

Safety gratings

SGPC-16

**B-LINE**  
SERIES

**Safety gratings**  
Safety for every walk of life™



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We are dedicated to ensuring that reliable, efficient and safe power is available when it's needed most.

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Eaton’s B-Line series safety grating offering is ideal for a wide variety of applications. From ladder rungs to stair treads to walkways and mezzanine floors, Eaton’s safety grating helps provide a safe walking surface.



Grip Strut walkways



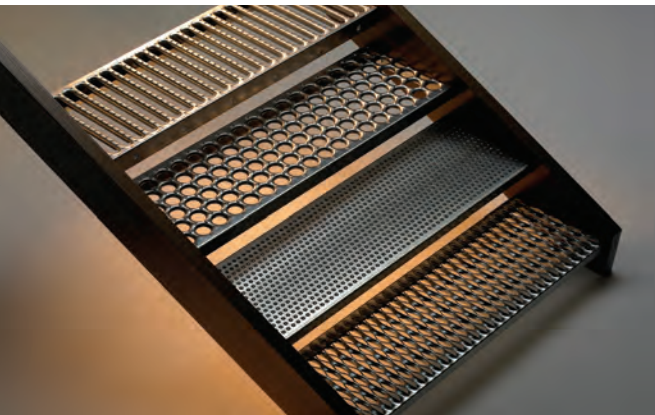
Grate-Lock rooftop walkways



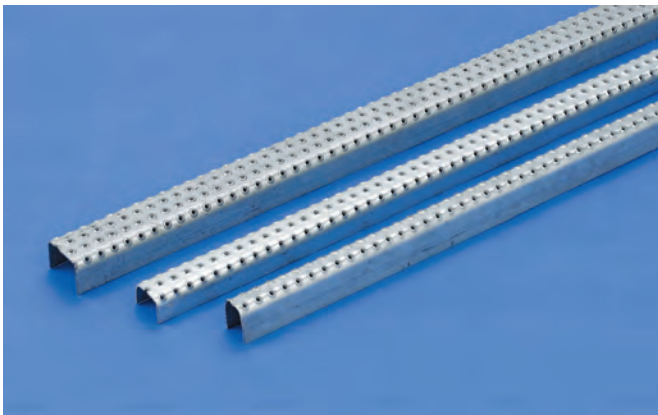
Mezzanine grating



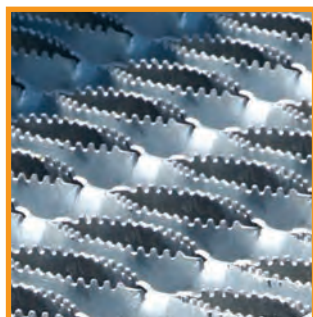
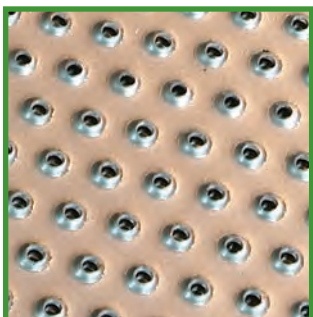
Traction tread flooring



Stair treads



Ladder rungs



<b>Product applications</b> . . . . .	<b>2</b>
<b>Table of contents</b> . . . . .	<b>3</b>
<b>Grip Strut™ grating</b> . . . . .	<b>4-33</b>
Table of contents / advantages . . . . .	4
Proof of Performance . . . . .	5
General load information . . . . .	6-7
Safe loading tables . . . . .	8-19
Comparative performance tables . . . . .	20-21
Accessories . . . . .	22-25
Specials . . . . .	26
Fabricated products . . . . .	27
Stair tread information . . . . .	28-29
Specifications . . . . .	30-31
How to build a part number . . . . .	32-33
Installation recommendations . . . . .	33
<b>Perf-O Grip™ grating</b> . . . . .	<b>34-51</b>
Table of contents . . . . .	34
General information . . . . .	35
Design load tables . . . . .	36-44
Accessories . . . . .	45-48
Stair tread information . . . . .	49
Specifications & how to order . . . . .	50-51
<b>Traction Tread™ grating</b> . . . . .	<b>52-61</b>
Table of contents / advantages . . . . .	52
Material option & hole patterns . . . . .	53
Design load tables . . . . .	54-59
Accessories . . . . .	60
Specifications & how to build a part number . . . . .	61
<b>Heavy Duty Grip Strut™ grating</b> . . . . .	<b>62-85</b>
Table of contents / advantages . . . . .	62-63
General load information . . . . .	64-66
Width comparison . . . . .	67
Safe loading tables . . . . .	68-79
Accessories . . . . .	80-81
Stair tread . . . . .	82
How to build a part number . . . . .	83
Specifications . . . . .	84-85
<b>Grate-Lock™ grating</b> . . . . .	<b>86-103</b>
Table of contents / advantages . . . . .	86
Proof of performance & recommendations . . . . .	87
Specifications & special services . . . . .	88
System components . . . . .	89
Safe loading tables . . . . .	90-97
Accessories & assembly . . . . .	98-101
How to build a part number . . . . .	90, 92, 94, 96, & 102
Solid deck planking . . . . .	102-103





## Grip Strut™ design load tables

Steel, aluminum, stainless steel

2-Diamond planks - 4¾" width .....	8-9
3-Diamond planks - 7" width .....	10-11
4-Diamond planks - 9½" width .....	12-13
5-Diamond planks - 11¾" width .....	14-15
8-Diamond planks - 18¾" width .....	16-17
10-Diamond planks - 24" width .....	18
10-Diamond walkway - 24" width .....	19

## Advantages

### Economical to install

In addition to low material cost and nominal erection cost, Grip Strut safety grating also helps save with its long-lasting, rust-resisting materials and finishes.

- Standard mill-galvanized finish resists corrosion to help provide lasting surfaces.
- High-strength aluminum and Types 304 and 316L stainless steel help provide maximum corrosion resistance.
- Black unpainted steel available for installations requiring hot dipped galvanized finish after fabrication.
- These light weight yet brawny panels permit substantial reduction in structural steel requirements.

### Versatility

Available in a variety of standard widths and channel heights.

- Numerous non-standard shapes and sizes.
- One piece construction with no welds or rivets to fail, minimizes need for plant fabrication.
- Special shapes and forming can be accomplished to suit unusual requirements.

### Safer, serrated surface

- Grips soles securely in all directions.
- Non-slip surface is ideal for inside or outside locations where mud, ice, snow, oil and detergents can create hazardous walking conditions.
- Openings are small enough to catch most falling tools and other dangerous objects.

### Open design, convenient cleaning

- Permits quick drainage of fluids, chips, grease and mud.
- Any ice accumulation shears easily under normal foot pressure.
- Open design allows convenient access for cleaning, and is easily cleaned with brush, liquid or air spray to help minimize overall maintenance.

### High load capacity, long life

- High strength-to-weight performance is achieved through depth of section and structural design.
- Bridged struts with integral side channels form plank that can support loads with minimum transverse and longitudinal deflection.
- No rivets or pressure joints to break or loosen.
- Sturdy construction provides advantages of heavy load-carrying capacity with minimal deflection.
- Rugged durability with longer-lasting performance.

### Fast installation

- Light, easy-to-handle planks make installation simpler and quicker.
- Can be handled by one man.
- Most sections are rapidly bolted, clamped or welded into place, easily field-cut at virtually any angle, or fabricated to adapt to field conditions.
- Several attachment devices permit fastening to most existing surfaces; allow fast installation or disassembly.

Performance

Tested by an independent laboratory for slip resistance, according to standards and methods established by Federal Specifications RR-G-1602D, Grip Strut™ safety grating exceeds all requirements of this specification.

The standards were exacting - five shoe sole materials tested in three directions under five conditions: dry, greasy, muddy, soapy and icy.

**Grip Strut safety grating test showed it was more slip-resistant than similar materials, depending on shoe materials and surface conditions.**

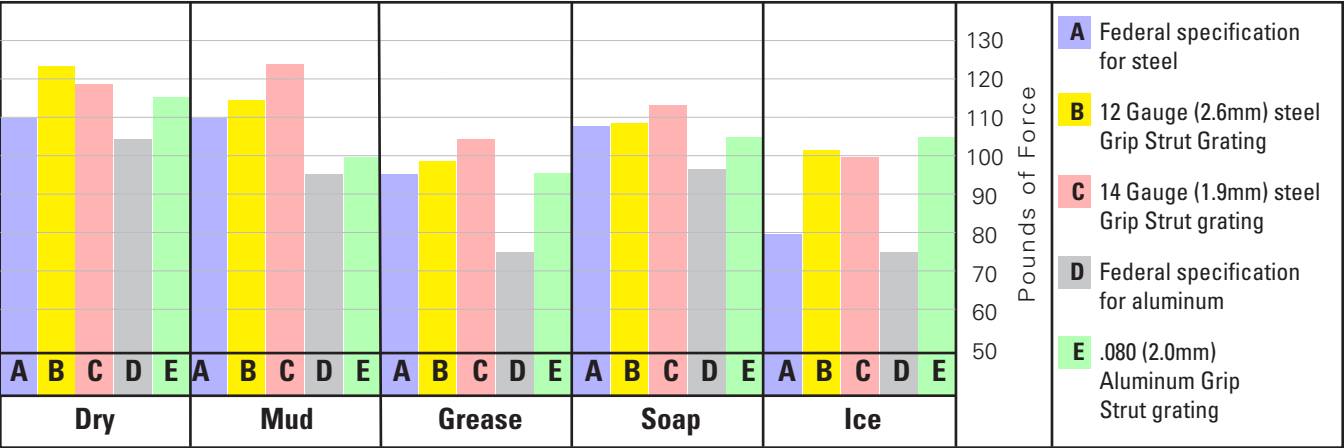
In survey after survey, accidents caused by falls are high on the list of disabling and lost-time injuries and even death. In fact, statistics from many states rate this type of accident are second as the cause for industry's loss of manhours and lower productivity.

As proved in the test described above, Grip Strut safety grating can substantially reduce this kind of accident. In addition, the hazard of falling objects is significantly minimized by the shape and size ( $1\frac{7}{8}$ " x  $1\frac{1}{16}$ " ) of the surface openings.



Grip Strut Grating

Test performance – slip resistance vs. federal specifications

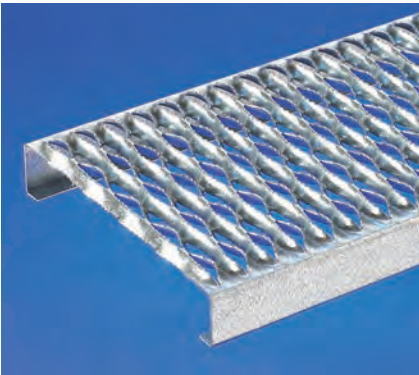


Values determined in accordance with standards for slip-resistance established by Federal Specification RR-G-1602D. The values indicated are an average of values obtained for five sole materials (leather, boot rubber, shoe rubber, Neolite®† and Hypalon®†) tested in three directions (longitudinally, transversely and diagonally) for the surface conditions noted. Values are in pounds of force necessary to move a 175 pound load one inch across the surface of grating.

† Mark shown is the property of its respective owner.



Close-up of standard pattern



Standard serrated surface



Non-serrated surface also available



## How to read load tables

To select size of Grip Strut™ safety grating:

- Determine load
- Clear span
- Deflection requirements
- Select from load tables the appropriate plank to meet job requirements.

Example: Clear span of 4'-0", concentrated load requirement of 300 lbs. at 0.25" maximum deflection.

## Select from the tables following

For 8-diamond, 18¾" wide, 2½" channel, 12 gauge steel which carries a load of 416 lbs. at a 0.18" deflection. This is one size to do the job. Other sizes will carry more load if necessary.

For 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 lbs. at midspan, for a given span, material gauge and channel height, regardless of width. (See "How load tables were prepared" described below.) The uniform load tables are tabulated in lbs./sq.ft., which accounts for the difference in load capacity shown for various widths. Deflection is in inches.

## How load tables were prepared

The values shown in the following tables are based on actual load tests conducted in accordance with the provisions of the AISI Specification for the design of cold-formed steel structural members, 1986 edition.

**To help ensure the safety of the tabulated loads, two aspects of Grip Strut safety grating must be considered.**

- 1 The first consideration is transverse bending in the grating surface, which is referred to as "strut flexure". 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 for each plank width. (See Figure 1a below and 2a on the following page). 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, along with the results of additional tests performed on 8- and 10-diamond grating, have been incorporated in the product selection/design tables on pages 8 through 19.

- 2 The second aspect of Grip Strut safety grating strength is channel flexure. 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 1b/2b and 1c/2c). 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.

## 2-, 3-, 4- and 5-diamond allowable load and deflection tables

Since 2- through 5-diamond planks are relatively narrow (less than 1 foot wide), it can be assumed that both side channels effectively support the concentrated load and that the grating surface deflection is negligible. Based upon these assumption, the values in the following design tables for 2-diamond through 5-diamond have been determined.

## Allowable uniform load (U)

Values indicated in the rows adjacent to "U" are the lowest of the (1) maximum allowable uniform loads considering channel flexure and (2) maximum grating surface flexure.

## Deflection corresponding to "U"

Deflection values are indicated below the uniform loads and are in the mid-span side channel deflections for the planks carrying the allowable uniform loads (Figure 1c and 2c).

## Allowable concentrated load (C)

Values indicated in the rows labeled "C" are the lowest of the (1) maximum allowable concentrated load considering channel flexure (Figure 1b and 2b), with both channels effective, and (2) the maximum allowable strut load (Cs) for a 1 foot long sample (Figure 1a and 2a).

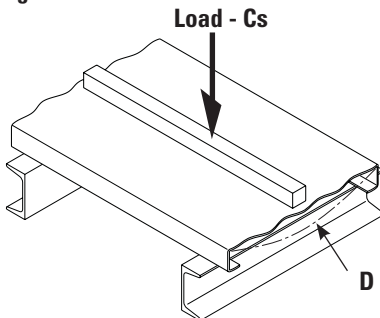
## Deflection corresponding to "C"

Deflection values indicated below "C" values in the tables are the mid-span, side channel deflections produced when the allowable concentrated load is placed at mid-span.

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 data in the strut loading tables (pages 8 -19) and the load/deflection conversion formula on top of following page.

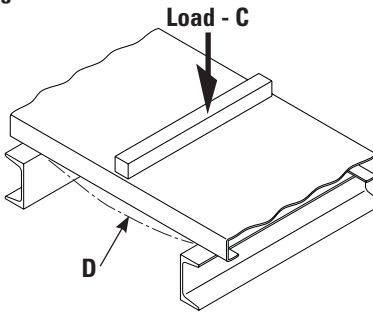
Load data based on yield strength of 33,000 psi for steel, 23,000 psi for aluminum, 35,000 psi for Type 304 stainless steel, and 30,000 psi for Type 316L stainless steel.

**Figure 1a - Strut load**



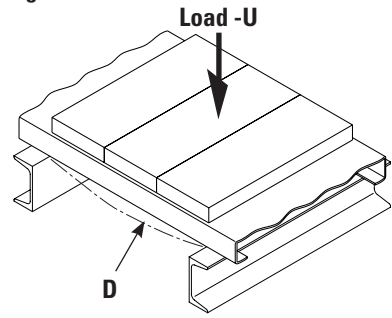
C<sub>s</sub> - Concentrated strut load (lb./ft.)

**Figure 1b - Concentrated load**



C - Concentrated load (lb.)

**Figure 1c - Uniform load**



U - Uniform load (lb./ft.<sup>2</sup>)



## Load and 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**). Also, if desired, the load which will produce a specific deflection can also be determined if the load is in the elastic range (as illustrated in **Example B**).

### Example A

What deflection will a 300 lb. concentrated load produce on a plank (catalog number 103012) spanning 5'-0"?

See page 18 for item 103012 at a span = 5'-0"  $C = 480 \text{ lb.}$   $D = 0.26"$   
 $D @ 300 \text{ lb.} = 0.26"/480 \text{ lb.} \times 300 \text{ lb.} = 0.16"$

### Example B

If a plank (catalog number 103012) is spanning 6'-0", what concentrated load will produce a  $\frac{1}{4}"$  deflection?

See page 18 for item 103012 at a span = 6'-0"  $C = 400 \text{ lb.}$   $D = 0.26"$   
 $C @ \frac{1}{4}" = 400 \text{ lb.}/0.26" \times 0.25" = 385 \text{ lb.}$

## 8- and 10-diamond allowable load and deflection tables

As width increases, grating strut flexure becomes much more important. 8-diamond and 10-diamond products are wide enough to require a change in the assumptions used to prepare the 2-diamond through 5-diamond product selection/design tables. 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-diamond 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 foot 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 foot long and 1 inch wide bar placed parallel to the side channels at mid-width and at the longitudinal center.

Results of these tests, included in the 8-diamond and 10-diamond product design 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 tables (pages 8-19).

## Values tabulated for 8-diamond and 10-diamond grating:

### Allowable Uniform load (U)

Values are given in the rows labeled "U" and are the lowest of the (1) maximum allowable uniform loads considering channel flexure, and (2) maximum grating surface flexure.

### Deflection Corresponding to "U"

Deflection values appear in the rows labeled "D", below the "U" values, and 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 1c and 2c).

### Allowable concentrated load (C)

Values tabulated in the rows labeled "C" are the lowest of the (1) maximum allowable concentrated load considering side channel flexure (with one side channel supporting the entire load — Figure 2b, and (2) the maximum allowable strut flexure (Figure 2a).

### Deflection Corresponding to "C"

Deflection values are indicated below "C" values in the table and are deflections the allowable concentrated load will produce at mid-span and at the mid-width. The deflection is the sum of side channel and grating surface deflections.

Figure 2a - Strut load

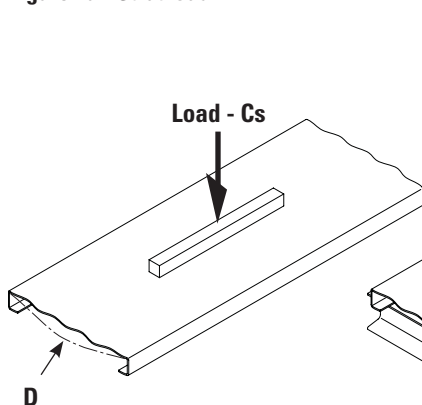


Figure 2b - Concentrated load

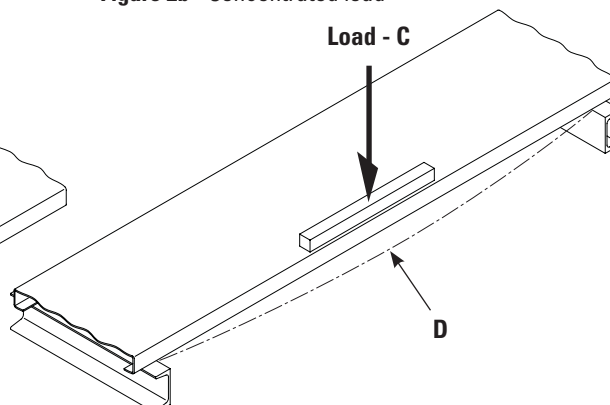
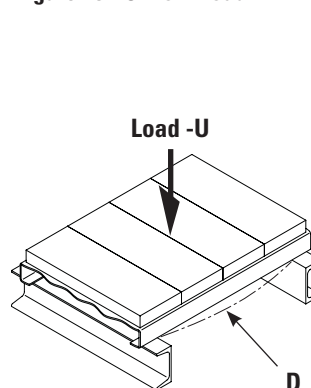


Figure 2c - Uniform load

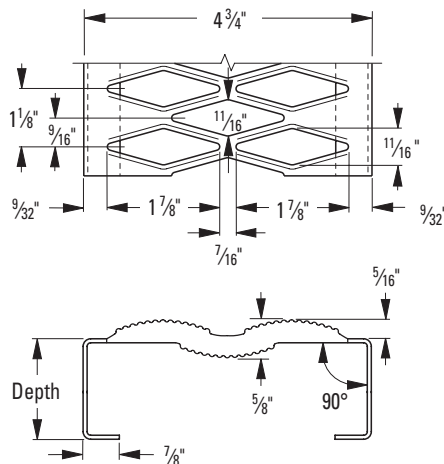




# Grip Strut Grating - Safe Loading Tables

2-Diamond plank — 4 3/4" width

Grip Strut  
Grating



## Product selection / design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (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		
	2½" (63.5)	2.8 (4.17)	22514	U	2522	1616	1124	827	634	502	408	338	285	244	211	184	163	139	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.	1½" (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	.63	.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
	2½" (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



# Grip Strut Grating - Safe Loading Tables

2-Diamond plank — 4¾" width

Grip Strut  
Grating

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of ¼" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load Defl. Code	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"	8'-6"	9'-0"	9'-6"	10'-0"
Alum. Alloy 5052 .080"	1½"*(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						
	2½"*(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				
Alum. Alloy 5052 .100"	1½"*(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				
	2½"*(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 on special order. Consult factory.

## Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	E I lb. x in. <sup>2</sup>
Steel 14 ga.	1½"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2½"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1½"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2½"	.504	.488	14.09 x 10 <sup>6</sup>
Aluminum .080"	1½"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
	2½"	.379	.441	4.50 x 10 <sup>6</sup>
Aluminum .100"	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2½"	.456	.544	5.55 x 10 <sup>6</sup>

## Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	6268	.10
	Cs	1240	.08
Steel 12 ga.	U	8619	.10
	Cs	1705	.08
Aluminum .080"	U	4677	.12
	Cs	925	.10
Aluminum .100"	U	5847	.12
	Cs	1157	.10

\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



## Grip Strut Grating

The top diagram shows a plan view of a diamond-shaped mesh. The overall width is 7". The mesh consists of two rows of diamond shapes. The top row has a width of 1 1/8" between the centers of adjacent diamonds. The bottom row has a width of 1 7/8" between the centers of adjacent diamonds. The vertical distance between the top and bottom rows is 1 1/16". The thickness of the mesh is 1/4". The bottom diagram shows a cross-section of the mesh. The depth is indicated. The top surface is 5/16" thick. The bottom surface is 5/8" thick. The mesh is bent at a 90° angle. The width of the mesh is 7/16".



**Eaton's B-Line series safety gratings** [www.eaton.com/b-lineseries](http://www.eaton.com/b-lineseries)

# Grip Strut Grating - Safe Loading Table

3-Diamond plank — 7" width

Grip Strut  
Grating

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load Defl. Code	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"	8'-6"	9'-0"	9'-6"	10'-0"
Alum. Alloy 5052 .080"	1½"* (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						
	2½"* (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				
Alum. Alloy 5052 .100"	1½"* (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				
	2½"* (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 on special order. Consult factory.

## Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1½"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2½"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1½"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2½"	.504	.488	14.09 x 10 <sup>6</sup>
Aluminum .080"	3"	.625	.722	20.94 x 10 <sup>6</sup>
	1½"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
Aluminum .080"	2½"	.379	.441	4.50 x 10 <sup>6</sup>
	3"	.464	.602	6.14 x 10 <sup>6</sup>
Aluminum .100"	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2½"	.456	.544	5.55 x 10 <sup>6</sup>
Aluminum .100"	3"	.627	.911	9.29 x 10 <sup>6</sup>

## Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	3535	.11
	Cs	1031	.09
Steel 12 ga.	U	6405	.11
	Cs	1868	.09
Aluminum .080"	U	2901	.15
	Cs	846	.12
Aluminum .100"	U	4488	.16
	Cs	1309	.13

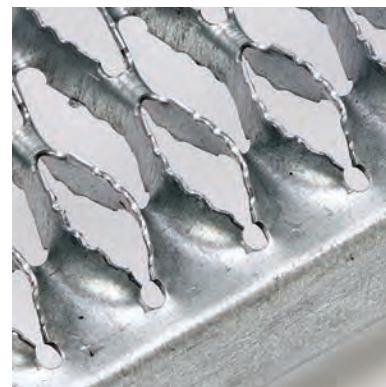
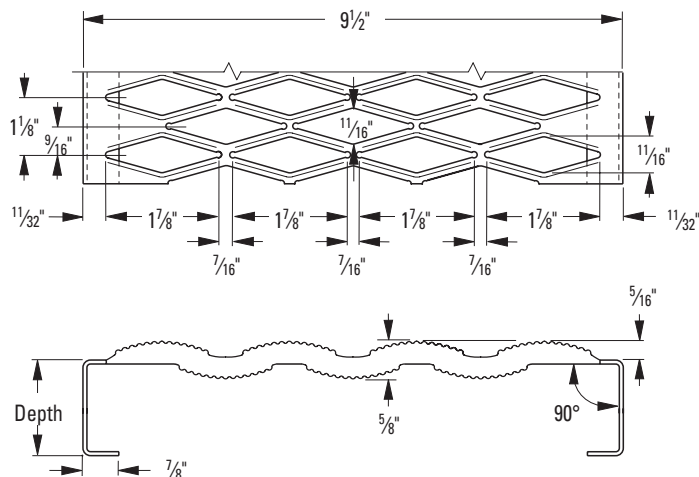
\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



# Grip Strut Grating - Safe Loading Table

## 4-Diamond Plank — 9½" Width (available in stainless steel)



Relief hole available upon request on 3, 4, & 5-diamond planks

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of ¼" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (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								
	2"	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		
	2½"	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	
Steel 12 ga.	1½" (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				
	2"	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
	2½"	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
Stainless Steel 316L* 16 ga.	1½" (38.1)	5.0 (7.44)	41512	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
	2"	5.4 (8.04)	42012	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
	2½"	5.7 (8.48)	42512	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
Stainless Steel 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 Steel 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						

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	Load/Defl. Code	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"
Alum. Alloy 5052 .080"	1½" (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						
	2½" (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	.05	.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			
Alum. Alloy 5052 .100"	1½" (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			
	2½" (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	.05	.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			

\* Available on special order. Consult factory.

## Engineering data For both channels

Material Gauge	Channel Depth - in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1½"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2½"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1½"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2½"	.504	.488	14.09 x 10 <sup>6</sup>
Aluminum .080"	1½"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
	2½"	.379	.441	4.50 x 10 <sup>6</sup>
Aluminum .100"	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2½"	.486	.544	5.55 x 10 <sup>6</sup>
Stainless 304 16 ga.	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2½"	.486	.544	5.55 x 10 <sup>6</sup>
Stainless 316L 16 ga.	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2½"	.486	.544	5.55 x 10 <sup>6</sup>

## Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	1844	.15
	Cs	730	.11
Steel 12 ga.	U	3537	.14
	Cs	1400	.11
Aluminum .080"	U	1435	.19
	Cs	568	.15
Aluminum .100"	U	2238	.23
	Cs	886	.15
Stainless 304 16 ga.	U	1450	.29
	Cs	574	.19
Stainless 316L 16 ga.	U	1243	.20
	Cs	492	.16

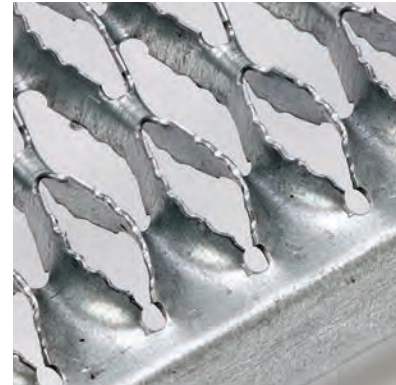
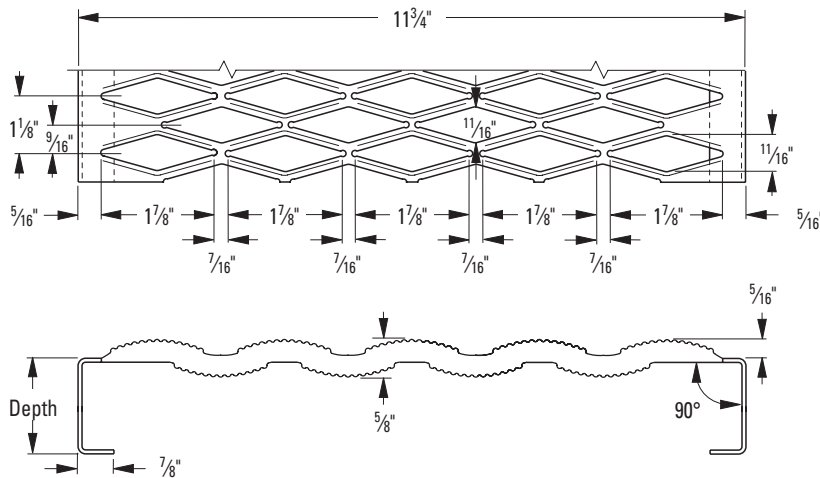
\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



# Grip Strut Grating - Safe Loading Tables

5-Diamond plank — 11 3/4" width (available in stainless steel)



Relief hole available upon request on 3, 4, & 5-diamond planks

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (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			
	2½" (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.	1½" (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	.27	.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	
	2½" (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 (10.40)	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
Stain-less 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	.68						
				C	464	458	323	330	290	259	235	215	199	185	165						
				D	.03	.06	.09	.12	.16	.21	.26	.32	.38	.45	.49						
Stain-less* 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 on special order. Consult factory.

# Grip Strut Grating - Safe Loading Tables

5-Diamond plank — 11 3/4" width (available in stainless steel)

Grip Strut  
Grating

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	Load/Defl. Code	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"
Alum. Alloy 5052 .080"	1½" (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"	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									
	2½" (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					
Alum. Alloy 5052 .100"	1½" (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"	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					
	2½" (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					

\* Available on special order. Consult factory.

## Engineering data For both channels

Material Gauge	Channel Depth - in.	Sx in. <sup>2</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1 1/2"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2 1/2"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1 1/2"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2 1/2"	.504	.488	14.09 x 10 <sup>6</sup>
	3"	.625	.722	20.94 x 10 <sup>6</sup>
Aluminum .080"	1 1/2"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
	2 1/2"	.379	.441	4.50 x 10 <sup>6</sup>
	3"	.464	.602	6.14 x 10 <sup>6</sup>
Aluminum .100"	1 1/2"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2 1/2"	.486	.544	5.55 x 10 <sup>6</sup>
	3"	.627	.911	9.29 x 10 <sup>6</sup>
Stainless 304 16 ga.	2"	.165	.1425	4.13 x 10 <sup>6</sup>
Stainless 316L 16 ga.	2"	.165	.1425	4.13 x 10 <sup>6</sup>

## Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	1444	.18
	Cs	707	.15
Steel 12 ga.	U	2277	.15
	Cs	1115	.12
Aluminum .080"	U	951	.24
	Cs	466	.20
Aluminum .100"	U	1458	.27
	Cs	714	.22
Stainless 304 16 ga.	U	947	.38
	Cs	464	.31
Stainless 316L 16 ga.	U	812	.31
	Cs	398	.25

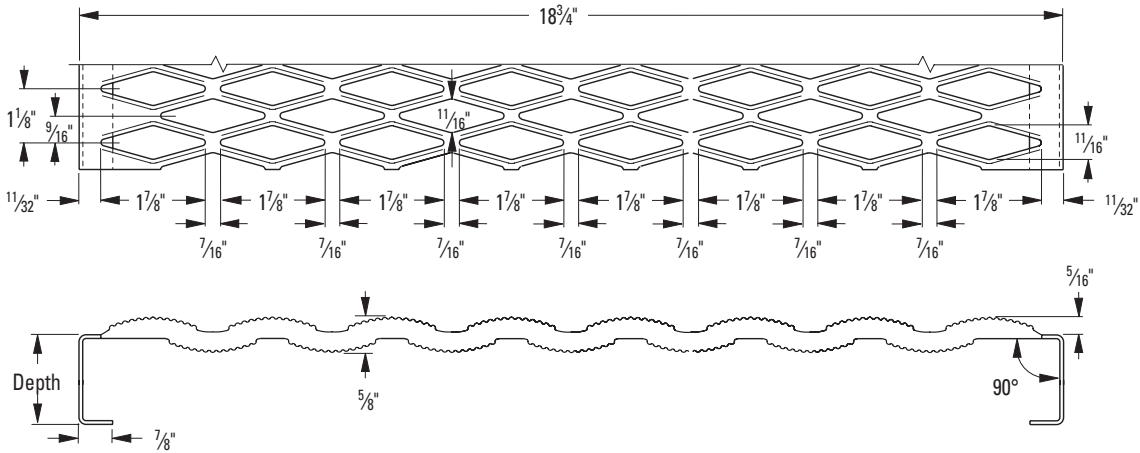
\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



# Grip Strut Grating - Safe Loading Tables

8-Diamond plank — 18¾" width



## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of ¼" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (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					
	2½" (63.5)	6.6 (9.8)	82514	U	540	411	286	211	162	129	105	87	74	63	56	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.	1½" (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				
	2½" (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

Note: Stainless is unavailable.

### Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of ¼" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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"
Alum. Alloy 5052 .080"	1½" (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									
	2½" (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					
Alum. Alloy 5052 .100"	1½" (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							
	2½" (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 on special order. Consult factory.

### Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1½"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2½"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1½"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2½"	.504	.488	14.09 x 10 <sup>6</sup>
Aluminum .080"	3"	.625	.722	20.94 x 10 <sup>6</sup>
Aluminum .080"	1½"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
	2½"	.379	.441	4.50 x 10 <sup>6</sup>
Aluminum .100"	3"	.464	.602	6.14 x 10 <sup>6</sup>
	1½"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
Aluminum .100"	2½"	.456	.544	5.55 x 10 <sup>6</sup>
	3"	.627	.911	9.29 x 10 <sup>6</sup>

### Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	540	.43
	Cs	422	.35
Steel 12 ga.	U	810	.30
	Cs	633	.24
Aluminum .080"	U	308	.48
	Cs	241	.39
Aluminum .100"	U	457	.51
	Cs	357	.41

\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

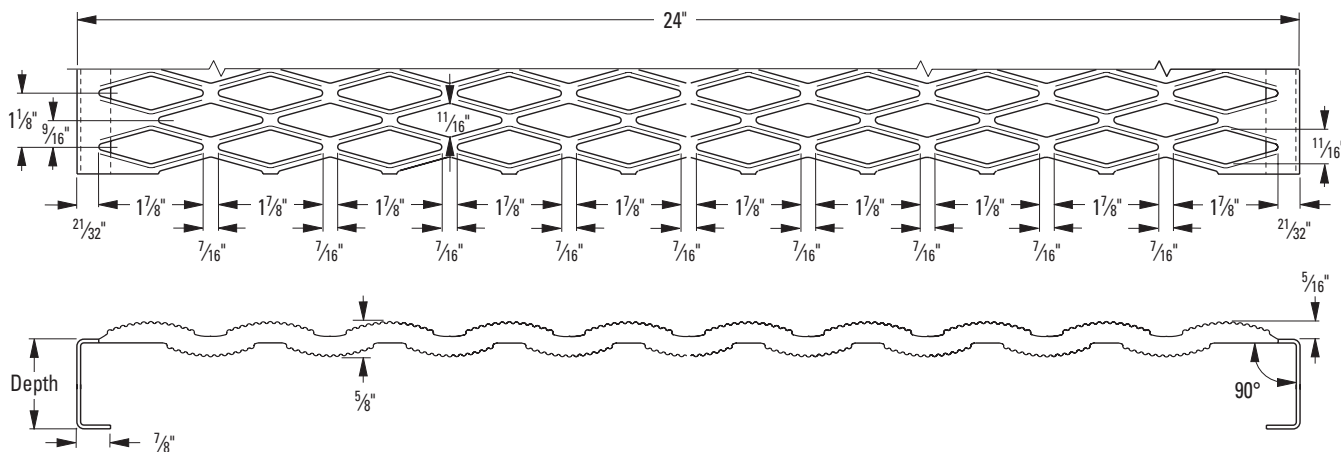
Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



# Grip Strut Grating - Safe Loading Tables

10-Diamond plank — 24" width

Grip Strut  
Grating



## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	Load/Defl. Code	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	216	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			

## Engineering data For both channels

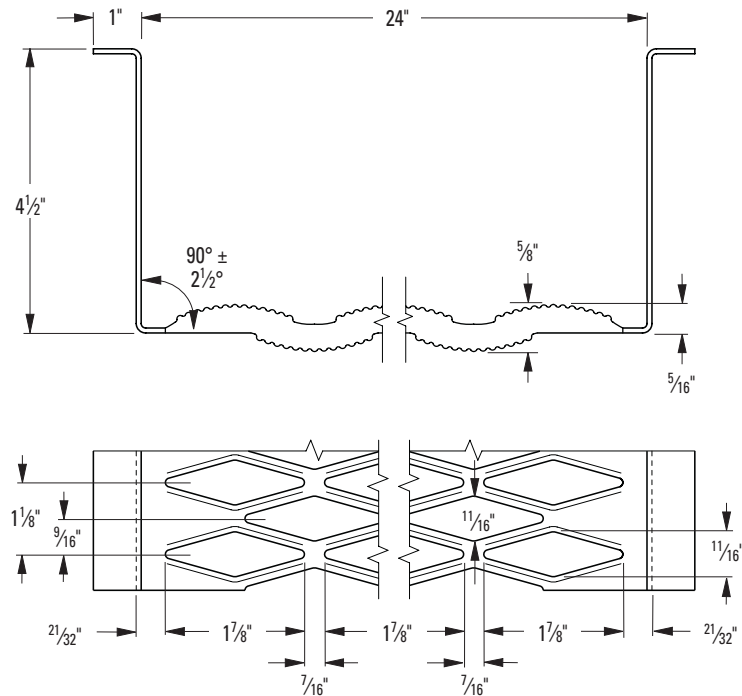
Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	2"	.303	.232	6.73 x 10 <sup>6</sup>
Steel 14 ga.	3"	.484	.713	20.68 x 10 <sup>6</sup>
Steel 12 ga.	2"	.387	.346	10.03 x 10 <sup>6</sup>
Steel 12 ga.	3"	.715	.959	27.81 x 10 <sup>6</sup>

## Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	300	.49
Steel 14 ga.	Cs	300	.40
Steel 12 ga.	U	475	.45
Steel 12 ga.	Cs	475	.36

\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



### Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Weight lb./lin. ft (kg/m)	Catalog Number	Load/Defl. Code	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.	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.	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	.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

### Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	4 1/2"	.806	1.43	41.47 x 10 <sup>6</sup>
Steel 12 ga.	4 1/2"	1.290	2.42	10.03 x 10 <sup>6</sup>

### Strut loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	300	.49
	Cs	300	.40
Steel 12 ga.	U	475	.45
	Cs	475	.36

\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)



# Grip Strut Grating - Comparative Performance Tables

## 8-Diamond plank — 18¾" width

**Note:** The data in these tables represents the performances 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. For product selection and design tables, see pages 8 through 19.

