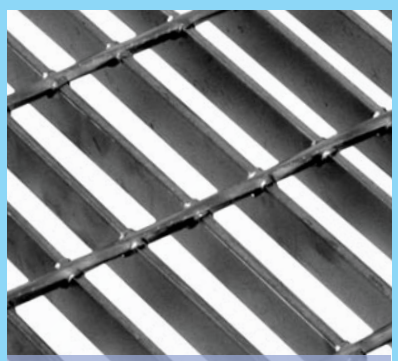
Brown-Campbell

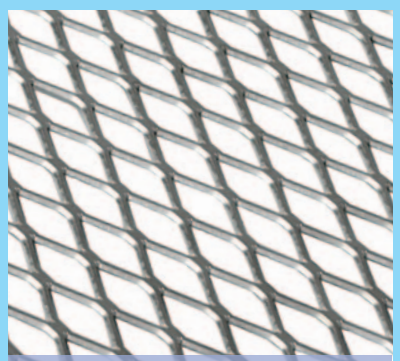
Specialty Metals & Fiberglass

Manufacturer, Fabricator and Distributor - Since 1952

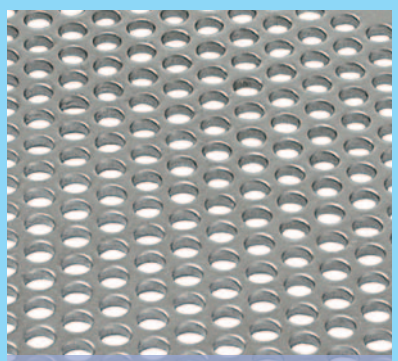
1-800-472-8464 **brown-campbell.com**



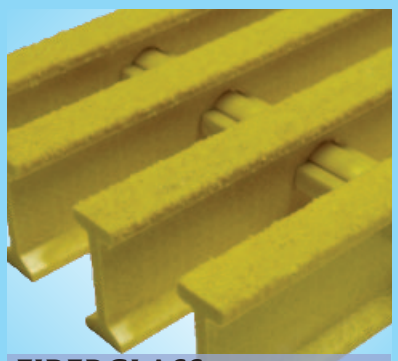
BAR GRATING



EXPANDED METAL



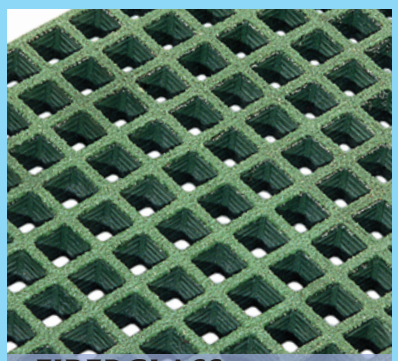
PERFORATED



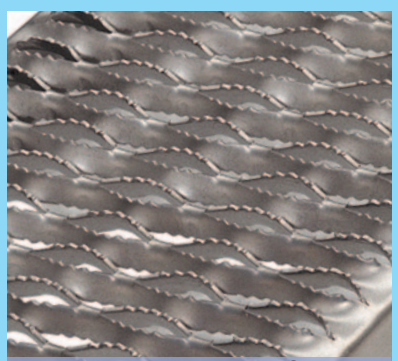
FIBERGLASS - PULTRUDED

9 LOCATIONS

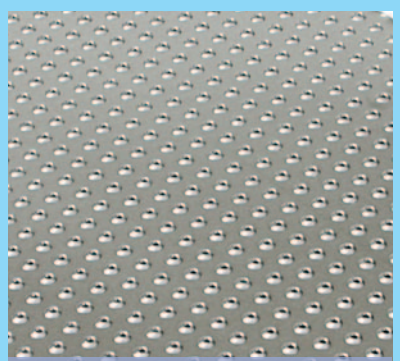
- -Cincinnati
- -Cleveland
- -Dallas
- -Detroit
- -Memphis
- -Minneapolis
- -Portland
- -S. Carolina
- -Wisconsin



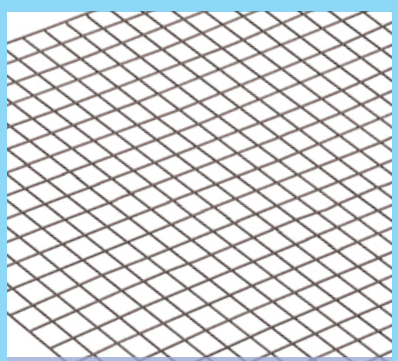
FIBERGLASS - MOLDED



GRIP STRUT®



TRACTION-TREAD™



WIRE CLOTH

Master Catalog

BROWN-CAMPBELL COMPANY

Over 70 Years of Excellence!

Exquisite Engineering Team ~ Sensational Sales Team
~ Magnificent Manufacturing Team ~
~ Fabulous Fabrication Team ~
9 Warehouses ~ 477,500 Square Feet ~ 7 Shears
15 Friction Saws ~ 12 Band Saws ~ 14 Paint Tanks

IN-STOCK Product
BROAD Product Selection
SAME Day Shipments

CUSTOM Fabrication
QUICK Production Runs
Impeccable **QUALITY**

FAST Quotes
OUTSTANDING Service

ONE STOP Shopping
Buy Direct & **SAVE**

1-800-472-8464

MANUFACTURING & SALES FACILITIES

CINCINNATI	555 QUALITY BOULEVARD	FAIRFIELD, OH 45014	FAX: 513-489-0119
CLEVELAND	14400 INDUSTRIAL AVE. S.	MAPLE HEIGHTS, OH 44137	FAX: 216-332-0303
DALLAS	2825 W. KINGSLEY ROAD	GARLAND, TX 75041	FAX: 972-926-4496
DETROIT	11800 INVESTMENT DRIVE	SHELBY TWP, MI 48315	FAX: 586-739-8739
MEMPHIS	2175 FILMORE AVENUE	MEMPHIS, TN 38114	FAX: 901-743-3756
MINNEAPOLIS	14920 27th AVENUE N.	PLYMOUTH, MN 55447	FAX: 612-822-4915
PORTLAND	18129 SW BOONES FERRY RD	PORTLAND, OR 97224	FAX: 586-739-8739
SOUTH CAROLINA	52 CYPRESS RIDGE COURT	RIDGELAND, SC 29936	FAX: 770-795-7789
WISCONSIN	2345 RICHFIELD PARKWAY	RICHFIELD, WI 53076	FAX: 612-822-4915

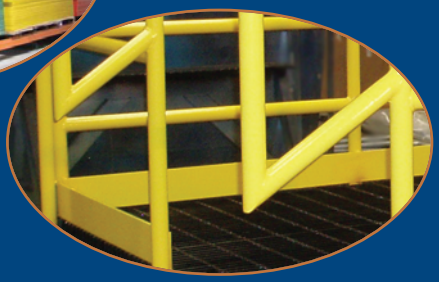
ADDITIONAL SALES OFFICES

ARIZONA • CALIFORNIA • NORTH CAROLINA • NY/NJ



brown-campbell.com







ISO 9001:2015 CERTIFIED

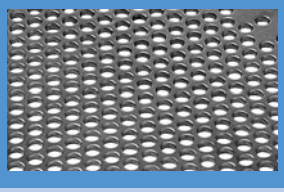
FAMILY OWNED & OPERATED

Brown-Campbell Company *was established in 1952 by the late John D. Campbell, Sr. based on the founding principles of dedication to product quality, reliable service and fair pricing. These founding principles have been carried on by his sons, Murdoch and the late John D. Campbell, Jr. and continue to be the footing of Brown-Campbell today, now in its third generation of leadership, as his grandsons John Campbell and Mike Campbell strive for no less than their grandfather's highest expected standards.*

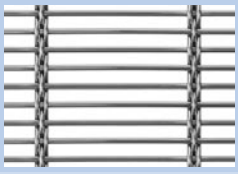
Table of Contents

Having started in a modest 2,500 square foot building in Detroit, Michigan, Brown-Campbell facilities now exceed 477,500 square feet with warehouses in Detroit, Cincinnati, Cleveland, Dallas, Memphis, Minneapolis, Portland, South Carolina and Wisconsin - and additional sales offices in Arizona, California, North Carolina and NY/NJ.

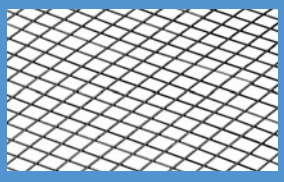
6 Perforated



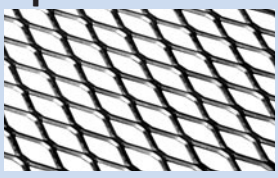
20 Architectural Wire



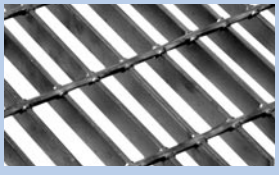
22 Wire Cloth



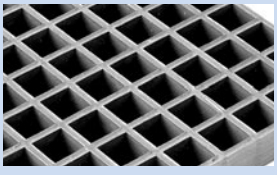
36 Expanded Metal



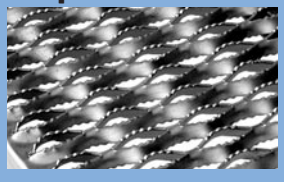
46 Bar Grating



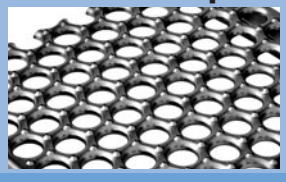
90 Fiberglass



112 Grip Strut®



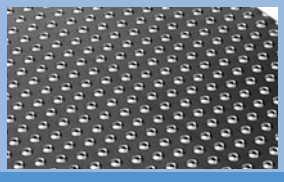
138 Perf-O Grip®



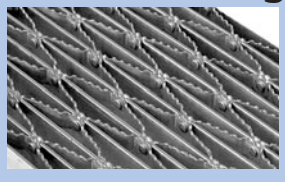
148 Grate-Lock™



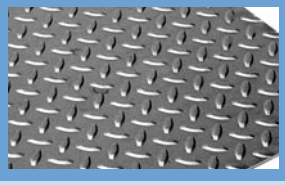
156 Traction-Tread™



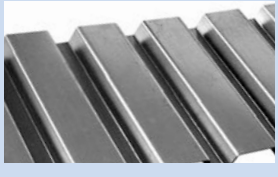
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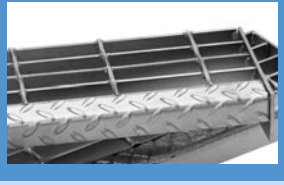
167 Floor Plate



168 Deck



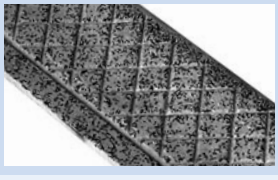
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186 Ladder Rungs



188 Nosings



192 Abrasive Coatings, Algrip™, Hexmetal

196 Manufacturing

198 Fabrication

199 Equip/Facilities

Engineering Team

Brown-Campbell is fortunate to have a exceptional, professional engineering team enabling us to provide all the special services you may need to complete your project.

Popular services include:

-**Take offs** for quotation from your electronic drawings (AutoCAD, pdf, tif, ftp site, etc) or faxed sketches

-**Drawings** from simple to complex

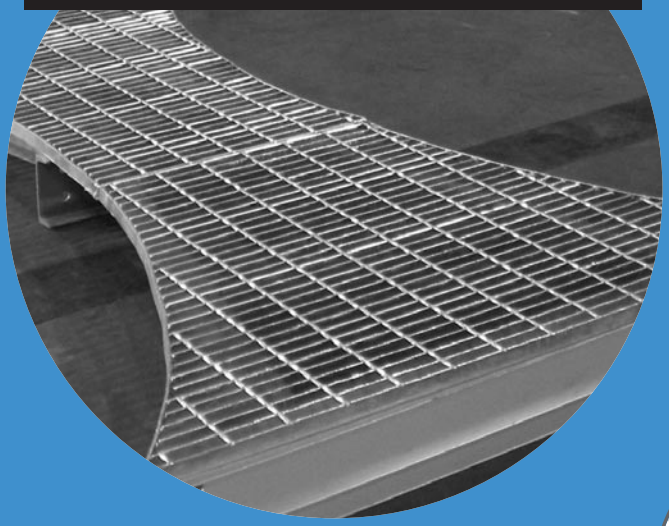
- -Bill of Material Preparation
- -Layout drawings for Field installation
- -Detailed drawings of each piece for Shop Fabrication

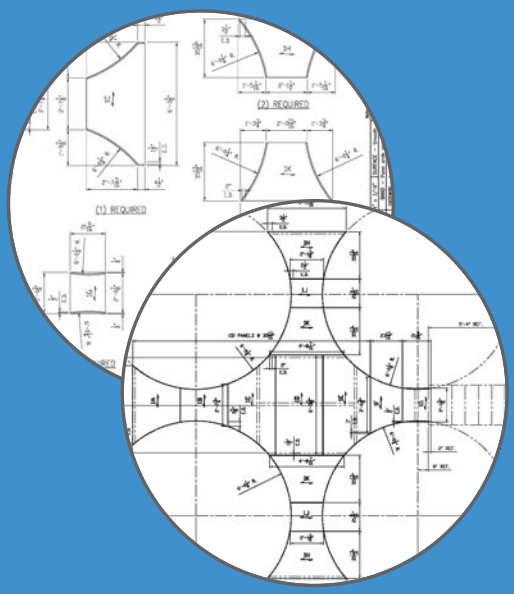
Precision



B-C services allow you to work with one company from start to finish. The direct communication between our sales, engineering and fabrication teams is essential in ensuring your order is delivered to you exactly as you expected. Accurately, timely and competitively priced.

Experience





Excellence

Our outstanding team of engineers has all the knowledge and tools necessary to complete your engineering requirements accurately and efficiently.

Our Brown-Campbell Sales Team has years of experience in specialty metal and fiberglass applications. We can provide the ideal product options for your application.

Our sales team members are NOT order takers - you do not need to know exactly what you are looking for when you call - we can provide you with the most economical alternatives for your job!

Look for this box in each product section for a 'heads up' on choices you will need to consider for your order.

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:
1. Application or use of product (including environment)
2. Physical requirements (open area, strength, etc.)

PLEASE SPECIFY:
- **Brown-Campbell Product**
- **Quantity:** number of cut pieces or full sheets
- **Material**
- **Thickness**
- **Width (x) Length**
- **Product specific info:** reference this box in each product section for distinctive product specifications
- **Special Requirements:** special shearing, leveling, finish or heat treating

Knowledgeable

Sales Team Services Include:

-Product Match for your application
-Liaison with B-C Engineering
-Fast Competitive Quotes
-Liaison with B-C Mfg & Fabrication
-Follow-up

Our sales team spans the United States. Please contact us at 1-800-472-8464 to talk with a sales team member or request they stop by for a visit.



Warehouses

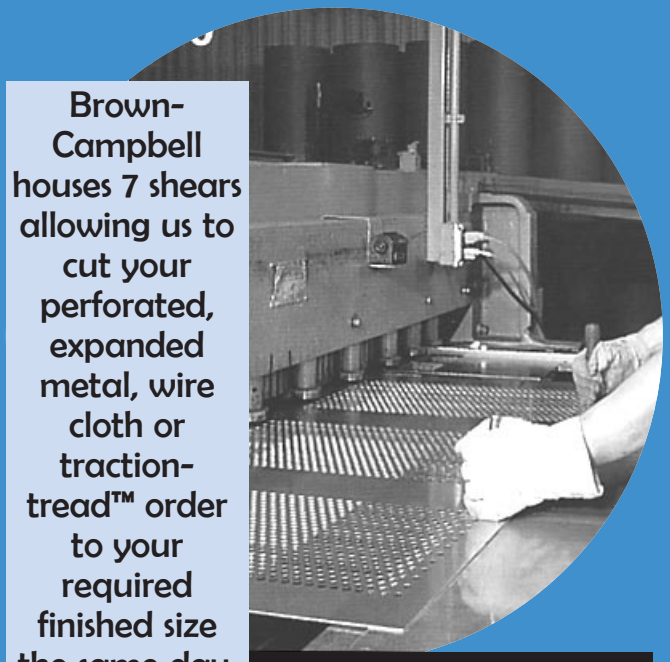


Over 477,500 square feet in 9 locations: Cincinnati, Cleveland, Dallas, Detroit, Memphis, Minneapolis, Portland, South Carolina and Wisconsin



Saws

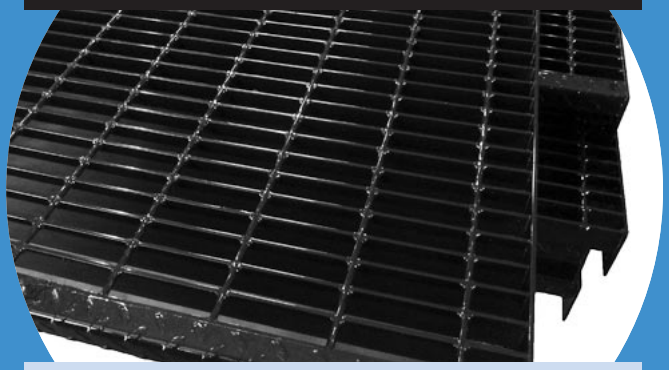
With 15 Friction Saws and 12 Band Saws, Brown-Campbell is ready to cut your order - large or small- fast and accurately, allowing for much faster installation.



Brown-Campbell houses 7 shears allowing us to cut your perforated, expanded metal, wire cloth or traction-tread™ order to your required finished size the same day, in-house.

Shears

Paint Tanks

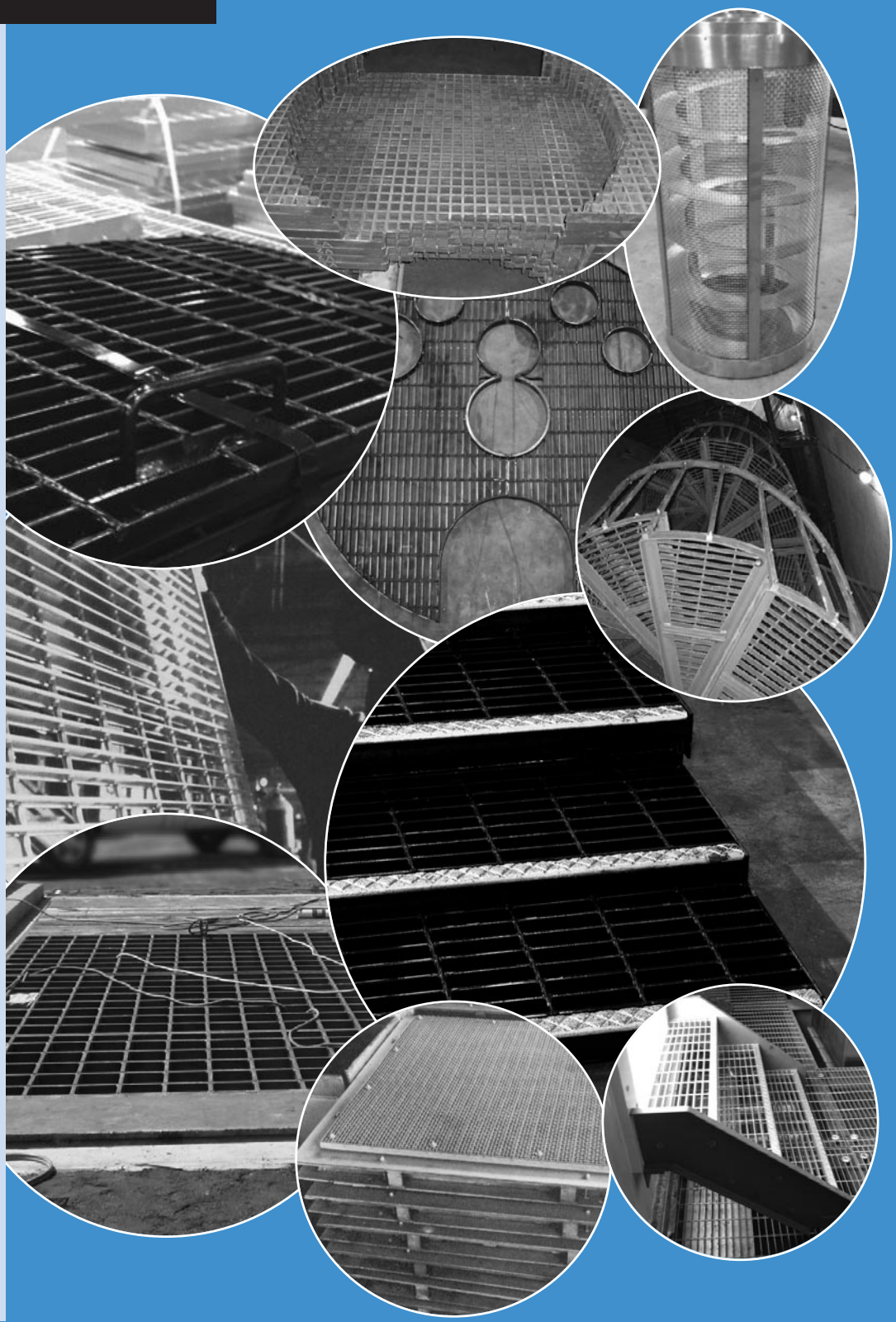


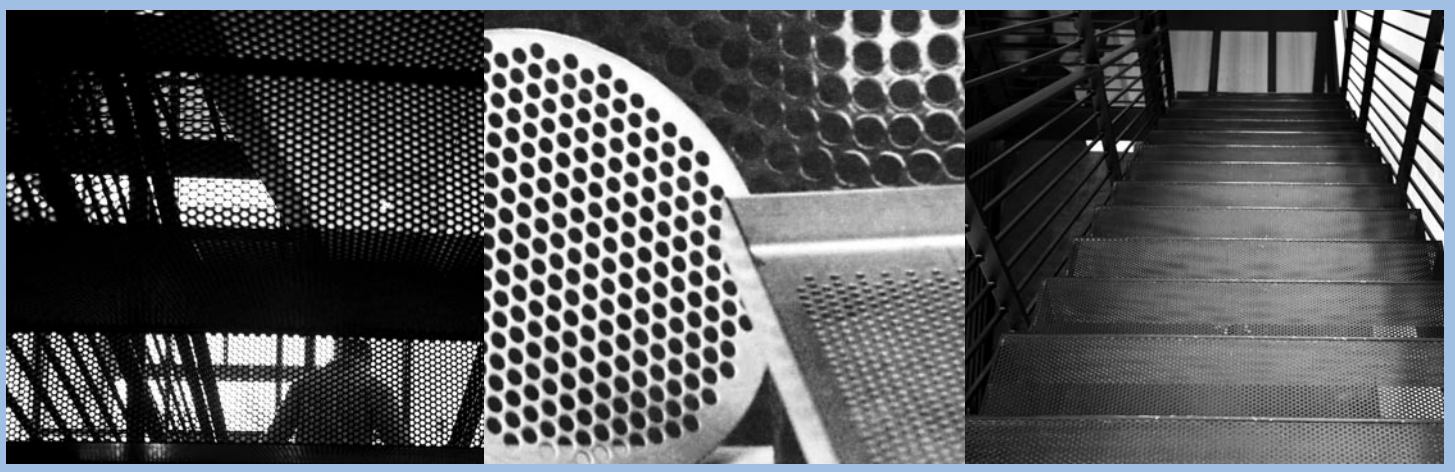
Brown-Campbell maintains 14 paint tanks allowing us to paint your grating order efficiently and economically.
Our tanks eliminate wasted paint, saving cost which we pass on to our customers.

Fabrication

- Banding
- Blanking
- Burning
- Circles
- Cut-to-size
- Galvanizing
- Infill Panels
- Notching
- Painting
- Sawing
- Shearing
- Special Shapes
- Stair Treads
- Welding

CUSTOM FABRICATION TO YOUR SPECIFICATIONS





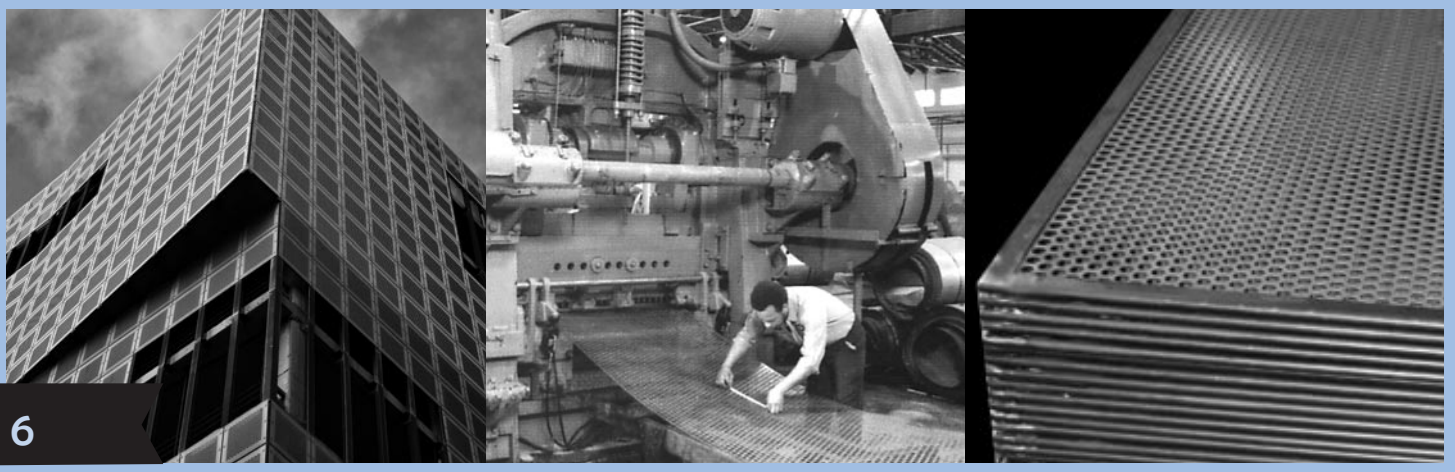
Perforated Products

Perforated materials offer a variety of patterns from the most basic to the decorative to satisfy your application. As consumers, we are not apt to wonder much about the work that 'holes' do for us. But, for a designer or engineer, holes can provide the perfect solution to many problems.

The versatility of perforated materials can be demonstrated by their use for sound suppression, microwave and radio containment, filtration and purification of air, smoke, water, and gases of every description.

Perforated metals are available in carbon, stainless steel, galvanized, aluminum and special alloys. Perforated Plastic - constructed of polypropylene is also available for corrosive environments and applications requiring lower weight.

Brown-Campbell maintains a large inventory of perforated products so we can offer you the most difficult to find products fast! So as you're looking for specialty perforated products of any kind, call the company that delivers same day!



PERFORATED STOCK LIST

RSTG=Round Staggered; RS=Round Straight; SS=Square Straight

Hole Size	Ctrs	Shape	Open Area	Gauge
Carbon Steel - Round				
.045”	.066”	RS	37%	24
.045”	.088”	RSTG	24%	24
1/16”	3/32”	RSTG	41%	24, 22, 20
1/16”	7/64”	RSTG	30%	20, 16
1/16”	1/8”	RSTG	23%	22, 20, 18, 16
.075”	.100”	RSTG	51%	24, 20
5/64”	7/64”	RSTG	46%	22, 20, 18
5/64”	1/8”	RSTG	35%	18, 16
3/32”	5/32”	RSTG	33%	22, 18, 16, 14
3/32”	3/16”	RSTG	23%	22, 14
1/8”	3/16”	RSTG	40%	24, 22, 20, 18, 16, 14, 12, 11
1/8”	1/4”	RSTG	23%	16
9/64”	3/16”	RSTG	51%	16
5/32”	3/16”	RSTG	63%	22, 20, 18, 16
5/32”	7/32”	RSTG	46%	10
3/16”	1/4”	RSTG	50%	22, 20, 18, 16, 14, 11
3/16”	5/16”	RSTG	33%	16, 12, 11, 3/16”
3/16”	3/8”	RSTG	23%	14
1/4”	5/16”	RSTG	58%	20, 18, 16, 14
1/4”	3/8”	RSTG	40%	20, 18, 16, 14, 12, 11, 7, 10, 3/16”, 1/4”
1/4”	1/2”	RSTG	23%	11, 1/4”
5/16”	3/8”	RSTG	63%	16
5/16”	7/16”	RSTG	46%	11, 3/16”
5/16”	1/2”	RSTG	35%	7
3/8”	1/2”	RSTG	51%	16, 14, 11
3/8”	9/16”	RSTG	40%	16, 14, 12, 11, 7, 3/16”, 1/4”
1/2”	11/16”	RSTG	48%	20, 16, 14, 11, 10, 7, 3/16”, 1/4”
1/2”	3/4”	RSTG	40%	3/8”
5/8”	7/8”	RSTG	46%	7
3/4”	1”	RSTG	51%	16, 11, 7, 3/16”, 1/4”
1”	1-1/4”	RSTG	58%	11, 1/4”

Typical Stock Sheets

3’x8’, 3’x10’, 4’x8’, 4’x10’

Hole Size	Ctrs	Shape	Open Area	Gauge
Carbon Steel - Other				
.200	1/4”	SS	64%	22, 20 (Hanover)
3/8”	1/2”	SS	56%	16
3/8”	1”	SS	14%	16
1/2”	11/16”	SS	53%	16, 12 (Lattice)
3/4”	1”	SS	56%	16, 11
Honeycomb 1/4” Hex			79%	22, 20
Windsor			45%	20
Grecian			35%	22
Octagon Cane			36%	22
Full Cloverleaf			51%	20
Airline			68%	16
1/4” Peg-Board 1” Ctrs			5%	20

If you don’t see the pattern you need, please call us at 1-800-472-8464

Hole Size	Ctrs	Shape	Open Area	Gauge
Galvanized				
1/16”	3/32”	RSTG	41%	22
3/32”	9/64”	RSTG	40%	18
3/32”	3/16”	RSTG	23%	22
1/8”	3/16”	RSTG	40%	20, 18, 16
5/32”	3/16”	RSTG	63%	22
3/16”	1/4”	RSTG	50%	18
1/4”	3/8”	RSTG	40%	16
1/2”	11/16”	RSTG	48%	18
Stainless Steel - Type 304				
1/16”	3/32”	RSTG	41%	22, 20
1/16”	1/8”	RSTG	23%	22, 20, 18
3/32”	5/32”	RSTG	33%	22, 18, 16
1/8”	3/16”	RSTG	40%	22, 20, 18, 16, 14, 11
5/32”	3/16”	RSTG	63%	24, 22, 20, 18, 16
3/16”	1/4”	RSTG	50%	22, 20, 18, 16, 14
3/16”	5/16”	RSTG	33%	22, 16, 11
3/16”	3/8”	RSTG	23%	16, 14
1/4”	5/16”	RSTG	58%	22, 20, 18, 16
1/4”	3/8”	RSTG	40%	20, 18, 16, 14, 11, 3/16”

Hole Size	Ctrs	Shape	Open Area	Gauge
Stainless Steel -Type 304 (con’t)				
3/8”	9/16”	RSTG	40%	16, 14, 11
1/2”	11/16”	RSTG	48%	16, 14, 11, 3/16”
3/4”	1”	RSTG	51%	16, 11
1”	1-1/4”	RSTG	58%	11
Stainless Steel - Type 316L				
1/16”	3/32”	RSTG	41%	22
3/32”	3/16”	RSTG	23%	22
1/8”	3/16”	RSTG	40%	16, 14
3/16”	3/8”	RSTG	23%	16
1/4”	5/16”	RSTG	58%	16
1/4”	3/8”	RSTG	40%	16, 14
1/2”	11/16”	RSTG	48%	16
Aluminum - 3003 H14				
1/16”	3/32”	RSTG	41%	.032”, .063”
1/16”	7/64”	RSTG	30%	.063”
1/16”	1/8”	RSTG	23%	.032”, .040”, .050”
3/32”	5/32”	RSTG	33%	.032”, .050”, .080”
3/32”	3/16”	RSTG	23%	.050”
1/8”	3/16”	RSTG	40%	.032”, .040”, .050”, .063”, .125”
5/32”	3/16”	RSTG	63%	.032”, .063”
3/16”	1/4”	RSTG	50%	.032”, .050”, .063”, .125”
3/16”	5/16”	RSTG	33%	.063”, .125”
1/4”	5/16”	RSTG	58%	.063”
1/4”	3/8”	RSTG	40%	.040”, .063”, .125”
1/4”	3/4”	SS	11%	.032”
5/16”	1/2”	SS	39%	.050”
3/8”	9/16”	RSTG	40%	.063”, .125”
1/2”	11/16”	RSTG	48%	.063”, .125”
3/4”	1”	RSTG	51%	.125”
Honeycomb 1/4” Hex			79%	.032”
Polypropylene Plastic-Semi Clear				
1/8”	3/16”	RSTG	40%	.063”
3/16”	5/16”	RSTG	33%	.125”

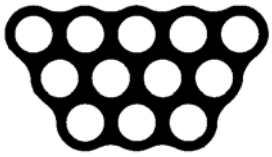
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Architectural	Fan Guards	Guards	Display Racks	Stair Tread Risers
Speaker Grilles	Acoustical Panels	Air Filtration	Sunscreens	Screening
Privacy Screening	Dryer Drums	Water Filtration	Building Facades	Fencing
Lighting Enclosures	Fans	Oil Filtration	In-Fill Panels	Noise Control
Air Diffusers	Filters	Shelving	Ceiling Panels	Lighting Fixtures

The Versatility of 'Holes'

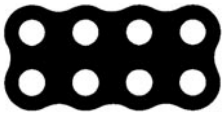
Round Hole Patterns Round holes ranging from under .020" to over 6" account for 80% of the production of the perforating industry. Round holes can be produced with greater efficiency and less expense than any other hole shape. The dies and punches to make round holes are the most cost efficient to build and maintain. Round holes are the most versatile in their application, providing a wide range of open areas and attractive appearance.

60° Staggered Round Hole Pattern This pattern is the most popular hole arrangement due to its inherent strength, wide range of open areas, and its attractive appearance.



(Standard Pattern)

Straight Center Round Hole Pattern This pattern is also a popular hole arrangement that is available in a variety of sizes and open areas. Please note, however, a straight line pattern of holes is weaker than a staggered pattern and has a tendency to stretch the material to a greater degree.

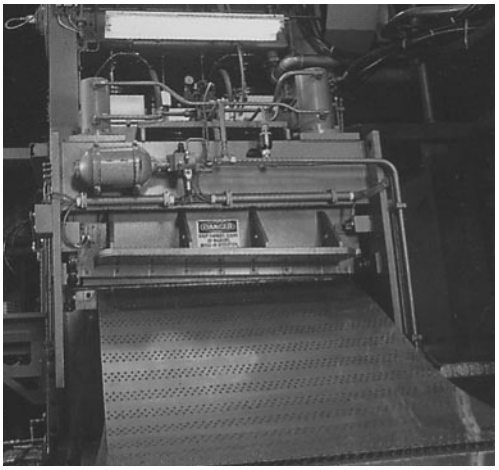


(Optional Pattern)

45° Staggered Round Hole Pattern Offers the same advantages as the 60° staggered pattern but with a different aesthetic appearance.



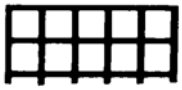
(Optional Pattern)



Square Hole Patterns Square holes are ideal for applications where visibility and through-put are priorities but strength isn't as essential, such as guards and decorative covers. These patterns provide a higher percent open area but are lower in strength compared to round hole patterns. Square hole patterns are available with staggered and straight centers.



Staggered Centers



Straight Centers

Hexagon Hole Pattern Ideal for applications where maximum through-put is required, provides the highest open area of all pattern alternatives.



Slots Slots are particularly well suited for sorting and grading of solid objects. The elongated slot opening increases the through-put for this type of application. There are four slot patterns to choose from:

Round End -End Staggered Ideal for sorting and grading solids that flow over the length dimension of the material.

Round End -Side Staggered Ideal for sorting and grading solids that flow over the width dimension of the material.

Round End -Straight Lines Ideal for sorting and grading solids when used in a shaking application.

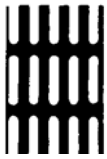
Square End -Straight Lines Ideal for sorting and grading solids when used in a shaking application.



Round End, End Staggered



Round End, Side Staggered



Round End, Straight Lines



Square End, Straight Lines

1-800-472-8464

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements (open area, strength, etc.)

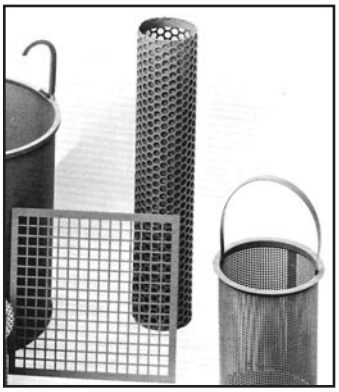
PLEASE SPECIFY:

- **Brown-Campbell "Perforated Metal or Plastic"**
- **Quantity:** number of cut pieces or full sheets
- **Material:** type of material desired - carbon, stainless steel, aluminum, polypropylene, etc.
- **Thickness:** for steel or stainless steel specify gauge or thickness in inches. All other metals specify in inches only.
- **Width (x) Length:** over all width & length. Mill tolerances will be supplied unless otherwise specified.
- **Perforation Size, Shape, and Arrangement:** refer to perforated patterns (pgs 10-11) and tooling lists (pgs 13-17). 60° staggered arrangement is standard.
- **Hole or Bar Centers:** (metal between perforations) Center to center measures width of bar at point where perforations are closest.
- **Blank Margins:** dimensions of blank margins, parallel width and length (+/- tolerance). Cost increases when blank margins are required.
- **Flatness:** requirements for flatness (page 12)
- **End Pattern:** "finished" or "unfinished" end pattern (see diagram page 9).
- **Special Requirements:** special shearing, leveling, finish or heat treating

In addition to the patterns described above, other decorative patterns are available.

See page 11 for examples.

Brown-Campbell can ship AS-IS INVENTORY same day! Call, email or click to place your order for fast shipment!



Minimum Hole Size and Bar Width Guidelines

Minimum Hole Size

The rule of thumb for perforating carbon steel and aluminum is that the hole diameter should not be less than the thickness of the material. The closer this 1-to-1 relationship is approached, the higher will be the probability for tool failure, and the greater the precautions necessary to avoid it. For stainless steel and other higher strength materials, it is best to drop at least one thickness gauge thinner than hole diameter.

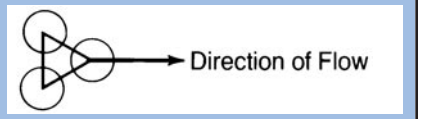
Minimum Bar Width

The material left between perforations is called the bar width. The same rule of thumb applies for bar width as hole diameter: the 1-to-1 relationship to thickness is the limit. Keep the bar width greater than the thickness of the material to avoid problems. As the 1-to-1 relationship is approached, the increasing number of punches required sharply escalates the process tonnage needed to perforate the pattern, thus creating potential for problems.

In some cases, variations to these recommendations can be accommodated but with additional production costs.

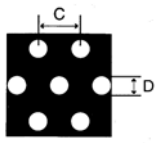
Flow of Material

If the sieving process requires a specified arrangement of holes, the direction of flow must be clearly specified.

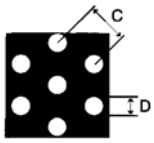


% of Open Area Formulas

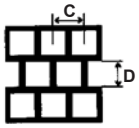
H.P.S.I. = Holes per square inch
D = Diameter of hole or size of square hole
C = Centers (distance between centers)



Round Hole 60° Staggered



Round Hole 45° Staggered



Square Hole Staggered

60° Staggered Round Hole Pattern

$$\% \text{ open area} = \frac{90.69\,(D)(D)}{(C)(C)} \qquad H.P.S.I. = \frac{\% \text{ Open Area}}{78.54\,(D)(D)}$$

Straight Line Round Hole Pattern

$$\% \text{ open area} = \frac{78.54\,(D)(D)}{(C)(C)} \qquad H.P.S.I. = \frac{\% \text{ Open Area}}{78.54(D)(D)}$$

45° Staggered Round Hole Pattern

$$\% \text{ open area} = \frac{78.54\,(D)(D)}{(C)(C)} \qquad H.P.S.I. = \frac{\% \text{ Open Area}}{78.54(D)(D)}$$

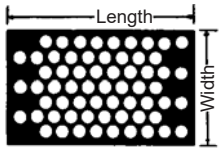
Square Hole Patterns-Straight or Staggered

$$\% \text{ open area} = \frac{100\,(D)(D)}{(C)(C)} \qquad H.P.S.I. = \frac{\% \text{ Open Area}}{100\,(D)(D)}$$

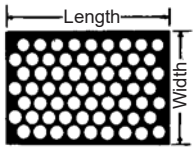
End Patterns and Side Margins

End Patterns

"Unfinished"- Standard end pattern at the beginning and end of the work piece resulting from the stepped perforating procedure pattern.
"Finished"- Requires special tooling or idling of the last row of punches to complete the pattern, thus slowing the perforating process and increasing costs. The finished end pattern is not standard and should be specified if desired.



Unfinished End Pattern - Standard

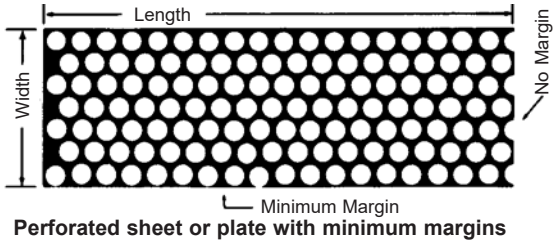


Finished End Pattern - Must be Specified

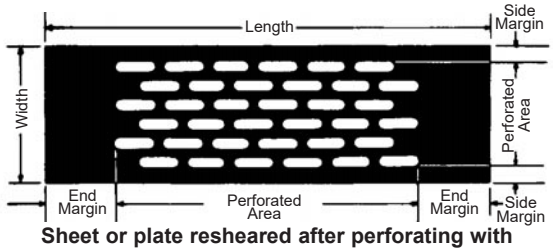
Side Margins

Margins along the sides of the perforated sheet introduce stresses into the sheet and cause distortion, so they should be kept to a minimum width. Excessive or uneven margins can actually cause buckling or a degree of distortion that can't be completely corrected by roller leveling. Additionally, when holes are small and the percent of open area is high, distortion can become exaggerated. The minimum side margin is determined by the die layout and the thickness of the material (see table below).

Thickness	Approximate Minimum Unperforated Side Margins
30Ga - 20Ga	Safe Edge
Over 20Ga - 14Ga	1/8"
Over 14Ga - 8Ga	1/4"
Over 8Ga - 3/8"	1/2"
Over 3/8" - 5/8"	3/4"
Over 5/8" - 1"	1"



Perforated sheet or plate with minimum margins

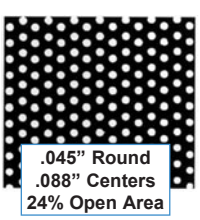


Sheet or plate resheared after perforating with margins as specified

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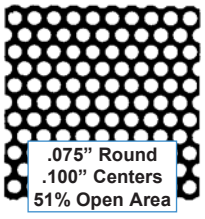
In-Stock Round Staggered Patterns

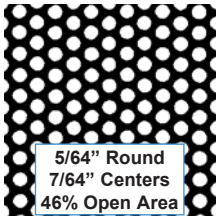

.045" Round
.088" Centers
24% Open Area


1/16" Round
3/32" Centers
41% Open Area

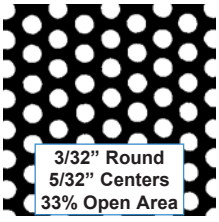

1/16" Round
7/64" Centers
30% Open Area


1/16" Round
1/8" Centers
23% Open Area


.075" Round
.100" Centers
51% Open Area

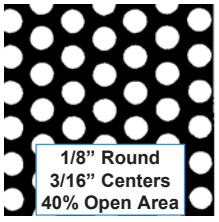

5/64" Round
7/64" Centers
46% Open Area

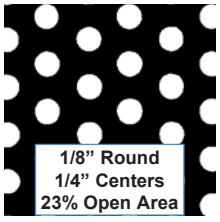

5/64" Round
1/8" Centers
35% Open Area

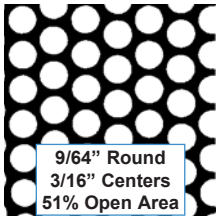

3/32" Round
5/32" Centers
33% Open Area

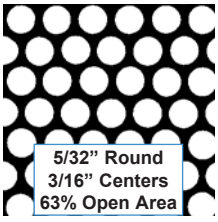

3/32" Round
9/64" Centers
40% Open Area

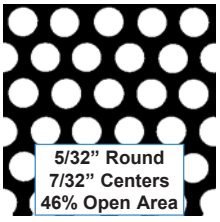

3/32" Round
3/16" Centers
23% Open Area


1/8" Round
3/16" Centers
40% Open Area


1/8" Round
1/4" Centers
23% Open Area


9/64" Round
3/16" Centers
51% Open Area


5/32" Round
3/16" Centers
63% Open Area

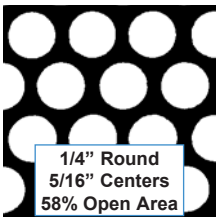

5/32" Round
7/32" Centers
46% Open Area

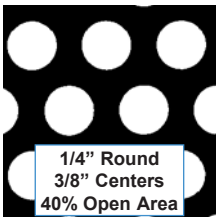

5/32" Round
1/4" Centers
35% Open Area

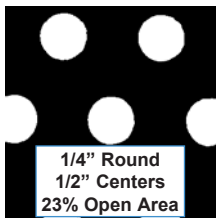

3/16" Round
1/4" Centers
50% Open Area


3/16" Round
5/16" Centers
33% Open Area


3/16" Round
3/8" Centers
23% Open Area


1/4" Round
5/16" Centers
58% Open Area

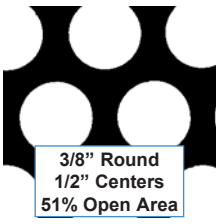

1/4" Round
3/8" Centers
40% Open Area

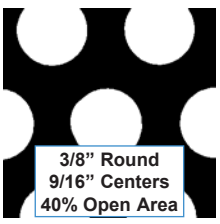

1/4" Round
1/2" Centers
23% Open Area

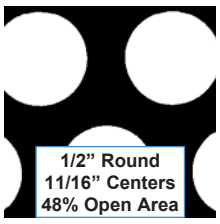

5/16" Round
3/8" Centers
63% Open Area


5/16" Round
7/16" Centers
46% Open Area

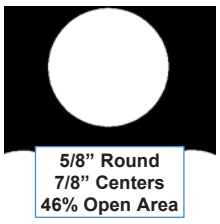

5/16" Round
1/2" Centers
35% Open Area


3/8" Round
1/2" Centers
51% Open Area


3/8" Round
9/16" Centers
40% Open Area

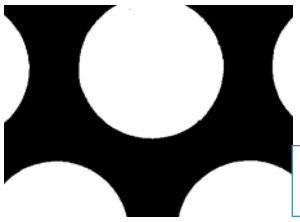

1/2" Round
11/16" Centers
48% Open Area

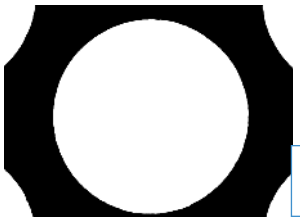

1/2" Round
3/4" Centers
40% Open Area


5/8" Round
7/8" Centers
46% Open Area

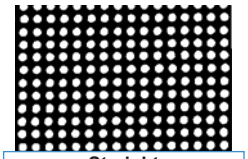
In-stock patterns are ready for same day shipment! Numerous other patterns are available.

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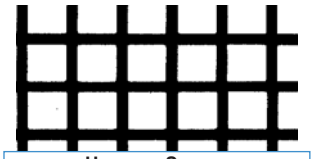

3/4" Round
1" Centers
51% Open Area


1" Round
1-1/4" Centers
58% Open Area

Other Patterns In-Stock



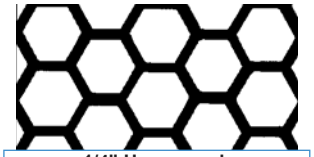
Straight
.045" Round .066" Ctrs
37% Open Area



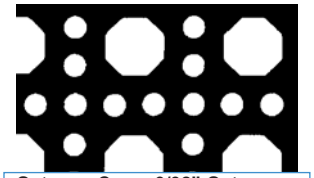
Hanover Square
.200" Square, 1/4" Centers
64% Open Area



Straight
3/8" Square, 1/2" Centers
56% Open Area



1/4" Honeycomb
1/4" Hex on 9/32" Centers
79% Open Area



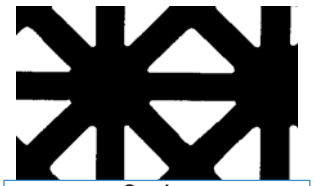
Octagon Cane: 9/32" Octagons,
7/64" Rounds, 36% Open Area



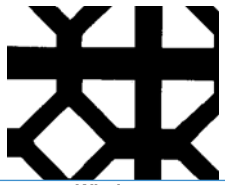
Full Cloverleaf: 1/2" Staggered
Clovers, 51% Open Area



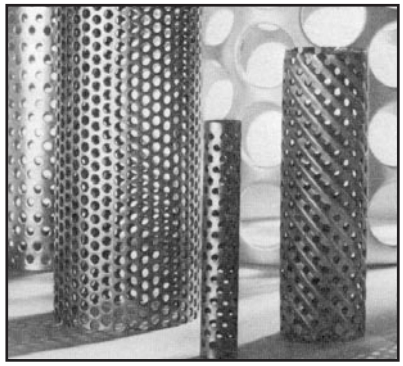
Lattice - 53% Open Area
Straight Row Centers
1/2" Squares, 11/16" Ctrs



Grecian
35% Open Area



Windsor
45% Open Area



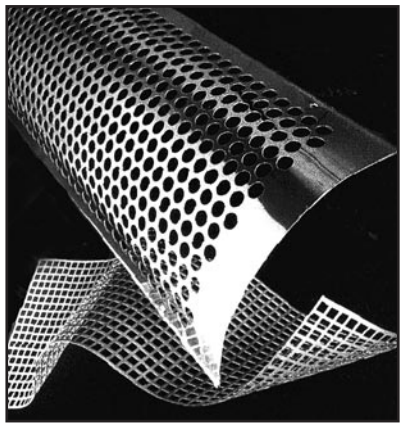
In-Stock Square Straight patterns not pictured:

1/4" Square, 3/4" Centers
11% Open Area

5/16" Square, 1/2" Centers
39% Open Area

3/8" Square, 1" Centers
14% Open Area

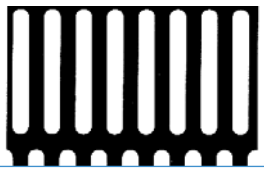
3/4" Square, 1" Centers
56% Open Area



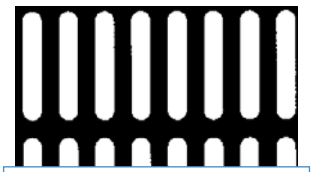
Other Popular Decorative Hole Patterns...



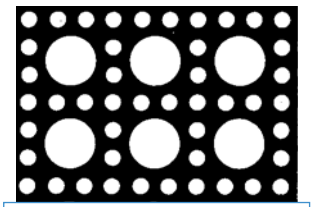
Slot - Side Staggered
Round End 1/8" x 1"
43% Open Area



Slot - End Staggered
Round End 1/8" x 1"
1/4" x 1-1/8" Centers
43% Open Area



Slot - Side Straight
Round End 1/4" x 3/4"
1/4" x 7/8" Centers
41% Open Area



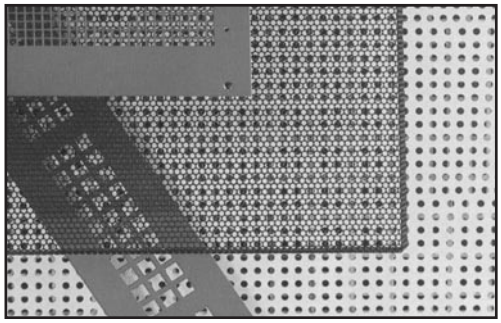
Round Cane: 9/16" Centers
47% Open Area



Moire - 41% Open Area
1/8" x 3/4" Round End Slot 1/8" Bars
LWS parallel to length of sheet



Airline - 68% Open Area
1/4" x 1-1/2" Rectangular Slots
Straight row parallel to width 3/32" bar every 3rd bar 3/16" lengthwise.
LWS parallel to width of sheet



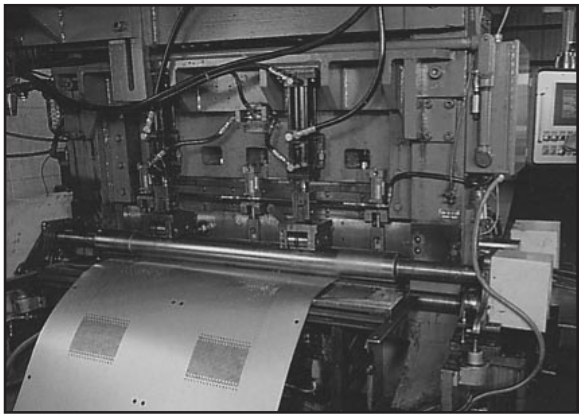
Flatness Tolerances

Flatness tolerance refers to the maximum deviation from a horizontal flat surface measured when the material is placed on a perfectly flat table. A ruler which does not flatten the material will give the degree of flatness. The measurement being from the highest point (or points) of the sheet or plate to the table surface minus the material thickness. Two levels of quality are available: Commercial Quality and Superior Quality. **Note: If not otherwise specified, commercial quality is supplied.** Flatness tolerances listed are of roller leveled sheets or plates with minimum or no margins. Flatness variation guidelines listed below should be followed.

Length 10' or less: variation should not exceed amount shown below.
Length greater than 10': variation for any 10' of length should not exceed the amount shown.
Longer dimension less than 36": variation along the length and across the width should not exceed 1/4" in each direction.
Longer dimension from 36" to 72": variation should not exceed 75% of the amount shown for the specified width, but never less than 1/4".
Note: Margins will usually increase the maximum deviation.

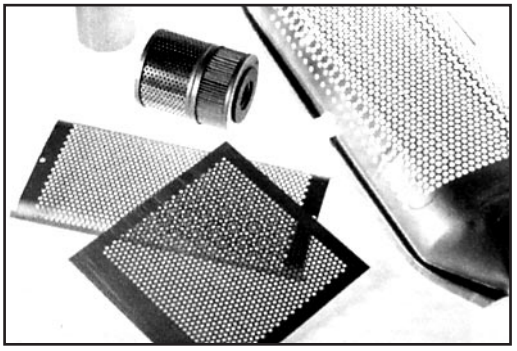
Thickness Range	To 36" Width Tolerance		>36" to 48" Width Tolerance		>48" to 60" Width Tolerance		>60" to 72" Width Tolerance		>72" to 84" Width Tolerance		>84" to 120" Width Tolerance		>120" Width Tolerance	
	Commercial*	Superior	Commercial*	Superior	Commercial*	Superior	Commercial*	Superior	Commercial*	Superior	Commercial*	Superior	Commercial*	Superior
H.R. & C.R. Steel Sheet, Plate & Hot Dipped Galvanized Sheets														
28 - 20 Ga.	3/8"	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"						
19 - 16 Ga.	1/2"	7/16"	5/8"	1/2"	3/4"	5/8"	1"	13/16"						
15 - 12 Ga.	5/8"	1/2"	3/4"	5/8"	1"	13/16"	1-1/4"	1"						
11 Ga - 1/4"	5/8"	1/2"	7/8"	23/32"	1-1/16"	27/32"	1-3/8"	1-1/8"	1-1/2"	1-1/4"	1-5/8"	1-3/8"	2-1/8"	1-7/8"
5/16" - 3/8"	9/16"	15/32"	3/4"	5/8"	7/8"	23/32"	1-1/16"	27/32"	1-1/4"	1"	1-1/2"	1-1/4"	2"	1-5/8"
7/16" - 1/2"	1/2"	7/16"	5/8"	1/2"	11/16"	9/16"	3/4"	5/8"	7/8"	23/32"	1-1/8"	7/8"	1-7/8"	1-1/4"
9/16" - 3/4"	7/16"	11/32"	9/16"	15/32"	5/8"	1/2"	11/16"	9/16"	3/4"	5/8"	1"	3/4"	1-1/2"	1-1/8"
Heat Treated Steel Plate (Hardness Range 185-360 Brinell)														
To 1/4"	1-5/16"	1-5/32"	1-5/8"	1-7/16"	1-7/8"	1-5/8"	2-3/8"	2"	2-1/2"	2-1/8"	2-5/8"	2-3/8"	3-1/8"	2-7/8"
1/4" - 3/8"	1-1/4"	1-1/8"	1-7/16"	1-1/4"	1-5/8"	1-7/16"	1-7/8"	1-5/8"	2-1/4"	1-15/16"	2-1/2"	2-1/4"	3"	2-5/8"
7/16" - 1/2"	1-1/4"	1-1/8"	1-3/8"	1-7/32"	1-7/16"	1-1/4"	1-7/16"	1-1/4"	1-5/8"	1-7/16"	2-1/8"	1-7/8"	2-7/8"	2-1/4"
9/16" - 3/4"	1-1/8"	1"	1-1/4"	1-1/8"	1-5/16"	1-5/32"	1-3/8"	1-7/32"	1-1/2"	1-5/16"	2"	1-3/4"	2-1/2"	2-1/8"
Stainless Steel and Other Heat Resistant Alloys Sheet & Plate														
30 - 20 Ga.	1/2"	7/16"	5/8"	1/2"	3/4"	5/8"	1"	13/16"						
19 - 16 Ga.	5/8"	1/2"	3/4"	5/8"	1"	13/16"	1-1/4"	1"						
15 - 12 Ga.	3/4"	5/8"	7/8"	23/32"	1-1/8"	15/16"	1-1/2"	1-1/4"						
11 Ga - 1/4"	3/4"	5/8"	1"	13/16"	1-3/16"	31/32"	1-1/2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"		
5/16" - 3/8"	11/16"	9/16"	13/16"	21/32"	7/8"	23/32"	1"	13/16"	1-1/4"	1-1/4"	1-1/4"	1-1/4"		
Aluminum & Copper														
.012 - .032"	5/16"	1/4"	7/16"	11/32"	9/16"	15/32"	11/16"	9/16"						
.033 - .063"	7/16"	11/32"	9/16"	15/32"	11/16"	9/16"	7/8"	23/32"						
.064" - .125"	9/16"	15/32"	11/16"	9/16"	15/16"	3/4"	1-1/8"	15/16"						
.126" - .500"	5/8"	9/16"	3/4"	11/16"	13/16"	3/4"	7/8"	13/16"	1"	7/8"	1-1/8"	1"		
.501" - .750"	11/16"	5/8"	13/16"	3/4"	3/4"	11/16"	15/16"	7/8"	1-1/16"	1"	1-1/4"	1-1/2"		

*Commercial Quality supplied unless otherwise specified.
Please call us at 1-800-472-8464 for additional information regarding flatness tolerances for sheets with extra wide margins, blank areas required within the perforated area, very large percentage of open area, heavy gauge metal in relation to the size of the perforation, special alloys, or stretcher-leveled sheets.



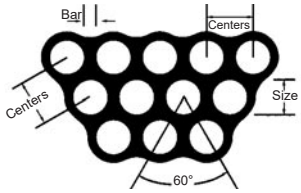
Our talented full-time engineering staff can assist you with all of your CAD requirements.

800-472-8464



Round Hole with Staggered Centers

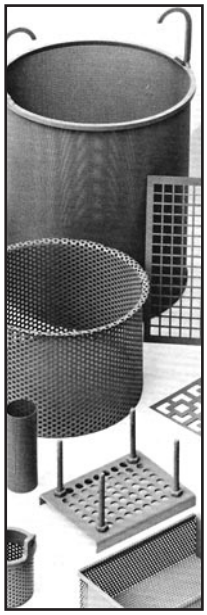
Standard Pattern



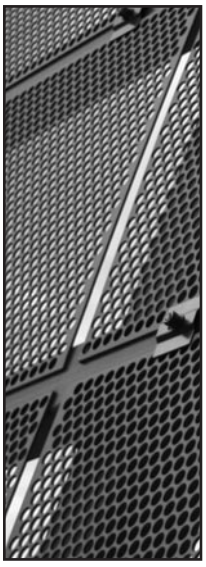
Perforated Material Options

•Carbon Steel •Stainless Steel •Galvanized
•Aluminum •Plastic •Special Alloys

In-stock items denoted by blue background.



In-stock perforated products ready for same day shipment - page 7



Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
.027	.057	.030	20%	354.6
.027	.099	.072	7%	117.0
1/32	1/16	1/32	23%	296.0
1/32	.108	.077	8%	99.1
.033	.074	.041	18%	210.5
.033	.111	.078	8%	93.5
.035	.104	.069	10%	107.1
.036	.060	.024	33%	320.3
.036	.120	.084	8%	80.6
.036	.180	.144	4%	35.4
.036	.360	.324	1%	8.8
.038	.058	.020	39%	343.0
.040	.080	.040	23%	180.6
.040	.140	.100	7%	58.9
.045	.088	.043	24%	149.0
.045	.092	.047	22%	136.4
.045	9/64	.096	9%	58.5
.050	3/32	.044	26%	131.4
3/64	3/32	3/64	23%	131.5
3/64	.160	.113	8%	45.2
.055	.100	.045	27%	115.3
.055	.170	.115	10%	40.0
1/16	3/32	1/32	41%	131.4
1/16	.100	.038	35%	115.4
1/16	7/64	3/64	30%	96.5
1/16	1/8	1/16	23%	74.0
1/16	5/32	3/32	15%	47.3
1/16	3/16	1/8	10%	32.9
1/16	7/32	5/32	7%	24.1
.066	7/64	.043	33%	96.5
.066	3/16	.122	11%	32.7
.067	1/8	.058	26%	74.0
.069	1/8	.056	28%	73.8
.069	.216	.147	9%	24.9
.071	1/8	.054	29%	74.0
.075	.100	.025	51%	115.4
.075	.170	.095	18%	40.1
.077	7/64	.032	45%	96.4
5/64	7/64	1/32	46%	96.6
5/64	1/8	3/64	35%	73.8
5/64	9/64	1/16	28%	58.4
5/64	5/32	5/64	23%	47.4
5/64	.189	.111	16%	32.3
5/64	7/32	9/64	12%	24.2
5/64	.243	.165	9%	19.6
5/64	.270	.192	8%	15.9
.079	7/64	.030	47%	96.5
.079	5/32	.077	23%	47.3
.080	1/8	.045	37%	73.8
.080	7/32	.139	12%	24.1
1/12	1/8	.042	40%	73.9
3/32	9/64	3/64	40%	58.4
3/32	5/32	1/16	33%	47.2
3/32	11/64	5/64	27%	39.1
3/32	3/16	3/32	23%	32.9
3/32	.243	.149	14%	19.6
3/32	1/4	5/32	13%	18.5
3/32	17/64	11/64	11%	16.4
3/32	5/16	7/32	8%	11.9
3/32	21/64	15/64	7%	10.7
3/32	.433	.339	4%	6.2
.097	5/32	.059	35%	47.4
.097	.270	.173	12%	15.8
.100	5/32	.056	37%	47.2
.100	.270	.170	12%	15.8
.109	5/32	.047	44%	47.3
7/64	5/32	3/64	44%	47.3
7/64	11/64	1/16	37%	39.1
7/64	3/16	5/64	31%	32.9
7/64	7/32	7/64	23%	24.2
7/64	19/64	3/16	12%	13.1
7/64	.324	.215	10%	11.0

Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
.117	9/64	.024	63%	58.4
.117	5/32	.039	51%	47.3
.117	.243	.126	21%	19.5
.117	.270	.153	17%	15.8
1/8	3/16	1/16	40%	32.8
1/8	7/32	3/32	30%	24.1
1/8	1/4	1/8	23%	18.5
1/8	5/16	3/16	15%	11.8
1/8	3/8	1/4	10%	8.2
1/8	7/16	5/16	7%	6.0
9/64	3/16	3/64	51%	32.8
9/64	7/32	5/64	38%	24.1
9/64	1/4	7/64	29%	18.5
9/64	21/64	3/16	17%	10.8
9/64	3/8	15/64	13%	8.2
.150	7/32	.069	43%	24.1
5/32	3/16	1/32	63%	32.9
5/32	7/32	1/16	46%	24.1
5/32	1/4	3/32	35%	18.5
5/32	9/32	1/8	28%	14.6
5/32	5/16	5/32	23%	11.8
5/32	3/8	7/32	16%	8.2
5/32	7/16	9/32	12%	6.0
11/64	1/4	5/64	43%	18.5
11/64	17/64	3/32	38%	16.4
11/64	5/16	9/64	27%	11.8
11/64	9/32	7/64	34%	14.6
11/64	3/8	13/64	19%	8.2
11/64	7/16	17/64	14%	6.0
11/64	31/64	5/16	11%	4.9
3/16	7/32	1/32	67%	24.1
3/16	1/4	1/16	50%	18.5
3/16	9/32	3/32	40%	14.6
3/16	19/64	7/64	36%	13.1
3/16	5/16	1/8	33%	11.8
3/16	3/8	3/16	23%	8.2
3/16	13/32	7/32	19%	7.0
3/16	7/16	1/4	17%	6.0
3/16	31/64	19/64	14%	4.9
3/16	1/2	5/16	13%	4.6
3/16	35/64	23/64	11%	3.9
3/16	.649	.462	8%	2.8
3/16	21/32	15/32	7%	2.7
3/16	3/4	9/16	6%	2.1
.191	1/4	.059	53%	18.5
.191	13/32	.215	20%	7.0
13/64	9/32	5/64	47%	14.6
13/64	5/16	7/64	38%	11.8
13/64	.541	.338	13%	3.9
13/64	37/64	3/8	11%	3.5
7/32	5/16	3/32	44%	11.8
7/32	11/32	1/8	37%	9.8
7/32	3/8	5/32	31%	8.2
7/32	7/16	7/32	23%	6.0
7/32	9/16	11/32	14%	3.6
7/32	19/32	3/8	12%	3.3
7/32	.649	.430	10%	2.7
7/32	1	25/32	4%	1.1
15/64	5/16	.078	51%	11.8
15/64	11/32	7/64	42%	9.8
15/64	3/8	9/64	35%	8.2
15/64	.595	.361	14%	3.3
1/4	5/16	1/16	58%	11.8
1/4	11/32	3/32	48%	9.8
1/4	3/8	1/8	40%	8.2
1/4	7/16	3/16	30%	6.0
1/4	1/2	1/4	23%	4.6
1/4	17/32	9/32	20%	4.1
1/4	9/16	5/16	18%	3.6
1/4	19/32	11/32	16%	3.3
1/4	21/32	13/32	13%	2.7
1/4	3/4	1/2	11%	2.1

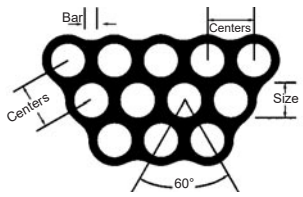
Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1/4	7/8	5/8	7%	1.5
1/4	31/32	23/32	6%	1.2
17/64	3/8	7/64	46%	8.2
17/64	25/64	1/8	42%	7.6
17/64	13/32	9/64	39%	7.0
9/32	3/8	3/32	51%	8.2
9/32	13/32	1/8	44%	7.0
9/32	7/16	5/32	38%	6.0
9/32	45/64	27/64	15%	2.3
19/64	7/16	9/64	42%	6.0
5/16	3/8	1/16	63%	8.2
5/16	7/16	1/8	46%	6.0
5/16	15/32	5/32	40%	5.3
5/16	1/2	3/16	35%	4.6
5/16	17/32	7/32	31%	4.1
5/16	5/8	5/16	23%	3.0
5/16	21/32	11/32	21%	2.7
5/16	3/4	7/16	16%	2.0
5/16	13/16	1/2	13%	1.7
5/16	7/8	9/16	12%	1.5
5/16	1-1/32	23/32	8%	1.1
5/16	1-33/64	1-13/64	4%	0.5
21/64	7/16	7/64	51%	6.0
21/64	1/2	11/64	39%	4.6
11/32	15/32	1/8	49%	5.3
11/32	1/2	5/32	43%	4.6
11/32	17/32	3/16	38%	4.1
11/32	55/64	33/64	15%	1.6
23/64	15/32	7/64	53%	5.3
23/64	17/32	11/64	42%	4.1
23/64	3/4	25/64	21%	2.1
3/8	7/16	1/16	67%	6.0
3/8	1/2	1/8	51%	4.6
3/8	17/32	5/32	45%	4.1
3/8	9/16	3/16	40%	3.6
3/8	19/32	7/32	36%	3.3
3/8	5/8	1/4	33%	3.0
3/8	11/16	5/16	27%	2.4
3/8	3/4	3/8	23%	2.1
3/8	25/32	13/32	21%	1.9
3/8	55/64	31/64	17%	1.6
3/8	31/32	19/32	14%	1.2
3/8	1-5/64	45/64	11%	1.0
3/8	1.299	.924	8%	0.7
3/8	2	1-5/8	3%	0.3
25/64	17/32	9/64	49%	4.1
25/64	9/64	11/64	44%	3.6
13/32	5/8	7/32	38%	3.0
13/32	9/16	5/32	47%	3.6
27/64	13/16	25/64	25%	1.8
27/64	5/8	13/64	41%	3.0
7/16	9/16	1/8	55%	3.7
7/16	5/8	3/16	44%	3.0
7/16	11/16	1/4	37%	2.4
7/16	3/4	5/16	31%	2.1
7/16	7/8	7/16	23%	1.5
7/16	1-5/64	41/64	15%	1.0
7/16	1.19	.753	12%	0.8
29/64	11/16	15/64	39%	2.4
15/32	5/8	5/32	51%	3.0
15/32	21/32	3/16	46%	2.7
15/32	3/4	9/32	35%	2.1
15/32	1-9/64	43/64	15%	0.9
31/64	11/16	13/64	45%	2.4
1/2	5/8	1/8	58%	3.0
1/2	11/16	3/16	48%	2.4
1/2	3/4	1/4	40%	2.1
1/2	7/8	3/8	30%	1.5
1/2	1	1/2	23%	1.2
1/2	1-1/16	9/16	20%	1.0
1/2	1-3/16	11/16	16%	0.8
1/2	1-19/64	51/64	14%	0.7

Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1/2	1-1/2	1	10%	0.5
1/2	1-3/4	1-1/4	7%	***
17/32	23/32	3/16	50%	2.2
17/32	3/4	7/32	46%	2.1
17/32	13/16	9/32	39%	1.8
17/32	1-1/4	23/32	16%	0.7
33/64	3/4	15/64	43%	2.1
35/64	3/4	13/64	48%	2.1
9/16	3/4	3/16	51%	2.1
9/16	7/8	5/16	38%	1.5
9/16	1	7/16	29%	1.2
9/16	1-19/64	47/64	17%	0.7
37/64	3/4	11/64	54%	2.1
19/32	13/16	7/32	48%	1.7
19/32	1-13/32	13/16	16%	0.6
5/8	13/16	3/16	54%	1.8
5/8	7/8	1/4	46%	1.5
5/8	1	3/8	35%	1.2
5/8	1-1/8	1/2	28%	0.9
5/8	1-13/16	1-3/16	11%	***
5/8	1-1/4	5/8	23%	0.7
5/8	1-13/32	25/32	18%	0.6
5/8	1-1/2	7/8	16%	0.5
5/8	1-47/64	1-7/64	12%	***
41/64	7/8	15/64	49%	1.5
21/32	27/32	3/16	55%	1.6
21/32	7/8	7/32	51%	1.5
21/32	15/16	9/32	44%	1.3
21/32	1-15/32	13/16	18%	0.5
11/16	7/8	3/16	56%	1.5
11/16	15/16	1/4	49%	1.3
11/16	1	5/16	43%	1.2
11/16	1-1/8	7/16	34%	0.9
11/16	1-1/2	13/16	19%	0.5
11/16	1-5/8	15/16	16%	***
11/16	1-3/4	1-1/16	14%	***
11/16	1-15/16	1-1/4	11%	***
23/32	29/32	3/16	57%	1.4
23/32	15/16	7/32	53%	1.3
23/32	1	9/32	47%	1.2
23/32	1-9/16	27/32	19%	0.5
23/32	1-5/8	29/32	18%	***
3/4	7/8	1/8	67%	1.5
3/4	15/16	3/16	58%	1.3
3/4	1	1/4	51%	1.2
3/4	1-1/16	5/16	45%	1.0
3/4	1-1/8	3/8	40%	0.9
3/4	1-1/4	1/2	33%	0.7
3/4	1-3/8	5/8	27%	0.6
3/4	1-1/2	3/4	23%	0.5
3/4	1-5/8	7/8	19%	***
3/4	1-47/64	63/64	17%	***
3/4	1-61/64	1-13/64	13%	***
25/32	31/32	3/16	59%	1.2
25/32	1	7/32	55%	1.2
25/32	1-3/16	13/32	39%	0.8
25/32	1-11/16	29/32	19%	***
13/16	1	3/16	60%	1.2
13/16	1-1/16	1/4	53%	1.0
13/16	1-1/8	5/16	47%	0.9
13/16	1-3/16	3/8	43%	0.8
13/16	1-5/16	1/2	35%	0.7
13/16	1-47/64	59/64	20%	***
13/16	1-27/32	1-1/32	18%	***
27/32	1-1/32	3/16	61%	1.1
27/32	1-1/8	9/32	51%	0.9
27/32	1-25/32	15/16	20%	***
7/8	1-1/16	3/16	62%	1.0
7/8	1-3/32	7/32	58%	1.0
7/8	1-1/8	1/4	55%	0.9
7/8	1-1/4	3/8	44%	0.7
7/8	1-5/16	7/16	40%	0.7

***Less than 1/2 a hole per square inch

Round Hole with Staggered Centers

Standard Pattern



In-stock items denoted by blue background.

Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
7/8	1-1/2	5/8	31%	0.5
7/8	1-3/4	7/8	23%	***
7/8	1-5/6	.958	21%	***
7/8	1-57/64	1-1/64	19%	***
7/8	1-15/16	1-1/16	19%	***
7/8	2-5/32	1-9/32	15%	***
7/8	2-17/64	1-25/64	14%	***
29/32	1-1/4	11/32	48%	0.7
15/16	1-1/8	3/16	63%	0.9
15/16	1-3/16	1/4	57%	0.8
15/16	1-1/4	5/16	51%	0.7
15/16	1-3/8	7/16	42%	0.6
15/16	2-1/16	1-1/8	19%	***
1	1-1/4	1/4	58%	0.7
1	1-3/8	3/8	48%	0.6
1	1-1/2	1/2	40%	0.5
1	1-5/8	5/8	34%	***
1	1-3/4	3/4	30%	***
1	1-7/8	7/8	26%	***
1	2-5/32	1-5/32	20%	***
1	2-3/8	1-3/8	16%	***
1-1/32	1-1/4	7/32	62%	0.7
1-1/16	1.444	.382	49%	0.6
1-1/16	1-1/2	7/16	46%	0.5
1-1/16	1-5/8	9/16	39%	***
1-1/8	1-7/16	5/16	56%	0.6
1-1/8	1-1/2	3/8	51%	0.5
1-1/8	1-5/8	1/2	44%	***
1-1/8	1-11/16	9/16	40%	***
1-1/8	1-3/4	5/8	38%	***
1-1/8	2	7/8	29%	***
1-1/8	2-1/4	1-1/8	23%	***
1-1/8	2-1/2	1-3/8	18%	***
1-1/8	2.67	1.545	16%	***
1-3/16	1-9/16	3/8	52%	0.5
1-3/16	1-11/16	1/2	45%	***
1-3/16	1-3/4	9/16	42%	***
1-3/16	2-45/64	1-33/64	18%	***
1-1/4	1-9/16	5/16	58%	0.5
1-1/4	1-5/8	3/8	54%	***
1-1/4	1-11/16	7/16	50%	***
1-1/4	1-3/4	1/2	46%	***
1-1/4	1-7/8	5/8	40%	***
1-1/4	1-15/16	11/16	38%	***
1-1/4	2	3/4	35%	***
1-1/4	2-13/16	1-9/16	18%	***
1-9/32	1-3/4	15/32	49%	***
1-5/16	1-3/4	7/16	51%	***
1-5/16	1-7/8	9/16	44%	***
1-3/8	1-5/8	1/4	65%	***
1-3/8	1-3/4	3/8	56%	***
1-3/8	1-7/8	1/2	49%	***
1-3/8	2	5/8	43%	***
1-3/8	2-3/16	13/16	36%	***
1-3/8	3-1/32	1-21/32	19%	***
1-7/16	1-3/4	5/16	61%	***
1-7/16	1-13/16	3/8	57%	***
1-7/16	2	9/16	47%	***
1-1/2	1-7/8	3/8	58%	***
1-1/2	2	1/2	51%	***
1-1/2	2-1/16	9/16	48%	***
1-1/2	2-1/8	5/8	45%	***
1-1/2	2-1/4	3/4	40%	***
1-9/16	1-15/16	3/8	59%	***
1-9/16	2	7/16	55%	***
1-9/16	2-1/16	1/2	52%	***
1-5/8	2	3/8	60%	***
1-5/8	2-1/16	7/16	56%	***
1-5/8	2-1/4	5/8	47%	***
1-11/16	2-1/8	7/16	57%	***
1-11/16	2-1/4	9/16	51%	***
1-3/4	2	1/4	69%	***

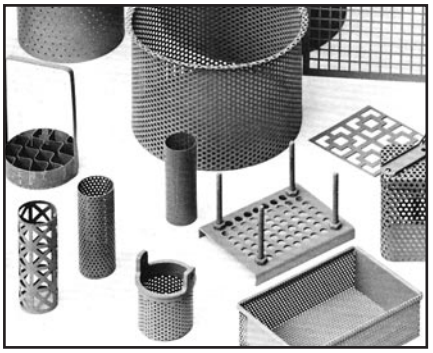
***Less than 1/2 a hole per square inch

Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1-3/4	2-1/8	3/8	62%	***
1-3/4	2-1/4	1/2	55%	***
1-3/4	2-3/8	5/8	49%	***
1-3/4	2-1/4	1/2	55%	***
1-13/16	2-5/16	1/2	56%	***
1-13/16	2-7/16	5/8	50%	***
1-7/8	2-1/4	3/8	63%	***
1-7/8	2-3/8	1/2	57%	***
1-7/8	2-1/2	5/8	51%	***
1-15/16	2-5/8	11/16	49%	***
2	2-1/4	1/4	72%	***
2	2-7/16	7/16	61%	***
2	2-19/32	19/32	54%	***
2	2-1/2	1/2	58%	***
2	2-5/8	5/8	53%	***
2	2-3/4	3/4	48%	***
2	2-5/8	5/8	53%	***
2	2-3/4	3/4	48%	***
2-1/16	any	any	varies	varies
2-1/8	2-5/8	1/2	59%	***
2-1/8	3	7/8	46%	***
2-1/8	any	any	varies	varies
2-1/5	any	any	varies	varies
2-1/4	2-3/4	1/2	61%	***
2-1/4	2-13/16	9/16	58%	***
2-1/4	2-27/32	19/32	57%	***
2-1/4	2-7/8	5/8	56%	***
2-1/4	3	3/4	51%	***
2-1/4	any	any	varies	varies
2-5/16	2-7/8	9/16	59%	***
2-5/16	any	any	varies	varies
2-3/8	2-7/8	1/2	62%	***
2-3/8	3	5/8	57%	***
2-3/8	3-1/8	3/4	52%	***
2-3/8	any	any	varies	varies
2-7/16	3	9/16	60%	***
2-7/16	3-1/8	11/16	55%	***
2-7/16	any	any	varies	varies
2-7/16	3-1/8	11/16	55%	***
2-15/32	any	any	varies	varies
2-1/2	2-7/8	3/8	69%	***
2-1/2	3	1/2	63%	***
2-1/2	3-1/8	5/8	58%	***
2-1/2	3-1/4	3/4	54%	***
2-1/2	3-1/2	1	46%	***
2-1/2	any	any	varies	varies
2-9/16	3-1/8	9/16	61%	***
2-9/16	any	any	varies	varies
2-5/8	3-1/8	1/2	64%	***
2-5/8	3-3/8	3/4	55%	***
2-5/8	any	any	varies	varies
2-11/16	3-3/8	11/16	58%	***
2-11/16	any	any	varies	varies
2-3/4	3-3/8	5/8	60%	***
2-3/4	any	any	varies	varies
2-13/16	any	any	varies	varies
2-7/8	any	any	varies	varies
3	3-3/4	3/4	58%	***
3	any	any	varies	varies
3-1/16	any	any	varies	varies
3-1/8	any	any	varies	varies
3-3/16	any	any	varies	varies
3-1/4	4	3/4	60%	***
3-1/4	any	any	varies	varies
3-5/16	any	any	varies	varies
3-3/8	4-3/16	13/16	59%	***
3-3/8	any	any	varies	varies
3-7/16	4-3/16	3/4	61%	***
3-7/16	any	any	varies	varies
3-1/2	any	any	varies	varies
3-9/16	any	any	varies	varies
3-5/8	any	any	varies	varies

Hole Size (In)	60° Stagg Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
3-3/4	any	any	varies	varies
3-7/8	any	any	varies	varies
4	any	any	varies	varies
4-1/16	any	any	varies	varies
4-1/8	any	any	varies	varies
4-1/4	any	any	varies	varies
4-3/8	any	any	varies	varies
4-1/2	any	any	varies	varies
4-3/4	any	any	varies	varies
5	any	any	varies	varies
5-1/8	any	any	varies	varies
5-3/16	any	any	varies	varies
5-1/4	any	any	varies	varies
5-3/8	any	any	varies	varies
5-1/2	any	any	varies	varies
5-3/4	any	any	varies	varies
6	any	any	varies	varies
6-1/8	any	any	varies	varies
6-1/4	any	any	varies	varies
6-1/2	any	any	varies	varies
7	any	any	varies	varies
7-1/2	any	any	varies	varies
8	any	any	varies	varies
8-1/4	any	any	varies	varies
8-1/2	any	any	varies	varies

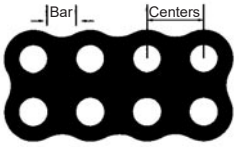
Perforated Material Options

- Carbon Steel
- Stainless Steel
- Galvanized
- Aluminum
- Plastic
- Special Alloys



See page 7 for a list of in-stock perforated products ready for same day shipment

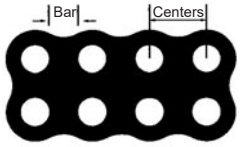
Round Hole with Straight Centers



Hole Size (In)	Strt Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
.027	7/64	.082	5%	83.8
1/32	7/64	5/64	6%	83.4
.033	.055	.022	28%	330.9
.036	7/64	.073	9%	83.5
.040	9/64	.101	6%	50.9
.045	.066	.021	37%	229.5
.045	9/64	.096	8%	50.3
3/64	11/64	1/8	6%	33.6
.055	11/64	.117	8%	33.7
1/16	.162	.100	12%	38.1
1/16	.189	.127	9%	28.0
1/16	.216	.154	7%	21.5
1/16	1	.938	0.3%	1.0
.066	3/16	.122	10%	28.4
.069	.216	.147	8%	21.4
.075	11/64	.097	15%	34.0
5/64	.189	.111	13%	28.0
5/64	7/32	9/64	10%	20.9
5/64	.243	.165	8%	16.9
5/64	.270	.192	7%	13.8
.080	7/32	.139	11%	20.9
3/32	17/64	11/64	10%	14.2
3/32	.270	.176	10%	13.8
3/32	21/64	15/64	6%	9.3
3/32	.433	.339	4%	5.4
.097	.270	.173	10%	13.7
.100	.142	.042	39%	49.7
.100	.270	.170	11%	13.8
7/64	19/64	3/16	11%	11.4
7/64	.324	.215	9%	9.6
.117	.243	.126	18%	16.9
.117	.270	.153	15%	13.7
1/8	21/64	13/64	11%	9.3
1/8	3/8	1/4	9%	7.1
1/8	27/64	19/64	7%	5.6
9/64	5/16	11/64	16%	10.2
9/64	3/8	15/64	11%	7.1
5/32	5/16	5/32	20%	10.2
5/32	3/8	7/32	14%	7.1
5/32	7/16	9/32	10%	5.2
11/64	7/16	17/64	12%	5.2
3/16	7/16	1/4	14%	5.2
3/16	15/32	9/32	13%	4.6
3/16	1/2	5/16	11%	4.0
3/16	17/32	11/32	10%	3.5
3/16	21/32	15/32	6%	2.3
3/16	3/4	9/16	5%	1.8
3/16	1	13/16	3%	1.0
7/32	19/32	3/8	11%	2.8
7/32	21/32	7/16	9%	2.3
15/64	19/32	23/64	12%	2.8
1/4	1/2	1/4	20%	4.0
1/4	17/32	9/32	17%	3.5
1/4	19/32	11/32	14%	2.8
1/4	21/32	13/32	11%	2.3
1/4	3/4	1/2	9%	1.8
1/4	7/8	5/8	6%	1.3
1/4	31/32	23/32	5%	1.1
1/4	1	3/4	5%	1.0
9/32	11/16	13/32	13%	2.1
5/16	21/32	11/32	18%	2.3
5/16	3/4	7/16	14%	1.8
5/16	13/16	1/2	12%	1.5
5/16	7/8	9/16	10%	1.3
5/16	1-5/16	1	5%	0.6
5/16	1-1/2	1-3/16	3%	***
5/16	1-25/32	1-15/32	2%	***
11/32	7/8	17/32	12%	1.3
3/8	3/4	3/8	20%	1.8
3/8	7/8	1/2	14%	1.3
3/8	15/16	9/16	13%	1.1
3/8	1-3/32	23/32	9%	0.8

***Less than 1/2 a hole per square inch

Round Hole with Straight Centers

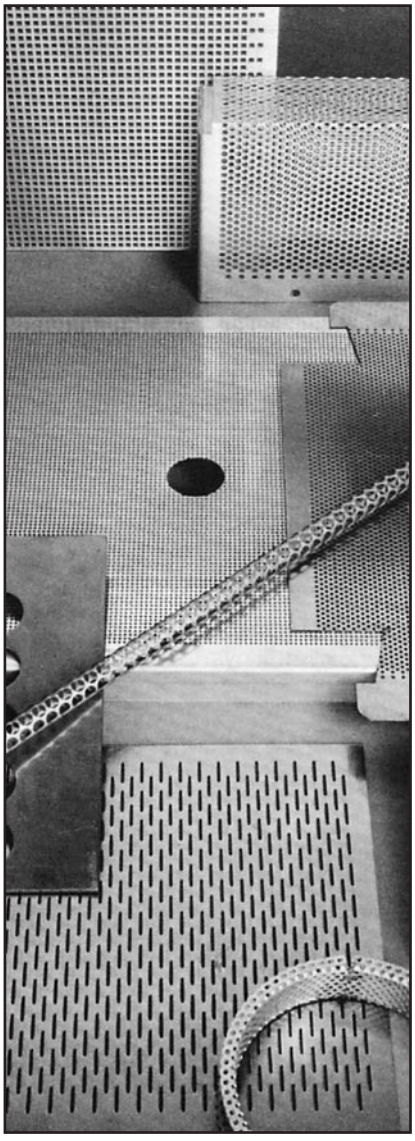


Hole Size (In)	Strt Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
3/8	1-19/64	59/64	7%	0.6
3/8	3-15/32	3-3/32	0.9%	***
13/32	17/32	1/8	46%	3.5
7/16	1-3/32	21/32	13%	0.8
7/16	1-3/16	3/4	11%	0.7
15/32	1-1/8	21/32	14%	0.8
1/2	1-1/16	9/16	17%	0.9
1/2	1-3/32	19/32	16%	0.8
1/2	1-3/16	11/16	14%	0.7
1/2	1-5/16	13/16	11%	0.6
1/2	1-1/2	1	9%	***
1/2	1-3/4	1-1/4	6%	***
17/32	1-1/4	23/32	14%	0.6
17/32	15/16	13/32	25%	1.1
9/16	3/4	3/16	44%	1.8
9/16	1-5/16	3/4	14%	0.6
19/32	1-7/16	27/32	13%	0.5
5/8	1-1/4	5/8	20%	0.6
5/8	1-7/16	13/16	15%	0.5
5/8	1-1/2	7/8	14%	***
5/8	1-3/4	1-1/8	10%	***
5/8	1-15/16	1-5/16	8%	***
21/32	1-1/2	27/32	15%	***
11/16	1-1/2	13/16	17%	***
11/16	1-5/8	15/16	14%	***
23/32	1-9/16	27/32	17%	***
23/32	1-5/8	29/32	15%	***
3/4	1-1/4	1/2	28%	0.6
3/4	1-1/2	3/4	20%	***
3/4	1-5/8	7/8	17%	***
3/4	1-3/4	1	14%	***
3/4	1-15/16	1-3/16	12%	***
3/4	2-3/8	1-5/8	8%	***
25/32	1-11/16	29/32	17%	***
13/16	1-3/4	15/16	17%	***
13/16	1-27/32	1-1/32	15%	***
27/32	1-13/16	31/32	17%	***
7/8	1-1/2	5/8	27%	***
7/8	1-7/8	1	17%	***
7/8	1-15/16	1-1/16	16%	***
7/8	2-3/16	1-5/16	13%	***
7/8	2-1/4	1-3/8	12%	***
15/16	1-15/16	1	18%	***
15/16	2-1/16	1-1/8	16%	***
1	2	1	20%	***
1	2-3/16	1-3/16	16%	***
1	2-3/8	1-3/8	14%	***
1	2-5/8	1-5/8	11%	***
1	2-13/16	1-13/16	10%	***
1	3-1/16	2-1/16	8%	***
1	3-1/4	2-1/4	7%	***
1-1/16	2-5/8	1-9/16	13%	***
1-1/8	2-5/16	1-3/16	19%	***
1-1/8	2-3/8	1-1/4	18%	***
1-1/8	2-1/2	1-3/8	16%	***
1-1/8	2-5/8	1-1/2	14%	***
1-3/16	2-23/32	1-17/32	15%	***
1-1/4	2-1/4	1	24%	***
1-1/4	2-13/16	1-9/16	16%	***
1-1/4	3-1/16	1-13/16	13%	***
1-1/4	3-1/4	2	12%	***
1-5/16	3-1/4	1-15/16	13%	***
1-3/8	2-1/4	7/8	29%	***
1-3/8	3	1-5/8	17%	***
1-3/8	3-1/4	1-7/8	14%	***
1-7/16	3-1/2	2-1/16	13%	***
1-1/2	2	1/2	44%	***
1-1/2	3-1/4	1-3/4	17%	***
1-1/2	3-15/32	1-31/32	15%	***
1-1/2	3-7/8	2-3/8	12%	***
1-9/16	3-23/64	1-51/64	17%	***
1-9/16	3-15/32	1-29/32	16%	***

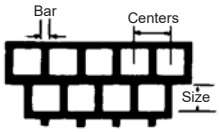
Hole Size (In)	Strt Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1-5/8	3-15/32	1-27/32	17%	***
1-5/8	3-37/64	1-61/64	16%	***
1-11/16	3-11/16	2	16%	***
1-3/4	2-7/16	11/16	41%	***
1-3/4	2-13/16	1-1/16	30%	***
1-3/4	3-11/16	1-15/16	18%	***
1-3/4	3-7/8	2-1/8	16%	***
1-3/4	4-7/64	2-23/64	14%	***
1-13/16	2-1/4	7/16	51%	***
1-13/16	4-1/64	2-13/64	16%	***
1-7/8	4-3/32	2-7/32	17%	***
1-7/8	4-1/8	2-1/4	16%	***
1-15/16	4-17/32	2-19/32	14%	***

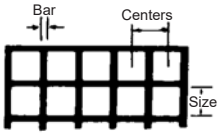
***Less than 1/2 a hole per square inch

In-stock items denoted by blue background.



Square Hole with Straight or Staggered Centers



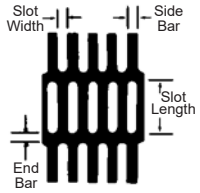


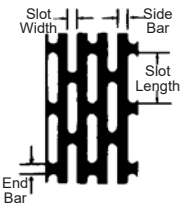
Hole Size (In)	Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1/8	1/4	1/8	25%	16.0
5/32	1/4	3/32	39%	16.0
3/16	9/32	3/32	44%	12.6
3/16	5/16	1/8	36%	10.2
3/16	3/8	3/16	25%	7.1
.200	1/4	.05	64%	16.0
7/32	11/32	1/8	41%	8.5
1/4	11/32	3/32	53%	8.5
1/4	3/8	1/8	44%	7.1
1/4	7/16	3/16	33%	5.2
1/4	1/2	1/4	25%	4.0
1/4	1	3/4	6%	1.0
9/32	7/16	5/32	41%	5.2
5/16	7/16	1/8	51%	5.2
5/16	15/32	5/32	44%	4.5
5/16	1/2	3/16	39%	4.0
3/8	1/2	1/8	56%	4.0
3/8	17/32	5/32	50%	3.5
3/8	9/16	3/16	44%	3.2
3/8	19/32	7/32	40%	2.8
3/8	5/8	1/4	36%	2.6
7/16	9/16	1/8	61%	3.2
7/16	19/32	5/32	54%	2.8
7/16	11/16	1/4	41%	2.1
1/2	5/8	1/8	64%	2.6
1/2	21/32	5/32	58%	2.3
1/2	11/16	3/16	53%	2.1
1/2	3/4	1/4	44%	1.8
1/2	7/8	3/8	33%	1.3
1/2	1	1/2	25%	1
9/16	3/4	3/16	56%	1.8
9/16	13/16	1/4	48%	1.5
5/8	3/4	1/8	69%	1.8
5/8	25/32	5/32	64%	1.6
5/8	13/16	3/16	59%	1.5
5/8	27/32	7/32	55%	1.4
5/8	7/8	1/4	51%	1.3
5/8	1	3/8	39%	1
5/8	1-1/8	1/2	31%	0.8
21/32	31/32	5/16	46%	1.1
11/16	7/8	3/16	62%	1.3
11/16	29/32	7/32	58%	1.2
11/16	1	5/16	47%	1.0
3/4	15/16	3/16	64%	1.1
3/4	1	1/4	56%	1.0
3/4	1-1/8	3/8	44%	0.8
3/4	1-1/4	1/2	36%	0.6
3/4	1-3/8	5/8	30%	0.5
3/4	1-1/2	3/4	25%	***
13/16	1	3/16	66%	1.0
13/16	1-1/16	1/4	59%	0.9
13/16	1-1/8	5/16	52%	0.8
7/8	1-1/16	3/16	68%	0.9
7/8	1-1/8	1/4	61%	0.8
7/8	1-1/4	3/8	49%	0.6
7/8	1-3/8	1/2	41%	0.5
7/8	1-1/2	5/8	34%	***
29/32	1-3/8	15/32	43%	0.5
15/16	1-3/16	1/4	62%	0.7
1	1-3/16	3/16	71%	0.7
1	1-1/4	1/4	64%	0.6
1	1-3/8	3/8	53%	0.5
1	1-7/16	7/16	48%	0.5
1	1-1/2	1/2	44%	***
1	1-5/8	5/8	38%	***
1-1/16	1-5/16	1/4	66%	0.6
1-1/16	1-1/2	7/16	50%	***
1-1/8	1-3/8	1/4	67%	0.5
1-1/8	1-1/2	3/8	56%	***
1-1/8	1-5/8	1/2	48%	***
1-3/16	1-7/16	1/4	68%	0.5
1-3/16	1-13/16	5/8	43%	***

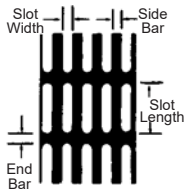
***Less than 1/2 a hole per square inch

Hole Size (In)	Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1-1/4	1-1/2	1/4	69%	***
1-1/4	1-5/8	3/8	59%	***
1-1/4	1-13/16	9/16	48%	***
1-1/4	1-7/8	5/8	44%	***
1-5/16	1-11/16	3/8	61%	***
1-3/8	1-5/8	1/4	72%	***
1-3/8	1-3/4	3/8	62%	***
1-3/8	1-13/16	7/16	58%	***
1-3/8	1-15/16	9/16	50%	***
1-7/16	1-13/16	3/8	63%	***
1-7/16	2-1/8	11/16	46%	***
1-1/2	1-3/4	1/4	74%	***
1-1/2	1-13/16	5/16	69%	***
1-1/2	1-7/8	3/8	64%	***
1-1/2	2	1/2	56%	***
1-1/2	2-1/4	3/4	44%	***
1-9/16	any	any	varies	varies
1-5/8	2	3/8	66%	***
1-5/8	2-1/8	1/2	59%	***
1-3/4	2	1/4	77%	***
1-3/4	2-1/8	3/8	68%	***
1-3/4	2-1/4	1/2	61%	***
1-3/4	2-3/8	5/8	54%	***
1-13/16	any	any	varies	varies
1-7/8	2-1/4	3/8	69%	***
2	2-1/4	1/4	79%	***
2	2-1/2	1/2	64%	***
2-1/16	any	any	varies	varies
2-1/8	2-5/8	1/2	66%	***
2-5/32	any	any	varies	varies
2-3/16	any	any	varies	varies
2-1/4	2-5/8	3/8	74%	***
2-1/4	2-3/4	1/2	67%	***
2-5/16	2-11/16	3/8	74%	***
2-5/16	any	any	varies	varies
2-3/8	any	any	varies	varies
2-7/16	2-7/8	7/16	72%	***
2-7/16	any	any	varies	varies
2-1/2	3	1/2	69%	***
2-1/2	any	any	varies	varies
2-5/8	any	any	varies	varies
2-3/4	3-1/4	1/2	72%	***
2-3/4	any	any	varies	varies
2-7/8	any	any	varies	varies
2-15/16	any	any	varies	varies
3	any	any	varies	varies
3-1/16	any	any	varies	varies
3-1/8	any	any	varies	varies
3-1/4	any	any	varies	varies
3-3/8	any	any	varies	varies
3-1/2	any	any	varies	varies
3-9/16	any	any	varies	varies
3-5/8	any	any	varies	varies
3-3/4	any	any	varies	varies
3-7/8	any	any	varies	varies
4	any	any	varies	varies
4-1/4	any	any	varies	varies
4-3/8	any	any	varies	varies
4-1/2	any	any	varies	varies
4-3/4	any	any	varies	varies
5	any	any	varies	varies
5-1/4	any	any	varies	varies
5-1/2	any	any	varies	varies
5-5/8	any	any	varies	varies
6	any	any	varies	varies
6-1/2	any	any	varies	varies
7	any	any	varies	varies

Slotted Hole with Round End







END STAGGERED

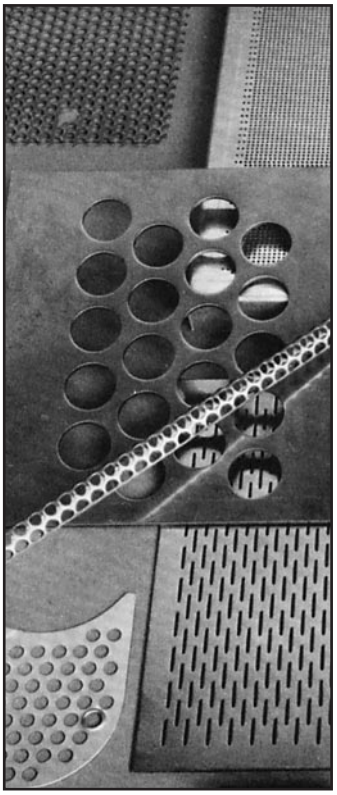
Size (In)	Side Bar (In)	End Bar (In)	Open Area
3/32 x 1-1/4	7/32	3/16	26%
1/8 x 1/2	1/8	1/8	38%
1/8 x 3/4	1/8	3/32	43%
1/8 x 1	5/32	5/32	37%
1/8 x 1	1/8	7/64	44%
5/32 x 1	1/4	3/16	35%
5/32 x 1-1/2	5/32	5/32	45%
5/32 x 2	11/32	1/2	25%
3/16 x 7/16	5/64	21/32	39%
3/16 x 1/2	5/32	5/32	40%
3/16 x 1	5/16	1/4	30%
3/16 x 1-1/2	3/16	3/16	43%
1/4 x 1/2	3/16	1/8	41%
1/4 x 3/4	3/16	3/16	42%
1/4 x 3/4	1/4	1/4	35%
1/4 x 3/4	3/16	1/8	45%
1/4 x 1	3/16	3/16	46%
1/4 x 1	1/32	1/4	34%
1/4 x 1	3/16	11/32	43%
1/4 x 1	5/16	5/16	32%
1/4 x 1-1/4	1/4	1/4	40%
1/4 x 1-1/2	7/16	3/8	28%
1/4 x 1-1/2	1/4	1/4	41%
1/4 x 2	1/4	1/2	39%
5/16 x 3/4	any	any	varies
5/16 x 1	any	any	varies
5/16 x 1-3/4	3/8	9/32	38%
5/16 x 3	15/16	15/16	44%
11/32 x 1-1/2	1/4	1/4	36%
3/8 x 1/2	any	any	varies
3/8 x 1	3/16	3/8	54%
3/8 x 1-1/8	1/4	1/4	48%
3/8 x 1-1/2	3/8	3/8	40%
3/8 x 3	1/2	1/2	37%
7/16 x 3/4	3/16	3/32	56%
1/2 x 3/4	3/16	3/16	56%
1/2 x 1	3/16	3/16	58%
1/2 x 1	1/4	1/4	51%
1/2 x 1	1/2	1/2	33%
1/2 x 1	1/2	5/8	30%
1/2 x 1	1/2	1	25%
1/2 x 1-1/2	1/4	1/4	56%
1/2 x 2	1/2	1/2	38%
1/2 x 2-1/2	5/16	5/16	54%
1/2 x 3-1/2	5/8	15/32	38%
5/8 x 3/4	3/8	3/8	34%
5/8 x 1	1/4	1/4	54%
5/8 x 1-1/4	1/4	1/4	58%
11/16 x 1	3/8	3/8	25%
3/4 x 1-1/4	5/16	5/16	54%
3/4 x 1-1/2	1/4	1/4	62%
3/4 x 2	7/8	7/8	37%
3/4 x 3	1/2	3/4	45%
7/8 x 1-3/4	3/8	3/8	56%
1 x 1-1/2	5/16	5/16	59%
1 x 2	1/2	1/2	30%
1 x 2	5/16	5/16	64%

SIDE STAGGERED

Size (In)	Side Bar (In)	End Bar (In)	Open Area
.040 x 1	0.1	1/8	25%
1/8 x 1/2	1/8	1/8	38%
1/8 x 3/4	1/8	1/8	41%
1/8 x 3/4	5/8	1/4	29%
1/8 x 1	1/8	1/8	43%
1/8 x 1-1/2	3/16	3/16	35%
3/16 x 1/2	3/16	3/16	35%
3/16 x 3/4	3/16	3/16	38%
3/16 x 1	3/16	3/16	40%
3/16 x 1	1/4	1/4	33%
3/16 x 3-1/4	3/16	3/16	47%
1/4 x 3/4	3/16	3/16	42%
1/4 x 3/4	1/4	1/4	35%
1/4 x 1	3/16	11/32	43%
1/4 x 1	5/16	5/16	32%
1/4 x 1-1/2	1/4	1/4	41%
1/4 x 1-1/2	1/4	3/8	39%
1/4 x 1-1/2	5/16	7/16	33%
1/4 x 4	1/4	1/4	47%
5/16 x 1-1/2	5/16	5/16	35%
5/16 x 2	5/8	3/4	36%
3/8 x 3/4	3/8	3/8	30%
3/8 x 1	5/16	5/16	38%
3/8 x 1	3/8	3/8	33%
3/8 x 1-1/8	1/4	1/4	48%
3/8 x 3	3/8	3/8	37%
1/2 x 1	1/4	1/2	44%
1/2 x 2	any	1-1/3	varies
5/8 x 1	any	5/8	varies
5/8 x 2	3/8	3/8	49%
3/4 x 1-1/2	3/8	3/8	48%
3/4 x 3	any	1	varies
7/8 x 4	11/16	1-3/4	37%
1 x 1-3/4	any	3/4	varies
1 x 2	1/2	1/2	48%
1 x 2-3/4	3/4	3/4	41%
1 x 3	11/16	7/8	42%
1 x 3	3/4	1	40%

STRAIGHT LINES

Hole Size (In)	Side Bar (In)	End Bar (In)	Open Area
.040 x 1	0.1	1/8	25%
1/16 x 1/2	3/32	3/32	34%
3/16 x 1-1/2	3/16	3/16	43%
1/4 x 1-1/2	3/32	3/32	68%
3/8 x 3	3/8	3/8	37%
1/2 x 2	any	1-1/3	varies
5/8 x 1	any	5/8	varies
11/16 x 1	3/8	3/8	25%
3/4 x 1-1/2	1/4	1/4	61%
3/4 x 2	7/8	7/8	37%
3/4 x 3	any	1	varies
3/4 x 3	3/4	3/4	38%
1-1/2 x 6-3/32	5-9/32	any	varies
2-1/4 x 6-1/8	5-17/32	any	varies
2-1/4 x 6-1/8	5-31/32	any	varies
2-1/4 x 6-7/16	5-13/16	any	varies
2-1/4 x 7	6-15/32	any	varies
3 x 6-9/32	5-7/16	any	varies
3 x 6-11/16	5-13/16	any	varies
3 x 6-5/8	5-5/8	any	varies

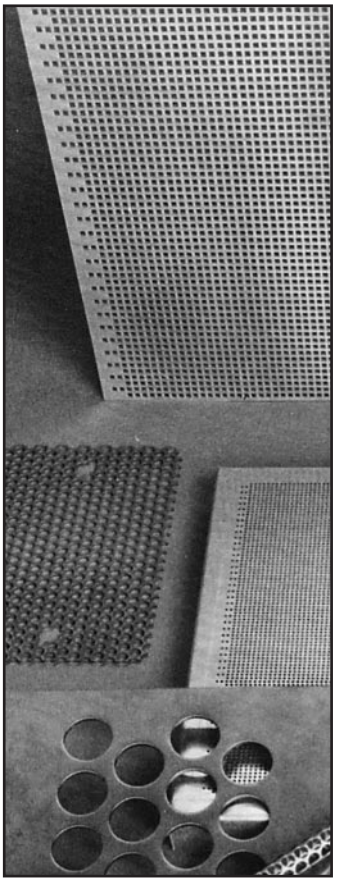


Perforated Material Options

- Carbon Steel
- Stainless Steel
- Galvanized
- Aluminum
- Plastic
- Special Alloys

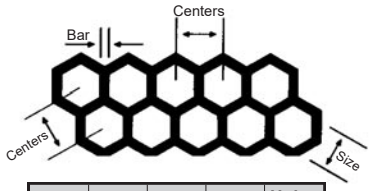
THESE SIZES AVAILABLE IN SIDE STAGGERED, END STAGGERED OR STRAIGHT LINE PATTERNS IN ANY SIZE SIDE AND END BAR.

Size (In)	
3/64 x 1/2	3/4 x 2-1/2
.072 x 1/2	3/4 x 3
3/32 x 1/2	3/4 x 4
3/16 x 1-1/4	3/4 x 6
3/16 x 3-1/4	7/8 x 1-1/4
9/32 x 4	7/8 x 1-3/8
5/16 x 2	1 x 1-1/4
11/32 x 1-1/2	1 x 1-3/4
3/8 x 1	1 x 2
3/8 x 1-1/2	1 x 2-3/4
3/8 x 2	1 x 3
3/8 x 5-1/2	1 x 4
7/16 x 7/8	1 x 4-1/4
7/16 x 15/16	1-1/8 x 2-1/16
7/16 x 1	1-1/8 x 2-1/4
1/2 x 3/4	1-1/4 x 2-1/2
1/2 x 7/8	1-1/4 x 3
1/2 x 1	1-3/8 x 2-1/2
1/2 x 1-1/4	1-3/8 x 2-7/8
1/2 x 2	1-1/2 x 2
1/2 x 2-1/2	1-1/2 x 2-3/8
1/2 x 3	1-1/2 x 3
1/2 x 3-1/2	1-1/2 x 4
1/2 x 4	1-1/2 x 6-3/32
9/16 x 7/8	1-1/2 x 6-9/16
9/16 x 1	1-3/4 x 2-1/2
9/16 x 1-1/4	2 x 2-1/2
9/16 x 1-1/2	2 x 3
9/16 x 3	2 x 4
5/8 x 3/4	2 x 6
5/8 x 7/8	2-1/16 x 3-3/16
5/8 x 2	2-1/4 x 6-1/8
5/8 x 2-1/4	2-1/4 x 7
5/8 x 2-3/4	2-1/2 x 3-1/8
5/8 x 3	2-1/2 x 3-1/2
5/8 x 4	3 x 5
11/16 x 1-3/8	3 x 6
3/4 x 1	3 x 6-9/32
3/4 x 1-1/4	3 x 6-11/16
3/4 x 1-1/2	3 x 6-5/8
3/4 x 2	3 x 7-1/4



Perforated Stock List
- ready for immediate shipment
- complete inventory on page 7

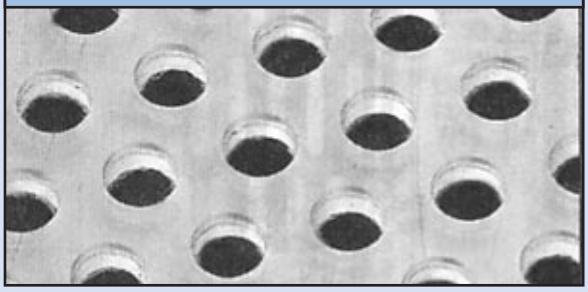
Hexagon



Hole Size (In)	Ctrs (In)	Bar Width (In)	Open Area	Holes Per Sq. Inch
1/4	3/8	1/8	44%	7.1
9/32	13/32	1/8	48%	6.1
5/16	7/16	1/8	51%	5.2
3/8	17/32	5/32	50%	3.5
7/16	19/32	5/32	54%	2.8
1/2	11/16	3/16	53%	2.1
9/16	13/16	1/4	48%	1.5
5/8	7/8	1/4	51%	1.3
11/16	15/16	1/4	54%	1.1
3/4	1	1/4	56%	1.0
13/16	1-1/16	1/4	58%	0.9
7/8	1-1/8	1/4	61%	0.8
7/8	1-1/4	3/8	49%	0.6
15/16	1-3/16	1/4	63%	0.7
1	1-1/4	1/4	64%	0.6
1	1-3/8	3/8	53%	0.5
1-3/32	1-3/8	9/32	63%	0.5
1-1/8	1-3/8	1/4	67%	0.5
1-3/16	1-1/2	5/16	63%	***
1-1/4	1-9/16	5/16	64%	***
1-1/4	1-5/8	3/8	59%	***
1-5/16	1-9/16	1/4	71%	***
1-5/16	1-11/16	3/8	61%	***
1-3/8	1-3/4	3/8	62%	***
1-7/16	2-1/16	5/8	49%	***
1-1/2	1-15/16	7/16	60%	***
1-5/8	2	3/8	66%	***
1-3/4	2-1/4	1/2	61%	***
1-7/8	2-1/4	3/8	69%	***
2	2-1/2	1/2	64%	***
2-1/8	2-1/2	3/8	72%	***
2-1/4	2-3/4	1/2	67%	***
2-5/16	2-13/16	1/2	68%	***
2-5/16	any	any	varies	varies
2-3/8	3	5/8	63%	***
2-1/2	3	1/2	69%	***
2-3/4	3-1/4	1/2	72%	***
2-13/16	3-5/16	1/2	72%	***
3-5/16	4-1/16	3/4	67%	***
3-3/8	3-7/8	1/2	76%	***
3-7/8	4-1/2	5/8	74%	***

***Less than 1/2 a hole per square inch

Perforated Plastic



Perforated Plastic offers a lower cost alternative for applications typically requiring stainless steel due to highly corrosive environments. In addition, perforated plastic is an ideal alternative where minimizing weight is important.

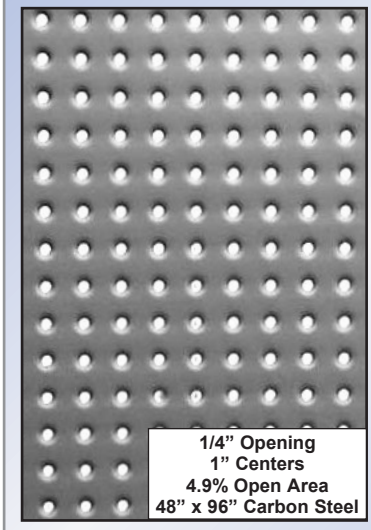
	Polypropylene
Standard Thickness	.063", .125"
Standard Sheet Size	48" x 96"
Color	Natural White - Semi Clear
Paint Adhesion	Poor
Finish	Smooth
Forms & Fabricates	Hot - Fair Cold - Poor Weldable
UV Stability	Fair
Chemical Resistance	Excellent

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Perforated Materials

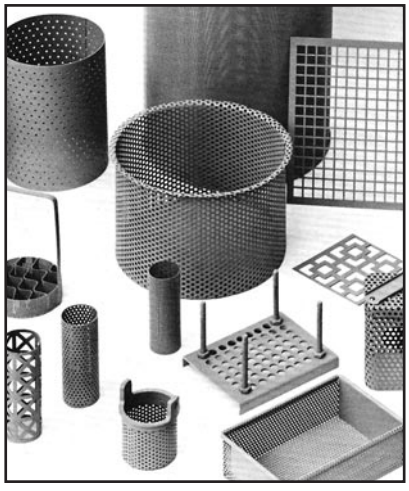
- Carbon & Stainless Steel
- Galvanized
- Aluminum
- Plastic
- Special Alloys

Peg-Board

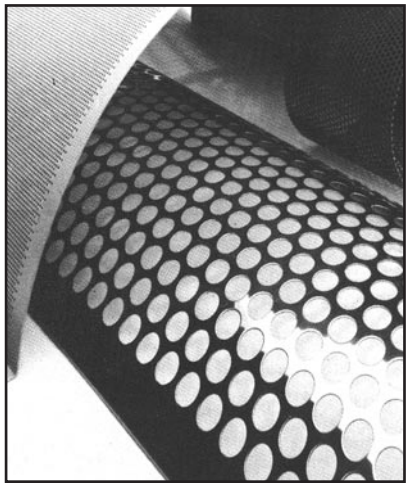


Perforated metal display and storage panels. Ideal for trade show exhibits, show room displays, toolroom storage ...unlimited applications where organization and aesthetically pleasing displays are desired.

(Note: Product also occasionally referred to as Mushroom Perf.)



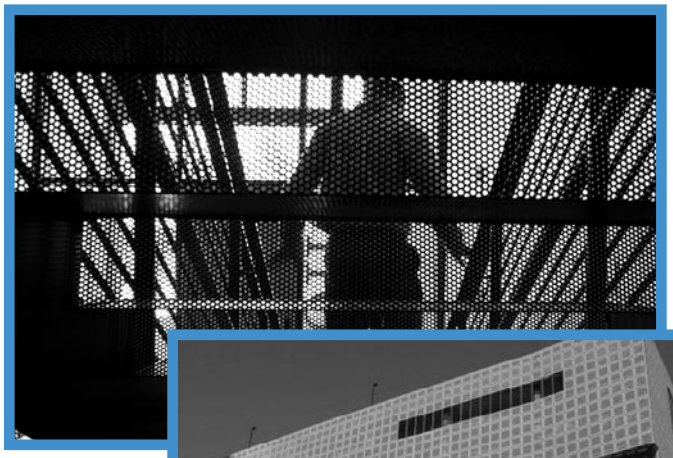




Perforated

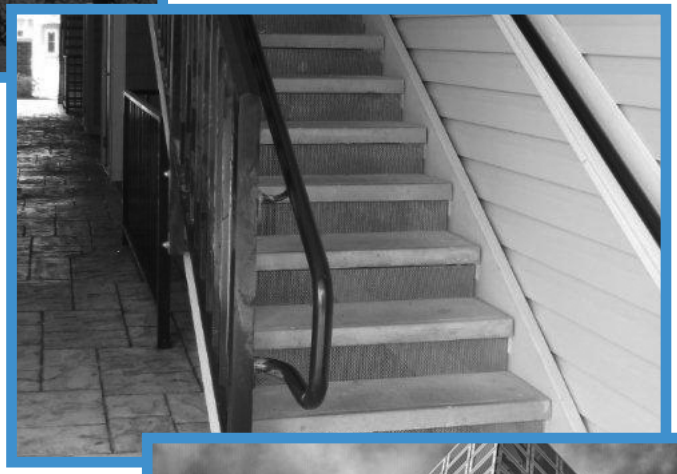
The tremendous array of applications for perforated materials is astounding!

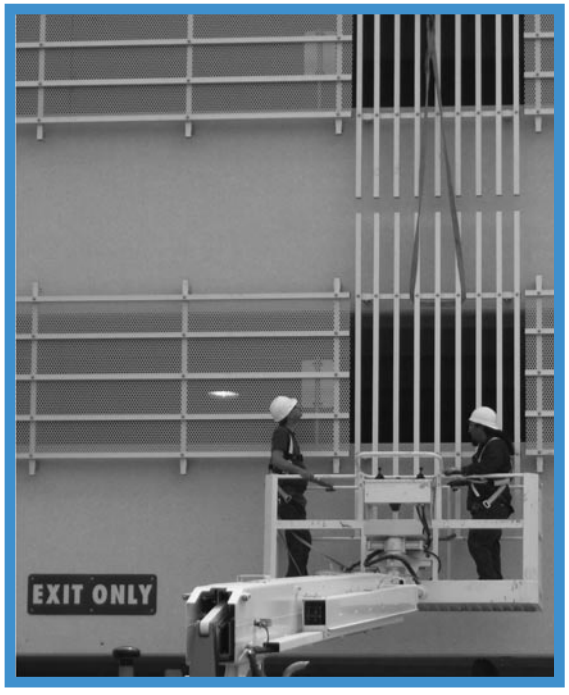
Featured here are just a few of the specialty jobs Brown-Campbell has supplied.





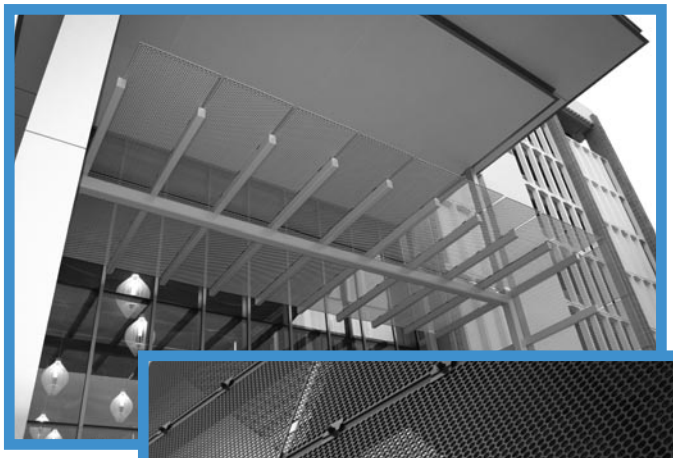






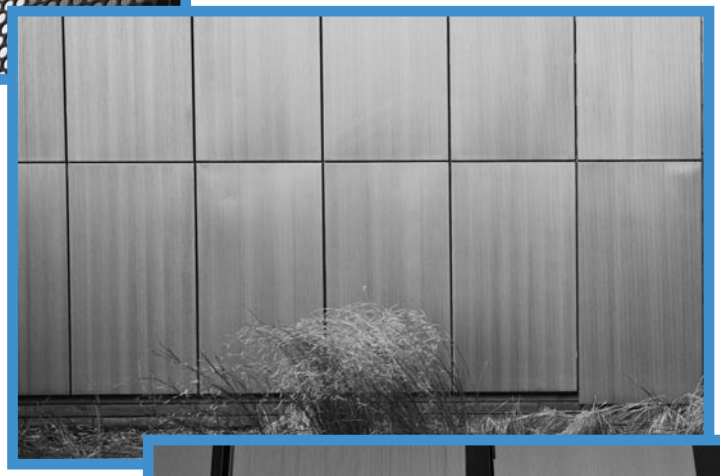


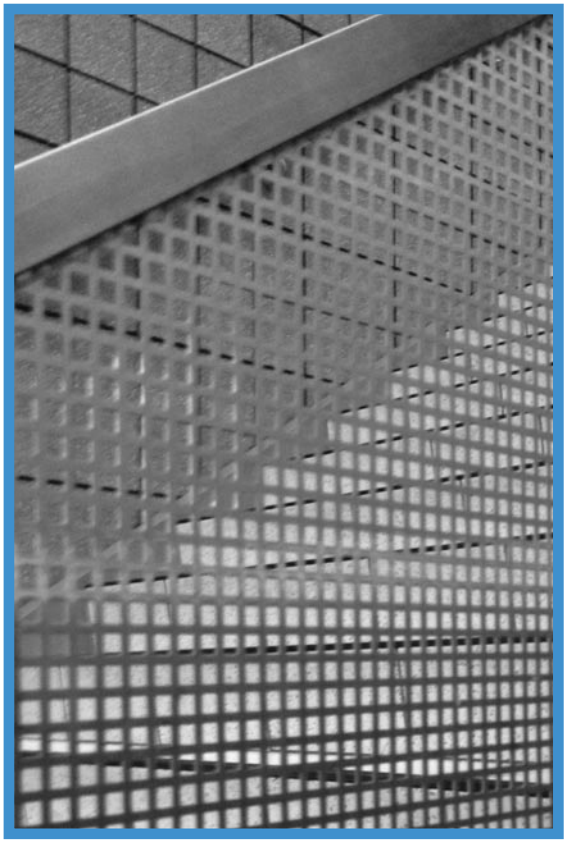
Brown-Campbell Company specializes in stellar customer service. ALL jobs get our full attention regardless of size or complexity.

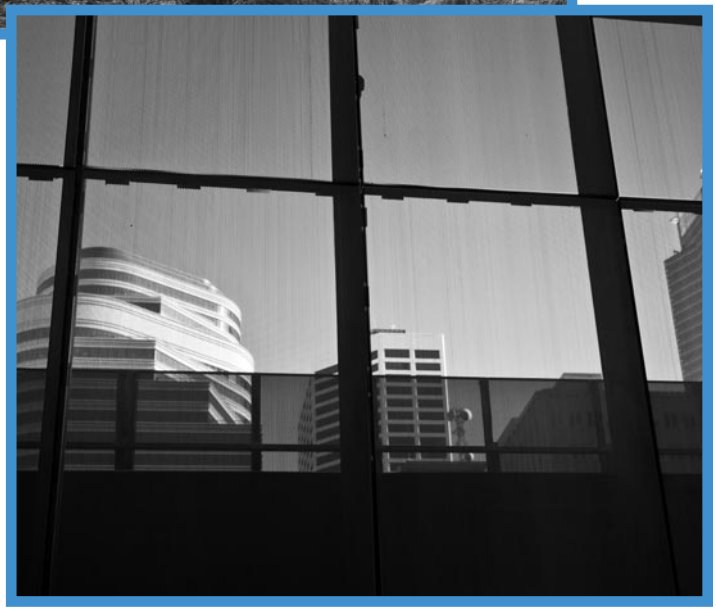












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Architectural Wire

Architectural Wire is a designer's dream! The possibilities are endless and only limited by the imagination. Architectural wire is suitable for both interior and exterior applications.

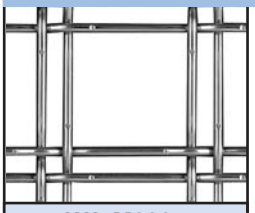
The most common material used is stainless steel 304 and 316. Many other alternatives are also available including carbon steel, pre-galvanized, aluminum, copper, bronze, brass or any combination of these two materials to create unique color and textures.

Colors and finishes including powder coating, black oxide, anodizing, plating and pickling can also be accommodated to provide you with the end result you are looking for. These finishes also offer corrosion resistance and reflectivity.

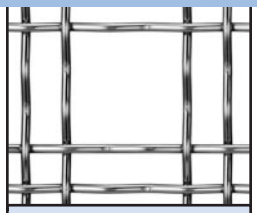
Brown-Campbell carries four patterns of architectural wire in stock for immediate delivery. Any design you envision can be created. If you have something special in mind please contact us and we will work with you to transform your vision into a fabricated product.



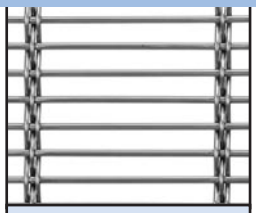
In-Stock Patterns



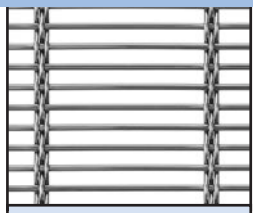
WA-M2227
Carbon Steel & SS304
.162" Gauge
% Open Area: 75%
lbs/sq ft: 1.40
Overall Thickness: .324"
Aspect Ratio: 1:1



WA-M228
Carbon Steel
.162" Gauge
% Open Area: 77.2%
lbs/sq ft: 1.33
Overall Thickness: .324"
Aspect Ratio: 1:1



WA-M13Z145
Stainless Steel 304
.162" x .120" Gauge
% Open Area: 74.5%
lbs/sq ft: 1.75
Overall Thickness: .402"
Aspect Ratio: 7.01:1



WA-M13Z179
Stainless Steel 304
.120" Gauge
% Open Area: 62.9%
lbs/sq ft: 1.65
Overall Thickness: .304"
Aspect Ratio: 8.16:1

Balcony Railings
Ceiling Panels
Laser Cut Grills
Room Dividers
Display Flooring
Light Fixtures
Walkway Canopies
Stairways
Interior Wall Screens
Area Divider Screens
Parking Garage Panels
Custom Cabinet Inserts
Elevator Cladding
Wall Cladding

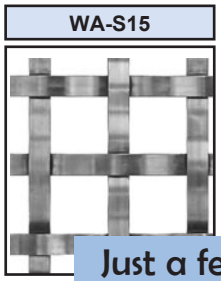
Any combination of wire patterns, crimps, materials, colors and finishes can be produced on demand fast!

Crimps
•Plain •Intercrimp
•Lockcrimp
•Flat Top •Twill
•Faux Cable •Helix
•Triple Shoot

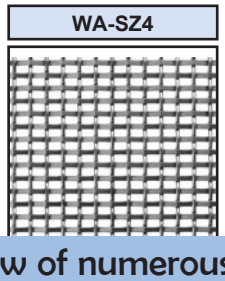
Alloys
•Carbon Steel
•Stainless Steel
•Pre-Galvanized
•Aluminum •Copper •Bronze
•Brass •Choose any Two

Colors & Finishes
•Powder Coating
•Anodizing
•Plating

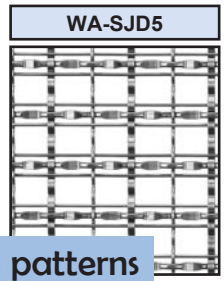
Wire Diameters available from .035" to .375". To bring more attention and interest to the vertical or horizontal lines consider weaving together two different wire diameters.



WA-S15



WA-SZ4



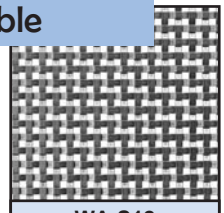
WA-SJD5



WA-FPZ46



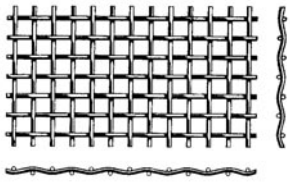
WA-DS5



WA-S12

Just a few of numerous patterns ... quickly available

Crimps



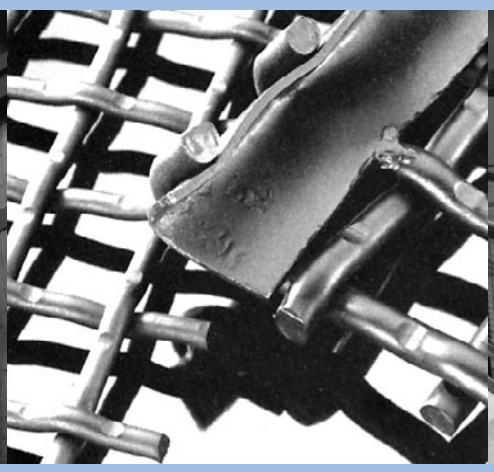
There are many different ways of crimping and weaving wire. Please reference page 26 for examples of the most common alternatives.

Facades or Panels
Imagination is the only limitation - discover the possibilities!







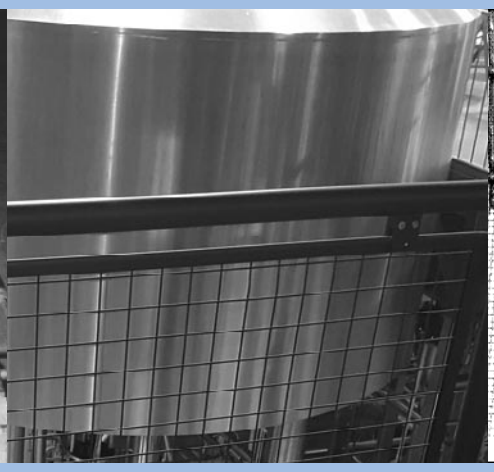
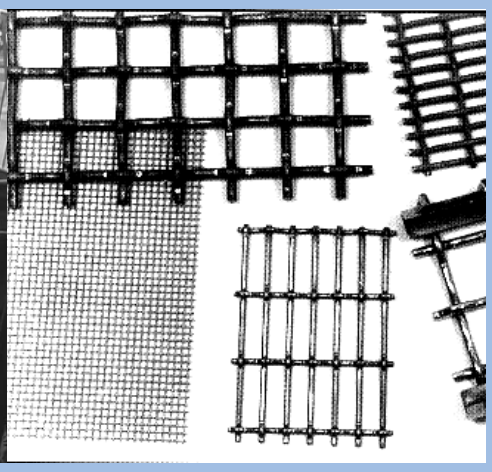




Wire Cloth

Wire Cloth is an extremely versatile product that had its inception during the Industrial Revolution. It is used in many different industries and has countless applications.

Wire cloth is manufactured as a woven product, where the wires are formed in a weave pattern. It is also manufactured as a welded product, where the wires are electro-welded at each intersection of the wires. Each type has a variety of applications. Much of the terminology can be applied to both woven and welded wire cloth.

Brown-Campbell carries a large array of woven and welded wire products in-stock and available for same day shipment. In-stock materials include carbon, pre-galvanized, galvanized after, and stainless steel types 304 and 316.

WIRE STOCK LIST

WOVEN WIRE

Opening/ Mesh	Wire Diameter
Carbon - Plain Steel	
4" Opening	.250
3" Opening	.250
2" Opening	.120, .135, .162, .192, .250, .375
1-3/4" Opening	.250
1-1/2" Opening	.120, .135, .192, .250
1-1/2" Centers	.135
1" Opening	.120, .135, .162, .192, .250
1" Ctr (1 Mesh)	.120
3/4" Opening	.120, .250
5/8" Opening	.120
1/2" Opening	.120, .250
2 Mesh	.063, .080, .120, .135
3 Mesh	.063
4 Mesh	.047, .063, .080, .120
6 Mesh	.035, .047
8 Mesh	.028, .047
10 Mesh	.025
12 Mesh	.028
Pre- Galvanized - Steel	
2" Opening	.250
1" Opening	.120
2 Mesh	.080
14 Mesh	.017
18 x 14 Mesh	.009
Galvanized After - Steel	
8 Mesh	.017
Aluminum	
4" Opening	.250
2" Opening	.250
1-1/2" Opening	.120
1" Opening	.120
2 Mesh	.063, .080
Copper	
2 Mesh	.063
4 Mesh	.047
16 Mesh	.011

Opening/ Mesh	Wire Diameter
Stainless Steel - Type 304	
4" Opening	.250
3" Opening	.192
2" Opening	.120, .135, .192, .250
1-1/2" Opening	.120
1" Opening	.120, .250
1 Mesh (1" Ctr)	.120
3/4" Opening	.120
3/4" Centers	.120
1/2" Opening	.120
2 Mesh	.047, .063, .080, .105, .120
3 Mesh	.063, .080
4 Mesh	.028, .035, .047, .063, .080
5 Mesh	.041
6 Mesh	.035, .047, .063
8 Mesh	.028, .047
10 Mesh	.025, .035, .047
12 Mesh	.018, .023, .028
14 Mesh	.020
16 Mesh	.018
18 Mesh	.009, .017
20 Mesh	.016, .023
24 Mesh	.0075, .014
30 Mesh	.012
40 Mesh	.010
50 Mesh	.009
60 Mesh	.0075
80 Mesh	.0055
100 Mesh	.0045
150 Mesh	.0026
200 Mesh	.0021
Stainless Steel - Type 316	
2 Mesh	.063
14 Mesh	.020
20 Mesh	.016

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WELDED WIRE

Opening/ Mesh	Wire Diameter
Carbon - Plain Steel	
4" Centers	.250
3" Opening	.250
3" Centers	.162, .192
3" x 1" Centers	.120
3" x 5/8" Centers	.120
2" Opening	.250
2" Centers	.105, .120, .135, .156, .187, .232, .250
2" x 1" Centers	.120
1-1/2" Centers	.120, .135
1 Mesh (1" Ctr)	.105, .120, .135
2 Mesh	.063
Pre- Galvanized - Steel	
2" Centers	.105
1 Mesh (1" Ctr)	.063, .080, .120
Galvanized After - Steel	
3" Centers	.189
2" Centers	.107, .122, .159, .189
2" x 1" Centers	.122

Opening/ Mesh	Wire Diameter
Galvanized After - Steel (con't)	
1 Mesh (1" Ctr)	.063, .107, .122
1" x 1/2" Centers	.063
2 Mesh	.041, .063
4 Mesh	.025
Stainless Steel - Type 304	
3" Opening	.250
3" Centers	.188
2" Opening	.188
2" Centers	.120
1" Opening	.120
1 Mesh (1" Ctr)	.080, .120
2 Mesh	.047, .063
3 Mesh	.047
4 Mesh	.032
Stainless Steel - Type 316	
2" Opening	.120

PVC Coated Wire also available.

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements, opening size, percent of open area (send sample of wire cloth currently being used if possible)

PLEASE SPECIFY:

- **Brown-Campbell superior "Wire Cloth"**
- **Quantity:** number of cut pieces, rolls or screens
- **Material/Finish Type:** 304 stainless steel, carbon steel, etc.
- **Piece Size:** Width and Length
- **Wire Diameter:** In decimals, thousands of an in.
- **Wire Opening:** provide mesh count per lineal inch or width of opening (clear opening between wires) in inches. Also state if square, rectangular or other type of opening shape.
- **Construction:** woven or welded, if woven specify type of weave; if welded specify edge wire requirement
- **Crimp Style:** if required
- **Special Fabrication:** submit drawing for special requirements such as notching, bolt holes, special shape, bending, forming, calendering, etc.

Common Wire Cloth Materials

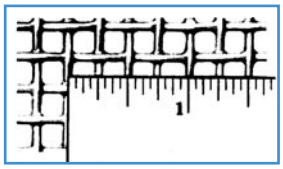
Wire cloth or wire mesh can be manufactured from any metal or alloy that can be drawn into wire that is suitable for weaving. The most commonly utilized materials in wire cloth weaving are listed below:

- **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
- **Nickel and Nickel Alloys:** Nickel, Monel® 400, Hastelloy B, Hastelloy C, Inconel® 600, Incoloy® 800, Nichrome I, Nichrome V

Other rare metals such as columbium, gold, molybdenum, platinum, titanium, and tungsten can be provided as specified.

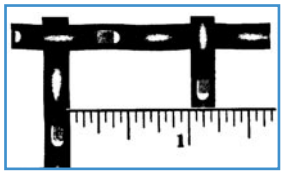
Measuring Wire Cloth

There is a distinct difference between "mesh" and "opening"



"**Mesh**" designates the number of openings per lineal inch. To determine the mesh, measure from the center of a wire to a point one inch distant, and count the number of openings. The diagram shows four openings in one inch. The diagram illustrates a 4 mesh wire. Mesh may also be expressed in inches, i.e.: wire 1/4" from center to center is a 1/4" mesh.

"Opening" is the measurement of the clear open space between the parallel wires. The diagram illustrates 1" clear opening.



Relationship between Wire Spacing, Opening Size and Wire Diameter

Wire Spacing
Wire Diameter + Opening Size

Opening Size (O)
Wire Spacing - Wire Diameter

Wire Diameter (D)
Wire Spacing - Opening Size

Calculating Mesh, Opening, & Open Area

Mesh count (M) = 1 / (O+D)
Opening (O) = (1-DM) / M
Open Area % = $(OM)^2$ x 100
or
Open Area % = $[O/(O+D)]^2$ x 100
or
Open Area % = $(1 - MD)^2$ x 100

Calculating Weight of Wire Cloth

The weight per square foot of any square mesh wire cloth can be quickly calculated by using the following formula:

Weight in lbs per square feet =

$$24 \times M \times W \times \sqrt{1 + (DM)^2}$$

M = meshes per inch, center to center of wire

W = weight of bare wire in pounds per lineal ft

D = diameter of wire in inches

Terminology & Definitions

Bolting Cloth - Made from light wire diameter woven into a plain square mesh pattern. The light wire diameter provides a high percentage of open area. Bolting cloth is principally used in sifting and screen printing; however, its relatively high percentage of open area makes it desirable in many other applications.

