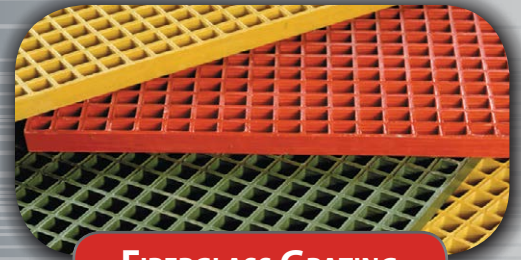


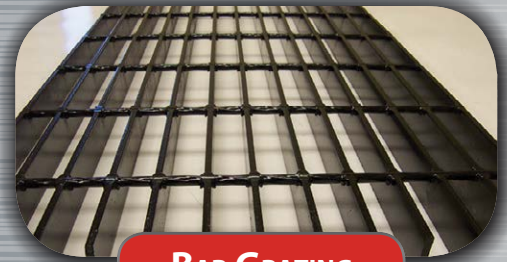


**P&R**  
**METALS**

**Metal With Service™**



**FIBERGLASS GRATING**



**BAR GRATING**



**GRIP STRUT®**

**1.877.880.3319**

**[www.prmembers.com](http://www.prmembers.com)**



# About P&R Metals

P&R Metals is a leading distributor of industrial flooring products. The company was founded in 1999 to provide superior customer satisfaction, service and reliability. We are located in a 26,000 square foot facility in Birmingham, Alabama. Located next to major interstates, as well as our galvanizers, we are focused on the highest possible efficiencies.



Our team atmosphere is our “secret” to success. From the moment we receive an order, until it arrives at our customer’s site, we are all accountable for the service and final product.

P&R Metals philosophy is the same today as when it was first founded - to remain focused on customer satisfaction. Our mission statement is based on common sense principles, “Customer relationships are our foundation. If our customer is in need of service, we will do everything we can to help. Can’t is a word that we avoid at every possible turn. We must take care of our customers or someone else will!” From sales to engineering to production, our employees are motivated and compensated on the fact that we are a team. We will exhaust every effort to meet your needs. You will find a different level of service at P&R Metals, because we look forward to serving your needs.

## Custom Fabrication of All Products



P&R Metals offers complete engineering and fabrication services for all the products sold. Products purchased usually need to fit the exact specifications of your particular task and we are happy to help.

Our fabrication and engineering services include estimating, detailing, and custom engineering. We can send and receive drawings electronically to expedite your order. Our fabrication department

can cut to length or custom design areas that require piece marks and erection drawings. Our 26,000 square foot facility is laid out to efficiently design, fabricate and ship the highest quality order in the least amount of time. After all, your project has certain order specifications that need to be completed quickly and we are very happy to help.

No request is too big or small. Please feel free to call us with your order requirements.

**“Customer relationships are our foundation. If our customer is in need of service, we will do everything we can to help. Can’t is a word that we avoid at every possible turn. We must take care of our customers or someone else will!”**

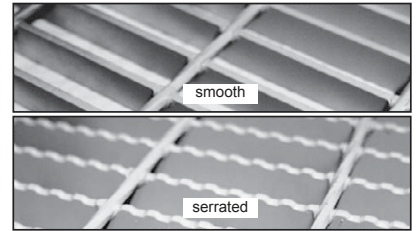
**- James Robinson, President**

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# WELDED STEEL BAR GRATING

Welded steel bar grating is manufactured by a resistance-weld process. Cross-bars are fused to bearing bars to form a permanent joint. Economical, yet durable for most applications. Available in standard panel widths of 2' or 3' and lengths of 20' or 24'. Material types include A569-carbon steel as well as stainless steel. Finishes include mill, H. D. galvanized, painted black. Custom colors upon request. Surfaces include, smooth, serrated or SlipNOT® anti-slip coating.



## LIGHT DUTY LOAD TABLE

SIZE (Symbol)	Load & Deflections	Span (Length of Bearing Bar)											
		2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	5' - 6"	6' - 0"	6' - 6"	7' - 0"	8' - 0"
3/4 x 3/16 (19-4-2)	U	578	370	258	188	144	115						
	D	0.095	0.151	0.215	0.295	0.374	0.486						
	C	578	462	386	331	289	257						
	D	0.076	0.119	0.173	0.234	0.308	0.389						
1 x 1/8 (19-4-3)	U	686	439	304	224	171	135	109	91	76			
	D	0.072	0.111	0.159	0.219	0.288	0.366	0.451	0.547	0.673			
	C	686	549	457	392	343	305	275	250	228			
	D	0.057	0.09	0.129	0.176	0.231	0.293	0.36	0.434	0.518			
1x 3/16 (19-4-4)	U	1029	659	459	338	257	203	164	135	114			
	D	0.072	0.111	0.159	0.219	0.288	0.366	0.451	0.547	0.673			
	C	1029	824	686	587	514	458	412	375	343			
	D	0.057	0.09	0.129	0.176	0.231	0.293	0.36	0.434	0.518			
1 1/4 x 1/8 (19-4-5)	U	1027	686	476	350	268	212	172	142	119	101	87	
	D	0.057	0.09	0.129	0.176	0.231	0.291	0.358	0.433	0.52	0.608	0.704	
	C	1027	858	716	613	536	477	430	390	358	330	306	
	D	0.046	0.072	0.104	0.141	0.183	0.233	0.288	0.349	0.416	0.487	0.565	
1 1/4 x 3/16 (19-4-6)	U	1608	1028	716	526	403	318	258	213	179	152	131	
	D	0.057	0.09	0.129	0.176	0.231	0.291	0.358	0.433	0.52	0.608	0.704	
	C	1608	1285	1073	918	803	716	644	585	536	495	459	
	D	0.046	0.072	0.104	0.141	0.183	0.233	0.288	0.349	0.416	0.487	0.565	
1 1/2 x 1/8 (19-4-7)	U	1544	987	686	505	387	306	248	205	172	149	128	96
	D	0.047	0.075	0.106	0.147	0.192	0.243	0.3	0.365	0.433	0.506	0.587	0.774
	C	1544	1235	1029	883	772	687	619	563	515	475	441	386
	D	0.038	0.059	0.087	0.117	0.154	0.195	0.241	0.289	0.347	0.406	0.47	0.614
1 1/2 x 3/16 (19-4-8)	U	2321	1485	1031	758	581	458	371	307	260	222	191	145
	D	0.047	0.072	0.106	0.147	0.192	0.243	0.3	0.365	0.433	0.506	0.587	0.774
	C	2321	1856	1547	1325	1159	1031	928	844	773	714	663	581
	D	0.038	0.059	0.087	0.117	0.154	0.195	0.241	0.289	0.347	0.406	0.47	0.614
1 3/4 x 3/16 (19-4-9)	U	3151	2016	1401	1029	788	622	505	416	351	299	259	197
	D	0.042	0.064	0.092	0.126	0.165	0.208	0.258	0.31	0.371	0.435	0.506	0.664
	C	3151	2521	2100	1800	1575	1400	1260	1145	1049	969	899	786
	D	0.033	0.052	0.074	0.101	0.132	0.167	0.206	0.249	0.297	0.347	0.403	0.527
2 x 3/16 (19-4-10)	U	4116	2633	1829	1344	1029	813	659	546	460	393	339	258
	D	0.036	0.056	0.081	0.111	0.144	0.183	0.226	0.273	0.325	0.384	0.447	0.58
	C	4116	3292	2745	2351	2058	1828	1646	1496	1370	1266	1175	1027
	D	0.029	0.045	0.064	0.088	0.115	0.145	0.18	0.217	0.259	0.303	0.353	0.46
2 1/4x 3/16 (19-4-11)	U	5209	3332	2314	1670	1302	1028	835	689	583	496	428	327
	D	0.032	0.05	0.072	0.098	0.127	0.162	0.199	0.241	0.287	0.338	0.393	0.512
	C	5209	4167	3472	2916	2604	2314	2082	1892	1733	1601	1487	1301
	D	0.026	0.039	0.057	0.079	0.102	0.129	0.16	0.194	0.23	0.27	0.314	0.41
2 1/2x 3/16 (19-4-12)	U	6432	4115	2858	2099	1609	1271	1029	850	720	613	529	405
	D	0.028	0.044	0.064	0.088	0.116	0.145	0.18	0.217	0.26	0.305	0.354	0.465
	C	6432	5147	4286	3673	3214	2858	2571	2338	2141	1977	1836	1607
	D	0.023	0.036	0.051	0.071	0.092	0.116	0.144	0.173	0.207	0.242	0.282	0.369

**Code:**  
 U = safe uniform load, lb/sq. ft.  
 D = deflection in inches  
 C = safe concentrated load, lb/ft.  
 of grating width, at mid-span

**Note (ALL LOAD TABLES):**  
 1/4" is recommended as the maximum deflection consistent with pedestrian comfort but can be exceeded for other loading conditions at the discretion of the engineer.

