end bar:** 0.125" – 0.25".
- **Open area:** 41% – 74%.
- **Panel width:** 36".
- **Panel length:** 24" – 120".

Hexagonal hole:

- **Thickness:** 14–22 gauge.
- **Hole size:** 0.25" – 0.5".
- **Hole centres:** 0.2813" – 0.5625".
- **Hole pattern:** staggered row.
- **Open area:** 35% – 80%.
- **Width:** 25" – 48".
- **Length:** 24" – 120".

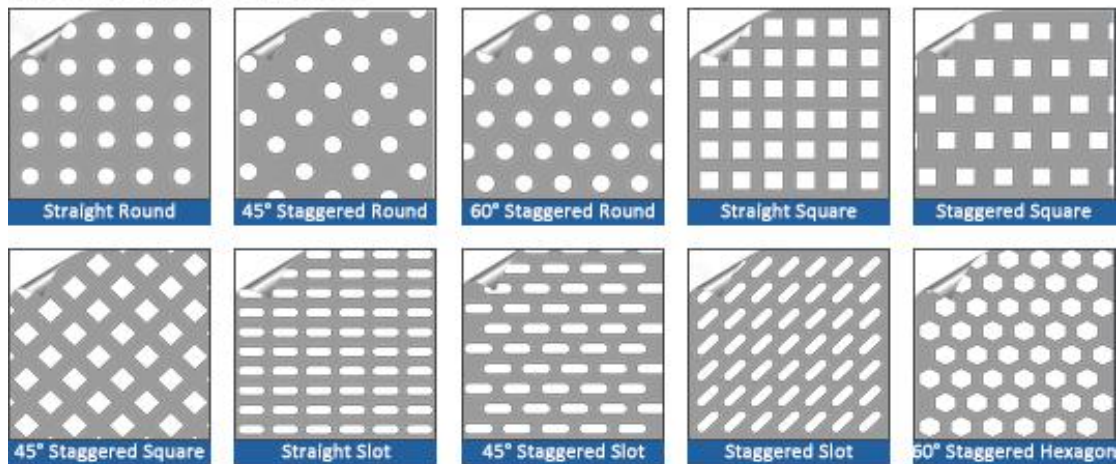
Decorative hole:

- **Open area:** 35% – 68%.
- **Thickness:** 11 – 24 gauge.
- **Width:** 36" – 48".
- **Length (span for grating):** 24" – 120".