Calendering - A rolling operation which flattens the knuckles of wire cloth giving it a smoother surface.

Crimps - Indentations placed in the wire to allow wires to be woven together. Placement and style determine location of the intersections and permit tight locking of the wires. (See page 26 for various crimp styles.)

Fill Wires (also known as cross wire or shute wire) - Wires running across the width of the cloth as woven.

Filter Cloth - Cloth used for filtration or straining.

Hardware Cloth - Plain weave square mesh cloth of relatively light wire, galvanized after weaving or welding. Usually between 2 and 8 mesh.

Market Grade - Wire cloth most commonly available and used. This term is applied to a series of common meshes, each with a specific wire diameter used for general purpose work.

Mesh - When specified as a number, refers to number of openings per lineal inch. When specified as a distance, refers to center to center distance of wires.

Micron - The unit of measure for particle retention of filter media. 1/1000 millimeter, 0.00003937 inch.

Micronic Filter Cloth - Wire cloth of fine wires usually giving a particle retention of 50 microns or less.

Off Count - A mesh which has a greater number of wires per inch in one direction, usually the warp direction, sometimes referred to as a rectangular mesh.

Oil Tempered Wire - High carbon steel wire that is heat resistant to produce good strength and abrasion resistance.

Opening - Measurement of the clear open space between parallel wires.

Rectangular Mesh - Wire cloth with different warp and fill wire mesh counts, resulting in rectangular openings. The most common have a higher warp mesh than filter mesh. Offers increased open area and reduced cost.

Selvage - Finished edges of wire cloth running the length of the roll which are produced by the weaving operation, prevents unraveling of the cloth.

Sleaziness - Refers to material easily knocked out of square.

Space Cloth - Plain weave, square mesh standard wire cloth with openings slightly larger than the equivalent ordinary square mesh material. Specified by the opening size rather than by the mesh count.

Square Mesh - Mesh with equal spacing of warp and fill wires to give square openings.

Warp Wires - Foundation wires running parallel to the length of the cloth.

Weaves - Pattern in which wires are interwoven.

Welded Wire Cloth - Warp and fill wires lay flat, no crimp; and are welded at each intersection.

Wire Diameter or Gauge - Diameter of wire used in wire cloth.

Filtration
Shields
Screens
Belts
Diffusion
Washing
Aggregate Sizing
Classification
Paper Processing
Waste Treatment
Food Processing
Plastic Manufacturing

Common Mesh Types

Type	Wire Dia. (Inches)	Opening Width (In)	Open Area
4" Opening	.250	4.000	88.6%
4" Centers	.250	3.750	87.9%
3" Opening	.192	3.000	88.3%
3" Opening	.250	3.000	85.2%
3" Centers	.162	2.838	89.5%
3" Centers	.188	2.812	87.9%
3" Centers	.189	2.811	87.8%
3" Centers	.192	2.808	87.6%
3" x 1" Ctrs	.120	2.880	92.2%
3" x 5/8" Ctrs	.120	2.880	92.0%
2" Opening	.120	2.000	89.0%
2" Opening	.135	2.000	88.7%
2" Opening	.162	2.000	85.6%
2" Opening	.188	2.000	83.6%
2" Opening	.192	2.000	83.2%
2" Opening	.250	2.000	79.0%
2" Opening	.375	2.000	70.9%
2" Centers	.101	1.899	90.2%
2" Centers	.105	1.895	89.8%
2" Centers	.120	1.880	88.4%
2" Centers	.122	1.878	88.2%
2" Centers	.135	1.865	87.0%
2" Centers	.156	1.844	85.0%
2" Centers	.159	1.841	84.7%
2" Centers	.187	1.813	82.2%
2" Centers	.189	1.811	82.0%
2" Centers	.232	1.768	78.1%
2" Centers	.250	1.750	76.6%
2" x 1" Ctrs	.120	1.880	88.4%
2" x 1" Ctrs	.122	1.878	88.2%
1-3/4" Opening	.250	1.750	76.6%
1-1/2" Opening	.120	1.500	85.7%
1-1/2" Opening	.135	1.500	84.2%
1-1/2" Opening	.192	1.500	78.6%
1-1/2" Opening	.250	1.500	73.4%
1-1/2" Centers	.120	1.380	84.6%
1-1/2" Centers	.135	1.365	82.8%
1" Opening	.120	1.000	79.7%
1" Opening	.135	1.000	77.6%
1" Opening	.162	1.000	74.0%
1" Opening	.192	1.000	70.4%
1" Opening	.250	1.000	64.0%
3/4" Opening	.120	.750	74.3%
3/4" Opening	.250	.750	56.3%
3/4" Centers	.120	.630	70.5%
5/8" Opening	.120	.625	70.3%
1/2" Opening	.120	.500	65.0%
1/2" Opening	.250	.500	44.4%
1" x 1/2" Ctrs	.063	.937	87.8%
1 Mesh	.063	.937	87.8%
1 Mesh	.080	.920	84.6%
1 Mesh	.101	.899	80.8%
1 Mesh	.105	.895	80.1%
1 Mesh	.120	.880	77.4%
1 Mesh	.122	.878	77.1%
1 Mesh	.135	.865	74.8%
2 Mesh	.041	.459	84.3%
2 Mesh	.047	.453	82.1%
2 Mesh	.063	.437	76.4%
2 Mesh	.080	.420	70.6%
2 Mesh	.105	.395	62.4%
2 Mesh	.120	.380	57.8%
2 Mesh	.135	.365	53.3%

Type	Wire Dia. (Inches)	Opening Width (In)	Open Area
3 Mesh	.047	.286	73.8%
3 Mesh	.063	.270	65.8%
3 Mesh	.080	.253	57.8%
4 Mesh	.025	.225	81.0%
4 Mesh	.028	.222	78.9%
4 Mesh	.032	.218	76.0%
4 Mesh	.035	.215	74.0%
4 Mesh	.047	.203	65.9%
4 Mesh	.063	.187	56.0%
4 Mesh	.080	.170	46.2%
4 Mesh	.120	.130	27.0%
5 Mesh	.041	.159	63.2%
6 Mesh	.035	.132	62.4%
6 Mesh	.047	.120	51.6%
6 Mesh	.063	.104	38.7%
8 Mesh	.017	.108	74.6%
8 Mesh	.028	.097	60.2%
8 Mesh	.047	.078	38.9%
10 Mesh	.025	.075	56.3%
10 Mesh	.035	.065	42.3%
10 Mesh	.047	.053	28.1%
12 Mesh	.018	.065	61.5%
12 Mesh	.023	.060	52.4%
12 Mesh	.028	.055	44.1%
14 Mesh	.017	.054	58.1%
14 Mesh	.020	.051	51.8%
16 Mesh	.011	.0515	67.9%
16 Mesh	.018	.0445	50.7%
18 Mesh	.009	.0466	70.2%
18 Mesh	.017	.0386	48.2%
18 x 14 Mesh	.009	.0466	72.0%
20 Mesh	.016	.0340	46.2%
20 Mesh	.023	.0270	29.2%
24 Mesh	.0075	.0342	67.0%
24 Mesh	.014	.0282	44.1%
30 Mesh	.012	.0213	41.0%
40 Mesh	.010	.0150	36.0%
50 Mesh	.009	.0110	30.3%
60 Mesh	.0075	.0092	30.3%
80 Mesh	.0055	.0070	31.4%
100 Mesh	.0045	.0055	30.3%
150 Mesh	.0026	.0041	37.2%
200 Mesh	.0021	.0029	33.6%

ISO 9001:2015 Certified

Standard Sizes of Round Wire Drawn to Industrial Wire Cloth Gauge Diameters

Diameter (Inches)	Diameter (Decimal)	Gauge/ Wire No.	Actual Wire Sizes
5/16	.307	0	
9/32	.283	1	
17/64	.263	2	
1/4	.244	3	
7/32	.225	4	
13/64	.207	5	
3/16	.192	6	
11/64	.177	7	
5/32	.162	8	
n/a	.148	9	
9/64	.135	10	
1/8	.120	11	
7/64	.105	12	
3/32	.092	13	
5/64	.080	14	
n/a	.072	15	
1/16	.063	16	
n/a	.054	17	
3/64	.047	18	
n/a	.041	19	
n/a	.035	20	
1/32	.032	21	

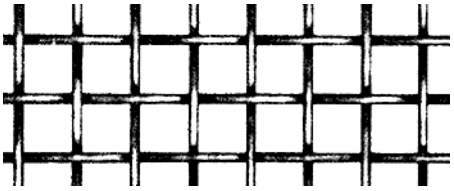
Note: Dimensions are approximate

Wire Diameter Table*

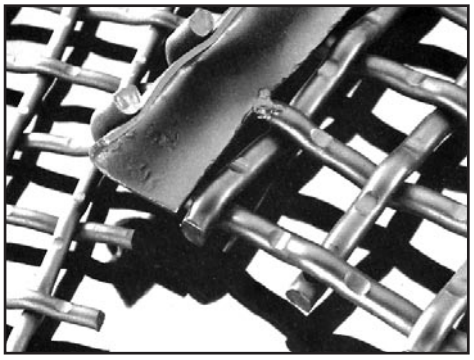
Diameter (inches)	Pounds/ Linear Ft	Linear Ft/ Pound	Diameter (inches)	Pounds/ Linear Ft	Linear Ft/ Pound	Diameter (inches)	Pounds/ Linear Ft	Linear Ft/ Pound
.375	.3751	2.666	**.120**	.03841	26.04	**.018**	.0008642	1157
.250	.1667	5.999	**.105**	.02941	34.00	**.017**	.0007708	1297
.232	.1436	6.966	**.101**	.02721	36.75	**.016**	.0006828	1465
.225	.1350	7.407	**.092**	.02258	44.30	**.014**	.0005228	1913
.192	.09832	10.17	**.080**	.01707	58.58	**.012**	.0003841	2604
.189	.09528	10.50	**.063**	.01059	94.42	**.011**	.0003227	3098
.188	.09427	10.61	**.047**	.005892	169.70	**.010**	.0002667	3749
.187	.09327	10.72	**.041**	.004484	223.00	**.009**	.0002160	4629
.162	.0700	14.29	**.035**	.003267	306.10	**.0075**	.0001500	6665
.159	.06743	14.83	**.032**	.002731	366.10	**.0055**	.00008068	12394
.156	.06491	15.41	**.028**	.002091	478.20	**.0045**	.00005401	18515
.148	.05842	17.12	**.025**	.001667	599.90	**.0026**	.00001803	55462
.135	.04861	20.57	**.023**	.001411	708.70	**.0021**	.00001176	85016
.122	.03970	25.19	**.020**	.001067	937.30	*Industrial Wire Cloth Std SAE-1008		

Wire Cloth

Woven Wire is offered in a wide range of alloys with mesh counts up to 1" in most alloys and as fine as 635 in some alloys. It is also available in a large array of configurations.



Common Alloys
- Plain Steel
- Galvanized Steel
- Stainless Steel - 7 types
- Aluminum
- Brass
- Bronze
- Copper
- High Temperature Alloys
- Nickel

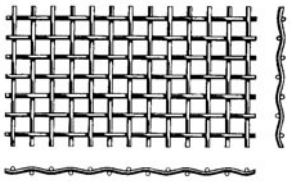


List of In-Stock Wire Cloth Products

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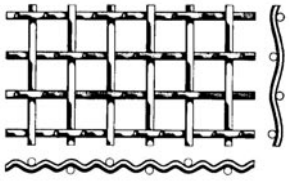
Crimps and Weaves

Plain / Double



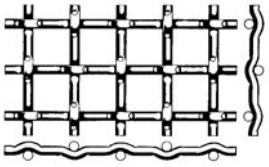
Standard type of weave for wire cloth resulting in square openings with wire sizes the same in both directions. Each warp wire passes alternately over and under fill wires at right angles both directions.

Intercrimp / Intermediate



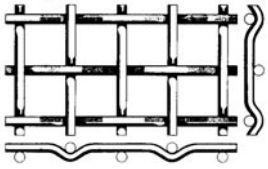
Similar to Plain Crimp however, only odd intersections are used. (i.e.: 3rd, 5th, 7th crimp or pocket)

Lockcrimp

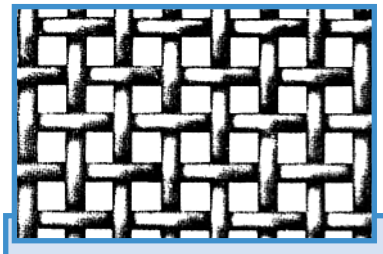


A more modern and versatile crimp style, lockcrimp is formed by a straight section of wire weaved with distinct crimp or pockets at wire intersections. Yields a truly tight dimensionally stable mesh. Designers find the visual look of lockcrimp aesthetically pleasing.

Flat Top / Smooth Top



Top surface of wires all lie in same plane, results in irregular crimped surface on underside. Flat surface improves flow of materials over screen panels by reducing friction.



Twilled Weave

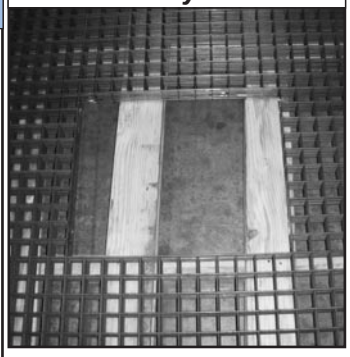
Each warp wire and fill wire pass successively over two and under the next adjacent pair of wires, resulting in a more pliable weave. Commonly used for filtration of fine particles.

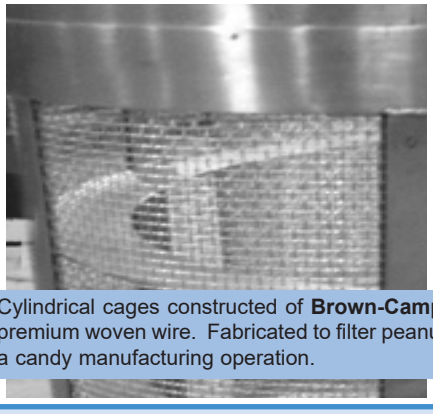
Other Crimps / Weaves

Other crimps and weaves are available, please inquire.

1-800-472-8464

Fabrication by B-C Dallas







Cylindrical cages constructed of **Brown-Campbell** premium woven wire. Fabricated to filter peanuts at a candy manufacturing operation.

Fast & Accurate Fabrication is our specialty!

Brown-Campbell stocks woven and welded wire cloth in carbon steel, pre-galvanized, galvanized after and stainless steel. A large range of opening/mesh sizes are in-stock in a variety of wire diameters. All ready for same day shipment.

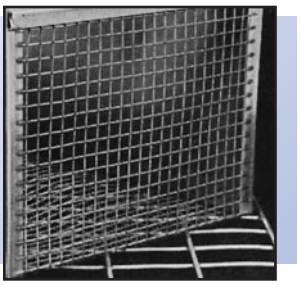
1-800-GRATING

Brown-Campbell Knows Wire Cloth!

We stock a tremendous amount of wire cloth across 477,500 square feet of warehouse space at our 9 locations - all ready to ship SAME DAY!



Welded Wire offers greater strength and versatility over woven wire. It is a grid formed by wires that are fused together at their intersections. Welded wire is produced by automatic welding looms that spot weld the intersections with the short wires over the long wires instead of weaving the wires over and under as in woven wire. The welding process results in a finished product that is ready for fabrication into anything imaginable since welded wire can be simply slit, cut or shaped to fit all of your applications.



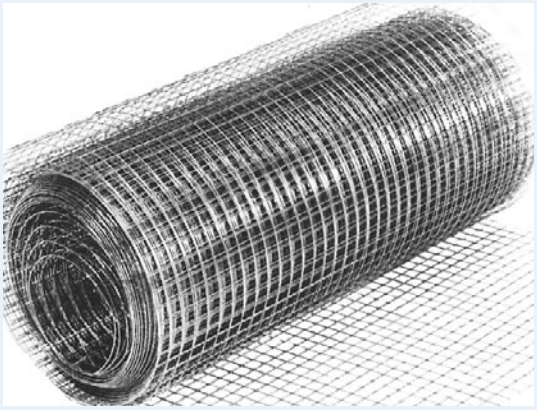
Welded Wire Applications

- Machine Guards
- Cages & Parts
- Catwalk Guards
- Fan Guards
- Security Guards
- Screens
- Scaffold Guards
- Fencing
- Stairway Guards
- Racking/Shelving
- Safety Barriers
- Pallets/Bins
- Lockers
- Containers
- Grills
- Suspended Ceilings
- Partitions
- Trays
- Racks

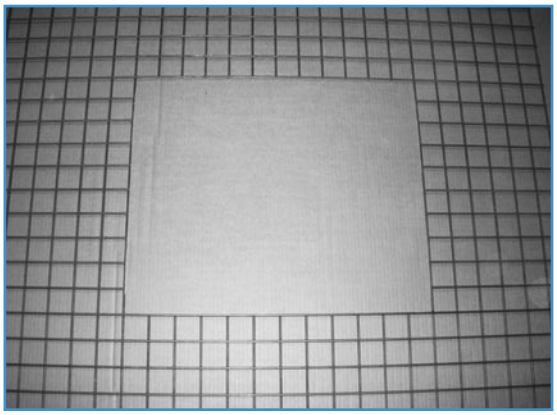
Galvanized Welded Wire

Galvanized After: After the grid is formed as described above, the mesh is passed through a hot galvanizing bath which produces a highly resistant coating as well as bonding the wire together at the joints. Galvanized after welded wire results in a strong rigid material.

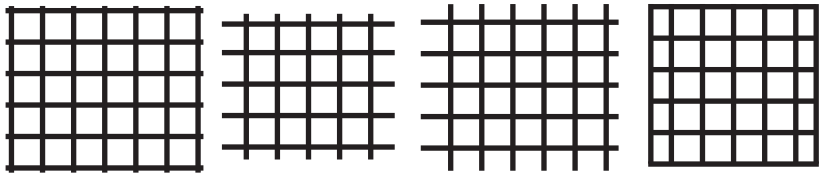
Pre-Galvanized: Plain strands of wire are passed through a bath of zinc, before the wires are spot welded together to form a mesh.



Same Day...
- Shipments
- Fabrication



Welded Wire Edge Types



Trimmed
Stubs trimmed flush with approximately 1/16" - 1/8" minimum on all sides.

Untrimmed
"Balanced Stubs"
Opposite side stubs equal. Stub length will not exceed opening size unless specified.

Untrimmed
"Random Stubs"
Stubs will vary on all four sides. Multiple pieces will not be identical.

With Edge Wire
"Balanced Stubs"
Opposite side stubs equal with welded edge wire.

Benefits of Welded Wire

- Easy to Cut and Fabricate
- Extremely Strong
- Smooth Surface
- Excellent aesthetic appearance
- Stable and Rigid
- Will not fray or unravel
- Large Range of Open Areas
- Variety of Materials

Welded Wire lends itself to limitless applications. It's three largest advantages are that it is lightweight, economical and extremely versatile making it an ideal choice for many settings. It's open mesh construction allows dirt, dust and debris to pass through allowing contents to stay cleaner.

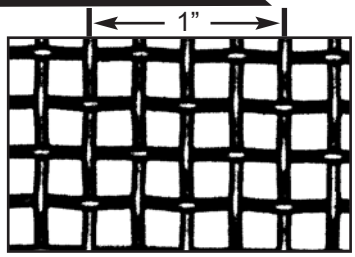
Economical • Lightweight • Versatile

Optimal for baskets, trays, guards, strainers, filters

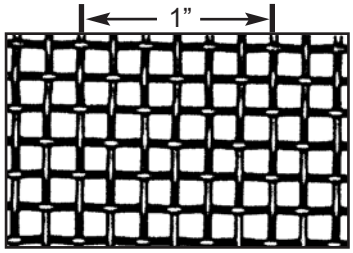
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Wire Cloth

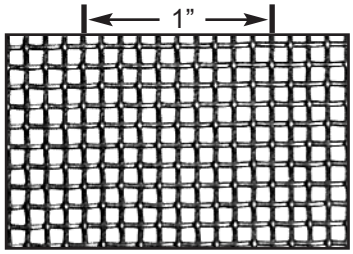
In-Stock Wire Cloth List - Page 23



4 Mesh



6 Mesh



10 Mesh

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
1” Center to Center of Wire	.250	56.3%	4.12	.750	**2** Mesh	.250	25.0%	8.94	.250	**2¾** Mesh	.177	26.4%	6.13	.187	**3½** Mesh	.148	23.3%	5.25	.138
	.225	60.1%	3.32	.775		.225	30.3%	7.10	.275		.162	30.9%	5.05	.202		.135	27.9%	4.29	.151
	.207	62.9%	2.80	.793		.207	34.3%	5.93	.293		.148	35.3%	4.16	.216		.120	33.8%	3.49	.166
	.192	65.3%	2.40	.808		.192	37.9%	5.05	.308		.135	39.7%	3.42	.229		.105	40.1%	2.63	.181
	.177	67.7%	2.03	.823		.177	41.7%	4.25	.323		.120	45.0%	2.67	.244		.092	46.1%	1.99	.194
	.162	70.2%	1.70	.838		.162	45.7%	3.53	.338		.105	50.7%	2.02	.259		.080	52.0%	1.48	.206
	.148	72.6%	1.41	.852		.148	49.6%	2.92	.352		.092	56.0%	1.53	.272		.072	56.1%	1.19	.214
	.135	74.8%	1.17	.865		.135	53.3%	2.41	.365		.080	61.0%	1.15	.284		.063	60.9%	.91	.223
	.122	77.1%	.960	.878		.120	57.8%	1.89	.380		.072	64.5%	.93	.292		.054	65.9%	.66	.232
	.120	77.4%	.928	.880		.105	62.4%	1.44	.395		.063	68.5%	.70	.301		.047	70.0%	.50	.239
	.105	80.1%	.710	.895		.092	66.6%	1.10	.408		.054	72.7%	.51	.310		.041	73.5%	.38	.245
	.101	80.8%	.656	.899		.080	70.6%	.83	.420		.047	76.0%	.39	.317		.035	77.2%	.27	.251
	.092	82.4%	.544	.908		.072	73.3%	.67	.428		.041	78.9%	.29	.323		.032	79.0%	.23	.254
	.080	84.6%	.411	.920		.063	76.4%	.51	.437		.035	81.9%	.21	.329					
	.072	86.1%	.333	.928		.054	79.6%	.37	.446										
	.063	87.8%	.255	.937		.047	82.1%	.28	.453										
						.041	84.3%	.21	.459										
						.035	84.3%	.15	.465										
3/4” Center to Center of Wire	.250	44.4%	5.62	.500	**2¼** Mesh	.225	24.3%	8.17	.219	**3** Mesh	.162	26.3%	5.60	.171	**3¾** Mesh	.148	19.9%	5.71	.119
	.225	49.0%	4.51	.525		.207	28.4%	6.80	.237		.148	30.8%	4.60	.185		.135	24.5%	4.65	.132
	.207	52.4%	3.79	.543		.192	32.2%	5.78	.252		.135	35.3%	3.77	.198		.120	30.4%	3.60	.147
	.192	55.3%	3.24	.558		.177	36.1%	4.85	.267		.120	40.8%	2.93	.213		.105	36.9%	2.84	.162
	.177	58.3%	2.74	.573		.162	40.3%	4.02	.282		.105	46.8%	2.22	.228		.092	43.1%	2.15	.175
	.162	61.4%	2.29	.588		.148	44.4%	3.32	.296		.092	52.3%	1.68	.241		.080	49.2%	1.60	.187
	.148	64.4%	1.90	.602		.135	48.3%	2.74	.309		.080	57.8%	1.26	.253		.072	53.5%	1.28	.195
	.135	67.2%	1.58	.615		.120	53.1%	2.14	.324		.072	61.3%	1.01	.261		.063	58.5%	.97	.204
	.120	70.5%	1.24	.630		.105	58.2%	1.63	.339		.063	65.8%	.77	.270		.054	63.8%	.71	.213
	.105	73.9%	.95	.645		.092	62.7%	1.24	.352		.054	70.1%	.56	.279		.047	68.1%	.53	.220
	.092	76.9%	.72	.658		.080	67.1%	.93	.364		.047	73.8%	.42	.286		.041	71.8%	.40	.226
	.080	79.8%	.54	.670		.072	70.1%	.75	.372		.041	76.7%	.32	.292		.035	75.7%	.29	.232
	.072	81.7%	.44	.678		.063	73.5%	.57	.381		.035	79.9%	.23	.298		.032	77.7%	.24	.235
	.063	83.9%	.34	.687		.054	77.0%	.42	.390		.032	81.5%	.19	.301					
	.054	86.1%	.24	.696		.047	79.8%	.32	.397										
						.041	82.2%	.24	.403										
						.035	84.7%	.17	.409										
5/8” Center to Center of Wire	.250	36.0%	6.89	.375	**2½** Mesh	.225	19.1%	10.20	.175	**3¼** Mesh	.148	27.0%	5.05	.160	**4** Mesh	.148	16.6%	6.19	.102
	.225	41.0%	5.51	.400		.207	23.3%	8.53	.193		.135	31.6%	4.14	.173		.135	21.2%	5.03	.115
	.207	44.7%	4.62	.418		.192	27.0%	7.23	.208		.120	37.3%	3.21	.188		.120	27.0%	3.88	.130
	.192	48.0%	3.95	.433		.177	31.1%	6.05	.223		.105	43.5%	2.42	.203		.105	33.6%	3.06	.145
	.177	51.4%	3.33	.448		.162	35.4%	5.00	.238		.092	49.3%	1.83	.216		.092	39.9%	2.31	.158
	.162	54.9%	2.77	.463		.148	39.7%	4.13	.252		.080	54.9%	1.37	.228		.080	46.2%	1.72	.170
	.148	58.3%	2.30	.477		.135	43.9%	3.40	.265		.072	58.8%	1.10	.236		.072	50.7%	1.38	.178
	.135	61.5%	1.91	.490		.120	49.0%	2.65	.280		.063	63.4%	.84	.245		.063	56.0%	1.04	.187
	.120	65.3%	1.50	.505		.105	54.4%	2.01	.295		.054	68.1%	.61	.254		.054	61.5%	.76	.196
	.105	69.2%	1.14	.520		.092	59.3%	1.53	.308		.047	72.0%	.46	.261		.047	65.9%	.57	.203
	.092	72.7%	.87	.533		.080	64.0%	1.15	.320		.041	75.3%	.35	.267		.041	69.9%	.43	.209
	.080	76.0%	.66	.545		.072	67.2%	.93	.328		.035	78.7%	.25	.273		.035	74.0%	.31	.215
	.072	78.3%	.53	.553		.063	71.0%	.71	.337		.032	80.5%	.21	.276		.032	76.0%	.26	.218
	.063	80.9%	.40	.562		.054	74.8%	.52	.346							.028	78.9%	.20	.222
	.054	83.5%	.30	.571		.047	77.9%	.39	.353							.025	81.0%	.16	.225
	.047	85.5%	.227	.578		.041	80.6%	.29	.359										
						.035	83.3%	.21	.365										

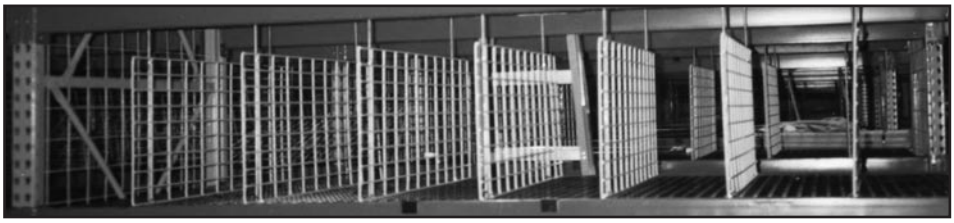
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Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
4½ Mesh	.120	21.1%	4.47	.102
	.105	27.7%	3.33	.117
	.092	34.2%	2.63	.130
	.080	40.8%	1.95	.142
	.072	45.6%	1.57	.150
	.063	51.2%	1.18	.159
	.054	57.2%	.86	.168
	.047	62.0%	.65	.175
	.041	66.3%	.49	.181
	.035	70.8%	.35	.187
	.032	73.1%	.29	.190
	.028	76.2%	.22	.194
	.025	78.6%	.18	.197
5 Mesh	.120	16.0%	5.10	.080
	.105	22.6%	3.78	.095
	.092	29.2%	2.83	.108
	.080	36.0%	2.20	.120
	.072	41.0%	1.76	.128
	.063	46.9%	1.33	.137
	.054	53.3%	.96	.146
	.047	58.5%	.72	.153
	.041	63.2%	.54	.159
	.035	68.1%	.39	.165
	.032	70.6%	.33	.168
	.028	74.0%	.25	.172
	.025	76.6%	.20	.175
	.023	78.3%	.17	.177
5½ Mesh	.105	17.9%	4.48	.077
	.092	24.5%	3.17	.090
	.080	31.5%	2.33	.102
	.072	36.6%	1.96	.110
	.063	42.8%	1.47	.119
	.054	49.6%	1.07	.128
	.047	55.1%	.80	.135
	.041	60.1%	.60	.141
	.035	65.4%	.43	.147
	.032	68.1%	.36	.150
	.028	71.7%	.27	.154
	.025	74.6%	.22	.157
	.023	76.5%	.18	.159
6 Mesh	.092	20.0%	3.52	.075
	.080	27.2%	2.59	.087
	.072	32.5%	2.16	.095
	.063	38.7%	1.63	.104
	.054	46.0%	1.17	.113
	.047	51.6%	.88	.120
	.041	57.2%	.66	.126
	.035	62.4%	.48	.132
	.032	65.6%	.40	.135
	.028	69.6%	.30	.139
	.025	72.6%	.24	.142
	.023	74.7%	.20	.144
	.020	77.8%	.15	.147

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
6½ Mesh	.092	16.2%	3.89	.062
	.080	23.1%	2.85	.074
	.072	28.4%	2.26	.082
	.063	35.0%	1.69	.091
	.054	42.3%	1.28	.100
	.047	48.4%	.96	.107
	.041	53.0%	.72	.113
	.035	59.8%	.52	.119
	.032	62.9%	.43	.122
	.028	67.1%	.33	.126
	.025	70.3%	.26	.129
	.023	72.5%	.22	.131
	.020	75.9%	.16	.134
7 Mesh	.080	20.2%	3.12	.063
	.072	24.7%	2.47	.071
	.063	31.4%	1.84	.080
	.054	38.8%	1.39	.089
	.047	45.2%	1.04	.096
	.041	51.0%	.78	.102
	.035	57.2%	.56	.108
	.032	60.4%	.47	.111
	.028	64.8%	.35	.115
	.025	68.2%	.28	.118
	.023	70.6%	.24	.120
	.020	74.1%	.18	.123
	.018	76.6%	.14	.125
7½ Mesh	.080	15.8%	3.40	.053
	.072	20.9%	2.68	.061
	.063	27.6%	2.00	.070
	.054	35.1%	1.51	.079
	.047	41.6%	1.12	.086
	.041	47.6%	.84	.092
	.035	54.0%	.60	.098
	.032	57.4%	.50	.101
	.028	62.0%	.38	.105
	.025	65.6%	.30	.108
	.023	68.1%	.25	.110
	.020	71.8%	.19	.113
	.018	74.4%	.15	.115
8 Mesh	.072	18.0%	2.91	.053
	.063	24.6%	2.16	.062
	.054	32.3%	1.62	.071
	.047	38.9%	1.20	.078
	.041	45.2%	.90	.084
	.035	51.8%	.65	.090
	.032	55.4%	.54	.093
	.028	60.2%	.41	.097
	.025	64.0%	.32	.100
	.023	66.6%	.27	.102
	.020	70.6%	.20	.105
	.018	73.3%	.16	.107
	.017	74.6%	.14	.108

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
8½ Mesh	.072	15.3%	3.14	.046
	.063	21.9%	3.32	.055
	.054	29.6%	1.65	.064
	.047	36.4%	1.29	.071
	.041	42.8%	.96	.077
	.035	49.8%	.69	.083
	.032	53.4%	.57	.086
	.028	58.5%	.43	.090
	.025	62.5%	.34	.093
	.023	65.2%	.29	.095
	.020	69.4%	.22	.098
	.018	72.3%	.17	.100
	.017	73.7%	.15	.101
9 Mesh	.072	12.3%	3.38	.039
	.063	18.7%	2.49	.048
	.054	26.3%	1.77	.057
	.047	33.2%	1.38	.064
	.041	39.7%	1.03	.070
	.035	46.8%	.74	.076
	.032	50.6%	.61	.079
	.028	55.8%	.46	.083
	.025	59.9%	.36	.086
	.023	62.7%	.31	.088
	.020	67.1%	.23	.091
	.018	70.1%	.18	.093
	.017	71.6%	.16	.094
	.016	73.1%	.14	.095
9½ Mesh	.063	15.9%	2.67	.042
	.054	23.5%	1.89	.051
	.047	30.4%	1.47	.058
	.041	37.0%	1.09	.064
	.035	44.2%	.78	.070
	.032	48.1%	.65	.073
	.028	53.5%	.49	.077
	.025	57.8%	.39	.080
	.023	60.7%	.32	.082
	.020	65.2%	.24	.085
	.018	68.3%	.20	.087
	.017	69.9%	.17	.088
	.016	71.5%	.15	.089
10 Mesh	.063	13.7%	2.85	.037
	.054	21.2%	2.01	.046
	.047	28.1%	1.48	.053
	.041	34.8%	1.16	.059
	.035	42.3%	.83	.065
	.032	46.2%	.68	.068
	.028	51.8%	.52	.072
	.025	56.3%	.41	.075
	.023	59.3%	.34	.077
	.020	64.0%	.26	.080
	.018	67.2%	.21	.082
	.017	68.9%	.18	.083
	.016	70.6%	.16	.084
	.015	72.3%	.14	.085

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
11 Mesh	.054	16.6%	2.26	.037
	.047	23.4%	1.66	.044
	.041	30.3%	1.23	.050
	.035	37.9%	.92	.056
	.032	42.1%	.76	.059
	.028	48.0%	.57	.063
	.025	52.7%	.45	.066
	.023	56.0%	.38	.068
	.020	61.0%	.28	.071
	.018	64.5%	.23	.073
	.017	66.3%	.20	.074
	.016	68.1%	.18	.075
	.015	69.9%	.16	.076
12 Mesh	.047	18.7%	1.85	.036
	.041	25.4%	1.36	.042
	.035	33.2%	1.02	.048
	.032	37.5%	.84	.051
	.028	44.1%	.63	.055
	.025	48.4%	.50	.058
	.023	52.4%	.42	.060
	.020	57.2%	.31	.063
	.018	61.5%	.25	.065
	.017	62.7%	.22	.066
	.016	64.5%	.20	.067
	.015	66.6%	.17	.068
	.014	68.6%	.15	.069
13 Mesh	.041	21.9%	1.50	.036
	.035	29.8%	1.06	.042
	.032	34.2%	.92	.045
	.028	40.6%	.69	.049
	.025	45.7%	.54	.052
	.023	49.7%	.45	.054
	.020	54.9%	.34	.057
	.018	58.8%	.27	.059
	.017	60.8%	.24	.060
	.016	62.9%	.21	.061
	.015	65.0%	.19	.062
	.014	67.1%	.16	.063
14 Mesh	.041	17.6%	1.65	.030
	.035	25.4%	1.16	.036
	.032	29.8%	1.00	.039
	.028	36.2%	.75	.043
	.025	41.5%	.59	.046
	.023	45.2%	.49	.048
	.020	51.8%	.37	.051
	.018	55.1%	.29	.053
	.017	58.1%	.26	.054
	.016	59.3%	.23	.055
	.015	61.5%	.20	.056
	.014	63.7%	.17	.057
	.0135	64.8%	.16	.0575
	.013	65.9%	.15	.058
	.012	68.2%	.13	.059
	.011	70.6%	.11	.060
	.010	72.9%	.09	.061



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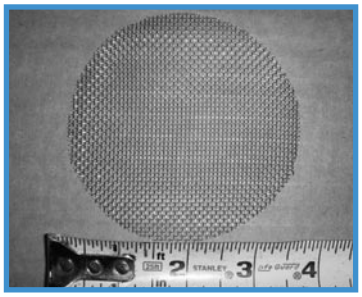
Wire Cloth

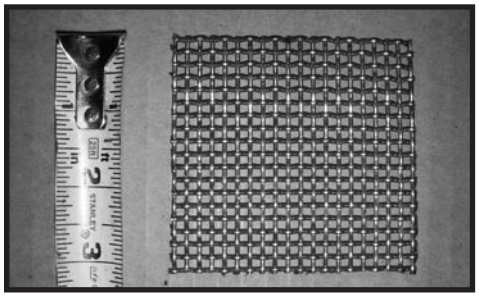
Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
15 Mesh	.041	15.2%	1.80	.026
	.035	23.0%	1.26	.032
	.032	27.6%	1.03	.035
	.028	34.2%	.77	.039
	.025	39.7%	.64	.042
	.023	43.6%	.53	.044
	.020	49.7%	.40	.047
	.018	54.0%	.32	.049
	.017	56.3%	.28	.050
	.016	58.5%	.25	.051
	.015	60.8%	.22	.052
	.014	63.2%	.19	.053
	.0135	64.4%	.17	.0535
	.013	65.6%	.16	.054
	.012	68.1%	.14	.055
	.011	70.6%	.11	.056
	.010	73.1%	.09	.057
16 Mesh	.041	11.8%	1.95	.0215
	.035	19.4%	1.36	.0275
	.032	23.8%	1.11	.0305
	.028	30.5%	.83	.0345
	.025	36.0%	.68	.0375
	.023	39.9%	.57	.0395
	.020	46.2%	.43	.0425
	.018	50.7%	.34	.0445
	.017	53.0%	.30	.0455
	.016	55.4%	.27	.0465
	.015	57.8%	.23	.0475
	.014	60.2%	.20	.0485
	.0135	61.5%	.19	.0490
	.013	62.7%	.17	.0495
	.012	65.3%	.15	.0505
	.011	67.9%	.12	.0515
	.010	70.6%	.10	.0525
	.0095	71.9%	.09	.0530
18 Mesh	.035	13.7%	1.58	.0206
	.032	18.0%	1.29	.0236
	.028	24.7%	.96	.0276
	.025	30.3%	.75	.0306
	.023	34.4%	.66	.0326
	.020	41.1%	.49	.0356
	.018	45.8%	.39	.0376
	.017	48.2%	.34	.0386
	.016	50.8%	.30	.0396
	.015	53.4%	.26	.0406
	.014	56.1%	.23	.0416
	.0135	57.4%	.21	.0421
	.013	58.8%	.20	.0426
	.012	61.6%	.17	.0436
	.011	64.4%	.14	.0446
	.010	67.4%	.11	.0456
	.0095	68.9%	.10	.0461
	.009	70.2%	.09	.0466

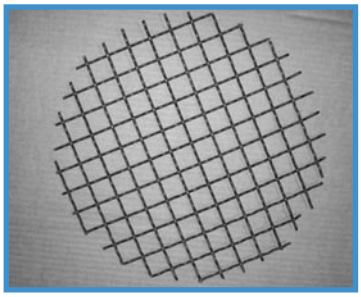
Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
20 Mesh	.032	13.0%	1.47	.0180
	.028	19.4%	1.09	.0220
	.025	25.0%	.85	.0250
	.023	29.2%	.70	.0270
	.020	36.0%	.55	.0300
	.018	41.0%	.44	.0320
	.017	43.6%	.39	.0330
	.016	46.2%	.34	.0340
	.015	49.0%	.30	.0350
	.014	51.8%	.26	.0360
	.0135	53.3%	.24	.0365
	.013	54.8%	.22	.0370
	.012	57.8%	.19	.0380
	.011	60.8%	.15	.0390
	.010	64.0%	.13	.0400
	.0095	65.6%	.11	.0405
	.009	67.2%	.10	.0410
22 Mesh	.028	14.8%	1.23	.0175
	.025	20.3%	.95	.0205
	.023	24.5%	.79	.0225
	.020	31.5%	.58	.0255
	.018	36.6%	.49	.0275
	.017	39.3%	.43	.0285
	.016	42.1%	.38	.0295
	.015	45.0%	.33	.0305
	.014	48.0%	.28	.0315
	.0135	49.6%	.26	.0320
	.013	51.1%	.24	.0325
	.012	54.3%	.21	.0335
	.011	57.6%	.17	.0345
	.010	61.0%	.14	.0355
	.0095	62.7%	.13	.0360
	.009	64.5%	.11	.0365
24 Mesh	.025	16.1%	1.06	.0167
	.023	20.1%	.88	.0187
	.020	27.1%	.64	.0237
	.018	32.4%	.51	.0247
	.017	35.1%	.48	.0257
	.016	38.0%	.42	.0267
	.015	41.1%	.36	.0277
	.014	44.1%	.31	.0282
	.0135	45.8%	.29	.0287
	.013	47.4%	.27	.0297
	.012	50.8%	.23	.0307
	.011	54.3%	.19	.0317
	.010	57.9%	.15	.0322
	.0095	59.7%	.14	.0327
	.009	61.6%	.12	.0332
	.0085	63.5%	.11	.0337
	.008	65.4%	.10	.0342
	.0075	67.0%	.09	.0342

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
26 Mesh	.020	23.1%	.71	.0185
	.018	28.4%	.56	.0205
	.017	31.2%	.52	.0215
	.016	34.2%	.46	.0225
	.015	37.3%	.40	.0235
	.014	40.6%	.34	.0245
	.0135	42.3%	.32	.0250
	.013	44.0%	.29	.0255
	.012	47.5%	.25	.0265
	.011	51.1%	.20	.0275
	.010	54.9%	.17	.0285
	.0095	56.9%	.16	.0290
	.009	58.8%	.15	.0295
	.0085	60.8%	.13	.0300
	.008	62.9%	.11	.0305
	.0075	65.0%	.10	.0310
28 Mesh	.018	24.6%	.61	.0177
	.017	27.4%	.54	.0187
	.016	30.4%	.50	.0197
	.015	33.6%	.43	.0207
	.014	36.9%	.37	.0217
	.0135	38.6%	.34	.0222
	.013	40.4%	.32	.0227
	.012	44.0%	.27	.0237
	.011	47.8%	.22	.0247
	.010	51.8%	.18	.0257
	.0095	53.8%	.16	.0262
	.009	55.9%	.15	.0267
	.0085	58.0%	.13	.0272
	.008	60.2%	.11	.0277
	.0075	62.3%	.10	.0282
30 Mesh	.017	23.9%	.59	.0163
	.016	26.9%	.51	.0173
	.015	30.1%	.47	.0183
	.014	33.5%	.40	.0193
	.0135	35.3%	.37	.0198
	.013	37.1%	.34	.0203
	.012	41.0%	.29	.0213
	.011	44.8%	.24	.0223
	.010	48.9%	.20	.0233
	.0095	51.0%	.18	.0238
	.009	53.1%	.16	.0243
	.0085	55.4%	.14	.0248
	.008	57.6%	.12	.0253
	.0075	59.9%	.11	.0258

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
32 Mesh	.016	24.0%	.56	.0153
	.015	27.2%	.48	.0163
	.014	30.6%	.44	.0173
	.0135	32.4%	.40	.0178
	.013	34.3%	.37	.0183
	.012	36.9%	.31	.0193
	.011	42.2%	.26	.0203
	.010	46.5%	.21	.0213
	.0095	48.7%	.19	.0218
	.009	50.9%	.17	.0223
	.0085	53.2%	.15	.0228
	.008	55.6%	.13	.0233
	.0075	58.0%	.11	.0238
	.007	60.5%	.10	.0243
35 Mesh	.016	19.4%	.62	.0126
	.015	22.7%	.54	.0136
	.014	26.1%	.46	.0146
	.0135	27.9%	.45	.0151
	.013	29.8%	.41	.0156
	.012	33.8%	.35	.0166
	.011	37.9%	.29	.0176
	.010	42.4%	.23	.0186
	.0095	44.7%	.21	.0191
	.009	47.1%	.19	.0196
	.0085	49.5%	.16	.0201
	.008	52.0%	.14	.0206
	.0075	54.5%	.13	.0211
	.007	57.2%	.11	.0216
38 Mesh	.014	21.8%	.51	.0123
	.0135	23.7%	.47	.0128
	.013	25.5%	.43	.0133
	.012	29.5%	.38	.0143
	.011	33.8%	.31	.0153
	.010	38.4%	.26	.0163
	.0095	40.8%	.23	.0168
	.009	43.2%	.20	.0173
	.0085	45.8%	.18	.0178
	.008	48.4%	.16	.0183
	.0075	51.0%	.14	.0188
	.007	53.8%	.12	.0193







See our stock list on page 23: Brown-Campbell offers SAME DAY SHIPMENT on all in-stock items.

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
40 Mesh	.0135	21.2%	.53	.0115
	.013	23.0%	.48	.0120
	.012	27.0%	.40	.0130
	.011	31.4%	.33	.0140
	.010	36.0%	.27	.0150
	.0095	38.4%	.24	.0160
	.009	41.0%	.22	.0165
	.0085	43.6%	.19	.0165
	.008	46.2%	.17	.0170
	.0075	49.0%	.15	.0175
	.007	51.8%	.13	.0180
42 Mesh	.0135	18.7%	.53	.0103
	.013	20.6%	.51	.0108
	.012	24.6%	.43	.0118
	.011	28.9%	.35	.0128
	.010	33.6%	.29	.0138
	.0095	36.1%	.26	.0143
	.009	38.6%	.23	.0148
45 Mesh	.013	17.1%	.53	.0092
	.012	21.1%	.44	.0102
	.011	25.4%	.36	.0112
	.010	30.1%	.31	.0122
	.0095	32.7%	.28	.0127
	.009	35.3%	.25	.0132
	.0085	38.0%	.22	.0137
	.008	40.8%	.19	.0142
	.0075	43.8%	.17	.0147
50 Mesh	.012	16.0%	.51	.0080
	.011	20.3%	.42	.0090
	.010	25.0%	.34	.0100
	.0095	27.6%	.32	.0105
	.009	30.3%	.28	.0110
	.0085	33.1%	.25	.0115
	.008	36.0%	.22	.0120
	.0075	39.1%	.19	.0125
55 Mesh	.011	15.7%	.47	.0072
	.010	20.3%	.38	.0082
	.0095	22.9%	.34	.0087
	.009	25.6%	.30	.0092
	.0085	28.5%	.28	.0097
	.008	31.5%	.24	.0102
	.0075	34.6%	.21	.0107
	.007	37.9%	.18	.0112
60 Mesh	.011	11.7%	.52	.0057
	.010	16.2%	.42	.0067
	.0095	18.7%	.37	.0072
	.009	21.3%	.33	.0077
	.0085	24.2%	.29	.0082
	.008	27.2%	.27	.0087
	.0075	30.3%	.23	.0092
	.007	33.9%	.20	.0097
	.0065	37.5%	.17	.0102
	.006	41.2%	.14	.0107
65 Mesh	.0075	26.4%	.26	.0079
	.007	29.8%	.22	.0084
	.0065	33.5%	.19	.0089
70 Mesh	.009	13.8%	.40	.0053
	.0085	16.5%	.35	.0058
	.008	19.4%	.31	.0063
	.0075	22.7%	.27	.0068
	.007	26.1%	.23	.0073
	.0065	29.8%	.20	.0078
	.006	33.8%	.17	.0083
75 Mesh	.007	22.3%	.25	.0063
	.0065	26.0%	.22	.0068
	.006	30.0%	.19	.0073
80 Mesh	.0075	16.0%	.31	.0050
	.007	19.4%	.27	.0055
	.0065	23.0%	.23	.0060
	.006	27.0%	.20	.0065
	.0055	31.4%	.16	.0070
	.005	36.0%	.13	.0075
90 Mesh	.006	21.1%	.22	.0051
	.0055	25.4%	.18	.0056
	.005	30.1%	.15	.0061
100 Mesh	.005	25.0%	.17	.0050
	.0045	30.3%	.14	.0055
	.004	36.0%	.11	.0060
	.0035	42.3%	.08	.0065
	.003	49.0%	.06	.0070
120 Mesh	.0037	30.5%	.13	.0046
130 Mesh	.0034	31.2%	.11	.0043
140 Mesh	.0029	34.6%	.09	.0042
150 Mesh	.0026	37.2%	.08	.0041
160 Mesh	.0028	31.4%	.07	.0038
170 Mesh	.0024	35.4%	.07	.0035
180 Mesh	.0023	35.3%	.07	.0033
200 Mesh	.0021	33.6%	.07	.0029
250 Mesh	.0016	32.1%	.05	.0024
400 Mesh	.0010	38.0%	.03	.0015

Our expert B-C sales team members are ready to answer all your wire cloth questions.

Please see our 'grate' wire cloth reference data to help you make your selections:

'Common Wire Cloth Materials' -Page 23-

'Standard Sizes of Round Wire' -Page 25-



With 9 manufacturing facilities located throughout the United States, Brown-Campbell is ready to meet your wire cloth needs fast.

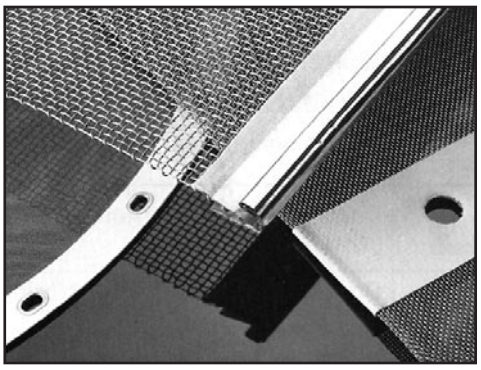
1-800-GRATING ~ brown-campbell.com

Twilled Weave Square Mesh

Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)	Mesh per Lineal Inch	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.	Width of Opening (Inches)
100 Mesh	.0050	25.0%	.17	.0045	140 Mesh	.0033	28.6%	.118	.0038	180 Mesh	.0025	31.1%	.067	.0031	300 Mesh	.0015	29.7%	.052	.0018
110 Mesh	.0045	25.6%	.124	.0046	150 Mesh	.0030	30.8%	.071	.0037	200 Mesh	.0025 .0023	25.0% 29.2%	.066 .063	.0025 .0027	325 Mesh	.0014	30.5%	.044	.0017
120 Mesh	.0042 .0040	24.6% 26.6%	.104 .102	.0041 .0043	160 Mesh	.0028	31.4%	.070	.0035	250 Mesh	.0016	36.0%	.046	.0024	400 Mesh	.0010	36.0%	.037	.0015
130 Mesh	.0038	25.6%	.145	.0039	170 Mesh	.0026	31.2%	.088	.0033	270 Mesh	.0016	32.2%	.053	.0021	1-800-GRATING				

Square Opening Wire Screens are primarily used in dry sizing applications in industries such as mining, quarries, sand/gravel and chemical.

Brown-Campbell offers screens in a multitude of sizes with a variety of hook and edge designs, ready for installation into any type of equipment. The following tables include 4" to 1/8" square openings - for other sizes please contact Brown-Campbell's experienced sales staff at 1-800-GRATING.



Slotted Screens
- Page 34 -

In-House Engineering...
- Drawings
- CAD

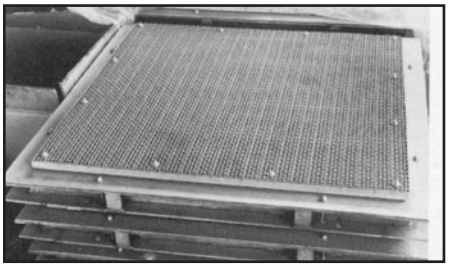
Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
4"	1	64.0%	13.06
	3/4	70.9%	7.66
	11/16	72.8%	6.53
	5/8	74.8%	5.46
	9/16	76.9%	4.47
	1/2	79.0%	3.58
	7/16	81.3%	2.77
	3/8	83.6%	2.07
	5/16	86.0%	1.45
	.283	87.2%	1.20
	.263	88.0%	1.04
	.250	88.6%	.94
3¾"	1	62.3%	13.77
	3/4	69.4%	8.11
	11/16	71.4%	6.90
	5/8	73.5%	5.77
	9/16	75.7%	4.74
	1/2	77.9%	3.79
	7/16	80.2%	2.94
	3/8	82.6%	2.19
	5/16	85.2%	1.54
	.283	86.5%	1.27
	.263	87.3%	1.11
	.250	87.9%	1.00

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
3½"	1	60.5%	14.57
	3/4	67.8%	8.60
	11/16	69.9%	7.32
	5/8	72.0%	6.13
	9/16	74.3%	5.03
	1/2	76.6%	4.03
	7/16	79.0%	3.13
	3/8	81.6%	2.33
	5/16	84.3%	1.65
	.283	85.6%	1.36
	.263	86.5%	1.18
	.250	87.1%	1.07
	.225	88.3%	.87
	.207	89.1%	.74
3¼"	1	58.5%	15.47
	3/4	66.0%	9.16
	11/16	68.1%	7.80
	5/8	70.3%	6.54
	9/16	72.6%	5.37
	1/2	75.0%	4.31
	7/16	77.6%	3.35
	3/8	80.4%	2.50
	5/16	83.2%	1.76
	.283	84.6%	1.46
	.263	85.6%	1.26
	.250	86.2%	1.15
	.225	87.5%	.93
	.207	88.4%	.79
	.192	89.2%	.69

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
3"	1	56.3%	16.50
	3/4	64.0%	9.79
	11/16	66.2%	8.35
	5/8	68.5%	7.00
	9/16	70.9%	5.76
	1/2	73.5%	4.62
	7/16	76.2%	3.59
	3/8	79.0%	2.68
	5/16	82.0%	1.90
	.283	83.5%	1.57
	.263	84.5%	1.36
	.250	85.2%	1.23
	.225	86.5%	1.01
	.207	87.5%	.86
	.192	88.3%	.74
	.177	89.2%	.63
	.162	90.0%	.53
2¾"	1	53.7%	17.67
	3/4	61.7%	10.52
	11/16	64.0%	8.98
	5/8	66.4%	7.54
	9/16	68.9%	6.20
	1/2	71.6%	4.98
	7/16	74.4%	3.88
	3/8	77.4%	2.90
	5/16	80.6%	2.05
	.283	82.2%	1.70
	.263	83.3%	1.48
	.250	84.0%	1.34
	.225	85.4%	1.09
	.207	86.5%	.93
	.192	87.4%	.80
	.177	88.3%	.69
	.162	89.2%	.58
	.148	90.0%	.48

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
2½"	1	51.0%	19.02
	3/4	59.2%	11.37
	11/16	61.5%	9.71
	5/8	64.0%	8.16
	9/16	66.6%	6.72
	1/2	69.4%	5.41
	7/16	72.4%	4.22
	3/8	75.6%	3.16
	5/16	79.0%	2.24
	.283	80.7%	1.85
	.263	81.9%	1.61
	.250	82.6%	1.46
	.225	84.2%	1.19
	.207	85.3%	1.02
	.192	86.2%	.88
	.177	87.2%	.75
	.162	88.2%	.63
	.148	89.1%	.53
2¼"	1	47.9%	20.61
	3/4	56.2%	12.37
	11/16	58.7%	10.58
	5/8	61.2%	8.90
	9/16	64.0%	7.34
	1/2	66.9%	5.91
	7/16	70.1%	4.62
	3/8	73.4%	3.46
	5/16	77.1%	2.46
	.283	78.9%	2.04
	.263	80.2%	1.77
	.225	82.6%	1.31
	.207	83.9%	1.12
	.192	84.9%	.97
	.177	85.9%	.83
	.162	87.0%	.70
	.148	88.0%	.59

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
2"	1	44.4%	22.49
	3/4	52.9%	13.57
	11/16	55.4%	11.62
	5/8	58.0%	9.79
	9/16	60.9%	8.09
	1/2	64.0%	6.53
	7/16	67.3%	5.11
	3/8	70.9%	3.84
	5/16	74.8%	2.73
	.283	76.7%	2.26
	.263	78.1%	1.97
	.250	79.0%	1.79
	.225	80.8%	1.46
	.207	82.1%	1.25
	.192	83.2%	1.08
	.188	83.6%	1.04
	.177	84.4%	.92
	.162	85.6%	.78
	.148	86.7%	.65
	.135	88.7%	.55
	.120	89.0%	.44
1¾"	1	40.5%	24.76
	3/4	49.0%	15.03
	11/16	51.6%	12.90
	5/8	54.3%	10.88
	9/16	57.3%	9.01
	1/2	60.5%	7.29
	7/16	64.0%	5.71
	3/8	67.8%	4.30
	5/16	71.9%	3.07
	.283	74.1%	2.55
	.263	75.6%	2.22
	.250	76.6%	2.02
	.225	78.5%	1.65
	.207	80.0%	1.41
	.192	81.2%	1.22
	.177	82.5%	1.04
	.162	83.8%	.88
	.148	85.0%	.74
	.135	86.2%	.62
	.120	87.6%	.49



Wire Cloth Stock List
Page 23

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
1½"	1	36.0%	27.57
	3/4	44.4%	16.86
	11/16	47.0%	14.50
	5/8	49.8%	12.27
	9/16	52.8%	10.18
	1/2	56.3%	8.25
	7/16	59.9%	6.48
	3/8	64.0%	4.90
	5/16	68.5%	3.50
	.283	70.8%	2.91
	.263	72.4%	2.54
	.250	73.4%	2.31
	.225	75.6%	1.89
	.207	77.2%	1.62
	.192	78.6%	1.40
	.177	80.0%	1.20
	.162	81.5%	1.02
	.148	82.8%	.85
	.135	84.2%	.72
	.120	85.7%	.57
1⅜"	3/4	41.9%	17.97
	11/16	44.4%	15.47
	5/8	47.3%	13.10
	9/16	50.4%	10.88
	1/2	53.8%	8.83
	7/16	57.6%	6.95
	3/8	61.7%	5.26
	5/16	66.4%	3.77
	.283	68.8%	3.14
	.263	70.5%	2.74
	.250	71.6%	2.49
	.225	73.9%	2.04
	.207	75.6%	1.75
	.192	77.0%	1.52
	.177	78.5%	1.30
	.162	80.0%	1.10
	.148	81.5%	.92
	.135	82.9%	.78
	.120	84.6%	.62
1¼"	3/4	39.1%	19.22
	11/16	41.6%	16.57
	5/8	44.4%	14.06
	9/16	47.5%	11.70
	1/2	51.0%	9.51
	7/16	54.8%	7.50
	3/8	59.2%	5.69
	5/16	64.0%	4.08
	.283	66.5%	3.40
	.263	68.3%	2.97
	.250	69.4%	2.70
	.225	71.8%	2.22
	.207	73.6%	1.90
	.192	75.1%	1.65
	.177	76.7%	1.42
	.162	78.4%	1.20
	.148	79.9%	1.01
	.135	81.5%	.85
	.120	83.2%	.68
	.105	85.1%	.52

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
1⅛"	3/4	36.0%	20.68
	11/16	38.5%	17.88
	5/8	41.3%	15.17
	9/16	44.4%	12.65
	1/2	47.9%	10.30
	7/16	51.8%	8.14
	3/8	56.3%	6.19
	5/16	61.2%	4.45
	.283	63.8%	3.71
	.263	65.7%	3.25
	.250	66.9%	2.96
	.225	69.4%	2.43
	.207	71.3%	2.08
	.192	73.0%	1.81
	.177	74.7%	1.55
	.162	76.4%	1.32
	.148	78.1%	1.11
	.135	79.7%	.93
	.120	81.7%	.74
	.105	83.7%	.58
	.092	85.5%	.45
1"	3/4	32.6%	22.38
	11/16	35.1%	19.37
	5/8	37.9%	16.49
	9/16	41.0%	13.78
	1/2	44.4%	11.25
	7/16	48.4%	8.91
	3/8	52.9%	6.79
	5/16	58.0%	4.90
	.283	60.8%	4.09
	.263	62.7%	3.58
	.250	64.0%	3.26
	.225	66.6%	2.69
	.207	68.6%	2.31
	.192	70.4%	2.01
	.177	72.2%	1.72
	.162	74.0%	1.46
	.148	75.9%	1.23
	.135	77.6%	1.04
	.120	79.7%	.83
	.105	81.9%	.64
	.092	83.9%	.50
	.080	85.7%	.38
⅞"	5/8	34.0%	18.06
	9/16	37.0%	15.13
	1/2	40.5%	12.38
	7/16	44.4%	9.84
	3/8	49.0%	7.52
	5/16	54.3%	5.44
	.283	57.1%	4.55
	.263	59.1%	3.99
	.250	60.5%	3.64
	.225	63.3%	3.01
	.207	65.3%	2.58
	.192	67.2%	2.25
	.177	69.2%	1.93
	.162	71.2%	1.64
	.148	73.5%	1.38
	.135	75.1%	1.17
	.120	77.3%	.93
	.105	79.7%	.72
	.092	81.9%	.56
	.080	83.9%	.43

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
¾"	5/8	29.7%	19.98
	9/16	32.6%	14.30
	1/2	36.0%	13.79
	7/16	39.9%	11.00
	3/8	44.4%	8.44
	5/16	49.8%	6.13
	.283	52.7%	5.15
	.263	54.8%	4.52
	.250	56.3%	4.12
	.225	59.2%	3.41
	.207	61.4%	2.93
	.192	63.4%	2.56
	.177	65.5%	2.20
	.162	67.6%	1.87
	.148	69.8%	1.58
	.135	71.8%	1.33
	.120	74.3%	1.07
	.105	76.9%	.83
	.092	79.3%	.65
	.080	81.7%	.50
⅝"	9/16	27.7%	18.90
	1/2	30.9%	15.57
	7/16	34.6%	12.47
	3/8	39.1%	9.61
	5/16	44.4%	7.03
	.283	47.4%	5.91
	.263	49.5%	5.20
	.250	51.0%	4.76
	.225	54.0%	3.94
	.207	56.4%	3.40
	.192	58.5%	2.97
	.177	60.7%	2.56
	.162	63.1%	2.18
	.148	65.4%	1.85
	.135	67.6%	1.56
	.120	70.3%	1.25
	.105	73.4%	.98
	.092	76.0%	.76
	.080	78.6%	.58
	.072	80.4%	.48
	.063	82.5%	.37
½"	1/2	25.0%	16.90
	7/16	28.4%	14.42
	3/8	32.7%	11.19
	5/16	37.9%	8.24
	.283	40.8%	6.96
	.263	42.9%	6.14
	.250	44.4%	5.62
	.225	47.5%	4.68
	.207	49.8%	4.04
	.192	52.2%	3.54
	.177	54.5%	3.06
	.162	57.1%	2.61
	.148	59.5%	2.22
	.135	62.0%	1.88
	.120	65.0%	1.51
	.105	68.3%	1.18
	.092	71.3%	.93
	.080	74.3%	.71
	.072	76.4%	.58
	.063	78.9%	.45

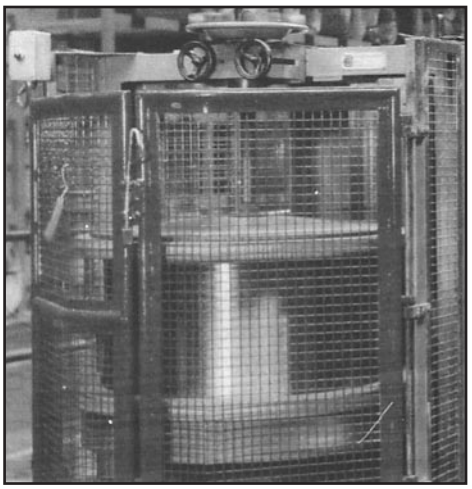
Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
7/16"	7/16	25.0%	15.40
	3/8	29.0%	12.20
	5/16	34.0%	9.03
	.283	36.9%	7.64
	.263	39.0%	6.75
	.250	40.5%	6.19
	.225	43.6%	5.16
	.207	46.0%	4.47
	.192	48.3%	3.92
	.177	50.7%	3.40
	.162	53.2%	2.90
	.148	55.8%	2.47
	.135	58.4%	2.09
	.120	61.5%	1.69
	.105	65.0%	1.33
	.092	68.3%	1.04
	.080	71.5%	.80
	.072	73.7%	.66
	.063	76.4%	.51
3/8"	3/8	25.0%	13.20
	5/16	29.7%	9.99
	.283	32.5%	8.48
	.263	34.5%	7.51
	.250	36.0%	6.89
	.225	39.0%	5.77
	.207	41.5%	5.00
	.192	43.8%	4.39
	.177	46.1%	3.82
	.162	48.7%	3.27
	.148	51.4%	2.79
	.135	54.1%	2.37
	.120	57.4%	1.92
	.105	61.0%	1.51
	.092	64.5%	1.18
	.080	67.9%	.91
	.072	70.4%	.75
	.063	73.3%	.59
	.054	76.4%	.44
5/16"	.263	29.5%	8.46
	.250	30.9%	7.78
	.225	33.8%	6.53
	.207	36.2%	5.68
	.192	38.4%	5.00
	.177	40.8%	4.36
	.162	43.4%	3.74
	.148	46.0%	3.20
	.135	48.8%	2.72
	.120	52.2%	2.21
	.105	56.0%	1.74
	.092	59.6%	1.37
	.080	63.4%	1.07
	.072	66.1%	.88
	.063	69.3%	.69
	.054	72.7%	.51

Square Opening	Wire Dia. (in)	% Open Area	Wght Lbs./ sq. ft.
¼"	.250	25.0%	8.90
	.225	27.7%	7.55
	.207	29.9%	6.59
	.192	32.0%	5.82
	.177	34.3%	5.08
	.162	36.8%	4.38
	.148	39.4%	3.76
	.135	42.2%	3.21
	.120	45.6%	2.62
	.105	49.6%	2.07
	.092	53.4%	1.64
	.080	57.4%	1.28
	.072	60.3%	1.06
	.063	63.8%	.83
	.054	67.6%	.62
	.047	70.9%	.48
3/16"	.192	24.4%	6.97
	.177	26.5%	6.12
	.162	28.8%	5.30
	.148	31.3%	4.57
	.135	33.8%	3.90
	.120	37.2%	3.20
	.105	41.1%	2.60
	.092	45.1%	2.00
	.063	56.0%	1.05
	.054	60.3%	.79
	.047	63.9%	.62
	.041	67.3%	.48
1/8"	.135	23.1%	4.90
	.120	26.0%	4.20
	.105	29.5%	3.40
	.092	33.2%	2.70
	.080	37.2%	2.20
	.072	40.3%	1.80
	.063	44.2%	1.40
	.054	48.8%	1.10
	.047	52.8%	.80
	.041	56.7%	.70
	.035	61.0%	.50
	.032	63.4%	.49

Wire Cloth

Hardware and Industrial Cloth

Offers extensive alternatives for many industry, farm and home applications. Some of the most common uses include air filters, aviaries, bag filters, baskets, cages, chimney guards, containers, equipment guards, fencing, fireplace screens, fuel filters, insect screens, livestock feeders, mining, pallets, partitions, racks, shelving, sieves, silo linings, strainers, ventilator covers and window guards.



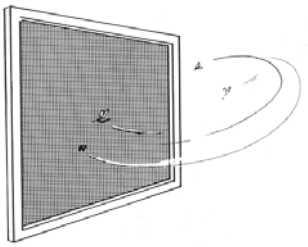
Opening/ Mesh	Wire Diameter	Width
Pre-Galvanized Woven		
1/2" Opening	.080	48"
1" Opening	.120	48"
2" Opening	.120	48"
Other products are available, please contact Brown-Campbell at 1-800-472-8464 to inquire. Our experienced sales specialists can help you find a solution to your needs.		
Galvanized After Woven		
3/4"	.105	36", 48"
2 Mesh	.041 .047 .080	24", 36", 48" 18" 48"
3 Mesh	.032	36", 48"
4 Mesh	.025	24", 36", 48"
8 Mesh	.017	36", 48"

Opening/ Mesh	Wire Diameter	Width
Pre-Galvanized Welded		
4" x 2"	.080	48"
2"	.099	60"
1"	.063 .080	48" 36", 48", 60"
1" x 2"	.080	48"
1/2" x 1"	.063	24", 30", 36", 48"
Galvanized After Welded		
2" x 1"	.080	34", 48"
1"	.063 .080	48" 72"
1/2" x 1"	.063	24", 36", 48", 60"
2 Mesh	.041 .063	24", 36", 48", 60" 48", 60", 72"
4 Mesh	.025	36"

Call Brown-Campbell at
1-800-472-8464
for all your wire cloth needs.

Insect Screen

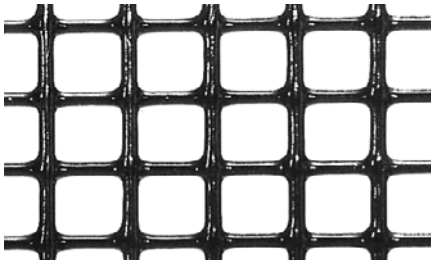
For insect screen requirements not listed below call us today at **1-800-472-8464**.



Mesh	Wire Diameter	Width	Lbs per sq. ft.	Material Type
16 x 16	.011	36", 48"	.14	Copper
18 x 16	.011	36", 48"	.05	Aluminum
18 x 14	.011	36", 48"	.14	Bronze
	.009	36", 48"	.09	Stainless Type 304
	.011	36", 48"	.13	Stainless Type 304
	.009	36", 48"	.09	Epoxy Coated

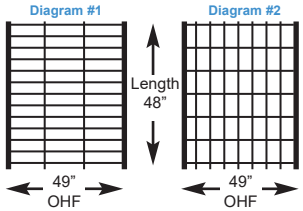
Vinylmesh

Wire is vinyl coated after galvanizing. For your vinylmesh requirements not listed below inquire at **1-800-472-8464**.



Mesh	Wire Diameter	Width	Lbs per sq. ft.
4" x 2" Welded	.105	24", 36", 48"	.33
2" Welded	.105	24", 36", 48", 72"	.43
	.080	24", 36", 48", 72"	.24
2" x 1" Welded	.080	24", 36", 48", 72"	.37
1" x 2" Welded	.080	24", 36", 48", 60"	.37
1" Welded	.080	24", 36", 48", 72"	.49
	.063	24", 36", 48"	.32
1" x 1/2" Welded	.063	24", 36", 48"	.47
2 Mesh Welded	.063	24", 36", 48"	.65
4 Mesh Welded	.025	24"	.33

Slotted Screens



The best way to specify slotted screens is to specify "long slots parallel to 49" dimension" as in diagram #1. In instances where length and outside hook flange (OHF) are the same, it is necessary to specify the direction of long slots in relation to length.

Ex: Diagram #1: "long slots at right angles to length"
Diagram #2: "long slots parallel to length"

Wire cloth applications are only limited by the imagination. It's versatility makes it applicable in almost any setting.





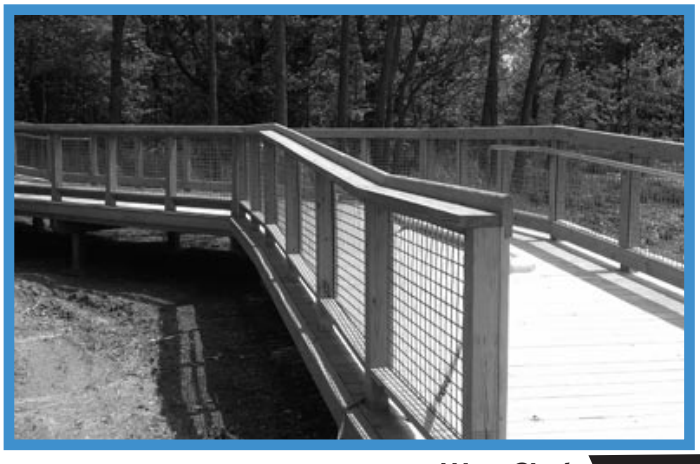


Wire Cloth

products have long been recognized for their extensive functionality 'behind the scenes' as filters, screens, etc. but are now becoming more and more dual purposed as DECORATIVE AND FUNCTIONAL.











Expanded Metal

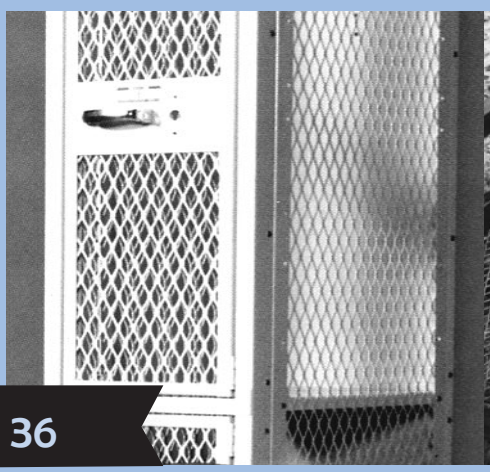
Expanded Metals are widely accepted and most often used for enclosure, protection, and support, time and again, in the following applications.

Architecture... Expanded metals provide lightweight strength that opens a myriad of design opportunities for fascia panels, balcony railings, sunshading in new construction and remodeling. Expanded metal offers safety, beauty, extensive selection, economy, wind resistance, and unique directional properties that capture the imagination of the architect.

Product Design... Creative application of expanded metals in product design helps sell most everything from beds to buses, lawn furniture to locomotives, radios to radiators. Expanded metal is easy to cut, shape, and weld and is available in a variety of metals and finishes with dozens of mesh patterns. These are the qualities a designer looks for in metal fabrics.

Plant Facilities... Plant engineers look to expanded metal products for machine guards, railing panels, shelving, partitions, security screens, and many other applications. These products are strong without excess bulk or weight. They are easy to fabricate, bend, curve or reinforce, if necessary. Other advantages include a high percentage of open area - plus availability of a variety of mesh sizes, weights, and materials.

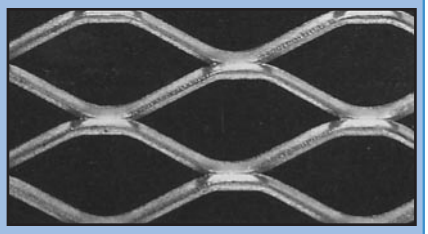
As Grating... Expanded metal grating provides secure footing for walkways, catwalks, floors, platforms and stair treads. Light in weight...high in strength...low in cost attributes make expanded metal grating a 'grate' alternative. Savings of up to 50% over other steel grating alternatives are not uncommon. Job cutting and fitting can easily be done by one or two people with the proper cutting and welding equipment.



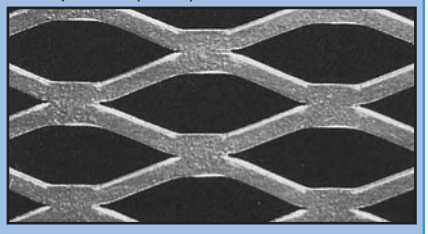


Standard & Flattened Expanded Metal

Standard: Expanded metal as it comes off the machine is referred to as "standard". The strands and bonds are set at a uniform angle to the plane of the sheet. This adds strength and rigidity, allows air circulation, distributes the load of the metal to the supporting frames, as well as making a skid resistant surface.



Flattened: Standard expanded metal sheets are passed through a cold roll reducing mill parallel to the diamond pattern (LWD) to form flattened expanded metal. By flattening the sheet, the bonds and strands are turned down to produce a smooth and flat surface, reducing the overall thickness and elongating the diamond pattern. Cross roll flattening is done by passing the expanded metal sheet through a cold roll reducing mill parallel to the SWD. The result is the same except the diamond pattern SWD is elongated. Material thickness may vary +/- 10% from the published dimensions.



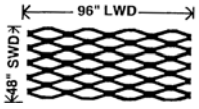
Style Designation

Expanded metal products are designated by a series of numbers which identify a given style.

First number: designates nominal diamond pitch Short Way of Design (SWD).
Second number: used in conjunction with the first number MAY specify the gauge of metal, weight per hundred square feet, or may have some other significance. Therefore, the word "gauge" should never be added to the style designation.
Grating products: Designated by weight per square foot of the finished product.

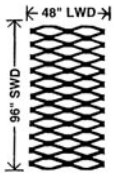
Example 1: **1/2" #18 carbon steel standard, 48" SWD by 96" LWD.**

Example 1 (STOCKED)



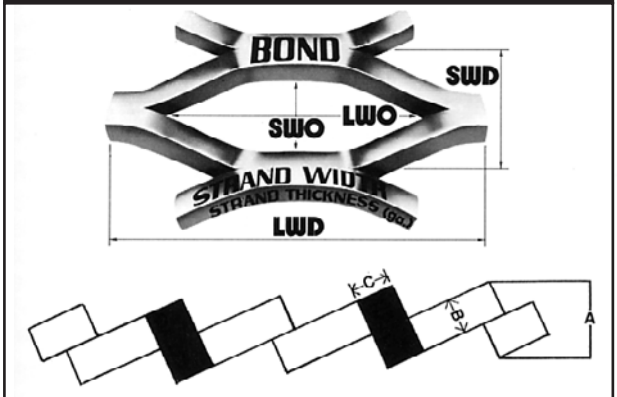
Example 2:
1/2" .051 aluminum standard, 96" SWD by 48" LWD.

Example 2



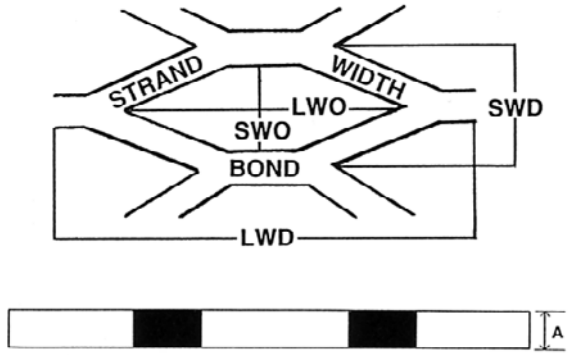
These illustrations demonstrate the importance of ALWAYS providing the SWD dimension BEFORE the LWD dimension.

Standard Expanded Metal



"A" - Overall Thickness "C" - Strand Thickness
"B" - Strand Width

Flattened Expanded Metal



"A" - Overall thickness and strand thickness

Bond - Intersection of two strands. Always equal to the width of two strands.

LWD - Long Way of Design - Distance from a point on a bond to a corresponding point on the following bond measured across the Long Way of Design. Also referred to as "pitch LWD".

LWO - Long Way of Opening - Distance measured from the inside of the bond across to the inside of the bond LWD.

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

Thickness -
Standard Expanded Metal: Gauge or thickness of the sheet or coil from which the expanded metal was produced.
Flattened Expanded Metal: Overall thickness of the finished sheet.

Width -
Standard Expanded Metal: Amount of metal fed into the expanding machine, which is slit and stretched with each stroke of the upper die.
Flattened Expanded Metal: Width of the strand.

SWD - Short Way of Design - Distance from a point on a bond to a corresponding point on the following bond measured across the SWD. Also referred to as "pitch SWD".

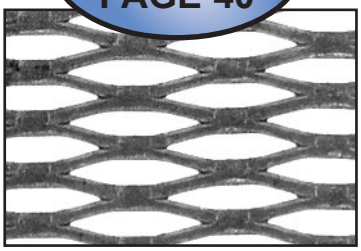
SWO - Short Way of Opening - Distance measured from the inside of the bond across to the inside of the bond SWD.

FLATTENED EXPANDED METAL: STOCK & AVAILABILITY

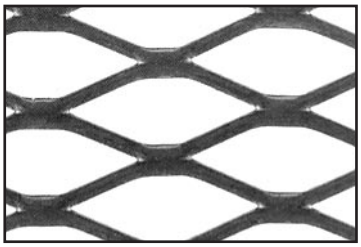
Style	Stock Size (Ft) Width SWD	Lgth LWD	Pounds/ 100 sq. ft. Plain	Galv	Design Sizes (In) SWD	LWD	Opening Sizes (In) SWO	LWO	Strand Sizes (In) Width	Thick	Overall Thickness (In)	Designs per sq. ft. SWD	LWD	% Open Area
Carbon and Hot Dipped Galvanized* Steel / FLATTENED														
3/16" - #22	8	3	43	n/a	.200	.510	.115	.300	.040	.024	.024	60	23	55%
1/4" - #20	4	8	82	103	.250	1.050	.110	.715	.079	.030	.030	48	11.60	35%
1/4" - #18	3,4	8	108	135	.250	1.050	.118	.715	.080	.040	.040	48	11.60	35%
1/2" - #40 (18ga)	4	8	38	n/a	.500	1.250	.380	1.000	.056	.040	.040	24	9.500	77%
1/2" - #20	3,4	8	40	51	.500	1.250	.375	1.000	.079	.029	.029	24	9.500	65%
1/2" - #18	3,4	8	66	83	.500	1.250	.312	1.000	.097	.039	.039	24	9.500	60%
	4	10												
1/2" - #16	3,4,5	8,10	82	98	.500	1.250	.312	1.000	.096	.050	.050	24	9.500	63%
	4	12												
1/2" - #13	3,4,6	8	140	161	.500	1.250	.265	1.000	.107	.078	.078	24	9.500	52%
	3,4,5	10												
3/4" - #16	3,4	8,10	51	57	.923	2.100	.750	1.750	.111	.048	.048	13	5.700	74%
3/4" - #14	3,4	8,10	63	74	.923	2.100	.688	1.813	.105	.061	.061	13	5.700	74%
3/4" - #13	3,4	8	75	88	.923	2.100	.688	1.781	.106	.078	.078	13	5.700	74%
	3,4,5	10												
3/4" - #10 (13ga)	special order		114	128	.923	2.100	.637	1.755	.160	.078	.078	13	5.700	68%
3/4" - #9 (10ga)	3,4,6	8	171	188	.923	2.100	.563	1.688	.165	.120	.120	13	5.700	63%
	3	9												
	3,4,5,6	10												
	4	12												
1" - #16	4	8	41	50	1.000	2.500	.813	2.250	.098	.050	.050	12	4.680	78%
1-1/2" - #16 (lt)	4	8	29	n/a	1.330	3.200	1.175	2.620	.093	.050	.050	9	3.750	83%
1-1/2" - #16	3,4	8	38	46	1.330	3.200	1.062	2.750	.119	.048	.048	9	3.750	83%
1-1/2" - #14	3,4	8	46	54	1.330	3.200	1.062	2.750	.116	.060	.060	9	3.750	80%
1-1/2" - #13	4	8	57	66	1.330	3.200	1.062	2.750	.116	.078	.078	9	3.750	80%
	3,4	10												
1-1/2" - #9 (10ga)	3,4	8	114	125	1.330	3.200	1.000	2.563	.158	.110	.110	9	3.750	75%
	3,4,5	10												
2" - #9 (10ga)	special order		80	88	1.825	4.355	1.445	3.700	.170	.110	.110	6.5	3.750	83%
*Galvanized available where lbs/100 sq. ft. provided. Above material conforms to Military Specification MIL-M-17194D Type II Class 1 & ASTM 1267 Type II Class 1.														
Stainless Steel - Type 304 & 316 / FLATTENED**														
1/4" - #18	4	8	143	n/a	.250	1.200	.080	.660	.090	.047	.047	48	11.60	28%
1/2" - #18	3,4**	8	69	n/a	.500	1.260	.312	1.000	.098	.040	.040	24	9.500	60%
1/2" - #16	3,4**	8	86	n/a	.500	1.260	.312	1.000	.099	.050	.050	24	9.500	60%
1/2" - #13	3,4**	8	178	n/a	.500	1.260	.240	.915	.132	.080	.080	24	9.500	45%
	4**	10												
3/4" - #18	3,4**	8	46	n/a	.923	2.100	.750	1.812	.118	.040	.040	13	5.700	75%
3/4" - #16	3,4**	8	57	n/a	.923	2.100	.750	1.812	.118	.050	.050	13	5.700	75%
3/4" - #13	3,4**	8	86	n/a	.923	2.100	.625	1.750	.120	.080	.080	13	5.700	75%
3/4" - #9 (10ga)	3,4**	8	195	n/a	.923	2.100	.562	1.697	.165	.119	.119	13	5.700	61%
1-1/2" - #16	3,4**	8	43	n/a	1.330	3.150	1.062	2.750	.128	.050	.050	9	3.800	80%
1-1/2" - #13	3,4**	8	65	n/a	1.330	3.150	1.000	2.625	.130	.080	.080	9	3.800	80%
1-1/2" - #9 (10ga)	3,4**	8	137	n/a	1.330	3.150	.937	2.625	.165	.119	.119	9	3.800	75%
**Type 316 available in 4x8 sheets only. Above material conforms to Military Specification MIL-M-17194D Type II Class 3 and ASTM 1267 Type II Class 3.														
Aluminum / FLATTENED														
1/2" - .051 (16ga)	3,4	8	27	n/a	.500	1.270	.312	1.000	.104	.040	.040	24	9.500	61%
1/2" - .081 (12ga)	3,4	8	42	n/a	.500	1.270	.312	1.000	.105	.060	.060	24	9.500	58%
3/4" - .051 (16ga)	3,4	8	16	n/a	.923	2.125	.750	1.812	.122	.040	.040	13	5.660	72%
3/4" - .081lt (12ga)	3,4	8	30	n/a	.923	2.125	.687	1.750	.143	.070	.070	13	5.660	70%
3/4" - .081hvy (12ga)	3,4	8	39	n/a	.923	2.125	.687	1.750	.181	.070	.070	13	5.660	63%
3/4" - .125 (8ga)	3,4	8	62	n/a	.923	2.125	.625	1.750	.187	.095	.095	13	5.660	62%
1-1/2" - .081 (12ga)	3,4	8	21	n/a	1.330	3.150	1.062	2.750	.143	.060	.060	9	3.800	77%
1-1/2" - .125 (8ga)	3,4	8	43	n/a	1.330	3.150	1.000	2.750	.181	.080	.080	9	3.800	70%
Above material conforms to Military Specification MIL-M-17999B 3003-H14 (MR) Class 2.														

Standard, Grating and Catwalk Expanded Metal STOCK LISTS continued on next 3 pages.

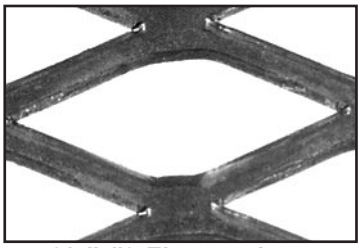
U-EDGING: PAGE 40



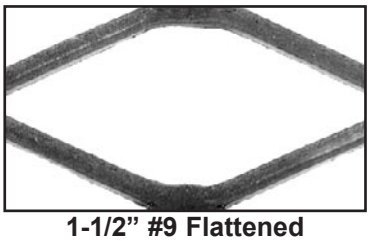
1/4" #20 Flattened



1/2" #13 Flattened



3/4" #9 Flattened



1-1/2" #9 Flattened

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:

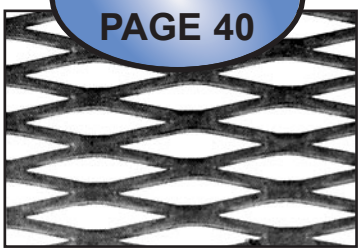
1. Application or use of product (including environment)
2. Physical requirements (including percent of open area, opening size, thickness)

PLEASE SPECIFY:

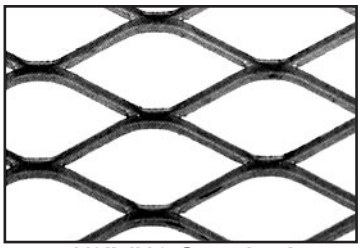
- **Brown-Campbell "Expanded Metal"**
- **Quantity:** # of full or cut pieces
- **Material/Finish Type:** Carbon, Stainless Steel...
- **Type:** standard, flattened, grating
- **Piece Size:** width (SWD) x length (LWD)
- **Stair Tread Size:** (if applicable)
- **Accessories:** U-Edging (pg 40), Stair Treads
- **Finish and Special Treatments:** mill finish, galvanized, etc. (see page 44)
- **Style Designation:** (see pg 37 for more details)
  Example: 1/2" #18
  1/2" = short way of diamond (SWD) dimension
  #18 = gauge
  Example: 2.0# Grating
  2.0# = weight per square foot of grating/catwalk
- **Shearing:** (see page 44)
  -Type: random or bond
  -Direction LWD to run
  -Tolerances
- **Special Requirements:** circle shearing, cut outs

Also see Flattened, Grating and Catwalk Expanded Metal STOCK LISTS.

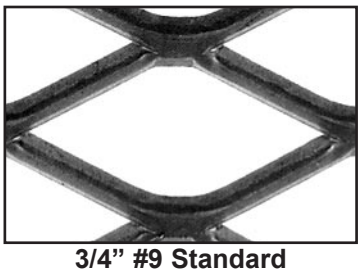
U-EDGING: PAGE 40



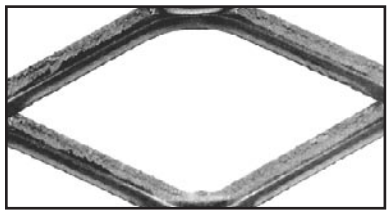
1/4" #18 Standard



1/2" #13 Standard



3/4" #9 Standard



1-1/2" #9 Standard

STANDARD EXPANDED METAL: STOCK & AVAILABILITY

Style	Stock Size (Ft) Width SWD	Stock Size (Ft) Lgth LWD	Pounds/ 100 sq. ft. Plain	Pounds/ 100 sq. ft. Galv	Design Sizes (In) SWD	Design Sizes (In) LWD	Opening Sizes (In) SWO	Opening Sizes (In) LWO	Strand Sizes (In) Width	Strand Sizes (In) Thick	Overall Thickness (In)	Designs per sq. ft. SWD	Designs per sq. ft. LWD	% Open Area
Carbon and Hot Dipped Galvanized* Steel / STANDARD														
3/32" - #24	4	2	57	n/a	.140	.240	.062	.135	.040	.024	.065	86	50	40%
3/16" - #22	4 8	4 3	45	n/a	.190	.500	.140	.345	.034	.031	.070	63	24	61%
1/4" - #20	4	8	86	108	.250	1.000	.125	.718	.072	.036	.135	48	12	45%
1/4" - #18	4	8	114	143	.250	1.000	.110	.718	.072	.048	.147	48	12	43%
1/2" - #40 (18ga)	special order		40	n/a	.500	1.200	.440	.938	.051	.048	.110	24	10	82%
1/2" - #20	4	8	43	54	.500	1.200	.438	.938	.072	.036	.140	24	10	80%
1/2" - #18	4,6	8	70	88	.500	1.200	.438	.938	.088	.048	.172	24	10	72%
1/2" - #16	4 4,6	8 10	86	104	.500	1.200	.375	.938	.087	.060	.175	24	10	65%
1/2" - #13	4,6	8,10	147	174	.500	1.200	.312	.938	.096	.092	.204	24	10	57%
3/4" - #16	4,6	8	54	61	.923	2.000	.813	1.750	.101	.060	.210	13	6	78%
3/4" - #13 (16ga)	4,6	8,10	80	94	.923	2.000	.750	1.688	.096	.090	.205	13	6	76%
3/4" - #10 (13ga)	4,6 6	8 10	120	134	.923	2.000	.750	1.625	.144	.090	.290	13	6	72%
3/4" - #9 (10ga)	4,6 4,5 6	8,10 10 12	180	198	.923	2.000	.688	1.562	.150	.134	.312	13	6	68%
1" - #16	4	8	44	51	1.000	2.400	.938	2.062	.087	.060	.192	12	5	82%
1-1/2" - #18	4	8	20	n/a	1.330	3.000	1.313	2.625	.068	.048	.140	9	4	90%
1-1/2" - #16	4	8	40	48	1.330	3.000	1.250	2.625	.108	.060	.230	9	4	85%
1-1/2" - #13	4,6 6	8 10	60	68	1.330	3.000	1.188	2.500	.105	.090	.242	9	4	85%
1-1/2" - #10 (13ga)	4,6	8,10	79	90	1.330	3.000	1.188	2.500	.138	.090	.284	9	4	80%
1-1/2" - #9 (10ga)	4,6	8,10	120	131	1.330	3.000	1.125	2.375	.144	.134	.312	9	4	76%
1-1/2" - #6 (6ga)	4 6	8,10 10,12	250	275	1.330	3.000	1.110	2.313	.203	.194	.433	9	4	69%
2" - #10 (13ga)	special order		68	77	1.850	4.000	1.630	3.438	.164	.092	.327	6.5	3	83%
2" - #9 (10ga)	4	8	90	99	1.850	4.000	1.563	3.375	.149	.134	.312	6.5	3	84%
*Galvanized available where lbs/100 sq. ft. provided. Above material conforms to Military Specification MIL-M-17194D Type II Class 1 & ASTM 1267 Type II Class 1.														
Stainless Steel - Type 304 & 316 / STANDARD**														
1/4" - #18	4	8	146	n/a	.250	1.000	.120	.620	.087	.050	.150	48	12	30%
1/2" - #18	3,4**	8	73	n/a	.500	1.200	.437	.937	.087	.050	.164	24	10	70%
1/2" - #16	3,4**	8	91	n/a	.500	1.200	.437	.937	.087	.062	.164	24	10	70%
1/2" - #13	3,4**	8	187	n/a	.500	1.200	.325	.875	.119	.093	.225	24	10	52%
3/4" - #18	3,4**	8	48	n/a	.923	2.000	.812	1.750	.106	.050	.202	13	6	85%
3/4" - #16	3,4**	8	60	n/a	.923	2.000	.812	1.750	.106	.062	.202	13	6	83%
3/4" - #13	3,4**	8	91	n/a	.923	2.000	.750	1.687	.107	.093	.202	13	6	80%
3/4" - #9 (10ga)	3,4**	8	205	n/a	.923	2.000	.687	1.562	.160	.140	.300	13	6	67%
1-1/2" - #16	3,4**	8	45	n/a	1.330	3.000	1.250	2.750	.115	.062	.222	9	4	85%
1-1/2" - #13	3,4**	8	68	n/a	1.330	3.000	1.250	2.625	.115	.093	.222	9	4	83%
1-1/2" - #9 (10ga)	3,4**	8	137	n/a	1.330	3.000	1.125	2.500	.155	.140	.280	9	4	77%
**Type 316 available in 4x8 sheets only. Above material conforms to Military Specification MIL-M-17194D Type I Class 3 and ASTM 1267 Type I Class 3.														
Aluminum / STANDARD														
3/16" - .032	4	4	16	n/a	.190	.500	.160	.360	.034	.032	.070	63	24	66%
1/2" - .051 (16ga)	3,4	8	27	n/a	.500	1.200	.375	.937	.093	.051	.158	24	10	65%
1/2" - .081 (12ga)	3,4,5 4	8 10	44	n/a	.500	1.200	.375	.937	.096	.081	.186	24	10	60%
3/4" - .051 (16ga)	3,4	8	17	n/a	.923	2.000	.812	1.750	.109	.051	.200	13	6	78%
3/4" - .081lt (12ga)	3,4	8	32	n/a	.923	2.000	.750	1.680	.129	.081	.220	13	6	76%
3/4" - .081hvy (12ga)	3,4	8	41	n/a	.923	2.000	.750	1.680	.165	.081	.300	13	6	69%
3/4" - .125 (8ga)	3,4	8	65	n/a	.923	2.000	.687	1.680	.169	.125	.305	13	6	68%
1-1/2" - .081 (12ga)	3,4	8	22	n/a	1.330	3.000	1.187	2.500	.128	.081	.240	9	4	85%
1-1/2" - .125 (8ga)	3,4	8	43	n/a	1.330	3.000	1.187	2.500	.162	.125	.300	9	4	79%
Above material conforms to Military Specification MIL-M-17999B 3003-H14 (MR) Class 2.														

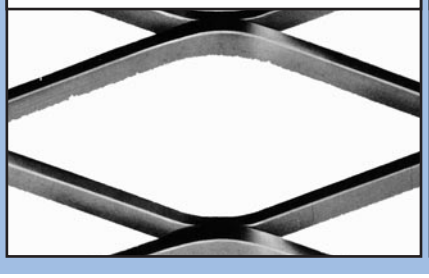
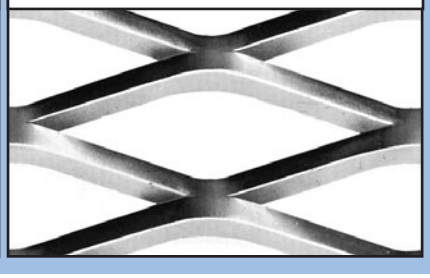
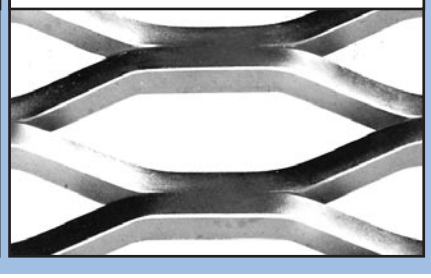
CUT, FORM & WELD

Expanded metal can easily be customized to fit a variety of applications.

Outdoor Grills	Sound Equip.	Platforms	Window Guards
Benches	Dog Kennels	Walkways	Highway
Covers	Enclosures	Stair Treads	Dividers
Racks	Partitions	Filter Screens	Outdoor Signs
Louvers	Machine Guards	Door Guards	Shelving

Expanded Metal

Expanded Metal Grating is a heavy duty expanded metal, produced from carbon steel and plate. Expanded Metal Grating contains no joints or welds, each sheet is a single piece of sturdy steel. Structurally stronger than the original sheet, yet lightweight -- Expanded Metal Grating is the ideal walkway and platform floor for light to heavy pedestrian loads.

3.14# CARBON 3.3# STAINLESS STEEL	4.27# CARBON 4.5# STAINLESS STEEL	3#, 4#, 5#, 6.25#, 7# CARBON 2# ALUMINUM
		

GRATING EXPANDED METAL: STOCK & AVAILABILITY

Style	Std. Sheet Size (Ft) Width SWD	Lgth LWD	Pounds/ 100 sq. ft. Plain	Galv	Design Sizes (In) SWD	LWD	Opening Sizes (In) SWO	LWO	Strand Sizes (In) Width	Thick	Overall Thickness (In)	Designs per sq. ft. SWD	LWD	% Open Area
Carbon Steel and Hot Dipped Galvanized Steel / STANDARD GRATING														
2.0 lbs.	special order		200	210	1.25	5.33	1.00	3.60	.230	.135	.460	10	2.25	77%
3.0 lbs.	4,6	8,10,12	300	315	1.33	5.33	.940	3.44	.264	.183	.540	9	2.25	60%
3.14 lbs.	4,6	8,10	314	330	2.00	6.00	1.625	4.88	.312	.250	.656	6	2	69%
4.0 lbs.	4,5,6	8,10	400	418	1.33	5.33	.940	3.44	.300	.215	.618	9	2.25	55%
4.27 lbs.	4,6	8,10	427	446	1.41	4.00	1.00	2.88	.300	.250	.625	8.5	3	58%
5.0 lbs.	4,5,6	8,10	500	520	1.33	5.33	.813	3.38	.331	.250	.655	9	2.25	50%
6.25 lbs.	4,6	8,12	625	647	1.41	5.33	.813	3.38	.350	.312	.715	8.5	2.25	50%
7.0 lbs.	4	8	700	725	1.41	5.33	.813	3.38	.391	.312	.740	8.5	2.25	45%
Carbon Steel and Hot Dipped Galvanized Steel / FLATTENED GRATING														
2.8 lbs.	4	8	280	293	1.33	5.67	.810	4.00	.285	.160	.160	9	2.1	55%
2.95 lbs.	4	10	295	308	2.00	6.38	1.310	5.50	.340	.220	.220	6	1.9	64%
3.75 lbs.	4	8	375	392	1.33	5.67	.810	4.00	.320	.190	.190	9	2.1	50%
Aluminum / STANDARD GRATING														
2.0 lbs.	4 5	8 10,12	200	n/a	1.33	5.33	.940	3.44	.387	.250	.730	9	2.25	48%
Stainless Steel - Type 304 / STANDARD GRATING														
3.3 lbs.	4	10	330	n/a	2.00	6.00	1.625	4.88	.312	.250	.656	6	2	69%
4.5 lbs.	4	10	450	n/a	1.41	4.00	1.00	2.88	.300	.250	.625	8.5	3	58%

Expanded Metal Grating Offers:

Safety: self-draining, foot holding surface

Strength: truss-like design

Economy: low priced, easily fabricated panels

Availability: Brown-Campbell's huge inventory

Ideal for walkway and platform applications including aircraft maintenance platforms, billboards, highway signs and machinery platforms

800-472-8464

U-EDGING

1" U-Edging 12' (18 ga. 5/16" opening)

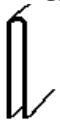
Carbon: **Standard** fits all but 3/4" #9, 1-1/2" #9, 1-1/2" #6, 2" #10, 2" #9; **Flattened** fits all
*Aluminum: **Standard** fits all; **Flattened** fits all
*Stainless: **Standard** fits all; **Flattened** fits all



35 lbs per 100 feet

1" U-Edging 12' (18 ga. 1/8" opening)

Carbon: **Standard** fits ONLY 1/4" #20, 1/4" #18 **Flattened** fits all
*Aluminum: **Standard** fits NONE; **Flattened** fits all
*Stainless: **Standard** fits NONE; **Flattened** fits all



34 lbs per 100 feet

1" U-Edging 12' (18 ga. 1/4" opening)

Carbon: **Standard** fits all but 3/4" #10, 3/4" #9, 1-1/2" #9, 1-1/2" #6, 2" #10, 2" #9; **Flattened** fits all
*Aluminum: **Standard** fits all but 3/4" .081hvy, 3/4" .125, 1-1/2" .125; **Flattened** fits all
*Stainless: **Standard** fits all but 3/4" #9, 1-1/2" #9 **Flattened** fits all



35 lbs per 100 feet

1" U-Edging 12' (18 ga. 1/16" opening)

Carbon: **Standard** fits NONE; **Flattened** fits all BUT 1/2" #13, 3/4" #14, 3/4" #13, 3/4" #9, 1-1/2" #14, 1-1/2" #13, 1-1/2" #9
*Aluminum: **Standard** fits NONE; **Flattened** fits ONLY 1/2" .051, 3/4" .051, 1-1/2" .081
*Stainless: **Standard** fits NONE; **Flattened** fits all BUT 3/4" #13, 3/4" #9, 1-1/2" #13, 1-1/2" #9



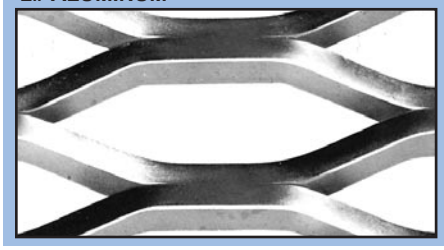
34 lbs per 100 feet

*Aluminum and Stainless by special order. Carbon Steel Stocked.

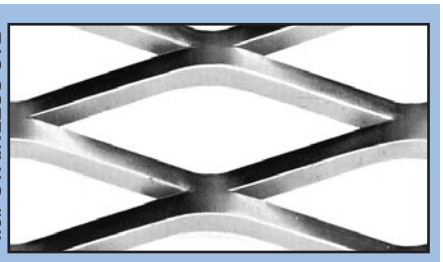
Catwalk Grating - Expanded metal grating designed for catwalks

Standard Size:
10' SWD x 2', 2'-6", 3' LWD
- Brown-Campbell can CUT to your size

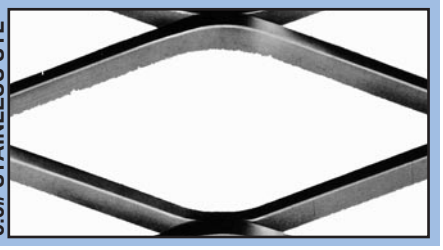
3#, 4#, 5#, 6.25#, 7# CARBON
2# ALUMINUM



4.27# CARBON
4.5# STAINLESS STL



3.14# CARBON
3.3# STAINLESS STL



ISO 9001:2015 CERTIFIED

CATWALK EXPANDED METAL: STOCK & AVAILABILITY

Style	Std. Sheet Size (Ft) Width SWD	Lgth LWD	Pounds/ 100 sq. ft. Plain	Galv	Design Sizes (In) SWD	LWD	Opening Sizes (In) SWO	LWO	Strand Sizes (In) Width	Thick	Overall Thickness (In)	Designs per sq. ft. SWD	LWD	% Open Area
Carbon Steel and Hot Dipped Galvanized Steel / STANDARD GRATING CATWALK														
2.0 lbs.	special order		200	210	1.25	5.33	1.00	3.60	.230	.135	.460	10	2.25	77%
3.0 lbs.	10	*multiple	300	315	1.33	5.33	.940	3.44	.264	.183	.540	9	2.25	60%
3.14 lbs.	10	*multiple	314	330	2.00	6.00	1.625	4.88	.312	.250	.656	6	2	69%
4.0 lbs.	10	*multiple	400	418	1.33	5.33	.940	3.44	.300	.215	.618	9	2.25	55%
4.27 lbs.	10	*multiple	427	446	1.41	4.00	1.00	2.88	.300	.250	.625	8.5	3	58%
5.0 lbs.	10	*multiple	500	520	1.33	5.33	.813	3.38	.331	.250	.655	9	2.25	50%

*multiple lengths available: 2', 2-1/2', 3', 6', 7-1/2', 8'

Catwalk Grating Selection Guide

Using the distance between supports (Clear Span) and the load to be carried, choose the most economical type of grating from the table below.*

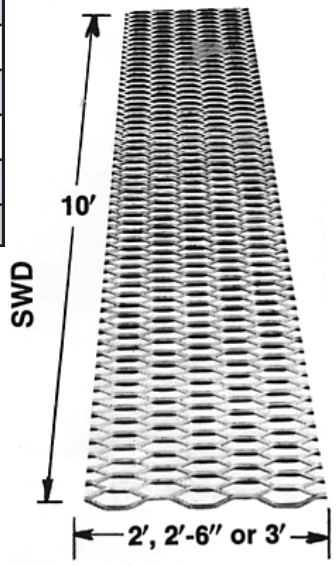
Concentrated Load (lb. per foot of length of Catwalk or Platform)	Clear Span (Distance between supports measured from the inside edge of one support to the inside edge of the next support) 23"	30"	35"	42"	47"	54"	60"
50 lbs. - Light or Occasional Pedestrian Traffic	3.0# 3.14#	3.0# 3.14#	3.0# 3.14#	3.0# 3.14#	3.0# 3.14#	4.0# 4.27#	5.0# 6.25#
100 lbs. - Normal or Frequent Pedestrian Traffic	3.0# 3.14#	3.0# 3.14#	3.0# 3.14#	4.0# 4.27#	5.0# 6.25#	7.0#	7.0#
150 lbs. - Heavy or Constant Pedestrian Traffic	3.0# 3.14#	4.0# 4.27#	4.0# 4.27#	5.0# 6.25#	6.25#	7.0#	
200 lbs. - Pedestrian Traffic with Light Equipment	3.0# 3.14#	4.0# 4.27#	4.27# 5.0#	6.25#	7.0#	7.0#	
250 lbs.	4.0# 4.27#	5.0#	5.0# 6.25#	7.0#			
300 lbs.	4.0# 4.27#	5.0# 6.25#	6.25#				
350 lbs.	4.0# 4.27#	6.25#	7.0#				

The concentrated load deflections for this selection chart do not exceed the 1/4" generally accepted recommendations for normal pedestrian comfort maximum deflection.

*3.14# grating may be used in lieu of 3# if application requires a larger diamond.
4.27# grating may be used in lieu of 4# if application requires a smaller diamond.

ADVANTAGES:

- Reduced installation costs
- Ease of fabrication
- Easier field handling
- Lower cost



Naturally slip resistant since snow, water and oil simply drain off - great for walkways and platforms. Also, functional and aesthetically pleasing in fencing applications.

Catwalk Grating Free Span Load Table

	Style (lbs/sqft)		2'	3'	4'
Carbon Steel	3.0 lbs.	C	100	50	50
		D	.177	.402	.515
	3.14 lbs.	C	200	100	50
		D	.255	.583	.275
	4.0 lbs.	C	200	100	50
		D	.237	.491	.615
	4.27 lbs.	C	200	100	50
		D	.223	.217	.330
	5.0 lbs.	C	350	100	50
		D	.240	.408	.372
	6.25 lbs.	C	400	100	50
		D	.249	.247	.270
	7.0 lbs.	C	400	100	75
		D	.245	.260	.250
Alum	2.0 lbs.	C	150	50	n/a
		D	.231	.257	n/a
Stainless Steel	3.3 lbs.	C	150	50	n/a
		D	.248	.300	n/a
	4.5 lbs.	C	150	50	50
		D	.210	.244	.600

C - Concentrated Load (lb./sq. ft.);
D - Deflection (in)

Catwalk Grating Fixed Span Load Table

	Style (lbs/sqft)		2'	3'	4'
Carbon Steel	3.0 lbs.	U	275	100	n/a
		D	.250	.220	n/a
		C	275	165	75
		D	.250	.250	.250
	3.14 lbs.	U	375	150	50
		D	.250	.240	.250
		C	375	155	75
		D	.250	.250	.250
	4.0 lbs.	U	350	150	50
		D	.240	.245	.250
		C	440	220	100
		D	.250	.250	.250
	4.27 lbs.	U	500	165	60
		D	.245	.245	.250
		C	400	225	100
		D	.250	.240	.250
	5.0 lbs.	U	600	175	100
		D	.240	.240	.250
		C	540	310	140
		D	.245	.250	.250
	6.25 lbs.	U	800	300	115
		D	.220	.250	.240
		C	800	300	150
		D	.220	.240	.240
	7.0 lbs.	U	800	400	165
		D	.210	.250	.240
		C	800	350	175
		D	.220	.240	.250
Alum	2.0 lbs.	C	250	100	50
		D	.250	.250	.250
Stainless Steel	3.3 lbs.	C	n/a	150	50
		D	n/a	.197	.135
	4.5 lbs.	C	300	150	100
		D	.217	.192	.212

U- Uniform Load (lb./sq. ft.); C - Concentrated Load (lb./sq. ft.); D - Deflection (in)

EXPANDED METAL STAIR TREADS

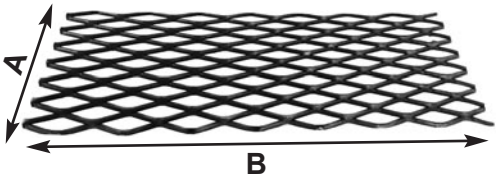
Custom length expanded metal stair treads can be quickly fabricated to your specifications. For structural integrity it is recommended that the tread width encapsulate full diamonds.

Please reference the accompanying chart for recommended tread widths (A) to yield full diamonds and maximum tread length (B) by style.

Brown-Campbell stocks BAR GRATING and FIBERGLASS stair treads in-stock ready for same day shipment.

We can also fabricate stair treads to your specifications from Floor Plate, Perforated Metal, Grip Strut®, Perf-O Grip®, Grate-Lock™ and Safe-T Grid®.

Note: Expanded metal stair treads do not come with endplates or nosings, only the expanded metal. The expanded metal material should be welded to an angle that is attached to a metal stair tread stringer. Extra supports may be required based on the stair tread size and application, please consult an engineer for specifications.



Number of Openings	Style		
	4.0 lbs	5.0 lbs	6.25 lbs
	Tread Width/Depth (A)		
5	6.65”	6.65”	7.05”
6	7.98”	7.98”	8.46”
7	9.31”	9.31”	9.87”
8	10.64”	10.64”	11.28”
9	11.97”	11.97”	12.69”
Maximum Length (B)	2’6”	3’0”	3’0”







Brown-Campbell aluminum expanded metal sold to fabricator for stair enclosures.

DESIGN DETAILS

STOCK SIZE SHEETS

Standard Tolerances for Stock Size & Machine Run Sheets			
Type	Material	SWD per foot of width	LWD Overall
Flattened	Carbon Steel & Aluminum	+3/8" - 0"	+3/4" - 0"
	Stainless Steel	+1/2" - 0"	
Standard	Carbon Steel & Aluminum	+3/8" - 0"	+1/2" - 0"
	Stainless Steel	+1/2" - 0"	
Grating / Catwalk	Carbon Steel & Aluminum	+3/8" - 0"	+1/2" - 0"
	Stainless Steel	+1/2" - 0"	



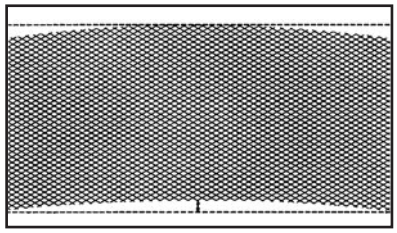
Brown-Campbell's sales staff are experts in specialty steel products, ready to provide you the best solutions possible.

FLATTENING

Limited to 72" maximum one dimension. Flattened sheet thickness will be +/- 10% of published thickness.

CAMBER

Bow in Sheet. Measured by placing a straight edge along the concave side of the sheet parallel to LWD, touching both ends of the sheet. The maximum distance between the edge of the expanded metal and the straight edge is the camber.

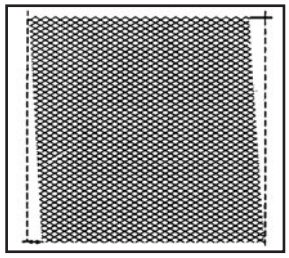


Camber Tolerances:

Standard Expanded Metal: 1/16" per foot of length
Flattened Expanded Metal: 3/32" per foot of length

OUT OF SQUARE

Expanded Metal sheets are not perfectly square as manufactured. Measured using 90 degree angle.



Out of Square Tolerances:
SWD: 1/16" per foot of width
LWD: 1/16" per foot of length

Note: Sheet must be re-squared by shearing on all sides for squareness, if required.

MANUFACTURED TO SIZE

Closed diamonds on all sides. Size tolerances same as stock size sheets.
Unless otherwise specified, material will be produced to plus side of tolerance.

Expanded Metal

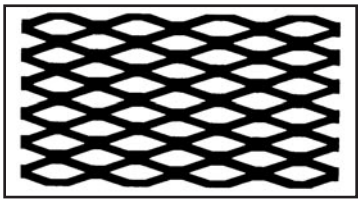
SHEARING

Random Shearing: Results in open diamond design and angle, leaving jagged edges and prongs in most cases. A closer tolerance is obtained at a normal mill tolerance for standard and flattened expanded metal of +/- 1/16" and +/- 1/4" on grating and catwalk.

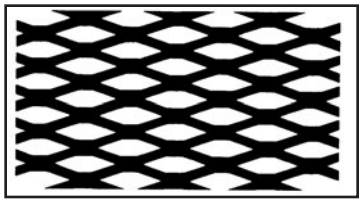
Bond Shearing: Results in closed diamond design and angle, eliminating jagged edges and prongs. Shearing cuts through expanded metal at center of bond, where strands intersect. Standard expanded metal should not be bond sheared SWD. SWD and LWD tolerances are greater at +/- 1/2 design size.

Balance Shearing: LWD only - expanded to SWD dimension. Provides matching sections for continuous catwalk and flooring applications. Closed diamonds SWD, cut with either open or closed diamonds to obtain ordered length LWD.

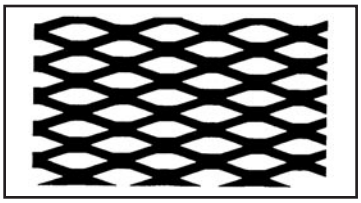
Centerline Shearing: Finished piece symmetrical, around a row of diamonds at center of piece. Open diamonds both SWD and LWD.



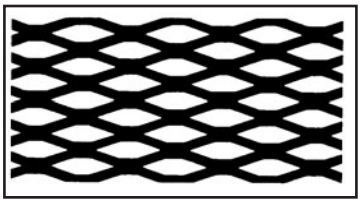
Standard Sheets
Bond or machine run all sides
(Some flattened material patterns may result in one random sheared LWD)



Random Sheared SWD & LWD



LWD - 1 side Bond, 1 side Random
SWD - 1 side Bond, 1 side Random



Bond Sheared SWD
Random Sheared LWD

FINISHES & SPECIAL TREATMENTS

Mill Finish - *Carbon Steel:* expanded metal is lightly oiled and requires cleaning before final finish using acid or solvent bath with a water rinse.
Aluminum: Clean with a non-etching chemical or detergent, then rinse and dry thoroughly. A wax or non-wax base cleaner can be used.

Hot Dip Galvanizing - Protective coating of zinc; may have a rough uneven appearance. Not applicable to patterns smaller than 1/4".

Electro-galvanized - Zinc finish applied to sheets to provide weather resistance.

Deburring - Remove burrs and sharp edges by wire brushing 9"-72" SWD, 50"-150" LWD. Not all styles will be deburred.

Leveling - A plane of the sheet leveled without flattening strands or bonds.



Anodized, coated, painted or plated expanded metal also available.

1-800-GRATING

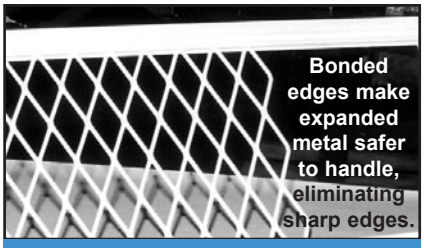
MILITARY/GOVERNMENT SPECIFICATIONS

MIL-M-17194D & ASTM F-1267-91 Metal, Expanded, Steel

Type I: Standard Expanded Metal
Type II: Flattened Expanded Metal
Class 1: Uncoated Mill Finish
Class 2: Hot Dip Zinc Galvanized
Grade A-.0025" minimum coating
Grade B-.0012" minimum coating
Class 3: Corrosion resisting steel

MIL-M17999C Metal, Expanded, Aluminum

Class 1: Standard Expanded Metal
Class 2: Flattened Expanded Metal



Brown-Campbell can fulfill any special fabrication including circle shearing, cutouts or bonded edges as shown above.

Expanded Metal



Expanded Metal utilized on Rock Crushing Machinery



Security Fencing





Machine Guards

Architecture	Fencing	Trailers
Catwalks	Machine Guards	Vents
Ceiling Panels	Screening	Warehouse Racks
Chimney Caps	Stairs	Waste Baskets





Stairway Landing & Stairway Gate





Bar Grating

Bar Grating has been a mainstay of the industrial flooring market for decades. It is the most frequently chosen product for flooring in mezzanines, staircases and walkways.

Bar grating is comprised of a series of equally spaced metal "bearing bars" and "cross rods". The bearing bars have a cross-sectional depth much greater than width and are held at equal, parallel spacing by the cross rods. The manner in which the cross rods are attached determines the type of bar grating. There are three common types of bar grating: welded, press-locked and swaged. Bar grating is available in carbon steel - light duty & heavy duty, aluminum and stainless steel. The right combination of type and material can achieve almost any load or weight specification you require.

Because of it's unique properties, bar grating is an ideal choice when looking for a product that offers strength and long-life at a low-cost.

In addition to traditional bar grating detailed in this section, Brown-Campbell also offers Riveted Grating for applications requiring extreme load capacity (beginning on page 160).





BAR GRATING STOCK LIST

Bearing Bar Size (in)	Surface	Type
Carbon Steel - Welded (Mill Finish, Galvanized, Painted Black)		
3/4 x 1/8	Smooth	19W4
3/4 x 3/16	Smooth	19W4. 15W2
3/4 x 3/16	Serrated	19W4
1 x 1/8	Smooth	19W4, 15W4
1 x 1/8	Serrated	19W4
1 x 3/16	Smooth	19W4, 19W2, 15W4, 15W2, 11W4
1 x 3/16	Serrated	19W4, 19W2, 15W4, 15W2
1 x 1/4	Smooth	19W4
1-1/4 x 1/8	Smooth	19W4
1-1/4 x 1/8	Serrated	19W4
1-1/4 x 3/16	Smooth	19W4, 19W2, 15W4, 15W2, 11W4
1-1/4 x 3/16	Serrated	19W4, 19W2, 15W4, 15W2, 11W4
1-1/4 x 1/4	Smooth	19W4
1-1/4 x 1/4	Serrated	19W4
1-1/2 x 1/8	Smooth	19W4
1-1/2 x 1/8	Serrated	19W4
1-1/2 x 3/16	Smooth	19W4, 19W2, 15W4, 15W2, 11W4
1-1/2 x 3/16	Serrated	19W4, 15W4, 11W4
1-1/2 x 1/4	Smooth	19W4
1-1/2 x 1/4	Serrated	19W4
1-3/4 x 3/16	Smooth	19W4, 15W2
1-3/4 x 3/16	Serrated	19W4
1-3/4 x 1/4	Smooth	19W4
2 x 3/16	Smooth	19W4, 15W4, 15W2
2 x 3/16	Serrated	19W4, 19W2
2 x 1/4	Smooth	19W4
2 x 1/4	Serrated	19W4
2-1/4 x 3/16	Smooth	19W4, 15W4
2-1/4 x 3/16	Serrated	19W4
2-1/4 x 1/4	Smooth	19W4
2-1/2 x 3/16	Smooth	19W4
2-1/2 x 1/4	Smooth	19W4
3 x 1/4	Smooth	19W4
3 x 3/8	Smooth	19W4
3-1/2 x 1/4	Smooth	19W4

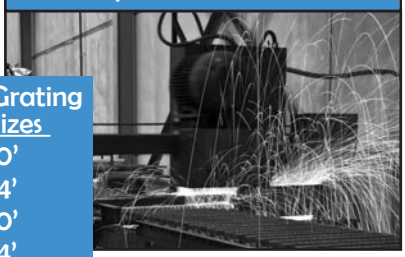
Bearing Bar Size (in)	Surface	Type
Aluminum - Swaged / I-Bar		
1 x 1/8	Smooth	19AS4
1 x 3/16	Smooth	19AS4, 7AS4
1 x 3/16	Serrated	19AS4
1 x 1/4	I-BAR	19AI4
1-1/4 x 1/8	Smooth	19AS4
1-1/4 x 3/16	Smooth	19AS4
1-1/4 x 3/16	Serrated	19AS4
1-1/4 x 1/4	I-BAR	19AI4
1-1/2 x 1/8	Smooth	19AS4
1-1/2 x 3/16	Smooth	19AS4
1-1/2 x 3/16	Serrated	19AS4
1-1/2 x 1/4	I-BAR	19AI4
1-3/4 x 3/16	Smooth	19AS4
1-3/4 x 3/16	Serrated	19AS4
1-3/4 x 1/4	I-BAR	19AI4
2 x 3/16	Smooth	19AS4
2 x 3/16	Serrated	19AS4
2 x 1/4	I-BAR	19AI4
2-1/4 x 3/16	Smooth	19AS4
2-1/4 x 3/16	Serrated	19AS4
2-1/2 x 3/16	Smooth	19AS4
Stainless Steel Type 304 - Welded		
1 x 1/8	Smooth	19SW4
1 x 3/16	Smooth	19SW4
1 x 3/16	Serrated	19SW4
1-1/4 x 3/16	Smooth	19SW4
1-1/4 x 3/16	Serrated	19SW4
1-1/2 x 3/16	Smooth	19SW4
1-1/2 x 3/16	Serrated	19SW4
Stair Treads - Welded (Mill Finish, Galvanized, Painted Black)		
1 x 3/16	Smooth	19W4
1 x 3/16	Serrated	19W4
1-1/4 x 3/16	Smooth	19W4
1-1/4 x 3/16	Serrated	19W4
brown-campbell.com		

Ordering From Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements.

- **Description of Grating:**
  - -Type of Grating
  - -Bearing Bar Spacing
  - -Cross Rod Spacing
  - -Bearing Bar Size
  - -Plain, Serrated, Slip Resistant Surface
  - -Material Type
- **Drawing Including:**
  - -Area to be Covered
  - -Span (bearing bar direction)
  - -Method of Support
  - -All Critical Dimensions
- **Finish**
- **Stair Treads**
  - -Nosing Type
  - -Number of Treads
- **Anchoring Devices**
- **Special Requirements**

Brown-Campbell can cut any of our products to your size requirements - Fast!



Standard Grating Panel Sizes

2' x 20'
2' x 24'
3' x 20'
3' x 24'

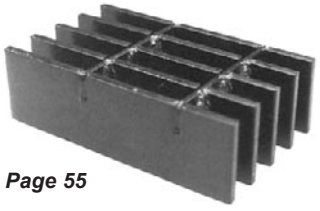
Bar Grating

Carbon Steel



Page 49

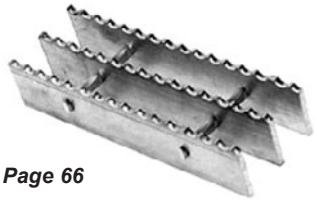
Light Duty: Light Duty Carbon Bar Grating includes bar sizes of 3/4" x 1/8" up to 2-1/2" x 3/16". It is primarily used for pedestrian traffic and for light, tired, rolling traffic such as carts, dollies, and hand trucks.



Page 55

Heavy Duty: Heavy Duty Carbon Bar Grating includes bar sizes of 1" x 1/4" up to 6" x 3/8". It is primarily used where heavy vehicular traffic is present including industrial plants utilizing fork lift trucks, highways, and bridges.

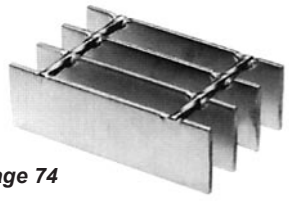
Aluminum



Page 66

Aluminum Bar Grating offers a corrosion resistant alternative to carbon. It is lightweight and strong, and highly utilized in corrosive environments including food/beverage preparation, water vessels, and sewage treatment facilities.

Stainless Steel



Page 74

Stainless Steel Bar Grating offers an alternative to carbon and aluminum materials in protection against severe corrosive environments such as chemical, food, and hydro processing areas.

Stair Treads



Page 78

Brown-Campbell manufactures superior stair treads in line with our extensive bar grating material alternatives to meet your specific needs.

Why Bar Grating?

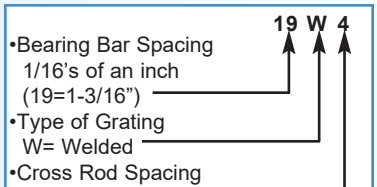
- ***Range of Alternatives*** - Provide safe, durable, and functional products for all environments.
- ***Flexibility*** - Allows ventilation and light to pass-thru while providing strength alternatives to support light pedestrian traffic to the heaviest vehicular traffic.
- ***Longevity*** - Lasts longer than any other material alternatives including wood, plastic and competing metal products.
- ***Ease of Installation and Fabrication*** - Adapts to complex floor configurations and hard-to-fit areas.
- ***Maintenance-Free*** - Open areas allow excellent drainage as well as lack of debris build-up.

Light Duty Carbon Steel Bar Grating
W = Light Duty Welded
P = Light Duty Press-Locked
S = Light Duty Swaged

Heavy Duty Carbon Steel Bar Grating
W = Heavy Duty Welded
WF = Heavy Duty Welded with Filler Bars

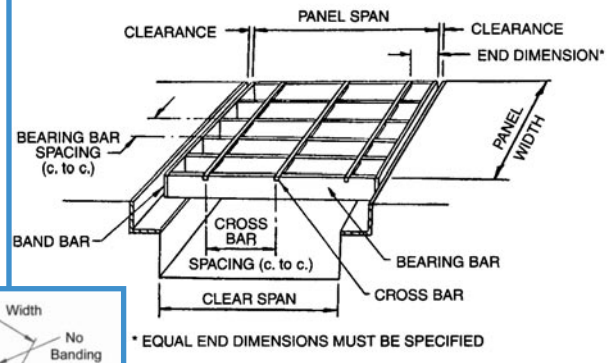
Aluminum Bar Grating
AS = Aluminum Swaged
AI = Aluminum I-Bar
AP = Aluminum Press-Locked
AF = Aluminum Flush Top

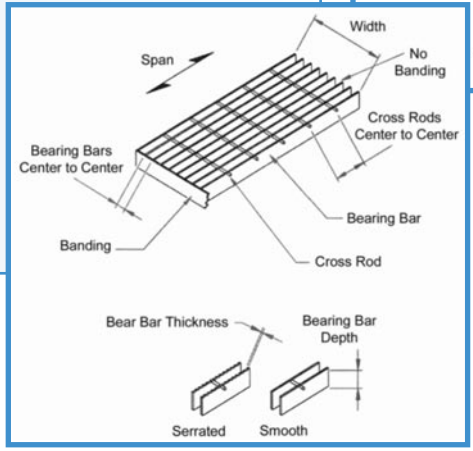
Stainless Steel Bar Grating
SW = Stainless Steel Welded
SP = Stainless Steel Press-Locked
SS = Stainless Steel Swaged



All grating products are manufactured to NAAMM tolerances and specifications.

Terminology





SAME DAY SERVICES...
- SHIPMENTS
- FABRICATION

CUSTOM FABRICATION...
- NO JOB TOO SMALL
- NO JOB TOO LARGE

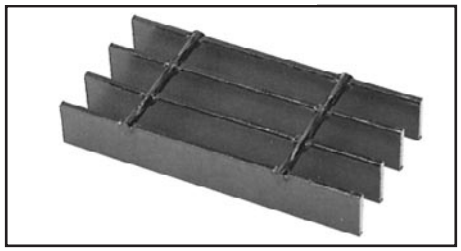
CARBON - Light Duty is one of the most versatile products available for industrial flooring. It is available in welded, press-locked and swaged and in several bearing bar sizes. This product is applicable for many light duty applications including pedestrian traffic and light, tired, rolling traffic such as carts, dollies and hand trucks and is virtually maintenance free due to it's open grid design. Most common bearing bar and cross rod spacing is 19-4 (1-3/16" and 4", respectively). Close-Mesh sizes are available ranging from 7/16" to 13/16".

Bar Grating having a 1/2" maximum opening conforms with the Americans With Disabilities Act Guidelines (ADA) when installed with the elongated opening perpendicular to the dominant direction of travel. Brown-Campbell offers 11/16" and 5/8" in 3/16" width and 1/2" and 7/16" in 1/8" and 3/16" widths light duty bar grating to meet your specific ADA needs.

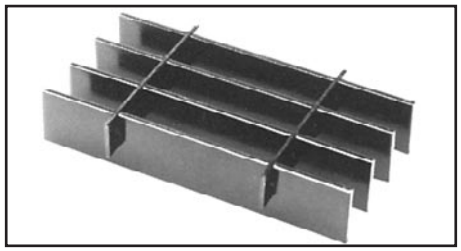
Bar Grating Applications

Bridge Sidewalks	Mezzanines
Catwalks	Motor Bases
Dipping Trays	Ornamental Grilles
Drainage Covers	Overhead Signs
Fencing	Paint Booths
Fire Escapes	Partitions
Flooring	Platforms
Freight Cars	Racks/Shelving
Ladder Treads	Ramps
Loading Ramps	Scaffolding
Machine Bases	Stairs
Machine Guards	Trench Covers
Material Screens	Walkways

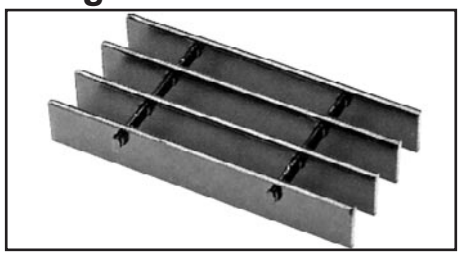
Welded



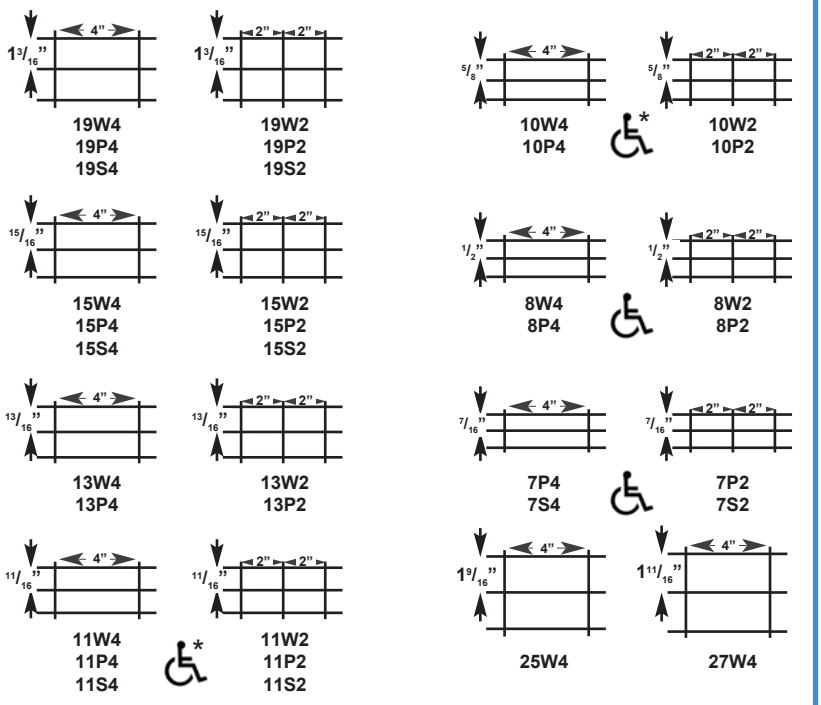
Press-Locked



Swaged



W=Welded; P=Press-Locked; S=Swaged



* 3/16" bearing bar widths conform with ADA spacing requirements

Welded - Most popular and economical choice of bar grating, bearing bars and cross rods are electroforged into one through use of hydraulic pressure and heat fusion.

Press-Locked - Bearing bars and cross rods are hydraulically pressed together by cross rod deformation without welds or rivets to form a permanent bond. The permanent bond is achieved by slotting the bearing bars with a wider 'dovetail' shape at the bottom of the slot, thus locking in the cross rod when hydraulically pressed together.

Swaged - Square cross rods are swaged through punched diamond shaped holes in rectangular bearing bars. Provides lower cost alternative to press-locked grating with the same strength. Swage-locking does not provide a cross rod flush with the walking surface.

Visit our website at
brown-campbell.com
and use our unique
'BAR GRATING CALCULATOR'
to determine the ideal grating to meet your needs.

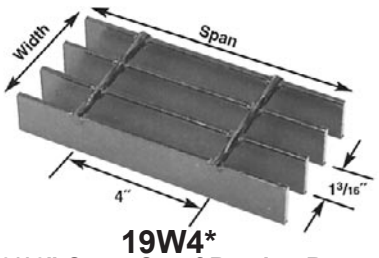


Serrated and Slip Resistant Surfaces Available
- See page 88

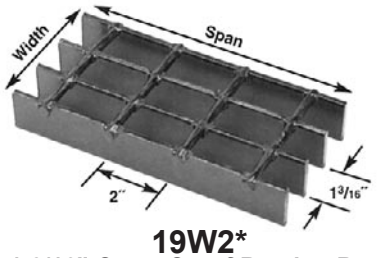
Bar Grating

19W4 & 19W2 Welded*

*Also available in press-locked - **19P4/19P2** and swaged -**19S4/19S2**. Please reference page 49 for examples of these products.