Based on 11 bearing bars per foot of width  
 Maximum allowable stress 18,000 psi

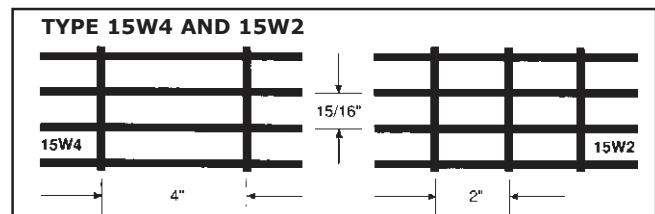
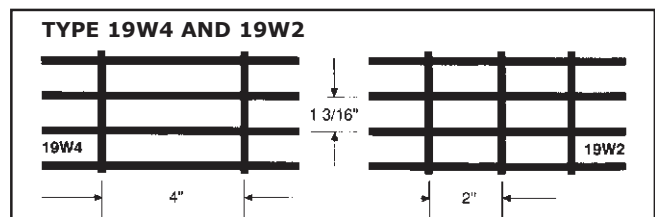
**Conversion Table**

Type	Multiplier
9W4	2.00
11W4	1.64
15W4	1.18

**WEIGHT IN POUNDS PER SQUARE FOOT**

Bearing Bars	Cross Bars	Type 19W4	Type 19W2	Type 15W4	Type 15W2
3/4 x 1/8	1/4	3.99	4.63	4.95	5.59
3/4 x 3/16	1/4	5.67	6.31	7.11	7.75
1 x 1/8	1/4	5.15	5.79	6.44	7.08
1 x 3/16	1/4	7.35	7.99	9.27	9.91
1 1/4 x 1/8	1/4	6.2	6.84	7.79	8.43
1 1/4 x 3/16	1/4	9.03	9.67	11.43	12.07
1 1/2 x 1/8	1/4	7.35	7.99	9.27	9.91
1 1/2 x 3/16	5/16	10.94	11.8	13.82	14.68
1 3/4 x 3/16	5/16	12.62	13.48	15.98	16.84
2 x 3/16	5/16	14.3	15.16	18.14	19.00
2 1/4 x 3/16	5/16	15.87	16.74	20.16	21.03
2 1/2 x 3/16	5/16	17.55	18.42	22.32	23.19

**Note:** 9W & 11W grating use 5/16 cross rods. Consult salesperson for 9W grating specifications & availability.



# WELDED STEEL BAR GRATING

## PANEL WIDTHS

<b>19W4</b>	# of bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
	1/8" bar	1-5/16	2-1/2	3-11/16	4-7/8	6-1/16	7-1/4	8-7/16	9-5/8	10-13/16	12	13-3/16	14-3/8	15-9/16	16-3/4	17-15/16				
	3/16" bar	1-3/8	2-9/16	3-3/4	4-15/16	6-1/8	7-5/16	8-1/2	9-11/16	10-7/8	12-1/16	13-1/4	14-7/16	15-5/8	16-13/16	18				
	# of bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<b>15W4</b>	# of bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1/8" bar	1-1/16	2	2-15/16	3-7/8	4-13/16	5-3/4	6-11/16	7-5/8	8-9/16	9-1/2	10-7/16	11-3/8	12-5/16	13-1/4	14-3/16	15-1/8	16-1/16	17	17-15/16
	3/16" bar	1-1/8	2-1/16	3	3-15/16	4-7/8	5-13/16	6-3/4	7-11/16	8-5/8	9-9/16	10-1/2	11-7/16	12-3/8	13-5/16	14-1/4	15-3/16	16-1/8	17-1/16	18
	# of bars	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
<b>11W4</b>	# of bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	3/16" bar	7/8	1-9/16	2-1/4	2-15/16	3-5/8	4-5/16	5	5-11/16	6-3/8	7-1/16	7-3/4	8-7/16	9-1/8	9-13/16	10-1/2	11-3/16	11-7/8	12-9/16	
	# of bars	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
	3/16" bar	13-1/4	13-15/16	14-5/8	15-5/16	16	16-11/16	17-3/8	18-1/16	18-3/4	19-7/16	20-1/8	20-13/16	21-1/2	22-3/16	22-7/8	23-9/16	24-1/4		

### PERCENTAGE OF FREE AREA

### ORDERING INFORMATION

Bar Hgt.	x-Rod Space	15W					19W				
		1/8	3/16	1/4	5/16	3/8	1/8	3/16	1/4	5/16	3/8
3/4	W4	80.4	74.1				83.0	78.0			
3/4	W2	74.5	68.6				76.9	72.3			
1	W4	80.4	74.1	67.3	60.2		83.0	78.0	72.4	66.5	61.7
1	W2	74.5	68.6	61.7	54.3		76.9	72.3	66.4	60.6	55.7
1 1/4	W4	80.4	74.1	67.3	60.2		83.0	78.0	72.4	66.5	61.7
1 1/4	W2	74.5	68.6	61.7	54.3		76.9	72.3	66.4	60.6	55.7
1 1/2	W4	80.4	73.5	67.3	60.2		83.0	77.4	72.4	66.5	61.7
1 1/2	W2	74.5	67.4	61.7	54.3		76.9	71.0	66.4	60.6	55.7
1 3/4	W4		72.5	66.3	60.2		76.3	71.4	66.5	61.7	
1 3/4	W2		65.4	59.9	54.3		68.9	64.4	60.6	55.7	
2	W4		72.5	66.3	60.2		76.3	71.4	66.5	60.5	
2	W2		65.4	59.9	54.3		68.9	64.4	60.6	53.3	
2 1/4	W4		72.5	66.3	60.2		76.3	71.4	66.5	60.5	
2 1/4	W2		65.4	59.9	54.3		68.9	64.4	60.6	58.3	
2 1/2	W4		72.5	66.3	60.2		76.3	71.4	66.5	60.5	
2 1/2	W2		65.4	59.9	54.3		68.9	64.4	60.6	53.3	
2 3/4	W4		72.5	66.3	60.2		76.3	71.4	66.5	60.5	
2 3/4	W2		65.4	59.9	54.3		68.9	64.4	60.6	53.3	
3	W4			65	59			70	65.2	60.5	
3	W2			57.3	52			61.6	57.4	53.3	
3 1/4	W4			65	59			70	65.2	60.5	
3 1/4	W2			57.3	52			61.6	57.4	53.3	
3 1/2	W4			65	59			70	65.2	60.5	
3 1/2	W2			57.3	52			61.6	57.4	53.3	
3 3/4	W4							70	65.2	60.5	
3 3/4	W2							61.6	57.4	53.3	
4	W4			7				70.0	65.2	60.5	
4	W2							61.6	57.4	53.3	

### GRATING

1. Specify type of grating (steel, aluminum, stainless steel)
2. Bearing bar size and center to center of spacing.
3. Span (Bearing Bar Direction)
4. Drawing: Area to be covered, including all cutouts and critical dimensions.
5. Type of anchorage (welded, saddle clip, friction clip, others).
6. Finish: Galvanized or black paint
7. Surfaces: Smooth, serrated or Slip-Not® anti-slip coating.

### STAIR TREADS

1. Type of grating and bearing bar size
2. Nosing: Checker-plate or abrasive
3. Finish: Mill, galvanized, or black paint
4. Surface: Smooth, serrated, or Slip-Not® anti-slip coating.

If you have any further questions, please let us know and we will be happy to help you!

**BANDING BAR** — A flat bar welded to the end of a panel of grating. The bar is mostly the same thickness and depth as the bearing bar.

**BEARING BAR** — The main load carrying bar which runs the same direction as the span.

**CIRCULAR CUT-BAND** — The circular cutting and banding of a panel to conform to a specific layout. Example: grating going around a tank or pipe.

**CROSS BARS** — The connecting bars made from steel strip or rolled bars which extend across the bearing bars, usually perpendicular to them. They are welded, forged or mechanically locked.

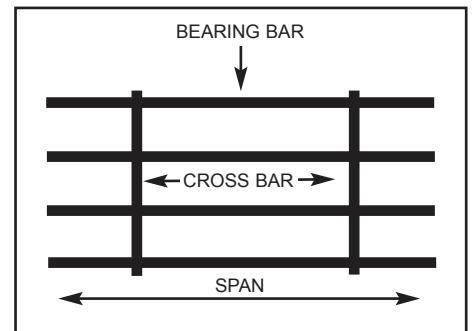
**NOSING** — An L-shaped section, usually made of checker plate or cast iron and cast aluminum abrasive material.

**SERRATED GRATING** — Grating which has that top surfaces of the bearing bar notched, which provides non-skid footing.

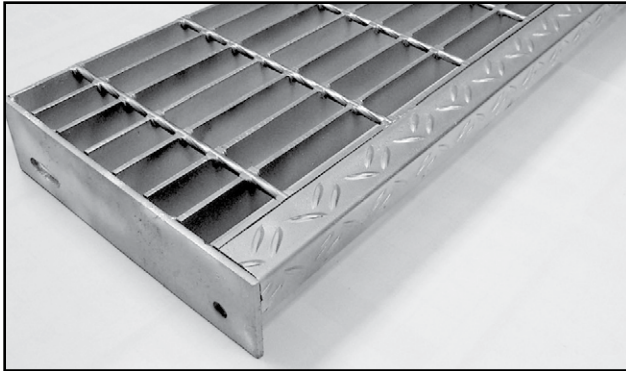
**SPAN** — The distance between points of grating support. Mostly direction of bearing bar.