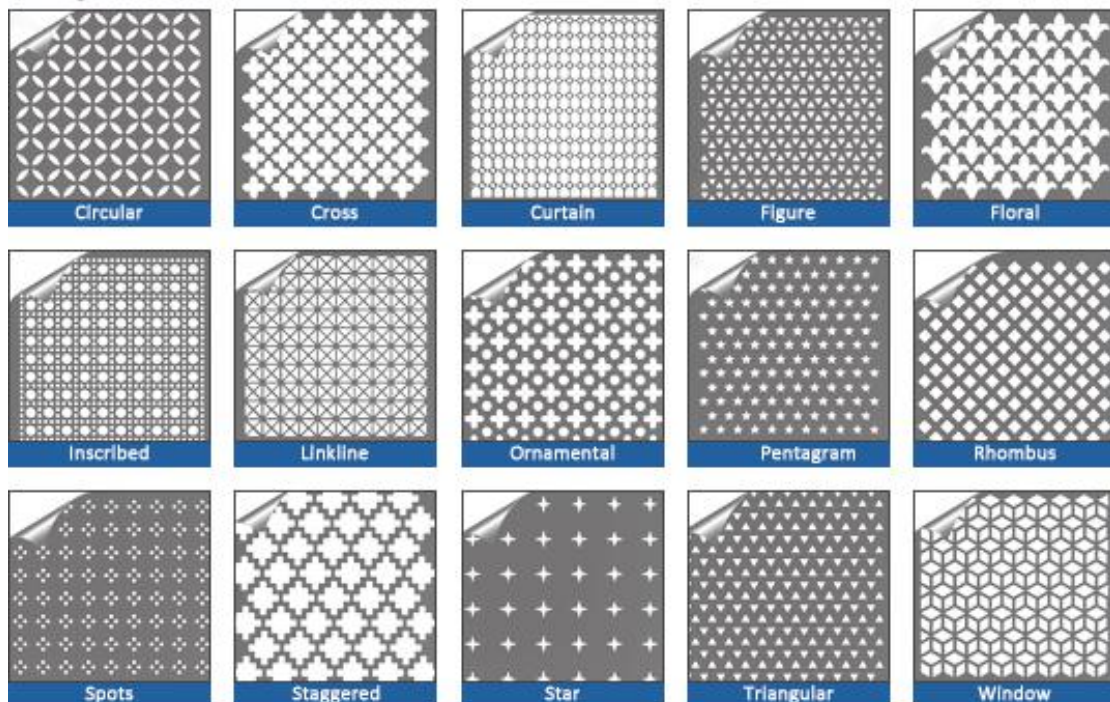
Holes patterns

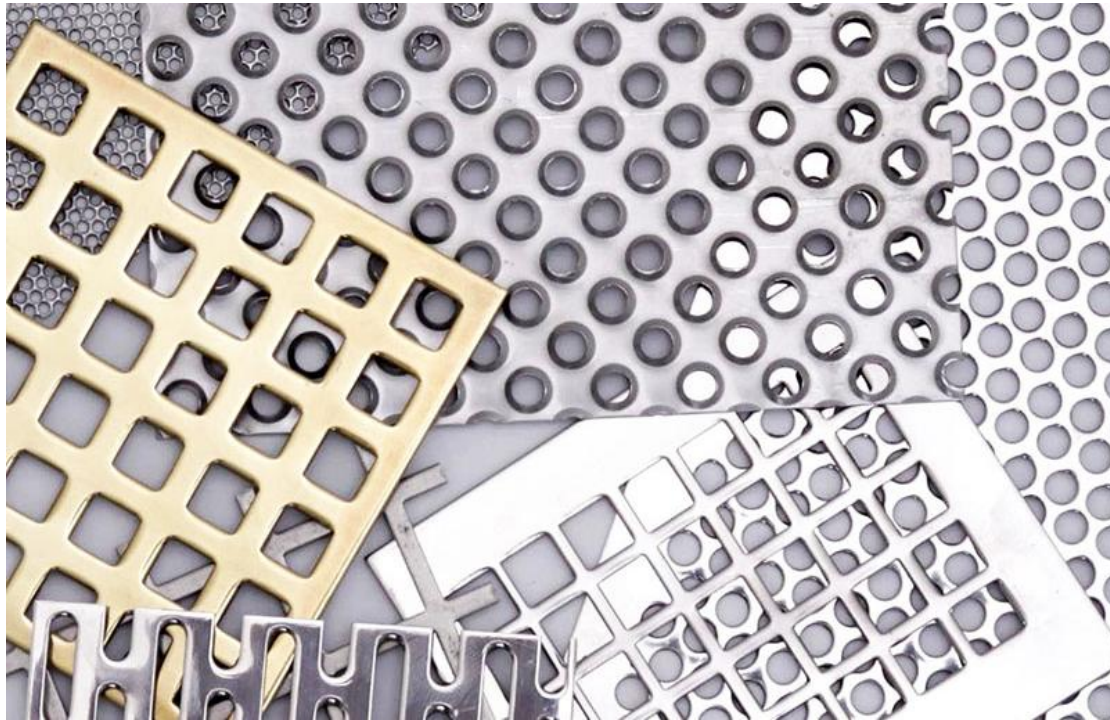
Any standard or customized Holes patterns never limited from round hole, square hole, oblong round hole, triangular hole, hexagonal hole, plum blossom hole, diamond hole, four-pointed star hole, five-pointed star, six-pointed star hole, honeycomb hole, alligator mouth hole, diamond grip strut, o grips strut, traction tread, various of ornamental hole and so on.

Normal Hole Patterns



Unique Hole Patterns





Production process

- 1.Mold design:** adjust the hole diameter and spacing as needed. So that CNC equipment can be used for punching.
- 2.Punching:** single punching (suitable for simple patterns), continuous punching (partial stacking processing), can process long holes. Multi-directional continuous punching, use small molds to process large holes.
- 3.Forming:** single forming, shallow stretching according to the shape of the mold. Continuous forming: a processing method that forms larger than the mold size. Array forming: processing multiple workpieces on a large plate. Subsequent processing: trimming, using a leveling machine to restore the deformed plate after punching to a flat state, and cleaning to remove lubricants.
- 4.Reprocessing:** cutting, labeling, packaging, degreasing, deburring, forming, annealing, painting, electroplating, welding, polishing, bending, rolling, etc., according to customer needs.
- 5.Surface treatment:** surface treatment is carried out through additional measures such as powder spraying, painting, electrogalvanizing, hot-dip galvanizing, and anodizing.
- 6.Packaging:** Perforated mesh belts, perforated mesh rolls, and perforated mesh plates are all packaged in standard export packaging.