19W4*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



19W2*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Approx. Weight*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	19W4 3.9# 19W2 4.4#	19P4 4.3# 19P2 5.2#	19S4 3.8# 19S2 4.4#	41"	.118	U	355	227	158	116	89	70							
						D	.099	.155	.223	.304	.397	.503							
						C	355	284	237	203	178	158							
						D	.079	.124	.179	.243	.318	.402							
3/4" x 3/16"	19W4 5.6# 19W2 6.2#	19P4 6.4# 19P2 7.8#	19S4 5.5# 19S2 6.1#	46"	.178	U	533	341	237	174	133	105							
						D	.099	.155	.223	.304	.397	.503							
						C	533	426	355	305	266	237							
						D	.079	.124	.179	.243	.318	.402							
1" x 1/8"	19W4 5.0# 19W2 5.5#	19P4 5.4# 19P2 6.3#	19S4 4.9# 19S2 5.5#	51"	.211	U	632	404	281	206	158	125	101	84	70				
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
						C	632	505	421	361	316	281	253	230	211				
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1" x 3/16"	19W4 7.2# 19W2 7.8#	19P4 8.1# 19P2 9.5#	19S4 7.0# 19S2 7.6#	57"	.316	U	947	606	421	309	237	187	152	125	105				
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
						C	947	758	632	541	474	421	379	344	316				
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1-1/4" x 1/8"	19W4 6.1# 19W2 6.6#	19P4 6.8# 19P2 8.1#	19S4 6.0# 19S2 6.6#	61"	.329	U	987	632	439	322	247	195	158	130	110	93	81		
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
						C	987	789	658	564	493	439	395	359	329	304	282		
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	19W4 8.9# 19W2 9.5#	19P4 10.2# 19P2 12.1#	19S4 8.7# 19S2 9.3#	67"	.493	U	1480	947	658	483	370	292	237	196	164	140	121		
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
						C	1480	1184	987	846	740	658	592	538	493	455	423		
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/2" x 1/8"	19W4 7.2# 19W2 7.7#	19P4 7.9# 19P2 9.2#	19S4 7.0# 19S2 7.6#	70"	.474	U	1421	909	632	464	355	281	227	188	158	135	116	89	70
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	1421	1137	947	812	711	632	568	517	474	437	406	355	316
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	19W4 10.5# 19W2 11.2#	19P4 11.8# 19P2 13.8#	19S4 10.3# 19S2 10.9#	77"	.711	U	2132	1364	947	696	533	421	341	282	237	202	174	133	105
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	2132	1705	1421	1218	1066	947	853	775	711	656	609	533	474
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	19W4 12.2# 19W2 12.8#	19P4 13.5# 19P2 15.4#	19S4 11.9# 19S2 12.5#	87"	.967	U	2901	1857	1289	947	725	573	464	384	322	275	237	181	143
						D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
						C	2901	2321	1934	1658	1451	1289	1161	1055	967	893	829	725	645
						D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	19W4 13.9# 19W2 14.5#	19P4 15.2# 19P2 17.1#	19S4 13.6# 19S2 14.2#	96"	1.263	U	3789	2425	1684	1237	947	749	606	501	421	359	309	237	187
						D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
						C	3789	3032	2526	2165	1895	1684	1516	1378	1263	1166	1083	947	842
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	19W4 15.5# 19W2 16.1#	19P4 16.8# 19P2 18.7#	19S4 15.2# 19S2 15.8#	105"	1.599	U	4796	3069	2132	1566	1199	947	767	634	533	454	392	300	237
						D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
						C	4796	3837	3197	2741	2398	2132	1918	1744	1599	1476	1370	1199	1066
						D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	19W4 17.2# 19W2 17.8#	19P4 18.5# 19P2 20.4#	19S4 16.8# 19S2 17.4#	113"	1.974	U	5921	3789	2632	1933	1480	1170	947	783	658	561	483	370	292
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
						C	5921	4737	3947	3383	2961	2632	2368	2153	1974	1822	1692	1480	1316
						D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 18,000 psi. Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	83%	77%
2"cc	76%	71%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

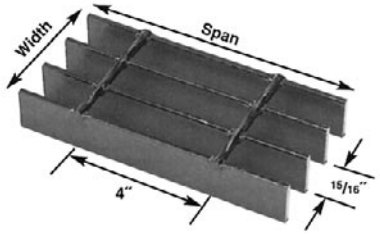
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

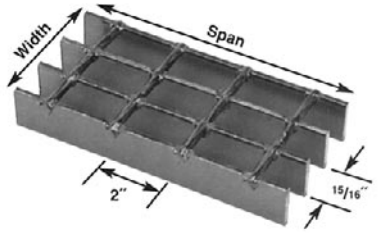
No. of Bars	1/8 Bar	3/16 Bar
2	1-5/16	1-3/8
3	2-1/2	2-9/16
4	3-11/16	3-3/4
5	4-7/8	4-15/16
6	6-1/16	6-1/8
7	7-1/4	7-5/16
8	8-7/16	8-1/2
9	9-5/8	9-11/16
10	10-13/16	10-7/8
11	12	12-1/16
12	13-3/16	13-1/4
13	14-3/8	14-7/16
14	15-9/16	15-5/8
15	16-3/4	16-13/16
16	17-15/16	18
17	19-1/8	19-3/16
18	20-5/16	20-3/8
19	21-1/2	21-9/16
20	22-11/16	22-3/4
21	23-7/8	23-15/16
22	25-1/16	25-1/8
23	26-1/4	26-5/16
24	27-7/16	27-1/2
25	28-5/8	28-11/16
26	29-13/16	29-7/8
27	31	31-1/16
28	32-3/16	32-1/4
29	33-3/8	33-7/16
30	34-9/16	34-5/8
31	35-3/4	35-13/16

15W4 & 15W2 Welded*

*Also available in press-locked - **15P4/15P2** and swaged -**15S4/15S2**. Please reference page 49 for examples of these products.



15W4*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



15W2*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Approx. Weight*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	15W4 4.7# 15W2 5.3#	15P4 5.1# 15P2 6.1#	15S4 4.6# 15S2 5.2#	44"	.150	U	450	288	200	147	113	89							
						D	.099	.155	.223	.304	.397	.503							
						C	450	360	300	257	225	200							
						D	.079	.124	.179	.243	.318	.402							
3/4" x 3/16"	15W4 6.9# 15W2 7.5#	15P4 7.7# 15P2 9.1#	15S4 6.7# 15S2 7.3#	48"	.225	U	675	432	300	220	169	133	108						
						D	.099	.155	.223	.304	.397	.503	.621						
						C	675	540	450	386	338	300	270						
						D	.079	.124	.179	.243	.318	.402	.497						
1" x 1/8"	15W4 6.1# 15W2 6.7#	15P4 6.5# 15P2 7.5#	15S4 6.0# 15S2 6.6#	54"	.267	U	800	512	356	261	200	158	128	106	89				
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
						C	800	640	533	457	400	356	320	291	267				
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1" x 3/16"	15W4 8.9# 15W2 9.6#	15P4 9.8# 15P2 11.2#	15S4 8.7# 15S2 9.3#	60"	.400	U	1200	768	533	392	300	237	192	159	133				
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
						C	1200	960	800	686	600	533	480	436	400				
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1-1/4" x 1/8"	15W4 7.5# 15W2 8.1#	15P4 8.2# 15P2 9.5#	15S4 7.3# 15S2 7.9#	64"	.417	U	1250	800	556	408	313	247	200	165	139	118	102		
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
						C	1250	1000	833	714	625	556	500	455	417	385	357		
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	15W4 11.0# 15W2 11.6#	15P4 12.3# 15P2 14.2#	15S4 10.8# 15S2 11.4#	71"	.625	U	1875	1200	833	612	469	370	300	248	208	178	153		
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
						C	1875	1500	1250	1071	938	833	750	682	625	577	536		
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/2" x 1/8"	15W4 8.9# 15W2 9.4#	15P4 9.6# 15P2 10.9#	15S4 8.7# 15S2 9.3#	74"	.600	U	1800	1152	800	588	450	356	288	238	200	170	147	113	89
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	1800	1440	1200	1029	900	800	720	655	600	554	514	450	400
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	15W4 13.1# 15W2 13.7#	15P4 14.4# 15P2 16.3#	15S4 12.8# 15S2 13.4#	82"	.900	U	2700	1728	1200	882	675	533	432	357	300	256	220	169	133
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	2700	2160	1800	1543	1350	1200	1080	982	900	831	771	675	600
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	15W4 15.2# 15W2 15.8#	15P4 16.5# 15P2 18.4#	15S4 14.9# 15S2 15.5#	92"	1.225	U	3675	2352	1633	1200	919	726	588	486	408	348	300	230	181
						D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
						C	3675	2940	2450	2100	1838	1633	1470	1336	1225	1131	1050	919	817
						D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	15W4 17.3# 15W2 17.9#	15P4 18.6# 15P2 20.5#	15S4 16.9# 15S2 17.5#	102"	1.600	U	4800	3072	2133	1567	1200	948	768	635	533	454	392	300	237
						D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
						C	4800	3840	3200	2743	2400	2133	1920	1745	1600	1477	1371	1200	1067
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	15W4 19.4# 15W2 20.0#	15P4 20.7# 15P2 22.6#	15S4 19.0# 15S2 19.6#	111"	2.025	U	6075	3888	2700	1984	1519	1200	972	803	675	575	496	380	300
						D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
						C	6075	4860	4050	3471	3038	2700	2430	2209	2025	1869	1736	1519	1350
						D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	15W4 21.4# 15W2 22.0#	15P4 22.7# 15P2 24.7#	15S4 20.9# 15S2 21.5#	120"	2.500	U	7500	4800	3333	2449	1875	1481	1200	992	833	710	612	469	370
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
						C	7500	6000	5000	4286	3750	3333	3000	2727	2500	2308	2143	1875	1667
						D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 18,000 psi.
Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	80%	73%
2"cc	74%	67%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

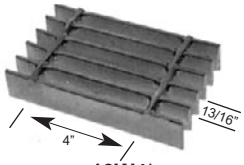
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

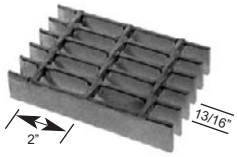
No. of Bars	1/8 Bar	3/16 Bar
2	1-1/16	1-1/8
3	2	2-1/16
4	2-15/16	3
5	3-7/8	3-15/16
6	4-13/16	4-7/8
7	5-3/4	5-13/16
8	6-11/16	6-3/4
9	7-5/8	7-11/16
10	8-9/16	8-5/8
11	9-1/2	9-9/16
12	10-7/16	10-1/2
13	11-3/8	11-7/16
14	12-5/16	12-3/8
15	13-1/4	13-5/16
16	14-3/16	14-1/4
17	15-1/8	15-3/16
18	16-1/16	16-1/8
19	17	17-1/16
20	17-15/16	18
21	18-7/8	18-15/16
22	19-13/16	19-7/8
23	20-3/4	20-13/16
24	21-11/16	21-3/4
25	22-5/8	22-11/16
26	23-9/16	23-5/8
27	24-1/2	24-9/16
28	25-7/16	25-1/2
29	26-3/8	26-7/16
30	27-5/16	27-3/8
31	28-1/4	28-5/16
32	29-3/16	29-1/4
33	30-1/8	30-3/16
34	31-1/16	31-1/8
35	32	32-1/16
36	32-15/16	33
37	33-7/8	33-15/16
38	34-13/16	34-7/8
39	35-3/4	35-13/16

Bar Grating

13W4 & 13W2 Welded*



13W4*
13/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



13W2*
13/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **13P4/13P2**. Please reference page 49 for an example of this product.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	13W4 5.3# 13W2 5.9#	13P4 5.8# 13P2 6.7#	45"	.173	U	519	332	231	170	130	103							
					D	.099	.155	.223	.304	.397	.503							
					C	519	415	346	297	260	231							
					D	.079	.124	.179	.243	.318	.402							
3/4" x 3/16"	13W4 7.8# 13W2 8.4#	13P4 8.6# 13P2 10.1#	50"	.260	U	779	498	346	254	195	154	125						
					D	.099	.155	.223	.304	.397	.503	.621						
					C	779	623	519	445	389	346	312						
					D	.079	.124	.179	.243	.318	.402	.497						
1" x 1/8"	13W4 6.9# 13W2 7.5#	13P4 7.4# 13P2 8.3#	56"	.308	U	923	591	410	301	231	182	148	122	103				
					D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
					C	923	738	615	527	462	410	369	336	308				
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1" x 3/16"	13W4 10.2# 13W2 10.8#	13P4 11.0# 13P2 12.4#	62"	.462	U	1385	886	615	452	346	274	222	183	154				
					D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
					C	1385	1108	923	791	692	615	554	503	462				
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1-1/4" x 1/8"	13W4 8.5# 13W2 9.1#	13P4 9.3# 13P2 10.5#	67"	.481	U	1442	923	641	471	361	285	231	191	160	137	118		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	1442	1154	962	824	721	641	577	524	481	444	412		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	13W4 12.6# 13W2 13.2#	13P4 13.9# 13P2 15.8#	74"	.721	U	2163	1385	962	706	541	427	346	286	240	205	177		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	2163	1731	1442	1236	1082	962	865	787	721	666	618		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/2" x 1/8"	13W4 10.1# 13W2 10.7#	13P4 10.9# 13P2 12.1#	77"	.692	U	2077	1329	923	678	519	410	332	275	231	197	170	130	103
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	2077	1662	1385	1187	1038	923	831	755	692	639	593	519	462
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	13W4 15.0# 13W2 15.6#	13P4 16.3# 13P2 18.2#	85"	1.038	U	3115	1994	1385	1017	779	615	498	412	346	295	254	195	154
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	3115	2492	2077	1780	1558	1385	1246	1133	1038	959	890	779	692
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	13W4 17.4# 13W2 18.0#	13P4 18.7# 13P2 20.6#	95"	1.413	U	4240	2714	1885	1385	1060	838	678	561	471	401	346	265	209
					D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
					C	4240	3392	2827	2423	2120	1885	1696	1542	1413	1305	1212	1060	942
					D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	13W4 19.8# 13W2 20.4#	13P4 21.1# 13P2 23.0#	105"	1.846	U	5538	3545	2462	1808	1385	1094	886	732	615	524	452	346	274
					D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
					C	5538	4431	3692	3165	2769	2462	2215	2014	1846	1704	1582	1385	1231
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	13W4 22.2# 13W2 22.8#	13P4 23.5# 13P2 25.4#	115"	2.337	U	7010	4486	3115	2289	1752	1385	1122	927	779	664	572	438	346
					D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
					C	7010	5608	4673	4005	3505	3115	2804	2549	2337	2157	2003	1752	1558
					D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	13W4 24.6# 13W2 25.2#	13P4 25.9# 13P2 27.8#	124"	2.885	U	8654	5538	3846	2826	2163	1709	1385	1144	962	819	706	541	427
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
					C	8654	6923	5769	4945	4327	3846	3462	3147	2885	2663	2473	2163	1923
					D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 18,000 psi.
Install Cross Rods on Top.

% Open Area[1]

Bars	1/8"	3/16"
4"cc	78%	70%
2"cc	72%	64%

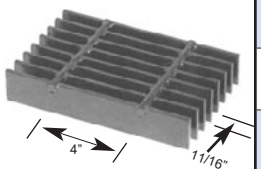
[1]Open Area % for reference only - %'s will vary with material & mfg. process.

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

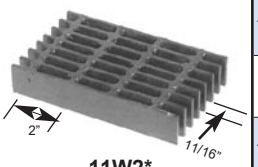
PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar
2	15/16	1
3	1-3/4	1-13/16
4	2-9/16	2-5/8
5	3-3/8	3-7/16
6	4-3/16	4-1/4
7	5	5-1/16
8	5-13/16	5-7/8
9	6-5/8	6-11/16
10	7-7/16	7-1/2
11	8-1/4	8-5/16
12	9-1/16	9-1/8
13	9-7/8	9-15/16
14	10-11/16	10-3/4
15	11-1/2	11-9/16
16	12-5/16	12-3/8
17	13-1/8	13-3/16
18	13-15/16	14
19	14-3/4	14-13/16
20	15-9/16	15-5/8
21	16-3/8	16-7/16
22	17-3/16	17-1/4
23	18	18-1/16
24	18-13/16	18-7/8
25	19-5/8	19-11/16
26	20-7/16	20-1/2
27	21-1/4	21-5/16
28	22-1/16	22-1/8
29	22-7/8	22-15/16
30	23-11/16	23-3/4
31	24-1/2	24-9/16
32	25-5/16	25-3/8
33	26-1/8	26-3/16
34	26-15/16	27
35	27-3/4	27-13/16
36	28-9/16	28-5/8
37	29-3/8	29-7/16
38	30-3/16	30-1/4
39	31	31-1/16
40	31-13/16	31-7/8
41	32-5/8	32-11/16
42	33-7/16	33-1/2
43	34-1/4	34-5/16
44	35-1/16	35-1/8
45	35-7/8	35-15/16

11W4 & 11W2 Welded*



11W4*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



11W2*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **11P4/11P2** and swaged - **11S4/11S2**. Please reference page 49 for examples of these products.

11/16" Bar Grating with 3/16" bearing bar width meets ADA requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	11W4 6.2# 11W2 6.8#	11P4 6.6# 11P2 7.6#	11S4 6.1# 11S2 6.7#	47"	.205	U	614	393	273	200	153	121	98						
						D	.099	.155	.223	.304	.397	.503	.621						
						C	614	491	409	351	307	273	245						
						D	.079	.124	.179	.243	.318	.402	.497						
3/4" x 3/16"	11W4 9.1# 11W2 9.7#	11P4 9.9# 11P2 11.3#	11S4 9.0# 11S2 9.6#	52"	.307	U	920	589	409	301	230	182	147						
						D	.099	.155	.223	.304	.397	.503	.621						
						C	920	736	614	526	460	409	368						
						D	.079	.124	.179	.243	.318	.402	.497						
1" x 1/8"	11W4 8.1# 11W2 8.6#	11P4 8.5# 11P2 9.4#	11S4 8.0# 11S2 8.6#	59"	.364	U	1091	698	485	356	273	215	175	144	121				
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
						C	1091	873	727	623	545	485	436	397	364				
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1" x 3/16"	11W4 11.9# 11W2 12.5#	11P4 12.7# 11P2 14.2#	11S4 11.7# 11S2 12.3#	65"	.545	U	1636	1047	727	534	409	323	262	216	182	155			
						D	.074	.116	.168	.228	.298	.377	.466	.563	.670	.787			
						C	1636	1309	1091	935	818	727	655	595	545	503			
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629			
1-1/4" x 1/8"	11W4 10.0# 11W2 10.5#	11P4 10.7# 11P2 12.0#	11S4 9.9# 11S2 10.5#	70"	.568	U	1705	1091	758	557	426	337	273	225	189	161	139		
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
						C	1705	1364	1136	974	852	758	682	620	568	524	487		
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	11W4 14.7# 11W2 15.3#	11P4 16.0# 11P2 17.9#	11S4 14.5# 11S2 15.1#	77"	.852	U	2557	1636	1136	835	639	505	409	338	284	242	209	160	
						D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730	.953	
						C	2557	2045	1705	1461	1278	1136	1023	930	852	787	731	639	
						D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584	.763	
1-1/2" x 1/8"	11W4 11.9# 11W2 12.4#	11P4 12.6# 11P2 13.9#	11S4 11.7# 11S2 12.3#	80"	.818	U	2455	1571	1091	801	614	485	393	325	273	232	200	153	121
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	2455	1964	1636	1403	1227	1091	982	893	818	755	701	614	545
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	11W4 17.5# 11W2 18.1#	11P4 18.8# 11P2 20.7#	11S4 17.3# 11S2 17.9#	88"	1.227	U	3682	2356	1636	1202	920	727	589	487	409	349	301	230	182
						D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
						C	3682	2945	2455	2104	1841	1636	1473	1339	1227	1133	1052	920	818
						D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	11W4 20.4# 11W2 21.0#	11P4 21.7# 11P2 23.6#	11S4 20.1# 11S2 20.7#	99"	1.670	U	5011	3207	2227	1636	1253	990	802	663	557	474	409	313	247
						D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
						C	5011	4009	3341	2864	2506	2227	2005	1822	1670	1542	1432	1253	1114
						D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	11W4 23.2# 11W2 23.8#	11P4 24.5# 11P2 26.4#	11S4 22.9# 11S2 23.5#	110"	2.182	U	6545	4189	2909	2137	1636	1293	1047	866	727	620	534	409	323
						D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
						C	6545	5236	4364	3740	3273	2909	2618	2380	2182	2014	1870	1636	1455
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	11W4 26.0# 11W2 26.6#	11P4 27.3# 11P2 29.2#	11S4 25.7# 11S2 26.3#	120"	2.761	U	8284	5302	3682	2705	2071	1636	1325	1095	920	784	676	518	409
						D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
						C	8284	6627	5523	4734	4142	3682	3314	3012	2761	2549	2367	2071	1841
						D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	11W4 28.8# 11W2 29.4#	11P4 30.1# 11P2 32.0#	11S4 28.4# 11S2 29.0#	130"	3.409	U	10227	6545	4545	3340	2557	2020	1636	1352	1136	968	835	639	505
						D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
						C	10227	8182	6818	5844	5114	4545	4091	3719	3409	3147	2922	2557	2273
						D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 18,000 psi. Install Cross Rods on Top.

% Open Area[1]

Bars	1/8"	3/16"
4"cc	75%	66%
2"cc	69%	60%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

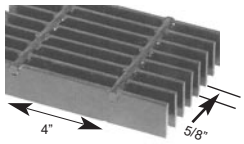
***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

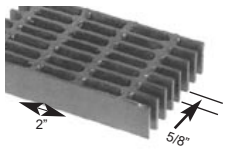
No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	13/16	7/8	28	18-11/16	18-3/4
3	1-1/2	1-9/16	29	19-3/8	19-7/16
4	2-3/16	2-1/4	30	20-1/16	20-1/8
5	2-7/8	2-15/16	31	20-3/4	20-13/16
6	3-9/16	3-5/8	32	21-7/16	21-1/2
7	4-1/4	4-5/16	33	22-1/8	22-3/16
8	4-15/16	5	34	22-13/16	22-7/8
9	5-5/8	5-11/16	35	23-1/2	23-9/16
10	6-5/16	6-3/8	36	24-3/16	24-1/4
11	7	7-1/16	37	24-7/8	24-15/16
12	7-11/16	7-3/4	38	25-9/16	25-5/8
13	8-3/8	8-7/16	39	26-1/4	26-5/16
14	9-1/16	9-1/8	40	26-15/16	27
15	9-3/4	9-13/16	41	27-5/8	27-11/16
16	10-7/16	10-1/2	42	28-5/16	28-3/8
17	11-1/8	11-3/16	43	29	29-1/16
18	11-13/16	11-7/8	44	29-11/16	29-3/4
19	12-1/2	12-9/16	45	30-3/8	30-7/16
20	13-3/16	13-1/4	46	31-1/16	31-1/8
21	13-7/8	13-15/16	47	31-3/4	31-13/16
22	14-9/16	14-5/8	48	32-7/16	32-1/2
23	15-1/4	15-5/16	49	33-1/8	33-3/16
24	15-15/16	16	50	33-13/16	33-7/8
25	16-5/8	16-11/16	51	34-1/2	34-9/16
26	17-5/16	17-3/8	52	35-3/16	35-1/4
27	18	18-1/16	53	35-7/8	35-15/16

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion. **Serrated Grating:** For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above tables.

10W4 & 10W2 Welded*



10W4*
5/8" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



10W2*
5/8" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **10P4/10P2**. Please reference page 49 for an example of this product.

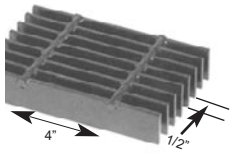
Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	10W4 6.8# 10W2 7.3#	10P4 7.2# 10P2 8.1#	48"	.225	U D	675 .099	432 .155	300 .223	220 .304	169 .397	133 .503	108 .621	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
					C D	675 .079	540 .124	450 .179	386 .243	338 .318	300 .402	270 .497						
3/4" x 3/16"	10W4 9.9# 10W2 10.5#	10P4 10.7# 10P2 12.2#	54"	.338	U D	1013 .099	648 .155	450 .223	331 .304	253 .397	200 .503	162 .621	134 .751	Data is theoretical and based on 18,000 psi. Install Cross Rods on Top.				
					C D	1013 .079	810 .124	675 .179	579 .243	506 .318	450 .402	405 .497	368 .601					
1" x 1/8"	10W4 8.8# 10W2 9.4#	10P4 9.2# 10P2 10.2#	60"	.400	U D	1200 .074	768 .116	533 .168	392 .228	300 .298	237 .377	192 .466	159 .563	133 .670	% Open Area[1] Bars 1/8" 3/16" 4"cc 73% 63% 2"cc 67% 57% [1]Open Area % for reference only - %'s will vary with material & mfg. process.				
					C D	1200 .060	960 .093	800 .134	686 .182	600 .238	533 .302	480 .372	436 .451	400 .536				
1" x 3/16"	10W4 13.0# 10W2 13.6#	10P4 13.8# 10P2 15.3#	67"	.600	U D	1800 .074	1152 .116	800 .168	588 .228	450 .298	356 .377	288 .466	238 .563	200 .670	170 .787			
					C D	1800 .060	1440 .093	1200 .134	1029 .182	900 .238	800 .302	720 .372	655 .451	600 .536	554 .629			
1-1/4" x 1/8"	10W4 10.9# 10W2 11.4#	10P4 11.6# 10P2 12.9#	71"	.625	U D	1875 .060	1200 .093	833 .134	612 .182	469 .238	370 .302	300 .372	248 .451	208 .536	178 .629	153 .730		
					C D	1875 .048	1500 .074	1250 .107	1071 .146	938 .191	833 .241	750 .298	682 .360	625 .429	577 .504	536 .584		
1-1/4" x 3/16"	10W4 16.1# 10W2 16.7#	10P4 17.4# 10P2 19.3#	79"	.938	U D	2813 .060	1800 .093	1250 .134	918 .182	703 .238	556 .302	450 .372	372 .451	313 .536	266 .629	230 .730	176 .953	
					C D	2813 .048	2250 .074	1875 .107	1607 .146	1406 .191	1250 .241	1125 .298	1023 .360	938 .429	865 .504	804 .584	703 .763	
1-1/2" x 1/8"	10W4 13.0# 10W2 13.5#	10P4 13.7# 10P2 15.0#	82"	.900	U D	2700 .050	1728 .078	1200 .112	882 .152	675 .199	533 .251	432 .310	357 .376	300 .447	256 .524	220 .608	169 .794	133 1.006
					C D	2700 .040	2160 .062	1800 .089	1543 .122	1350 .159	1200 .201	1080 .248	982 .300	900 .358	831 .420	771 .487	675 .636	600 .804
1-1/2" x 3/16"	10W4 19.2# 10W2 19.8#	10P4 20.5# 10P2 22.4#	91"	1.350	U D	4050 .050	2592 .078	1800 .112	1322 .152	1013 .199	800 .251	648 .310	536 .376	450 .447	383 .524	331 .608	253 .794	200 1.006
					C D	4050 .040	3240 .062	2700 .089	2314 .122	2025 .159	1800 .201	1620 .248	1473 .300	1350 .358	1246 .420	1157 .487	1013 .636	900 .804
1-3/4" x 3/16"	10W4 22.3# 10W2 22.9#	10P4 23.6# 10P2 25.5#	102"	1.838	U D	5513 .043	3528 .067	2450 .096	1800 .130	1378 .170	1089 .215	882 .266	729 .322	613 .383	522 .450	450 .521	345 .681	272 .862
					C D	5513 .034	4410 .053	3675 .077	3150 .104	2756 .136	2450 .172	2205 .213	2005 .257	1838 .306	1696 .360	1575 .417	1378 .545	1225 .689
2" x 3/16"	10W4 25.4# 10W2 26.0#	10P4 26.7# 10P2 28.6#	112"	2.400	U D	7200 .037	4608 .058	3200 .084	2351 .114	1800 .149	1422 .189	1152 .233	952 .282	800 .335	682 .393	588 .456	450 .596	356 .754
					C D	7200 .030	5760 .047	4800 .067	4114 .091	3600 .119	3200 .151	2880 .186	2618 .225	2400 .268	2215 .315	2057 .365	1800 .477	1600 .603
2-1/4" x 3/16"	10W4 28.5# 10W2 29.1#	10P4 29.8# 10P2 31.7#	123"	3.038	U D	9113 .033	5832 .052	4050 .074	2976 .101	2278 .132	1800 .168	1458 .207	1205 .250	1013 .298	863 .350	744 .406	570 .530	450 .670
					C D	9113 .026	7290 .041	6075 .060	5207 .081	4556 .106	4050 .134	3645 .166	3314 .200	3038 .238	2804 .280	2604 .324	2278 .424	2025 .536
2-1/2" x 3/16"	10W4 31.6# 10W2 32.2#	10P4 32.9# 10P2 34.8#	133"	3.750	U D	11250 .030	7200 .047	5000 .067	3673 .091	2813 .119	2222 .151	1800 .186	1488 .225	1250 .268	1065 .315	918 .365	703 .477	556 .603
					C D	11250 .024	9000 .037	7500 .054	6429 .073	5625 .095	5000 .121	4500 .149	4091 .180	3750 .215	3462 .252	3214 .292	2813 .381	2500 .483

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

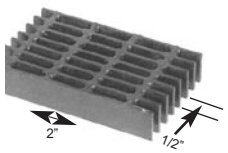
PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	3/4	13/16	31	18-7/8	18-15/16
3	1-3/8	1-7/16	32	19-1/2	19-9/16
4	2	2-1/16	33	20-1/8	20-3/16
5	2-5/8	2-11/16	34	20-3/4	20-13/16
6	3-1/4	3-5/16	35	21-3/8	21-7/16
7	3-7/8	3-15/16	36	22	22-1/16
8	4-1/2	4-9/16	37	22-5/8	22-11/16
9	5-1/8	5-3/16	38	23-1/4	23-5/16
10	5-3/4	5-13/16	39	23-7/8	23-15/16
11	6-3/8	6-7/16	40	24-1/2	24-9/16
12	7	7-1/16	41	25-1/8	25-3/16
13	7-5/8	7-11/16	42	25-3/4	25-13/16
14	8-1/4	8-5/16	43	26-3/8	26-7/16
15	8-7/8	8-15/16	44	27	27-1/16
16	9-1/2	9-9/16	45	27-5/8	27-11/16
17	10-1/8	10-3/16	46	28-1/4	28-5/16
18	10-3/4	10-13/16	47	28-7/8	28-15/16
19	11-3/8	11-7/16	48	29-1/2	29-9/16
20	12	12-1/16	49	30-1/8	30-3/16
21	12-5/8	12-11/16	50	30-3/4	30-13/16
22	13-1/4	13-5/16	51	31-3/8	31-7/16
23	13-7/8	13-15/16	52	32	32-1/16
24	14-1/2	14-9/16	53	32-5/8	32-11/16
25	15-1/8	15-3/16	54	33-1/4	33-5/16
26	15-3/4	15-13/16	55	33-7/8	33-15/16
27	16-3/8	16-7/16	56	34-1/2	34-9/16
28	17	17-1/16	57	35-1/8	35-3/16
29	17-5/8	17-11/16	58	35-3/4	35-13/16
30	18-1/4	18-5/16			

8W4 & 8W2 Welded*



8W4*
1/2" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



8W2*
1/2" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **8P4/8P2**. Please reference page 49 for an example of this product.

5/8" Bar Grating with 3/16" bearing bar width and 1/2" with 1/8" and 3/16" bearing bar widths meets ADA requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	8W4 8.3# 8W2 8.8#	8P4 8.7# 8P2 9.6#	51"	.281	U D	844 .099	540 .155	375 .223	276 .304	211 .397	167 .503	135 .621	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
					C D	844 .079	675 .124	563 .179	482 .243	422 .318	375 .402	338 .497						
3/4" x 3/16"	8W4 12.2# 8W2 12.8#	8P4 13.0# 8P2 14.4#	57"	.422	U D	1266 .099	810 .155	563 .223	413 .304	316 .397	250 .503	203 .621	167 .751	Data is theoretical and based on 18,000 psi. Install Cross Rods on Top.				
					C D	1266 .079	1013 .124	844 .179	723 .243	633 .318	563 .402	506 .497	460 .601					
1" x 1/8"	8W4 10.9# 8W2 11.4#	8P4 11.3# 8P2 12.2#	64"	.500	U D	1500 .074	960 .116	667 .168	490 .228	375 .298	296 .377	240 .466	198 .563	167 .670	% Open Area[1] Bars 1/8" 3/16" 4"cc 68% 56% 2"cc 62% 50% [1]Open Area % for reference only - %'s will vary with material & mfg. process.				
					C D	1500 .060	1200 .093	1000 .134	857 .182	750 .238	667 .302	600 .372	545 .451	500 .536				
1" x 3/16"	8W4 16.0# 8W2 16.7#	8P4 16.9# 8P2 18.3#	71"	.750	U D	2250 .074	1440 .116	1000 .168	735 .228	563 .298	444 .377	360 .466	298 .563	250 .670	213 .787			
					C D	2250 .060	1800 .093	1500 .134	1286 .182	1125 .238	1000 .302	900 .372	818 .451	750 .536	692 .629			
1-1/4" x 1/8"	8W4 13.4# 8W2 14.0#	8P4 14.2# 8P2 15.4#	75"	.781	U D	2344 .060	1500 .093	1042 .134	765 .182	586 .238	463 .302	375 .372	310 .451	260 .536	222 .629	191 .730		
					C D	2344 .048	1875 .074	1563 .107	1339 .146	1172 .191	1042 .241	938 .298	852 .360	781 .429	721 .504	670 .584		
1-1/4" x 3/16"	8W4 19.9# 8W2 20.5#	8P4 21.2# 8P2 23.1#	84"	1.172	U D	3516 .060	2250 .093	1563 .134	1148 .182	879 .238	694 .302	563 .372	465 .451	391 .536	333 .629	287 .730	220 .953	174 1.207
					C D	3516 .048	2813 .074	2344 .107	2009 .146	1758 .191	1563 .241	1406 .298	1278 .360	1172 .429	1082 .504	1004 .584	879 .763	781 .965
1-1/2" x 1/8"	8W4 16.0# 8W2 16.6#	8P4 16.7# 8P2 18.0#	87"	1.125	U D	3375 .050	2160 .078	1500 .112	1102 .152	844 .199	667 .251	540 .310	446 .376	375 .447	320 .524	276 .608	211 .794	167 1.006
					C D	3375 .040	2700 .062	2250 .089	1929 .122	1688 .159	1500 .201	1350 .248	1227 .300	1125 .358	1038 .420	964 .487	844 .636	750 .804
1-1/2" x 3/16"	8W4 23.8# 8W2 24.4#	8P4 25.1# 8P2 27.0#	96"	1.688	U D	5063 .050	3240 .078	2250 .112	1653 .152	1266 .199	1000 .251	810 .310	669 .376	563 .447	479 .524	413 .608	316 .794	250 1.006
					C D	5063 .040	4050 .062	3375 .089	2893 .122	2531 .159	2250 .201	2025 .248	1841 .300	1688 .358	1558 .420	1446 .487	1266 .636	1125 .804
1-3/4" x 3/16"	8W4 27.6# 8W2 28.2#	8P4 28.9# 8P2 30.8#	108"	2.297	U D	6891 .043	4410 .067	3063 .096	2250 .130	1723 .170	1361 .215	1103 .266	911 .322	766 .383	652 .450	563 .521	431 .681	340 .862
					C D	6891 .034	5513 .053	4594 .077	3938 .104	3445 .136	3063 .172	2756 .213	2506 .257	2297 .306	2120 .360	1969 .417	1723 .545	1531 .689
2" x 3/16"	8W4 31.5# 8W2 32.1#	8P4 32.8# 8P2 34.7#	119"	3.000	U D	9000 .037	5760 .058	4000 .084	2939 .114	2250 .149	1778 .189	1440 .233	1190 .282	1000 .335	852 .393	735 .456	563 .596	444 .754
					C D	9000 .030	7200 .047	6000 .067	5143 .091	4500 .119	4000 .151	3600 .186	3273 .225	3000 .268	2769 .315	2571 .365	2250 .477	2000 .603
2-1/4" x 3/16"	8W4 35.3# 8W2 35.9#	8P4 36.6# 8P2 38.5#	130"	3.797	U D	11391 .033	7290 .052	5063 .074	3719 .101	2848 .132	2250 .168	1823 .207	1506 .250	1266 .298	1078 .350	930 .406	712 .530	563 .670
					C D	11391 .026	9113 .041	7594 .060	6509 .081	5695 .106	5063 .134	4556 .166	4142 .200	3797 .238	3505 .280	3254 .324	2848 .424	2531 .536
2-1/2" x 3/16"	8W4 39.2# 8W2 39.8#	8P4 40.5# 8P2 42.4#	141"	4.688	U D	14063 .030	9000 .047	6250 .067	4592 .091	3516 .119	2778 .151	2250 .186	1860 .225	1563 .268	1331 .315	1148 .365	879 .477	694 .603
					C D	14063 .024	11250 .037	9375 .054	8036 .073	7031 .095	6250 .121	5625 .149	5114 .180	4688 .215	4327 .252	4018 .292	3516 .381	3125 .483

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

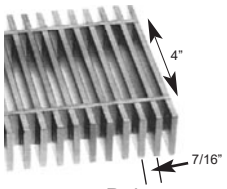
PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	5/8	11/16	38	18-5/8	18-11/16
3	1-1/8	1-3/16	39	19-1/8	19-3/16
4	1-5/8	1-11/16	40	19-5/8	19-11/16
5	2-1/8	2-3/16	41	20-1/8	20-3/16
6	2-5/8	2-11/16	42	20-5/8	20-11/16
7	3-1/8	3-3/16	43	21-1/8	21-3/16
8	3-5/8	3-11/16	44	21-5/8	21-11/16
9	4-1/8	4-3/16	45	22-1/8	22-3/16
10	4-5/8	4-11/16	46	22-5/8	22-11/16
11	5-1/8	5-3/16	47	23-1/8	23-3/16
12	5-5/8	5-11/16	48	23-5/8	23-11/16
13	6-1/8	6-3/16	49	24-1/8	24-3/16
14	6-5/8	6-11/16	50	24-5/8	24-11/16
15	7-1/8	7-3/16	51	25-1/8	25-3/16
16	7-5/8	7-11/16	52	25-5/8	25-11/16
17	8-1/8	8-3/16	53	26-1/8	26-3/16
18	8-5/8	8-11/16	54	26-5/8	26-11/16
19	9-1/8	9-3/16	55	27-1/8	27-3/16
20	9-5/8	9-11/16	56	27-5/8	27-11/16
21	10-1/8	10-3/16	57	28-1/8	28-3/16
22	10-5/8	10-11/16	58	28-5/8	28-11/16
23	11-1/8	11-3/16	59	29-1/8	29-3/16
24	11-5/8	11-11/16	60	29-5/8	29-11/16
25	12-1/8	12-3/16	61	30-1/8	30-3/16
26	12-5/8	12-11/16	62	30-5/8	30-11/16
27	13-1/8	13-3/16	63	31-1/8	31-3/16
28	13-5/8	13-11/16	64	31-5/8	31-11/16
29	14-1/8	14-3/16	65	32-1/8	32-3/16
30	14-5/8	14-11/16	66	32-5/8	32-11/16
31	15-1/8	15-3/16	67	33-1/8	33-3/16
32	15-5/8	15-11/16	68	33-5/8	33-11/16
33	16-1/8	16-3/16	69	34-1/8	34-3/16
34	16-5/8	16-11/16	70	34-5/8	34-11/16
35	17-1/8	17-3/16	71	35-1/8	35-3/16
36	17-5/8	17-11/16	72	35-5/8	35-11/16
37	18-1/8	18-3/16	73	36-1/8	36-3/16

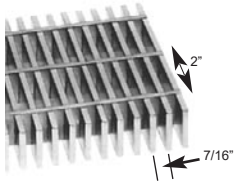
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion. **Serrated Grating:** For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above tables.

Bar Grating

7P4 & 7P2
Press-Locked*



7P4*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



7P2*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in swaged - **7S4/7S2**. Please reference page 49 for an example of this product.

7/16" Bar Grating meets ADA requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	7P4 9.8# 7P2 10.7#	7S4 9.4# 7S2 10.0#	53"	.321	U	964	617	429	315	241	190	154						
					D	.099	.155	.223	.304	.397	.503	.621						
					C	964	771	643	551	482	429	386						
					D	.079	.124	.179	.243	.318	.402	.497						
3/4" x 3/16"	7P4 14.6# 7P2 16.1#	7S4 13.9# 7S2 14.5#	59"	.482	U	1446	926	643	472	362	286	231	191					
					D	.099	.155	.223	.304	.397	.503	.621	.751					
					C	1446	1157	964	827	723	643	579	526					
					D	.079	.124	.179	.243	.318	.402	.497	.601					
1" x 1/8"	7P4 12.7# 7P2 13.7#	7S4 12.1# 7S2 12.7#	66"	.571	U	1714	1097	762	560	429	339	274	227	190	162			
					D	.074	.116	.168	.228	.298	.377	.466	.563	.670	.787			
					C	1714	1371	1143	980	857	762	686	623	571	527			
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629			
1" x 3/16"	7P4 19.0# 7P2 20.5#	7S4 18.1# 7S2 18.7#	73"	.857	U	2571	1646	1143	840	643	508	411	340	286	243	210		
					D	.074	.116	.168	.228	.298	.377	.466	.563	.670	.787	.912		
					C	2571	2057	1714	1469	1286	1143	1029	935	857	791	735		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
1-1/4" x 1/8"	7P4 16.0# 7P2 17.2#	7S4 15.3# 7S2 15.9#	78"	.893	U	2679	1714	1190	875	670	529	429	354	298	254	219	167	
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730	.953	
					C	2679	2143	1786	1531	1339	1190	1071	974	893	824	765	670	
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584	.763	
1-1/4" x 3/16"	7P4 23.9# 7P2 25.8#	7S4 22.8# 7S2 23.4#	86"	1.339	U	4018	2571	1786	1312	1004	794	643	531	446	380	328	251	198
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730	.953	1.207
					C	4018	3214	2679	2296	2009	1786	1607	1461	1339	1236	1148	1004	893
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584	.763	.965
1-1/2" x 1/8"	7P4 18.9# 7P2 20.2#	7S4 18.1# 7S2 18.7#	90"	1.286	U	3857	2469	1714	1259	964	762	617	510	429	365	315	241	190
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187	1102	964	857
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	7P4 28.3# 7P2 30.2#	7S4 27.0# 7S2 27.6#	99"	1.929	U	5786	3703	2571	1889	1446	1143	926	765	643	548	472	362	286
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	5786	4629	3857	3306	2893	2571	2314	2104	1929	1780	1653	1446	1286
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	7P4 32.7# 7P2 34.6#	7S4 31.2# 7S2 31.8#	111"	2.625	U	7875	5040	3500	2571	1969	1556	1260	1041	875	746	643	492	389
					D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
					C	7875	6300	5250	4500	3938	3500	3150	2864	2625	2423	2250	1969	1750
					D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	7P4 37.1# 7P2 39.0#	7S4 35.4# 7S2 36.0#	123"	3.429	U	10286	6583	4571	3359	2571	2032	1646	1360	1143	974	840	643	508
					D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
					C	10286	8229	6857	5878	5143	4571	4114	3740	3429	3165	2939	2571	2286
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	7P4 41.5# 7P2 43.4#	7S4 39.6# 7S2 40.2#	135"	4.339	U	13018	8331	5786	4251	3254	2571	2083	1721	1446	1232	1063	814	643
					D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
					C	13018	10414	8679	7439	6509	5786	5207	4734	4339	4005	3719	3254	2893
					D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	7P4 45.9# 7P2 47.8#	7S4 43.8# 7S2 44.4#	146"	5.357	U	16071	10286	7143	5248	4018	3175	2571	2125	1786	1522	1312	1004	794
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
					C	16071	12857	10714	9184	8036	7143	6429	5844	5357	4945	4592	4018	3571
					D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 18,000 psi.
Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	69%	56%
2"cc	66%	53%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

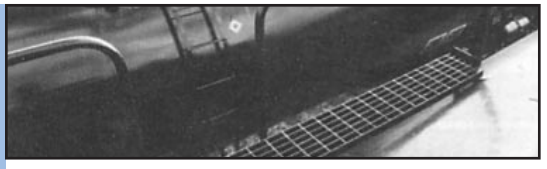
***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

PANEL WIDTH CHART
(in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	9/16	5/8	43	18-1/2	18-9/16
3	1	1-1/16	44	18-15/16	19
4	1-7/16	1-1/2	45	19-3/8	19-7/16
5	1-7/8	1-15/16	46	19-13/16	19-7/8
6	2-5/16	2-3/8	47	20-1/4	20-5/16
7	2-3/4	2-13/16	48	20-11/16	20-3/4
8	3-3/16	3-1/4	49	21-1/8	21-3/16
9	3-5/8	3-11/16	50	21-9/16	21-5/8
10	4-1/16	4-1/8	51	22	22-1/16
11	4-1/2	4-9/16	52	22-7/16	22-1/2
12	4-15/16	5	53	22-7/8	22-15/16
13	5-3/8	5-7/16	54	23-5/16	23-3/8
14	5-13/16	5-7/8	55	23-3/4	23-13/16
15	6-1/4	6-5/16	56	24-3/16	24-1/4
16	6-11/16	6-3/4	57	24-5/8	24-11/16
17	7-1/8	7-3/16	58	25-1/16	25-1/8
18	7-9/16	7-5/8	59	25-1/2	25-9/16
19	8	8-1/16	60	25-15/16	26
20	8-7/16	8-1/2	61	26-3/8	26-7/16
21	8-7/8	8-15/16	62	26-13/16	26-7/8
22	9-5/16	9-3/8	63	27-1/4	27-5/16
23	9-3/4	9-13/16	64	27-11/16	27-3/4
24	10-3/16	10-1/4	65	28-1/8	28-3/16
25	10-5/8	10-11/16	66	28-9/16	28-5/8
26	11-1/16	11-1/8	67	29	29-1/16
27	11-1/2	11-9/16	68	29-7/16	29-1/2
28	11-15/16	12	69	29-7/8	29-15/16
29	12-3/8	12-7/16	70	30-5/16	30-3/8
30	12-13/16	12-7/8	71	30-3/4	30-13/16
31	13-1/4	13-5/16	72	31-3/16	31-1/4
32	13-11/16	13-3/4	73	31-5/8	31-11/16
33	14-1/8	14-3/16	74	32-1/16	32-1/8
34	14-9/16	14-5/8	75	32-1/2	32-9/16
35	15	15-1/16	76	32-15/16	33
36	15-7/16	15-1/2	77	33-3/8	33-7/16
37	15-7/8	15-15/16	78	33-13/16	33-7/8
38	16-5/16	16-3/8	79	34-1/4	34-5/16
39	16-3/4	16-13/16	80	34-11/16	34-3/4
40	17-3/16	17-1/4	81	35-1/8	35-3/16
41	17-5/8	17-11/16	82	35-9/16	35-5/8
42	18-1/16	18-1/8	83	36	36-1/16

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion. **Serrated Grating:** For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

RAILROAD GRATING - AAR Approved



Association of American Railroads (AAR) Approved Bar Grating is available meeting AAR Specifications, Rule 53 in the Field Manual of the AAR Interchange Rules.

This bar grating has been designed and engineered to meet AAR specifications for width, clear openings, deflection under load, and non-skid attributes. It is ideal for AAR approved safety walkway applications such as brake steps, crossover and dome platforms, and running boards.

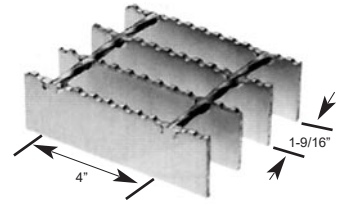
This product meets the requirements for AAR Steel:
Group Number 1 (unsupported length - 4 feet)
Group Number 2 (unsupported length - 7 feet)
Group Number 3 (unsupported length - 10 feet)

AAR Group Number	Bar Size	Symbol / Apprx. Wgt. Lbs/Sq. Ft.	Unsupported Length
1	1" x 1/8"	25W4 3.85#	4 feet
1	1" x 3/16"	25W4 5.67#	4 feet
1	1" x 3/16"	27W4 5.47#	4 feet
2	1-1/2" x 3/16"	27W4 7.88#	7 feet
3	2" x 3/16"	27W4 10.29#	10 feet

PANEL WIDTH CHART
(in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

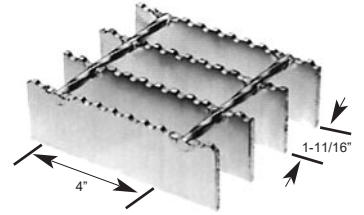
No. of Bars	25W4 1/8 Bar	25W4 3/16 Bar	27W4 3/16 Bar
6	7-15/16	8	8-5/8
7	9-1/2	9-9/16	10-5/16
8	11-1/6	11-1/8	12
9	12-5/8	12-11/16	13-11/16
10	14-3/16	14-1/4	15-3/8
11	15-3/4	15-13/16	17-1/16
12	17-5/16	17-3/8	18-3/4
13	18-7/8	18-15/16	20-7/16
14	20-7/16	20-1/2	22-1/8
15	22	22-1/16	23-13/16
16	23-9/16	23-5/8	25-1/2
17	25-1/8	25-3/16	27-3/16
18	26-11/16	26-3/4	28-7/8
19	28-1/4	28-5/16	30-9/16
20	29-13/16	29-7/8	32-1/4
21	31-3/8	31-7/16	33-15/16
22	32-15/16	33	35-5/8
23	34-1/2	34-9/16	37-5/16
24	36-1/16	36-1/8	39

25W4 - Welded



25W4
1-9/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

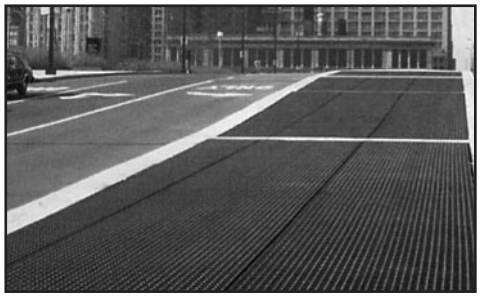
27W4 - Welded



27W4
1-11/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

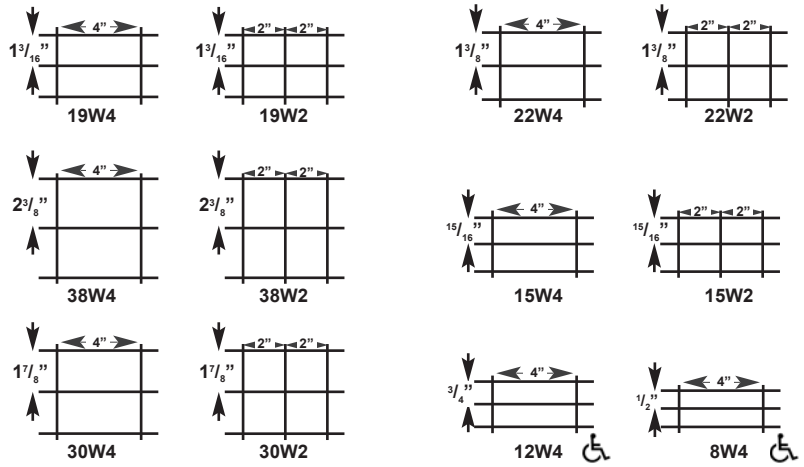
CARBON - Heavy Duty is primarily used where heavy vehicular traffic is utilized. This product is resistance-welded for durability, strength, and safety using an automated process. This process uses high temperatures and high pressure to form a permanent bond between the bearing bars and cross rods.

Heavy Duty Grating is particularly applicable in applications such as highways, bridges, and industrial plants utilizing fork lift trucks. It is recommended that the grating be load banded when rolling wheel loads are used to provide added lateral strength. Most common bearing bar and cross rod spacing is 19-4 (1-3/16" and 4", respectively).

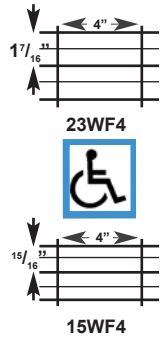


Serrated and Slip Resistant Surfaces Available - See page 88

W=Welded



W=Welded with Filler Bars



Please see page 65 for photographs of Heavy Duty Welded with Filler Bars.

Engineering "Take Offs"

At Brown-Campbell, our engineers are capable of doing "take offs" from architectural plans and preparing detailed grating drawings. We will manufacture, cut, weld, paint, galvanize and fabricate grating to any requirement you present us with.

Supplemental Bottom Cross Rods

Welding of supplemental cross rods to the bottom of the grating is recommended to provide added lateral strength and longer life when:

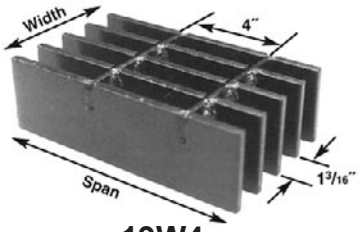
- Traffic areas run perpendicular to span direction
- Grating is difficult to handle
- Extremely heavy rolling wheel loads are anticipated

Maximum Traffic Conditions			Wheel Load (lbs.) (1/2 of Axle Load + 30% Impact)	Loading	Load Distribution** a	Load Distribution** b
Truck Traffic 32,000 Lb. Axle Load Dual Wheels			20,800	H-20	20"	20" + (2s)
Truck Traffic 24,000 Lb. Axle Load Dual Wheels			15,600	H-15	15"	15" + (2s)
10,000 Lb. Capacity Lift Truck 14,400 Lb. Vehicle 24,400 Lb. Total Load 85% Drive Axle Load	(Rubber Tires)		13,480	5 Ton	11"	11" + (2s)
6,000 Lb. Capacity Lift Truck 9,800 Lb. Vehicle 15,800 Lb. Total Load 85% Drive Axle Load	(Rubber Tires)		8,730	3 Ton	7"	7" + (2s)
2,000 Lb. Capacity Lift Truck 4,200 Lb. Vehicle 6,200 Lb. Total Load 85% Drive Axle Load	(Rubber Tires)		3,425	1 Ton	4"	4" + (2s)

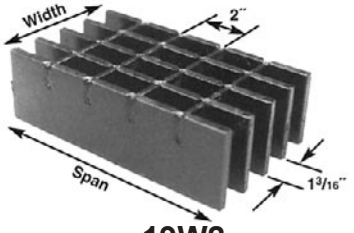
NOTE:
1. For continuous spans, use continuity factor = .80
**2. This distribution results in larger grating sizes for lighter trucks on shorter spans. If H-20 loading is specified the worst condition should be used as the design criteria.
3. The fork lift wheel loads and load distribution patterns depicted above, generally, and only partially, represent the broad range of rubber-tired lift trucks available. For those applications falling outside of these examples, please contact Brown-Campbell.
4. Wheeled vehicles with urethane tires should NEVER be used in conjunction with open grid bar grating.

All grating products are manufactured to NAAMM tolerances and specifications.

19W4 & 19W2
Heavy Duty Welded



19W4
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



19W2
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Data is theoretical and based on 20,000 psi.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span												
						1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
1" x 1/4"	19W4	9.4#	19W2	10.0#	.421	2807	1871	1404	1123	936	802	702	624	561	510	468	401	351
1" x 5/16"	19W4	12.5#	19W2	14.0#	.526	3506	2336	1754	1404	1170	1003	877	780	702	638	585	501	439
1" x 3/8"	19W4	14.7#	19W2	16.2#	.632	4213	2809	2105	1684	1404	1203	1053	936	842	766	702	602	526
1-1/4" x 1/4"	19W4	11.6#	19W2	12.2#	.658	4387	2924	2193	1754	1462	1253	1096	975	877	797	731	627	548
1-1/4" x 5/16"	19W4	15.2#	19W2	16.8#	.822	5479	3652	2741	2193	1827	1566	1371	1218	1096	997	914	783	685
1-1/4" x 3/8"	19W4	18.0#	19W2	19.5#	.987	6580	4387	3289	2632	2193	1880	1645	1462	1316	1196	1096	940	822
1-1/2" x 1/4"	19W4	13.8#	19W2	14.3#	.947	6313	4209	3158	2526	2105	1805	1579	1404	1263	1148	1053	902	789
1-1/2" x 5/16"	19W4	18.0#	19W2	19.5#	1.184	7893	5262	3947	3158	2632	2256	1974	1754	1579	1435	1316	1128	987
1-1/2" x 3/8"	19W4	21.3#	19W2	22.8#	1.421	9473	6316	4737	3789	3158	2707	2368	2105	1895	1722	1579	1353	1184
1-3/4" x 1/4"	19W4	16.0#	19W2	16.6#	1.289	8593	5729	4298	3439	2865	2456	2149	1910	1719	1563	1433	1228	1075
1-3/4" x 5/16"	19W4	20.7#	19W2	22.3#	1.612	10741	7161	5373	4298	3582	3070	2686	2388	2149	1954	1791	1535	1343
1-3/4" x 3/8"	19W4	24.6#	19W2	26.1#	1.934	12893	8596	6447	5158	4298	3684	3224	2865	2579	2344	2149	1842	1612
2" x 1/4"	19W4	18.2#	19W2	18.8#	1.684	11227	7484	5614	4491	3743	3208	2807	2495	2246	2041	1871	1604	1404
2" x 5/16"	19W4	23.5#	19W2	25.0#	2.105	14033	9356	7018	5614	4678	4010	3509	3119	2807	2552	2339	2005	1754
2" x 3/8"	19W4	27.9#	19W2	29.4#	2.526	16840	11227	8421	6737	5614	4812	4211	3743	3368	3062	2807	2406	2105
2-1/4" x 1/4"	19W4	20.4#	19W2	21.1#	2.132	14213	9476	7105	5684	4737	4060	3553	3158	2842	2584	2368	2030	1776
2-1/4" x 5/16"	19W4	26.2#	19W2	27.8#	2.664	17766	11845	8882	7105	5921	5075	4441	3947	3553	3230	2961	2538	2220
2-1/4" x 3/8"	19W4	31.1#	19W2	32.6#	3.197	21313	14209	10658	8526	7105	6090	5329	4737	4263	3876	3553	3045	2664
2-1/2" x 1/4"	19W4	22.6#	19W2	23.3#	2.632	17547	11698	8772	7018	5848	5013	4386	3899	3509	3190	2924	2506	2193
2-1/2" x 5/16"	19W4	29.0#	19W2	30.5#	3.289	21927	14618	10965	8772	7310	6266	5482	4873	4386	3987	3655	3133	2741
2-1/2" x 3/8"	19W4	34.4#	19W2	25.9#	3.947	26313	17542	13158	10526	8772	7519	6579	5848	5263	4785	4386	3759	3289
2-3/4" x 1/4"	19W4	25.7#	19W2	27.2#	3.184	21228	14148	10614	8491	7076	6065	5307	4717	4246	3860	3538	3033	2654
2-3/4" x 5/16"	19W4	32.3#	19W2	34.3#	3.980	26536	17690	13268	10614	8845	7581	6634	5897	5307	4825	4423	3791	3317
2-3/4" x 3/8"	19W4	38.3#	19W2	40.3#	4.776	31842	21226	15921	12737	10614	9098	7961	7076	6368	5789	5307	4549	3980
3" x 1/4"	19W4	27.9#	19W2	29.4#	3.789	25260	16840	12632	10105	8421	7218	6316	5614	5053	4593	4211	3609	3158
3" x 5/16"	19W4	35.0#	19W2	37.1#	4.737	31580	21053	15789	12632	10526	9023	7895	7018	6316	5742	5263	4511	3947
3" x 3/8"	19W4	41.6#	19W2	43.6#	5.684	37893	25262	18947	15158	12632	10827	9474	8421	7579	6890	6316	5414	4737
3-1/4" x 1/4"	19W4	30.1#	19W2	31.6#	4.447	29650	19762	14825	11860	9883	8471	7412	6589	5930	5391	4942	4236	3706
3-1/4" x 5/16"	19W4	37.8#	19W2	39.8#	5.559	37062	24702	18531	14825	12354	10589	9265	8236	7412	6738	6177	5294	4633
3-1/4" x 3/8"	19W4	44.9#	19W2	46.9#	6.671	44474	29642	22237	17789	14825	12707	11118	9883	8895	8086	7412	6353	5559
3-1/2" x 1/4"	19W4	32.4#	19W2	33.9#	5.158	34387	22924	17193	13754	11462	9825	8596	7641	6877	6252	5731	4912	4298
3-1/2" x 5/16"	19W4	40.5#	19W2	42.6#	6.447	42983	28655	21491	17193	14327	12281	10746	9552	8596	7815	7164	6140	5373
3-1/2" x 3/8"	19W4	48.2#	19W2	50.2#	7.737	51580	34387	25789	20632	17193	14737	12895	11462	10316	9378	8596	7368	6447
4" x 1/4"	19W4	36.8#	19W2	38.3#	6.737	44912	29942	22456	17965	14971	12832	11228	9981	8982	8166	7485	6416	5614
4" x 5/16"	19W4	46.0#	19W2	48.1#	8.421	56140	37427	28070	22456	18713	16040	14035	12476	11228	10207	9357	8020	7018
4" x 3/8"	19W4	54.7#	19W2	56.8#	10.105	67368	44911	33684	26947	22456	19248	16842	14971	13474	12249	11228	9624	8421
4-1/2" x 1/4"	19W4	41.2#	19W2	42.7#	8.526	56842	37893	28421	22737	18947	16241	14211	12632	11368	10335	9474	8120	7105
4-1/2" x 5/16"	19W4	51.5#	19W2	53.6#	10.658	71052	47356	35526	28421	23684	20301	17763	15789	14211	12919	11842	10150	8882
4-1/2" x 3/8"	19W4	61.3#	19W2	63.4#	12.789	85264	56840	42632	34105	28421	24361	21316	18947	17053	15502	14211	12180	10658
5" x 1/4"	19W4	45.6#	19W2	47.1#	10.526	70176	46772	35088	28070	23392	20050	17544	15595	14035	12759	11696	10025	8772
5" x 5/16"	19W4	57.0#	19W2	59.1#	13.158	87720	58465	43860	35088	29240	25063	21930	19493	17544	15949	14620	12531	10965
5" x 3/8"	19W4	67.9#	19W2	70.0#	15.789	105263	70158	52632	42105	35088	30075	26316	23392	21053	19139	17544	15038	13158
6" x 1/4"	19W4	54.4#	19W2	55.9#	15.158	101051	67352	50526	40421	33684	28872	25263	22456	20211	18373	16842	14436	12632
6" x 5/16"	19W4	68.0#	19W2	70.1#	18.947	126315	84190	63158	50526	42105	36090	31579	28070	25263	22967	21053	18045	15789
6" x 3/8"	19W4	81.1#	19W2	83.1#	22.737	151578	101027	75789	60632	50526	43308	37895	33684	30316	27560	25263	21654	18947

* Based on 10.105 bars/ft of grating width. Bearing bars 1-3/16" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

19W4 & 19W2 Heavy Duty Welded

% Open Area				
BB Size	CB Centers	BB Thickness		
		1/4"	5/16"	3/8"
Thru 2-1/2"	4"cc	72%	67%	62%
	2"cc	65%	61%	56%
3" - 6"	4"cc	74%	69%	64%
	2"cc	70%	65%	60%

Bar Size	Sec. Mod. Per Ft. Of Width**	Moment of Inertia**	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
1" x 1/4"	.421	.211	3/8" Dia.	7"	6"	7"	9"
1" x 3/8"	.632	.316	3/8" Dia.	9"	8"	9"	11"
1-1/4" x 1/4"	.658	.411	3/8" Dia.	10"	8"	9"	12"
1-1/4" x 3/8"	.987	.617	3/8" Dia.	14"	10"	12"	14"
1-1/2" x 1/4"	.947	.711	3/8" Dia.	13"	10"	11"	14"
1-1/2" x 5/16"	1.184	.888	3/8" Dia.	16"	11"	13"	16"
1-1/2" x 3/8"	1.421	1.066	3/8" Dia.	19"	13"	14"	18"
1-3/4" x 1/4"	1.289	1.128	3/8" Dia.	17"	12"	14"	17"
1-3/4" x 3/8"	1.934	1.692	1/2" Dia.	25"	17"	18"	21"
2" x 1/4"	1.684	1.684	3/8" Dia.	22"	15"	16"	20"
2" x 5/16"	2.105	2.105	3/8" Dia.	28"	18"	19"	23"
2" x 3/8"	2.526	2.526	1/2" Dia.	33"	21"	22"	26"
2-1/4" x 1/4"	2.132	2.398	3/8" Dia.	28"	18"	19"	23"
2-1/4" x 3/8"	3.197	3.597	1/2" Dia.	41"	26"	26"	31"
2-1/2" x 1/4"	2.632	3.289	3/8" Dia.	34"	22"	22"	27"
2-1/2" x 5/16"	3.289	4.112	3/8" Dia.	42"	27"	27"	31"
2-1/2" x 3/8"	3.947	4.934	1/2" Dia.	50"	31"	31"	36"
3" x 1/4"	3.789	5.684	3/8" Dia.	49"	30"	30"	35"
3" x 5/16"	4.737	7.105	3/8" Dia.	60"	37"	36"	42"
3" x 3/8"	5.684	8.526	1/2" Dia.	67"*	44"	43"	49"
3-1/2" x 1/4"	5.158	9.026	3/8" Dia.	66"	40"	39"	45"
3-1/2" x 3/8"	7.737	13.539	1/2" Dia.	85"*	58"	56"	64"
4" x 1/4"	6.737	13.473	3/8" Dia.	85"*	51"	50"	57"
4" x 5/16"	8.421	16.842	3/8" Dia.	95"*	63"	61"	70"
4" x 3/8"	10.105	20.210	1/2" Dia.	96"	75"	72"	80"*
4-1/2" x 1/4"	8.526	19.184	3/8" Dia.	96"	64"	61"	70"
4-1/2" x 3/8"	12.789	28.776	1/2" Dia.	96"	94"*	90"	95"*
5" x 1/4"	10.526	26.315	3/8" Dia.	96"	78"	75"	85"
5" x 5/16"	13.158	32.894	1/2" Dia.	96"	96"	92"	96"
5" x 3/8"	15.789	39.473	1/2" Dia.	96"	96"	96"	96"
6" x 1/4"	15.158	45.473	1/2" Dia.	96"	96"	96"	96"
6" x 5/16"	18.947	56.841	1/2" Dia.	96"	96"	96"	96"
6" x 3/8"	22.737	68.209	1/2" Dia.	96"	96"	96"	96"

* Span limited to 1/400 of span = Deflection.
** Based on 10.105 bars/ft of grating width. Bearing bars 1-3/16" center to center.

PANEL WIDTH CHART (in inches) Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)			
No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar
2	1-7/16	1-1/2	1-9/16
3	2-5/8	2-11/16	2-3/4
4	3-13/16	3-7/8	3-15/16
5	5	5-1/16	5-1/8
6	6-3/16	6-1/4	6-5/16
7	7-3/8	7-7/16	7-1/2
8	8-9/16	8-5/8	8-11/16
9	9-3/4	9-13/16	9-7/8
10	10-15/16	11	11-1/16
11	12-1/8	12-3/16	12-1/4
12	13-5/16	13-3/8	13-7/16
13	14-1/2	14-9/16	14-5/8
14	15-11/16	15-3/4	15-13/16
15	16-7/8	16-15/16	17
16	18-1/16	18-1/8	18-3/16
17	19-1/4	19-5/16	19-3/8
18	20-7/16	20-1/2	20-9/16
19	21-5/8	21-11/16	21-3/4
20	22-13/16	22-7/8	22-15/16
21	24	24-1/16	24-1/8
22	25-3/16	25-1/4	25-5/16
23	26-3/8	26-7/16	26-1/2
24	27-9/16	27-5/8	27-11/16
25	28-3/4	28-13/16	28-7/8
26	29-15/16	30	30-1/16
27	31-1/8	31-3/16	31-1/4
28	32-5/16	32-3/8	32-7/16
29	33-1/2	33-9/16	33-5/8
30	34-11/16	34-3/4	34-13/16
31	35-7/8	35-15/16	36

BROWN-CAMPBELL STOCKS A TREMENDOUS AMOUNT OF INVENTORY IN A VARIETY OF PRODUCTS READY FOR SAME DAY SHIPMENT...

Architectural Wire
Bar Grating
Deck
Expanded Metal
Fiberglass
Floor Plate
Grate-Lock™
Grip Strut®
Ladder Rungs
Perforated
Perf-O Grip®
Riveted Grating
Stair Treads
Traction-Tread™
Wire Cloth

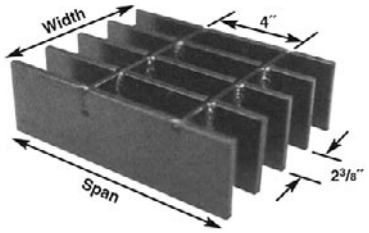
ISO 9001:2015 CERTIFIED

HEAVY DUTY BAR GRATING PROVIDES TREMENDOUS STRENGTH.

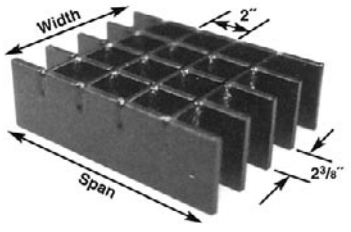
Pictured here, heavy duty bar grating is welded into a bridge structure to support constant traffic from large trucks carrying full loads of heavy sand.



38W4 & 38W2
Heavy Duty Welded



38W4
2-3/8" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



38W2
2-3/8" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Data is theoretical and based on 20,000 psi.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span												
						1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
1" x 1/4"	38W4	5.2#	38W2	5.8#	.211	1407	938	702	561	468	401	351	312	281	255	234	201	175
1" x 5/16"	38W4	7.2#	38W2	8.7#	.263	1754	1169	877	702	585	501	439	390	351	319	292	251	219
1" x 3/8"	38W4	8.3#	38W2	9.8#	.316	2107	1404	1053	842	702	602	526	468	421	383	351	301	263
1-1/4" x 1/4"	38W4	6.3#	38W2	6.9#	.329	2193	1462	1096	877	731	627	548	487	439	399	365	313	274
1-1/4" x 5/16"	38W4	8.6#	38W2	10.1#	.411	2741	1828	1371	1096	914	783	685	609	548	498	457	392	343
1-1/4" x 3/8"	38W4	10.0#	38W2	11.5#	.493	3287	2191	1645	1316	1096	940	822	731	658	598	548	470	411
1-1/2" x 1/4"	38W4	7.4#	38W2	7.9#	.474	3160	2107	1579	1263	1053	902	789	702	632	574	526	451	395
1-1/2" x 5/16"	38W4	10.0#	38W2	11.5#	.592	3947	2631	1974	1579	1316	1128	987	877	789	718	658	564	493
1-1/2" x 3/8"	38W4	11.7#	38W2	13.2#	.711	4740	3160	2368	1895	1579	1353	1184	1053	947	861	789	677	592
1-3/4" x 1/4"	38W4	8.6#	38W2	9.2#	.645	4300	2867	2149	1719	1433	1228	1075	955	860	781	716	614	537
1-3/4" x 5/16"	38W4	11.4#	38W2	12.9#	.806	5369	3580	2686	2149	1791	1535	1343	1194	1075	977	895	768	672
1-3/4" x 3/8"	38W4	13.4#	38W2	14.9#	.967	6447	4298	3224	2579	2149	1842	1612	1433	1289	1172	1075	921	806
2" x 1/4"	38W4	9.7#	38W2	10.3#	.842	5613	3742	2807	2246	1871	1604	1404	1248	1123	1021	936	802	702
2" x 5/16"	38W4	12.9#	38W2	14.4#	1.053	7020	4680	3509	2807	2339	2005	1754	1559	1404	1276	1170	1003	877
2" x 3/8"	38W4	15.1#	38W2	16.6#	1.263	8420	5613	4211	3368	2807	2406	2105	1871	1684	1531	1404	1203	1053
2-1/4" x 1/4"	38W4	10.8#	38W2	11.5#	1.066	7107	4738	3553	2842	2368	2030	1776	1579	1421	1292	1184	1015	888
2-1/4" x 5/16"	38W4	14.3#	38W2	15.8#	1.332	8878	5920	4441	3553	2961	2538	2220	1974	1776	1615	1480	1269	1110
2-1/4" x 3/8"	38W4	16.8#	38W2	18.3#	1.599	10660	7107	5329	4263	3553	3045	2664	2368	2132	1938	1776	1523	1332
2-1/2" x 1/4"	38W4	12.0#	38W2	12.6#	1.316	8773	5849	4386	3509	2924	2506	2193	1949	1754	1595	1462	1253	1096
2-1/2" x 5/16"	38W4	15.7#	38W2	17.2#	1.645	10967	7311	5482	4386	3655	3133	2741	2437	2193	1994	1827	1566	1371
2-1/2" x 3/8"	38W4	18.5#	38W2	20.0#	1.974	13160	8773	6579	5263	4386	3759	3289	2924	2632	2392	2193	1880	1645
2-3/4" x 1/4"	38W4	14.0#	38W2	15.5#	1.592	10609	7074	5307	4246	3538	3033	2654	2359	2123	1930	1769	1516	1327
2-3/4" x 5/16"	38W4	17.7#	38W2	19.7#	1.990	13261	8843	6634	5307	4423	3791	3317	2948	2645	2412	2211	1895	1658
2-3/4" x 3/8"	38W4	20.7#	38W2	22.8#	2.388	15914	10612	7961	6368	5307	4549	3980	3538	3184	2895	2654	2274	1990
3" x 1/4"	38W4	15.1#	38W2	16.7#	1.895	12633	8422	6316	5053	4211	3609	3158	2807	2526	2297	2105	1805	1579
3" x 5/16"	38W4	19.1#	38W2	21.1#	2.368	15793	10529	7895	6316	5263	4511	3947	3509	3158	2871	2632	2256	1974
3" x 3/8"	38W4	22.4#	38W2	24.5#	2.842	18947	12631	9474	7579	6316	5414	4737	4211	3789	3445	3158	2707	2368
3-1/4" x 1/4"	38W4	16.3#	38W2	17.8#	2.224	14817	9881	7412	5930	4942	4236	3706	3294	2965	2695	2471	2118	1853
3-1/4" x 5/16"	38W4	20.5#	38W2	22.5#	2.780	18521	12350	9265	7412	6177	5294	4633	4118	3706	3369	3088	2647	2316
3-1/4" x 3/8"	38W4	24.1#	38W2	26.2#	3.336	22225	14820	11118	8895	7412	6353	5559	4942	4447	4043	3706	3177	2780
3-1/2" x 1/4"	38W4	17.4#	38W2	18.9#	2.579	17193	11462	8596	6877	5731	4912	4298	3821	3439	3126	2865	2456	2149
3-1/2" x 5/16"	38W4	21.9#	38W2	24.0#	3.224	21481	14324	10746	8596	7164	6140	5373	4776	4298	3907	3582	3070	2686
3-1/2" x 3/8"	38W4	25.8#	38W2	27.9#	3.868	25793	17196	12895	10316	8596	7368	6447	5731	5158	4689	4298	3684	3224
4" x 1/4"	38W4	19.7#	38W2	21.2#	3.368	22460	14973	11228	8982	7485	6416	5614	4990	4491	4083	3743	3208	2807
4" x 5/16"	38W4	24.8#	38W2	26.8#	4.211	28073	18716	14035	11228	9357	8020	7018	6238	5614	5104	4678	4010	3509
4" x 3/8"	38W4	29.2#	38W2	31.3#	5.053	33687	22458	16842	13474	11228	9624	8421	7485	6737	6124	5614	4812	4211
4-1/2" x 1/4"	38W4	22.0#	38W2	23.5#	4.263	28420	18947	14211	11368	9474	8120	7105	6316	5684	5167	4737	4060	3553
4-1/2" x 5/16"	38W4	27.6#	38W2	29.6#	5.329	35508	23678	17763	14211	11842	10150	8882	7895	7105	6459	5921	5075	4441
4-1/2" x 3/8"	38W4	32.6#	38W2	34.7#	6.395	42633	28422	21316	17053	14211	12180	10658	9474	8526	7751	7105	6090	5329
5" x 1/4"	38W4	24.2#	38W2	25.7#	5.263	35093	23396	17544	14035	11696	10025	8772	7797	7018	6380	5848	5013	4386
5" x 5/16"	38W4	30.4#	38W2	32.5#	6.579	43860	29240	21930	17544	14620	12531	10965	9747	8772	7974	7310	6266	5482
5" x 3/8"	38W4	36.0#	38W2	38.1#	7.895	52633	35089	26316	21053	17544	15038	13158	11696	10526	9569	8772	7519	6579
6" x 1/4"	38W4	28.8#	38W2	30.3#	7.579	67344	33689	25263	20211	16842	14436	12632	11228	10105	9187	8421	7218	6316
6" x 5/16"	38W4	36.1#	38W2	38.1#	9.474	84172	42107	31579	25263	21053	18045	15789	14035	12632	11483	10526	9023	7895
6" x 3/8"	38W4	42.8#	38W2	44.9#	11.368	101007	50529	37895	30316	25263	21654	18947	16842	15158	13780	12632	10827	9474

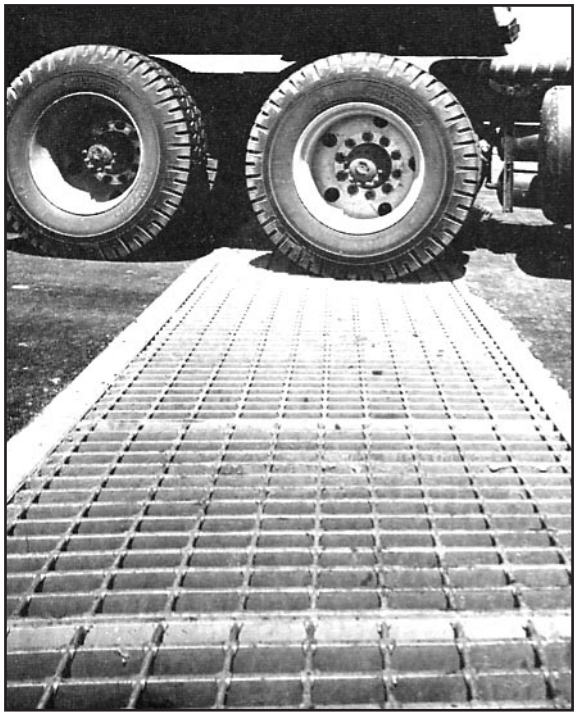
* Based on 5.053 bars/ft of grating width. Bearing bars 2-3/8" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

38W4 & 38W2
Heavy Duty Welded

Bar Size	Sec. Mod. Per Ft. Of Width**	Moment of Inertia**	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
1" x 1/4"	.211	.105	3/8" Dia.	5"	5"	6"	7"
1" x 3/8"	.316	.158	3/8" Dia.	7"	6"	7"	8"
1-1/4" x 1/4"	.329	.206	3/8" Dia.	7"	6"	7"	9"
1-1/4" x 3/8"	.493	.308	1/2" Dia.	10"	7"	9"	11"
1-1/2" x 1/4"	.474	.355	3/8" Dia.	10"	7"	9"	10"
1-1/2" x 5/16"	.592	.444	1/2" Dia.	12"	8"	10"	12"
1-1/2" x 3/8"	.711	.533	1/2" Dia.	14"	9"	11"	13"
1-3/4" x 1/4"	.645	.564	3/8" Dia.	12"	9"	10"	12"
1-3/4" x 3/8"	.967	.846	1/2" Dia.	18"	12"	13"	15"
2" x 1/4"	.842	.842	3/8" Dia.	16"	11"	12"	14"
2" x 5/16"	1.053	1.053	1/2" Dia.	19"	12"	13"	16"
2" x 3/8"	1.263	1.263	1/2" Dia.	23"	14"	15"	18"
2-1/4" x 1/4"	1.066	1.199	3/8" Dia.	20"	13"	13"	16"
2-1/4" x 3/8"	1.599	1.799	1/2" Dia.	29"	17"	17"	20"
2-1/2" x 1/4"	1.316	1.645	3/8" Dia.	24"	15"	15"	18"
2-1/2" x 5/16"	1.645	2.056	1/2" Dia.	30"	18"	18"	21"
2-1/2" x 3/8"	1.974	2.467	1/2" Dia.	35"	21"	20"	24"
3" x 1/4"	1.895	2.842	3/8" Dia.	34"	20"	20"	23"
3" x 5/16"	2.368	3.553	1/2" Dia.	42"	24"	23"	27"
3" x 3/8"	2.842	4.263	1/2" Dia.	50"	29"	27"	31"
3-1/2" x 1/4"	2.579	4.513	3/8" Dia.	45"	26"	25"	29"
3-1/2" x 3/8"	3.868	6.770	1/2" Dia.	67"	38"	35"	40"
4" x 1/4"	3.368	6.737	3/8" Dia.	59"	33"	31"	35"
4" x 5/16"	4.211	8.422	1/2" Dia.	73"	41"	38"	43"
4" x 3/8"	5.053	10.106	1/2" Dia.	86"*	48"	44"	50"
4-1/2" x 1/4"	4.263	9.593	1/2" Dia.	74"	41"	38"	43"
4-1/2" x 3/8"	6.395	14.389	1/2" Dia.	96"	60"	55"	60"
5" x 1/4"	5.263	13.159	1/2" Dia.	91"	50"	46"	51"
5" x 5/16"	6.579	16.449	1/2" Dia.	96"	62"	56"	62"
5" x 3/8"	7.895	19.738	1/2" Dia.	96"	74"	66"	72"
6" x 1/4"	7.579	22.739	1/2" Dia.	96"	71"	64"	70"
6" x 5/16"	9.474	28.423	1/2" Dia.	96"	88"	79"	85"
6" x 3/8"	11.368	34.108	1/2" Dia.	96"	96"	94"	96"

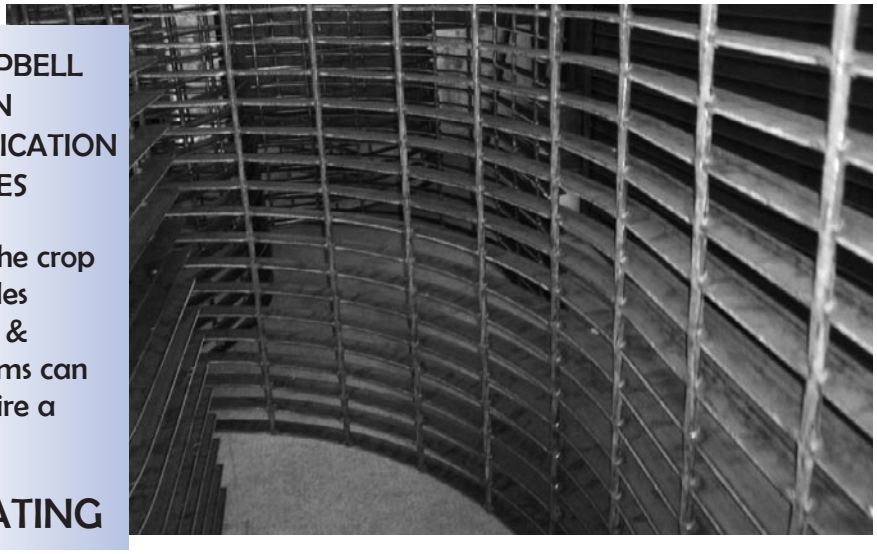
* Span limited to 1/400 of span = Deflection.
** Based on 5.053 bars/ft of grating width. Bearing bars 2-3/8" center to center.



% Open Area				
BB Size	CB Centers	BB Thickness		
		1/4"	5/16"	3/8"
Thru 2-1/2"	4"cc	82%	80%	77%
	2"cc	76%	73%	71%
3" - 6"	4"cc	84%	82%	79%
	2"cc	80%	78%	75%

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PANEL WIDTH CHART (in inches) Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)			
No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar
2	2-5/8	2-11/16	2-3/4
3	5	5-1/16	5-1/8
4	7-3/8	7-7/16	7-1/2
5	9-3/4	9-13/16	9-7/8
6	12-1/8	12-3/16	12-1/4
7	14-1/2	14-9/16	14-5/8
8	16-7/8	16-15/16	17
9	19-1/4	19-5/16	19-3/8
10	21-5/8	21-11/16	21-3/4
11	24	24-1/16	24-1/8
12	26-3/8	26-7/16	26-1/2
13	28-3/4	28-13/16	28-7/8
14	31-1/8	31-3/16	31-1/4
15	33-1/2	33-9/16	33-5/8
16	35-7/8	35-15/16	36



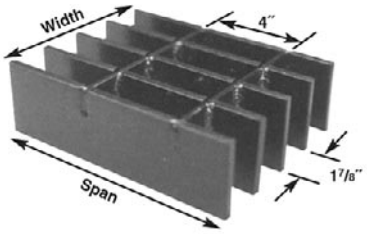
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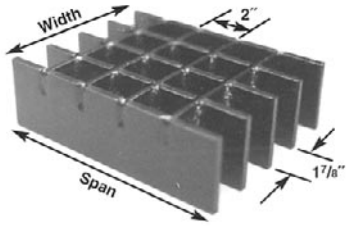
1-800-GRATING

Airports
Highways
Industrial Areas
Parking Lots
Terminals

30W4 & 30W2
Heavy Duty Welded



30W4
1-7/8" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



30W2
1-7/8" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Data is theoretical and based on 20,000 psi.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span												
						1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
1" x 1/4"	30W4	6.3#	30W2	6.9#	.267	1780	1187	889	711	593	508	444	395	356	323	296	254	222
1" x 5/16"	30W4	8.6#	30W2	10.1#	.333	2221	1481	1111	889	741	635	556	494	444	404	370	317	278
1" x 3/8"	30W4	10.0#	30W2	11.5#	.400	2667	1778	1333	1067	889	762	667	593	533	485	444	381	333
1-1/4" x 1/4"	30W4	7.7#	30W2	8.3#	.417	2780	1853	1389	1111	926	794	694	617	556	505	463	397	347
1-1/4" x 5/16"	30W4	10.4#	30W2	11.9#	.521	3470	2314	1736	1389	1157	992	868	772	694	631	579	496	434
1-1/4" x 3/8"	30W4	12.1#	30W2	13.6#	.625	4167	2778	2083	1667	1389	1190	1042	926	833	758	694	595	521
1-1/2" x 1/4"	30W4	9.1#	30W2	9.6#	.600	4000	2667	2000	1600	1333	1143	1000	889	800	727	667	571	500
1-1/2" x 5/16"	30W4	12.1#	30W2	13.6#	.750	5000	3333	2500	2000	1667	1429	1250	1111	1000	909	833	714	625
1-1/2" x 3/8"	30W4	14.3#	30W2	15.8#	.900	6000	4000	3000	2400	2000	1714	1500	1333	1200	1091	1000	857	750
1-3/4" x 1/4"	30W4	10.6#	30W2	11.2#	.817	5447	3631	2722	2178	1815	1556	1361	1210	1089	990	907	778	681
1-3/4" x 5/16"	30W4	13.9#	30W2	15.4#	1.021	6803	4536	3403	2722	2269	1944	1701	1512	1361	1237	1134	972	851
1-3/4" x 3/8"	30W4	16.4#	30W2	17.9#	1.225	8167	5444	4083	3267	2722	2333	2042	1815	1633	1485	1361	1167	1021
2" x 1/4"	30W4	12.0#	30W2	12.6#	1.067	7113	4742	3556	2844	2370	2032	1778	1580	1422	1293	1185	1016	889
2" x 5/16"	30W4	15.7#	30W2	17.2#	1.333	8887	5924	4444	3556	2963	2540	2222	1975	1778	1616	1481	1270	1111
2" x 3/8"	30W4	18.5#	30W2	20.0#	1.600	10667	7111	5333	4267	3556	3048	2667	2370	2133	1939	1778	1524	1333
2-1/4" x 1/4"	30W4	13.4#	30W2	14.0#	1.350	9000	6000	4500	3600	3000	2571	2250	2000	1800	1636	1500	1286	1125
2-1/4" x 5/16"	30W4	17.5#	30W2	19.0#	1.688	11244	7498	5625	4500	3750	3214	2813	2500	2250	2045	1875	1607	1406
2-1/4" x 3/8"	30W4	20.6#	30W2	22.1#	2.025	13500	9000	6750	5400	4500	3857	3375	3000	2700	2455	2250	1929	1688
2-1/2" x 1/4"	30W4	14.8#	30W2	15.4#	1.667	11113	7409	5556	4444	3704	3175	2778	2469	2222	2020	1852	1587	1389
2-1/2" x 5/16"	30W4	19.2#	30W2	20.7#	2.083	13887	9258	6944	5556	4630	3968	3472	3086	2778	2525	2315	1984	1736
2-1/2" x 3/8"	30W4	22.8#	30W2	24.3#	2.500	16667	11111	8333	6667	5556	4762	4167	3704	3333	3030	2778	2381	2083
2-3/4" x 1/4"	30W4	17.1#	30W2	18.6#	2.017	13437	8960	6722	5378	4481	3841	3361	2988	2689	2444	2241	1921	1681
2-3/4" x 5/16"	30W4	21.6#	30W2	23.6#	2.521	16798	11201	8403	6722	5602	4802	4201	3735	3361	3056	2801	2401	2101
2-3/4" x 3/8"	30W4	25.4#	30W2	27.5#	3.025	20156	13441	10083	8067	6722	5762	5042	4481	4033	3667	3361	2881	2521
3" x 1/4"	30W4	18.6#	30W2	20.1#	2.400	16000	10667	8000	6400	5333	4571	4000	3556	3200	2909	2667	2286	2000
3" x 5/16"	30W4	23.3#	30W2	25.4#	3.000	20000	13333	10000	8000	6667	5714	5000	4444	4000	3636	3333	2857	2500
3" x 3/8"	30W4	27.5#	30W2	29.6#	3.600	24000	16000	12000	9600	8000	6857	6000	5333	4800	4364	4000	3429	3000
3-1/4" x 1/4"	30W4	20.0#	30W2	21.5#	2.817	18769	12516	9389	7511	6259	5365	4694	4173	3756	3414	3130	2683	2347
3-1/4" x 5/16"	30W4	25.1#	30W2	27.1#	3.521	23460	15644	11736	9389	7824	6706	5868	5216	4694	4268	3912	3353	2934
3-1/4" x 3/8"	30W4	29.7#	30W2	31.7#	4.225	28152	18773	14083	11267	9389	8048	7042	6259	5633	5121	4694	4024	3521
3-1/2" x 1/4"	30W4	21.4#	30W2	22.9#	3.267	21780	14520	10889	8711	7259	6222	5444	4840	4356	3960	3630	3111	2722
3-1/2" x 5/16"	30W4	26.9#	30W2	28.9#	4.083	27208	18143	13611	10889	9074	7778	6806	6049	5444	4949	4537	3889	3403
3-1/2" x 3/8"	30W4	31.8#	30W2	33.8#	4.900	32667	21778	16333	13067	10889	9333	8167	7259	6533	5939	5444	4667	4083
4" x 1/4"	30W4	24.2#	30W2	25.7#	4.267	28447	18964	14222	11378	9481	8127	7111	6321	5689	5172	4741	4063	3556
4" x 5/16"	30W4	30.4#	30W2	32.5#	5.333	35553	23702	17778	14222	11852	10159	8889	7901	7111	6465	5926	5079	4444
4" x 3/8"	30W4	36.0#	30W2	38.1#	6.400	42667	28444	21333	17067	14222	12190	10667	9481	8533	7758	7111	6095	5333
4-1/2" x 1/4"	30W4	27.1#	30W2	28.6#	5.400	36000	24000	18000	14400	12000	10286	9000	8000	7200	6545	6000	5143	4500
4-1/2" x 5/16"	30W4	34.0#	30W2	36.0#	6.750	44978	29993	22500	18000	15000	12857	11250	10000	9000	8182	7500	6429	5625
4-1/2" x 3/8"	30W4	40.3#	30W2	42.3#	8.100	54000	36000	27000	21600	18000	15429	13500	12000	10800	9818	9000	7714	6750
5" x 1/4"	30W4	29.9#	30W2	31.4#	6.667	44422	29631	22222	17778	14815	12698	11111	9877	8889	8081	7407	6349	5556
5" x 5/16"	30W4	37.5#	30W2	39.6#	8.333	55528	37036	27778	22222	18519	15873	13889	12346	11111	10101	9259	7937	6944
5" x 3/8"	30W4	44.5#	30W2	46.6#	10.000	66633	44444	33333	26667	22222	19048	16667	14815	13333	12121	11111	9524	8333
6" x 1/4"	30W4	35.6#	30W2	37.1#	9.600	63968	42656	32000	25600	21333	18286	16000	14222	12800	11636	10667	9143	8000
6" x 5/16"	30W4	44.6#	30W2	46.7#	12.000	79960	53320	40000	32000	26667	22857	20000	17778	16000	14545	13333	11429	10000
6" x 3/8"	30W4	53.0#	30W2	55.1#	14.400	95952	63984	48000	38400	32000	27429	24000	21333	19200	17455	16000	13714	12000

* Based on 6.4 bars/ft of grating width. Bearing bars 1-7/8" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

30W4 & 30W2
Heavy Duty Welded

Bar Size	Sec. Mod. Per Ft. Of Width**	Moment of Inertia**	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
1" x 1/4"	.267	.133	3/8" Dia.	6"	5"	6"	8"
1" x 3/8"	.400	.200	1/2" Dia.	8"	6"	8"	9"
1-1/4" x 1/4"	.417	.260	3/8" Dia.	8"	6"	8"	10"
1-1/4" x 3/8"	.625	.391	1/2" Dia.	11"	8"	10"	12"
1-1/2" x 1/4"	.600	.450	3/8" Dia.	11"	8"	9"	12"
1-1/2" x 5/16"	.750	.563	1/2" Dia.	13"	9"	10"	13"
1-1/2" x 3/8"	.900	.675	1/2" Dia.	15"	10"	12"	14"
1-3/4" x 1/4"	.817	.715	3/8" Dia.	14"	10"	11"	14"
1-3/4" x 3/8"	1.225	1.072	1/2" Dia.	20"	13"	14"	17"
2" x 1/4"	1.067	1.067	3/8" Dia.	18"	12"	13"	16"
2" x 5/16"	1.333	1.333	1/2" Dia.	22"	14"	15"	18"
2" x 3/8"	1.600	1.600	1/2" Dia.	26"	16"	17"	20"
2-1/4" x 1/4"	1.350	1.519	3/8" Dia.	22"	14"	15"	18"
2-1/4" x 3/8"	2.025	2.278	1/2" Dia.	32"	20"	20"	23"
2-1/2" x 1/4"	1.667	2.083	3/8" Dia.	27"	17"	17"	20"
2-1/2" x 5/16"	2.083	2.604	1/2" Dia.	33"	20"	20"	24"
2-1/2" x 3/8"	2.500	3.125	1/2" Dia.	39"	24"	23"	27"
3" x 1/4"	2.400	3.600	3/8" Dia.	38"	23"	23"	26"
3" x 5/16"	3.000	4.500	1/2" Dia.	47"	28"	27"	31"
3" x 3/8"	3.600	5.400	1/2" Dia.	56"	33"	31"	36"
3-1/2" x 1/4"	3.267	5.717	3/8" Dia.	51"	30"	29"	33"
3-1/2" x 3/8"	4.900	8.575	1/2" Dia.	75"*	43"	41"	46"
4" x 1/4"	4.267	8.533	3/8" Dia.	66"	38"	36"	41"
4" x 5/16"	5.333	10.667	1/2" Dia.	82"	47"	44"	50"
4" x 3/8"	6.400	12.800	1/2" Dia.	91"*	56"	52"	58"
4-1/2" x 1/4"	5.400	12.150	1/2" Dia.	83"	47"	44"	50"
4-1/2" x 3/8"	8.100	18.225	1/2" Dia.	96"	69"	64"	71"
5" x 1/4"	6.667	16.667	1/2" Dia.	96"	58"	54"	60"
5" x 5/16"	8.333	20.833	1/2" Dia.	96"	71"	66"	73"
5" x 3/8"	10.000	25.000	1/2" Dia.	96"	85"	78"	86"
6" x 1/4"	9.600	28.800	1/2" Dia.	96"	82"	75"	83"
6" x 5/16"	12.000	36.000	1/2" Dia.	96"	96"	93"	96"
6" x 3/8"	14.400	43.200	1/2" Dia.	96"	96"	96"	96"

* Span limited to 1/400 of span = Deflection.
** Based on 6.4 bars/ft of grating width. Bearing bars 1-7/8" center to center.

PANEL WIDTH CHART
(in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar	No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar
2	2-1/8	2-3/16	2-1/4	12	20-7/8	20-15/16	21
3	4	4-1/16	4-1/8	13	22-3/4	22-13/16	22-7/8
4	5-7/8	5-15/16	6	14	24-5/8	24-11/16	24-3/4
5	7-3/4	7-13/16	7-7/8	15	26-1/2	26-9/16	26-5/8
6	9-5/8	9-11/16	9-3/4	16	28-3/8	28-7/16	28-1/2
7	11-1/2	11-9/16	11-5/8	17	30-1/4	30-5/16	30-3/8
8	13-3/8	13-7/16	13-1/2	18	32-1/8	32-3/16	32-1/4
9	15-1/4	15-5/16	15-3/8	19	34	34-1/16	34-1/8
10	17-1/8	17-3/16	17-1/4	20	35-7/8	35-15/16	36
11	19	19-1/16	19-1/8	1-800-GRATING (472-8464)			

% Open Area				
BB Size	CB Centers	BB Thickness		
		1/4"	5/16"	3/8"
Thru 2-1/2"	4"cc	79%	76%	73%
	2"cc	72%	70%	67%
3" - 6"	4"cc	82%	78%	75%
	2"cc	77%	74%	71%

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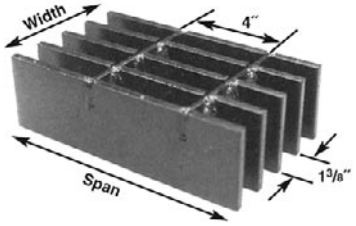
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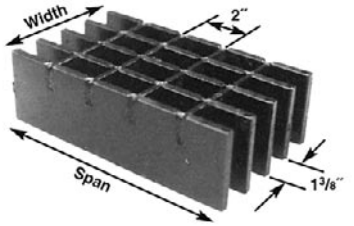
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22W4 & 22W2
Heavy Duty Welded



22W4
1-3/8" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



22W2
1-3/8" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Data is theoretical and based on 20,000 psi.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span												
						1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
1" x 1/4"	22W4	8.3#	22W2	8.9#	.364	2427	1618	1212	970	808	693	606	539	485	441	404	346	303
1" x 5/16"	22W4	11.0#	22W2	12.6#	.455	3028	2019	1515	1212	1010	866	758	673	606	551	505	433	379
1" x 3/8"	22W4	12.9#	22W2	14.4#	.545	3633	2422	1818	1455	1212	1039	909	808	727	661	606	519	455
1-1/4" x 1/4"	22W4	10.2#	22W2	10.8#	.568	3787	2524	1894	1515	1263	1082	947	842	758	689	631	541	473
1-1/4" x 5/16"	22W4	13.4#	22W2	14.9#	.710	4732	3155	2367	1894	1578	1353	1184	1052	947	861	789	676	592
1-1/4" x 3/8"	22W4	15.8#	22W2	17.3#	.852	5680	3787	2841	2273	1894	1623	1420	1263	1136	1033	947	812	710
1-1/2" x 1/4"	22W4	12.0#	22W2	12.6#	.818	5453	3636	2727	2182	1818	1558	1364	1212	1091	992	909	779	682
1-1/2" x 5/16"	22W4	15.8#	22W2	17.3#	1.023	6820	4547	3409	2727	2273	1948	1705	1515	1364	1240	1136	974	852
1-1/2" x 3/8"	22W4	18.7#	22W2	20.2#	1.227	8180	5453	4091	3273	2727	2338	2045	1818	1636	1488	1364	1169	1023
1-3/4" x 1/4"	22W4	14.0#	22W2	14.6#	1.114	7427	4951	3712	2970	2475	2121	1856	1650	1485	1350	1237	1061	928
1-3/4" x 5/16"	22W4	18.2#	22W2	19.7#	1.392	9275	6185	4640	3712	3093	2652	2320	2062	1856	1687	1547	1326	1160
1-3/4" x 3/8"	22W4	21.5#	22W2	23.0#	1.670	11133	7422	5568	4455	3712	3182	2784	2475	2227	2025	1856	1591	1392
2" x 1/4"	22W4	15.9#	22W2	16.5#	1.455	9700	6467	4848	3879	3232	2771	2424	2155	1939	1763	1616	1385	1212
2" x 5/16"	22W4	20.6#	22W2	22.1#	1.818	12120	8080	6061	4848	4040	3463	3030	2694	2424	2204	2020	1732	1515
2" x 3/8"	22W4	24.4#	22W2	25.9#	2.182	14547	9698	7273	5818	4848	4156	3636	3232	2909	2645	2424	2078	1818
2-1/4" x 1/4"	22W4	17.8#	22W2	18.4#	1.841	12273	8182	6136	4909	4091	3506	3068	2727	2455	2231	2045	1753	1534
2-1/4" x 5/16"	22W4	23.0#	22W2	24.5#	2.301	15332	10224	7670	6136	5114	4383	3835	3409	3068	2789	2557	2192	1918
2-1/4" x 3/8"	22W4	27.2#	22W2	28.7#	2.761	18407	12271	9205	7364	6136	5260	4602	4091	3682	3347	3068	2630	2301
2-1/2" x 1/4"	22W4	19.7#	22W2	20.3#	2.273	15153	10102	7576	6061	5051	4329	3788	3367	3030	2755	2525	2165	1894
2-1/2" x 5/16"	22W4	25.4#	22W2	26.9#	2.841	18940	12627	9470	7576	6313	5411	4735	4209	3788	3444	3157	2706	2367
2-1/2" x 3/8"	22W4	30.1#	22W2	31.6#	3.409	22727	15151	11364	9091	7576	6494	5682	5051	4545	4132	3788	3247	2841
2-3/4" x 1/4"	22W4	22.5#	22W2	24.0#	2.750	18325	12220	9167	7333	6111	5238	4583	4074	3667	3333	3056	2619	2292
2-3/4" x 5/16"	22W4	28.3#	22W2	30.3#	3.438	22915	15274	11458	9167	7639	6548	5729	5093	4583	4167	3819	3274	2865
2-3/4" x 3/8"	22W4	33.5#	22W2	35.5#	4.125	25487	18329	13750	11000	9167	7857	6875	6111	5500	5000	4583	3929	3438
3" x 1/4"	22W4	24.5#	22W2	26.0#	3.273	21820	14547	10909	8727	7273	6234	5455	4848	4364	3967	3636	3117	2727
3" x 5/16"	22W4	30.7#	22W2	32.7#	4.091	27273	18182	13636	10909	9091	7792	6818	6061	5455	4959	4545	3896	3409
3" x 3/8"	22W4	36.4#	22W2	38.4#	4.909	32727	21818	16364	13091	10909	9351	8182	7273	6545	5950	5455	4675	4091
3-1/4" x 1/4"	22W4	26.4#	22W2	27.9#	3.841	25593	17066	12803	10242	8535	7316	6402	5690	5121	4656	4268	3658	3201
3-1/4" x 5/16"	22W4	33.1#	22W2	35.1#	4.801	31992	21333	16004	12803	10669	9145	8002	7113	6402	5820	5335	4573	4001
3-1/4" x 3/8"	22W4	39.2#	22W2	41.3#	5.761	38391	25600	19205	15364	12803	10974	9602	8535	7682	6983	6402	5487	4801
3-1/2" x 1/4"	22W4	28.3#	22W2	29.8#	4.455	29693	19796	14848	11879	9899	8485	7424	6599	5939	5399	4949	4242	3712
3-1/2" x 5/16"	22W4	35.5#	22W2	37.5#	5.568	37103	24742	18561	14848	12374	10606	9280	8249	7424	6749	6187	5303	4640
3-1/2" x 3/8"	22W4	42.1#	22W2	44.1#	6.682	44547	29698	22273	17818	14848	12727	11136	9899	8909	8099	7424	6364	5568
4" x 1/4"	22W4	32.1#	22W2	33.6#	5.818	38787	25858	19394	15515	12929	11082	9697	8620	7758	7052	6465	5541	4848
4" x 5/16"	22W4	40.2#	22W2	42.3#	7.273	48487	32324	24242	19394	16162	13853	12121	10774	9697	8815	8081	6926	6061
4" x 3/8"	22W4	47.8#	22W2	49.8#	8.727	58180	38787	29091	23273	19394	16623	14545	12929	11636	10579	9697	8312	7273
4-1/2" x 1/4"	22W4	35.9#	22W2	37.4#	7.364	49065	32724	24545	19636	16364	14026	12273	10909	9818	8926	8182	7013	6136
4-1/2" x 5/16"	22W4	45.0#	22W2	47.0#	9.205	61333	40899	30682	24545	20455	17532	15341	13636	12273	11157	10227	8766	7670
4-1/2" x 3/8"	22W4	53.5#	22W2	55.5#	11.045	73599	49089	36818	29455	24545	21039	18409	16364	14727	13388	12273	10519	9205
5" x 1/4"	22W4	39.8#	22W2	41.3#	9.091	60576	40394	30303	24242	20202	17316	15152	13468	12121	11019	10101	8658	7576
5" x 5/16"	22W4	49.8#	22W2	51.8#	11.364	75720	50493	37879	30303	25253	21645	18939	16835	15152	13774	12626	10823	9470
5" x 3/8"	22W4	59.2#	22W2	61.3#	13.636	90865	60592	45455	36364	30303	25974	22727	20202	18182	16529	15152	12987	11364
6" x 1/4"	22W4	47.4#	22W2	48.9#	13.091	87228	58167	43636	34909	29091	24935	21818	19394	17455	15868	14545	12468	10909
6" x 5/16"	22W4	59.3#	22W2	61.4#	16.364	109035	72708	54545	43636	36364	31169	27273	24242	21818	19835	18182	15584	13636
6" x 3/8"	22W4	70.7#	22W2	72.7#	19.636	130845	87252	65455	52364	43636	37403	32727	29091	26182	23802	21818	18701	16364

* Based on 8.727 bars/ft of grating width. Bearing bars 1-3/8" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

Bar Size	Sec. Mod. Per Ft. Of Width**	Moment of Inertia**	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/ H-20
1" x 1/4"	.364	.182	3/8" Dia.	6"	6"	7"	9"
1" x 3/8"	.545	.273	3/8" Dia.	9"	7"	9"	11"
1-1/4" x 1/4"	.568	.355	3/8" Dia.	9"	7"	9"	11"
1-1/4" x 3/8"	.852	.533	3/8" Dia.	13"	9"	11"	13"
1-1/2" x 1/4"	.818	.614	3/8" Dia.	12"	9"	11"	13"
1-1/2" x 5/16"	1.023	.767	3/8" Dia.	15"	11"	12"	15"
1-1/2" x 3/8"	1.227	.920	3/8" Dia.	18"	12"	13"	16"
1-3/4" x 1/4"	1.114	.974	3/8" Dia.	16"	11"	13"	15"
1-3/4" x 3/8"	1.670	1.462	1/2" Dia.	23"	15"	16"	20"
2" x 1/4"	1.455	1.455	3/8" Dia.	21"	14"	15"	18"
2" x 5/16"	1.818	1.818	3/8" Dia.	25"	17"	17"	21"
2" x 3/8"	2.182	2.182	1/2" Dia.	30"	19"	20"	24"
2-1/4" x 1/4"	1.841	2.071	3/8" Dia.	26"	17"	18"	21"
2-1/4" x 3/8"	2.761	3.106	1/2" Dia.	38"	24"	24"	28"
2-1/2" x 1/4"	2.273	2.841	3/8" Dia.	31"	20"	20"	24"
2-1/2" x 5/16"	2.841	3.551	3/8" Dia.	39"	24"	24"	29"
2-1/2" x 3/8"	3.409	4.261	1/2" Dia.	46"	28"	28"	33"
3" x 1/4"	3.273	4.909	3/8" Dia.	45"	27"	27"	32"
3" x 5/16"	4.091	6.136	3/8" Dia.	55"	33"	33"	38"
3" x 3/8"	4.909	7.363	1/2" Dia.	64"*	40"	38"	44"
3-1/2" x 1/4"	4.455	7.795	3/8" Dia.	60"	36"	35"	41"
3-1/2" x 3/8"	6.682	11.693	1/2" Dia.	81"*	53"	50"	58"
4" x 1/4"	5.818	11.636	3/8" Dia.	78"	46"	45"	51"
4" x 5/16"	7.273	14.545	3/8" Dia.	91"*	57"	54"	62"
4" x 3/8"	8.727	17.454	1/2" Dia.	96"	68"	64"	73"
4-1/2" x 1/4"	7.364	16.568	3/8" Dia.	96"	58"	55"	63"
4-1/2" x 3/8"	11.045	24.851	1/2" Dia.	96"	85"	80"	89"*
5" x 1/4"	9.091	22.727	3/8" Dia.	96"	71"	67"	76"
5" x 5/16"	11.364	28.408	1/2" Dia.	96"	88"	82"	92"
5" x 3/8"	13.636	34.090	1/2" Dia.	96"	96"	96"	96"
6" x 1/4"	13.091	39.272	1/2" Dia.	96"	96"	94"	96"
6" x 5/16"	16.364	49.089	1/2" Dia.	96"	96"	96"	96"
6" x 3/8"	19.636	58.907	1/2" Dia.	96"	96"	96"	96"

* Span limited to 1/400 of span = Deflection.
** Based on 8.727 bars/ft of grating width. Bearing bars 1-3/8" center to center.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar
2	1-5/8	1-11/16	1-3/4
3	3	3-1/16	3-1/8
4	4-3/8	4-7/16	4-1/2
5	5-3/4	5-13/16	5-7/8
6	7-1/8	7-3/16	7-1/4
7	8-1/2	8-9/16	8-5/8
8	9-7/8	9-15/16	10
9	11-1/4	11-5/16	11-3/8
10	12-5/8	12-11/16	12-3/4
11	14	14-1/16	14-1/8
12	15-3/8	15-7/16	15-1/2
13	16-3/4	16-13/16	16-7/8
14	18-1/8	18-3/16	18-1/4
15	19-1/2	19-9/16	19-5/8
16	20-7/8	20-15/16	21
17	22-1/4	22-5/16	22-3/8
18	23-5/8	23-11/16	23-3/4
19	25	25-1/16	25-1/8
20	26-3/8	26-7/16	26-1/2
21	27-3/4	27-13/16	27-7/8
22	29-1/8	29-3/16	29-1/4
23	30-1/2	30-9/16	30-5/8
24	31-7/8	31-15/16	32
25	33-1/4	33-5/16	33-3/8
26	34-5/8	34-11/16	34-3/4
27	36	36-1/16	36-1/8

% Open Area

BB Size	CB Centers	BB Thickness		
		1/4"	5/16"	3/8"
Thru 2-1/2"	4"cc	75%	70%	66%
	2"cc	68%	64%	60%
3" - 6"	4"cc	77%	72%	68%
	2"cc	72%	68%	64%

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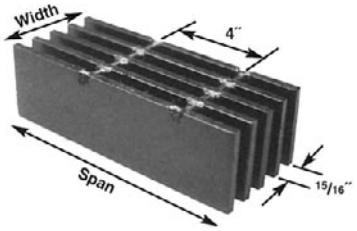
Of course, we offer it!

- see page 54 -

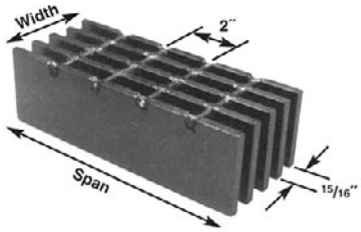


Over 7 decades of serving loyal customers!

15W4 &15W2
Heavy Duty Welded



15W4
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



15W2
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Data is theoretical and based on 20,000 psi.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span											
						1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
1" x 1/4"	15W4	11.7#	15W2	12.3#	.533	3553	2369	1778	1422	1185	1016	889	790	711	646	593	508	444
1" x 5/16"	15W4	15.3#	15W2	16.8#	.667	4442	2962	2222	1778	1481	1270	1111	988	889	808	741	635	556
1" x 3/8"	15W4	18.1#	15W2	19.6#	.800	5333	3556	2667	2133	1778	1524	1333	1185	1067	970	889	762	667
1-1/4" x 1/4"	15W4	14.5#	15W2	15.1#	.833	5553	3702	2778	2222	1852	1587	1389	1235	1111	1010	926	794	694
1-1/4" x 5/16"	15W4	18.8#	15W2	20.3#	1.042	6941	4628	3472	2778	2315	1984	1736	1543	1389	1263	1157	992	868
1-1/4" x 3/8"	15W4	22.2#	15W2	23.7#	1.250	8333	5556	4167	3333	2778	2381	2083	1852	1667	1515	1389	1190	1042
1-1/2" x 1/4"	15W4	17.2#	15W2	17.7#	1.200	8000	5333	4000	3200	2667	2286	2000	1778	1600	1455	1333	1143	1000
1-1/2" x 5/16"	15W4	22.3#	15W2	23.8#	1.500	10000	6667	5000	4000	3333	2857	2500	2222	2000	1818	1667	1429	1250
1-1/2" x 3/8"	15W4	26.4#	15W2	27.9#	1.800	12000	8000	6000	4800	4000	3429	3000	2667	2400	2182	2000	1714	1500
1-3/4" x 1/4"	15W4	20.0#	15W2	20.6#	1.633	10887	7258	5444	4356	3630	3111	2722	2420	2178	1980	1815	1556	1361
1-3/4" x 5/16"	15W4	25.7#	15W2	27.2#	2.042	13605	9072	6806	5444	4537	3889	3403	3025	2722	2475	2269	1944	1701
1-3/4" x 3/8"	15W4	30.5#	15W2	32.0#	2.450	16333	10889	8167	6533	5444	4667	4083	3630	3267	2970	2722	2333	2042
2" x 1/4"	15W4	22.8#	15W2	23.4#	2.133	14220	9480	7111	5689	4741	4063	3556	3160	2844	2586	2370	2032	1778
2" x 5/16"	15W4	29.2#	15W2	30.7#	2.667	17780	11853	8889	7111	5926	5079	4444	3951	3556	3232	2963	2540	2222
2" x 3/8"	15W4	34.7#	15W2	36.2#	3.200	21333	14222	10667	8533	7111	6095	5333	4741	4267	3879	3556	3048	2667
2-1/4" x 1/4"	15W4	25.6#	15W2	26.2#	2.700	18000	12000	9000	7200	6000	5143	4500	4000	3600	3273	3000	2571	2250
2-1/4" x 5/16"	15W4	32.6#	15W2	34.1#	3.375	29977	14996	11250	9000	7500	6429	5625	5000	4500	4091	3750	3214	2813
2-1/4" x 3/8"	15W4	38.8#	15W2	40.3#	4.050	27000	18000	13500	10800	9000	7714	6750	6000	5400	4909	4500	3857	3375
2-1/2" x 1/4"	15W4	28.3#	15W2	28.9#	3.333	22220	14813	11111	8889	7407	6349	5556	4938	4444	4040	3704	3175	2778
2-1/2" x 5/16"	15W4	36.1#	15W2	37.6#	4.167	27780	18520	13889	11111	9259	7937	6944	6173	5556	5051	4630	3968	3472
2-1/2" x 3/8"	15W4	42.9#	15W2	44.4#	5.000	33333	22222	16667	13333	11111	9524	8333	7407	6667	6061	5556	4762	4167
2-3/4" x 1/4"	15W4	32.0#	15W2	33.5#	4.033	26875	17921	13444	10756	8963	7683	6722	5975	5378	4889	4481	3841	3361
2-3/4" x 5/16"	15W4	40.1#	15W2	42.1#	5.042	33595	22402	16806	13444	11204	9603	8403	7469	6722	6111	5602	4802	4201
2-3/4" x 3/8"	15W4	47.6#	15W2	49.7#	6.050	40314	26882	20167	16133	13444	11524	10083	8963	8067	7333	6722	5762	5042
3" x 1/4"	15W4	34.8#	15W2	36.3#	4.800	32000	21333	16000	12800	10667	9143	8000	7111	6400	5818	5333	4571	4000
3" x 5/16"	15W4	43.6#	15W2	45.6#	6.000	40000	26667	20000	16000	13333	11429	10000	8889	8000	7273	6667	5714	5000
3" x 3/8"	15W4	51.8#	15W2	53.8#	7.200	48000	32000	24000	19200	16000	13714	12000	10667	9600	8727	8000	6857	6000
3-1/4" x 1/4"	15W4	37.5#	15W2	39.0#	5.633	37537	25031	18778	15022	12519	10730	9389	8346	7511	6828	6259	5365	4694
3-1/4" x 5/16"	15W4	47.0#	15W2	49.1#	7.042	46921	31288	23472	18778	15648	13413	11736	10432	9389	8535	7824	6706	5868
3-1/4" x 3/8"	15W4	55.9#	15W2	58.0#	8.450	56306	37547	28167	22533	18778	16095	14083	12519	11267	10242	9389	8048	7042
3-1/2" x 1/4"	15W4	40.3#	15W2	41.8#	6.533	43553	29036	21778	17422	14519	12444	10889	9679	8711	7919	7259	6222	5444
3-1/2" x 5/16"	15W4	50.5#	15W2	52.5#	8.167	54417	36287	27222	21778	18148	15556	13611	12099	10889	9899	9074	7778	6806
3-1/2" x 3/8"	15W4	60.1#	15W2	62.1#	9.800	65333	43556	32667	26133	21778	18667	16333	14519	13067	11879	10889	9333	8167
4" x 1/4"	15W4	45.9#	15W2	47.4#	8.533	56887	37924	28444	22756	18963	16254	14222	12642	11378	10343	9481	8127	7111
4" x 5/16"	15W4	57.4#	15W2	59.4#	10.667	71076	47409	35556	28444	23704	20317	17778	15802	14222	12929	11852	10159	8889
4" x 3/8"	15W4	68.3#	15W2	70.4#	12.800	85291	56889	42667	34133	28444	24381	21333	18963	17067	15515	14222	12190	10667
4-1/2" x 1/4"	15W4	51.4#	15W2	52.9#	10.800	71964	48000	36000	28800	24000	20571	18000	16000	14400	13091	12000	10286	9000
4-1/2" x 5/16"	15W4	64.3#	15W2	66.4#	13.500	89955	59985	45000	36000	30000	25714	22500	20000	18000	16364	15000	12857	11250
4-1/2" x 3/8"	15W4	76.6#	15W2	78.7#	16.200	107946	71982	54000	43200	36000	30857	27000	24000	21600	19636	18000	15429	13500
5" x 1/4"	15W4	56.9#	15W2	58.4#	13.333	88844	59244	44444	35556	29630	25397	22222	19753	17778	16162	14815	12698	11111
5" x 5/16"	15W4	71.2#	15W2	73.3#	16.667	111056	74056	55556	44444	37037	31746	27778	24691	22222	20202	18519	15873	13889
5" x 3/8"	15W4	84.9#	15W2	87.0#	20.000	133267	88867	66667	53333	44444	38095	33333	29630	26667	24242	22222	19048	16667
6" x 1/4"	15W4	68.0#	15W2	69.5#	19.200	127936	85312	64000	51200	42667	36571	32000	28444	25600	23273	21333	18286	16000
6" x 5/16"	15W4	85.1#	15W2	87.1#	24.000	159920	106640	80000	64000	53333	45714	40000	35556	32000	29091	26667	22857	20000
6" x 3/8"	15W4	101.5#	15W2	103.5#	28.800	191904	127968	96000	76800	64000	54857	48000	42667	38400	34909	32000	27429	24000

* Based on 12.8 bars/ft of grating width. Bearing bars 15/16" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

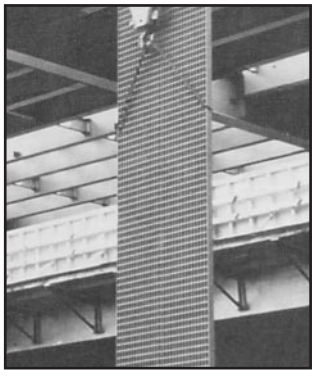
Bar Size	Sec. Mod. Per Ft. Of Width**	Moment of Inertia**	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/ H-20
1" x 1/4"	.533	.267	3/8" Dia.	8"	7"	8"	10"
1" x 3/8"	.800	.400	3/8" Dia.	11"	8"	10"	13"
1-1/4" x 1/4"	.833	.521	3/8" Dia.	11"	9"	10"	13"
1-1/4" x 3/8"	1.250	.781	3/8" Dia.	16"	11"	13"	16"
1-1/2" x 1/4"	1.200	.900	3/8" Dia.	15"	11"	13"	16"
1-1/2" x 5/16"	1.500	1.125	3/8" Dia.	19"	13"	15"	18"
1-1/2" x 3/8"	1.800	1.350	3/8" Dia.	22"	15"	16"	20"
1-3/4" x 1/4"	1.633	1.429	3/8" Dia.	20"	14"	15"	19"
1-3/4" x 3/8"	2.450	2.144	1/2" Dia.	30"	20"	21"	25"
2" x 1/4"	2.133	2.133	3/8" Dia.	26"	17"	19"	22"
2" x 5/16"	2.667	2.667	3/8" Dia.	32"	21"	22"	26"
2" x 3/8"	3.200	3.200	1/2" Dia.	38"	25"	25"	30"
2-1/4" x 1/4"	2.700	3.038	3/8" Dia.	32"	21"	22"	26"
2-1/4" x 3/8"	4.050	4.556	1/2" Dia.	47"*	30"	31"	36"
2-1/2" x 1/4"	3.333	4.167	3/8" Dia.	40"	26"	26"	31"
2-1/2" x 5/16"	4.167	5.208	3/8" Dia.	49"	31"	32"	37"
2-1/2" x 3/8"	5.000	6.250	1/2" Dia.	55"*	37"	37"	43"
3" x 1/4"	4.800	7.200	3/8" Dia.	56"	36"	36"	42"
3" x 5/16"	6.000	9.000	3/8" Dia.	66"*	44"	43"	50"
3" x 3/8"	7.200	10.800	1/2" Dia.	73"*	52"	51"	59"*
3-1/2" x 1/4"	6.533	11.433	3/8" Dia.	75"*	47"	47"	54"
3-1/2" x 3/8"	9.800	17.150	1/2" Dia.	92"*	69"	67"	73"*
4" x 1/4"	8.533	17.067	3/8" Dia.	92"*	61"	59"	69"
4" x 5/16"	10.667	21.333	3/8" Dia.	96"	75"	73"	81"*
4" x 3/8"	12.800	25.600	1/2" Dia.	96"	87"*	84"*	89"*
4-1/2" x 1/4"	10.800	24.300	3/8" Dia.	96"	76"	74"	85"
4-1/2" x 3/8"	16.200	36.450	1/2" Dia.	96"	96"	96"	96"
5" x 1/4"	13.333	33.333	3/8" Dia.	96"	93"	90"	96"
5" x 5/16"	16.667	41.667	1/2" Dia.	96"	96"	96"	96"
5" x 3/8"	20.000	50.000	1/2" Dia.	96"	96"	96"	96"
6" x 1/4"	19.200	57.600	1/2" Dia.	96"	96"	96"	96"
6" x 5/16"	24.000	72.000	1/2" Dia.	96"	96"	96"	96"
6" x 3/8"	28.800	86.400	1/2" Dia.	96"	96"	96"	96"

* Span limited to 1/400 of span = Deflection.
** Based on 12.8 bars/ft of grating width. Bearing bars 15/16" center to center.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar	No. of Bars	1/4 Bar	5/16 Bar	3/8 Bar
2	1-3/16	1-1/4	1-5/16	21	19	19-1/16	19-1/8
3	2-1/8	2-3/16	2-1/4	22	19-15/16	20	20-1/16
4	3-1/16	3-1/8	3-3/16	23	20-7/8	20-15/16	21
5	4	4-1/16	4-1/8	24	21-13/16	21-7/8	21-15/16
6	4-15/16	5	5-1/16	25	22-3/4	22-13/16	22-7/8
7	5-7/8	5-15/16	6	26	23-11/16	23-3/4	23-13/16
8	6-13/16	6-7/8	6-15/16	27	24-5/8	24-11/16	24-3/4
9	7-3/4	7-13/16	7-7/8	28	25-9/16	25-5/8	25-11/16
10	8-11/16	8-3/4	8-13/16	29	26-1/2	26-9/16	26-5/8
11	9-5/8	9-11/16	9-3/4	30	27-7/16	27-1/2	27-9/16
12	10-9/16	10-5/8	10-11/16	31	28-3/8	28-7/16	28-1/2
13	11-1/2	11-9/16	11-5/8	32	29-5/16	29-3/8	29-7/16
14	12-7/16	12-1/2	12-9/16	33	30-1/4	30-5/16	30-3/8
15	13-3/8	13-7/16	13-1/2	34	31-3/16	31-1/4	31-5/16
16	14-5/16	14-3/8	14-7/16	35	32-1/8	32-3/16	32-1/4
17	15-1/4	15-5/16	15-3/8	36	33-1/16	33-1/8	33-3/16
18	16-3/16	16-1/4	16-5/16	37	34	34-1/16	34-1/8
19	17-1/8	17-3/16	17-1/4	38	34-15/16	35	35-1/16
20	18-1/16	18-1/8	18-3/16	39	35-7/8	35-15/16	36

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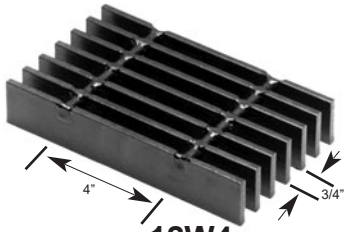


% Open Area				
BB Size	CB Centers	BB Thickness		
		1/4"	5/16"	3/8"
Thru 2-1/2"	4"cc	66%	60%	54%
	2"cc	60%	55%	49%
3" - 6"	4"cc	69%	62%	56%
	2"cc	64%	58%	53%

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12W4
Heavy Duty Welded

Meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.



12W4
3/4" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

Note: 12W4 is available in plain surface and 4" cross bar centers only.

Data is theoretical and based on 20,000 psi. **% Open Area = 60%**

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span							
				0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"
1" x 1/4"	12W4	14.73#	.667	8893	4447	2964	2223				
1-1/4" x 1/4"	12W4	18.14#	1.042	13893	6947	4631	3473	2779			
1-1/2" x 1/4"	12W4	21.53#	1.500	20000	10000	6667	5000	4000	3333		
1-3/4" x 1/4"	12W4	24.94#	2.042	27227	13613	9076	6807	5445	4538	3890	
2" x 1/4"	12W4	28.33#	2.667	35560	17780	11853	8890	7112	5927	5080	3160

* Based on 16 bars/ft of grating width. Bearing bars 3/4" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

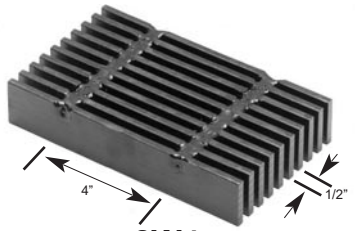
Bar Size	Sec. Mod. Per Ft. Of Width	Moment of Inertia	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
1" x 1/4"	.667	.333	3/8" Dia.	9"	7"	9"	11"
1-1/4" x 1/4"	1.042	.651	3/8" Dia.	13"	10"	11"	14"
1-1/2" x 1/4"	1.500	1.125	3/8" Dia.	18"	13"	14"	18"
1-3/4" x 1/4"	2.042	1.786	3/8" Dia.	23"	16"	18"	21"
2" x 1/4"	2.667	2.667	3/8" Dia.	30"	20"	21"	26"

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars

No. of Bars	1/4 Bar	No. of Bars	1/4 Bar
2	1	26	19
3	1-3/4	27	19-3/4
4	2-1/2	28	20-1/2
5	3-3/4	29	21-1/4
6	4	30	22
7	4-3/4	31	22-3/4
8	5-1/2	32	23-1/2
9	6-1/4	33	24-1/4
10	7	34	25
11	7-3/4	35	25-3/4
12	8-1/2	36	26-1/2
13	9-1/4	37	27-1/4
14	10	38	28
15	10-3/4	39	28-3/4
16	11-1/2	40	29-1/2
17	12-1/4	41	30-1/4
18	13	42	31
19	13-3/4	43	31-3/4
20	14-1/2	44	32-1/2
21	15-1/4	45	33-1/4
22	16	46	34
23	16-3/4	47	34-3/4
24	17-1/2	48	35-1/2
25	18-1/4	49	36-1/4

8W4
Heavy Duty Welded

Meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.



8W4
1/2" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

Note: 8W4 is available in plain surface and 4" cross bar centers only.

Data is theoretical and based on 20,000 psi. **% Open Area = 45%**

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span							
				0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"
1" x 1/4"	8W4	21.53#	1.000	13333	6667	4444	3333				
1-1/4" x 1/4"	8W4	26.64#	1.563	20840	10420	6947	5210	4168			
1-1/2" x 1/4"	8W4	31.73#	2.250	30000	15000	10000	7500	6000	5000		
1-3/4" x 1/4"	8W4	36.84#	3.063	40840	20420	13613	10210	8168	6807	5834	
2" x 1/4"	8W4	41.93#	4.000	53333	26667	17778	13333	10667	8889	7619	6667

* Based on 24 bars/ft of grating width. Bearing bars 1/2" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

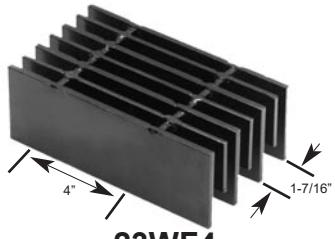
Bar Size	Sec. Mod. Per Ft. Of Width	Moment of Inertia	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
1" x 1/4"	1.000	.500	3/8" Dia.	11"	9"	11"	14"
1-1/4" x 1/4"	1.563	.977	3/8" Dia.	17"	13"	14"	18"
1-1/2" x 1/4"	2.250	1.688	3/8" Dia.	23"	17"	18"	22"
1-3/4" x 1/4"	3.063	2.680	3/8" Dia.	31"	22"	23"	28"
2" x 1/4"	4.000	4.000	3/8" Dia.	40"	27"	29"	34"

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars

No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar
2	3/4	26	12-3/4	50	24-3/4
3	1-1/4	27	13-1/4	51	25-1/4
4	1-3/4	28	13-3/4	52	25-3/4
5	2-1/4	29	14-1/4	53	26-1/4
6	2-3/4	30	14-3/4	54	26-3/4
7	3-1/4	31	15-1/4	55	27-1/4
8	3-3/4	32	15-3/4	56	27-3/4
9	4-1/4	33	16-1/4	57	28-1/4
10	4-3/4	34	16-3/4	58	28-3/4
11	5-1/4	35	17-1/4	59	29-1/4
12	5-3/4	36	17-3/4	60	29-3/4
13	6-1/4	37	18-1/4	61	30-1/4
14	6-3/4	38	18-3/4	62	30-3/4
15	7-1/4	39	19-1/4	63	31-1/4
16	7-3/4	40	19-3/4	64	31-3/4
17	8-1/4	41	20-1/4	65	32-1/4
18	8-3/4	42	20-3/4	66	32-3/4
19	9-1/4	43	21-1/4	67	33-1/4
20	9-3/4	44	21-3/4	68	33-3/4
21	10-1/4	45	22-1/4	69	34-1/4
22	10-3/4	46	22-3/4	70	34-3/4
23	11-1/4	47	23-1/4	71	35-1/4
24	11-3/4	48	23-3/4	72	35-3/4
25	12-1/4	49	24-1/4		

23WF4
Heavy Duty Welded with Filler Bars

Meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.



23WF4
1-7/16" Ctr to Ctr of Bearing Bars
(11½WF4-Walking Surface)

Note: 23WF4 with Filler Bars is available in plain or serrated surfaces. Only available in 4" cross bar centers.

Data is theoretical and based on 20,000 psi.

% Open Area = 66%

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span										
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
2-1/2" x 1/4"	23WF4	29.67#	2.174	7247	5797	4831	4141	3623	3221					
3" x 1/4"	23WF4	33.21#	3.131	10437	8349	6958	5964	5218	4639	4175				
3-1/2" x 1/4"	23WF4	36.76#	4.261	14203	11363	9469	8116	7102	6313	5681	5165			
4" x 1/4"	23WF4	40.31#	5.565	18550	14840	12367	10600	9275	8244	7420	6745	6183		
4-1/2" x 1/4"	23WF4	43.86#	7.044	23480	18784	15653	13417	11740	10436	9392	8538	7827	6709	
5" x 1/4"	23WF4	47.41#	8.696	28987	23189	19324	16564	14493	12883	11595	10541	9662	8282	7247

* Based on 8.348 bars/ft of grating width. Bearing bars 1-7/16" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

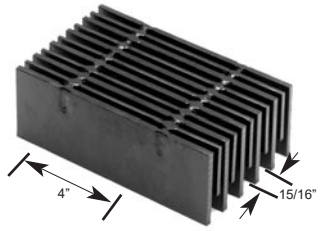
Bar Size	Sec. Mod. Per Ft. Of Width	Moment of Inertia	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
2-1/2" x 1/4"	2.174	2.717	1/4" x 1"	31"	19"	20"	24"
3" x 1/4"	3.131	4.696	1/4" x 1"	43"	27"	26"	31"
3-1/2" x 1/4"	4.261	7.457	1/4" x 1"	59"	35"	34"	40"
4" x 1/4"	5.565	11.131	1/4" x 1"	72"	45"	43"	50"
4-1/2" x 1/4"	7.044	15.848	1/4" x 1"	84"	56"	53"	61"
5" x 1/4"	8.696	21.740	1/4" x 1"	96"	69"	65"	73"

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars

No. of Bars	1/4 Bar
2	1-11/16
3	3-1/8
4	4-9/16
5	6
6	7-7/16
7	8-7/8
8	10-5/16
9	11-3/4
10	13-3/16
11	14-5/8
12	16-1/16
13	17-1/2
14	18-15/16
15	20-3/8
16	21-13/16
17	23-1/4
18	24-11/16

15WF4
Heavy Duty Welded with Filler Bars

Meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.



15WF4
15/16" Ctr to Ctr of Bearing Bars
(7½WF4-Walking Surface)

Note: 15WF4 with Filler Bars is available in plain or serrated surfaces. Only available in 4" cross bar centers.

Data is theoretical and based on 20,000 psi.

% Open Area = 51%

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Sec. Mod. Per Ft. Of Width	Maximum Safe Concentrated Load*, Lbs. - Clear Span										
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
2-1/2" x 1/4"	15WF4	44.81#	3.333	11110	8888	7407	6349	5555	4938					
3" x 1/4"	15WF4	50.25#	4.800	16000	12800	10667	9143	8000	7111	6400				
3-1/2" x 1/4"	15WF4	55.69#	6.533	21777	17421	14518	12444	10888	9679	8711	7919			
4" x 1/4"	15WF4	61.13#	8.533	28443	22755	18962	16253	14222	12641	11377	10343	9481		
4-1/2" x 1/4"	15WF4	66.57#	10.800	36000	28800	24000	20571	18000	16000	14400	13091	12000	10286	
5" x 1/4"	15WF4	72.01#	13.333	44443	35555	29629	25396	22222	19753	17777	16161	14814	12698	11111

* Based on 12.8 bars/ft of grating width. Bearing bars 15/16" center to center.
*** Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Bar Size	Sec. Mod. Per Ft. Of Width	Moment of Inertia	Cross Bar Size	Maximum Safe Clear Span, Inches - Partially Distributed Load			
				1 Ton	3 Ton	5 Ton	H-15/H-20
2-1/2" x 1/4"	3.333	4.167	1/4" x 1"	40"	26"	26"	31"
3" x 1/4"	4.800	7.200	1/4" x 1"	56"	36"	36"	42"
3-1/2" x 1/4"	6.533	11.433	1/4" x 1"	66"	47"	47"	54"
4" x 1/4"	8.533	17.067	1/4" x 1"	72"	61"	59"	69"
4-1/2" x 1/4"	10.800	24.300	1/4" x 1"	84"	76"	74"	84"
5" x 1/4"	13.333	33.333	1/4" x 1"	96"	93"	90"	96"

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars

No. of Bars	1/4 Bar
2	1-3/16
3	2-1/8
4	3-1/16
5	4
6	4-15/16
7	5-7/8
8	6-13/16
9	7-3/4
10	8-11/16
11	9-5/8
12	10-9/16
13	11-1/2
14	12-7/16
15	13-3/8
16	14-5/16
17	15-1/4
18	16-3/16
19	17-1/8
20	18-1/16
21	19
22	19-15/16
23	20-7/8
24	21-13/16
25	22-3/4
26	23-11/16

Bar Grating

ALUMINUM is a versatile option for special grating applications where environments require unique consideration. Aluminum has light mass, a high strength-to-weight ratio, and high corrosion resistance, making it an ideal option for applications including food/beverage preparation, water vessels and sewage treatment facilities. It is available in Swaged, I-Bar, Press-Locked and Flush Top construction and in several bearing bar sizes. Most common bearing bar and cross rod spacing is 19-4 (1-3/16" and 4", respectively).

Bar Grating having a 1/2" maximum opening conforms with the Americans With Disabilities Act Guidelines (ADA) when installed with the elongated opening perpendicular to the dominant direction of travel. Brown-Campbell offers 11/16" and 5/8" in 3/16" width and 1/2" and 7/16" in 1/8" and 3/16" widths aluminum bar grating to meet your special ADA needs.

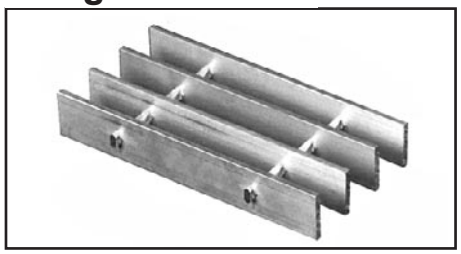
In addition, Brown-Campbell offers *Extruded Aluminum Grating Frames* for embedded concrete applications, please see page 87 for details.

Serrated and Slip Resistant Surfaces Available
- See page 88

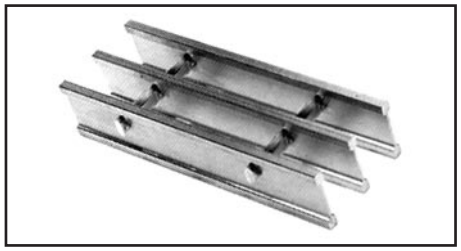


Same Day Service!

