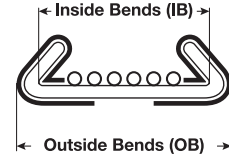


# **BISON STEEL**

**PRESSURE WELDED  
HIGH CARBON WIRE  
HIGH LIFE SCREENS**

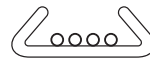
# How to order a Screen from Bison Steel

- QUANTITY** - Number of screens on each specification, listed separately.
- WIRE**
  - Diameter of wire in thousands of an inch.
  - Type - The standard is a high wear resistant carbon steel. Stainless steel can also be provided.
- OPENING** - Clear opening between wires. Specify both openings for slotted screens.
- WIDTH** - Outside (OB) or inside (IB) bend dimension on hooked edge. Outside measurement (OB) is preferred. The normal tolerance is  $\pm 0.00$ " and  $-1/2$ ".
- LENGTH** - Length of screen, including overlap if required.
- TYPE OF EDGE** - Type of edge preferred.
  - If one hook is bent up and the other down, designate by adding "Z" after type, i.e. BZ, CZ, DZ or EZ.
  - pieces without special edge applications can be cut to your dimensions.

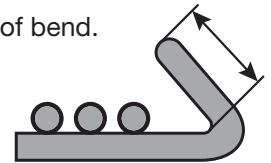
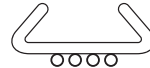


- DEGREE OF BEND** - Specify if other than  $135^\circ$  outside,  $45^\circ$  inside.
- BEND MEASUREMENT** - Height of bend is measured from the top of the hook to the inside of bend.
- SURFACE** - Smooth or rough surface, at no extra charge.

Smooth Surface, i.e. hooked wires on bottom →



Rough surface, i.e. hooked wires on top →



- ARCHING** - Welded screens must be arched to fit crowned decks. The deck profile must be either measured or the information obtained from the equipment manufacturer where possible.
- HOOK STRIPS** - Length of hook strips if not the same as screen length. If notching is required, please specify.
- LAP SIZE** - Overhang for lapping (if any) and length of sheet metal edge. A 1" lap is standard and corners are notched in this case.
- OTHER INFORMATION** - Please provide any other information available, such as:
  - Direction of flow.
  - Type of equipment
  - Name of equipment manufacturer

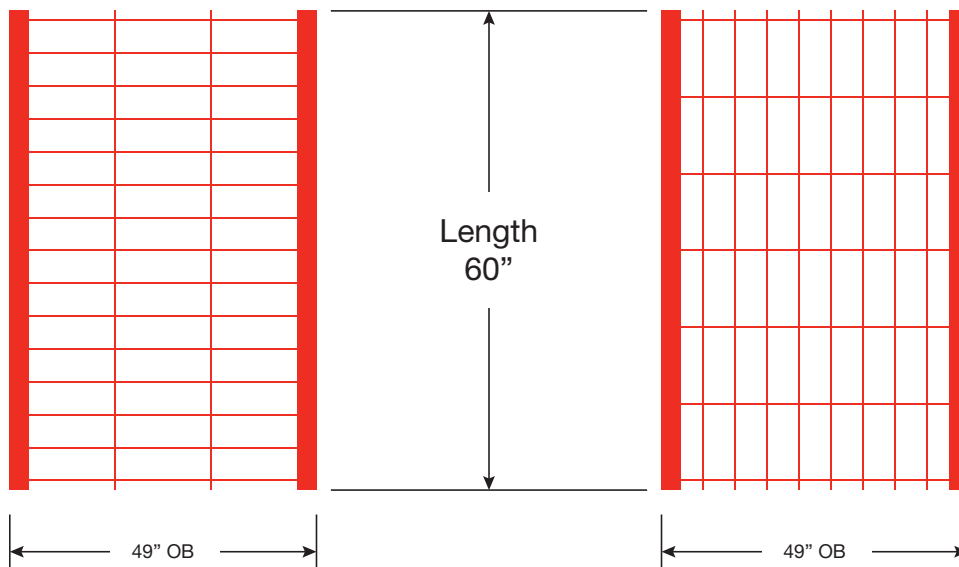
## Slotted Screens

On Slotted Screens, the direction of the slot should be clearly specified. Usually the best way is to specify "long slots parallel to 49" dimension" as in Example 1 below.

In those few cases where the length and OB dimensions are the same (e.g., if OB above were 60"), it is necessary to tell the direction of long slots in relation to the length. Example 2, "long slots parallel to the length."