Technical information

Steel Edge Trims:

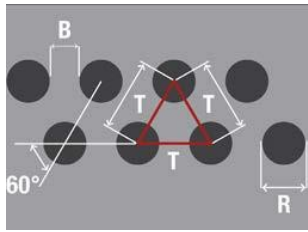
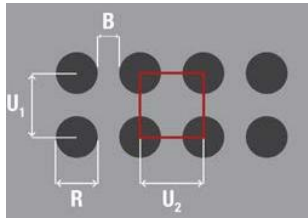
- Providing an alternative to conventional methods of framing and installation.
- Giving a smooth continuous framework.
- Removing the danger of sharp serrated edges from cutting and fabrication.
- Can be used for decorative shop fitting.

Table 1 Steel Edge Trims

Product code	Material	Standard Length	Weight "W"	Gap "G"	Thickness "T"	Weight (kg/length)
SET1	Steel	3000	12	2	1.0	0.61
SET2	Steel	3000	19	4	1.2	1.22

Technical details of holes pattern perforation:

Table 2 Round Hole Perforation Technical Details

Arrangement of Hole	Shape of Hole	Identification of Hole Pattern
Triangular Pitch	R	R T
	Calculation of open area in %	$R^2 \times 90.69 / T^2$
	Number of holes per m ²	$1,154,700 / T^2$
Rectangular Pitch	R	R U
	Calculation of open area in %	$R^2 \times 78.5 / (U_1 \times U_2)$
	Number of holes per m ²	$1,000,000 / (U_1 \times U_2)$
Diagonal Pitch	R	R M

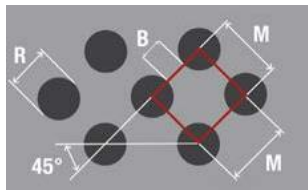
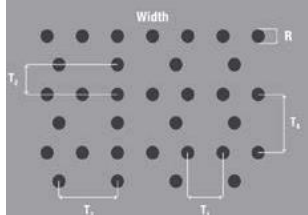
	Calculation of open area in %	$R^2 \times 78.5/M^2$
	Number of holes per m ²	1,000,000/M ²
Euro Pattern	R	Euro
	$R = 4.5$ $T_1 = 15$ $T_2 = 12.5$ $T_3 = 25$ $T_4 = 25$	

Table 3 Square Hole Perforation Technical Details

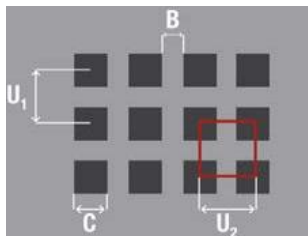
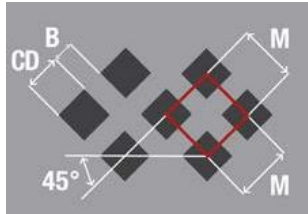
Arrangement of Hole	Shape of Hole	Identification of Hole Pattern
Rectangular Pitch	C	CU
	Calculation of open area in %	$C^2 \times 100 / (U_1 \times U_2)$
	Number of holes per m ²	$1,000,000 / (U_1 \times U_2)$
Diagonal Staggered Pitch	CD	CDM
	Calculation of open area in %	$CD^2 \times 100 / M^2$
	Number of holes per m ²	$1,000,000 / M^2$

Table 4: Slot Hole Perforation Technical Details

Arrangement of Hole	Shape of Hole	Identification of Hole Pattern
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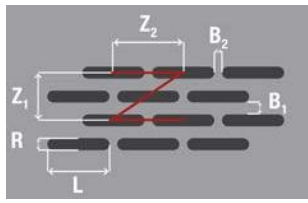
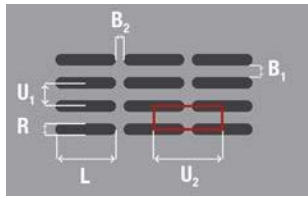
Staggered Pitch	LR	LRZ
	Calculation of open area in %	$(L \times R - 0.2146 R^2) \times 100 / (0.5 \times Z_1 \times Z_2)$
	Number of holes per m ²	$1,000,000 / (0.5 \times Z_1 \times Z_2)$
Rectangular Pitch	LR	LRU
	Calculation of open area in %	$(L \times R - 0.2146 R^2) \times 100 / (U_1 \times U_2)$
	Number of holes per m ²	$1,000,000 / (U_1 \times U_2)$