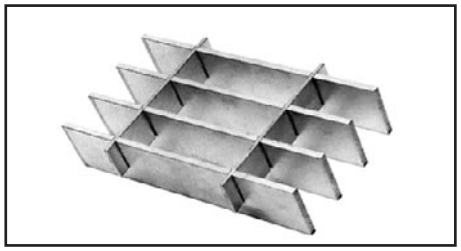
Swaged



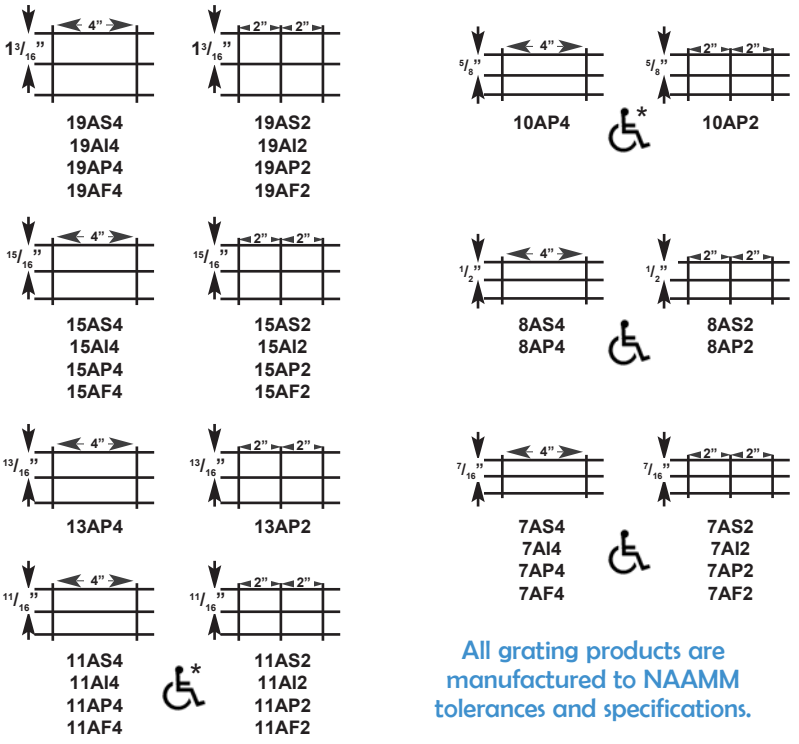
I-Bar



Press-Locked



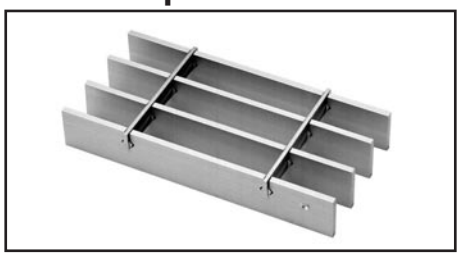
AS=Swaged; AI=I-Bar;
AP=Press-Locked; AF=Flush Top



All grating products are manufactured to NAAMM tolerances and specifications.

* 3/16" bearing bar widths conform with **ADA** spacing requirements

Flush Top



Swaged - Square cross rods are swaged through punched diamond shaped holes in rectangular bearing bars. Provides lower cost alternative to press-locked aluminum grating with the same strength. Swage-locking does not provide a cross rod flush with the walking surface.

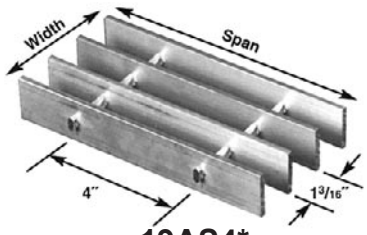
I-Bar - Bearing Bars are thicker at top and bottom to provide similar strength to rectangular bar but with lighter weight. Cross rods are swage-locked. The striated top and bottom flanges provide a "built-in" skid resistance without serration. This product is the lightest weight aluminum grating alternative.

Press-Locked - Bearing bars and cross rods are hydraulically pressed together by cross rod deformation without welds or rivets to form a permanent bond. The permanent bond is achieved by slotting the bearing bars with a wider 'dovetail' shape at the bottom of the slot, thus locking in the cross rod when hydraulically pressed together. Cross rods are flush with the walking surface.

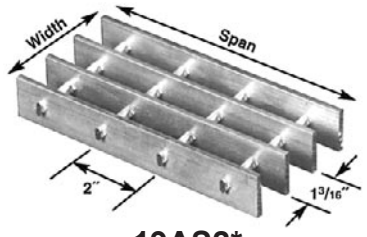
Flush Top - A type of press-locked grating in which cross rods are flush with the walking surface.

19AS4 & 19AS2 Swaged*

*Also available in Aluminum press-locked - **19AP4/19AP2** and Aluminum Flush Top - **19AF4/19AF2**. Please reference page 66 for examples of these products.



19AS4*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



19AS2*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Approx. Weight*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	19AP4 1.5# 19AP2 1.8#	19AS4 1.5# 19AS2 1.8#	n/a	31"	.118	U	237	152	105	77									
						D	.192	.300	.432	.588									
						C	237	189	158	135									
						D	.154	.240	.346	.470									
3/4" x 3/16"	19AP4 2.3# 19AP2 2.8#	19AS4 2.1# 19AS2 2.4#	n/a	35"	.178	U	355	227	158	116									
						D	.192	.300	.432	.588									
						C	355	284	237	203									
						D	.154	.240	.346	.470									
1" x 1/8"	19AP4 1.9# 19AP2 2.2#	19AS4 1.9# 19AS2 2.2#	19AF4 1.8# 19AF2 2.2#	39"	.211	U	421	269	187	137	105								
						D	.144	.225	.324	.441	.576								
						C	421	337	281	241	211								
						D	.115	.180	.259	.353	.461								
1" x 3/16"	19AP4 2.8# 19AP2 3.3#	19AS4 2.7# 19AS2 3.0#	19AF4 2.5# 19AF2 2.9#	43"	.316	U	632	404	281	206	158	125							
						D	.144	.225	.324	.441	.576	.729							
						C	632	505	421	361	316	281							
						D	.115	.180	.259	.353	.461	.583							
1-1/4" x 1/8"	19AP4 2.4# 19AP2 2.8#	19AS4 2.3# 19AS2 2.6#	19AF4 2.2# 19AF2 2.6#	46"	.329	U	658	421	292	215	164	130							
						D	.115	.180	.259	.353	.461	.583							
						C	658	526	439	376	329	292							
						D	.092	.144	.207	.282	.369	.467							
1-1/4" x 3/16"	19AP4 3.6# 19AP2 4.3#	19AS4 3.2# 19AS2 3.6#	19AF4 3.1# 19AF2 3.5#	51"	.493	U	987	632	439	322	247	195	158						
						D	.115	.180	.259	.353	.461	.583	.720						
						C	987	789	658	564	493	439	395						
						D	.092	.144	.207	.282	.369	.467	.576						
1-1/2" x 1/8"	19AP4 2.8# 19AP2 3.2#	19AS4 2.7# 19AS2 3.0#	19AF4 2.7# 19AF2 3.1#	53"	.474	U	947	606	421	309	237	187	152						
						D	.096	.150	.216	.294	.384	.486	.600						
						C	947	758	632	541	474	421	379						
						D	.077	.120	.173	.235	.307	.389	.480						
1-1/2" x 3/16"	19AP4 4.2# 19AP2 4.8#	19AS4 3.8# 19AS2 4.1#	19AF4 3.8# 19AF2 4.2#	59"	.711	U	1421	909	632	464	355	281	227	188					
						D	.096	.150	.216	.294	.384	.486	.600	.726					
						C	1421	1137	947	812	711	632	568	517					
						D	.077	.120	.173	.235	.307	.389	.480	.581					
1-3/4" x 3/16"	19AP4 4.8# 19AP2 5.4#	19AS4 4.4# 19AS2 4.7#	19AF4 4.3# 19AF2 4.7#	66"	.967	U	1934	1238	860	632	484	382	309	256	215	183			
						D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869			
						C	1934	1547	1289	1105	967	860	774	703	645	595			
						D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695			
2" x 3/16"	19AP4 5.3# 19AP2 6.0#	19AS4 5.0# 19AS2 5.3#	19AF4 4.9# 19AF2 5.3#	73"	1.263	U	2526	1617	1123	825	632	499	404	334	281	239	206		
						D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882		
						C	2526	2021	1684	1444	1263	1123	1011	919	842	777	722		
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706		
2-1/4" x 3/16"	19AP4 5.9# 19AP2 6.6#	19AS4 5.6# 19AS2 5.9#	19AF4 5.5# 19AF2 5.9#	80"	1.599	U	3197	2046	1421	1044	799	632	512	423	355	303	261	200	
						D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	
						C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	799	
						D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	
2-1/2" x 3/16"	19AP4 6.5# 19AP2 7.2#	19AS4 6.2# 19AS2 6.5#	19AF4 6.0# 19AF2 6.4#	87"	1.974	U	3947	2526	1754	1289	987	780	632	522	439	374	322	247	195
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
						C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987	877
						D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 12,000 psi. Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	85%	80%
2"cc	81%	77%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

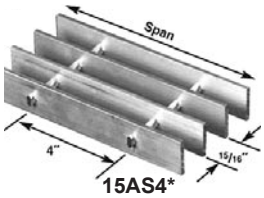
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

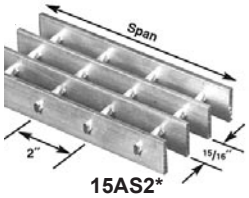
No. of Bars	1/8 Bar	3/16 Bar
2	1-5/16	1-3/8
3	2-1/2	2-9/16
4	3-11/16	3-3/4
5	4-7/8	4-15/16
6	6-1/16	6-1/8
7	7-1/4	7-5/16
8	8-7/16	8-1/2
9	9-5/8	9-11/16
10	10-13/16	10-7/8
11	12	12-1/16
12	13-3/16	13-1/4
13	14-3/8	14-7/16
14	15-9/16	15-5/8
15	16-3/4	16-13/16
16	17-15/16	18
17	19-1/8	19-3/16
18	20-5/16	20-3/8
19	21-1/2	21-9/16
20	22-11/16	22-3/4
21	23-7/8	23-15/16
22	25-1/16	25-1/8
23	26-1/4	26-5/16
24	27-7/16	27-1/2
25	28-5/8	28-11/16
26	29-13/16	29-7/8
27	31	31-1/16
28	32-3/16	32-1/4
29	33-3/8	33-7/16
30	34-9/16	34-5/8
31	35-3/4	35-13/16

Bar Grating

15AS4 & 15AS2
Swaged*



15AS4*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



15AS2*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in aluminum press-locked - **15AP4/15AP2** and aluminum flush top - **15AF4/15AF2**. Please reference page 66 for examples of these products.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	15AP4 1.8# 15AP2 2.1#	15AS4 1.8# 15AS2 2.1#	n/a	33"	.150	U	300	192	133	98									
						D	.192	.300	.432	.588									
						C	300	240	200	171									
						D	.154	.240	.346	.470									
3/4" x 3/16"	15AP4 2.7# 15AP2 3.2#	15AS4 2.5# 15AS2 2.8#	n/a	37"	.225	U	450	288	200	147	113								
						D	.192	.300	.432	.588	.768								
						C	450	360	300	257	225								
						D	.154	.240	.346	.470	.614								
1" x 1/8"	15AP4 2.3# 15AP2 2.6#	15AS4 2.3# 15AS2 2.6#	n/a	42"	.267	U	533	341	237	174	133								
						D	.144	.225	.324	.441	.576								
						C	533	427	356	305	267								
						D	.115	.180	.259	.353	.461								
1" x 3/16"	15AP4 3.4# 15AP2 3.9#	15AS4 3.3# 15AS2 3.6#	15AF4 3.1# 15AF2 3.5#	46"	.400	U	800	512	356	261	200	158							
						D	.144	.225	.324	.441	.576	.729							
						C	800	640	533	457	400	356							
						D	.115	.180	.259	.353	.461	.583							
1-1/4" x 1/8"	15AP4 2.9# 15AP2 3.3#	15AS4 2.8# 15AS2 3.1#	n/a	49"	.417	U	833	533	370	272	208	165	133						
						D	.115	.180	.259	.353	.461	.583	.720						
						C	833	667	556	476	417	370	333						
						D	.092	.144	.207	.282	.369	.467	.576						
1-1/4" x 3/16"	15AP4 4.3# 15AP2 5.0#	15AS4 4.0# 15AS2 4.3#	15AF4 3.9# 15AF2 4.3#	55"	.625	U	1250	800	556	408	313	247	200	165					
						D	.115	.180	.259	.353	.461	.583	.720	.871					
						C	1250	1000	833	714	625	556	500	455					
						D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/2" x 1/8"	15AP4 3.4# 15AP2 3.8#	15AS4 3.3# 15AS2 3.6#	n/a	57"	.600	U	1200	768	533	392	300	237	192	159					
						D	.096	.150	.216	.294	.384	.486	.600	.726					
						C	1200	960	800	686	600	533	480	436					
						D	.077	.120	.173	.235	.307	.389	.480	.581					
1-1/2" x 3/16"	15AP4 5.1# 15AP2 5.8#	15AS4 4.7# 15AS2 5.0#	15AF4 4.7# 15AF2 5.1#	63"	.900	U	1800	1152	800	588	450	356	288	238	200				
						D	.096	.150	.216	.294	.384	.486	.600	.726	.864				
						C	1800	1440	1200	1029	900	800	720	655	600				
						D	.077	.120	.173	.235	.307	.389	.480	.581	.691				
1-3/4" x 3/16"	15AP4 5.8# 15AP2 6.5#	15AS4 5.5# 15AS2 5.8#	15AF4 5.4# 15AF2 5.8#	70"	1.225	U	2450	1568	1089	800	613	484	392	324	272	232			
						D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869			
						C	2450	1960	1633	1400	1225	1089	980	891	817	754			
						D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695			
2" x 3/16"	15AP4 6.5# 15AP2 7.2#	15AS4 6.2# 15AS2 6.5#	15AF4 6.1# 15AF2 6.5#	78"	1.600	U	3200	2048	1422	1045	800	632	512	423	356	303	261		
						D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882		
						C	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914		
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706		
2-1/4" x 3/16"	15AP4 7.3# 15AP2 8.0#	15AS4 6.9# 15AS2 7.2#	15AF4 6.8# 15AF2 7.2#	85"	2.025	U	4050	2592	1800	1322	1013	800	648	536	450	383	331	253	200
						D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
						C	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013	900
						D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	15AP4 8.0# 15AP2 8.7#	15AS4 7.7# 15AS2 8.0#	15AF4 7.5# 15AF2 7.9#	92"	2.500	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	247
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
						C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250	1111
						D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 12,000 psi.
Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	83%	76%
2"cc	79%	73%

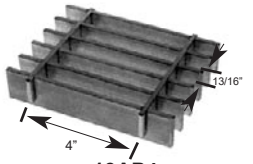
[1]Open Area % for reference only - %'s will vary with material & mfg. process.

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

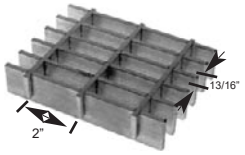
PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar
2	1-1/16	1-1/8
3	2	2-1/16
4	2-5/16	3
5	3-7/8	3-15/16
6	4-13/16	4-7/8
7	5-3/4	5-13/16
8	6-11/16	6-3/4
9	7-5/8	7-11/16
10	8-9/16	8-5/8
11	9-1/2	9-9/16
12	10-7/16	10-1/2
13	11-3/8	11-7/16
14	12-5/16	12-3/8
15	13-1/4	13-5/16
16	14-3/16	14-1/4
17	15-1/8	15-3/16
18	16-1/16	16-1/8
19	17	17-1/16
20	17-15/16	18
21	18-7/8	18-15/16
22	19-13/16	19-7/8
23	20-3/4	20-13/16
24	21-11/16	21-3/4
25	22-5/8	22-11/16
26	23-9/16	23-5/8
27	24-1/2	24-9/16
28	25-7/16	25-1/2
29	26-3/8	26-7/16
30	27-5/16	27-3/8
31	28-1/4	28-5/16
32	29-3/16	29-1/4
33	30-1/8	30-3/16
34	31-1/16	31-1/8
35	32	32-1/16
36	32-15/16	33
37	33-7/8	33-15/16
38	34-13/16	34-7/8
39	35-3/4	35-13/16

13AP4 & 13AP2
Press-Locked



13AP4
13/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



13AP2
13/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	13AP4 2.0# 13AP2 2.4#	35"	.173	U	346	222	154	113									
				D	.192	.300	.432	.588									
				C	346	277	231	198									
				D	.154	.240	.346	.470									
3/4" x 3/16"	13AP4 3.0# 13AP2 3.5#	38"	.260	U	519	332	231	170	130								
				D	.192	.300	.432	.588	.768								
				C	519	415	346	297	260								
				D	.154	.240	.346	.470	.614								
1" x 1/8"	13AP4 2.6# 13AP2 2.9#	43"	.308	U	615	394	274	201	154								
				D	.144	.225	.324	.441	.576								
				C	615	492	410	352	308								
				D	.115	.180	.259	.353	.461								
1" x 3/16"	13AP4 3.9# 13AP2 4.4#	48"	.462	U	923	591	410	301	231	182							
				D	.144	.225	.324	.441	.576	.729							
				C	923	738	615	527	462	410							
				D	.115	.180	.259	.353	.461	.583							
1-1/4" x 1/8"	13AP4 3.3# 13AP2 3.7#	51"	.481	U	962	615	427	314	240	190							
				D	.115	.180	.259	.353	.461	.583							
				C	962	769	641	549	481	427							
				D	.092	.144	.207	.282	.369	.467							
1-1/4" x 3/16"	13AP4 4.9# 13AP2 5.6#	57"	.721	U	1442	923	641	471	361	285	231	191					
				D	.115	.180	.259	.353	.461	.583	.720	.871					
				C	1442	1154	962	824	721	641	577	524					
				D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/2" x 1/8"	13AP4 3.8# 13AP2 4.3#	59"	.692	U	1385	886	615	452	346	274	222	183					
				D	.096	.150	.216	.294	.384	.486	.600	.726					
				C	1385	1108	923	791	692	615	554	503					
				D	.077	.120	.173	.235	.307	.389	.480	.581					
1-1/2" x 3/16"	13AP4 5.7# 13AP2 6.4#	65"	1.038	U	2077	1329	923	678	519	410	332	275	231				
				D	.096	.150	.216	.294	.384	.486	.600	.726	.864				
				C	2077	1662	1385	1187	1038	923	831	755	692				
				D	.077	.120	.173	.235	.307	.389	.480	.581	.691				
1-3/4" x 3/16"	13AP4 6.6# 13AP2 7.3#	73"	1.413	U	2827	1809	1256	923	707	558	452	374	314	268			
				D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869			
				C	2827	2262	1885	1615	1413	1256	1131	1028	942	870			
				D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695			
2" x 3/16"	13AP4 7.4# 13AP2 8.1#	81"	1.846	U	3692	2363	1641	1206	923	729	591	488	410	350	301		
				D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882		
				C	3692	2954	2462	2110	1846	1641	1477	1343	1231	1136	1055		
				D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706		
2-1/4" x 3/16"	13AP4 8.3# 13AP2 8.9#	88"	2.337	U	4673	2991	2077	1526	1168	923	748	618	519	442	381	292	231
				D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
				C	4673	3738	3115	2670	2337	2077	1869	1699	1558	1438	1335	1168	1038
				D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	13AP4 9.1# 13AP2 9.8#	95"	2.885	U	5769	3692	2564	1884	1442	1140	923	763	641	546	471	361	285
				D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
				C	5769	4615	3846	3297	2885	2564	2308	2098	1923	1775	1648	1442	1282
				D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 12,000 psi.
Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	80%	72%
2"cc	74%	68%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

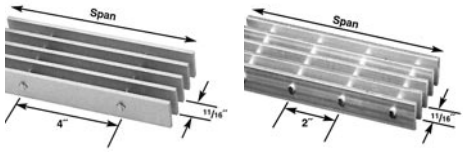
***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar
2	15/16	1
3	1-3/4	1-13/16
4	2-9/16	2-5/8
5	3-3/8	3-7/16
6	4-3/16	4-1/4
7	5	5-1/16
8	5-13/16	5-7/8
9	6-5/8	6-11/16
10	7-7/16	7-1/2
11	8-1/4	8-5/16
12	9-1/16	9-1/8
13	9-7/8	9-15/16
14	10-11/16	10-3/4
15	11-1/2	11-9/16
16	12-5/16	12-3/8
17	13-1/8	13-3/16
18	13-15/16	14
19	14-3/4	14-13/16
20	15-9/16	15-5/8
21	16-3/8	16-7/16
22	17-3/16	17-1/4
23	18	18-1/16
24	18-13/16	18-7/8
25	19-5/8	19-11/16
26	20-7/16	20-1/2
27	21-1/4	21-5/16
28	22-1/16	22-1/8
29	22-7/8	22-15/16
30	23-11/16	23-3/4
31	24-1/2	24-9/16
32	25-5/16	25-3/8
33	26-1/8	26-3/16
34	26-15/16	27
35	27-3/4	27-13/16
36	28-9/16	28-5/8
37	29-3/8	29-7/16
38	30-3/16	30-1/4
39	31	31-1/16
40	31-13/16	31-7/8
41	32-5/8	32-11/16
42	33-7/16	33-1/2
43	34-1/4	34-5/16
44	35-1/16	35-1/8
45	35-7/8	35-15/16

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above tables.

11AS4 & 11AS2 - Swaged*



11AS4*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

11AS2*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in aluminum press-locked - **11AP4/11AP2** and aluminum flush top - **11AF4/11AF2**. Please reference page 66 for examples of these products.

11/16" Bar Grating with 3/16" bearing bar width meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	13/16	7/8	28	18-11/16	18-3/4
3	1-1/2	1-9/16	29	19-3/8	19-7/16
4	2-3/16	2-1/4	30	20-1/16	20-1/8
5	2-7/8	2-15/16	31	20-3/4	20-13/16
6	3-9/16	3-5/8	32	21-7/16	21-1/2
7	4-1/4	4-5/16	33	22-1/8	22-3/16
8	4-15/16	5	34	22-13/16	22-7/8
9	5-5/8	5-11/16	35	23-1/2	23-9/16
10	6-5/16	6-3/8	36	24-3/16	24-1/4
11	7	7-1/16	37	24-7/8	24-15/16
12	7-11/16	7-3/4	38	25-9/16	25-5/8
13	8-3/8	8-7/16	39	26-1/4	26-5/16
14	9-1/16	9-1/8	40	26-15/16	27
15	9-3/4	9-13/16	41	27-5/8	27-11/16
16	10-7/16	10-1/2	42	28-5/16	28-3/8
17	11-1/8	11-3/16	43	29	29-1/16
18	11-13/16	11-7/8	44	29-11/16	29-3/4
19	12-1/2	12-9/16	45	30-3/8	30-7/16
20	13-3/16	13-1/4	46	31-1/16	31-1/8
21	13-7/8	13-15/16	47	31-3/4	31-13/16
22	14-9/16	14-5/8	48	32-7/16	32-1/2
23	15-1/4	15-5/16	49	33-1/8	33-3/16
24	15-15/16	16	50	33-13/16	33-7/8
25	16-5/8	16-11/16	51	34-1/2	34-9/16
26	17-5/16	17-3/8	52	35-3/16	35-1/4
27	18	18-1/16	53	35-7/8	35-15/16

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	11AP4 2.3# 11AP2 2.7#	11AS4 2.3# 11AS2 2.6#	n/a	36"	.205	U	409	262	182	134	102								
						D	.192	.300	.432	.588	.768								
						C	409	327	273	234	205								
						D	.154	.240	.346	.470	.614								
3/4" x 3/16"	11AP4 3.5# 11AP2 4.0#	11AS4 3.3# 11AS2 3.6#	n/a	40"	.307	U	614	393	273	200	153								
						D	.192	.300	.432	.588	.768								
						C	614	491	409	351	307								
						D	.154	.240	.346	.470	.614								
1" x 1/8"	11AP4 3.0# 11AP2 3.3#	11AS4 3.0# 11AS2 3.3#	n/a	45"	.364	U	727	465	323	237	182	144							
						D	.144	.225	.324	.441	.576	.729							
						C	727	582	485	416	364	323							
						D	.115	.180	.259	.353	.461	.583							
1" x 3/16"	11AP4 4.5# 11AP2 5.0#	11AS4 4.3# 11AS2 4.6#	11AF4 4.1# 11AF2 4.5#	50"	.545	U	1091	698	485	356	273	215	175						
						D	.144	.225	.324	.441	.576	.729	.900						
						C	1091	873	727	623	545	485	436						
						D	.115	.180	.259	.353	.461	.583	.720						
1-1/4" x 1/8"	11AP4 3.8# 11AP2 4.2#	11AS4 3.6# 11AS2 4.0#	n/a	53"	.568	U	1136	727	505	371	284	224	182						
						D	.115	.180	.259	.353	.461	.583	.720						
						C	1136	909	758	649	568	505	455						
						D	.092	.144	.207	.282	.369	.467	.576						
1-1/4" x 3/16"	11AP4 5.6# 11AP2 6.3#	11AS4 5.3# 11AS2 5.6#	11AF4 5.1# 11AF2 5.5#	59"	.852	U	1705	1091	758	557	426	337	273	225					
						D	.115	.180	.259	.353	.461	.583	.720	.871					
						C	1705	1364	1136	974	852	758	682	620					
						D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/2" x 1/8"	11AP4 4.4# 11AP2 4.9#	11AS4 4.3# 11AS2 4.6#	n/a	61"	.818	U	1636	1047	727	534	409	323	262	216	182				
						D	.096	.150	.216	.294	.384	.486	.600	.726	.864				
						C	1636	1309	1091	935	818	727	655	595	545				
						D	.077	.120	.173	.235	.307	.389	.480	.581	.691				
1-1/2" x 3/16"	11AP4 6.6# 11AP2 7.3#	11AS4 6.3# 11AS2 6.6#	11AF4 6.2# 11AF2 6.6#	68"	1.227	U	2455	1571	1091	801	614	485	393	325	273	232			
						D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014			
						C	2455	1964	1636	1403	1227	1091	982	893	818	755			
						D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811			
1-3/4" x 3/16"	11AP4 7.6# 11AP2 8.3#	11AS4 7.3# 11AS2 7.6#	11AF4 7.2# 11AF2 7.6#	76"	1.670	U	3341	2138	1485	1091	835	660	535	442	371	316	273		
						D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008		
						C	3341	2673	2227	1909	1670	1485	1336	1215	1114	1028	955		
						D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806		
2" x 3/16"	11AP4 8.6# 11AP2 9.3#	11AS4 8.3# 11AS2 8.6#	11AF4 8.1# 11AF2 8.5#	84"	2.182	U	4364	2793	1939	1425	1091	862	698	577	485	413	356	273	215
						D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
						C	4364	3491	2909	2494	2182	1939	1745	1587	1455	1343	1247	1091	970
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	11AP4 9.6# 11AP2 10.3#	11AS4 9.3# 11AS2 9.6#	11AF4 9.1# 11AF2 9.5#	92"	2.761	U	5523	3535	2455	1803	1381	1091	884	730	614	523	451	345	273
						D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
						C	5523	4418	3682	3156	2761	2455	2209	2008	1841	1699	1578	1381	1227
						D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	11AP4 10.6# 11AP2 11.3#	11AS4 10.3# 11AS2 10.6#	11AF4 10.1# 11AF2 10.5#	100"	3.409	U	6818	4364	3030	2226	1705	1347	1091	902	758	646	557	426	337
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
						C	6818	5455	4545	3896	3409	3030	2727	2479	2273	2098	1948	1705	1515
						D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 12,000 psi. Install Cross Rods on Top.

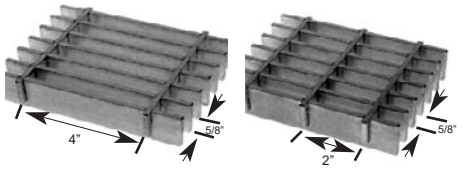
% Open Area[1]

Bars	1/8"	3/16"
4"cc	78%	69%
2"cc	74%	65%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

10AP4 & 10AP2 - Press-Locked



10AP4
5/8" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

10AP2
5/8" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

5/8" Bar Grating with 3/16" bearing bar width meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	3/4	13/16	31	18-7/8	18-15/16
3	1-3/8	1-7/16	32	19-1/2	19-9/16
4	2	2-1/16	33	20-1/8	20-3/16
5	2-5/8	2-11/16	34	20-3/4	20-13/16
6	3-1/4	3-5/16	35	21-3/8	21-7/16
7	3-7/8	3-15/16	36	22	22-1/16
8	4-1/2	4-9/16	37	22-5/8	22-11/16
9	5-1/8	5-3/16	38	23-1/4	23-5/16
10	5-3/4	5-13/16	39	23-7/8	23-15/16
11	6-3/8	6-7/16	40	24-1/2	24-9/16
12	7	7-1/16	41	25-1/8	25-3/16
13	7-5/8	7-11/16	42	25-3/4	25-13/16
14	8-1/4	8-5/16	43	26-3/8	26-7/16
15	8-7/8	8-15/16	44	27	27-1/16
16	9-1/2	9-9/16	45	27-5/8	27-11/16
17	10-1/8	10-3/16	46	28-1/4	28-5/16
18	10-3/4	10-13/16	47	28-7/8	28-15/16
19	11-3/8	11-7/16	48	29-1/2	29-9/16
20	12	12-1/16	49	30-1/8	30-3/16
21	12-5/8	12-11/16	50	30-3/4	30-13/16
22	13-1/4	13-5/16	51	31-3/8	31-7/16
23	13-7/8	13-15/16	52	32	32-1/16
24	14-1/2	14-9/16	53	32-5/8	32-11/16
25	15-1/8	15-3/16	54	33-1/4	33-5/16
26	15-3/4	15-13/16	55	33-7/8	33-15/16
27	16-3/8	16-7/16	56	34-1/2	34-9/16
28	17	17-1/6	57	35-1/8	35-3/16
29	17-5/8	17-11/16	58	35-3/4	35-13/16
30	18-1/4	18-5/16			

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	10AP4 2.5# 10AP2 2.9#	37"	.225	U	450	288	200	147	113								
				D	.192	.300	.432	.588	.768								
				C	450	360	300	257	225								
				D	.154	.240	.346	.470	.614								
3/4" x 3/16"	10AP4 3.8# 10AP2 4.3#	41"	.338	U	675	432	300	220	169								
				D	.192	.300	.432	.588	.768								
				C	675	540	450	386	338								
				D	.154	.240	.346	.470	.614								
1" x 1/8"	10AP4 3.3# 10AP2 3.6#	46"	.400	U	800	512	356	261	200	158							
				D	.144	.225	.324	.441	.576	.729							
				C	800	640	533	457	400	356							
				D	.115	.180	.259	.353	.461	.583							
1" x 3/16"	10AP4 4.9# 10AP2 5.4#	51"	.600	U	1200	768	533	392	300	237	192						
				D	.144	.225	.324	.441	.576	.729	.900						
				C	1200	960	800	686	600	533	480						
				D	.115	.180	.259	.353	.461	.583	.720						
1-1/4" x 1/8"	10AP4 4.1# 10AP2 4.5#	55"	.625	U	1250	800	556	408	313	247	200	165					
				D	.115	.180	.259	.353	.461	.583	.720	.871					
				C	1250	1000	833	714	625	556	500	455					
				D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/4" x 3/16"	10AP4 6.1# 10AP2 6.8#	60"	.938	U	1875	1200	833	612	469	370	300	248	208				
				D	.115	.180	.259	.353	.461	.583	.720	.871	1.037				
				C	1875	1500	1250	1071	938	833	750	682	625				
				D	.092	.144	.207	.282	.369	.467	.576	.697	.829				
1-1/2" x 1/8"	10AP4 4.8# 10AP2 5.3#	63"	.900	U	1800	1152	800	588	450	356	288	238	200				
				D	.096	.150	.216	.294	.384	.486	.600	.726	.864				
				C	1800	1440	1200	1029	900	800	720	655	600				
				D	.077	.120	.173	.235	.307	.389	.480	.581	.691				
1-1/2" x 3/16"	10AP4 7.2# 10AP2 7.9#	69"	1.350	U	2700	1728	1200	882	675	533	432	357	300	256			
				D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014			
				C	2700	2160	1800	1543	1350	1200	1080	982	900	831			
				D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811			
1-3/4" x 3/16"	10AP4 8.3# 10AP2 9.0#	78"	1.838	U	3675	2352	1633	1200	919	726	588	486	408	348	300	230	
				D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	
				C	3675	2940	2450	2100	1838	1633	1470	1336	1225	1131	1050	919	
				D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	
2" x 3/16"	10AP4 9.4# 10AP2 10.1#	86"	2.400	U	4800	3072	2133	1567	1200	948	768	635	533	454	392	300	237
				D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
				C	4800	3840	3200	2743	2400	2133	1920	1745	1600	1477	1371	1200	1067
				D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	10AP4 10.5# 10AP2 11.2#	94"	3.038	U	6075	3888	2700	1984	1519	1200	972	803	675	575	496	380	300
				D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
				C	6075	4860	4050	3471	3038	2700	2430	2209	2025	1869	1736	1519	1350
				D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	10AP4 11.6# 10AP2 12.3#	102"	3.750	U	7500	4800	3333	2449	1875	1481	1200	992	833	710	612	469	370
				D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
				C	7500	6000	5000	4286	3750	3333	3000	2727	2500	2308	2143	1875	1667
				D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 12,000 psi. Install Cross Rods on Top.

% Open Area[1]

Bars	1/8"	3/16"
4"cc	76%	67%
2"cc	71%	62%

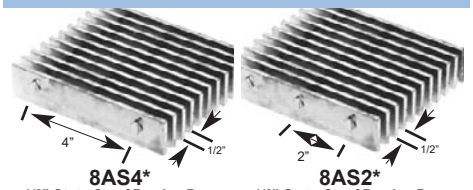
[1]Open Area % for reference only - %'s will vary with material & mfg. process.

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above tables.

Bar Grating

8AS4 & 8AS2 - Swaged*



8AS4*
1/2" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

8AS2*
1/2" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

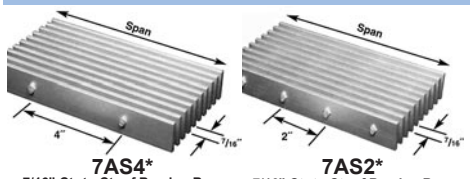
*Also available in aluminum press-locked - **8AP4/8AP2**. Please reference page 66 for an example of this product.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	5/8	11/16	26	12-5/8	12-11/16	50	24-5/8	24-11/16
3	1-1/8	1-3/16	27	13-1/8	13-3/16	51	25-1/8	25-3/16
4	1-5/8	1-11/16	28	13-5/8	13-11/16	52	25-5/8	25-11/16
5	2-1/8	2-3/16	29	14-1/8	14-3/16	53	26-1/8	26-3/16
6	2-5/8	2-11/16	30	14-5/8	14-11/16	54	26-5/8	26-11/16
7	3-1/8	3-3/16	31	15-1/8	15-3/16	55	27-1/8	27-3/16
8	3-5/8	3-11/16	32	15-5/8	15-11/16	56	27-5/8	27-11/16
9	4-1/8	4-3/16	33	16-1/8	16-3/16	57	28-1/8	28-3/16
10	4-5/8	4-11/16	34	16-5/8	16-11/16	58	28-5/8	28-11/16
11	5-1/8	5-3/16	35	17-1/8	17-3/16	59	29-1/8	29-3/16
12	5-5/8	5-11/16	36	17-5/8	17-11/16	60	29-5/8	29-11/16
13	6-1/8	6-3/16	37	18-1/8	18-3/16	61	30-1/8	30-3/16
14	6-5/8	6-11/16	38	18-5/8	18-11/16	62	30-5/8	30-11/16
15	7-1/8	7-3/16	39	19-1/8	19-3/16	63	31-1/8	31-3/16
16	7-5/8	7-11/16	40	19-5/8	19-11/16	64	31-5/8	31-11/16
17	8-1/8	8-3/16	41	20-1/8	20-3/16	65	32-1/8	32-3/16
18	8-5/8	8-11/16	42	20-5/8	20-11/16	66	32-5/8	32-11/16
19	9-1/8	9-3/16	43	21-1/8	21-3/16	67	33-1/8	33-3/16
20	9-5/8	9-11/16	44	21-5/8	21-11/16	68	33-5/8	33-11/16
21	10-1/8	10-3/16	45	22-1/8	22-3/16	69	34-1/8	34-3/16
22	10-5/8	10-11/16	46	22-5/8	22-11/16	70	34-5/8	34-11/16
23	11-1/8	11-3/16	47	23-1/8	23-3/16	71	35-1/8	35-3/16
24	11-5/8	11-11/16	48	23-5/8	23-11/16	72	35-5/8	35-11/16
25	12-1/8	12-3/16	49	24-1/8	24-3/16			

1/2" & 7/16" Bar Grating meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

7AS4 & 7AS2 - Swaged*



7AS4*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center

7AS2*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in aluminum press-locked - **7AP4/7AP2** and aluminum flush top - **7AF4/7AF2**. Please reference page 66 for examples of these products.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar	No. of Bars	1/8 Bar	3/16 Bar
2	9/16	5/8	30	12-13/16	12-7/8	57	24-5/8	24-11/16
3	1	1-1/16	31	13-1/4	13-5/16	58	25-1/16	25-1/8
4	1-7/16	1-1/2	32	13-11/16	13-3/4	59	25-1/2	25-9/16
5	1-7/8	1-15/16	33	14-1/8	14-3/16	60	25-15/16	26
6	2-5/16	2-3/8	34	14-9/16	14-5/8	61	26-3/8	26-7/16
7	2-3/4	2-13/16	35	15	15-1/16	62	26-13/16	26-7/8
8	3-3/16	3-1/4	36	15-7/16	15-1/2	63	27-1/4	27-5/16
9	3-5/8	3-11/16	37	15-7/8	15-15/16	64	27-11/16	27-3/4
10	4-1/16	4-1/8	38	16-5/16	16-3/8	65	28-1/8	28-3/16
11	4-1/2	4-9/16	39	16-3/4	16-13/16	66	28-9/16	28-5/8
12	4-15/16	5	40	17-3/16	17-1/4	67	29	29-1/16
13	5-3/8	5-7/16	41	17-5/8	17-11/16	68	29-7/16	29-1/2
14	5-13/16	5-7/8	42	18-1/16	18-1/8	69	29-7/8	29-15/16
15	6-1/4	6-5/16	43	18-1/2	18-9/16	70	30-5/16	30-3/8
16	6-11/16	6-3/4	44	18-15/16	19	71	30-3/4	30-13/16
17	7-1/8	7-3/16	45	19-3/8	19-7/16	72	31-3/16	31-1/4
18	7-9/16	7-5/8	46	19-13/16	19-7/8	73	31-5/8	31-11/16
19	8	8-1/16	47	20-1/4	20-5/16	74	32-1/16	32-1/8
20	8-7/16	8-1/2	48	20-11/16	20-3/4	75	32-1/2	32-9/16
21	8-7/8	8-15/16	49	21-1/8	21-3/16	76	32-15/16	33
22	9-5/16	9-3/8	50	21-9/16	21-5/8	77	33-3/8	33-7/16
23	9-3/4	9-13/16	51	22	22-1/16	78	33-13/16	33-7/8
24	10-3/16	10-1/4	52	22-7/16	22-1/2	79	34-1/4	34-5/16
25	10-5/8	10-11/16	53	22-7/8	22-15/16	80	34-11/16	34-3/4
26	11-1/16	11-1/8	54	23-5/16	23-3/8	81	35-1/8	35-3/16
27	11-1/2	11-9/16	55	23-3/4	23-13/16	82	35-9/16	35-5/8
28	11-15/16	12	56	24-3/16	24-1/4	83	36	36-1/16
29	12-3/8	12-7/16						

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	8AP4 3.1# 8AP2 3.4#	8AS4 3.0# 8AS2 3.4#	39"	.281	U	563	360	250	184	141								
					D	.192	.300	.432	.588	.768								
					C	563	450	375	321	281								
					D	.154	.240	.346	.470	.614								
3/4" x 3/16"	8AP4 4.6# 8AP2 5.1#	8AS4 4.4# 8AS2 4.7#	43"	.422	U	844	540	375	276	211	167							
					D	.192	.300	.432	.588	.768	.972							
					C	844	675	563	482	422	375							
					D	.154	.240	.346	.470	.614	.778							
1" x 1/8"	8AP4 4.0# 8AP2 4.3#	8AS4 3.9# 8AS2 4.3#	49"	.500	U	1000	640	444	327	250	198	160						
					D	.144	.225	.324	.441	.576	.729	.900						
					C	1000	800	667	571	500	444	400						
					D	.115	.180	.259	.353	.461	.583	.720						
1" x 3/16"	8AP4 5.9# 8AP2 6.4#	8AS4 5.8# 8AS2 6.1#	54"	.750	U	1500	960	667	490	375	296	240	198					
					D	.144	.225	.324	.441	.576	.729	.900	1.089					
					C	1500	1200	1000	857	750	667	600	545					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
1-1/4" x 1/8"	8AP4 5.0# 8AP2 5.4#	8AS4 4.9# 8AS2 5.2#	58"	.781	U	1563	1000	694	510	391	309	250	207					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
					C	1563	1250	1042	893	781	694	625	568					
					D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/4" x 3/16"	8AP4 7.5# 8AP2 8.1#	8AS4 7.1# 8AS2 7.4#	64"	1.172	U	2344	1500	1042	765	586	463	375	310	260				
					D	.115	.180	.259	.353	.461	.583	.720	.871	1.037				
					C	2344	1875	1563	1339	1172	1042	938	852	781				
					D	.092	.144	.207	.282	.369	.467	.576	.697	.829				
1-1/2" x 1/8"	8AP4 5.9# 8AP2 6.3#	8AS4 5.8# 8AS2 6.1#	66"	1.125	U	2250	1440	1000	735	563	444	360	298	250	213			
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014			
					C	2250	1800	1500	1286	1125	1000	900	818	750	692			
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811			
1-1/2" x 3/16"	8AP4 8.8# 8AP2 9.5#	8AS4 8.5# 8AS2 8.8#	73"	1.688	U	3375	2160	1500	1102	844	667	540	446	375	320	276		
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176		
					C	3375	2700	2250	1929	1688	1500	1350	1227	1125	1038	964		
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941		
1-3/4" x 3/16"	8AP4 10.2# 8AP2 10.9#	8AS4 9.8# 8AS2 10.2#	82"	2.297	U	4594	2940	2042	1500	1148	907	735	607	510	435	375	287	
					D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	
					C	4594	3675	3063	2625	2297	2042	1838	1670	1531	1413	1313	1148	
					D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	
2" x 3/16"	8AP4 11.5# 8AP2 12.2#	8AS4 11.2# 8AS2 11.5#	91"	3.000	U	6000	3840	2667	1959	1500	1185	960	793	667	568	490	375	296
					D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
					C	6000	4800	4000	3429	3000	2667	2400	2182	2000	1846	1714	1500	1333
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	8AP4 12.9# 8AP2 13.6#	8AS4 12.6# 8AS2 12.9#	100"	3.797	U	7594	4860	3375	2480	1898	1500	1215	1004	844	719	620	475	375
					D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
					C	7594	6075	5063	4339	3797	3375	3038	2761	2531	2337	2170	1898	1688
					D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	8AP4 14.3# 8AP2 14.9#	8AS4 13.9# 8AS2 14.2#	108"	4.688	U	9375	6000	4167	3061	2344	1852	1500	1240	1042	888	765	586	463
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
					C	9375	7500	6250	5357	4688	4167	3750	3409	3125	2885	2679	2344	2083
					D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 12,000 psi. Install Cross Rods on Top.

% Open Area[1]

Bars	1/8"	3/16"
4"cc	71%	59%
2"cc	68%	55%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the tables.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	7AP4 3.4# 7AP2 3.8#	n/a	n/a	41"	.321	U	643	411	286	210	161								
						D	.192	.300	.432	.588	.768								
						C	643	514	429	367	321								
						D	.154	.240	.346	.470	.614								
3/4" x 3/16"	7AP4 5.2# 7AP2 5.7#	n/a	n/a	45"	.482	U	964	617	429	315	241	190							
						D	.192	.300	.432	.588	.768	.972							
						C	964	771	643	551	482	429							
						D	.154	.240	.346	.470	.614	.778							
1" x 1/8"	7AP4 4.5# 7AP2 4.8#	n/a	n/a	50"	.571	U	1143	731	508	373	286	226	183						
						D	.144	.225	.324	.441	.576	.729	.900						
						C	1143	914	762	653	571	508	457						
						D	.115	.180	.259	.353	.461	.583	.720						
1" x 3/16"	7AP4 6.7# 7AP2 7.2#	7AS4 6.3# 7AS2 6.6#	7AF4 6.3# 7AF2 6.7#	56"	.857	U	1714	1097	762	560	429	339	274	227					
						D	.144	.225	.324	.441	.576	.729	.900	1.089					
						C	1714	1371	1143	980	857	762	686	623					
						D	.115	.180	.259	.353	.461	.583	.720	.871					
1-1/4" x 1/8"	7AP4 5.6# 7AP2 6.1#	n/a	n/a	60"	.893	U	1786	1143	794	583	446	353	286	236					
						D	.115	.180	.259	.353	.461	.583	.720	.871					
						C	1786	1429	1190	1020	893	794	714	649					
						D	.092	.144	.207	.282	.369	.467	.576	.697					
1-1/4" x 3/16"	7AP4 8.4# 7AP2 9.1#	7AS4 7.8# 7AS2 8.1#	7AF4 7.9# 7AF2 8.3#	66"	1.339	U	2679	1714	1190	875	670	529	429	354	298	254			
						D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217			
						C	2679	2143	1786	1531	1339	1190	1071	974	893	824			
						D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973			
1-1/2" x 1/8"	7AP4 6.7# 7AP2 7.1#	n/a	n/a	68"	1.286	U	2571	1646	1143	840	643	508	411	340	286	243			
						D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014			
						C	2571	2057	1714	1469	1286	1143	1029	935	857	791			
						D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811			
1-1/2" x 3/16"	7AP4 10.0# 7AP2 10.7#	7AS4 9.3# 7AS2 9.6#	7AF4 9.5# 7AF2 9.9#	76"	1.929	U	3857	2469	1714	1259	964	762	617	510	429	365	315		
						D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176		
						C	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187	1102		
						D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941		
1-3/4" x 3/16"	7AP4 11.5# 7AP2 12.2#	7AS4 10.8# 7AS2 11.1#	7AF4 11.0# 7AF2 11.4#	85"	2.625	U	5250	3360	2333	1714	1313	1037	840	694	583	497	429	328	259
						D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	1.666
						C	5250	4200	3500	3000	2625	2333	2100	1909	1750	1615	1500	1313	1167
						D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	1.333
2" x 3/16"	7AP4 13.1# 7AP2 13.8#	7AS4 12.3# 7AS2 12.6#	7AF4 12.5# 7AF2 12.9#	94"	3.429	U	6857	4389	3048	2239	1714	1354	1097	907	762	649	560	429	339
						D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
						C	6857	5486	4571	3918	3429	3048	2743	2494	2286	2110	1959	1714	1524
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	7AP4 14.6# 7AP2 15.3#	7AS4 13.8# 7AS2 14.1#	7AF4 14.1# 7AF2 14.5#	103"	4.339	U	8679	5554	3857	2834	2170	1714	1389	1148	964	822	708	542	429
						D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
						C	8679	6943	5786	4959	4339	3857	3471	3156	2893	2670	2480	2170	1929
						D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	7AP4 16.2# 7AP2 16.9#	7AS4 15.3# 7AS2 15.6#	7AF4 15.6# 7AF2 16.0#	112"	5.357	U	10714	6857	4762	3499	2679	2116	1714	1417	1190	1014	875	670	529
						D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
						C	10714	8571	7143	6122	5357	4762	4286	3896	3571	3297	3061	2679	2381
						D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

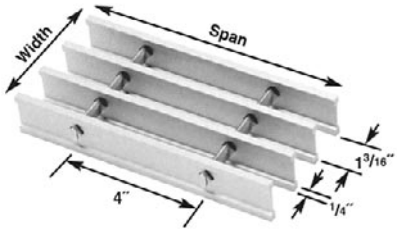
Data is theoretical and based on 12,000 psi. Install Cross Rods on Top.

% Open Area[1]

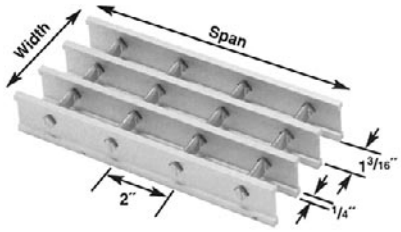
Bars	1/8"	3/16"
4"cc	68%	53%
2"cc	64%	50%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

I-BAR
19AI4 & 19AI2



19AI4
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



19AI2
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Approx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
1" x 1/4"	19AI4 2.0# 19AI2 2.4#	46"	.354	U	707	453	314	231	177							
				D	.135	.212	.304	.415	.542							
				C	707	566	472	404	354							
				D	.108	.169	.244	.332	.434							
1-1/4" x 1/4"	19AI4 2.3# 19AI2 2.7#	53"	.539	U	1077	689	479	352	269	213						
				D	.110	.172	.248	.337	.439	.557						
				C	1077	862	718	616	539	479						
				D	.088	.137	.198	.270	.352	.446						
1-1/2" x 1/4"	19AI4 2.7# 19AI2 3.1#	61"	.766	U	1532	980	681	500	383	303	245	203				
				D	.092	.144	.207	.282	.369	.467	.576	.699				
				C	1532	1226	1021	875	766	681	613	557				
				D	.074	.115	.166	.226	.295	.373	.461	.558				
1-3/4" x 1/4"	19AI4 3.1# 19AI2 3.5#	68"	1.029	U	2057	1317	914	672	514	406	329	272	229			
				D	.079	.124	.179	.244	.318	.402	.497	.601	.717			
				C	2057	1646	1372	1176	1029	914	823	748	686			
				D	.064	.099	.143	.195	.254	.322	.398	.481	.573			
2" x 1/4"	19AI4 3.4# 19AI2 3.8#	75"	1.341	U	2682	1716	1192	876	670	530	429	355	298	254		
				D	.070	.109	.157	.214	.279	.354	.436	.529	.629	.738		
				C	2682	2145	1788	1532	1341	1192	1073	975	894	825		
				D	.056	.087	.126	.171	.224	.283	.349	.422	.503	.590		
2-1/4" x 1/4"	19AI4 3.8# 19AI2 4.2#	82"	1.673	U	3347	2142	1487	1093	837	661	535	443	372	317	273	
				D	.062	.097	.140	.191	.249	.315	.389	.472	.561	.658	.763	
				C	3347	2677	2231	1912	1673	1487	1339	1217	1116	1030	956	
				D	.050	.078	.112	.153	.199	.252	.312	.377	.449	.527	.610	
2-1/2" x 1/4"	19AI4 4.2# 19AI2 4.6#	88"	2.068	U	4137	2648	1839	1351	1034	817	662	547	460	392	338	259
				D	.056	.088	.126	.172	.225	.285	.351	.425	.506	.594	.689	.901
				C	4137	3310	2758	2364	2068	1839	1655	1504	1379	1273	1182	1034
				D	.045	.070	.101	.138	.180	.228	.281	.340	.405	.475	.551	.719

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 12,000 psi.

% Open Area[1]	
4"cc	73%
2"cc	67%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar
2	1-7/16
3	2-5/8
4	3-13/16
5	5
6	6-3/16
7	7-3/8
8	8-9/16
9	9-3/4
10	10-15/16
11	12-1/8
12	13-5/16
13	14-1/2
14	15-11/16
15	16-7/8
16	18-1/16
17	19-1/4
18	20-7/16
19	21-5/8
20	22-13/16
21	24
22	25-3/16
23	26-3/8
24	27-9/16
25	28-3/4
26	29-15/16
27	31-1/8
28	32-5/16
29	33-1/2
30	34-11/16
31	35-7/8



Bearing Bar Top - 1/4" Width

Note: The top and bottom .031" striations are in addition to the standard grating depth. For example, a 1" I-Bar section has an overall depth of 1.062"

19AI4 IS THE MOST COMMON TYPE OF ALUMINUM I-BAR AND IS A GREAT OPTION FOR APPLICATIONS WHERE ALUMINUM IS NECESSARY.

ALUMINUM I-BAR OFFERS THE LIGHTEST WEIGHT OF ALUMINUM ALTERNATIVES.

I-BAR 15AI4 & 15AI2



15AI4
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



15AI2
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar
2	1-3/16	15	13-3/8	28	25-9/16
3	2-1/8	16	14-5/16	29	26-1/2
4	3-1/16	17	15-1/4	30	27-7/16
5	4	18	16-3/16	31	28-3/8
6	4-15/16	19	17-1/8	32	29-5/16
7	5-7/8	20	18-1/16	33	30-1/4
8	6-13/16	21	19	34	31-3/16
9	7-3/4	22	19-15/16	35	32-1/8
10	8-11/16	23	20-7/8	36	33-1/16
11	9-5/8	24	21-13/16	37	34
12	10-9/16	25	22-3/4	38	34-15/16
13	11-1/2	26	23-11/16	39	35-7/8
14	12-7/16	27	24-5/8		

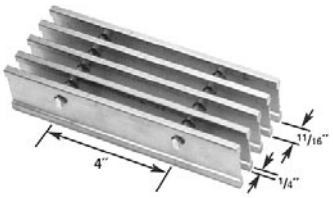
% Open Area[1]	
4"cc	68%
2"cc	62%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

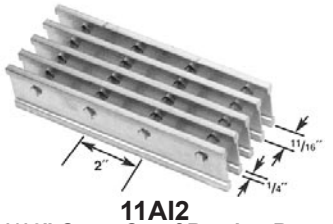
Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
1" x 1/4"	15AI4 2.4# 15AI2 2.8#	48"	.448	U	896	573	398	293	224	177	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
				D	.135	.212	.305	.416	.542	.686						
				C	896	717	597	512	448	398						
				D	.108	.169	.244	.332	.434	.548						
1-1/4" x 1/4"	15AI4 2.9# 15AI2 3.3#	57"	.682	U	1364	873	606	446	341	270	218	Data is theoretical and based on 12,000 psi				
				D	.110	.172	.247	.337	.440	.558	.686					
				C	1364	1092	910	780	682	606	546					
				D	.088	.138	.198	.270	.352	.445	.550					
1-1/2" x 1/4"	15AI4 3.3# 15AI2 3.7#	65"	.970	U	1940	1242	862	634	485	383	310	257				
				D	.092	.144	.207	.282	.369	.466	.575	.698				
				C	1940	1552	1294	1109	970	862	776	706				
				D	.074	.115	.166	.226	.295	.373	.461	.558				
1-3/4" x 1/4"	15AI4 3.8# 15AI2 4.2#	72"	1.303	U	2606	1668	1158	851	652	515	417	345	290	247		
				D	.079	.124	.179	.243	.318	.403	.497	.602	.717	.841		
				C	2606	2085	1737	1489	1303	1158	1042	948	869	802		
				D	.064	.099	.143	.195	.254	.322	.397	.481	.573	.672		
2" x 1/4"	15AI4 4.3# 15AI2 4.7#	80"	1.699	U	3397	2174	1510	1109	849	671	544	449	377	322	277	
				D	.070	.109	.157	.214	.279	.354	.437	.528	.628	.739	.855	
				C	3397	2718	2265	1941	1699	1510	1359	1235	1132	1045	971	
				D	.056	.087	.126	.171	.224	.283	.349	.422	.503	.590	.685	
2-1/4" x 1/4"	15AI4 4.7# 15AI2 5.1#	87"	2.120	U	4239	2713	1884	1384	1060	837	678	561	471	401	346	265
				D	.062	.097	.140	.191	.249	.315	.389	.471	.561	.657	.763	.997
				C	4239	3391	2826	2422	2120	1884	1696	1542	1413	1304	1211	1060
				D	.050	.078	.112	.153	.199	.252	.312	.377	.448	.526	.610	.797
2-1/2" x 1/4"	15AI4 5.2# 15AI2 5.6#	94"	2.620	U	5240	3354	2329	1711	1310	1035	838	693	582	496	428	328
				D	.056	.088	.126	.172	.225	.285	.351	.425	.506	.594	.689	.901
				C	5240	4192	3494	2994	2620	2329	2096	1906	1747	1612	1497	1310
				D	.045	.070	.101	.138	.180	.228	.281	.340	.405	.475	.551	.719

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

I-BAR 11AI4 & 11AI2



11AI4
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



11AI2
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar
2	15/16	15	9-7/8	28	18-13/16	41	27-3/4
3	1-5/8	16	10-9/16	29	19-1/2	42	28-7/16
4	2-5/16	17	11-1/4	30	20-3/16	43	29-1/8
5	3	18	11-15/16	31	20-7/8	44	29-13/16
6	3-11/16	19	12-5/8	32	21-9/16	45	30-1/2
7	4-3/8	20	13-5/16	33	22-1/4	46	31-3/16
8	5-1/16	21	14	34	22-15/16	47	31-7/8
9	5-3/4	22	14-11/16	35	23-5/8	48	32-9/16
10	6-7/16	23	15-3/8	36	24-5/16	49	33-1/4
11	7-1/8	24	16-1/16	37	25	50	33-15/16
12	7-13/16	25	16-3/4	38	25-11/16	51	34-5/8
13	8-1/2	26	17-7/16	39	26-3/8	52	35-5/16
14	9-3/16	27	18-1/8	40	27-1/16	53	36

% Open Area[1]	
4"cc	59%
2"cc	55%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

11/16" Bar Grating meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
1" x 1/4"	11AI4 3.2# 11AI2 3.6#	52"	.611	U	1222	782	543	399	305	241	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
				D	.136	.212	.305	.415	.541	.685						
				C	1222	977	815	698	611	543						
				D	.108	.169	.244	.332	.434	.549						
1-1/4" x 1/4"	11AI4 3.8# 11AI2 4.2#	61"	.930	U	1861	1191	827	608	465	368	298	246	Data is theoretical and based on 12,000 psi			
				D	.110	.172	.247	.337	.440	.557	.688	.831				
				C	1861	1489	1240	1063	930	827	744	677				
				D	.088	.137	.198	.269	.352	.445	.550	.666				
1-1/2" x 1/4"	11AI4 4.4# 11AI2 4.8#	70"	1.323	U	2646	1694	1176	864	662	523	423	350	294			
				D	.092	.144	.207	.282	.369	.467	.576	.697	.830			
				C	2646	2117	1764	1512	1323	1176	1058	962	882			
				D	.074	.115	.166	.226	.295	.373	.461	.558	.664			
1-3/4" x 1/4"	11AI4 5.0# 11AI2 5.4#	78"	1.777	U	3554	2274	1579	1160	888	702	569	470	395	336	290	
				D	.080	.124	.179	.244	.318	.402	.497	.601	.716	.839	.973	
				C	3554	2843	2369	2031	1777	1579	1422	1292	1185	1093	1015	
				D	.064	.099	.143	.195	.254	.322	.398	.481	.573	.671	.779	
2" x 1/4"	11AI4 5.7# 11AI2 6.1#	86"	2.316	U	4633	2965	2059	1513	1158	915	741	613	515	439	378	290
				D	.070	.109	.157	.214	.279	.354	.436	.529	.629	.738	.855	1.119
				C	4633	3706	3088	2647	2316	2059	1853	1685	1544	1425	1324	1158
				D	.056	.087	.126	.171	.223	.283	.349	.423	.503	.590	.685	.894
2-1/4" x 1/4"	11AI4 6.2# 11AI2 6.6#	94"	2.891	U	5781	3700	2569	1888	1445	1142	925	764	642	547	472	361
				D	.062	.097	.140	.191	.249	.315	.389	.471	.560	.658	.763	.996
				C	5781	4625	3854	3303	2891	2569	2312	2102	1927	1779	1652	1445
				D	.050	.078	.112	.153	.199	.252	.311	.377	.449	.526	.611	.797
2-1/2" x 1/4"	11AI4 6.9# 11AI2 7.3#	101"	3.573	U	7146	4573	3176	2333	1787	1412	1143	945	794	677	583	447
				D	.056	.088	.126	.172	.225	.285	.351	.425	.506	.594	.688	.900
				C	7146	5717	4764	4083	3573	3176	2858	2599	2382	2199	2042	1787
				D	.045	.070	.101	.138	.180	.228	.281	.340	.405	.475	.551	.720

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

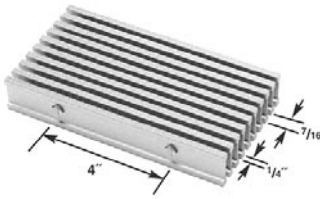
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in tables), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.



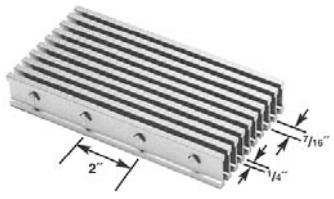
Bearing Bar Top - 1/4" Width

Note: The top and bottom .031" striations are in addition to the standard grating depth. For example, a 1" I-Bar section has an overall depth of 1.062"

I-BAR
7AI4 & 7AI2



7AI4
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



7AI2
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars
(Add 1/4" for extended cross rods)

No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar	No. of Bars	1/4 Bar
2	11/16	19	8-1/8	36	15-9/16	53	23	70	30-7/16
3	1-1/8	20	8-9/16	37	16	54	23-7/16	71	30-7/8
4	1-9/16	21	9	38	16-7/16	55	23-7/8	72	31-5/16
5	2	22	9-7/16	39	16-7/8	56	24-5/16	73	31-3/4
6	2-7/16	23	9-7/8	40	17-5/16	57	24-3/4	74	32-3/16
7	2-7/8	24	10-5/16	41	17-3/4	58	25-3/16	75	32-5/8
8	3-5/16	25	10-3/4	42	18-3/16	59	25-5/8	76	33-1/16
9	3-3/4	26	11-3/16	43	18-5/8	60	26-1/16	77	33-1/2
10	4-3/16	27	11-5/8	44	19-1/16	61	26-1/2	78	33-15/16
11	4-5/8	28	12-1/16	45	19-1/2	62	26-15/16	79	34-3/8
12	5-1/16	29	12-1/2	46	19-15/16	63	27-3/8	80	34-13/16
13	5-1/2	30	12-15/16	47	20-3/8	64	27-13/16	81	35-1/4
14	5-15/16	31	13-3/8	48	20-13/16	65	28-1/4	82	35-11/16
15	6-3/8	32	13-13/16	49	21-1/4	66	28-11/16	83	36-1/8
16	6-13/16	33	14-1/4	50	21-11/16	67	29-1/8		
17	7-1/4	34	14-11/16	51	22-1/8	68	29-9/16		
18	7-11/16	35	15-1/8	52	22-9/16	69	30		



Bearing Bar Top - 1/4" Width

Note: The top and bottom .031" striations are in addition to the standard grating depth. For example, a 1" I-Bar section has an overall depth of 1.062"

% Open Area[1]	
4"cc	39%
2"cc	36%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.	Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
1" x 1/4"	7AI4 4.8# 7AI2 5.1#	59"	.960	U	1920	1229	853	627	480	379	307	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches				
				D	.135	.212	.305	.415	.542	.685	.846					
				C	1920	1536	1280	1097	960	853	768					
				D	.108	.169	.244	.332	.434	.548	.677					
1-1/4" x 1/4"	7AI4 5.8# 7AI2 6.2#	69"	1.462	U	2924	1871	1300	955	731	578	468	387	325	Data is theoretical and based on 12,000 psi		
				D	.110	.172	.248	.337	.440	.557	.688	.832	.990			
				C	2924	2339	1949	1671	1462	1300	1170	1063	975			
				D	.088	.137	.198	.269	.352	.446	.550	.665	.792			
1-1/2" x 1/4"	7AI4 6.7# 7AI2 7.0#	78"	2.079	U	4158	2661	1848	1358	1040	821	665	550	462	394		
				D	.092	.144	.207	.282	.369	.466	.576	.697	.830	.975		
				C	4158	3327	2772	2376	2079	1848	1663	1512	1386	1279		
				D	.074	.115	.166	.226	.295	.373	.461	.558	.664	.779		
1-3/4" x 1/4"	7AI4 7.7# 7AI2 8.0#	87"	2.792	U	5585	3574	2482	1824	1396	1103	894	738	621	529	456	349
				D	.080	.124	.179	.244	.318	.402	.497	.601	.716	.840	.974	1.272
				C	5585	4468	3723	3191	2792	2482	2234	2031	1862	1718	1596	1396
				D	.064	.099	.143	.195	.254	.322	.398	.481	.573	.672	.779	1.017
2" x 1/4"	7AI4 8.7# 7AI2 9.0#	96"	3.640	U	7280	4659	3235	2377	1820	1438	1165	963	809	689	594	455
				D	.070	.109	.157	.214	.279	.354	.437	.528	.629	.737	.855	1.118
				C	7280	5824	4853	4160	3640	3235	2912	2647	2427	2240	2080	1820
				D	.056	.087	.126	.171	.224	.283	.349	.423	.503	.590	.684	.894
2-1/4" x 1/4"	7AI4 9.6# 7AI2 9.9#	105"	4.542	U	9084	5814	4038	2966	2271	1794	1454	1201	1009	860	742	568
				D	.062	.097	.140	.191	.249	.315	.389	.471	.560	.658	.764	.997
				C	9084	7268	6056	5191	4542	4038	3634	3303	3028	2795	2596	2271
				D	.050	.078	.112	.153	.199	.252	.311	.377	.448	.526	.611	.797
2-1/2" x 1/4"	7AI4 10.7# 7AI2 11.1#	113"	5.615	U	11229	7187	4991	3667	2807	2218	1797	1485	1248	1063	917	702
				D	.056	.088	.126	.172	.225	.285	.351	.425	.506	.594	.689	.900
				C	11229	8984	7486	6417	5615	4991	4492	4083	3743	3455	3208	2807
				D	.045	.070	.101	.138	.180	.228	.281	.340	.405	.475	.551	.719

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

7/16" Bar Grating meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

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Bar Grating

STAINLESS STEEL is the best bar grating option for severely corrosive environments such as chemical, food, and hydro processing areas. It is available in Welded, Press-Locked, and Swaged construction and in several bearing bar sizes. Most common bearing bar and cross rod spacing is 19-4 (1-3/16" and 4", respectively). Most common material is Type 304 Stainless, however Type 316 Stainless is also available upon request.

Bar Grating having a 1/2" maximum opening conforms with the Americans With Disabilities Act Guidelines (ADA) when installed with the elongated opening perpendicular to the dominant direction of travel. Brown-Campbell offers 11/16" in 3/16" width and 7/16" in 1/8" and 3/16" widths stainless steel bar grating to meet your special ADA needs.

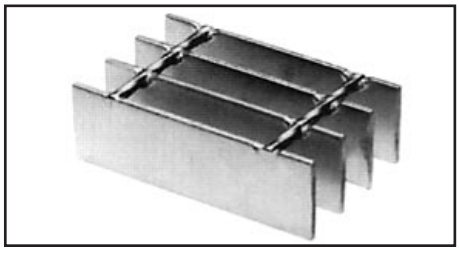


Serrated and Slip Resistant Surfaces Available

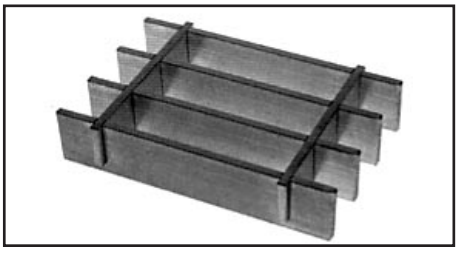
- See page 88

ISO 9001:2015 Certified!

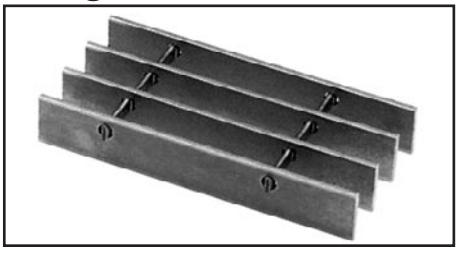
Welded



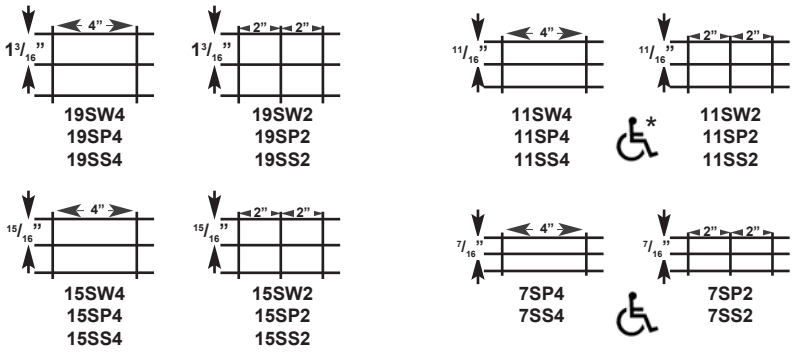
Press-Locked



Swaged



W=Welded; P=Press-Locked; S=Swaged



* 3/16" bearing bar widths conform with ADA spacing requirements

Welded - Most popular and economical choice of bar grating, bearing bars and cross rods are electroforged into one through use of hydraulic pressure and heat fusion. Results in discolored, uneven joint surfaces - please consider swaged stainless steel if this is undesirable.

Press-Locked - Bearing bars and cross rods are hydraulically pressed together by cross rod deformation without welds or rivets to form a permanent bond. The permanent bond is achieved by slotting the bearing bars with a wider 'dovetail' shape at the bottom of the slot, thus locking in the cross rod when hydraulically pressed together.

Swaged - Square cross rods are swaged through punched diamond shaped holes in rectangular bearing bars. Provides lower cost alternative to press-locked grating with the same strength. Swage-locking does not provide a cross rod flush with the walking surface.

All grating products are manufactured to NAAMM tolerances and specifications.

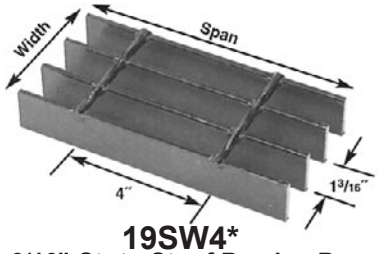
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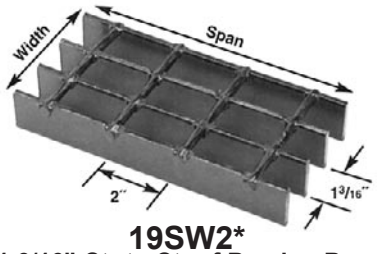


19SW4 & 19SW2 Welded*

*Also available in press-locked - **19SP4/19SP2** and swaged - **19SS4/19SS2**. Please reference page 74 for examples of these products.



19SW4*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



19SW2*
1-3/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

Bar Size	Symbol / Approx. Weight*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	19SW4 3.9# 19SW2 4.4#	19SP4 4.3# 19SP2 5.2#	n/a	41"	.118	U	395	253	175	129	99	78							
						D	.114	.179	.257	.350	.457	.579							
						C	395	316	263	226	197	175							
						D	.091	.143	.206	.280	.366	.463							
3/4" x 3/16"	19SW4 5.6# 19SW2 6.2#	19SP4 6.4# 19SP2 7.8#	19SS4 5.6# 19SS2 6.2#	45"	.178	U	592	379	263	193	148	117							
						D	.114	.179	.257	.350	.457	.579							
						C	592	474	395	338	296	263							
						D	.091	.143	.206	.280	.366	.463							
1" x 1/8"	19SW4 5.0# 19SW2 5.5#	19SP4 5.4# 19SP2 6.3#	19SS4 5.0# 19SS2 5.6#	51"	.211	U	702	449	312	229	175	139	112	93					
						D	.086	.134	.193	.263	.343	.434	.536	.648					
						C	702	561	468	401	351	312	281	255					
						D	.069	.107	.154	.210	.274	.347	.429	.519					
1" x 3/16"	19SW4 7.2# 19SW2 7.8#	19SP4 8.1# 19SP2 9.5#	19SS4 7.2# 19SS2 7.8#	56"	.316	U	1053	674	468	344	263	208	168	139					
						D	.086	.134	.193	.263	.343	.434	.536	.648					
						C	1053	842	702	602	526	468	421	383					
						D	.069	.107	.154	.210	.274	.347	.429	.519					
1-1/4" x 1/8"	19SW4 6.1# 19SW2 6.6#	19SP4 6.8# 19SP2 8.1#	19SS4 6.1# 19SS2 6.7#	60"	.329	U	1096	702	487	358	274	217	175	145	122	104	90		
						D	.069	.107	.154	.210	.274	.347	.429	.519	.617	.724	.840		
						C	1096	877	731	627	548	487	439	399	365	337	313		
						D	.055	.086	.123	.168	.219	.278	.343	.415	.494	.579	.672		
1-1/4" x 3/16"	19SW4 8.9# 19SW2 9.5#	19SP4 10.2# 19SP2 12.1#	19SS4 8.8# 19SS2 9.4#	67"	.493	U	1645	1053	731	537	411	325	263	217	183	156	134		
						D	.069	.107	.154	.210	.274	.347	.429	.519	.617	.724	.840		
						C	1645	1316	1096	940	822	731	658	598	548	506	470		
						D	.055	.086	.123	.168	.219	.278	.343	.415	.494	.579	.672		
1-1/2" x 1/8"	19SW4 7.2# 19SW2 7.7#	19SP4 7.9# 19SP2 9.2#	19SS4 7.2# 19SS2 7.8#	69"	.474	U	1579	1011	702	516	395	312	253	209	175	149	129	99	78
						D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	.914	1.157
						C	1579	1263	1053	902	789	702	632	574	526	486	451	395	351
						D	.046	.071	.103	.140	.183	.231	.286	.346	.411	.483	.560	.731	.926
1-1/2" x 3/16"	19SW4 10.5# 19SW2 11.2#	19SP4 11.8# 19SP2 13.8#	19SS4 10.5# 19SS2 11.1#	76"	.711	U	2368	1516	1053	773	592	468	379	313	263	224	193	148	117
						D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	.914	1.157
						C	2368	1895	1579	1353	1184	1053	947	861	789	729	677	592	526
						D	.046	.071	.103	.140	.183	.231	.286	.346	.411	.483	.560	.731	.926
1-3/4" x 3/16"	19SW4 12.2# 19SW2 12.8#	19SP4 13.5# 19SP2 15.4#	19SS4 11.7# 19SS2 12.3#	86"	.967	U	3224	2063	1433	1053	806	637	516	426	358	305	263	201	159
						D	.049	.077	.110	.150	.196	.248	.306	.370	.441	.517	.600	.784	.992
						C	3224	2579	2149	1842	1612	1433	1289	1172	1075	992	921	806	716
						D	.039	.061	.088	.120	.157	.198	.245	.296	.353	.414	.480	.627	.793
2" x 3/16"	19SW4 13.9# 19SW2 14.5#	19SP4 15.2# 19SP2 17.1#	19SS4 13.8# 19SS2 14.4#	95"	1.263	U	4211	2695	1871	1375	1053	832	674	557	468	399	344	263	208
						D	.043	.067	.096	.131	.171	.217	.268	.324	.386	.453	.525	.686	.868
						C	4211	3368	2807	2406	2105	1871	1684	1531	1404	1296	1203	1053	936
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549	.694
2-1/4" x 3/16"	19SW4 15.5# 19SW2 16.1#	19SP4 16.8# 19SP2 18.7#	19SS4 15.5# 19SS2 16.1#	104"	1.599	U	5329	3411	2368	1740	1332	1053	853	705	592	505	435	333	263
						D	.038	.060	.086	.117	.152	.193	.238	.288	.343	.402	.467	.610	.771
						C	5329	4263	3553	3045	2664	2368	2132	1938	1776	1640	1523	1332	1184
						D	.030	.048	.069	.093	.122	.154	.190	.230	.274	.322	.373	.488	.617
2-1/2" x 3/16"	19SW4 17.2# 19SW2 17.8#	19SP4 18.5# 19SP2 20.4#	19SS4 17.1# 19SS2 17.7#	112"	1.974	U	6579	4211	2924	2148	1645	1300	1053	870	731	623	537	411	325
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549	.694
						C	6579	5263	4386	3759	3289	2924	2632	2392	2193	2024	1880	1645	1462
						D	.027	.043	.062	.084	.110	.139	.171	.207	.247	.290	.336	.439	.555

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches

Data is theoretical and based on 20,000 psi. Install Cross Rods on Top.

% Open Area[1]		
Bars	1/8"	3/16"
4"cc	83%	77%
2"cc	76%	71%

[1]Open Area % for reference only – %'s will vary with material & mfg. process.

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)

No. of Bars	1/8 Bar	3/16 Bar
2	1-5/16	1-3/8
3	2-1/2	2-9/16
4	3-11/16	3-3/4
5	4-7/8	4-15/16
6	6-1/16	6-1/8
7	7-1/4	7-5/16
8	8-7/16	8-1/2
9	9-5/8	9-11/16
10	10-13/16	10-7/8
11	12	12-1/16
12	13-3/16	13-1/4
13	14-3/8	14-7/16
14	15-9/16	15-5/8
15	16-3/4	16-13/16
16	17-15/16	18
17	19-1/8	19-3/16
18	20-5/16	20-3/8
19	21-1/2	21-9/16
20	22-11/16	22-3/4
21	23-7/8	23-15/16
22	25-1/16	25-1/8
23	26-1/4	26-5/16
24	27-7/16	27-1/2
25	28-5/8	28-11/16
26	29-13/16	29-7/8
27	31	31-1/16
28	32-3/16	32-1/4
29	33-3/8	33-7/16
30	34-9/16	34-5/8
31	35-3/4	35-13/16

15SW4 & 15SW2 - Welded*



15SW4*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



15SW2*
15/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **15SP4/15SP2** and swaged - **15SS4/15SS2**. Please reference page 74 for examples of these products.

% Open Area[1]	
Bars	3/16"
4"cc	73%
2"cc	67%

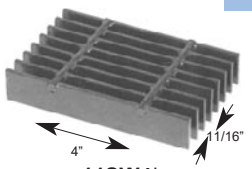
[1]Open Area % for reference only - %'s will vary with material & mfg. process.

PANEL WIDTH CHART (in inches) Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)			
No. of Bars	3/16 Bar	No. of Bars	3/16 Bar
2	1-1/8	21	18-15/16
3	2-1/16	22	19-7/8
4	3	23	20-13/16
5	3-15/16	24	21-3/4
6	4-7/8	25	22-11/16
7	5-13/16	26	23-5/8
8	6-3/4	27	24-9/16
9	7-11/16	28	25-1/2
10	8-5/8	29	26-7/16
11	9-9/16	30	27-3/8
12	10-1/2	31	28-5/16
13	11-7/16	32	29-1/4
14	12-3/8	33	30-3/16
15	13-5/16	34	31-1/8
16	14-1/4	35	32-1/16
17	15-3/16	36	33
18	16-1/8	37	33-15/16
19	17-1/16	38	34-7/8
20	18	39	35-13/16

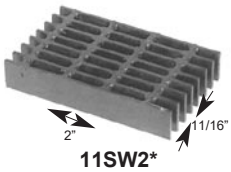
Bar Size	Symbol / Approx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
3/4" x 3/16"	15SW4 6.9# 15SW2 7.5#	15SP4 7.7# 15SP2 9.1#	15SS4 7.0# 15SS2 7.6#	48"	.225	U	750	480	333	245	188	148	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
						D	.114	.179	.257	.350	.458	.578						
						C	750	600	500	429	375	333						
						D	.091	.143	.206	.280	.366	.462						
1" x 3/16"	15SW4 8.9# 15SW2 9.6#	15SP4 9.8# 15SP2 11.2#	15SS4 9.0# 15SS2 9.6#	60"	.400	U	1333	853	593	435	333	263	213	176	Data is theoretical and based on 20,000 psi. Install Cross Rods on Top.			
						D	.086	.134	.193	.262	.343	.433	.535	.647				
						C	1333	1067	889	762	667	593	533	485				
						D	.069	.107	.154	.210	.274	.347	.428	.519				
1-1/4" x 3/16"	15SW4 11.0# 15SW2 11.6#	15SP4 12.3# 15SP2 14.2#	15SS4 11.0# 15SS2 11.6#	71"	.625	U	2083	1333	926	680	521	412	333	275	231			
						D	.069	.107	.154	.210	.274	.348	.428	.518	.616			
						C	2083	1667	1389	1190	1042	926	833	758	694			
						D	.055	.086	.123	.168	.219	.278	.343	.415	.493			
1-1/2" x 3/16"	15SW4 13.1# 15SW2 13.7#	15SP4 14.4# 15SP2 16.3#	15SS4 13.1# 15SS2 13.7#	81"	.900	U	3000	1920	1333	980	750	593	480	397	333	284	245	
						D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	
						C	3000	2400	2000	1714	1500	1333	1200	1091	1000	923	857	
						D	.046	.071	.103	.140	.183	.231	.286	.346	.411	.483	.560	
1-3/4" x 3/16"	15SW4 15.2# 15SW2 15.8#	15SP4 16.5# 15SP2 18.4#	15SS4 14.7# 15SS2 15.3#	91"	1.225	U	4083	2613	1815	1333	1021	807	653	540	454	387	333	255
						D	.049	.077	.110	.150	.196	.248	.306	.370	.441	.518	.599	.783
						C	4083	3267	2722	2333	2042	1815	1633	1485	1361	1256	1167	1021
						D	.039	.061	.088	.120	.157	.198	.245	.296	.353	.414	.480	.627
2" x 3/16"	15SW4 17.3# 15SW2 17.9#	15SP4 18.6# 15SP2 20.5#	15SS4 17.3# 15SS2 17.9#	101"	1.600	U	5333	3413	2370	1741	1333	1053	853	705	593	505	435	333
						D	.043	.067	.096	.131	.171	.217	.268	.324	.386	.453	.525	.685
						C	5333	4267	3556	3048	2667	2370	2133	1939	1778	1641	1524	1333
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.548
2-1/4" x 3/16"	15SW4 19.4# 15SW2 20.0#	15SP4 20.7# 15SP2 22.6#	15SS4 19.5# 15SS2 20.1#	110"	2.025	U	6750	4320	3000	2204	1688	1333	1080	893	750	639	551	422
						D	.038	.060	.086	.117	.152	.193	.238	.288	.343	.402	.467	.610
						C	6750	5400	4500	3857	3375	3000	2700	2455	2250	2077	1929	1688
						D	.030	.048	.069	.093	.122	.154	.190	.231	.274	.322	.373	.488
2-1/2" x 3/16"	15SW4 21.4# 15SW2 22.0#	15SP4 22.7# 15SP2 24.7#	15SS4 21.5# 15SS2 22.1#	119"	2.500	U	8333	5333	3704	2721	2083	1646	1333	1102	926	789	680	521
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549
						C	8333	6667	5556	4762	4167	3704	3333	3030	2778	2564	2381	2083
						D	.027	.043	.062	.084	.110	.139	.171	.207	.247	.290	.336	.439

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

11SW4 & 11SW2 - Welded*



11SW4*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



11SW2*
11/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **11SP4/11SP2** and swaged - **11SS4/11SS2**. Please reference page 74 for examples of these products.

% Open Area[1]	
Bars	3/16"
4"cc	66%
2"cc	60%

[1]Open Area % for reference only - %'s will vary with material & mfg. process.

11/16" Bar Grating with 3/16" bearing bar width meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

PANEL WIDTH CHART (in inches) Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)			
No. of Bars	3/16 Bar	No. of Bars	3/16 Bar
2	7/8	28	18-3/4
3	1-9/16	29	19-7/16
4	2-1/4	30	20-1/8
5	2-15/16	31	20-13/16
6	3-5/8	32	21-1/2
7	4-5/16	33	22-3/16
8	5	34	22-7/8
9	5-11/16	35	23-9/16
10	6-3/8	36	24-1/4
11	7-1/16	37	24-15/16
12	7-3/4	38	25-5/8
13	8-7/16	39	26-5/16
14	9-1/8	40	27
15	9-13/16	41	27-11/16
16	10-1/2	42	28-3/8
17	11-3/16	43	29-1/16
18	11-7/8	44	29-3/4
19	12-9/16	45	30-7/16
20	13-1/4	46	31-1/8
21	13-15/16	47	31-13/16
22	14-5/8	48	32-1/2
23	15-5/16	49	33-3/16
24	16	50	33-7/8
25	16-11/16	51	34-9/16
26	17-3/8	52	35-1/4
27	18-1/16	53	35-15/16

Bar Size	Symbol / Approx. Wgt*** Lbs/Sq. Ft.			Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
3/4" x 3/16"	11SW4 9.1# 11SW2 9.7#	11SP4 9.9# 11SP2 11.3#	11SS4 9.3# 11SS2 9.9#	52"	.307	U	1023	655	455	334	256	202	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches					
						D	.114	.179	.257	.350	.458	.578						
						C	1023	818	682	584	511	455						
						D	.091	.143	.206	.280	.365	.463						
1" x 3/16"	11SW4 11.9# 11SW2 12.5#	11SP4 12.7# 11SP2 14.2#	11SS4 12.0# 11SS2 12.6#	65"	.545	U	1818	1164	808	594	455	359	291	240	Data is theoretical and based on 20,000 psi. Install Cross Rods on Top.			
						D	.086	.134	.193	.263	.343	.434	.536	.647				
						C	1818	1455	1212	1039	909	808	727	661				
						D	.069	.107	.154	.210	.274	.347	.428	.518				
1-1/4" x 3/16"	11SW4 14.7# 11SW2 15.3#	11SP4 16.0# 11SP2 17.9#	11SS4 14.8# 11SS2 15.4#	77"	.852	U	2841	1818	1263	928	710	561	455	376	316	269		
						D	.069	.107	.154	.210	.274	.347	.429	.519	.618	.724		
						C	2841	2273	1894	1623	1420	1263	1136	1033	947	874		
						D	.055	.086	.123	.168	.219	.278	.343	.415	.494	.579		
1-1/2" x 3/16"	11SW4 17.5# 11SW2 18.1#	11SP4 18.8# 11SP2 20.7#	11SS4 17.7# 11SS2 18.3#	88"	1.227	U	4091	2618	1818	1336	1023	808	655	541	455	387	334	256
						D	.057	.089	.129	.175	.229	.289	.357	.432	.515	.603	.700	.915
						C	4091	3273	2727	2338	2046	1818	1636	1488	1364	1259	1169	1023
						D	.046	.071	.103	.140	.183	.231	.286	.346	.412	.483	.560	.732
1-3/4" x 3/16"	11SW4 20.4# 11SW2 21.0#	11SP4 21.7# 11SP2 23.6#	11SS4 19.8# 11SS2 20.4#	99"	1.670	U	5568	3564	2475	1818	1392	1100	891	736	619	527	455	348
						D	.049	.077	.110	.150	.196	.248	.306	.370	.441	.517	.601	.784
						C	5568	4455	3712	3182	2784	2475	2227	2025	1856	1713	1591	1392
						D	.039	.061	.088	.120	.157	.198	.245	.296	.353	.414	.480	.627
2" x 3/16"	11SW4 23.2# 11SW2 23.8#	11SP4 24.5# 11SP2 26.4#	11SS4 23.4# 11SS2 24.0#	109"	2.182	U	7273	4655	3232	2375	1818	1437	1164	962	808	689	594	455
						D	.043	.067	.096	.131	.171	.217	.268	.324	.386	.453	.525	.686
						C	7273	5818	4849	4156	3636	3232	2909	2645	2424	2238	2078	1818
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549
2-1/4" x 3/16"	11SW4 26.0# 11SW2 26.6#	11SP4 27.3# 11SP2 29.2#	11SS4 26.3# 11SS2 26.9#	119"	2.761	U	9205	5891	4091	3006	2301	1818	1473	1217	1023	871	751	575
						D	.038	.060	.086	.117	.152	.193	.238	.288	.343	.402	.466	.609
						C	9205	7364	6137	5260	4602	4091	3682	3347	3068	2832	2630	2301
						D	.030	.048	.069	.093	.122	.154	.190	.230	.274	.322	.373	.488
2-1/2" x 3/16"	11SW4 28.8# 11SW2 29.4#	11SP4 30.1# 11SP2 32.0#	11SS4 29.1# 11SS2 29.7#	129"	3.409	U	11364	7273	5051	3711	2841	2245	1818	1503	1263	1076	928	710
						D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.548
						C	11364	9091	7576	6494	5682	5051	4546	4132	3788	3497	3247	2841
						D	.027	.043	.062	.084	.110	.139	.171	.207	.247	.290	.336	.439

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

Brown-Campbell is committed to servicing all your bar grating needs. Call us today at 1-800-GRATING and experience the best.

7SS4 & 7SS2 - Swaged*



7SS4*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 4" Center to Center



7SS2*
7/16" Ctr to Ctr of Bearing Bars
Cross Rods 2" Center to Center

*Also available in press-locked - **7SP4/7SP2**. Please reference page 74 for an example of this product.

Bar Size	Symbol / Apprx. Wgt*** Lbs/Sq. Ft.		Ped. Span	Sec. Mod. Per Ft. Of Width		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
3/4" x 3/16"	7SP4 14.6#	7SS4 14.3#	58"	.482	U	1607	1029	714	525	402	317	257	U=Safe uniform load, lb/sq ft C=Safe concentrated load, lb/ft of grating width, at mid-span D=Deflection in inches Install Cross Rods on Top.				
	7SP2 16.1#	7SS2 14.9#			D	.114	.179	.257	.350	.457	.578	.714					
					C	1607	1286	1071	918	804	714	643					
					D	.091	.143	.206	.280	.366	.463	.572					
1" x 3/16"	7SP4 19.0#	7SS4 18.5#	73"	.857	U	2857	1829	1270	933	714	564	457	378	317	271	Data is theoretical and based on 20,000 psi.	
	7SP2 20.5#	7SS2 19.1#			D	.086	.134	.193	.263	.343	.434	.536	.649	.770	.907		
					C	2857	2286	1905	1633	1429	1270	1143	1039	952	879		
					D	.069	.107	.154	.210	.274	.347	.429	.519	.617	.724		
1-1/4" x 3/16"	7SP4 23.9#	7SS4 23.0#	86"	1.339	U	4464	2857	1984	1458	1116	882	714	590	496	423	364	279
	7SP2 25.8#	7SS2 23.6#			D	.069	.107	.154	.210	.274	.347	.428	.518	.617	.725	.839	1.097
					C	4464	3571	2976	2551	2232	1984	1786	1623	1488	1374	1276	1116
					D	.055	.086	.123	.168	.219	.278	.343	.415	.494	.580	.672	.878
1-1/2" x 3/16"	7SP4 28.3#	7SS4 27.4#	98"	1.929	U	6429	4114	2857	2099	1607	1270	1029	850	714	609	525	402
	7SP2 30.2#	7SS2 28.0#			D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	.915
					C	6429	5143	4286	3674	3214	2857	2571	2338	2143	1978	1837	1607
					D	.046	.071	.103	.140	.183	.231	.286	.346	.411	.483	.560	.731
1-3/4" x 3/16"	7SP4 32.7#	7SS4 30.8#	110"	2.625	U	8750	5600	3889	2857	2188	1728	1400	1157	972	828	714	547
	7SP2 34.6#	7SS2 31.4#			D	.049	.077	.110	.150	.196	.248	.306	.370	.441	.517	.600	.784
					C	8750	7000	5833	5000	4375	3889	3500	3182	2917	2692	2500	2188
					D	.039	.061	.088	.120	.157	.198	.245	.296	.353	.414	.480	.627
2" x 3/16"	7SP4 37.1#	7SS4 36.4#	122"	3.429	U	11429	7314	5079	3732	2857	2258	1829	1511	1270	1082	933	714
	7SP2 39.0#	7SS2 37.0#			D	.043	.067	.096	.131	.171	.217	.268	.324	.386	.453	.525	.685
					C	11429	9143	7619	6531	5714	5079	4572	4156	3810	3517	3265	2857
					D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549
2-1/4" x 3/16"	7SP4 41.5#	7SS4 41.1#	133"	4.339	U	14465	9257	6429	4723	3616	2857	2314	1913	1607	1369	1181	904
	7SP2 43.4#	7SS2 41.7#			D	.038	.060	.086	.117	.152	.193	.238	.288	.343	.402	.467	.610
					C	14465	11572	9643	8265	7232	6429	5786	5260	4822	4451	4133	3616
					D	.030	.048	.069	.093	.122	.154	.190	.230	.274	.322	.373	.488
2-1/2" x 3/16"	7SP4 45.9#	7SS4 45.4#	144"	5.357	U	17857	11429	7937	5831	4464	3527	2857	2361	1984	1691	1458	1116
	7SP2 47.8#	7SS2 46.0#			D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549
					C	17857	14286	11905	10204	8929	7937	7143	6494	5952	5495	5102	4464
					D	.027	.043	.062	.084	.110	.139	.171	.207	.247	.290	.336	.439

***Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches) Dimensions shown are out-to-out of bearing bars (Add 1/4" for extended cross rods)			
No. of Bars	3/16 Bar	No. of Bars	3/16 Bar
2	5/8	43	18-9/16
3	1-1/16	44	19
4	1-1/2	45	19-7/16
5	1-15/16	46	19-7/8
6	2-3/8	47	20-5/16
7	2-13/16	48	20-3/4
8	3-1/4	49	21-3/16
9	3-11/16	50	21-5/8
10	4-1/8	51	22-1/16
11	4-9/16	52	22-1/2
12	5	53	22-15/16
13	5-7/16	54	23-3/8
14	5-7/8	55	23-13/16
15	6-5/16	56	24-1/4
16	6-3/4	57	24-11/16
17	7-3/16	58	25-1/8
18	7-5/8	59	25-9/16
19	8-1/16	60	26
20	8-1/2	61	26-7/16
21	8-15/16	62	26-7/8
22	9-3/8	63	27-5/16
23	9-13/16	64	27-3/4
24	10-1/4	65	28-3/16
25	10-11/16	66	28-5/8
26	11-1/8	67	29-1/16
27	11-9/16	68	29-1/2
28	12	69	29-15/16
29	12-7/16	70	30-3/8
30	12-7/8	71	30-13/16
31	13-5/16	72	31-1/4
32	13-3/4	73	31-11/16
33	14-3/16	74	32-1/8
34	14-5/8	75	32-9/16
35	15-1/16	76	33
36	15-1/2	77	33-7/16
37	15-15/16	78	33-7/8
38	16-3/8	79	34-5/16
39	16-13/16	80	34-3/4
40	17-1/4	81	35-3/16
41	17-11/16	82	35-5/8
42	18-1/8	83	36-1/16

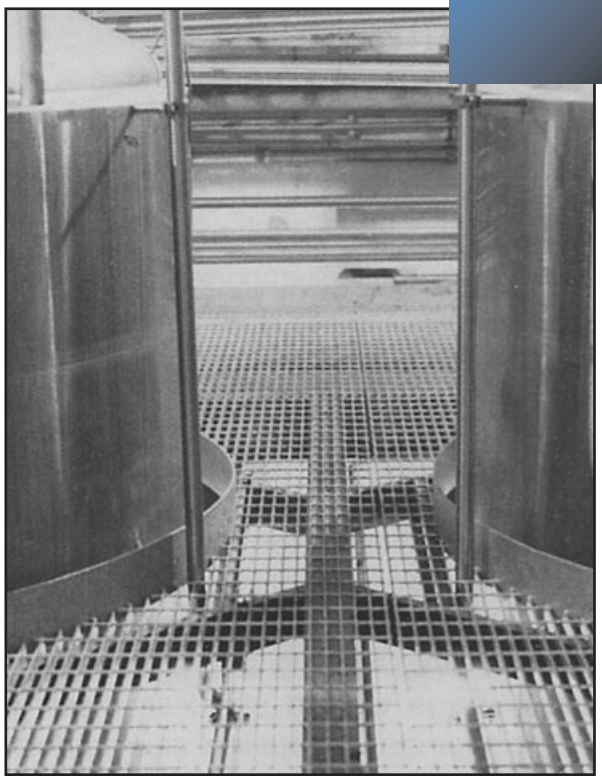
7/16" Bar Grating meets **ADA** requirements when installed with the elongated opening perpendicular to the dominant direction of travel.

% Open Area[1]	
Bars	3/16"
4"cc	53%
2"cc	50%

[1]Open Area % for reference only - %'s *will vary with material & mfg. process.*

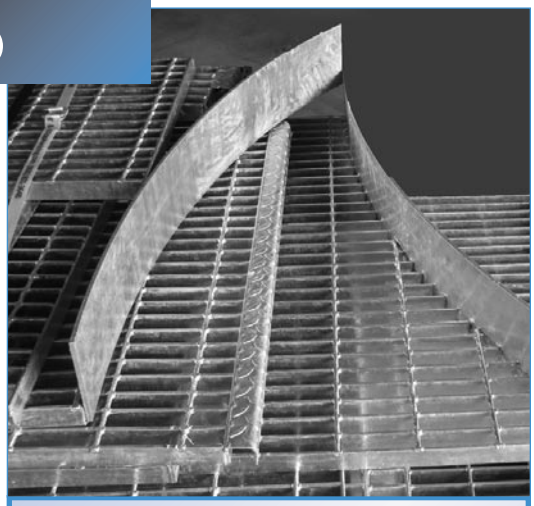
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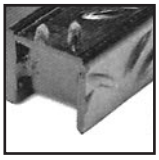
STAIR TREADS constructed of bar grating manufactured by Brown-Campbell Company are available in all of the bar grating material/construction combinations shown in the previous pages. The chart below summarizes the large array of products available.

For a snapshot of all of our available stair treads in a multitude of products, please see pages 184-185. Brown-Campbell can custom fabricate the stair treads of your choice to your detailed specifications - fast!

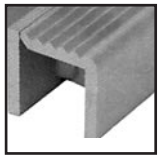
Material	Construction	Nosing	Surface	Qualities
Steel	Welded (W) Press-Locked (P) Swaged (S)	Checker Plate* Abrasive Coated Cast Aluminum	Plain Serrated	Most common due to strength, ease of installation, and lowest cost.
Aluminum Rectangular Bar	Press-Locked (P) Swaged (S) Flush Top (F)	Grooved Nose* Abrasive Coated Cast Aluminum	Plain Serrated	Higher strength, higher stiffness to weight ratio.
Aluminum I-Bar	Swaged I-Bar (I)	Grooved Nose* Abrasive Coated Cast Aluminum	Plain	Higher strength, less weight, lower cost than Aluminum Rectangular Bar.
Stainless Steel	Welded (W) Press-Locked (P) Swaged (S)	Checker Plate* Cast Aluminum	Plain Serrated	Ideal for highly corrosive environments.

*Standard Nosing

Stair Tread Nosings:



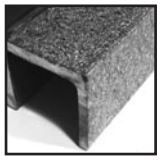
Checker Plate Nosing



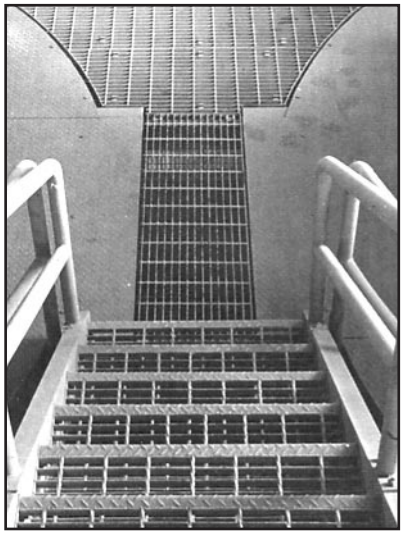
Grooved Nose

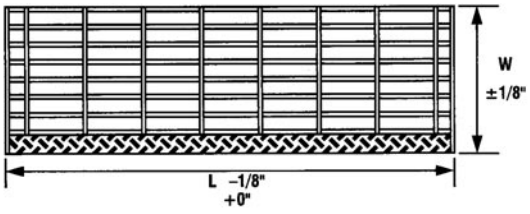


Cast Aluminum Nosing

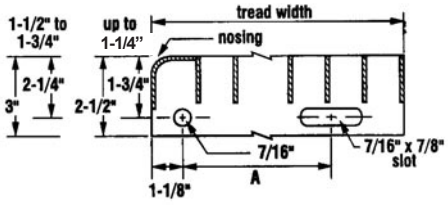


Abrasive Coated Nosing

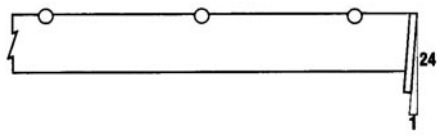




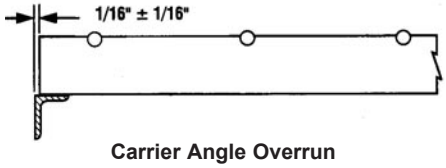
Tread Length and Width Tolerance



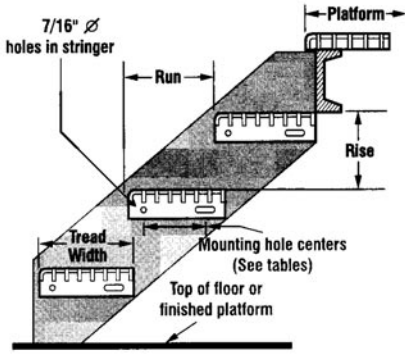
Typical Tread Dimensions



Carrier Plate or Band Lean Tolerance



Carrier Angle Overrun



Typical Stair Tread Stringer Detail

Ordering Stair Treads

PLEASE SPECIFY:

1. Type of grating
2. Depth and thickness of bearing bars
3. Length of tread
4. Width of tread (see tables for standard widths)
5. Type of nosing
6. Plain, Serrated, or Slip Resistant Surface
7. Size and spacing of holes, if to be bolted to stringers will be punched as per tables on the following pages, unless otherwise specified.
8. Finish - mill, shop coat of paint, or galvanized
9. Number of treads required
10. Shipping instructions
11. Mounting bolts and nuts furnished by others

STAIR TREADS
Carbon Steel & Stainless Steel

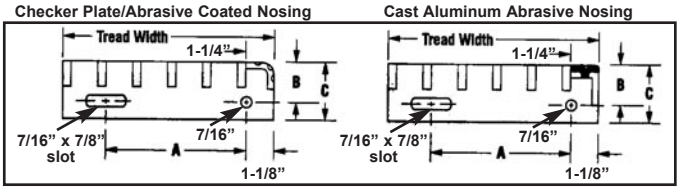


Welded

Construction: Welded
Press-Locked
Swaged

Nosings: Checker Plate (Std)
Abrasive Coated
Cast Aluminum

Surface: Plain, Serrated



End Plate Dimensions
19W4/19P4/19S4
19SW4/19SP4/19SS4
1-3/16" Center to Center of Bearing Bars

Grating Depth	Up to 1-1/4"	1-1/2" to 1-3/4"
Dimension "B"	1-3/4"	2-1/4"
Dimension "C"	2-1/2"	3"
Dimension "A": See Tread Width Table		

Weight Table Per Inch of Tread Length
19W4/19P4/19S4
19SW4/19SP4/19SS4
1-3/16" Center to Center of Bearing Bars

No. of Bearing Bars	Nosing*	3/4" x 3/16"	1" x 3/16"	1-1/4" x 3/16"	1-1/2" x 3/16"
5	CP/AC	.31	.36	.41	.48
	CA	.41	.46	.51	.56
6	CP/AC	.36	.43	.49	.55
	CA	.46	.53	.59	.65
7	CP/AC	.41	.50	.57	.64
	CA	.51	.59	.67	.74
8	CP/AC	.46	.56	.65	.73
	CA	.56	.66	.75	.83
9	CP/AC	.52	.63	.73	.83
	CA	.62	.73	.83	.93
10	CP/AC	.58	.70	.81	.92
	CA	.68	.80	.90	1.02

*CP/AC = Checker Plate/Abrasive Coated Nosing
*CA = Cast Aluminum Abrasive Nosing

Maximum Tread Lengths*
19W4/19P4/19S4
19SW4/19SP4/19SS4
1-3/16" Center to Center of Bearing Bars

Bearing Bar Size	Plain	Serrated
3/4" x 3/16"	2'-4"	1'-11"
1" x 3/16"	3'-5"	2'-10"
1-1/4" x 3/16"	4'-8"	4'-2"
1-1/2" x 3/16"	5'-6"	5'-3"

*Maximum tread length based on 300 lb. concentrated load on front 5 in. of tread at center of tread length and deflection limitation of 1/240 of length.

Tread Width (Incl. Nosing)
19W4/19P4/19S4
19SW4/19SP4/19SS4
1-3/16" Center to Center of Bearing Bars

No. of Bearing Bars	Bearing Bar Depth		Bolt Hole Spacing Dimension "A"
	1/8"	3/16"	
	Tread Width		
5	6-1/8"	6-3/16"	2-1/2"
6	7-5/16"	7-3/8"	4-1/2"
7	8-1/2"	8-9/16"	4-1/2"
8	9-11/16"	9-3/4"	7"
9	10-7/8"	10-15/16"	7"
10	12-1/16"	12-1/8"	7"



Other Brown-Campbell Stair Tread Products...

At a Glance...pgs 184-185
Expanded Metal...pg 42 • Fiberglass...pg 100
Grip Strut®...pg 131 • Perf-O Grip®...pg 146
Grate-Lock™..pg 154 • Traction-Tread™...pg 159
Floor Plate...pg 167 • Safety Treads...pg 188

STAIR TREADS
Aluminum Rectangular Bar & I-Bar

Aluminum Rectangular Bar



Swaged

Construction: Press-Locked, Swaged, Flush Top
Nosings: Grooved Nose (Std), Abrasive Coated, Cast Aluminum
Surface: Plain, Serrated

Tread Width (Incl. Nosing)
19AP4/19AS4/19AF4
1-3/16" Ctr to Ctr of Bearing Bars

No. of Bearing Bars	Bearing Bar Depth 3/16" Tread Width	Bolt Hole Spacing Dimension "A"
5	6-3/16"	2-1/2"
6	7-3/8"	4-1/2"
7	8-9/16"	4-1/2"
8	9-3/4"	7"
9	10-15/16"	7"
10	12-1/8"	7"

Maximum Tread Lengths*
19AP4/19AS4/19AF4
1-3/16" Ctr to Ctr of Bearing Bars

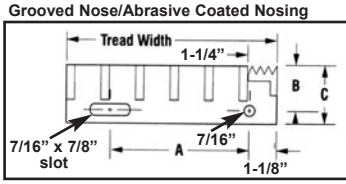
Bearing Bar Size	Plain	Serrated
1" x 3/16"	2'-4"	2'-2"
1-1/4" x 3/16"	2'-10"	2'-7"
1-1/2" x 3/16"	3'-6"	3'-2"
1-3/4" x 3/16"	4'-3"	3'-10"

*Maximum tread length based on 300 lb. concentrated load on front 5 in. of tread at center of tread length and deflection limitation of 1/240 of length.

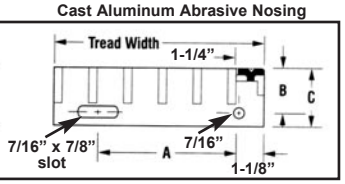
End Plate Dimensions
19AP4/19AS4/19AF4
1-3/16" Center to Center of Bearing Bars

Grating Depth	Up to 1-3/4"
Dimension "B"	2-1/4"
Dimension "C"	3"
Dimension "A": See Tread Width Table	

Grooved Nose/Abrasive Coated Nosing



Cast Aluminum Abrasive Nosing

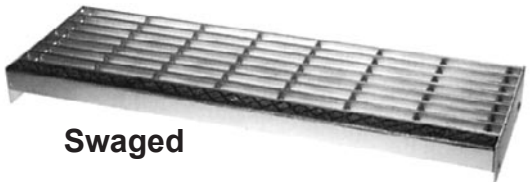


Weight Table Per Inch of Tread Length
19AP4/19AS4/19AF4
1-3/16" Center to Center of Bearing Bars

No. of Bearing Bars	Nosing*	1" x 3/16"	1-1/4" x 3/16"	1-1/2" x 3/16"	1-3/4" x 3/16"
5	G/AC	.13	.15	.18	.19
	CA	.17	.19	.21	.23
6	G/AC	.16	.18	.21	.23
	CA	.19	.21	.24	.27
7	G/AC	.18	.21	.24	.27
	CA	.22	.24	.28	.30
8	G/AC	.21	.23	.28	.31
	CA	.24	.27	.31	.34
9	G/AC	.23	.27	.31	.35
	CA	.26	.30	.34	.38
10	G/AC	.25	.30	.35	.39
	CA	.29	.33	.38	.42

*G/AC = Grooved Nose/Abrasive Coated Nosing
*CA = Cast Aluminum Abrasive Nosing

Aluminum I-Bar



Swaged

Construction: Swaged
Nosings: Grooved Nose (Std), Abrasive Coated, Cast Aluminum
Surface: Plain

Tread Width (Incl. Nosing)
19AI4
1-3/16" Ctr to Ctr of Bearing Bars

No. of Bearing Bars	Bearing Bar Depth 1/4" Tread Width	Bolt Hole Spacing Dimension "A"
5	6-1/4"	2-1/2"
6	7-7/16"	4-1/2"
7	8-5/8"	4-1/2"
8	9-13/16"	7"
9	11"	7"
10	12-3/16"	7"

Maximum Tread Lengths*
19AI4
1-3/16" Ctr to Ctr of Bearing Bars

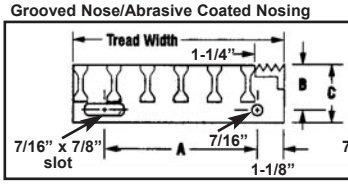
Bearing Bar Size	Plain
1" x 1/4"	2'-4"
1-1/4" x 1/4"	2'-10"
1-1/2" x 1/4"	3'-6"
1-3/4" x 1/4"	4'-3"

*Maximum tread length based on 300 lb. concentrated load on front 5 in. of tread at center of tread length and deflection limitation of 1/240 of length.

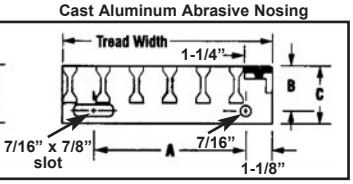
End Plate Dimensions
19AI4
1-3/16" Center to Center of Bearing Bars

Grating Depth	Up to 1-3/4"
Dimension "B"	2-1/4"
Dimension "C"	3"
Dimension "A": See Tread Width Table	

Grooved Nose/Abrasive Coated Nosing



Cast Aluminum Abrasive Nosing



Weight Table Per Inch of Tread Length
19AI4
1-3/16" Center to Center of Bearing Bars

No. of Bearing Bars	Nosing*	1" x 1/4"	1-1/4" x 1/4"	1-1/2" x 1/4"	1-3/4" x 1/4"
5	G/AC	.11	.13	.14	.15
	CA	.15	.16	.18	.19
6	G/AC	.13	.15	.17	.18
	CA	.17	.18	.20	.22
7	G/AC	.15	.17	.19	.21
	CA	.19	.20	.23	.24
8	G/AC	.17	.19	.22	.24
	CA	.21	.23	.25	.27
9	G/AC	.19	.21	.24	.27
	CA	.23	.25	.28	.30
10	G/AC	.21	.24	.27	.30
	CA	.25	.27	.30	.33

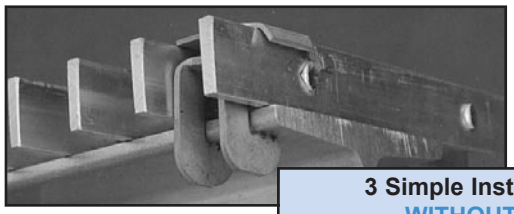
*G/AC = Grooved Nose/Abrasive Coated Nosing
*CA = Cast Aluminum Abrasive Nosing

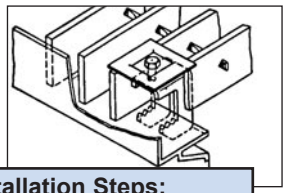
ANCHORING DEVICES

G-CLIPS

Available In: Galvanized, Aluminum, 316 Stainless Steel, and CuNi

Low cost, fast and dependable way to fasten grating materials to structural members. No damage to structural members, paint or coating systems. No drilling necessary, applied with simple hand tools.





3 Simple Installation Steps:
WITHOUT DRILLING

1) Drop the G-Clip in place from above grating
2) Slide the G-Clip toward the beam flange
3) Tighten the G-Clip, using a 7/16" nut driver

Available G-Clips

Grating Height	Structural Member Flange Thickness 1/4" - 3/4" GG-1	3/4" - 1-1/4" GG-2	1-1/4" - 1-3/4" GG-3	1-3/4" - 2-1/4" GG-4
1" = A	GG-1A*	GG-2A	GG-3A	GG-4A
1-1/4" = B	GG-1B*	GG-2B	GG-3B	GG-4B
1-1/2" = C	GG-1C*	GG-2C	GG-3C	GG-4C
1-3/4" = D	GG-1D	GG-2D	GG-3D	GG-4D
2" = E	GG-1E	GG-2E	GG-3E	GG-4E

Available in Galvanized, Aluminum, 316 Stainless Steel and CuNi

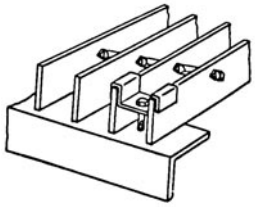
*Dark boxes represent most common styles

H-3 SADDLE ANCHOR

Available In: Galvanized Steel, Aluminum and Stainless Steel

Saddle plate bridges two bearing bars and is attached with TEK Screw or 1/4" bolt and nut when hole is drilled through supporting flange. Available for 15/16", 1-3/16", and 1-3/8" bearing bar spacings (15, 19, and 22 space).

Fasteners (TEK screws, bolts, nuts) used to fasten H-3 saddle anchor to flange not included. Please see chart for available TEK Screws. Available in zinc or stainless steel.



Grating Height	TEK Screws
Up to 1-1/4"	2TEK5*
Up to 1-1/2"	2TEK3SS
1-1/2" to 2-1/4"	3TEK5*
1-3/4" to 2-1/2"	3TEK3SS
2-1/2" to 2-15/16"	4TEK5*
*Zinc Coated	

GRATE-FAST™ CLAMP

One person installation - easy to install/easy to remove!

Available for immediate shipment: Galvanized 2-1/4" long screw*, 3/8" Capscrew and 13 ga. top-hat bracket

Fits: 1-3/16" centers (19-4, 19-2) with 1/8", 3/16" and 1/4" bearing bar thicknesses. Profiled nose to fit flat or sloping beam flanges. Stepped tail fits beam flanges from 1/8" to 3/4".

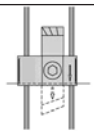
*longer screws also available, please inquire

FAST - VERSATILE ECONOMICAL

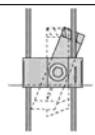




Step 1: Position Grate-Fast™ clamp with body between grating bars and nose pointing towards steelwork. Arrows on top hat bracket should also be pointing towards supporting steelwork and the bracket itself resting on bearing bars.

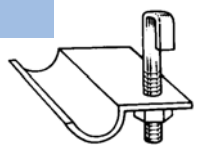


Step 2: Slide the Grate-Fast™ clamp towards the steelwork until the nose fits under the beam flange. Where necessary adjust the body/screw to the approximate flange thickness/grating depth.



Step 3: Tighten cap-screw using the hexagon key. Grate-Fast™ body casting will automatically rotate until it locks under bearing bar, with nose under flange. Continue tightening to the recommended torque. Grate-Fast™ is now secure.

H-1 ANCHOR CLIP WITH J BOLT



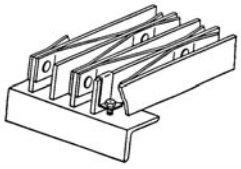
Available In: Carbon

A flat-head J-bolt secures a preformed plate to underside of steel bearing bars and structural supporting flange. No drilling needed. Access to underside of grating required for installation. J-bolt is 1/4" x 2-1/2" for grating up to 2-1/4" deep and 1/4" x 3-1/2" for 2-1/2" to 3-1/2" deep grating.

Z CLIP

Available In: Stainless Steel

Versatile clip anchor available in 1" for 1" and 1-1/4" grating, 1-1/2" for 1-1/2" and 1-3/4" grating and 2" for 2-1/4" and 2-1/2" grating. Provided with a pre-punched hole to accept a 1/4" bolt or TEK screw (not included).

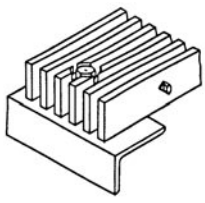


COUNTERSUNK LAND

Application: Aluminum

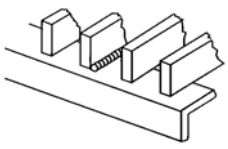
May be drilled by the grating manufacturer for use with a 1/4" diameter TEK screw. For 7/16" or 11/16" (7 or 11 space)

Aluminum grating only



WELDING

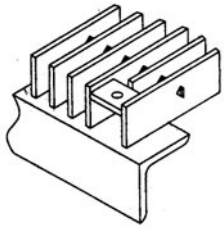
Recommended for all permanent installation of grating panels.



ANCHOR BLOCK

Available In: Carbon, Aluminum

Recommended for permanent or removable grating panels. Anchor Blocks are shop welded and therefore must be specified at time of order. Available in 1/4" or 3/16" for use with 7/16", 11/16", and 15/16" bearing bar spacings (7, 11, and 15 space). Requires 1/4" minimum fastener (not included).



Brown-Campbell can help you determine the best anchoring technique for your application. Call us today and talk to our experienced sales personnel.

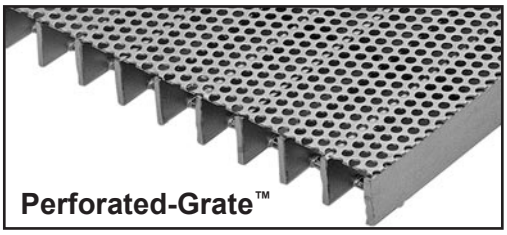
1-800-472-8464

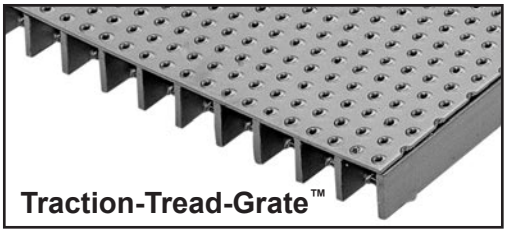
Bar Grating

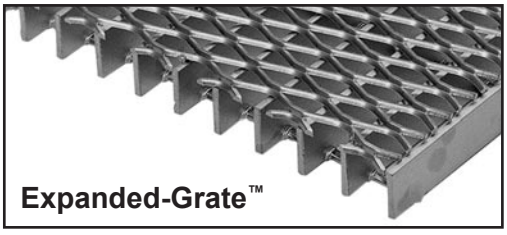
COVERED GRATES constructed of sturdy bar grating and covered with worker friendly walking surfaces.

This unique product offers...
- Reduced open areas at a fraction of the cost of close mesh grating
- Combination of bar grating strength with reduced openings of expanded metal, perforated metal or Traction-Tread™
- Prevention of tools and debris from falling through to areas below
- Strength and rigidity of floor plate


Floor Plate-Grate™


Perforated-Grate™


Traction-Tread-Grate™


Expanded-Grate™

Brown-Campbell Engineering Services

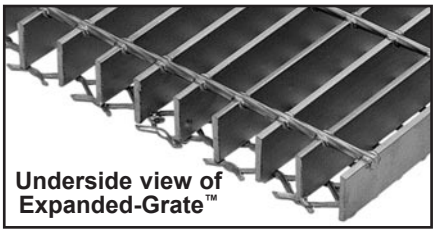
"Providing grating that fits every time - at a price that fits every budget"

takeoff → quotation → drawing approval → final fabrication

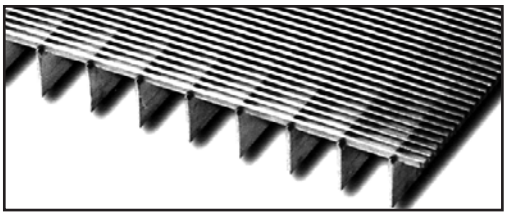
Brown-Campbell offers Custom Fabrication

Cut-to-size
Infill Panels
Special Shapes
Stair Treads
Welding

1-800-472-8464

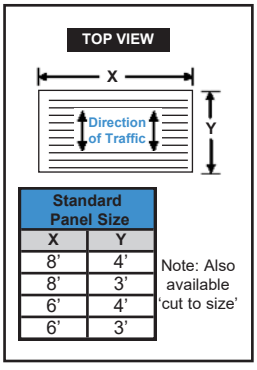

Underside view of Expanded-Grate™

GRATING MATS constructed of stainless steel are a great alternative to aluminum or vinyl entrance mats, offering a much longer life and lower maintenance.



Material: Type 304 Stainless Steel*
Slot Openings: 1/8"
Tread Surface: .071" x .177"
Bearing Bars: 1-1/8" or 5/8" high, 1" on center
Weight: 1-1/8": 7#/sq ft; 5/8": 5#/sq ft

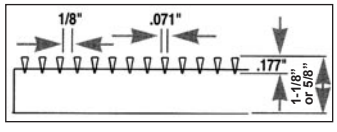
*Similar products also available in aluminum and bronze or with carpet or vinyl inserts, please inquire.

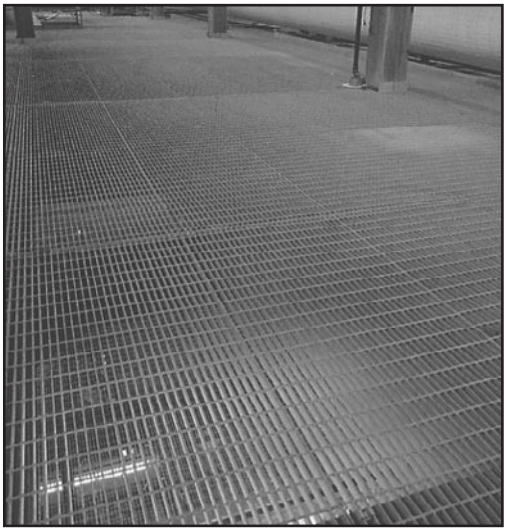


Standard Panel Size	
X	Y
8'	4'
8'	3'
6'	4'
6'	3'

Note: Also available 'cut to size'

ADA Compliant



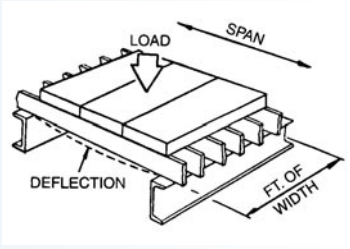


Air Grills	Light Diffusers
Ceilings & Walls	Revolving Doors
Entrance Mats	Swimming Pool Grates

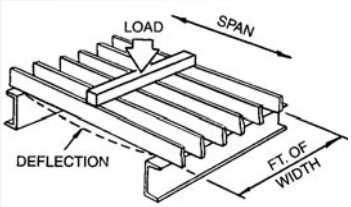
LOAD CALCULATIONS

LIGHT DUTY, ALUMINUM, & STAINLESS STEEL

U = Uniform Load - lbs/ft²
C = Concentrated Load - lbs/ft of grating width
D = Deflection - inches
F = Allowable Bending Stress
  Light Duty: 18,000 psi
  Aluminum: 12,000 psi
  Stainless: 20,000 psi
E = Modulus of Elasticity, lbs. per sq. inch (psi)
  Light Duty: 29,000,000 psi
  Aluminum: 10,000,000 psi
  Stainless: 28,000,000 psi
A = center to center distance between bearing bars, inches
K = number of bearing bars per foot of grating width = 12/A
t = Bearing Bar Thickness
d = Bearing Bar Depth
L = Simple Clear Span - feet
S = Section Modulus - in³/ft of grating width
I = Moment of Inertia - in⁴/bar
M = Bending Moment



UNIFORM LOAD



CONCENTRATED LOAD

Load Calculation:

	Uniform	Concentrated
Determine S:	$S=Ktd^2/6$	$S=Ktd^2/6$
Determine M:	$M=FS/12$	$M=FS/12$
Determine U or C:	$U=8M/L^2$	$C=4M/L$
Determine I:	$I=Ktd^3/12$	$I=Ktd^3/12$
Check D*:	$D=\frac{5UL(Lx12)^3}{384EI}$	$D=\frac{C(Lx12)^3}{48EI}$

* To ensure pedestrian comfort, maximum deflection should be limited to 1/4".

HEAVY DUTY

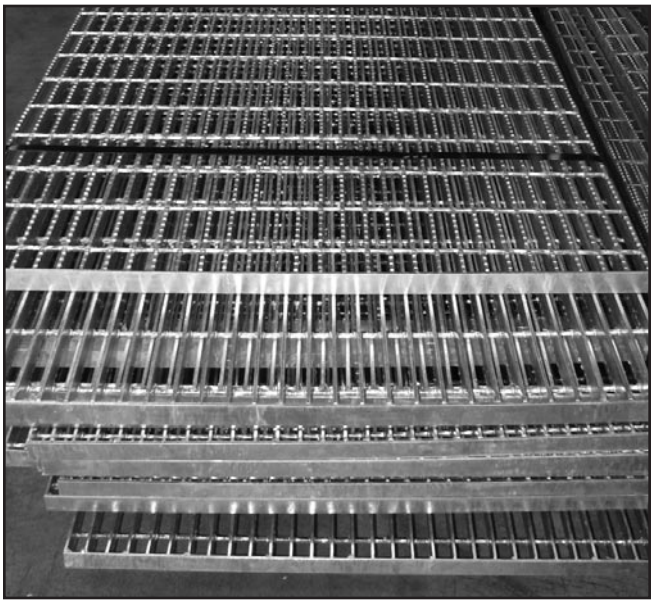
D = Deflection - inches
F = Allowable Bending Stress
  Heavy Duty: 20,000 psi
E = Modulus of Elasticity, lbs. per sq. inch (psi)
  Heavy Duty: 29,000,000 psi
A = center to center distance between bearing bars, inches
K = number of bearing bars per foot of grating width = 12/A
t = Bearing Bar Thickness
d = Bearing Bar Depth
L = Simple Clear Span - inches
S = Section Modulus - in³/ft of grating width
I = Moment of Inertia - in⁴/bar
M = Bending Moment
a = Partial Load Contact Parallel to Span - inches
b = Partial Load Contact Dimension at 90 degrees to Span - inches; b = a + (2A)
P = Total Wheel or Partial Load Incl. Impact - lbs.
P_1 = P per bearing bar; $P_1 = P \times (A/b)$

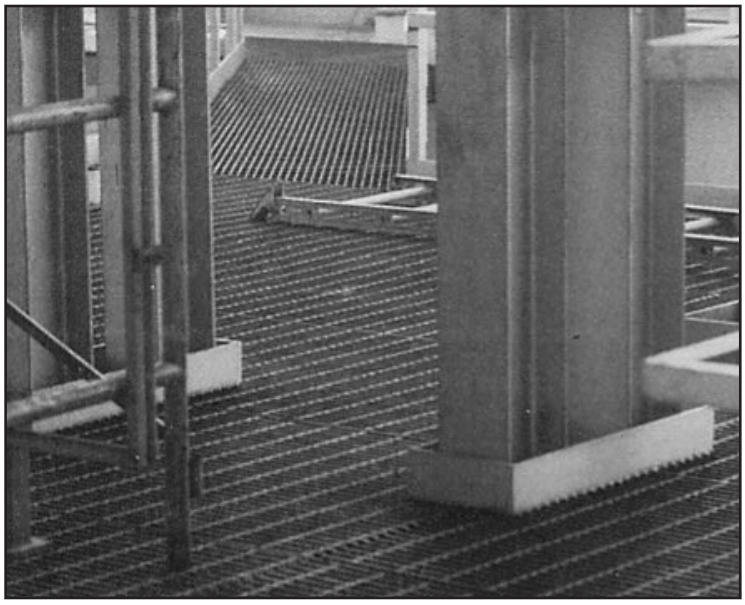
Heavy Duty Load Calculation:

Determine S: $S= Ktd^2/6$
Determine M: $M=FS/12$
Substituting for M, solve for L: *if* a>L *then* $M=PL^2/8ab$; *if* a<L *then* $M=P(.25L - .125a)/b$
Check D*: $D=\frac{P_1[(2L^3)-(a^2L)+(a^3/4)]}{96EI}$

* Maximum deflection should be limited to 1/400 span.

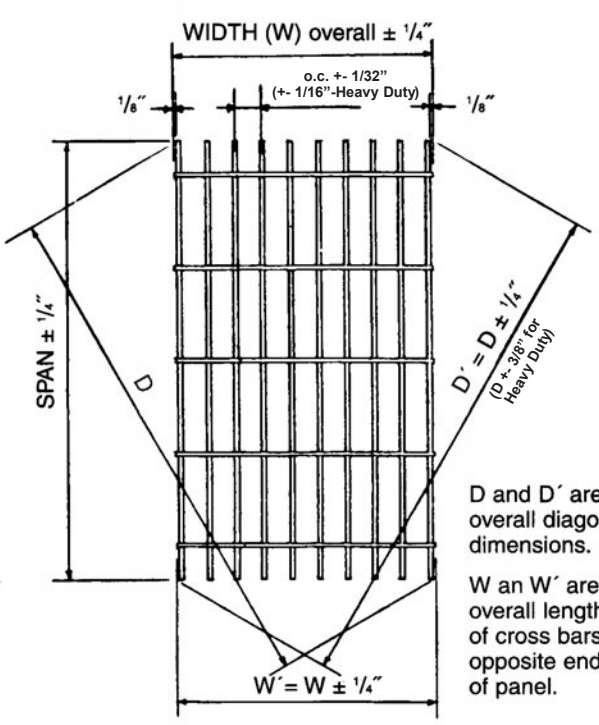
All grating products are manufactured to NAAMM tolerances and specifications.





DESIGN DETAILS

DIMENSIONS AND SQUARENESS

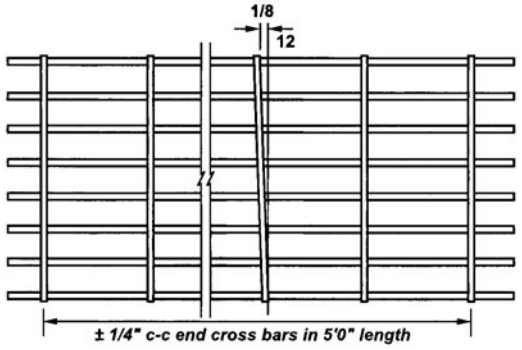


D and D´ are overall diagonal dimensions.

W an W´ are overall lengths of cross bars at opposite ends of panel.

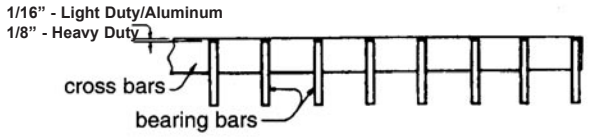
CROSS BAR ALIGNMENT AND SPACING

Cross rod shall not vary more than 1/8" in 12" in either direction from perpendicular alignment with bearing bars.

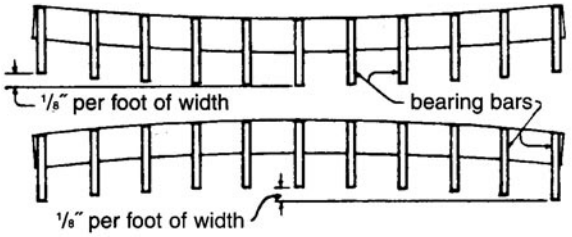




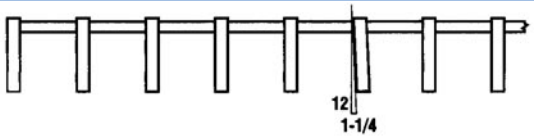
CROSS BAR LOCATION



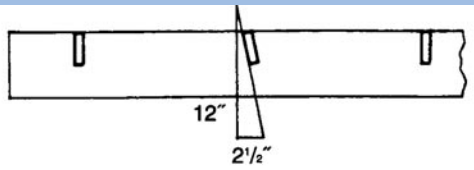
TRAVERSE BOW



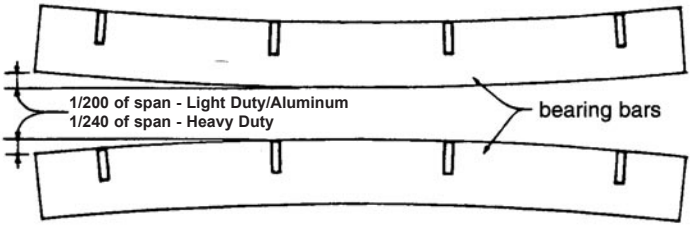
BEARING BAR LEAN



CROSS BAR LEAN



LONGITUDINAL BOW

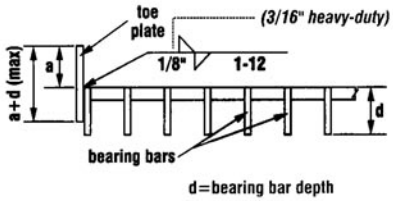


All grating products are manufactured to NAAMM tolerances and specifications.

WELDING STANDARDS

TOE PLATE Welded to Length

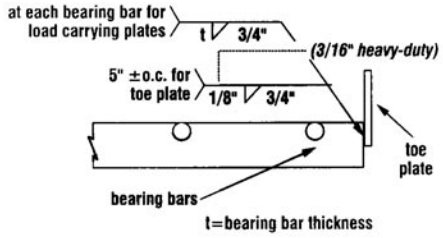
Maximum depth of toe plate is a+d. It should not extend below the bearing bars. The minimum recommended dimension for "a", the projection of toe plate above the grating, is 4".



d=bearing bar depth

Attachment to Length of Bearing Bar
Toe plate to be welded with alternating 1/8" fillet welds, 1" long every 12".

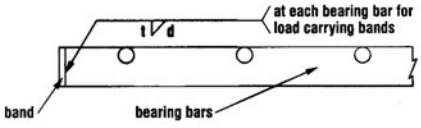
TOE PLATE Welded to End



t=bearing bar thickness

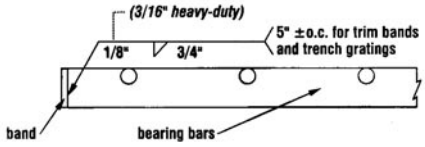
Attachment to End of Bearing Bar
Load carrying toe plates to be welded at each bearing bar with a fillet weld the size of the bearing bar thickness (t), 3/4" long. Non-load carrying toe plates to be welded to bearing bars with 1/8" fillet weld (3/16" for heavy-duty), 3/4" long every 5".

LOAD BANDING



Load Banding (must specify)
Load carrying end band to be welded with fillet weld the size of bearing bar thickness (t) and the length of bearing bar depth (d) at each bearing bar.

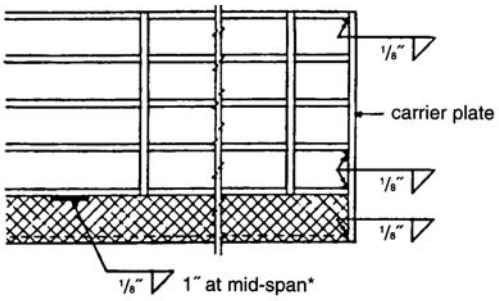
TRIM BANDING



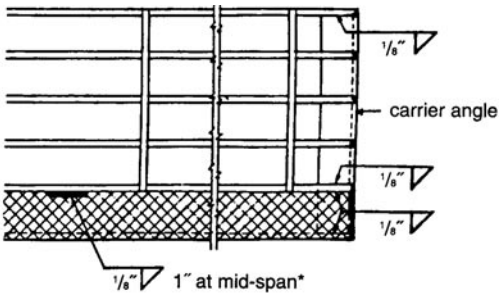
Standard Trim Band
End band to be welded with 1/8" fillet welds (3/16" for heavy duty), 3/4" long every 5".

STAIR TREADS

Note: Treads spanning 4 ft. or more must have two welds, located at the third points.

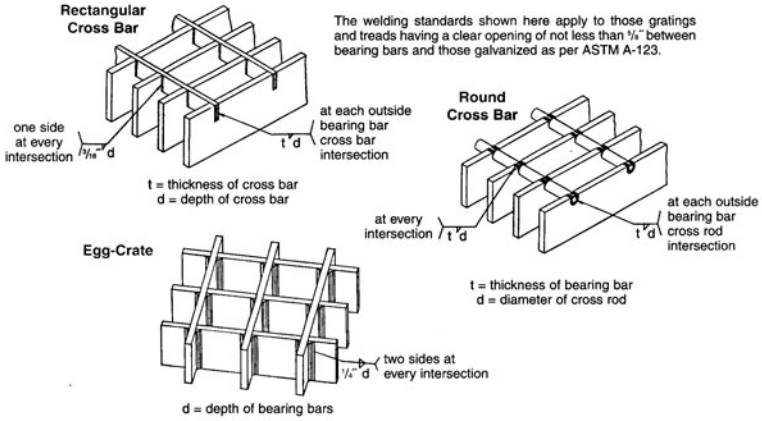


Weld 1st, 2nd and last bearing bars as shown. On treads over 9¾" wide, weld end of center bar also.



On treads over 9¾" wide, weld end of center bar also.