**STRAIGHT CUT** — The cutting of grating along a straight edge. Mostly figured when cutting around columns or posts.

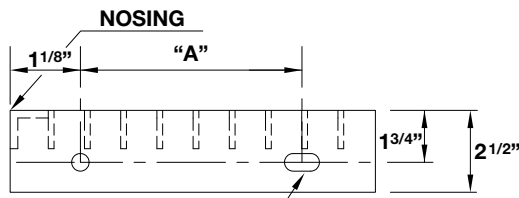
**TOE PLATE** — A flat bar attached flat against the outer edge of grating and projecting above the top surface of grating to form lip or curve.



# STAIR TREADS

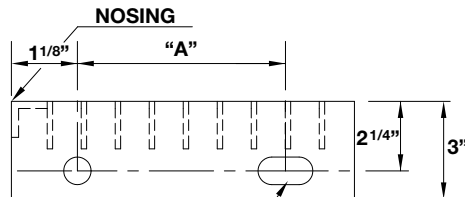


**CROSS SECTION:  
GRATING DEPTH UP TO 1-1/4"**



7/16" DIAMETER  
HOLE & SLOT

**CROSS SECTION:  
GRATING DEPTH FROM 1-1/2" TO 1-3/4"  
AND ALL ALUMINUM TREADS**



7/16" DIAMETER  
HOLE & SLOT

Steel Treads Bearing Bar Size In Inches	Maximum Tread Length*			
	19-4 (1-3/16") On-Center		15-4 (15/16") On-Center	
	Plain	Serrated	Plain	Serrated
1" x 1/8"	2' 7"	2' 3"	3' 0"	2' 6"
1" x 3/16"	3' 5"	2' 10"	4' 0"	3' 4"
1-1/4" x 3/16"	4' 8"	4' 2"	5' 1"	4' 6"
1-1/2" x 3/16"	5' 6"	5' 3"	5' 6"	5' 6"

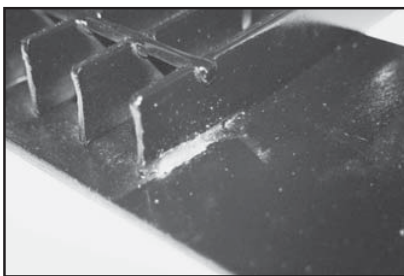
Aluminum Treads Bearing Bar Size In Inches	Maximum Tread Length*			
	19-4 (1-3/16") On-Center		15-4 (15/16") On-Center	
	Plain	Serrated	Plain	Serrated
1" x 3/16"	2' 4"	N.R.	2' 6"	N.R.
1-1/4" x 3/16"	2' 10"	2' 7"	3' 1"	2' 9"
1-1/2" x 3/16"	3' 6"	3' 2"	3' 10"	3' 6"
1-3/4" x 3/16"	4' 3"	3' 10"	4' 8"	4' 3"

Aluminum I-Bars Bearing Bar Size In Inches	Maximum Tread Length*	
	19-4 (1-3/16") On-Center	15-4 (15/16") On-Center
	1" I-Bar	2' 4"
1-1/4" I-Bar	2' 10"	3' 1"
1-1/2" I-Bar	3' 6"	3' 10"
1-3/4" I-Bar	4' 3"	4' 8"

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

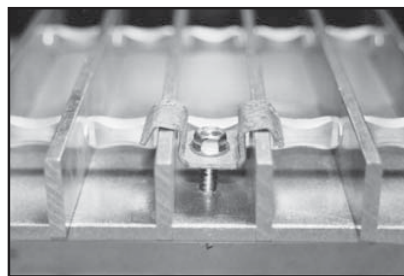
Standard Tread Widths		Dimension
Bearing Bar Centers		A
19-4(1-3/16")	15-4(15/16")	
6-3/16"	6-1/8"	2-1/2"
7-3/8"	7-1/16"	4-1/2"
8-9/16"	8"	4-1/2"
9-3/4"	8-15/16"	7"
10-15/16"	9-7/8"	7"
12-1/8"	10-13/16"	7"

## GRATING ATTACHMENT METHODS



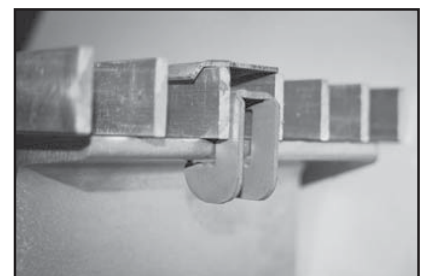
**Welded**

Recommended for permanent installation.



**Saddle Clip**

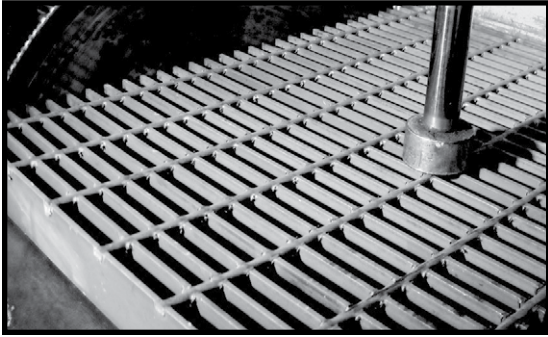
May be attached with self drilling TEK® screws or bolt and nut. Available galvanized steel, stainless steel or aluminum.



**G-Clip®**

Friction Fastener that enables no welding or drilling into support steel. Available galvanized or stainless steel.

# HEAVY-DUTY WELDED STEEL GRATING



Heavy-duty welded grating is strong enough for extreme load areas, such as parking lots, highways, terminals, airports and heavy-duty industrial zones.

**Panel Widths:**

Standard panel widths are 24" (36" available on certain sizes). Lengths up to 20' & 24' certain size. Call for availability.

**Material types:**

Carbon Steel & Stainless Steel

**Finishes**

*Carbon Steel:* Mill, Primed Black Paint & Galvanized

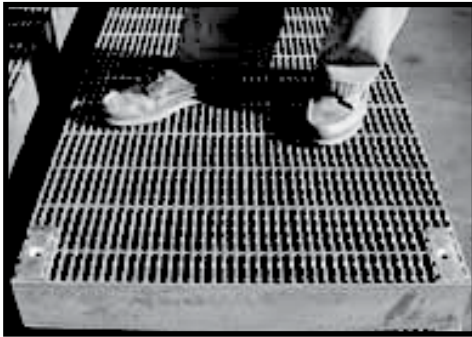
*Stainless Steel:* Mill finish as fabricated; Sandblasted upon request

**Surface Options:**

Smooth or Serrated

**We Also Offer:**

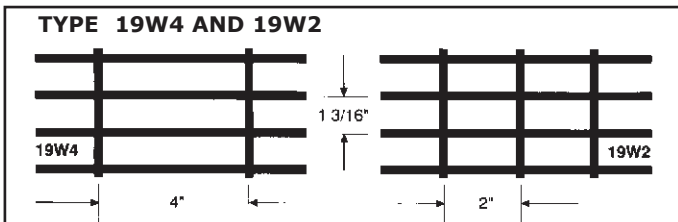
**Non-standard depths above 4"; ADA-approved heavy-duty grating for wheelchairs (& heels); Riveted grates; Grizzly grates**



## LOAD TABLE

### TYPE 19W4 - BEARING BARS 1 3/16" CENTER TO CENTER

Bar Sizes	Weight		Sec Mod	Load	SPAN																
	Lbs. Per 19W4	Sq. Ft 19W2			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"
1 1/2 X 1/4	14.3	15.5	0.984	U	3282	2101	1459	1072	820	648	526	434	364	311	268	233					
				C	3282	2625	2188	1875	1641	1459	1313	1193	1094	1010	938	875					
1 1/2 X 3/8	21.7	23.7	1.477	U	4922	3150	2188	1607	1230	972	788	651	547	402		308					
				C	4922	3938	3281	2813	2461	2188	1969	1790	1641		1406		1230				
2 X 1/4	18.7	19.8	1.750	U	5834	3734	2593	1905	1459	1152	933	771	648	552	477	414	364	323			
				C	5834	4667	3890	3334	2917	2593	2334	2122	1944	1795	1667	1555	1459	1373			
2 X 3/8	28.3	30.3	2.625	U	8750	5600	3889	2857	2188	1726	1400	1157	972		714	547					
				C	8750	7000	5833	5000	4357	3889	3500	3182	2917		2500		2188				
2 1/2 X 1/4	23.1	24.3	2.734	U	9116	5834	4052	2976	2279	1801	1459	1205	1013	863	744	648	570	504	450	404	
				C	9116	7293	6077	5209	4668	4052	3646	3315	3039	2805	2604	2431	2279	2145	2025	1919	
2 1/2 X 3/8	35.0	37.0	4.102	U	13672	8750	6076	4464	3418	2701	2188	1808	1519		1116	854					
				C	13672	10938	9115	7813	6836	6076	5469	4972	4557		3906		3418				
3 X 1/4	27.5	28.6	3.937	U	13128	8401	5834	4286	3282	2593	2101	1735	1459	1243	1072	933	820	727	648	582	526
				C	13128	10502	8751	7501	6564	5834	5251	4774	4376	4040	3751	3501	3282	3089	2917	2764	2625
3 X 3/8	42.1	44.1	5.906	U	19688	12600	8750	6429	4922	3889	3150	2603	2188		1607	1230					
				C	19688	15750	13125	11250	9844	8750	7875	7159	6563		5625		4922				
3 1/2 x 1/4	31.9	33	5.359	U	17865	11433	7940	5833	4466	3528	2858	2362	1985	1691	1458	1270	1116	989	882	792	715
				C	17865	14292	11910	10208	8932	7940	7146	6496	5955	5497	5105	4765	4467	4203	3970	3762	3573
3 1/2 X 3/8	48.1	50.1	8.04	U	26797	17150	11910	8750	6699	5293	4288	3543	2977		2188	1675					
				C	26797	21438	17865	15313	13398	11910	10719	9744	8932		7656		6699				
4 x 1/4	36.3	37.4	7.000	U	23338	14936	10372	7620	5834	4610	3734	3086	2593	2210	1905	1660	1459	1292	1152	1034	933
				C	23338	18670	16558	13335	11669	10372	9335	8486	7779	7180	6668	6223	5834	5491	5186	4913	4667
4 X 3/8	54.7	56.7	10.500	U	35000	22400	15556	11429	8750	6914	5600	4628	3889		2857	2188					
				C	35000	28000	23333	20000	17500	15556	14000	12727	11667		10000		8750				