U=Uniform load (lb./ft. <sup>2</sup> ) C= Concentrated load (lb.) D=Deflection (in.)															
Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load Defl. Code	Span										
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
Steel 14 ga.	1½" (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
				D	.06	.09	.13	.17	.23	.29	.36	.44	.53	.62	.73
				C	873	698	583	501	440	396	358	328	303	281	264
				D	.05	.07	.10	.14	.18	.23	.29	.35	.42	.50	.58
	2½" (63.5)	6.6 (9.8)	82514	U	639	411	286	211	162	129	105	87	74	63	55
				D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.46
				C	1003	803	669	574	504	449	410	375	346	321	301
				D	.03	.04	.06	.09	.12	.15	.18	.22	.27	.32	.37
Steel 12 ga.	1½" (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
				D	.05	.08	.11	.16	.21	.26	.33	.40	.48	.57	.66
				C	1107	887	741	637	564	505	458	419	387	361	338
				D	.04	.06	.09	.12	.16	.21	.26	.32	.38	.45	.53
	2½" (63.5)	9.2 (13.7)	82512	U	1059	680	473	348	267	212	172	143	120	103	89
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.45	.52
				C	1656	1325	1106	949	832	741	668	613	564	523	488
				D	.03	.05	.07	.10	.13	.17	.21	.26	.30	.36	.42
	3" (76.2)	9.6 (14.3)	83012	U	1340	858	598	440	337	267	217	180	152	130	112
				D	.04	.06	.08	.11	.14	.18	.23	.27	.33	.38	.45
				C	2097	1678	1398	1200	1051	936	844	769	706	653	614
				D	.03	.04	.06	.09	.11	.15	.18	.22	.26	.31	.36
Alum. Alloy 5052 .080"	1½"* (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			
	2½"* (63.5)	2.29 (3.40)	8251A	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)	8301A	U	684	438	304	223	171	135	109	90	76	65	56
				D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77
				C	1069	856	713	611	535	475	428	389	356	329	305
				D	.04	.07	.11	.15	.20	.25	.31	.38	.45	.53	.61
Alum. Alloy 5052 .100"	1½"* (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	68	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	.46	.56	.66	.78		
	2½"* (63.5)	2.91 (4.33)	82510-A	U	714	457	317	233	179	141	114	94	79	68	58
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88
				C	1116	893	744	638	558	496	446	406	373	343	319
				D	.05	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70
	3"* (76.2)	3.02 (4.50)	83010-A	U	922	590	410	301	231	182	148	122	102	87	75
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68
				C	1441	1153	961	823	720	640	576	524	480	443	412
				D	.04	.06	.10	.13	.17	.22	.27	.33	.40	.47	.54

\* Available on special order. Consult factory.

# Grip Strut Grating - Comparative Performance Tables

## 10-Diamond plank & walkway 24" width

**Note:** The data in these tables represents the performances 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.

For product selection and design tables, see pages 8 through 19.

Grip Strut  
Grating

U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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. Plank	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. Plank	2" (50.8)	10.4 (15.5)	102012	U	650	416	289	212	162	128	104	86	72	62	53						
				D	.07	.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	736	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
Steel 14 ga. Walkway	4.5" (114.3)	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	1339	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. Walkway	4.5" (114.3)	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	4200	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

\* Available on special order. Consult factory.

### Load and 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.**) Also, if desired, the load which will produce a specific deflection can also be determined if the load is in the elastic range (as illustrated in **Example B.**)

### Example A

What deflection will a 300 lb. concentrated load produce on a plank (catalog number 103012) spanning 5'-0"?

See page 18 for item 103012 at a span = 5'-0" C = 480 lb. D = 0.26"  
D @ 300 lb. = 0.26"/480 lb. x 300 lb. = 0.16"

### Example B

If a plank (catalog number 103012) is spanning 6'-0", what concentrated load will produce a ¼" deflection?

See page 18 for item 103012 at a span = 6'-0" C = 400 lb. D = 0.26"  
C @ ¼" = 400 lb./0.26" x 0.25" = 385 lb.



# Grip Strut Grating - Fastening Anchor Accessories

## Diamond washer



Field drilling is required.

\*\* Plank carriage bolt lengths = Side channel height + 1"  
Walkway carriage bolt = 5/16"-18 x 2"

### Part number includes

(1) Diamond washer

### Source locally

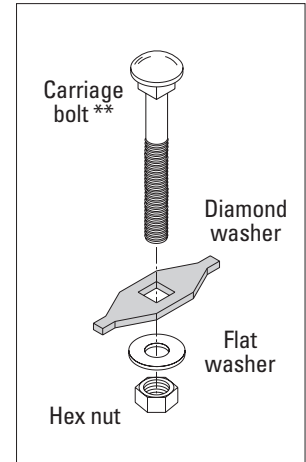
(1) 5/16"-18 Carriage bolt \*\*

(1) 5/16" Flat washer

(1) 5/16"-18 Hex nut

Finish: G-90 mill galvanized

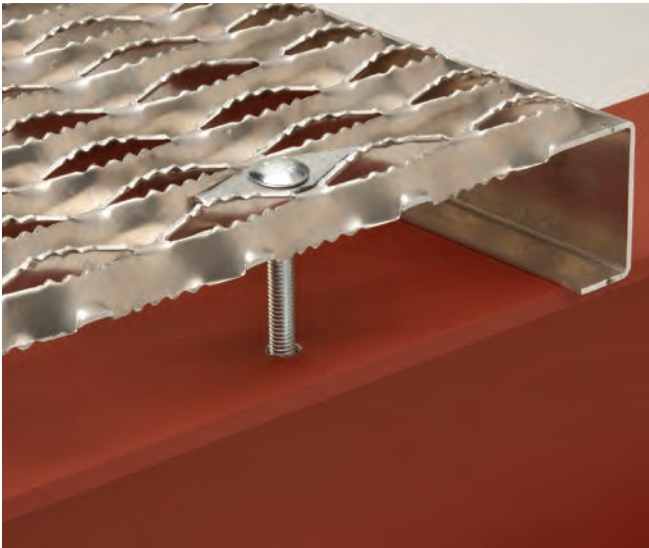
Also available in 304 stainless steel



### Diamond Washer

UPC Number	Catalog Number	Wt./Box of 300
66251626610	12262	9.00

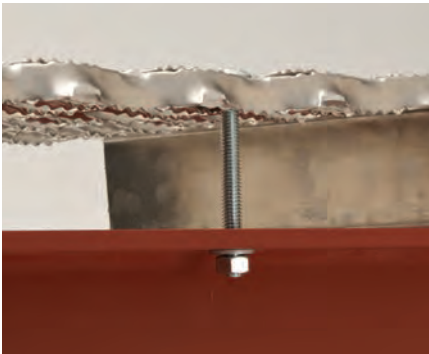
Sold in box qty. only. (300/box)



### Assembly

1. Align Grip Strut™ planks on I-beam or other anchoring cross-member.
2. Mark the I-beam for drilling purposes under a slot near the end of Grip Strut plank. Drill a pilot hole.
3. Remove Grip Strut plank and drill a finish hole.
4. Replace Grip Strut plank. Align diamond washer over the drilled hole. Run the carriage bolt through the diamond washer and I-beam. Tighten the washer and nut until secure.
5. Test for movement or slippage. If Grip Strut planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 4.

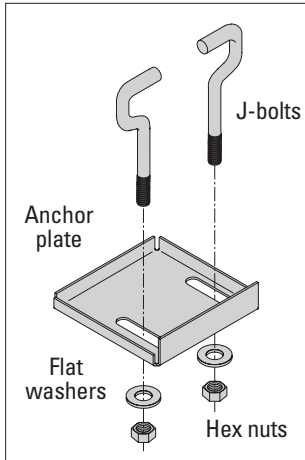
**WARNING: Do not walk on Grip Strut planks if they are not secure. Serious injury could result.**



### Welding

A common method of fastening safety grating is welding. It is recommended that all Eaton B-Line series safety grating products be fillet welded per AWS D1.3.

For more information, consult technical services.



Finish: G-90  
mill galvanized



No field drilling required.

### Part Number Includes

- (1) Anchor plate
- (2)  $\frac{3}{8}$ "-16 J-polts
- (2)  $\frac{3}{8}$ " Flat washer
- (2)  $\frac{3}{8}$ "-16 Hex nut

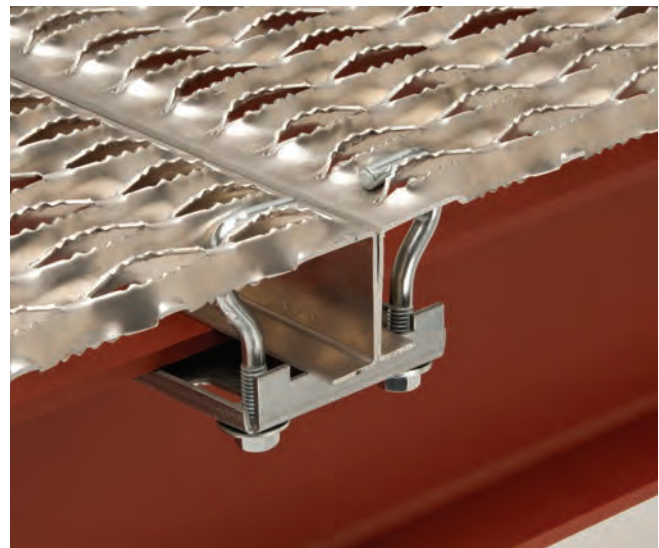
### Anchor plate assemblies

UPC Number	Catalog Number	Grating Height	J-Bolt Size	Wt./Ea.
66251634139	ACA15	1½"	$\frac{3}{8}$ "-16 x 1½"	0.80
66251634141	ACA20	2"	$\frac{3}{8}$ "-16 x 2"	0.80
66251634142	ACA25	2½"	$\frac{3}{8}$ "-16 x 2½"	0.80
66251634144	ACA30	3"	$\frac{3}{8}$ "-16 x 3"	0.90

### Assembly

1. Align two (2) Grip Strut™ planks side-by-side on I-beam or other anchoring cross-member.
2. Place J-bolts in Grip Strut openings opposite each other. Make sure you choose the openings nearest to the inner edge of the 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 secured.
5. Test for movement or slippage. If Grip Strut planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 4.

**WARNING: Do not walk on Grip Strut planks if they are not secure. Serious injury could result.**



### Welding

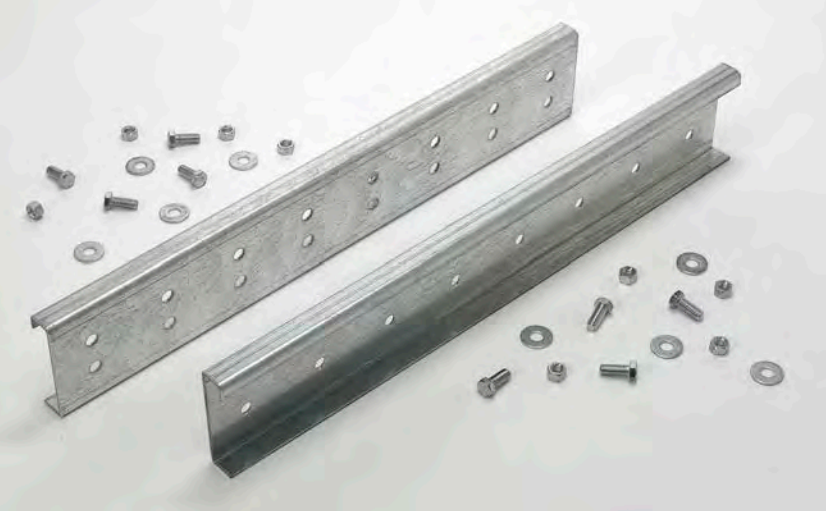
A common method of fastening safety grating is welding. It is recommended that all Eaton B-Line series safety grating products be fillet welded per AWS D1.3. For more information, consult technical services.



# Grip Strut Grating - Walkway Accessories

## Walkway splice plate (30" long) kit

Grip Strut  
Grating



**Part number includes**

- (2) Splice plates
- (32) 1/2" - 13 x 1 1/4" Hex bolts
- (32) 1/2" - 13 Hex nuts
- (32) 1/2" Washers

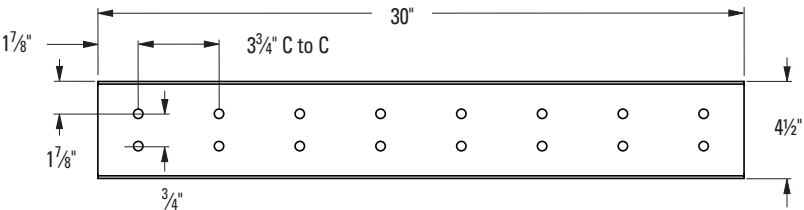
Walkway Splice Plate Kit		
UPC Number	Catalog Number	Wt./Ea.
66251642714	SP-10DU-30	18.1

Walkway splice plates provide continuity when multiple lengths of Grip Strut™ walkway are desired. Connections are reinforced with the addition of splice plates attached to side channels.

Splice plates are formed from 12 gauge mill-galvanized steel, prepunched and supplied with hardware shown above.

SP-10DU-7 and SP10DU-30 are used with 12 and 14 gauge Grip Strut walkway.

Torque to 40 ft.-lbs.



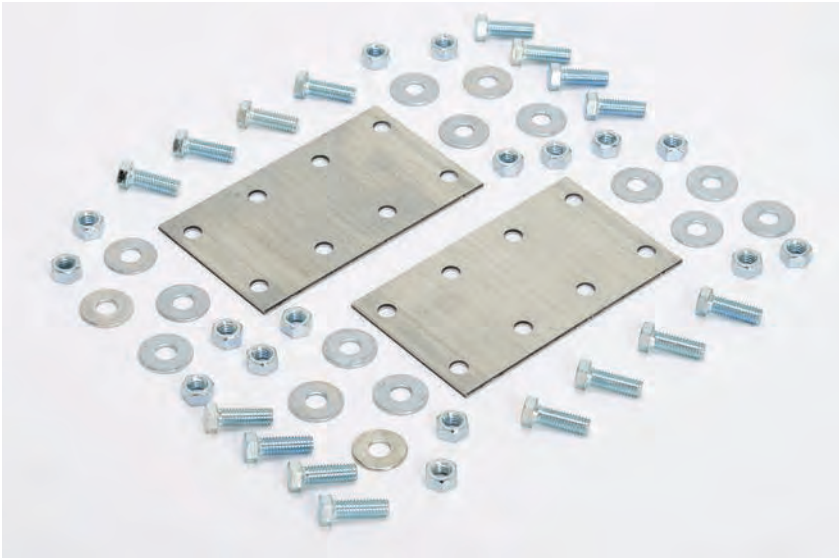


Walkway splice plate (7" long) kit

**Part number includes**

- (2) Splice plates - 4" x 7"
- (16) 7/16"-14 x 1 1/4" Hex bolts
- (16) 7/16"-14 Hex nuts
- (16) 7/16" Washers

Walkway splice plate kit		
UPC Number	Catalog Number	Wt./Ea.
66251642716	SP-10DU-7	4.1



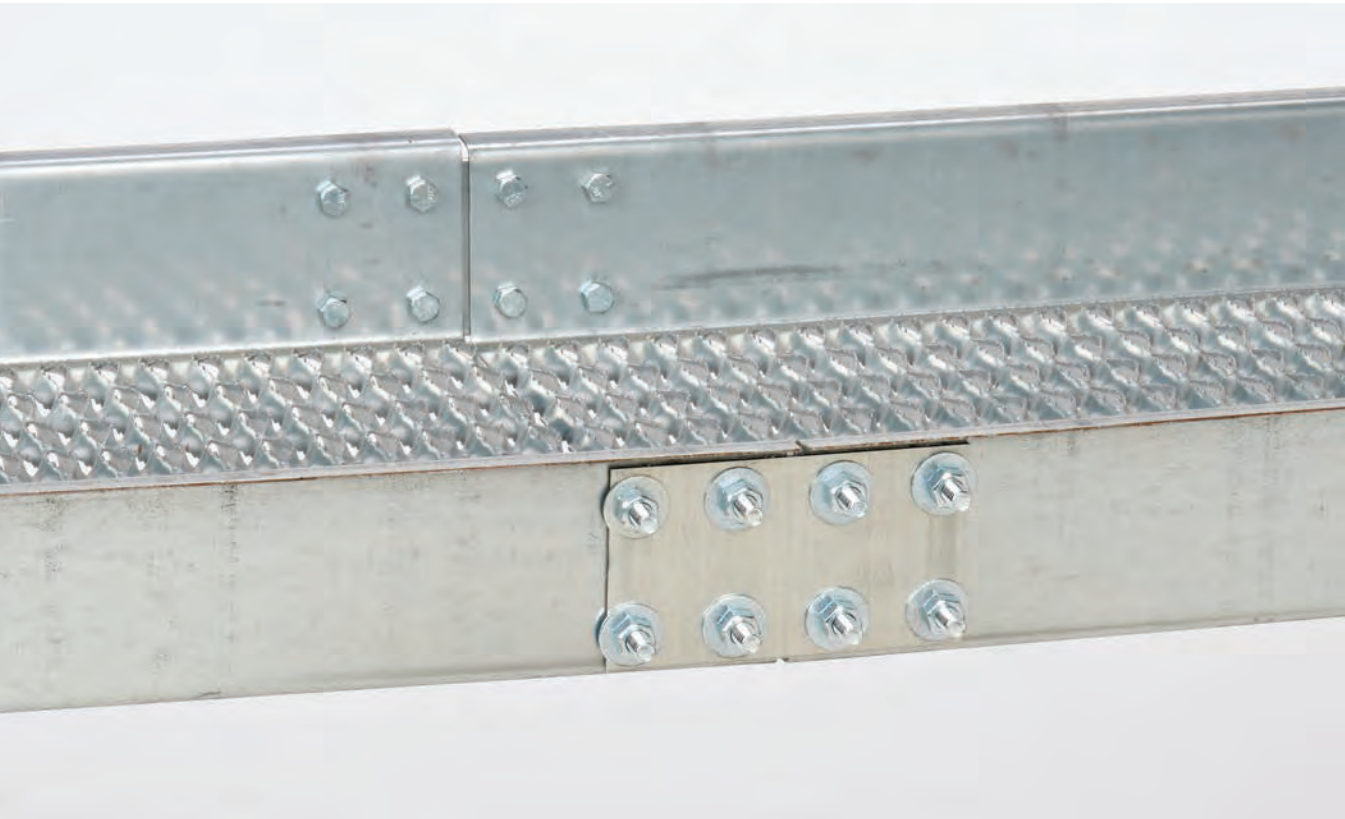
Kit joins continuous sections together in a run only over supports.

Splice plates are formed from 10 gauge mill-galvanized steel, prepunched and supplied with hardware shown above.

SP-10DU-7 and SP10DU-30 are used with 12 and 14 gauge Grip Strut walkway.

Torque to 55 ft.-lbs. (minimum)

**Note:** Contact factory for information on pre-punched holes in walkway grating.



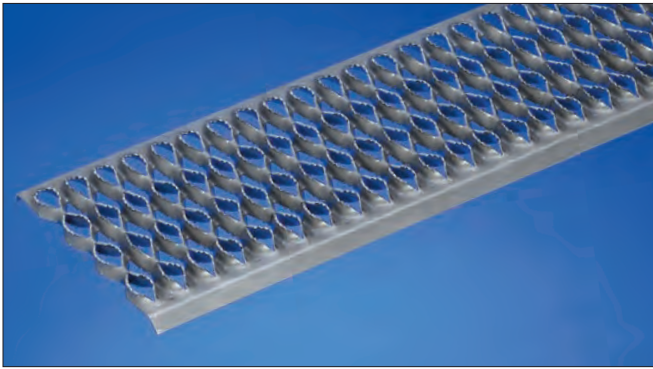
## Reconditioning material

The recommended "safety first" way to re-do worn and unsafe floors and stairs: Resurface with non-slip Grip Strut™ safety grating reconditioning material (RM).

Grip Strut safety grating is the only product that gives 500 wall-to-wall teeth per square foot. Serrated, diamond-shaped openings make Grip Strut safety grating safer than conventional gratings — permit mud, oil, grease and industrial waste to fall through, when used over open floor materials such as bar grating. Even ice shears free under normal foot pressure. Down-turned edges allow grating to lie flat and secure over existing flooring. Consult distributor for product specifications.

Other important Grip Strut safety grating advantages include:

- Easy field fabrication and fast, low-cost installation.
- Reconditioned material products available on special order in standard materials and sizes.



**Reconditioning material**

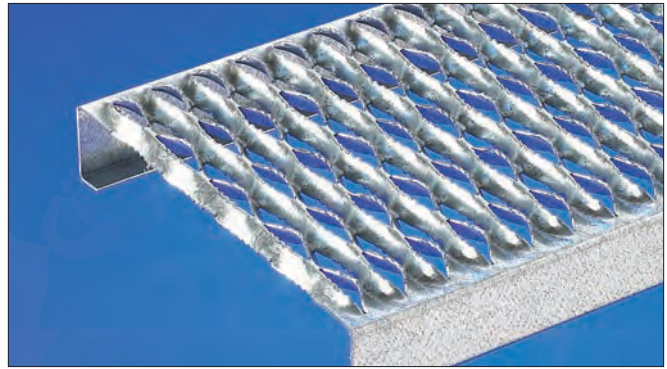
## Flat stock material

Flat stock can be manufactured to specified dimensions of flat metal on either or both sides. Consult your distributor for specifications and availability.

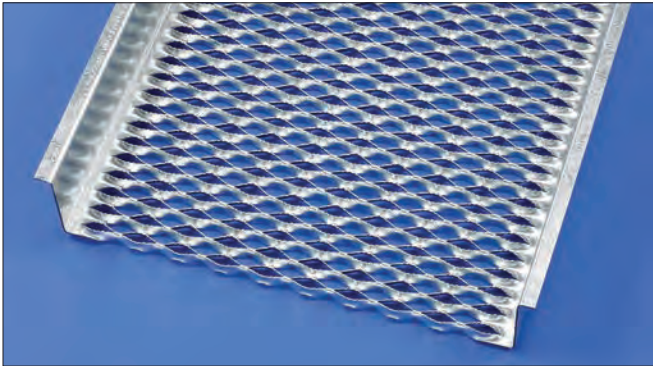
## Versatility in form and function for new or special products

Because of its light-weight plank design, Grip Strut safety grating is easy to handle and economical to install. Most sections can be handled by one man and can be quickly field-cut with standard tools. Layout and erection goes quickly because panels match perfectly. Various widths may be used to suit space requirements.

Many variations of Grip Strut safety grating panels are available to suit specific requirements. Special forming can be accomplished to suit requirements not covered by the standard panels. Consult your distributor for availability.



**Grip Strut with standard serrated surface**



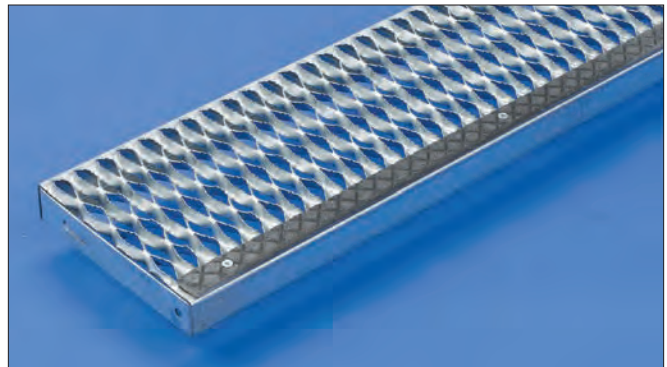
**Grip Strut walkways**



**Grip Strut with non-serrated surface**



**Grip Strut 1-diamond rungs**



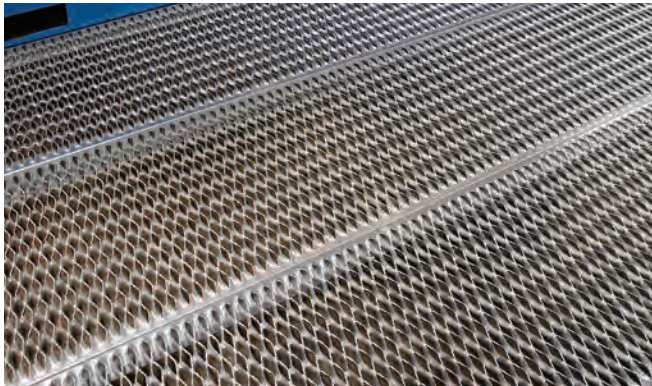
**Grip Strut stair treads**



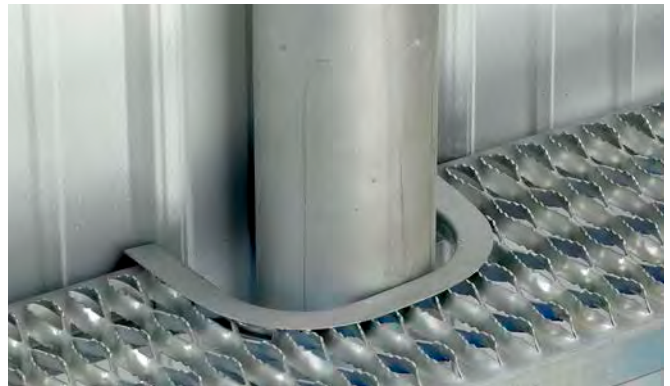
### Fabricating services

We can quote large jobs, including detailing and fabricating of special material, according to your project specifications. Submit plans and specifications through your Grip Strut™ safety grating distributor.

After your order is received, a bill of materials and shop drawings will be prepared for your approval before fabrication is begun. A few of the fabricating services available include: special cutting, marking according to layout, banding and toe plates. "Additional fees may apply."



**Grip Strut flooring**



**Grip Strut special fabrication**



**Special walkways**



**Grip Strut railcar walkways**



**Industrial walkways**



**Grip Strut stairs and ramps**



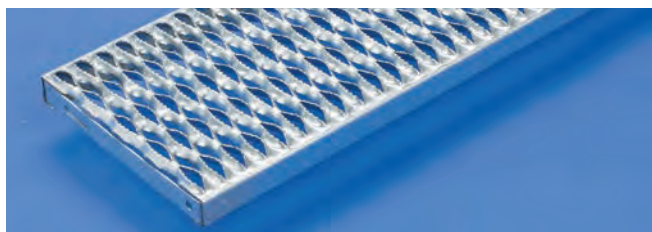
# Grip Strut Grating - Stair Tread Information

## Safe loading information

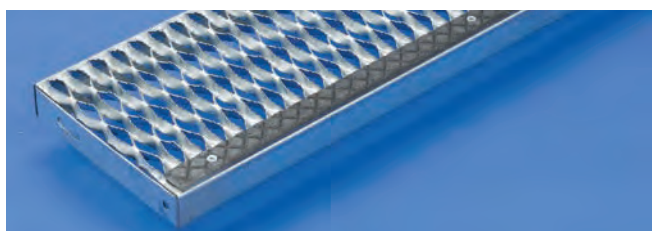
Load data below takes eccentric loads into consideration. Although load values include allowances for normal impact conditions and usual pedestrian traffic, be sure to make provisions in the structural design for special uses and loads involving unusual impact forces or vibratory forces. Load-carrying capacity of stair treads increases as side channel height and gauge or material increase.



Grip Strut stair tread application



Grip Strut stair tread



Grip Strut stair tread with abrasive nosing

U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.)

		2-Diamond 4¾" Depth				3-Diamond 7" Depth				4-Diamond 9½" Depth				5-Diamond 11¼" Depth			
Material		Steel				Steel				Steel				Steel			
Thickness		14		12		14		12		14		12		14		12	
Span	Channel Depth - in. (mm)	U	C	U	C	U	C	U	C	U	C	U	C	U	C	U	C
2'-0"	1½" (38.1)	1191	472	1576	624	761	443	1006	587	549	435	750	595	434	425	575	563
	2" (50.8)	1978	783	2513	995	1262	737	1604	936	911	604	1158	917	721	573	916	897
2'-6"	1½" (38.1)	764	378	1011	500	488	356	645	470	353	349	481	476	278	342	369	452
	2" (50.8)	1268	611	1611	797	810	590	1029	750	584	578	742	734	463	566	587	719
3'-0"	1½" (38.1)	532	315	703	418	340	300	450	393	245	300	335	398	194	300	258	378
	2" (50.8)	882	524	1121	665	563	492	716	626	407	483	517	614	322	473	409	601
4'-0" (1)	2" (50.8)	498	394	633	501	318	372	404	472	230	364	292	463	182	356	232	454

(1) Intermediate stringer is recommended for spans over 4 feet.

		2-Diamond 4¾" Depth		3-Diamond 7" Depth		4-Diamond 9½" Depth		4-Diamond 9½" Depth		5-Diamond 11¼" Depth		5-Diamond 11¼" Depth	
Material		Aluminum		Aluminum		Aluminum		Stainless Steel		Aluminum		Stainless Steel	
Thickness		.080"	.100"	.080"	.100"	.080"	.100"	304	316L	.080"	.100"	304	316L
Span	Channel Depth in. (mm)	U	C	U	C	U	C	U	C	U	C	U	C
2'-0"	2" (50.8)	1328	526	1862	737	862	503	1208	705	607	483	525	416
2'-6"	2" (50.8)	850	420	1191	590	551	402	773	564	388	392	555	550
3'-0"	2" (50.8)	590	350	827	491	383	335	537	470	270	327	385	458
4'-0" (1)	2" (50.8)	332	263	465	369	215	252	302	353	152	245	216	344

(1) Intermediate stringer is recommended for spans over 4 feet.

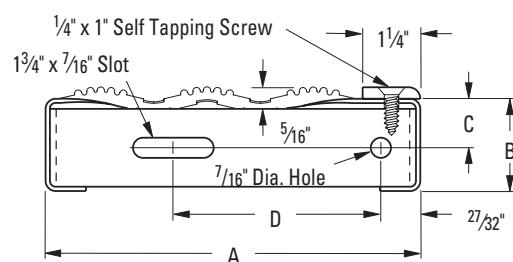
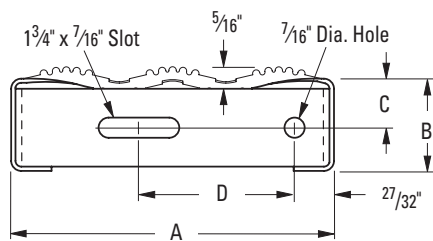
# Grip Strut Grating - Stair Tread Information

Standard sizes and recommended spans <sup>(1)</sup>

Steel			Standard Stair Treads		Stair Treads with Abrasive Nosing	
Span in.	Thickness	Channel Depth - in.	Catalog Number	Size in.	Catalog Number	Size in.
Up to 30"	14 ga.	1½"	T-21514	2-Diamond - 4¾"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8⅝"
			T-41514	4-Diamond - 9½"	T-41514-N	4-Diamond - 10½"
			T-51514	5-Diamond - 11¾"	--	--
30" to 36"	14 ga.	1½"	T-21514	2-Diamond - 4¾"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8⅝"
			T-41514	4-Diamond - 9½"	T-41514-N	4-Diamond - 10½"
			T-51514	5-Diamond - 11¾"	--	--
36" to 42"	14 ga.	1½"	T-21514	2-Diamond - 4¾"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8⅝"
			T-41514	4-Diamond - 9½"	T-41514-N	4-Diamond - 10½"
			T-51514	5-Diamond - 11¾"	--	--
42" to 48"	14 ga.	2"	T-21514	2-Diamond - 4¾"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8⅝"
			T-41514	4-Diamond - 9½"	T-41514-N	4-Diamond - 10½"
			T-51514	5-Diamond - 11¾"	--	--
Aluminum						
Up to 42"	.080"	2"	T-22012-A	2-Diamond - 4¾"	--	--
			T-32012-A	3-Diamond - 7"	T-32012-A-N	3-Diamond - 8⅝"
			T-42012-A	4-Diamond - 9½"	T-42012-A-N	4-Diamond - 10½"
			T-52012-A	5-Diamond - 11¾"	--	--
Up to 48"	.100"	2"	T-22010-A*	2-Diamond - 4¾"	--	--
			T-32010-A*	3-Diamond - 7"	T-32010-A-N	3-Diamond - 8⅝"
			T-42010-A*	4-Diamond - 9½"	T-42010-A-N	4-Diamond - 10½"
			T-52010-A*	5-Diamond - 11¾"	--	--
Stainless Steel						
Up to 30"	Type 316L 16 ga.	2"	T-42016-SL*	4-Diamond - 9½"	--	--
			T-52016-SL*	5-Diamond - 11¾"	--	--
Up to 36"	Type 304 16 ga.	2"	T-42012-SS	4-Diamond - 9½"	--	--
			T-52012-SS	5-Diamond - 11¾"	--	--

(1) Recommendations are based on approximate minimum loads of 300 lbs. concentrated; 100 lbs. uniform. Specific performance criteria may vary by municipality/building code body and should be locally checked prior to finalizing specifications.

\* Available on special order. Consult factory.



