

# BOYD

C O R P O R A T I O N

## METAL WIRE CLOTH

One Company, Many Solutions

Precision Components

Fabricated Solutions

Global Presence

## METAL WIRE MESH

Boyd metal wire mesh is widely used in the electronics, industrial, chemical, mining, transportation and aerospace industries for filter and acoustic applications. Wire mesh is available in many different metals, colors, weave types, sintered and non-sintered. Most metal wire mesh offers great acid, alkali, heat and wear resistance. Custom materials, colors, weave types and mesh counts are available by request. Please see Boyd Sales for custom information.

### Standard Materials:

- Stainless Steel 302
- Stainless Steel 304
- Stainless Steel 304L
- Stainless Steel 316
- Stainless Steel 316L
- Stainless steel properties allow for long life parts in severe corrosion and temperature environments. SS304 is the most common blend for wire mesh.
- Aluminum
- Aluminum is a light weight solution offering good electrical conductivity and atmospheric corrosion resistance.
- Nickel
- Nickel is excellent for applications requiring corrosion resistance, except in sulfuric environments. Nickel is common for petrochemical and heat treat applications.
- Brass
- Brass offers good formability and lower conductivity, higher tensile strength than copper. Brass also resists corrosion.
- Copper
- Copper offers good formability, great electrical and thermal conductivity, and corrosion resistance in water, alkaline solutions and atmosphere. Tensile strength is lower than Brass.
- Bronze
- Bronze offers better corrosion resistance but less tensile strength than Brass.
- Titanium
- Titanium is light weight, high strength and excellent for corrosion resistance in salt water, atmosphere, metallic salts, chlorides, hydroxides and various acids.

### Filter Applications:

- Filtration
- Separation
- Screening
- Sieving
- Sifting
- Sorting
- Sizing
- Extraction
- Conveying
- EMI Shielding
- Breather Vents

### Mesh Types:

- Plain Weave
- Twill Weave
- Dutch Weave
- Reverse Dutch Weave
- Five-Heddle Weave
- Square Wire Mesh
- Crimped Wire Mesh
- Galvanized Wire Mesh
- Perforated Metal

## ACOUSTIC APPLICATIONS

Boyd metal wire mesh is often used in acoustic applications. It is uniformly woven with consistent mesh openings to produce reliable acoustical performance - resulting in predictable sound transmission and damping. The performance of acoustic mesh is a function of airflow resistance - please see Boyd Sales for air flow testing specific to your application.

### Acoustic Applications:

- Mobile phones
- MP3 players
- Home entertainment
- Home video
- PDAs
- Automotive
- Headsets
- Microphones
- Speakers

### Features:

- Predictable sound transmission and damping
- Regulates and controls airflow
- High mechanical strength
- High workability
- Color treatment available for aesthetic applications

**Boyd houses a Quality Control Department approved by a leading audio equipment design and manufacturing OEM with air flow testing capabilities for continuous air permeability control and consistent performance in acoustic applications.**

## STAINLESS STEEL WIRE MESH

Boyd stainless steel wire mesh offers great acid, alkali, heat and wear resistance. It is widely used in the chemical, mining, aerospace, industrial and electronics industries.

### Weave Types:

- Plain
  - Plain is the most common weave. Matching diameter warp and shute wires are woven in a simple over / under pattern producing screens with the same mesh count in both directions. This creates a square opening screen.
- Twill
  - Each shute wire passes over / under 2 warp wires in twill weave. Higher diameter wires can be used for higher mechanical strength, density and corrosion resistance.



SPECIFICATIONS		
Mesh Count/Inch	Wire Gauge (SWG)	Aperture (mm)
3 x 3	14	6.27
4 x 4	16	4.27
5 x 5	18	3.86
6 x 6	18	3.04
8 x 8	20	2.26
10 x 10	20	1.63
20 x 20	30	0.95
30 x 30	34	0.61
40 x 40	36	0.44
50 x 50	38	0.36
60 x 60	40	0.30
80 x 80	42	0.21
100 x 100	44	0.172
120 x 120	44	0.130
150 x 150	46	0.108
160 x 160	46	0.097
180 x 180	47	0.090
200 x 200	47	0.077
250 x 250	48	0.061
280 x 280	49	0.060
300 x 300	49	0.054
350 x 350	49	0.042
400 x 400	50	0.0385

### Stainless Steel Materials:

- 302
- 304
- 304L
- 316
- 316L

## DUTCH WOVEN WIRE MESH

Boyd dutch woven wire mesh offers great acid, alkali, heat and wear resistance and is commonly used for fine filtration due to high mechanical strength properties. It is widely used in the chemical, mining, medical, aerospace, industrial and electronics industries.