HEAVY DUTY



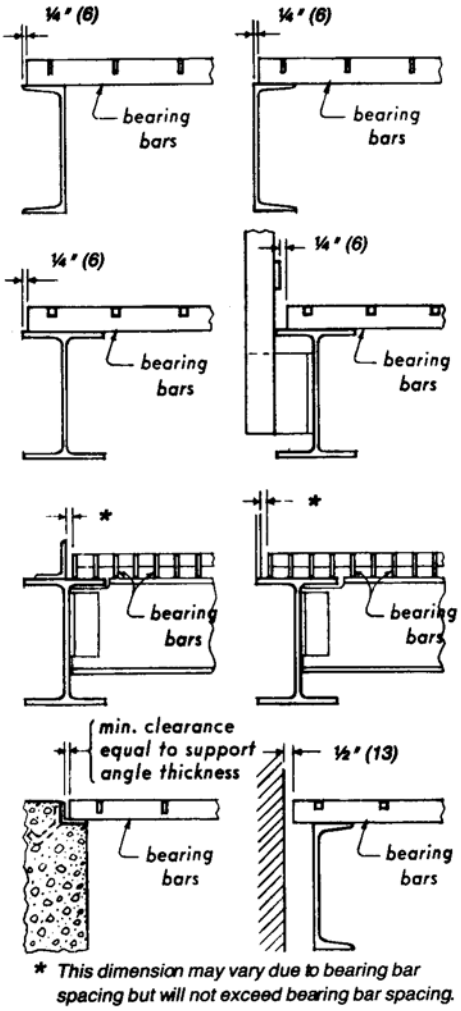
INSTALLATION/CUTOUTS

INSTALLATION RECOMMENDATIONS

•Grating must be installed with cross rods on top side to achieve strength specifications provided.

•Metal should be used for all grating supports.

•A minimum of 1” bearing shall be provided for bearing bar depths up to 2-1/4”; 2” minimum bearing shall be provided for bearing bar depths of 2-1/2” or greater.

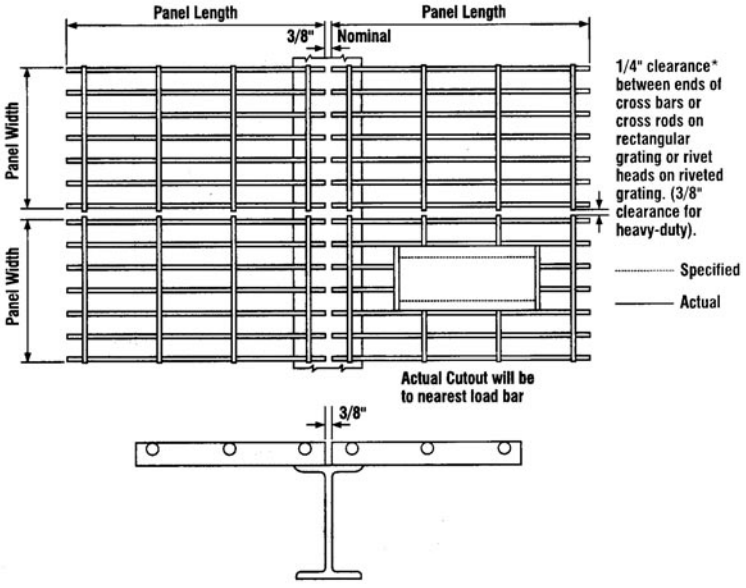


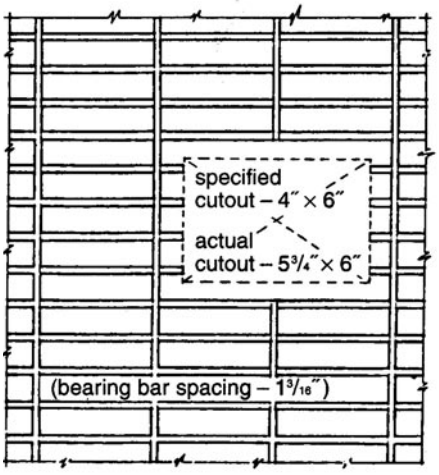
CUTOUT RECOMMENDATIONS

•**Clearances** shown are recommended, but may vary in accordance with dimensional tolerances.

•**Cutouts** for circular obstructions are recommended to be at least 2 inches larger in diameter than the obstruction. It is further recommended that cutouts for all piping 4 inches or less in diameter be made in the field.

•**Heavy Duty Grating** must be designed to have structural support under each bearing bar at cutouts.





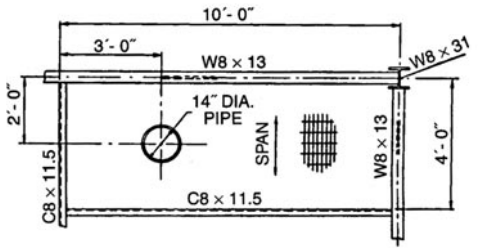
As shown, all rectangular cutouts are made to the next bearing bar beyond the penetration with a clearance not to exceed bearing bar spacing.

All grating products are manufactured to NAAMM tolerances and specifications.

CUSTOM FABRICATION

Brown-Campbell can manufacture, cut, weld, paint, galvanize, and fabricate grating to meet customer requirements, just a few examples below:

- •Straight and Circular Cutting and Banding
- •Notching/Welding
- •Serrated Heavy Duty Bearing Bars and Cross Rods
- •Toe Plate Attachment
- •Radially Cut Grating Panel Fabrication
- •Grating with Checker Plate
- •Vault Grating
- •Grating with Hinges, Locks, and Lift Handles
- •Heavy Duty Grating with Top and Bottom Cross Rods
- •Heavy Duty Grating with Spacer Bars to Form a Close Mesh



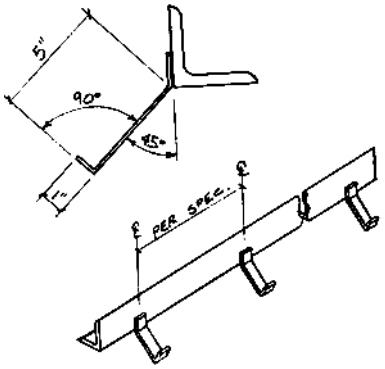
Our experienced engineering department can provide "take offs" from architectural plans or grating outline drawings supplied by the customer (example shown below) to develop detailed grating drawings necessary for custom fabrication.

STEEL CURB ANGLES

Tab Centers: **18"**
Tab Size: **3/16" x 1-1/4" x 5"**
Length: **20'**

Please Specify:
1. Grating or filler height
2. Angle size required
3. Angle length
4. Number of angles required
5. Tab centers
6. Tab size
7. Finish

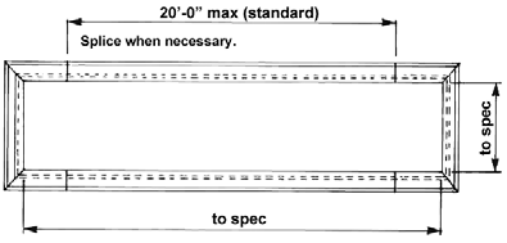
Filler or Grating Height (In)	Angle Size (In)
3/4	1 x 1 x 1/4
1	1-1/4 x 1-1/4 x 1/4
1-1/4	1-1/2 x 1-1/2 x 1/4
1-1/2	1-3/4 x 1-3/4 x 1/4
1-3/4	2 x 2 x 1/4
2	2-1/4 x 2-1/4 x 1/4
2-1/4	2-1/2 x 2-1/2 x 1/4
2-1/2	2-3/4 x 2-3/4 x 1/4



EXTRUDED GRATING FRAMES

Applicable for embedded concrete applications. Extruded aluminum (alloy 6063) grating frames provide a continuous ledge (anchor) to allow plank fasteners, grating clamps, or self-tapping screws for other types of fasteners. The continuous anchor can be used by itself or with supplementary anchor straps. The angle frame is available custom fabricated or with prefabricated corners in standard lengths of 20' (longer lengths by special order). Finishes include a choice of mill finish or a coat of zinc chromate paint on surfaces which come into contact with concrete.





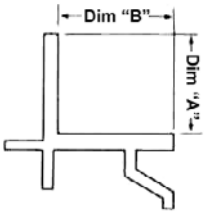
Fabrication Guidelines

•All corners are mitered at 45 degrees and welded on the back side. Welds are not ground.

•Small frame sizes 1'0" x 1'0" through 5'0" x 10'0" are made in one piece.

•Extended trench frames are provided with pre-fabricated end sections and long lengths shipped loose for field butt joining.

•Standard stock lengths are 20'0". Longer lengths available by special order.



Grating Size & Dim "A"	Dim "B"
1"	1-1/2"
1-1/4"	1-1/2"
1-1/2"	1-1/2"
2"	2"
2-1/2"	2"

SURFACE TYPE

Plain Surface
•Standard on all grating products except Aluminum I-Bar.

Serrated Surface
•Available on all grating products except Aluminum I-Bar. Recommended when oil, water, or chemicals are present.

Slip Resistant Surface
•Abrasive Coated Surface available on all grating products.

Abrasive Coating: An all metal plasma stream deposition applied directly to bar grating. Will not flake off or delaminate and can be punched, sheared, torched, plasma or laser cut, welded either directly to the surface or the opposite side, or otherwise fabricated with no adverse effects to the abrasive coated surface. *(See page 192 for more detailed information regarding Abrasive Coatings.)*

Product	Material Specification	Federal Specification	Military Specification	Finish Specification
Light Duty Welded, Light Duty Press-Locked, Light Duty Swaged	--ASTM A-569 (1/8", 3/16",1/4") --ASTM A-36 (1/4") by inquiry	ANSI/NAAMM MBG 531	MIL-G-18014 (Ships)	--Bare Steel --Galvanized per ASTM A-123 or A-385. --One shop coat mfg's standard paint. Note: This is to protect grating during transit only, not intended as a permanent finish.
Heavy Duty Welded Steel	--ASTM A-36 (1/4", 5/16", 3/8",1/2") --Other (by inquiry)	AASHTO (American Association of State Highway and Transportation Officials) Standard Specifications For Highway Bridges ANSI/NAAMM MBG 532		--Bare Steel --Galvanized per ASTM A-123 or A-385. --One shop coat mfg's standard paint. Note: This is to protect grating during transit only, not intended as a permanent finish.
Aluminum Press-Locked, Aluminum Swaged, Aluminum Flush Top, Aluminum I-Bar	--Alloy 6063-T6 or Alloy 6061-T6 (special order) for bearing bars per ASTM B-221 --Alloy 6063 for cross bars per ASTM B-221	ANSI/NAAMM MBG 531	MIL-G-18014 (Ships)	--Mill Finish --Other (by inquiry)
Stainless Steel Welded, Stainless Steel Press-Locked, Stainless Steel Swaged	--Type 304 per ASTM A-167 (1/8" and 3/16") --Other (by inquiry)	ANSI/NAAMM MBG 531	MIL-G-18014 (Ships)	--Welded: 'As-welded' --Press-Locked: Mill Finish --Other (by inquiry)

GLOSSARY OF TERMS

ANCHOR - A device by which grating is attached to its supports.

BAND - A flat bar welded to a side or end of a grating panel, or along the line of a cutout, and extending neither above nor below the bearing bars.

Load-Carrying Band: A band used in a cutout, to transfer the load from unsupported bearing bars in the cutout to the supported bearing bars.

Trim Band: A band which carries no load, but is used chiefly to improve appearance.

BEARING BARS - Load-carrying bars extending in the direction of the grating span.

BEARING BAR CENTERS - The distance to the center of the bearing bars.

CARRIERS (PUNCHED PLATE) - Flats which are welded to the grating panel and nosing of a stair tread and are bolted to a stair stringer to support the tread.

CLEAR OPENING - The distance between faces of bearing bars in a rectangular grating, or between a bent connecting bar in a riveted grating.

CROSS RODS - The connecting bars which extend across bearing bars, perpendicular to them.

CROSS ROD CENTERS - The distance center to the center of the cross bars.

CURVED CUT - A cutout following a curved pattern.

CUTOUT - An area of grating removed to clear an obstruction or to permit pipes, ducts, columns, etc. to pass through the grating.

FINISH - The coating, usually the paint or galvanizing, which is applied to the grating.

GRATING - An open grid assembly of metal bars, in which the bearing bars, running in one direction, are spaced by rigid cross rods attached to them.

I-BAR - An extruded aluminum bearing bar having a cross sectional shape resembling the letter "I".

LENGTH (SPAN) - The dimension of a grating panel measured parallel to the bearing bars.

OPEN AREA PERCENTAGE - The amount of open area stated as a % of the overall size of the material. *This % can vary depending on the material & manufacturing tolerances. Open area percentage can also vary depending on the manufacturing process: welded, press-locked, swaged or flush top. The open area percentages provided in this book are intended for reference only. To determine the exact open area %, the calculation must be performed for each piece of grating after it has been produced and fabricated to the finish size.*

NOSING - A special L-section member serving as the front or leading edge of a stair tread, or of grating at the head of a stair. Usually manufactured of a checkered plate or cast aluminum abrasive material.

PRESS-LOCKED GRATING - Bearing Bars are locked in position by cross rod deformation instead of riveting or welding.

RADIALLY CUT GRATING - Rectangular grating which is cut into panels shaped as annular segments, for use in circular or annular areas.

RETICULINE BAR - A sinuously bent connecting bar extending between two adjacent bearing bars, alternately contacting and being riveted to each.

REVERSIBLE GRATING - Grating so constructed that it may be installed either side up, with no difference in appearance or carrying capacity.

SERRATED GRATING - Grating which has the top surfaces of the bearing bars notched by punching.

SPAN OF GRATING - The distance between points of grating support, or the direction of this dimension.

STRAIGHT CUT - That portion of the cut edge or cutout of a grating which follows a straight line.

SWAGED- A method of altering the cross-sectional shape of a metal bar by pressure applied through dies.

TOEPLATE - A flat bar attached flat against the outer edge of a grating or rear edge of a tread, and projection above the top surface of grating or tread to form a lip or curb.

TREAD - A piece of grating having carrier plates and nosing attached by welding, and designed specifically to serve as a stair tread.

WELDED GRATING - Grating in which the bearing bars and cross rods are joined at their intersections by resistance welding.

WIDTH - The overall dimension of a grating piece, measured perpendicular to the bearing bars.



Brown-Campbell offers a full range of fabrication.
We...
manufacture • cut • weld
band • paint • galvanize
...just to name a few!

Same Day Shipments Available!

Bar Grating, Perforated, Wire Cloth, Safety Grating... this is just the short list, we have it all!
1-800-GRATING or visit our website at
brown-campbell.com





With 9 locations and our own fleet of trucks Brown-Campbell can get your order to you FAST!



Brown-Campbell ... Your grating specialist!

1-800-472-8464



Fiberglass

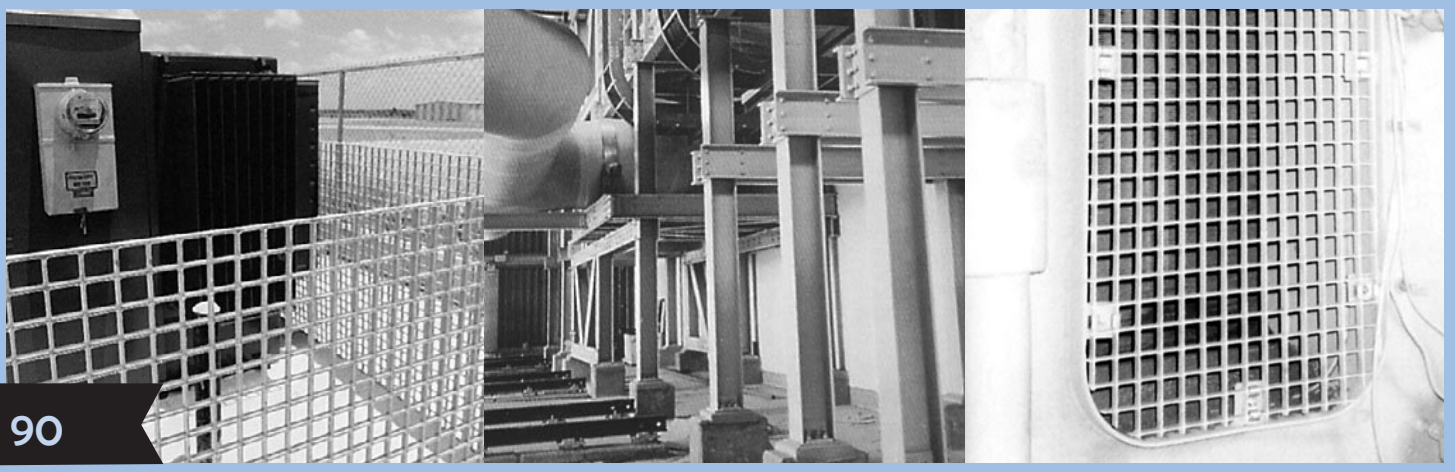
Fiberglass products are designed for applications requiring maximum corrosion resistance and greater strength than plastic products. All Brown-Campbell fiberglass products have UV Inhibitors.

Fiberglass products offer unique properties for many industrial applications including...

- •corrosion resistance
- •fire retardance
- •light weight
- •longevity
- •withstands heavy impact
- •low thermal conductivity
- •wide range of colors
- •aesthetically appealing
- •ease of fabrication
- •maintenance-free
- •resilience

In many applications fiberglass lasts much longer than metal alternatives thereby offering a lower product life cycle cost - a primary reason for it's increasing popularity in many industrial applications.

Brown-Campbell offers a variety of molded and pultruded fiberglass products including grating, stair treads, and platforms in an array of constructions. Additional fiberglass products such as handrails, ladder systems, floor plate, and structural shapes are also readily available.



FIBERGLASS STOCK LIST

Description	Resin/Type	Color	Surface	Item No.	Stock Size
MOLDED: Rectangular					
1 x 1 x 4	C-Polyester	Green	Grit	FCNG114	120" x 36" 96" x 48" 144" x 48"
	C-Polyester	Gray	Concave	FCG114	
	C-Polyester	Gray	Grit	FCGG114	
	C-Polyester	Yellow	Grit	FCYG114	
MOLDED: Square					
1 x 1.5 x 1.5	C-Polyester	Green	Concave	FCN11515	36" x 96" 36" x 120" 36" x 144" 48" x 96" 48" x 144" 60" x 120"
	C-Polyester	Green	Grit	FCNG11515	
	C-Polyester	Gray	Concave	FCG11515	
	C-Polyester	Gray	Grit	FCGG11515	
	C-Polyester	Yellow	Concave	FCY11515	
	C-Polyester	Yellow	Grit	FCYG11515	
1.5 X 1.5 X 1.5	C-Polyester	Green	Concave	FCN151515	
	C-Polyester	Green	Grit	FCNG151515	
	C-Polyester	Gray	Concave	FCG151515	
	C-Polyester	Gray	Grit	FCGG151515	
	C-Polyester	Light Gray	Concave	FCL151515	
	C-Polyester	Light Gray	Grit	FCLG151515	
	C-Polyester	Yellow	Grit	FCYG151515	
	V-Vinyl Ester	Gray	Grit	FVGG151515	
	V-Vinyl Ester	Orange	Grit	FVOG151515	
2 x 2 x 2	C-Polyester	Green	Grit	FCNG222	
	C-Polyester	Gray	Grit	FCGG222	
MOLDED: Stair Treads					
1.5 x 1.5 x 6	C-Polyester	Green	Grit	FCNG15156	22.5" x 120" 22.5" x 144"
	C-Polyester	Gray	Grit	FCGG15156	
	V-Vinyl Ester	Gray	Grit	FVGG15156	
	C-Polyester	Light Gray	Grit	FCLG15156	
	C-Polyester	Yellow	Grit	FCYG15156	
MOLDED: Covered					
1.625 x 1.5 x 1.5	I-Polyester	Green	Grit	FING16251515	48" x 144"
FLOOR PANELS					
1/4	C-Polyester	Gray	Smooth	FCG1/4	48" x 144"
3/8	F-Polyester	Light Gray	Grit	FFLG3/8	48" x 96"
PULTRUDED: I-Bar					
I-4010	P-Polyester	Gray	Grit	FPGG40106	36" x 144" 36" x 240" 48" x 144" 48" x 240"
	P-Polyester	Yellow	Grit	FPYG40106	
I-4015	P-Polyester	Gray	Grit	FPGG40156	
	P-Polyester	Yellow	Grit	FPYG40156	
I-5015	P-Polyester	Yellow	Grit	FPYG50156	
I-6010	P-Polyester	Gray	Grit	FPGG60106	
	P-Polyester	Yellow	Grit	FPYG60106	
	V-Vinyl Ester	Yellow	Grit	FVYG60106	
I-6015	P-Polyester	Gray	Grit	FPGG60156	
	P-Polyester	Yellow	Grit	FPYG60156	
I-60175	P-Polyester	Gray	Grit	FPGG601756	
PULTRUDED: T-Bar					
T-1810	P-Polyester	Gray	Grit	FPGG18106	36" x 240" 48" x 144"
T-5020	P-Polyester	Gray	Grit	FPGG50206	
	P-Polyester	yellow	Grit	FPYG50206	
Concrete Embedment FRP Angles					
1 x 1.5 x .25	V-Vinyl Ester	Gray	n/a	FAVG11525	240"
2 x 1.5 x .25	V-Vinyl Ester	Gray	n/a	FAVG21525	

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements

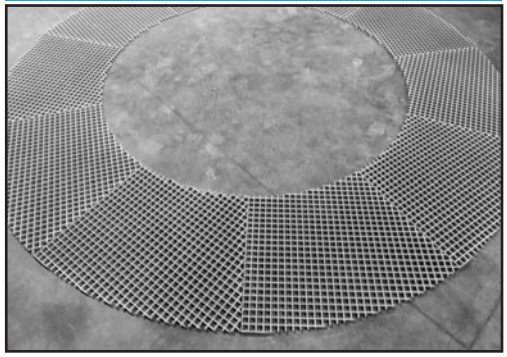
PLEASE SPECIFY:

- **Brown-Campbell "Fiberglass Grating"**
- **Type:** Rectangular or Square Molded and mesh size; I-Bar or T-Bar Pultruded, stair treads, etc.
- **Resin** - See Table on Page 92
- **Color** - Any color can be manufactured
- **Quantity:** # of panels, areas, or treads
- **Height:** Molded: panel height; Pultruded: bar height
- **Width & Length**
- **Surface:** concave (no grit) or grit
- **Bearing & Cross Bar Spacing:** applicable to Pultruded I-Bar & T-Bar Planks only
- **Span:** Required for Rectangular Molded & Pultruded panels
- **Accessories** - See Page 107
- **Special Requirements:** cut-outs, etc.

Don't forget the Clips!

Please see Page 107 for our Fiberglass Clip options.





Brown-Campbell can cut your fiberglass order to detailed specifications - FAST!

Molded or Pultruded

As a general rule of thumb:

Molded: Corrosion resistance - PRIMARY

Pultruded: Strength and stiffness - PRIMARY
Corrosion resistance - SECONDARY

The chart to the right summarizes certain characteristics that should be considered in deciding which fiberglass grating is most appropriate for your application.

Molded & Pultruded Comparison Chart

Characteristics	MOLDED		PULTRUDED
	1" Rectangular Mesh	1", 1-1/2" & 2" Sq. Mesh	
Corrosion Resistance	Highly Recommended	Highly Recommended	Recommended
Strength/Stiffness (longest span)	Recommended	Recommended	Highly Recommended
Impact Resistance	Recommended	Highly Recommended	Acceptable
Open Area	Highly Recommended	Highly Recommended	Acceptable
One-Direction Span	Recommended	Acceptable	Highly Recommended
Bi-Direction Span	Not Recommended	Highly Recommended	Not Recommended
Layout/Installation Ease	Acceptable	Highly Recommended	Acceptable
Lightweight compared to Metals	Highly Recommended	Highly Recommended	Highly Recommended

Molded & Pultruded Resin Systems

	Resin	Type	Flame Spread Rating*	Description
MOLDED	V	Vinyl Ester	15 or less	Developed for reliable performance in the toughest environments. This resin system formulation is the most chemically-resistant available today, offering outstanding resistance to a wide range of highly corrosive environments, ranging from caustic to acidic. In fact, no other resin system can match it's performance in highly acidic environments. Also available in a UL Classified resin formulation.
	I	Polyester	15 or less	Designed for industrial and chemical processing applications, where corrosion resistance is important. Also available in a UL Classified resin formulation.
	F	Polyester	20 or less	1st fiberglass grating USDA accepted for food processing applications. All of Brown-Campbell's Fiberglass Grating is now accepted by the USDA.
	C	Polyester	20 or less	The most popular type of molded fiberglass grating. This grating outperforms a number of competitive fiberglass and metal products and meets the requirements for corrosion resistance found in light industrial and water/wastewater applications.
	X	Vinyl Ester	10 or less	This highly corrosive-resistant resin is recommended for use where the fire potential is high. Flame spread rating level exceeded by no other resin.
	S	Vinyl Ester	non-fire retardant	A superior grade resin system designed for extreme temperatures (180 to 400 degrees F) and extremely corrosive environments such as solvents and acidic oxidizers. This resin system is non-fire retardant unless otherwise specified and is used mainly as packing hold-downs (bed limiters) and as packing supports in environmental or process scrubber and stripping applications.
	E	Modified Acrylic	15	This Extra Low Smoke resin system offers a flame spread of 15, a smoke density index of 45 and Fuel Contribution of 0 when tested according to the ASTM E-84 Tunnel Test. This product offers all the benefits of fiberglass products plus the added advantage of greater worker visibility and lower toxicity in emergencies, making it the ideal choice for tunnel, offshore, ship and other confined area applications.
PULTRUDED	P	Polyester	20 or less	Polyester resin. Premium grade resin providing outstanding corrosion resistance for splash and spill exposures in moderate temperature conditions. Typically lower in cost compared to vinyl ester products.
	V	Vinyl Ester	15 or less	Vinyl ester resin. Provides the highest level of corrosion protection and demonstrates better retention of structural properties at elevated temperatures.

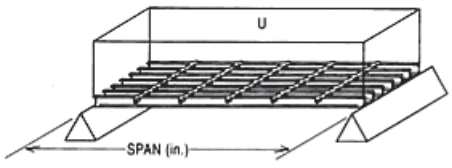
*Flame spread rating per ASTM E-84.

Brown-Campbell stocks gray, green, yellow, orange and light gray.
If you require a special color Brown-Campbell can manufacture it for you.

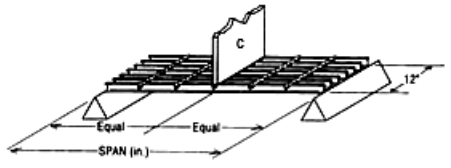
Inquire Today at 1-800-GRATING or brown-campbell.com

Fiberglass Load and Deflection Tables (tables start on page 94)

The fiberglass load and deflection tables included in this section provide uniform load and concentrated loads of regular capacity fiberglass grating. 'Maximum Load Recommended' represents levels below which corrosion resistance damage does not occur. Ultimate Load Capacity represents a complete and total failure of the grating and is presented to illustrate the reserve strength of the grating at a given span, these amounts represent the lowest or most conservative ultimate capacity value. 'Ultimate capacities' are not to be used for design, ***functionality of the grating is limited to the 'Maximum Recommended Load'.*** The load/deflection values provided in the following tables are average values with manufacturing control limits on stiffness for all panels plus or minus 7.5% of these average values.

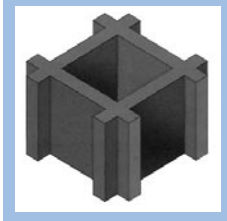


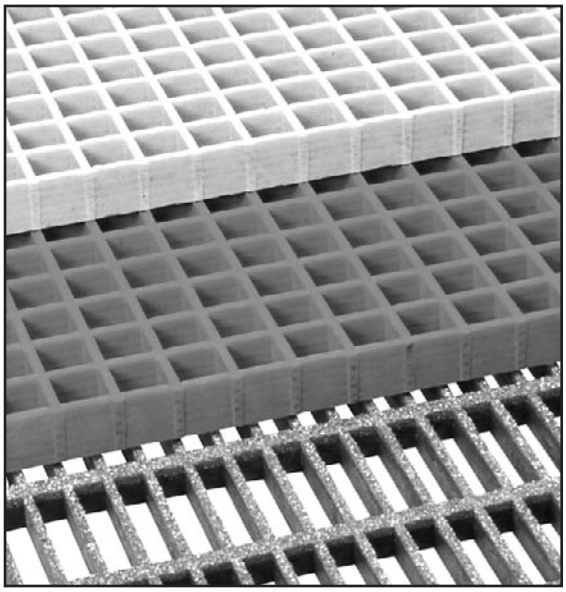
Uniform Load - lbs/ft²



Concentrated Load - lbs/ft of width

MOLDED GRATING combines fiberglass rovings with thermosetting resin to form a strong one-piece molded panel. There are seven types of resins available (see summary chart on previous page), each offering different levels of corrosion-resistance and fire retardancy to meet your specific needs. Consisting of 65% resin by weight, molded grating offers superior corrosion resistance. Additionally, outstanding slip resistance for worker safety is provided by the standard concave meniscus surface or with optional surfaces of Quartz or Aluminum Oxide Grit.





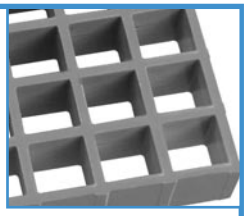
Molded Grating Availability

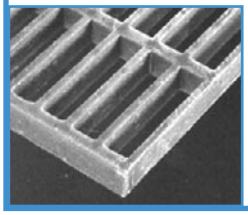
Style	Height (In)	Open Area	Load Bar Spacing CC	Std Panel Sizes (Ft)*	Lbs/ Sq. Ft.
1-1/2" x 1-1/2" Square Mesh	3/4	70%	1-1/2"	3x10, 4x8, 4x12	2.0 lbs.
	1	70%	1-1/2"	3x10, 4x8, 4x12	2.5 lbs.
	1-1/4	70%	1-1/2"	3x10, 4x8, 4x12, 5x10	3.2 lbs.
	1-1/2	70%	1-1/2"	3x10, 4x8, 4x12, 5x10	3.7 lbs.
2" x 2" Square Mesh	2	72%	2"	4x12	4.0 lbs.
1" x 4" Rect. Mesh	3/4	69%	1"	10x3, 8x4	2.5 lbs.
	1	69%	1"	10x3, 8x4	2.5 lbs.

*Standard Panel Size Shown - Brown-Campbell can cut any fiberglass panel to your size specifications.

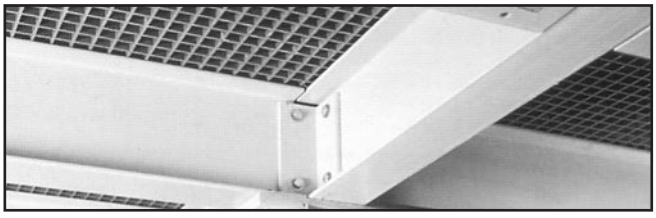
All fiberglass panels can be cut or manufactured to your size specifications.

Square Mesh pattern allows for easy on-site cutting of panels, allowing a variety of flooring layouts to be easily accommodated with minimal waste. The need for additional supports is eliminated in many cases due to this product's bi-directional strength.





Rectangular Mesh offers one-direction span strength in the width of the grating panel and is often used for walkways and trench covers.

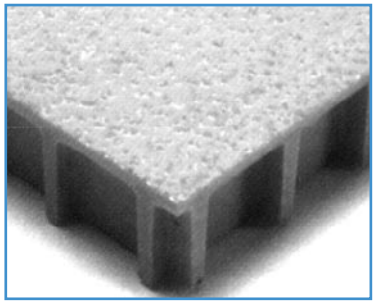




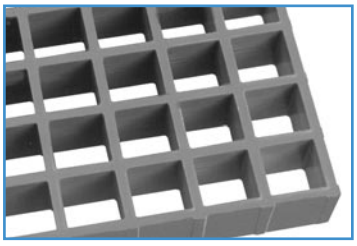
Inquire today - Call 1-800-GRATING or visit our website at brown-campbell.com and click on "Request A Quote" on any web page.

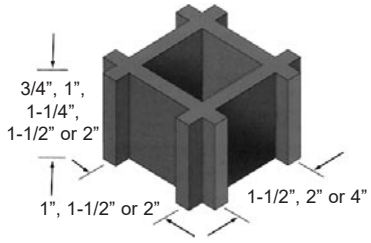
Covered Molded Grating

Covered molded grating includes a 1/8" deep fiberglass gritted plate cover affixed to any molded grating panel. This grating offers a strong, level surface for foot or cart traffic and provides approximately 35% higher stiffness values than that of open mesh grating. Its standard grit-top cover assures secure footing.



Brown-Campbell Fiberglass Products have UV Inhibitors





All fiberglass panels can be cut or manufactured to your size specifications.

1-800-GRATING
brown-campbell.com

See page 92 for info on 'Fiberglass Load and Deflection Tables'

Molded Grating

Style			Uniform Load - lbs/sq. ft; Deflection - inches									Concentrated Load - lbs/ft of width; Deflection - inches								
Style (In)	Height (In)	Load Bar Spacing CC (In)	Load/ Span	18"	24"	30"	36"	42"	48"	54"	60"	Load/ Span	18"	24"	30"	36"	42"	48"	54"	60"
1 x 4 Rectangular Mesh	1	1	50	.01	.04	.08	.16	.33				200	.05	.12	.22	.34	***.60***			
			100	.02	.07	.17	.32	***.66***				300	.07	.18	.32	***.52***	***.90***			
			200	.04	.15	.34	***.65***	***1.32***				500	.12	.30	***.54***	***.86***	***1.51***			
			FL*	1902	1070	685	476	349				FL*	1427	1070	856	713	613			
1-1/2 x 1-1/2 Square Mesh	1	1-1/2	50	.02	.06	.14	.31	***.49***				200	.08	.20	.35	***.66***	***.90***			
			100	.04	.12	.27	***.62***	***.98***				300	.12	.30	***.53***	***.99***	***1.35***			
			200	.08	.25	***.55***	***1.24***	***1.97***				500	.20	***.49***	***.88***	***1.65***	--			
			FL*	1268	713	456	317	233				FL*	951	713	571	476	408			
1-1/2 x 1-1/2 Square Mesh	1-1/2	1-1/2	50	<.01	.02	.05	.10	.17	.28	***.42***		200	.03	.07	.12	.21	.32	***.45***	***.60***	
			100	.01	.04	.09	.20	.34	***.56***	***.84***		300	.05	.10	.18	.32	***.47***	***.68***	***.90***	
			200	.03	.06	.18	***.40***	***.69***	***1.13***	***1.68***		500	.08	.17	.29	***.53***	***.79***	***1.13***	***1.50***	
			FL*	2779	1600	1024	711	522	400	316		FL*	2133	1600	1280	1067	914	800	711	
2 x 2 Square Mesh	2	2	50	<.01	.01	.02	.04	.08	.14	.21	.37	200	.02	.03	.06	.09	.14	.22	.30	***.47***
			100	.01	.02	.05	.09	.16	.28	***.42***	***.73***	300	.03	.05	.09	.14	.22	.33	***.45***	***.70***
			200	.02	.04	.09	.18	.32	***.56***	***.84***	***1.46***	500	.05	.08	.14	.23	.36	***.56***	***.75***	***1.17***
			FL*	2566	1925	1338	929	682	522	413	334	FL*	2787	2090	1672	1393	1194	1045	929	836

*FL: Failure load. Determined by applying a 2.5 Factor of Safety to the Ultimate Capacity of the grating.
•Deflection for uniform loads is limited to L/120 with L representing clear span length in inches. For typical pedestrian traffic, uniform load of 50 PSF is recommended with deflection not to exceed .375"
•Deflections for concentrated loads are shown for the same span conditions as for uniform loads.
•Deflection limits can be higher for fiberglass gratings as they are more resilient than metal materials.
•Italicized, bolded values indicate deflection greater than .375" or L/120. For these conditions, sustained loads or data not shown, please contact Brown-Campbell.

Brown-Campbell is an industry leader in fiberglass products.
Our product expertise and customer service is unsurpassed.
Inquire today at 1-800-GRATING or brown-campbell.com

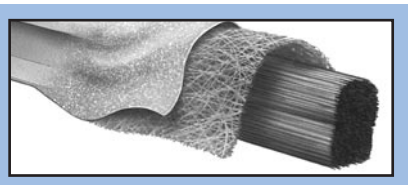






PULTRUDED GRATING

is manufactured with a high percentage of glass within the laminate, providing durability, extremely high unidirectional strength and stiffness. Due to its exceptional stiffness, pultruded grating can be used in applications requiring wide support spans, rarely needing additional support.

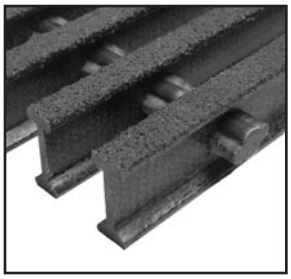


To form a pultruded element, continuous fiber rovings and mat are mechanically drawn through a resin bath and shaped through a series of forming guides, then pulled through a heated die.

Pultruded grating exceeds the requirements for grating used in chemical, water and wastewater, electronics, food and beverage, pulp and paper, petroleum processing, and marine applications.

Corrosion resistant • Long life • Maintenance-free • Lightweight • Easy to Fabricate
Easier to install • Slip-resistant • Non-conductive • Fire retardant

Pultruded I-Bar Fiberglass Grating

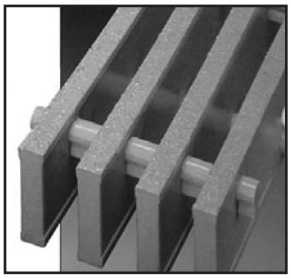


I-6000 and I-4000 Series

- *Superior and economical walking surface*
- *60% and 40% open areas*

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Pultruded Heavy Duty I-Bar Fiberglass Grating

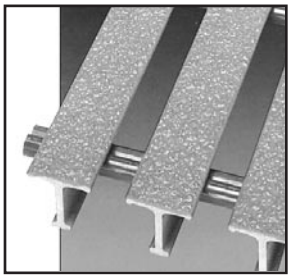


I-5800 and I-4700 Series

- *High strength designed specifically for heavy loading and to support vehicular traffic*
- *58% and 47% open areas*

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Pultruded T-Bar Fiberglass Grating



T-3500, T-1800, T-0000, T-5000 and T-3300 Series

- *Most comfortable walking surface*
- *1" & 1-1/2" Height: Solid surface, 35%, and 18% open areas*
- *2" Height: 50% and 33% open areas*

Page 98-99

Resin Systems

Pultruded grating is available in two resin formulations, Polyester and Vinyl Ester, for an accurate match of product characteristics with the application. Both resin systems provide corrosion resistance that is superior to that offered by metal grating.

See page 92 for a resin system comparison.

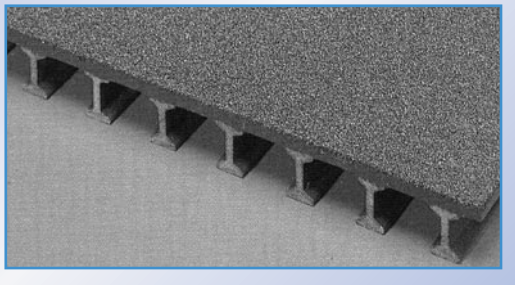
Common Fiberglass Applications

Assembly Lines • Catwalks
Platforms • Ramps • Stairs
Trench Covers • Walkways



Covered Pultruded Grating

Top surface available in smooth or slip resistant with 1/8", 1/4", 3/8" and 1/2" thicknesses. Ideal for turning wheel traffic areas or when necessary to eliminate passage of light/air/debris.





Brown-Campbell Fiberglass Products have UV Inhibitors

Pultruded I-Bar Fiberglass Grating

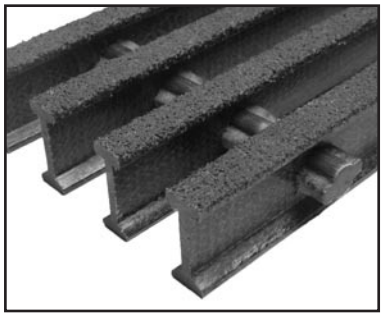
Pultruded I-Bar offers a superior and economical walking surface with high strength and corrosion protection. Open areas are available in 60% or 40% making this product an excellent option for work platforms.

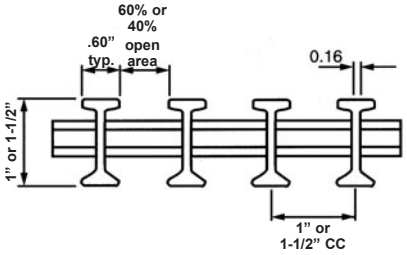
Pultruded I-Bar Grating Availability

Style	Height	Surface Width	Open Space	Open Area	Load Bar Spacing CC	Std Width*	Std Length*	Lbs/ Sq. Ft.	I in^4/ft of width[a]	S in^3/ft of width[a]
I-6010	1"	.60"	.9"	60%	1-1/2"	3', 4'	20', 24'	2.2 lbs.	.348	.696
I-60125	1-1/4"	.60"	.9"	60%	1-1/2"	3', 4'	20', 24'	2.6 lbs.	.578	.928
I-6015	1-1/2"	.60"	.9"	60%	1-1/2"	3', 4'	20', 24'	2.8 lbs.	1.000	1.333
I-4010	1"	.60"	.4"	40%	1"	3', 4'	20', 24'	3.3 lbs.	.522	1.044
I-40125	1-1/4"	.60"	.4"	40%	1"	3', 4'	20', 24'	4.0 lbs.	.868	1.388
I-4015	1-1/2"	.60"	.4"	40%	1"	3', 4'	20', 24'	4.2 lbs.	1.500	2.000

a) I = Moment of Inertia; S = Section Modulus

*Standard Widths and Lengths Shown - Brown-Campbell can cut any fiberglass panel to your size specifications





Color: Standard - gray or yellow (any color can be manufactured)

Surface: Furnished standard with gritted, skid resistant top surface.

Cross bar spacings: 6" on center

All fiberglass panels can be cut or manufactured to your size specifications.

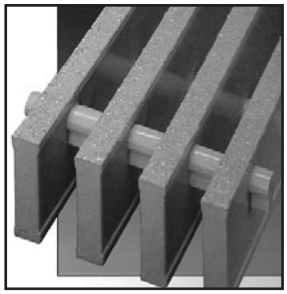
Pultruded I-Bar Grating

Style			Uniform Load - lbs/sq. ft; Deflection - inches										Concentrated Load - lbs/ft of width; Deflection - inches									
Style	Ht. (In)	Load Bar Spacing CC (In)	Load/ Span	24"	30"	36"	42"	48"	54"	60"	66"	72"	Load/ Span	24"	30"	36"	42"	48"	54"	60"	66"	72"
I-6010	1	1-1/2	50	.01	.03	.05	.10	.17	.27	***.40***			200	.04	.07	.12	.18	.27	***.38***	***.52***		
			100	.02	.06	.11	.20	.33					300	.06	.11	.17	.27	***.40***				
			200	.05	.11	.22							500	.09	.18	.29						
			FL*	2320	1485	1031	754	575	453	362			FL*	2320	1856	1546	1319	1149	1019	906		
I-60125	1-1/4	1-1/2	50	.01	.02	.04	.07	.11	.17	.26	***.38***	***.54***	200	.02	.05	.08	.12	.18	.25	.34	***.45***	***.58***
			100	.02	.04	.07	.13	.22	.35				300	.04	.07	.12	.18	.27	.37			
			200	.03	.07	.15	.27						500	.06	.12	.19	.30					
			FL*	2920	1852	1274	921	694	537	424	342	279	FL*	2920	2315	1911	1612	1388	1209	1061	940	838
I-6015	1-1/2	1-1/2	50	.01	.01	.02	.04	.06	.10	.15	.22	.31	200	.01	.03	.04	.07	.10	.14	.19	.26	.33
			100	.01	.02	.04	.08	.13	.20	.30	***.44***		300	.02	.04	.07	.10	.15	.21	.29	***.39***	***.50***
			200	.02	.04	.08	.15	.25	***.40***				500	.04	.07	.11	.17	.25	.36	***.49***		
			FL*	3520	2218	1517	1088	3813	621	486	388	312	FL*	3520	2797	2275	1904	1626	1398	1216	1066	937
I-4010	1	1	50	.01	.02	.04	.07	.11	.18	.27	***.40***	***.56***	200	.02	.05	.08	.12	.18	.25	.34	***.46***	***.60***
			100	.02	.04	.07	.13	.22	.36				300	.04	.07	.12	.18	.27	***.38***			
			200	.03	.07	.15	.27						500	.06	.12	.19	.30					
			FL*	3480	2227	1546	1131	862	680	543	444	368	FL*	3480	2784	2320	1979	1724	1529	1359	1221	1107
I-40125	1-1/4	1	50	.01	.01	.02	.04	.07	.12	.18	.26	.36	200	.01	.03	.04	.07	.10	.14	.19	.26	.33
			100	.01	.02	.05	.09	.15	.23	.35	***.51***		300	.02	.04	.07	.10	.15	.21	.29	***.39***	***.50***
			200	.02	.05	.10	.18	.29					500	.04	.08	.13	.20	.29	***.41***			
			FL*	4380	2777	1910	1382	1041	806	636	513	419	FL*	4380	3472	2866	2418	2082	1814	1592	1410	1257
I-4015	1-1/2	1	50	.01	.01	.01	.02	.04	.07	.10	.15	.21	200	.01	.02	.03	.05	.07	.10	.13	.17	.22
			100	.01	.01	.03	.05	.09	.14	.21	.31	***.44***	300	.01	.03	.04	.07	.10	.14	.19	.26	.33
			200	.01	.03	.06	.10	.17	.27	***.40***			500	.02	.04	.07	.11	.17	.24	.32	***.43***	***.55***
			FL*	5280	3328	2275	1632	1220	932	730	582	468	FL*	5280	4160	3413	2857	2440	2098	1824	1600	1406

*FL: Failure load. Determined by applying a 2.5 Factor of Safety to the Ultimate Capacity of the grating.
•Deflection for uniform loads is limited to L/120 with L representing clear span length in inches. For typical pedestrian traffic, uniform load of 50 PSF is recommended with deflection not to exceed .375"
•Deflections for concentrated loads are shown for the same span conditions as for uniform loads.
•Deflection limits can be higher for fiberglass gratings as they are more resilient than metal materials.
•Italicized, bolded values indicate deflection greater than .375" or L/120. For these conditions, sustained loads or data not shown, please contact Brown-Campbell.

Heavy Duty Pultruded I-Bar Fiberglass Grating

Heavy Duty Pultruded I-Bar is high strength grating designed specifically for heavy loading with the I-4700 Series having the highest load capacity of any fiberglass grating available today. The sections are engineered to support vehicular traffic including transport trucks up to H-20 unidirectional loading.

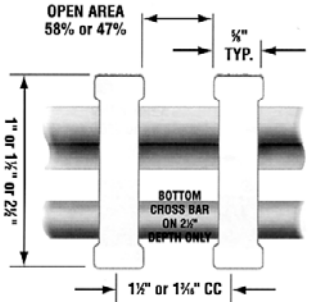


For turning wheel loads, covered Heavy Duty Pultruded I-Bar grating with 1/8" plate is available, please contact a Brown-Campbell sales representative today for assistance.

Heavy Duty Pultruded I-Bar Grating Availability

Style	Height	Surface Width	Open Space	Open Area	Load Bar Spacing CC	Std Width*	Std Length*	Lbs/ Sq. Ft.
I-4710	1"	5/8"	9/16"	47%	1-3/16"	23.75", 35.63"	20', 24'	5.5 lbs.
I-4715	1-1/2"	5/8"	9/16"	47%	1-3/16"	23.75", 35.63"	20', 24'	8.0 lbs.
I-4720	2"	5/8"	9/16"	47%	1-3/16"	23.75", 35.63"	20', 24'	10.9 lbs.
I-4725	2-1/2"	5/8"	9/16"	47%	1-3/16"	23.75", 35.63"	20', 24'	12.3 lbs.
I-5815	1-1/2"	5/8"	7/8"	58%	1-1/2"	3', 4'	20', 24'	6.5 lbs.
I-5820	2"	5/8"	7/8"	58%	1-1/2"	3', 4'	20', 24'	8.7 lbs.
I-5825	2-1/2"	5/8"	7/8"	58%	1-1/2"	3', 4'	20', 24'	10.0 lbs.

*Standard Widths and Lengths Shown - Brown-Campbell can cut any fiberglass panel to your size specifications



Color: Standard - yellow (any color can be manufactured)

Surface: Furnished standard with gritted, skid resistant top surface

Cross bar spacings: 6" on center

Heavy Duty Pultruded I-Bar

Style			Uniform Load - lbs/sq. ft; Deflection - inches										Wheel Loads - lbs/ft of width; Deflection - inches								
Style	Ht. (In)	Load Bar Spacing CC (In)	Load/ Span	36"	42"	48"	54"	60"	66"	72"	78"	84"	Load/ Span	12"	18"	24"	30"	36"	42"	48"	54"
I-4710	1	1-3/16	100	.05	.08	.13	.21	.32	***.48***				2000	.04	.10	.20	.33				
			200	.10	.17	.27	***.42***						6200	.13							
			300	.15	.25	***.40***							8730	.19							
			FL*	3221	2366	1812	1431	1159	958				20800	.12							
I-4715	1-1/2	1-3/16	100	.02	.04	.06	.10	.15	.22	.30	***.42***	***.56***	2000	.03	.06	.11	.17	.25	.36		
			200	.05	.08	.13	.20	.29	***.43***				6200	.10	.19	.33	***.53***				
			300	.07	.12	.19	.29	***.44***					8730	.14	.27						
			FL*	7070	5194	3977	3142	2545	2103	1767	1506	1298	20800	.09	.23						
I-4720	2	1-3/16	100	.01	.02	.03	.05	.06	.09	.12	.17	.22	6200		.17	.22	.31	***.43***	***.58***		
			200	.03	.04	.06	.09	.13	.18	.25	.33	***.44***	8730		.24	.31	***.44***	***.60***			
			300	.04	.06	.09	.14	.19	.26	.37	***.50***	***.67***	10400		.26	.36					
			FL*	12180	8949	6851	5413	4385	3624	3045	2595	2237	20800		.21	.34					
I-4725	2-1/2	1-3/16	100	.01	.01	.02	.03	.05	.07	.09	.13	.17	6200		.05	.10	.16	.24	.35	***.49***	***.66***
			200	.02	.03	.04	.06	.09	.13	.19	.26	.34	8730		.08	.13	.23	.34	***.49***	***.69***	
			300	.02	.04	.06	.09	.14	.20	.28	***.38***	***.52***	10400		.08	.15	.26	***.40***	***.58***		
			FL*	15789	13534	10672	8432	6830	5465	4743	4041	3485	20800		.07	.14	.27	***.43***	***.64***		
I-5815	1-1/2	1-1/2	100	.03	.05	.08	.12	.18	.27	***.38***	***.52***	***.70***	2000	.04	.08	.10	.13	.21	.32		
			200	.06	.10	.16	.25	.37	***.54***				6200	.13	.24						
			300	.09	.15	.24	.37						8730	.18							
			FL*	5597	4112	3148	2488	2015	1665	1399	1192	1028	20800	.11	.29						
I-5820	2	1-1/2	100	.02	.03	.04	.06	.08	.11	.15	.21	.28	6200		.21	.28	***.38***	***.53***			
			200	.03	.05	.08	.11	.16	.22	.31	***.42***	***.57***	8730		.29	***.39***					
			300	.05	.08	.12	.17	.24	.34	***.46***	***.63***		10400								
			FL*	9641	7083	5423	4285	3471	2869	2410	2054	1771	20800		.25						
I-5825	2-1/2	1-1/2	100	.01	.02	.03	.04	.06	.08	.12	.16	.22	6200		.06	.12	.20	.30	***.44***	***.61***	
			200	.02	.03	.05	.08	.11	.16	.23	.32	***.43***	8730		.09	.17	.28	***.42***	***.62***		
			300	.03	.05	.08	.11	.17	.25	.35	***.48***	***.65***	10400		.10	.19	.33	***.49***			
			FL*	12500	10714	8448	6675	5407	4469	3755	3199	2759	20800		.07	.18	.34	***.53***			

*FL: Failure load. Determined by applying a 2.5 Factor of Safety to the Ultimate Capacity of the grating.
•Deflection for uniform loads is limited to L/120 with .375" being the recommended maximum for non-sustained loads.
Italicized, bolded values indicate deflection greater than .375" or L/120, please seek engineer's advice for applicability.
•Wheel loads represent: 2000 lbs. on 7"x10" wheel print; 6200 lbs. - 2 Ton Fork Lift; 8730 lbs. - 3 Ton Fork Lift; 10400 lbs - H10 load on 10"x10" wheel print; 20800 lbs. - H20 load on 20"x20" wheel print.

Pultruded T-Bar Fiberglass Grating

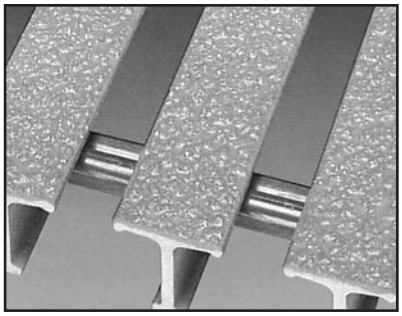
Pultruded T-Bar is the ideal alternative when the most comfortable walking surface is desired. Pultruded T-Bar grating provides maximum surface area underfoot, excellent for high foot traffic and roller trucks and carts. Available in 35% and 18% open areas or solid deck surface.

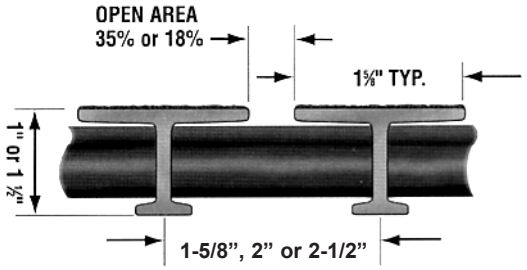
Pultruded 1" & 1-1/2" T-Bar Grating Availability

Style	Height	Surface Width	Open Space	Open Area	Load Bar Spacing CC	Std Width*	Std Length*	Lbs/ Sq. Ft.	I in⁴/ft of width[a]	S_T in³/ft of width[a]	S_B in³/ft of width[a]
T-3510	1"	1-5/8"	7/8"	35%	2-1/2"	35", 47.5"	20', 24'	3.3 lbs.	.292	.820	.454
T-3515	1-1/2"	1-5/8"	7/8"	35%	2-1/2"	35", 47.5"	20', 24'	2.7 lbs.	.769	1.380	.810
T-1810	1"	1-5/8"	3/8"	18%	2"	3', 4'	20', 24'	2.8 lbs.	.365	1.025	.567
T-1815	1-1/2"	1-5/8"	3/8"	18%	2"	3', 4'	20', 24'	3.3 lbs.	.962	1.747	1.013
T-0010	1"	1-5/8"	0"	0%	1-5/8"	35", 47.125"	20', 24'	4.0 lbs.	.449	1.261	.697
T-0015	1-1/2"	1-5/8"	0"	0%	1-5/8"	35.75", 47.125"	20', 24'	4.0 lbs.	1.183	2.149	1.246

a) I = Moment of Inertia; S = Section Modulus

*Standard Widths and Lengths Shown - Brown-Campbell can cut any fiberglass panel to your size specifications





All fiberglass panels can be cut or manufactured to your size specifications.

Color: Standard - gray or yellow (any color can be manufactured)

Surface: Furnished standard with gritted, skid resistant top surface

Cross bar spacings: 6" on center

Pultruded T-Bar Grating - 1" & 1-1/2"

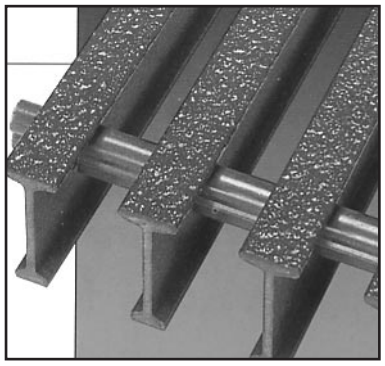
Style			Uniform Load - lbs/sq. ft; Deflection - inches										Concentrated Load - lbs/ft of width; Deflection - inches									
Style	Ht. (In)	Load Bar Spacing CC (In)	Load/ Span	24"	30"	36"	42"	48"	54"	60"	66"	72"	Load/ Span	24"	30"	36"	42"	48"	54"	60"	66"	72"
T-3510	1	2-1/2	50	.02	.04	.09	.15	.26	.37				200	.06	.11	.18	.28	***.41***	***.53***			
			100	.04	.08	.17	.30						300	.09	.16	.27	***.42***					
			200	.07	.17	.34							500	.15	.27	***.46***						
			FL*	1709	1083	741	533	400					FL*	1709	1354	1111	933	800				
T-3515	1-1/2	2-1/2	50	.01	.02	.04	.07	.10	.15	.20	.26	.32	200	.03	.06	.09	.12	.17	.21	.25	.30	.34
			100	.02	.04	.08	.13	.21	.29	***.40***	***.51***		300	.05	.08	.13	.19	.25	.31	***.38***	***.45***	***.52***
			200	.04	.09	.16	.27						500	.08	.14	.22	.31					
			FL*	3049	1932	1322	951	714	564	457	378	317	FL*	3049	2416	1982	1665	1427	1270	1143	1039	952
T-1810	1	2	50	.01	.03	.07	.12	.20					200	.05	.09	.15	.22	.33	***.42***			
			100	.03	.07	.14	.24						300	.07	.13	.22	.34					
			200	.06	.14	.27							500	.12	.22	.37						
			FL*	2136	1354	926	666	500					FL*	2136	1693	1389	1166	1000				
T-1815	1-1/2	2	50	.01	.02	.03	.05	.08	.12	.16	.21	.26	200	.02	.04	.07	.10	.13	.17	.20	.24	.28
			100	.02	.03	.06	.11	.17	.23	.32	***.41***	***.52***	300	.04	.07	.10	.15	.20	.25	.30	.36	***.41***
			200	.03	.07	.13	.22	.33					500	.06	.11	.17	.25	.33	.42			
			FL*	3811	2415	1653	1189	893	705	571	473	396	FL*	3811	3020	2478	2081	1784	1588	1429	1299	1190
T-0010	1	1-5/8	50	.01	.03	.06	.10	.17	.24	.33			200	.04	.07	.12	.18	.27	.34	***.43***	***.52***	
			100	.02	.06	.11	.20	.33					300	.06	.11	.18	.27	***.40***				
			200	.05	.11	.22							500	.10	.18	.30						
			FL*	2629	1666	1140	820	615					FL*	2629	2084	1710	1435	1231				
T-0015	1-1/2	1-5/8	50	.01	.02	.03	.04	.07	.10	.13	.17	.21	200	.02	.04	.06	.08	.11	.13	.16	.19	.22
			100	.01	.03	.05	.09	.13	.19	.26	.33	***.42***	300	.03	.05	.08	.12	.16	.20	.25	.29	.34
			200	.02	.06	.11	.18	.27	***.38***				500	.05	.09	.14	.20	.27	.34	***.41***	***.49***	***.56***
			FL*	4691	2972	2034	1463	1098	868	703	582	488	FL*	4691	3717	3049	2562	2195	1954	1758	1598	1465

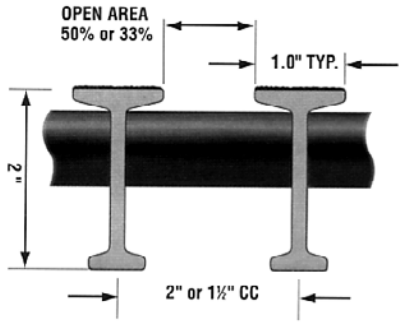
*FL: Failure load. Determined by applying a 2.5 Factor of Safety to the Ultimate Capacity of the grating.
•Deflection for uniform loads is limited to L/120 with L representing clear span length in inches. For typical pedestrian traffic, uniform load of 50 PSF is recommended with deflection not to exceed .375"
•Deflections for concentrated loads are shown for the same span conditions as for uniform loads.
•Deflection limits can be higher for fiberglass gratings as they are more resilient than metal materials.
•Italicized, bolded values indicate deflection greater than .375" or L/120. For these conditions, sustained loads or data not shown, please contact Brown-Campbell.

2” Pultruded T-Bar Fiberglass Grating

2” Pultruded T-Bar offers the highest strength to weight ratio of all fiberglass grating and provides the greatest economy in relation to longer spans.

Pultruded 2” T-Bar Grating Availability											
Style	Ht	Surface Width	Open Space	Open Area	Load Bar Spacing CC	Std Width*	Std Length*	Lbs/ Sq. Ft.	I in⁴/ft of width[a]	S_T in³/ft of width[a]	S_B in³/ft of width[a]
T-5020	2”	1”	1”	50%	2”	3’, 4’	20’, 24’	2.8 lbs.	1.753	1.950	1.590
T-3320	2”	1”	1/2”	33%	1-1/2”	3’, 4’	20’, 24’	3.7 lbs.	2.337	2.600	2.120
a) I = Moment of Inertia; S = Section Modulus											
*Standard Widths and Lengths Shown - Brown-Campbell can cut any fiberglass panel to your size specs											





Color: Standard - gray or yellow (any color can be manufactured)

Surface: Furnished standard with gritted, skid resistant top surface

Cross bar spacings: 6” on center

All fiberglass panels can be cut or manufactured to your size specifications.

Pultruded T-Bar Grating - 2”																				
Style			Uniform Load - lbs/sq. ft; Deflection - inches										Concentrated Load - lbs/ft of width; Deflection - inches									
Style	Ht. (In)	Load Bar Spacing CC (In)	Load/ Span	36”	42”	48”	54”	60”	66”	72”	78”	84”	Load/ Span	36”	42”	48”	54”	60”	66”	72”	78”	84”
T-5020	2	2	50	.01	.03	.04	.07	.10	.14	.20	.28	.37	200	.03	.05	.07	.10	.13	.17	.22	.27	.34
			100	.03	.05	.08	.13	.20	.29	***.41***	***.55***		300	.04	.07	.10	.14	.19	.25	.32	***.41***	***.51***
			200	.06	.10	.17	.27	***.40***					500	.07	.12	.17	.24	.32	***.42***	***.54***		
			FL*	1791	1316	1007	796	645	533	447	381	329	FL*	2687	2303	2015	1791	1612	1465	1343	1240	1151
T-3320	2	1-1/2	50	.01	.02	.03	.04	.07	.10	.13	.19	.25	200	.02	.03	.04	.06	.09	.11	.14	.18	.22
			100	.02	.03	.06	.09	.13	.19	.27	.37	***.49***	300	.03	.05	.07	.10	.13	.17	.22	.27	.34
			200	.04	.07	.11	.18	.27	***.39***	***.54***			500	.05	.08	.11	.16	.21	.28	.36	***.46***	***.56***
			FL*	2686	1974	1511	1194	967	799	671	572	493	FL*	4030	3454	3022	2686	2418	2198	2015	1860	1727

*FL: Failure load. Determined by applying a 2.5 Factor of Safety to the Ultimate Capacity of the grating.
•Deflection for uniform loads is limited to L/120 with L representing clear span length in inches. For typical pedestrian traffic, uniform load of 50 PSF is recommended with deflection not to exceed .375”
•Deflections for concentrated loads are shown for the same span conditions as for uniform loads.
•Deflection limits can be higher for fiberglass gratings as they are more resilient than metal materials.
•Italicized, bolded values indicate deflection greater than .375” or L/120. For these conditions, sustained loads or data not shown, please contact Brown-Campbell.

See page 92 for info on ‘Fiberglass Load and Deflection Tables’



With its corrosion-resistant, slip-resistant and non-conductive properties, fiberglass products are ideal solutions for use in many unique environments including....

Food & Beverage • Manufacturing
Metals & Mining • Microelectronics
Pulp & Paper • Water & Wastewater
Oil & Gas • Pharmaceutical • Power
Transportation • Telecommunications

FIBERGLASS STAIR TREADS

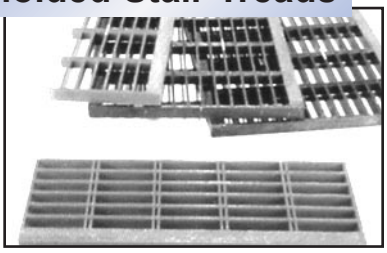
Brown-Campbell fiberglass stair treads deliver safety and long lasting durability. All exceed tough OSHA standards for safety, strength, durability and corrosion resistance.

Brown-Campbell can manufacture treads to any size in 24 hours. Treads may be attached to stringers using fiberglass or steel support angles or wooden ledges. Two standard hold down clips bolt stair tread to angle at each end.

Stair treads are available in the same high performance resin formulations as our regular fiberglass grating. See page 92 for a complete list of resin options.



Molded Stair Treads



- Exceeds OSHA requirements
- Non-conductivity
- Low flame spread
- Outstanding protection against corrosion

Molded 1.5" x 1.5" x 6" Stair Treads

Tread Width (Depth) (Including Nosing)	Length
4-3/4"	Length may be any size up to 10'-0" Lengths in 6" intervals (18", 24", 30", 36", 42", 48", etc.) will ensure that the treads are terminated with closed ends. Additional support is required for treads exceeding 42" in length.
7-3/4"	
9-1/4"	
10-3/4"	
12-1/4"	
13-3/4"	
15-1/4"	
16-3/4"	
18-1/4"	
19-3/4"	

Notes:
1) Widths stated above include nosing and result in a cut that is flush with the bearing bar.
2) Treads can be manufactured to any width (depth) up to 19-3/4", however please note that any variation from the widths listed above will result in a nub on the back side of the tread.

1.5" x 1.5" x 6" Molded
Typical Deflection Properties

Span	Load (lbs) 250	500
18"	.03	.06
24"	.05	.10
36"	.16	.32
48"	.41	1.24

Properties based on concentrated load deflection applied at the midpoint of the tread, centered on the nosing to simulate the landing of a foot. This information is provided as a guide to the use and application of fiberglass stair treads and is not or does not represent a specific warranty of the product or its performance. The designer or user must determine the suitability of this product for a specific application.

Also Available:
Molded Stair Tread Panels

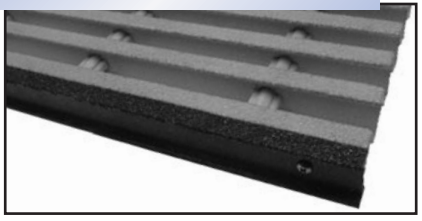
If the exact size of the treads are not known you may use 1.5" x 1.5" x 6" molded fiberglass stair tread panels and cut the exact size in the field with a circular saw using a masonry or carbide tip blade.

MOLDED FIBERGLASS STAIR TREAD PANELS STOCK LIST

Depth/Mesh	Open Area (%)	lbs per sq ft	Surface	Panel Size	Resin/ Type	Color	Item #
1.5" x 1.5" x 6"	67%	3.2	Grit	22.5" x 120" 22.5" x 144"	C	Green	FCNG15156
						Gray	FCGG15156
						Lt Gray	FCLG15156
					V	Gray	FVGG15156

Note: 1-1/2" wide gritted strip is molded-in on both sides of the panel lengthwise, allowing treads to be cut on both sides.

Pultruded Stair Treads



Pultruded stair treads offer greater strength and span capacity.

Pultruded Stair Tread Load Table
Approx. Deflection - 300 lb. conc. load midspan front 5" +/- Tread

Style	Height	Tread Length 24"	30"	36"	42"	48"	54"
I-6010	1"	.062	.114	.187	.284	n/a	n/a
I-6015	1-1/2"	.036	.058	.112	.172	.249	.345

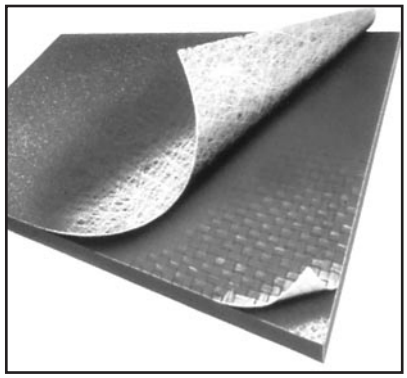
Pultruded I-6010 & I-6015 Stair Treads

Tread Width (Depth) (Including Nosing)	Length
5-3/4"	Length may be any size up to 20'-0"
7-1/4"	
8-3/4"	
10-1/4"	
11-3/4"	
13-1/4"	
14-3/4"	
16-1/4"	
17-3/4"	
19-1/4"	

Note: Pultruded treads must be made to the width (depth) stated above.

All fiberglass panels can be cut or manufactured to your size specifications.

All fiberglass products can be manufactured in any color.



ISO 9001:2015 CERTIFIED

FIBERGLASS FLOOR PANELS are usually installed over existing grating to provide a solid walkway or to extend the life of high traffic areas. Floor panels can also be bolted directly to structural beams and used as wall panels that are resistant to corrosive splash when ordered with an ungritted surface.

Fiberglass floor panels offer a safe solution to slippery walking surfaces with high durability and a long, maintenance free life. A molded-in grit-top surface is standard for improved footing. Panels are non-conductive and non-porous.

Fiberglass floor panels are manufactured by building up multiple layers of fiberglass reinforcement and specially formulated resins, therefore resulting in a solid composite panel offering bi-directional strength and corrosion resistance.

Note: Floor Panels are also sometimes referred to as "Floor Plate"

Fiberglass Floor Panels Uniform (U) and Concentrated (C) Load Table - Deflection in Inches

Depth (In)	Span (In)	Concentrated Load - Full Panel							Uniform Load - Full Panel							Concentrated Load to produce deflection at 1% of span
		Norm(1) Max Load	Firm(2) Max Load	100 lbs.	250 lbs.	500 lbs.	750 lbs.	1000 lbs.	Norm(1) Max Load	Firm(2) Max Load	25 lbs.	50 lbs.	75 lbs.	100 lbs.	150 lbs.	
1/4"	12	229	135	.047	.104	.199	.294	.392	336	208	.010	.014	.022	.029	.043	300 lbs.
	18	196	117	.079	.181	.351	--	--	99	54	.056	.085	.115	.145	.204	256 lbs.
	24	181	116	.102	.268	--	--	--	28	15	.177	.327	.476	--	--	223 lbs.
	36(3)	84	55	.350	--	--	--	--	--	--	--	--	--	--	--	103 lbs.
3/8"	12	515	325	.018	.045	.093	.140	.190	480	300	--	--	--	.020	.030	667 lbs.
	18	455	288	.028	.077	.158	.239	.320	146	91	.026	.050	.075	.099	.148	584 lbs.
	1/2	259	149	.100	.195	.355	--	--	64	40	.075	.150	.225	.300	.449	308 lbs.
	36(3)	154	98	.178	.467	--	--	--	28	17	.258	--	--	--	--	192 lbs.
1/2"	12	960	600	--	--	.048	.075	.100	654	410	--	--	--	.016	.022	1250 lbs.
	18	853	543	.011	.038	.081	.125	.169	206	125	.025	.041	.057	.074	.106	1184 lbs.
	1/2	508	313	.043	.098	.190	.282	.374	118	72	.051	.089	.127	.165	.241	631 lbs.
	36(3)	260	157	.127	.283	--	--	--	49	30	.153	.297	.441	--	--	318 lbs.
3/4"	12	3965	2469	.003	.007	.013	.019	.024	1944	1215	.0012	.0025	.0037	.0049	.0074	4750 lbs.
	18	1798	1123	.009	.024	.043	.063	.079	576	360	.002	.011	.018	.025	.039	2140 lbs.
	1/2	1412	882	.019	.042	.075	.106	.133	243	152	.031	.054	.075	.093	.131	1700 lbs.
	36(3)	1108	693	.027	.066	.129	.188	.243	85	53	.078	.134	.187	.231	.321	1440 lbs.

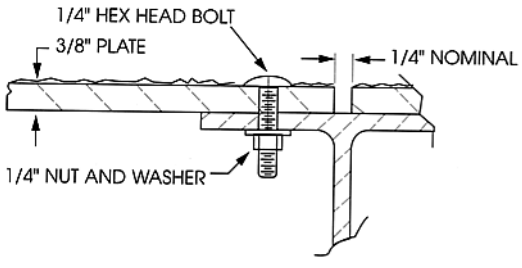
(1) Normal load is load which will produce a L/D of 125 or .375" maximum.
(2) Firm load is load which will produce a L/D of 200 or .25" maximum.
(3) Clear span is 2" less than width of grating

Notes: 1/8" Plate designed for use as covering only; not recommended for load bearing service. Deflection less than .01" and greater than .5" have been omitted and denoted by dashes. Loads for short span Normal and Firm have been limited to allow for shearing effects.

Panel Weight: 1/8": 1-5/8 lbs/sq. ft.; 1/4": 3 lbs/sq. ft.; 3/8": 4-1/4 lbs/sq. ft.; 1/2": 5-5/8 lbs/sq. ft.; 3/4": 8-3/8 lbs/sq. ft.

Installation

- Install using ordinary hand tools and masonry blade
- Fastener assembly kits may be ordered
- Elastomeric caulk may be used in the gap between plates
- It is recommended that cut edges and holes be sealed

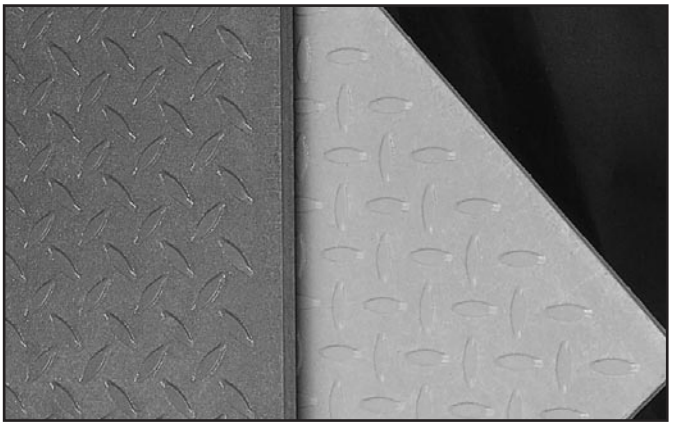




All Brown-Campbell Fiberglass Products have UV Inhibitors

DIAMOND PLATE FLOORING offers a very high strength-to-weight ratio, plus outstanding corrosion resistance. This product features a slip-resistant, molded-in diamond pattern for improved footing.

Diamond Plate Flooring is made using a compression-molding process that combines heat and pressure to produce a high-density high strength panel - weighing 1/3 as much as steel. Diamond Plate Flooring is ideal as a trench cover and in applications where a solid plate is necessary to contain vapors.



Diamond Plate Uniform (U) and Concentrated (C) Load Table - Deflection in Inches

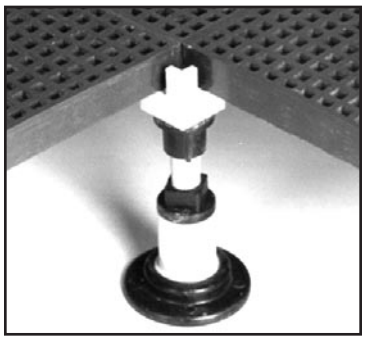
Span (In)	Depth (In)		Load = Uniform: lbs/sq. ft; Concentrated: lbs/ft. of width										
			20 lbs.	40 lbs.	60 lbs.	80 lbs.	100 lbs.	120 lbs.	160 lbs.	200 lbs.	240 lbs.	Max Load Rec'd	Ultimate Capacity
12"	1/4	U	--	.02	--	.05	--	.07	.09	.12	--	220	440
		C	.02	.04	.06	.08	.09	--	--	--	--	110	220
	3/8	U	--	.01	--	.01	--	.02	.03	.03	.04	580	1160
		C	.01	.01	.02	.02	.03	.03	--	--	--	290	580
	1/2	U	--	<.01	--	.01	--	.01	.01	.01	.02	660	1320
		C	<.01	.01	.01	.01	.01	.01	--	--	--	670	1340
	3/4	U	--	<.01	--	<.01	--	<.01	<.01	<.01	.01	2620	5240
		C	--	<.01	<.01	<.01	--	--	--	--	--	2270	4540
18"	1/4	U	--	.12	--	--	--	--	--	--	--	60	120
		C	.10	--	--	--	--	--	--	--	--	45	90
	3/8	U	--	.04	--	.07	--	.11	.14	.17	--	220	440
		C	.03	.06	.09	.11	.14	--	--	--	--	165	330
	1/2	U	--	.02	--	.03	--	.05	.06	.07	.09	500	1000
		C	.01	.02	.04	.05	.06	.07	--	--	--	375	750
	3/4	U	--	.01	--	.01	--	.01	.02	.02	.03	1680	3360
		C	<.01	.01	.01	.01	.02	.02	--	--	--	1260	2520
24"	3/8	U	--	.12	--	.23	--	--	--	--	--	80	160
		C	.09	.18	--	--	--	--	--	--	--	80	160
	1/2	U	--	.05	--	.10	--	.14	.19	.23	--	220	440
		C	.04	.08	.11	.15	.19	--	--	--	--	220	440
	3/4	U	--	.02	--	.03	--	.04	.06	.07	.08	720	1440
		C	.01	.02	.03	.05	.06	.07	--	--	--	720	1440
30"	3/8	U	--	.29	--	--	--	--	--	--	--	40	80
		C	.23	--	--	--	--	--	--	--	--	50	100
	1/2	U	--	.12	--	.24	--	--	--	--	--	100	200
		C	.10	.19	--	--	--	--	--	--	--	100	200
	3/4	U	--	.04	--	.07	--	.11	.14	.17	.20	360	720
		C	.03	.06	.08	.11	.14	.16	--	--	--	450	900
36"	1/2	U	--	.26	--	--	--	--	--	--	--	40	80
		C	.20	--	--	--	--	--	--	--	--	60	120
	3/4	U	--	.08	--	.15	--	.22	.29	.36	--	220	440
		C	.06	.12	.17	.23	.28	--	--	--	--	330	660
42"	3/4	U	--	.15	--	.28	--	.40	--	--	--	120	240
		C	.11	.21	.32	--	--	--	--	--	--	210	420
48"	3/4	U	--	.25	--	.47	--	--	--	--	--	80	160
		C	.19	.36	--	--	--	--	--	--	--	160	320
54"	3/4	U	--	.41	--	--	--	--	--	--	--	40	80
		C	.30	--	--	--	--	--	--	--	--	90	180
60"	3/4	U	--	.62	--	--	--	--	--	--	--	40	80
		C	.45	--	--	--	--	--	--	--	--	100	200

- Standard Panel Size: 4' x 8'
- Thickness: 1/4", 3/8", 1/2", 3/4"
- Resin: Vinyl Ester, Polyester
- Standard Color: Gray or Yellow
- Weight per sq. ft.:
  1/4": 2.3 lbs
  3/8": 3.4 lbs
  1/2": 4.6 lbs
  3/4": 6.8 lbs

All fiberglass panels can be cut or manufactured to your size specifications.

All Brown-Campbell Fiberglass Products have UV Inhibitors

MiniMesh™ Grating



MiniMesh™ grating is designed to be a low cost alternative to aluminum, steel, stainless steel and other metals for applications where corrosion resistant underfloor access and unobstructed air flow is required. Lightweight MiniMesh™ panels are easily removable, providing ready access to electrical conduits, air supply plenums, and service lines.

MiniMesh™ panels minimize vibration from rolling cart and wheelchair traffic. It's 1/2" mesh size is ADA compliant and also prevents small tools and other objects from falling through. It also easily satisfies the "15 mm ball test" requirement, common in Europe and offshore applications.

Applications Include:
- Semiconductor & Telecommunications
- Computer rooms
- Drain & trench covers
- Mezzanines
- Offshore platforms

Adjustable quad-head grating pedestals allow for fast, smooth installation and readily adjust to sub-floor contour to provide a level flooring surface. MiniMesh™ panels are available in three surface textures -- smooth, meniscus, and gritted. Corrosion resistant and fire retardant, MiniMesh™ grating is the ideal alternative for many applications.

MiniMesh™ is produced in 1-1/2" depth, 3/4" top mesh, 1-1/2" x 1-1/2" square bottom mesh, 2' x 2' panels, with 44% open area.

GuardMesh™ Screening



GuardMesh™ molded fiberglass screening is available for use in marine, commercial, and general industrial applications where the greatest amount of open area is desired. GuardMesh™ is a 1/2" deep, 1-1/2" square mesh screening product with 1/8" thick bars produced in 4' x 8' panels. This screen offers 87% open area, allowing generous airflow and a standard sanded smooth surface for customer safety. Due to the high percentage of open area, GuardMesh™ is very lightweight and subsequently easy to install. Corrosion resistant, anti-magnetic, non-conductive, and able to withstand significant impact, GuardMesh™ provides long, reliable life, even in the most demanding conditions.

Applications Include:
- Air duct screens
- Wall fan screens
- Pump screen barrier
- Electrical equipment screen barrier

For safety purposes, GuardMesh™ has been designed with a tight mesh to prevent hands from coming into contact with fan blades or other moving parts.

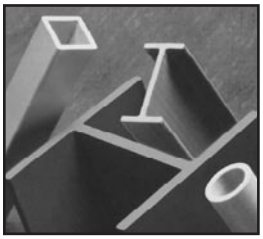
FenceMesh™ Grating

Applications Include:
- Machinery guards
- Fencing
- Space dividers
- Cages



FenceMesh™ is a 1/2" deep multi-purpose lightweight fiberglass reinforced plastic screen. This product can be used for a wide range of industrial, commercial and institutional applications including machinery guards, fencing, space dividers in factories and warehouses and cages for tools, equipment and animals. Additionally, FenceMesh™ grating is an ideal alternative as a fully supported anti-skid flooring in areas such as food processing facilities and other areas where wet or slippery conditions are prevalent.

FenceMesh™ possesses all of the features of fiberglass grating including corrosion resistance, lightweight, non-conductivity and skid resistance. It is produced in 1/2" depth, 2" x 2" mesh, 4' x 12' panels, with 82% open area.



Fiberglass Structural Shapes 'X' denotes most popular items (standard length 20')

Size (In)	IP	IFR	VFR	lbs/ Ft
Equal Leg Angle				
1 x 1/8		X		.17
1 x 1/4				.32
1-1/8 x 1/8				.19
1-1/2 x 1/8				.28
1-1/2 x 3/16				.41
1-1/2 x 1/4		X	X	.50
2 x 1/8				.37
2 x 3/16				.56
2 x 1/4	X	X	X	.73
3 x 1/8				.52
3 x 3/16				.78
3 x 1/4	X	X	X	1.13
3 x 3/8	X	X	X	1.66
4 x 1/4		X	X	1.54
4 x 3/8		X	X	2.31
4 x 1/2		X		2.86
6 x 1/4				2.35
6 x 3/8				3.44
6 x 1/2		X	X	4.64
Unequal Leg Angle				
1 x 1-1/2 x 1/8				.21
1 x 2 x 1/8				.28
1 x 2 x 3/16				.37
1 x 2 x 1/4				.49
1 x 3 x 1/8				.34
1-1/4 x 3/4 x 1/8				.16
1-1/4 x 2 x 1/4				.54
1-1/2 x 2 x 1/8				.31
1-1/2 x 2 x 1/4				.61
1-1/2 x 3 x 1/8				.39
1-1/2 x 3 x 3/16				.58
1-1/2 x 3 x 1/4				.76
1-5/8 x 2-5/8 x 1/8				.39
2 x 3 x 3/16				.64
2 x 3 x 1/4				.85
2 x 3 x 3/8				1.32
2 x 4 x 1/4				1.08
2 x 4 x 3/8				1.60
3 x 4 x 1/4				1.21
3 x 4 x 3/8				1.78
3-1/2 x 5 x 1/2				2.92
3-1/2 x 11 x 1/8				1.35
4 x 6 x 1/4				1.75
4 x 6 x 3/8				2.59
4 x 6 x 1/2				3.42
Rectangular Box Beam				
6 x 4 x 1/4				3.56
7 x 4 x 1/4				3.83
7 x 4 x 3/8				6.05
8 x 4 x 1/4				4.31
8 x 4 x 3/8				6.20

Size (In)	IP	IFR	VFR	lbs/ Ft
Channel				
1-1/2 x 1 x 3/16				.46
2 x 9/16 x 1/8				.25
2-3/4 x 1 x 1/8				.41
3 x 7/8 x 1/4		X		.77
3 x 1 x 3/16				.68
3 x 1-1/2 x 1/4				1.03
4 x 1-1/16 x 1/8				.58
4 x 1-1/8 x 1/4		X		1.11
4 x 1-3/4 x 3/16				1.16
5 x 1-3/8 x 1/4				1.40
6 x 1-5/8 x 1/4	X	X	X	1.40
6 x 1-11/16 x 3/8		X		2.46
7 x 2 x 1/4				2.00
8 x 2-3/16 x 3/8		X	X	3.41
8 x 2-3/16 x 1/2				2.32
10 x 2-3/4 x 1/8				1.42
10 x 2-3/4 x 1/2		X		5.50
11-1/2 x 2-3/4 x 1/2				6.08
24 x 3 x 1/4				5.61
24 x 4 x 1/2				10.89
I-Beam				
3 x 1-1/2 x 1/4				1.11
4 x 2 x 1/4		X		1.48
6 x 3 x 1/4				2.31
6 x 3 x 3/8				3.39
8 x 4 x 3/8		X		4.61
8 x 4 x 1/2				6.03
10 x 5 x 3/8				5.78
10 x 5 x 1/2				7.58
12 x 6 x 1/2		X		9.24
Wide Flange Beam				
3 x 1/4		X		1.69
4 x 1/4		X	X	2.22
6 x 1/4		X		3.52
6 x 3/8		X	X	5.13
8 x 3/8		X		6.97
8 x 1/2				9.23
10 x 3/8				8.78
10 x 1/2				11.64
12 x 1/2				13.68
Flat Sheet				
1/8 x 48 x 96		X	X	1.41
3/16 x 48 x 96	X			1.71
1/4 x 48 x 96		X	X	2.34
3/8 x 48 x 96		X	X	3.54
1/2 x 48 x 96		X	X	4.68
5/8 x 48 x 96				5.79
3/4 x 48 x 96				6.94
1 x 48 x 96				9.27

Size (In)	IP	IFR	VFR	lbs/ Ft
Round Tube				
3/4 x 3/32				.18
1 x 1/8		X		.25
1-1/4 x 3/32				.27
1-1/4 x 1/8				.32
1-1/2 x 1/8		X		.45
1-1/2 x 1/4				.79
1-3/4 x 1/8				.47
1-3/4 x 1/4				.94
2 x 1/8				.60
2 x 1/4		X		1.12
2-1/2 x 1/8				.71
2-1/2 x 1/4				1.43
3 x 1/4				1.70
3-1/2 x 1/4				2.04
Square Tube				
1 x 1/8		X	X	.32
1-1/4 x 1/4				.68
1-1/2 x 1/8		X		.50
1-1/2 x 1/4			X	.98
1-3/4 x 1/8				.64
1-3/4 x 1/4		X	X	1.19
2 x 1/8		X	X	.74
2 x 1/4		X	X	1.40
2-1/8 x 3/16				1.14
2-1/2 x 1/4				1.79
3 x 1/4		X		2.20
4 x 1/4		X		3.08

B-C Sales Staff are experts in specialty steel products, call us today, we can help! 1-800-472-8464

Rectangular Tube				
1-1/4 x 3/4 x 1/8				.35
4 x 1/8 x 1-3/4 x 1/4				1.27
4-7/16 x 1-7/16 x1/8				1.13
4-3/4 x 1-3/4 x 1/8				1.23
5 x 2 x 1/8				1.42
6 x 2 x 1/8*				1.80
8 x 1 x 3/32*				1.20

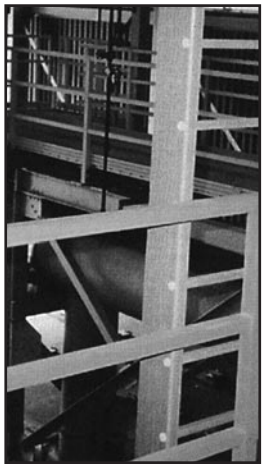
*Shapes contain internal webs.

Flat Strip*				
1/8 x 2-1/2				.23
1/8 x 4				.37
3/16 x 2-1/2				.34
1/4 x 4				.73
1/4 x 6				1.10
1/4 x 9				1.64
3/8 x 3				.82
3/8 x 6				1.64
1/2 x 2				.73

*Many other flat strips available. Please call today for other size availability.

•IP: Isophthalic Polyester - *Green* •IFR: Isophthalic Fire Retardant - *Gray* •VFR: Vinyl Ester Fire Retardant - *Beige*

1-800-GRATING
brown-campbell.com



Fiberglass Structural Shapes 'X' denotes most popular items (standard length 20')

Size (In)	IP	IFR	VFR	lbs/ Ft
Solid Round Rod Isophthalic Polyester				
1/4	X			.04
3/8	X			.10
1/2	X			.17
5/8				.27
3/4	X			.39
1	X			.69
1-1/4	X			1.10
1-1/2	X			1.52
2				2.56
Solid Square Bar				
1/4 x 1/4				.05
1 x 1				.87
1-1/4 x 1-1/4	X			1.31
1-1/2 x 1-1/2	X			1.93
Fasteners				
Studs				
3/8" - 16 Uncoated		X		.08
1/2" - 13 Uncoated		X		.13
5/8" - 11 Uncoated		X		.21
3/4" - 10 Uncoated		X		.32
1" - 8 Uncoated		X		.59
Nuts				
3/8" - 16 Uncoated		X		.64
1/2" - 13 Uncoated		X		1.26
5/8" - 11 Uncoated		X		1.12
3/4" - 10 Uncoated		X		1.42
1" - 8 Uncoated		X		1.65
Studs are available in 48" and 96" lengths and made with vinyl ester (VFR) resin.				

Size (In)	IP	IFR	VFR	lbs/ Ft
Special Shapes				
Toe Plate				
4 x 1/2 x 1/8		X	X	.53
6 x 1/2 x 1/8				.68
Curb Angle				
3/4 x 1-1/2 x 1/4				.90
1 x 1-1/2 x 1/4			X	1.00
1-1/2 x 1-1/2 x 1/4			X	1.10
2 x 1-1/2 x 1/4			X	1.20
Gate Guide				
2-1/2 x 2-1/4 x 1/4				1.13
Sludge Flight				
6 x 1/8 x 2-1/2 x 3/16				1.21
8 x 1/8 x 2-1/2 x 3/16				1.39
U-Trough				
8-1/2 x 9-1/4 x 1/4				4.95
12 x 12 x 1/4				6.54
Square Tube with Round Hole				
1 x 3/4 dia.				.49
2 x 1-1/2 dia.				1.67
Door Frame				
6				1.58
T-Sections Cut from I-Sections and can be quoted upon request.				

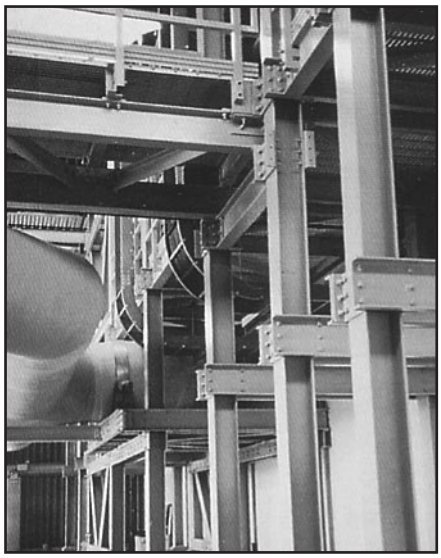
Epoxy Kits/ Resin Sealant Kits	
1/2 Gallon Kit (includes 1 quart base and 1 quart hardener)	X
10 Gallon Kit (includes 5 gallons base and 5 gallons hardener)	
EPDM Rubber Spray Coating Sealant	
1 Can	X
1 Case (12 cans)	X

•IP: Isophthalic Polyester - *Green*

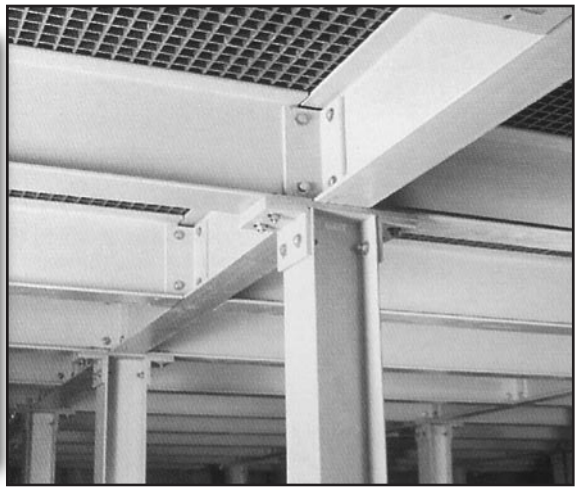
•IFR: Isophthalic Fire Retardant - *Gray*

•VFR: Vinyl Ester Fire Retardant - *Beige*

•IP: Isophthalic Polyester - *Green* •IFR: Isophthalic Fire Retardant - *Gray* •VFR: Vinyl Ester Fire Retardant - *Beige*



Same Day Services:
•Shipments •Fabrication
•In-House Engineering
BROWN-CAMPBELL COMPANY
800-472-8464
brown-campbell.com



FIBERGLASS SAFETY LADDERS AND CAGE SYSTEM

components are shipped in compact kit form. The safety cage is ready for field assembly with pre-drilled hoops for fast and easy installation to the ladder and vertical safety bars.

Manufactured with isophthalic polyester (vinyl ester also available) yellow pultruded structural shapes, our lightweight ladder systems offer a long and maintenance-free life.

Safety features include special clip angles for secure anchoring, intermediate stand-off brackets for lateral stabilization on 6-foot centers, heavily serrated flutes on ladder rungs for positive, anti-slip footholds and rugged safety cages designed to meet strict OSHA requirements.

In addition to standard ladder cage configurations, custom fabrication is available including single or double side dismounts to platforms, special stand-off distances, self-supporting returns, and returns connected to safety handrails and systems for additional worker safety.



•Meets/Exceeds OSHA Requirements

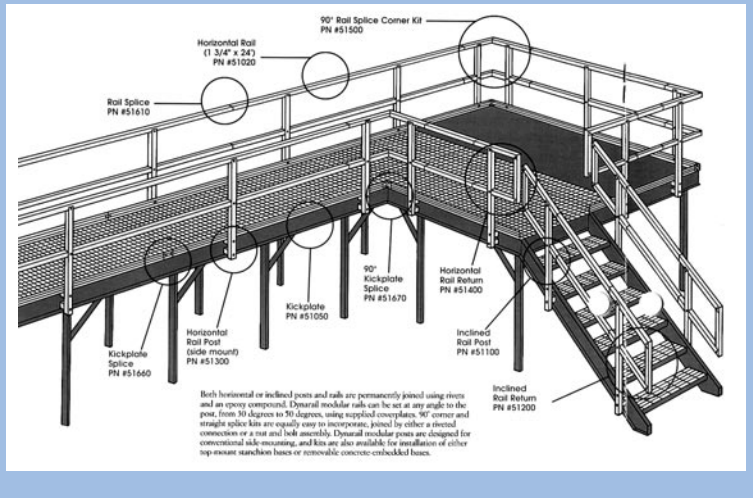
•Fire-retardant •Non-conductive

•Fully Fabricated in Kit Form

For details regarding ladder and handrail systems including complete component and accessory listings please contact *Brown-Campbell* at *1-800-GRATING*.
Our sales personnel have all the technical data readily available to help you order the system you need for your application.

FIBERGLASS SAFETY HANDRAILS AND SYSTEMS

are manufactured with square tube handrails to ensure ultimate resistance to corrosive salts, acids, and other chemical compounds. The safety yellow color is molded-in for an enduring, maintenance-free long life.

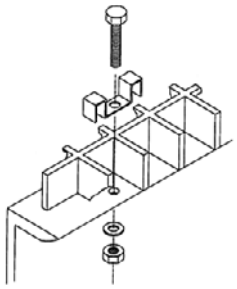


Sections are pre-fabricated in both horizontal and inclined configurations for fast, field assembly. Sections consist of pultruded fiberglass with a synthetic coating for ultraviolet protection. All joints are epoxy-bonded. System designed to meet/exceed OSHA requirements and major building code requirements.

1-800-472-8464

'M' HOLD DOWN CLIP

'M' Hold Down Clips secure panels to support frames using two adjacent grating bars for a secure fit.



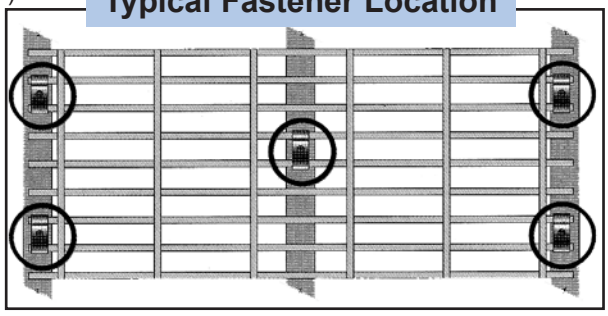
These clips are available for fastening panels together and securing them to other structures. All types are made of 316 stainless steel and are available in 1", 1-1/2", and 2" sizes. Install clips a maximum of every 48" and use at least four clips per piece of grating (at least eight clips per 4' x 12' panel).

Recommended 'M' Clips, Bolts and TEK Screws

	Grating Style	Clip Only (316 Stainless Steel)	Bolt Assembly* (Stainless Steel 18-8)	TEK Screws (410 Stainless Steel)
Molded	1" x 1" x 4"	M1	B1	2TEK3SS
	1" x 1-1/2" x 1-1/2"	M2	B5	
	1-1/2" x 1-1/2" x 1-1/2"	M2	B2	
	1-1/2" x 1-1/2" x 6"	M2	B2	
	2" x 2" x 2"	M4	B4	3TEK3SS
Pultruded	I-4010	M40	B8	2TEK3SS
	I-4015	M40	B1	
	I-6010	M60	B6	
	I-6015	M60	B7	
	T-5020	M50	B2	

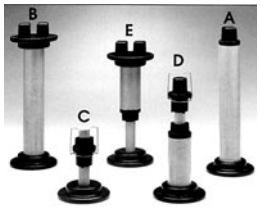
*Note: Bolt Assemblies include a bolt, washer and nut. Clips are sold separately.

Typical Fastener Location





Molded Grating - Grating Legs



Pedestals can be designed for varied heights up to a maximum of 60". Lateral bracing or support is recommended.

Fixed-Height Grating Legs for Level Floors:

A) Single Head - Interior panel support up to 60" above level floor
B) Double Head - Support two adjacent pnls

Adjustable-Height Grating Legs for Sloping Floors:

C) Mini Legs - Raise grating from 2-3/4" to 9" above sloping floor
D) Single Head - Screw-adjusted from the top
E) Double Head - Join and support two adjacent panels

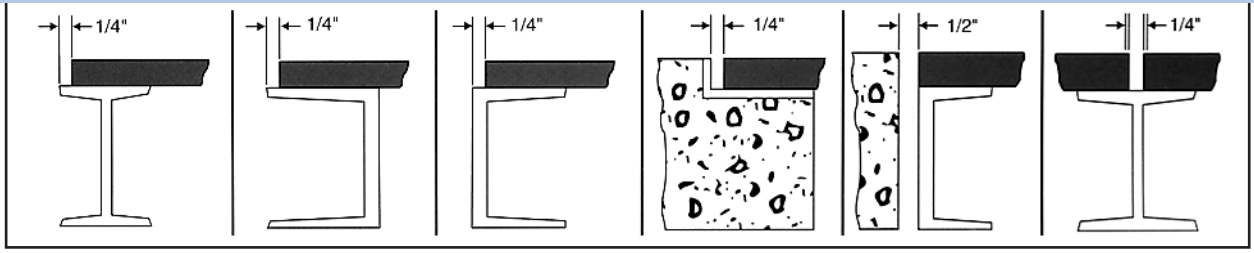
Resin Kits

Resin Kits include everything you need to seal cut ends of fiberglass. Sealing cut ends and holes prevents corrosive attack to the glass fibers exposed during field cutting and drilling, thus extending the life of the product.

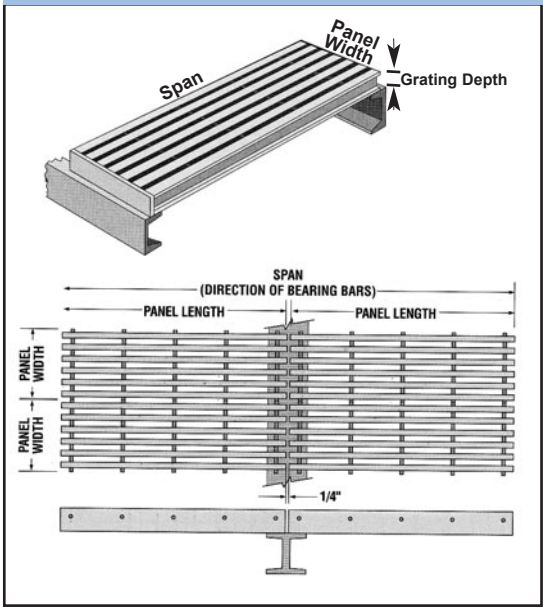
Kit Includes:
Instructions, Resin, Hardener, Cups, Brushes, Stir Sticks, Gloves



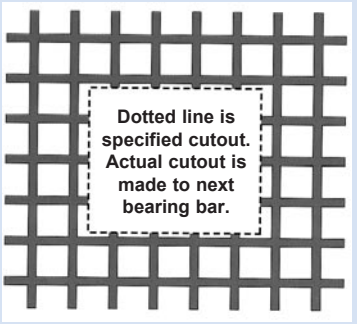
Standard Installation Clearances

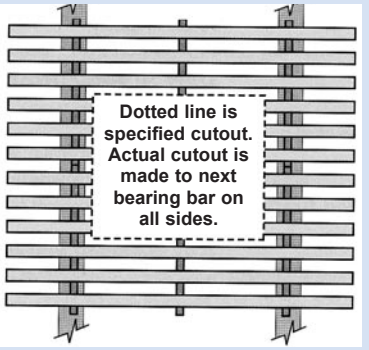


Standard Nomenclature



Cutouts





Cutouts for circular obstructions are recommended to be at least 2" larger in diameter than the obstruction. It is strongly recommended that cutouts for all openings 12" or less in dimension be made in the field. As shown in the drawing, all rectangular cutouts are made to the next bearing bar past the obstruction. **ALWAYS SEAL ANY CUT SURFACES OR EDGES ON ALL FIBERGLASS PRODUCTS.**

Please see our RESIN KITS on page 107.

Brown-Campbell can help with all of your fiberglass needs.

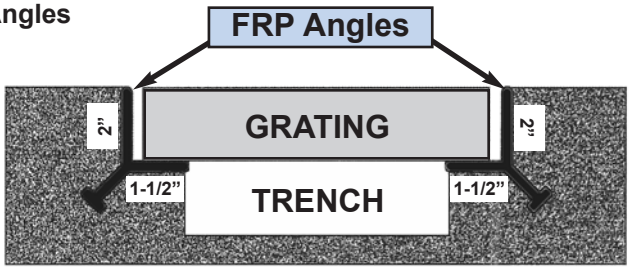
Contact us today and receive the level of service you deserve.

WE DON'T JUST DO IT - WE DO IT RIGHT!

1-800-GRATING
brown-campbell.com

CONCRETE EMBEDMENT FRP ANGLES

Concrete Embedment FRP Angles provide a flat and straight seat for grating to prevent rocking and rattling. Constructed of gray vinyl ester material offering high corrosion resistance and concrete compatibility.



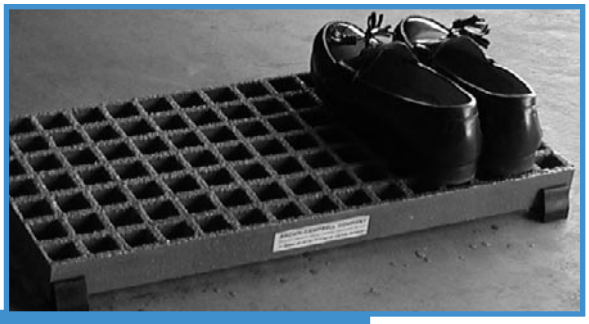
Provided in 20 foot lengths for easy field cutting and installation.

FRP Angles		
Angle Size	**Interchangeable Heights can be used as..**	**Weight Per Foot (lbs)**
1" x 1-1/2" x 1/4"	1" x 1-1/2" x 1/4" or 1-1/2" x 1" x 1/4"	1.0
2" x 1-1/2" x 1/4"	2" x 1-1/2" x 1/4" *(pictured)* or 1-1/2" x 2" x 1/4"	1.2

GRATE-MAT™

Grate-Mat™ is a Brown-Campbell exclusive product providing a non-slip grit surface for safe, sure footing when stepping down on slick surfaces.

- **2" closer to first step - just the little lift often needed**
- **Open grid surface, allows dirt and debris to fall through**
- **Includes detachable rubber feet to provide sure footing on concrete and other hard surfaces**
- **Lightweight, easy to move and store - 7 lbs, 10-1/2" x 22-3/4" size**
- **Easy to clean**



Colors: Dark Gray, Green, Yellow
Size: 10½" x 22¾"
Weight: Only 7 lbs.

CORROSION RESISTANCE GUIDE
Molded Fiberglass Grating

Chemical Environment	% Concentration	Temp °F	Molded Grating V	S	I	F	C	X
Acetic Acid	50	Max	C	C	C	C	C	I
Acetone	100	75	S	S	I	I	T	I
Alcohol	100	120	C	C	I	I	I	S
Alum	All	Max	C	C	C	C	C	C
Aluminum Chloride	All	Max	C	C	C	C	C	C
Aluminum Fluoride	20	75	C	C	I	I	I	I
Ammonium Hydroxide	30	75	C	C	N	N	N	N
Ammonium Salts-Neutral	All	120	C	C	C	C	S	S
Ammonium Salts-Aggressive	All	75	S	C	I	I	T	I
Aromatic Solvents	All	75	T	T	N	N	N	N
Barium Salts	All	Max	C	C	C	C	C	C
Benzen	100	140	I	S	I	I	N	I
Black Liquor (Pulp Mill)	All	Max	C	C	I	I	N	I
Bleach Liquor (Pulp Mill)	All	Max	C	C	I	I	N	N
Calcium Hydroxide	25	Max	C	C	S	S	I	I
Calcium Hypochlorite	All	Max	C	C	I	I	N	I
Calcium Salts	All	Max	C	C	C	C	C	C
Carbon Tetrachloride	100	75	C	C	I	I	N	S
Chlorinated Hydrocarbons	100	75	T	T	T	T	T	N
Chlorine Dioxide	Sat	140	C	C	N	N	N	N
Chlorine Water	Sat	120	C	C	I	I	T	I
Chlorine, Wet	Sat	Max	C	C	N	N	N	N
Chlorobenzene	100	75	S	S	N	N	N	N
Chlorobenzene	All	Up to 100	C	C	N	N	N	N
Chloroform	100	75	N	N	N	N	N	N
Chromic Acid	50	140	S	S	S	S	N	N
Citric Acid	All	Max	C	C	C	C	C	C
Copper Cyanide Plating	All	125	C	C	S	S	I	N
Copper Salts	All	Max	C	C	C	C	C	C
Crude Oil (Sweet or Sour)	All	Max	C	C	C	C	C	C
Dichlorobenzene	100	75	T	S	N	N	N	N
Ethers	---	75	T	T	N	N	N	N
Ferric Chloride	100	Max	C	C	C	C	C	C
Ferric Salts	All	Max	C	C	C	C	C	C
Fluoride Salts + HCl	All	75	C	C	S	S	N	I
Fluosilicic Acid	10	75	C	C	S	S	S	S
Formaldehyde	37	150	C	C	I	I	I	I
Formic Acid	25	100	C	C	S	S	I	I
Fuel (Diesel, Jet, Gasoline)	All	100	C	C	C	C	C	C
Glycerine	100	Max	C	C	C	C	C	C
Green Liquor (Pulp Mill)	All	Max	C	C	N	N	N	N
Hydrobromic Acid	48	Max	S	S	S	S	I	I
Hydrochloric Acid	10	Max	C	C	S	S	S	C
Hydrochloric Acid	30	Max	CS	C	S	S	I	I
Hydrochloric Acid (concentrated)	All	Up to 180	I	C	N	N	N	N
Hydrocyanic Acid	All	Max	C	C	I	I	I	I
Hydrofluoric Acid	20	75	S	C	N	N	N	N
Hydrogen Peroxide	30	75	C	C	N	N	N	I
Lactic Acid	100	Max	C	C	C	C	C	C
Lime Slurry	Sat	Max	C	C	C	C	C	C
Lithium Salts	All	Max	C	C	C	C	C	C
Magnesium Salts	All	Max	C	C	C	C	C	C
Maleic Acid	100	Max	C	C	S	S	I	C
Mercury Chloride	100	Max	C	C	C	C	C	C
Nickel Salts	All	Max	C	C	C	C	C	C
Nitric Acid	20	120	C	C	S	S	I	I
Nitric Acid	35	100	C	C	N	N	N	I
Nitric Acid	40	Ambient	I	C	N	N	N	N
Nitric, Hydrofluoric	20:2	75	I	C	N	N	N	N
Nitrous Acid	10	75	C	C	C	C	C	C
Ozone for sewage treatment	---	100	C	C	C	C	C	C
Perchloroethylene	100	75	S	C	N	N	N	I
Phenol	10	75	C	C	N	N	N	N
Phenol	88	Ambient	S	C	N	N	N	N
Phosphoric Acid	85	Max	C	C	C	C	S	C
Phosphoric Acid, Super	115	Max	C	C	I	I	T	S
Potassium Hydroxide	10	120	C	C	I	I	N	N
Potassium Salts	All	Max	C	C	C	C	C	C
Silver Nitrate	100	Max	C	C	C	C	C	C
Sodium Cyanide	All	75	C	C	I	I	I	I
Sodium Hydroxide	50	Max	C	C	I	I	N	N
Sodium Hydroxide	10	Max	C	C	N	N	N	N
Sodium Hypochlorite (Stable)	10	100	C	C	S	S	I	S
Sodium Salts-Neutral	All	Max	C	C	C	C	C	C

Letters denote different levels of exposure of the grating to the chemical environment listed at the temperature listed:
C- Continuous exposure
S - Frequent exposure to splashes and spills
I - Infrequent exposure to splashes and spills and immediate cleaning & washing of grating
N - Not recommended
T - Test

Consult Brown-Campbell Company for corrosion recommendations at concentrations, temperatures, and chemicals not listed. Type S may require benzoyl peroxide-DMA cure system to increase service life.

Max Temperature is 400°F for S; 180°F for V; 150°F for I, F, X; 140°F for C.

The information in this table is correct to the best of our knowledge. It is based on extensive experience with fiberglass grating in corrosive applications. Because actual use conditions differ and mixtures of corrosives will occur in service, the end user must test for use under actual conditions. There are no warranties, expressed or implied, including warranties of merchantability or fitness for any particular purpose. In no event will Brown-Campbell Company be liable for incidental or consequential damages, whether arising from alleged negligence, strict liability or otherwise. Test coupons are available upon request.

CORROSION RESISTANCE GUIDE
Molded Fiberglass Grating

Chemical Environment	% Concentration	Temp °F	Molded Grating V	S	I	F	C	X
Sodium Salts-Aggressive	All	75	S	C	I	I	T	I
Sulfur Dioxide	Sat	Max	C	C	S	S	S	S
Sulfuric Acid	25	Max	C	C	S	S	I	S
Sulfuric Acid	50	Max	C	C	S	S	N	S
Sulfuric Acid	75	100	C	C	I	I	N	I
Toluene	100	120	S	C	I	I	N	N
Trichloroethane1,1,1	All	75	S	C	I	I	N	I
Trisodium Phosphate	50	Max	C	C	I	I	I	I
Water (Fresh, Salt, Moderate D.I.)	100	Max	C	C	C	C	C	C
Wet Chlorine/Hydrochloric Acid	10-20	Up to 350	S	C	N	N	N	N
White Liquor (Pulp Mill)	All	Max	C	C	I	I	N	I
Zinc Chloride Plating	All	75	C	C	S	S	N	S
Zinc Salts	100	Max	C	C	C	C	C	C

Letters denote different levels of exposure of the grating to the chemical environment listed at the temperature listed:
C- Continuous exposure
S - Frequent exposure to splashes and spill
I - Infrequent exposure to splashes and spills and immediate cleaning & washing of grating
N - Not recommended
T - Test

See other notes for Molded Grating Corrosion Resistance Guide on previous page.

CORROSION RESISTANCE GUIDE
Pultruded Fiberglass Grating

Chemical Environment	Vinyl Ester (V) Operating Temp, °F	Polyester (P) Operating Temp, °F	Chemical Environment	Vinyl Ester (V) Operating Temp, °F	Polyester (P) Operating Temp, °F
Acetic Acid, 50%	180	150	Lithium Chloride	180	150
Acetone	Amb(2)	N	Magnesium Carbonate	160	Amb
Alcohol	120(2)	120(2)	Magnesium Chloride	180	150
Aluminum Chloride	180	150	Magnesium Hydroxide	140	N
Aluminum Hydroxide	120	Amb	Magnesium Nitrate	160	Amb
Aluminum Nitrate	140	100	Magnesium Sulfate	160	120
Aluminum Sulfate	160	120	Mercuric Chloride	180	150
Ammonium Chloride	160	120	Methyl Ethyl Ketone	N	N
Ammonium Hydroxide, 5%	140	N	Mineral Oil	180	150
Ammonium Nitrate, 50%	160	120	Nickel Chloride	180	120
Ammonium Nitrate, Saturated	160	100	Nitric Acid, 5%	120	100
Ammonium Persulfate, 25%	120	N	Phenol, 10%	Amb(2)	N
Ammonium Phosphate	150	Amb	Phosphoric Acid, 85%	180	140(1)
Ammonium Sulfate	160	120	Phosphoric Acid, Vapor	160	120
Barium Chloride	180	150	Potassium Aluminum Sulfate	180	150
Barium Sulfate	180	150	Potassium Bicarbonate	110	Amb(1)
Benzene	Amb(2)	N	Potassium Carbonate, 10%	110	N
Black Liquor (Pulp Process)	160(2)	N	Potassium Chloride	180	150
Bleach Liquor (Pulp Process)	160(2)	N	Potassium Hydroxide, 10%	120(1)	N
Brine (Sodium Chloride)	180	150	Potassium Nitrate	180	150
Calcium Carbonate	160	120	Potassium Sulfate	180	150
Calcium Hydroxide, 25%	180(1)	150(2)	Propylene Glycol	180	150
Calcium Hypocholrite	180(2)	N	Sodium Acetate	180	150
Calcium Nitrate	180	150	Sodium Benzoate	120	Amb
Calcium Sulfate	180	150	Sodium Bisulfate	180	150
Carbonic Acid	120	Amb	Sodium Borate	180	150
Carbon Tetrachloride	Amb(2)	N	Sodium Bromide	180	150
Chlorine Dioxide	120	N	Sodium Carbonate, 10%	120	N
Chlorine, Wet Gas	N	N	Sodium Chloride	180	150
Chlorine Water	120(2)	N	Sodium Cyanide	160	Amb(2)
Chromic Acid, 10%	Amb(2)	N	Sodium Dichromate	160	Amb
Chromium Sulfate	140(2)	Amb	Sodium Diphosphate	160	120
Citric Acid	180	150	Sodium Hydroxide, 10%	N	N
Copper Chloride	180	150	Sodium Hypocholorite, 5-1/4%	110(1)	Amb(1)
Copper Cyanide Plating	120(1)	Amb(2)	Sodium Nitrate	180	150
Copper Nitrate	180	150	Sodium Sulfate	180	150
Crude Oil, Sour	180	150	Soy Oil	160	120
Ethylene Glycol	180	150	Stearic Acid	160	120
Fatty Acids	180	150	Styrene	N	N
Ferric Chloride	180	150	Sulfite Liquor	160	Amb
Ferric Sulfate	180	150	Sulfur Dioxide, Gas - wet	180	150(1)
Formaldehyde, 35%	150(1)	150(2)	Sulfur Trioxide, Gas - wet	Amb	N
Formic Acid, 25%	100(1)	100(2)	Sulfuric Acid, 25%	180(1)	150(2)
Fuel (Aviation, Diesel, Gasoline)	100	100	Tartaric Acid	160	120
Glycerine	180	150	Toluene	120(2)	N
Green Liquor (Pulp Process)	180(2)	N	Trisodium Phosphate, 50%	180(2)	N
Hydraulic Fluid	140	N	Urea, 35%	110	N
Hydrobromic Acid, 45%	180(2)	N	Vinegar	160	150
Hydrochloric Acid, 15%	180(1)	150(1)	Water, Fresh, Salt, Distilled	180	150
Hydrofluoric Acid, 20%	N	N	White Liquor (Pulp Process)	180(1)	N
Kerosene	160	120	Zinc Chloride (Plating)	75(1)	N
Lactic Acid	160	120	Zinc Nitrate	180	150
Lead Acetate	160	Amb	Zinc Salt	180	150
Lime	180	150	Zinc Sulfate	180	150
Linseed Oil	180	150			

(1) - Splash and Spill Exposure Only

(2) - Infrequent splash and spill exposure with spills immediately cleaned up

Amb - Ambient or room temperature exposure.

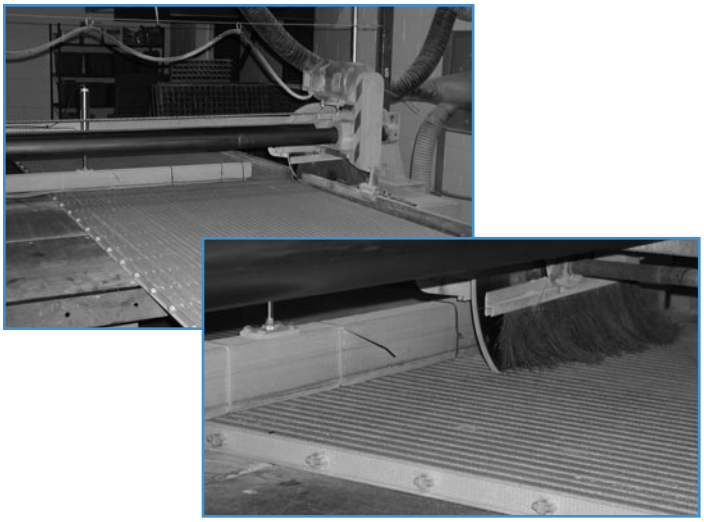
N - Not recommended for these conditions

Consult Brown-Campbell Company for corrosion recommendations at concentrations, temperatures, and chemicals not listed.

The corrosive resistance guide provided here is based on extensive experience and knowledge of composites in chemical service. Since actual in-use conditions can differ from referenced conditions and can vary during the usable life of the grating, this guide is intended for general reference use only. The end user is responsible for testing and determining final product suitability. Test coupons are available upon request.

Brown-Campbell continues to grow it's fiberglass grating inventory and fabrication capabilities, exponentially. Inventory is continually being expanded as well as our fabrication capabilities. Panels can be shipped as is, cut to size or elaborately fabricated to fit your specific application.

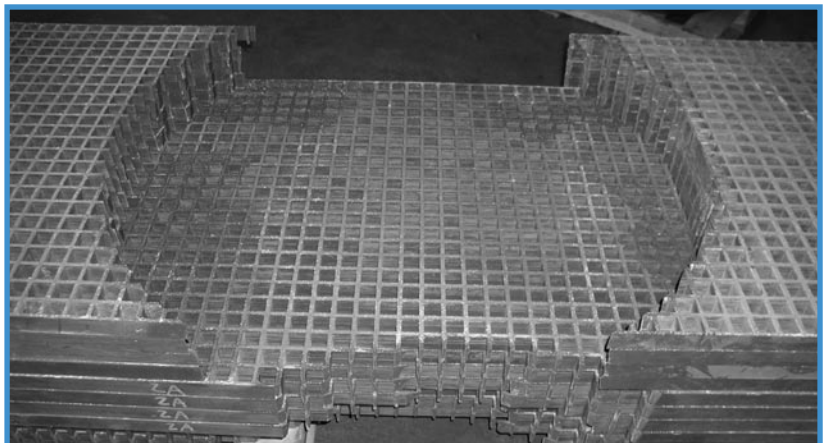




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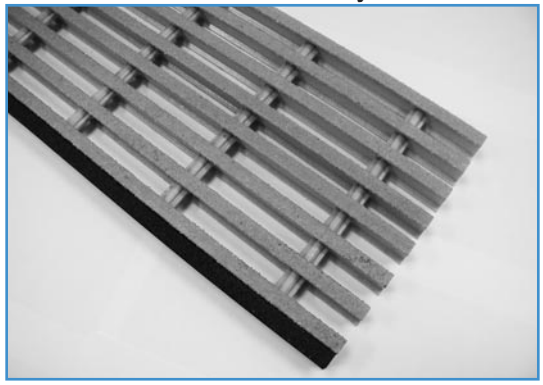
Our employees are experts in their field offering product selection assistance, engineering & fabrication expertise. Our ever expanding inventory allows for quick shipment, with many orders shipped out same day.

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Full Panels • Cut to Size • Custom Cutting
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We do it all - FAST & PRECISE...and for the right price!

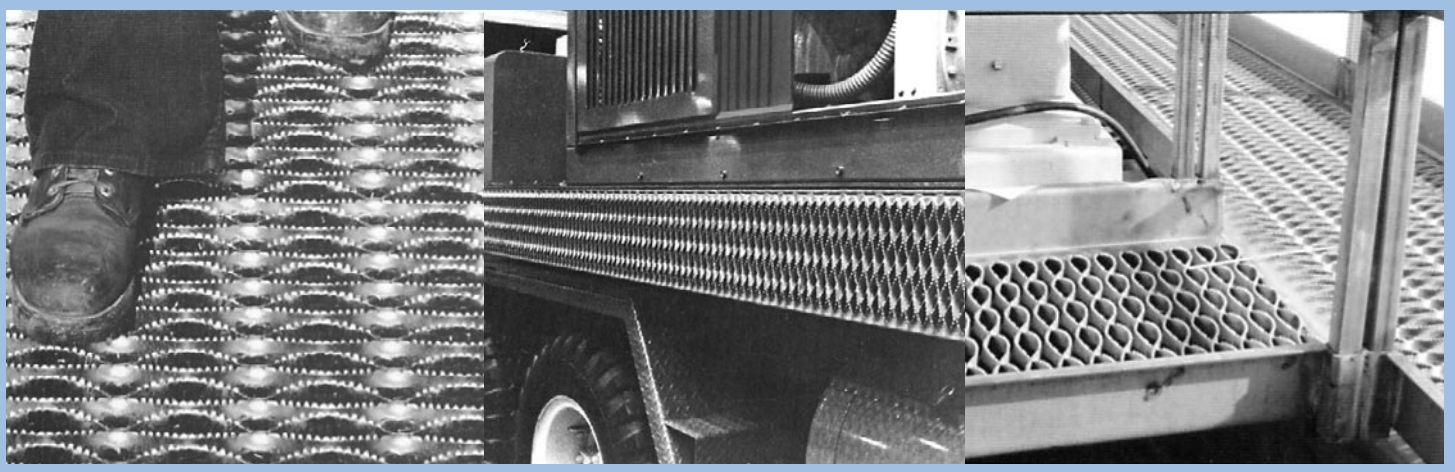


Precision cut molded fiberglass order, engineered and fabricated by our expert B-C team members.

Pultruded Fiberglass Stair Treads, fabricated at our Detroit Facility.



1-800-472-8464



Grip Strut®

Grip Strut® helps reduce accident rates by providing a safer walking and working surface than any other available grating product. It's serrated surface gives maximum slip protection and performance under practically all conditions and in every direction. Every year industrial accidents - falls, tripping over debris, slipping on wet or greasy surfaces - cost millions of dollars in lost manhours and production. By reducing accidents, insurance costs can frequently be decreased.

The serrated surface is designed in an open diamond pattern, allowing drainage of fluids, mud, chips, and other accident-causing debris. With 4-1/2" high side channels, Grip Strut® Safety Grating Walkways meet OSHA requirements for toeboards on elevated surfaces.

•Safer, serrated surface •Maintenance-free open design •High load capacity, long life
•Fast installation •Economical to install & use
•Versatile in application

Brown-Campbell Grip Strut® is available in both regular and heavy duty constructions in plank and walkways. Custom stair treads, rooftop walkway systems, and work platforms are also available.



Proof of Performance

Tested by an independent laboratory for slip resistance according to standards and methods established by Federal Specification for slip resistance - Grip Strut® Safety Grating proved its superiority by exceeding all requirements of this specification. Grip Strut® Safety Grating tested 10% to 180% more slip-resistant than similar materials, depending on shoe materials and surface conditions. Grip Strut® Safety Grating substantially reduces accidents caused by falls. In addition, the hazard of falling objects is minimized by the 1-7/8" x 11/16" shape and size of the surface openings.

Strong & Durable: A 4-ft. length of Grip Strut® Grating was tested dynamically for metal fatigue and durability. One end was securely anchored while the other end was weighted with a 75-lb. load. Then the free, weighted end was vibrated 30,000 times. ***The result - No fatigue or structural failure was evident!***

GRIP STRUT® STOCK & AVAILABILITY LIST

Catalog No.	Diamond	Width (In)	Channel Height (In)
Pre-Galvanized- 14 Ga. Serrated			
11014 Rung	1	2-1/2	1-1/8
21514	2	4-3/4	1-1/2
22014	2	4-3/4	2
22514	2	4-3/4	2-1/2
31514	3	7	1-1/2
32014	3	7	2
32514	3	7	2-1/2
41514	4	9-1/2	1-1/2
42014	4	9-1/2	2
42514	4	9-1/2	2-1/2
51514	5	11-3/4	1-1/2
52014	5	11-3/4	2
52514	5	11-3/4	2-1/2
81514	8	18-3/4	1-1/2
82014	8	18-3/4	2
82514	8	18-3/4	2-1/2
102014	10	24	2
103014	10	24	3
104514 U-Walkway	10	24	4-1/2
Pre-Galvanized- 12 Ga. Serrated			
21512	2	4-3/4	1-1/2
22012	2	4-3/4	2
22512	2	4-3/4	2-1/2
31512	3	7	1-1/2
32012	3	7	2
32512	3	7	2-1/2
33012	3	7	3
41512	4	9-1/2	1-1/2
42012	4	9-1/2	2
42512	4	9-1/2	2-1/2
43012	4	9-1/2	3
51512	5	11-3/4	1-1/2
52012	5	11-3/4	2
52512	5	11-3/4	2-1/2
53012	5	11-3/4	3
81512	8	18-3/4	1-1/2
82012	8	18-3/4	2
82512	8	18-3/4	2-1/2
83012	8	18-3/4	3
101512	10	24	1-1/2
102012	10	24	2
103012	10	24	3
104512 U-Walkway	10	24	4-1/2
Items above also available in Black (HRP&O plain Steel)			

Catalog No.	Diamond	Width (In)	Channel Height (In)
Heavy Duty Pre-Galvanized - 10 Ga. Serrated			
H-32510	3	13-3/4	2-1/2
H-52010	5	23-1/4	2
H-55010 U-Walkway	5	24	5
H-62010	6	27-3/4	2
H-65010 U-Walkway	6	30	5
H-82010	8	36	2
H-82510	8	36	2-1/2
H-85010 U-Walkway	8	36	5
5052 Aluminum- .080" Ga. Serrated			
22012-A	2	4-3/4	2
31512-A	3	7	1-1/2
32012-A	3	7	2
41512-A	4	9-1/2	1-1/2
42012-A	4	9-1/2	2
43012-A	4	9-1/2	3
51512-A	5	11-3/4	1-1/2
52012-A	5	11-3/4	2
81512-A	8	18-3/4	1-1/2
82012-A	8	18-3/4	2
5052 Aluminum- .100" Ga. Serrated			
22010-A	2	4-3/4	2
31510-A	3	7	1-1/2
41510-A	4	9-1/2	1-1/2
42010-A	4	9-1/2	2
304 Stainless Steel- 16 Ga. Serrated			
22016-S	2	4-3/4	2
31516-S	3	7	1-1/2
41516-S	4	9-1/2	1-1/2
42016-S	4	9-1/2	2
51516-S	5	11-3/4	1-1/2
52016-S	5	11-3/4	2

Catalog No. Denotation

1st number: Number of diamonds to width or plank
2nd & 3rd numbers: Height (plank) or depth (walkway)
4th & 5th numbers: Gauge
Following Hyphen: Type of Material (no hyphen denotes Pre-Galvanized Steel)

Example 1: 21514
2: 2 Diamonds
15: 1-1/2" height
14: 14 gauge
none: Pre-Galvanized

Example 2: 21514-B
2: 2 Diamonds
15: 1-1/2" height
14: 14 gauge
-B: Black (Plain) Steel

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

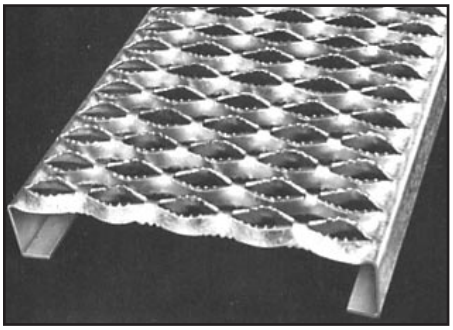
THINK ABOUT:
1. Application or use of product (including environment)
2. Physical requirements: loading, open area, slip resistance

PLEASE SPECIFY:
- **Grip Strut® Grating or Grip Strut® Heavy Duty Grating**
- **Catalog No.-** see denotation example at left
- **Quantity-** number of pieces or planks required
- **Material-** Regular Pre-Galvanized Steel, 14 or 12 ga., Regular Plain (Black) Steel, 14 or 12 ga., Heavy Duty Pre-Galvanized Steel, 10 ga. (Heavy Duty 9 &11 ga. by special order), Aluminum, .080" or .100" ga., Stainless Steel, Type 304 or 316L
- **Width & Channel Height**
- **Length-** 10' or 12' or cut to size up to 24'
- **Surface-** Serrated (std), Non-serrated (special order)
- **Special Requirements or Fabrication-** flat stock, forming, reconditioned material, etc.
- **Accessories-** clamps, splice plates, etc.

GRIP STRUT® SAFETY GRATING
Plank and Walkway

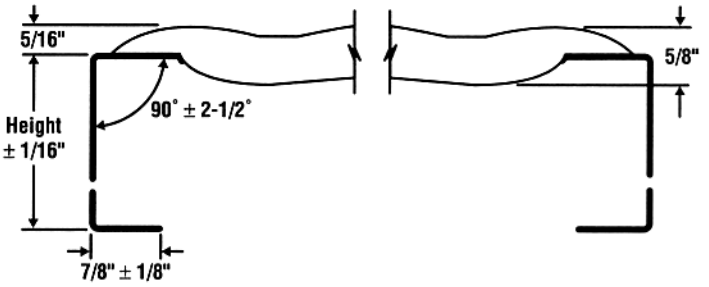
Material: 12 & 14 ga. Pre-Galvanized and Plain Steel; .080 and .100 ga. 5052-H32 Aluminum (plank only); Type 304 16 ga. Stainless Steel (Type 316L Stainless by special order)
Width: Plank: 4-3/4", 7", 9-1/2", 11-3/4", 18-3/4", 24"
Walkway: 24"
Height: Plank: 1-1/2", 2", 2-1/2", 3"
Walkway: 4-1/2" (depth)
Length: 10', 12', or cut to size, Walkways up to 24' by special order (Stock sizes are run to full diamonds)

Plank

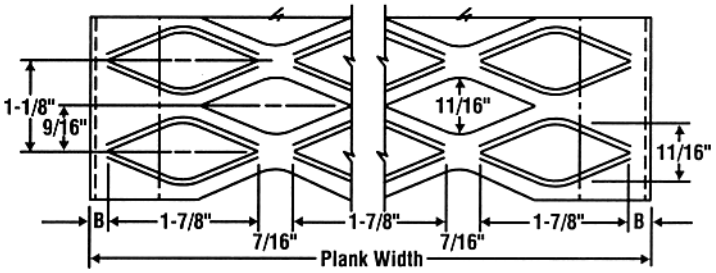


Grip Strut® Plank Details					
Descr.	Width	'B'	Descr.	Width	'B'
2-Diamond	4-3/4"	9/32"	5-Diamond	11-3/4"	5/16"
3-Diamond	7"	1/4"	8-Diamond	18-3/4"	11/32"
4-Diamond	9-1/2"	11/32"	10-Diamond	24"	21/32"

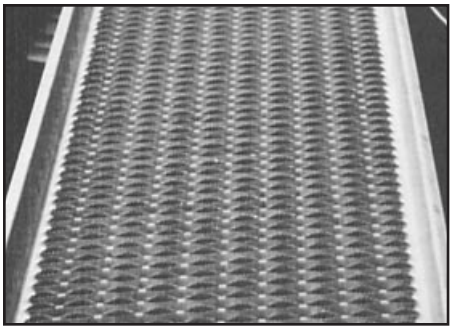
PLANK End View



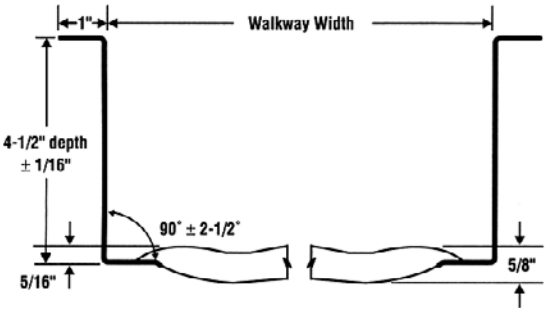
PLANK Top View



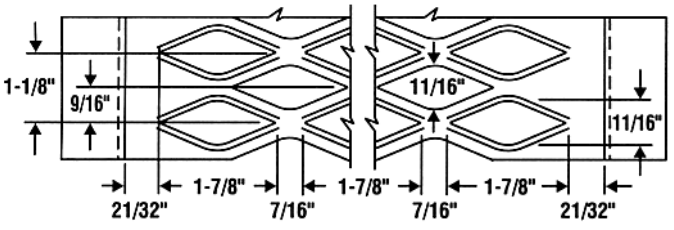
Walkway



WALKWAY End View



WALKWAY Top View



GRIP STRUT® LOAD TABLES

In order to select the size of Grip Strut® Safety Grating, first determine load, clear span and deflection requirements. Having this information, select from the appropriate load tables for regular or Heavy Duty Grip Strut® to find the appropriate product to meet your specific requirements.

For example, your job requirements are:
Clear Span: 4'0"
Concentrated Load: 300 lb
Maximum deflection: 1/4"
Grip Strut® Type: Regular

You will find that 8-Diamond Grip Strut®, 18-3/4" wide, 2-1/2" channel height, 12 ga. steel carries a load of 416 lbs at a .18" deflection. This would clearly meet the job requirements specified in the example. Additionally, other sizes will carry more load if necessary. For a more economical selection, choose the greatest width that will support the load consistent with job requirements and choose deeper channels rather than heavier steel gauges.

Grip Strut® Safety Grating will generally carry the same concentrated load, tabulated in lb at mid-span, for a given span, material gauge and channel height, regardless of width. The uniform load tables are tabulated in lb/sq ft, which accounts for the difference in load capacity shown for various widths. Deflection is in inches.

To ensure the safety of the tabulated loads, two aspects of Grip Strut® Grating strength must be considered:
1) Transverse Bending or Strut Flexure of the grating: This occurs when the grating is loaded with either a uniform load or a mid-width concentrated load, and the "struts" (grating surface) deflect relative to the side channels. To determine the allowable strut loads, samples of each grating material and thickness were tested with each plank width (see figure 1: Strut Load). The data resulting from these tests was used to prepare "strut loading" tables, which give allowable loads and deflections considering strut flexure only. These allowable strut loads are provided in the following pages for regular Grip Strut®.
2) Channel Flexure of the grating: This occurs when the channels at mid-span of the plank deflect relative to support points. To verify the performance of the side channels, samples were loaded with concentrated and uniform loads at different spans (see figures 2 & 3). To approximate the most severe condition, there were no attachments between the channels and the supports. In cases where spans are shorter, channels deeper and planks wider, strut flexure becomes more critical.

With the exception of 8 and 10-Diamond regular Grip Strut®, it can be assumed that both side channels and all widths effectively support the concentrated load, and the grating surface deflection is negligible. Based on these assumptions, the following values found in the load tables have been determined:

If grating surface deflection should be considered when selecting a product to meet a particular specification, then the deflection of the mid-width of the grating, relative to the side channels, can be calculated using both the Strut Loading Table (see page 123) and the Load/Deflection Conversion formula (see bottom of this page).

All load tables show maximum loads, based upon actual load tests. Loads are designated: (U) for uniform load in lb/sq ft, (C) for concentrated load in lbs, (D) for corresponding deflection in inches.