## Steel, aluminum and stainless steel <sup>(1)</sup>

Standard				With Abrasive Nosing			
A	B	C	D	A	B	C	D
4¾"	1½"	¾"	2⅝"	--	--	--	--
(2-Diamond)	2"	1"	2⅝"	--	--	--	--
7"	1½"	¾"	3⅝"	8⅝"	1½"	¾"	4½"
(3-Diamond)	2"	1"	3⅝"	(3-Diamond)	2"	1"	4½"
9½"	1½"	¾"	5⅝"	10½"	1½"	¾"	6⅝"
(4-Diamond)	2"	1"	5⅝"	(4-Diamond)	2"	1"	6⅝"
11¾"	1½"	¾"	8⅝"	--	--	--	--
(5-Diamond)	2"	1"	8⅝"	--	--	--	--

(1) Stainless steel not available in 2-diamond or 3-diamond widths.

## Part 1: General

### 1.1 Section includes

- A. Safety grating walkways, planks, stair-treads with reticulated and formed metal cross struts.
- B. Regular and heavy duty safety grating products constructed from single-sheet with integrally-formed channels at the edges.
- C. Slip resistant walkways, planks and stair-treads with stamped surface textures/patterns.

### 1.2 Related documents & sections

Drawings and general provisions of the contract, including general and supplementary conditions and division 01 Specification Sections, apply to this section. Other related sections include:

- A. 05 51 00, Metal stairs
  - 05 51 19, Metal grating stairs
  - 05 51 13, Metal ladders
  - 05 51 36, Catwalks
- B. 05 55 00, Metals stair treads and nosings

### 1.3 Submittals

- A. Submit drawings of safety grating products, accessories and attachments.
- B. Submit manufacturer's product data on safety grating products including, but not limited to; types, materials, finishes, gauge thickness, surface patterns. For each grating cross-section, submit dimensional information, span, load capacity and deflection requirements.
- C. Shop drawings:
  - 1. Show fabrication and installation details, including plans.

- 2. Coordination of drawings: Floor plans and sections, drawn to scale. Include scaled layout and relationships between grating and adjacent structural elements.

### 1.4 References

- A. ASTM A 123 - Standard specification for zinc (hot-dip galvanized) coatings on iron and steel products.
- B. ASTM A 240 - Standard specification for chromium and chromium-nickel stainless steel plate, sheet, and strip for pressure vessels and for general applications.
- C. ASTM A 653 - Standard specification for steel sheet, zinc-coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot-dip process.
- D. ASTM A 924 - Standard specification for general requirements for steel sheet, metallic coated by the hot-dip process.
- E. ASTM A 1011 - Standard specification for steel, sheet and strip, hot-rolled, carbon, structural, high-strength low-alloy, and high-strength low-alloy with improved formability.
- F. ASTM B 209 - Standard specification for aluminum and aluminum-alloy sheet and plate.
- G. OSHA-Occupational safety and health administration-standards for walking-working surfaces. Part number 1910, subpart D.
- H. RR-G-1602D- Federal specification for safety grating (other than bar type & excluding naval vessels).
- I. ISO 9001:2000 Quality management system-requirements.

### 1.5 Quality Assurance

- A. Manufacturers: firms regularly engaged in the manufacture of safety grating of the types required, whose products have been in satisfactory use in similar service for not less than 5 years.



- B. OSHA Compliance: all grating installations must comply with OSHA standards for walking working surfaces.
- C. Federal specification RR-G-1602D (or current revision) defines the criteria for items to be considered "safety grating". Slip resistant performance data must be available to support compliance.
- D. Manufacturer must have an ISO registered quality system in place, and manual available upon request.

## 1.6 Delivery, storage and handling

- A. Deliver safety grating and components carefully to avoid damage, denting and scoring of finishes. Do not install damaged material.
- B. Store materials in original packaging and in clean, dry space; protect from weather and construction traffic. Materials to be elevated off of ground by blocks or skids or pallets.

## Part 2: Products

### 2.1 Acceptable manufacturers

Safety Gratings: Subject to compliance with these specifications, safety gratings shall be installed as manufactured by Eaton B-Line series Grip Strut™ safety grating (or engineer approved equal).

### 2.2 Materials and finish

- A. Hot rolled, pickled & oiled steel: commercial steel per ASTM A 1011, minimum yield of 33 ksi.
- B. Mill galvanized steel: commercial steel per ASTM A 653 and ASTM A 924 with G-90 coating designation, minimum yield of 33 ksi.
- C. Hot-dip galvanized after fabrication: commercial steel per ASTM A 1011, minimum yield of 33 ksi, hot-dip galvanized after fabrication per ASTM A 123.

- D. Aluminum: alloy 5052, temper H32 aluminum per ASTM B 209.
- E. Stainless steel: type 304 (type 316) stainless steel, 2B or 2D finish, per ASTM A 240.

## 2.3 Gratings and components

Safety grating: (planks) (walkways) (treads) (ladder rungs) shall meet or exceed the federal standard RR-G-1602D for safety grating.

## Part 3: Execution

### 3.1 Installation

- A. Inspect areas to receive grating for obstacles. Notify the engineer of conditions that would adversely affect the installation or subsequent utilization of the areas. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Install grating according to manufacturer's recommendations and as shown on the construction drawings.
- C. Position grating sections flat and square with ends bearing minimum 1½" on supporting structure.
- D. Keep sections at least ¼" away from vertical steel sections and ½" from concrete walls.
- E. Allow clearance at joints between sections of maximum ½" at side channels and maximum ¾" at ends.
- F. Band random cut ends and diagonal or circular cut exposed edges with a minimum ⅛" thick bar welded at contact points.
- G. Join abutting walkway sections with manufacturer supplied splice plates; bolted or welded as specified.
- H. For stair treads, intermediate stringer is recommended for spans over 4 feet.

# Grip Strut Grating - General Installation Recommendations

Grip Strut™ safety grating and stair treads are stocked in all major markets. For the finest in safety grating and stair treads, contact us or look for your local Grip Strut grating distributor on the internet using [www.cooperblineline.com/grating](http://www.cooperblineline.com/grating).

## Catalog number code

The catalog number code given below will assist you in ordering the material according to the specifications required.

### 1. Steel

- First numeral is width. "5" denotes 5-diamond or 11¾" width.
- Second and third numerals denote channel size. "20" denotes 2", "15" denotes 1½", etc.
- Last two numbers denote gauge. "12" denotes 12 gauge, "14" denotes 14 gauge.
- Standard material is mill galvanized G-90 (ASTM A653)  
*Example:* 52014 = 5-diamond, 11¾" wide, 2" channel, 14 gauge

### 2. Aluminum

- First numeral is width. "5" denotes 5-diamond or 11¾" width.
- Second and third numerals denote channel size. "20" denotes 2", "15" denotes 1½", etc.
- Last two numbers denote gauge. "10" denotes .100" thick, "12" denotes .080" thick.
- Material - AL: Denotes aluminum.  
*Example:* 52012-AL = 5-diamond, 11¾" wide, 2" channel, .080 thick, aluminum

### 3. Stainless Steel

- First numeral is width. "5" denotes 5-diamond or 11¾" width.
- Second and third numerals denote channel size. "20" denotes 2", "15" denotes 1½", etc.
- Last two numbers denote gauge. "16" denotes 16 gauge.
- Material - SS = Type 304, SL = 316L  
*Example:* 52016-SS = 5-diamond, 11¾" wide, 2" channel, 16 gauge, Type 304 stainless

### 4. Stair Treads

- Any of the above numbers preceded by "T-"  
*Example:* T-42014 = 4-diamond, 9½" wide, 2" channel, 14 gauge, steel stair tread

### 5. Plain:

- For ordering purposes, any catalog number followed by "BL" signifies plain unpainted steel (HRP&O).  
*Example:* 52012-BL = 5-diamond, 11¾" wide, 2" channel, 12 gauge, plain steel

### 6. Special Products:

- Consult local Grip Strut safety grating distributor for identification and order placement of special products not herein identified.

### Standard Sizes

- Length: (nominal 10'-0" and 12'-0")

### Tolerances

- Planks: standard 10'-0" and 12'-0" lengths are 120" and 144" respectively, with a tolerance of  $\pm \frac{1}{8}$ ".
- Special lengths are available.
- Treads: standard stair tread lengths are as shown in this catalog with tolerances of  $\pm \frac{1}{8}$ ".

### Raw Materials

- Steel
  - Pre-galvanized - ASTM A653
  - 14 gauge: hot rolled, commercial quality, oiled black steel and commercial quality, commercial coating, chemically treated galvanized steel
  - 12 gauge: hot rolled, pickled and oiled, commercial quality black steel and commercial quality, commercial coating, chemically treated galvanized steel
- Aluminum: alloy 5052 H-32 mill finish
- Stainless steel: 2B finish - 316L (light, cold rolled)  
— 2D finish - 304 (cold rolled)

### Fabrication service

- On large jobs, we estimate, quote, detail, and fabricate to your requirements.
- After receipt of order, a bill of materials and necessary layout drawings are prepared.
- Grating is supplied with special cutting, banding and toe plates installed where needed.
- Stair treads are also available fabricated and non-serrated.
- This fabrication service is available through Grip Strut safety grating distributors.

## Recommended clearance

### Steel

- ¼" minimum is recommended at perimeter and ⅜" maximum at end joints.
- Maximum between panels is ¼"; ⅛" is generally used.

### Concrete

- Concrete form deflection calls for slightly greater perimeter clearance. ½" is recommended.
- Maximum between panels is ¼".

## Bearing Surfaces

- Recommended minimum bearing 1½".
- Surfaces supporting Grip Strut™ safety 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.

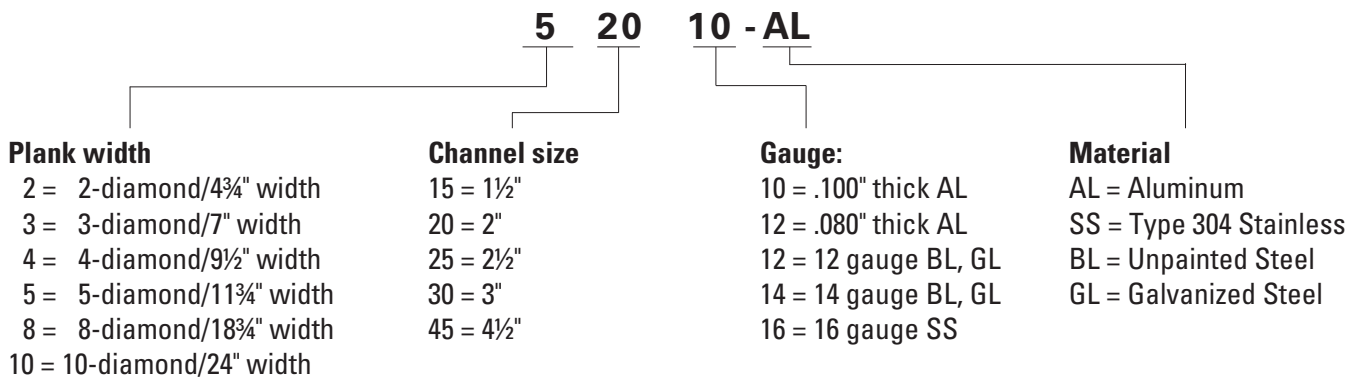
For welded-attachment, secure side channels to supports by fusion welding with ⅛" fillet welds, 1" long. Weld adjacent planks together with ⅛" fillet welds, 1" long, 24" on center staggered top and bottom.

Install Grip Strut safety grating according to details as shown on individual job drawings, or as follows:

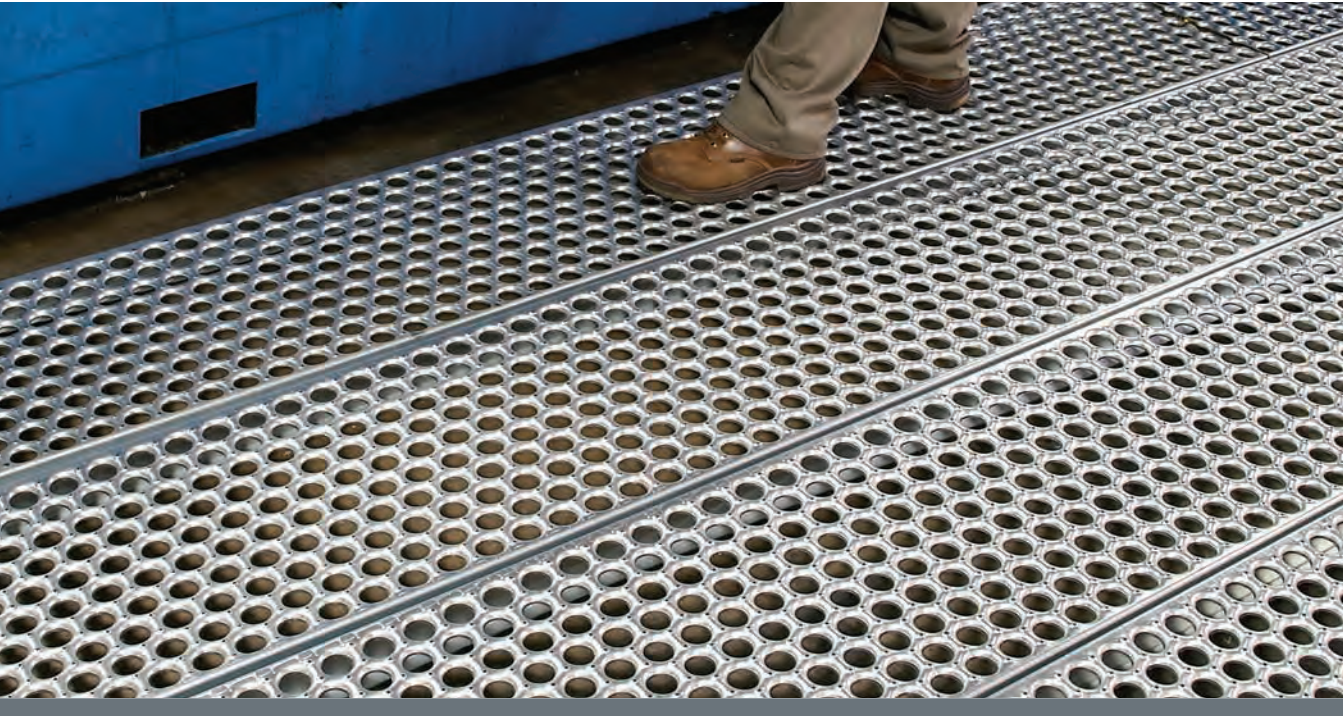
- Single width applications. Utilizing the anchoring device or weldings, attach Grip Strut safety grating plank at every point of contact with supporting structure around perimeter of plank.
- Multiple width applications. Utilizing the Grip Strut safety grating anchoring device or welded as recommended 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 feet, weld or bolt side channels of adjacent planks together at midpoint of span. When spans exceed 6 feet, consider similar treatment.

## How to build a part number:







**Perf-O Grip™ design load tables**

Steel, aluminum, stainless steel

2-Hole planks - 5" width.....	37
3-Hole planks - 7" width .....	38
5-Hole planks - 10" width.....	39
6-Hole Planks - 12" width.....	40

Steel, aluminum

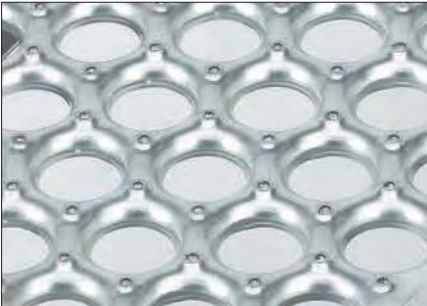
10-Hole planks - 18" width .....	41
----------------------------------	----

Steel

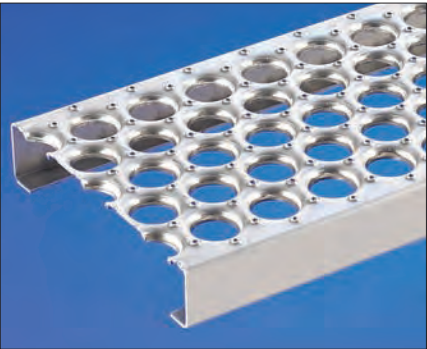
13-Hole planks - 24" width .....	42
16-Hole planks - 30" width .....	43
Walkways - 24" & 30" width .....	44



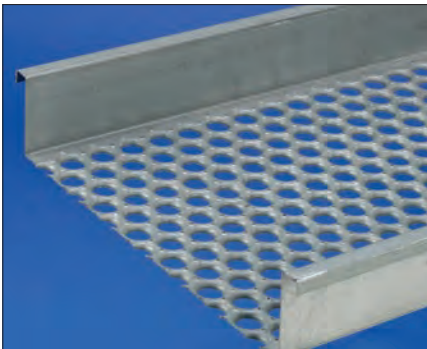
**Perf-O Grip 2 pattern**



**Perf-O Grip pattern**



**Perf-O Grip grating**



**Perf-O Grip walkway**



**Perf-O Grip stair tread**

## Perf-O Grip safety grating

The unique surface of large debossed holes and perforated buttons helps provide maximum slip protection and performance under practically all conditions and in every direction.

- Allow fluids, mud, chips and other debris to drain away.
- With 5 inch high side channels, Perf-O Grip™ walkways meet OSHA requirements for toeboards on elevated structures.
- Canadian OH & S compliant designs are also available.
- Cushions the impact of footfalls thereby lessening worker fatigue and increasing efficiency.
- Available in 2-hole (5" wide) through 16-hole (30" wide).

## Perf-O Grip "2" safety grating

We offer a second style of Perf-O Grip grating.

- Features 1 $\frac{5}{16}$ " on center hole spacing (compared to 2" on the original style).
- Can be produced with safety end margins on its 2-hole (5" wide) through 6 hole (12" wide) plank
- Can be made without end margins on its 10-hole (18" wide) through 16-hole (30" wide) plank.

## Safe surface - grips soles in all directions

- Non-slip surfaces ideal for inside or outside locations where mud, ice, snow, oil and detergents can create hazardous walking conditions.
- Circular openings (38% of surface area depending on product size) are small enough to catch most falling tools and other dangerous objects.
- Self-cleaning open design permits quick drainage of fluids, chips, grease and mud.
- Permits ventilation and lighting flow.
- Ice accumulation shears easily under normal foot pressure.
- Open design allows convenient access for cleaning.
- Easily cleaned with brush, liquid or air spray.

## Helps extend life

- High load capacity, long-life, and high strength-to-weight performance; achieved through depth of section and structural design.
- Formed struts with integral side channels form a plank can support loads with minimum transverse and longitudinal deflection.
- No rivets or pressure joints to break or loosen.
- Heavy load-carrying capacity with minimal deflection
- Rugged durability with longer-lasting performance.

## Fast installation

- Light, easy-to-handle planks make installation simple and quick.

- Can be handled by one person.
- Most sections are rapidly bolted, clamped or welded into place.
- Easily field cut at virtually any angle, or fabricated to adapt to field conditions.
- Attachment devices permit fastening to most existing surfaces, allowing for fast installation and disassembly.

## Economical to install and use

- Long-lasting, rust- resistant materials and finishes.
- Standard mill-galvanized finish resists corrosion to provide lasting surfaces.
- High-strength aluminum, Type 316-2B and Type 304-2B stainless steels are available to provide maximum corrosion resistance.
- Plain unpainted steel (HRP&O) is available for those installations requiring paint.
- Lightweight yet brawny panels permit substantial reduction in structural steel requirements.

## Safety, durability and versatility

- Variety of standard widths and channel heights are available.
- Numerous non-standard shapes and sizes to meet almost any requirement of strength, size, durability, weight, finish, appearance and application.
- One-piece construction.
- No welds or rivets to fail — minimizes need for field fabrication. Special shapes and forming can be accomplished to suit unusual requirements.
- All surfaces are accessible to brush or spray, making it simple and economical to apply finish coatings.
- May be hot dipped galvanized after fabrication, anodized, plated, plastic-coated or otherwise finished to suit job requirements.
- Available in materials and sizes to meet most load/span requirements.
- May be used as is, or banded, cut, welded or notched to suit requirements.

## Stocking levels

- 5", 7", 10" and 12" widths and in 10'-0" (120") and 12'-0" (144") lengths for planks.
- 24", 30" and 36" widths, in 10'-0" (120") and 12'-0" (144") lengths for walkways.
- Other lengths can be manufactured per order requirements.
- Standard metals are 11 gauge and 13 gauge carbon steel (mill-galvanized), 16 gauge stainless steel (type 304-2B to 12" wide), and .125" aluminum.
- Perf-O Grip can also be manufactured in HRPO steel and stainless steel (type 304-2B) on special order.



## How to read load tables

To select the proper size of Perf-O Grip™ grating, determine load, clear span and deflection requirements by first determining your loading requirements.

Example — Clear span of 4'-0" with a concentrated load requirement of 600 lbs. at 0.25" maximum deflection, for a 10'-0" 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 lbs. (or greater) concentrated load (C). In this example, the 13 gauge, 2" depth product (part number P52013) carries a load of 648 lbs. with a 0.10" 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 occur when the channels at midspan 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). To approximate the most severe condition, there were no attachments between the channels and the supports.

Deflection values indicated in the tables are the midspan side channel deflection produced when the allowable uniform or allowable concentrated load is placed at midspan. 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 316-2B stainless steel.

(U) = Allowable uniform load (lbs./ft.2)

(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

## Load and 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.**) If desired, the load which will produce a specific deflection can also be determined if the load is in the elastic range (as illustrated in **Example B.**)

### Example A

What deflection will a 300 lb. midspan concentrated load produce on a plank spanning 5'-0" (part number P133011 - page 42)?

$$C = 1517 \text{ lbs.} \quad D = 0.09"$$

$$D @ 300 \text{ lbs.} = 0.09" \times (300 \text{ lbs.} \div 1517 \text{ lbs.}) = 0.02 \text{ inches}$$

### Example B

If a plank (part number P132011 - page 42) is spanning 7'-0", what midspan concentrated load will produce a .25" deflection?

$$C = 598 \text{ lbs.} \quad D = 0.27"$$

$$C @ .25" = 598 \text{ lbs.} \times (0.25" \div 0.27") = 554 \text{ lbs.}$$

## Special note on planks

As width increases, grating surface performance becomes more critical. Thus, for Perf-O Grip grating widths greater than 12", use of the grating surface splice kit is recommended to mechanically join butt ends of plank sections.

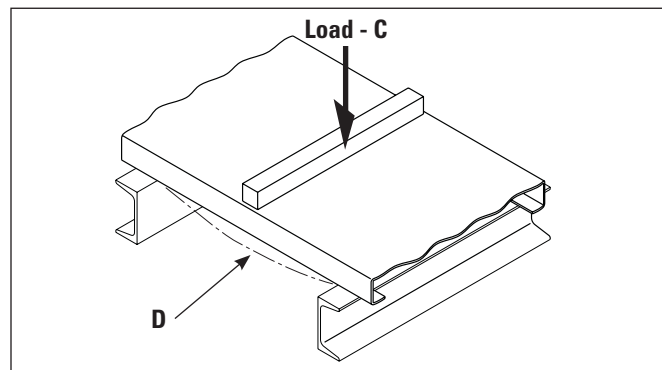


Figure 1. Concentrated load

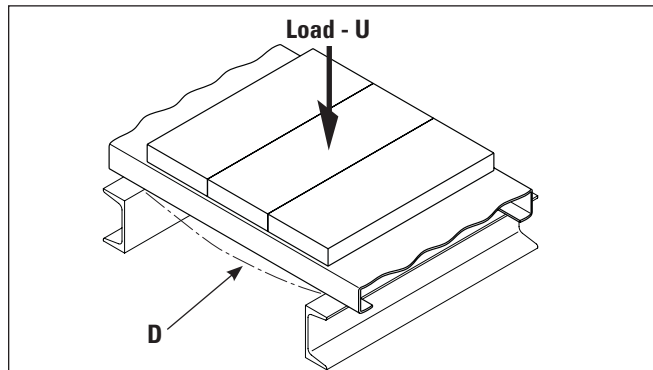
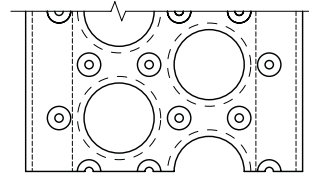
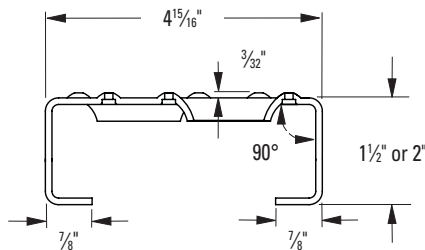


Figure 2. Uniform load

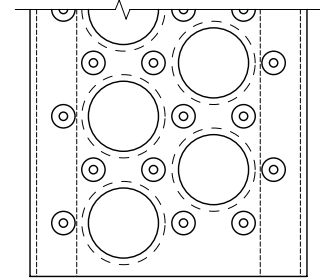


# Perf-O Grip Grating - Design Load Tables

2-Hole plank — 5" width nominal



Perf-O Grip pattern



Perf-O Grip 2 pattern

Perf-O Grip  
Grating

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	2.6 (3.8)	P21513† A21513	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	.35	.43	.49	.57	.65	.83	1.04	1.27	1.52	
	2" (50.8)	2.8 (4.1)	P22013† A22013	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	
Alum. 0.125"	2" (50.8)	1.3 (1.9)	P220125† A220125	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	
				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* 16 ga.	2" (50.8)	2.1 (3.1)	P22016S†	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	

Note: Also available in 11 ga.

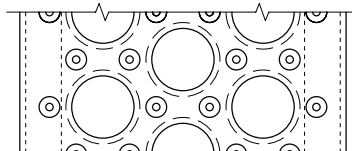
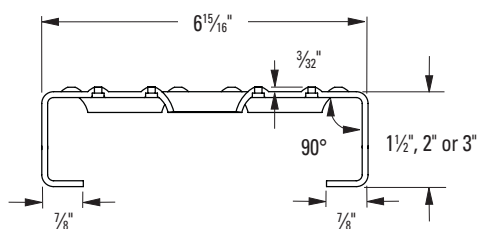
† **Perf-O Grip:** To order standard Perf-O Grip grating use part number "Pxxxxx".

**Perf-O Grip 2:** To order Perf-O Grip 2 grating use part number "Axxxxx". End margins are standard on Perf-O Grip 2 grating 2-hole through 6-hole plank only ( 5" through 12" widths). Standard lengths are 10'-0" and 12'-0".

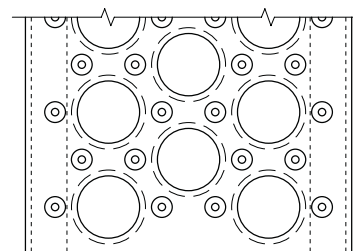
\* Available on special order. Consult factory.

# Perf-O Grip Grating - Safe Loading Tables

3-Hole plank — 7" width nominal



Perf-O Grip pattern



Perf-O Grip 2 pattern

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	3.0 (4.4)	P31513† A31513	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
	2" (50.8)	3.3 (4.9)	P32013† A32013	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
Steel 11 ga.	1½" (38.1)	4.2 (6.2)	P31511† A31511	U	1981	1269	883	650	498	394	320	265	224	191	165	144	128	101	83	69	59
				D	.05	.07	.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
	2" (50.8)	4.5 (6.7)	P32011† A32011	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
	3" (76.2)	4.8 (7.1)	P33011† A33011	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
Alum. 0.125"	2" (50.8)	1.5 (2.2)	P320125† A320125	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* 16 ga.	2" (50.8)	2.4 (3.6)	P32016S†	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

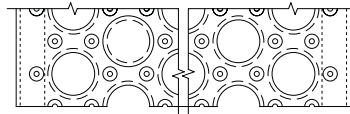
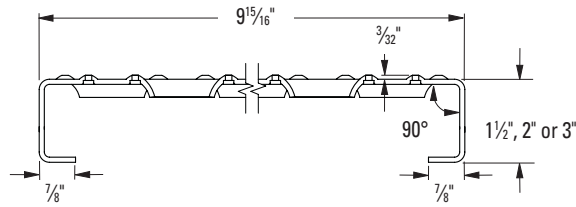
† Perf-O Grip: To order standard Perf-O Grip grating use part number "Pxxxxx".

Perf-O Grip 2: To order Perf-O Grip 2 grating use part number "Axxxxx". End margins are standard on Perf-O Grip 2 grating 2-hole through 6-hole plank only ( 5" through 12" widths). Standard lengths are 10'-0" and 12'-0".

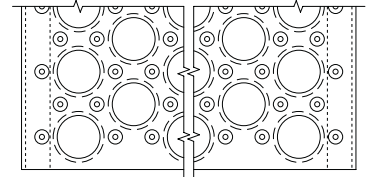
\* Available on special order. Consult factory.

# Perf-O Grip Grating - Safe Loading Tables

5-Hole plank — 10" width nominal



Perf-O Grip pattern



Perf-O Grip 2 pattern

Perf-O Grip  
Grating

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	3.5 (5.2)	P51513† A51513	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" (50.8)	3.9 (5.8)	P52013† A52013	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.	1½" (38.1)	4.5 (6.7)	P51511† A51511	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" (50.8)	5.1 (7.6)	P52011† A52011	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" (76.2)	5.1 (7.6)	P53011† A53011	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	.35	.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				
Alum. 0.125"	2" (50.8)	1.8 (2.7)	P520125† A520125	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* 16 ga.	2" (50.8)	2.7 (4.0)	P52016S†	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

† Perf-O Grip: To order standard Perf-O Grip grating use part number "Pxxxxx".

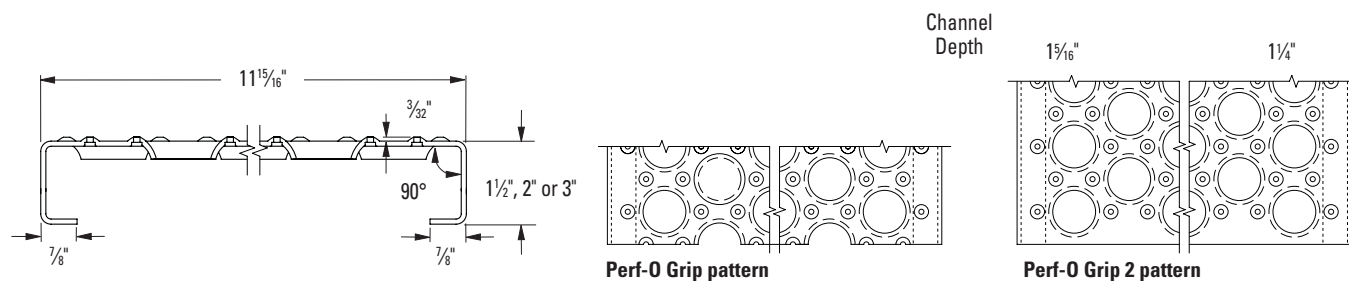
Perf-O Grip 2: To order Perf-O Grip 2 grating use part number "Axxxxx". End margins are standard on Perf-O Grip 2 grating 2-hole through 6-hole plank only ( 5" through 12" widths). Standard lengths are 10'-0" and 12'-0".

\* Available on special order. Consult factory.



# Perf-O Grip Grating - Safe Loading Table

6-Hole plank — 12" width nominal



## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	4.3 (6.4)	P61513† A61513	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" (50.8)	4.6 (6.8)	P62013† A62013	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.	1½" (38.1)	5.3 (7.9)	P61511† A61511	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" (50.8)	5.5 (8.2)	P62011† A62011	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	389	341	
				D	.02	.04	.06	.08	.10	.13	.16	.20	.23	.27	.32	.37	.42	.54	.67	.81	.98	
3" (76.2)	6.2 (9.2)	P63011† A63011	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		
Alum. 0.125"	2" (50.8)	2.1 (3.1)	P620125† A620125	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* 16 ga.	2" (50.8)	3.2 (4.7)	P62016S†	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	

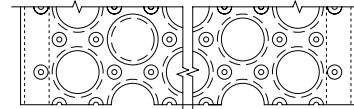
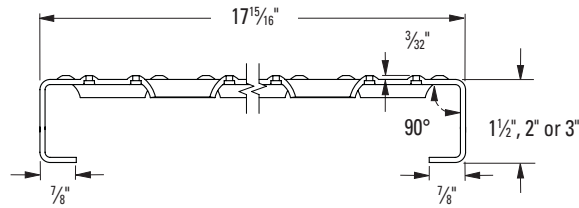
† Perf-O Grip: To order standard Perf-O Grip grating use part number "Pxxxxx".

Perf-O Grip 2: To order Perf-O Grip 2 grating use part number "Axxxxx". End margins are standard on Perf-O Grip 2 grating 2-hole through 6-hole plank only ( 5' through 12' widths). Standard lengths are 10'-0" and 12'-0".

\* Available on special order. Consult factory.

# Perf-O Grip Grating - Safe Loading Table

10-Hole plank — 18" width nominal



Perf-O Grip pattern

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

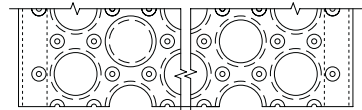
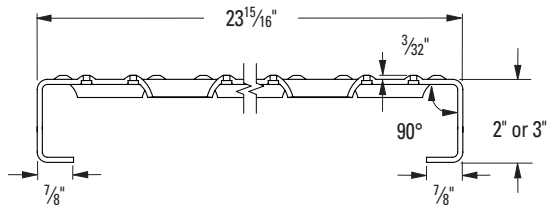
Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel* 13 ga.	1½" (38.1)	5.7 (8.5)	P101513	U	714	457	317	233	179	142	116	96	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" (50.8)	6.0 (8.9)	P102013	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.	1½" (38.1)	6.8 (10.1)	P101511	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" (50.8)	7.1 (10.5)	P102011	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" (76.2)	7.9 (11.7)	P103011	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
Alum.* 0.125"	2" (50.8)	2.8 (4.1)	P1020125	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

\* Available on special order. Consult factory.

# Perf-O Grip Grating - Safe Loading Table

13-Hole plank — 24" width nominal

Perf-O Grip  
Grating



Perf-O Grip pattern

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

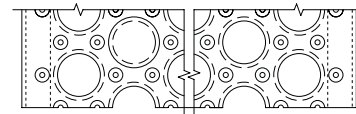
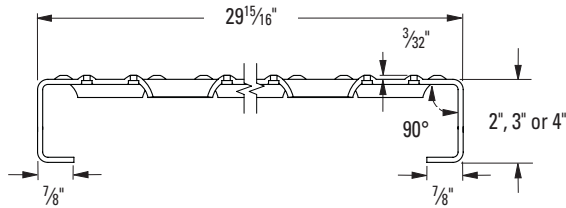
Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 11 ga.	2" (50.8)	8.9 (13.2)	P132011	U	1094	700	486	357	273	216	175	145	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" (76.2)	9.8 (14.5)	P133011	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

**Perf-O Grip:** To order standard Perf-O Grip grating use part number "Pxxxxx".  
Standard lengths are 10'-0" and 12'-0".