### Weave Types:

- Plain Dutch Weave
  - Woven with a standard over / under pattern with heavier warp wires. Causes shute wires to weave very close together, creating a high density mesh with low flow rates, high strength and high particle retention.
- Twilled Dutch Weave
  - Woven 2 over / 2 under with a smaller diameter shute wire, creating a tighter weave and higher particle retention than Plain Dutch Weave.
- Reverse Dutch Weave
  - Woven reverse to Plain Dutch Weave, heavier shute wires are woven with lighter warp wires maintaining strength and particle retention, simply in reverse direction.
- Five-Heddle Weave
  - High strength, rectangular opening high flow rate weave.

### SPECIFICATIONS

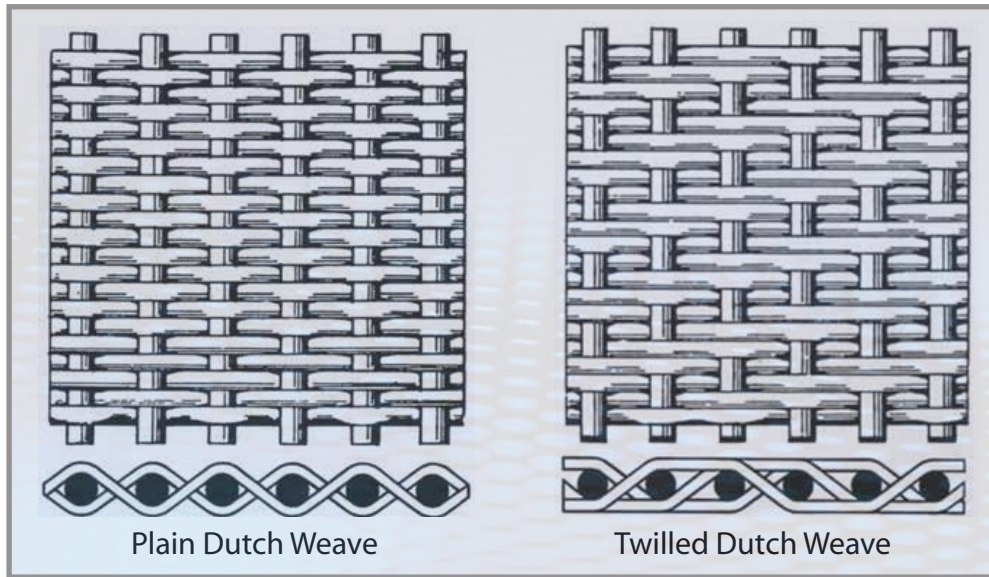
Mesh Count/Inch	Wire Gauge (SWG)	Wire Diameter (mm)	Aperture (microns)
8 x 62	32	0.63 x 0.45	300
10 x 79	40	0.50 x 0.355	250
12 x 64	48	0.58 x 0.40	280
14 x 88	55	0.40 x 0.30	180
19 x 140	76	0.315 x 0.20	140
20 x 300	80	0.35 x 0.20	-
24 x 110	95	0.355 x 0.25	120
25 x 140	100	0.28 x 0.20	100
30 x 150	120	0.25 x 0.18	80
35 x 175	140	0.224 x 0.16	71
40 x 200	160	0.20 x 0.14	60
45 x 250	180	0.16 x 0.112	56
50 x 250	200	0.14 x 0.11	53
55.5 x 280	220	0.14 x 0.10	50
65 x 330	240	0.11 x 0.08	36
70 x 350	280 (1)	0.11 x 0.08	35
70 x 385	280 (2)	0.11 x 0.07	32
78 x 700	300	0.11 x 0.08	30
80 x 400	315 (1)	0.10 x 0.065	40
80 x 600	315 (2)	0.10 x 0.06	-
80 x 800	315 (3)	0.15 x 0.04	-
81 x 780	320	0.10 x 0.07	30
90 x 550	354	0.12 x 0.05	-