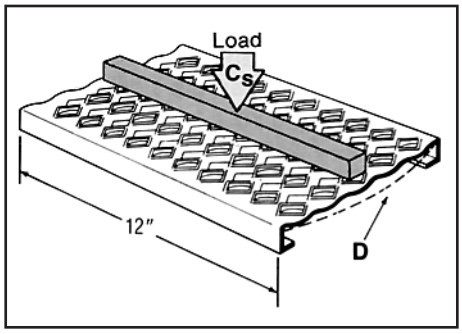


Figure 1: Strut Load
C_s - Concentrated Strut Load (lb/ft)

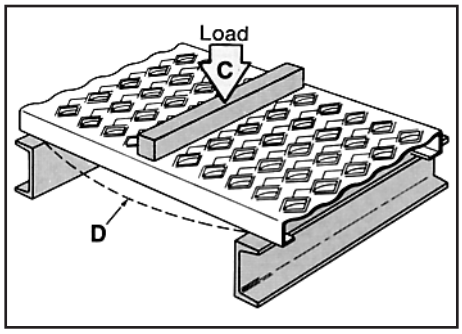


Figure 2: Concentrated Load
C - Concentrated Load (lb)

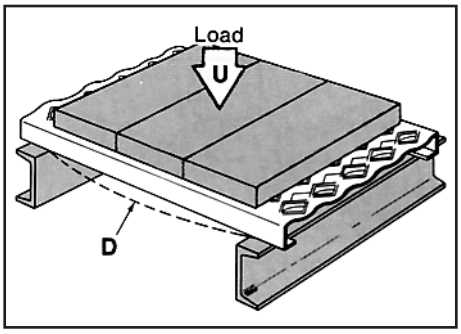


Figure 3: Uniform Load
U - Uniform Load (lb/sq ft)

LOAD/DEFLECTION CONVERSION FORMULAS

In the elastic range, deflection is proportional to the applied load for both uniform and concentrated loads. This relationship can be used to determine the deflection that any load which is less than the allowable load will produce, as shown in Example A below. Also, if desired, the load which will produce a specified deflection can also be determined if the load is in the elastic range as illustrated in Example B below.

Example A
What deflection will a 300 lb. concentrated load produce on a plank (catalog number 103012) spanning 5'0"?

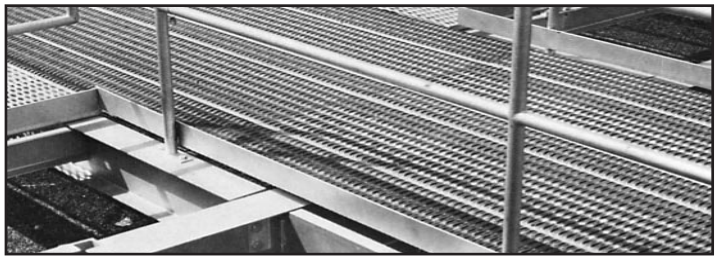
See page 121 for item 103012 at a span of 5'0":

C = 480 lb D = .26"
D @ 300 lb = (.26" / 480 lb) x 300 lb = .16"

Example B
If a plank (catalog number 103012) is spanning 6'0", what concentrated load will produce a 1/4" deflection?

See page 121 for item 103012 at a span of 6'0":

C = 400 lb D = .26"
C @ 1/4" = (400 lb / .26") x .25" = 385 lb



Form It! Cut It! Bend It!
Special forming can be accomplished to suit requirements not covered by standard panels.

2-Diamond Plank - 4-3/4" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	2.3 (3.42)	21514	U	1324	849	591	435	334	265	215	179	151								
				D	.06	.10	.14	.20	.26	.32	.40	.49	.58								
				C	524	420	351	301	265	236	213	195	179								
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47								
	2 (50.8)	2.6 (3.87)	22014	U	2198	1409	980	721	553	438	356	295	248	212	184	161	142	113	93		
				D	.06	.09	.13	.17	.23	.29	.35	.43	.51	.60	.70	.81	.92	1.18	1.47		
				C	870	697	582	499	438	390	352	321	295	273	255	239	225	201	183		
				D	.04	.07	.10	.14	.18	.23	.28	.34	.41	.48	.56	.65	.74	.94	1.18		
	2-1/2 (63.5)	2.8 (4.17)	22514	U	2522	1616	1124	827	634	502	408	338	285	244	211	184	163	130	106	88	75
				D	.04	.06	.08	.11	.14	.18	.23	.27	.33	.38	.45	.51	.59	.75	.94	1.14	1.38
				C	998	800	667	573	502	447	404	368	338	313	292	273	257	231	210	193	178
				D	.03	.04	.06	.09	.11	.15	.18	.22	.26	.31	.36	.41	.47	.60	.75	.92	1.10
Steel 12 ga.	1-1/2 (38.1)	3.2 (4.76)	21512	U	1751	1123	782	576	443	351	286	237	200	172	149	131	116				
				D	.07	.11	.15	.21	.27	.35	.43	.52	.62	.74	.86	.99	1.14				
				C	693	556	464	399	350	313	283	258	238	221	206	194	183				
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.69	.79	.91				
	2 (50.8)	3.6 (5.36)	22012	U	2792	1790	1245	917	703	557	453	375	317	271	235	205	181	145	119	99	85
				D	.05	.08	.11	.16	.20	.26	.32	.39	.46	.55	.64	.73	.84	1.07	1.34	1.64	1.98
				C	1105	886	739	635	557	496	448	409	376	348	325	305	287	258	235	216	201
				D	.04	.06	.09	.12	.16	.21	.26	.31	.37	.44	.51	.59	.67	.86	1.07	1.31	1.58
	2-1/2 (63.5)	4.0 (5.95)	22512	U	4179	2676	1860	1368	1049	830	673	557	469	400	346	302	266	211	172	143	121
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.51	.59	.67	.86	1.07	1.30	1.55
				C	1654	1324	1104	948	830	739	666	606	557	515	479	448	421	376	341	312	288
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.35	.41	.47	.54	.69	.85	1.04	1.24
Aluminum Alloy 5052 12 ga. .080"	1-1/2 (38.1)	.85 (1.26)	21512-A	U	998	639	443	326	248	196	159	131	110	94							
				D	.10	.15	.22	.31	.40	.51	.63	.76	.90	1.08							
				C	395	316	263	226	197	175	157	143	131	121							
				D	.08	.12	.18	.25	.32	.41	.50	.61	.73	.85							
	2 (50.8)	.92 (1.37)	22012-A	U	1463	937	650	478	366	289	234	194	162	138	119						
				D	.08	.13	.18	.25	.33	.42	.52	.63	.74	.87	1.02						
				C	579	463	386	331	290	257	232	211	192	177	165						
				D	.06	.10	.15	.20	.27	.34	.42	.51	.59	.69	.80						
	2-1/2* (63.5)	1.00 (1.48)	22512-A	U	2199	1407	977	718	550	434	352	291	244	208	179	156	137				
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12				
				C	870	696	580	497	435	387	348	316	290	268	249	232	218				
				D	.05	.08	.12	.17	.22	.28	.35	.42	.50	.59	.68	.78	.89				
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	1.08 (1.60)	21510-A	U	1136	727	505	371	284	224	181	149	125	107							
				D	.09	.15	.22	.30	.39	.50	.63	.76	.90	1.08							
				C	450	360	300	257	225	200	179	162	149	137							
				D	.07	.12	.17	.24	.31	.40	.51	.61	.73	.85							
	2 (50.8)	1.20 (1.78)	22010-A	U	2049	1312	911	669	512	405	328	271	228	194	167	146	128				
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30	1.48				
				C	811	649	541	464	406	361	325	295	270	250	232	216	203				
				D	.07	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04	1.18				
	2-1/2* (63.5)	1.31 (1.95)	22510-A	U	2820	1805	1253	921	705	557	451	373	313	267	230	201	176				
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15				
				C	1116	893	744	638	558	496	446	406	372	343	319	298	279				
				D	.05	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92				

*Available by special order.
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

3-Diamond Plank - 7" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	3.0 (4.46)	31514	U	899	577	402	269	227	180	147	122	103								
				D	.06	.10	.14	.20	.26	.33	.40	.49	.59								
				C	524	421	351	302	265	237	214	196	180								
				D	.05	.08	.11	.16	.21	.26	.32	.39	.47								
	2 (50.8)	3.2 (4.76)	32014	U	1492	957	665	490	376	298	242	201	169	145	125	110	97	77	63		
				D	.06	.09	.13	.17	.23	.29	.35	.43	.51	.61	.71	.81	.93	1.19	1.49		
				C	871	697	582	500	439	391	353	322	296	275	256	240	226	203	185		
				D	.04	.07	.10	.14	.18	.23	.28	.34	.41	.48	.56	.65	.74	.95	1.19		
	2-1/2 (63.5)	3.5 (5.21)	32514	U	1712	1097	763	562	431	342	277	230	194	166	144	126	111	89	73	61	52
				D	.04	.06	.08	.11	.14	.18	.23	.27	.33	.39	.45	.52	.59	.76	.94	1.16	1.40
				C	999	800	668	574	503	448	405	369	340	315	293	275	259	233	212	195	181
				D	.03	.04	.06	.09	.11	.15	.18	.22	.26	.31	.36	.41	.47	.61	.76	.93	1.12
Steel 12 ga.	1-1/2 (38.1)	4.1 (6.10)	31512	U	1189	763	532	392	301	239	195	162	137	118	102	90	79				
				D	.07	.11	.15	.21	.27	.35	.43	.52	.63	.74	.87	1.00	1.15				
				C	694	556	465	400	352	314	284	260	240	223	208	196	185				
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.69	.80	.92				
	2 (50.8)	4.5 (6.70)	32012	U	1896	1216	846	623	478	379	308	256	216	185	160	140	124	99	82	68	58
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.64	.74	.85	1.08	1.36	1.67	2.01
				C	1106	886	740	636	558	498	450	410	378	350	327	307	289	260	238	219	203
				D	.04	.06	.09	.12	.16	.21	.26	.31	.37	.44	.51	.59	.68	.87	1.09	1.33	1.61
	2-1/2 (63.5)	4.9 (7.29)	32512	U	2836	1817	1263	929	712	564	457	379	319	272	235	206	181	144	118	98	83
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.52	.59	.68	.86	1.07	1.31	1.57
				C	1654	1325	1105	948	831	740	667	608	558	516	481	450	423	378	343	314	290
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.35	.41	.47	.54	.69	.86	1.05	1.25
	3 (76.2)	5.2 (7.74)	33012	U	3587	2298	1597	1174	900	712	578	478	403	344	297	259	228	181	148	123	104
				D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.38	.44	.51	.58	.74	.92	1.12	1.34
				C	1868	1675	1397	1199	1050	935	843	767	705	652	606	567	533	476	431	395	364
				D	.03	.04	.06	.09	.11	.14	.18	.22	.26	.30	.35	.41	.46	.59	.73	.89	1.07
Aluminum Alloy 5052 12 ga. .080"	1-1/2* (38.1)	1.06 (1.58)	31512-A	U	667	443	301	221	168	133	108										
				D	.10	.15	.22	.31	.40	.51	.63										
				C	395	316	263	226	197	175	157										
				D	.08	.12	.18	.25	.32	.41	.50										
	2 (50.8)	1.15 (1.71)	32012-A	U	993	636	441	324	248	196	159	131	110	93	80						
				D	.08	.13	.18	.25	.33	.42	.52	.63	.74	.86	1.00						
				C	579	463	386	331	290	257	232	211	192	177	165						
				D	.06	.10	.15	.20	.27	.34	.42	.51	.59	.69	.80						
	2-1/2* (63.5)	1.24 (1.85)	32512-A	U	1492	955	663	487	373	295	239	197	166	141	122	106	93				
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12				
				C	812	696	580	497	435	387	348	316	290	268	249	232	218				
				D	.05	.08	.12	.17	.22	.28	.35	.42	.50	.59	.68	.78	.89				
	3* (76.2)	1.33 (1.98)	33012-A	U	1833	1173	815	598	458	362	293	242	204	174	150	130	115				
				D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00				
				C	846	846	713	611	535	475	428	389	356	329	305	285	267				
				D	.03	.07	.11	.15	.20	.25	.31	.38	.45	.53	.61	.70	.80				
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	1.34 (1.99)	31510-A	U	771	494	343	252	193	152	122	101									
				D	.09	.15	.22	.30	.39	.50	.63	.76									
				C	450	360	300	257	225	200	179	162									
				D	.07	.12	.17	.24	.31	.40	.51	.61									
	2 (50.8)	1.46 (2.38)	32010-A	U	1391	890	618	454	348	275	223	184	155	132	114	99	87				
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30	1.48				
				C	811	649	541	464	406	361	325	295	270	250	232	216	203				
				D	.07	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04	1.18				
	2-1/2* (63.5)	1.57 (2.34)	32510-A	U	1913	1225	850	625	478	378	306	253	213	181	156	136	120				
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15				
				C	1116	893	744	638	558	496	446	406	372	343	319	298	279				
				D	.05	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92				
	3* (76.2)	1.68 (2.50)	33010-A	U	2470	1581	1098	807	618	488	395	327	274	234	202	176	154				
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89				
				C	1309	1153	961	823	720	640	576	524	480	443	412	384	360				
				D	.04	.06	.10	.13	.17	.22	.27	.33	.40	.47	.54	.62	.71				

*Available by special order.
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

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4-Diamond Plank - 9-1/2" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	3.6 (5.36)	41514	U	663	426	296	219	168	134	109	90	77								
				D	.06	.10	.14	.20	.26	.33	.41	.50	.59								
				C	525	421	352	303	266	238	215	197	182								
				D	.05	.08	.11	.16	.21	.26	.33	.40	.47								
	2 (50.8)	3.8 (5.65)	42014	U	1100	705	491	362	278	220	179	148	125	107	93	81	72	58	47		
				D	.06	.09	.13	.17	.23	.29	.36	.43	.52	.61	.71	.82	.94	1.20	1.51		
				C	730	698	583	501	440	392	354	323	298	276	258	242	228	205	187		
				D	.04	.07	.10	.14	.18	.23	.28	.35	.41	.49	.57	.66	.75	.96	1.20		
	2-1/2 (63.5)	4.1 (6.10)	42514	U	1262	809	563	415	318	252	205	170	144	123	106	93	82	66	54	45	
				D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.45	.52	.60	.76	.95	1.17	
				C	730	730	669	574	504	449	406	370	341	316	295	277	261	235	214	197	
				D	.02	.04	.06	.09	.12	.15	.18	.22	.26	.31	.36	.42	.48	.61	.76	.94	
Steel 12 ga.	1-1/2 (38.1)	5.0 (7.44)	41512	U	906	581	405	298	229	182	148	123	104	89	77	67	60				
				D	.07	.11	.16	.21	.28	.36	.44	.54	.64	.76	.89	1.02	1.17				
				C	718	575	481	413	363	324	292	267	246	228	213	200	189				
				D	.06	.09	.13	.17	.23	.29	.35	.43	.52	.61	.71	.82	.94				
	2 (50.8)	5.4 (8.04)	42012	U	1398	896	624	460	353	280	228	189	160	137	119	104	92	74	61	51	43
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.65	.75	.85	1.10	1.38	1.69	2.03
				C	1107	887	741	637	559	499	451	412	380	353	329	309	292	264	241	222	206
				D	.04	.06	.09	.12	.16	.21	.26	.31	.37	.44	.52	.60	.68	.88	1.10	1.35	1.63
	2-1/2 (63.5)	5.7 (8.48)	42512	U	2090	1339	931	685	525	416	338	280	236	201	174	152	134	107	87	73	62
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.52	.60	.68	.87	1.08	1.32	1.58
				C	1400	1325	1106	949	832	741	668	609	559	518	482	452	425	380	345	316	293
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.36	.41	.48	.54	.69	.86	1.05	1.27
	3 (76.2)	6.1 (9.08)	43012	U	2644	1694	1177	866	664	525	426	353	297	254	219	192	169	134	110	91	77
				D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.38	.44	.51	.58	.74	.92	1.12	1.35
				C	1400	1400	1398	1200	1051	936	844	769	706	653	608	569	535	478	434	397	367
				D	.02	.04	.06	.09	.11	.15	.18	.22	.26	.31	.35	.41	.47	.59	.74	.90	1.08
Aluminum Alloy 5052 12 ga. .080"	1-1/2* (38.1)	1.28 (1.90)	41512-A	U	499	319	222	163	124	98											
				D	.10	.15	.22	.31	.40	.51											
				C	395	316	263	226	197	175											
				D	.08	.12	.18	.25	.32	.41											
	2 (50.8)	1.37 (2.03)	42012-A	U	732	468	325	239	183	145	117	97	81	69							
				D	.08	.13	.18	.25	.33	.42	.52	.63	.74	.87							
				C	568	463	386	331	290	257	232	211	192	177							
				D	.06	.10	.15	.20	.27	.34	.42	.51	.59	.69							
	2-1/2* (63.5)	1.46 (2.17)	42512-A	U	1099	704	489	359	275	217	176	145	122	104	90	78	69				
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12				
				C	568	568	568	497	435	387	348	316	290	268	249	232	218				
				D	.03	.07	.12	.17	.22	.28	.35	.42	.50	.59	.68	.78	.89				
	3* (76.2)	1.55 (2.30)	43012-A	U	1350	864	600	441	338	267	216	179	150	128	110	96	84				
				D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00				
				C	568	568	568	568	535	475	428	389	356	329	305	285	267				
				D	.02	.05	.09	.14	.20	.25	.31	.38	.45	.53	.61	.70	.80				
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	1.62 (2.41)	41510-A	U	568	364	253	186	142	112											
				D	.09	.15	.22	.30	.39	.50											
				C	450	360	300	257	225	200											
				D	.07	.12	.17	.24	.31	.40											
	2 (50.8)	1.74 (2.58)	42010-A	U	1025	656	455	335	256	202	164	136	114	97	84	73	64				
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30	1.48				
				C	811	649	541	464	406	361	325	295	270	250	232	216	203				
				D	.07	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04	1.18				
	2-1/2* (63.5)	1.85 (2.75)	42510-A	U	1410	902	627	460	352	278	226	186	157	133	115	100	88				
				D	.07	.11	.16	.22	.28	.36	.44	.54	.64	.76	.88	1.01	1.15				
				C	886	886	744	638	558	496	446	406	372	343	319	298	279				
				D	.04	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92				
	3* (76.2)	1.97 (2.93)	43010-A	U	1820	1165	809	594	455	360	291	241	202	172	149	129	114				
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89				
				C	886	886	886	823	720	640	576	524	480	443	412	384	360				
				D	.02	.05	.09	.13	.17	.22	.27	.33	.40	.47	.54	.62	.71				
Stainless Type 304 16 ga.	2 (50.8)	3.2 (4.76)	42016-S	U	720	462	322	238	183	145	118	98	83	71	59						
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.61						
				C	570	457	382	329	289	258	234	214	197	184	165						
				D	.04	.06	.09	.12	.16	.21	.26	.31	.38	.44	.49						
Stainless Type 316L 16 ga.	2 (50.8)	3.2 (4.76)	42016-SL	U	626	400	278	204	156	123	100	82	69	59	51						
				D	.04	.06	.10	.13	.17	.22	.27	.32	.39	.45	.53						
				C	492	397	330	283	248	220	198	180	165	152	141						
				D	.03	.05	.08	.10	.14	.17	.22	.26	.31	.36	.42						

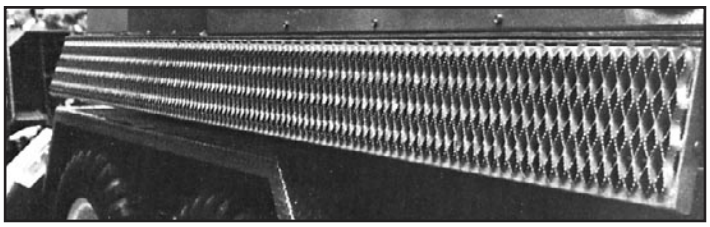
*Available by special order.
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

5-Diamond Plank - 11-3/4" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	4.2 (6.25)	51514	U	536	344	240	177	136	108	88	74	62								
				D	.06	.10	.14	.20	.26	.33	.41	.50	.60								
				C	525	422	353	304	267	239	216	198	183								
				D	.05	.08	.12	.16	.21	.26	.33	.40	.48								
	2 (50.8)	4.4 (6.55)	52014	U	890	571	397	293	225	178	145	120	102	87	76	66	59	47			
				D	.06	.09	.13	.17	.23	.29	.36	.43	.52	.61	.71	.83	.95	1.21			
				C	707	699	584	502	440	393	355	324	299	277	259	243	230	207			
				D	.04	.07	.10	.14	.18	.23	.29	.35	.42	.49	.57	.66	.76	.97			
	2-1/2 (63.5)	4.7 (6.99)	52514	U	1021	655	456	336	258	204	166	138	116	100	86	76	67	54	44		
				D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.45	.52	.60	.77	.96		
				C	707	707	669	575	505	450	407	371	342	317	296	278	262	236	216		
				D	.02	.04	.06	.09	.12	.15	.18	.22	.26	.31	.36	.42	.48	.62	.77		
Steel 12 ga.	1-1/2 (38.1)	5.9 (8.78)	51512	U	710	456	318	235	181	144	117	98	83	71	62	55	49				
				D	.07	.11	.15	.21	.28	.35	.44	.53	.64	.76	.89	1.03	1.18				
				C	695	558	467	402	354	317	287	263	244	227	213	201	190				
				D	.05	.08	.12	.17	.22	.28	.35	.43	.51	.60	.71	.82	.95				
	2 (50.8)	6.2 (9.23)	52012	U	1131	725	505	372	286	227	185	154	130	111	97	85	75	60	50	42	
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.56	.65	.75	.86	1.11	1.39	1.70	
				C	1107	888	742	638	561	501	453	414	382	355	332	312	295	266	243	224	
				D	.04	.06	.09	.12	.16	.21	.26	.31	.38	.44	.52	.60	.69	.89	1.11	1.36	
	2-1/2 (63.5)	6.6 (9.82)	52512	U	1691	1083	753	554	425	337	273	226	151	141	123	109	87	71	59	59	50
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.87	1.09	1.33	1.60
				C	1115	1115	1106	950	833	742	669	610	561	519	484	453	426	382	347	319	295
				D	.02	.04	.07	.10	.13	.17	.21	.25	.30	.36	.41	.48	.55	.70	.87	1.06	1.28
	3 (76.2)	7.0 (10.4)	53012	U	2138	1370	952	701	537	425	345	286	241	206	178	155	137	109	89	74	63
				D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.38	.44	.51	.58	.74	.93	1.13	1.36
				C	1115	1115	1115	1115	1052	937	845	770	707	654	609	570	537	480	436	399	369
				D	.02	.03	.05	.08	.11	.15	.18	.22	.26	.31	.36	.41	.47	.60	.74	.90	1.09
Aluminum Alloy 5052 12 ga. .080"	1-1/2* (38.1)	1.49 (2.22)	51512-A	U	403	255	179	132	100												
				D	.10	.15	.22	.31	.40												
				C	395	316	263	226	197												
				D	.08	.12	.18	.25	.32												
	2 (50.8)	1.59 (2.36)	52012-A	U	592	379	263	193	148	117	95	78									
				D	.08	.13	.18	.25	.33	.42	.52	.63									
				C	466	466	386	331	290	257	232	211									
				D	.05	.10	.15	.20	.27	.34	.42	.51									
	2-1/2* (63.5)	1.67 (2.48)	52512-A	U	889	569	395	290	222	176	142	118	99	84	73	63					
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98					
				C	466	466	466	466	435	387	348	316	290	268	249	232					
				D	.02	.05	.10	.16	.22	.28	.35	.42	.50	.59	.68	.78					
	3* (76.2)	1.75 (2.60)	53012-A	U	951	699	485	357	273	216	175	144	121	103	89	78	68				
				D	.05	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00				
				C	466	466	466	466	466	466	428	389	356	329	305	285	267				
				D	.02	.04	.07	.11	.17	.24	.31	.38	.45	.53	.61	.70	.80				
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	1.88 (2.79)	51510-A	U	459	294	204	150	115	91											
				D	.09	.15	.22	.30	.39	.50											
				C	450	360	300	257	225	200											
				D	.07	.12	.17	.24	.31	.40											
	2 (50.8)	2.00 (2.98)	52010-A	U	829	530	368	271	207	164	133	110	92	78	68	59					
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30					
				C	714	649	541	464	406	361	325	295	270	250	232	216					
				D	.06	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04					
	2-1/2* (63.5)	2.11 (3.14)	52510-A	U	1140	730	507	372	285	225	182	151	127	105	93	81	71				
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15				
				C	714	714	714	638	558	496	446	406	372	343	319	298	279				
				D	.03	.07	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92				
	3* (76.2)	2.22 (3.30)	53010-A	U	1458	942	654	481	368	291	235	195	164	139	120	105	92				
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89				
				C	714	714	714	714	714	640	576	524	480	443	412	384	360				
				D	.02	.04	.07	.12	.17	.22	.27	.33	.40	.47	.54	.62	.71				
Stainless Type 304 16 ga.	2 (50.8)	3.7 (5.51)	52016-S	U	583	374	261	192	148	118	96	80	68	58	48						
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.56	.61						
				C	464	458	323	330	290	259	235	215	199	185	165						
				D	.03	.06	.09	.12	.16	.21	.26	.32	.38	.45	.49						
Stainless Type 316L 16 ga.	2 (50.8)	3.7 (5.51)	52016-SL	U	406	324	225	165	126	100	81	66	56	47							
				D	.04	.06	.10	.13	.17	.22	.27	.32	.39	.45							
				C	398	397	330	283	248	220	198	180	165	152							
				D	.03	.05	.08	.10	.14	.17	.22	.26	.31	.36							

*Available by special order.
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

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8-Diamond Plank - 18-3/4" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	6.1 (9.1)	81514	U	337	217	151	112	86	69	56	47									
				D	.33	.27	.26	.29	.33	.38	.45	.55									
				C	263	211	178	153	135	121	110	101									
				D	.16	.15	.15	.16	.17	.19	.22	.25									
	2 (50.8)	6.3 (9.4)	82014	U	540	358	250	184	142	113	92	76	65	55	48	42					
				D	.48	.37	.34	.32	.34	.38	.43	.50	.58	.66	.77	.87					
				C	437	349	292	251	220	198	179	164	152	141	132	124					
				D	.24	.21	.20	.19	.20	.21	.23	.26	.29	.32	.36	.40					
	2-1/2 (63.5)	6.6 (9.8)	82514	U	540	411	286	211	162	129	105	87	74	63	55	48	43				
				D	.46	.39	.35	.28	.27	.28	.31	.35	.39	.44	.50	.57	.64				
				C	450	402	335	287	252	225	205	188	173	161	151	142	134				
				D	.24	.22	.20	.19	.19	.19	.20	.21	.23	.24	.27	.29	.32				
Steel 12 ga.	1-1/2 (38.1)	8.5 (12.6)	81512	U	446	287	201	148	115	91	75	63	53	46	40						
				D	.27	.22	.22	.26	.32	.39	.47	.56	.67	.80	.92						
				C	359	280	235	203	179	161	146	135	125	117	110						
				D	.12	.12	.12	.14	.16	.19	.22	.26	.30	.35	.40						
	2 (50.8)	8.9 (13.2)	82012	U	710	456	318	235	181	144	117	98	83	71	62	54	48				
				D	.31	.25	.23	.25	.28	.31	.37	.44	.51	.60	.68	.79	.90				
				C	554	444	371	319	282	253	229	210	194	181	169	160	151				
				D	.17	.15	.14	.15	.16	.17	.19	.22	.25	.28	.32	.36	.40				
	2-1/2 (63.5)	9.2 (13.7)	82512	U	810	680	473	348	267	212	172	143	120	103	89	78	69	55	45		
				D	.33	.31	.27	.26	.27	.29	.32	.37	.42	.49	.55	.63	.72	.90	1.12		
				C	800	663	553	475	416	371	334	307	282	262	244	229	216	194	177		
				D	.23	.20	.18	.18	.18	.18	.19	.21	.23	.25	.28	.31	.34	.41	.50		
	3 (76.2)	9.6 (14.3)	83012	U	810	810	598	440	337	267	217	180	152	130	112	98	87	69	57	47	40
				D	.32	.35	.30	.27	.26	.28	.31	.34	.39	.43	.49	.56	.62	.78	.96	1.17	1.40
				C	800	800	699	600	526	468	422	385	353	327	307	288	271	243	221	203	189
				D	.22	.23	.22	.20	.20	.20	.20	.21	.22	.24	.26	.28	.31	.37	.44	.52	.61
Aluminum Alloy 5052 12 ga. .080"	1-1/2* (38.1)	2.11 (3.13)	81512-A	U	253	162	112	83													
				D	.49	.40	.39	.44													
				C	198	158	132	113													
				D	.24	.22	.22	.24													
	2 (50.8)	2.20 (3.27)	82012-A	U	308	237	165	121	93	73	59	49									
				D	.54	.50	.44	.44	.47	.53	.61	.71									
				C	290	232	193	166	145	129	116	106									
				D	.32	.28	.27	.27	.28	.30	.32	.36									
	2-1/2* (63.5)	2.29 (3.40)	82512-A	U	308	308	248	182	139	110	89	74	62	53							
				D	.51	.57	.54	.49	.50	.52	.57	.65	.73	.83							
				C	350	348	290	249	218	194	174	158	145	134							
				D	.37	.39	.35	.33	.33	.34	.35	.37	.40	.43							
	3* (76.2)	2.39 (3.55)	83012-A	U	308	308	308	223	171	135	109	90	76	65	56	49					
				D	.50	.54	.62	.54	.52	.52	.56	.61	.68	.76	.86	.96					
				C	350	350	350	306	268	238	214	195	178	165	153	143					
				D	.37	.38	.41	.38	.37	.37	.37	.39	.40	.43	.46	.50					
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	2.68 (3.98)	81510-A	U	288	184	128	94	72	57											
				D	.41	.36	.36	.40	.47	.56											
				C	225	180	150	129	113	100											
				D	.18	.18	.19	.21	.23	.27											
	2 (50.8)	2.79 (4.15)	82010-A	U	457	332	231	170	130	103	83	69	58	49							
				D	.59	.51	.46	.47	.52	.57	.67	.78	.89	1.03							
				C	406	325	271	232	203	181	163	148	135	125							
				D	.29	.26	.25	.26	.28	.30	.33	.37	.42	.47							
	2-1/2* (63.5)	2.91 (4.33)	82510-A	U	457	457	317	233	179	141	114	94	79	68	58	51	45				
				D	.55	.62	.51	.48	.48	.52	.58	.64	.73	.84	.94	1.07	1.20				
				C	550	447	372	319	279	248	223	203	186	172	160	149	140				
				D	.37	.32	.30	.29	.29	.30	.32	.35	.38	.41	.46	.52	.55				
	3* (76.2)	3.02 (4.50)	83010-A	U	457	457	410	301	231	182	148	122	102	87	75	66	58				
				D	.53	.57	.58	.51	.48	.48	.51	.56	.61	.69	.76	.85	.95				
				C	550	550	481	412	360	320	288	262	240	222	206	192	180				
				D	.37	.39	.37	.35	.34	.34	.36	.38	.41	.44	.48	.52	.57				

*Available by special order.
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

10-Diamond Plank - 24" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	2 (50.8)	7.4 (11.0)	102014	U	300	300	228	168	128	102	82	68	57	49	42						
				D	.46	.48	.42	.38	.38	.41	.44	.49	.55	.62	.70						
				C	400	400	343	294	257	229	206	187	172	158	147						
				D	.34	.35	.32	.30	.29	.29	.30	.31	.33	.35	.37						
	3 (76.2)	7.9 (11.8)	103014	U	300	300	300	264	202	160	130	107	90	77	66	58	51	40			
				D	.42	.43	.46	.44	.39	.36	.35	.36	.39	.44	.45	.49	.54	.65			
				C	400	400	400	400	400	360	324	295	270	249	232	219	203	180			
				D	.33	.33	.34	.35	.37	.35	.33	.33	.32	.32	.33	.34	.35	.38			
Steel 12 ga.	2 (50.8)	10.4 (15.5)	102012	U	475	416	289	212	162	128	104	86	72	62	53	46					
				D	.40	.39	.33	.31	.31	.34	.38	.44	.48	.56	.63	.71					
				C	650	520	434	372	325	289	260	237	217	200	186	174					
				D	.26	.22	.19	.20	.20	.21	.22	.23	.25	.28	.31	.34					
	3 (76.2)	11.1 (16.5)	103012	U	475	475	475	392	300	237	192	159	133	114	98	85	75	59	48		
				D	.38	.39	.42	.38	.36	.34	.35	.37	.39	.43	.47	.52	.58	.70	.85		
				C	900	900	800	686	600	534	480	437	400	369	343	320	300	267	240		
				D	.34	.35	.33	.29	.27	.26	.26	.26	.26	.27	.29	.30	.32	.36	.41		

10-Diamond Walkway - 24" width — Load Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	4-1/2	8.9 (13.2)	104514-U	U	300	300	300	300	300	263	213	176	148	126	109	95	83	66	53	43	
				D	.41	.41	.42	.45	.48	.47	.42	.40	.40	.41	.43	.45	.47	.55	.64	.75	
				C	400	400	400	400	400	400	400	400	400	400	380	355	333	296	266	242	
				D	.32	.33	.33	.33	.34	.35	.36	.38	.39	.41	.42	.41	.41	.42	.44	.47	
Steel 12 ga.	4-1/2	12.5 (18.6)	104512-U	U	475	475	475	475	475	420	340	281	236	201	173	151	133	105	85	70	59
				D	.37	.37	.38	.40	.43	.43	.39	.37	.37	.37	.39	.41	.44	.51	.59	.69	.80
				C	900	900	900	900	900	900	850	773	709	654	607	567	531	472	425	387	354
				D	.34	.34	.35	.35	.36	.37	.37	.35	.34	.33	.33	.33	.33	.35	.37	.40	.44

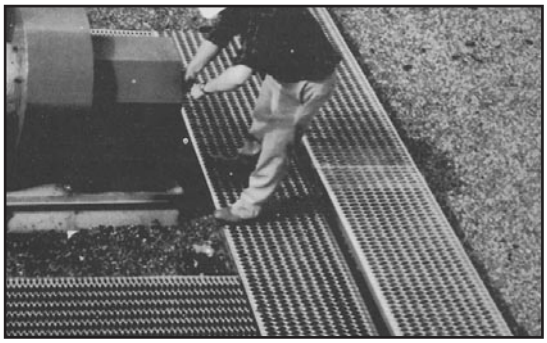
Allowable loads and deflections: U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)
Spans to left of heavy line produce a deflection of 1/4" or less under a uniform load of 100 lbs per sq. ft.

GRIP STRUT® FULL DIAMOND LENGTH CHART

# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)	# of Diam.	Length (In)
1	1-1/8	25	28-1/8	49	55-1/8	73	82-1/8	97	109-1/8	121	136-1/8	145	163-1/8	169	190-1/8	193	217-1/8	217	244-1/8	241	271-1/8
2	2-1/4	26	29-1/4	50	56-1/4	74	83-1/4	98	110-1/4	122	137-1/4	146	164-1/4	170	191-1/4	194	218-1/4	218	245-1/4	242	272-1/4
3	3-3/8	27	30-3/8	51	57-3/8	75	84-3/8	99	111-3/8	123	138-3/8	147	165-3/8	171	192-3/8	195	219-3/8	219	246-3/8	243	273-3/8
4	4-1/2	28	31-1/2	52	58-1/2	76	85-1/2	100	112-1/2	124	139-1/2	148	166-1/2	172	193-1/2	196	220-1/2	220	247-1/2	244	274-1/2
5	5-5/8	29	32-5/8	53	59-5/8	77	86-5/8	101	113-5/8	125	140-5/8	149	167-5/8	173	194-5/8	197	221-5/8	221	248-5/8	245	275-5/8
6	6-3/4	30	33-3/4	54	60-3/4	78	87-3/4	102	114-3/4	126	141-3/4	150	168-3/4	174	195-3/4	198	222-3/4	222	249-3/4	246	276-3/4
7	7-7/8	31	34-7/8	55	61-7/8	79	88-7/8	103	115-7/8	127	142-7/8	151	169-7/8	175	196-7/8	199	223-7/8	223	250-7/8	247	277-7/8
8	9	32	36	56	63	80	90	104	117	128	144	152	171	176	198	200	225	224	252	248	279
9	10-1/8	33	37-1/8	57	64-1/8	81	91-1/8	105	118-1/8	129	145-1/8	153	172-1/8	177	199-1/8	201	226-1/8	225	253-1/8	249	280-1/8
10	11-1/4	34	38-1/4	58	65-1/4	82	92-1/4	106	119-1/4	130	146-1/4	154	173-1/4	178	200-1/4	202	227-1/4	226	254-1/4	250	281-1/4
11	12-3/8	35	39-3/8	59	66-3/8	83	93-3/8	107	120-3/8	131	147-3/8	155	174-3/8	179	201-3/8	203	228-3/8	227	255-3/8	251	282-3/8
12	13-1/2	36	40-1/2	60	67-1/2	84	94-1/2	108	121-1/2	132	148-1/2	156	175-1/2	180	202-1/2	204	229-1/2	228	256-1/2	252	283-1/2
13	14-5/8	37	41-5/8	61	68-5/8	85	95-5/8	109	122-5/8	133	149-5/8	157	176-5/8	181	203-5/8	205	230-5/8	229	257-5/8	253	284-5/8
14	15-3/4	38	42-3/4	62	69-3/4	86	96-3/4	110	123-3/4	134	150-3/4	158	177-3/4	182	204-3/4	206	231-3/4	230	258-3/4	254	285-3/4
15	16-7/8	39	43-7/8	63	70-7/8	87	97-7/8	111	124-7/8	135	151-7/8	159	178-7/8	183	205-7/8	207	232-7/8	231	259-7/8	255	286-7/8
16	18	40	45	64	72	88	99	112	126	136	153	160	180	184	207	208	234	232	261	256	288
17	19-1/8	41	46-1/8	65	73-1/8	89	100-1/8	113	127-1/8	137	154-1/8	161	181-1/8	185	208-1/8	209	235-1/8	233	262-1/8	Stock sizes are run to full diamonds	
18	20-1/4	42	47-1/4	66	74-1/4	90	101-1/4	114	128-1/4	138	155-1/4	162	182-1/4	186	209-1/4	210	236-1/4	234	263-1/4		
19	21-3/8	43	48-3/8	67	75-3/8	91	102-3/8	115	129-3/8	139	156-3/8	163	183-3/8	187	210-3/8	211	237-3/8	235	264-3/8		
20	22-1/2	44	49-1/2	68	76-1/2	92	103-1/2	116	130-1/2	140	157-1/2	164	184-1/2	188	211-1/2	212	238-1/2	236	265-1/2		
21	23-5/8	45	50-5/8	69	77-5/8	93	104-5/8	117	131-5/8	141	158-5/8	165	185-5/8	189	212-5/8	213	239-5/8	237	266-5/8		
22	24-3/4	46	51-3/4	70	78-3/4	94	105-3/4	118	132-3/4	142	159-3/4	166	186-3/4	190	213-3/4	214	240-3/4	238	267-3/4		
23	25-7/8	47	52-7/8	71	79-7/8	95	106-7/8	119	133-7/8	143	160-7/8	167	187-7/8	191	214-7/8	215	241-7/8	239	268-7/8		
24	27	48	54	72	81	96	108	120	135	144	162	168	189	192	216	216	243	240	270		

ROOFTOP WALKWAY SYSTEMS

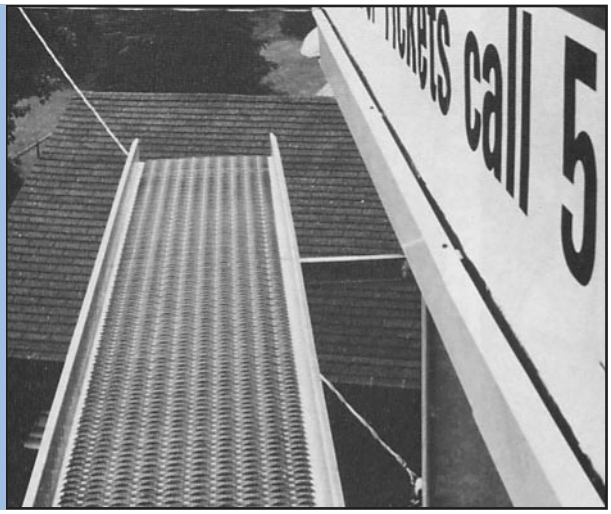
- **Optimizes Roof Performance - Saves roof from wear and tear**
- **Versatile - Designed for all roofing systems: Built-up, Single-ply, Inverted, and Spray-on**
- **Flexible - Innovative design easily adapts to changing traffic patterns, accommodates level and roof slope changes**
- **Traffic Control - Raised level discourages "shortcuts"**
- **Safe, Year-Round Use - Raised level stays above snowfalls, drains snow, stays slip-resistant in three directions**
- **Easy Installation - Goes down fast without fasteners, stays put**
- **Economical - Long life, low maintenance on roof and walkway**



Grip Strut® Rooftop Walkway System Components

Item	Catalog No.	Gauge/ Size	Steel	Weight (lbs)	Supplied With	Purpose
Plank 10' or 12' Regular Grip Strut®	102014	14	Galvanized	7.4 LF	n/a	Walkway surface - Choose length & gauge according to live load/deflection requirements.
Plank 10' or 12' Regular Grip Strut®	102012	12	Galvanized	10.4 LF		
Nosing Cap	RTW-N	16	Galvanized	1.06	2 sets flat counter sunk slotted head cap screws/hex nuts & anchor #12262	Place across cut edge of plank: trim ends of walkway runs and step-ups to protect shins. To be installed only where full diamond exists as exposed ends of grating plank.
Splice Plates - Flat	RTW-FSP	12	Galvanized	.25	Pairs with four sets of 'T'-connectors	Level runs.
Splice Plates - Angle	RTW-ASP	12	Galvanized	.25		Level runs to bottoms of slopes.
Splice Plates - Modified	RTW-MAS	16	Galvanized	2.36		Level runs to tops of slopes and to eliminate tripping hazards.
Side Channel Connector	RTW-SC	16	Galvanized	.37	Pairs with four sets of 'T'-connectors	Connecting planks side-by-side; one connector each end to provide work surfaces or wide walkway runs.
Support Stand Standard 21"	RTW-SS-5	14	Galvanized	8.93	Four 'T'-connectors for attachment of planks	5-13/16" walkway height, 3-1/2" clearance - for basic-run level-walkway support, adaptable to "T" intersection.
Support Stand Standard 21"	RTW-SS-8	14	Galvanized	11.35		9-1/8" walkway height, 6-13/16" clearance. Open for free-flow drainage, use to support plank lengths at mid-stand, support/splice/self-align plank ends at joints. Standard-level support adaptable to "T" intersections for level changes.
Support Stand Adjustable 21"	RTW-AS-8	14	Galvanized	14.00		2-way and 6-level adjustability in each leg of walkway support adaptable to roof-sloping in any direction.
T-Junction Bracket	RTW-TJ	12	Galvanized	3.79	Four 'T'-connectors for attachment of planks	To connect the plank run at "T" intersections on elevated continuous runs.
Step Support Bracket	RTW-SB	14	Galvanized	.74	Three 'T'-connectors for attachment	Mount four on plank ends as risers, and a length (4' max) of plank as tread, for a step change walkway level or bridge obstructions such as piping, etc.
Protective Pad	RTW-PAD	n/a	n/a	8.50	25" x 11" - 1/2" Durable Hard Rubber	Use directly on roof membrane (unless PVC roof) under support stands and/or plank ends to protect roof from shock of traffic and spread loads over larger areas.
Carriage Bolt Component Kit	RTW-CK	1-1/4"	Galvanized	n/a	Nylon nut, flat washer, diamond washer	To connect planks to accessories and support stands.

WORK PLATFORMS



Safe Side-Channel — Load Table

Material	Wgt lb/lin ft (kg/m)	Catalog No.		Span 10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"
Steel 14 ga.	8.9 (13.2)	104514-U	C	266	242	222	205	190	177	166
			D	.58	.60	.66	.77	.89	1.02	1.16
Steel 12 ga.	12.5 (18.6)	104512-U	C	425	386	354	327	304	283	266
			D	.53	.55	.61	.72	.83	.95	1.09

C - allowable concentrated load (lb); D- maximum deflection (in)

Cantilever, Overhanging Walkway — Load Table

Material	Catalog No.		Span 2'-0"	3'-0"	4'-0"
Steel 14 ga.	104514-U	U	300	148	83
		C	300	222	166
Steel 12 ga.	104512-U	U	475	236	133
		C	475	354	266

U- uniform load (lb/sq ft); C - concentrated load (lb)
Note: Walkway material must be rigidly attached to the supports to properly support cantilevered loads.

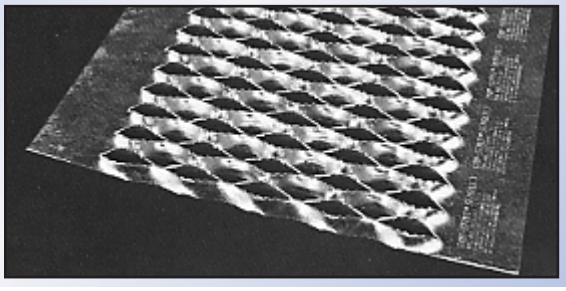
FLAT STOCK GRIP STRUT®

Flat Stock Grip Strut® is available by special order in all standard materials and sizes listed throughout this catalog. Please reference table for approximate dimensions of flat metal available on each side. The open matrix is symmetrical across the flat plane.

Flat stock can also be manufactured to customer specified flat metal dimensions on one or both sides.

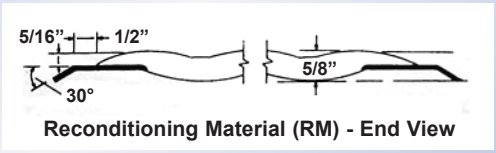
Flat Stock Grip Strut®	
# of Diam.	Flat Metal on each side*
2 Diam.	2-1/4" to 7-1/2"
3 Diam.	2-3/8" to 6-1/2"
4 Diam.	2-3/8" to 7-5/8"
5 Diam.	2-3/8" to 6-1/2"
8 Diam.	2-3/8" to 5-5/8"
10 Diam.	3-1/4" to 7-5/8"

*Can be mfg. to customer specifications on one or both sides.

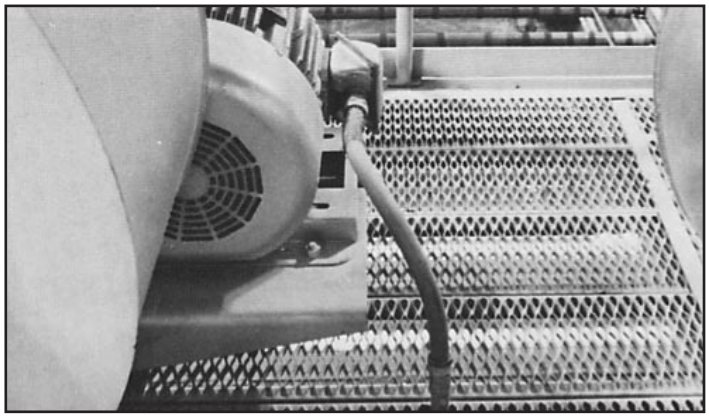


RECONDITIONING MATERIAL

Ideal for re-furbishing worn and unsafe floors and stairs. Manufactured with down-turned edges to allow grating to lie flat and secure over existing flooring. Grip Strut® Reconditioning Material (RM) provides 500 teeth per square foot assuring safe footing wall-to-wall. RM products available by special order in standard Grip Strut® materials and sizes.



Reconditioning Material (RM) - End View



ENGINEERING DATA
Both Side Channels

Material	Height	Sx (in^3)	Ix (in^4)	E I (lb. x in^2)
2, 3, 4, 5, & 8-Diamond Plank				
Steel 14 ga.	1-1/2"	.174	.102	2.96 x 10^6
	2"	.270	.193	5.60 x 10^6
	2-1/2"	.307	.335	9.71 x 10^6
Steel 12 ga.	1-1/2"	.216	.125	3.62 x 10^6
	2"	.342	.264	7.66 x 10^6
	2-1/2"	.504	.488	14.09 x 10^6
	3"*	.625	.722	20.94 x 10^6
Aluminum 12 ga. .080"	1-1/2"	.171	.137	1.40 x 10^6
	2"	.251	.246	2.51 x 10^6
	2-1/2"	.379	.441	4.50 x 10^6
	3"*	.464	.602	6.14 x 10^6
Aluminum 10 ga. .100"	1-1/2"	.196	.156	1.59 x 10^6
	2"	.352	.309	3.15 x 10^6
	2-1/2"	.486	.544	5.55 x 10^6
	3"*	.627	.911	9.29 x 10^6
Stainless Steel 304 - 16 ga.	2"**	.165	.1425	4.13 x 10^6
Stainless Steel 316L - 16 ga.	2"**	.165	.1425	4.13 x 10^6
10-Diamond Plank				
Steel 14 ga.	2"	.303	.232	6.73 x 10^6
	3"	.484	.713	20.68 x 10^6
Steel 12 ga.	2"	.387	.346	10.03 x 10^6
	3"	.715	.959	27.81 x 10^6
10-Diamond Walkway				
Steel 14 ga.	4-1/2"	.806	1.43	41.47 x 10^6
Steel 12 ga.	4-1/2"	1.29	2.42	70.18 x 10^6

*Not applicable to 2-Diamond
**Not applicable to 2, 3, or 8-Diamond

ISO 9001:2015

STRUT LOADING

Description	Material	Loading	Load	Deflection (in)
2-Diamond Plank 4-3/4" width	Steel 14 ga.	U	6268	.10
		C_s	1240	.08
	Steel 12 ga.	U	8619	.10
		C_s	1705	.08
	Aluminum 12 ga. - .080"	U	4677	.12
		C_s	925	.10
	Aluminum 10 ga. - .100"	U	5847	.12
		C_s	1157	.10
3-Diamond Plank 7" width	Steel 14 ga.	U	3535	.11
		C_s	1031	.09
	Steel 12 ga.	U	6405	.11
		C_s	1868	.09
	Aluminum 12 ga. - .080"	U	2901	.15
		C_s	846	.12
	Aluminum 10 ga. - .100"	U	4488	.16
		C_s	1309	.13
4-Diamond Plank 9-1/2" width	Steel 14 ga.	U	1844	.15
		C_s	730	.11
	Steel 12 ga.	U	3537	.14
		C_s	1400	.11
	Aluminum 12 ga. - .080"	U	1435	.19
		C_s	568	.15
	Aluminum 10 ga. - .100"	U	2238	.23
		C_s	886	.15
	Stainless 304 - 16 ga.	U	1450	.29
		C_s	574	.19
	Stainless 316L - 16 ga.	U	1243	.20
		C_s	492	.16
5-Diamond Plank 11-3/4" width	Steel 14 ga.	U	1444	.18
		C_s	707	.15
	Steel 12 ga.	U	2277	.15
		C_s	1115	.12
	Aluminum 12 ga. - .080"	U	951	.24
		C_s	466	.20
	Aluminum 10 ga. - .100"	U	1458	.27
		C_s	714	.22
	Stainless 304 - 16 ga.	U	947	.38
		C_s	464	.31
	Stainless 316L - 16 ga.	U	812	.31
		C_s	398	.25
8-Diamond Plank 18-3/4" width	Steel 14 ga.	U	540	.43
		C_s	422	.35
	Steel 12 ga.	U	810	.30
		C_s	633	.24
	Aluminum 12 ga. - .080"	U	308	.48
		C_s	241	.39
	Aluminum 10 ga. - .100"	U	457	.51
		C_s	357	.41
10-Diamond Plank 24" width	Steel 14 ga.	U	300	.49
		C_s	300	.40
	Steel 12 ga.	U	475	.45
		C_s	475	.36
10-Diamond Walkway 24" width	Steel 14 ga.	U	300	.49
		C_s	300	.40
	Steel 12 ga.	U	475	.45
		C_s	475	.36

U = Allowable Uniform Load (lbs./sq. ft.)
C_s = Allowable Concentrated Load per ft. of length at mid-width (lb/ft)

COMPARATIVE PERFORMANCE TABLES

The data in these tables represent the performance of both side channels ignoring grating surface performance. **These values are not to be used for product selection** but should be used when comparisons are being made with other products whose published information does not include grating surface performance. *Reference bottom of next page for 8 and 10-Diamond Comparative Performance Load Table explanation.* **Please see pages 116 through 121 for Regular Grip Strut® Load Tables.**

8-Diamond Plank - 18-3/4" width — Comparative Performance Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1-1/2 (38.1)	6.1 (9.1)	81514	U	337	217	151	112	86	69	56	47	40								
				D	.06	.10	.14	.20	.26	.33	.41	.51	.61								
				C	525	421	355	306	270	242	220	202	187								
				D	.05	.08	.12	.16	.21	.27	.33	.41	.49								
	2 (50.8)	6.3 (9.4)	82014	U	557	358	250	184	142	113	92	76	65	55	48	42					
				D	.06	.09	.13	.17	.23	.29	.36	.44	.53	.62	.73	.84					
				C	873	698	583	501	440	396	358	328	303	281	264	248					
				D	.05	.07	.10	.14	.18	.23	.29	.35	.42	.50	.58	.67					
	2-1/2 (63.5)	6.6 (9.8)	82514	U	639	411	286	211	162	129	105	87	74	63	55	48	43				
				D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.46	.53	.61				
				C	1003	803	669	574	504	449	410	375	346	321	301	283	267				
				D	.03	.04	.06	.09	.12	.15	.18	.22	.27	.32	.37	.43	.49				
Steel 12 ga.	1-1/2 (38.1)	8.5 (12.6)	81512	U	446	287	201	148	115	91	75	63	53	46	40						
				D	.07	.11	.15	.21	.28	.36	.44	.54	.65	.78	.91						
				C	718	560	470	406	358	321	292	269	249	233	219						
				D	.06	.08	.12	.17	.22	.28	.35	.43	.52	.62	.73						
	2 (50.8)	8.9 (13.2)	82012	U	710	456	318	235	181	144	117	98	83	71	62	54	48				
				D	.05	.08	.11	.16	.21	.26	.33	.40	.48	.57	.66	.77	.88				
				C	1107	887	741	637	564	505	458	419	387	361	338	319	302				
				D	.04	.06	.09	.12	.16	.21	.26	.32	.38	.45	.53	.61	.71				
	2-1/2 (63.5)	9.2 (13.7)	82512	U	1059	680	473	348	267	212	172	143	120	103	89	78	69	55	45		
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.45	.52	.60	.69	.88	1.10		
				C	1656	1325	1106	949	832	741	668	613	564	523	488	458	431	388	353		
				D	.03	.05	.07	.10	.13	.17	.21	.26	.30	.36	.42	.48	.55	.71	.88		
	3 (76.2)	9.6 (14.3)	83012	U	1340	858	598	440	337	267	217	180	152	130	112	98	87	69	57	47	40
				D	.04	.06	.08	.11	.14	.18	.23	.27	.33	.38	.45	.52	.59	.75	.94	1.15	1.39
				C	2097	1678	1398	1200	1051	936	844	769	706	653	614	575	542	486	442	406	377
				D	.03	.04	.06	.09	.11	.15	.18	.22	.26	.31	.36	.41	.47	.60	.75	.92	1.11
Aluminum Alloy 5052 12 ga. .080"	1-1/2* (38.1)	2.11 (3.13)	81512-A	U	253	162	112	83													
				D	.10	.15	.22	.31													
				C	395	316	263	226													
				D	.08	.12	.18	.25													
	2 (50.8)	2.20 (3.27)	82012-A	U	371	237	165	121	93	73	59	49									
				D	.08	.13	.18	.25	.33	.42	.52	.63									
				C	579	463	386	331	290	257	232	211									
				D	.06	.10	.15	.20	.27	.34	.42	.51									
	2-1/2* (63.5)	2.29 (3.40)	82512-A	U	557	357	248	182	139	110	89	74	62	53	46						
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85						
				C	812	696	580	497	435	387	348	316	290	268	249						
				D	.05	.08	.12	.17	.22	.28	.35	.42	.50	.59	.68						
	3* (76.2)	2.39 (3.55)	83012-A	U	684	438	304	223	171	135	109	90	76	65	56	49					
				D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88					
				C	1069	856	713	611	535	475	428	389	356	329	305	285					
				D	.04	.07	.11	.15	.20	.25	.31	.38	.45	.53	.61	.70					
Aluminum Alloy 5052 10 ga. .100"	1-1/2* (38.1)	2.68 (3.98)	81510-A	U	288	184	128	94	72	57											
				D	.09	.15	.22	.30	.39	.50											
				C	450	360	300	257	225	200											
				D	.07	.12	.17	.24	.31	.40											
	2 (50.8)	2.79 (4.15)	82010-A	U	519	332	231	170	130	103	83	69	58	49							
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98							
				C	811	649	541	464	406	361	325	295	270	250							
				D	.07	.11	.16	.22	.29	.37	.46	.56	.66	.78							
	2-1/2* (63.5)	2.91 (4.33)	82510-A	U	714	457	317	233	179	141	114	94	79	68	58	51	45	40			
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15	1.30			
				C	1116	893	744	638	558	496	446	406	372	343	319	298	279	263			
				D	.05	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92	1.04			
	3* (76.2)	3.02 (4.50)	83010-A	U	922	590	410	301	231	182	148	122	102	87	75	66	58	51	46		
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89	1.01	1.13		
				C	1441	1153	961	823	720	640	576	524	480	443	412	384	360	339	320		
				D	.04	.06	.10	.13	.17	.22	.27	.33	.40	.47	.54	.62	.71	.80	.90		

*Available by special order.
U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)

10-Diamond Plank - 24" width — Comparative Performance Table

Material	Channel Height In (mm)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	2 (50.8)	7.4 (11.0)	102014	U	514	329	228	168	128	102	82	68	57	49							
				D	.05	.08	.12	.16	.21	.27	.33	.40	.47	.55							
				C	1028	822	685	587	514	457	411	374	343	316	294	274	257	228	206	187	171
				D	.04	.07	.09	.13	.17	.21	.26	.32	.38	.44	.51	.59	.67	.85	1.05	1.27	1.51
	3 (76.2)	7.9 (11.8)	103014	U	810	518	360	264	202	160	130	107	90	77	66	58	51				
				D	.03	.05	.07	.09	.12	.15	.18	.22	.27	.31	.36	.41	.47				
				C	1620	1296	1080	926	810	720	648	589	540	498	463	432	405	360	324	295	270
				D	.02	.04	.05	.07	.09	.12	.15	.18	.21	.25	.29	.33	.38	.48	.59	.71	.85
Steel 12 ga.	2 (50.8)	10.4 (15.5)	102012	U	650	416	289	212	162	128	104	86	72	62	53						
				D	.05	.08	.11	.15	.19	.24	.30	.37	.43	.51	.59						
				C	1300	1040	867	743	650	578	520	473	433	400	371	347	325	289	260	236	217
				D	.04	.06	.09	.12	.15	.20	.24	.29	.35	.41	.47	.54	.62	.78	.96	1.17	1.39
	3 (76.2)	11.1 (16.5)	103012	U	1200	768	533	392	300	237	192	159	133	114	98	85	75	59			
				D	.03	.05	.07	.10	.13	.16	.20	.25	.29	.34	.40	.46	.52	.66			
				C	2400	1920	1600	1371	1200	1067	960	873	800	738	686	640	600	533	480	436	400
				D	.03	.04	.06	.08	.10	.13	.16	.20	.23	.27	.32	.37	.42	.53	.65	.79	.94

10-Diamond Walkway - 24" width — Comparative Performance Table

Material	Channel Depth (In)	Wgt lb/lin ft (kg/m)	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	4-1/2	8.9 (13.2)	104514-U	U	1330	851	591	434	332	263	213	176	148	126	109	95	83	66	53		
				D	.02	.04	.05	.07	.09	.12	.14	.17	.20	.24	.28	.32	.36	.46	.57		
				C	2660	2128	1773	1520	1330	1182	1064	967	887	818	760	709	665	591	532	484	443
				D	.02	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.26	.29	.37	.45	.55	.65
Steel 12 ga.	4-1/2	12.5 (18.6)	104512-U	U	2125	1360	944	694	531	420	340	281	236	201	173	151	133	105	85	70	59
				D	.02	.03	.05	.06	.08	.11	.13	.16	.19	.22	.26	.30	.34	.43	.53	.64	.76
				C	4250	3400	2833	2429	2125	1889	1700	1545	1417	1308	1214	1133	1062	944	850	773	708
				D	.02	.03	.04	.05	.07	.09	.11	.13	.15	.18	.21	.24	.27	.34	.42	.51	.61

U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)

8 AND 10-DIAMOND COMPARATIVE PERFORMANCE LOAD AND DEFLECTION TABLES

As width increases, grating strut flexure becomes much more important. 8 and 10-Diamond products are wide enough to require a change in the assumptions used to prepare the 2 through 5-Diamond Load Table data. No longer will it be assumed that both side channels are equally effective in supporting a concentrated load. In fact, to provide a high level of safety, one side channel will be required to carry 100% of a concentrated load.

Also strut deflection for 8 and 10-Diamond products may be significant. The most critical case occurs when a concentrated load is located at mid-span and mid-width. To determine how the struts perform under this loading, 3-ft. long samples of each material and thickness were tested. For these tests the side channels were continuously supported and loads were applied using a 1-ft. long and 1" wide bar placed parallel to the side channels at mid-width and at the longitudinal center. Results of these tests, included in the 8 and 10-Diamond Load Tables, proved the performance of these materials when a concentrated load is applied at mid-span and mid-width. If a concentrated load is to be applied at mid-width at the end of a plank, consult the "strut loading" table. The following values have been tabulated for 8 and 10-Diamond grating and are shown in the comparative performance tables on pages 124 and 125:

Allowable Uniform Load "U"

Values are the lowest of (1) maximum allowable uniform loads considering channel flexure, and (2) maximum grating surface flexure.

Deflection "D" Corresponding to "U"

Values are maximum deflections the allowable uniform loads would produce. Maximum deflections will occur at mid-span and mid-width and will be the sum of side channel and grating surface deflections (Figure 3).

Allowable Concentrated Load "C"

Values are the lowest of (1) maximum allowable concentrated load considering side channel flexure (with one side channel supporting the entire load) (Fig. 2), and (2) the maximum allowable strut flexure (Fig. 1).

Deflection "D" Corresponding to "C"

Values are deflections the allowable concentrated loads will produce at mid-span and mid-width. The deflection is the sum of side channel and grating surface deflections.

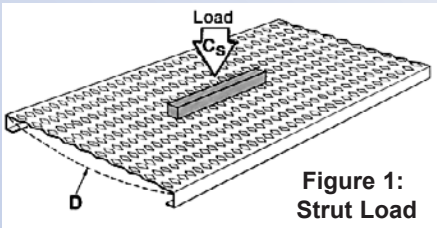


Figure 1: Strut Load

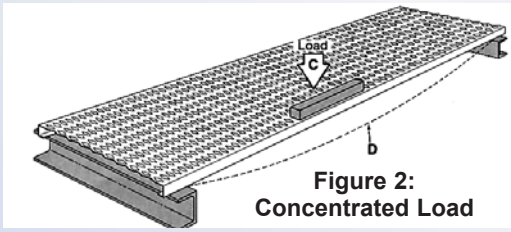


Figure 2: Concentrated Load

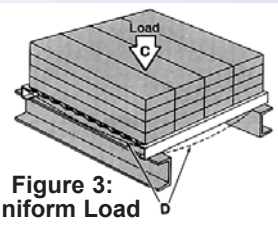


Figure 3: Uniform Load

HEAVY DUTY GRIP STRUT® SAFETY GRATING products offer the same advantages of Regular Grip Strut® Safety Grating but are designed for applications of greater load and/or longer span. The basic design is the same, but diamond openings are larger and metal is thicker. Available in three thicknesses of steel, walkways available in one siderail height and three widths, planks available in four siderail heights and five widths.

Plank and Walkway

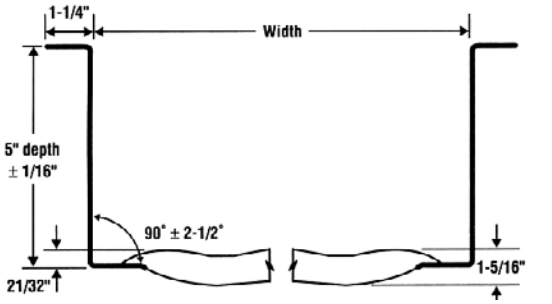
Material: 10 ga. Pre-Galvanized and Plain Steel (9 & 11 ga. by special order); .150 ga. Aluminum (by special order)
Width: Plank: 9-1/4", 13-3/4", 23-1/4", 27-3/4", 36"
Walkway: 24", 30", 36"
Height: Plank: 2", 2-1/2", 3", 4"
Walkway: 5" (depth)
Length: 10', 12', or cut to size. Walkways up to 24' by special order (Stock sizes are run to full diamonds)

For general load information please see page 115

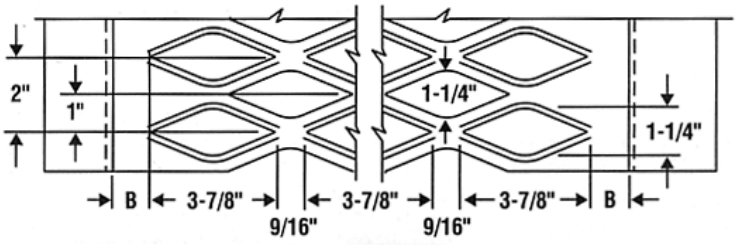
Heavy Duty Grip Strut® Walkway

Heavy Duty Walkway Details			
Descr.	Width	'B'	Material
5-Diamond	24"	1-3/16"	Galv. & Black
6-Diamond	30"	1-31/32"	Galv. & Black
8-Diamond	36"	17/32"	Galv. & Black

HEAVY DUTY WALKWAY End View

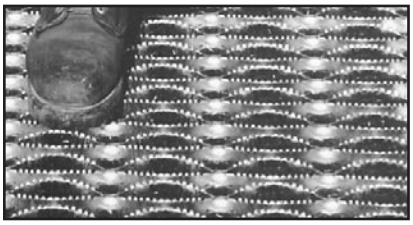


HEAVY DUTY WALKWAY Top View

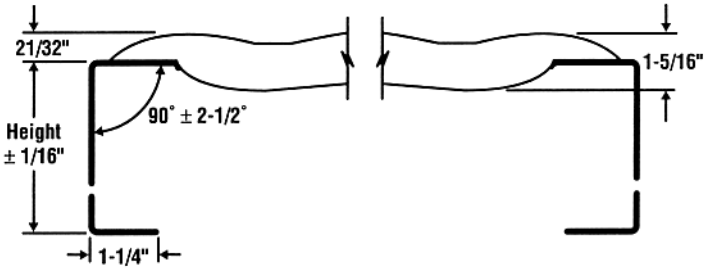


Heavy Duty Grip Strut® Plank

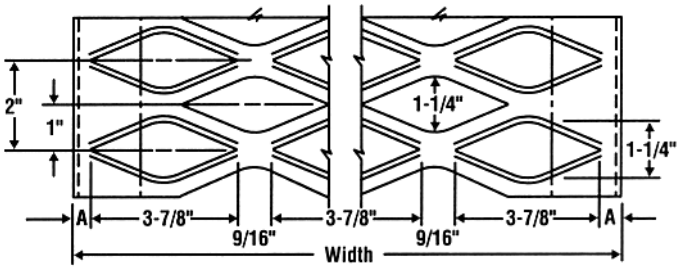
Heavy Duty Plank Details			
Descr.	Width	'A'	Material
2-Diamond	9-1/4"	15/32"	Galv. & Black
3-Diamond	13-3/4"	1/2"	Galv. & Black
5-Diamond	23-1/4"	13/16"	Galv. & Black
6-Diamond	27-3/4"	27/32"	Galv. & Black
8-Diamond	36"	17/32"	Galv. & Black



HEAVY DUTY PLANK End View



HEAVY DUTY PLANK Top View



2-Diamond Plank - 9-1/4" width — Heavy Duty Load Table

Material	Channel Height In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 10 ga.	2	7.4	H-22010	U	2681	1716	1141	876	699	529	428	354	300	253	218	191	167	132	109	90	74
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	7.9	H-22510	U	4063	2600	1806	1327	1016	802	650	537	451	385	331	288	253	202	163	136	113
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	8.4	H-23010	U	4324	2767	1923	1413	1082	852	692	572	479	409	354	307	269	214	171	144	121
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	10.3	H-24010	U	7091	4538	3152	2316	1775	1401	1136	938	786	673	580	506	444	350	284	234	195
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 9 ga.*	2	8.3	H-2209	U	2949	1888	1255	964	769	582	471	389	330	278	240	210	184	145	120	98	81
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	8.8	H-2259	U	4469	2860	1987	1460	1118	882	715	591	496	424	364	317	278	222	179	150	124
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	9.3	H-2309	U	4756	3044	2115	1554	1190	937	761	629	527	450	389	338	296	235	188	158	133
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	10.3	H-2409	U	7800	4992	3467	2548	1953	1541	1250	1032	865	740	638	557	488	385	312	257	215
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

3-Diamond Plank - 13-3/4" width — Heavy Duty Load Table

Material	Channel Height In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 10 ga.	2	9.5	H-32010	U	1804	1154	801	589	450	356	288	238	202	170	147	128	113	89	73	60	50
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	10.0	H-32510	U	2733	1794	1214	893	683	539	437	361	304	259	223	194	170	136	110	92	76
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	10.5	H-33010	U	2909	1862	1293	950	728	573	466	385	322	275	238	207	181	144	115	97	81
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	11.4	H-34010	U	4770	3053	2121	1558	1194	943	765	631	529	453	390	340	298	236	191	157	131
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 9 ga.*	2	10.6	H-3209	U	1984	1269	881	648	495	392	317	262	222	187	162	141	124	98	80	66	55
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	11.1	H-3259	U	3006	1973	1335	982	751	593	481	397	334	285	245	213	187	150	121	101	84
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	11.6	H-3309	U	3200	2048	1422	1045	801	630	513	424	354	303	262	228	199	158	127	107	89
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	12.7	H-3409	U	5247	3358	2333	1714	1313	1037	842	694	582	498	429	374	328	260	210	173	144
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

*Available by special order.
U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)

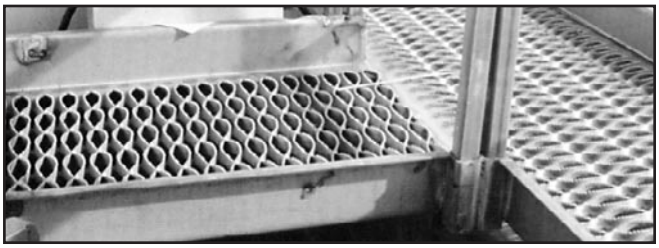
5-Diamond Plank - 23-1/4" width — Heavy Duty Load Table

Material	Channel Height In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 10 ga.	2	14.4	H-52010	U	1034	661	459	337	258	204	165	136	116	97	84	73	65	51	42	34	29
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	14.9	H-52510	U	1617	1034	718	528	404	319	259	214	180	153	132	115	101	81	65	54	45
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	15.4	H-53010	U	1720	1101	765	562	430	339	276	228	190	163	141	122	107	85	68	57	48
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	16.4	H-54010	U	2821	1805	1254	921	706	557	452	373	312	268	231	201	177	139	113	93	77
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 9 ga.*	2	16.1	H-5209	U	1137	727	505	371	284	224	182	150	127	107	93	81	71	56	46	38	32
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	16.7	H-5259	U	1778	1137	790	581	444	350	283	234	197	167	144	125	110	88	71	59	48
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	17.2	H-5309	U	1892	1211	841	618	472	372	302	249	209	178	155	133	116	93	74	62	53
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	18.3	H-5409	U	3103	1985	1380	1013	776	613	497	410	344	294	252	221	194	153	124	102	85
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

6-Diamond Plank - 27-3/4" width — Heavy Duty Load Table

Material	Channel Height In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 10 ga.	2	16.2	H-62010	U	923	590	410	301	230	182	147	122	103	87	75	66	58	46	37	31	25
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	16.7	H-62510	U	1398	894	621	457	349	276	224	185	156	132	114	99	87	70	56	47	39
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	17.2	H-63010	U	1488	952	662	486	372	293	239	197	164	141	122	106	93	74	59	49	42
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	18.2	H-64010	U	2440	1561	1805	797	611	482	391	323	270	232	200	174	153	120	98	80	67
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 9 ga.*	2	18.2	H-6209	U	1013	650	450	330	253	200	162	134	112	95	81	71	63	49	40	34	27
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	18.7	H-6259	U	1537	983	683	502	384	303	245	202	170	144	125	108	95	76	61	51	42
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	19.3	H-6309	U	1636	1047	727	534	408	322	261	215	181	154	134	115	100	80	64	54	46
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	19.8	H-6409	U	2684	1717	1194	876	671	530	430	355	298	254	218	191	168	132	107	88	74
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

*Available by special order.
U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)



8-Diamond Plank - 36” width — Heavy Duty Load Table

Material	Channel Height In	Wgt lb/ft	Catalog No.		Clear Span 2’-0”	2’-6”	3’-0”	3’-6”	4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”
Steel 10 ga.	2	19.9	H-82010	U	689	441	306	225	172	136	110	91	77	65	56	49	43	34	28	23	19
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	20.4	H-82510	U	1044	668	464	341	261	206	167	138	116	99	85	74	65	52	42	35	29
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	20.9	H-83010	U	1111	711	494	363	278	219	178	147	123	105	91	79	69	55	44	37	31
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	21.8	H-84010	U	1822	1166	810	595	456	360	292	241	202	173	149	130	114	90	73	60	50
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 9 ga.*	2	22.1	H-8209	U	758	485	337	248	189	150	121	100	85	72	62	54	47	37	31	25	21
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2-1/2	22.7	H-8259	U	1148	735	510	375	287	227	184	152	128	109	94	81	72	57	46	39	32
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3	23.9	H-8309	U	1222	782	543	399	306	241	196	162	135	116	100	87	76	61	48	41	34
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4	24.2	H-8409	U	2004	1283	891	655	502	396	321	265	222	190	164	143	125	99	80	66	55
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

Walkway: 5-Diamond-24”, 6-Diamond-30” & 8-Diamond-36” width

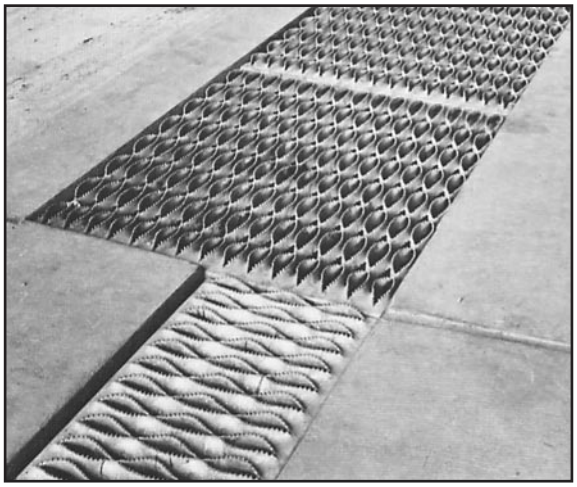
Width	Ga	Channel Depth In	Wgt lb/ft	Catalog No.		Clear Span 4’-0”	5’-0”	6’-0”	7’-0”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”	13’-0”	14’-0”	15’-0”	16’-0”	18’-0”	20’-0”	22’-0”	24’-0”
24”	10	5	17.5	H-55010-W	U	937	600	417	306	234	185	150	124	104	89	77	67	59	46	38	31	26
					D	.38	.39	.42	.38	.38	.38	.39	.47	.56	.66	.77	.88	1.01	1.26	1.59	1.89	2.25
					C	3750	3000	2500	2143	1875	1667	1500	1364	1250	1153	1071	1000	938	833	750	682	625
					D	.30	.31	.34	.31	.30	.30	.31	.38	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
	9*	5	19.6	H-5509-W	U	1031	660	459	337	257	204	165	136	114	98	85	74	65	51	42	34	29
					D	.38	.39	.42	.38	.38	.38	.39	.47	.56	.66	.77	.88	1.01	1.26	1.59	1.89	2.25
					C	4125	3300	2750	2357	2063	1834	1650	1500	1375	1268	1178	1100	1032	916	825	750	688
					D	.30	.31	.34	.31	.30	.30	.31	.38	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
30”	10	5	19.9	H-65010-W	U	916	586	407	299	229	182	146	121	102	87	75	65	57	45	36	30	25
					D	.37	.43	.40	.40	.46	.42	.41	.41	.49	.57	.66	.75	.86	1.09	1.33	1.62	1.92
					C	4584	3666	3056	2619	2291	2037	1834	1667	1528	1410	1309	1222	1146	1019	916	834	763
					D	.30	.34	.32	.32	.37	.34	.33	.33	.39	.45	.53	.61	.69	.87	1.08	1.30	1.55
	9*	5	22.1	H-6509-W	U	1007	644	447	328	251	200	160	133	112	95	82	71	62	49	39	33	27
					D	.37	.43	.40	.40	.46	.42	.41	.41	.49	.57	.66	.75	.86	1.09	1.33	1.62	1.92
					C	5042	4032	3361	2880	2520	2240	2017	1833	1680	1551	1439	1344	1260	1120	1007	917	839
					D	.30	.34	.32	.32	.37	.34	.33	.33	.39	.45	.53	.61	.69	.87	1.08	1.30	1.55
36”	10	5	22.7	H-85010-W	U	556	356	247	181	139	110	89	73	62	53	45	39	35	27	22	18	15
					D	.39	.39	.33	.32	.33	.36	.39	.42	.51	.60	.69	.79	.91	1.15	1.40	1.67	1.98
					C	3330	2667	2222	1905	1667	1481	1333	1212	1111	1026	952	889	833	741	667	606	556
					D	.31	.31	.26	.26	.26	.29	.31	.34	.41	.48	.55	.64	.72	.92	1.13	1.37	1.63
	9*	5	25.3	H-8509-W	U	611	391	271	199	152	121	97	80	68	58	49	42	38	29	24	19	16
					D	.39	.39	.33	.32	.33	.36	.39	.42	.51	.60	.69	.79	.91	1.15	1.40	1.67	1.98
					C	3663	2933	2444	2095	1833	1629	1466	1333	1222	1128	1047	977	916	815	733	666	611
					D	.31	.31	.26	.26	.26	.29	.31	.34	.41	.48	.55	.64	.72	.92	1.13	1.37	1.63

*Available by special order.
U-uniform load (lb/sq ft); C-concentrated load (lb); D-deflection (in)

HEAVY DUTY STRUT LOADING

Description	Material	Loading	Load	Deflection (in)
2-Diamond Plank 9-1/4" width	Steel 10 ga.	U	5201	.01
		C_s	2004	.01
	Steel 9 ga.	U	5917	.01
		C_s	2281	.01
3-Diamond Plank 13-3/4" width	Steel 10 ga.	U	2354	.03
		C_s	1348	.02
	Steel 9 ga.	U	2678	.03
		C_s	1534	.02
5-Diamond Plank 23-1/4" width	Steel 10 ga.	U	971	.10
		C_s	941	.08
	Steel 9 ga.	U	1093	.10
		C_s	1059	.08
6-Diamond Plank 27-3/4" width	Steel 10 ga.	U	682	.14
		C_s	788	.11
	Steel 9 ga.	U	767	.14
		C_s	887	.11
8-Diamond Plank 36" width	Steel 10 ga.	U	343	.20
		C_s	515	.16
	Steel 9 ga.	U	391	.20
		C_s	586	.16
5-Diamond Walkway 24" width	Steel 10 ga.	U	912	.11
		C_s	912	.08
	Steel 9 ga.	U	1026	.11
		C_s	1026	.08
6-Diamond Walkway 30" width	Steel 10 ga.	U	494	.14
		C_s	618	.11
	Steel 9 ga.	U	563	.14
		C_s	703	.11
8-Diamond Walkway 36" width	Steel 10 ga.	U	343	.20
		C_s	515	.16
	Steel 9 ga.	U	391	.20
		C_s	586	.16

Note: Above values based on serrated surface
U = Allowable Uniform Load (lbs/sq ft)
C_s = Allowable Concentrated Load per ft. of length at mid-width (lb/ft)

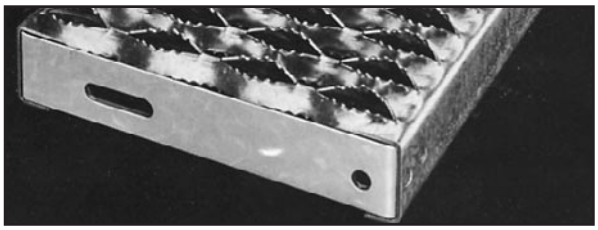


HEAVY DUTY ENGINEERING DATA
Both Side Channels

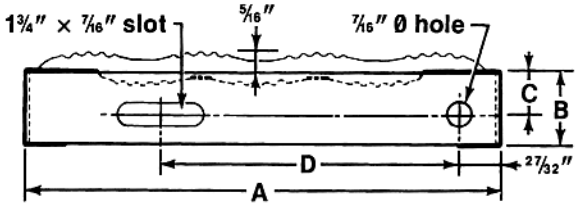
Material	Height	Sx (in^3)	Ix (in^4)	E I (lb x in^2)
2-Diamond Plank - Heavy Duty				
Steel 10 ga.	2"	.32	.40	11.5×10^6
	2-1/2"	.47	.71	20.7×10^6
	3"	.65	1.15	33.4×10^6
	4"	1.07	2.46	71.5×10^6
Steel 9 ga.	2"	.34	.42	12.1×10^6
	2-1/2"	.50	.76	22.0×10^6
	3"	.69	1.23	35.7×10^6
	4"	1.15	2.65	77.0×10^6
3-Diamond Plank - Heavy Duty				
Steel 10 ga.	2"	.33	.41	11.8×10^6
	2-1/2"	.49	.73	21.2×10^6
	3"	.67	1.18	34.1×10^6
	4"	1.10	2.50	72.8×10^6
Steel 9 ga.	2"	.35	.43	12.5×10^6
	2-1/2"	.52	.78	22.5×10^6
	3"	.71	1.23	35.6×10^6
	4"	1.18	2.70	78.4×10^6
8-Diamond Plank - Heavy Duty				
Steel 10 ga.	2"	.32	.40	11.5×10^6
	2-1/2"	.47	.71	20.7×10^6
	3"	.65	1.15	33.4×10^6
	4"	1.07	2.46	71.5×10^6
Steel 9 ga.	2"	.43	.42	12.1×10^6
	2-1/2"	.50	.76	22.0×10^6
	3"	.69	1.23	35.7×10^6
	4"	1.15	2.65	77.0×10^6
6-Diamond Walkway - Heavy Duty				
Steel 10 ga.	5"	2.52	6.84	198.5×10^6
Steel 9 ga.	5"	2.75	7.46	216.3×10^6
8-Diamond Walkway - Heavy Duty				
Steel 10 ga.	5"	1.59	4.47	129.6×10^6
Steel 9 ga.	5"	1.72	4.85	140.5×10^6

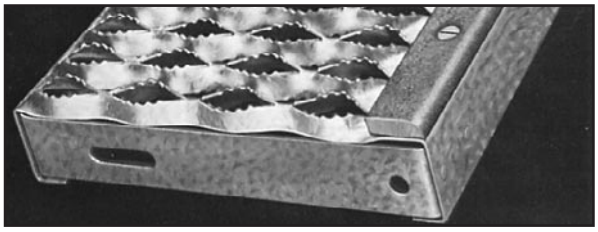


GRIP STRUT® STAIR TREADS - Regular

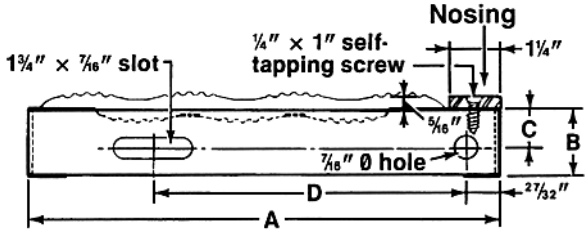


Regular Stair Treads





Regular Stair Treads w/ Abrasive Nosings



Regular Stair Tread Carrier Plates
Steel, Aluminum & Stainless Steel

Standard (No Nosing)				With Abrasive Nosing			
A	B	C	D	A	B	C	D
4-3/4" 2-Diam.	1-1/2"	3/4"	2-5/8"	5-3/4" 2-Diam.*	1-1/2"	3/4"	3-5/8"
	2"	1"	2-5/8"		2"	1"	3-5/8"
7" 3-Diam.	1-1/2"	3/4"	3-3/8"	8-1/8" 3-Diam.	1-1/2"	3/4"	4-1/2"
	2"	1"	3-3/8"		2"	1"	4-1/2"
9-1/2" 4-Diam.	1-1/2"	3/4"	5-7/8"	10-1/2" 4-Diam.	1-1/2"	3/4"	6-7/8"
	2"	1"	5-7/8"		2"	1"	6-7/8"
11-3/4" 5-Diam.	1-1/2"	3/4"	8-1/8"	12-3/4" 5-Diam.*	1-1/2"	3/4"	9-1/8"
	2"	1"	8-1/8"		2"	1"	9-1/8"

*Special Order
Note: Stainless Steel not available in 2 & 3 Diamond Widths.

Brown-Campbell is committed to YOU. Call us today at 1-800-GRATING and let us service your Grip Strut® needs.



Regular Stair Tread Standard Sizes and Recommended Spans

Span	Ga	Channel Depth	Standard (No Nosing) Catalog No.	Standard (No Nosing) Size	With Abrasive Nosing Catalog No.	With Abrasive Nosing Size
Steel						
Up to 42"	14 12	1-1/2"	T-21514*	2-Diam: 4-3/4"	T-21514-N*/**	2-Diam: 5-3/4"
			T-31514*	3-Diam: 7"	T-31514-N*	3-Diam: 8-1/8"
			T-41514*	4-Diam: 9-1/2"	T-41514-N*	4-Diam: 10-1/2"
			T-51514*	5-Diam: 11-3/4"	T-51514-N*/**	5-Diam: 12-3/4"
Up to 48"	14 12	2"	T-22014*	2-Diam: 4-3/4"	T-22014-N*/**	2-Diam: 5-3/4"
			T-32014*	3-Diam: 7"	T-32014-N*	3-Diam: 8-1/8"
			T-42014*	4-Diam: 9-1/2"	T-42014-N*	4-Diam: 10-1/2"
			T-52014*	5-Diam: 11-3/4"	T-52014-N*/**	5-Diam: 12-3/4"
Aluminum						
Up to 42"	.080"	2"	T-22012-A	2-Diam: 4-3/4"	T-22012-A-N**	2-Diam: 5-3/4"
			T-32012-A	3-Diam: 7"	T-32012-A-N	3-Diam: 8-1/8"
			T-42012-A	4-Diam: 9-1/2"	T-42012-A-N	4-Diam: 10-1/2"
			T-52012-A	5-Diam: 11-3/4"	T-52012-A-N**	5-Diam: 12-3/4"
Up to 48"	.100"	2"	T-22010-A**	2-Diam: 4-3/4"	T-22010-A-N**	2-Diam: 5-3/4"
			T-32010-A**	3-Diam: 7"	T-32010-A-N**	3-Diam: 8-1/8"
			T-42010-A**	4-Diam: 9-1/2"	T-42010-A-N**	4-Diam: 10-1/2"
			T-52010-A**	5-Diam: 11-3/4"	T-52010-A-N**	5-Diam: 12-3/4"
Stainless Steel						
Up to 30"	316L 16 ga	2"	T-42016-SL	4-Diam: 9-1/2"	n/a	n/a
			T-52016-SL	5-Diam: 11-3/4"	n/a	n/a
Up to 36"	304 16 ga	2"	T-42016-S	4-Diam: 9-1/2"	n/a	n/a
			T-52016-S	5-Diam: 11-3/4"	n/a	n/a

*Catalog No. provided for 14 ga. on steel - substitute last digit with a '2' for 12 ga.
**Special Order
Above recommendations based on approx. min. loads of 300 lb. concentrated; 100 lb. uniform. Specific performance criteria may vary by municipality/building code body and should be locally checked prior to finalizing specifications.

Regular Stair Treads — Load Table

Load data below takes eccentric loads into consideration. Although load values include allowances for normal impact conditions and usual pedestrian traffic, be sure to make provisions in the structural design for special uses and loads involving unusual impact forces or vibratory forces. Load-carrying capacity of stair treads increases as side channel height and gauge of material increase.

Steel

		2-Diamond 4-3/4"				3-Diamond 7"				4-Diamond 9-1/2"				5-Diamond 11-3/4"			
Gauge		14		12		14		12		14		12		14		12	
Span	Height	U	C	U	C	U	C	U	C	U	C	U	C	U	C	U	C
2'-0"	1-1/2"	1191	472	1576	624	761	443	1006	587	549	435	750	595	434	425	575	563
	2"	1978	783	2513	995	1262	737	1604	936	911	604	1158	917	721	573	916	897
2'-6"	1-1/2"	764	378	1011	500	488	356	645	470	353	349	481	476	278	342	369	452
	2"	1268	611	1611	797	810	590	1029	750	584	578	742	734	463	566	587	719
3'-0"	1-1/2"	532	315	703	418	340	300	450	393	245	300	335	398	194	300	258	378
	2"	882	524	1121	665	563	492	716	626	407	483	517	614	322	473	409	601
4'-0"**	2"	498	394	633	501	318	372	404	472	230	364	292	463	182	356	232	454

Aluminum

		2-Diamond				3-Diamond				4-Diamond				5-Diamond			
Gauge (In)		.080		.100*		.080		.100*		.080		.100*		.080		.100*	
Span	Height	U	C	U	C	U	C	U	C	U	C	U	C	U	C	U	C
2'-0"	2"	1328	526	1862	737	862	503	1208	705	607	481	867	687	396	388	607	595
2'-6"	2"	850	420	1191	590	551	402	773	564	388	392	555	550	253	388	388	540
3'-0"	2"	590	350	827	491	383	335	537	470	270	327	385	458	176	321	270	450
4'-0"**	2"	332	263	465	369	215	252	302	353	152	245	216	344	99	241	151	338

Stainless Steel

		4-Diamond				5-Diamond			
Type		304		316L		304		316L	
Span	Height	U	C	U	C	U	C	U	C
2'-0"	2"	610	483	525	416	394	386	338	331
2'-6"	2"	390	387	336	336	252	381	216	330
3'-0"	2"	271	323	233	279	175	319	150	275
4'-0"**	2"	152	244	131	210	98	241	84	221

*Special Order

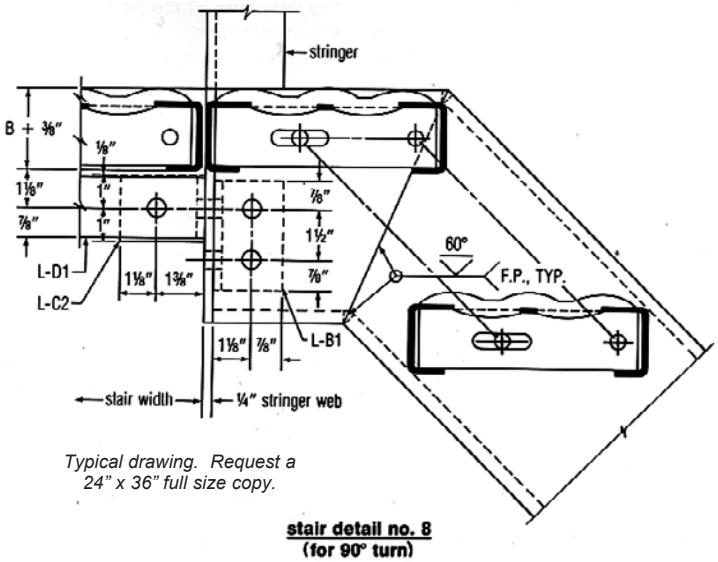
**Intermediate stringer recommended for spans over 4'.



Grip Strut® safety grating stair treads are the perfect safety precaution for stairs. These stair treads offer superior slip resistance in all directions and allow for slip-inducing fluids and materials to pass through it's high open area, keeping walking areas safe and footing secure.

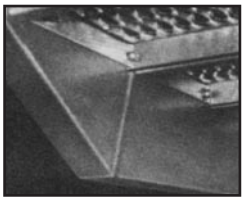
STAIR TREAD INSTALLATION

Grip Strut® engineered bolt-up system makes staircase erection easier and quicker. Staircases can be constructed on-site with locally available materials from designs that comply with the requirements of major building codes.

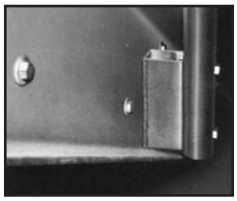


Typical drawing. Request a 24" x 36" full size copy.

stair detail no. 8 (for 90° turn)



Standard stair treads in place to form landing.



Bolted handrail attachment



Stringer bolted solidly to top support



Stringer firmly anchored to floor by bolts

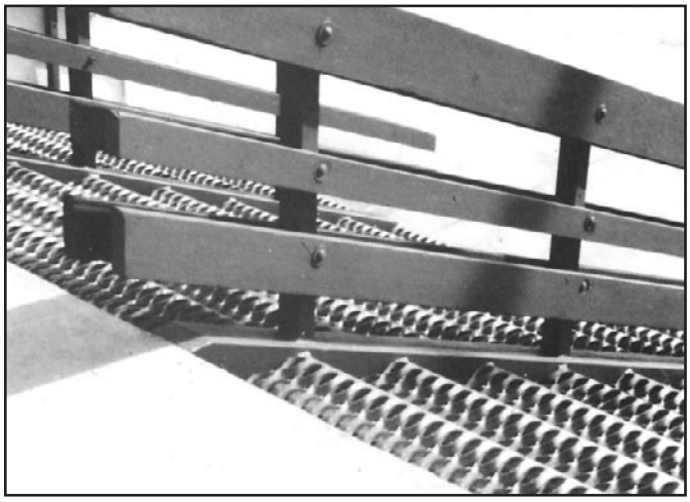


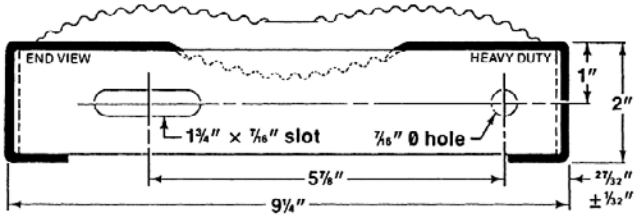
GRIP STRUT® STAIR TREADS - Heavy Duty

Offers many advantages including multi-directional scraping action of tiny-toothed surfaces keeping shoes clean, open design keeping surface free of debris, and edges easily seen as each step is taken thus reducing dangerous accidents.

Availability:

Nosing: standard
Material: 10 ga. steel
.150" aluminum
Depth: 2"
Width: 9-1/4"



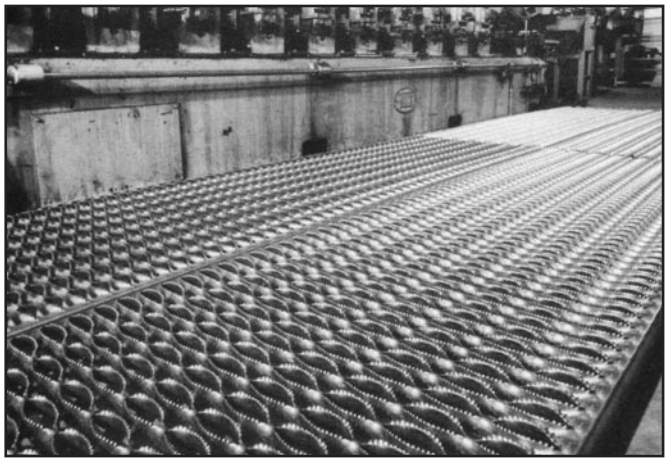


Heavy Duty Stair Treads — Load Table

Heavy Duty Stair Treads						Clear Span			
Material	Thick-ness	Depth	Wt. (lb/ft)	Catalog No.		2'0"	2'6"	3'0"	4'0"
Steel	10 ga.	2"	7.4	HT-22010	U	2412	1544	1026	629
					C	1860	1487	1240	929

Maximum allowable tread loads.





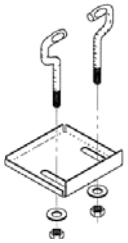


PLANK INSTALLATION

ANCHOR PLATE ASSEMBLY

For side-to-side installation

See catalog No. table below, select ACA's by height of plank grating. Clamp prevents grating from shifting on supports. Holds pieces together with or without clearance between panels. All bolts are below top surface of grating and no holes are drilled in supporting members.

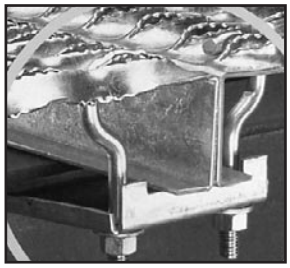


Assembly consists of (1) anchor plate, (2) 3/8" J-bolts, (2) 3/8" hex nuts, and (2) 3/8" flat washers all electro zinc plated with standard finish hot dip mill-galvanized before fabrication. Special Order Option: anchoring device can be cadmium plated.

Assembly:

1. Align two planks side by side on I-Beam or other anchoring cross-member.
2. Place J-Bolts in openings opposite each other (nearest to the inner edge of each plank).
3. Slide ACA anchor plate up J-Bolts until snug. Make sure the inside edge of the ACA anchor plate is as close as possible to the center of the cross member.
4. Tighten nuts until planks are secure.

3/8" J-Bolts	
Channel Depth	Catalog No.
1-1/2"	ACA-15
2"	ACA-20
2-1/2"	ACA-25
3"	ACA-30

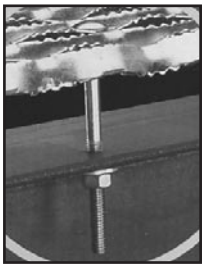


DIAMOND WASHER

Catalog #12262 is shaped to fit in diamond opening. Punched to receive 5/16" carriage head bolt with square shank.

Assembly:

1. Align plank on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes under a slot near the end of plank. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Align diamond washer over the drilled hole. Run bolt through diamond washer and I-Beam. Tighten with washer and nut until secure.





Bolt and nut must be ordered separately:

Plank Carriage Bolt:
5/16" x (Side Channel height + 1")

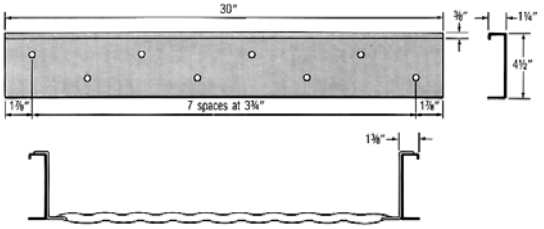
Walkway Carriage Bolt:
5/16" x 2"

Hex Nut: 5/16"



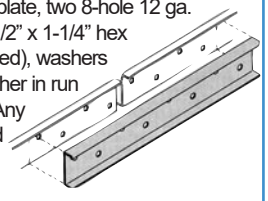
Also available: Grip Strut® Ladder Rungs - pg 186

WALKWAY SPLICE KITS



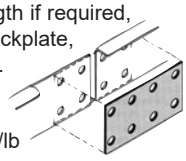
Splice Plate Kit - 30 in. - Catalog #SP-10DU-30

Package includes: Grip Strut® Grating cut to length if required, four 9/16" dia. holes staggered in each corner of up-turned kickplate, two 8-hole 12 ga. 4-1/2" x 30" C-channel splice plates with 16 ea. 1/2" x 1-1/4" hex head cap screws (galv. S.A.E. Grade 5, lightly oiled), washers and hex nuts. Kit joins continuous sections together in run over clear spans to act as one continuous unit. Any combination of 12 and 10 ft. planks can be joined with splice plate package.
Recommended bolt torque: 72 ft/lb min.



Splice Plate Kit - 7 in. - Catalog #SP-10DU-7

Package includes: Grip Strut® Grating cut to length if required, four 1/2" dia. holes in each corner of up-turned kickplate, two 8-hole 10 ga. 4" x 7" splice plates with 16 ea. 7/16" x 1-1/4" bolts, washers, and hex nuts. Kit joins continuous sections together in a run only over supports. Recommended bolt torque: 55 ft/lb min.



GENERAL INSTALLATION RECOMMENDATIONS

Recommended Clearance
STEEL: 1/4" minimum is recommended at perimeter and 3/8" maximum at end joints. Maximum between panels is 1/4"; 1/8" is generally used.
CONCRETE: Concrete form deflection calls for slightly greater perimeter clearance. 1/2" is recommended. (Max. between panels 1/4")

Bearing Surfaces
Recommended minimum bearing 1-1/2". Surfaces supporting Grip Strut® Grating must be smooth and level to insure that adjoining sections provide a safe, even walking surface.

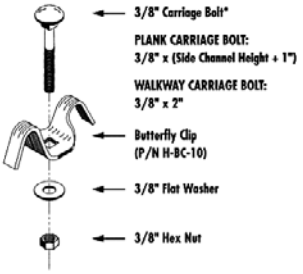
Permanent Installation
Grip Strut® Safety Grating is easily welded to supports for permanent installations. Channels are quickly welded together between supports to provide uniform deflection in adjacent panels.

For welded-attachment, secure side channels to supports by fusion welding with 1/8" fillet welds, 1" long. Weld adjacent planks together with 1/8" fillet welds 1" long, 24" o.c. staggered top and bottom.

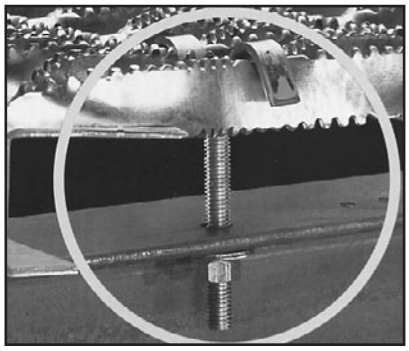
Install Grip Strut® Safety Grating according to details as shown on individual job drawings, or as follows:
(1) Single width applications - Utilizing the anchoring device or weldings, attach Grip Strut® Grating plank at every point of contact with supporting structure around perimeter of plank.
(2) Multiple width applications - Utilizing the Grip Strut® Safety Grating anchoring device or welded as recommended by A.I.S.I., attach grating plank around the perimeter at each point of contact with supporting structure. In field of platform, attach plank to supporting structure with a minimum of one attachment at each end of plank on alternate sides. When span exceeds 8 ft., weld or bolt side channels of adjacent planks together at midpoint of span. (Consider similar treatment for spans exceeding 6 ft.)

HEAVY DUTY BUTTERFLY CLIP

Catalog No. H-BC-10. For Stainless Steel use with 3/8" square-shank carriage bolts, nuts and washers obtained locally.



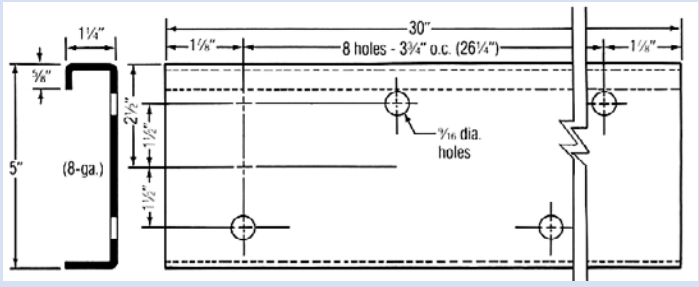
Assembly:
1. Align Heavy Duty planks on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes under the first slot nearest the end of plank. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Place butterfly clip in plank over the drilled hole. Run bolt through butterfly clip and drilled hole. Tighten with washer and nut until secure.



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with your inquiry today and experience true customer service.

HEAVY DUTY WALKWAY SPLICE PLATE

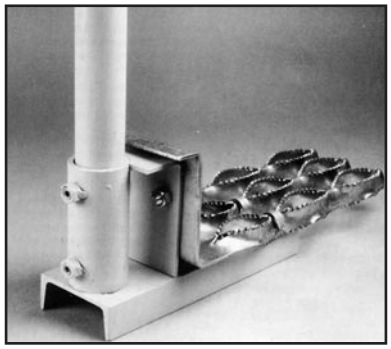
Catalog No. P-H-SP-U, formed from 9 ga. mill-galvanized steel, pre-punched and supplied with 1/2" hex bolts, nuts and washers. Torque to 40 ft/lbs.



SAME DAY SERVICES:
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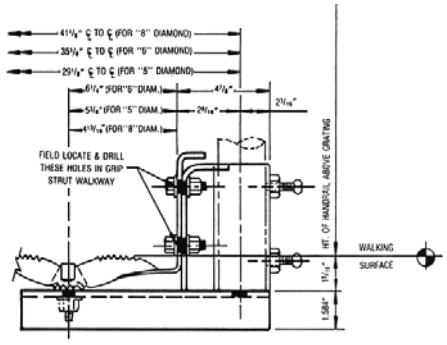
HEAVY DUTY HANDRAIL BRACKETS

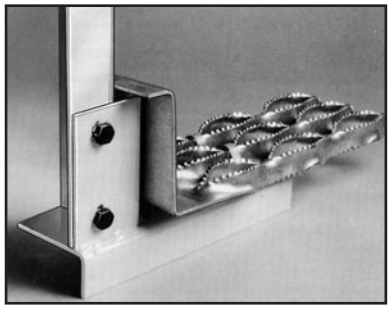
Eliminate unnecessary and costly substructure to support handrail post. Available in two styles: (1) Pipe Sleeve and (2) Clip Angle. Catalog No. example: HRB-P-5 where P designates Pipe Sleeve and 5 designates 5-Diamond. Substitute 'P' for Pipe Sleeve or 'A' for Clip Angle. Substitute Diamond Number in Last Position. Handrail brackets are sold in plain non-finished steel but may be ordered in a hot dipped galvanized after fabrication finish. All hardware for mounting Handrail Bracket to Heavy Duty Steel Walkway is included.



Heavy Duty Pipe Sleeve Handrail Bracket

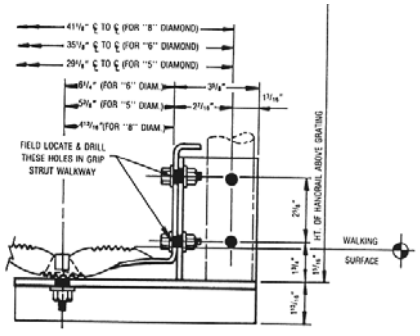
Catalog No. HRB-P-_ Designed for use with pipe style handrail post (Max. 2" O.D.) which allows for simple installation of handrail post. Secure post by tightening two allen head set screws.





Heavy Duty Clip Angle Handrail Bracket

Catalog No. HRB- A-_ Designed for use with all types of Handrail Post: Pipe, Angle, Tube, etc. Handrail Post may be mounted to Handrail Bracket with two 1/2" bolts and nuts (not included) to holes conveniently located, or by welding.



Grip Strut®

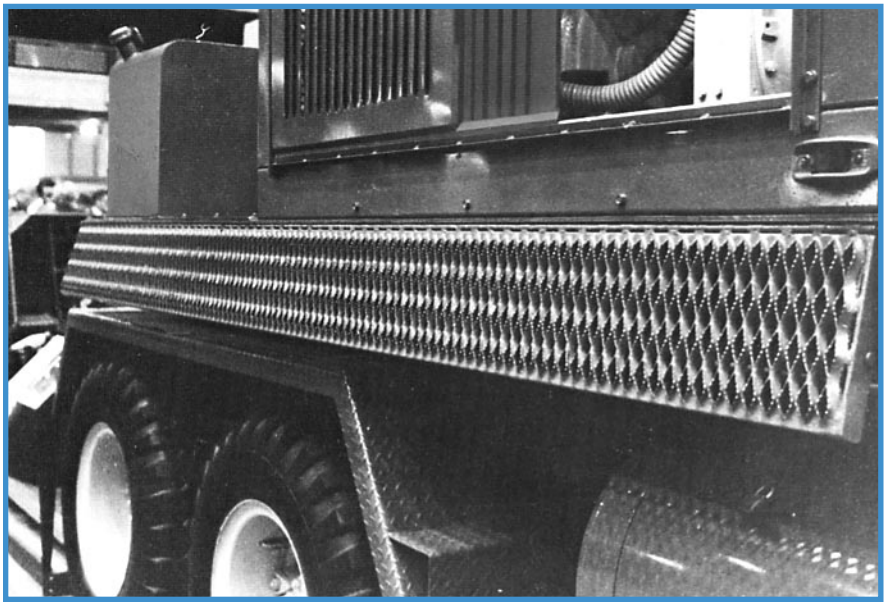


Our engineering, sales, manufacturing & fabrication teams are second to none! Give Brown-Campbell the opportunity to fulfill your Grip Strut® needs and you won't be disappointed!



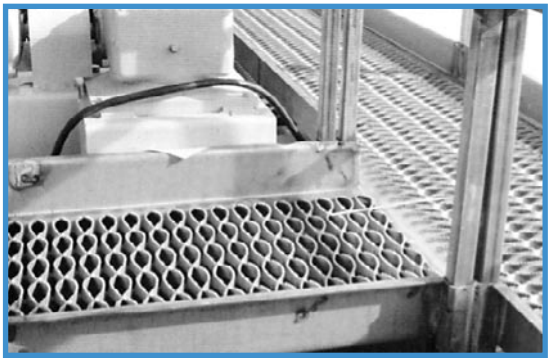






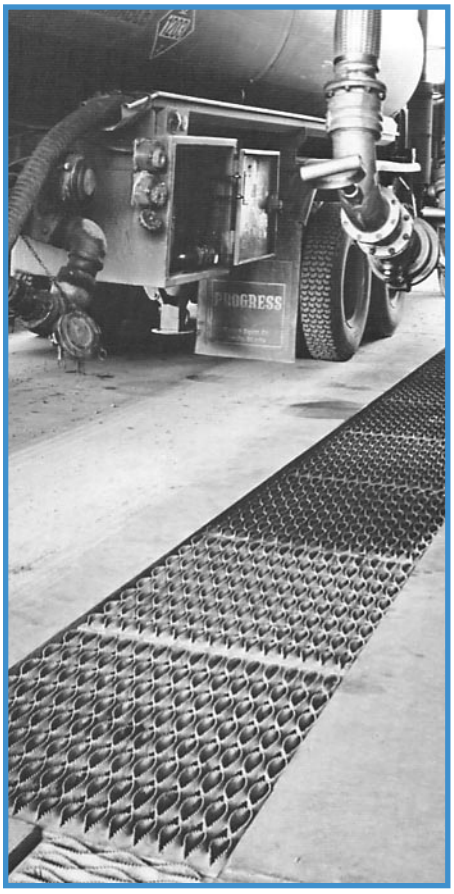
Brown-Campbell's product breadth is ideal for one stop shopping! You only need one supplier for all of your specialty metal & fiberglass needs!

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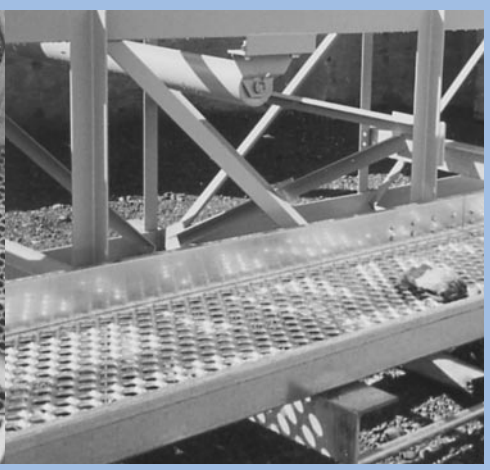
Riveted Grating
Stair Treads
Traction-Tread™
Wire Cloth





Abrasive Coatings
Aluminum Plank
Bar Grating
Deck
Expanded Metal
Fiberglass
Floor Plate
Grate-Lock™
Ladder Rungs
Nosings
Perf-O Grip®
Perforated



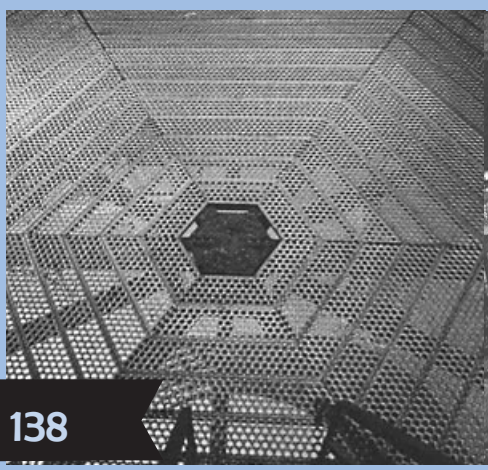
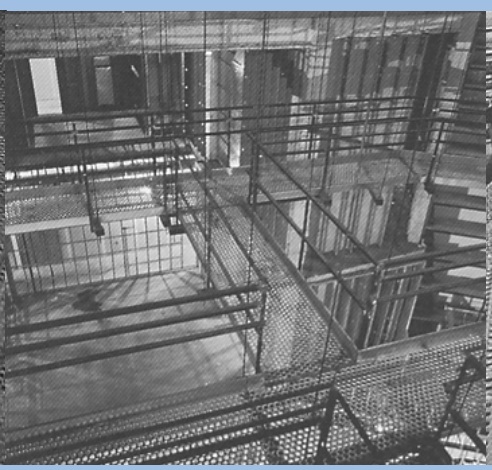
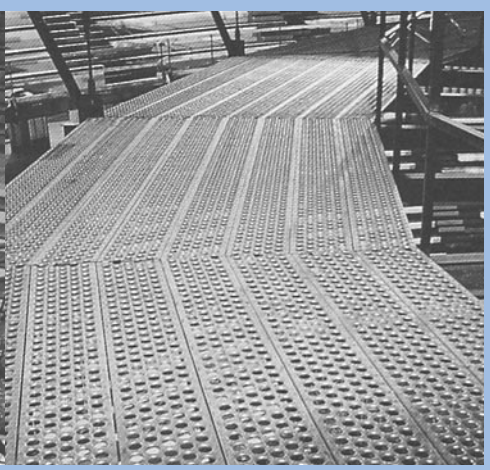


Perf-O Grip®

Perf-O Grip® grating offers a unique surface of large debossed holes and perforated buttons providing maximum slip protection and performance under practically all conditions and in every direction.

- Self-cleaning, large open area allows debris to drain away
- Permits flow of air, heat and light
- Walkways meet OSHA requirements for toeboards on elevated structures
- Comfortable, resilient surface lessens worker fatigue
- High strength-to-weight ratio
- Light, easy to handle planks make installation easy
- Versatility due to multiple finish options and a variety of standard configurations
- Longevity, retains slip resistance properties over time
- Economical

Brown-Campbell Perf-O Grip® is available in both regular and heavy duty constructions in plank and walkways. Custom stair treads, rooftop walkway systems, and work platforms are also available.

STOCK & AVAILABILITY

Catalog No.	Hole	Width (In)	Depth (In)
Pre-Galvanized- 13 Ga. Steel			
OG51513	2	5	1-1/2
OG52013	2	5	2
OG71513	3	7	1-1/2
OG72013	3	7	2
OG101513	5	10	1-1/2
OG102013	5	10	2
OG121513	6	12	1-1/2
OG122013	6	12	2
OG181513	10	18	1-1/2
OG182013	10	18	2
Pre-Galvanized- 11 Ga. Steel			
OG71511	3	7	1-1/2
OG72011	3	7	2
OG73011	3	7	3
OG101511	5	10	1-1/2
OG102011	5	10	2
OG103011	5	10	3
OG121511	6	12	1-1/2
OG122011	6	12	2
OG123011	6	12	3
OG181511	10	18	1-1/2
OG182011	10	18	2
OG183011	10	18	3
OG242011	13	24	2
OG243011	13	24	3
OG302011	16	30	2
OG303011	16	30	3
OG304011	16	30	4
Walkways- Pre-Galv. 11 Ga. Steel			
OG245011W	13	24	5
OG305011W	16	30	5
OG365011W	20	36	5
Aluminum- .125" Ga.			
OGA520125	2	5	2
OGA720125	3	7	2
OGA1020125	5	10	2
OGA1220125	6	12	2
OGA1820125	10	18	2
304 Stainless Steel- 16 Ga.			
OGS52016	2	5	2
OGS72016	3	7	2
OGS102016	5	10	2
OGS122016	6	12	2
316 Stainless Steel- 14 Ga. -Available by Special Order-			
OGS52014	2	5	2
OGS72014	3	7	2
OGS102014	5	10	2
OGS122014	6	12	2

Note: 13 & 11 Ga. Steel also available in Black (HRP&O): Change OG to OGH in Catalog No.

Brown-Campbell has years of experience in specialty metal products. Our sales staff is extremely knowledgeable in all of our product lines providing you with the essential details to make the best decision for your application. Other services we offer include in-house engineering, full fabrication and fast shipments.

- Product Knowledge
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Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

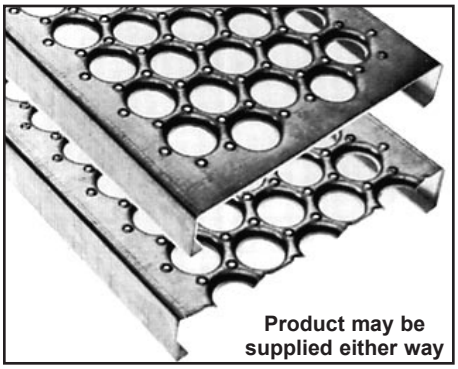
THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements: loading, open area, slip resistance

PLEASE SPECIFY:

- **Perf-O Grip® Grating**
- **Catalog No.-** see stock list
- **Quantity-** number of pieces or planks required
- **Material-** Pre-Galvanized Steel, 13 or 11 ga., Plain (Black) Steel, 13 ga. (11 ga. by special order), Aluminum, .125" ga., Stainless Steel, 14 ga. (16 ga. by special order)
- **Width**
- **Depth**
- **Length-** 10', 12' or cut to size
- **Accessories-** bolts, clips, splice plate kits, etc.

Perf-O Grip® Plank

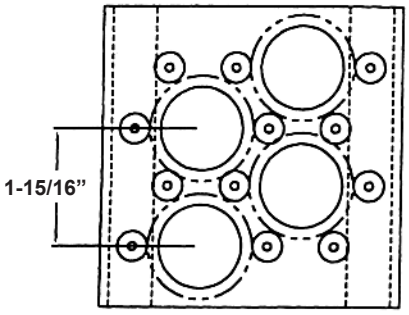


Brown-Campbell Company has been selling specialty metal products since 1952 building an exceptional employee base including our sales, engineering and fabricators.

B-C sales staff is excellent at helping you choose the product that best fits your application, lending the expertise you need to pick the most cost effective product for you.

Our on-staff engineering department is available to provide any level of engineering service - from simple to complex.

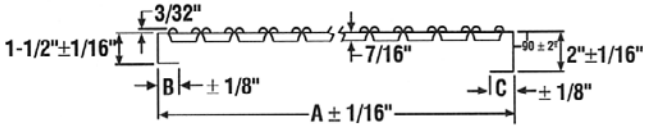
And lastly, your job culminates with our fabricators working hand in hand with engineering and sales to be certain your job is completed exactly as you expect.



Perf-O Grip® Plank

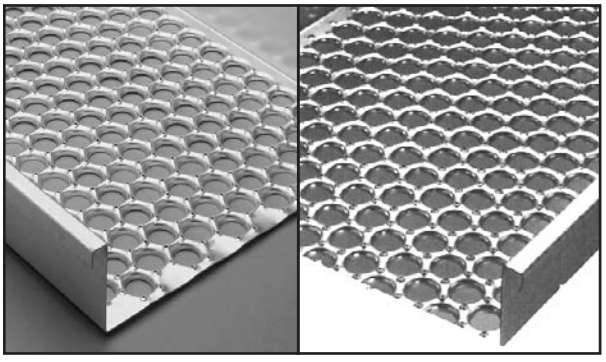
Perf-O Grip® Plank Details

	Plank Width				
	5"	7"	10"	12"	18"
A	4-7/8"	6-7/8"	9-7/8"	11-7/8"	17-7/8"
B	15/16"	1-9/32"	1-7/16"	1-5/16"	1-7/32"
C	15/16"	25/32"	15/16"	13/16"	23/32"
D	1-19/32"	1-3/4"	1-9/16"	1-23/32"	1-11/32"

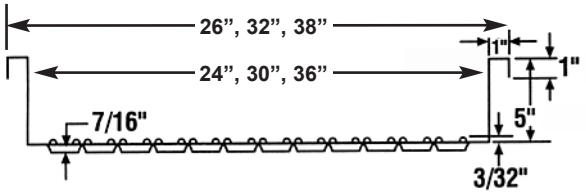


Plank - End View

Perf-O Grip® Walkway



Product may be supplied either way



Walkway - End View



Brown-Campbell has decades of experience in the specialty steel industry.

Call **1-800-GRATING** today and talk to the sales consultants that know their product.

PERF-O GRIP® LOAD TABLES

In order to select the size of Perf-O Grip® Grating, first determine load, clear span and deflection requirements. Having this information, select from the appropriate load tables to find the appropriate plank to meet your specific requirements.

For example, your job requirements are:
Clear Span: 4'0"
Concentrated Load: 600 lb.
Maximum deflection: 1/4"
Material Type: Perf-O Grip® 10" wide plank

Refer to the 5-Hole Plank (10" width), then locate the clear span subheading for 4'0" to find the first occurrence of 600 pounds (or greater) Concentrated Load (C). In this example, the 13-gauge, 2" depth product (Catalog number OG102013) carries a load of 648 pounds with .10" deflection. While this is one product which meets the minimum requirements, other options might be selected to carry greater loads. For economical selection, choose the greatest width that will support the load consistent with job requirements and choose deeper channels rather than heavier steel gauges.

How Load Tables were Prepared
The values shown in the following tables are based on actual load tests. The tables have been prepared in accordance with the provisions of the AISI Specification for the Design of Cold-Formed Steel Structural Members, 1986 edition. These load table values are based on consideration of side channel flexure only and do not consider grating surface performance. Side channel flexure occurs when the channels at mid-span of the plank deflect relative to support points. To verify the performance of the side channels, samples were loaded with concentrated and uniform loads at different spans (See figures 1 and 2, below). To approximate the most severe condition, there were no attachments between the channels and supports.

Deflection values indicated in the tables are the mid-span side channel deflection produced when the allowable uniform or allowable concentrated load is placed at mid-span. Load data is based on yield strength of 33,000 psi for steel, 27,000 psi for aluminum, 35,000 psi for Type 304 stainless steel, and 30,000 psi for Type 316 stainless steel.

U = Allowable Uniform Load (lbs/sq ft)
C = Allowable Concentrated Load (lbs) applied by 2" round bar across full width of grating
D = Vertical Deflection (inches) of side channels at mid-span resulting from allowable load

Special Note on Wide Planks
As width increases, grating surface performance becomes more critical, therefore, for Perf-O Grip® product widths greater than 12", use of the grating surface splice kit is recommended to mechanically join butt ends of plank sections.

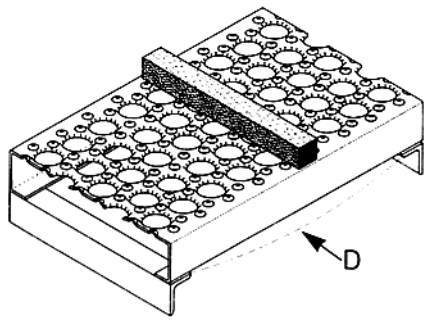


Figure 1: Concentrated Load

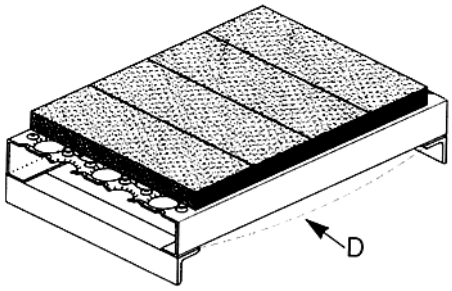


Figure 2: Uniform Load

LOAD/DEFLECTION CONVERSION FORMULAS

In the elastic range, deflection is proportional to the applied load for both uniform and concentrated loads. This relationship can be used to determine the deflection that any load which is less than the allowable load will produce, as shown in Example A below. Also, if desired, the load which will produce a specified deflection can also be determined if the load is in the elastic range as illustrated in Example B below.

Example A
What deflection will a 300 lb. mid-span concentrated load produce on a plank spanning 5'0" (catalog number OG243011, page 145)?

C = 1517 lbs; D = .09"
D @ 300 lb = .09" x (300 lbs / 1517 lbs) = .02"

Example B
If a plank (catalog number OG242011, page 145) is spanning 7'0", what mid-span concentrated load will produce a 1/4" deflection?

C = 598 lbs; D = .27"
C @ 1/4" = 598 lbs x (.25" / .27") = 554 lbs

Brown-Campbell offers a full line of grating products in addition to Perf-O Grip® including Bar Grating, Expanded Metal, Fiberglass, Grip Strut®, Grate-Lock™, and Traction Tread™. Call us today at 1-800-GRATING and we will help you determine the best product for your application.

2-Hole Plank - 5” width — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span 2’-0”	2’-6”	3’-0”	3’-6”	4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”
Steel 13 ga.	1-1/2	2.6	OG51513	U	2008	1287	895	659	505	400	325	269	227	194	168	146	130	103	85	70	60
				D	.05	.08	.11	.15	.20	.25	.31	.38	.45	.53	.62	.71	.82	1.04	1.30	1.57	1.90
				C	836	670	559	481	421	375	338	308	284	263	244	229	216	194	176	162	150
				D	.04	.06	.09	.12	.16	.20	.25	.30	.36	.43	.49	.57	.65	.83	1.04	1.27	1.52
	2	2.8	OG52013	U	3035	1944	1352	994	762	603	490	405	341	292	253	221	194	155	126	105	89
				D	.04	.06	.09	.12	.15	.19	.24	.29	.34	.41	.47	.54	.62	.79	.98	1.20	1.43
				C	1228	1003	845	725	635	566	510	465	427	395	368	344	324	290	263	240	223
				D	.03	.05	.07	.09	.12	.15	.19	.23	.28	.32	.38	.43	.50	.63	.79	.96	1.15
Aluminum .125” ga.	2	1.3	OGA520125	U	2910	1863	1294	950	728	575	466	385	323	276	237	207	182	143	116	96	81
				D	.08	.12	.18	.24	.32	.40	.50	.60	.72	.84	.98	1.12	1.27	1.61	1.99	2.41	2.87
				C	1213	970	809	693	606	539	485	441	404	373	346	323	303	270	243	221	202
				D	.06	.10	.14	.20	.25	.32	.40	.48	.57	.67	.78	.90	1.02	1.29	1.60	1.93	2.29
Stainless Steel Type 304 16 ga.	2	2.1	OGS52016	U	2781	2049	1422	1046	800	632	512	424	355	303	262	227	200	159	128	106	89
				D	.05	.08	.12	.16	.21	.26	.32	.39	.46	.54	.63	.72	.82	1.04	1.28	1.56	1.85
				C	1334	1066	889	761	666	593	534	485	445	410	381	355	334	296	267	243	223
				D	.04	.06	.09	.13	.16	.21	.26	.31	.37	.43	.50	.58	.66	.83	1.03	1.25	1.48
Stainless Steel Type 316 14 ga. (special order)	2	2.1	OGS52014	U	3684	2410	1673	1230	942	744	602	498	418	357	307	267	235	186	151	125	105
				D	.06	.08	.13	.17	.22	.27	.34	.41	.49	.57	.66	.77	.87	1.10	1.36	1.65	1.95
				C	1569	1255	1046	896	784	697	627	570	523	482	448	418	392	349	314	286	262
				D	.05	.07	.10	.14	.17	.22	.27	.33	.39	.46	.54	.61	.70	.88	1.09	1.31	1.57

3-Hole Plank - 7” width — Load Table

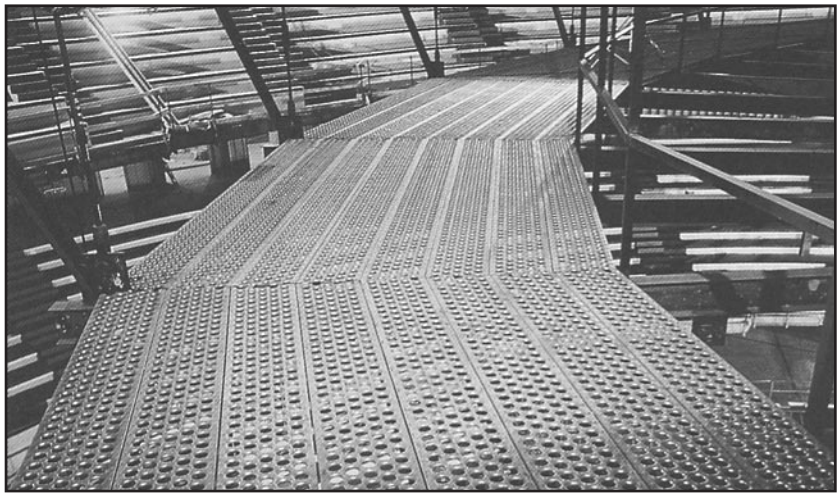
Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span 2’-0”	2’-6”	3’-0”	3’-6”	4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”
Steel 13 ga.	1-1/2	3	OG71513	U	1536	984	685	504	387	306	249	206	174	149	129	112	100	79	65	55	46
				D	.05	.07	.11	.14	.19	.24	.29	.36	.43	.50	.58	.67	.77	.98	1.22	1.51	1.81
				C	914	731	609	522	457	406	366	332	305	283	263	246	232	208	190	174	162
				D	.04	.06	.08	.12	.15	.19	.24	.29	.34	.40	.47	.54	.61	.78	.98	1.20	1.44
	2	3.3	OG72013	U	1965	1473	1024	754	578	458	371	307	259	222	192	167	147	118	96	80	68
				D	.03	.06	.08	.11	.14	.18	.23	.27	.33	.38	.44	.51	.58	.74	.92	1.13	1.36
				C	1369	1096	913	783	685	609	548	498	456	421	391	366	344	308	279	257	237
				D	.03	.05	.07	.09	.12	.15	.18	.22	.26	.31	.35	.41	.47	.59	.74	.90	1.08
Steel 11 ga.	1-1/2	4.2	OG71511	U	1981	1269	883	650	498	394	320	265	224	191	165	144	128	101	83	69	59
				D	.05	.17	.11	.15	.19	.24	.30	.36	.43	.51	.59	.68	.78	.98	1.22	1.50	1.81
				C	1165	932	777	666	582	518	467	426	391	362	337	316	297	266	241	222	205
				D	.04	.06	.09	.12	.15	.19	.24	.29	.34	.40	.47	.54	.62	.79	.98	1.20	1.44
	2	4.5	OG72011	U	2899	1978	1375	1012	776	614	498	411	347	302	261	228	201	160	130	108	92
				D	.03	.06	.08	.11	.15	.19	.23	.28	.34	.40	.47	.54	.62	.78	.97	1.18	1.42
				C	1762	1410	1175	1032	904	805	726	661	607	573	533	499	469	420	380	348	321
				D	.03	.05	.07	.09	.12	.15	.19	.23	.27	.32	.37	.43	.49	.63	.78	.95	1.14
	3	4.8	OG73011	U	5806	3716	2581	1898	1454	1150	932	771	649	554	479	417	367	291	236	196	166
				D	.03	.04	.06	.08	.11	.13	.17	.20	.24	.28	.33	.37	.43	.54	.67	.81	.98
				C	3188	2550	2125	1822	1594	1417	1275	1159	1132	1050	976	913	857	764	690	630	581
				D	.02	.03	.04	.06	.07	.10	.12	.15	.19	.22	.26	.30	.34	.43	.54	.65	.78
Aluminum .125” ga.	2	1.5	OGA720125	U	2138	1491	1035	761	582	460	372	308	258	221	190	166	146	115	93	77	65
				D	.07	.14	.20	.27	.35	.44	.54	.66	.78	.92	1.07	1.23	1.39	1.76	2.18	2.64	3.14
				C	1509	1207	1006	862	755	671	604	549	503	464	431	402	377	335	302	274	252
				D	.07	.11	.16	.21	.28	.35	.44	.53	.63	.74	.85	.98	1.12	1.41	1.74	2.11	2.51
Stainless Steel Type 304 16 ga.	2	2.4	OGS72016	U	1419	1399	971	714	546	432	350	289	243	207	178	155	137	107	88	72	61
				D	.03	.07	.10	.13	.17	.22	.27	.33	.39	.46	.53	.61	.70	.88	1.09	1.31	1.56
				C	1275	1021	850	729	638	567	510	464	425	392	365	341	319	283	255	232	213
				D	.03	.05	.08	.11	.14	.18	.22	.26	.31	.37	.43	.49	.56	.70	.87	1.05	1.25
Stainless Steel Type 316 14 ga. (special order)	2	2.8	OGS72014	U	1879	1571	1091	801	614	485	393	325	273	232	200	175	153	121	98	81	69
				D	.04	.07	.10	.14	.18	.22	.27	.33	.40	.47	.54	.62	.70	.89	1.10	1.33	1.59
				C	1432	1145	954	818	715	637	573	521	478	440	409	382	358	318	287	261	239
				D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.37	.43	.49	.56	.71	.88	1.06	1.27

U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Load (lbs) applied by 2” round bar across full width of grating; D = Vertical deflection (in) of side channels at mid-span resulting from Allowable Load.

5-Hole Plank - 10” width — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span																
					2’-0”	2’-6”	3’-0”	3’-6”	4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”
Steel 13 ga.	1-1/2	3.5	OG101513	U	963	745	517	380	291	230	187	154	129	110	95	83	73	58	46	38	32
				D	.04	.08	.11	.15	.19	.24	.30	.36	.43	.51	.59	.67	.77	.98	1.20	1.44	1.71
				C	855	684	645	554	485	431	388	353	323	298	277	259	242	216	191	176	162
				D	.03	.05	.09	.12	.15	.19	.24	.29	.35	.41	.47	.54	.61	.78	.95	1.16	1.39
	2	3.9	OG102013	U	1735	1110	771	568	435	344	281	232	196	167	144	126	110	88	70	60	50
				D	.04	.06	.08	.11	.15	.18	.23	.28	.33	.39	.45	.52	.59	.75	.91	1.14	1.34
				C	1297	1038	865	741	648	645	584	532	489	453	422	392	368	327	297	267	245
				D	.02	.04	.05	.08	.10	.15	.18	.22	.26	.31	.36	.41	.47	.60	.79	.89	1.06
Steel 11 ga.	1-1/2	4.5	OG101511	U	1385	888	618	455	349	276	225	186	157	134	117	101	90	71	59	48	41
				D	.05	.07	.10	.14	.18	.23	.29	.35	.41	.49	.57	.65	.75	.95	1.20	1.45	1.74
				C	1086	888	772	663	582	518	467	426	392	363	338	318	299	268	244	225	205
				D	.03	.05	.08	.11	.15	.18	.23	.28	.33	.39	.45	.52	.60	.76	.96	1.17	1.39
	2	5.1	OG102011	U	2261	1447	1005	739	567	449	364	300	253	216	186	162	142	112	91	75	63
				D	.04	.06	.08	.11	.15	.19	.23	.28	.33	.39	.45	.52	.59	.75	.92	1.12	1.32
				C	1670	1336	1113	954	888	823	758	689	631	583	541	505	473	421	378	344	316
				D	.02	.04	.06	.08	.11	.14	.18	.22	.27	.31	.36	.42	.47	.60	.74	.89	1.06
	3	5.1	OG103011	U	4214	2697	1873	1376	1053	832	674	557	468	399	344	300	263	208	168	139	117
				D	.03	.04	.06	.08	.10	.13	.16	.19	.23	.27	.31	.36	.41	.52	.64	.77	.92
				C	3095	2476	2064	1769	1548	1376	1238	1126	1032	952	927	902	878	781	702	638	585
				D	.02	.03	.04	.05	.07	.08	.11	.14	.16	.19	.24	.28	.33	.41	.51	.62	.74
Aluminum .125” ga.	2	1.8	OGA1020125	U	1048	1022	710	522	400	316	256	212	178	153	131	115	101	80	65	54	46
				D	.05	.12	.18	.24	.31	.40	.49	.59	.71	.83	.96	1.10	1.26	1.59	1.96	2.37	2.83
				C	1431	1145	954	818	715	636	572	520	477	440	409	382	358	318	286	260	238
				D	.06	.09	.13	.19	.25	.32	.39	.47	.57	.66	.77	.88	1.00	1.27	1.57	1.90	2.26
Stainless Steel Type 304 16 ga.	2	2.7	OGS102016	U	1418	907	630	463	354	280	226	187	158	134	115	101	88	70	57	47	39
				D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.44	.52	.59	.67	.85	1.06	1.28	1.50
				C	1148	918	765	656	574	510	459	430	393	363	337	315	295	263	237	215	197
				D	.03	.05	.07	.10	.13	.17	.21	.26	.30	.36	.41	.48	.54	.69	.85	1.02	1.22
Stainless Steel Type 316 14 ga. (special order)	2	3.2	OGS102014	U	1600	1024	711	522	400	315	256	211	178	152	130	114	99	79	64	53	45
				D	.04	.07	.10	.13	.17	.22	.27	.32	.38	.45	.52	.60	.68	.86	1.07	1.28	1.54
				C	1296	1037	864	741	648	576	530	485	445	410	381	355	334	296	266	242	222
				D	.03	.05	.07	.10	.13	.17	.21	.26	.31	.36	.42	.48	.55	.69	.85	1.03	1.22

U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Load (lbs) applied by 2” round bar across full width of grating; D = Vertical deflection (in) of side channels at mid-span resulting from Allowable Load.