**Additional Engineering Data & Information Available Upon Request.**

# HEAVY-DUTY WELDED STEEL GRATING

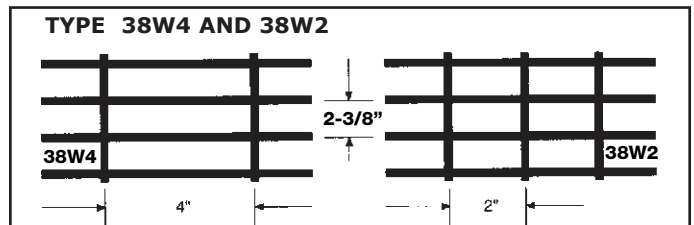
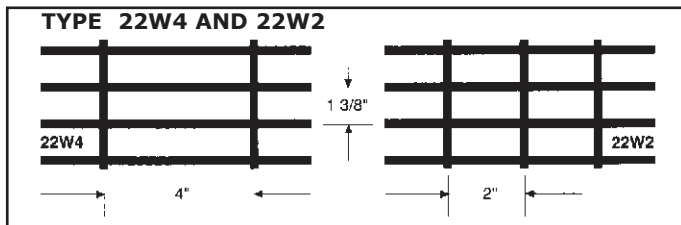
## LOAD TABLES

### TYPE 22W4- BEARING BARS 1 3/8" CENTER TO CENTER

Bar Sizes	Weight		Sec Mod	Load	SPAN																
	Lbs. Per	Sq. Ft			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"
	22W4	22W2																			
1 1/2 x 1/4	12.6	13.7	0.843	U	2813	1800	1250	918	703	556	450	372	313	266	230	200					
				C	2813	2250	1875	1607	1406	1250	1125	1023	938	865	804	750					
1 1/2 X 3/8	19.2	21.2	1.266	U	4219	2700	1875	1378	1055	833	675	558	469		344		264				
				C	4219	3375	2813	2411	2109	1875	1688	1534	1406		1205		1055				
2 x 1/4	16.4	17.5	1.500	U	5000	3200	2222	1632	1250	988	800	661	556	473	408	356	313	277			
				C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1583	1429	1333	1250	1176			
2 X 3/8	24.9	26.9	2.250	U	7500	4800	3333	2449	1875	1481	1200	992	833		612		469				
				C	7500	6000	5000	4286	3750	3333	3000	2727	2500		2143		1875				
2 1/2 X 1/4	20.3	21.4	2.344	U	7813	5000	3472	2551	1953	1543	1250	1033	868	740	638	556	488	433	385	346	
				C	7813	6250	5208	4464	3906	3472	3125	2841	2604	2404	2232	2083	1953	1838	1736	1645	
2 1/2 X 3/8	30.7	32.7	3.516	U	11719	7500	5208	3827	2930	2315	1875	1550	1302		957		732				
				C	11719	9375	7813	6696	5859	5208	4688	4261	3906		3348		2930				
3 X 1/4	24.1	25.2	3.375	U	11250	7200	5000	3673	2813	2222	1800	1487	1250	1065	918	800	703	623	556	499	450
				C	11250	9000	7500	6429	5625	5000	4500	4091	3750	3462	3214	3000	2813	2647	2500	2368	2250
3 X 3/8	36.9	38.9	5.063	U	16875	10800	7500	5510	4219	3333	2700	2231	1875		1378		1055				
				C	16875	13500	11250	9643	8438	7500	6750	6136	5625		4821		4219				
3 1/2 X 1/4	27.9	29	4.594	U	15313	9800	6806	5000	3828	3025	2450	2025	1701	1450	1250	1089	957	848	756	679	613
				C	15313	12250	10208	8750	7656	6806	6125	5568	5104	4712	4375	4083	3828	3603	3403	3224	3063
3 1/2 X 3/8	42.1	44.1	6.891	U	22969	14700	10208	7500	5742	4537	3675	3037	2552		1875		1435				
				C	22969	18375	15313	13125	11484	10208	9188	8352	7656		6563		5742				
4 X 1/4	31.7	32.8	6.000	U	20000	12800	8888	6531	5000	3950	3200	2645	2222	1893	1633	1422	1250	1107	988	856	800
				C	20000	16000	13333	11429	10000	8889	8000	7273	6667	6154	5714	5333	5000	4706	4444	4211	4000
4 X 3/8	47.9	49.9	9.000	U	30000	19200	13333	9796	7500	5926	4800	3967	3333		2449		1875				
				C	30000	24000	20000	17143	15000	13333	12000	10909	10000		8571		7500				

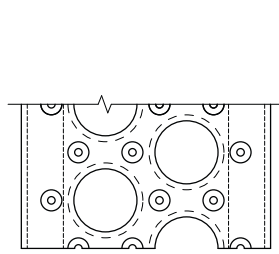
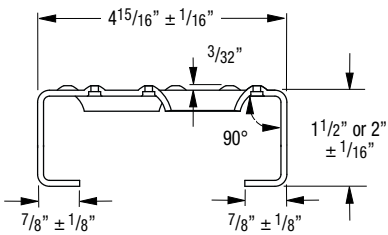
### TYPE 38W4 - BEARING BARS 2 3/8" CENTER TO CENTER

Bar Sizes	Weight		Sec Mod	Load	SPAN																
	Lbs. Per	Sq. Ft			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"
	38W4	38W2																			
1 1/2 X 1/4	8	9.1	0.516	U	1719	1100	764	561	430	340	275	227	191	163	140	122					
				C	1719	1375	1146	982	859	764	688	625	573	529	491	458					
1 1/2 x 3/8	12.2	14.2	0.773	U	2578	1650	1146	842	645	509	413	341	286		210		161				
				C	2578	2063	1719	1473	1289	1146	1031	938	859		737		645				
2 X 1/4	10.2	11.3	0.917	U	3056	1956	1358	998	764	604	489	404	340	289	249	217	191	169			
				C	3056	2444	2037	1746	1528	1358	1222	1111	1019	940	873	815	764	719			
2 x 3/8	15.6	17.6	1.375	U	4583	2933	2037	1497	1146	905	733	606	509		374		286				
				C	4583	3667	3056	2619	2292	2037	1833	1667	1528		1310		1146				
2 1/2 X 1/4	12.5	13.6	1.432	U	4774	3056	2122	1559	1194	943	764	631	530	452	390	340	298	264	236	212	
				C	4774	3819	3183	2728	2387	2122	1910	1736	1591	1469	1364	1273	1194	1123	1061	1005	
2 1/2 x 3/8	19.0	21.0	2.148	U	7161	4583	3183	2338	1790	1415	1146	947	796		585		448				
				C	7161	5729	4774	4092	3581	3183	2865	2604	2387		2046		1790				
3 X 1/4	14.7	15.8	2.063	U	6875	4400	3058	2245	1719	1358	1100	909	764	651	561	489	430	381	340	305	275
				C	6875	5500	4583	3929	3438	3056	2750	2500	2292	2115	1964	1833	1719	1618	1528	1447	1375
3 3/8	22.7	24.7	3.094	U	10313	6600	4583	3367	2578	2037	1650	1384	1146		842		645				
				C	10313	8250	6875	5893	5156	4583	4125	3750	3438		2946		2578				
3 1/2 X 1/4	17	18.1	2.807	U	9358	5989	4159	3056	2339	1848	1497	1237	1040	886	764	665	585	518	462	415	374
				C	9358	7486	6238	5347	4679	4159	3743	3403	3119	2879	2674	2495	2339	2202	2079	1970	1872
3 1/2 x 3/8	25.8	27.8	4.211	U	14036	8983	6238	4583	3509	2773	2246	1856	1560		1146		877				
				C	14036	11229	9358	8021	7018	6238	5615	5104	4679		4010		3509				
4 X 1/4	19.3	20.4	3.667	U	12222	7822	5432	3991	3056	2414	1956	1616	1358	1157	998	869	764	677	604	542	489
				C	12222	9778	8148	6984	6111	5432	4889	4444	4074	3761	3492	3259	3056	2876	2716	2573	2444
4 x 3/8	29.2	31.2	5.500	U	18333	11733	8148	5986	4583	3621	2993	2424	2037		1497		1146				
				C	18333	14667	12222	10476	9167	8148	7333	6667	6111		5238		4583				