# Perf-O Grip Grating - Safe Loading Table

16-Hole plank — 30" width nominal



Perf-O Grip pattern

Perf-O Grip  
Grating

## Plank selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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" (50.8)	11.8 (17.5)	P162011*	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" (76.2)	12.7 (18.9)	P163011*	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" (101.6)	13.5 (20.1)	P164011*	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

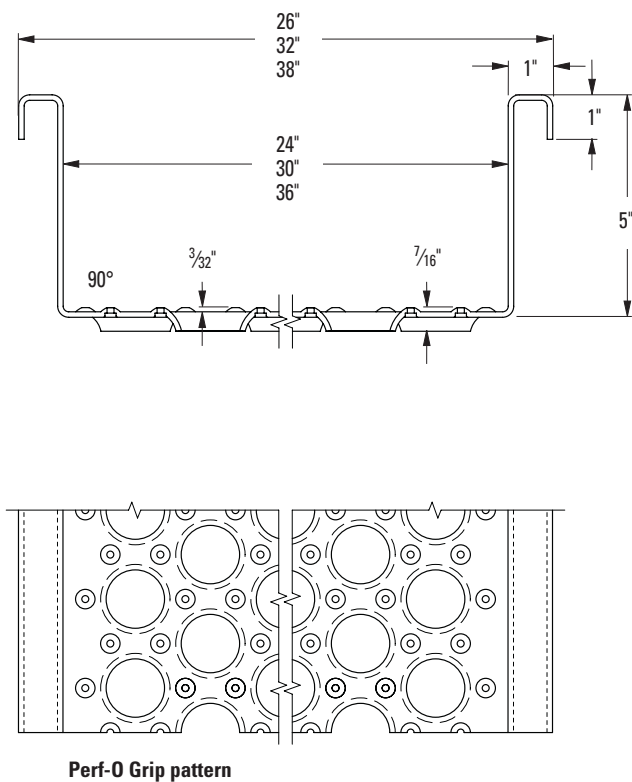
**Perf-O Grip:** To order standard Perf-O Grip grating use part number "Pxxxxx".  
Standard lengths are 10'-0" and 12'-0".

\* Available on special order. Consult factory.

# Perf-O Grip Grating - Safe Loading Tables

Walkway — 24", 30" & 36" widths nominal

Perf-O Grip  
Grating

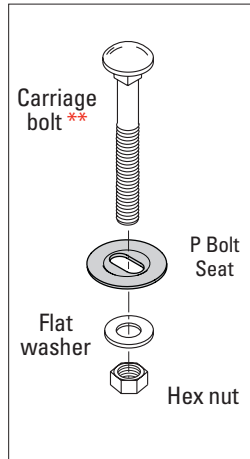


## Walkway selection/design tables (Note: consult factory for data on 36" width, 20 hole)

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft (kg/m)	Catalog Number	Load/Deflt. Code	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 (609.6)	5" (127.0)	11.8 (17.5)	P135011W	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 (762.0)	5" (127.0)	13.6 (20.2)	P165011W	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	.00	.01	.02	.03	.04	.05	.06	.07	.08	.10	.11	.13	.15	.19	.23	.28	.33

**Perf-O Grip:** To order standard Perf-O Grip grating use part number "Pxxxxx".  
Standard lengths are 10'-0" and 12'-0". Longer lengths of 20'-0" and 24'-0" are available. Consult factory.



### Part number includes

(1) Bolt washer seat (PBOLTSEAT)

### Source Locally

(1)  $\frac{3}{8}$ "-16 Carriage bolt \*\*

(1)  $\frac{3}{8}$ " Flat washer

(1)  $\frac{3}{8}$ "-16 Hex nut

\*\* Plank carriage bolt lengths = Side channel height + 1"  
Walkway carriage bolt =  $\frac{5}{16}$ "-18 x 2"

### Bolt Washer Seat (P Bolt Seat)

UPC Number	Catalog Number	Wt./Ea.
66251626616	PBOLTSEAT	0.10



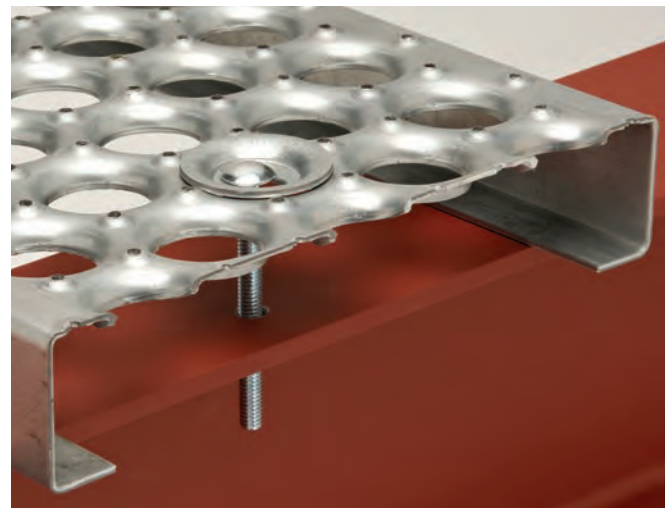
Field drilling is required.

Perf-O Grip bolt seats help provide a secure anchor of the grating to structural supports. The standard bolt seat features oblong holes specifically designed to help ensure a vertical anchor (with a  $\frac{3}{8}$ " bolt) even if the hole is off concentrically by as much as  $\frac{1}{4}$ ".

Hardware is not provided.

## Assembly

1. Align Perf-O Grip™ planks on I-beam or other anchoring cross-member.
2. Mark the I-beam for drilling purposes under the Perf-O Grip hole nearest the end. Drill a pilot hole.
3. Remove Perf-O Grip plank and drill a finish hole.
4. Replace Perf-O Grip plank to its original position. Place bolt seat in the Perf-O Grip hole which is now lined up with the drilled hole.
5. Run the carriage bolt through the bolt seat, Perf-O Grip and I-Beam, and tighten with washer and nut until secure.
6. Test for movement or slippage. If Perf-O Grip planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 5.



## Welding

A common method of fastening safety grating is welding. It is recommended that all B-Line series safety grating products be fillet welded per AWS D1.3. For more information, consult technical services.



**Note: Do not walk on Perf-O Grip planks if they are not secure. Serious injury could result.**



# Perf-O Grip Grating - Safe Loading Tables

## Perf-O Grip J-clip



Perf-O Grip™ J-clips fasten the grating securely to the supporting steel without drilling holes.

Standard finish is galvanized.

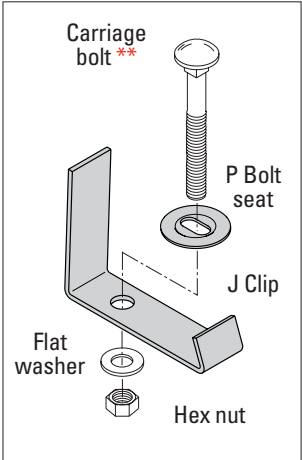
Hardware is not provided.

### Part number includes

(1) J-Clip & (1) P Bolt Seat

### Source Locally

- (1) 3/8"-16 Carriage bolt \*\*
- (1) 3/8" Flat washer
- (1) 3/8"-16 Hex nut



\*\* Plank carriage bolt lengths = Side channel height + 1"  
walkway carriage bolt = 5/16"-18 x 2"

Seated J Clip		
UPC Number	Catalog Number	Wt./Ea.
78205153667	JCLIP	0.30



### Assembly

1. Align Perf-O Grip planks on I-beam or other anchoring cross-member.
2. Place bolt seat on center hole of Perf-O Grip nearest the overhanging end.
3. Align J-clip below Perf-O Grip 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 the washer and nut.
5. Test for movement or slippage. If Perf-O Grip planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 4.



### Welding

A common method of fastening safety grating is welding. It is recommended that all B-Line series safety grating products be fillet welded per AWS D1.3. For more information, consult technical services.

Note: Stainless is unavailable.

Note: Do not walk on Perf-O Grip planks if they are not secure. Serious injury could result.

## Perf-O Grip mid support clip with hardware

### Part number includes

(1) Clip & (2) Set Screws



Perf-O Grip™ mid support clips can be used at midspan to increase load carrying capacities of individual channels by fastening several planks together to form an integral section. Mid support clip is manufactured from galvanized steel and includes two set screws.

Mid Support Clip (with hardware)

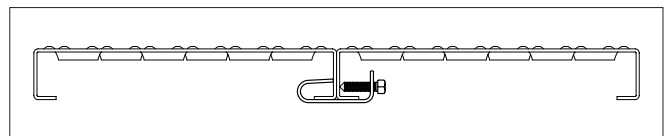
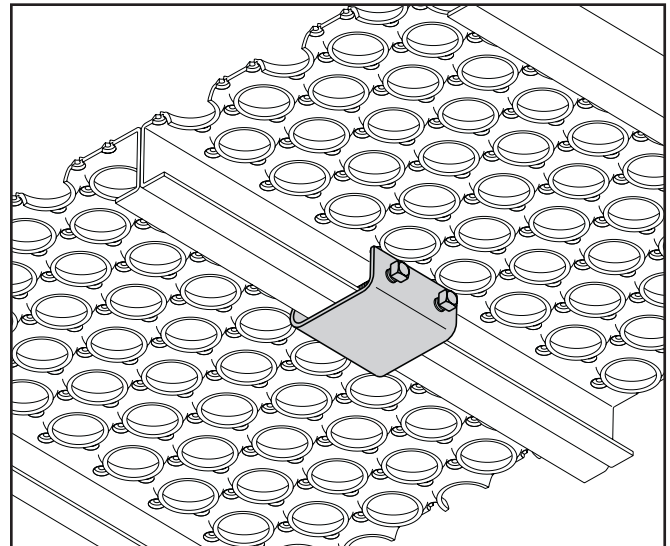
UPC Number	Catalog Number	Wt./Ea.
66251639386	MSCLIP	0.50

### Assembly

1. Align Perf-O Grip planks on I-beam or other anchoring cross-member.
2. Place clip around the bottom flanges of the Perf-O Grip planks.
3. Slide to the required location.
4. Tighten the set screws.
5. Test for movement or slippage. If Perf-O Grip planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 4 as required.

### Welding

A common method of fastening safety grating is welding. It is recommended that all B-Line series safety grating products be fillet welded per AWS D1.3. For more information, consult technical services.



**Note: Do not walk on Perf-O Grip planks if they are not secure. Serious injury could result.**

# Perf-O Grip Grating - Safe Loading Tables

## Perf-O Grip splice plate kits



POG-ES-10 shown

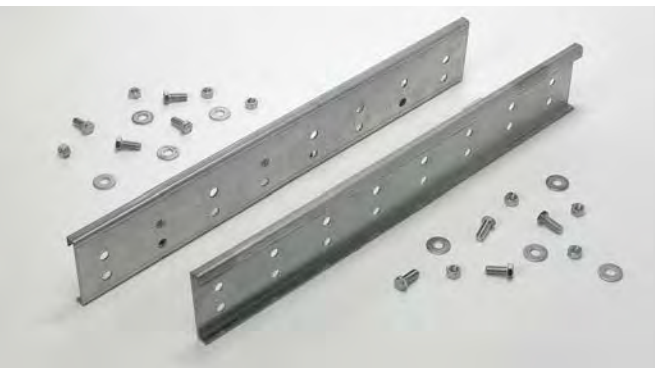
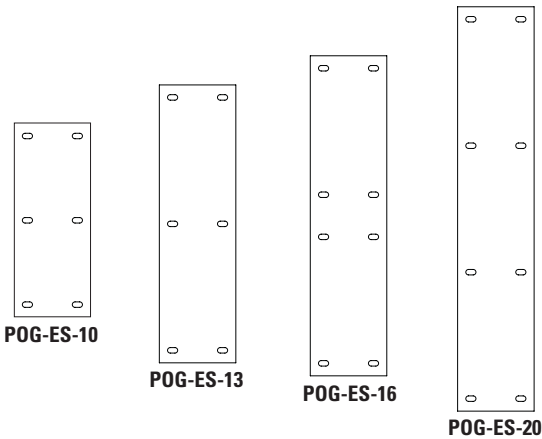
### Surface splice plate kits

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) & **POG-ES-13** (for 24" wide plank) includes six (6) each of hardware shown below.
- **POG-ES-16** (for 30" wide plank) & **POG-ES-20** (for 36" wide plank) includes eight (8) each of hardware shown below.
- **Hardware included:** 3/8" x 1" carriage bolts, 3/8" flat washers and bolt seats.

Perf-O Grip splice plate kits

UPC Number	Catalog Number	Wt./Ea.
66251640777	<b>POG-ES-10</b>	4.40
66251640778	<b>POG-ES-13</b>	5.95
66251640779	<b>POG-ES-16</b>	7.00
78205167734	<b>POG-ES-20</b>	7.24



POG-WS-30

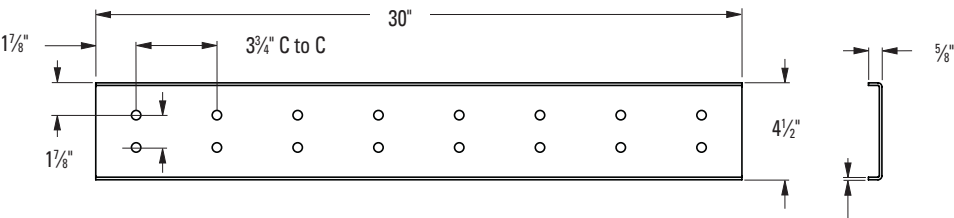
### Walkway splice plate kits

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" and 36" wide walkway.
- **Each kit includes:** two (2) splice plates and thirty-two (32) each of the following hardware: 1/2" x 1 1/4" hex bolts, 1/2"-13 hex nuts and 1/2" flat washers.

Walkway splice plate kits

UPC Number	Catalog Number	Wt./Ea.
78205166238	<b>POG-WS-30</b>	18.04'

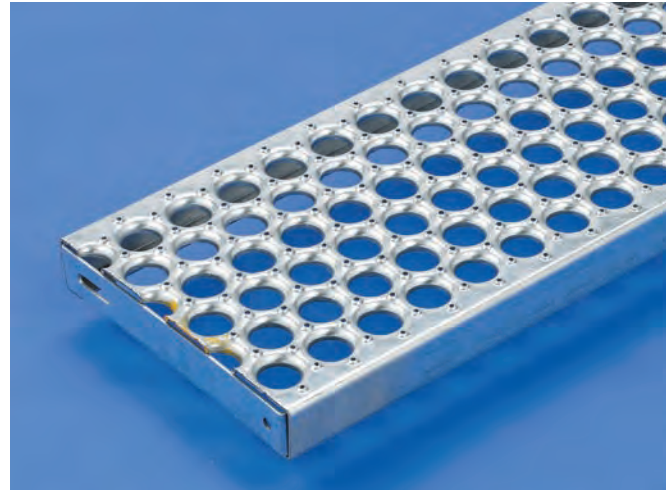




### Perf-O Grip stair treads

Specify original Perf-O Grip™ or Perf-O Grip 2 stair treads. All treads have welded ends for attachment to stringers.

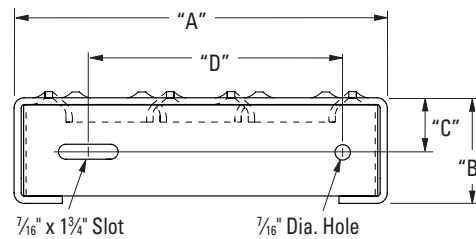
- Mill-galvanized steel: 11 ga and 13 ga.
- Hot rolled, pickled and oiled carbon steel: 11 ga. and 13 ga.
- 24", 30", 36" and 48" lengths.
- 5", 7" 10" and 12" (nominal) widths.
- 1½" and 2" channel heights.
- For stair treads, intermediate stringer is recommended for spans over 4 feet.



### Perf-O Grip carrier plates

Carrier plates allow you to create your own custom stair treads. They are sold by the pair.

(2 plates = one pair).



Perf-O Grip carrier plate

Product	Nominal Width	"A"	"B"	"C"	"D"
2-Hole Tread	5" (127mm)	4 <sup>15</sup> / <sub>16</sub> " (125mm)	1½" (38mm)	¾" (19mm)	2" (51mm)
		4 <sup>5</sup> / <sub>16</sub> " (125mm)	2" (51mm)	1" (25mm)	2" (51mm)
3-Hole Tread	7" (178mm)	6 <sup>15</sup> / <sub>16</sub> " (176mm)	1½" (38mm)	¾" (19mm)	4" (102mm)
		6 <sup>5</sup> / <sub>16</sub> " (176mm)	2" (51mm)	1" (25mm)	4" (102mm)
5-Hole Tread	10" (254mm)	9 <sup>15</sup> / <sub>16</sub> " (254mm)	1½" (38mm)	¾" (19mm)	7" (178mm)
		9 <sup>5</sup> / <sub>16</sub> " (254mm)	2" (51mm)	1" (25mm)	7" (178mm)
6-Hole Tread	12" (305mm)	11 <sup>15</sup> / <sub>16</sub> " (303mm)	1½" (38mm)	¾" (19mm)	9" (227mm)
		11 <sup>5</sup> / <sub>16</sub> " (303mm)	2" (51mm)	1" (25mm)	9" (227mm)

## Notes to architect

1. Perf-O Grip™ and Perf-O Grip 2 gratings are intended for general purpose use in plants and process facilities by industry, commerce, and public utilities, and on air, water, and surface, for both mobile and stationary equipment.
2. Perf-O Grip and Perf-O Grip 2 stair treads are intended for utility stairs and fire escapes in commercial, public and private buildings where local code permits. They are not intended for staircases used regularly by the general public where flat closed surfaces are desired. For this type of application, see Traction-Tread™ stair treads and sheets.
3. These specifications are presented as a general guide to the architect or structural engineer in preparing project specifications. Allowable loads, spans and other limiting conditions presented in this catalog offer product data for use in design and construction.
4. All supports should provide a smooth, level, 1½" minimum bearing surface, free of burrs, bridging, welds or other irregularities.
5. Random cut ends and diagonal or circular cut exposed edges should be banded with a bar at least ⅝" thick and equal to the overall side channel depth of grating welded at contact points at the discretion of the design engineer.
6. Bolted connections, except stair or ladder tread attachment to stringer channels, may be replaced by welded connections that develop the same strength.

## Part 1: General

### 1.1 Scope

The contractor shall furnish and install Perf-O Grip and Perf-O Grip 2 Gratings and Stair Treads, as specified and shown on the drawings.

### 1.2 Qualifications

Perf-O Grip and Perf-O Grip 2 gratings, stair tread and accessories, unless otherwise indicated, shall be manufactured by Eaton's B-Line Division, and shall be installed in accordance with its current printed directions.

Safety surface shall be slip-resistant in all directions.

### 1.3 Submittals

The contractor shall furnish shop drawings of grating layout, framing and supports, unit dimensions and sections, type and location of fasteners and welds.

### 1.4 Storage and handling

All materials shall be stored and handled to avoid damage. Damaged materials shall be removed from the premises.

## Part 2: Products

### 2.1 Grating materials

- a. Type:** Perf-O Grip, Perf-O Grip 2 gratings and Perf-O Grip walkways)
- b. Metal and finish:** Standard (mill-galvanized steel, ASTM A924) (stainless steel, alloy types 304-2B/D) (aluminum, alloy 5052 H32); Special order (carbon steel — hot rolled, pickled and oiled, ASTM-A569) (stainless steel, alloy type 316-2B/D)
- c. Metal gauge:** (13-ga. steel) (11-ga. steel) (16-ga. stainless steel) (.125" aluminum)
- d. Section width:** (5") (7") (10") (12") (18") (24") (30") plank; (24") (30") (36") walkway
- e. Channel height:** Safety grating (1½") (2") (3") (4") plank; (5") Walkway grating - OSHA compliant; Canadian OH & S compliant
- f. Standard lengths:** (10'-0") (12'-0")

### 2.2 Stair tread materials

- a. Type:** (Perf-O Grip and Perf-O Grip 2 stair tread)
- b. Metal and finish:** Standard (mill-galvanized steel, ASTM G90 and A653 Galv.) (stainless steel, alloy types 304-2B/D) (aluminum, alloy 5052 H32); Special order (carbon steel — hot rolled, pickled and oiled, ASTM-A1011) (stainless steel, alloy type 316-2B/D)
- c. Metal gauge:** (13-ga. steel) (11-ga. steel) (16-ga. stainless steel) (.125" aluminum)
- d. Tread depth:** Standard (10"); Special order (5") (7") (12")
- e. Channel height:** Standard (1½"); Special order (2")
- f. Span or width of staircase:** (24") (30") (36")

### 2.3 Accessories

- a. Bolt seats:** Standard (mill-galvanized steel, ASTM A924); Special order (carbon steel — hot rolled, pickled and oiled, ASTM A569) (aluminum, alloy 5052-H32); (stainless steel, alloy Types 304-2B/D) (stainless steel, alloy Type 316-2B/D)
- b. "J" clip attachment:** Standard (mill-galvanized steel, ASTM A924); Special order (carbon steel — hot rolled, pickled and oiled, ASTM A569) (aluminum, alloy 5052-H32); (stainless steel, alloy Types 304-2B/D) (stainless steel, alloy Type 316-2B/D)
- c. Midsupport clip:** Standard (mill-galvanized steel, ASTM A924); Special order (carbon steel — hot rolled, pickled and oiled, ASTM A1011) (aluminum, alloy 5052-H32); (stainless steel, alloy types 304-2B/D) (stainless steel, alloy type 316-2B/D)

- d. **Surface splice kit:** Standard (mill-galvanized steel, ASTM A924); Special order (carbon steel — hot rolled, pickled and oiled, ASTM A1011) (aluminum, alloy 5052-H32); (stainless steel, alloy types 304-2B/D) (stainless steel, alloy type 316-2B/D)
- e. **Walkway splice kit:** Standard (mill-galvanized steel, ASTM A924); Special order (carbon steel — hot rolled, pickled and oiled, ASTM A1011) (aluminum, alloy 5052-H32); (stainless steel, alloy types 304-2B/D) (stainless steel, alloy type 316-2B/D)
- f. **Universal handrail bracket for walkways:** Eliminates unnecessary substructure for supporting handrail posts.

## Part 3: Execution

### 3.1 Condition of surfaces

Prior to grating installation, contractor shall inspect supports for correct size, layout and alignment and verify that surfaces to receive grating are free of debris. The contractor shall report to the design or consulting engineer or owner's agent in writing any defects considered detrimental to proper application of grating so defects can be remedied before grating is applied.

### 3.2 Grating installation

Install grating in accordance with manufacturer's recommendations and shop drawings. Position grating sections flat and square with ends bearing min. 1½" on supporting structure. Keep grating sections at least ¼" away from vertical steel sections and ½" from concrete walls. Installation clearances are built into this product. Allow clearance at joints between sections of max. ¼" at side channels and max. ¾" at ends. When specified, band random cut ends and diagonal or circular cut exposed edges with a min. ⅛" thick bar welded at contact points.

### 3.3 Grating attachment

Attach grating to supports without warp or deflection as follows:

- a. **Single plank application:** Secure plank ends to supporting members at every point of contact. Use (2) Perf-O Grip™ bolt seats or "J" Clip assemblies at each end or secure both side channels at each end to supports by fusion welding with ⅝" fillet welds, 1" long.
- b. **Multiple plank application:** Secure perimeter plank to supporting members at every point of contact and intermediate grating sections with at least (1) attachment each end of plank, on alternate sides. For added rigidity when span exceeds (6'-0") (8'-0"), attach side channels of adjacent plank together (at mid-point of span) using mid support clip.
- c. **Welded attachment:** Secure side channels to supports by fusion welding with ⅝" fillet welds, 1" long. Weld adjacent planks together with ⅝" fillet welds, 1" long, 24" o.c. staggered top and bottom.
- d. **Clip attachment:** Secure intermediate planks to supports using bolt seat and "J" Clip assembly. Use bolt seat with ¾" carriage bolts and nuts for securing perimeter planks. Fasten adjacent side rails together with mid support clip or ¾" machine bolts and nuts through locally drilled holes.

### 3.4 Stair tread installation

Install Perf-O Grip and Perf-O Grip 2 stair treads as shown on the drawings. Fasten treads to stair stringers with ¾" x 1" machine bolts and nuts.

- a. **For stair treads,** intermediate stringer is recommended for spans over 4 feet.

## How to order

### Technical assistance

For technical assistance not found in this catalog, contact your local Perf-O Grip and Perf-O Grip 2 gratings distributor, or contact our technical service department at 1-800-582-3643 (phone) or 1-770-268-7213 (fax).

Perf-O Grip and Perf-O Grip 2 gratings are stocked in all major markets. For the finest in slip-resistant grating and stair treads, contact us or go to [www.eaton.com/b-lineseries](http://www.eaton.com/b-lineseries) to locate your local distributor. You will receive skilled consulting service on your specific requirements.

### Fabrication service

On large jobs, we estimate, quote, detail and fabricate to your requirement. After receipt of order, layout drawings are prepared for easy installation.

**Notice:** We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claims shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

See terms and conditions at [www.cooperblineline.com/legal](http://www.cooperblineline.com/legal).





Traction Tread  
Grating

**Traction Tread™ Design Load Tables**

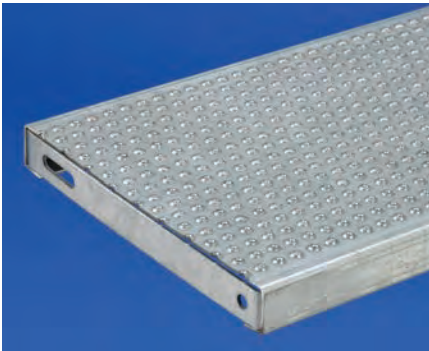
Steel, aluminum, stainless steel

Planks - 7" width .....	54
Planks - 10" width .....	55
Planks - 12" width .....	56
Planks - 10" width, large hole .....	57
Stair treads .....	58
Ladder rungs .....	59

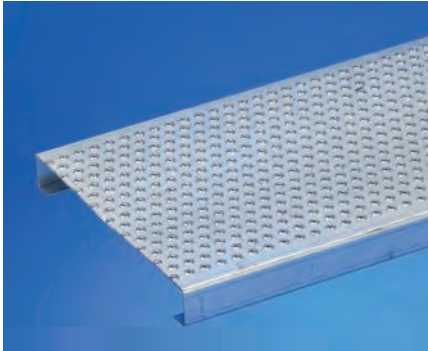
**Advantages**

Traction Tread flooring feature a surface with hundreds of perforated buttons that provide slip-resistance in all directions making it a practical choice for industrial applications.

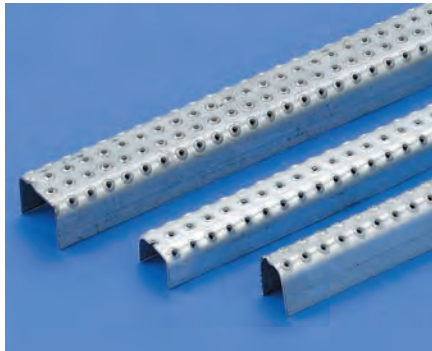
- Appropriate for commercial & industrial applications where pedestrian traffic is a consideration
- Perfectly suited for ADA-compliant requirements
- Easily adapted for a multitude of applications, offering a safe walking-working surface for walkways, ramps, stair treads and equipment platforms
- Ideal 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
- Sheet size - 36" x 120"
- Can be cut to order
- Variations of hole patterns are available upon request
- Special fabrication, cutting or specialty configurations available upon request
- Material options: see page 53



**Traction Tread stair treads**



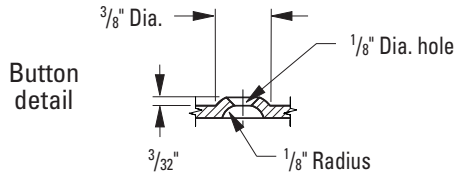
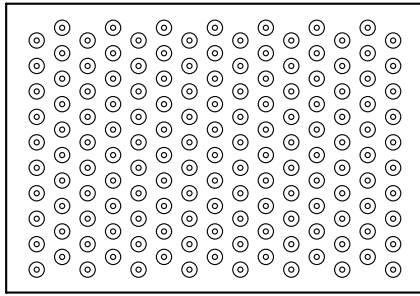
**Traction Tread planks**



**Traction Tread ladder rungs**



Standard pattern



## Material options

- Hot rolled, pickled and oiled carbon steel:

11 gauge (5.0 lbs./sq. ft.)

12 gauge (4.3 lbs./sq. ft.)

13 gauge (3.8 lbs./sq. ft.)

14 gauge (3.1 lbs./sq. ft.)

16 gauge (2.5 lbs./sq. ft.)

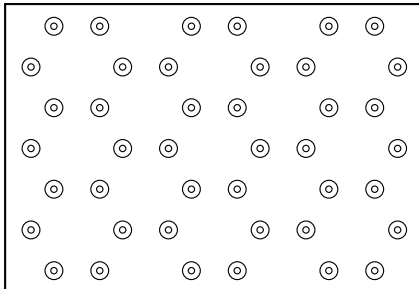
- Aluminum alloy 5052-H32:  
.125" (1.6 lbs./sq. ft.)

## Sheet size

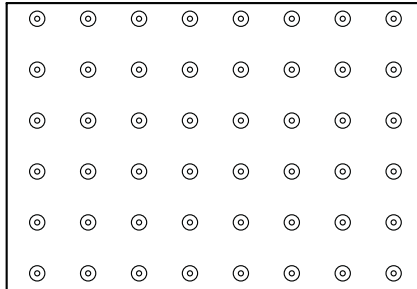
- Standard - 36" x 120"
- Cut to order

- Traction Tread™ is available as shown above as a standard product. However, variations to the surface design can be produced according to your requirement (see examples illustrated below).

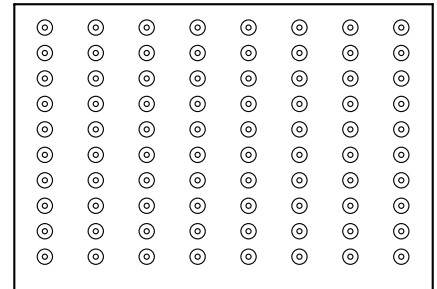
Star pattern



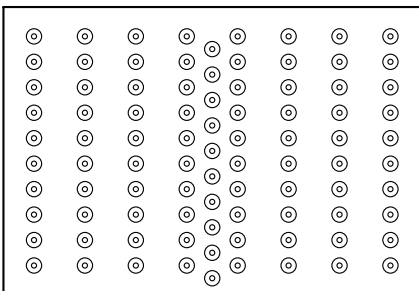
Square pattern



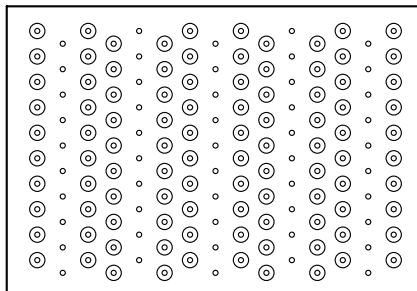
Rectangular pattern



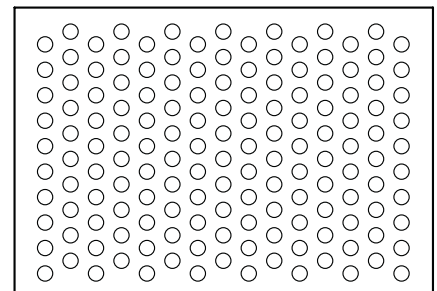
OEM pattern



Drain hole pattern

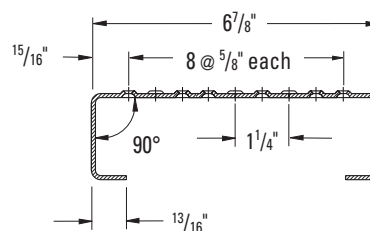
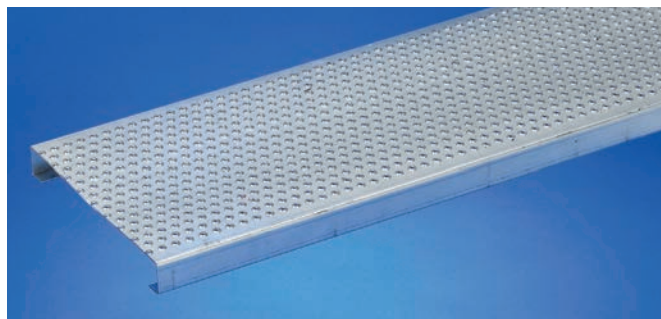


Dimple only pattern



# Traction Tread Grating - Safe Loading Tables

## Traction Tread Plank — Width 7" Nominal



### Plank lengths

- 120" and 144" lengths

### Material options

- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Also available by special order in hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge; consult factory

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	3.40 (5.06)	TT71513 GL	U D	824 0.02	675 0.04	488 0.06	351 0.08	257 0.10	201 0.13	158 0.15	144 0.20	127 0.25	92 0.25	69 0.25						
	2" (50.8)	3.71 (5.52)	TT72013 GL	U D	1642 0.02	1345 0.04	973 0.06	700 0.08	513 0.10	400 0.13	315 0.15	287 0.20	253 0.25	184 0.25	137 0.25	104 0.25	80 0.25	50 0.25			
	3" (76.2)	4.11 (6.11)	TT73013 GL *	U D	4378 0.02	3587 0.04	2595 0.06	1867 0.08	1368 0.10	1068 0.13	841 0.15	766 0.20	676 0.25	491 0.25	365 0.25	277 0.25	214 0.25	133 0.25	88 0.25	60 0.25	42 0.25
Steel 11 ga.	1½" (38.1)	4.72 (7.02)	TT71511 GL	U D	1032 0.02	845 0.04	612 0.06	440 0.08	323 0.10	252 0.13	198 0.15	180 0.20	159 0.25	116 0.25	86 0.25						
	2" (50.8)	5.15 (7.66)	TT72011 GL	U D	2084 0.02	1707 0.04	1235 0.06	889 0.08	651 0.10	508 0.13	400 0.15	364 0.20	322 0.25	233 0.25	174 0.25	132 0.25	102 0.25	64 0.25			
	3" (76.2)	6.13 (9.12)	TT73011 GL *	U D	5619 0.02	4603 0.04	3330 0.06	2396 0.08	1756 0.10	1370 0.13	1079 0.15	982 0.20	867 0.25	630 0.25	468 0.25	355 0.25	274 0.25	171 0.25	112 0.25	77 0.25	54 0.25
Alum 0.125"	1½" (38.1)	1.63 (2.42)	TT715125 AL *	U D	359 0.02	294 0.04	213 0.06	153 0.08	112 0.10	88 0.13	69 0.15	63 0.20	55 0.25	40 0.25	30 0.25						
	2" (50.8)	1.80 (2.68)	TT720125 AL	U D	727 0.02	595 0.04	431 0.06	310 0.08	227 0.10	177 0.13	139 0.15	127 0.20	112 0.25	81 0.25	61 0.25	46 0.25	35 0.25	22 0.25			

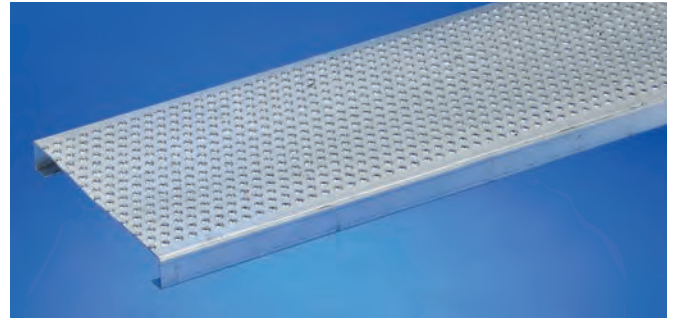
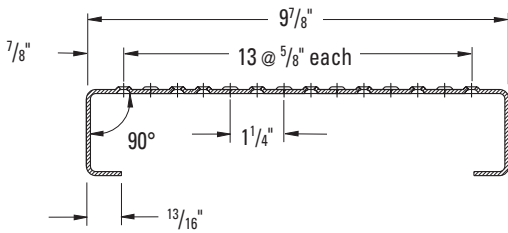
\* Available on special order. Consult factory.