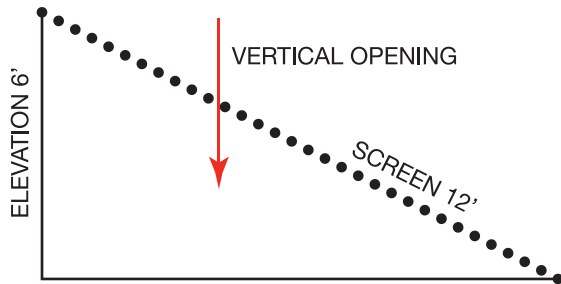
EXAMPLE 1

EXAMPLE 2



## Vertical Opening of Flat Tilted Screen

At times it may be desirable to know the vertical opening of a flat tilted screen. Bison Steel has devised a formula for this problem.



O = vertical opening

S = space or opening of wire mesh on inclined plane (inches)

D = diameter of wires on the inclined plane (inches)

$\delta$  = elevation of highest end of screen above the lowest end of screen (in feet) / length of screen (in feet)  
In example,  $\delta = 6 / 12$  or 0.5

### FORMULA:

$$O = (\sqrt{1 - \delta^2}) (S + D) - D$$

## Hardness

150 Kg. "Brale" "Rockwell" Hardness Tester	3000 Kg. Brinell Hardness Brinell Hultgren 10mm Ball
60	614
55	547
50	484
45	426
40	372
35	322
30	283
25	255
20	230

## Credit Terms

Terms of payment are 30 days.

## Prices

Quoted are valid for 30 days.

## Conditions of Sale

Orders will be shipped pre-paid by truck, with charges added to the invoice. Unless instructed otherwise, Bison Steel will select the carrier. Orders may not be canceled after manufacture begins. Screens furnished to customer specifications cannot be returned without authorization and specific shipping instructions from Bison Steel.

## Quantity Purchases

Prices are more favorable if more screens of the same specifications are ordered at the same time.

## Wire Cloth Tolerances

TOLERANCES ON OPENINGS FOR SPACE CLOTH	
OPENING	TOLERANCE (+ OR -)
<b>Inches</b>	<b>Inch</b>
Over 1/2 to 3/4 incl.	.020
Over 3/4 to 1 incl.	.030
Over 1 to 1-1/2 incl.	.045
Over 1-1/2 to 3 incl.	.075
Over 3	.100



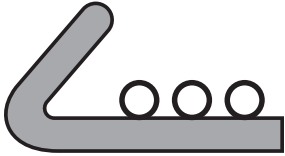
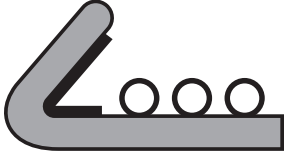
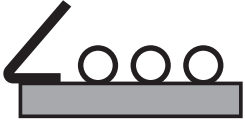
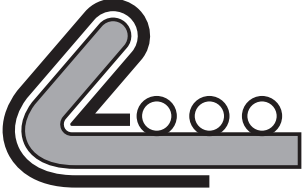