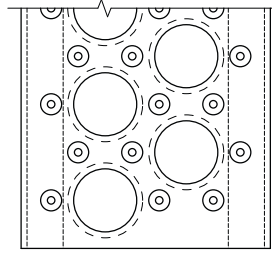


# PERF-O GRIP® SAFETY PLANKS

## 2-HOLE PLANK - 5" WIDTH



Perf-O-Grip



Perf-O-Grip 2



### 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		Span																	
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 13 ga.	1 1/2" (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	
	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	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
Stainless Steel 16 ga.	2" (50.8)	2.1 (3.1)	P22016S * A22016S	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	
Stainless Steel 14 ga.	2" (50.8)	2.1 (3.1)	P22014S * A22014S	U	3684	2410	1673	1230	942	744	602	498	418	357	307	267	235	186	151	125	105	
				D	.06	.08	.13	.17	.22	.27	.34	.41	.49	.57	.66	.77	.87	1.10	1.36	1.65	1.95	
				C	1569	1255	1046	896	784	697	627	570	523	482	448	418	392	349	314	286	262	
				D	.05	.07	.10	.14	.17	.22	.27	.33	.39	.46	.54	.61	.70	.88	1.09	1.31	1.57	

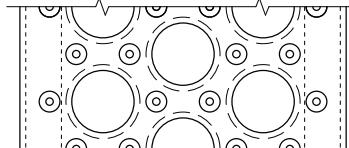
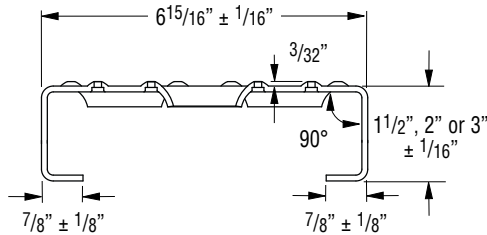
\* Perf-O Grip : To order standard Perf-O Grip Grating use part number "Pxxxx".

Perf-O Grip 2 : To order New Perf-O Grip 2™ Grating use part number "Axxxx". End margins are standard on new Perf-O Grip 2™ Grating 2-Hole through 6-Hole Plank only (5" through 12" widths). Standard lengths are 10'-0" and 12'-0". Longer lengths of 20'-0" and 24'-0" are available on both Perf-O Grip and Perf-O Grip 2™. Cons

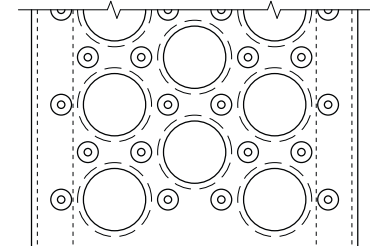


# PERF-O GRIP®-SAFETY PLANKS

## 2-HOLE PLANK - 7" WIDTH



Perf-O-Grip



Perf-O-Grip 2

### Plank Selection/Design Tables

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

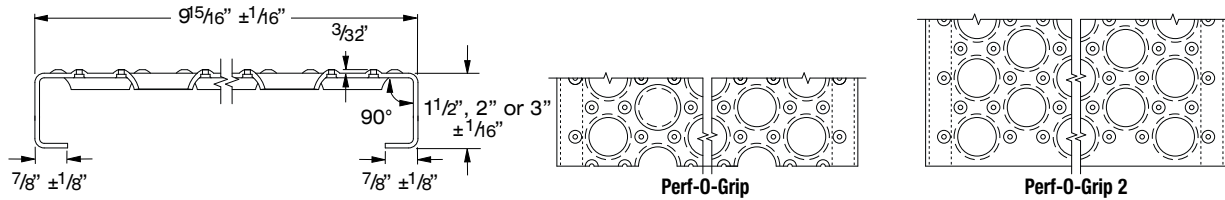
Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number		Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1 1/2" (38.1)	3.0 (4.4)	P31513* A31513	U	1536	984	685	504	387	306	249	206	174	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.	1 1/2" (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
Stainless Steel 16 ga.	2" (50.8)	2.4 (3.6)	P32016S* A32016S	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
Stainless Steel 14 ga.	2" (50.8)	2.8 (4.1)	P32014S* A32014S	U	1879	1571	1091	801	614	485	393	325	273	232	200	175	153	121	98	81	69
				D	.04	.07	.10	.14	.18	.22	.27	.33	.40	.47	.54	.62	.70	.89	1.10	1.33	1.59
				C	1432	1145	954	818	715	637	573	521	478	440	409	382	358	318	287	261	239

\* Perf-O Grip: To order standard Perf-O Grip Grating use part number "Pxxxx".

Perf-O Grip 2: To order New Perf-O Grip 2™ Grating use part number "Axxxx". End margins are standard on new Perf-O Grip 2™ Grating 2-Hole through 6-Hole Plank only (5" through 12" widths). Standard lengths are 10'-0" and 12'-0". Longer lengths of 20'-0" and 24'-0" are available on both Perf-O Grip and Perf-O Grip 2™. Consult factory.

# PERF-O GRIP® SAFETY PLANKS

## 5-HOLE PLANK - 10" WIDTH



### Plank Selection/Design Tables

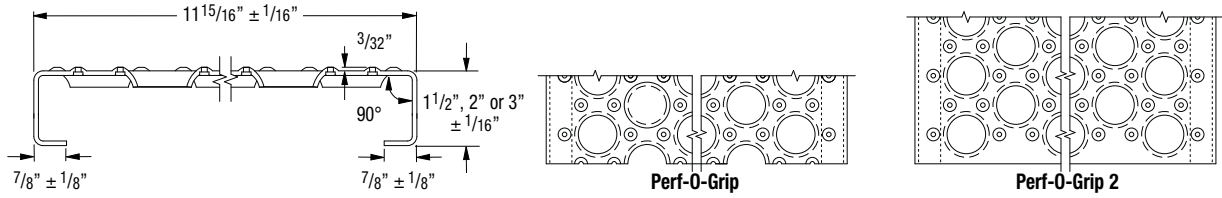
Allowable Loads and Deflections: U=Uniform Load (lb./ft.) C=Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number		Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 13 ga.	1 1/2" (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
	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
Steel 11 ga.	1 1/2" (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
	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
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	
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
Stainless Steel 16 ga.	2" (50.8)	2.7 (4.0)	P52016S* A52016S	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
Stainless Steel 14 ga.	2" (50.8)	3.2 (4.7)	P52014S* A52014S	U	1296	1037	864	741	648	576	530	485	445	410	381	355	334	296	266	242	222
				D	.04	.07	.10	.13	.17	.22	.27	.32	.38	.45	.52	.60	.68	.86	1.07	1.28	1.54
				C	1296	1037	864	741	648	576	530	485	445	410	381	355	334	296	266	242	222

\* Perf-O Grip : To order standard Perf-O Grip Grating use part number "Pxxxx".  
 Perf-O Grip 2 : To order New Perf-O Grip 2™ Grating use part number "Axxxx". End margins are standard on new Perf-O Grip 2™ Grating 2-Hole through 6-Hole Plank only ( 5" through 12" widths). Standard lengths are 10'-0" and 12'-0".  
 Longer lengths of 20'-0" and 24'-0" are available on both Perf-O Grip and Perf-O Grip 2™. Consult factory.

# PERF-O GRIP® SAFETY PLANKS

## 6-HOLE PLANK - 12" WIDTH



### Plank Selection/Design Tables

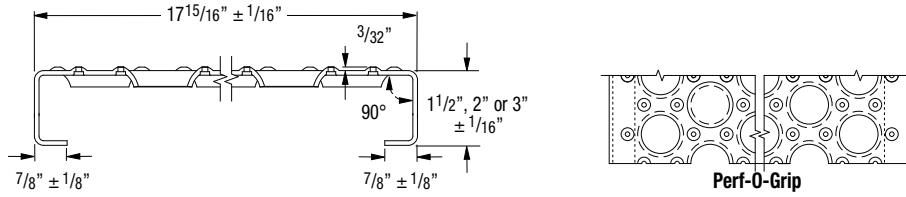
Allowable Loads and Deflections: U=Uniform Load (lb./ft. <sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																				
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"				
Steel 13 ga.	1 1/2" (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	.82	1.02	1.16	1.43	1.68		
				C	960	819	684	588	516	460	416	380	349	325	303	285	268	241	218	198	182			
	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	.63	.77	.85	1.03	1.25		
				C	1442	1154	961	862	756	673	608	555	509	472	440	413	388	349	317	291	270			
Steel 11 ga.	1 1/2" (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			
	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			
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				
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			
Stainless Steel 16 ga.	2" (50.8)	3.2 (4.7)	P62016S* A62016S	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			
Stainless Steel 14 ga.	2" (50.8)	3.8 (5.6)	P62014S* A62014S	U	1455	931	647	475	365	288	233	193	162	138	119	104	82	65	54	46	39			
				D	.04	.07	.10	.13	.17	.21	.26	.32	.38	.44	.51	.59	.65	.83	1.02	1.23	1.47			
				C	1416	1133	944	809	708	629	583	529	486	448	416	389	365	323	291	265	242			
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.35	.41	.47	.54	.68	.84	1.02	1.21			

\* **Perf-O Grip** : To order standard Perf-O Grip Grating use part number "Pxxxxx".  
**Perf-O Grip 2** : To order New Perf-O Grip 2™ Grating use part number "Axxxxx". End margins are standard on new Perf-O Grip 2™ Grating 2-Hole through 6-Hole Plank only (5" through 12" widths). Standard lengths are 10'-0" and 12'-0". Longer lengths of 20'-0" and 24'-0" are available on both Perf-O Grip and Perf-O Grip 2™. Cons