## Engineering Data For Both Channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>
Steel 13 ga.	1 1/2"	0.344	0.396
	2"	0.534	0.806
	3"	1.000	2.196
Steel 11 ga.	1 1/2"	0.273	0.316
	2"	0.420	0.636
	3"	1.711	0.782
Aluminum .125"	1 1/2"	0.348	0.400
	2"	0.540	0.815

# Traction Tread Grating - Safe Loading Tables

Traction Tread Plank — Width 10" Nominal



## Material Options:

- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Also available by special order in hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge; consult factory

## Plank Lengths:

- 120" and 144" lengths

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	4.32 (6.43)	TT101513 GL	U D	628 0.02	515 0.04	372 0.06	268 0.08	196 0.10	153 0.13	121 0.15	110 0.20	97 0.25	70 0.25	52 0.25						
	2" (50.8)	4.63 (6.89)	TT102013 GL	U D	1267 0.02	1038 0.04	751 0.06	540 0.08	396 0.10	309 0.13	243 0.15	221 0.20	195 0.25	142 0.25	106 0.25	80 0.25	62 0.25				
	3" (76.2)	5.24 (7.80)	TT103013 GL *	U D	3412 0.02	2795 0.04	2022 0.06	1455 0.08	1066 0.10	832 0.13	655 0.15	597 0.20	527 0.25	382 0.25	284 0.25	216 0.25	167 0.25	104 0.25	68 0.25	47 0.25	33 0.25
Steel 11 ga.	1½" (38.1)	6.01 (8.94)	TT101511 GL	U D	787 0.02	645 0.04	466 0.06	336 0.08	246 0.10	192 0.13	151 0.15	138 0.20	121 0.25	88 0.25	66 0.25						
	2" (50.8)	6.44 (9.58)	TT102011 GL	U D	1605 0.02	1315 0.04	951 0.06	685 0.08	502 0.10	392 0.13	308 0.15	281 0.20	248 0.25	180 0.25	134 0.25	101 0.25	78 0.25				
	3" (76.2)	7.45 (11.06)	TT103011 GL *	U D	4380 0.02	3588 0.04	2595 0.06	1868 0.08	1369 0.10	1068 0.13	841 0.15	766 0.20	676 0.25	491 0.25	365 0.25	277 0.25	214 0.25	134 0.25	88 0.25	60 0.25	42 0.25
Alum 0.125"	1½" (38.1)	2.07 (3.08)	TT1015125 AL *	U D	275 0.02	225 0.04	163 0.06	117 0.08	86 0.10	67 0.13	53 0.15	48 0.20	42 0.25	31 0.25	23 0.25						
	2" (50.8)	2.22 (3.30)	TT1020125 AL	U D	560 0.02	469 0.04	332 0.06	239 0.08	175 0.10	137 0.13	107 0.15	98 0.20	86 0.25	63 0.25	47 0.25	35 0.25	27 0.25				

\* Available on special order. Consult factory.

## Engineering Data For Both Channels

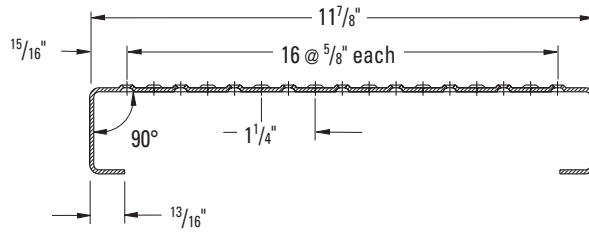
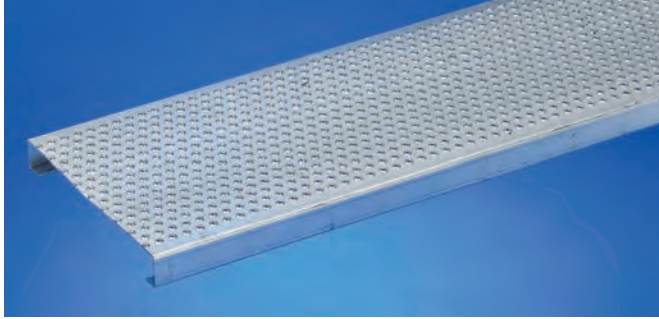
Material Gauge	Channel Depth in.	S <sub>x</sub> in. <sup>3</sup>	I <sub>x</sub> in. <sup>4</sup>
Steel 13 ga.	1½"	0.344	0.396
	2"	0.534	0.806
	3"	1.000	2.196
Steel 11 ga.	1½"	0.273	0.316
	2"	0.420	0.636
	3"	1.711	0.782
Aluminum .125"	1½"	0.348	0.400
	2"	0.540	0.815

Traction Tread Grating



# Traction Tread Grating - Safe Loading Table

## Traction Tread Plank — Width 12" Nominal



### Plank Lengths:

- 120" and 144" lengths

### Material Options:

- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Also available by special order in hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge; consult factory

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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.	1½" (38.1)	4.93 (7.33)	TT121513 GL	U D	544 0.02	445 0.04	322 0.06	232 0.08	170 0.10	133 0.13	104 0.15	95 0.20	84 0.25	61 0.25	45 0.25						
	2" (50.8)	5.24 (7.80)	TT122013 GL	U D	1101 0.02	902 0.04	652 0.06	469 0.08	344 0.10	268 0.13	211 0.15	192 0.20	170 0.25	123 0.25	92 0.25	70 0.25	54 0.25				
	3" (76.2)	5.57 (8.29)	TT123013 GL *	U D	2986 0.02	2446 0.04	1769 0.06	1273 0.08	933 0.10	728 0.13	573 0.15	522 0.20	461 0.25	335 0.25	249 0.25	189 0.25	146 0.25	91 0.25	60 0.25	41 0.25	29 0.25
Steel 11 ga.	1½" (38.1)	6.90 (10.27)	TT121511 GL	U D	682 0.02	559 0.04	404 0.06	291 0.08	213 0.10	166 0.13	131 0.15	119 0.20	105 0.25	76 0.25	57 0.25						
	2" (50.8)	7.30 (10.86)	TT122011 GL	U D	1395 0.02	1143 0.04	827 0.06	595 0.08	436 0.10	340 0.13	268 0.15	244 0.20	215 0.25	156 0.25	116 0.25	88 0.25	68 0.25				
	3" (76.2)	8.23 (12.25)	TT123011 GL *	U D	3831 0.02	3138 0.04	2270 0.06	1634 0.08	1197 0.10	934 0.13	736 0.15	670 0.20	591 0.25	429 0.25	319 0.25	242 0.25	187 0.25	117 0.25	77 0.25	52 0.25	37 0.25
Alum 0.125"	1½" (38.1)	2.37 (3.52)	TT1215125 AL	U D	238 0.02	195 0.04	141 0.06	101 0.08	74 0.10	58 0.13	46 0.15	42 0.20	37 0.25	27 0.25	20 0.25						
	2" (50.8)	2.52 (3.75)	TT1220125 AL *	U D	487 0.02	399 0.04	288 0.06	207 0.08	152 0.10	119 0.13	93 0.15	85 0.20	75 0.25	55 0.25	41 0.25	31 0.25	24 0.25				

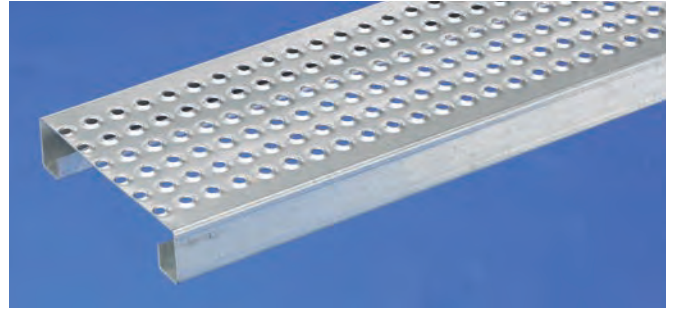
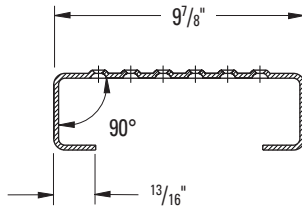
\* Available on special order. Consult factory.

### Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>
Steel 13 ga.	1 1/2"	0.344	0.396
	2"	0.534	0.806
	3"	1.000	2.196
Steel 11 ga.	1 1/2"	0.273	0.316
	2"	0.420	0.636
	3"	1.711	0.782
Aluminum .125"	1 1/2"	0.348	0.400
	2"	0.540	0.815

# Traction Tread Grating - Safe Loading Table

## Traction Tread Plank (Large Hole) — Width 10"



### Material Options:

- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Also available by special order in hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge; consult factory
- LH (large hole) pattern

### Plank Dimensions:

- 120" and 144" lengths
- 1½" minimum or 2" channel height
- ¾" hole diameter
- Not available in sheets

## Product selection/design tables

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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"
Steel 13 ga.	1½" (38.1)	4.28 (6.37)	TT101513LH GL	U D	621 0.02	508 0.04	368 0.06	265 0.08	194 0.10	151 0.13	119 0.15	109 0.20	96 0.25	70 0.25	52 0.25				
	2" (50.8)	4.60 (6.84)	TT102013LH GL	U D	1251 0.02	1025 0.04	741 0.06	533 0.08	391 0.10	305 0.13	240 0.15	219 0.20	193 0.25	140 0.25	104 0.25	79 0.25	61 0.25		
Steel 11 ga.	1½" (38.1)	5.95 (8.85)	TT101511LH GL	U D	777 0.02	637 0.04	461 0.06	331 0.08	243 0.10	190 0.13	149 0.15	136 0.20	120 0.25	87 0.25	65 0.25				
	2" (50.8)	6.37 (9.48)	TT102011LH GL	U D	1585 0.02	1299 0.04	939 0.06	676 0.08	495 0.10	387 0.13	304 0.15	277 0.20	245 0.25	178 0.25	132 0.25	100 0.25	77 0.25		
Alum 0.125"	1½" (38.1)	2.05 (3.05)	TT1015125LH AL	U D	271 0.02	222 0.04	161 0.06	116 0.08	85 0.10	66 0.13	52 0.15	47 0.20	42 0.25	30 0.25	23 0.25				
	2" (50.8)	2.20 (3.27)	TT1020125LH AL	U D	553 0.02	453 0.04	328 0.06	236 0.08	173 0.10	135 0.13	106 0.15	97 0.20	85 0.25	62 0.25	46 0.25	35 0.25	27 0.25		

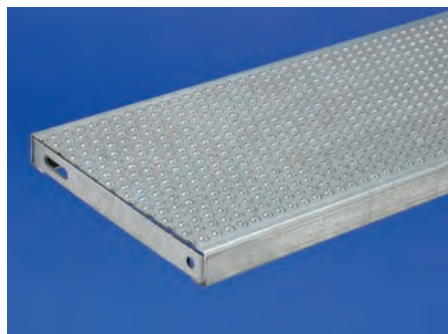
Traction Tread Grating

## Engineering data For both channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>
Steel 13 ga.	1½"	0.344	0.396
	2"	0.534	0.806
Steel 11 ga.	1½"	0.273	0.316
	2"	0.420	0.636
Aluminum .125"	1½"	0.348	0.400
	2"	0.540	0.815

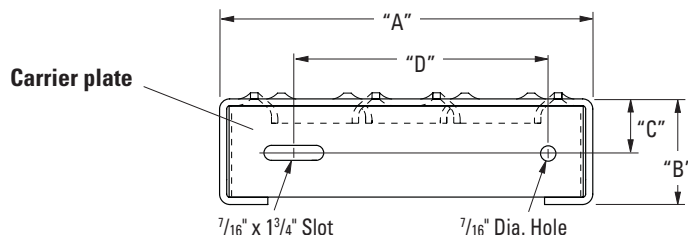
# Traction Tread Grating - Safe Loading Table

## Stair treads



All treads have welded ends for attachment to stringers.

- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Also available in Hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge
- 24" to 48" lengths
- Custom lengths can be made with the use of carrier plates
- 7" 10" and 12" (nominal) widths
- 1½" and 2" channel heights



## Product selection/design tables

C = Safe allowable concentrated load of center span on simple beam (lbs.)

D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/ Defl. Code	Span				
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0" <sup>(1)</sup>
7" Width									
Steel 13 ga.	1½" (38.1)	3.73 (5.55)	T-TT71513 GL	C	555	483	420	352	295
	2" (50.8)	4.06 (6.04)	T-TT72013 GL	C	1107	963	836	702	588
Steel 11 ga.	1½" (38.1)	4.87 (7.25)	T-TT71511 GL	C	696	605	526	441	370
	2" (50.8)	5.43 (8/08)	T-TT72011 GL	C	1405	1222	1061	891	746
Alum .125	1½" (38.1)	1.70 (2.53)	T-TT715125 AL	C	242	211	183	154	129
	2" (50.8)	1.87 (2.78)	T-TT720125 AL	C	490	426	370	311	260
10" Width									
Steel 13 ga.	1½" (38.1)	4.61 (7.16)	T-TT101513 GL	C	608	530	460	386	323
	2" (50.8)	4.89 (7.28)	T-TT102013 GL	C	1226	1067	927	778	651
Steel 11 ga.	1½" (38.1)	6.24 (9.28)	T-TT101511 GL	C	762	663	576	483	405
	2" (50.8)	6.70 (9.97)	T-TT102011 GL	C	1554	1353	1174	986	826
Alum .125	1½" (38.1)	2.11 (3.14)	T-TT1015125 AL	C	266	232	201	169	141
	2" (50.8)	2.35 (3.50)	T-TT1020125 AL	C	542	472	409	344	288
12" Width									
Steel 13 ga.	1½" (38.1)	5.00 (7.44)	T-TT121513 GL	C	633	551	478	402	336
	2" (50.8)	5.70 (8.48)	T-TT122013 GL	C	1281	1115	968	813	681
Steel 11 ga.	1½" (38.1)	7.16 (10.65)	T-TT121511 GL	C	794	691	600	504	422
	2" (50.8)	7.58 (11.28)	T-TT122011 GL	C	1624	1414	1227	1031	863
Alum .125	1½" (38.1)	2.45 (3.64)	T-TT1215125 AL	C	277	241	209	176	147
	2" (50.8)	2.60 (3.87)	T-TT1220125 AL	C	566	493	428	359	301
Deflection (same for all widths and depths)				D	0.02	0.04	0.06	0.08	0.10

## Carrier plates

Carrier plates allow you to create your own custom stair treads. They are sold by the pair. (2 plates = one pair).

Product Width	"A"	"B"	"C"	"D"
7" (178mm)	6 <sup>15</sup> / <sub>16</sub> " (176mm)	1½" (38mm)	¾" (19mm)	4" (102mm)
	6 <sup>15</sup> / <sub>16</sub> " (176mm)	2" (51mm)	1" (25mm)	4" (102mm)
10" (254mm)	9 <sup>15</sup> / <sub>16</sub> " (252mm)	1½" (38mm)	¾" (19mm)	7" (178mm)
	9 <sup>15</sup> / <sub>16</sub> " (252mm)	2" (51mm)	1" (25mm)	7" (178mm)
12" (305mm)	11 <sup>15</sup> / <sub>16</sub> " (303mm)	1½" (38mm)	¾" (19mm)	9" (227mm)
	11 <sup>15</sup> / <sub>16</sub> " (303mm)	2" (51mm)	1" (25mm)	9" (227mm)

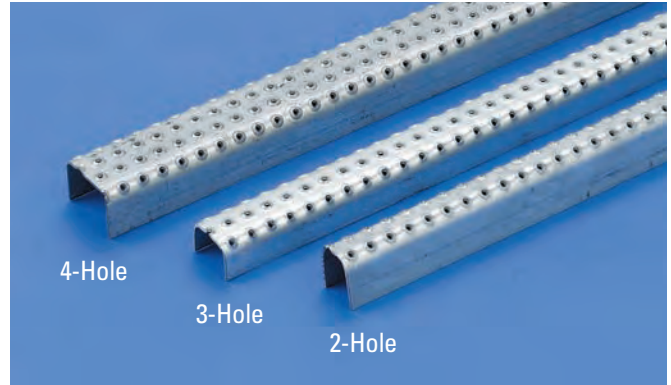
Safe allowable design loads shown are concentrated at center of span on simple beam.

<sup>(1)</sup> For stair treads, intermediate stringer is recommended for spans over 4 feet.

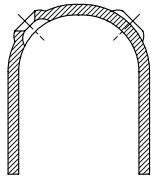
# Traction Tread Grating - Safe Loading Table

## Ladder rungs

Traction Tread™ ladder rungs feature a hand-overhand friendly surface with moderate slip resistance. Products are sold in efficient lengths, well suited to fabricators of ladders. Vehicle applications are an option.

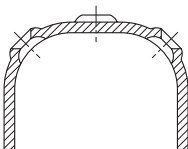


### 2-Hole ladder rung



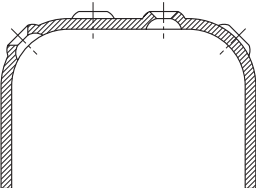
- Hot rolled, pickled and oiled carbon steel: 13 gauge (1.2 lbs./ft.)
- Aluminum alloy 5052-H32: .125" (0.5 lbs./ft.)
- 1¼" wide x 1½" high x 48" or 60" long

### 3-Hole ladder rung



- Hot rolled, pickled and oiled carbon steel: 13 gauge (1.3 lbs./ft.)
- Aluminum alloy 5052-H32: .125" (0.5 lbs./ft.)
- 1⅝" wide x 1⅞" high x 48" or 60" long

### 4-Hole ladder rung



- Hot rolled, pickled and oiled carbon steel: 13 gauge (1.5 lbs./ft.)
- Aluminum alloy 5052-H32: .125" (0.7 lbs./ft.)
- 2¼" wide x 1½" high x 48" or 60" long

### 2 Row ladder rungs

Material	Safe Allowable Concentrated Load (Lbs.)		Weight Lbs./Ln. Ft.
	48¾" Span	60" Span	
11 Gauge Steel*	515	383	1.52
13 Gauge Steel	328	252	1.18
.125" Aluminum	207	187	0.56
16 Gauge Stainless Steel*	218	183	0.82

### 3 Row ladder rungs

Material	Safe Allowable Concentrated Load (Lbs.)		Weight Lbs./Ln. Ft.
	48¾" Span	60" Span	
11 Gauge Steel*	297	229	1.46
13 Gauge Steel	187	151	1.06
.125" Aluminum	163	135	0.50
16 Gauge Stainless Steel*	151	103	0.73

### 4 Row ladder rungs

Material	Safe Allowable Concentrated Load (Lbs.)		Weight Lbs./Ln. Ft.
	48¾" Span	60" Span	
11 Gauge Steel*	523	408	2.08
13 Gauge Steel	372	274	1.49
.125" Aluminum	280	248	0.70
16 Gauge Stainless Steel*	236	201	1.03

Safe allowable design loads shown are concentrated at center of span on simple beam

The minimum safety factor = 2.0

\* Available on special order. Consult factory.

Traction Tread Grating





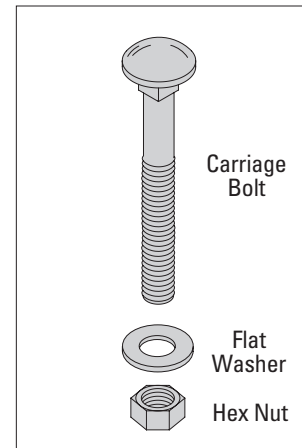
### Source Locally

(1)  $\frac{3}{8}$ " - 16 Carriage bolt \*\*

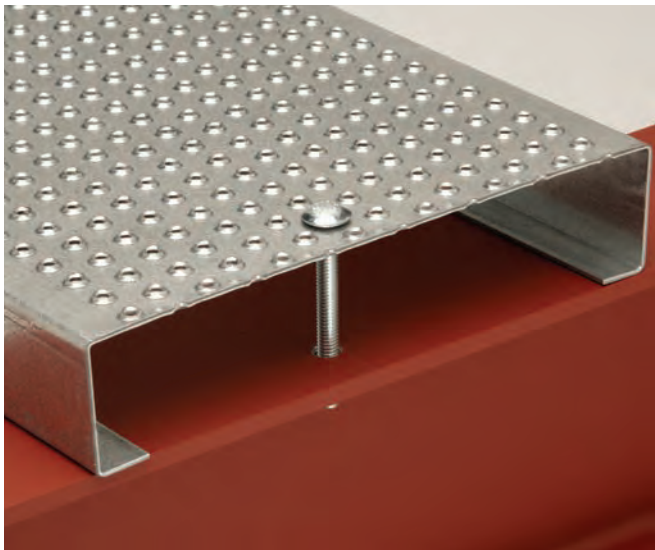
(1)  $\frac{3}{8}$ " Flat washer

(1)  $\frac{3}{8}$ " - 16 Hex nut

\*\* Plank carriage bolt lengths =  
Side Channel Height + 1"



Field drilling is required.



### Assembly

1. Align Traction Tread™ planks on I-beam or other anchoring cross-member.
2. Mark the I-beam for drilling purposes under the third or fourth hole from the end of the Traction Tread plank. Drill a pilot hole.
3. Remove Traction Tread plank and drill a finish hole.
4. Drill out the hole in Traction Tread plank.
5. Replace Traction Tread plank to its original position. Run bolt through Traction Tread plank and I-beam. Tighten with washer and nut until secure.
6. Test for movement or slippage. If Traction Tread planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 5.

**Note: Do not walk on Traction Tread planks if they are not secure. Serious injury could result.**

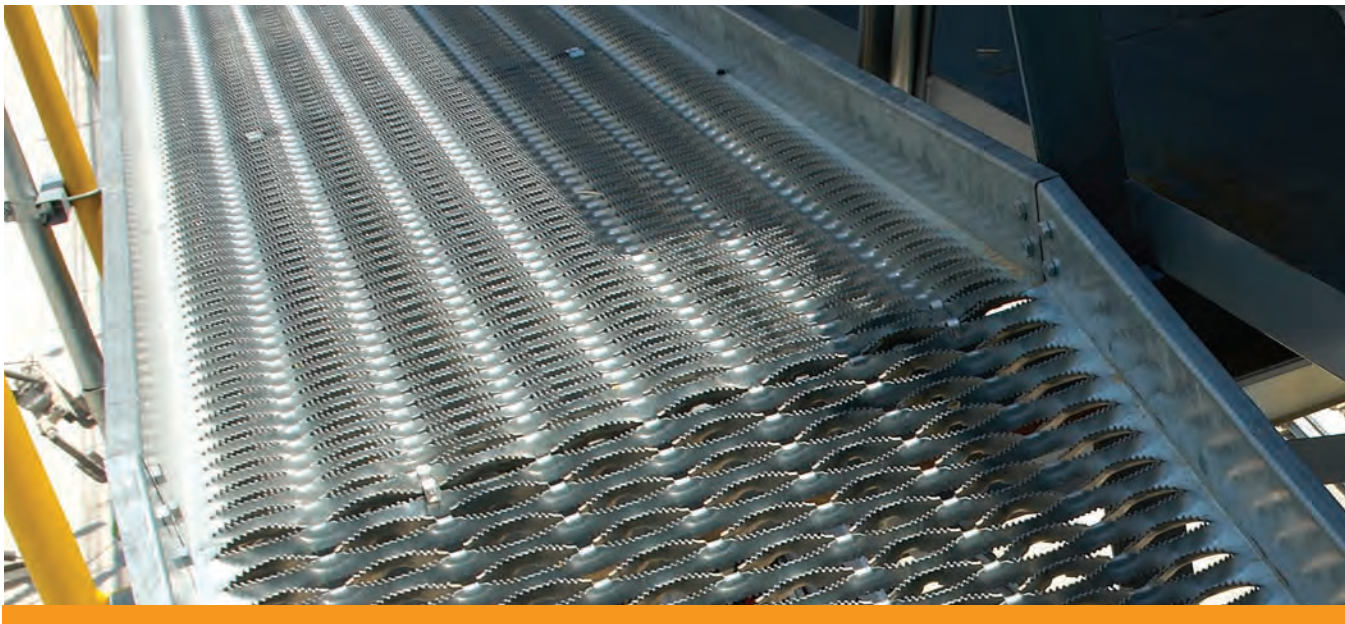


### Welding

A common method of fastening safety grating is welding. It is recommended that all B-Line series safety grating products be fillet welded.

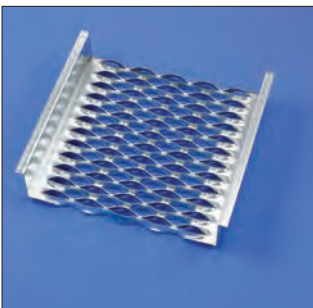
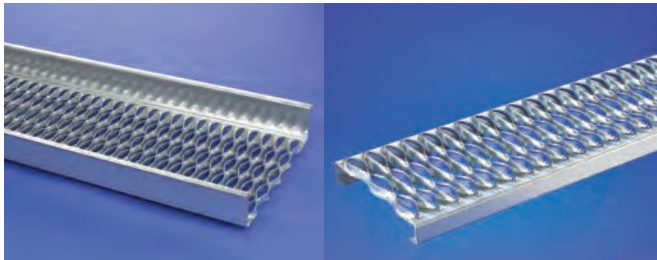
For more information, consult technical services.

## 61

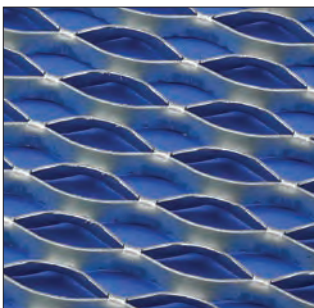


Heavy Duty Grip Strut™ Design Load Tables		
Steel		
2-Diamond planks - 9¼" width	.....	68 - 69
3-Diamond planks - 13¾" width	.....	70 - 71
5-Diamond planks - 23¼" width	.....	72 - 73
6-Diamond planks - 27¾" width	.....	74 - 75
8-Diamond planks - 36" width	.....	76 - 77

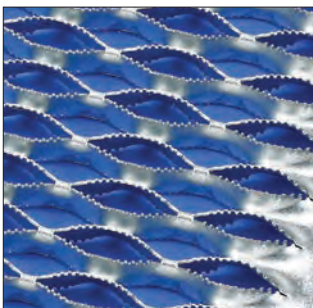
- Advantages**
- Gratings for greater loads, safer walking**
- High strength-to-weight ratio — efficient structural design means large-load capacity with low deadweight
  - Slip resisting surface — scores of tiny teeth grip shoes tightly (exceeds Federal Specification RR-G-1602D slip-resistance requirements)
  - Open design — sheds slip-causing stones, dirt and debris
  - Slip-resisting serrated or less harsh non-serrated wearing surfaces tailor long life to diverse service conditions — sheds slip-causing stones, dirt and debris
  - Complete line of products, design data, support services
  - Handrail brackets available for maximum safety and meeting OSHA requirements
  - Splice plates speed assembly without welding
  - Integral, OSHA compliant toeboards. Canadian compliant OH&S designs available in some sizes.



**Heavy Duty Grip Strut walkway**  
Helps provide safer walking surface



**Heavy Duty Grip Strut pattern**  
- No teeth -  
Labor saving alternative to bar grating lowest installed solution



**Heavy Duty Grip Strut pattern**  
- Standard with teeth -  
cleaning and self draining all-in-one



**Heavy Duty Grip Strut Walkway**  
-Reduced opening -  
Limits items from falling through openings for safety below



## Heavy Duty Grip Strut overview

Every year, falls cost industry millions of dollars in lost time and production. The safer walking-working surfaces of Heavy Duty Grip Strut™ safety grating products help reduce accidents, and in doing so, may help cut insurance costs.

The secret is in the serrated surface and open design. The open diamond pattern allows fluids, mud, chips, ice and snow to fall through. The serrated surface helps provide high friction for maximum slip protection in all directions, and under practically all conditions. The resilience of Grip Strut grating cushions the impact of walking, lessening worker fatigue and increasing efficiency.

Heavy Duty Grip Strut safety grating products offer the advantage of regular Grip Strut safety grating, but are designed for applications of greater load and/or longer span. Basic design is the same, but diamond openings are larger and metal is thicker. Heavy Duty grating products are available in many of the same configurations, materials and finishes as regular Grip Strut safety grating. Heavy Duty Grip Strut grating products include: planks, walkways and stair treads; for specification see pages 84 & 85. For specifications and information on regular Grip Strut safety gratings, see pages 28-29.

## High load capacity, long life

- High strength-to-weight performance is achieved through section depth and integral side-channel design.
- Bridged struts form a rigid, strong plank surface that carries large loads with minimum deflection.
- No rivets, fabricated joints or pressure joints to loosen or break.

## Safety at all levels

- Serrated surfaces grip soles securely in all directions.
- Non-slip sheared edges are ideal for both indoor and outdoor locations — wherever mud, ice, snow, oil and detergents can create hazardous walking conditions.

## Minimal maintenance

- Openings allow fluids, chips, stones and mud to quickly drop through. Ice easily shears off under normal foot pressure.
- Open design is easily cleaned with a brush, liquid or air spray.

## Application versatility

- Variety of standard plank widths and channel heights can be combined with numerous special-order items to meet almost any application requirement.
- Special sizes and fabricating services are available for unusual requirements.
- May be painted, hot-dip galvanized after fabrication, anodized, plated, plastic-coated or specially finished in other ways to fit service requirements.
- Finish coatings are economically applied since all surfaces are accessible to brush or spray.

## Compliance with regulatory codes / standards

- Exceeds Federal Specification RR-G-1602D requirements.
- Meets OSHA toeboard requirements for elevated structures with standard upturned, 5 inch high integral side channels.

## Low life-cycle cost

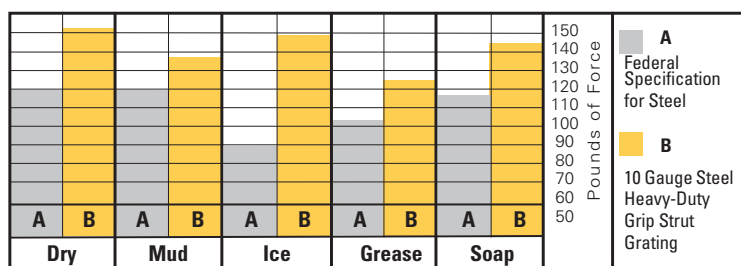
- Lower upfront material costs and long-lasting, corrosion-resisting finishes help provide long service life to all Grip Strut gratings: steel or aluminum.
- Brawny yet lightweight, these planks, walkways and stair treads permit substantial reduction in supporting structural materials.
- Self-cleaning open design is virtually maintenance-free.

## Fast, simple Installation

- Light and simply installed.
- Regular maintenance personnel can do the job.
- Sections are easily field-cut, at virtually any angle, and field-adapted; connections are rapidly made with bolts, clamps or welding.
- Disassembly, when needed, can be just as rapid.

## Tested performance – slip resistance vs. federal specification

Statistics show falls as the second highest cause of lost-time injuries in industry. Yet tests prove that falls can be reduced by the safe surface of Heavy Duty Grip Strut safety grating, planks, walkways and stair treads. And fewer accidents mean lower workmen's compensation insurance costs, to save the cost of Grip Strut safety grating many times over. Independent laboratory tests prove that Heavy Duty Grip Strut safety grating exceeds Federal Specification RR-G-1602D requirements for slip resistance. Five shoe soles were tested, in longitudinal, transverse and diagonal directions; under five conditions: dry, greasy, muddy, soapy and icy. Heavy Duty Grip Strut safety grating tested more slip-resistant than other gratings (depending upon the condition).



(1) Value of force required to move 1 175 lb. load a distance of one inch across the grating surface of two Heavy-Duty Grip Strut serrated style safety gratings (B & C) compared with the respective Federal Specification RR-G-1602D standard (A). Letter coding is as follows:

\* A — standard established for steel grating with each type of condition, by Federal Specification RR-G-1602D.

\* B — average of tests on Heavy Duty Grip Strut safety gratings of 10 gauge steel.

Values were determined by test made in longitudinal, transverse and diagonal directions on each grating with five sole materials: leather, boot rubber, shoe rubber, Neolite®† and Hypaton®†.

† Mark shown is the property of its respective owner.



# Heavy Duty Grip Strut Grating - General Load Information

## Walkways, Planks and Stair Treads

### General load information

Heavy Duty Grip Strut™ safety grating walkways and planks are available in three thicknesses of steel and one of aluminum; walkways have one standard siderail height, planks have four. In each category, walkways come in three widths, planks in five. Begin sizing, for maximum economy, with widest practical grating for the job (shallowest siderails and thinnest gauge); if this does not meet required load capacity, first consider deeper siderails, then heavier gauge, and finally narrower grating width, if necessary.

Flexural load tables have been calculated according to design load limiting criteria, and if not illustrated in this catalog they can be obtained from our technical services.

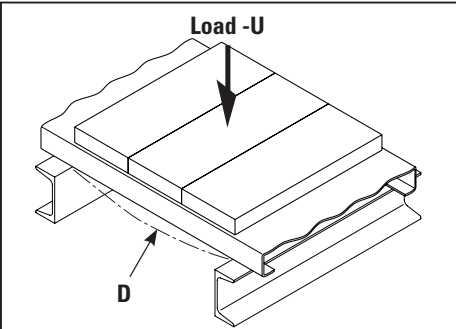
“Strut Load Tables” show flexural strength and deflection of individual grating surface struts relative to siderails. Since these are maximum values in the elastic range, lesser loads and deflections can be proportioned from them.

Design load assumptions differ according to load type: (1) uniform, (2) concentrated (see Figures 1, 2 and 3 below for explanation of load application). Concentrated load capacities generally vary with span, siderail height and material thickness, irrespective of grating width, although large differences in grating width cause concentrated loads to be distributed somewhat differently into siderails.

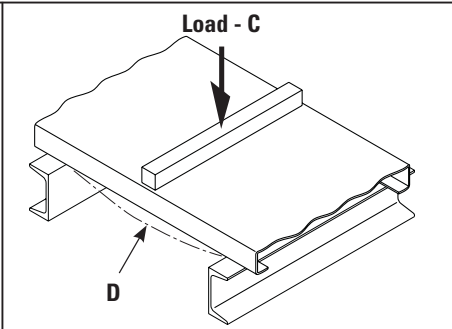
Siderail strength usually controls, but with shorter spans, deeper siderails, and/or wider grating surfaces, flexural strength of individual struts may control. In sizing walkways or planks with strength as a design criterion, be sure to check Heavy Duty Grip Strut safety grating for both: (1) strength of walkways/plank siderails, (2) strength of individual struts in grating surface. With deflection as a design criterion, loads may be limited by either: strength of individual surface struts, or total deflection of one siderail at midspan plus a surface strut at midwidth of walkway or plank (sum of siderail deflection plus strut deflection).

All load tables show maximum loads, based upon actual load tests performed at the Pinckneyville (IL) plant, and determined in accordance with AISI “Specification for the Design of Cold-Formed Steel Structural Members”, 1980 Edition, using minimum yield strength of 33 ksi for steel, 23 ksi for aluminum. Loads are designated:

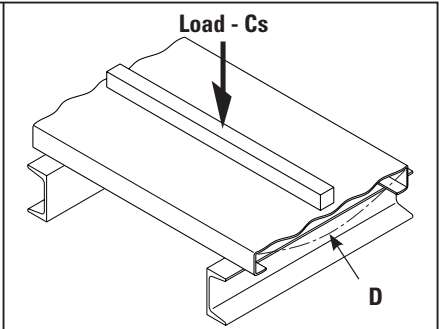
- (U) for uniform, in./ft.<sup>2</sup>
- (C) for concentrated, in./lb.
- (D) for corresponding deflections, in inches



**Figure 1**  
**Uniform load (U)**  
**applications to all walkways/planks:**  
Maximum load (lb./ft.<sup>2</sup>) permitted by flexural stress in siderail or grating strut, whichever is lower, applied to entire grating area (full-width by clear-span) between supports.  
**Deflection (D) in all walkways/planks:**  
Deflection (in.) corresponding to maximum load (U) or (C) permitted by flexural stress in siderail or grating strut, whichever is lower, applied as defined in Figures 1 or 2, and 3.