Table 5: Hexagonal Hole Perforation Technical Details

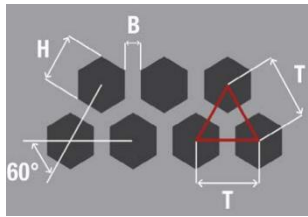
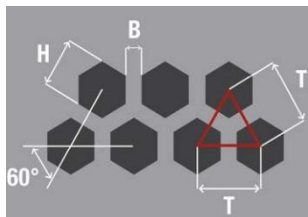
Arrangement of Hole	Shape of Hole	Identification of Hole Pattern
Triangular Pitch	H	HT
	Calculation of open area in %	$H^2 \times 100 / T^2$
	Number of holes per m ²	$1,154,700 / T^2$

Table 6: Decorative Hole Perforation Technical Details

Arrangement of Hole	Shape of Hole	Identification of Hole Pattern
Club Pattern	CPR	CPRM
	N/A	

Tolerances:

Table 7: Standard Circle Shearing Tolerances

Heavy Gauge	Light Gauge
11 gauge carbon steel	24 gauge carbon steel
16 gauge stainless steel	24 gauge stainless steel
Maximum and minimum	3" – 48" diameter: tolerance of $\pm 1/8"$, except 11 gauge which has a tolerance of $\pm 3/16"$.

Table 8: Standard Flatness Tolerances for Sheets

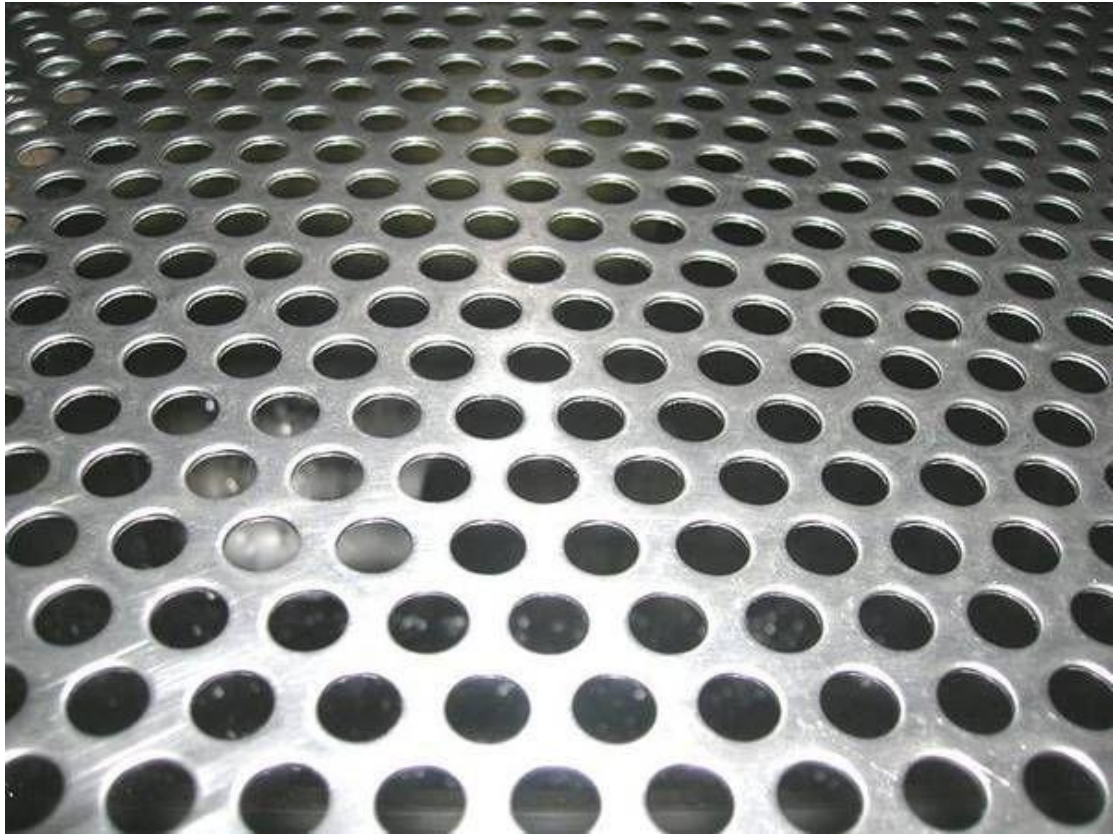
Sheet Thickness	Widths	Tolerances
16 gauge and heavier	Up to and including 60"	1/2"
	Between 60" and 70"	3/4"
	Over 72"	1"
17 gauge and lighter	Up to and including 36"	1/2"
	Between 36" and 60"	3/4"
	Over 60"	1"