# PERF-O GRIP® SAFETY PLANKS

## 10-HOLE PLANK - 18" WIDTH

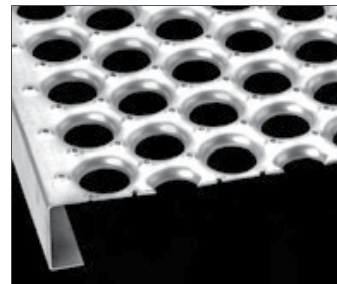


### Plank Selection/Design Tables

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

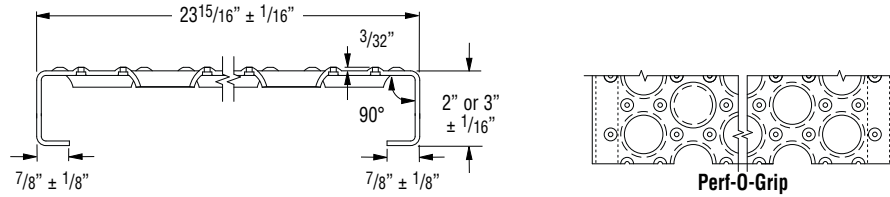
Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number		Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
					U	D	C	D	U	D	C	D	U	D	C	D	U	D	C	D	U
Steel 13 ga.	1 1/2" (38.1)	5.7 (8.5)	P101513	U	714	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
	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
Steel 11 ga.	1 1/2" (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
	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
	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
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

**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.



# PERF-O GRIP® SAFETY PLANKS

## 13-HOLE PLANK - 24" WIDTH



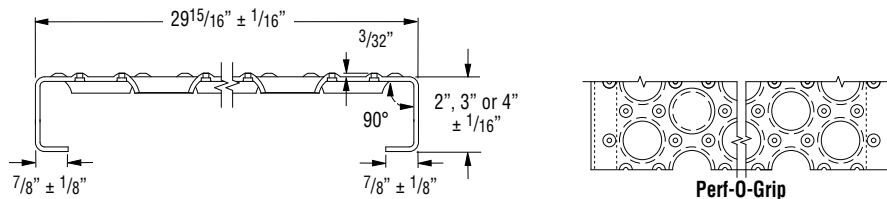
### Plank Selection/Design Tables

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./in. ft. (kg/m)	Catalog Number	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
	3" (76.2)	9.8 (8.914.5)	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". Longer lengths of 20'-0" and 24'-0" are available.

## 16-HOLE PLANK - 30" WIDTH



### Plank Selection/Design Tables

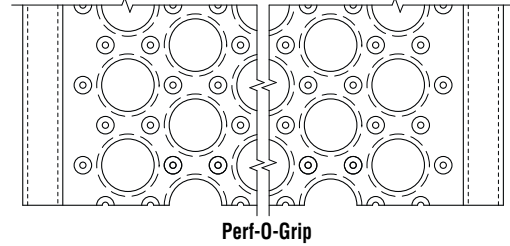
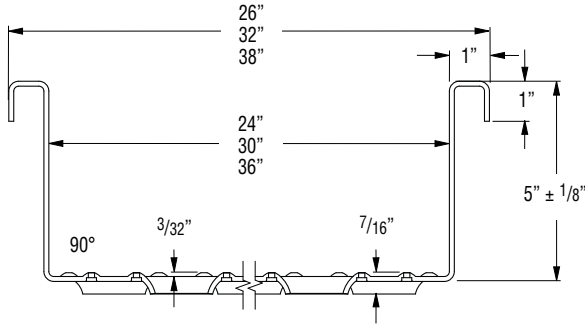
Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	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
	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
	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". Longer lengths of 20'-0" and 24'-0" are available.

# PERF-O GRIP® SAFETY WALKWAYS

## WALKWAY - 24", 30" & 36" WIDTHS



### Walkway Selection/Design Tables (Note: Consult factory for data on 36" width)

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

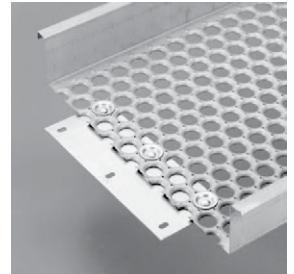
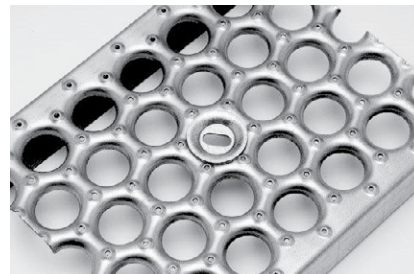
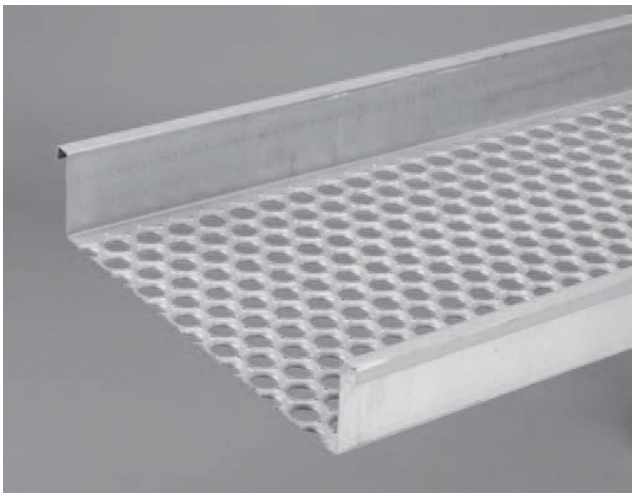
Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
				U	D	C	D	U	D	C	D	U	D	C	D	U	D	C	D	U	D
Steel 11 ga.	5" (127.0)	11.8 (17.5)	P135011W	U	5751	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
	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.

## BOLT SEATS

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

Available in mill-galvanized steel, aluminum and stainless steel. Hardware is not provided.



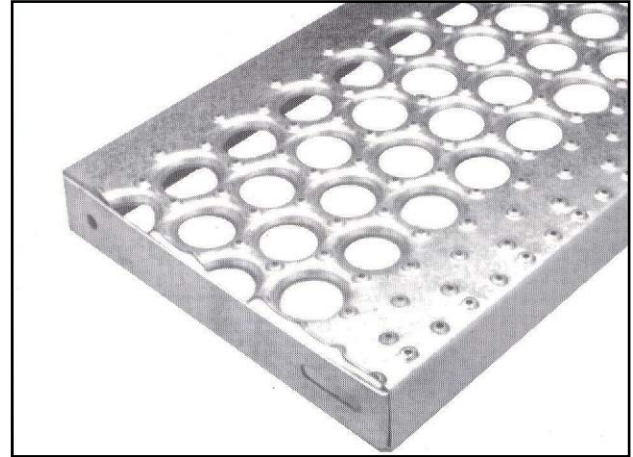
# PERF-O GRIP® STAIR TREADS



## Perf-O-Grip Stair Treads (standard)

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" and 36" lengths.
- 5", 7" 10" and 12" (nominal) widths.
- 1 1/2" and 2" channel heights.

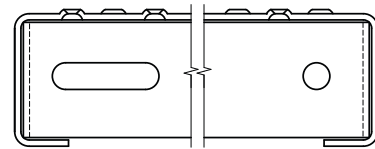


## Stair Treads (custom)

Stair Treads are also available with Traction Tread™ and other options.

## Carrier Plates

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



Traction Tread Carrier Plate

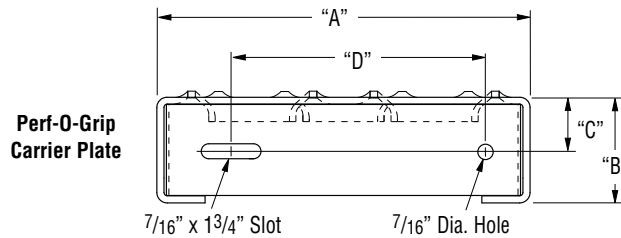


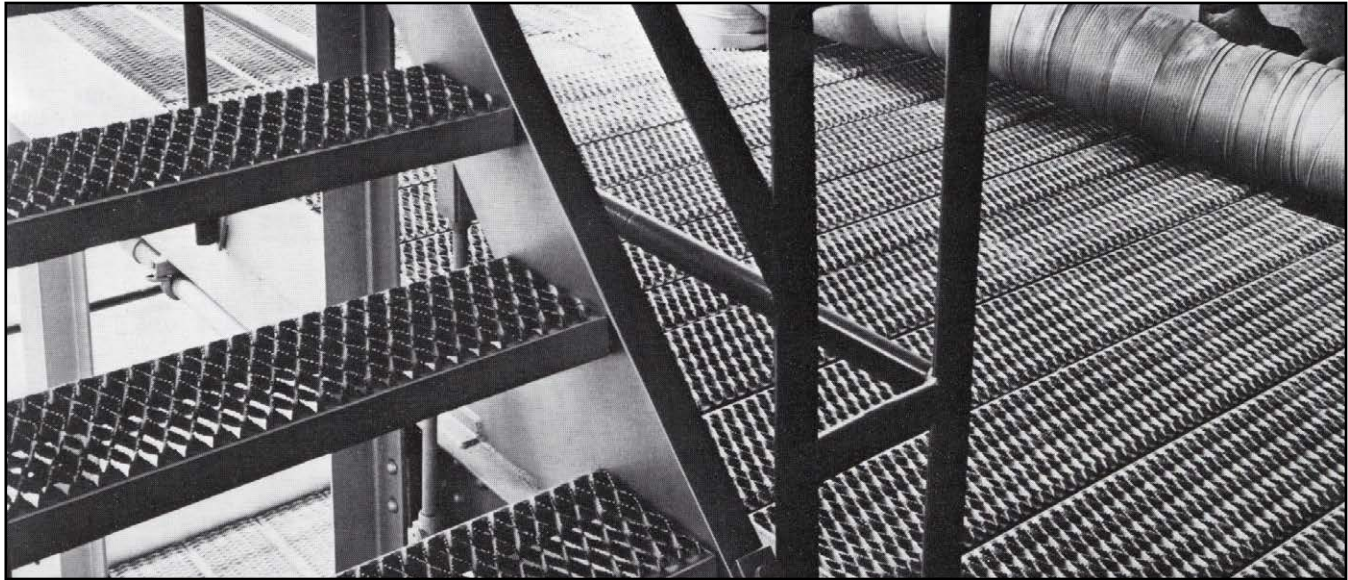
Table for Perf-O-Grip Treads

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

# GRIP STRUT® STAIR TREADS

## Safe Loading — Stair Treads

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.