### Materials Available:

- SS 302
- SS 304
- SS 304L
- SS 316
- SS 316L
- Nickel
- Brass
- Low-Carbon Steel



## DUTCH WOVEN WIRE MESH



SPECIFICATIONS			
Mesh Count/Inch	Wire Gauge (SWG)	Wire Diameter (mm)	Aperture (microns)
91 x 787	360	0.10 x 0.07	25
101 x 900	400	0.10 x 0.063	20
120 x 400	472	0.10 x 0.075	-
127 x 1100	500	0.07 x 0.05	17
160 x 1500	630	0.063 x 0.04	15
165 x 400	650 (1)	0.071 x 0.06	-
165 x 600	650 (2)	0.071 x 0.05	-
165 x 800	650 (3)	0.071 x 0.05	25
165 x 1100	650 (4)	0.071 x 0.045	-
165 x 1400	650 (5)	0.071 x 0.04	16
174 x 1700	685	0.063 x 0.032	13
200 x 600	787 (1)	0.071 x 0.06	-
200 x 800	787 (2)	0.071 x 0.05	-
200 x 1400	787 (3)	0.071 x 0.04	12
202 x 1760	795	0.05 x 0.032	10
216 x 1860	850	0.045 x 0.030	9
254 x 2000	1000	0.04 x 0.028	8
285 x 2235	1125	0.036 x 0.025	7
312 x 2100	1228	0.035 x 0.025	-
318 x 2235	1250	0.036 x 0.025	-
325 x 2300	1280	0.035 x 0.025	5
400 x 3100	1575	0.035 x 0.019	3

## REVERSE DUTCH WOVEN WIRE MESH

Boyd reverse dutch woven wire mesh is ideal for fine filtration and is highly durable. High mechanical strength promotes it to be widely used in the chemical, mining, industrial, medical and electronics industries.

**Materials Available:**

- SS 302      - SS 316L
- SS 304      - Bronze
- SS 304L    - Brass
- SS 316      - Copper



SPECIFICATIONS		
Mesh Count/Inch	Wire Diameter (mm)	Absolute Filter Rating (microns)
63 x 18	0.40 x 0.60	220
107 x 20	0.24 x 0.60	210
170 x 40	0.20 x 0.45	130
132 x 32	0.20 x 0.40	105
171 x 46	0.15 x 0.30	85
290 x 75	0.09 x 0.20	55
615 x 102	0.04 x 0.16	42
615 x 130	0.04 x 0.13	22
720 x 150	0.036 x 0.10	17
850 x 155	0.03 x 0.10	19

## FIVE HEDDLE WEAVE WIRE MESH

Boyd five heddle weave wire mesh offers unique rectangular opening design with high flow rate and mechanical strength that can assist with increased drainage and flow properties. It is commonly used in waste water treatment processing, water filtration and mining. Naturally smooth surface on one side.

**Materials Available:**

- SS 304      - SS 316L
- SS 304L    - SS 310S
- SS 316      - SS 321

SPECIFICATIONS			
Mesh Count/Inch	Wire Diameter (mm)	Aperture (mm)	Open Area %
108 x 59	0.160	0.075 x 0.271	20
110 x 60	0.160	0.071 x 0.263	19
38 x 38	0.150	0.518 x 0.518	60

## SQUARE WIRE MESH

Boyd square wire mesh is typically used in acid and alkali conditions for screens and filtration. Common industries include oil and chemical.

<b>Materials Available:</b>		<b>Weave Types:</b>
- SS 304	- SS 316	- Plain
- SS 321	- SS 316L	- Twill
- SS 304L	- SS 310S	
- H80 Brass	- SS Q195	
- Nickel	- Titanium	
- Galvanized		