# BISON STEEL, INC.

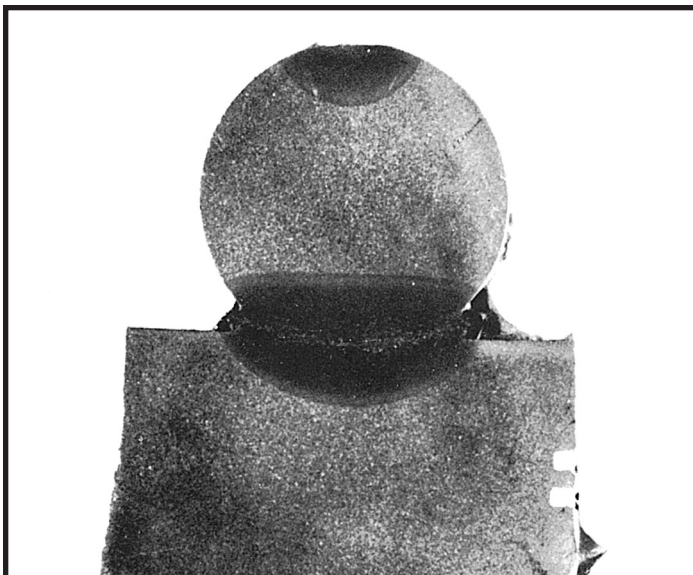
2 Main Street, Depew, New York 14043

Phone: (716) 683-0900 • Fax (716) 683-3529

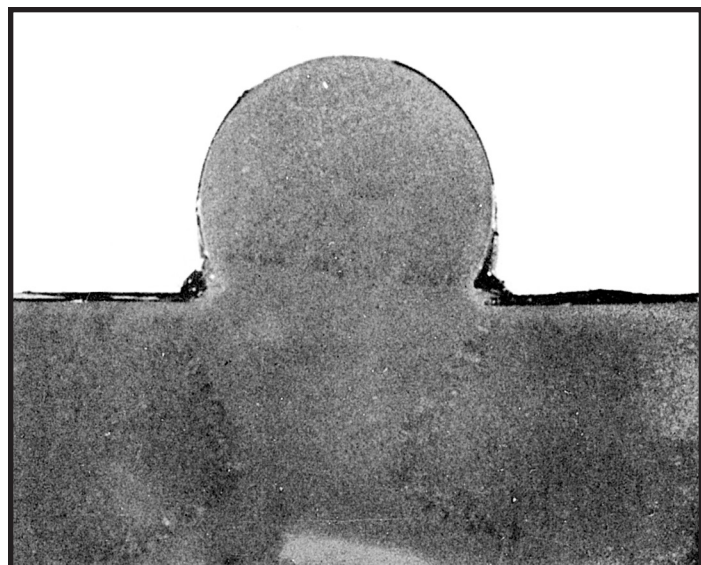
Email: [contact@bisonsteelinc.com](mailto:contact@bisonsteelinc.com)

# Edge Preparations

	TYPE	DESCRIPTION
	<b>B</b>	Standard Hooked Edge
	<b>C</b>	Hooked Edge with Steel Support Strip
	<b>D</b>	Prefabricated Steel Angle Welded on Screen
	<b>E</b>	Shrouded Hooked Edge
	<b>G</b>	General, No Hook



25x magnified joint cross-section **before** proprietary process.



25x magnified joint cross-section **after** proprietary process.

## ADVANTAGES OF **BISON STEEL PRESSURE WELDED HIGH LIFE SCREENS**

**Bison Steel** produces welded high carbon steel screens using a unique proprietary process. Welded high carbon screens have numerous advantages over woven screens, such as:

- Life at least three times as long - GUARANTEED
- Increased throughput/production from better screening action
- Easier to install as Custom Fit to your deck
- Less plugging as rigid openings can't trap material
- Wires can be clustered over support bars to protect the bars
- Precise hole size maintained by welds
- Can double up feed screen with "wearpad" to extend life
- Stronger and holds tension better, no crimps or bends
- Screen change outs are predictable
- Transmits vibration into material better

Since welded screens last longer, overall installation costs are lower and production is increased as fewer screen changes are necessary.

Welded screens are GUARANTEED to last as long as perforated plate plus they offer the advantages of more throughput, less weight and more open area.

### **WIRE SPECIFICATION**

Welded screens are supplied with special high carbon steel wire with excellent abrasion resistant properties. The hardness is up to 500 Brinell. A unique, wear resistant stainless steel wire can also be provided.

### **CUSTOMER COMMENTS**

*"received 4 times the life out of welded wire cloth compared to conventional crimped cloth"*

*"my declining cost is \$0.0003 per ton"*

*"we used to buy 50 woven screens per year but with Bison we only buy 12"*

*"my welded screens are getting 1.5 times the life of perforated plate"*

*"welded (Custom Fit) screens are easy to install - they fit like a glove"*

## Opening Sizes

The following table shows the most commonly used square openings. However, virtually **any** size opening can be supplied. Similarly, **any slot** combination can be provided for slotted screens.