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

		2-Diamond 4 <sup>3</sup> / <sub>4</sub> " Depth				3-Diamond 7" Depth				4-Diamond 9 <sup>1</sup> / <sub>2</sub> " Depth				5-Diamond 11 <sup>3</sup> / <sub>4</sub> " Depth			
Material		Steel				Steel				Steel				Steel			
Gauge		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"	1 <sup>1</sup> / <sub>2</sub> " (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"	1 <sup>1</sup> / <sub>2</sub> " (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"	1 <sup>1</sup> / <sub>2</sub> " (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'-0".

		2-Diamond 4 <sup>3</sup> / <sub>4</sub> " Depth				3-Diamond 7" Depth				4-Diamond 9 <sup>1</sup> / <sub>2</sub> " Depth				4-Diamond 9 <sup>1</sup> / <sub>2</sub> " Depth				5-Diamond 11 <sup>3</sup> / <sub>4</sub> " Depth				5-Diamond 11 <sup>3</sup> / <sub>4</sub> " Depth			
Material		Aluminum				Aluminum				Aluminum				Stainless Steel				Aluminum				Stainless Steel			
Gauge		.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	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	481	867	687	610	483	525	416	396	388	607	595	394	386	338	331
2'-6"	2" (50.8)	850	420	1191	590	551	402	773	564	388	392	555	550	390	387	336	336	253	388	388	540	252	381	216	339
3'-0"	2" (50.8)	590	350	827	491	383	335	537	470	270	327	385	458	271	323	233	279	176	321	270	450	175	319	150	275
4'-0" (1)	2" (50.8)	332	263	465	369	215	252	302	353	152	245	216	344	152	244	131	210	99	241	151	338	98	241	84	221

(1) Intermediate stringer is recommended for spans over 4'-0".



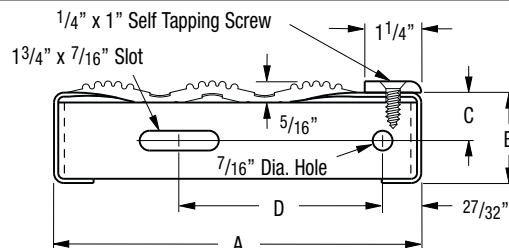
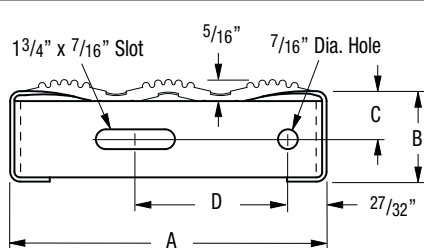
# GRIP STRUT® STAIR TREADS

## Standard Sizes and Recommended Spans (1)

Steel			Standard Stair Treads		Stair Treads with Abrasive Nosing	
Span in.	Gauge	Channel Depth - in.	Catalog Number	Size in.	Catalog Number	Size in.
Up to 30"	14	1 1/2"	T-21514	2-Diamond - 4 3/4"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8 1/8"
			T-41514	4-Diamond - 9 1/2"	T-41514-N	4-Diamond - 10 1/2"
			T-51514	5-Diamond - 11 3/4"	--	--
30" to 36"	14	1 1/2"	T-21514	2-Diamond - 4 3/4"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8 1/8"
			T-41514	4-Diamond - 9 1/2"	T-41514-N	4-Diamond - 10 1/2"
			T-51514	5-Diamond - 11 3/4"	--	--
36" to 42"	14 ga.	1 1/2"	T-21514	2-Diamond - 4 3/4"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8 1/8"
			T-41514	4-Diamond - 9 1/2"	T-41514-N	4-Diamond - 10 1/2"
			T-51514	5-Diamond - 11 3/4"	--	--
42" to 48"	14 ga.	2"	T-21514	2-Diamond - 4 3/4"	--	--
			T-31514	3-Diamond - 7"	T-31514-N	3-Diamond - 8 1/8"
			T-41514	4-Diamond - 9 1/2"	T-41514-N	4-Diamond - 10 1/2"
			T-51514	5-Diamond - 11 3/4"	--	--
<b>Aluminum</b>						
Up to 42"	.080"	2"	T-22012-A	2-Diamond - 4 3/4"	--	--
			T-32012-A	3-Diamond - 7"	T-32012-A-N	3-Diamond - 8 1/8"
			T-42012-A	4-Diamond - 9 1/2"	T-42012-A-N	4-Diamond - 10 1/2"
			T-52012-A	5-Diamond - 11 3/4"	--	--
Up to 48"	.100"	2"	T-22010-A*	2-Diamond - 4 3/4"	--	--
			T-32010-A*	3-Diamond - 7"	T-32010-A-N	3-Diamond - 8 1/8"
			T-42010-A*	4-Diamond - 9 1/2"	T-42010-A-N	4-Diamond - 10 1/2"
			T-52010-A*	5-Diamond - 11 3/4"	--	--
<b>Stainless Steel</b>						
Up to 30"	Type 316L 16 ga.	2"	T-42016-SL	4-Diamond - 9 1/2"	--	--
			T-52016-SL	5-Diamond - 11 3/4"	--	--
Up to 36"	Type 304 16 ga.	2"	T-42012-A	4-Diamond - 9 1/2"	--	--
			T-52012-A	5-Diamond - 11 3/4"	--	--

(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.



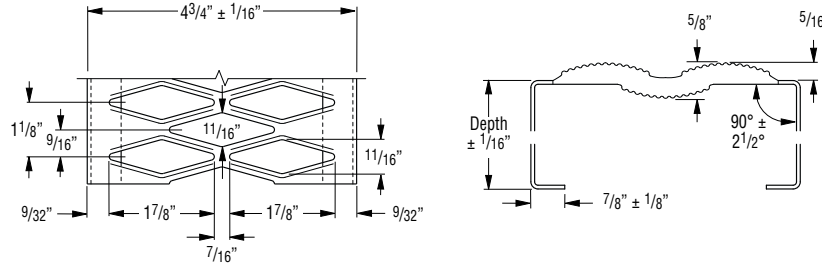
## Steel, Aluminum and Stainless Steel (1)

Standard				With Abrasive Nosing			
A	B	C	D	A	B	C	D
4 3/4" (2-Diamond)	1 1/2" 2"	3/4" 1"	2 5/8" 2 5/8"	-- --	-- --	-- --	-- --
7" (3-Diamond)	1 1/2" 2"	3/4" 1"	3 3/8" 3 3/8"	8 1/8" (3-Diamond)	1 1/2" 2"	3/4" 1"	4 1/2" 4 1/2"
9 1/2" (4-Diamond)	1 1/2" 2"	3/4" 1"	5 7/8" 5 7/8"	10 1/2" (4-Diamond)	1 1/2" 2"	3/4" 1"	6 7/8" 6 7/8"
11 3/4" (5-Diamond)	1 1/2" 2"	3/4" 1"	8 1/8" 8 1/8"	-- --	-- --	-- --	-- --

(1) Stainless Steel not available in 2-Diamond or 3-Diamond widths.