**Figure 2**  
**Concentrated load (C)**  
**applications to all walkways/planks:**  
Maximum load (lb.) permitted by flexural stress in siderail or grating strut, whichever is lower, applied transversely to total width of grating at midspan and assumed to be carried equally by both siderails.  
**Deflection (D) in all walkways/planks:**  
Deflection (in.) corresponding to maximum load (U) or (C) permitted by flexural stress in siderail or grating strut, whichever is lower, applied as defined in Figures 1 or 2, and 3.



**Figure 3**  
**Concentrated load (Cs)**  
**applications to grating surface struts of all walkways/planks:**  
Maximum load (lb./ft.) permitted by flexural stress in grating strut, applied longitudinally to a 1 foot length of grating at midwidth.  
**Deflection (Ds) in all walkways/planks**  
Deflection (in.) corresponding to maximum concentrated strut load (Cs) permitted by flexural stress in grating strut, applied longitudinally to a 1 foot length of grating at midwidth.

# Heavy Duty Grip Strut Grating - General Load Information

Walkways with Integrated Toeboards, Meeting OSHA Requirements

## Heavy Duty Grip Strut walkways\* availability

Material	Thickness	Walkway Width		
		36"	30"	24"
Steel	11 ga.**	✓	✓	✓
	10 ga.	✓	✓	✓
	9 ga.**	✓	✓	✓

\* Standard toeboard depth of 5" .

\*\* Available on special order. Consult factory.

Heavy Duty Grip Strut™ safety grating walkways, like Heavy Duty planks, offer additional strength for walkway applications with greater load requirements. Grating surface design is identical. The walkway difference is in the side channels, which are turned up as 5 inch toeboards, complying with OSHA requirements. Walkways offer all the slip-resistance and self-cleaning advantages of planks, and are available in the material and thickness combinations shown above.

Heavy Duty Grip Strut safety grating walkways are ideal for many types of applications. They are equally at home in process plants, refineries, grain elevators, conveyor walkways and large machines in paper mills. Allowable design load and deflection data are complete on pages 78 & 79.

They are combined with Grip Strut stair treads for a complete walkway design. For further information on stair treads, see page 82. The pre-formed, integral design of stair treads helps reduce the costs by saving not only material, but fabrication and detailing time as well.

Heavy Duty Grip Strut walkways incorporate 5 inch integral toeboards, complying with OSHA regulations (appropriate safety devices may also be necessary during use — consult applicable safety regulations). Canadian compliant (OH&S) designs are also available in some sizes.

Handrail brackets are available for application on Heavy Duty Grip Strut steel walkways. This is a valuable accessory for those projects where utilization of Heavy Duty Grip Strut steel walkway is desirable for its superior long spanability. And handrailing with handrail post on maximum eight foot center is required per OSHA. The handrail bracket eliminates unnecessary and costly substructure to support handrail post.

Splice plates (P-H-SP-U) are available for use with Heavy Duty Grip Strut steel walkways. Splice plates can help reduce costly material cuts and waste. The Splice Plates may be used at midspan conditions without reducing the load carrying capacity of the Heavy Duty Grip Strut walkway.



Heavy Duty  
Grip Strut Grating



# Heavy Duty Grip Strut Grating - Safe Loading Tables

Planks — versatility of 9¼" to 36" widths for single- or multi-width platforms

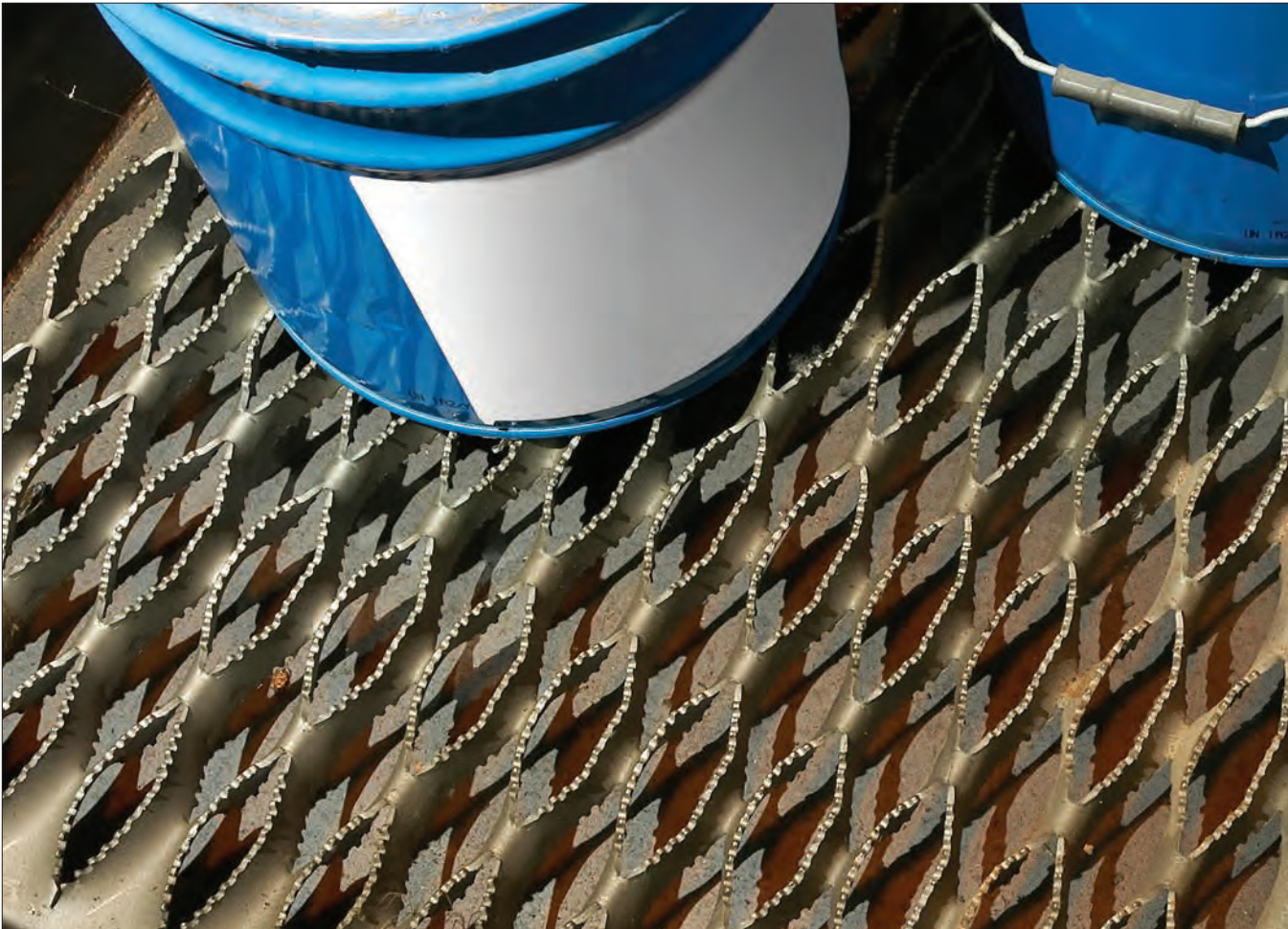
Heavy Duty Grip Strut planks\* availability

Material	Thickness	Plank Width				
		36"	27¾"	24"	13¾"	9¼"
Steel	11 ga.**	✓	✓	✓	✓	✓
	10 ga.	✓	✓	✓	✓	✓
	9 ga.**	✓	✓	✓	✓	✓

\* All in depths of 2", 2½", 3" and 4".  
\*\* Available on special order. Consult factory.

Heavy Duty Grip Strut™ safety grating planks are ideal for all types and sizes of platform applications with design load requirements beyond the capacities of regular Grip Strut safety grating (fully described in Grip Strut safety grating catalog). Four depths and five widths, each in steel and aluminum alloy 5052, provide versatility of load capacity for greatest economy, as well as adequate strength without over design. Each width and side channel depth combination is available in material and thickness combinations as shown above.

All can be used for single-plank applications, or in multi-plank combinations for large-area platforms (see Multi-plank width chart, opposite page). One combination of width/depth/metal thickness is certain to meet your requirements with exceptional economy. For special job requirements, or the fine-tuned economies required by O.E.M. applications, other materials and many special fabricating services are available (see page 82).



Heavy Duty  
Grip Strut Grating

# Heavy Duty Grip Strut Grating - Safe Loading Tables

Multi-plank width comparison

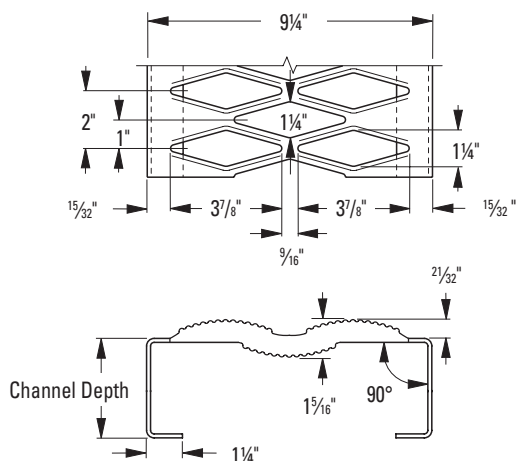
0" clearance between planks				1/8" clearance between planks			
15'				15'			
	(19) 14'-7 <sup>3</sup> / <sub>4</sub> "	(13) 14'-10 <sup>3</sup> / <sub>4</sub> "			(19) 14'-10"	(13) 15'-0 <sup>1</sup> / <sub>4</sub> "	
	(18) 13'-10 <sup>1</sup> / <sub>2</sub> "	(12) 13'-9"	(5) 15'-0"		(18) 14'-0 <sup>5</sup> / <sub>8</sub> "	(12) 13'-10 <sup>3</sup> / <sub>8</sub> "	(5) 15'-0 <sup>1</sup> / <sub>2</sub> "
	(17) 13'-1 <sup>1</sup> / <sub>4</sub> "		(6) 13'-9 <sup>3</sup> / <sub>4</sub> "		(17) 13'-3 <sup>1</sup> / <sub>4</sub> "	(6) 13'-10 <sup>3</sup> / <sub>8</sub> "	
12'	(16) 12'-4"	(11) 12'-7 <sup>1</sup> / <sub>4</sub> "		12'	(16) 12'-5 <sup>1</sup> / <sub>2</sub> "	(11) 12'-8 <sup>1</sup> / <sub>2</sub> "	
	(15) 11'-6 <sup>3</sup> / <sub>4</sub> "	(10) 11'-5 <sup>1</sup> / <sub>2</sub> "	(4) 12'-0"		(15) 11'-8 <sup>1</sup> / <sub>2</sub> "	(10) 11'-6 <sup>1</sup> / <sub>8</sub> "	(4) 12'-0 <sup>3</sup> / <sub>8</sub> "
	(14) 10'-9 <sup>1</sup> / <sub>2</sub> "		(5) 11'-6 <sup>1</sup> / <sub>8</sub> "		(14) 10'-10 <sup>1</sup> / <sub>8</sub> "	(5) 11'-6 <sup>5</sup> / <sub>8</sub> "	
	(13) 10'-0 <sup>1</sup> / <sub>4</sub> "	(9) 10'-3 <sup>3</sup> / <sub>4</sub> "			(13) 10'-1 <sup>1</sup> / <sub>4</sub> "	(9) 10'-4 <sup>3</sup> / <sub>4</sub> "	
9'	(12) 9'-3"	(8) 9'-2"	(3) 9'-0"	9'	(12) 9'-4 <sup>3</sup> / <sub>8</sub> "	(8) 9'-2 <sup>7</sup> / <sub>8</sub> "	(3) 9'-0 <sup>1</sup> / <sub>4</sub> "
	(11) 8'-5 <sup>3</sup> / <sub>4</sub> "		(4) 9'-2 <sup>1</sup> / <sub>2</sub> "		(11) 8'-7"	(4) 9'-2 <sup>7</sup> / <sub>8</sub> "	
	(10) 7'-8 <sup>1</sup> / <sub>2</sub> "	(7) 8'-0 <sup>1</sup> / <sub>4</sub> "			(10) 7'-9 <sup>5</sup> / <sub>8</sub> "	(7) 8'-1"	
	(9) 6'-11 <sup>1</sup> / <sub>4</sub> "	(6) 6'-10 <sup>1</sup> / <sub>2</sub> "			(9) 7'-0 <sup>1</sup> / <sub>4</sub> "	(6) 6'-11 <sup>1</sup> / <sub>8</sub> "	
6'	(8) 6'-2"		(3) 6'-10 <sup>1</sup> / <sub>8</sub> "	6'	(8) 6'-2 <sup>1</sup> / <sub>2</sub> "	(3) 6'-11 <sup>1</sup> / <sub>8</sub> "	(2) 6'-0 <sup>1</sup> / <sub>8</sub> "
	(7) 5'-4 <sup>3</sup> / <sub>4</sub> "	(5) 5'-8 <sup>3</sup> / <sub>4</sub> "			(7) 5'-5 <sup>1</sup> / <sub>2</sub> "	(5) 4'-9 <sup>1</sup> / <sub>4</sub> "	
	(6) 4'-7 <sup>1</sup> / <sub>2</sub> "	(4) 4'-7"	(2) 4'-7 <sup>1</sup> / <sub>4</sub> "		(6) 4'-8 <sup>1</sup> / <sub>8</sub> "	(4) 4'-7 <sup>3</sup> / <sub>8</sub> "	
	(5) 3'-10 <sup>1</sup> / <sub>4</sub> "				(5) 3'-10 <sup>1</sup> / <sub>4</sub> "	(2) 4'-7 <sup>3</sup> / <sub>8</sub> "	
3'	(4) 3'-1"	(3) 3'-5 <sup>1</sup> / <sub>4</sub> "		3'	(4) 3'-1 <sup>3</sup> / <sub>8</sub> "	(3) 3'-5 <sup>1</sup> / <sub>2</sub> "	
	(3) 2'-3 <sup>3</sup> / <sub>4</sub> "	(2) 2'-3 <sup>1</sup> / <sub>2</sub> "	(1) 3'-0"		(3) 2'-4"	(2) 2'-3 <sup>3</sup> / <sub>8</sub> "	(1) 3'-0"
	(2) 1'-6 <sup>1</sup> / <sub>2</sub> "		(1) 2'-3 <sup>5</sup> / <sub>8</sub> "		(2) 1'-6 <sup>5</sup> / <sub>8</sub> "	(1) 2'-3 <sup>5</sup> / <sub>8</sub> "	
0'	(1) 0'-9 <sup>1</sup> / <sub>4</sub> "	(1) 1'-1 <sup>3</sup> / <sub>4</sub> "		0'	(1) 0'-9 <sup>1</sup> / <sub>4</sub> "	(1) 1'-1 <sup>3</sup> / <sub>4</sub> "	
	2-Diamond	3-Diamond	6-Diamond		2-Diamond	3-Diamond	6-Diamond
			8-Diamond				8-Diamond

Heavy Duty  
Grip Strut Grating



# Heavy Duty Grip Strut Grating Plank - Safe Loading Table

2-Diamond plank — 9<sup>1</sup>/<sub>4</sub>" width — "H" series



## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	6.6 (9.8)	H-22011	U	2413	1544	1027	788	629	476	385	319	270	228	196	172	150	119	98	81	67
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2½" (63.5)	7.0 (10.4)	H-22511	U	3657	2340	1625	1194	914	722	585	483	406	347	298	259	228	182	147	122	102
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	7.5 (11.1)	H-23011	U	3892	2490	1731	1272	974	767	623	515	431	368	319	276	242	193	154	130	109
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	8.3 (12.3)	H-24011	U	6382	4084	2837	2084	1598	1261	1022	844	707	606	522	455	400	315	256	211	176
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel	2" (50.8)	7.4 (11.0)	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	.96	1.16
	2½" (63.5)	7.9 (11.7)	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	.12	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	8.4 (12.5)	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" (101.6)	10.3 (15.3)	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

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Plank - Safe Loading Table

2-Diamond plank — 9¼" width — "H" series cont.

## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	8.3 (12.3)	H-22009	U	2949	1888	1255	964	769	582	471	389	330	278	240	210	184	145	120	96	81
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1618	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
	2½" (63.5)	8.8 (13.1)	H-22509	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" (76.2)	9.3 (13.8)	H-23009	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" (101.6)	10.3 (15.3)	H-24009	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

\* Available on special order. Consult factory.

## Strut concentrated - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated Cs (lb./ft.)	
		Serrated	Non-Serrated
9¼"	11 ga. Steel	1741	1985
	10 ga. Steel	2004	2283
	9 ga. Steel	2281	2594
	Deflection (in.)	0.01	0.01

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

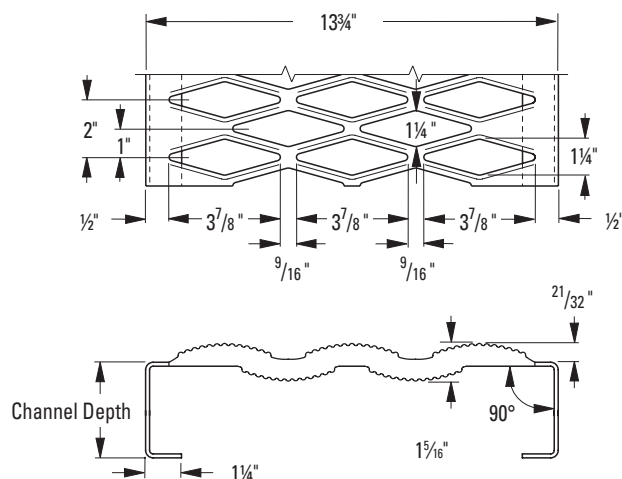
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
9¼"	11 ga. Steel	4516	5153
	10 ga. Steel	5201	5925
	9 ga. Steel	5917	6731
	Deflection (in.)	0.01	0.01

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

# Heavy Duty Grip Strut Grating Plank- Safe Loading Table

3-Diamond plank — 13¾" width — "H" series



## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	8.5 (12.6)	H-32011	U	1624	1039	721	530	405	320	259	214	182	153	132	115	102	80	66	54	45
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2½" (63.5)	8.9 (13.2)	H-32511	U	2460	1615	1093	804	615	485	393	325	274	233	201	175	153	122	99	83	68
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	9.3 (13.8)	H-33011	U	2618	1676	1164	855	655	516	419	347	290	248	214	186	163	130	104	87	73
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	10.1 (15.0)	H-34011	U	4293	2748	1909	1402	1075	849	689	568	476	408	351	306	268	212	172	141	118
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel	2" (50.8)	9.5 (14.1)	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
	2½" (63.5)	10.0 (14.9)	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" (76.2)	10.5 (15.6)	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	.xx
	4" (101.6)	11.4 (16.9)	H-34010	U	4770	3053	2121	1558	1194	943	765	631	529	453	390	340	298	236	191	157	13x
				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	.46	.53	.63

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Plank - Safe Loading Table

3-Diamond plank — 13¾" width — "H" series cont.

## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	10.6 (15.8)	H-32009	U	1984	1269	881	648	495	392	317	262	222	187	162	141	124	98	80	66	55
				D	.05	.06	.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
	2½" (63.5)	11.1 (16.5)	H-32509	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" (76.2)	11.6 (17.2)	H-33009	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" (101.6)	12.7 (18.9)	H-34009	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 on special order. Consult factory.

## Strut concentrated- loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
13¾"	11 ga. Steel	1171	1336
	10 ga. Steel	1348	1536
	9 ga. Steel	1534	1745
	Deflection (in.)	0.02	0.02

C<sub>s</sub> = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
13¾"	11 ga. Steel	2044	2322
	10 ga. Steel	2354	2681
	9 ga. Steel	2678	3046
	Deflection (in.)	0.03	0.03

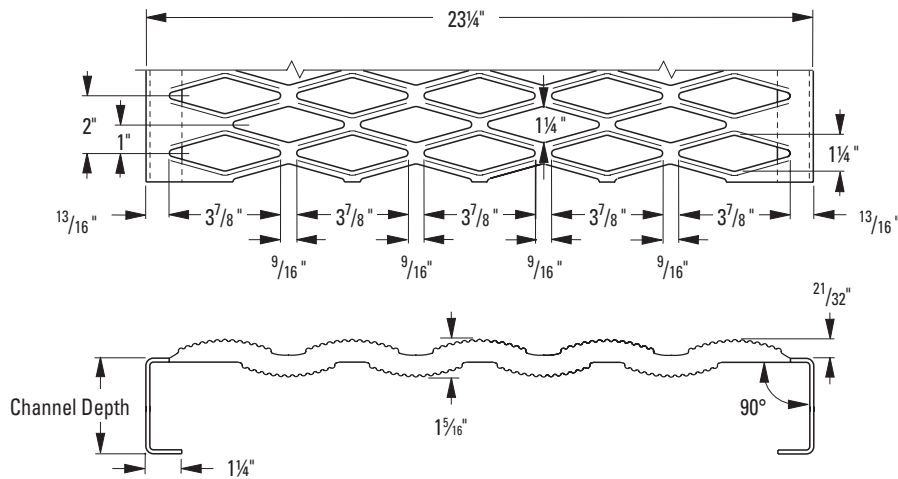
U = Allowable uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.



# Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

5-Diamond plank — 23¼" width — "H" series



## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	12.7 (18.9)	H-52011	U	930	595	413	304	232	184	149	123	104	88	76	66	58	46	38	31	26
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2½" (63.5)	13.1 (19.5)	H-52511	U	1409	925	626	460	352	278	225	186	157	134	115	100	88	70	57	47	39
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.06
	3" (76.2)	13.6 (20.2)	H-53011	U	1547	989	687	504	387	305	247	204	170	146	125	110	96	76	60	51	42
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	14.4 (21.4)	H-54011	U	2538	1624	1129	828	635	502	406	334	280	240	207	181	158	125	101	84	70
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel	2" (50.8)	14.4 (21.4)	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
	2½" (63.5)	14.8 (22.0)	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" (76.2)	15.4 (22.9)	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	.11	.12	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	16.4 (24.4)	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	.76
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.05	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

5-Diamond plank — 23¼" width — "H" series cont.

## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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* 9 ga.	2" (38.1)	16.1 (23.9)	H-52009	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
	2½" (63.5)	16.7 (24.8)	H-52509	U	1778	1137	790	581	444	359	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" (76.2)	17.2 (25.6)	H-53009	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" (101.6)	18.3 (27.2)	H-54009	U	3103	1985	1380	1013	775	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

\* Available on special order. Consult factory.

## Strut concentrated - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C. (lb./ft.)	
		Serrated	Non-Serrated
23¼"	11 ga. Steel	823	939
	10 ga. Steel	941	1072
	9 ga. Steel	1059	1205
	Deflection (in.)	0.08	0.07

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

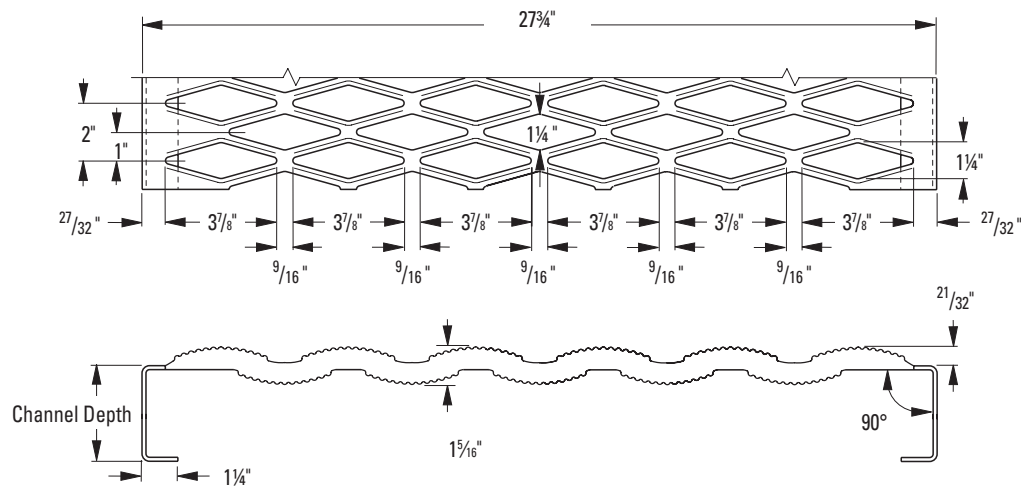
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
23¼"	11 ga. Steel	850	969
	10 ga. Steel	971	1106
	9 ga. Steel	1093	1244
	Deflection (in.)	0.10	0.09

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

6-Diamond plank — 27¾" width — "H" series



Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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" (38.1)	14.3 (21.3)	H-62011	U	830	530	368	271	206	163	132	108	93	78	67	59	51	40	34	27	22
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2½" (63.5)	14.7 (21.9)	H-62511	U	1258	805	559	410	313	247	201	166	139	119	102	88	78	61	49	42	35
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	15.2 (22.6)	H-63011	U	1338	855	594	436	335	264	214	176	147	126	108	95	83	66	52	44	36
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	687	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	16.0 (23.8)	H-64011	U	2234	1405	976	716	549	434	351	289	242	208	179	157	137	106	87	73	61
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel 10 ga.	2" (50.8)	16.2 (24.1)	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
	2½" (63.5)	16.7 (24.8)	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" (76.2)	17.2 (25.6)	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" (101.6)	18.2 (27.1)	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

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

6-Diamond plank — 27¾" width — "H" series cont.

## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*  9 ga.	2" (38.1)	18.2 (27.1)	H-62009	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
	2½" (63.5)	18.7 (27.8)	H-62509	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" (76.2)	19.3 (28.7)	H-63009	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" (101.6)	19.8 (29.4)	H-64009	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	1505	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

\* Available on special order. Consult factory.

## Strut concentrated - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
23¾"	11 ga. Steel	690	793
	10 ga. Steel	788	906
	9 ga. Steel	887	1019
	Deflection (in.)	0.11	0.10

C<sub>s</sub> = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
23¾"	11 ga. Steel	597	686
	10 ga. Steel	682	784
	9 ga. Steel	767	882
	Deflection (in.)	0.14	0.13

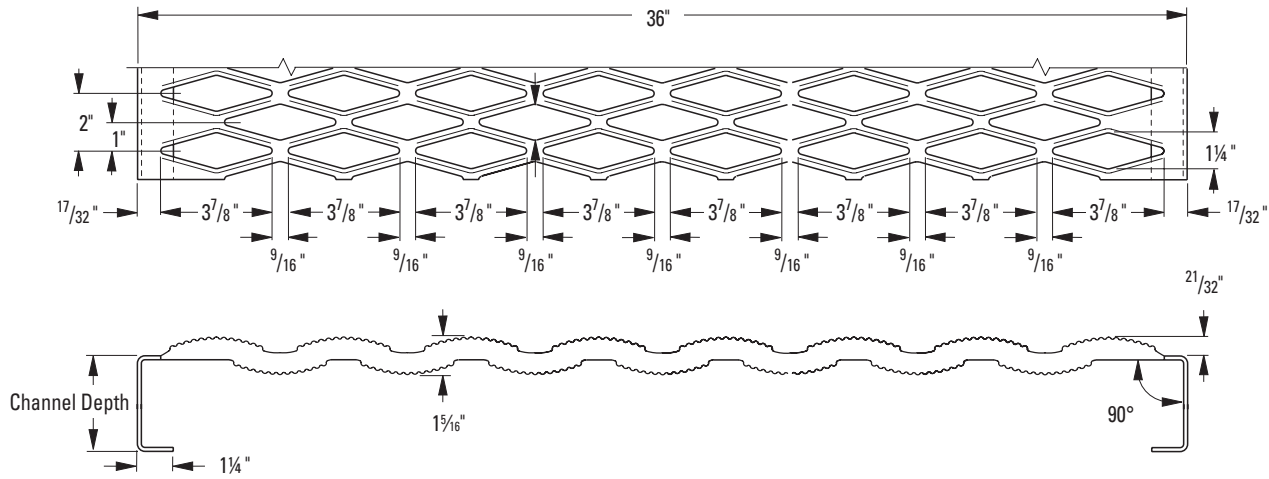
U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.



# Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

## 8-Diamond plank — 36" width — "H" series



### Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*	2" (38.1)	18.0 (26.8)	H-82011	U	620	397	275	203	155	122	99	82	69	59	50	44	39	31	25	21	17
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2½" (63.5)	18.4 (27.4)	H-82511	U	950	601	418	307	235	185	150	124	104	89	77	67	59	47	38	32	26
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	18.9 (28.1)	H-83011	U	1000	640	445	327	250	197	160	132	111	95	82	71	62	50	40	33	28
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	19.7 (29.3)	H-84011	U	1640	1049	729	536	410	324	263	217	182	156	134	117	103	81	66	54	45
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63
Steel	2" (50.8)	19.9 (29.6)	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
	2½" (63.5)	20.4 (30.3)	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" (76.2)	20.9 (31.1)	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" (101.6)	21.8 (32.4)	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

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Plank - Safe Loading Tables

8-Diamond plank — 36" width — "H" series cont.

## Plank selection & design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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*  9 ga.	2" (38.1)	22.1 (32.9)	H-82009	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
	2½" (63.5)	22.7 (33.8)	H-82509	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" (76.2)	23.9 (35.5)	H-83009	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" (101.6)	24.2 (36.0)	H-84009	U	2004	1283	891	655	502	396	321	265	222	190	164	143	125	99	80	66	56
				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 on special order. Consult factory.

## Strut concentrated - loads/deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
36"	11 ga. Steel	447	510
	10 ga. Steel	515	587
	9 ga. Steel	586	667
	Deflection (in.)	0.16	0.15

C<sub>s</sub> = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

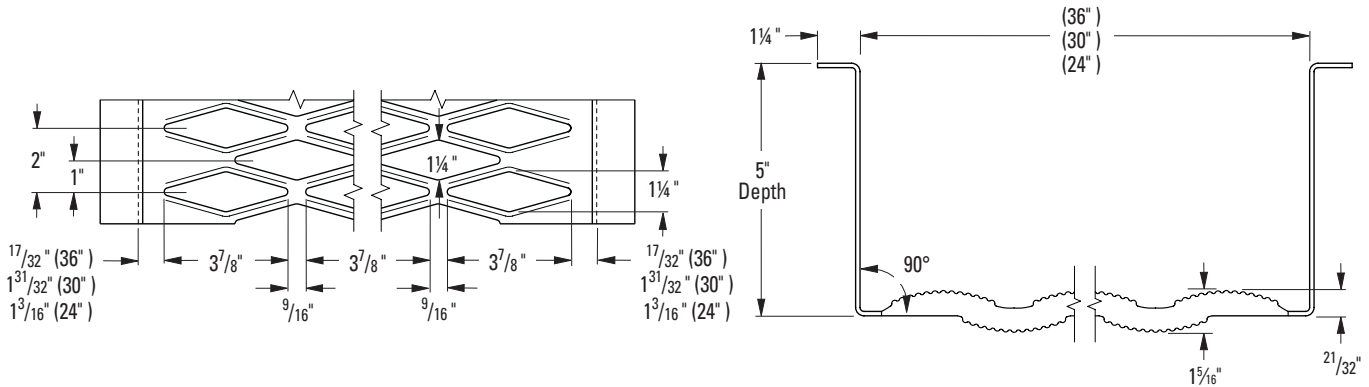
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
36"	11 ga. Steel	298	340
	10 ga. Steel	343	391
	9 ga. Steel	391	444
	Deflection (in.)	0.20	0.19

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

# Heavy Duty Grip Strut Grating Walkway - Safe Loading Tables

5-Diamond walkway — 24" width — 5" deep — "H" series  
 6-Diamond walkway — 30" width — 5" deep — "H" series  
 8-Diamond walkway — 36" width — 5" deep — "H" series



## Steel walkway selection design loads/deflections

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Load/Defl. Code	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" 5-Dia	11 ga.*	15.4 (22.9)	H-55011-W	U	750	480	334	245	187	148	120	99	83	71	62	54	47	37	30	25	21
				D	.34	.35	.38	.34	.34	.35	.42	.50	.59	.69	.79	.91	1.13	1.43	1.70	2.03	
				C	3000	2400	2000	1714	1500	1334	1200	1091	1000	922	857	800	750	666	600	546	500
				D	.27	.28	.31	.28	.28	.27	.28	.34	.41	.48	.56	.63	.72	.91	1.13	1.36	1.62
	10 ga.	17.5 (26.0)	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	.36	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
	9 ga.*	19.6 (29.1)	H-55009-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	.36	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
30" 6-Dia	11 ga.*	17.7 (26.3)	H-65011-W	U	732	468	325	239	183	145	116	96	81	69	60	52	45	36	28	24	20
				D	.33	.39	.36	.36	.41	.38	.37	.37	.44	.51	.59	.68	.77	.98	1.20	1.46	1.73
				C	3667	2932	2444	2095	1832	1629	1467	1333	1222	1128	1047	977	916	815	732	667	610
				D	.27	.31	.29	.29	.33	.31	.30	.30	.35	.41	.48	.55	.62	.78	.97	1.17	1.40
	10 ga.	19.9 (29.6)	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 ga.*	22.1 (32.9)	H-65009-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	2530	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" 8-Dia	11 ga.*	20.2 (30.0)	H-85011-W	U	444	284	197	144	111	88	71	58	49	42	36	31	28	21	17	14	12
				D	.35	.35	.30	.29	.30	.32	.35	.38	.46	.54	.62	.71	.82	1.04	1.26	1.50	1.78
				C	2664	2133	1777	1524	1333	1184	1066	969	888	820	761	711	666	592	533	484	444
				D	.28	.28	.23	.23	.23	.26	.28	.31	.37	.43	.50	.58	.65	.83	1.02	1.23	1.47
	10 ga.	22.7 (33.8)	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	.46	.55	.64	.72	.92	1.13	1.37	1.63
	9 ga.*	25.3 (37.6)	H-85009-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	.46	.55	.64	.72	.92	1.13	1.37	1.63

\* Available on special order. Consult factory.

# Heavy Duty Grip Strut Grating Walkway - Safe Loading Tables

5-Diamond walkway — 24" width — 5" deep — "H" series  
 6-Diamond walkway — 30" width — 5" deep — "H" series  
 8-Diamond walkway — 36" width — 5" deep — "H" series

## Strut concentrated - loads/deflections<sup>(2)</sup>

Walkway Width	Thickness - Material	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
24"	11 ga. - Steel	798	917
	10 ga. - Steel	912	1048
	9 ga. - Steel	1026	1179
	Deflection (in.)	0.08	0.07
30"	11 ga. - Steel	537	612
	10 ga. - Steel	618	704
	9 ga. - Steel	703	800
	Deflection (in.)	0.11	0.10
36"	11 ga. - Steel	447	510
	10 ga. - Steel	515	587
	9 ga. - Steel	586	667
	Deflection (in.)	0.16	0.15

C<sub>s</sub> = Allowable concentrated load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.

## Strut uniform - loads/deflections<sup>(2)</sup>

Walkway Width	Thickness - Material	Uniform U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
24"	11 ga. - Steel	798	917
	10 ga. - Steel	912	1048
	9 ga. - Steel	1026	1179
	Deflection (in.)	0.11	0.10
30"	11 ga. - Steel	429	490
	10 ga. - Steel	494	563
	9 ga. - Steel	563	640
	Deflection (in.)	0.14	0.13
36"	11 ga. - Steel	298	340
	10 ga. - Steel	343	391
	9 ga. - Steel	391	444
	Deflection (in.)	0.20	0.19

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 64, for explanation of design load deflection conditions.