Table 9: Standard Flatness Tolerances for plates

Thickness	To 36"	36" to 48"	48" to 60"	60" to 72"	72" to 84"
To 1/4"	5/8"	7/8"	1-1/16"	1-3/8"	1-1/2"
1/4" to 3/8"	9/16"	3/4"	7/8"	1-1/16"	1-1/4"
3/8" to 1/2"	1/2"	5/8"	11/16"	3/4"	7/8"
1/4" to 3/4"	7/16"	9/16"	5/8"	11/16"	3/4"

Table 10: Standard Thickness Tolerance

Gauge	Plain (carbon) Steel		Stainless Steel		Aluminum	
	Decimal	Tolerance	Decimal	Tolerance	Decimal	Tolerance
30	0.0120	0.0140" 0.0100"	0.0125	N/A	0.010	N/A
28	0.0149	0.0170" 0.0130"	0.0156	0.0166 0.0136	0.012	N/A
26	0.0180	0.0200" 0.0160"	0.0178	0.0193 0.0163	0.016	0.0175" 0.0145"
24	0.0239	0.0270" 0.0210"	0.0235	0.0240 0.0220	0.020	0.0220" 0.0180"
22	0.0299	0.0330" 0.0270"	0.0293	0.0313 0.0273	0.025	0.0270" 0.0230"
20	0.0359	0.0390" 0.0330"	0.0355	0.0375 0.0335	0.032	0.0340" 0.0300"
18	0.0478	0.0520" 0.0440"	0.0480	0.0510 0.0450	0.040	0.0425" 0.0375"
16	0.0598	0.0650" 0.0550"	0.0595	0.0615 0.0565	0.050	0.0430" 0.0470"
14	0.0747	0.0817" 0.0677"	0.0781	0.0821 0.0741	0.063	0.0660" 0.0600"
12	0.1046	0.1146" 0.0946"	0.1094	0.1144 0.1044	0.080	0.0835" 0.0765"
11	0.1196	0.1296" 0.1096"	0.1250	0.1300 0.1200	0.090	0.0935" 0.0865"
10	N/A	N/A	0.1406	0.1466 0.1346	0.100	0.0104" 0.0996"
8	N/A	N/A	0.1650	0.1720 0.1580	0.125	0.1295" 0.1205"
3/16"	0.1875	0.2050" 0.1780"	N/A	N/A	N/A	N/A
1/4"	0.2500	0.2700" 0.2400"	N/A	N/A	N/A	N/A
5/16"	0.3125	0.3330" 0.3030"	N/A	N/A	N/A	N/A
3/8"	0.3750	0.3980" 0.3650"	N/A	N/A	N/A	N/A



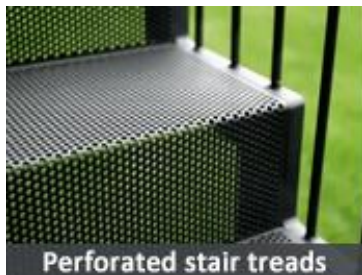
Uses of Perforated Mesh

Application of round hole perforated mesh

- ◆ Architecture
- ◆ Environmental protection and filtration
- ◆ Food and medicine
- ◆ Daily and industrial

Application of elliptical hole perforated mesh

- ◆ **Ventilation and filtration:** ventilation ducts, vents. Filters, filter screens, remove impurities and suspended matter in water.
- ◆ **Industrial equipment:** filter components of chemical machinery, food and beverage machinery.



Application of square hole perforated mesh

- ◆ Screening and filtration
- ◆ Daily necessities

Application of oblong hole (rectangular) perforated mesh

- ◆ Vibrating screen and filtration
- ◆ Industrial equipment

Application of hexagonal hole perforated mesh

- ◆ Architecture and decoration
- ◆ Industrial protection



Application of other hole types

Filtration: Filtration and protection of chemical machinery, pharmaceutical equipment, food and beverage machinery.

Textile: fine parts in the fields of handicraft production, papermaking hydraulic accessories, etc.