Square Opening	Grade	Wire Diameter		% Open Area	Weight (Lb/Sq. Ft.)
		Fraction	Decimal		
<b>8"</b>	M	3/4"	.750	83.6%	4.12
	ML	5/8"	.625	86.0%	2.90
<b>6"</b>	M	3/4"	.750	79.0%	5.35
	ML	5/8"	.625	82.0%	3.78
<b>5"</b>	MH	3/4"	.750	75.6%	6.27
	M	5/8"	.625	79.0%	4.45
<b>4"</b>	MH	3/4"	.750	70.9%	7.60
	M	5/8"	.625	74.8%	5.42
	ML	1/2"	.500	79.9%	3.56
<b>3 3/4"</b>	MH	3/4"	.750	69.4%	8.02
	M	5/8"	.625	73.5%	5.73
	ML	1/2"	.500	77.9%	3.77
<b>3 1/2"</b>	H	3/4"	.750	67.8%	8.49
	MH	5/8"	.625	72.0%	6.07
	M	1/2"	.500	76.6%	4.01
<b>3 1/4"</b>	H	3/4"	.750	66.0%	9.02
	MH	5/8"	.625	70.3%	6.47
	M	1/2"	.500	75.1%	4.28
<b>3"</b>	H	3/4"	.750	64.0%	9.62
	MH	5/8"	.625	68.5%	6.91
	M	1/2"	.500	73.5%	4.58
<b>2 7/8"</b>	MH	5/8"	.625	67.5%	7.16
	M	1/2"	.500	72.6%	4.75
<b>2 3/4"</b>	H	5/8"	.625	66.4%	7.42
	MH	1/2"	.500	71.6%	4.93
	ML	3/8"	.375	77.4%	2.89
<b>2 5/8"</b>	H	5/8"	.625	65.2%	7.71
	MH	1/2"	.500	70.6%	5.13
	ML	3/8"	.375	76.6%	3.01
<b>2 1/2"</b>	H	5/8"	.625	64.0%	8.02
	MH	1/2"	.500	69.4%	5.35
	ML	3/8"	.375	75.6%	3.14
<b>2 3/8"</b>	H	5/8"	.625	62.7%	8.35
	MH	1/2"	.500	68.2%	5.58
	ML	3/8"	.375	74.6%	3.28
<b>2 1/4"</b>	H	5/8"	.625	61.2%	8.71
	MH	1/2"	.500	66.9%	5.83
	ML	3/8"	.375	73.5%	3.44
<b>2 1/8"</b>	MH	1/2"	.500	65.5%	6.11
	M	3/8"	.375	72.3%	3.61
	ML	5/16"	.313	76.0%	2.57
<b>2"</b>	MH	1/2"	.500	64.0%	6.41
	M	3/8"	.375	70.9%	3.80
	ML	5/16"	.313	74.8%	2.71
<b>1 7/8"</b>	M	3/8"	.375	69.4%	4.01
	ML	5/16"	.313	73.5%	2.86

Square Opening	Grade	Wire Diameter		% Open Area	Weight (Lb/Sq. Ft.)
		Fraction	Decimal		
<b>1 3/4"</b>	M	3/8"	.375	67.8%	4.24
	ML	5/16"	.313	72.0%	3.04
<b>1 5/8"</b>	M	3/8"	.375	66.0%	4.51
	ML	5/16"	.313	70.3%	3.23
<b>1 1/2"</b>	MH	3/8"	.375	64.0%	4.81
	M	5/16"	.313	68.5%	3.46
	ML	1/4"	.250	73.5%	2.29
<b>1 3/8"</b>	MH	3/8"	.375	61.7%	5.15
	M	5/16"	.313	66.4%	3.71
	ML	1/4"	.250	71.6%	2.47
<b>1 1/4"</b>	MH	3/8"	.375	59.2%	5.55
	M	5/16"	.313	64.0%	4.01
	ML	1/4"	.250	69.4%	2.67
<b>1 3/16"</b>	H	3/8"	.375	57.8%	5.77
	MH	5/16"	.313	62.7%	4.18
	M	1/4"	.250	68.2%	2.79
<b>1 1/8"</b>	MH	5/16"	.313	61.2%	4.36
	M	1/4"	.250	66.9%	2.92
<b>1 1/16"</b>	MH	5/16"	.313	59.7%	4.56
	M	1/4"	.250	65.5%	3.05
<b>1"</b>	MH	5/16"	.313	58.0%	4.77
	M	1/4"	.250	64.0%	3.21
<b>15/16"</b>	MH	1/4"	.250	62.3%	3.38
<b>7/8"</b>	MH	1/4"	.250	60.5%	3.56
<b>13/16"</b>	MH	1/4"	.250	58.5%	3.77
<b>3/4"</b>	MH	1/4"	.250	56.3%	4.01
<b>11/16"</b>	H	* 1/4"	.250	53.8%	4.28
<b>5/8"</b>	H	* 1/4"	.250	51.0%	4.58
<b>9/16"</b>	H	* 1/4"	.250	47.9%	4.93

\* Special abrasive resistant wire

H - HEAVY

MH - MEDIUM HEAVY

M - MEDIUM

ML - MEDIUM LIGHT