SPECIFICATIONS		
Mesh Count/Inch	Wire Diameter (mm)	Aperture (mm)
7 x 7	1.00	2.63
10 x 10	0.60	1.94
18 x 18	0.35	1.06
20 x 20	0.40	0.87
30 x 30	0.30	0.55
40 x 40	0.23	0.40
50 x 50	0.20	0.31
60 x 60	0.15	0.27
70 x 70	0.12	0.24
80 x 80	0.13	0.19
90 x 90	0.12	0.16
100 x 100	0.10	0.15
150 x 150	0.063	0.11
180 x 180	0.053	0.09
200 x 200	0.053	0.07
250 x 250	0.040	0.063
300 x 300	0.040	0.044
325 x 325	0.035	0.043
400 x 400	0.030	0.033
450 x 450	0.028	0.028
500 x 500	0.025	0.026
635 x 635	0.018	0.022

## CRIMPED WIRE MESH

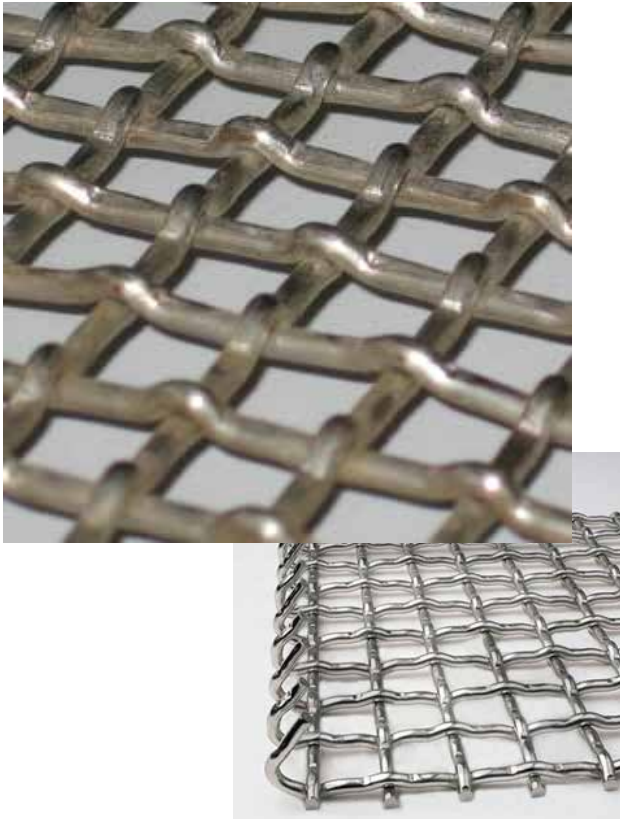
Boyd crimped wire mesh offers weaving with pre-crimped wire for added strength. This style of wire mesh is typically used as screens and filters for the mining, construction and industrial markets.

**Materials Available:**

- SS
- Iron
- Copper
- Brass

**Weave Types:**

- Double Crimp
- Intermediate Crimp



SPECIFICATIONS	
Wire Diameter (mm)	Aperture (mm)
4.00	40
4.00	30
4.00	25
3.20	25
3.20	20
2.60	20
2.60	18
2.60	15
2.00	8
1.80	7
1.80	6
1.60	3
1.40	4
1.20	6

## GALVANIZED WIRE MESH

Boyd galvanized wire mesh is made from galvanized iron wire. The wire can be hot dipped or electrically galvanized before or after weaving and is typically used for window screens or sieves. Available in 5 gauge to 40 gauge wire. Please see Boyd sales for more information.



## ALUMINUM WIRE MESH

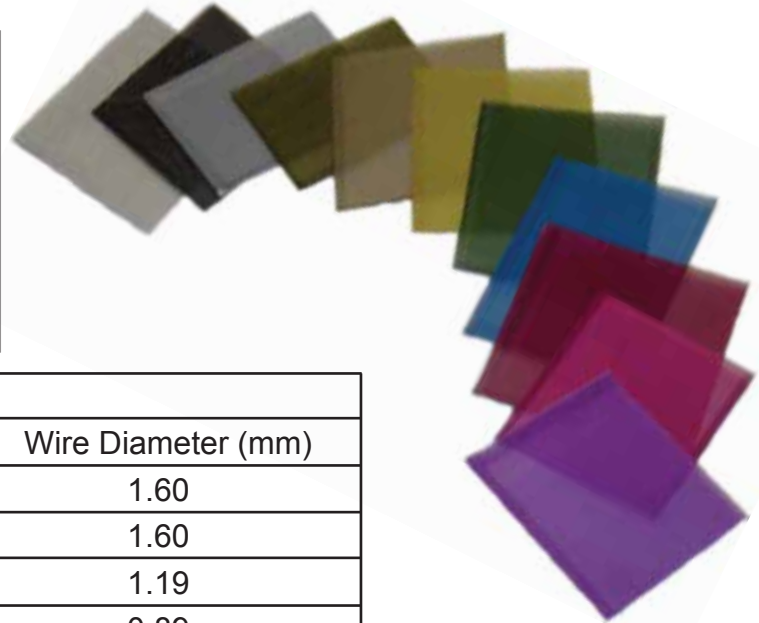
Boyd aluminum wire mesh is lightweight, corrosion resistant and offers a high strength to weight ratio. It can be treated to color-match most projects and is an economical alternative to stainless steel wire mesh.