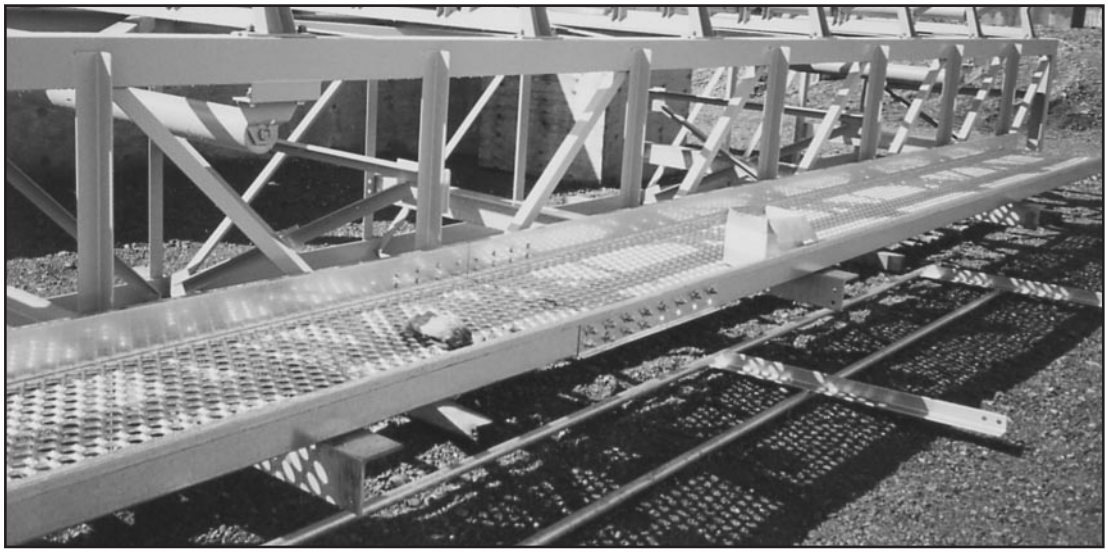
Brown-Campbell has been in the specialty metal industry since 1952. We have an extremely experienced sales team that can assist you in determining the solutions to your needs. Call us today - 1-800-GRATING

6-Hole Plank - 12" width — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1-1/2	4.3	OG121513	U	669	655	456	336	258	204	166	138	117	100	87	76	67	54	44	37	31
				D	.03	.07	.10	.13	.17	.22	.27	.33	.40	.47	.55	.63	.72	.92	1.16	1.43	1.68
				C	960	819	684	588	516	460	416	380	349	325	303	285	268	241	218	198	182
				D	.03	.05	.08	.11	.14	.18	.22	.26	.32	.37	.44	.50	.58	.74	.91	1.11	1.32
	2	4.6	OG122013	U	1510	966	671	493	378	299	243	201	170	145	126	110	97	77	63	53	45
				D	.03	.05	.07	.10	.13	.16	.20	.25	.29	.35	.40	.46	.53	.68	.85	1.03	1.25
				C	1442	1154	961	862	756	673	608	555	509	472	440	413	388	349	317	291	270
				D	.02	.04	.06	.08	.10	.13	.16	.20	.23	.28	.32	.37	.42	.54	.67	.82	.99
Steel 11 ga.	1-1/2	5.3	OG121511	U	986	739	515	378	291	230	188	156	131	112	97	85	75	60	50	41	35
				D	.03	.06	.09	.12	.16	.21	.25	.31	.37	.43	.50	.57	.65	.82	1.02	1.25	1.50
				C	1231	985	821	703	615	547	492	448	410	379	352	328	308	274	246	227	210
				D	.03	.05	.07	.10	.13	.16	.20	.25	.29	.34	.40	.46	.52	.66	.81	1.00	1.20
	2	5.5	OG122011	U	1937	1240	861	633	486	385	312	259	218	186	161	140	124	99	80	67	57
				D	.03	.05	.07	.10	.13	.16	.20	.24	.29	.34	.40	.46	.52	.67	.83	1.01	1.22
				C	1881	1505	1292	1109	971	865	781	712	654	604	563	527	496	444	403	369	341
				D	.02	.04	.06	.08	.10	.13	.16	.20	.23	.27	.32	.37	.42	.54	.67	.81	.98
	3	6.2	OG123011	U	3828	2450	1701	1250	957	757	614	507	427	365	315	274	242	192	156	130	108
				D	.02	.04	.05	.07	.10	.12	.15	.18	.22	.25	.29	.34	.39	.49	.61	.74	.87
				C	3448	2759	2299	1971	1724	1533	1405	1396	1282	1185	1102	1030	968	864	781	714	652
				D	.02	.02	.04	.05	.07	.09	.11	.14	.17	.20	.24	.27	.31	.39	.49	.59	.70
Aluminum .125" ga.	2	2.1	OGA1220125	U	1463	936	650	478	366	290	235	194	163	140	120	104	93	73	60	49	41
				D	.08	.12	.17	.23	.30	.38	.47	.57	.68	.79	.92	1.05	1.20	1.52	1.88	2.27	2.70
				C	1612	1290	1075	921	806	716	645	586	537	496	461	430	403	358	322	293	269
				D	.06	.09	.14	.18	.24	.30	.38	.45	.54	.63	.74	.84	.96	1.22	1.50	1.82	2.16
Stainless Steel Type 304 16 ga.	2	3.2	OGS122016	U	1289	825	573	421	322	255	206	170	143	122	105	91	80	64	51	42	35
				D	.04	.07	.10	.13	.17	.22	.27	.33	.39	.46	.53	.61	.69	.88	1.08	1.30	1.54
				C	1252	1002	835	715	626	556	501	469	430	397	368	343	322	286	257	234	215
				D	.03	.05	.07	.10	.13	.17	.21	.26	.31	.37	.42	.49	.55	.70	.86	1.05	1.25
Stainless Steel Type 316 14 ga. (special order)	2	3.8	OGS122014	U	1455	931	647	475	365	288	233	193	162	138	119	104	82	65	54	46	39
				D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.44	.51	.59	.65	.83	1.02	1.23	1.47
				C	1416	1133	944	809	708	629	583	529	486	448	416	389	365	323	291	265	242
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.35	.41	.47	.54	.68	.84	1.02	1.21

U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Load (lbs) applied by 2" round bar across full width of grating; D = Vertical deflection (in) of side channels at mid-span resulting from Allowable Load.

Brown-Campbell maintains an expansive inventory allowing same day shipment on many items. Call us today at 1-800-GRATING.



Perf-O Grip® Walkway
(see pages 140 and 146 for walkway information)

10-Hole Plank - 18" width — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1-1/2	5.7	OG181513	U	714	457	317	233	179	142	116	96	82	69	60	52	45	36	29	24	21
				D	.04	.07	.10	.13	.17	.21	.26	.32	.39	.45	.52	.60	.68	.86	1.05	1.27	1.56
				C	964	771	642	551	495	481	434	397	366	337	314	293	274	243	220	199	183
				D	.03	.04	.07	.09	.12	.17	.21	.26	.31	.36	.42	.48	.55	.69	.85	1.03	1.23
	2	6.0	OG182013	U	1072	686	476	350	268	212	173	143	121	103	90	78	69	55	44	36	31
				D	.03	.05	.07	.10	.13	.16	.20	.24	.29	.34	.40	.46	.53	.67	.82	.98	1.19
				C	1452	1162	968	830	726	645	581	528	509	489	470	439	411	366	329	299	274
				D	.02	.03	.05	.06	.09	.12	.14	.17	.22	.27	.32	.37	.42	.53	.65	.79	.94
Steel 11 ga.	1-1/2	6.8	OG181511	U	781	500	347	255	196	156	127	105	89	76	66	58	52	41	34	29	25
				D	.04	.06	.09	.12	.15	.19	.24	.29	.34	.40	.47	.53	.61	.77	.96	1.20	1.45
				C	1257	1006	838	718	629	559	503	457	419	387	359	335	314	279	253	234	219
				D	.03	.05	.07	.09	.12	.15	.19	.23	.27	.32	.37	.43	.49	.62	.76	.94	1.14
	2	7.1	OG182011	U	1250	800	555	408	314	249	201	167	141	121	104	91	80	64	53	44	37
				D	.03	.05	.07	.09	.12	.15	.18	.22	.26	.31	.35	.41	.46	.59	.74	.91	1.08
				C	1924	1539	1283	1099	962	855	770	700	641	592	550	514	484	434	395	363	337
				D	.02	.04	.05	.07	.09	.12	.14	.17	.21	.24	.28	.33	.37	.48	.59	.73	.87
	3	7.9	OG183011	U	2675	1712	1189	873	669	528	428	354	297	254	219	190	167	132	107	89	74
				D	.02	.04	.05	.07	.09	.11	.14	.17	.20	.24	.28	.31	.36	.45	.56	.68	.81
				C	3531	2825	2354	2018	1766	1569	1412	1284	1177	1141	1106	1070	1003	892	802	730	669
				D	.01	.02	.03	.04	.06	.08	.10	.12	.14	.20	.23	.25	.29	.36	.45	.54	.65
Aluminum .125" ga.	2	2.8	OGA1820125	U	992	635	441	324	248	196	158	131	110	94	81	70	62	49	40	33	27
				D	.07	.10	.16	.21	.28	.35	.44	.53	.63	.74	.86	.98	1.12	1.42	1.75	2.11	2.52
				C	1652	1322	1102	944	826	734	661	601	551	508	472	441	413	367	330	300	275
				D	.05	.08	.13	.17	.22	.28	.35	.42	.50	.59	.69	.79	.89	1.13	1.40	1.69	2.01

13-Hole Plank - 24" width — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 11 ga.	2	8.9	OG242011	U	1094	700	486	357	273	216	175	145	123	105	91	79	70	56	45	38	33
				D	.03	.05	.06	.09	.12	.15	.18	.22	.26	.31	.36	.41	.47	.60	.75	.92	1.13
				C	2092	1674	1395	1196	1046	930	837	761	697	644	598	558	540	504	459	423	393
				D	.02	.03	.05	.06	.09	.11	.14	.17	.20	.23	.27	.31	.37	.49	.61	.74	.90
	3	9.8	OG243011	U	1971	1261	876	644	493	389	315	261	219	187	161	141	124	99	80	67	57
				D	.02	.03	.04	.06	.08	.10	.12	.15	.18	.21	.24	.28	.32	.40	.50	.61	.73
				C	3792	3033	2528	2167	1896	1685	1517	1379	1264	1167	1083	1011	948	843	758	689	632
				D	.01	.02	.03	.04	.05	.07	.09	.10	.12	.15	.17	.19	.22	.30	.38	.46	.54

U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Load (lbs) applied by 2" round bar across full width of grating; D = Vertical deflection (in) of side channels at mid-span resulting from Allowable Load.

PERF-O GRIP® ROOFTOP WALKWAY SYSTEMS

Metal roofs meet a wide variety of design and performance needs. As a result, the square footage and building varieties covered by metal standing seam roofs has increased rapidly. These thin gauged roofing systems are engineering wonders, but they are not made to absorb foot and maintenance traffic. Perf-O Grip® Systems are an ideal solution to this situation. It is also an ideal solution for safer footing on rooftop applications.

- **Optimizes Roof Performance**
  - Saves roof from walking and equipment abuse
  - Maximizes direct, free-flow drainage through elevated planks and open support
- **Versatile** - Designed for most metal roof systems
- **Flexible** - Innovative design easily adapts to changing traffic patterns, accommodates level and roof slope changes, allows multiple piece consolidation to accommodate wider walkways
- **Traffic Control** - Raised level discourages "shortcuts"
- **Safe, Year-Round Use** - Raised level stays above snowfalls, drains snow, stays slip-resistant in three directions
- **Easy Installation** - Goes down fast, stays where you want it
- **Economical** - Long life, low maintenance on roof and walkway

16-Hole Plank - 30" width — Load Table

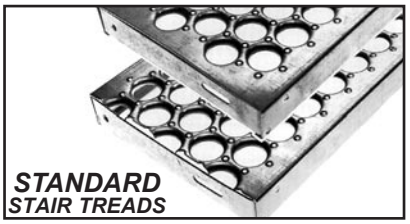
Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 11 ga.	2	11.8	OG302011	U	956	612	425	312	239	189	153	126	106	91	77	68	60	47	38	32	27
				D	.02	.03	.04	.05	.07	.09	.11	.13	.16	.18	.21	.24	.28	.35	.43	.52	.62
				C	2564	2051	1709	1465	1282	1140	1026	932	855	789	733	684	641	570	513	466	427
				D	.01	.02	.03	.04	.06	.07	.09	.10	.12	.15	.17	.20	.22	.28	.35	.42	.50
	3	12.7	OG303011	U	1413	904	628	461	353	279	226	187	157	134	116	100	89	70	57	46	39
				D	.02	.03	.04	.06	.08	.10	.12	.14	.17	.20	.23	.26	.30	.38	.47	.57	.67
				C	3802	3041	2534	2172	1901	1690	1521	1382	1267	1170	1086	1014	950	845	760	691	634
				D	.01	.02	.03	.04	.05	.07	.09	.10	.12	.14	.17	.19	.22	.28	.34	.41	.53
	4	13.5	OG304011	U	2240	1434	996	731	560	443	358	296	249	212	183	159	140	111	91	75	64
				D	.01	.02	.03	.04	.06	.07	.09	.11	.13	.15	.17	.20	.23	.29	.36	.44	.52
				C	5838	4670	3892	3336	2919	2595	2335	2123	1946	1796	1668	1557	1459	1297	1168	1061	973
				D	.01	.02	.02	.03	.04	.05	.07	.08	.09	.11	.13	.15	.17	.21	.26	.32	.38

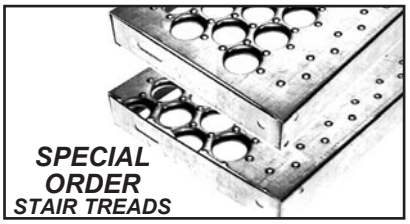
Walkway - 24", 30" and 36" widths — Load Table

Material	Depth In	Wgt lb/ft	Catalog No.		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 11 ga. 24" Wide	5	11.8	OG245011W	U	5751	3681	2556	1878	1438	1136	920	760	639	544	469	409	359	284	230	190	160
				D	.02	.02	.04	.05	.06	.08	.10	.12	.14	.16	.19	.22	.25	.31	.39	.47	.56
				C	9504	7603	6336	5431	4752	4224	3802	3456	3168	2924	2715	2534	2376	2112	1901	1728	1584
				D	.01	.01	.02	.03	.04	.05	.06	.07	.08	.10	.11	.13	.15	.19	.23	.28	.34
Steel 11 ga. 30" Wide	5	13.6	OG305011W	U	3868	2475	1719	1263	967	764	619	511	430	366	316	275	242	191	155	128	107
				D	.01	.02	.03	.04	.05	.06	.08	.10	.12	.13	.16	.18	.20	.26	.32	.39	.46
				C	9534	7627	6356	5448	4767	4237	3813	3467	3178	2933	2724	2542	2383	2119	1907	1733	1589
				D	.01	.01	.02	.03	.04	.05	.06	.07	.08	.10	.11	.13	.15	.19	.23	.28	.33
Steel 11 ga. 36" Wide	5	15.8	OG365011W	U	1597	***	710	***	399	***	256	***	177	***	130	***	100	***	64	***	44
				D	.01	***	.01	***	.02	***	.04	***	.05	***	.07	***	.10	***	.15	***	.21
				C	4792	***	3195	***	2396	***	1917	***	1597	***	1369	***	1198	***	958	***	799
				D	.01	***	.01	***	.02	***	.03	***	.04	***	.06	***	.08	***	.12	***	.17

U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Load (lbs) applied by 2" round bar across full width of grating; D = Vertical deflection (in) of side channels at mid-span resulting from Allowable Load. ***Please contact a Brown-Campbell sales consultant.

PERF-O GRIP® STAIR TREADS AND CARRIER PLATES





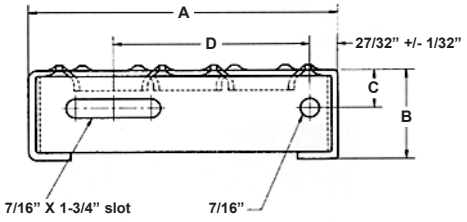
Stair Treads have welded ends for attachment to stringers.

- Material: 11 and 13 ga. mill-galvanized and plain steel
- Length: 24", 30", 36"
- Nominal Width: 5", 7", 10", 12"
- Channel Height: 1-1/2", 2"

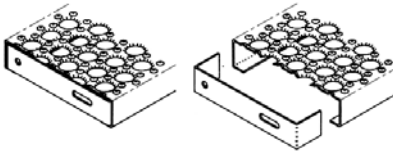
Stair Treads also available with Traction Tread™ leading edge nosing.

- Material: 11 and 13 ga. mill-galvanized and plain steel
- Length: 24", 30", 36"
- Nominal Width: 12"
- Channel Height: 1-1/2", 2"

PERF-O GRIP® CARRIER PLATES allow you to create your own custom stair treads. Two plates are provided (pair).



Product	Nominal Width	'A'	'B'	'C'	'D'
2-Hole Tread	5"	4-15/16"	1-1/2" 2"	3/4" 1"	2"
3-Hole Tread	7"	6-15/16"	1-1/2" 2"	3/4" 1"	4"
5-Hole Tread	10"	9-15/16"	1-1/2" 2"	3/4" 1"	7"
6-Hole Tread	12"	11-15/16"	1-1/2" 2"	3/4" 1"	9"

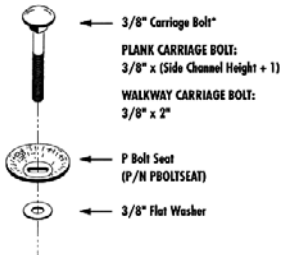


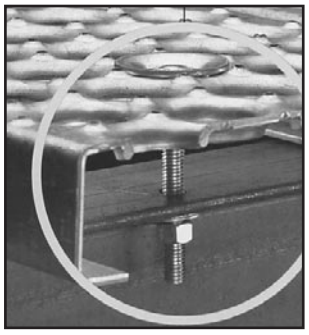
Stair treads and carrier plates are available in mill-galvanized and plain steel, but may be ordered in aluminum or stainless steel. Call a Brown-Campbell sales consultant today.

BOLT WASHER SEATS

Perf-O Grip® bolt seats provide a secure anchor of the grating to structural supports. The standard bolt seat features oblong holes specifically designed to ensure a vertical anchor (with a 3/8" bolt) even if the hole is off concentrically by as much as 1/4". Double bolt seats are available to maximize the attachment location flexibility by providing approximately 2" of longitudinal adjustment. Available in mill-galvanized steel and stainless steel. Hardware is not provided.

P-BOLT WASHER SEAT







Standard



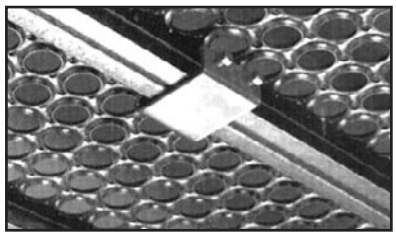
Double

Assembly:
1. Align planks on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes under the hole nearest the end. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Place bolt seat in the hole which is now lined up with the drilled hole.
5. Run the carriage bolt through bolt seat, plank and I-Beam, and tighten with washer and nut until secure.

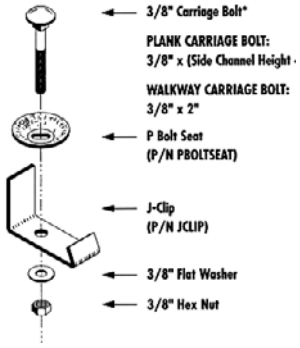
SUPPORT CLIPS

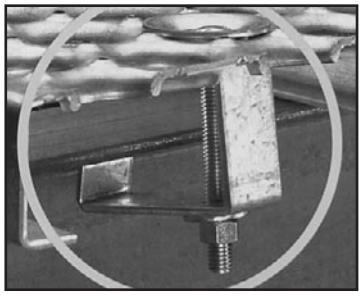
MID-CLIP - Midsupport clips can be used at mid-span to increase load carrying capacities of individual channels by fastening several planks together to form an integral section. Manufactured in mill-galvanized steel and includes two bolts.





J-CLIP - J-Clips fasten grating securely to the supporting steel without drilling holes. Manufactured in mill-galvanized steel. Hardware is not provided.





Assembly:
1. Align planks on I-Beam or other anchoring cross-member.
2. Place bolt seat on center hole of plank nearest the overhanging end.
3. Align J-Clip below plank so that the carriage bolt can slide through. Make sure the lower lip of the J-Clip reaches well into the I-Beam.
4. Run the carriage bolt through the bolt seat to the J-Clip and tighten securely with washer and nut.

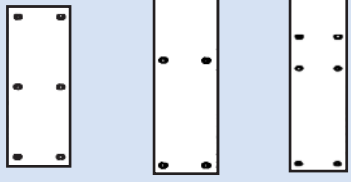
SPLICE PLATE KITS

SURFACE SPLICE PLATE KITS

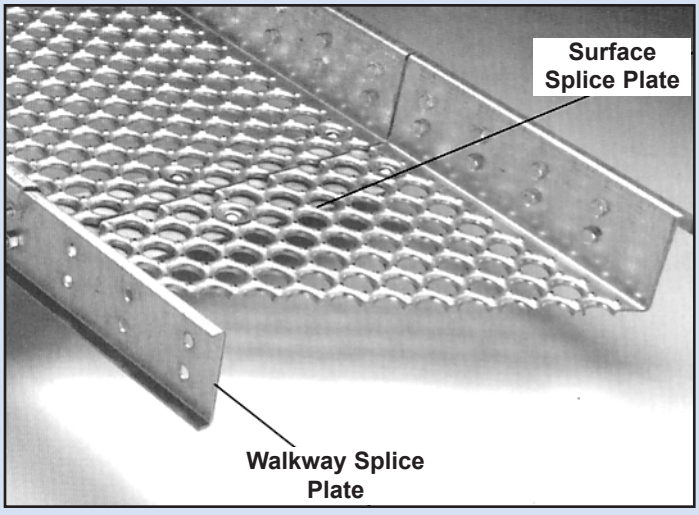
As width increases, grating surface performance becomes more critical. Thus, for Perf-O Grip® product widths greater than 12", use of the grating surface splice kit is recommended to mechanically join butt ends of plank sections.

- **POG-ES-10** for **18"** wide plank includes 6 sets of hardware
- **POG-ES-13** for **24"** wide plank includes 6 sets of hardware
- **POG-ES-16** for **30"** wide plank includes 8 sets of hardware

- **Hardware**: 3/8" x 1" carriage bolts, 3/8" flat washers and bolt seats.



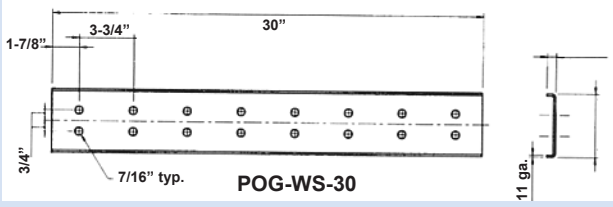
POG-ES-10 POG-ES-13 POG-ES-16



WALKWAY SPLICE PLATE KITS

Walkway Splice Plates provide continuity when multiple lengths of Perf-O Grip® are desired. Connections are reinforced with the addition of splice plates attached to side channels.

- **POG-WS-30** for **24" & 30"** wide walkway includes 2 splice plates and 32 sets of hardware -- 1/2" x 1-1/4" hex bolts, 1/2"-13 hex nuts and 1/2" flat washers.



POG-WS-30





Grate-Lock™

Grate-Lock™ grating is an easy-to-install system of interlocking grating planks, treads and accessories that provides safe, sturdy footing for mezzanine floors, platforms, walkways and other applications where non-slip performance is required. Hundreds of sole-gripping dimples insure a safe surface in all kinds of weather and environments. The grating is available textured for safer working surfaces, non-textured for wheeled traffic or rack decking. Grate-Lock™ is also available in a smooth surface as an efficient new way to create profitable storage areas from unused overhead spaces in plants and warehouses.

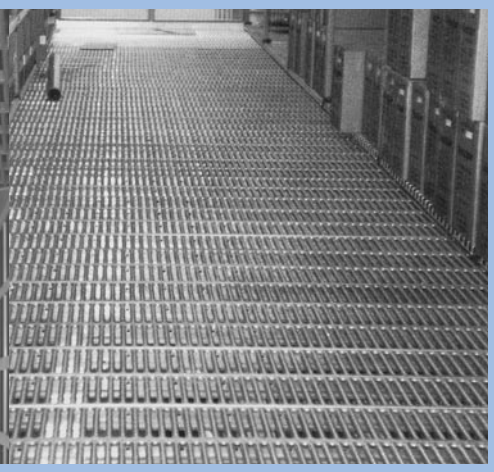
• Many design options • Large variety of size and gauge alternatives • Fast Assembly • Interlocking Planks for Great Strength • Superior Finish for Low Maintenance

Great Loading Performance with Cost Saving Design:

Grate-Lock™'s unique design offers increased load performance at a lower cost than other grating systems. Interlocking planks, stronger rung design and an expanded selection of leg heights and material gauges offer more design options. Grate-Lock™ lets you specify lighter gauge steel for the same job amounting in substantial material savings.

Brown-Campbell Grate-Lock™ is available galvanized or HRP&O with a choice of traction grip or smooth surface and in a variety of flange options.



GRATE-LOCK™ STOCK & AVAILABILITY

Catalog No.	Width (In)	Channel Height (In)	Open Area	lbs/ Lin Ft
Pre-Galvanized- 18 Ga. Steel				
GL121518	12	1-1/2	45%	2.9#
GL91518	9	1-1/2	43%	2.3#
GL61518	6	1-1/2	39%	1.9#
GL122518	12	2-1/2	45%	3.7#
GL92518	9	2-1/2	43%	3.2#
GL62518	6	2-1/2	39%	2.6#
GL32518	3	2-1/2	solid filler pnl	1.9#
GL123018	12	3	45%	3.9#
GL93018	9	3	43%	3.3#
GL63018	6	3	39%	2.8#
GL33018	3	3	solid filler pnl	2.1#
GL124018	12	4	45%	4.2#
GL94018	9	4	43%	3.7#
GL64018	6	4	39%	3.2#
GL34018	3	4	solid filler pnl	2.4#
Pre-Galvanized- 16 Ga. Steel				
GL121516	12	1-1/2	43%	3.5#
GL91516	9	1-1/2	41%	2.9#
GL61516	6	1-1/2	37%	2.3#
GL122516	12	2-1/2	43%	4.6#
GL92516	9	2-1/2	41%	3.9#
GL62516	6	2-1/2	37%	3.2#
GL32516	3	2-1/2	solid filler pnl	2.3#
GL123016	12	3	43%	4.8#
GL93016	9	3	41%	4.1#
GL63016	6	3	37%	3.4#
GL33016	3	3	solid filler pnl	2.5#
GL124016	12	4	43%	5.2#
GL94016	9	4	41%	4.6#
GL64016	6	4	37%	3.9#
GL34016	3	4	solid filler pnl	2.9#
Pre-Galvanized- 14 Ga. Steel				
GL121514	12	1-1/2	40%	4.2#
GL91514	9	1-1/2	38%	3.5#
GL61514	6	1-1/2	35%	2.7#
GL122514	12	2-1/2	40%	5.6#
GL92514	9	2-1/2	38%	4.8#
GL62514	6	2-1/2	35%	4.0#
GL32514	3	2-1/2	solid filler pnl	2.8#
GL123014	12	3	40%	5.9#
GL93014	9	3	38%	5.1#
GL63014	6	3	35%	4.3#
GL33014	3	3	solid filler pnl	3.1#
GL124014	12	4	40%	6.5#
GL94014	9	4	38%	5.6#
GL64014	6	4	35%	4.8#
GL34014	3	4	solid filler pnl	3.6#

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements: loading, open area, slip resistance

PLEASE SPECIFY:

- **Grate-Lock™ Grating**
- **Catalog Number-** see denotation example below
- **Quantity-** number of pieces or planks required
- **Material-** Pre-Galvanized Steel, 14 or 18 ga. (16 ga. by special order), HRP&O Plain Steel by special order
- **Width-** 12", 9", 6", or 3" filler panel
- **Height-** 1-1/2" (12' length only), 2-1/2", 3", 4" (4" supplied FM flange only), 3" & 4" by special order
- **Length-** 12' (max for 1-1/2" height), 20', 24' or cut to size
- **Flange Option-** female/male; male/male; female/female (see flange options below)
- **Accessories-** kickplates, clamps, bolts, screws, etc.

CATALOG NUMBER DENOTATION

1ST & 2ND LETTER

-FINISH

'GL' - Galvanized
'GH' - HRP&O

3RD, 4TH LETTER

-SURFACE OPTION & FLANGE OPTIONS

3rd, 4th	Surface	Flange
none	Traction Grip	female/male
'F'	Traction Grip	female/female
'M'	Traction Grip	male/male
'S'	Smooth	female/male
'SF'	Smooth	female/female
'SM'	Smooth	male/male

FINAL LETTERS

-MATERIAL WIDTH
-CHANNEL HEIGHT
-MATERIAL GAUGE

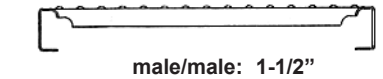
EXAMPLE 1:
GLM122518

GL: Grate-Lock™ Galvanized
M: Traction Grip surface male/male flange
12: 12" width
25: 2-1/2" channel height
18: 18 gauge

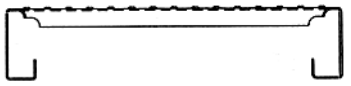
EXAMPLE 2:
GHSF61516

GH: Grate-Lock™ HRP&O
SF: Smooth surface female/female flange
6: 6" width
15: 1-1/2" channel height
16: 16 gauge

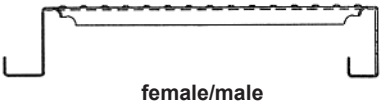
Flange Options (End View)



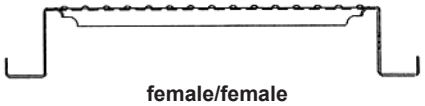
male/male: 1-1/2"



male/male: 2-1/2", 3", 4"



female/male



female/female

FAST BOLT-TOGETHER ASSEMBLY

Save time in the field with Grate-Lock™ bolt-together slotted assemblies. Kickplates and plank sections are prepunched. For additional ease, planks can be straight, curved or angle cut with hand tools.



Grate-Lock™
2-1/2", 3", 4" Rung Loading

Gauge	Width (In)		Load (Lbs)	Deflection (In)
18	12	U	1057	.07
		C	529	.06
	9	U	1881	.02
		C	705	.02
	6	U	4232	.04
		C	1058	.04
16	12	U	1276	.07
		C	638	.05
	9	U	2275	.02
		C	851	.02
	6	U	5118	.04
		C	1134	.03
14	12	U	1461	.07
		C	730	.06
	9	U	2597	.03
		C	974	.03
	6	U	5843	.05
		C	1461	.03

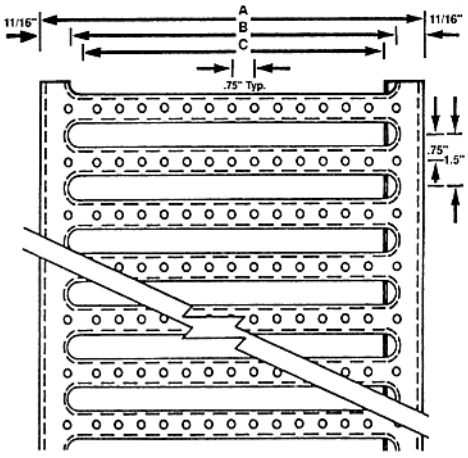
U = Allowable Uniform Load (lbs/sq ft); C = Allowable Concentrated Line Load per ft. of length at mid-width (lbs)

In addition to Grate-Lock™, Brown-Campbell stocks other safety grating products including Grip Strut®, Perf-O Grip® & Traction Tread™. Be sure to check out these products too!

MORE SIZES & GAUGES

Grate-Lock™ offers a broad array of products. Available in three plank widths, four plank heights, three gauges and lengths up to 24', Grate-Lock™ can accommodate your requirements. Interlocking sections provide the strength you need for extra-wide designs.

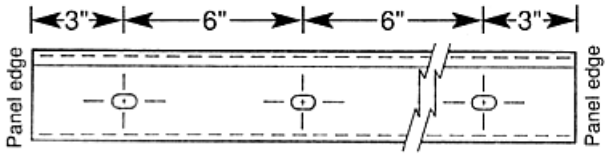
Top View



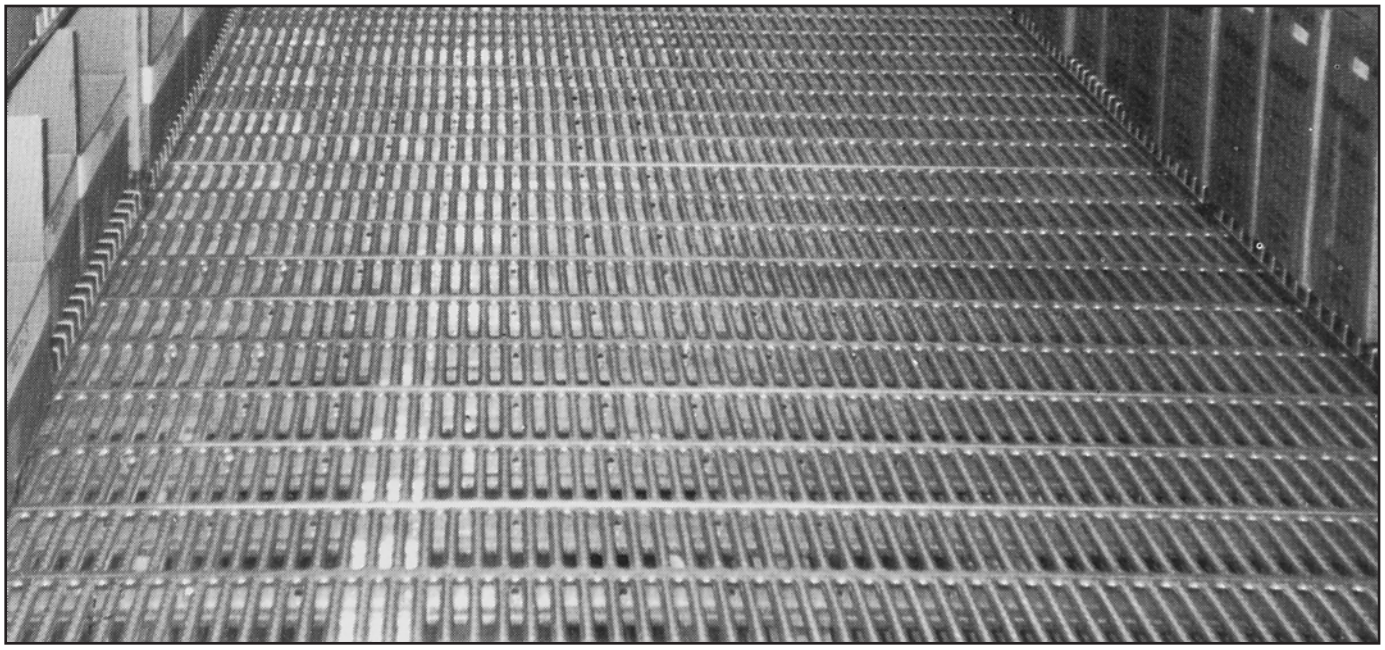
Grate-Lock™ Top View Details			
Width	'A'	'B'	'C'
6"	5.9375"	4.562"	3.812"
9"	8.9375"	7.562"	6.812"
12"	11.9375"	10.562"	9.812"

Note: Tolerances +- 1/16"; 1-1/2" height product differs in rung detail and loading capabilities

Side View



Note: 1-1/2" height planks do not have side bolt holes and differ in rung detail and loading capabilities. Also available as female/male or female/female.



1-1/2" Channel Height - Plank — Load Table

Gauge	Width In	Wgt lb/ft	Catalog No.		Clear Span																	
					2'-0"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	10'-0"	11'-0"	12'-0"
18 ga.	12	3.7	GL121518	U	443	196	144	110	87	70	58	49	41	36	31	27	24	21	17	14	12
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	440	293	251	220	195	176	160	146	135	125	117	110	103	97	88	80	73
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	9	3.2	GL91518	U	591	263	193	147	116	94	78	65	56	48	42	37	32	29	23	19	16
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	440	293	251	220	195	176	160	146	135	125	117	110	103	97	88	80	73
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	6	2.6	GL61518	U	890	395	290	222	175	142	117	99	84	72	63	55	49	44	35	29	24
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	440	293	251	220	195	176	160	146	135	125	117	110	103	97	88	80	73
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
16 ga.	12	4.6	GL121516	U	549	244	179	137	108	87	72	61	52	44	39	34	30	27	22	18	15
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	546	364	312	273	242	218	198	182	168	156	145	136	128	121	109	99	91
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	9	3.9	GL91516	U	733	326	239	183	144	117	97	81	69	59	52	45	40	36	29	24	20
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	546	364	312	273	242	218	198	182	168	156	145	136	128	121	109	99	91
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	6	3.2	GL61516	U	1104	490	360	276	218	176	146	122	104	90	78	69	61	54	44	36	30
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	546	364	312	273	242	218	198	182	168	156	145	136	128	121	109	99	91
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
14 ga.	12	5.6	GL121514	U	667	296	217	166	131	106	88	74	63	54	47	41	36	32	26	22	18
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	663	442	379	331	295	265	241	221	204	189	177	165	156	147	132	120	110
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	9	4.8	GL91514	U	891	396	291	222	176	142	117	99	84	72	63	55	49	44	35	29	24
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	663	442	379	331	295	265	241	221	204	189	177	165	156	147	132	120	110
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54
	6	4.0	GL61514	U	1341	596	438	335	265	214	177	149	127	109	95	83	74	66	53	44	37
				D	.10	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.31	1.59	1.89
				C	663	442	379	331	295	265	241	221	204	189	177	165	156	147	132	120	110
				D	.04	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	1.06	1.28	1.54

U- Allowable Simple Span Uniform Load (lb/sq ft); C - Allowable Simple Span Concentrated Line Load at mid-span (lb); D - Vertical Deflection at Mid-span (in)

Brown-Campbell sales consultants are experts in their field. Call us today at 1-800-GRATING with all of your specialty flooring questions, we have the answers you have been searching for.



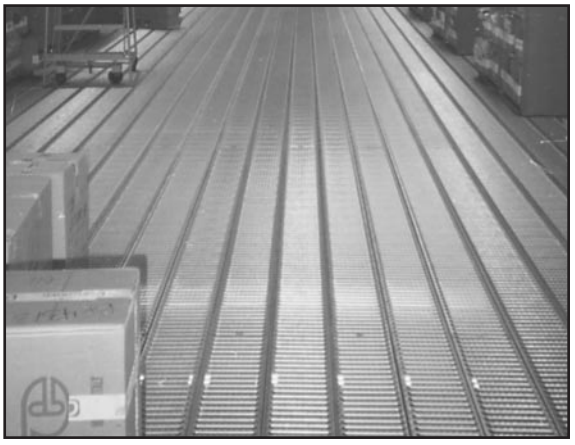
2-1/2" Channel Height - Plank — Load Table

Gauge	Width In	Wgt lb/ft	Catalog No.		Clear Span																
					2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"
18 ga.	12	3.7	GL122518	U	1057	552	312	200	140	103	80	64	52	43	36	31	27	23	20	18	16
				D	.03	.10	.17	.27	.39	.54	.71	.90	1.13	1.38	1.61	1.91	2.23	2.47	2.83	3.20	3.60
				C	529	529	529	501	420	362	319	286	260	239	217	207	194	184	175	167	160
				D	.01	.05	.12	.22	.31	.43	.57	.72	.90	1.09	1.33	1.57	1.85	2.15	2.48	2.85	3.24
	9	3.2	GL92518	U	1552	691	390	251	175	129	100	79	65	54	46	40	35	30	27	24	21
				D	.05	.10	.18	.28	.41	.56	.74	.95	1.18	1.44	1.73	2.05	2.41	2.80	3.22	3.69	4.01
				C	705	705	585	470	394	339	299	268	243	223	207	193	181	171	163	153	145
				D	.02	.07	.14	.23	.33	.45	.59	.76	.94	1.15	1.38	1.64	1.93	2.24	2.58	2.91	3.27
	6	2.6	GL62518	U	2141	954	538	346	241	178	137	109	89	74	63	54	47	42	37	33	30
				D	.04	.09	.16	.25	.36	.50	.65	.83	1.04	1.27	1.52	1.80	2.11	2.45	2.82	3.23	3.67
				C	1053	715	538	432	362	312	274	246	223	204	189	176	165	156	148	141	135
				D	.04	.07	.13	.20	.29	.40	.52	.67	.83	1.01	1.22	1.44	1.69	1.96	2.26	2.58	2.93
16 ga.	12	4.6	GL122516	U	1276	655	370	238	166	123	95	76	62	52	44	37	32	28	24	22	20
				D	.03	.10	.17	.27	.39	.54	.71	.91	1.13	1.39	1.67	1.94	2.21	2.55	2.81	3.34	3.59
				C	638	638	638	595	499	432	381	342	312	285	261	241	224	209	196	184	174
				D	.01	.05	.12	.22	.31	.43	.57	.72	.91	1.10	1.31	1.53	1.78	2.04	2.34	2.63	2.94
	9	3.9	GL92516	U	1949	869	491	316	220	163	126	100	82	69	58	49	43	37	33	29	26
				D	.05	.10	.18	.29	.41	.57	.75	.96	1.19	1.46	1.76	2.05	2.39	2.69	3.16	3.48	3.92
				C	851	851	736	592	496	428	378	339	308	383	261	241	224	209	196	184	174
				D	.02	.09	.15	.23	.33	.45	.60	.76	.95	1.17	1.40	1.64	1.90	2.19	2.48	2.77	3.15
	6	3.2	GL62516	U	2774	1235	696	447	312	230	177	140	114	95	81	69	60	53	47	42	38
				D	.04	.09	.17	.26	.38	.51	.67	.86	1.06	1.30	1.55	1.84	2.15	2.49	2.86	3.26	3.69
				C	1134	926	696	559	467	402	354	316	286	262	242	225	211	198	188	178	170
				D	.02	.07	.13	.21	.30	.41	.54	.69	.85	1.04	1.24	1.47	1.72	1.99	2.29	2.61	2.95
14 ga.	12	5.6	GL122514	U	1276	783	442	284	199	147	113	90	74	62	52	44	38	35	29	28	25
				D	.03	.10	.17	.27	.39	.54	.71	.91	1.13	1.38	1.63	1.94	2.20	2.70	2.92	3.58	4.08
				C	730	730	730	711	596	514	454	407	370	338	310	286	266	248	233	219	207
				D	.01	.05	.12	.22	.31	.43	.57	.72	.90	1.09	1.31	1.53	1.77	2.04	2.33	2.63	2.96
	9	4.8	GL92514	U	2357	1050	593	381	266	196	151	121	98	82	70	58	50	45	40	36	32
				D	.04	.10	.18	.28	.41	.56	.74	.94	1.17	1.43	1.72	1.88	2.21	2.57	2.96	3.39	3.85
				C	974	974	889	714	598	516	454	407	369	339	314	282	265	250	238	227	218
				D	.02	.07	.14	.23	.33	.45	.59	.75	.94	1.14	1.38	1.50	1.77	2.05	2.37	2.71	3.08
	6	4.0	GL62514	U	3722	1654	931	596	414	304	233	184	149	123	103	88	76	66	58	52	46
				D	.05	.10	.18	.29	.42	.56	.74	.93	1.15	1.39	1.65	1.93	2.25	2.57	2.91	3.32	3.70
				C	1461	1241	931	744	620	532	465	414	372	338	310	286	266	248	233	219	207
				D	.03	.09	.14	.23	.33	.45	.58	.74	.92	1.11	1.32	1.55	1.80	2.06	2.36	2.65	2.98

U- Allowable Simple Span Uniform Load (lb/sq ft); C - Allowable Simple Span Concentrated Line Load at mid-span (lb); D - Vertical Deflection at Mid-span (in)

Safe allowable loads with deflections equal to or less than L/120

Safe allowable loads with deflections equal to or less than L/240



Left: **Grate-Lock™ flooring**

Right: **Grate-Lock™ applied in ceiling application**



3” Channel Height - Plank — Load Table

Gauge	Width In	Wgt lb/ft	Catalog No.		Clear Span 2’-0”	3’-0”	4’-0”	5’-0”	6’-0”	7’-0”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”	13’-0”	14’-0”	15’-0”	16’-0”	17’-0”	18’-0”
18 ga.	12	3.9	GL123018	U	1057	611	345	222	155	114	88	70	57	48	41	35	31	27	24	22	20
				D	.02	.07	.12	.19	.28	.39	.51	.65	.80	.98	1.20	1.43	1.68	1.95	2.25	2.58	2.93
				C	529	529	529	529	472	405	354	316	287	263	244	229	215	203	193	184	177
				D	.01	.03	.07	.14	.22	.31	.41	.52	.64	.79	.95	1.14	1.34	1.56	1.80	2.06	2.34
	9	3.3	GL93018	U	1881	840	472	302	210	154	118	93	76	62	52	45	39	34	30	26	24
				D	.03	.08	.13	.21	.31	.42	.55	.68	.86	1.01	1.21	1.43	1.70	1.93	2.23	2.47	2.81
				C	705	705	705	567	472	405	354	315	283	258	236	218	202	189	177	168	161
				D	.01	.04	.11	.17	.24	.33	.44	.55	.68	.82	.98	1.15	1.32	1.52	1.74	1.97	2.24
	6	2.8	GL63018	U	2834	1260	709	453	315	231	177	140	113	94	79	67	58	50	44	39	35
				D	.04	.07	.13	.21	.29	.39	.52	.66	.80	.99	1.19	1.37	1.14	1.82	2.08	2.34	2.60
				C	1058	945	709	567	472	405	354	315	283	258	236	218	202	189	177	167	157
				D	.02	.06	.11	.16	.23	.32	.42	.53	.65	.60	.93	1.11	1.28	1.47	1.66	1.14	2.09
14 ga.	12	5.9	GL123014	U	1461	950	536	345	241	178	137	109	89	74	63	54	47	42	37	33	30
				D	.02	.07	.13	.20	.29	.40	.53	.67	.84	1.02	1.23	1.46	1.71	1.99	2.29	2.62	2.98
				C	730	730	730	730	722	622	548	491	446	409	379	353	332	314	298	284	272
				D	.01	.03	.07	.14	.23	.32	.42	.54	.67	.82	.98	1.17	1.37	1.59	1.83	2.10	2.38
	9	5.1	GL93014	U	2597	1477	831	532	369	271	208	164	133	110	92	79	68	59	52	46	41
				D	.03	.09	.16	.25	.36	.48	.63	.79	.98	1.19	1.40	1.67	1.94	2.18	2.53	2.81	3.14
				C	974	974	974	974	831	712	623	554	498	453	415	383	356	332	311	293	277
				D	.01	.04	.10	.20	.28	.38	.50	.63	.78	.95	1.12	1.32	1.54	1.76	2.00	2.27	2.54
	6	4.3	GL63014	U	4984	2215	1246	797	554	407	311	246	199	165	138	118	102	89	78	69	62
				D	.04	.09	.15	.24	.34	.46	.60	.76	.94	1.14	1.35	1.60	1.85	2.12	2.42	2.72	3.05
				C	1461	1461	1246	997	831	712	623	554	498	453	415	383	356	332	311	293	277
				D	.02	.06	.12	.19	.27	.36	.48	.61	.75	.91	1.08	1.27	1.48	1.70	1.92	2.18	2.43

4” Channel Height - Plank — Load Table

Gauge	Width In	Wgt lb/ft	Catalog No.		Clear Span 2’-0”	3’-0”	4’-0”	5’-0”	6’-0”	7’-0”	8’-0”	9’-0”	10’-0”	11’-0”	12’-0”	13’-0”	14’-0”	15’-0”	16’-0”	17’-0”	18’-0”
18 ga.	12	4.2	GL124018	U	1057	996	560	359	249	183	140	111	90	74	62	53	46	40	35	31	28
				D	.03	.06	.11	.16	.24	.34	.42	.54	.66	.81	.96	1.09	1.26	1.45	1.65	1.90	2.11
				C	529	529	529	529	529	529	529	498	448	408	374	345	320	299	280	264	249
				D	.00	.01	.04	.08	.13	.21	.32	.44	.53	.65	.77	.87	1.01	1.17	1.33	1.50	1.68
	9	3.7	GL94018	U	1881	1329	747	478	332	244	187	148	120	99	83	71	61	53	47	41	37
				D	.02	.06	.12	.18	.26	.35	.47	.58	.72	.86	1.03	1.21	1.41	1.60	1.83	2.05	2.34
				C	705	705	705	705	705	641	560	498	448	408	374	345	320	299	280	264	249
				D	.01	.02	.06	.12	.20	.28	.36	.46	.57	.70	.83	.96	1.12	1.28	1.47	1.65	1.85
	6	3.2	GL64018	U	4232	1993	1121	717	498	366	280	221	179	148	125	106	92	80	70	62	55
				D	.03	.06	.10	.18	.25	.34	.44	.55	.69	.83	.99	1.17	1.35	1.54	1.77	1.98	2.24
				C	1058	1058	1058	897	747	641	560	498	448	408	374	345	320	299	280	264	249
				D	.01	.04	.08	.13	.19	.26	.35	.45	.55	.67	.80	.93	1.07	1.24	1.41	1.60	1.78
14 ga.	12	6.5	GL124014	U	1461	1448	814	521	362	266	204	161	131	109	92	79	69	61	54	48	43
				D	.01	.06	.10	.16	.24	.32	.42	.54	.67	.82	.98	1.16	1.35	1.57	1.80	2.06	2.33
				C	730	730	730	730	730	730	730	724	655	599	554	515	483	455	430	409	391
				D	.00	.01	.04	.07	.12	.20	.30	.43	.54	.65	.78	.93	1.08	1.26	1.44	1.65	1.87
	9	5.6	GL94014	U	2597	1988	1120	719	501	369	284	225	184	153	129	111	96	84	75	67	60
				D	.02	.06	.11	.17	.25	.34	.44	.57	.70	.85	1.02	1.21	1.41	1.63	1.88	2.14	2.42
				C	974	974	974	974	974	969	852	761	688	629	581	540	505	475	449	426	406
				D	.01	.02	.05	.10	.17	.27	.36	.45	.56	.68	.82	.97	1.13	1.31	1.50	1.71	1.93
	6	4.8	GL64014	U	5843	2895	1629	1042	724	532	407	322	261	215	181	154	133	116	102	91	82
				D	.03	.06	.12	.19	.28	.37	.48	.61	.75	.91	1.08	1.26	1.47	1.69	1.92	2.19	2.48
				C	1461	1461	1461	1303	1086	931	814	724	651	592	543	501	465	434	407	386	367
				D	.01	.04	.09	.15	.21	.30	.39	.49	.60	.73	.87	1.01	1.18	1.35	1.54	1.75	1.98

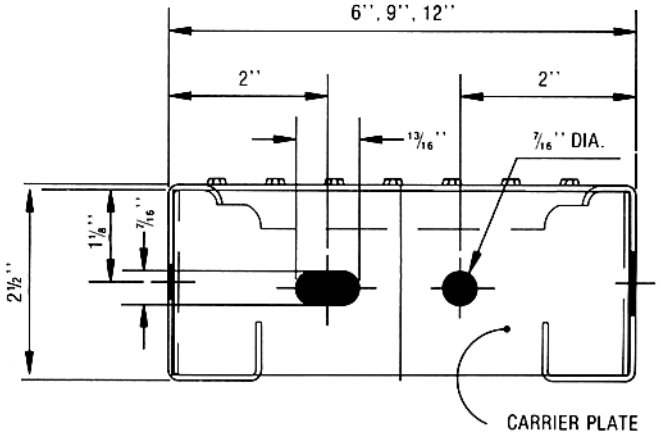
U- Allowable Simple Span Uniform Load (lb/sq ft); C - Allowable Simple Span Concentrated Line Load at mid-span (lb); D - Vertical Deflection at Mid-span (in)

Safe allowable loads with deflections equal to or less than L/120

Safe allowable loads with deflections equal to or less than L/240

GRATE-LOCK™ STAIR TREADS

•Material: 14 ga. mill-galvanized steel
•Length: 24”, 30”, 36”, 48”
•Width: 12”, 9”, 6”
•Channel Height: 2-1/2”



Brown-Campbell manufactures stair treads in a variety of constructions. Please see other sections of this catalog for various stair tread products including Bar Grating, Expanded Metal, Grip Strut® and Perf-O Grip®.

Stair Treads Load Table

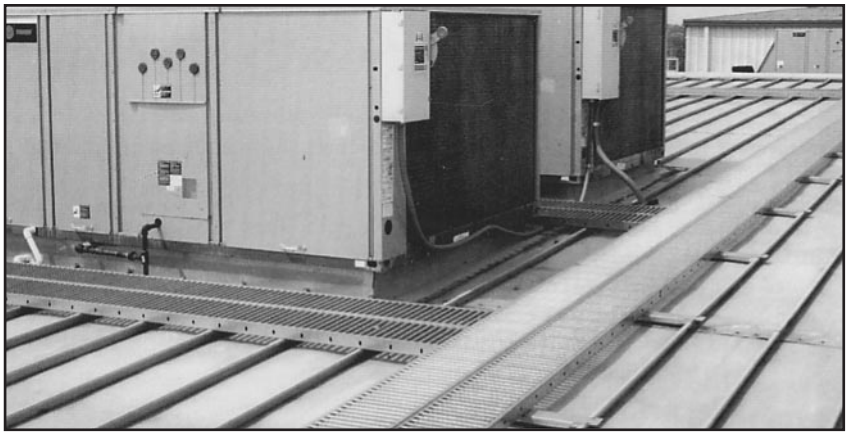
Gauge	Width (In)		Catalog No.	Clear Span 2’-0”	2’-6”	3’-0”	4’-0”
14	12	U	GL122514	1276	816	783	442
		C		730	730	730	730
	9	U	GL92514	2356	1508	1050	593
		C		974	974	974	889
	6	U	GL62514	3722	2382	1654	931
		C		1461	1168	1241	931

Note: Intermediate stringer recommended for spans over 4’.

GRATE-LOCK™ ROOFTOP WALKWAY SYSTEMS

Metal roofs meet a wide variety of design and performance needs. As a result, the square footage and building varieties covered by metal standing seam roofs has increased rapidly. These thin gauged roofing systems are engineering wonders, but they are not made to absorb foot and maintenance traffic. Grate-Lock™ Systems are an ideal solution to this situation. It is also an ideal solution for safer footing on rooftop applications.

- **Optimizes Roof Performance**
  - Saves roof from walking and equipment abuse
  - Maximizes direct, free-flow drainage through elevated planks and open support
- **Versatile** - Designed for most metal roof systems
- **Flexible** - Innovative design easily adapts to changing traffic patterns, accommodates level and roof slope changes, allows multiple piece consolidation to accommodate wider walkways
- **Traffic control** - Raised level discourages “shortcuts”
- **Safe, Year-Round Use** - Raised level stays above snowfalls, drains snow, stays slip-resistant in three directions
- **Easy Installation** - Goes down fast, stays where you want it
- **Economical** - Long life, low maintenance on roof and walkway

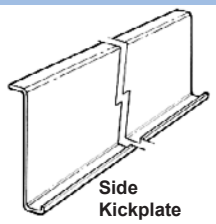


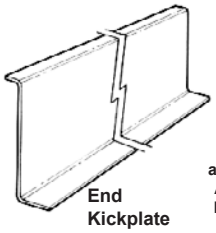


Brown-Campbell has the ‘GRATE’ combination of years of experience and an expansive inventory. This only means one thing to you, the customer - fast delivery of the quality product you expect and deserve. Call 1-800-GRATING and experience the best service in the industry!

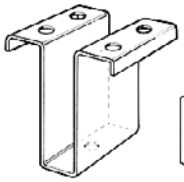
VISIT OUR WEBSITE at brown-campbell.com

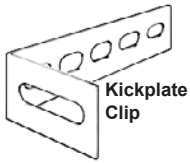
GRATE-LOCK™ ACCESSORIES

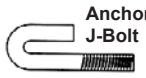


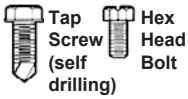


See right for attachment photos of Anchor J-Bolt, Hold Down Clip and Hold Down Clamp.



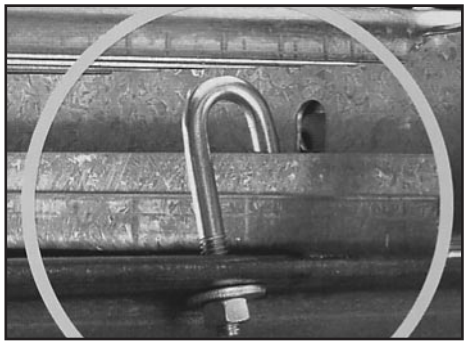






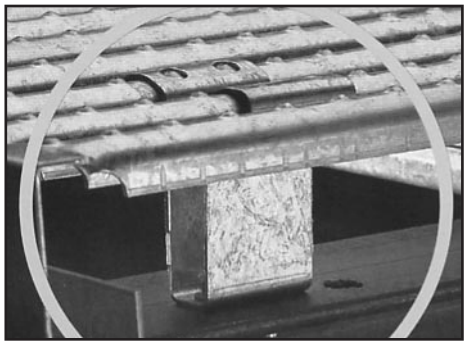
Grate-Lock™ Accessories

Item	Catalog No.	Height (In)
Side Kickplate (14 ga.) 12 ft. lengths	M-SK-2514	6-1/2
	M-SK-3014	7
	M-SK-4014	8
End Kickplate (14 Ga.) 12 ft. lengths	M-EK-2514	6-1/2
	M-EK-3014	7
	M-EK-4014	8
Kickplate Clip	M-KC	n/a
Hold Down Clip - Select by height of grating. (Self tapping screws sold separate.)	M-HC-15	1-1/2
	M-HC-25	2-1/2
	M-HC-30	3
	M-HC-40	4
Anchor J-Bolt (Washer & Nut not included)	M-250J	2-13/16
Hold Down Clamp (Bolt, nut, washer not included)	RTM-SW	Side Channel +1
Tap Screw - self drilling	M-SDST-25	1
3/8" Hex Head Bolt with nut and washer	M-100-B	1



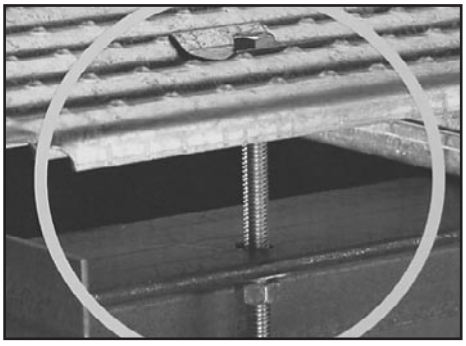
ANCHOR J-BOLT

Assembly:
1. Align planks on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes near the outer edges of the plank. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Place the threaded end of J-Bolts into drilled hole. Place the "J" end of J-Bolt in the gutters along each edge of the plank. Tighten with washers and nuts until secure.



HOLD DOWN CLIP

Assembly:
1. Align planks on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes under the second or third slot from the end of plank. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Align hold down clip over the drilled holes. Make sure the top of hold down clip attaches firmly to the ridges of plank. Tighten screws until secure.



HOLD DOWN CLAMP

Assembly:
1. Align planks on I-Beam or other anchoring cross-member.
2. Mark the I-Beam for drilling purposes. Drill a pilot hole.
3. Remove plank and drill a finish hole.
4. Replace plank. Place hold down clamp in a slot of plank, which is now over the drilled hole. Make sure the hold down clamp and drilled hole line up.
5. Run bolt through hold down clamp, plank, and I-Beam. Tighten with washer and nut until secure.

GRATE-LOCK™ ASSEMBLY INFORMATION

Good Design Practices

These specifications are presented as a general guide in preparing project specifications:

1) All supports should provide a smooth, level, 1-1/2" minimum bearing surface (2-1/2" when using hold-down clip), free of burrs, bridging, welds or other irregularities.
2) Random cut ends and diagonal or circular cut exposed edges should be banded and welded at contact points at the discretion of the design engineer.
3) Bolted connections, except stair or ladder tread attachment to stringer channels, may be replaced by welded connections that develop the same strength.
4) Interlocking panels must be bolted or welded together when kickplates are used.

Grating Installation

Install grating in accordance with manufacturer's recommendations and shop drawings. Position grating sections flat and square with ends bearing minimum 1-1/2" on supporting structure. Keep grating sections at least 1/4" away from vertical steel sections and 1/2" from concrete walls. Allow clearance at joints between sections of maximum 1/4" at side channels and maximum 3/8" at ends. Band random cut ends and diagonal or circular cut exposed edges with a minimum 1/8" thick bar welded at contact points.

Grating Attachment - attach grating to supports without warp or deflection as follows:

1) **Single Plank Attachment** - Secure plank ends to supporting members at every point of contact. Use Grate-Lock™ accessories.
2) **Multiple Plank Application** - Secure plank ends to supporting members at every point of contact and intermediate grating sections with at least one attachment at each end of plank on alternate sides. For added rigidity, attach side channels of adjacent plank together (at mid-point of span).
3) **Welded Attachment** - Secure side channels to supports by fusion welding with 1/8" fillet welds 1" long. Weld adjacent planks together with 1/8" fillet welds 1" long, 24" o.c. staggered top and bottom.
4) **Clamp and Bolt Attachment** - Secure intermediate planks to supports using proper length hold-down clamps.



Traction-Tread™

Traction-Tread™ flooring and planks feature a surface with hundreds of perforated buttons that provide slip-resistance in all directions making it a practical choice for industrial applications. Traction-Tread™ is also appropriate for commercial applications where pedestrian traffic is a consideration, perfectly suited for ADA-compliant requirements. Available in flooring or plank configurations making it easily adaptable for a multitude of applications, offering a safe walking and working surface for walkways, ramps, stair treads and equipment platforms. It is ideal for the manufacture of special and fabricated products, and is often used as a reconditioning material over existing surfaces that do not provide slip-resistance.

• High Slip-Resistance in All Directions • Surface Design Flexibility • ADA Compliant

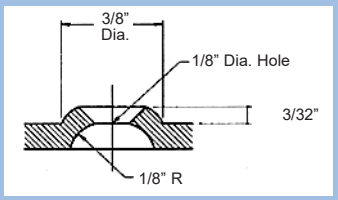
It is easily adapted for a multitude of applications, offering a safe walking and working surface for walkways, ramps, stair treads and equipment platforms. It is often used as a reconditioning material over existing surfaces that do not provide slip-resistance.

Brown-Campbell Traction-Tread™ is available in plank and walkways. Custom stair treads, rooftop walkway systems, and work platforms are also available.

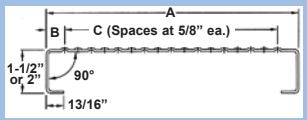
STOCK & AVAILABILITY

Material Type/Finish	Gauge	Material Type/Finish	Gauge
FLOORING Standard Pattern		**PLANKS Standard Pattern**	
HRP&O Plain Steel	11, 13, 16	HRP&O Plain Steel	11, 13
Pre-Galvanized	11, 13	Pre-Galvanized	11, 13
Aluminum	.125”	Aluminum	.125”
304 Stainless Steel	16		
FLOORING Star -with or without drainage		**PLANKS Star/Square -no drainage**	
HRP&O Plain Steel	11, 13	HRP&O Plain Steel	11, 13
Pre-Galvanized	13	Pre-Galvanized	11, 13
Aluminum	.125”	Aluminum	.125”
FLOORING Square -with or without drainage		**PLANKS Star/Square -with drainage**	
HRP&O Plain Steel	11, 13, 16	HRP&O Plain Steel	11, 13
Pre-Galvanized	13	Pre-Galvanized	13
Aluminum	.125”	Aluminum	.125”

DIMPLE DETAIL



PLANK DETAILS



Width	A	B	C
7”	6-7/8”	15/16”	8
10”	9-7/8”	7/8”	13
12”	11-7/8”	15/16”	16

Heights: 1-1/2”, 2”
Widths: 7”, 10”, 12”
Lengths: 10’, 12’,
or length cut to size

FLOORING DETAILS

Traction-Tread™ Flooring Pounds/Square Foot	
Standard Pattern Flooring	
11 ga. HRP&O	5.0#
12 ga. HRP&O	4.4#
13 ga. HRP&O	3.8#
14 ga. HRP&O	3.1#
16 ga. HRP&O	2.5#
11 ga. Pre-Galvanized	5.0#
13 ga. Pre-Galvanized	3.8#
.125 ga. Aluminum	1.6#
16 ga. 304 Stainless Steel	2.4#

Square Pattern (Special Pattern)		
	Without Drainage	With Drainage
11 ga. HRP&O	5.0#	4.7#
13 ga. HRP&O	3.8#	3.5#
16 ga. HRP&O	2.5#	2.3#
13 ga. Pre-Galvanized	3.8#	3.5#
.125 ga. Aluminum	1.6#	1.6#

Standard Size: Width: 36”
Length: 10’

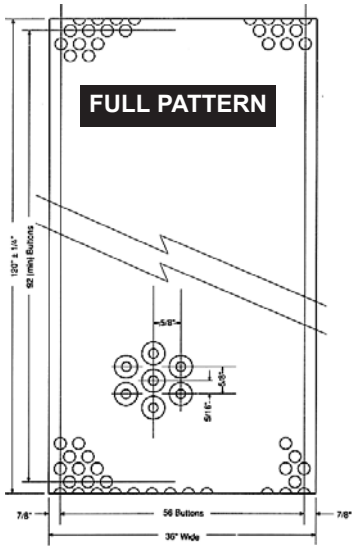
Flooring width and length can be cut to size

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

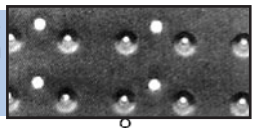
THINK ABOUT:
1. Application or use of product (including environment)
2. Physical requirements: loading, open area, slip resistance

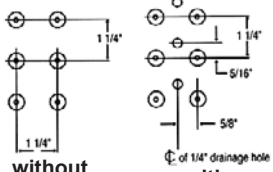
PLEASE SPECIFY:
- **Traction-Tread™ Grating**
- **Quantity:** # of pieces or planks required
- **Material:** See Product List for availability
- **Width:** Planks: 7", 10", or 12"; Flooring: 36" or cut to size
- **Length:** Planks: 10', 12', or cut to size up to 24'; Flooring: 10' or cut to size
- **Height:** Steel Plank: 1-1/2" or 2"; Aluminum Plank: 2"
- **Accessories:** Carriage Bolts



TRACTION-TREAD™ SPECIAL PATTERNS

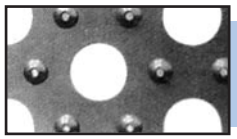
Square Pattern with drainage

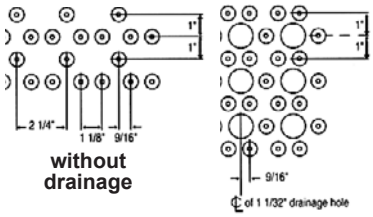




without drainage — with drainage

Star Pattern with drainage





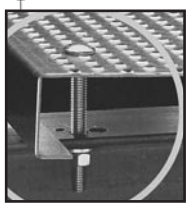
without drainage — with drainage

ACCESSORIES

CARRIAGE BOLT

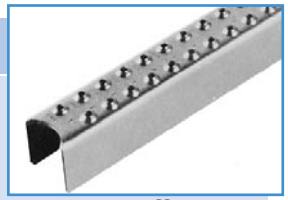
Available in various sizes.
Hardware is not provided.





9 LOCATIONS TO SERVICE YOUR SPECIALTY METAL & FIBERGLASS NEEDS!

LADDER RUNGS



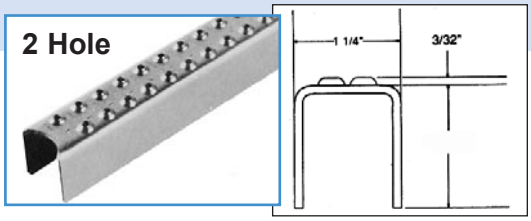
Traction-Tread™ Ladder Rungs are available in 2-Hole, 3-Hole and 4-Hole patterns, offering moderate slip resistance with a comfortable surface for hands.

Small channel shaped sections; the web of the channel being the walking surface which is covered with small perforated dimples, produced by a cold forming process. Available in 2, 3, or 4 hole configurations.

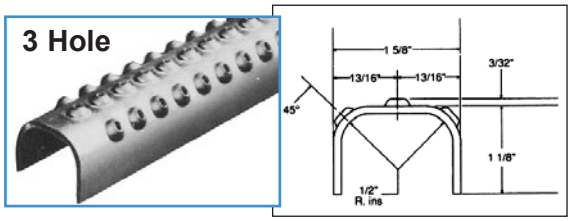
Material: 13 & 11 ga. Pre-Galvanized and HRP&O Plain Steel

-See page 187 for load details

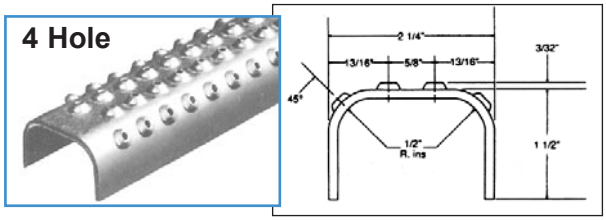
2 Hole



3 Hole



4 Hole



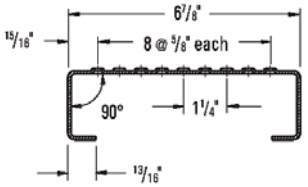
ISO 9001:2015 CERTIFIED

ROOFTOP WALKWAY SYSTEMS

Metal roofs meet a wide variety of design and performance needs. As a result, the square footage and building varieties covered by metal standing seam roofs has increased rapidly. These thin gauged roofing systems are engineering wonders, but they are not made to absorb foot and maintenance traffic. Traction-Tread™ Systems are an ideal solution to this situation. It is also an ideal solution for safer footing on rooftop applications.

- **Optimizes Roof Performance** -Saves roof from walking and equipment abuse -Maximizes direct, free-flow drainage through elevated planks and open support
- **Versatile** - Designed for most metal roof systems
- **Traffic Control** - Raised level discourages "shortcuts"
- **Flexible** - Innovative design easily adapts to changing traffic patterns, accommodates level and roof slope changes, allows multiple piece consolidation to accommodate wider walkways
- **Safe, Year-Round Use** - Raised level stays above snowfalls, drains snow, stays slip-resistant in three directions
- **Easy Installation** - Goes down fast, stays where you want it
- **Economical** - Long life, low maintenance on roof and walkway

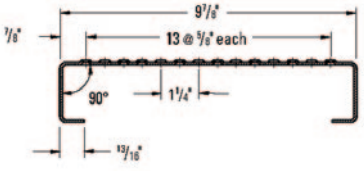
7” Width Traction-Tread™ Plank Standard Pattern — Load Table



Gauge	Channel Depth In	Wgt lb/ft		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1-1/2	3.40	U	824	675	488	351	257	201	158	144	127	92	69						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	3.71	U	1642	1345	973	700	513	400	315	287	253	184	137	104	80	50			
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25			
	3*	4.11	U	4378	3587	2595	1867	1368	1068	841	766	676	491	365	277	214	133	88	60	42
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Steel 11 ga	1-1/2	4.72	U	1032	845	612	440	323	252	198	180	159	116	86						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	5.15	U	2084	1707	1235	889	651	508	400	364	322	233	174	132	102	64			
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25			
	3*	6.13	U	5619	4603	3330	2396	1756	1370	1079	982	867	630	468	355	274	171	112	77	54
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Aluminum .125	1-1/2*	1.63	U	359	294	213	153	112	88	69	63	55	40	30						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	1.80	U	727	595	431	310	227	177	139	127	112	81	61	46	35	22			
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25			

U- Uniform Load (lb/sq ft); D - Deflection (in)
*Available by special order, please call 1-800-GRATING to inquire.

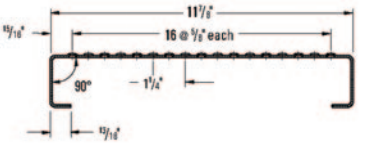
10” Width Traction-Tread™ Plank Standard Pattern — Load Table



Gauge	Channel Depth In	Wgt lb/ft		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1-1/2	4.32	U	628	515	372	268	196	153	121	110	97	70	52						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	4.63	U	1267	1038	751	540	396	309	243	221	195	142	106	80	62				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				
	3*	5.24	U	3412	2795	2022	1455	1066	832	655	597	527	382	284	216	167	104	68	47	33
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Steel 11 ga	1-1/2	6.01	U	787	645	466	336	246	192	151	138	121	88	66						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	6.44	U	1605	1315	951	685	502	392	308	281	248	180	134	101	78				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				
	3*	7.45	U	4380	3588	2595	1868	1369	1068	841	766	676	491	365	277	214	134	88	60	42
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Aluminum .125	1-1/2*	2.07	U	275	225	163	117	86	67	53	48	42	31	23						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	2.22	U	560	469	332	239	175	137	107	98	86	63	47	35	27				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				

U- Uniform Load (lb/sq ft); D - Deflection (in)
*Available by special order, please call 1-800-GRATING to inquire.

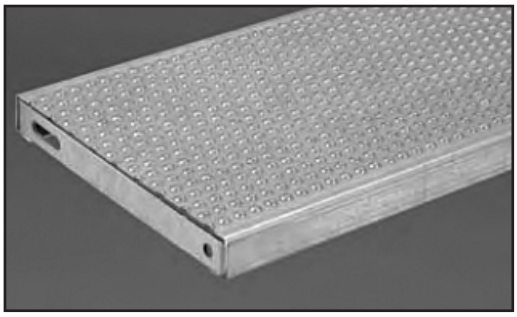
12” Width Traction-Tread™ Plank Standard Pattern — Load Table



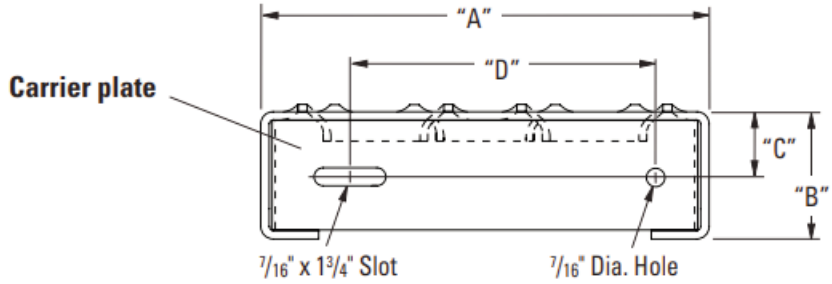
Gauge	Channel Depth In	Wgt lb/ft		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1-1/2	4.93	U	544	445	322	232	170	133	104	95	84	61	45						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	5.24	U	1101	902	652	469	344	268	211	192	170	123	92	70	54				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				
	3*	5.57	U	2986	2446	1769	1273	933	728	573	522	461	335	249	189	146	91	60	41	29
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Steel 11 ga	1-1/2	6.90	U	682	559	404	291	213	166	131	119	105	76	57						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	7.30	U	1395	1143	827	595	436	340	268	244	215	156	116	88	68				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				
	3*	8.23	U	3831	3138	2270	1634	1197	934	736	670	591	429	319	242	187	117	77	52	37
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25	.25	.25	.25	.25
Aluminum .125	1-1/2*	2.37	U	238	195	141	101	74	58	46	42	37	27	20						
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25						
	2	2.52	U	487	399	288	207	152	119	93	85	75	55	41	31	24				
			D	.02	.04	.06	.08	.10	.13	.15	.20	.25	.25	.25	.25	.25				

U- Uniform Load (lb/sq ft); D - Deflection (in)
*Available by special order, please call 1-800-GRATING to inquire.

TRACTION-TREAD™ STAIR TREADS



Carrier Plates allow you to create your own custom stair treads.



All treads have welded ends for attachment to stringers.
- Mill-galvanized steel: 11 ga and 13 ga
- Aluminum alloy 5052-H32: .125"
- Also available in HRP&O carbon steel: 11 ga and 13 ga
- 24" to 48" lengths
- Custom lengths can be made with the use of carrier plates
- 7" 10" and 12" (nominal) widths
- 1-1/2" and 2" channel heights

Stair Tread Carrier Plates
Steel, Aluminum & Stainless Steel

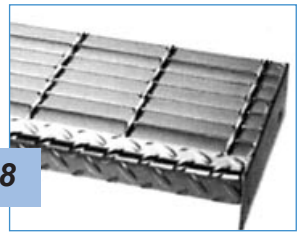
Width	A	B	C	D
7"	6-15/16"	1-1/2"	3/4"	4"
	6-15/16"	2"	1"	4"
10"	9-15/16"	1-1/2"	3/4"	7"
	9-15/16"	2"	1"	7"
12"	11-15/16"	1-1/2"	3/4"	9"
	11-15/16"	2"	1"	9"

Traction-Tread™ Stair Tread Standard Pattern — Load Table

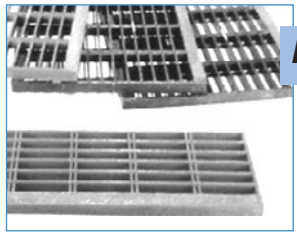
	Material	Channel Depth In	Wgt lb/ft		Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"
7" Width	Steel 13 ga.	1-1/2"	3.73	C	555	483	420	352	295
		2"	4.06	C	1107	963	836	702	588
	Steel 11 ga.	1-1/2"	4.87	C	696	605	526	441	370
		2"	5.43	C	1405	1222	1061	891	746
	Alum .125	1-1/2"	1.70	C	242	211	183	154	129
		2"	1.87	C	490	426	370	311	260
10" Width	Steel 13 ga.	1-1/2"	4.61	C	608	530	460	386	323
		2"	4.89	C	1226	1067	927	778	651
	Steel 11 ga.	1-1/2"	6.24	C	762	663	576	483	405
		2"	6.70	C	1554	1353	1174	986	826
	Alum .125	1-1/2"	2.11	C	266	232	201	169	144
		2"	2.35	C	542	472	409	344	288
12" Width	Steel 13 ga.	1-1/2"	5.00	C	633	551	478	402	336
		2"	5.70	C	1281	1115	968	813	681
	Steel 11 ga.	1-1/2"	7.16	C	794	691	600	504	422
		2"	7.58	C	1624	1414	1227	1031	863
	Alum .125	1-1/2"	2.45	C	277	241	209	176	147
		2"	2.60	C	566	493	428	359	301
Deflection - same for all widths and depths				D	.02	.04	.06	.08	.10

C - Safe allowable concentrated load of center span on simple beam (lbs);
D - Deflection (in)

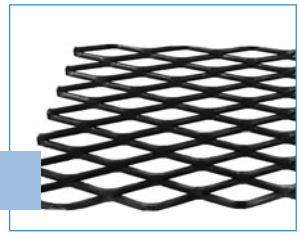
Brown-Campbell also supplies stair treads in these popular products.



Bar Grating...pg 78

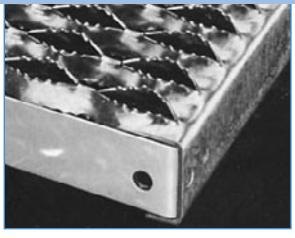


Fiberglass...pg 100



Expanded...pg 42

Grip Strut®...pg 131



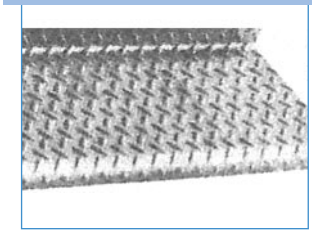
Perf-O Grip®...pg 146

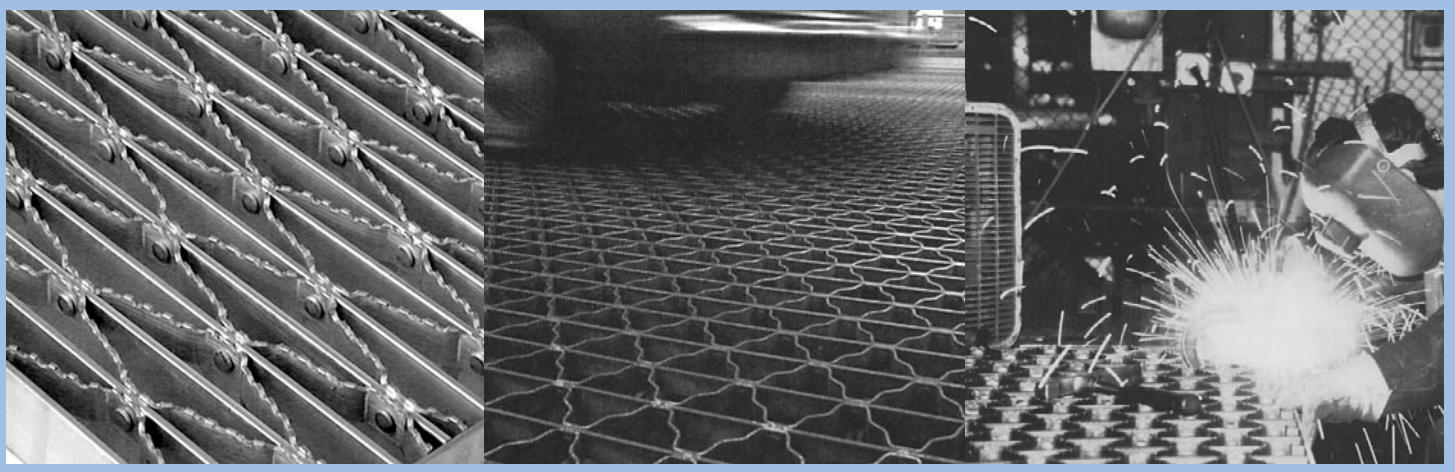


Grate-Lock™...pg 154



Floor Plate...pg 167





Riveted Grating

Riveted Grating is the first choice by many engineers for a multitude of applications. Compared to welded or swage-locked grating, riveted has a greater load carrying capacity for the same span and depth of grating. Reticulated bars, riveted to the bearing bars increase resistance to buckling caused by vehicular loading conditions.

Available in light duty carbon steel, heavy duty carbon steel and aluminum, riveted grating uses individually cold-pressed rivets through hydraulically and mechanically operated riveting tools that provide bearing bars and reticulated bars sealed together as a high-strength joint, freeing the grating from the residual stresses that cause warp and joint failures.

Riveted Grating is ideal in applications using rolling stock and wheeled equipment, especially with casters, since the reticular bars provide a smoother surface. It is also very popular for use as flooring, ramps, docks and ideally suited for walkways because of its added walking comfort.

TYPES OF RIVETED GRATING

LIGHT DUTY: **Light Duty Carbon Riveted Grating includes bar sizes of 3/4" x 1/8" up to 2-1/2" x 3/16". It is primarily used for pedestrian traffic and for light, tired, rolling traffic such as carts, dollies, and hand trucks.**
HEAVY DUTY: **Heavy Duty Carbon Riveted Grating includes bar sizes of 2-1/2" x 3/16" up to 5" x 3/8". It is primarily used where heavy vehicular traffic is utilized including industrial plants utilizing fork lift trucks, highways, and bridges.**
ALUMINUM: **Aluminum Riveted Grating offers a corrosion resistant alternative to carbon. It is lightweight and strong. It is highly utilized in corrosive environments including food/beverage preparation, water vessels, and sewage treatment facilities. Sizes parallel Light Duty Carbon Grating provided above.**
STAIR TREADS: **Offered to match our full Riveted Grating line.**

Carbon Steel Bar Grating
R = Light/Heavy Duty Riveted
RF = Heavy Duty Riveted with Filler Bars

Aluminum Bar Grating
AR = Aluminum Riveted

18 R 7
- •Bearing Bar Spacing 1/16's of an inch (18=1-1/8")
- •Type of Grating R= Riveted
- •Rivet Centers Inches (7= 7 inches)

Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

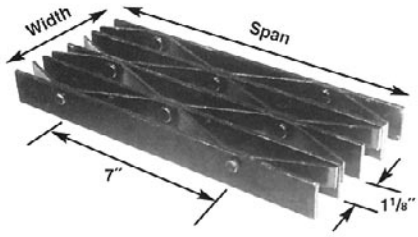
THINK ABOUT:
1. Application or use of product (including environment)
2. Physical requirements: loading, open area, slip resistance

PLEASE SPECIFY:
- **•Riveted Grating**
- **•Description of Grating:**
  - -Type of Grating
  - -Bearing Bar Spacing
  - -Cross Rod Spacing
  - -Bearing Bar Size
  - -Plain, Serrated, or Slip Resistant Surface
  - -Material Type
- **•Drawing Including:**
  - -Area to be Covered
  - -Span (bearing bar direction)
  - -Method of Support
  - -All Critical Dimensions
- **•Anchoring Devices**
- **•Finish**
- **•Shipping Instructions**

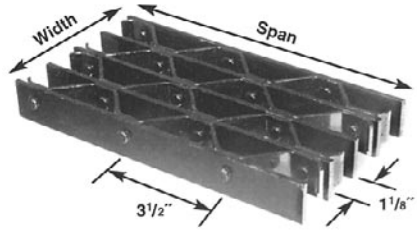
When ordering **Stair Treads** also provide **Nosing Type** and **Number of Treads**.

18R7 & 18R3 Light Duty Riveted

1-1/8" Inside Face to Inside Face of Bearing Bars



18R7
7" Rivet Centers - 1/4" Dia. Rivets



18R3
3-1/2" Rivet Centers - 1/4" Dia. Rivets

Bar Size	Symbol / Approx. Weight Lbs/Sq Ft	Ped. Span	Sec. Mod. Per Ft. Of Width			Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	18R7 6.5# 18R3 7.3#	42"	.113	3/4" X 1/8" CRIMP BAR	U	338	216	150	110	84	67							
					D	.099	.155	.223	.304	.397	.503							
					C	338	270	255	193	169	150							
					D	.079	.124	.179	.243	.318	.402							
3/4" x 3/16"	18R7 7.7# 18R3 8.4#	48"	.161		U	482	309	214	157	121	95							
					D	.099	.155	.223	.304	.397	.503							
					C	482	386	321	276	241	214							
					D	.079	.124	.179	.243	.318	.402							
1" x 1/8"	18R7 7.5# 18R3 8.3#	53"	.200		U	600	384	267	196	150	119	96	76					
					D	.074	.116	.168	.228	.298	.377	.466	.563					
					C	600	480	400	343	300	267	240	218					
					D	.060	.093	.134	.182	.238	.302	.372	.451					
1" x 3/16"	18R7 9.2# 18R3 9.9#	59"	.286		U	857	549	381	280	214	169	137	113					
					D	.074	.116	.168	.228	.298	.377	.466	.563					
					C	857	686	571	490	429	381	343	312					
					D	.060	.093	.134	.182	.238	.302	.372	.451					
1-1/4" x 1/8"	18R7 8.6# 18R3 9.4#	63"	.313		U	938	600	417	306	234	185	150	124	104	89	77		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	938	750	625	536	469	417	375	341	313	288	268		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	18R7 10.7# 18R3 11.4#	70"	.446		U	1339	857	595	437	335	265	214	177	149	127	109		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	1339	1071	893	765	670	595	536	487	446	412	383		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/2" x 1/8"	18R7 10.7# 18R3 11.7#	72"	.450	1" X 1/8" CRIMP BAR	U	1350	864	600	441	338	267	216	179	150	128	110	84	67
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	1350	1080	900	771	675	600	540	491	450	415	386	338	300
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	18R7 13.2# 18R3 14.2#	80"	.643		U	1929	1234	857	630	482	381	309	255	214	183	157	121	95
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	1929	1543	1286	1102	964	857	771	701	643	593	551	482	429
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	18R7 14.7 18R3 15.7#	90"	.875		U	2625	1680	1167	857	656	519	420	347	292	249	214	164	130
					D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
					C	2625	2100	1750	1500	1313	1167	1050	955	875	808	750	656	583
					D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	18R7 16.2# 18R3 17.2#	99"	1.143		U	3429	2194	1524	1120	857	677	549	453	381	325	280	214	169
					D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
					C	3429	2743	2286	1959	1714	1524	1371	1247	1143	1055	980	857	762
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	18R7 17.7# 18R3 18.7#	108"	1.446		U	4339	2777	1929	1417	1085	857	694	574	482	411	354	271	214
					D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
					C	4339	3471	2893	2480	2170	1929	1736	1578	1446	1335	1240	1085	964
					D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	18R7 19.2# 18R3 20.2#	117"	1.786		U	5357	3429	2381	1749	1339	1058	857	708	595	507	437	335	265
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
					C	5357	4286	3571	3061	2679	2381	2143	1948	1786	1648	1531	1339	1190
					D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 18,000 psi.

% Open Area[1]		
Bars	1/8"	3/16"
7"cc	78%	74%
3-1/2"cc	77%	73%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

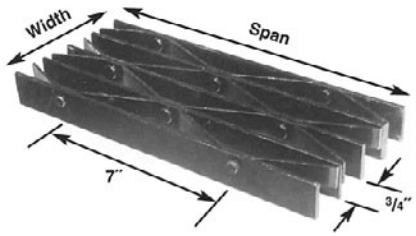
PANEL WIDTH CHART (in inches)

Dimensions shown are out-to-out of bearing bars and include 1/4" for rivet heads (1/8" per side).

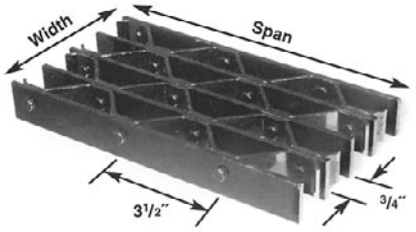
No. of Bars	1/8 Bar	3/16 Bar
2	1-5/8	1-3/4
3	2-7/8	3-1/16
4	4-1/8	4-3/8
5	5-3/8	5-11/16
6	6-5/8	7
7	7-7/8	8-5/16
8	9-1/8	9-5/8
9	10-3/8	10-15/16
10	11-5/8	12-1/4
11	12-7/8	13-9/16
12	14-1/8	14-7/8
13	15-3/8	16-3/16
14	16-5/8	17-1/2
15	17-7/8	18-13/16
16	19-1/8	20-1/8
17	20-3/8	21-7/16
18	21-5/8	22-3/4
19	22-7/8	24-1/16
20	24-1/8	25-3/8
21	25-3/8	26-11/16
22	26-5/8	28
23	27-7/8	29-5/16
24	29-1/8	30-5/8
25	30-3/8	31-15/16
26	31-5/8	33-1/4
27	32-7/8	34-9/16
28	34-1/8	35-7/8
29	35-3/8	37-3/16
30	36-5/8	38-7/16

12R7 & 12R3 Light Duty Riveted

3/4" Inside Face to Inside Face of Bearing Bars



12R7
7" Rivet Centers - 1/4" Dia. Rivets



12R3
3-1/2" Rivet Centers - 1/4" Dia. Rivets

Bar Size	Symbol / Approx. Weight Lbs/Sq Ft	Ped. Span	Sec. Mod. Per Ft. Of Width			Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	12R7 9.0# 12R3 9.6#	45"	.161	3/4" X 1/8" CRIMP BAR	U	482	309	214	157	121	95							
					D	.099	.155	.223	.304	.397	.503							
					C	482	386	321	276	241	214							
					D	.079	.124	.179	.243	.318	.402							
3/4" x 3/16"	12R7 10.5# 12R3 11.0#	52"	.225		U	675	432	300	220	169	133	108						
					D	.099	.155	.223	.304	.397	.503	.621						
					C	675	540	450	386	338	300	270						
					D	.079	.124	.179	.243	.318	.402	.497						
1" x 1/8"	12R7 10.5# 12R3 11.1#	57"	.286		U	857	549	381	280	214	169	137	113					
					D	.074	.116	.168	.228	.298	.377	.466	.563					
					C	857	686	571	490	429	381	343	312					
					D	.060	.093	.134	.182	.238	.302	.372	.451					
1" x 3/16"	12R7 12.6# 12R3 13.1#	64"	.400		U	1200	768	533	392	300	237	192	159	133				
					D	.074	.116	.168	.228	.298	.377	.466	.563	.670				
					C	1200	960	800	686	600	533	480	436	400				
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536				
1-1/4" x 1/8"	12R7 12.0# 12R3 12.6#	68"	.446		U	1339	857	595	437	335	265	214	177	149	127	109		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	1339	1071	893	765	670	595	536	487	446	412	383		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/4" x 3/16"	12R7 14.7# 12R3 15.2#	76"	.625		U	1875	1200	833	612	469	370	300	248	208	178	153		
					D	.060	.093	.134	.182	.238	.302	.372	.451	.536	.629	.730		
					C	1875	1500	1250	1071	938	833	750	682	625	577	536		
					D	.048	.074	.107	.146	.191	.241	.298	.360	.429	.504	.584		
1-1/2" x 1/8"	12R7 15.0# 12R3 15.7#	78"	.643	1" X 1/8" CRIMP BAR	U	1929	1234	857	630	482	381	309	255	214	183	157	121	95
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.724	1.006
					C	1929	1543	1286	1102	964	857	771	701	643	593	551	482	429
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-1/2" x 3/16"	12R7 18.1# 12R3 18.8#	87"	.900		U	2700	1728	1200	882	675	533	432	357	300	256	220	169	133
					D	.050	.078	.112	.152	.199	.251	.310	.376	.447	.524	.608	.794	1.006
					C	2700	2160	1800	1543	1350	1200	1080	982	900	831	771	675	600
					D	.040	.062	.089	.122	.159	.201	.248	.300	.358	.420	.487	.636	.804
1-3/4" x 3/16"	12R7 20.2# 12R3 20.9#	98"	1.225		U	3675	2352	1633	1200	919	726	588	486	408	348	300	230	181
					D	.043	.067	.096	.130	.170	.215	.266	.322	.383	.450	.521	.681	.862
					C	3675	2940	2450	2100	1838	1633	1470	1336	1225	1131	1050	919	817
					D	.034	.053	.077	.104	.136	.172	.213	.257	.306	.360	.417	.545	.689
2" x 3/16"	12R7 22.3# 12R3 23.0#	108"	1.600		U	4800	3072	2133	1567	1200	948	768	635	533	454	392	300	237
					D	.037	.058	.084	.114	.149	.189	.233	.282	.335	.393	.456	.596	.754
					C	4800	3840	3200	2743	2400	2133	1920	1745	1600	1477	1371	1200	1067
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
2-1/4" x 3/16"	12R7 24.4# 12R3 25.1#	118"	2.025		U	6075	3888	2700	1984	1519	1200	972	803	675	575	496	380	300
					D	.033	.052	.074	.101	.132	.168	.207	.250	.298	.350	.406	.530	.670
					C	6075	4860	4050	3471	3038	2700	2430	2209	2025	1869	1736	1519	1350
					D	.026	.041	.060	.081	.106	.134	.166	.200	.238	.280	.324	.424	.536
2-1/2" x 3/16"	12R7 26.5# 12R3 27.1#	128"	2.500		U	7500	4800	3333	2449	1875	1481	1200	992	833	710	612	469	370
					D	.030	.047	.067	.091	.119	.151	.186	.225	.268	.315	.365	.477	.603
					C	7500	6000	5000	4286	3750	3333	3000	2727	2500	2308	2143	1875	1667
					D	.024	.037	.054	.073	.095	.121	.149	.180	.215	.252	.292	.381	.483

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 18,000 psi.

% Open Area[1]		
Bars	1/8"	3/16"
7"cc	69%	65%
3-1/2"cc	68%	64%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

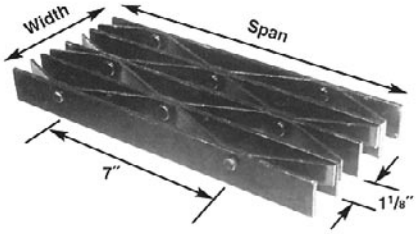
PANEL WIDTH CHART (in inches)

Dimensions shown are out-to-out of bearing bars and include 1/4" for rivet heads (1/8" per side).

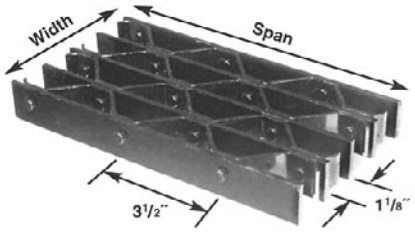
No. of Bars	1/8 Bar	3/16 Bar
2	1-1/4	1-3/8
3	2-1/8	2-5/16
4	3	3-1/4
5	3-7/8	4-3/16
6	4-3/4	5-1/8
7	5-5/8	6-1/16
8	6-1/2	7
9	7-3/8	7-15/16
10	8-1/4	8-7/8
11	9-1/8	9-13/16
12	10	10-3/4
13	10-7/8	11-11/16
14	11-3/4	12-5/8
15	12-5/8	13-9/16
16	13-1/2	14-1/2
17	14-3/8	15-7/16
18	15-1/4	16-3/8
19	16-1/8	17-5/16
20	17	18-1/4
21	17-7/8	19-3/16
22	18-3/4	20-1/8
23	19-5/8	21-1/16
24	20-1/2	22
25	21-3/8	22-15/16
26	22-1/4	23-7/8
27	23-1/8	24-13/16
28	24	25-3/4
29	24-7/8	26-11/16
30	25-3/4	27-5/8
31	26-5/8	28-9/16
32	27-1/2	29-1/2
33	28-3/8	30-7/16
34	29-1/4	31-3/8
35	30-1/8	32-5/16
36	31	33-1/4
37	31-7/8	34-3/16
38	32-3/4	35-1/8
39	33-5/8	36-1/16
40	34-1/2	37
41	35-3/8	37-15/16
42	36-1/4	38-7/8

18AR7 & 18AR3 Aluminum Riveted

1-1/8" Inside Face to Inside Face of Bearing Bars



18AR7
7" Rivet Centers - 1/4" Dia. Rivets



18AR3
3-1/2" Rivet Centers - 1/4" Dia. Rivets

Bar Size	Symbol / Approx. Weight Lbs/Sq Ft	Ped. Span	Sec. Mod. Per Ft. Of Width			Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	18AR7 2.3# 18AR3 2.6#	32"	.113	3/4" X 1/8" CRIMP BAR	U	225	144	100	73	56	44							
					D	.192	.300	.432	.588	.768	.972							
					C	225	180	150	129	113	100							
					D	.154	.240	.346	.470	.614	.778							
3/4" x 3/16"	18AR7 2.7# 18AR3 3.0#	37"	.161		U	321	206	143	105	80	63							
					D	.192	.300	.432	.588	.768	.972							
					C	321	257	214	184	161	143							
					D	.154	.240	.346	.470	.614	.778							
1" x 1/8"	18AR7 2.7# 18AR3 3.0#	41"	.200		U	400	256	178	131	100	79	64	53					
					D	.144	.225	.324	.441	.576	.729	.900	1.089					
					C	400	320	267	229	200	178	160	145					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
1" x 3/16"	18AR7 3.2# 18AR3 3.6#	45"	.286		U	571	366	254	187	143	113	91	76					
					D	.144	.225	.324	.441	.576	.729	.900	1.089					
					C	571	457	381	327	286	254	229	208					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
1-1/4" x 1/8"	18AR7 3.0# 18AR3 3.4#	48"	.313		U	625	400	278	204	156	123	100	83	69	59	51		
					D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411		
					C	625	500	417	357	313	278	250	227	208	192	179		
					D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129		
1-1/4" x 3/16"	18AR7 3.8# 18AR3 4.1#	53"	.446		U	893	571	397	292	223	176	143	118	99	85	73		
					D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411		
					C	893	714	595	510	446	397	357	325	298	275	255		
					D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129		
1-1/2" x 1/8"	18AR7 3.8# 18AR3 4.2#	55"	.450	1" X 1/8" CRIMP BAR	U	900	576	400	294	225	178	144	119	100	85	73	56	44
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944
					C	900	720	600	514	450	400	360	327	300	277	257	225	200
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555
1-1/2" x 3/16"	18AR7 4.6# 18AR3 5.0#	61"	.643		U	1286	823	571	420	321	254	206	170	143	122	105	80	63
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944
					C	1286	1029	857	735	643	571	514	468	429	396	367	321	286
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555
1-3/4" x 3/16"	18AR7 5.1# 18AR3 5.6#	69"	.875		U	1750	1120	778	571	438	346	280	231	194	166	143	109	86
					D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	1.666
					C	1750	1400	1167	1000	875	778	700	636	583	538	500	438	389
					D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	1.333
2" x 3/16"	18AR7 5.7# 18AR3 6.1#	76"	1.143		U	2286	1463	1016	746	571	451	366	302	254	216	187	143	113
					D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
					C	2286	1829	1524	1306	1143	1016	914	831	762	703	653	571	508
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	18AR7 6.2# 18AR3 6.6#	83"	1.446		U	2893	1851	1286	945	723	571	463	383	321	274	236	181	143
					D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
					C	2893	2314	1929	1653	1446	1286	1157	1052	964	890	827	723	643
					D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	18AR7 6.7# 18AR3 7.1#	90"	1.786		U	3571	2286	1587	1166	893	705	571	472	397	338	292	223	176
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
					C	3571	2857	2381	2041	1786	1587	1429	1299	1190	1099	1020	893	794
					D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 12,000 psi.

% Open Area[1]		
Bars	1/8"	3/16"
7"cc	78%	74%
3-1/2"cc	77%	73%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

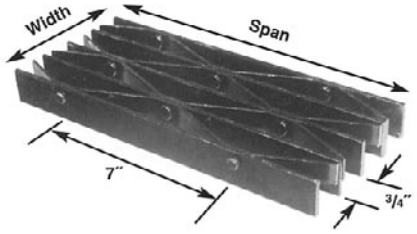
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars and include 1/4" for rivet heads (1/8" per side).

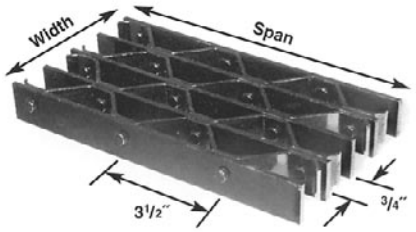
No. of Bars	1/8 Bar	3/16 Bar
2	1-5/8	1-3/4
3	2-7/8	3-1/16
4	4-1/8	4-3/8
5	5-3/8	5-11/16
6	6-5/8	7
7	7-7/8	8-5/16
8	9-1/8	9-5/8
9	10-3/8	10-15/16
10	11-5/8	12-1/4
11	12-7/8	13-9/16
12	14-1/8	14-7/8
13	15-3/8	16-3/16
14	16-5/8	17-1/2
15	17-7/8	18-13/16
16	19-1/8	20-1/8
17	20-3/8	21-7/16
18	21-5/8	22-3/4
19	22-7/8	24-1/16
20	24-1/8	25-3/8
21	25-3/8	26-11/16
22	26-5/8	28
23	27-7/8	29-5/16
24	29-1/8	30-5/8
25	30-3/8	31-15/16
26	31-5/8	33-1/4
27	32-7/8	34-9/16
28	34-1/8	35-7/8
29	35-3/8	37-3/16
30	36-5/8	38-7/16

12AR7 & 12AR3 Aluminum Riveted

3/4" Inside Face to Inside Face of Bearing Bars



12AR7
7" Rivet Centers - 1/4" Dia. Rivets



12AR3
3-1/2" Rivet Centers - 1/4" Dia. Rivets

Bar Size	Symbol / Approx. Weight Lbs/Sq Ft	Ped. Span	Sec. Mod. Per Ft. Of Width			Clear Span 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	12AR7 3.2# 12AR3 3.4#	34"	.161	3/4" X 1/8" CRIMP BAR	U	321	206	143	105	80	63							
					D	.192	.300	.432	.588	.768	.972							
					C	321	257	214	184	161	143							
					D	.154	.240	.346	.470	.614	.778							
3/4" x 3/16"	12AR7 3.7# 12AR3 3.9#	39"	.225		U	450	288	200	147	113	89							
					D	.192	.300	.432	.588	.768	.972							
					C	450	360	300	257	225	200							
					D	.154	.240	.346	.470	.614	.778							
1" x 1/8"	12AR7 3.7# 12AR3 4.0#	43"	.286		U	571	366	254	187	143	113	91	76					
					D	.144	.225	.324	.441	.576	.729	.900	1.089					
					C	571	457	381	327	286	254	229	208					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
1" x 3/16"	12AR7 4.4# 12AR3 4.7#	49"	.400		U	800	512	356	261	200	158	128	106					
					D	.144	.225	.324	.441	.576	.729	.900	1.089					
					C	800	640	533	457	400	356	320	291					
					D	.115	.180	.259	.353	.461	.583	.720	.871					
1-1/4" x 1/8"	12AR7 4.2# 12AR3 4.5#	52"	.446		U	893	571	397	292	223	176	143	118	99	85	73		
					D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411		
					C	893	714	595	510	446	397	357	325	298	275	255		
					D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129		
1-1/4" x 3/16"	12AR7 5.1# 12AR3 5.4#	58"	.625		U	1250	800	556	408	313	247	200	165	139	118	102		
					D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411		
					C	1250	1000	833	714	625	556	500	455	417	385	357		
					D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129		
1-1/2" x 1/8"	12AR7 5.2# 12AR3 5.6#	59"	.643	1" X 1/8" CRIMP BAR	U	1286	823	571	420	321	254	206	170	143	122	105	80	63
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944
					C	1286	1029	857	735	643	571	514	468	429	396	367	321	286
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555
1-1/2" x 3/16"	12AR7 6.3# 12AR3 6.6#	67"	.900		U	1800	1152	800	588	450	356	288	238	200	170	147	113	89
					D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944
					C	1800	1440	1200	1029	900	800	720	655	600	554	514	450	400
					D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555
1-3/4" x 3/16"	12AR7 7.1# 12AR3 7.4#	75"	1.225		U	2450	1568	1089	800	613	484	392	324	272	232	200	153	121
					D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	1.666
					C	2450	1960	1633	1400	1225	1089	980	891	817	754	700	613	544
					D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	1.333
2" x 3/16"	12AR7 7.8# 12AR3 8.1#	83"	1.600		U	3200	2048	1422	1045	800	632	512	423	356	303	261	200	158
					D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458
					C	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914	800	711
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
2-1/4" x 3/16"	12AR7 8.5# 12AR3 8.8#	90"	2.025		U	4050	2592	1800	1322	1013	800	648	536	450	383	331	253	200
					D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296
					C	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013	900
					D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037
2-1/2" x 3/16"	12AR7 9.2# 12AR3 9.5#	98"	2.500		U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	247
					D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166
					C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250	1111
					D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933

U=Safe uniform load, lb/sq ft
C=Safe concentrated load, lb/ft of grating width, at mid-span
D=Deflection in inches
Data is theoretical and based on 12,000 psi.

% Open Area[1]		
Bars	1/8"	3/16"
7"cc	69%	65%
3-1/2"cc	68%	64%

[1]Open Area % for reference only - *%'s will vary with material & mfg. process.*

Note: Weight depends on panel width, cross bar selection, mill tolerance and manufacturing tolerance.

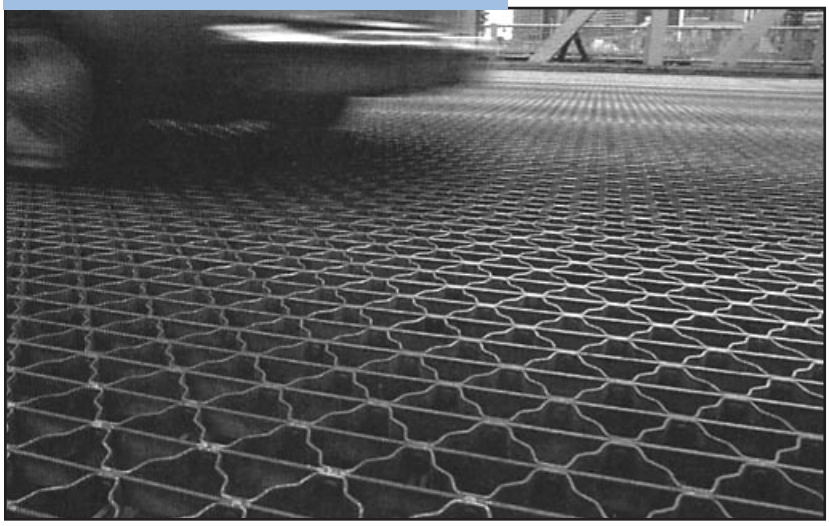
Deflection: To ensure safe pedestrian comfort, maximum deflection (D) should be limited to 1/4" for uniform load of 100 psf (denoted by values to the left of heavy line in table above), however, this can be exceeded for non-pedestrian loading conditions at engineer's discretion.

Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.

PANEL WIDTH CHART (in inches)
Dimensions shown are out-to-out of bearing bars and include 1/4" for rivet heads (1/8" per side).

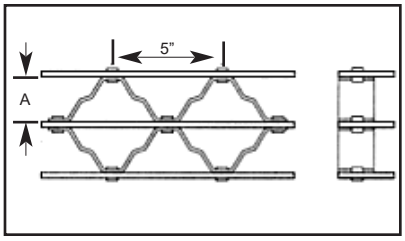
No. of Bars	1/8 Bar	3/16 Bar
2	1-1/4	1-3/8
3	2-1/8	2-5/16
4	3	3-1/4
5	3-7/8	4-3/16
6	4-3/4	5-1/8
7	5-5/8	6-1/16
8	6-1/2	7
9	7-3/8	7-15/16
10	8-1/4	8-7/8
11	9-1/8	9-13/16
12	10	10-3/4
13	10-7/8	11-11/16
14	11-3/4	12-5/8
15	12-5/8	13-9/16
16	13-1/2	14-1/2
17	14-3/8	15-7/16
18	15-1/4	16-3/8
19	16-1/8	17-5/16
20	17	18-1/4
21	17-7/8	19-3/16
22	18-3/4	20-1/8
23	19-5/8	21-1/16
24	20-1/2	22
25	21-3/8	22-15/16
26	22-1/4	23-7/8
27	23-1/8	24-13/16
28	24	25-3/4
29	24-7/8	26-11/16
30	25-3/4	27-5/8
31	26-5/8	28-9/16
32	27-1/2	29-1/2
33	28-3/8	30-7/16
34	29-1/4	31-3/8
35	30-1/8	32-5/16
36	31	33-1/4
37	31-7/8	34-3/16
38	32-3/4	35-1/8
39	33-5/8	36-1/16
40	34-1/2	37
41	35-3/8	37-15/16
42	36-1/4	38-7/8

Heavy Duty Riveted
R & RF Series



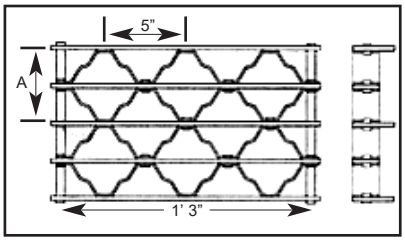
R SERIES

Bearing Bars: 2-1/2" to 2-11/16"
Reticulated Bars: 3/16" x 1-1/2"
Surface: plain, serrated



RF SERIES (WITH FILLER BARS)

Bearing Bars: 5-1/8" to 5-1/4"
Reticulated Bars: 1/4" x 1-1/2"
Filler Bars: 1/4" x 1-1/2"
Lateral Tie Bars: 1/2" x 3/4"
Surface: plain, serrated



For load information please see following page. For panel width data please see below.

Basis For Design

Loadings per AASHTO	H15/HS15	H20/HS20
Total Weight for H or weight on first two axles for HS (lbs)	30,000	30,000
Rear Axle Load (lbs) (80% of total load)	24,000	24,000
Rear Axle Load (lbs) (50% of total load)	12,000	12,000
Impact Factor (maximum)	30%	30%
Rear Wheel Load with Impact (lbs)	15,600	15,600
Load Distribution per AASHTO	**H15/HS15**	**H20/HS20**
Normal to Bearing Bars - inches (1-1/4" per ton of axle load plus twice the bearing bar spacings)	15" + 2A	20" + 2A
Parallel to Bearing Bars (inches)	15"	20"

Fiber Stress (psi) = 20,000

- Heavy Duty Steel Riveted Grating designed in accordance with AASHTO Standard Specifications for Highway Bridges.
- 'A' = Inside Face to Inside Face of Bearing Bars
- It is recommended that bearing bars be placed parallel to traffic. If the engineer specifies placement perpendicular to traffic, measures should be taken to minimize the effects of out-of-place bending of bars due to vehicle acceleration and braking.
- The engineer must specify hold down anchors at ends and supports as necessary.

When it comes to grating, just remember Brown-Campbell! Our experience dates back to 1952 and our knowledgeable sales consultants are ready to service your specialized needs.
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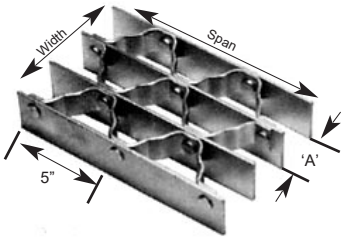
PANEL WIDTH CHART (inches)

Dimensions shown are out-to-out of bearing bars and include 1/4" for rivet heads (1/8" each side).

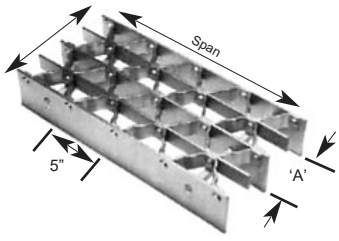
Series	Bar Thickness (in)	Bar Spacing 'A' (in)	Number of Bearing Bars																		
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
R	3/16	2-1/2	2-15/16	5-7/16	7-15/16	10-7/16	12-15/16	15-7/16	17-15/16	20-7/16	22-15/16	25-7/16	27-15/16	30-7/16	32-15/16	35-7/16	37-15/16	40-7/16	42-15/16	45-7/16	47-15/16
	1/4	2-9/16	3-1/16	5-5/8	8-3/16	10-3/4	13-5/16	15-7/8	18-7/16	21	23-9/16	26-1/8	28-11/16	31-1/4	33-13/16	36-3/8	38-15/16	41-1/2	44-1/16	46-5/8	49-3/16
	5/16	2-5/8	3-3/16	5-13/16	8-7/16	11-1/16	13-11/16	16-5/16	18-15/16	21-9/16	24-3/16	26-13/16	29-7/16	32-1/16	34-11/16	37-5/16	39-15/16	42-9/16	45-3/16	47-13/16	50-7/16
	3/8	2-11/16	3-5/16	6	8-11/16	11-3/8	14-1/16	16-3/4	19-7/16	22-1/8	24-13/16	27-1/2	30-3/16	32-7/8	35-9/16	38-1/4	40-15/16	43-5/8	46-5/16	49	51-11/16
RF	1/4	5-1/8	5-5/8	10-3/4	15-7/8	21	26-1/8	31-1/4	36-3/8	41-1/2	46-5/8	51-3/4	56-7/8								
	5/16	5-3/16	5-3/4	10-15/16	16-1/8	21-5/16	26-1/2	31-11/16	36-7/8	42-1/16	47-1/4	52-7/16	57-5/8								
	3/8	5-1/4	5-7/8	11-1/8	16-3/8	21-5/8	26-7/8	32-1/8	37-3/8	42-5/8	47-7/8	53-1/8	58-3/8								

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1-800-GRATING

R & RF Series
Heavy Duty
Riveted



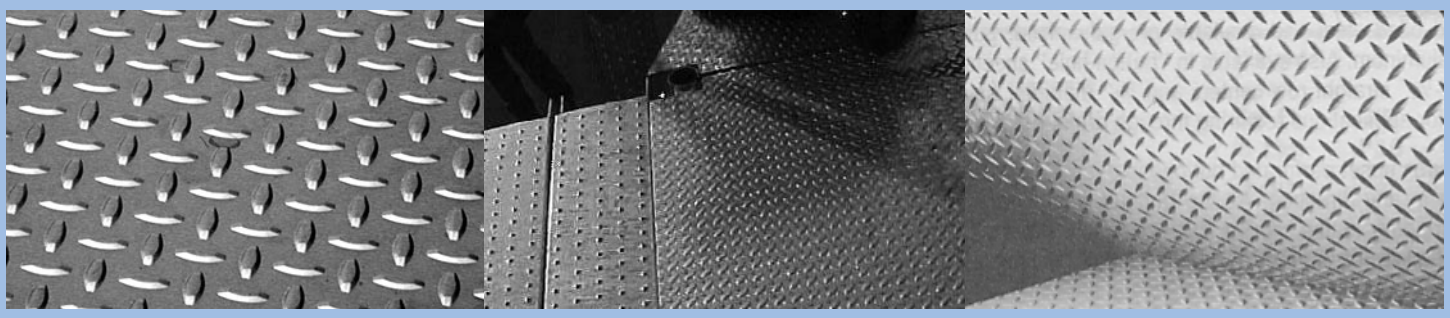
R Plain Surface
3/8" Dia. Rivets



RF Plain Surface
3/8" Dia. Rivets

Symbol	Bearing Bar Size	Reticuline Bar Size	Weight (psf)	Section Modulus (in^3)		Simple Span (in)		Continuous Span (3 or more supports) (in)		'A' Bearing Bar Spacing (in)
				per unit of grating width	per foot of grating width	H-15	H-20	H-15	H-20	
40R5	2-1/2" X 3/16"	1-1/2" X 3/16"	15.3	.1953	.938	15.5	17.5	18.7	21.1	2-1/2
41R5	2-1/2" X 1/4"	1-1/2" X 3/16"	17.4	.2604	1.220	18.0	19.8	21.7	23.9	2-9/16
42R5	2-1/2" X 5/16"	1-1/2" X 3/16"	19.5	.3255	1.488	20.4	22.0	24.6	26.6	2-5/8
43R5	2-1/2" X 3/8"	1-1/2" X 3/16"	21.4	.3906	1.744	22.7	24.2	27.3	29.1	2-11/16
40R5	2-3/4" X 3/16"	1-1/2" X 3/16"	16.1	.2363	1.134	17.2	19.1	20.7	23.0	2-1/2
41R5	2-3/4" X 1/4"	1-1/2" X 3/16"	18.4	.3151	1.476	20.2	21.9	24.3	26.4	2-9/16
42R5	2-3/4" X 5/16"	1-1/2" X 3/16"	20.7	.3939	1.801	23.1	24.6	27.8	29.6	2-5/8
43R5	2-3/4" X 3/8"	1-1/2" X 3/16"	22.8	.4727	2.110	25.9	27.2	31.2	32.7	2-11/16
40R5	3" X 3/16"	1-1/2" X 3/16"	16.8	.2813	1.350	19.0	20.8	22.9	25.1	2-1/2
41R5	3" X 1/4"	1-1/2" X 3/16"	19.4	.3750	1.756	22.6	24.1	27.2	29.1	2-9/16
42R5	3" X 5/16"	1-1/2" X 3/16"	21.9	.4688	2.143	26.0	27.3	31.4	32.9	2-5/8
43R5	3" X 3/8"	1-1/2" X 3/16"	24.3	.5625	2.512	29.4	30.4	35.4	36.7	2-11/16
41R5	3-1/4" X 1/4"	1-1/2" X 3/16"	20.4	.4401	2.061	25.2	26.6	30.4	32.0	2-9/16
42R5	3-1/4" X 5/16"	1-1/2" X 3/16"	23.1	.5501	2.515	29.3	30.4	35.3	36.6	2-5/8
43R5	3-1/4" X 3/8"	1-1/2" X 3/16"	25.7	.6602	2.948	33.2	34.0	40.0	40.9	2-11/16
41R5	3-1/2" X 1/4"	2" X 3/16"	23.6	.5104	2.390	28.1	29.2	33.8	35.2	2-9/16
42R5	3-1/2" X 5/16"	2" X 3/16"	26.5	.6380	2.917	32.7	33.6	39.4	40.5	2-5/8
43R5	3-1/2" X 3/8"	2" X 3/16"	29.2	.7656	3.419	37.3	37.8	44.9	45.5	2-11/16
41R5	3-3/4" X 1/4"	2" X 3/16"	24.6	.5859	2.744	31.1	32.1	37.5	38.7	2-9/16
42R5	3-3/4" X 5/16"	2" X 3/16"	27.7	.7324	3.348	36.5	37.1	43.9	44.7	2-5/8
43R5	3-3/4" X 3/8"	2" X 3/16"	30.6	.8789	3.924	41.7	41.9	50.2	50.5	2-11/16
41R5	4" X 1/4"	2" X 3/16"	25.6	.6667	3.122	34.4	35.1	41.4	42.3	2-9/16
42R5	4" X 5/16"	2" X 3/16"	28.9	.8333	3.810	40.5	40.8	48.8	49.2	2-5/8
43R5	4" X 3/8"	2" X 3/16"	32.0	1.0000	4.465	46.4	46.3	55.9	55.8	2-11/16
41R5	4-1/2" X 1/4"	2" X 3/16"	27.6	.8438	3.951	41.5	41.8	50.0	50.4	2-9/16
42R5	4-1/2" X 5/16"	2" X 3/16"	31.3	1.0547	4.821	49.2	49.0	59.3	59.1	2-5/8
43R5	4-1/2" X 3/8"	2" X 3/16"	34.9	1.2656	5.651	56.7	56.0	68.3	67.4	2-11/16
41R5	5" X 1/4"	2" X 3/16"	29.6	1.0417	4.878	49.5	49.3	59.6	59.4	2-9/16
42R5	5" X 5/16"	2" X 3/16"	33.7	1.3021	5.952	59.0	58.2	71.1	70.1	2-5/8
43R5	5" X 3/8"	2" X 3/16"	37.7	1.5625	6.977	68.2	66.7	82.2	80.4	2-11/16
82RF5	3-1/2" X 1/4"	2" X 3/16"	18.3	.5104	1.195	20.4	21.6	24.6	26.0	5-1/8
83RF5	3-1/2" X 5/16"	2" X 3/16"	19.8	.6380	1.476	23.5	24.4	28.3	29.4	5-3/16
84RF5	3-1/2" X 3/8"	2" X 3/16"	21.3	.7656	1.750	26.6	27.1	32.0	32.7	5-1/4
82RF5	3-3/4" X 1/4"	2" X 3/16"	18.8	.5859	1.372	22.3	23.3	26.9	28.1	5-1/8
83RF5	3-3/4" X 5/16"	2" X 3/16"	20.4	.7324	1.694	25.9	26.5	31.2	31.9	5-3/16
84RF5	3-3/4" X 3/8"	2" X 3/16"	22.0	.8789	2.009	29.4	29.6	35.4	35.7	5-1/4
82RF5	4" X 1/4"	2" X 3/16"	19.3	.6667	1.561	24.3	25.1	29.3	30.3	5-1/8
83RF5	4" X 5/16"	2" X 3/16"	21.0	.8333	1.928	28.4	28.8	34.2	34.7	5-3/16
84RF5	4" X 3/8"	2" X 3/16"	22.7	1.0000	2.286	32.4	32.3	39.0	39.0	5-1/4
82RF5	4-1/2" X 1/4"	2" X 3/16"	20.3	.8438	1.976	28.8	29.2	34.7	35.1	5-1/8
83RF5	4-1/2" X 5/16"	2" X 3/16"	22.2	1.0547	2.440	34.0	33.8	40.9	40.7	5-3/16
84RF5	4-1/2" X 3/8"	2" X 3/16"	24.2	1.2656	2.893	39.0	38.3	47.0	46.1	5-1/4
82RF5	5" X 1/4"	2" X 3/16"	21.3	1.0417	2.439	33.8	33.6	40.7	40.5	5-1/8
83RF5	5" X 5/16"	2" X 3/16"	23.5	1.3021	3.012	40.2	39.3	48.4	47.4	5-3/16
84RF5	5" X 3/8"	2" X 3/16"	25.6	1.5625	3.571	46.4	44.9	55.9	54.1	5-1/4

Note: It is recommended that bearing bars be placed parallel to traffic.
Serrated Grating: For serrated grating, the depth of grating required for a specified load is 1/4" greater than shown in the above table.



Floor Plate

Floor Plate, also referred to as diamond plate, provides a raised diamond lug pattern delivering superior slip resistance for a wide range of applications including machinery platforms, loading docks, boat docks, stairways, truck beds, ramps, and work platforms.

Presents a solid raised durable surface with attractive appearance camouflaging scrapes and dents for years of added wear. Also limits fire to the source, contains spills without surface penetration, and allows easy cleaning with no pockets for dirt/grease accumulation.

CARBON

Thickness: 16 ga., 14 ga., 12 ga., 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"
Widths: 36", 48", 60", 72" (width availability varies with choice of thickness)
Lengths: 96", 120", 144", 240" (length availability varies with choice of thickness)

ALUMINUM

Thickness: .100", .125", .1875", .188", .250", .3125", .375", .4375", .500", .625"
Widths: 36", 48", 60", 72" (width availability varies with choice of thickness)
Lengths: 92", 96", 120", 144", 180", 192" (length availability varies with choice of thickness)

STAINLESS STEEL

Thickness: 1/8", 3/16", 1/4", 3/8"
Widths: 36", 48", 60" (width availability varies with choice of thickness)
Lengths: 96", 120", 144", 240", 288" (length availability varies with choice of thickness)

Floor Plate Load Table

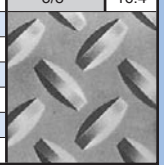
Gauge (in)	Clear Span								
	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	6'-0"
3/16	333	188	120	84	61	47			
1/4	593	333	213	148	109	83	66	53	
5/16	925	520	333	232	170	130	103	83	58
3/8	1335	750	480	333	245	188	148	120	84
7/16	1810	1020	655	453	333	255	204	164	113
1/2	2370	1330	852	592	435	333	264	213	148
9/16	3000	1690	1080	750	550	423	333	270	187
5/8	3700	2080	1330	925	680	520	411	333	232
3/4	5340	3000	1920	1330	980	750	593	480	333
7/8	7258	4088	2613	1815	1333	1022	807	653	454
1	9481	5333	3413	2370	1741	1333	1053	853	593
Deflection Coefficient	**.037**	**.066**	**.104**	**.149**	**.203**	**.265**	**.335**	**.414**	**.596**

-Uniform loads above in lbs per sq ft; Thickness of plate is through body, does not include projections; Loads include weight of plates.
-f = 16,000 psi
-The safe uniform load above the heavy line will exceed the deflection 1/100th of the span
-Deflection in inches with maximum safe uniform load = deflection coefficient divided by thickness of plate in inches
-Deflection in inches with any uniform load within the elastic limit = deflection coefficient times actual load per sq ft all divided by maximum safe load per sq ft times the plate thickness.

Approximate Weight per Sq Ft

Carbon Steel				Aluminum		Stainless Steel	
Thickness	lbs	Thickness	lbs	Thickness	lbs	Thickness	lbs
16 ga.	3.0	5/8"	26.6	.100"	1.6	1/8"	6.2
14 ga.	3.8	3/4"	31.7	.125"	2.0	3/16"	8.7
12 ga.	5.3	1"	41.9	.1875"	2.8	1/4"	11.3
1/8"	6.2			.188"	3.0	3/8"	16.4
3/16"	8.7			.250"	3.9		
1/4"	11.3			.3125"	4.6		
5/16"	13.8			.375"	5.6		
3/8"	16.4			.4375"	6.3		
7/16"	18.9			.500"	7.2		
1/2"	21.5			.625"	9.0		

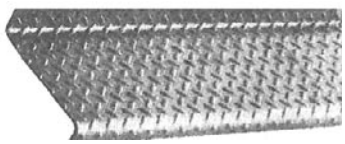
Call Brown-Campbell today for all of your Floor Plate needs
1-800-GRATING



STAIR TREADS

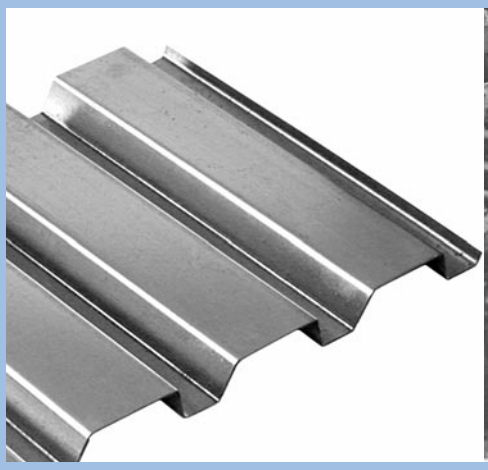
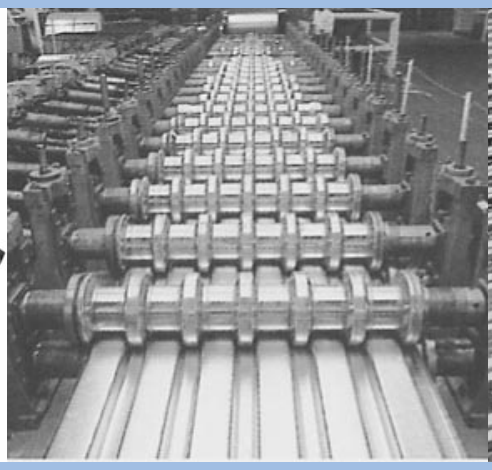
Standard Sizes*:
- **Thickness:** 3/16", 1/4"
- **Widths:** 9", 10", 11", 12"
- **Lengths:** 2', 2-1/2', 3'

(Includes 1" Nosing and 1" Riser)



*Special tread sizes available

Treads are formed, painted, galvanized or furnished plain per your requirements.


Deck

Deck products combine the properties of steel with an efficient profile design to provide a high strength-to-weight ratio.

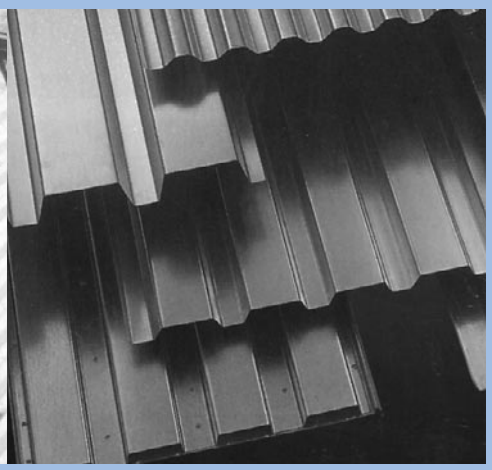
Roof Deck is available in both fluted and cellular configurations, 1-1/2, 3, and 4-1/2 inch depths, 6 or 8 inch rib. Selected coatings and colors, up to 1.0 mil thick, permit innovation and flexibility for special aesthetic or performance conditions. Most sections are also available as acoustical decks to assist the designer in achieving the required noise control.

Composite Floor Deck is available in composite slab construction and can be used with composite beams to provide an efficient structural floor system. Floor decks are engineered for composite beam design and full value shear connectors can be used.

Form Deck Systems are routinely specified for schools, warehouses and low and high rise buildings. These systems offer fast, easy, and economical installation providing strong, secure, stay-in-place form for poured concrete applications.

Brown-Campbell carries a full line of deck products in-stock ready for same day shipment.





Brown-Campbell Deck Products

Type	Description	Page
ROOF DECK	1-1/2" Type B - Wide Rib 1-1/2" Type B Acoustical - Wide Rib	171
	1-1/2" Type F - Intermediate Rib	171
	1-1/2" Type A - Narrow Rib	172
	3" Type N - Deep Rib	172
	4-1/2" Type D - Deep Rib Note: Shipped product may have two small notches or one large notch.	172
	1-1/2" Type L - Cellular	173
	3" Type L - Cellular	173
COMPOSITE FLOOR DECK	1 1/2" - Not Interlocking	177
	2" - Interlocking	178
	3" - Interlocking	178
FORM DECK	Type S	181
	Type HD	182
	Type EH	183
	Type SD	183
	Type FM	183

Note: Illustrations above provided to demonstrate differences in configurations; indentations reflected in diagrams may not necessarily be present in product.

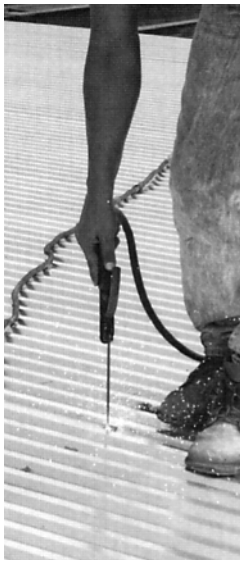


DECK STOCK LIST

Profile	Type	Gauge	Finish
ROOF DECK			
	1-1/2" Type B	18, 20, 22	Painted, Galvanized
	1-1/2" Type B with White Bottom	20	Painted
	1-1/2" Type F	20	Galvanized
		22	Painted
	3" Type N	18, 20	Galvanized
COMPOSITE FLOOR DECK			
	1-1/2" Not Interlocking	18, 20	Galvanized
	2" Interlocking	18, 20	Galvanized
	3" Interlocking	16, 18, 20	Galvanized
FORM DECK			
	Type S	24, 28	Galvanized
	Type HD	22	Galvanized

Stock sizes vary by product, please inquire.





Ordering from Brown-Campbell

Call 1-800-472-8464 and the Brown-Campbell service center closest to you will immediately assist you with your requirements. Your order will be expedited more quickly if you have the following details available when calling.

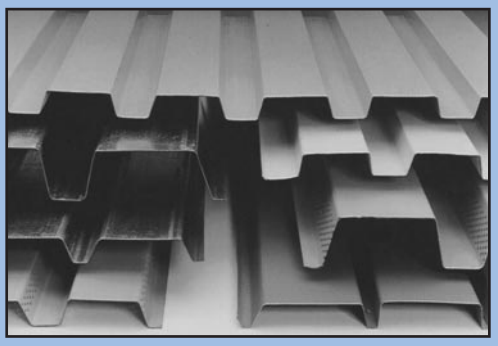
THINK ABOUT:

1. Application or use of product (including environment)
2. Physical requirements

PLEASE SPECIFY:

- **Brown-Campbell superior "Deck Products"**
- **Type-** Roof, Composite Floor, or Form Deck
- **Gauge**
- **Finish-** Galvanized, Unpainted, Painted
- **Width & Length**
- **Quantity**

BROWN-CAMPBELL ROOF DECK **is the ideal product for many non-residential roofing needs. It is designed for pitched, flat, and arched construction roofs and therefore is ideal for many applications including arenas, auditoriums, malls, schools and supermarkets. Diaphragm design with proper attachment patterns can provide lateral stability, reducing the need for structural bracing. It is the product of choice because it is lightweight, strong, economical and easy to install.**



Roof Deck is manufactured in three primary types: standard, acoustical, and cellular. Acoustical roof deck is produced from standard roof deck amended to include perforations along the webs of the ribs. On the job site, rolls of sound absorbing fiberglass are placed between the perforated ribs. NRC ratings of .85 to .95 are possible, depending on the insulating product and the panel type utilized. Cellular acoustical roof deck has a perforated bottom plate. Sound absorbing fiberglass elements are placed in the cells for NRC ratings of .65 to .90.

Brown-Campbell roof deck is available in two finishes, painted and galvanized. Painted roof deck is manufactured from steel conforming to ASTM A611 and galvanized roof deck is manufactured from steel conforming to ASTM A653, both finishes at a minimum 33 ksi yield. Galvanized roof deck is manufactured with a standard coating of G-60, additionally a coating weight of G-90 is available upon request.

Uniform Load Table

1) Loads shown in load tables are uniformly distributed total (dead plus live) loads in pounds per square foot. A dead load of 10 psf is assumed for the deck and typical 20 year built up roof with a slag aggregate. Live load deflection does not exceed L/240. All loads are governed by the allowable flexural stress limit of 20,000 psi for a 33,000 psi minimum yield steel. Where heavy construction loads or unusual concentrated loads are anticipated during the lifetime of the deck, the specified live load must be increased to offset the effects of the abnormal concentrated loading.

2) Span length assumes center to center spacing of supports. Tabulated loads shall not be increased by assuming clear span dimensions.

3) The rib width limitations shown are taken at the theoretical intersection points of the flange and web projection.