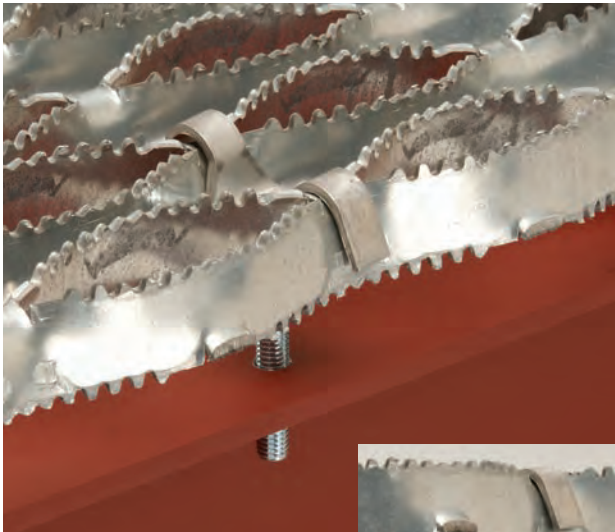
Heavy Duty Grip Strut Grating



# Heavy Duty Grip Strut - Accessories

## Heavy Duty Grip Strut Hold-Down Clip

- Catalog number **H-BC-10** (G-90 Mill Galvanized)
- Use with 3/8" square-shank carriage bolts, nuts and washers obtained locally.
- Also available in stainless steel.



Heavy Duty Grip strut Hold-Down Clip		
UPC Number	Catalog Number	Wt./Ea.
66251626561	H-BC-10	.12

## Walkway Splice Plate

- Catalog number **P-H-SP-U**.
- Formed from 9 gauge mill-galvanized steel, prepunched and supplied with 1/2" hex bolts, nuts and washers.
- Torque to 40 ft.-lbs.

Walkway Splice Plate Kit		
UPC Number	Catalog Number	Wt./Ea.
6625160771	P-H-SP-U	27.94



## Handrail Brackets

- Available for application on Heavy Duty Grip Strut™ steel walkways.
- Valuable accessory for those projects where utilization of Heavy Duty Grip Strut steel walkway is desired for its superior long spanability.
- Handrailing with handrail post on maximum eight foot center is required per OSHA.
- Eliminate unnecessary and costly substructure to support handrail post.
- Tested as a proper moment connection for handrail post to standards as outlined in "OSHA" 1910.23.

Handrail Brackets come in two styles; Universal Type and Clip Angle Type, and can be ordered by the following catalog system;

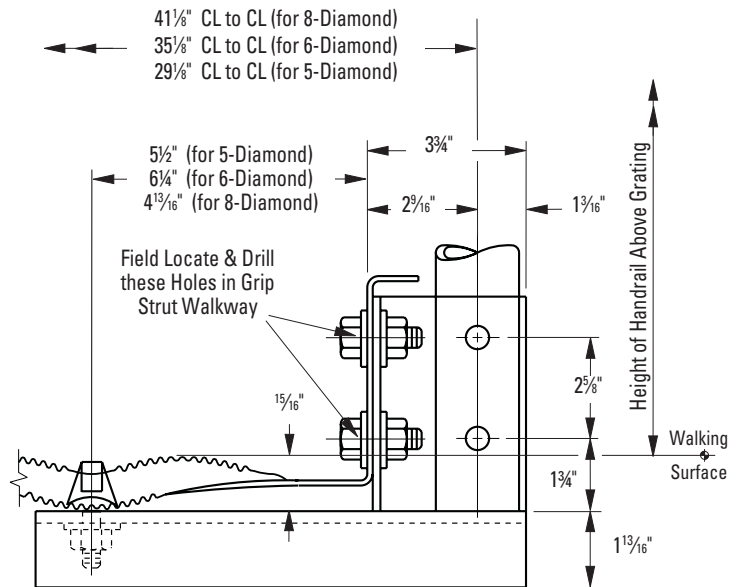


## How to order

HRB-Hand Rail Bracket  
5, 6, or 8 Diamond  
**HRB-A-5**  
A (Clip Angle Type)  
or  
UNIV\_HRB\_P (Universal Type)

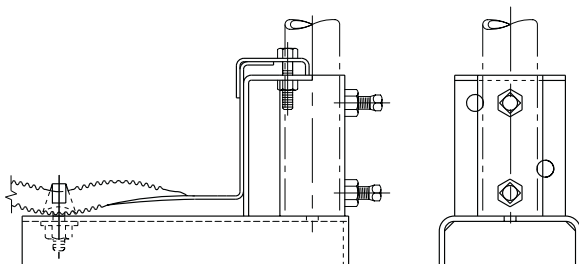
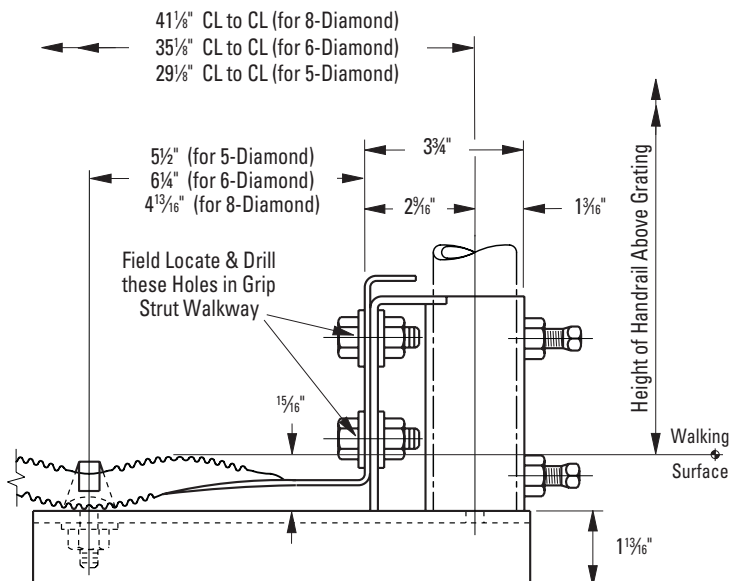
## Clip Angle/Handrail Bracket (HRB-A-\_)

- 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.
- 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.



## Universal Handrail Bracket (UNIV\_HRB\_P)

- Designed for use with pipe style handrail post (maximum 2" O.D.) which allows for simple installation of handrail post.
- Secure post by tightening two allen head set screws.
- Bracket sold in plain non-finish 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.



Universal Handrail Bracket permits attachment without drilling

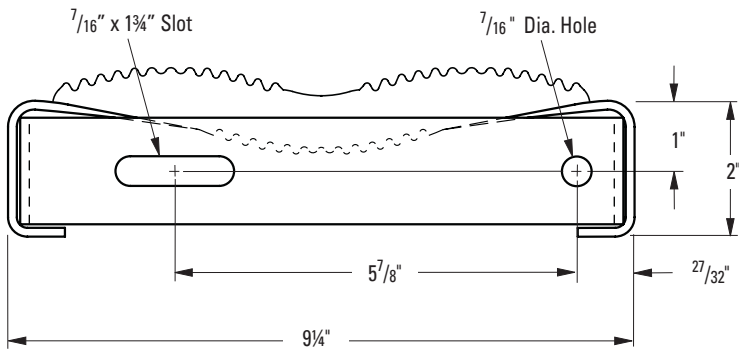
# Heavy Duty Grip Strut Grating - Stair Treads

## A step ahead with safety, two ways

No-where is sole-gripping design more critical than on stairs, where feet are more prone to slip, often with severe consequences. Heavy Duty Grip Strut™ stair treads provide the sole-gripping qualities of Grip Strut safety grating for extra safety in two ways: multi-directional scraping action of tiny-toothed surfaces keeps shoes clean; open design rids surface of debris. The open area also makes threads easy to see, and edges read well from above.

Heavy Duty Grip Strut stair treads are available in standard style only, 10-gauge steel: one depth (2"), two widths (91/4", 133/4"), and four standard spans (24", 30", 36", 48"), with others available upon request. They are ideal for new construction, or easily attached to stringers for rehabilitation of existing stairs.

### Heavy-Duty Grip Strut — 2-Diamond stair tread construction



### Stair tread selection & design loads <sup>(1)</sup>

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)

Material	Thickness	Depth in.	Weight lb./lin. ft. (kg/m)	Catalog Number	Load Type	Clear Span			
						2'-0"	2'-6"	3'-0"	4'-0" <sup>(2)</sup>
Steel	10 ga.	2"	7.4 (11.0)	HT22010	U	2412	1544	1026	629
					C	1860	1487	1240	929

(1) See "General load information", page 64, for explanation of design load deflection conditions.

(2) For stair treads, intermediate stringer is recommended for spans over 4 feet.

### Fabricating services

We can quote large jobs, including detailing and fabricating of special material, according to your project specifications. Submit plans and specifications through your Grip Strut safety grating distributor.

After your order is received, a bill of materials and shop drawings will be prepared for your approval before fabrication is begun. A few of the fabricating services available include:

- Special cutting
- Marking according to layout
- Banding
- Toe plates



# Heavy Duty Grip Strut Grating - How to Build a Part Number

Heavy Duty Grip Strut™ safety grating planks, walkways and stair treads are available through any local Grip Strut safety grating distributors in all major market areas. For the finest in Safety Grating and Stair Treads, contact your local distributor or us. You will get skilled consulting service on your specific requirements.

All standard products are coded with a catalog number which should be used in ordering. For identification and ordering information on special products, consult your Grip Strut safety grating distributor or contact us.

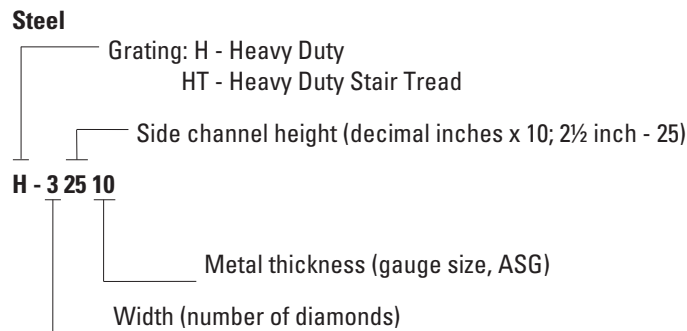
## How to build a part number:

### Plank and walkway catalog numbers

denote product configuration as follows:

#### Steel —

Standard material is mill-galvanized per ASTM A525. For plain, unpainted steel, "BL" follows the five-digit catalog number coded below.



#### Examples:

Catalog Number H-82010-GL denotes a mill-galvanized, 10 gauge steel plank of 8-diamond (36") width and 2" high side channels;

Catalog Number H-65009-WBL denotes a plain, unpainted, 9 gauge steel walkway of 6-diamond (30") width and 5" high side channels.

Catalog Number H-65010-WBL denotes a plain, unpainted, 10 gauge steel walkway of 6-diamond (30") width and 5" high side channels.

### Stair Tread catalog numbers —

Use the above coding preceded by "HT" to denote stair tread.

#### Example:

Catalog Number HT-22010-B denotes a stair tread of plain, unpainted, 10 gauge steel, 2-diamond (9¼" ) width and 2" high deep side channels.

Optional "W" = walkway.



## Notes to architect

1. These specifications are presented as a general guide to the architect or structural engineer in preparing project specifications. Allowable loads, spans, and other limiting conditions presented in this catalog are product data for use in design and construction. These products must not be used without prior structural design by a qualified engineer or architect.
2. Grip Strut safety gratings are intended for general purpose use in plants and process facilities by industry, commerce, and public utilities.  
  
Grip Strut safety grating stair treads are intended for utility stairs and fire escapes in commercial, industrial buildings where local code permits. They are not intended for staircases and other areas used regularly by the general public where flat closed surfaces are desired.
3. All supports should be  $1\frac{1}{2}$ " minimum bearing surface free of burrs, bridging, welds and other irregularities. (**Note:** When using Butterfly Anchor Clips "H-BC-10" it is advisable to provide a minimum of 3" for bearing per support per grating).
4. Random-, diagonal- or circular-cut exposed edges should be reinforced with a bar of grating thickness (minimum  $\frac{1}{8}$ " ) and width equal to overall grating depth, welded at contact points of the designer's discretion.
5. Bolted connections, except stair or ladder tread attachment to stringers, may be replaced by welded connections of equal or greater strength.

## Part 1: General

### 1.1 Scope

The contractor shall furnish and install Grip Strut grating and stair treads, as specified, in all areas where shown on the drawings.

### 1.2 Qualifications

All Grip Strut grating, stair tread and accessories, unless otherwise indicated, shall be manufactured by Eaton, and shall be installed in accordance with its current recommendations.

### 1.3 Submittals

The contractor shall furnish shop drawings of grating layout, framing and supports, unit dimensions and sections, fastener and weld types and locations.

### 1.4 Storage and Handling

All materials shall be stored and handled to avoid damage. Damaged or deteriorated materials shall be removed from the premises.

## Part 2: Products

### 2.1 Gratings

- a. **Type:** Heavy Duty Grip Strut™ safety grating (plank) (walkway).
- b. **Metal:** (carbon steel).
- c. **Finish:** mill-galvanized before fabrication, ASTM A653 G-90 plain, unpainted, and oiled (HRP&O).
- d. **Metal gauge:** 11-ga., 10-ga., 9-ga. (ASG steel).
- e. **Section width:** 9 $\frac{1}{4}$ ", 13 $\frac{3}{4}$ ", 23 $\frac{1}{4}$ ", 27 $\frac{3}{4}$ ", 36" (plank); 24", 30", 36" (walkway).
- f. **Side channel height:** 2", 2 $\frac{1}{2}$ ", 3", 4" (plank); 5" (walkway), also Canadian OH & S compliant.
- g. **Standard lengths:** 10'-0" , 12'-0" , 24'-0" (walkway); 10'-0", 12'-0" , special order (plank).
- h. **Opening diamond:** "H" series, 3 $\frac{7}{8}$ " x 1 $\frac{1}{4}$ " wide (grating surface-projected dimensions).
- i. **Reticulated pattern:** 1 $\frac{5}{16}$ " high, minimum of 500 teeth per square foot.
- j. **Slip resistance:** Complies with Federal Specification RR-G-1602D standards.
- k. **Surface texture:** Standard serrated, non-serrated, and reduced opening.

## 2.2 Stair Treads

- a. **Type:** Heavy Duty Grip Strut™ stair tread.
- b. **Metal:** carbon steel - ASTM A653 G-90.
- c. **Finish:** mill-galvanized before fabrication, ASTM A525 plain, unpainted, and oiled (HRP&O).
- d. **Metal thickness:** 10-ga. (ASG, steel).
- e. **Section width:** 9½" .
- f. **Side channel height:** 2" .
- g. **Standard lengths:** (2", 2½", 36", 4" (nominal and actual).
- h. **Opening diamond:** "H" Series, 3⅞" x 1¼" wide (grating surface-projected dimensions).
- i. **Open area:** 52%.
- j. **Reticulated pattern:** 1⅝" high, minimum of 500 teeth per square foot.
- k. **Slip resistance:** Complies with Federal Specification RR-G-1602D standards.

## 2.3 Accessories

Heavy Duty Grip Strut hold-down clip, G-90 mill galvanized, Catalog number H-BC-10. (Use with ⅜" square-shank carriage bolts, nuts, and washers obtained locally). Also available in stainless steel.

Handrail bracket - hardware to attach bracket to walkway is supplied. Optional hot dipped galvanized after fabrication is available per request.

Heavy Duty Grip Strut splice plate (P-H-SP-U), 30" , 9 gauge mill-galvanized steel splice plate with bolts, hex nuts, and washers.

## Part 3: Execution

### 3.1 Bearing surfaces

Prior to grating installation, inspect supports for correct size, layout and alignment, and verify that bearing surfaces are smooth and free of debris. Report in writing to the engineer or owner's agent and defects so they can be corrected before grating is installed.

### 3.2 Grating installation

Install grating in accordance with manufacturer's recommendations and shop drawings. Position grating sections flat and square with ends bearing min. 1½" on supporting structure; for sections over 12'-0" long, and when Heavy Duty Grip Strut hold-down clips are used, 3" minimum bearing surface is required. Bearing surface must be smooth, level, free of burrs, bridging, welds and other irregularities. Space grating sections a minimum ¼" from vertical steel sections, and ½" from concrete walls. Allow maximum clearance between sections at joints of ¼" at side channels, ⅜" at ends.

Band random-cut ends and diagonal or circular cut exposed edges with a bar of grating thickness (min. ⅛") and width equal to overall depth, welded at contact points of the designer's discretion.

### 3.3 Grating attachment

Attach grating to supports without warp or deflection as follows:

- a. **Single plank application:** Secure plank ends to supporting members at every point of contact. At each end, use Heavy Duty Grip Strut hold-down clips with ⅜" square shank carriage bolts and nuts, or secure each side channel to support by ⅝" x 1" long fillet welds.
- b. **Multiple plank application:** Secure perimeter plank to supporting members with ⅝" x 1" long fillet welds at every point of contact, intermediate grating sections with at least one attachment each end on alternate sides. When span exceeds 6'-0", attach side channels of adjacent planks together at mid-point of span for added rigidity. To joint adjacent planks together, weld them at 24" O.C. staggered top and bottom.

### 3.4 Stair Tread Installation

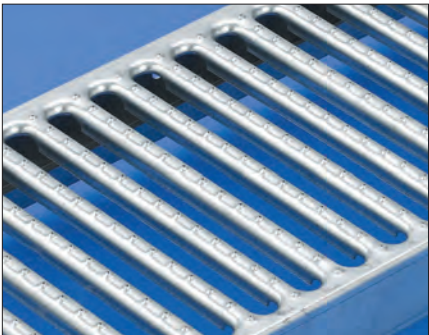
Fasten Grip Strut stair treads shown on the drawings, or as herein specified, to stair stringers with ⅜" x 1" machine bolts and nuts.

- a. **For stair treads,** intermediate stringer is recommended for spans over 4 feet.



Grate-Lock™ Safe Loading Tables (6", 9", & 12" Widths)	
1½" Channel Height .....	90-91
2½" Channel Height .....	92-93
3" Channel Height .....	94-95
4" Channel Height .....	96-97
Accessories & Assembly	
Hold Down Clamp .....	98
Hold Down Clip .....	99
Anchor J-Bolts .....	100
Kickplate .....	101
Solid Deck Planking .....	102-103

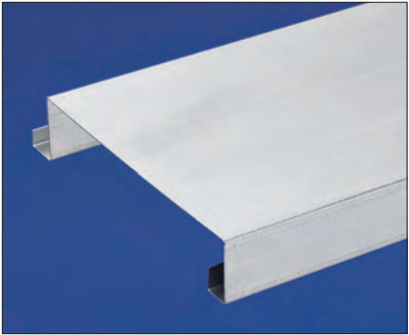
- Advantages**
- Cost-saving design
  - Wide range of sizes, accessories
  - Fast field assembly
  - Traction grip and plain surfaces
  - Choice of two standard gauges: 14 and 18. Special 16 gauge is available
  - Solid Deck is a durable, solid surface
  - Low-cost installation and low maintenance
  - Easy to replace
  - Pre-galvanized with a variety of uses



With sole-gripping dimples



Without dimples



Solid deck planking



# Grate-Lock Safety Grating - Proof of Performance & Recommendations

## Grate-Lock overview

Grate-Lock™ grating is an easy-to-install system of interlocking grating planks, treads, and accessories that helps provide 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 and non-textured for wheeled traffic or rack decking.

## Design helps improve loading performance

The unique design of Grate-Lock grating provides more design options. Increased load performance (see charts pages 6-13) has been achieved through interlocking planks, stronger rung design and an expanded selection of leg heights and material gauges. Grate-Lock lets you specify lighter gauge steel for substantial material savings.

## Sizes and gauges

Grate-Lock grating provides one of the broadest line of grating products of any manufacturer.

- Three (3) plank width options
- Four (4) plank height options
- Three (3) gauge options
- Lengths up to 24 feet
- For stair treads, intermediate stringer is recommended for spans over 4 feet

Interlocking sections provide the strength you need for extra-wide designs.



## Full line of accessories

Our line includes kickplates, hold-down clamps, attachment hardware and stair treads for complete job design.

## Fast bolt-together assembly

Helps 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.

## Specify Grate-Lock grating with confidence

We have constructed our tables using the most stringent interpretation of the AISI standards. Our safe allowable loads help guard against harmful local distortion as well as failure, while other manufacturers have prepared allowable load tables guarding against failure only.



## Recommended design practices

1. These specifications are presented as a general guide to the architect or structural engineer in preparing project specifications. Allowable loads, spans and other limiting conditions presented in this catalog offer product data for use in design and construction. These products must not be used without prior structural evaluation by a qualified engineer or architect.
2. All supports should provide a smooth, level, 1½" minimum bearing surface (2½" when using hold-down clip), free of burrs, bridging, welds or other irregularities.
3. 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.
4. Bolted connections, except stair or ladder tread attachment to stringer channels, may be replaced by welded connections that develop the same strength.
5. Interlocking panels must be bolted or welded together when kickplates are used.
6. For stair treads, intermediate stringer is recommended for spans over 4 feet.



## Part 1: General

- 1.1 Scope** - The contractor shall furnish and install Grate-Lock™ Mezzanine Gratings as specified in all areas where shown in the drawings and as specified herein.
- 1.2 Qualifications** - All B-Line series Grate-Lock gratings and accessories, unless otherwise indicated, shall be manufactured by Eaton, and shall be installed in accordance with its current printed directions.
- 1.3 Submittals** - The contractor shall furnish shop drawings of grating layout, framing and supports, unit dimensions and sections, type and location of fasteners and welds.
- 1.4 Storage and Handling** - All materials shall be stored and handled to avoid damage. Damaged or deteriorated materials shall be removed from the premises.

## Part 2: Products

### 2.1 Grating Materials

- a. **Type:** Grate-Lock grating
- b. **Metal:** (carbon steel) (hot dipped, mill-galvanized steel)
- c. **Finish:** (mill-galvanized before fabrication, ASTM A653)
- d. **Metal gauge:** (14-ga. steel) (16-ga./ steel special order), (18-ga. steel)
- e. **Section width:** (12") (9") (6") (3"-4"-supplied FM flange only)
- f. **Channel height:** (11/2") (21/2") (3") (4")
- g. **Standard lengths:** 12', 20', 24' (other lengths to order)
- h. **Flange options:** (FM) (MM) (FF)
- i. **Surface condition:** (MG - traction grip) (MS - smooth)

## Part 3: Execution

- 3.1 Condition of Surfaces** - Prior to grating installation, contractor shall inspect supports for correct size, layout and alignment and verify that surfaces to relieve grating are free of debris. The contractor shall report to the design or consulting engineer or owner's agent in writing any defects considered detrimental to proper application or grating so defects can be remedied before grating is applied.
- 3.2 Grating Installation** - Install grating in accordance with manufacturer's recommendations and shop drawings. Position grating sections flat and square with ends bearing min. 1½" on supporting structure. Keep grating sections at least ¼" away from vertical steel sections and ½" from concrete walls. Allow clearance at joints between sections of max. ¼" at side channels and max. ⅜" at ends. Band random cut ends and diagonal or circular cut exposed edges with a min. ⅛" thick bar welded at contact points.
- 3.3 Grating Attachment** - Attach grating to supports without warp or deflection as follows:
  - a. **Single plank application** - Secure plank ends to supporting members at every point of contact. Use Grate-Lock Anchoring Devices.
  - b. **Multiple plank application** - Secure plank ends to supporting members at every point of contact and intermediate grating sections with at least one attachment each end of plank on alternate sides. For added rigidity, attach side channels of adjacent plank together (at mid-point of span)
  - c. **Welded attachment** - Secure side channels to supports by fusion welding with ⅛" fillet welds 1" long. Weld adjacent planks together with ⅛" fillet welds 1" long, 24" o.c. staggered top and bottom.
  - d. **Clamp and bolt attachment** - Secure intermediate planks to supports using proper length hold-down clamps.

## Special Services

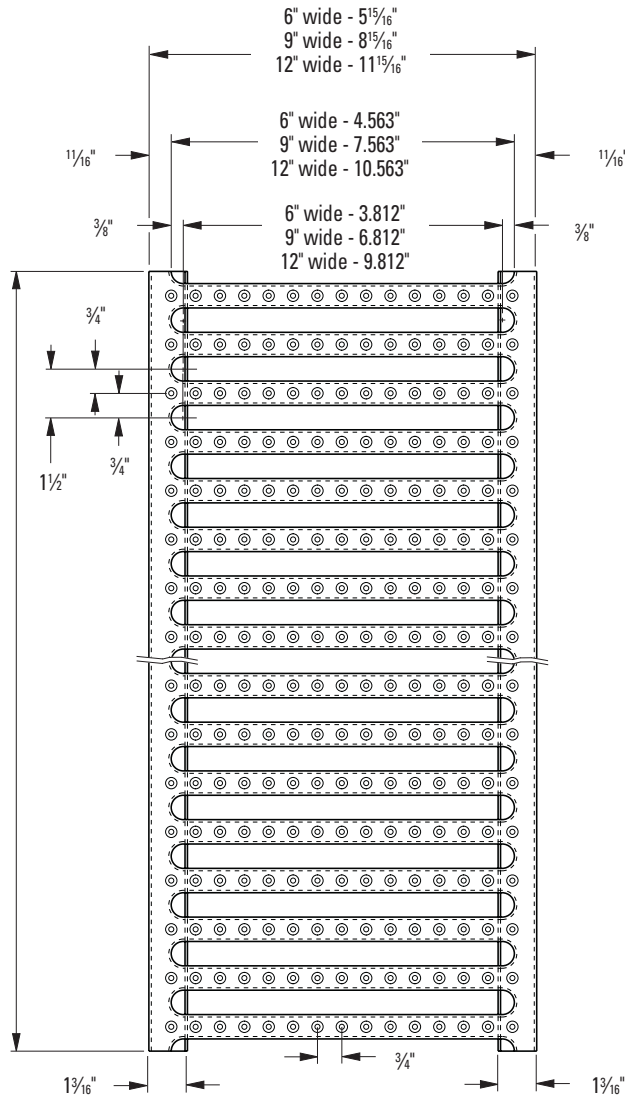
**Custom Fabrication** - On large jobs, Eaton estimates, quotes, details and fabricates to your specifications. Quotations are made from submitted plans and specification. After receipt of order, a bill of materials and necessary layout drawings are prepared. Grating is supplied with special cutting, banding and toe plates installed where needed. Fabrication services are available through your Grate-Lock grating distributor.

**Stair Treads** - Contact us at the toll-free number listed below for information on standard and custom stair tread designs.

**Distributors** - Grate-Lock grating for mezzanines are stocked by distributors in principal cities. Contact us for more information: 800-851-7415.

**NOTICE:** We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

## Grate-Lock non-slip plank sections

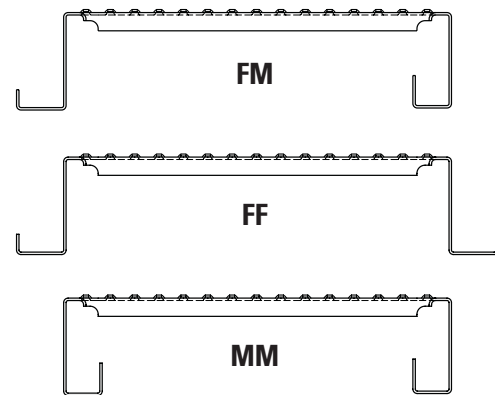


**Widths:** 3", 4"(\*), 6", 9", 12"  
**Heights:** 1<sup>1</sup>/<sub>2</sub>"(\*\*), 2<sup>1</sup>/<sub>2</sub>", 3"(\*), 4"(\*)  
**Gauges:** 18, 16(\*), 14  
**Lengths:** 12'-0", 20'-0", 24'-0"  
 Other lengths available

Note: 3" and 4" filler plank is solid. FM interlock.

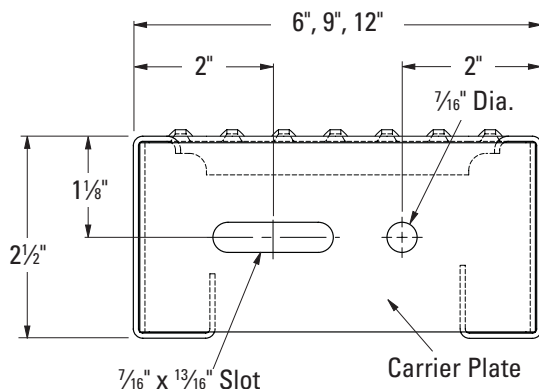
(\*) Special quote required.

(\*\*) The 1<sup>1</sup>/<sub>2</sub>" product is available only in 12'-0" length and differs in side channel detail and loading capabilities. See pages 90 and 91.



## Stair Treads

Stair treads are available in standard and custom designs. Contact us for more information 800-851-7415.



## Stair tread design and selection table

### Catalog Number

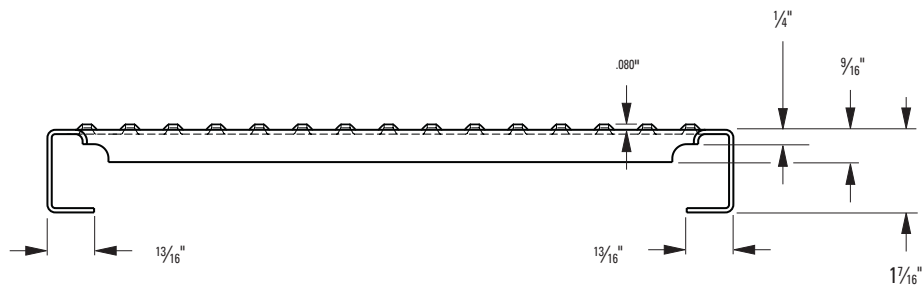
	T-MG62514		T-MG92514		T-MG122514	
Span	U	C	U	C	U	C
2'-0"	3722	1461	2357	974	1276	730
2'-6"	2382	1168	1508	974	816	730
3'-0"	1654	1241	1050	974	783	730
4'-0" (1)	931	931	593	889	442	730

U - Uniform Load (lb/sq. ft) C - Concentrated Load (lb)

(1) Intermediate stringer recommended for spans over 4

# Grate-Lock Safety Grating - Safe Loading Tables

1½" Channel Height — 6", 9", and 12" Widths



## Component availability of galvanized steel panels

Section description

Interlock Detail	Steel Gauge	Width	Standard Length <sup>(3)</sup>	Catalog Number <sup>(2)</sup>	Wt./lin. ft. (lbs.)	Open Area (percent)
(1)	18	12"	12'-0"	<b>MG-121518</b>	2.9	45
		9"		<b>MG-91518</b>	2.3	43
		6"		<b>MG-61518</b>	1.9	39
(1)	16*	12"	12'-0"	<b>MG-121516</b>	3.5	43
		9"		<b>MG-91516</b>	2.9	41
		6"		<b>MG-61516</b>	2.3	37
(1)	14	12"	12'-0"	<b>MG-121514</b>	4.2	40
		9"		<b>MG-91514</b>	3.5	38
		6"		<b>MG-61514</b>	2.7	35

<sup>(1)</sup> Specify interlock detail of panel, i.e., FM, FF or MM. Refer to general catalog (page 86) for details.

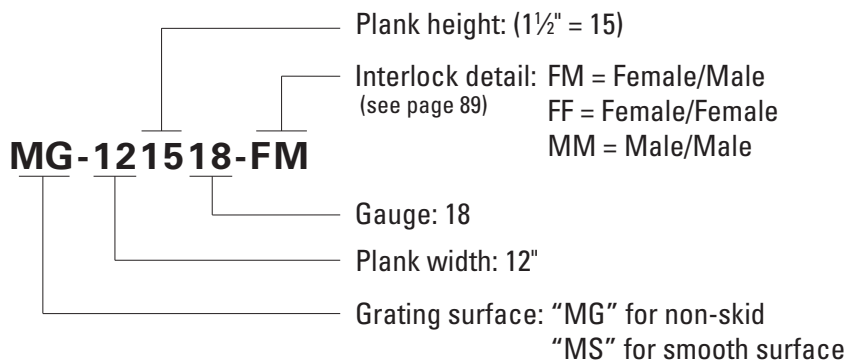
<sup>(2)</sup> Traction grip surface (MG) is standard. For smooth surface replace "MG" in catalog number with "MS".

<sup>(3)</sup> 12' is the maximum length in 1½" channel height. .

Note: Refer to pages 98-101 for information on accessories and 2½", 3" and 4" channel height panels.

\* Special order only. Consult factory.

## How to build a part number:



# Grate-Lock Safety Grating - Safe Loading Tables

1 1/2" Channel Height — 6", 9", and 12" Widths

## Panel Design Loads

Allowable Loads and Deflections: U=Uniform Load <sup>(3)</sup> (lb./ft.<sup>2</sup>) C=Concentrated Load <sup>(4)</sup> (lb.) D=Deflection (in.)

		Span																					
Gauge	Width	Load/ Defl. Code	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"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
18	12"	U	443	283	196	144	110	87	70	58	49	41	36	31	27	24	21	19	17	16	14	13	12
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					
	9"	U	591	378	263	193	147	116	94	78	65	56	48	42	37	32	29	26	23	21	19	17	16
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C	440	352	293	251	220	195	176	160	146	135	125	117	110	103	97	92	86	83	80	76	73
		D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	.96	1.06	1.17	1.28	1.40	1.54
	6"	U	890	570	395	290	222	175	142	117	99	84	72	63	55	49	44	39	35	32	29	26	24
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					
16*	12"	U	549	351	244	179	137	108	87	72	61	52	44	39	34	30	27	24	22	19	18	16	15
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					
	9"	U	733	469	326	239	183	144	117	97	81	69	59	52	45	40	36	32	29	26	24	22	20
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C	546	437	364	312	273	242	218	198	182	168	156	145	136	128	121	115	109	104	99	95	91
		D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	.96	1.06	1.17	1.28	1.40	1.54
	6"	U	1104	706	490	360	276	218	176	146	122	104	90	78	69	61	54	49	44	40	36	33	30
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					
14	12"	U	667	427	296	217	166	131	106	88	74	63	54	47	41	36	32	29	26	24	22	20	18
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					
	9"	U	891	570	396	291	222	176	142	117	99	84	72	63	55	49	44	39	35	32	29	27	24
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C	663	531	442	379	331	295	265	241	221	204	189	177	165	156	147	139	132	126	120	115	110
		D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.77	.86	.96	1.06	1.17	1.28	1.40	1.54
	6"	U	1341	858	596	438	335	265	214	177	149	127	109	95	83	74	66	59	53	48	44	40	37
		D	.10	.11	.14	.18	.22	.27	.33	.40	.48	.56	.65	.74	.84	.95	1.06	1.18	1.31	1.45	1.59	1.73	1.89
		C																					
		D																					

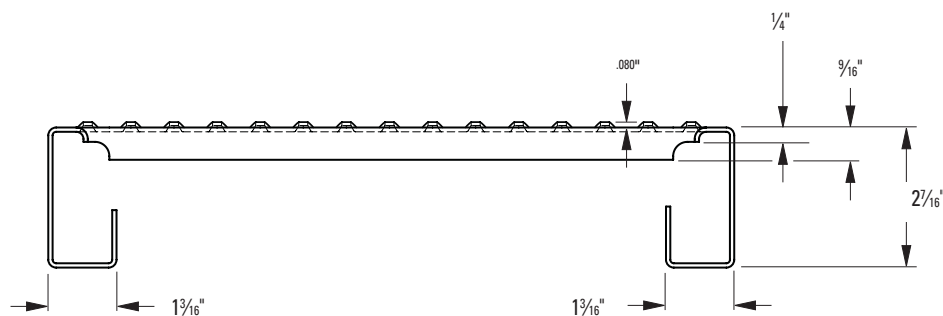
<sup>(3)</sup> Simple or equal-length double spans; multiply uniform load values by 1.07 for three, or 1.04 for four equal-length continuous spans. Deflections shown for simple spans (all were within 1/120th of span limitation); multiply deflection values by 0.71 for equal-length double spans, or by 0.76 for three of four equal-length continuous spans.

<sup>(4)</sup> Simple spans; multiply concentrated load volumes by 1.23 for equal-length double spans, 1.17 for three, or 1.19 for four equal length continuous spans. Load(s) applied to top section, as a line across entire section width, at center of (each) span.