### Weave Types:

- Plain
- Twill

### Custom Colors:

- Black
- Gold
- Green
- Brown
- Grey
- Red
- Pink
- Violet
- Blue
- Natural
- Olive
- Others available by request

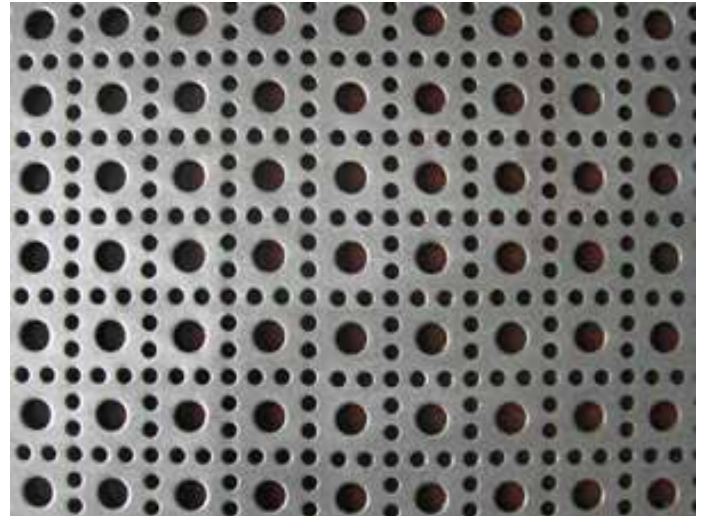
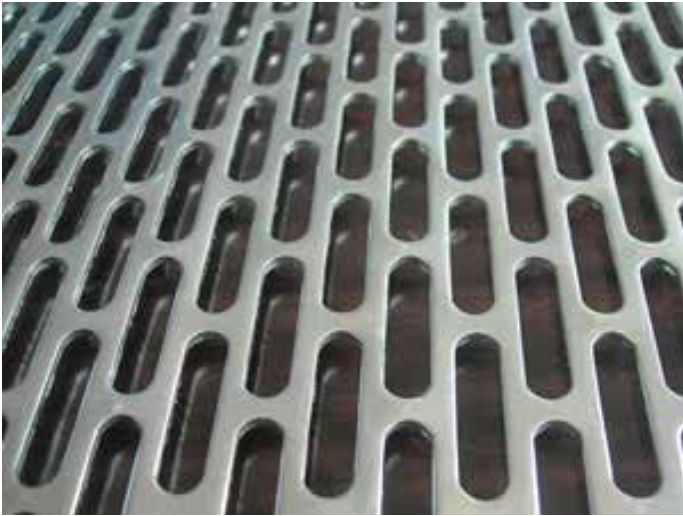


SPECIFICATIONS	
Mesh Count/Inch	Wire Diameter (mm)
2 x 2	1.60
4 x 4	1.60
4 x 4	1.19
6 x 6	0.89
8 x 8	0.71
10 x 10	0.64
12 x 12	0.58
14 x 14	0.51
16 x 16	0.46
20 x 20	0.41
30 x 30	0.28
40 x 40	0.25
50 x 50	0.23
100 x 100	0.10



## PERFORATED METAL

Boyd perforated metal is available in any pattern. Standard patterns are round, rectangular, square, triangle, diamond, hexagonal, cross and slotted. Patterns customized to specific requirements available by request. Standard materials are stainless steel, brass and bronze. Color treatment available.



Please see Boyd Sales with your specific needs.