4) Bending Moment formula used for flexural stress limitations and deflection formula used for deflection limitations in accordance with the Steel Deck Institute are as follows:

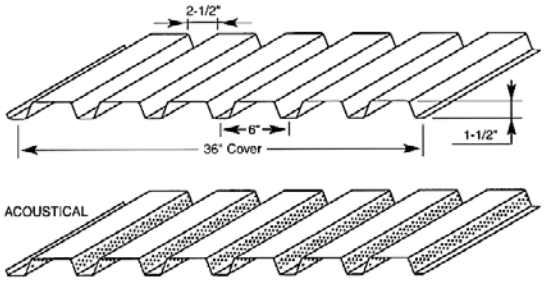
Design	Moment	Deflection
One Span	M = fS = wL^2 x 12/8	D max. = .0130 wL^4 x 1728/EI
Two Spans	M = fS = wL^2 x 12/8	D max. = .0054 wL^4 x 1728/EI
Three or More Spans	M = fS = wL^2 x 12/10	D max. = .0069 wL^4 x 1728/EI

5) The displayed spans (ft - in) are the maximum spans for construction and maintenance loads as specified by SDI. Spans are governed by a maximum stress of .8 Fy and a maximum deflection of L/240 with a temporary 200-lb concentrated load applied at midspan on a 1'0" wide section of deck. For 1-1/2" roof decks required to be in conformance with Factory Mutual (FM) specifications, use the following maximum spans:

FM Allowable Spans for 1-1/2" Roof Decks			
Deck Type	Design Thickness - Gauge		
	22 Gauge	20 Gauge	18 Gauge
Type A	4' - 10"	5' - 3"	6' - 0"
Type F	4' - 11"	5' - 5"	6' - 3"
Type B	6' - 0"	6' - 6"	7' - 5"
Spans may be increased 10% when mechanical insulation fasteners are installed and sidelap fasteners are spaced 18" o.c. FM does not limit the spans on Type "N" roof deck.			

6) All deck weights provided are approximate values to be used for design purposes only.

1-1/2" Type B - Wide Rib Roof Deck

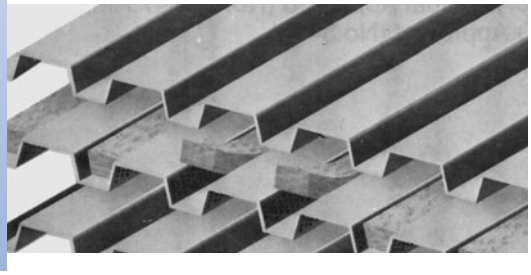


Allowable Uniform Total Loads - psf												
Number of Spans	Gauge	Span - Feet & Inches										
		5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
1 Span	22	92	72	58	47	40	34	30				
	20	116	90	72	58	49	42	36	32			
	18	162	125	98	79	66	55	47	41	36	32	
	16	206	157	123	99	81	68	58	50	44	39	35
2 Span	22	100	82	69	59	51	45	39	35	31		
	20	122	101	85	73	63	55	48	43	38	34	31
	18	163	135	113	97	84	73	64	57	51	45	41
	16	205	170	143	122	105	92	81	72	64	57	52
3 Span	22	124	103	86	74	64	56	49	43	39	35	31
	20	152	126	106	91	78	68	60	53	46	41	36
	18	202	168	141	121	104	91	80	69	60	52	46
	16	255	211	178	152	131	115	101	85	74	64	56

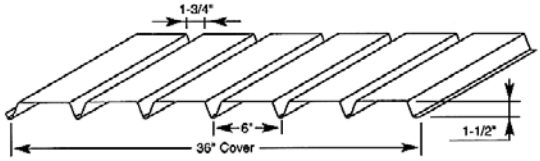
Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
22	1.8#	1.7#
20	2.2#	2.1#
18	2.9#	2.8#
16	3.6#	3.5#

Type B deck provides excellent structural load carrying capacity per pound of steel utilized, and it's nestable design eliminates the need for dieset ends.

Acoustical deck is ideal for auditoriums, schools and theatres where sound control is desirable. Acoustic perforations are located in the vertical webs where the load carrying properties are negligibly affected (less than 5%). Inert, non-organic glass fiber sound absorbing batts are placed in the rib openings to absorb up to 65% of the sound striking the deck. Batts are field installed and may require separation.



1-1/2" Type F - Intermediate Rib Roof Deck



Allowable Uniform Total Loads - psf												
Number of Spans	Gauge	Span - Feet & Inches										
		5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
1 Span	22	63	52	44	38	32						
	20	79	65	55	47	40	35	31				
	18	108	89	75	63	53	45	38	34	30		
2 Span	22	69	57	48	41	35	31					
	20	84	69	58	50	43	37	33				
	18	111	92	77	66	57	49	43	38	34	31	
3 Span	22	86	71	60	51	44	38	34	30			
	20	105	86	73	62	54	47	41	36	32		
	18	138	114	96	82	71	62	54	48	43	38	35

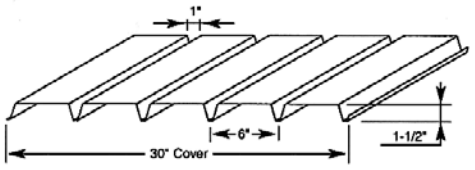
Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
22	1.8#	1.7#
20	2.2#	2.1#
18	2.9#	2.8#



Brown-Campbell offers same day shipment on all in-stock items.

See our Deck stock list on page 169.

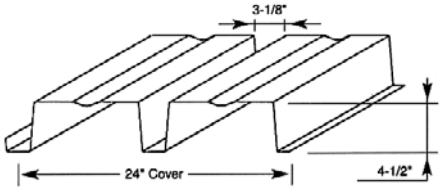
1-1/2” Type A - Narrow Rib Roof Deck



Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
22	1.8#	1.7#
20	2.2#	2.0#
18	2.8#	2.7#

Allowable Uniform Total Loads - psf												
Number of Spans	Gauge	Span - Feet & Inches										
		4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”	8’-6”	9’-0”
1 Span	22	93	73	60	49	41	35	30				
	20	116	91	74	61	51	44	38	33			
	18	158	125	101	84	70	60	51	44	38	33	
2 Span	22	102	80	65	54	45	38	33				
	20	122	97	79	65	55	47	40	35	31		
	18	162	128	104	86	72	62	53	46	41	36	32
3 Span	22	125	99	81	67	56	48	41	36	32		
	20	152	121	98	81	68	58	50	44	38	34	30
	18	201	159	129	107	90	77	66	58	51	45	40

4-1/2” Type D - Deep Rib Roof Deck



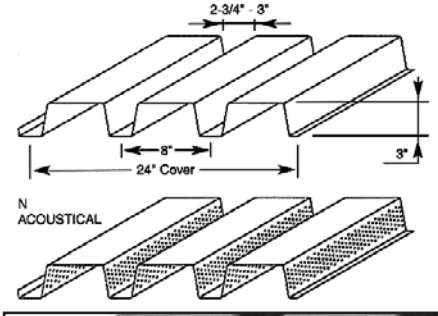
Note: Shipped product may have two small notches or one large notch.

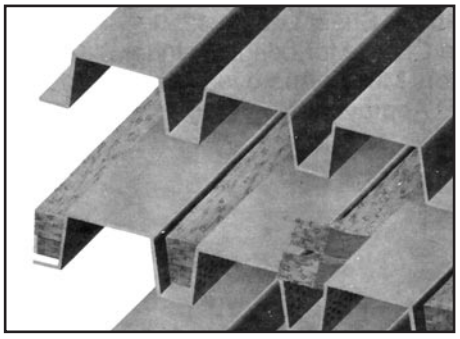
Allowable Uniform Total Loads - psf																
Number of Spans	Gauge	Span - Feet & Inches														
		8’-0”	9’-0”	10’-0”	11’-0”	12’-0”	13’-0”	14’-0”	15’-0”	16’-0”	17’-0”	18’-0”	19’-0”	20’-0”	21’-0”	22’-0”
1 Span	20	94	83	75	68	63	58	51	45	39	35	31	28	25	23	21
	19	122	109	98	89	81	70	61	53	46	41	37	33	30	27	25
	18	155	138	124	113	95	81	70	61	54	47	42	38	34	31	28
	16	272	215	174	144	121	103	89	77	68	60	54	47	42	37	34

Note: Loads shown to the left of the bold line are governed by bearing stress with a 4” end bearing.

Weight (Pounds per Sq Ft)	Gauge	Galvanized
	20	2.7#
	19	3.1#
	18	3.6#
	16	4.4#

3” Type N - Deep Rib Roof Deck



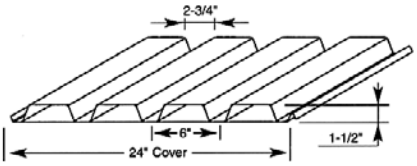


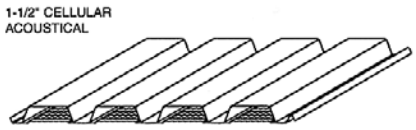
Allowable Uniform Total Loads - psf												
Number of Spans	Gauge	Span - Feet & Inches										
		9’-0”	9’-6”	10’-0”	10’-6”	11’-0”	11’-6”	12’-0”	12’-6”	13’-0”	13’-6”	14’-0”
1 Span	22	64	57	51	47	43	39	36				
	20	81	73	66	59	53	48	43	39	36		
	18	112	100	91	82	72	65	58	53	48	44	40
	16	145	130	118	106	95	84	75	68	61	56	51
2 Span	22	69	63	57	52	47	43	40	37	34		
	20	89	80	73	66	60	55	51	47	43	40	37
	18	120	108	98	89	81	74	68	63	58	54	50
	16	152	136	123	112	102	93	86	79	73	68	63
3 Span	22	78	74	70	65	59	54	50	46	42	39	37
	20	111	100	90	82	75	68	63	58	54	50	46
	18	150	135	122	111	101	92	85	78	72	67	62
	16	189	170	153	139	127	116	107	99	91	85	79

Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
22	2.1#	2.0#
20	2.5#	2.4#
18	3.3#	3.2#
16	4.2#	4.1#

1-1/2" Type L - Cellular Roof Deck

Allowable Uniform Total Loads - psf												
Number of Spans	Gauge	Span - Feet & Inches										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
1 Span	20/20	114	97	80	67	57	49	43	38	34	31	28
	20/18	116	98	85	72	61	52	46	40	36	33	30
	18/20	163	130	106	88	75	64	55	49	43	39	35
	18/18	170	141	115	95	80	68	59	52	46	41	37
	18/16	172	147	122	101	85	73	63	55	48	43	39
	16/18	223	178	144	119	100	85	73	64	56	50	45
	16/16	237	190	154	127	107	91	78	68	60	53	47
2 Span	20/20	170	145	125	109	95	85	75	68	61	55	50
	20/18	173	148	127	111	98	86	77	69	62	57	52
	18/20	216	184	158	138	121	107	96	86	78	70	64
	18/18	220	187	162	141	124	110	98	88	79	72	65
	18/16	224	191	165	144	126	112	100	90	81	73	67
	16/18	267	227	196	171	150	133	119	106	96	87	79
	16/16	272	232	200	174	153	136	121	109	98	89	81
3 Span	20/20	178	151	131	114	99	84	72	63	56	49	44
	20/18	181	154	133	116	102	90	77	67	59	52	47
	18/20	263	224	191	157	132	111	95	83	72	64	57
	18/18	266	227	196	170	142	120	103	89	78	68	61
	18/16	269	229	198	172	151	128	109	94	82	73	64
	16/18	333	284	245	213	179	151	129	111	97	85	75
	16/16	340	290	250	218	191	162	138	119	103	91	80

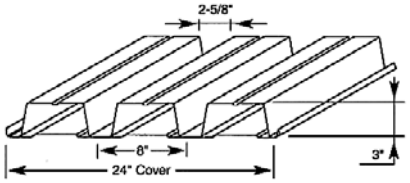


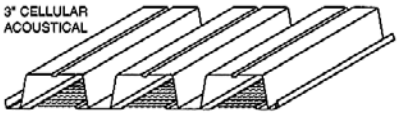


Weight (Lbs per Sq Ft)	
Gauge	Galvanized
20/20	3.8#
20/18	4.3#
18/20	4.5#
18/18	5.1#
18/16	5.6#
16/18	5.8#
16/16	6.4#

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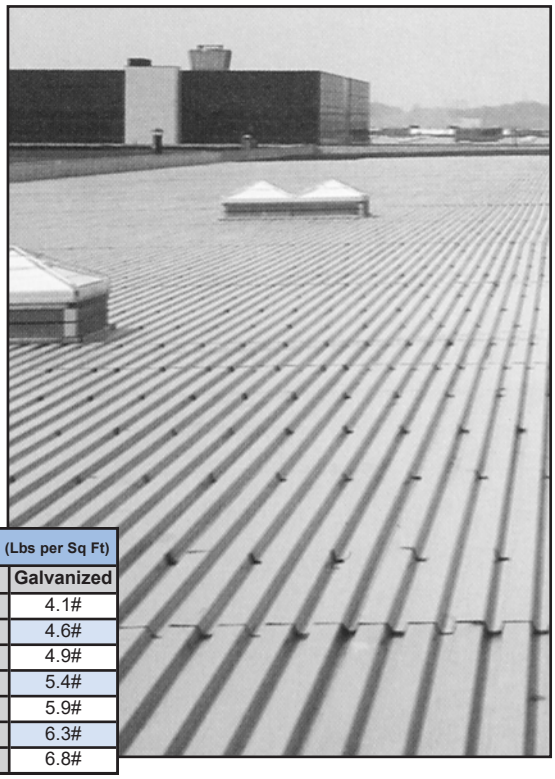
3" Type L - Cellular Roof Deck





Allowable Uniform Total Loads - psf														
Number of Spans	Gauge	Span - Feet & Inches												
		9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
1 Span	20/20	98	92	88	84	80	76	73	70	66	60	55	51	47
	20/18	98	92	88	84	80	76	73	70	68	65	59	54	50
	18/20	180	171	161	141	124	109	97	87	79	71	65	60	55
	18/18	180	171	162	153	134	119	106	95	85	77	70	64	59
	18/16	180	171	162	154	144	128	113	102	91	83	75	69	63
	16/18	276	236	204	177	156	137	122	109	98	89	81	74	67
	16/16	284	254	219	191	167	147	131	117	105	95	86	79	72
2 Span	20/20	125	118	112	107	102	96	88	81	75	69	65	60	56
	20/18	125	118	112	107	102	98	93	86	79	74	69	64	60
	18/20	184	165	149	135	123	113	104	95	88	82	76	71	66
	18/18	210	191	172	156	142	130	119	110	102	94	88	82	76
	18/16	210	198	179	162	148	135	124	114	106	98	91	85	79
	16/18	248	223	201	182	166	152	140	129	119	110	103	96	89
	16/16	271	243	219	199	181	166	152	140	130	120	112	104	97
3 Span	20/20	122	116	110	105	100	95	91	88	84	81	78	75	70
	20/18	122	116	110	105	100	95	91	88	87	81	78	76	73
	18/20	225	207	187	169	154	141	130	119	110	102	95	89	83
	18/18	225	213	203	193	178	163	149	138	127	118	110	102	96
	18/16	225	213	203	193	184	169	155	143	132	122	114	106	99
	16/18	310	278	251	228	208	190	175	161	149	138	128	120	112
	16/16	338	304	274	249	226	207	190	175	162	150	140	130	122

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Weight (Lbs per Sq Ft)	
Gauge	Galvanized
20/20	4.1#
20/18	4.6#
18/20	4.9#
18/18	5.4#
18/16	5.9#
16/18	6.3#
16/16	6.8#

BROWN-CAMPBELL COMPOSITE FLOOR DECK is designed for non-residential applications in low-rise, high-rise, and manufacturing sectors. This flooring system offers the dual purpose of 1) acting as a working platform before and during concrete placement, thereby eliminating the costly effort of utilizing wood forms, and 2) acting as a positive reinforcement for the concrete slabs, thereby eliminating the need for rebar in most cases. In most projects, the only additional reinforcement necessary is welded wire fabric for controlling temperature and shrinkage cracks.



Composite floor deck is comprised of a ribbed profile deck with special rolled-in embossments designed to interlock with the concrete slab. This construction maximizes the efficiency of both the steel and the concrete components. Composite beam design utilizing composite floor deck and shear studs provides a tremendous cost saving opportunity through reduction in the size and cost of steel beams by as much as 30 percent.

Brown-Campbell composite floor deck is available in two finishes, painted and galvanized. Painted floor deck is manufactured from steel conforming to ASTM A611 and galvanized floor deck is manufactured from steel conforming to ASTM A653. Painted composite floor deck is the most cost effective alternative for use in enclosed environments, the painted bottom side of the floor deck is high-heat baked-on thermal setting primer. The end use and exposure to weather and other elements determine the selection of finish. Galvanized roof deck is manufactured with a standard coating of G-60, additionally a coating weight of G-90 is available upon request.

Diaphragm Design - Composite deck slabs can be utilized in diaphragm design with lateral loading. This type of diaphragm is composed of composite steel floor deck and structural, normal or lightweight concrete fill. The concrete fill must have a cover of 2-1/2 inches and attain a minimum compressive strength of 3,000 psi and WWF temperature reinforcing meeting SDI requirements.

Fireproofing - If required by the U.L. Design Assembly requirements or specifying engineer, fireproofing can be sprayed to the underside of the deck. Fireproofing requirements, including surface preparations, are the responsibility of and shall be provided by other trades/suppliers. Brown-Campbell Company shall not be responsible for cleaning the underside of the metal deck to ensure bond of fireproofing nor adhesion or adhesive ability of the fireproofing.





Brown-Campbell can ship roof deck, composite floor deck and form deck same day.

See our stock list on pg 169.

1) Sectional properties of Composite floor deck have been determined in accordance with the American Iron and Steel Institute (AISI) "Specifications for the Design of Cold Formed Steel Structural Members, 1996 edition". Cold formed steel sectional properties are a function of shape, thickness, and steel yield strength.

2) Form spans shown in the table are maximum unshored clear span lengths based on Load and Resistance Factor Design (LRFD) rationale with the exception of web crippling being based on Allowable Stress Design (ASD). Form loading is based upon the Steel Deck Institute (SDI) form span criteria that allows for the sequence of construction live loading that usually occurs during the construction phase with the placement of wet concrete by construction workers. This form span loading is represented by combinations of uniformly applied dead load and 20 psf construction load or uniformly applied dead load superimposed with 150 lb. mid-span concentrated load. See figure 1, 2, and 3 for bending, deflection, and support reaction diagrams and equations (page 174).
The maximum unshored clear span lengths are governed by the following:

a: Load factors: 1.6 for concrete weight; 1.4 for men and equipment; and 1.2 for deck weight
b: Bending moments where ø is 0.95: $+M = ø\ Fy\ S_p$, $-M = ø\ Fy\ S_N$
c: Shear: ø Vn where ø = 0.90 or 1.0 depending on web length to thickness ratio
d: Combined bending and shear: $[(Mu/ø_b\ Mn)^2 + (Vu/ø_v\ Vn)^2] <= 1.0$
e: Web crippling based upon ASD contained in the 1996 DCFSSM. Bearing lengths used in the calculations are:

1-1/2" composite	2.0" external, 4.0" internal
2.0" composite	2.5" external, 5.0" internal
3.0" composite	3.0" external, 5.0" internal

f: Deflection limitation of L/180 not to exceed 3/4" relative to supports

3) Superimposed uniform live loads shown in the tables are based on the SDI Composite Deck Design Handbook employing LRFD rationale. Composite deck slabs are single span condition with the deck serving as the positive reinforcing for the slab. Research has shown that the presence of shear studs for composite beam design influences the moment capacity of the composite deck system. When the number of shear studs present are sufficient quantity, the composite deck slab can achieve its full ultimate moment capacity. Allowable superimposed live load is governed by the following:

a: Bending Strength: $W = (1/1.6) \times [(8Mx/L^2) - 1.2W_s]$ where ø Mx = Mno = .85 Sc Fy (no-studs)
b: Shear: ø V steel deck = ø V concrete, where ø for steel deck = .90 or 1.0 depending on web length and ø for concrete = .85
c: Live load deflection limitation of L/360

4) 3,000 psi concrete compressive strength

5) Welded wire fabric 1" below top surface of slab is recommended. **If welded wire fabric is not used, the superimposed live loads in the following tables should be reduced by 10%.** The minimum area of steel permitted by the ACI building code for temperature and shrinkage is .00075 times the area of concrete above the deck but not less than the cross-sectional area provided by 6 x 6 - W 1.4 x W 1.4 WWF. **Please reference the WWF table at right for WWF size recommendations for various slab thicknesses.**

6) Chloride admixtures or admixtures containing chloride salts shall not be added under any circumstances to the concrete. Such additives have proven damaging to steel and steel finish.

7) Underwriters Laboratories, Inc. fire rated floor design assembly live load limit for composite deck slabs is 200 psf except for design assemblies D742, D825, D840, D860, D902, D907, D914, D916, which have a live load limit of 250 psf.

Concrete Volume and Welded Wire Fabric

Deck Depth	Total Slab Depth	Concrete Volume		Recommended Welded Wire Fabric
		C.U. yd/ 100 Sq Ft	C.U. Ft/Sq Ft	
1-1/2"	4"	.93	.252	6 x 6 - W1.4 x W1.4
	4-1/2"	1.08	.293	6 x 6 - W1.4 x W1.4
	4-3/4"	1.16	.314	6 x 6 - W1.4 x W1.4
	5"	1.24	.335	6 x 6 - W2.1 x W2.1
	5-1/2"	1.39	.376	6 x 6 - W2.1 x W2.1
	5-3/4"	1.47	.397	6 x 6 - W2.1 x W2.1
	6"	1.55	.418	6 x 6 - W2.1 x W2.1
2"	4-1/2"	1.08	.292	6 x 6 - W1.4 x W1.4
	5"	1.23	.333	6 x 6 - W1.4 x W1.4
	5-1/4"	1.31	.354	6 x 6 - W1.4 x W1.4
	5-1/2"	1.39	.375	6 x 6 - W2.1 x W2.1
	6"	1.54	.417	6 x 6 - W2.1 x W2.1
	6-1/4"	1.62	.438	6 x 6 - W2.1 x W2.1
	6-1/2"	1.70	.458	6 x 6 - W2.1 x W2.1
3"	5-1/2"	1.23	.333	6 x 6 - W1.4 x W1.4
	6"	1.39	.375	6 x 6 - W1.4 x W1.4
	6-1/4"	1.47	.396	6 x 6 - W1.4 x W1.4
	6-1/2"	1.54	.417	6 x 6 - W2.1 x W2.1
	7"	1.70	.458	6 x 6 - W2.1 x W2.1
	7-1/4"	1.77	.479	6 x 6 - W2.1 x W2.1
	7-1/2"	1.85	.500	6 x 6 - W2.1 x W2.1

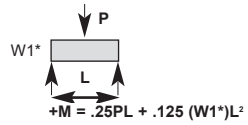
- Concrete volume is based upon composite deck rib geometry. Add'l concrete for deck and frame deflection must be considered for field use volume.
- Recommended welded wire fabric is based upon ACI guidelines of .00075 times area of concrete above the deck.
- Above welded wire fabric is for temperature steel to control shrinkage cracks.

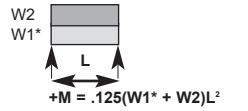
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LOADING DIAGRAMS

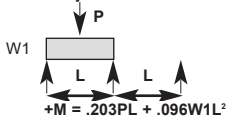
Figure 1
Loading Diagrams and Bending Moments

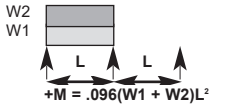
Single Span Condition

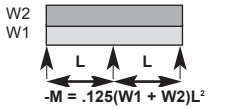




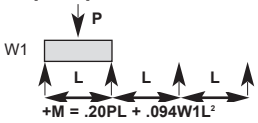
Double Span Condition

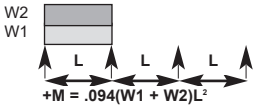






Triple Span Condition





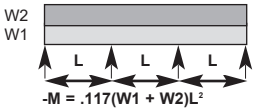
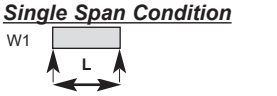
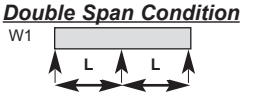


Figure 2
Loading Diagrams and Deflections

Single Span Condition



Double Span Condition



Triple Span Condition

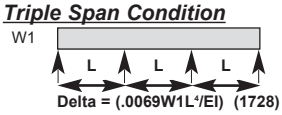
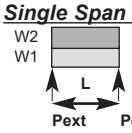


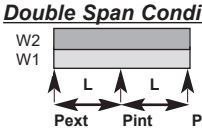
Figure 3
Loading Diagrams and Support Reactions

Single Span Condition



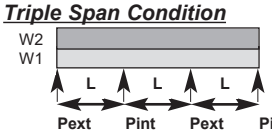
Pext = .5 (W1 + W2)L

Double Span Condition



Pext = .375 (W1 + W2)L
Pint = 1.25 (W1 + W2)L

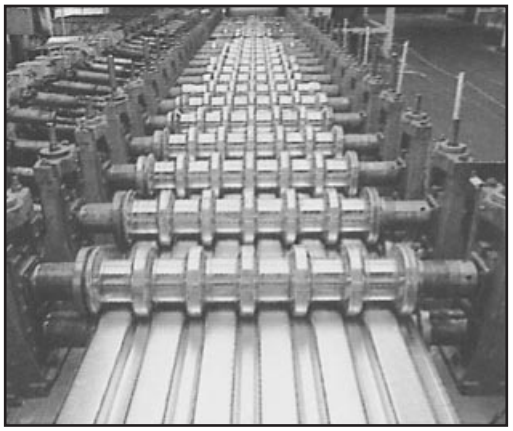
Triple Span Condition



Pext = .4 (W1 + W2)L
Pint = 1.1 (W1 + W2)L

P = 150 pound concentrated load
$W1^* = 1.5\ (W_{dc}) + W_{dd} <= (W_{dc} + 30) + W_{dd}$
$W1 = W_{dc} + W_{dd}$
where: W_{dc} = slab weight
W_{dd} = deck weight
W2 = 20 pounds per sq ft construction load
L = span length (ft)

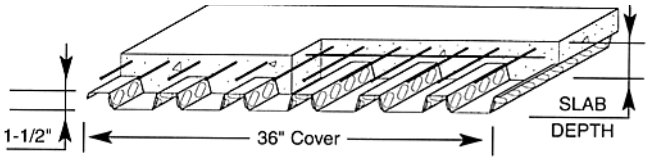
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Type B Roof Deck being formed
- see pages 170-173 for Roof Deck information.

1-1/2" Not Interlocking - Normal



Weight (Lbs per Sq Ft)	
Gauge	Galvanized
22	1.7#
20	2.0#
18	2.7#
16	3.4#

Roof Deck and Form Deck also available.

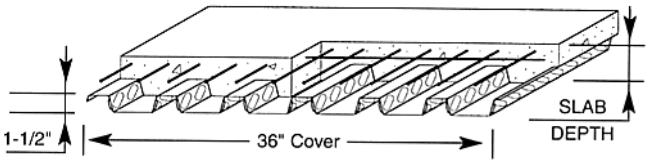
See our availability by deck type on page 167 - ready for same day shipment

1-1/2" Composite Floor Deck - 145 pcf Normal Weight Concrete

Total Slab Depth D / Wt. Conc. / Area Conc.	Gauge	Maximum Unshored Clear Spans			Composite Properties		Superimposed Live Loads - psf (no studs) Span - Feet & Inches										
		Single Span	Double Span	Triple Span	Iavg in^4/ft	Sc in^3/ft	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"
4" 36.3 psf 20.6 in^2	22	5'-10"	7'-9"	7'-11"	3.573	.887	400	343	292	251	217	189	166	146	129	114	101	90
	20	6'-9"	9'-0"	9'-2"	3.854	1.052	400	400	352	303	262	229	201	178	158	140	125	111
	18	7'-2"	9'-5"	9'-8"	4.333	1.345	400	400	360	310	269	235	206	182	161	142	128	115
	16	8'-4"	10'-6"	10'-11"	4.782	1.638	400	400	360	310	269	235	206	182	161	142	128	115
4-1/2" 42.4 psf 24.8 in^2	22	5'-6"	7'-5"	7'-6"	5.107	1.087	400	400	360	309	268	233	205	180	160	142	126	113
	20	6'-4"	8'-7"	8'-8"	5.496	1.291	400	400	400	373	324	283	249	220	195	174	156	140
	18	6'-9"	8'-11"	9'-3"	6.160	1.653	400	400	400	383	332	290	255	226	200	179	160	143
	16	7'-10"	10'-0"	10'-4"	6.789	2.018	400	400	400	383	332	290	255	226	200	179	160	143
5" 48.4 psf 29.3 in^2	22	5'-3"	7'-1"	7'-2"	7.022	1.293	400	400	400	370	320	279	245	216	191	170	152	136
	20	6'-1"	8'-2"	8'-4"	7.544	1.538	400	400	400	400	388	339	298	264	235	209	187	168
	18	6'-5"	8'-6"	8'-9"	8.431	1.972	400	400	400	400	398	348	307	271	241	215	193	173
	16	7'-6"	9'-6"	9'-10"	9.280	2.415	400	400	400	400	398	348	307	271	241	215	193	173
5-1/2" 54.4 psf 34.1 in^2	22	5'-0"	6'-9"	6'-10"	9.360	1.503	400	400	400	400	374	326	287	253	224	199	178	159
	20	5'-10"	7'-10"	7'-11"	10.036	1.791	400	400	400	400	400	397	349	309	275	245	220	197
	18	6'-2"	8'-2"	8'-5"	11.187	2.301	400	400	400	400	400	400	360	318	283	253	227	204
	16	7'-2"	9'-2"	9'-5"	12.298	2.824	400	400	400	400	400	400	360	318	283	253	227	204
6" 60.5 psf 39.4 in^2	22	4'-10"	6'-6"	6'-7"	12.157	1.717	400	400	400	400	400	374	329	290	258	229	205	183
	20	5'-7"	7'-6"	7'-8"	13.012	2.048	400	400	400	400	400	400	400	355	316	282	253	227
	18	5'-11"	7'-10"	8'-1"	14.468	2.636	400	400	400	400	400	400	400	366	326	291	261	235
	16	6'-10"	8'-9"	9'-1"	15.883	3.242	400	400	400	400	400	400	400	366	326	291	261	235

1-1/2" Not Interlocking - Inverted*

1-1/2" Inverted is exact same product as above but installed in reverse, generally allowing higher load capacity.



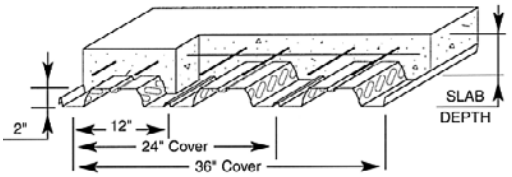
Weight (Lbs per Sq Ft)	
Gauge	Galvanized
22	1.7#
20	2.0#
18	2.7#
16	3.4#



1-1/2" Inverted Composite Floor Deck - 145 pcf Normal Weight Concrete

Total Slab Depth D / Wt. Conc. / Area Conc.	Gauge	Maximum Unshored Clear Spans			Composite Properties		Superimposed Live Loads - psf (no studs) Span - Feet & Inches										
		Single Span	Double Span	Triple Span	Iavg in^4/ft	Sc in^3/ft	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"
4" 36.3 psf 20.6 in^2	22	5'-8"	7'-5"	7'-9"	4.800	1.190	400	400	397	342	296	259	227	201	178	158	141	126
	20	6'-7"	8'-5"	8'-8"	5.146	1.415	400	400	400	400	358	314	276	244	217	194	169	148
	18	6'-11"	8'-9"	9'-1"	5.724	1.812	400	400	400	400	367	322	283	251	223	199	179	160
	16	7'-11"	9'-11"	10'-3"	6.278	2.221	400	400	400	400	367	322	283	251	223	199	179	160
4-1/2" 42.4 psf 24.8 in^2	22	5'-5"	7'-1"	7'-4"	6.671	1.399	400	400	400	400	350	306	268	237	210	187	167	150
	20	6'-3"	8'-0"	8'-3"	7.142	1.667	400	400	400	400	400	371	327	289	257	230	206	185
	18	6'-7"	8'-4"	8'-8"	7.929	2.140	400	400	400	400	400	381	336	298	265	237	212	191
	16	7'-7"	9'-6"	9'-10"	8.690	2.630	400	400	400	400	400	381	336	298	265	237	212	191
5" 48.4 psf 29.3 in^2	22	5'-2"	6'-10"	7'-1"	8.963	1.613	400	400	400	400	400	353	311	275	244	217	194	174
	20	6'-0"	7'-8"	7'-11"	9.580	1.923	400	400	400	400	400	400	378	335	298	267	239	215
	18	6'-3"	8'-0"	8'-4"	10.618	2.475	400	400	400	400	400	400	390	346	308	275	247	222
	16	7'-2"	9'-1"	9'-5"	11.626	3.048	400	400	400	400	400	400	390	346	308	275	247	222
5-1/2" 54.4 psf 34.1 in^2	22	5'-0"	6'-7"	6'-9"	11.714	1.829	400	400	400	400	400	400	353	312	277	247	221	198
	20	5'-9"	7'-4"	7'-7"	12.502	2.184	400	400	400	400	400	400	400	382	340	304	273	246
	18	6'-0"	7'-8"	8'-0"	13.831	2.816	400	400	400	400	400	400	400	395	352	315	282	254
	16	6'-11"	8'-9"	9'-0"	15.129	3.475	400	400	400	400	400	400	400	395	352	315	282	254
6" 60.5 psf 39.4 in^2	22	4'-10"	6'-4"	6'-6"	14.963	2.048	400	400	400	400	400	400	397	351	312	278	249	223
	20	5'-7"	7'-1"	7'-4"	15.945	2.448	400	400	400	400	400	400	400	400	382	342	307	276
	18	5'-10"	7'-5"	7'-8"	17.608	3.161	400	400	400	400	400	400	400	400	396	354	318	287
	16	6'-9"	8'-5"	8'-9"	19.238	3.906	400	400	400	400	400	400	400	400	396	354	318	287

2” Interlocking

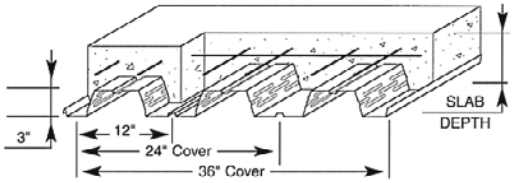


Weight (Lbs per Sq Ft)	
Gauge	Galvanized
22	2.0#
20	2.3#
18	3.0#
16	3.7#

2” Composite Floor Deck - 145 pcf Normal Weight Concrete

Total Slab Depth D / Wt. Conc. / Area Conc.	Gauge	Maximum Unshored Clear Spans			Composite Properties		Superimposed Live Loads - psf (no studs) Span - Feet & Inches											
		Single Span	Double Span	Triple Span	Iavg in⁴/ft	Sc in³/ft	7’-0”	7’-6”	8’-0”	8’-6”	9’-0”	9’-6”	10’-0”	10’-6”	11’-0”	11’-6”	12’-0”	12’-6”
4-1/2” 42.3 psf 29.6 in²	22	7’-1”	9’-1”	9’-4”	5.519	1.081	358	308	266	232	204	179	159	141	125	112	100	90
	20	8’-3”	10’-4”	10’-9”	5.917	1.288	400	372	323	283	248	220	195	174	155	139	125	113
	18	9’-3”	11’-5”	11’-10”	6.586	1.653	400	383	332	290	255	226	200	179	160	143	129	116
	16	10’-9”	12’-11”	13’-0”	7.219	2.020	400	383	332	290	255	226	200	179	160	143	129	116
5” 48.3 psf 33.8 in²	22	6’-9”	8’-7”	8’-11”	7.481	1.277	400	365	316	276	242	213	189	168	149	134	120	107
	20	7’-10”	9’-11”	10’-3”	8.006	1.522	400	400	383	335	295	261	232	207	185	166	149	135
	18	8’-9”	10’-11”	11’-3”	8.889	1.954	400	400	394	345	304	269	239	213	191	171	154	139
	16	10’-2”	12’-4”	12’-8”	9.733	2.394	400	400	394	345	304	269	239	213	191	171	154	139
5-1/2” 54.4 psf 38.1 in²	22	6’-5”	8’-3”	8’-7”	9.863	1.478	400	400	367	320	281	248	220	195	174	156	140	126
	20	7’-5”	9’-6”	9’-10”	10.536	1.763	400	400	400	390	343	304	270	241	216	194	175	158
	18	8’-4”	10’-5”	10’-9”	11.674	2.268	400	400	400	400	354	313	279	249	223	200	180	163
	16	9’-8”	11’-10”	12’-3”	12.769	2.784	400	400	400	400	354	313	279	249	223	200	180	163
6” 60.4 psf 42.7 in²	22	6’-2”	7’-11”	8’-2”	12.702	1.684	400	400	400	366	322	284	252	224	200	179	161	144
	20	7’-2”	9’-1”	9’-5”	13.548	2.010	400	400	400	400	393	348	309	276	247	222	200	181
	18	8’-0”	10’-0”	10’-4”	14.981	2.589	400	400	400	400	400	359	320	285	256	230	207	187
	16	9’-3”	11’-4”	11’-9”	16.369	3.184	400	400	400	400	400	359	320	285	256	230	207	187
6-1/2” 66.5 psf 47.4 in²	22	6’-0”	7’-7”	7’-11”	16.039	1.893	400	400	400	400	363	320	284	253	226	202	182	164
	20	7’-0”	8’-9”	9’-1”	17.081	2.262	400	400	400	400	400	393	349	312	280	252	227	205
	18	7’-10”	9’-8”	10’-0”	18.850	2.917	400	400	400	400	400	400	361	323	290	261	235	213
	16	9’-0”	10’-11”	11’-4”	20.575	3.594	400	400	400	400	400	400	361	323	290	261	235	213

3” Interlocking



Weight (Lbs per Sq Ft)	
Gauge	Galvanized
22	2.1#
20	2.5#
18	3.3#
16	4.1#



3” Composite Floor Deck - 145 pcf Normal Weight Concrete

Total Slab Depth D / Wt. Conc. / Area Conc.	Gauge	Maximum Unshored Clear Spans			Composite Properties		Superimposed Live Loads - psf (no studs) Span - Feet & Inches											
		Single Span	Double Span	Triple Span	Iavg in⁴/ft	Sc in³/ft	9’-0”	9’-6”	10’-0”	10’-6”	11’-0”	11’-6”	12’-0”	12’-6”	13’-0”	13’-6”	14’-0”	14’-6”
5-1/2” 48.3 psf 35.4 in²	22	9’-1”	10’-1”	10’-5”	9.373	1.331	253	224	198	176	157	141	126	113	102	92	83	75
	20	10’-6”	12’-8”	13’-2”	10.014	1.589	310	274	244	217	195	175	158	142	129	117	106	96
	18	11’-7”	13’-10”	14’-3”	11.089	2.042	319	282	251	224	201	180	162	147	133	120	109	99
	16	13’-3”	15’-6”	15’-7”	12.125	2.502	319	282	251	224	201	180	162	147	133	120	109	99
6” 54.4 psf 39.5 in²	22	8’-4”	9’-3”	9’-7”	12.034	1.534	293	259	230	204	182	163	147	132	119	107	97	87
	20	10’-0”	12’-2”	12’-7”	12.835	1.832	358	317	282	252	226	203	183	165	150	136	123	112
	18	11’-0”	13’-2”	13’-8”	14.181	2.354	369	327	290	259	233	209	189	170	154	140	127	116
	16	12’-7”	14’-10”	15’-2”	15.483	2.886	369	327	290	259	233	209	189	170	154	140	127	116
6-1/2” 60.4 psf 43.8 in²	22	7’-9”	8’-6”	8’-11”	15.164	1.745	335	296	262	234	209	187	168	151	136	123	111	100
	20	9’-7”	11’-8”	11’-11”	16.149	2.084	400	362	322	288	258	232	209	189	171	156	141	129
	18	10’-6”	12’-8”	13’-2”	17.811	2.679	400	373	332	297	266	240	216	195	177	161	146	133
	16	12’-0”	14’-4”	14’-10”	19.426	3.290	400	373	332	297	266	240	216	195	177	161	146	133
7” 66.5 psf 48.2 in²	22	7’-2”	8’-0”	8’-4”	18.801	1.963	378	334	296	264	236	212	190	171	154	140	126	114
	20	9’-4”	11’-0”	11’-2”	19.997	2.344	400	400	364	325	292	262	237	214	194	176	160	146
	18	10’-3”	12’-3”	12’-8”	22.021	3.016	400	400	375	336	301	271	245	222	201	182	166	151
	16	11’-8”	13’-9”	14’-3”	23.995	3.708	400	400	375	336	301	271	245	222	201	182	166	151
7-1/2” 72.5 psf 52.8 in²	22	6’-9”	7’-6”	7’-9”	22.985	2.185	400	373	331	295	264	237	213	192	173	157	142	128
	20	9’-0”	10’-4”	10’-5”	24.419	2.610	400	400	400	363	326	294	265	240	218	198	180	164
	18	10’-0”	11’-10”	12’-3”	26.850	3.363	400	400	400	376	337	304	274	248	225	205	187	170
	16	11’-5”	13’-4”	13’-9”	29.231	4.139	400	400	400	376	337	304	274	248	225	205	187	170

BROWN-CAMPBELL FORM DECK **is designed for non-residential applications in low and high-rise office buildings, schools, and warehouses. Installation of this system is easy and economical since the need for wood framing is eliminated and the sides and ends of the product are designed to overlap with a close, snug fit which reduces welding time. Additionally, this system provides a safe working surface for workers before and during concrete placement.**



Form deck is designed to serve as a permanent steel base for poured reinforced concrete floor slabs. It is available without slots or with slots to accelerate concrete drying time. Form deck with slots is used primarily as a roof deck with lightweight insulating concrete fills. This product has a built-in side lap vent which eliminates the necessity of using separate vent clips. Form deck, with or without slots, provides a strong, efficient section for forming slabs, while giving lateral stability to structural members.

Form deck is made from high strength, full hard steel that conforms to ASTM A653 SS Grade 80. It is galvanized in accordance with ASTM A924 Class G-60 and G-90. Form deck without slots is available uncoated conforming to ASTM A611 Grade E for applications where permanence is not essential, however, this product should always be galvanized when used as a structural support for lightweight insulating concrete fill.

Diaphragm Design - Form deck can be utilized in diaphragm design with lateral loading. The deck can be used in floor systems composed of structural normal weight or lightweight concrete slabs (2-1/2" minimum cover), roof systems composed of lightweight insulating concretes (2-1/2" minimum cover) or insulating concrete used in combination with expanded polystyrene insulation board.

Form Deck Specifications

1) Sectional properties of form deck have been determined in accordance with the American Iron and Steel Institute (AISI) "Specifications for the Design of Cold Formed Steel Structural Members, 1996 edition". Cold formed steel sectional properties are a function of shape, thickness, and steel yield strength.

2) Loads shown in the Maximum Allowable Uniform Load tables are uniform distributed loads in pounds per square foot on bare deck.
- a: Stress loads are governed by the allowable flexural stress limit of 36,000 psi for 80,000 psi yield steel.
- b: Deflection loads shown are limited by a ratio of L/240 and L/180 and not to exceed stress loading.
- c: Span lengths assume center to center of supports. Tabulated loads shall not be increased by assuming clear span dimensions.
- d: Bending Moment formula used for flexural stress limitations and deflection formula used for deflection limitations in accordance with Steel Deck Institute are:
- e: All deck weights shown in the tables on the following pages are approximate valued to be used for design purposes only.

Design	Moment	Deflection
One Span	$M = fS = wL^2 \times 12/8$	D max. = $.0130\ wL^4 \times 1728/EI$
Two Spans	$M = fS = wL^2 \times 12/8$	D max. = $.0054\ wL^4 \times 1728/EI$
Three or More Spans	$M = fS = wL^2 \times 12/10$	D max. = $.0069\ wL^4 \times 1728/EI$

3) Maximum allowable unshored construction clear span tables are based upon Allowable Stress Design Rationale (ASD). Form loading is based upon the Steel Deck Institute (SDI) form span criteria that allow for the sequence of construction live loading that usually occurs during the construction phase with placement of wet concrete by construction workers. This form span loading is represented by combinations of uniformly applied dead load and 20 psf construction load or uniformly applied dead load superimposed with 150 lb. mid-span concentrated load. See Loading Diagrams, figures 1, 2, and 3 for bending, deflection, and support reaction diagrams and equations (Page 176). The maximum unshored clear span lengths are governed by:
- a: Design stress = .6 Fy
- b: Web crippling design equations contained in the AISI 1996 Specification for the Cold Formed Steel Structural Members. Bearing lengths are 2" external and 4" internal.
- c: A deflection limitation of L/180 not to exceed 3/4" relative to the supports.

Specifications continued on next page...

Form Deck Specifications *(continued from previous page)*

4) Allowable uniform superimposed loads for reinforced concrete slab tables are based upon American Concrete Institute (ACI) 318 ultimate strength design. Allowable superimposed live load is governed by the following:

a: Loads shown are based upon three span analysis with $+M = WL^2/16$, $-M = WL^2/12$. For spans exceeding 10'-0" $-M = WL^2/10$. Load values for end spans, dual spans or single spans should be reduced to compensate for the increased moment coefficients.

b: The following reinforced concrete formula were used:

$M = A_s\ Fy\ (d - a/2)/12$ $\quad a = A_s\ Fy/.85\ f'cb$

$Fy = 60{,}000$ psi $\quad f'c = 3{,}000$ psi

$M = øM/1.7$ $\quad ø = .90$

c: Position of welded wire reinforcement: 2-1/2" and 3" depth slabs, the welded wire reinforcement is undraped and positioned at the center of the slab (figures 4 and 5). Slabs over 3" in depth, the welded wire reinforcement is draped over supports (figures 6 and 7).

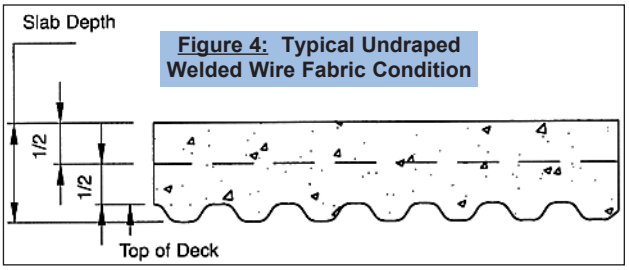


Figure 4: Typical Undraped Welded Wire Fabric Condition

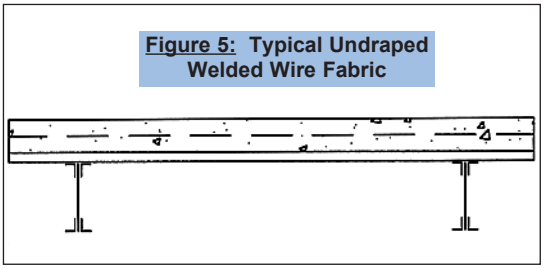


Figure 5: Typical Undraped Welded Wire Fabric

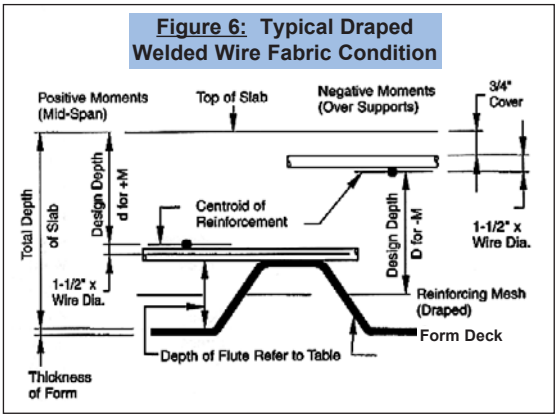


Figure 6: Typical Draped Welded Wire Fabric Condition

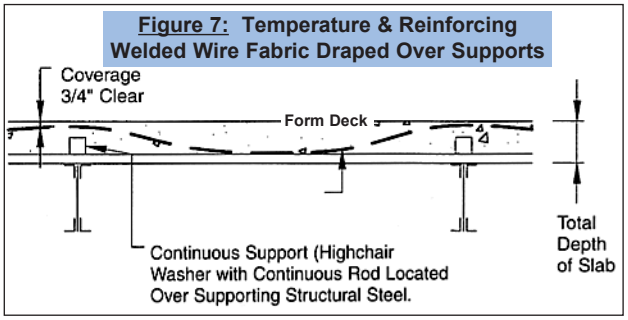


Figure 7: Temperature & Reinforcing Welded Wire Fabric Draped Over Supports

d: Reinforcing fiber may not be substituted for welded wire tensile reinforcement.

e: Allowable uniform superimposed loads shown are based upon the use of uncoated deck form, without venting slots, with the reinforced slab carrying live load plus slab weight. When galvanized deck form, without venting slots, is used as a permanent form, superimposed allowable load may be increased by the amount of slab weight. If temporary shoring is used, the superimposed load may not be increased by the slab weight regardless of deck finish.

f: Conditions such as concentrated loads or moving loads may require a more detailed analysis.

g: Some slab superimposed live loads shown may exceed ACI 318; three times unit dead load limit.

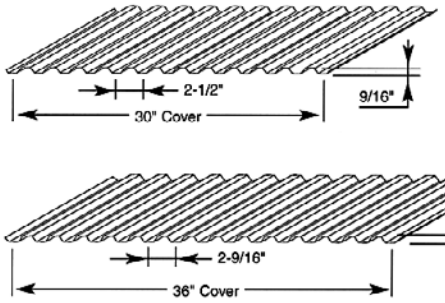
h: Chloride admixtures or admixtures containing chloride salts shall not be added under any circumstances to the concrete. Such additives have proven damaging to steel and steel finish.



Welding washers placed in flute of deck for weld attachment to structural support.



Type S Form Deck



Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
28	0.9#	0.8#
26	1.0#	1.0#
24	1.3#	1.2#
22	1.6#	1.5#

Allowable Uniform Superimposed Loads for Reinforced Concrete Slabs - psf

Slab Depth	Reinforcement		Three Span Condition - Center to Center						
	W.W.R.	A_s (in^2/ft)	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
2-1/2"	6x6-W1.4xW1.4	.028*	249	151	98	66	45	31	
	6x6-W2.0xW2.0	.040*	362	223	148	103	73	53	38
	6x6-W2.9xW2.9	.058*	400	329	221	156	114	85	65
3"	6x6-W1.4xW1.4	.028*	299	182	118	79	54	37	
	6x6-W2.0xW2.0	.040*	400	269	178	124	88	64	46
	6x6-W2.9xW2.9	.058	400	397	267	189	138	103	78
3-1/2"	6x6-W2.0xW2.0	.040*	400	314	208	193	140	103	77
	6x6-W2.9xW2.9	.058*	400	400	313	286	211	159	123
	6x6-W4.0xW4.0	.080	400	400	400	392	292	224	175
4"	6x6-W2.9xW2.9	.058*	400	400	359	356	263	200	155
	6x6-W4.0xW4.0	.080	400	400	400	400	367	282	221
	4x4-W2.9xW2.9	.087	400	400	400	400	400	315	248
4-1/2"	6x6-W4.0xW4.0	.080*	400	400	400	400	400	339	267
	4x4-W2.9xW2.9	.087	400	400	400	400	400	379	299
	4x4-W4.0xW4.0	.120	400	400	400	400	400	400	400
5"	6x6-W4.0xW4.0	.080*	400	400	400	400	400	397	313
	4x4-W2.9xW2.9	.087*	400	400	400	400	400	400	349
	4x4-W4.0xW4.0	.120	400	400	400	400	400	400	400

*A_s does not meet A.C.I. criteria for temperature and shrinkage reinforcement (.0018Ac)

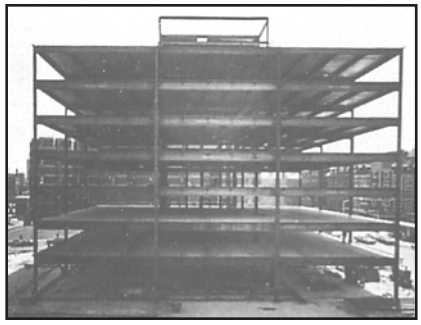
Maximum Allowable Uniform Total Loads - psf

Gauge	Number of Spans	Design Condition		Span - Feet & Inches							
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"
28	1 Span	Stress	36 ksi	214	137	95	70	54	42	34	28
		Deflection	L/240	96	49	29	18				
		Deflection	L/180	129	66	38	24	16			
	2 Spans	Stress	36 ksi	214	137	96	70	54	43	35	29
		Deflection	L/240	214	118	68	43	29	20	15	
		Deflection	L/180	214	137	91	57	38	27	20	15
	3 Spans	Stress	36 ksi	266	173	120	88	67	53	43	36
		Deflection	L/240	181	93	54	34	23	16		
		Deflection	L/180	241	123	71	45	30	21	15	
26	1 Span	Stress	36 ksi	272	174	121	89	68	54	44	36
		Deflection	L/240	120	61	36	22	15			
		Deflection	L/180	160	82	47	30	20			
	2 Spans	Stress	36 ksi	272	175	122	90	69	54	44	36
		Deflection	L/240	272	146	85	53	36	25	18	
		Deflection	L/180	272	175	113	71	48	33	24	18
	3 Spans	Stress	36 ksi	337	217	152	112	86	68	55	45
		Deflection	L/240	225	115	67	42	28	20		
		Deflection	L/180	300	153	89	56	37	26	19	
24	1 Span	Stress	36 ksi	392	251	174	128	98	78	63	52
		Deflection	L/240	160	82	47	30	20			
		Deflection	L/180	213	109	63	40	27	19		
	2 Spans	Stress	36 ksi	380	244	170	125	96	76	62	51
		Deflection	L/240	380	196	113	71	48	34	24	18
		Deflection	L/180	380	244	151	95	64	45	33	25
	3 Spans	Stress	36 ksi	471	304	212	156	120	95	77	64
		Deflection	L/240	301	154	89	56	38	26	19	
		Deflection	L/180	402	206	119	75	50	35	26	19
22	1 Span	Stress	36 ksi	481	308	214	157	120	95	77	64
		Deflection	L/240	198	101	59	37	25	17		
		Deflection	L/180	264	135	78	49	33	23	17	
	2 Spans	Stress	36 ksi	466	300	209	154	118	93	76	63
		Deflection	L/240	466	243	141	89	59	42	30	23
		Deflection	L/180	466	300	187	118	79	56	41	30
	3 Spans	Stress	36 ksi	579	374	261	192	147	117	95	78
		Deflection	L/240	374	191	111	70	47	33	24	18
		Deflection	L/180	498	255	148	93	63	44	32	24

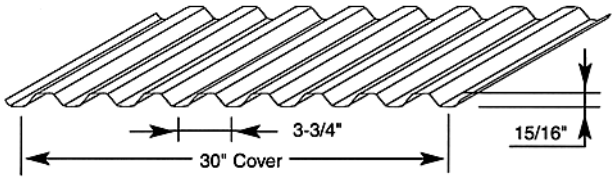
Maximum Allowable Unshored Construction Clear Spans

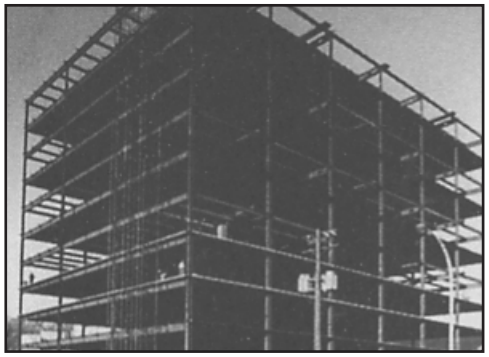
145 pcf Normal Wt. Concrete

Slab Depth	Gauge	Slab Wt (psf)	Single Span	Double Span	Triple Span
2-1/2"	28	28	2'-2"	2'-10"	2'-10"
	26	28	2'-8"	3'-5"	3'-6"
	24	28	3'-6"	4'-7"	4'-7"
	22	28	4'-1"	5'-4"	5'-2"
3"	28	34	2'-1"	2'-9"	2'-9"
	26	34	2'-6"	3'-3"	3'-4"
	24	34	3'-4"	4'-4"	4'-5"
	22	34	3'-10"	5'-1"	4'-10"
3-1/2"	28	41	2'-0"	2'-7"	2'-8"
	26	41	2'-5"	3'-2"	3'-3"
	24	41	3'-2"	4'-2"	4'-3"
	22	41	3'-8"	4'-10"	4'-7"
4"	28	47	1'-11"	2'-7"	2'-7"
	26	47	2'-4"	3'-1"	3'-1"
	24	47	3'-1"	4'-0"	4'-1"
	22	47	3'-6"	4'-8"	4'-5"
4-1/2"	28	53	1'-11"	2'-6"	2'-6"
	26	53	2'-3"	3'-0"	3'-0"
	24	53	2'-11"	3'-11"	3'-11"
	22	53	3'-4"	4'-6"	4'-3"
5"	28	59	1'-10"	2'-5"	2'-5"
	26	59	2'-2"	2'-11"	2'-11"
	24	59	2'-10"	3'-9"	3'-9"
	22	59	3'-3"	4'-4"	4'-1"



Type HD Form Deck





Allowable Uniform Superimposed Loads for Reinforced Concrete Slabs - psf

Slab Depth	Reinforcement W.W.R.	Reinforcement A_s (in²/ft)	Three Span Condition - Center to Center 3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
2-1/2"	6x6-W1.4xW1.4	.028*	78	52	34				
	6x6-W2.0xW2.0	.040*	118	81	57	41			
	6x6-W2.9xW2.9	.058*	176	124	90	66	50	37	
3"	6x6-W1.4xW1.4	.028*	106	71	48	32			
	6x6-W2.0xW2.0	.040*	160	111	79	57	41		
	6x6-W2.9xW2.9	.058	240	169	123	92	69	53	40
3-1/2"	6x6-W2.0xW2.0	.040*	203	176	127	94	70	53	39
	6x6-W2.9xW2.9	.058*	303	260	192	145	111	87	68
	6x6-W4.0xW4.0	.080	400	356	265	203	158	125	100
4"	6x6-W2.9xW2.9	.058*	362	330	244	185	143	112	88
	6x6-W4.0xW4.0	.080	400	400	339	261	204	162	131
	4x4-W2.9xW2.9	.087	400	400	380	292	230	184	149
4-1/2"	6x6-W4.0xW4.0	.080*	400	400	400	318	250	200	161
	4x4-W2.9xW2.9	.087	400	400	400	356	280	224	182
	4x4-W4.0xW4.0	.120	400	400	400	400	390	315	258
5"	6x6-W4.0xW4.0	.080*	400	400	400	376	296	237	191
	4x4-W2.9xW2.9	.087*	400	400	400	400	331	265	215
	4x4-W4.0xW4.0	.120	400	400	400	400	400	373	306

*A_s does not meet A.C.I. criteria for temperature and shrinkage reinforcement (.0018Ac)

Maximum Allowable Uniform Total Loads - psf

Gauge	Number of Spans	Design Condition		Span - Feet & Inches 3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"
26	1 Span	Stress	36 ksi	174	128	98	77	63	52	43	37	32	28
		Deflection	L/240	88	55	37	26	19					
		Deflection	L/180	117	74	49	35	25	19	15			
	2 Spans	Stress	36 ksi	180	133	102	81	65	54	45	39	34	29
		Deflection	L/240	180	132	88	62	45	34	26	21	16	
		Deflection	L/180	180	133	102	81	60	45	35	27	22	18
	3 Spans	Stress	36 ksi	224	165	127	101	82	67	57	48	42	36
		Deflection	L/240	165	104	69	49	36	27	21	16		
		Deflection	L/180	219	138	93	65	47	36	27	22	17	
25	1 Span	Stress	36 ksi	207	152	116	92	74	62	52	44	38	33
		Deflection	L/240	103	65	43	30	22	17				
		Deflection	L/180	137	86	58	41	30	22	17			
	2 Spans	Stress	36 ksi	215	159	122	96	78	64	54	46	40	35
		Deflection	L/240	215	109	76	56	42	32	25	20	19	16
		Deflection	L/180	215	159	122	97	71	53	41	32	25	20
	3 Spans	Stress	36 ksi	274	202	156	123	100	83	70	59	70	59
		Deflection	L/240	193	122	81	57	42	31	24	19	24	19
		Deflection	L/180	258	162	109	76	56	42	32	25	20	17
24	1 Span	Stress	36 ksi	252	185	142	112	91	75	63	54	46	40
		Deflection	L/240	122	77	52	36	26	20	15			
		Deflection	L/180	163	103	69	48	35	26	20	16		
	2 Spans	Stress	36 ksi	257	190	146	115	94	77	65	55	48	42
		Deflection	L/240	257	181	121	85	63	47	36	28	23	19
		Deflection	L/180	257	190	146	113	83	62	48	38	24	20
	3 Spans	Stress	36 ksi	319	236	181	144	116	96	81	69	81	69
		Deflection	L/240	226	142	95	67	49	37	28	22	28	22
		Deflection	L/180	301	190	127	89	65	49	38	30	38	30
22	1 Span	Stress	36 ksi	322	237	181	143	116	96	81	69	81	69
		Deflection	L/240	148	93	62	44	32	24	18	15	18	15
		Deflection	L/180	197	124	83	58	43	32	25	19	25	19
	2 Spans	Stress	36 ksi	316	233	179	142	115	95	80	68	80	68
		Deflection	L/240	316	224	150	105	77	58	44	35	44	35
		Deflection	L/180	316	233	179	140	102	77	59	47	59	47
	3 Spans	Stress	36 ksi	392	290	223	177	144	119	100	85	100	85
		Deflection	L/240	280	176	118	83	60	45	35	27	35	27
		Deflection	L/180	373	235	157	110	81	61	47	37	47	37

Maximum Allowable Unshored Construction Clear Spans

145 pcf Normal Wt. Concrete

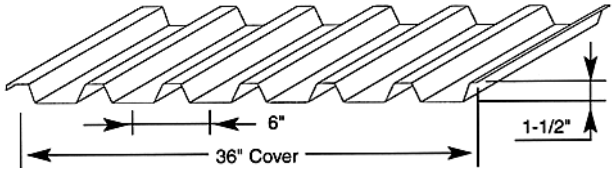
Slab Depth	Gauge	Slab Wt (psf)	Single Span	Double Span	Triple Span
2-1/2"	26	26	3'-7"	4'-8"	4'-8"
	25	26	4'-1"	5'-4"	5'-5"
	24	26	4'-10"	6'-4"	6'-5"
	22	26	5'-7"	7'-5"	7'-3"
3"	26	32	3'-5"	4'-5"	4'-6"
	25	32	3'-10"	5'-1"	5'-1"
	24	32	4'-6"	6'-0"	6'-1"
	22	32	5'-3"	6'-11"	6'-9"
3-1/2"	26	38	3'-3"	4'-3"	4'-4"
	25	38	3'-8"	4'-10"	4'-11"
	24	38	4'-4"	5'-9"	5'-10"
	22	38	4'-11"	6'-7"	6'-5"
4"	26	44	3'-1"	4'-1"	4'-2"
	25	44	3'-6"	4'-8"	4'-8"
	24	44	4'-1"	5'-6"	5'-7"
	22	44	4'-8"	6'-4"	6'-1"
4-1/2"	26	50	3'-0"	3'-11"	4'-0"
	25	50	3'-4"	4'-6"	4'-6"
	24	50	4'-0"	5'-4"	5'-4"
	22	50	4'-6"	6'-1"	5'-10"
5"	26	56	2'-10"	3'-10"	3'-10"
	25	56	3'-3"	4'-4"	4'-4"
	24	56	3'-10"	5'-1"	5'-2"
	22	56	4'-4"	5'-10"	5'-7"

Weight (Pounds per Sq Ft)

Gauge	Galvanized	Painted
26	1.0#	0.9#
25	1.1#	1.0#
24	1.3#	1.2#
22	1.6#	1.5#

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Type SD Form Deck



Maximum Allowable Unshored Construction Clear Spans
145 pcf Normal Wt. Concrete

Slab Depth	Gauge	Slab Wt (psf)	Single Span	Double Span	Triple Span
3-1/2"	22	40	6'-3"	8'-3"	8'-6"
	20	40	7'-3"	9'-4"	9'-6"
	18	40	8'-8"	10'-11"	10'-7"
	16	40	9'-4"	12'-2"	11'-5"
4"	22	46	5'-11"	7'-10"	8'-1"
	20	46	6'-11"	8'-11"	9'-1"
	18	46	8'-3"	10'-4"	10'-1"
	16	46	8'-11"	11'-9"	11'-0"
4-1/2"	22	52	5'-8"	7'-6"	7'-9"
	20	52	6'-7"	8'-7"	8'-8"
	18	52	7'-11"	9'-11"	9'-8"
	16	52	8'-7"	11'-3"	10'-6"
5"	22	58	5'-5"	7'-2"	7'-5"
	20	58	6'-4"	8'-2"	8'-4"
	18	58	7'-7"	9'-6"	9'-4"
	16	58	8'-3"	10'-9"	10'-2"
5-1/2"	22	64	5'-3"	6'-11"	7'-2"
	20	64	6'-1"	7'-10"	8'-1"
	18	64	7'-4"	9'-2"	9'-0"
	16	64	8'-0"	10'-5"	9'-10"
6"	22	70	5'-2"	6'-8"	6'-11"
	20	70	5'-11"	7'-7"	7'-10"
	18	70	7'-1"	8'-10"	8'-9"
	16	70	7'-9"	10'-0"	9'-6"
6-1/2"	22	76	5'-0"	6'-5"	6'-8"
	20	76	5'-10"	7'-4"	7'-7"
	18	76	6'-11"	8'-7"	8'-6"
	16	76	7'-7"	9'-9"	9'-3"

Weight (Pounds per Sq Ft)

Gauge	Galvanized	Painted
22	1.8#	1.7#
20	2.2#	2.1#
18	2.9#	2.8#
16	3.6#	3.5#

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Allowable Uniform Superimposed Loads for Reinforced Concrete Slabs - psf

Slab Depth	Reinforcement W.W.R.	Reinforcement A_s (in²/ft)	Three Span Condition - Center to Center 5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"
3-1/2"	6x6-W2.1xW2.1	.058*	103	79	61	47	36		
	6x6-W2.9xW2.9	.080	147	116	92	73	59	47	37
	6x6-W4.0xW4.0	.087	167	133	106	86	69	56	45
4"	6x6-W2.9xW2.9	.058*	135	105	82	64	50	39	
	6x6-W4.0xW4.0	.080	193	153	122	99	80	65	52
	4x4-W2.9xW2.9	.087	218	173	140	113	92	76	62
4-1/2"	6x6-W2.9xW2.9	.058*	166	130	103	81	64	50	39
	6x6-W4.0xW4.0	.080*	239	190	153	124	101	82	67
	4x4-W2.9xW2.9	.087	268	214	173	141	116	95	79
5"	6x6-W4.0xW4.0	.080*	285	227	183	149	122	100	82
	4x4-W2.9xW2.9	.087*	318	255	206	169	139	115	95
	4x4-W4.0xW4.0	.120	400	359	294	244	203	171	145
5-1/2"	6x6-W4.0xW4.0	.080*	330	264	213	174	143	118	97
	4x4-W2.9xW2.9	.087*	369	296	240	197	162	135	112
	4x4-W4.0xW4.0	.120	400	400	342	284	237	200	169
6"	6x6-W4.0xW4.0	.080*	376	301	244	199	164	135	112
	4x4-W2.9xW2.9	.087*	400	336	273	224	186	154	129
	4x4-W4.0xW4.0	.120	400	400	390	324	271	229	194
6-1/2"	6x6-W4.0xW4.0	.080*	400	338	274	224	185	153	127
	4x4-W2.9xW2.9	.087*	400	377	307	252	209	174	145
	4x4-W4.0xW4.0	.120*	400	400	400	364	305	258	219

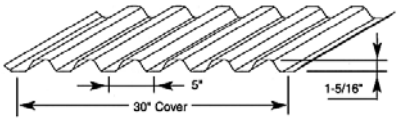
*A_s does not meet A.C.I. criteria for temperature and shrinkage reinforcement (.0018Ac)

Maximum Allowable Uniform Total Loads - psf

Gauge	Number of Spans	Design Condition		Span - Feet & Inches 5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
22	1 Span	Stress	36 ksi	168	139	117	99	86	75	66	58	52	47
		Deflection	L/240	94	71	54	43	34	28	23			
		Deflection	L/180	126	94	73	57	46	37	31	26	22	
	2 Spans	Stress	36 ksi	158	130	110	94	81	70	62	55	49	44
		Deflection	L/240	158	130	110	92	74	60	49	41	35	30
		Deflection	L/180	158	130	110	94	81	70	62	55	46	39
	3 Spans	Stress	36 ksi	196	162	137	117	101	88	77	68	61	55
		Deflection	L/240	160	120	92	73	58	47	39	33	27	23
		Deflection	L/180	196	160	123	97	78	63	52	43	37	31
20	1 Span	Stress	36 ksi	214	177	149	127	109	95	84	74	66	59
		Deflection	L/240	115	87	67	53	42	34	28	24	20	
		Deflection	L/180	154	116	89	70	56	46	38	31	26	22
	2 Spans	Stress	36 ksi	205	170	143	122	105	92	81	71	64	57
		Deflection	L/240	205	170	143	116	93	75	62	52	44	37
		Deflection	L/180	205	170	143	122	105	92	81	69	58	49
	3 Spans	Stress	36 ksi	255	211	178	152	131	114	101	89	80	71
		Deflection	L/240	200	151	116	91	73	59	49	41	34	29
		Deflection	L/180	255	201	155	122	97	79	65	54	46	39
18	1 Span	Stress	36 ksi	293	242	204	173	150	130	115	101	90	81
		Deflection	L/240	154	116	89	70	56	46	38	31	26	22
		Deflection	L/180	206	154	119	94	75	61	50	42	35	30
	2 Spans	Stress	36 ksi	279	231	195	166	143	125	110	97	87	78
		Deflection	L/240	279	231	195	161	129	105	86	72	61	52
		Deflection	L/180	279	231	195	166	143	125	110	96	81	69
	3 Spans	Stress	36 ksi	347	288	243	207	179	156	137	122	108	97
		Deflection	L/240	279	209	161	127	102	83	68	57	48	41
		Deflection	L/180	347	279	215	169	135	110	91	76	64	54
16	1 Span	Stress	36 ksi	376	310	261	222	192	167	147	130	116	104
		Deflection	L/240	196	147	113	89	71	58	48	40	34	29
		Deflection	L/180	261	196	151	119	95	77	64	53	45	38
	2 Spans	Stress	36 ksi	361	299	252	215	185	162	142	126	112	101
		Deflection	L/240	361	299	252	211	169	138	113	94	80	68
		Deflection	L/180	361	299	252	215	185	162	142	126	106	90
	3 Spans	Stress	36 ksi	449	372	313	268	231	202	177	157	140	126
		Deflection	L/240	366	275	212	166	133	108	89	74	63	53
		Deflection	L/180	449	366	282	222	178	144	119	99	84	71

Other Form Deck Available:

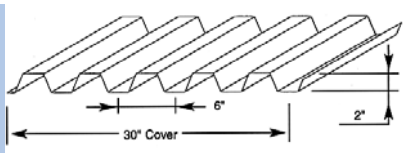
Type EH Form Deck



Note: Also available in 4-1/2" center to center

Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
26	1.2#	1.1#
24	1.4#	1.3#
22	1.8#	1.7#
20	2.1#	2.0#

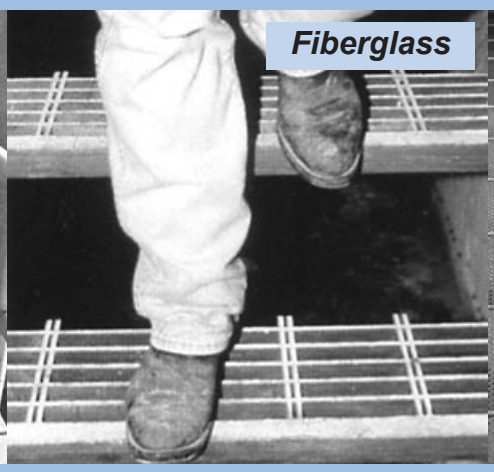
Type FM Form Deck

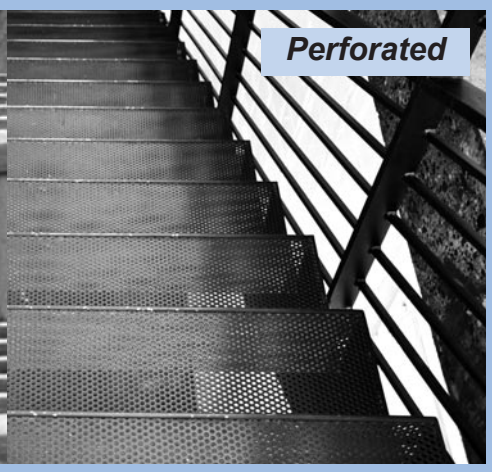


Weight (Pounds per Sq Ft)		
Gauge	Galvanized	Painted
22	2.0#	1.9#
20	2.4#	2.3#
18	3.2#	3.1#
16	3.8#	3.7#

1-800-472-8464


Bar Grating


Fiberglass


Perforated

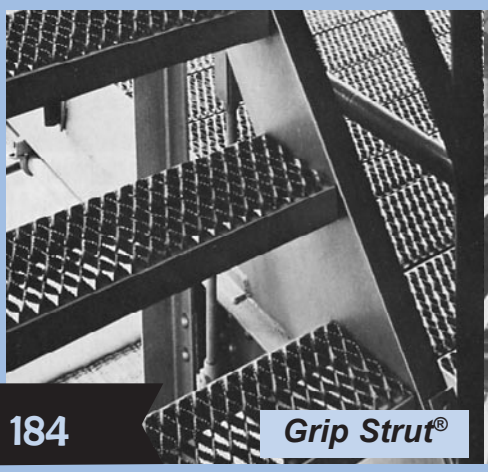
Stair Treads

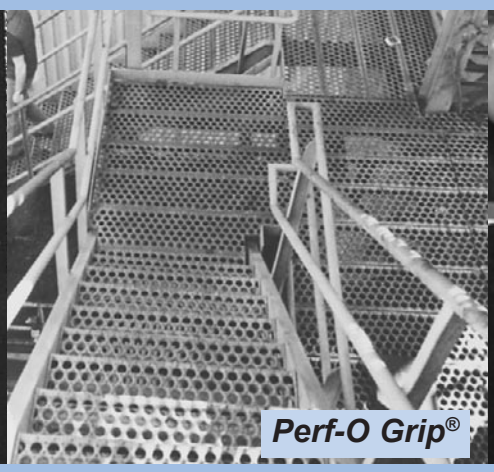
Stair treads are extremely versatile and available constructed in many of the specialty metal and fiberglass products offered throughout this catalog.

We carry bar grating and fiberglass stair treads in-stock ready for same day shipment in their most common constructions and sizes:

- Light duty welded 19W4 bar grating hrp&o smooth and serrated with checker plate nosings
- Molded fiberglass with grit surface in green, gray and light gray

Additionally, Brown-Campbell can custom fabricate stair treads to your specifications from any material. Popular bar grating choices include welded hrp&o or galvanized carbon steel, welded stainless steel, aluminum swaged rectangular bar or I-Bar. Any form of molded or pultruded fiberglass can be fabricated to any size. Other stair tread options include grip strut®, perf-o grip®, expanded metal, perforated, grate-lock™ and floor plate.


Grip Strut®


Perf-O Grip®


Stair treads fabricated with abrasive nosings.

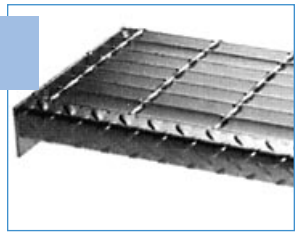
PERFORATED

Page 6



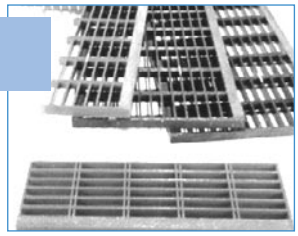
BAR GRATING

Pages 78



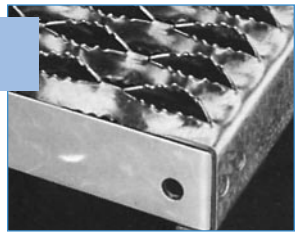
FIBERGLASS

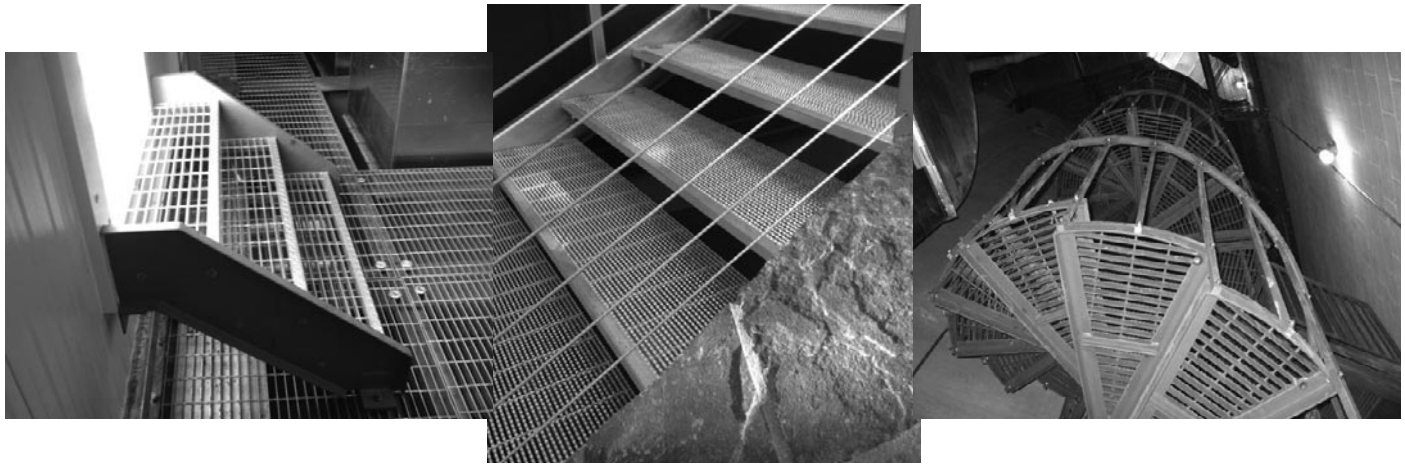
Page 100



GRIP STRUT®

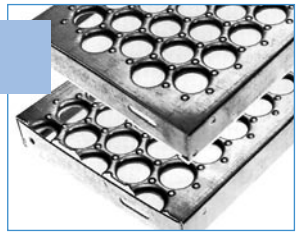
Pages 131





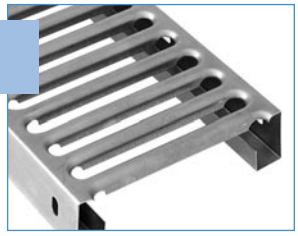
PERF-O GRIP®

Page 146



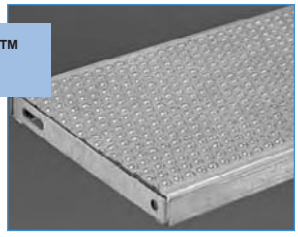
GRATE-LOCK™

Page 154



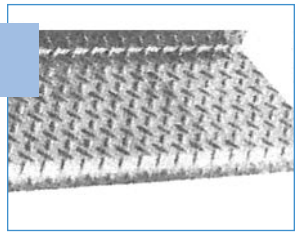
TRACTION-TREAD™

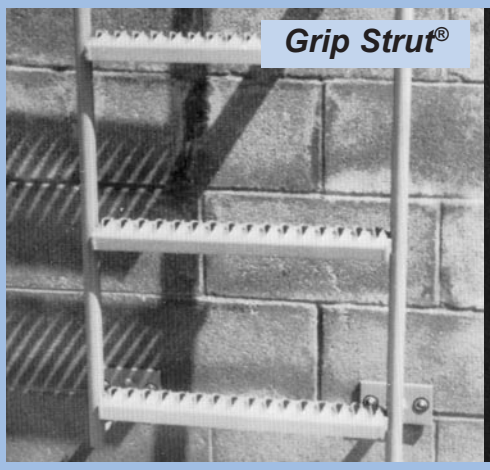
Page 159

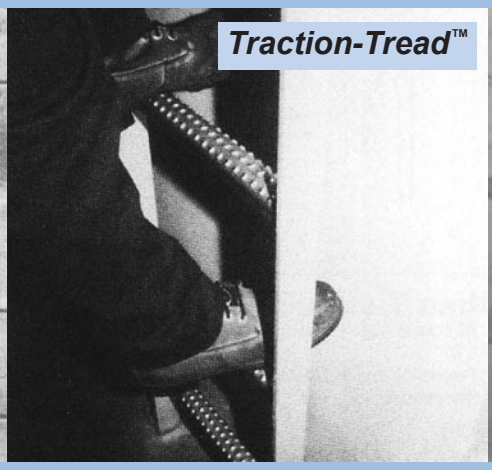


FLOOR PLATE

Page 167









Ladder Rungs

Ladder Rungs are available in four common constructions:
Traction-Tread™ - 2, 3, and 4 hole
Grip Strut® - standard and reverse diamond
Abrasive coated solid ladder rungs - round, square or tubes
Abrasive coated ladder rung covers - 1" and 1-1/4"

Material options include hrp&o carbon steel, pre-galvanized carbon steel, aluminum and stainless steel.

Each construction offers it's own unique properties and applications. Consider your needs regarding weight, strength and slip resistance in conjunction with whether installation will be indoor or outdoor. Outdoor applications might need to consider corrosion resistance as well as a more aggressive surface for safe use in snow and ice conditions.

GRIP STRUT® LADDER RUNGS

Serrated open diamond pattern in the web of the channel allows debris to fall through providing safe footing indoors and out.

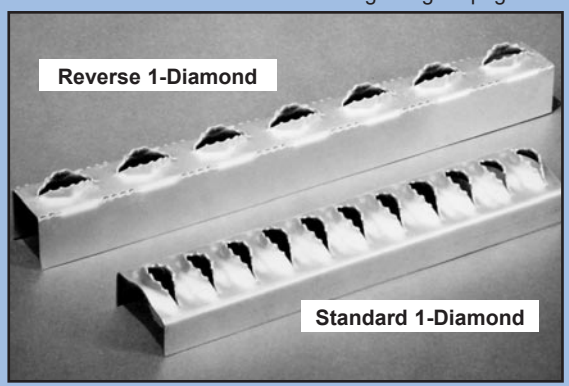
Material:	**14 ga. Pre-Galvanized and HRP&O Plain Steel**
Width:	**2-1/2"; Rev. Diamond 1-5/8"**
Height:	**1-1/8"; Rev. Diamond 1-5/8"**
Length:	**3', 4', 10', 12' or cut to size; Rev. Diamond 23-1/8"**
Weight:	**1.13 lbs/ft**
Safety Factor:	**1.5 (steel)**

14 Gauge Steel Load Table

Catalog Number		Clear Span					
		16"	18"	20"	24"	30"	36"
LG1	C	528	469	422	352	281	234
	D	.06	.07	.09	.13	.21	.30

C - Concentrated Live Load (lb); D - Corresponding Deflection (in)
Note: Values based on concentrated load placed at mid-span.

Please refer to the Grip Strut® section of this catalog for product information -beginning on page 112

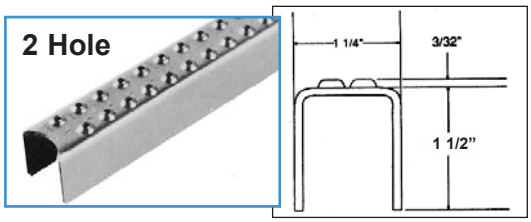


TRACTION-TREAD™ LADDER RUNGS

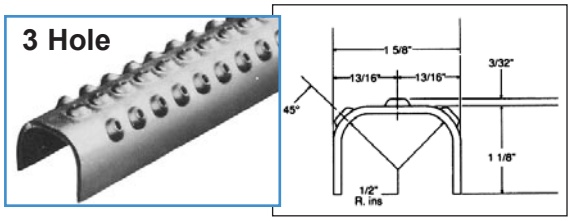
Small channel shaped sections; the web of the channel being the walking surface which is covered with small perforated dimples, produced by a cold forming process. Available in 2, 3, or 4 hole configurations.

Material: 13 & 11 ga. Pre-Galvanized and HRP&O Plain Steel
.125" ga. 5052-H32 Aluminum
Type 304 16 ga. Stainless Steel
Length: 48-3/4", 60"

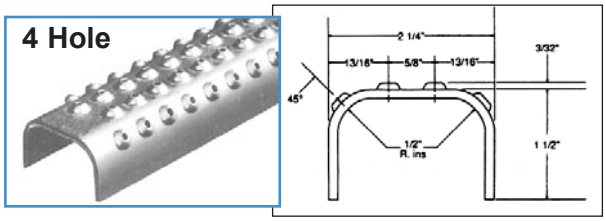
2 Hole



3 Hole



4 Hole



Please refer to the Traction-Tread™ section of this catalog for product information -beginning on pg 156.

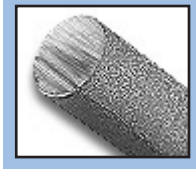
Type	Weight (lb/ft)	Catalog Number		Clear Span 16"	18"	20"	24"
1-1/4" Wide (2 Hole)							
Steel 13 ga.	1.18	LT213 (plain)	C	508	451	401	338
		LTG213 (galv)	C	508	451	401	338
Steel 11 ga.	1.52	LT211 (plain)	C	664	590	531	443
		LTG211 (galv)	C	664	590	531	443
Stainless Steel 16ga	.82	LTS216	C	345	306	276	230
Aluminum.125	.56	LTA218	C	471	418	377	314
1-5/8" Wide (3 Hole)							
Steel 13 ga.	1.06	LT313 (plain)	C	375	334	300	250
		LTG313 (galv)	C	375	334	300	250
Steel 11 ga.	1.46	LT311 (plain)	C	474	422	379	316
		LTG311 (galv)	C	474	422	379	316
Stainless Steel 16ga	.73	LTS316	C	260	231	208	
Aluminum.125	.50	LTA318	C	337	299	269	224
2-1/4" Wide (4 Hole)							
Steel 13 ga.	1.49	LT413 (plain)	C	862	766	689	574
		LTG413 (galv)	C	862	766	689	574
Steel 11 ga.	2.08	LT411 (plain)	C	1138	1012	911	759
		LTG411 (galv)	C	1138	1012	911	759
Stainless Steel 16ga	1.03	LTS416	C	580	516	464	387
Aluminum.125	.70	LTA418	C	810	720	649	540

C - Safe Allowable Concentrated Load (lb)

ABRASIVE COATED LADDER RUNGS & COVERS

Abrasive coated ladder rungs and ladder rung covers provide essential safety for ladder construction. The abrasive coating is applied through a metal plasma stream deposition providing a superior slip resistant surface.

SOLID LADDER RUNGS



Material: Steel, Aluminum, Stainless Steel
Shape: round, square or tubes
Thickness: 3/4", 1" or as specified
Length: up to 120" - steel, up to 144" stainless steel and aluminum
Grade: Grade 1-Fine, Grade 2-Medium

LADDER RUNG COVERS



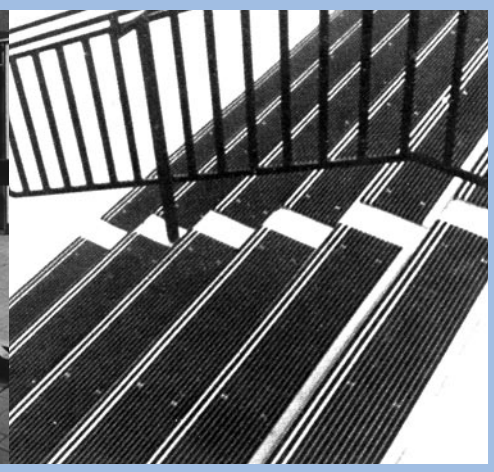


Material: Steel, Galvanized, Aluminum, Stainless Steel
Thickness: 1/8"
Width: 1" (for 3/4" dia. rungs), 1-1/4" (for 1" dia. rungs)
Length: up to 120" - steel and galvanized, up to 144" stainless steel and aluminum
Grade: Grade 1-Fine (except galvanized), Grade 2-Medium

Please refer to Abrasive Coatings on page 192 for product information

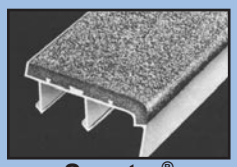
Abrasive coated ladder rungs exceed all requirements for coefficient of friction specified by ANSI, ASTM, ADA, NFPA, and OSHA.

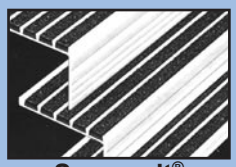




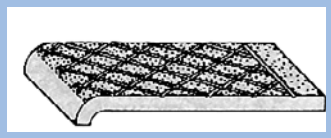
Nosings & Safety Treads

Nosings & Safety Treads offer a great safety precaution to protect your employees and visitors from dangerous slips and falls. Brown-Campbell stocks a full line of high quality nosings and safety treads including Spectra®, Supergrit®, Stairmaster® and Abrasive Cast.

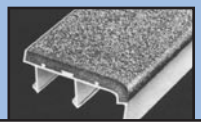

Spectra®


Supergrit®


Stairmaster®

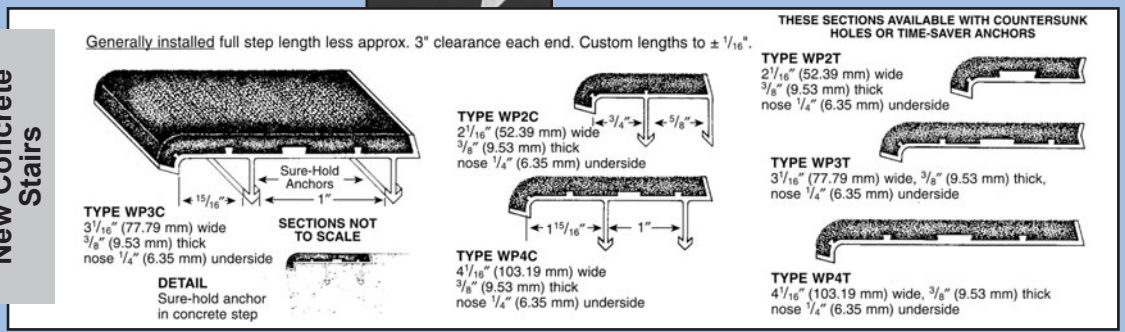

Abrasive Cast

SPECTRA® SAFETY TREADS

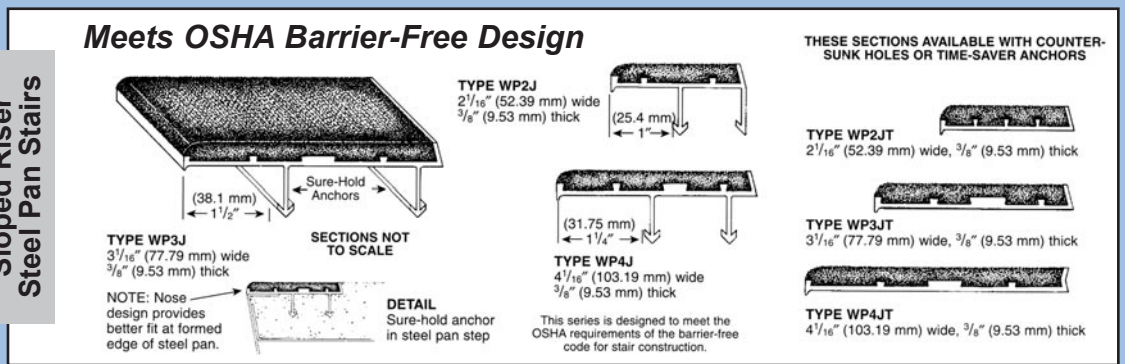


Available in 18 standard colors (see color chart below) designed to enhance the safety and beauty of every architectural installation. High content of aluminum oxide abrasive for long life and low wear.

New Concrete Stairs



Sloped Riser Steel Pan Stairs



- ADA Compliant
- Extruded aluminum base - abrasive filler
- One-piece lengths up to 10'0"
- Anti-slip abrasive extending over radius of nose
- Long life
- Protective Tape available
- Non-combustible

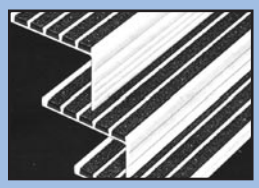
SPECTRA® COLORS

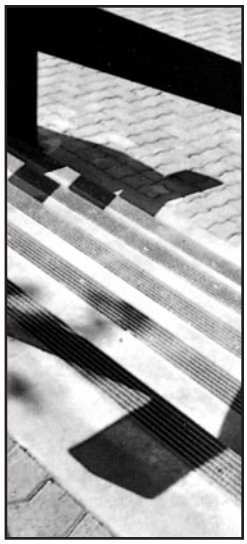
Standard color is black. Black will be shipped unless other color is specified.

Red (RD-6)	Brick Red (RD-5)	Burgundy (R-13)	Orange (OR-18)	Dk. Brown (BR-3)	Brown (BR-21)
Lt. Green (G-21)	Dk. Green (G-8)	Off White (WH-9)	Lt. Buff (B-1)	Lt. Blue (BU-17)	Blue (BU-10)
Safety Yellow (SSY-10)	Safety Orange (SSO-10)	Gold (YG-19)	Blue Gray (GY-5)	Black (BL-1)	Silver Gray (CA-5)

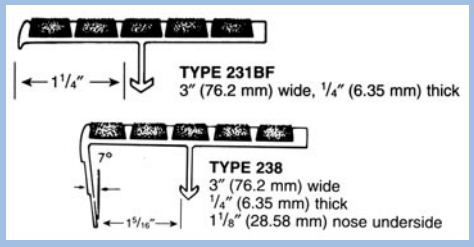
SUPERGRIT® SAFETY TREADS

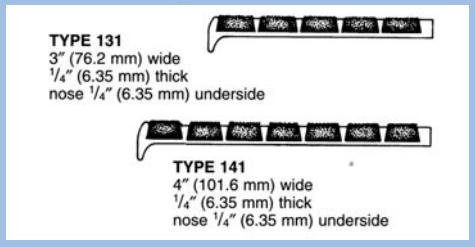
Ideal for heavy pedestrian traffic areas. Offers excellent indoor or outdoor safety protection at a low cost. Applicable for new construction or renovation applications.
Types 231BF, 131, 141, and 238.





- **Dual purpose - new concrete stairs or steel pan**
- **Available in 11 colors - see color list below**





Supergrit® & Stairmaster® Colors

Standard color is black. Black will be shipped unless other color is specified.

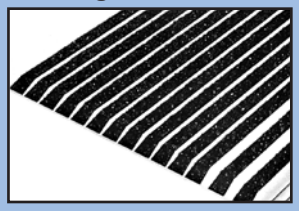
Light Green (LG-1) • Dark Green (DG-1) • Light Brown (LB-1) • Dark Brown (DB-1)
Light Red (LR-1) • Dark Red (DR-1) • Concrete Gray (CG-1) • Blue (BLU-1)
Safety Yellow (SY-1) • Black (BLA-1) • White (W-1)

Don't wait for an accident to happen! Call Brown-Campbell today and order your nosings and safety treads.

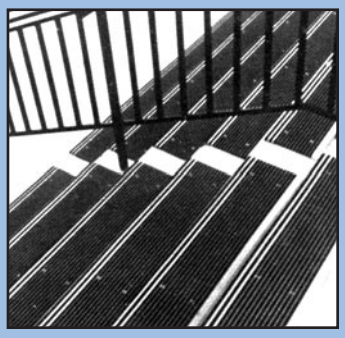
1-800-472-8464

STAIRMASTER® RENOVATION SAFETY TREADS

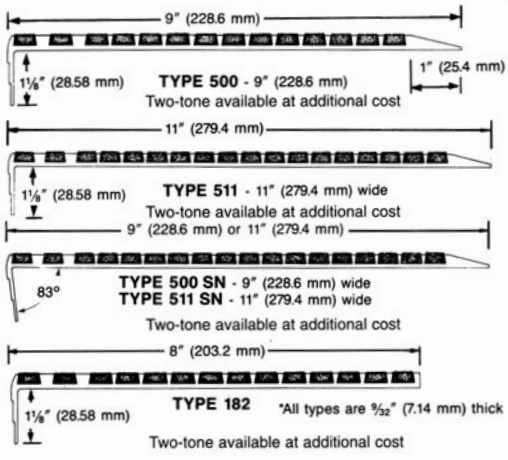
Designed for the modernization and restoration of all types of stairs, while providing excellent anti-slip protection for pedestrians.

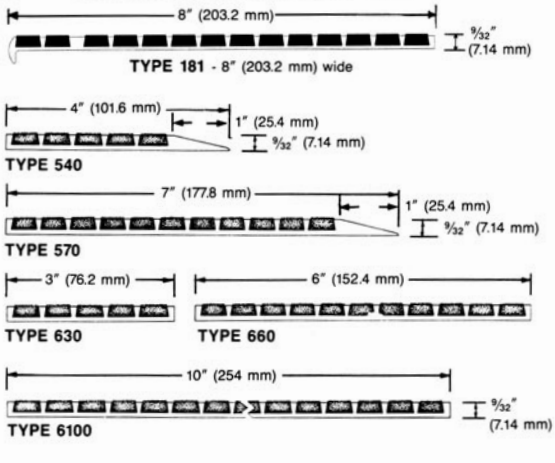


- **ADA Compliant**
- **All types 9/32" thick**
- **Two-tone treads with contrasting color available**
- **Great alternative to removal and reconstruction of existing stairways**
- **11 Color Choices - see color list above**



Most styles available up to 12'0" in one section. Maximum on type 511 SN and 511 is 8'0" and maximum on type 6100 is 10'0".
Drilled and countersunk holes are standard. Unless otherwise specified, Stairmaster treads furnished with beveled ends standard.





Brown-Campbell sales personnel are ready to assist you with your safety tread questions. We have years of experience in finding economical solutions to safety concerns!

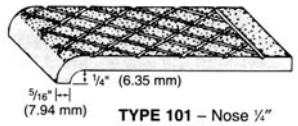
ABRASIVE CAST SAFETY TREADS AND NOSINGS

Offer the best alternative for use in the most difficult environments. This type of safety tread/nosing offers maximum durability in rough use and resistance to unusually corrosive environments.

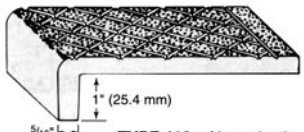
• ADA Compliant • Indoor or outdoor use • New construction or renovation •

POURED CONCRETE

Generally installed full step length less approx. 3″ (76.2 mm) clearance at each end.

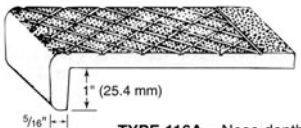


TYPE 101 – Nose ¼″ (6.35 mm) lip.
Chief use: as nosings in concrete stairs. Tread installed flush all around.



TYPE 116 – Nose depth 1″ (25.4 mm) standard.
Chief use: as nosings in concrete stairs where deeper lip is desirable.

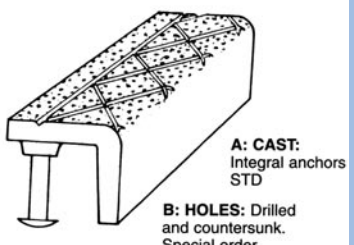
FOR EXISTING STAIR REPAIR



TYPE 116A – Nose depth 1″ (25.4 mm) standard.
Chief use: superimposed on existing steps for repair and modernization.

Beveled Treads. Contact Brown-Campbell for availability per application.

CONCRETE CURBS

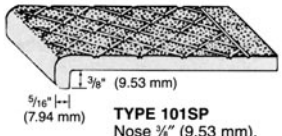


TYPE 150
1½″ x 1½″ x ⅜″
(38.1 mm x 38.1 mm x 9.53 mm)
Maximum length 6′0″ (1.83 m)

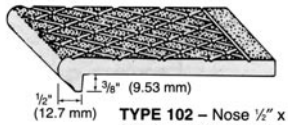
TYPE 250
2½″ x 2½″ x ½″
(63.5 mm x 63.5 mm x 12.7 mm)
Maximum length 6′0″ (1.83 m)

STEEL PAN

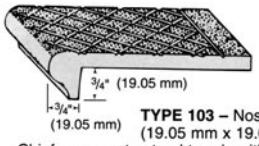
Generally installed full stringer to stringer length, less ¼″ (3.05 mm) clearance.



TYPE 101SP
Nose ⅜″ (9.53 mm).
Chief use: as nosings on steel-pan concrete-filled stairs or superimposed on existing steps.



TYPE 102 – Nose ½″ x ⅜″. (12.7 mm x 9.53 mm).
Chief use: as nosings on steel-pan stairs. Can also be used structurally with bent-plate risers.



TYPE 103 – Nose ¾″ x ¾″. (19.05 mm x 19.05 mm).
Chief use: as structural treads with bent-plate risers or as nosings full width of stair.

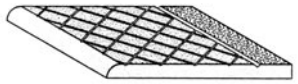
MISCELLANEOUS USES



TYPE 100
Square edges. Chief uses: floor plates, trench covers, stair landing platforms, expansion joint covers.



TYPE 110
Rounded edges. Chief uses: Expansion joint covers, platforms around machinery, deck treads.



TYPE 120
One edge rounded. Chief use: nosings on steel grating treads and for special conditions, usually superimposed.



TYPE 950
Ladder Rung.
AL-18″ length only

Abrasive Cast - Maximum Length vs. Depth
(Guide for developing specification or bid)

Type No.	Metal	Depth	Thickness	Non-Structural Max Length
100, 101, 101sp, 102, 103, 110, 116, 116A, 120	Aluminum/ Cast Iron	1.5″ to 6″	5/16″ - 3/8″	8′-6″
		6″ to 12″	5/16″ - 5/8″	6′
150	Aluminum/ Cast Iron	1.5″ to 1.5″	3/8″	6′
250	Aluminum/ Cast Iron	2.5″ to 2.5″	1/2″	6′

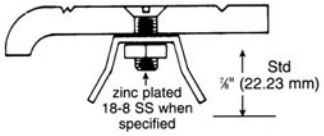
- **Castings are subject to usual foundry draft, tolerances and thicknesses +/- 1/8″**
- **Nosing will show a parting line on nose surface**
- **Standard measurements are from top of nosing**
- **Custom lengths to +/- 1/16″**
- **Standard hole size 1/4″ with countersunk hole tops**



FASTENERS

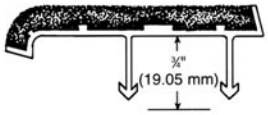
FRESH CONCRETE

WING TYPE ANCHOR



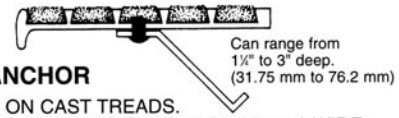
Steel wing anchors, bolts, and nuts are furnished for field attachment into factory-drilled and ctsk. holes, prior to tread installation. Standard spacing is 3" (76.2 mm) from ends on approx. 12" (304.8 mm) centers. In single, staggered or double row, according to tread width. Can be furnished on most types if specified. ¾"–½" length – 14 FHMS. Wing metal, standard mild steel. Stainless steel upon request.

SURE-HOLD ANCHOR



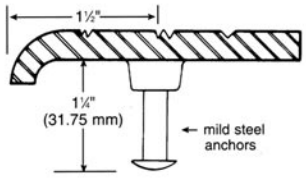
Sure-Hold anchors run full length of tread for positive anchorage and quick installation. Since Sure-Hold anchors are concealed, no bolt holes appear on the tread surface.

TIME-SAVER ANCHOR



NOT AVAILABLE ON CAST TREADS.
NOT AVAILABLE ON TREADS OVER 4" (101.6 mm) WIDE.
Time-Saver anchors provide concealed anchorage. Anchors are bent to desired depth (usually 45°) before treads are installed. Standard spacing is 3" (76.2 mm) from ends on approx. 12" (304.8 mm) centers, in single, staggered, or double row, according to tread width.

CONCEALED INTEGRAL ANCHOR



This concealed type steel anchor is furnished standard on cast types 150 and 250. Anchor spacing in on approx. 10" (254 mm) centers.

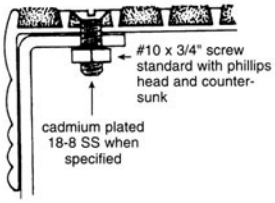
EXISTING CONCRETE



WOOD OR MACHINE SCREWS | GALVANIZED TAPCON SCREWS | SCREW & SHIELDS

Treads being superimposed on existing stairs can be furnished pre-drilled and ctsk. for wood, machine or Tapcon screws. Standard spacing is 3˝ (76.2 mm) in from each end, approx. 12˝ (304.8 mm) centers, in single, staggered, or double row, according to tread width. Will furnish #10 screws.

BOLTED TO STEEL PAN RETURN

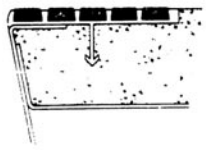


Additional anchorage can be provided on some types of treads being used on new steel pan stairs. Pan return must be 1" (25.4 mm) minimum. Standard hole spacing is 3" (76.2 mm) from ends on approx. 12" (304.8 mm) centers. Specify how much of a return is on the pan for drilling purposes.

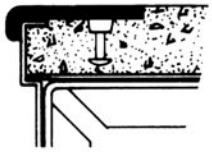
ALSO AVAILABLE: PROTECTIVE TAPE

Nosings for NEW construction can be furnished with a protective tape cover. This tape should be removed after the stairs are installed. Keeps treads free of dirt during construction. Tape coverings, of course, entail a small additional charge per lineal foot.
Tape should not be left on treads over 45 days.

INSTALLATION



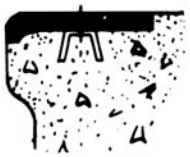
TYPE 231 BF
Sure-hold anchor in sloped riser steel pan step.



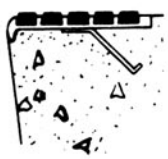
Type 101SP with concealed integral anchor in steel pan stair.



Type WP3C with integral Sure-Hold anchor in new concrete stair.



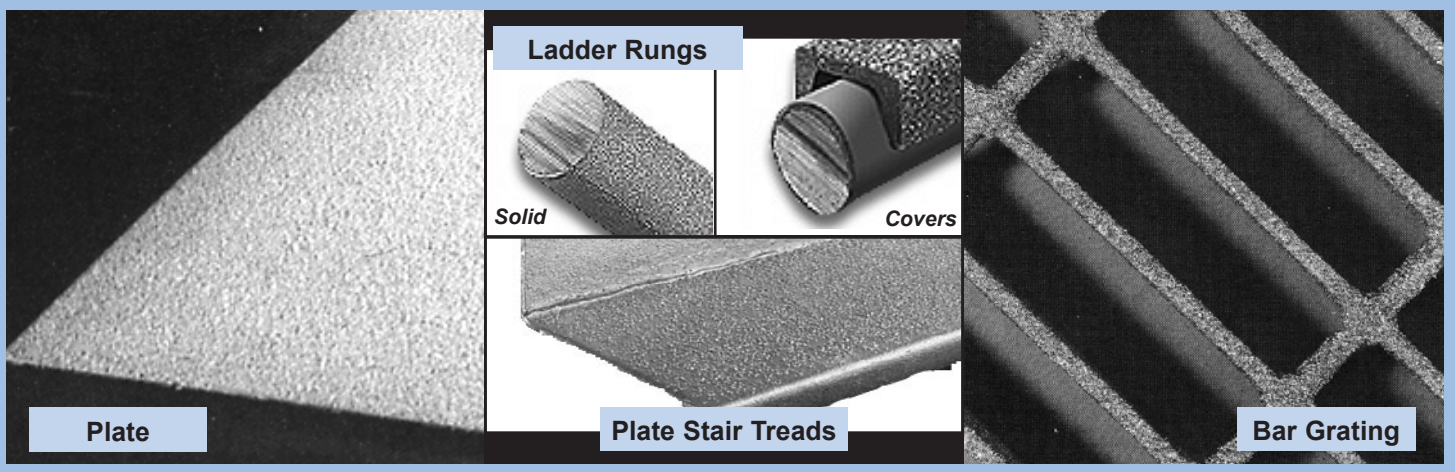
Type 101 with wing type anchors in poured concrete stair.



Type 131 with Time-Saver strap anchors in new concrete stair.



Inquire at 1-800-472-8464 or brown-campbell.com



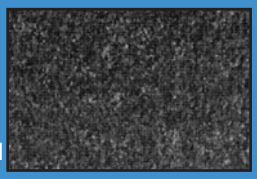
Abrasive Coatings

Abrasive Coatings applied to specialty metal products offer superior slip resistance. Our abrasive coatings have a surface hardness of up to 62 on the Rockwell "C" scale. This approaches the hardness of a file and gives our abrasive coatings the longest wearing surface of any slip resistant product offered. The bond strength exceeds 4,500 p.s.i. Surface hardness and bond strength are critical to longevity. Low bond strength allows the surface to wear off, dramatically reducing the slip resistance and therefore, effective life.

Applications include: walkways, conveyors, platforms, stairs, bridge walkways, wheelchair ramps, ladder rungs, vehicle surfaces, assembly lines, tank bottoms, vault covers, engine rooms

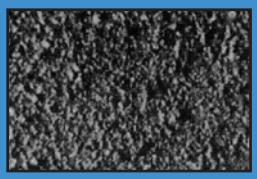
Grade 1-Fine

A fine surface with minimum surface depth suitable for variable pedestrian traffic flow and areas with moderate liquid accumulation.



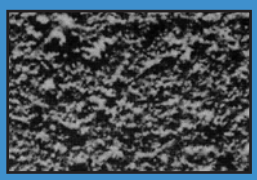
Grade 2-Medium

A medium surface applicable to heavier liquid accumulations. This is considered the all-purpose surface.



Grade 3-Coarse

A coarse surface applicable for extremely heavy traffic, higher debris accumulation and high viscosity fluids.

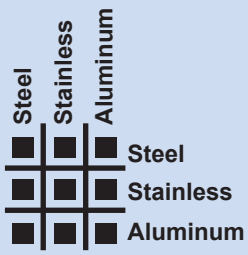


Abrasive Coatings are Proven!

When compared to "pressed grit" or "coated on grit" products, our abrasive coatings deliver far superior slip-resistance and wear performance as proven by national testing laboratories and other authorities.

Why use Abrasive Coatings?

- Limits liability exposure due to injuries resulting from slips and falls.
- **FLEXIBILITY: Our abrasive coating combinations can be chosen to accommodate unique applications, such as merging the toughness of steel with the light weight of aluminum.**



- Exceeds all OSHA standards for safety and slip resistance.
- USDA/FDA approved for use in the food service industry.
- Cleans Easily
- Long lasting, Durable, and Economical
- Versatile: Can be applied to any product
- Modifiable: Any fabrication can be applied without adverse effects
- Weldable: Can be directly welded to with no surface preparation.

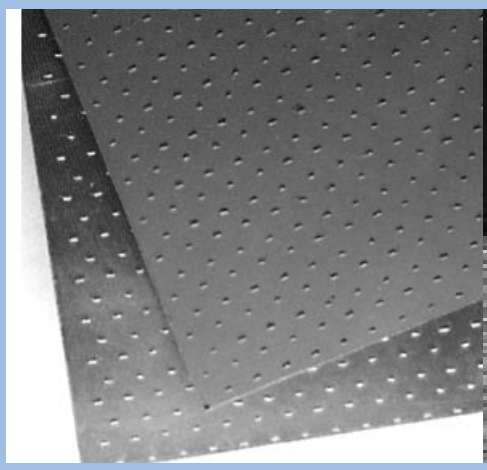
Abrasive Coating Process

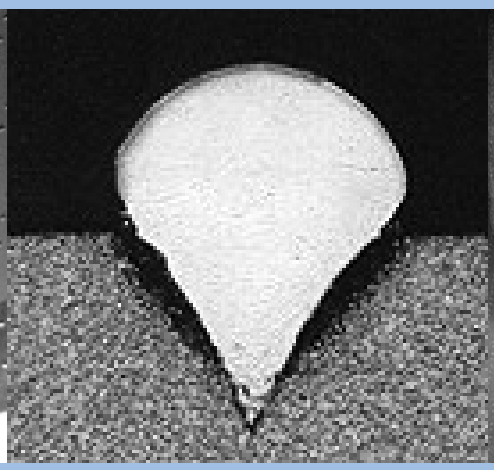
An all metal plasma stream disposition is applied directly to plate, bar grating, stair treads, ladder rungs or other specialty steel product. Our abrasive coating can be fabricated in any way (punched, sheared, torched, plasma or laser cut, welded, etc.) on the surface or underside without any adverse effects to the abrasive coated surface.

Plasma Stream Deposition



The application of a molten metal alloy to a metallic surface. The extreme temperature assures maximum adhesion. This is much different from a grit simply rolled or coated onto a base product.







Algrip™

Algrip™ is a slip-resistant floor plate designed to provide safe walking surfaces for the most demanding commercial and industrial installations in wet or dry conditions. Algrip™ is manufactured through a patented CNC laser deposition process in which hundreds of rugged, custom alloy, slip-resistant laser deposits are delivered to each square foot of a steel plate substrate in a standard .250 x .375 staggered matrix, providing slip-resistance in all directions.

Ease of Fabrication

One of the greatest advantages of Algrip™ is that it can be easily manufactured into finished components using common metal working tools. The superior adhesion of the Algrip™ slip-resistant surface allows the plate to be fabricated by:

•Welding •Drilling
•Shearing •Countersinking
•Press Brake Forming
•Flame Cutting •Punching

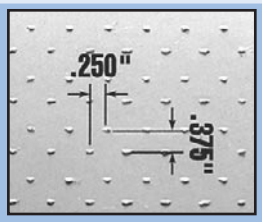
Finishing

Traditional metal finishes can be applied to Algrip™ without compromising its superior traction properties. Algrip™ can be painted with common acrylic or epoxy coatings. Hot dip galvanizing is also easily accomplished without sandblasting or other expensive surface preparation.

Maintenance

With proper finishing, maintenance is limited to appropriate cleaning of dirt and debris from the plate to ensure safe footing.

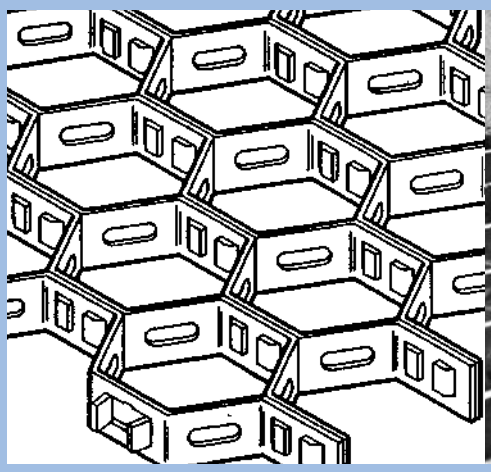
•Thickness:
1/8”, 3/16”, 1/4”, 5/16”, 3/8”, 7/16”, 1/2”, 9/16”, 5/8”, 11/16”, 3/4”
•Width & Length:
cut to order

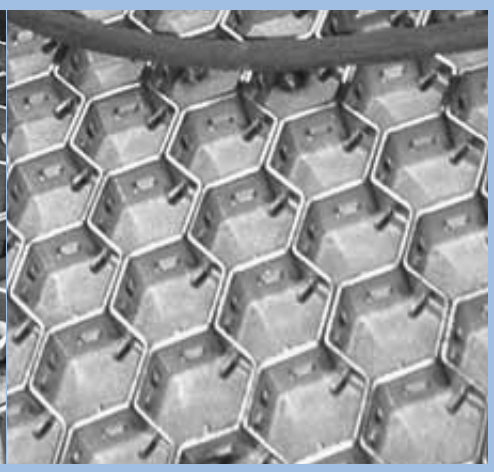


Algrip™ Load Table

Thickness		Clear Span 1’-0”	1’-6”	2’-0”	2’-6”	3’-0”	3’-6”	4’-0”	4’-6”	5’-0”	5’-6”	6’-0”	6’-6”	7’-0”	7’-6”	8’-0”
1/8”	U	333	148	83	53	37										
	D	.18	.40	.71	1.12	1.61										
3/16”	U	750	333	187	120	83	61	47								
	D	.12	.27	.48	.74	1.07	1.46	1.90								
1/4”	U	1333	593	333	213	148	109	83	66							
	D	.09	.20	.36	.56	.80	1.09	1.43	1.81							
5/16”	U	2083	926	521	333	231	170	130	103	83						
	D	.07	.16	.29	.45	.64	.87	1.14	1.45	1.78						
3/8”	U	3000	1333	750	460	333	245	187	148	120	99					
	D	.06	.13	.24	.37	.54	.73	.95	1.20	1.49	1.80					
7/16”	U	4083	1815	1021	653	454	333	255	202	163	135	113				
	D	.05	.11	.20	.32	.46	.62	.82	1.03	1.27	1.54	1.83				
1/2”	U	5333	2370	1333	853	593	435	333	263	213	176	148	126			
	D	.04	.10	.18	.28	.40	.55	.71	.90	1.12	1.35	1.61	1.88			
9/16”	U	6750	3000	1687	1080	750	551	422	333	270	223	187	160	138		
	D	.04	.09	.16	.25	.38	.49	.63	.80	.99	1.20	1.43	1.67	1.94		
5/8”	U	8333	3704	2083	1333	926	680	521	412	333	275	231	197	170		
	D	.04	.08	.14	.22	.32	.44	.57	.72	.89	1.08	1.28	1.51	1.75		
11/16”	U	10083	4481	2521	1613	1120	823	630	498	403	333	280	239	206	179	
	D	.03	.07	.13	.20	.29	.40	.52	.66	.81	.98	1.17	1.37	1.59	1.82	
3/4”	U	12000	5333	3000	1920	1333	980	750	593	480	397	333	284	245	213	187
	D	.03	.07	.12	.19	.27	.36	.48	.60	.74	.90	1.07	1.26	1.46	1.67	1.90

U - Allowable Uniform Load (lbs/sq ft); D - Deflection at Mid-span (in)
Plates for spans left of the bold line have a deflection of less than 1/4” when subjected to uniform loads of 100 lbs/sq ft
Allowable stress 16,000 pounds per sq in



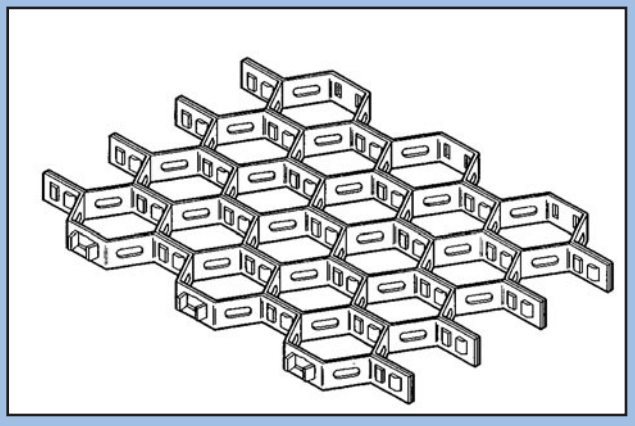


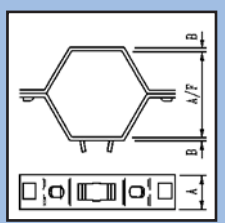
Hexmetal

Hexmetal is composed of a hexagon shaped grid used in the installation of thick linings. Hexmetal supports the lining and prevents slumps. It retards erosion, corrosion, cracking, blistering, pitting or collapse thereby lengthening the life of the lining. Hexmetal is recommended for use when placement is spaced from the steel shell to allow room for thick insulation between the steel shell and the armored surface. The slots permit passage of the castable which forms a key between adjacent cells. Available in standard and lance pattern.

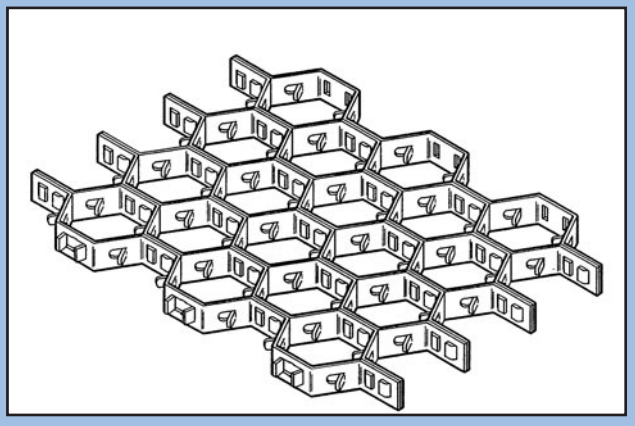
Material:	**Carbon Steel**
	Stainless Steel
Gauge:	**16, 14, 12**
Depth:	**3/4”, 1”**
A/F:	**1-7/8”**

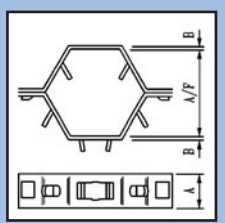
STANDARD PATTERN





LANCE PATTERN







Brown-Campbell Purchasing prides itself on maintaining the most comprehensive specialty metal & fiberglass inventory in the industry.

Same Day Shipments available on all IN-STOCK items.







Brown-Campbell is ready to ship In-Stock items SAME DAY. Call now and get your order on it's way to you!



SELECT STOCK LISTS

Perforated	p. 7
Wire Cloth	p. 21-23
Expanded Metal	p. 38-41
Bar Grating	p. 47
Fiberglass	p. 91
Grip Strut®	p. 113
Perf-O Grip®	p. 139
Grate-Lock™	p. 149
Traction-Tread™	p. 156
Deck	p. 169

1-800-472-8464

Manufacturing

Brown-Campbell Manufacturing is dedicated to supplying quality products each and every time! Constant effort is put forth in obtaining the best raw materials and increasing efficiency through production and machinery improvements to enable Brown-Campbell to offer the best service and price possible to all of our valued customers.





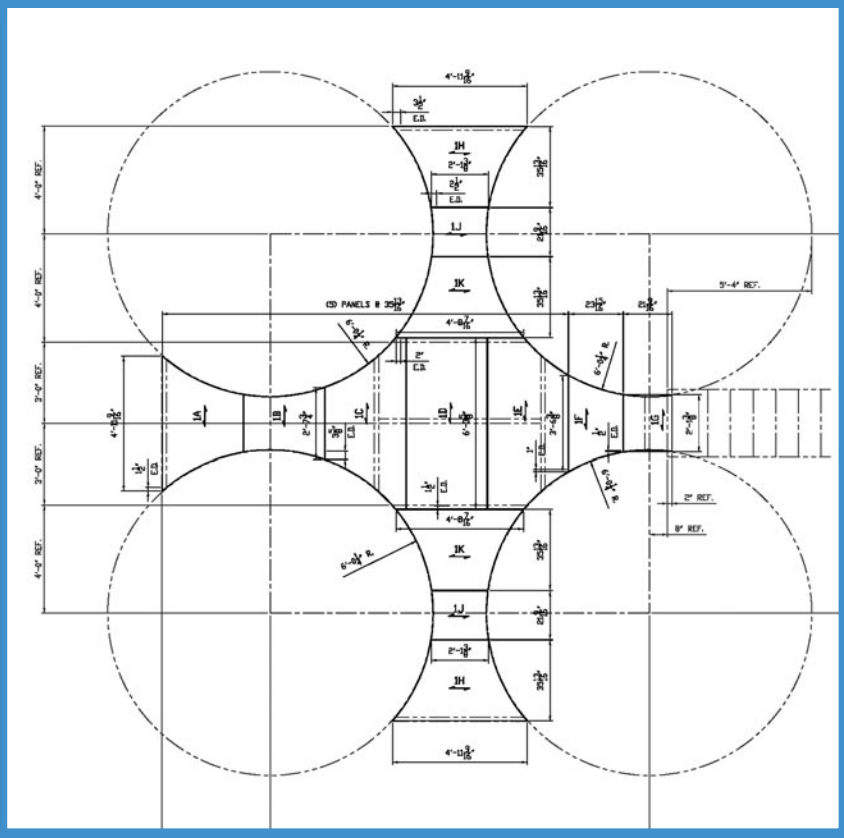


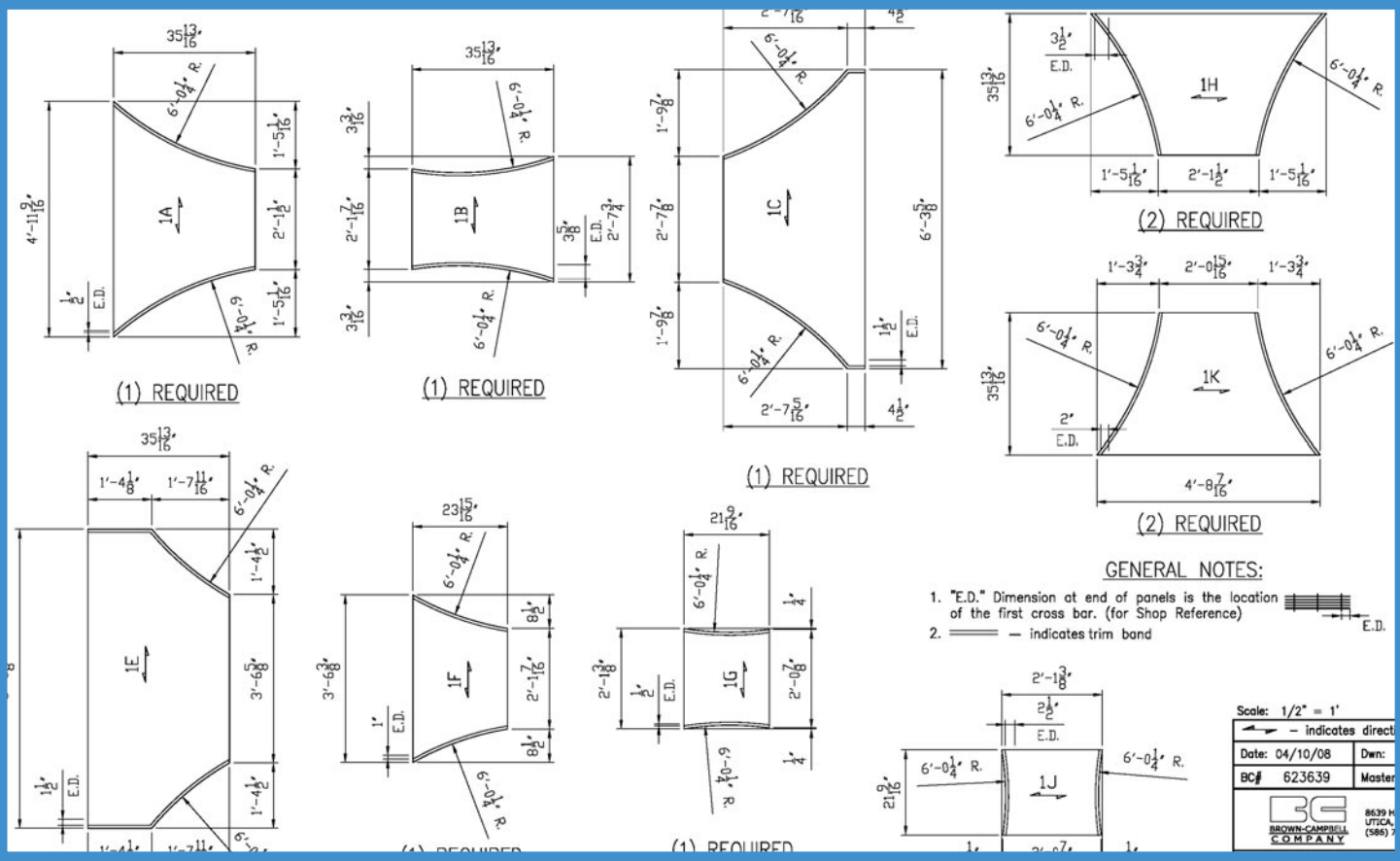
Manufacturing team members surrounded by bar grating panels and the machines that make them.

TAKE OFFS & DRAWINGS

- In-House
- Fast
- Precise

1-800-472-8464



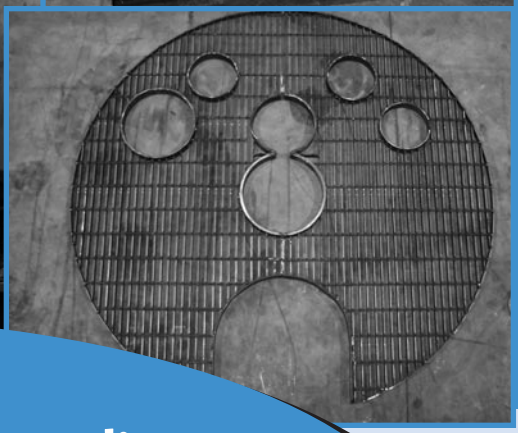


Fabrication Services

1-800-472-8464







- Cutting
- Shearing • Sawing • Banding
- Circles • Burning • Galvanizing • Painting
- Blanking • Notching • Welding
- Stair Treads





ISO 9001:2015 Certified

9 Service Centers

Cincinnati, Cleveland, Dallas, Detroit, Memphis, Minneapolis, Portland, South Carolina, Wisconsin

+ 4 Additional Sales Offices

Arizona, California, North Carolina, NY/NJ

Servicing the United States & Canada from our facilities located throughout the U.S. that exceed **477,500** total square feet.



With **15 Friction Saws** and **12 Band Saws**, Brown-Campbell is ready to cut your order -large or small- fast and accurately, allowing for much faster installation.

7 Shears empower us to cut your Perforated, Expanded Metal, Wire Cloth or Traction-Tread™ order to your required finished size the same day, in-house.

Brown-Campbell maintains **14 Paint Tanks** enabling us to paint your grating order efficiently and economically. Our tanks eliminate wasted paint, saving cost which we pass on to our customers.

Wide-Ranging Equipment List

Everything necessary to fabricate your order to your specifications:

OF COURSE WITH
SPEED & PRECISION!



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Terms & Conditions

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TERMS AND CONDITIONS:

The following terms and conditions govern the sale of all Brown-Campbell Company products, services, goods and materials, regardless of whether they may be made pursuant to written or oral orders placed with Brown-Campbell Company (further referred to as B-C).

1. PRICE: Absent written agreement to the contrary, price is subject to change without notice, unless specifically designated as firm for a specified period of time pursuant to a written quote or sales acceptance issued by B-C. Any and all prices and deliveries are F.O.B. shipping point. B-C reserves the right to cancel any order in the event that selling prices, which are lower than the prices quoted, are established by governmental regulations.

2. TRANSPORTATION: Absent customer instructions to the contrary which are to be provided in the sales contract, B-C shall use its judgment in determining method and manner of shipment and routing of its goods/materials. B-C will not and shall not be responsible for any delays and/or excessive transportation charges resulting from its selection.

3. PACKING: Unless otherwise specifically provided in the Sales Contract, B-C will comply with only minimum packing standards consistent with the method of transportation selected. Any and all costs of special packing, loading or bracing that may be requested by Buyer along with any special shipping instructions shall be paid for by Buyer.

4. PAYMENT TERMS: Unless otherwise provided in the Sales Contract, if payment is made within ten days from the date of invoice, the customer shall be allowed a 1/2% discount from the sales price. This discount does not apply to any sales tax or freight charges. Otherwise, payment will be net 30 with a carrying charge of 2% per month for payment received after thirty (30) days. B-C reserves the right to require advance payment or satisfactory security for the goods if, in the sole discretion of B-C, the financial condition of Buyer so warrants this determination. If the Buyer fails to pay in accordance with the terms of this Agreement or any other collateral Agreement, B-C, may, at its option, without waiving any and all of the rights they may have under Michigan Law, cancel any unshipped portion of the Order. The Buyer will thereupon be liable for any and all unpaid costs.

5. TAXES & IMPORT/EXPORT LICENSES: Prices do not include taxes. Taxes are paid by Buyer upon invoice from B-C unless Buyer provides a valid exemption certificate acceptable to the taxing authority or unless B-C is forbidden by law from collection of said taxes from Buyer. Import or export licenses are to be secured by Buyer.

6. TITLE & RISK OF LOSS: Delivery to carrier shall constitute delivery to Buyer, and thereafter risk of loss or damage shall pass to Buyer. Any claim of Buyer relative to damage during shipping or delivery should be made directly to the carrier. Any claims by Buyer against B-C for shortage or damage occurring prior to such delivery to carrier must be made within five (5) days after receipt of the goods and accompanied by original transportation bill signed by carrier noting that carrier received the goods from B-C in the condition claimed. Notwithstanding passage of the risk of loss to Buyer, title and right of possession to the goods sold hereunder shall remain with B-C until all payments hereunder, including deterred payments evidenced by notes or otherwise, Interest, carrying charges, and attorneys’ fees, shall have been made in cash, and Buyer agrees to do all acts necessary to perfect and maintain such right and title in B-C.

7. RETURN OF PRODUCTS: Goods cannot be returned, and orders once accepted by B-C cannot be cancelled, except upon the written approval of B-C. Cut to size items and special orders may not be returned unless it has been determined to be provided in error by B-C. If a return is approved, customers returning goods are responsible for all freight charges, incoming and returning to B-C and shall be assessed a restocking fee of 20% of the order.

8. FORCE MAJEURE: B-C shall not be liable for failure to perform its obligations resulting directly or indirectly from or contributed to by acts of God; acts of Buyer, civil or military authority, including wage and price controls; war; fires; riot; terrorism; delays in transportation; lack of or inability to obtain raw materials (including energy sources), components, fuel, labor, or supplies; or other circumstances beyond B-C’s reasonable control, whether similar or dissimilar to the foregoing. If certain quantities are affected and other quantities are not, the quantities affected shall be eliminated without liability, but the agreement shall remain unaffected. B-C may, during any period of shortage due to any of the above said causes, allocate its supply of such raw materials among its various users thereof in any manner which B-C deems fair and reasonable. In no event shall B-C be liable for special or subsequent damages for any delay for any cause.

9. ATTORNEY FEES: In the event Buyer defaults, and B-C has to institute proceedings for the recovery of the purchase price, any unpaid balance, or for breach by Buyer under any of the terms herein contained, Buyer shall pay to B-C or its agents, in addition to the damages provided by law, all attorney fees and costs of collection.

10. SHIPMENT ERRORS: B-C shall have no liability for errors in weight or quantity delivered unless claim is made by Buyer within five (5) days after receipt of shipment and accompanied by original transportation bill signed by carrier noting that carrier received the goods from B-C in the condition claimed. If such timely claim is made by Buyer, and the claim is deemed valid by B-C, B-C may fulfill its responsibility by either shipping the quantity necessary to make good on the deficiency, or at B-C’s option, crediting Buyer with the invoice price of the deficiency.

11. WARRANTY: All goods sold by B-C are warranted to Buyer to be free from defects in material and workmanship, and manufactured in accordance with industry standards. Except as expressly set forth in the first sentence of this condition (#11) B-C makes no representation or warranty of any kind, express or implied, at law or in equity, in respect of any of the goods sold, including with respect to merchantability, fitness for any particular use, design or purpose. All other representations or warranties are hereby disclaimed. No agent, employee, or representative of B-C has any authority to bind B-C to any representation, affirmation, or warranty concerning the goods and any such representation, affirmation, or warranty shall not become a part the agreement between Buyer and B-C and shall be unenforceable. Any claimed defect in material or workmanship shall be deemed waived by Buyer unless submitted to B-C in writing within five (5) days from the date the goods are received by Buyer. B-C shall not be liable under the foregoing limited warranty if any loss or damage is caused by improper application or use of the goods. The foregoing warranty is non-assignable.

12. REMEDIES & LIMITATION OF LIABILITY: B-C shall not be liable for incidental, speculative, punitive or consequential losses, damages, or expenses arising directly or indirectly from the sale, handling or use of the goods, or from any other cause relating thereto. Further, B-C shall not be responsible, obligated, or liable for any injury or damage resulting from the customer’s application or use of its products, either singularly or in combination with other products, arising out of acceptance of this order which is not directly related to and arises from a breach of the limited warranty set forth above. Upon discovery of unsatisfactory material, the Buyer must immediately notify B-C in writing, who will initiate an investigation into the complaint. B-C shall be given the opportunity to inspect the material prior to any corrective work being done. B-C’s liability, in any case, including for claims of breaches of warranty or negligence is exclusively limited, at B-C’s option (not Buyer’s), to the replacement of goods not complying with this agreement, the repayment of, or crediting the Buyer with, an amount equal to the purchase price of such goods, repairing or arranging for repair of the goods. The Buyer may not repair the goods unless authorized in writing by B-C prior to the repair. If B-C requests the return of the goods, the goods will be redelivered to B-C in accordance with B-C’s instructions. The remedies contained in this paragraph constitute the sole recourse of Buyer against B-C for breach of any of B-C’s obligations, whether of warranty or otherwise. As long as B-C makes a good faith effort to rectify any breach, the remedies provided for herein shall be deemed satisfied.

13. SELECTION: Buyer represents that the goods sold hereunder are fit for their actual or intended use and that Buyer placed no reliance on B-C’s skill or judgment in selecting suitable goods or materials or in the design of suitable goods and materials. Buyer represents that the use and installation of the goods shall be made in compliance with all applicable government requirements. Buyer will defend, indemnify and hold harmless B-C, its successors, assigns and subsidiaries from and against all costs (including attorney’s fees), damages and liabilities resulting from actual or alleged claims asserted or any penalties proposed or assessed B-C for any alleged violation of any federal, state or local law, rule, regulation or standard, by reason of or in connection with any use of the goods delivered hereunder.

14. CHOICE OF LAW; VENUE: This Agreement and all matters contained herein will be governed in accordance with the laws of the State of Michigan.

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1-800-GRATING



BAR GRATING



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