\* Special Order Only Consult Factory



## 2½" Channel Height — 6", 9", and 12" Widths



### Component availability/galvanized steel panels

### Section description

Interlock Detail	Steel Gauge	Width	Standard Length	Catalog Number <sup>(2)</sup>	Wt./lin. ft. (lbs.)	Open Area (percent)
(1)	18	12"	12'-0"	MG-122518	3.5	45
		9"		MG-92518	3.0	43
		6"		MG-62518	2.5	39
(1)	16*	12"	12'-0"	MG-122516	4.3	43
		9"		MG-92516	3.7	41
		6"		MG-62516	3.1	37
(1)	14	12"	12'-0"	MG-122514	5.2	40
		9"		MG-92514	4.4	38
		6"		MG-62514	3.7	35

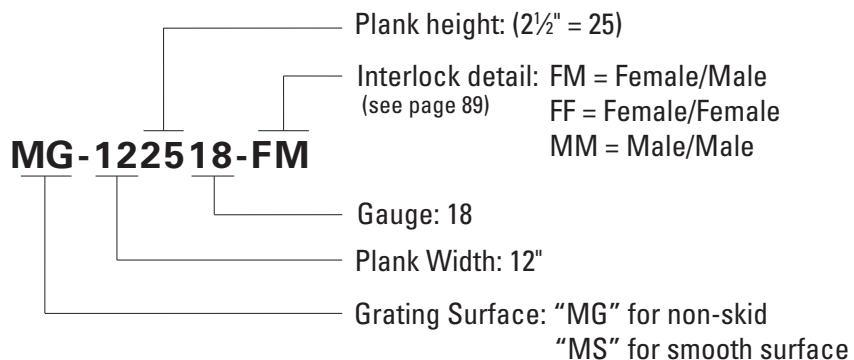
<sup>(1)</sup> Specify interlock detail of panel, i.e., FM, FF or MM. Refer to general catalog (page 89) for details.

<sup>(2)</sup> Traction grip surface (MG) is standard. For smooth surface replace “MG” in catalog number with “MS”.

Note: Refer to pages 98-101 for information on accessories.

\* Available on special order. Consult factory.

## How to build a part number:



# Grate-Lock Safety Grating - Safe Loading Table

2½" Channel Height — 6", 9", and 12" Widths

## Product selection/design table

Allowable loads and deflections: U=Uniform load (lb./ft.²) C=Concentrated load (lb.) D=Deflection (in.)

Gauge	Width	Weight Lb./lin.ft.	Cat. No.	Load/ Defl. Code	Clear Span (Lin.Ft.)																	
					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	12"	3.70	MG122518	U	1057	552	312	200	140	103	80	64	52	43	36	31	27	23	20	18	16	
				D	0.03	0.10	0.17	0.27	0.39	0.54	0.71	0.90	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	0.01	0.05	0.12	0.22	0.31	0.43	0.57	0.72	0.90	1.09	1.33	1.57	1.85	2.15	2.48	2.85	3.24	
	9"	3.16	MG92518	U	1552	691	390	251	175	129	100	79	65	54	46	40	35	30	27	24	21	
				D	0.05	0.10	0.18	0.28	0.41	0.56	0.74	0.95	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	0.02	0.07	0.14	0.23	0.33	0.45	0.59	0.76	0.94	1.15	1.38	1.64	1.93	2.24	2.58	2.91	3.27	
	6"	2.62	MG62518	U	2141	954	538	346	241	178	137	109	89	74	63	54	47	42	37	33	30	
				D	0.04	0.09	0.16	0.25	0.36	0.50	0.65	0.83	0.04	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	0.04	0.07	0.13	0.20	0.29	0.40	0.52	0.67	0.83	1.01	1.22	1.44	1.69	1.96	2.26	2.58	2.93	
16*	12"	4.55	MG122516	U	1276	655	370	238	166	123	95	76	62	52	44	37	32	28	24	22	20	
				D	0.03	0.10	0.17	0.27	0.39	0.54	0.71	0.91	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	0.01	0.05	0.12	0.22	0.31	0.43	0.57	0.72	0.91	1.10	1.31	1.53	1.78	2.04	2.34	2.63	2.94	
	9"	3.89	MG92516	U	1949	869	491	316	220	163	126	100	82	69	58	49	43	37	33	29	26	
				D	0.05	0.10	0.18	0.29	0.41	0.57	0.75	0.96	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	283	261	241	224	209	196	184	174	
				D	0.02	0.09	0.15	0.23	0.33	0.45	0.60	0.76	0.95	1.17	1.40	1.64	1.90	2.19	2.48	2.77	3.15	
	6"	3.22	MG62516	U	2774	1235	696	447	312	230	177	140	114	95	81	69	60	53	47	42	38	
				D	0.04	0.09	0.17	0.26	0.38	0.51	0.67	0.86	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	0.02	0.07	0.13	0.21	0.30	0.41	0.54	0.69	0.85	1.04	1.24	1.47	1.72	1.99	2.29	2.61	2.95	
14	12"	5.62	MG122514	U	1276	783	442	284	199	147	113	90	74	62	52	44	38	35	29	28	25	
				D	0.03	0.10	0.17	0.27	0.39	0.54	0.71	0.91	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	0.01	0.05	0.12	0.22	0.31	0.43	0.57	0.72	0.90	1.09	1.31	1.53	1.77	2.04	2.33	2.63	2.96	
	9"	4.80	MG92514	U	2357	1050	593	381	266	196	151	121	98	82	70	58	50	45	40	36	32	
				D	0.04	0.10	0.18	0.28	0.41	0.56	0.74	0.94	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	0.02	0.07	0.14	0.23	0.33	0.45	0.59	0.75	0.94	1.14	1.38	1.50	1.77	2.05	2.37	2.71	3.08	
	6"	3.98	MG62514	U	3722	1654	931	596	414	304	233	184	149	123	103	88	76	66	58	52	46	
				D	0.05	0.10	0.18	0.29	0.42	0.56	0.74	0.93	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	0.03	0.09	0.14	0.23	0.33	0.45	0.58	0.74	0.92	1.11	1.32	1.55	1.80	2.06	2.36	2.65	2.98	

### Notes:

These tables are prepared based on test conducted in accordance with the 1980 edition, section 6.2 of the American Iron and Steel Institute Specification for the design of cold-rolled steel structural members with results checked and adjusted where required by calculations in accordance with section 2 of the same specification.

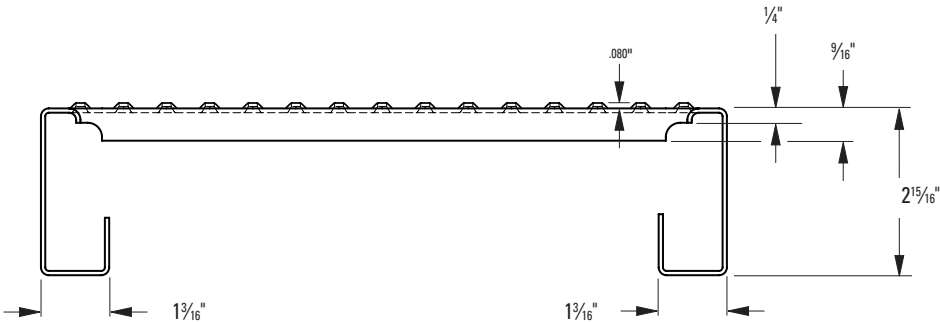
 Safe Allowable Loads with deflections equal to or less than L/120

 Safe Allowable Loads with deflections equal to or less than L/240

\*Special Order Only Consult Factory

# Grate-Lock Safety Grating - Safe Loading Table

3" Channel height — 6", 9", and 12" widths



## Component availability of galvanized steel panels

### Section description

Interlock Detail	Steel Gauge	Width	Standard Length	Catalog Number <sup>(2)</sup>	Wt./lin. ft. (lbs.)	Open Area (percent)
(1)	18	12"	12'-0"	MG-123018	3.6	45
		9"		MG-93018	3.1	43
		6"		MG-63018	2.6	39
(1)	16*	12"	12'-0"	MG-123016	4.5	43
		9"		MG-93016	3.7	41
		6"		MG-63016	3.2	37
(1)	14	12"	12'-0"	MG-123014	5.4	40
		9"		MG-93014	4.7	38
		6"		MG-63014	3.9	35

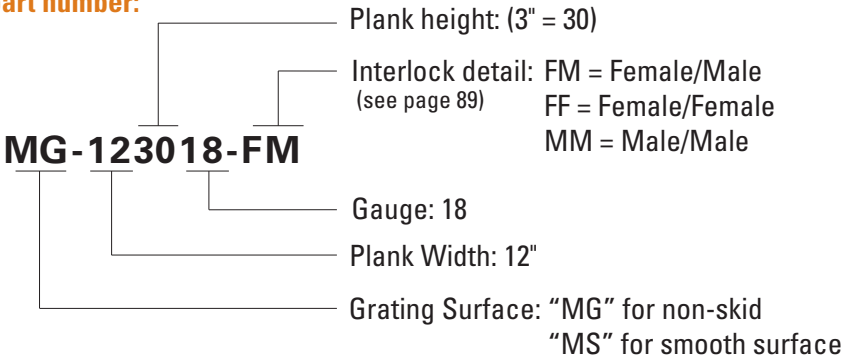
<sup>(1)</sup> Specify interlock detail of panel, i.e., FM, FF or MM. Refer to general catalog (page 89) for details.

<sup>(2)</sup> Traction grip surface (MG) is standard. For smooth surface replace "MG" in catalog number with "MS".

Note: Refer to pages 98-101 for information on accessories.

\* Available on special order. Consult factory.

### How to build a part number:



# Grate-Lock Safety Grating - Safe Loading Table

3" Channel height — 6", 9", and 12" widths

## Product selection/design table

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C=Concentrated load (lb.) D=Deflection (in.)

Clear Span (Lin.Ft.)																					
Gauge	Width	Weight Lb./lin.ft.	Cat. No.	Defl/ Load Code	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	12"	3.88	MG123018	U	1057	611	345	222	155	114	88	70	57	48	41	35	31	27	24	22	20
				D	0.02	0.07	0.12	0.19	0.28	0.39	0.51	0.65	0.80	0.98	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	0.01	0.03	0.07	0.14	0.22	0.31	0.41	0.52	0.64	0.79	0.95	1.14	1.34	1.56	1.80	2.06	2.34
	9"	3.34	MG93018	U	1881	840	472	302	210	154	118	93	76	62	52	45	39	34	30	26	24
				D	0.03	0.08	0.13	0.21	0.31	0.42	0.55	0.68	0.86	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	0.01	0.04	0.11	0.17	0.24	0.33	0.44	0.55	0.68	0.82	0.98	1.15	1.32	1.52	1.74	1.97	2.24
	6"	2.80	MG63018	U	2834	1260	709	453	315	231	177	140	113	94	79	67	58	50	44	39	35
				D	0.04	0.07	0.13	0.21	0.29	0.39	0.52	0.66	0.80	0.99	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	0.02	0.06	0.11	0.16	0.23	0.32	0.42	0.53	0.65	0.60	0.93	1.11	1.28	1.47	1.66	1.14	2.09
16*	12"	4.77	MG123016	U	1276	775	438	282	197	160	123	98	80	66	56	45	39	35	31	28	25
				D	0.02	0.07	0.12	0.20	0.28	0.45	0.59	0.75	0.93	1.13	1.35	1.43	1.69	1.96	2.27	2.61	2.97
				C	638	638	638	638	591	559	492	440	398	365	337	293	276	262	249	238	229
				D	0.01	0.03	0.07	0.05	0.23	0.36	0.47	0.60	0.74	0.90	1.08	1.15	1.35	1.57	1.82	2.09	2.38
	9"	4.11	MG93016	U	2275	1029	581	373	261	193	149	118	97	81	69	59	52	46	40	36	33
				D	0.03	0.03	0.13	0.21	0.30	0.41	0.54	0.69	0.87	1.06	1.27	1.51	1.77	2.06	2.37	2.70	3.05
				C	851	851	851	700	587	506	446	400	363	333	309	288	271	256	242	230	220
				D	0.01	0.04	0.11	0.17	0.24	0.33	0.44	0.56	0.69	0.85	1.02	1.21	1.42	1.65	1.89	2.16	2.44
	6"	3.44	MG63016	U	3418	1519	854	547	380	279	214	169	137	113	95	82	71	62	55	49	45
				D	0.03	0.07	0.12	0.20	0.28	0.39	0.50	0.64	0.79	0.95	1.13	1.34	1.56	1.81	2.08	2.37	2.68
				C	1134	1134	854	684	570	480	427	380	342	310	286	266	249	234	221	210	201
				D	0.02	0.05	0.10	0.15	0.23	0.31	0.40	0.51	0.63	0.76	0.91	1.07	1.25	1.45	1.66	1.89	2.14
14	12"	5.89	MG123014	U	1461	950	536	345	241	178	137	109	89	74	63	54	47	42	37	33	30
				D	0.02	0.07	0.13	0.20	0.29	0.40	0.53	0.67	0.84	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	0.01	0.03	0.07	0.14	0.23	0.32	0.42	0.54	0.67	0.82	0.98	1.17	1.37	1.59	1.83	2.10	2.38
	9"	5.07	MG93014	U	2597	1477	831	532	369	271	208	164	133	110	92	79	68	59	52	46	41
				D	0.03	0.09	0.16	0.25	0.36	0.48	0.63	0.79	0.98	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	0.01	0.04	0.10	0.20	0.28	0.38	0.50	0.63	0.78	0.95	1.12	1.32	1.54	1.76	2.00	2.27	2.54
	6"	4.25	MG63014	U	4984	2215	1246	797	554	407	311	246	199	165	138	118	102	89	78	69	62
				D	0.04	0.09	0.15	0.24	0.34	0.46	0.60	0.76	0.94	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	0.02	0.06	0.12	0.19	0.27	0.36	0.48	0.61	0.75	0.91	1.08	1.27	1.48	1.70	1.92	2.18	2.43

### Notes:

These tables are prepared based on test conducted in accordance with the 1980 edition, section 6.2 of the American Iron and Steel Institute Specification for the design of cold-rolled steel structural members with results checked and adjusted where required by calculations in accordance with section 2 of the same specification.

 Safe Allowable Loads with deflections equal to or less than L/120

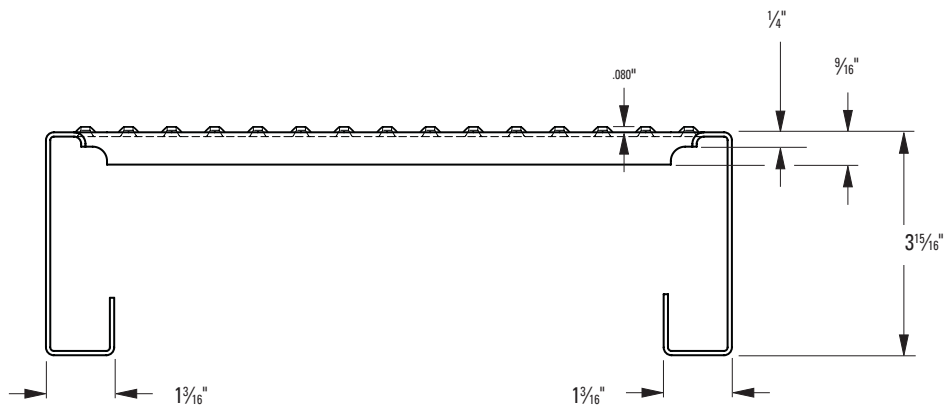
 Safe Allowable Loads with deflections equal to or less than L/240

\* Available on special order. Consult factory.



# Grate-Lock Safety Grating - Safe Loading Tables

4" Channel height — 6", 9", and 12" widths



## Component availability of galvanized steel panels

Section description

Interlock Detail	Steel Gauge	Width	Standard Length	Catalog Number <sup>(2)</sup>	Wt./lin. ft. (lbs.)	Open Area (percent)
(1)	18	12"	12'-0"	MG-124018	4.0	45
		9"		MG-94018	3.5	43
		6"		MG-64018	3.0	39
(1)	16*	12"	12'-0"	MG-124016	4.9	43
		9"		MG-94016	4.3	41
		6"		MG-64016	3.7	37
(1)	14	12"	12'-0"	MG-124014	5.9	40
		9"		MG-94014	5.2	38
		6"		MG-64014	4.4	35

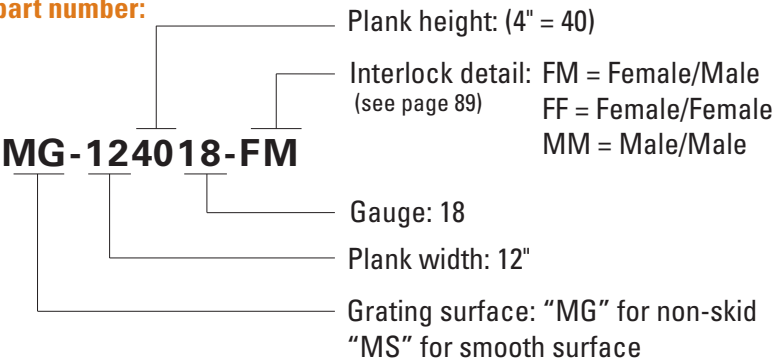
(1) Specify interlock detail of panel, i.e., FM, FF or MM. Refer to general catalog (page 89) for details.

(2) Traction grip surface (MG) is standard. For smooth surface replace "MG" in catalog number with "MS".

Note: Refer to pages 98-101 for information on accessories.

\* Special Order Only Consult Factory

### How to build a part number:



# Grate-Lock Safety Grating - Safe Loading Tables

4" Channel height — 6", 9", and 12" widths


## Product selection/design table

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C=Concentrated load (lb.) D=Deflection (in.)

					Clear Span (Lin.Ft.)																	
Gauge	Width	Weight Lb./lin.ft.	Cat. No.	Defl/ Load Code	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	12"	4.24	MG124018	U	1057	996	560	359	249	183	140	111	90	74	62	53	46	40	35	31	28	
				D	0.03	0.06	0.11	0.16	0.24	0.34	0.42	0.54	0.66	0.81	0.96	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	0.00	0.01	0.04	0.08	0.13	0.21	0.32	0.44	0.53	0.65	0.77	0.87	1.01	1.17	1.33	1.50	1.68	
	9"	3.70	MG94018	U	1881	1329	747	478	332	244	187	148	120	99	83	71	61	53	47	41	37	
				D	0.02	0.06	0.12	0.18	0.26	0.35	0.47	0.58	0.72	0.86	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	0.01	0.02	0.06	0.12	0.20	0.28	0.36	0.46	0.57	0.70	0.83	0.96	1.12	1.28	1.47	1.65	1.85	
	6"	3.16	MG64018	U	4232	1993	1121	717	498	366	280	221	179	148	125	106	92	80	70	62	55	
				D	0.03	0.06	0.10	0.18	0.25	0.34	0.44	0.55	0.69	0.83	0.99	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	0.01	0.04	0.08	0.13	0.19	0.26	0.35	0.45	0.55	0.67	0.80	0.93	1.07	1.24	1.41	1.60	1.78	
16*	12"	5.21	MG124016	U	1276	1215	685	439	306	226	173	138	112	93	79	69	60	53	47	42	37	
				D	0.03	0.06	0.11	0.17	0.25	0.34	0.45	0.51	0.71	0.86	1.03	1.11	1.29	1.49	1.71	1.95	2.20	
				C	638	638	638	638	638	638	638	619	560	512	472	450	420	395	373	354	337	
				D	0.00	0.01	0.04	0.08	0.14	0.21	0.33	0.46	0.57	0.69	0.83	0.89	1.03	1.20	1.37	1.56	1.76	
	9"	4.55	MG94016	U	2275	1612	907	580	403	296	227	179	145	120	101	86	75	66	58	52	47	
				D	0.02	0.06	0.10	0.16	0.24	0.37	0.48	0.60	0.75	0.91	1.07	1.27	1.48	1.71	1.96	2.22	2.51	
				C	851	851	851	851	851	777	680	604	544	495	453	420	393	369	348	330	314	
				D	0.01	0.02	0.05	0.10	0.18	0.29	0.38	0.49	0.60	0.73	0.86	1.01	1.18	1.37	1.56	1.78	2.01	
	6"	3.89	MG64016	U	5118	2418	1360	870	604	444	340	269	218	180	151	129	111	97	85	75	67	
				D	0.02	0.06	0.10	0.16	0.22	0.30	0.40	0.51	0.63	0.76	0.90	1.05	1.22	1.41	1.59	1.80	2.02	
				C	1134	1134	1134	1088	907	777	680	604	544	495	453	418	389	363	340	320	302	
				D	0.01	0.03	0.07	0.12	0.18	0.25	0.32	0.41	0.50	0.60	0.72	0.85	0.98	1.13	1.28	1.44	1.61	
14	12"	6.49	MG124014	U	1461	1448	814	521	362	266	204	161	131	109	92	79	69	61	54	48	43	
				D	0.01	0.06	0.10	0.16	0.24	0.32	0.42	0.54	0.67	0.82	0.98	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	0.00	0.01	0.04	0.07	0.12	0.20	0.30	0.43	0.54	0.65	0.78	0.93	1.08	1.26	1.44	1.65	1.87	
	9"	5.62	MG94014	U	2597	1988	1120	719	501	369	284	225	184	153	129	111	96	84	75	67	60	
				D	0.02	0.06	0.11	0.17	0.25	0.34	0.44	0.57	0.70	0.85	0.92	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	0.01	0.02	0.05	0.10	0.17	0.27	0.36	0.45	0.56	0.68	0.82	0.97	1.13	1.31	1.50	1.71	1.93	
	6"	4.80	MG64014	U	5843	2895	1629	1042	724	532	407	322	261	215	181	154	133	116	102	91	82	
				D	0.03	0.06	0.12	0.19	0.28	0.37	0.48	0.61	0.75	0.91	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	513	501	465	434	407	386	367	
				D	0.01	0.04	0.09	0.15	0.21	0.30	0.39	0.49	0.60	0.73	0.87	1.01	1.18	1.35	1.54	1.75	1.98	

### Notes:

These tables are prepared based on test conducted in accordance with the 1980 edition, section 6.2 of the American Iron and Steel Institute Specification for the design of cold-rolled steel structural members with results checked and adjusted where required by calculations in accordance with section 2 of the same specification.

 Safe Allowable Loads with deflections equal to or less than L/120

 Safe Allowable Loads with deflections equal to or less than L/240

\* Available on special order. Consult factory.

# Grate-Lock Safety Grating - Accessories & Assembly

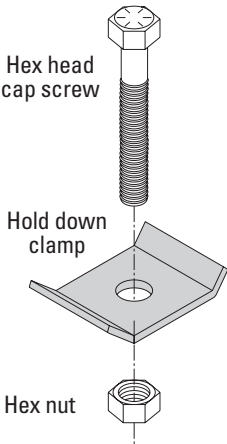
## Hold down clamp



Field drilling is required.

Hold down clamp		
UPC Number	Catalog Number	Wt./Ea.
66251641905	RTM-SW	0.04

\*\* Hex Head Cap Screw lengths = Side Channel Height + 1"



### Part number includes

(1) Hold down clamp

### Source locally

- (1) 5/16" - 18 HHCS \*\*
- (1) 5/16" Flat Washer
- (1) 5/16" - 18 Hex Nut



### Assembly

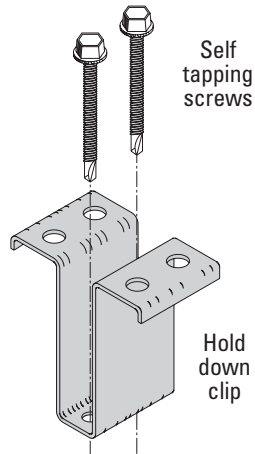
1. Align Grate-Lock™ plank on I-beam or other anchoring cross-member.
2. Mark the I-beam for drilling purposes near the outer edges of Grate-Lock plank. Drill a pilot hole.
3. Remove Grate-Lock plank and drill a finish hole.
4. Replace Grate-Lock plank to its original position. Place the hold down clamp in slot Grate-Lock plank, which is now over the drilled hole. Make sure the hold down clamp and drilled hole line up.
5. Run cap screw through the hold down clamp, Grate-Lock plank, and I-beam. Tighten with washer and nut until secure.
6. Test for movement or slippage. If Grate-Lock planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 5.

**Note: Do not walk on Grate-Lock planks if they are not secure. Serious injury could result.**

### Welding

A common method of fastening safety grating is welding. It is recommended that all Eaton's B-Line series Safety Grating products be fillet welded per AWS D1.3. For more information, consult Technical Services.

Hold down clip



## Part number includes

(1) Hold down clip

## Order separately

(2) 1/4" Self tapping screws



Field drilling is required.

Hold Down Clip

UPC Number	Catalog Number	Plank Height	Wt./Ea.
66251626549	M-HC-15	1½"	0.10
66251626550	M-HC-25	2½"	0.20
66251626551	M-HC-30	3"	0.20
66251626552	M-HC-40	4"	0.30

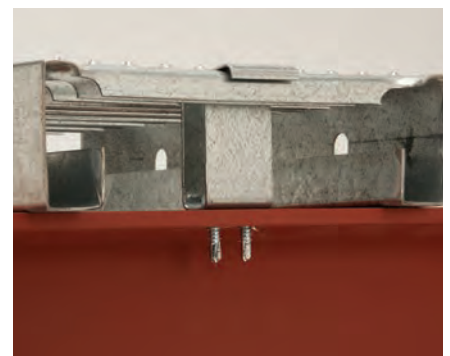
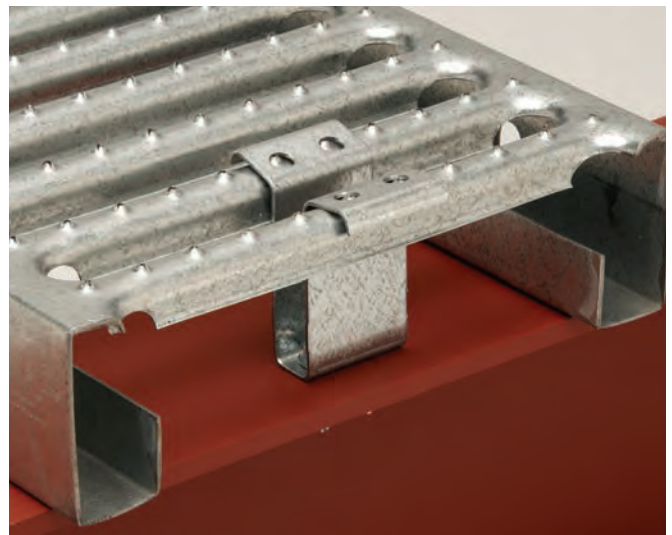
## Assembly

1. Align Grate-Lock™ 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 the Grate-Lock plank. Drill pilot holes.
3. Remove Grate-Lock plank and drill finish holes.
4. Replace Grate-Lock plank to its original position. Align hold down clip over the drilled holes. Make sure the top of the hold down clip attaches firmly to the ridges of the Grate-Lock plank.
5. Tighten screws until snug.
6. Test for movement or slippage. If Grate-Lock planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 5.

**Note: Do not walk on Grate-Lock planks if they are not secure. Serious injury could result.**

## Welding

A common method of fastening safety grating is welding. It is recommended that all Eaton's B-Line series Safety Grating products be fillet welded per AWS D1.3. For more information, consult technical services.



Grate-Lock  
Grating

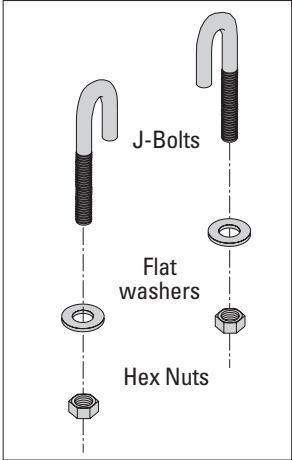


# Grate-Lock Safety Grating - Accessories & Assembly

## Anchor J-bolts



**Part number includes**  
(2) 5/16" - 18 x 2 13/16" J-bolts  
(2) 5/16" Flat washers  
(2) 5/16" - 18 Hex nuts



Field drilling is required.

Anchor J-Bolt		
UPC Number	Catalog Number	Wt./Box*
66251640737	M-250-J	0.10

\* Sold in box quantity only. (50/box)



### Assembly

1. Align Grate-Lock™ planks on I-beam or other anchoring cross-member.
2. Mark the I-beam for drilling purposes near the outer edges of Grate-Lock plank. Drill pilot holes.
3. Remove Grate-Lock plank and drill finish holes.
4. Replace Grate-Lock plank to its original position. Place the threaded end of the J-Bolts into drilled holes. Place the 'J' end of the J-Bolt in the gutters along each edge of the Grate-Lock plank. Tighten the washer and nut until secure.
5. Test for movement or slippage. If GREAT-LOCK planks are not secure, check fastening system for loose or missing parts. Repeat steps 1 thru 4.

**Note: Do not walk on Grate-Lock planks if they are not secure. Serious injury could result.**



### Welding

A common method of fastening safety grating is welding. It is recommended that all Eaton's B-Line series Safety Grating products be fillet welded per AWS D1.3. For more information, consult Technical Services.

Item	UPC Number	Product Code	Height
Side kickplate (14 ga.) 12-ft. lengths	66251639398	<b>M-SK-2514</b>	6½"
	66251639411	<b>M-SK-3014</b>	7"
	66251639419	<b>M-SK-4014</b>	8"



Item	UPC Number	Product Code	Height
End kickplate (14 ga.) 12-ft. lengths	66251636794	<b>M-EK-2514</b>	6½"
	66251636807	<b>M-EK-3014</b>	7"
	66251630808	<b>M-EK-4014</b>	8"



Item	UPC Number	Product Code	Height
Kickplate clip	66251639381	<b>M-KC</b>	3"



Item	UPC Number	Product Code	Screw Size
Tap screw (self-drilling)	66251639390	<b>M-SDST-25*</b>	¼" x 1"

\* 50/box - Sold in box quantity only.



Item	UPC Number	Product Code	Bolt Size
¾" Hex head bolt with nut and washer	66251640729	<b>M-100-B*</b>	¾"-16 x 1"

Used as an option to attach the end kick plate to the Grate-Lock™ plank

\* 50/box - Sold in box quantity only.



# Grate-Lock Safety Grating - Solid Deck Planking

Solid deck planking provides the flexibility of a medium weight and a smooth surface. Manufactured with the same interlocking system of Grate-Lock™, solid deck locks into place for quick installation. Use solid deck in areas where a solid, sturdy covering surface is needed. Solid deck is available in a wide variety of gauges and special quote options.



Single FM plank



Interlocked FM Planks

### Solid Deck Planking Features

- Durable, pre-galvanized solid surface
- Quick, low-cost installation
- Easy to replace
- Minimum maintenance
- Accessories available
- Available in widths of 6", 9", and 12"
- Available in heights of 1 1/2" and 2 1/2"
- Available in lengths of 12'-0", 20'-0", 24'-0"
- Standard 14 gauge steel
- Applications include rack decking, filler planks, and light-load flooring
- Other gauges, widths, and lengths are available by special order. On large jobs, We estimate, detail, and fabricate to your specifications.

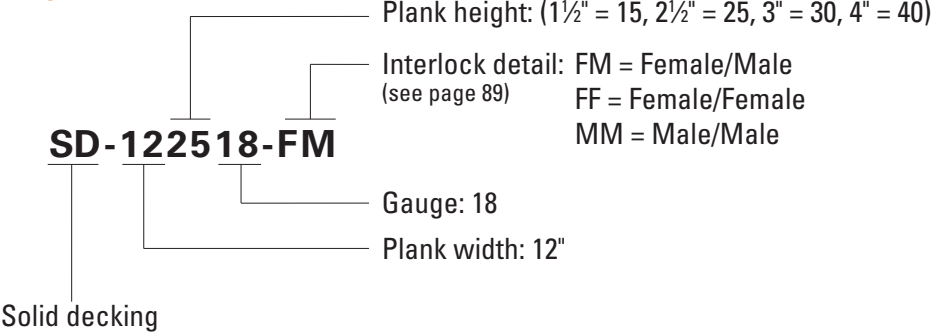


Interlocked FM planks (end view)



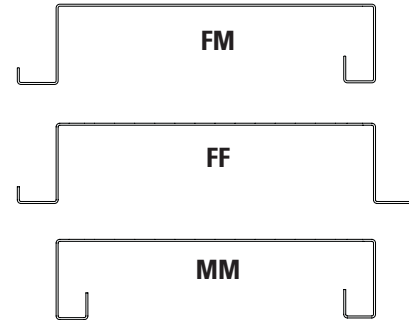
Standard accessories

### How to build a part number:





\*\* Profile for 1 1/2" Channel Depth



Interlocking Options for 2 1/2" Channel Depth

Specify interlock detail of panel, i.e., FM, FF or MM.  
Refer to page 89 for details.

Clear Span (Lin.Ft.)																
Channel Depth	Gauge	Width	Catalog Number	Weight Lb./lin.ft.	Load Defl/ Code	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
1 1/2"	14	12"	SD-121514	4.5	U	316	296	166	106	74	54	41	32	26	22	18
					D	0.03	0.14	0.22	0.33	0.48	0.65	0.84	1.06	1.31	1.59	1.89
					C	158	158	158	158	158	158	158	147	132	120	110
					D	0.01	0.03	0.08	0.16	0.27	0.44	0.65	0.86	1.06	1.28	1.54
		9"	SD-91514	3.7	U	420	398	222	142	99	72	55	44	35	29	24
					D	0.03	0.14	0.22	0.33	0.48	0.65	0.85	1.06	1.31	1.59	1.89
					C	211	211	211	211	211	189	165	147	132	120	110
					D	0.01	0.05	0.11	0.21	0.37	0.52	0.68	0.86	1.06	1.28	1.54
		6"	SD-61514	2.9	U	690	596	335	214	149	109	83	66	53	44	37
					D	0.03	0.06	0.10	0.18	0.25	0.34	0.44	0.55	0.69	0.83	0.99
					C	344	344	331	265	221	189	165	147	132	120	110
					D	0.02	0.07	0.17	0.26	0.38	0.52	0.68	0.86	1.06	1.28	1.54
2 1/2"	14	12"	SD-122514	5.8	U	316	316	316	284	199	147	113	90	74	62	52
					D	0.01	0.04	0.13	0.27	0.39	0.54	0.71	0.91	1.13	1.38	1.63
					C	158	158	158	158	158	158	158	158	158	158	158
					D	0.01	0.01	0.03	0.04	0.08	0.13	0.19	0.28	0.39	0.52	0.67
		9"	SD-92514	5.0	U	420	420	420	381	266	196	151	121	98	82	70
					D	0.01	0.04	0.13	0.28	0.41	0.56	0.74	0.94	1.17	1.43	1.72
					C	211	211	211	211	211	211	211	211	211	211	211
					D	0.01	0.01	0.03	0.07	0.11	0.18	0.27	0.38	0.52	0.69	0.90
		6"	SD-62514	4.2	U	690	690	690	596	414	304	233	184	149	123	103
					D	0.01	0.04	0.14	0.29	0.42	0.56	0.74	0.93	1.15	1.39	1.65
					C	344	344	344	344	344	344	344	344	344	338	310
					D	0.01	0.02	0.05	0.11	0.18	0.29	0.43	0.62	0.85	1.11	1.32

## Notes:

These tables are prepared based on tests conducted in accordance with the 1986 edition, section F.1 of the American Iron and Steel Institute Specification for the design of cold-rolled steel structural members with the results checked and adjusted where required by calculations in accordance with section A5 of the same specification.

  Safe Allowable loads with deflections equal to or less than L/120

  Safe Allowable loads with deflections equal to or less than L/240

**Bold Print** values designate loads/deflections limited due to 'Strut Loading'

U = Allowable simple span uniform load (lb./ft.<sup>2</sup>)    C = Allowable simple span concentrated line load (lb.) at Midspan

D = Vertical deflection (in.) at midspan





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