# GRIP STRUT® SAFETY PLANKS

## 2-DIAMOND PLANK - 4 3/4" 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 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	U	Span																
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
Steel 14 ga.	1 1/2" (38.1)	2.3 (3.42)	21514	U	1324	849	591	435	334	265	215	179	151								
				D	.06	.10	.14	.20	.26	.32	.40	.49	.58								
				C	524	420	351	301	265	236	213	195	179								
	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		
	2 1/2" (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
Steel 12 ga.	1 1/2" (38.1)	3.2 (4.76)	21512	U	1751	1123	782	576	443	351	286	237	200	172	149	131	116				
				D	.07	.11	.15	.21	.27	.35	.43	.52	.62	.74	.86	.99	1.14				
				C	693	556	464	399	350	313	283	258	238	221	206	194	183				
	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
	2 1/2" (63.5)	4.0 (5.95)	22512	U	4179	2676	1860	1368	1049	830	673	557	469	400	346	302	266	211	172	143	121
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.51	.59	.67	.86	1.07	1.30	1.55
				C	1654	1324	1104	948	830	739	666	606	557	515	479	448	421	376	341	312	288
Alum. Alloy 5052 .080"	1 1/2"* (38.1)	.85 (1.26)	21512-A	U	998	639	443	326	248	196	159	131	110	94							
				D	.10	.15	.22	.31	.40	.51	.63	.76	.90	1.08							
				C	395	316	263	226	197	175	157	143	131	121							
	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						
	2 1/2"* (63.5)	1.00 (1.48)	22512-A	U	2199	1407	977	718	550	434	352	291	244	208	179	156	137				
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12				
				C	870	696	580	497	435	387	348	316	290	268	249	232	218				
Alum. Alloy 5052 .100"	1 1/2"* (38.1)	1.08 (1.60)	21510-A	U	1136	727	505	371	284	224	181	149	125	107							
				D	.09	.15	.22	.30	.39	.50	.63	.76	.90	1.08							
				C	450	360	300	257	225	200	179	162	149	137							
	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				
	2 1/2"* (63.5)	1.31 (1.95)	22510-A	U	2820	1805	1253	921	705	557	451	373	313	267	230	201	176				
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15				
				C	1116	893	744	638	558	496	446	406	372	343	319	298	279				

\* Available on special order.

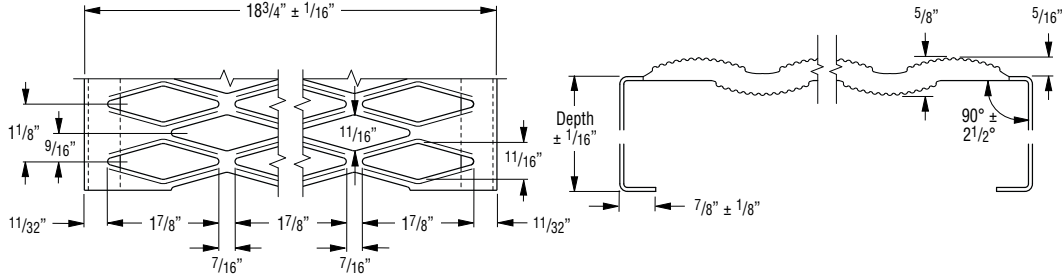






# GRIP STRUT® SAFETY PLANKS

## 8-DIAMOND PLANK - 18 3/4" WIDTH



**Product Selection/Design Tables**

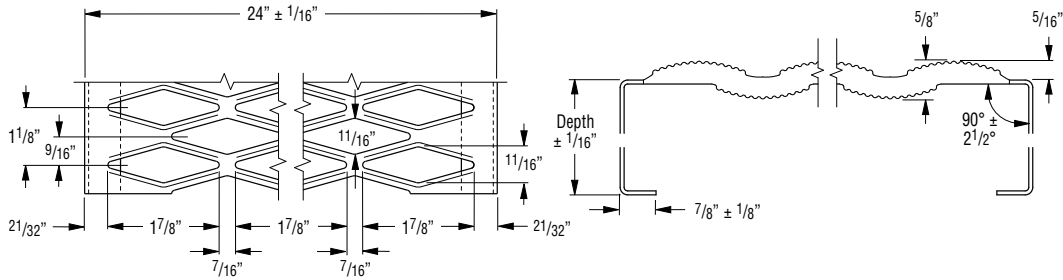
Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
 Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																			
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"			
Steel 14 ga.	1 1/2" (38.1)	6.1 (9.1)	81514	U	337	217	151	112	86	69	56	47											
				D	.33	.27	.26	.29	.33	.38	.45	.55											
				C	263	211	178	153	135	121	110	101											
	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							
	2 1/2" (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						
Steel 12 ga.	1 1/2" (38.1)	8.5 (12.6)	81512	U	446	287	201	148	115	91	75	63	53	46	40								
				D	.27	.22	.22	.26	.32	.39	.47	.56	.67	.80	.92								
				C	359	280	235	203	179	161	146	135	125	117	110								
	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						
	2 1/2" (63.5)	9.2 (13.7)	82512	U	810	680	473	348	267	212	172	143	120	103	89	78	69	55	45				
				D	.33	.31	.27	.26	.27	.29	.32	.37	.42	.49	.55	.63	.72	.90	1.12				
				C	800	663	553	475	416	371	334	307	282	262	244	229	216	194	177				
	2 1/2" (63.5)	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		
Alum. Alloy 5052 .080"	1 1/2" (38.1)	2.11 (3.13)	81512-A	U	253	162	112	83															
				D	.49	.40	.39	.44															
				C	198	158	132	113															
	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											
	2 1/2" (63.5)	2.29 (3.40)	82512-A	U	308	308	248	182	139	110	89	74	62	53									
				D	.51	.57	.54	.49	.50	.52	.57	.65	.73	.83									
				C	350	348	290	249	218	194	174	158	145	134									
	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							
Alum. Alloy 5052 .100"	1 1/2" (38.1)	2.68 (3.98)	81510-A	U	288	184	128	94	72	57													
				D	.41	.36	.36	.40	.47	.56													
				C	225	180	150	129	113	100													
	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									
	2 1/2" (63.5)	2.91 (4.33)	82510-A	U	457	457	317	233	179	141	114	94	79	68	58	51	45						
				D	.55	.62	.51	.48	.48	.52	.58	.64	.73	.84	.94	1.07	1.20						
				C	550	447	372	319	279	248	223	203	186	172	160	149	140						
	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						

\* Available on special order.

# GRIP STRUT® SAFETY PLANKS

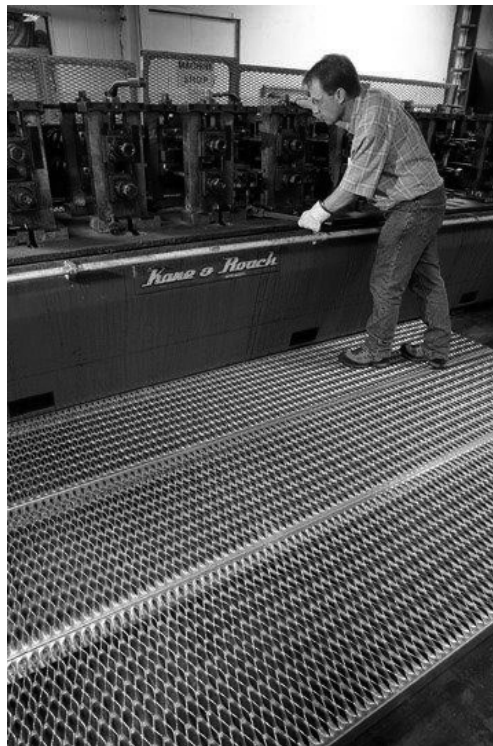
## 10-DIAMOND PLANK - 24" WIDTH



### Product Selection/Design Tables

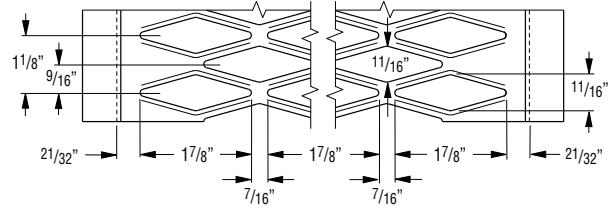
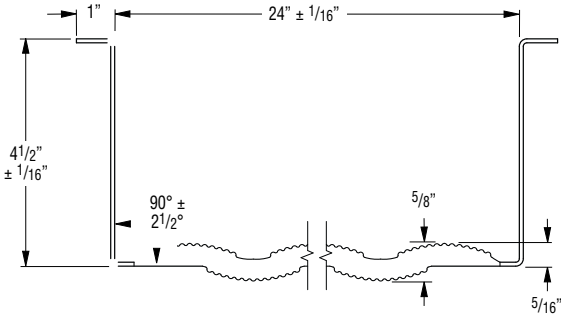
Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
 Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	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						
	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			
Steel 12 ga.	2" (50.8)	19.4 (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					
	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	.26	.27	.29	.30	.32	.36	.41	



# GRIP STRUT® SAFETY WALKWAYS

## 10-DIAMOND WALKWAY - 24" WIDTH



### Product Selection/Design Tables

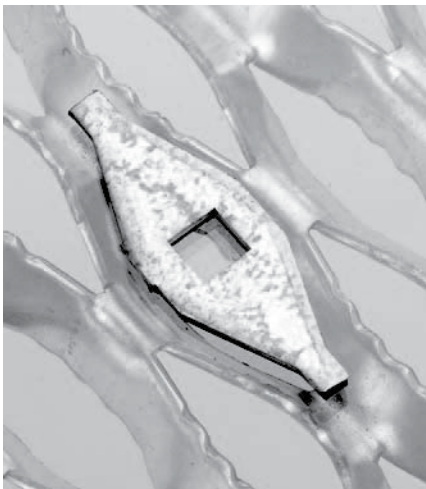
Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
 Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Weight lb./in. ft. (kg/m)	Catalog Number		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	.33	.35	.37	.40

## Grip Strut® Engineering & Strut Data Available Upon Request

### Anchoring Device Clip

Diamond Anchor is shaped to fit in diamond opening. Punched to receive head bolt with square shank. Does not include bolts, nuts or washers. Standard finish is hot-dipped galvanized before fabrication. Also available in 304 stainless steel.





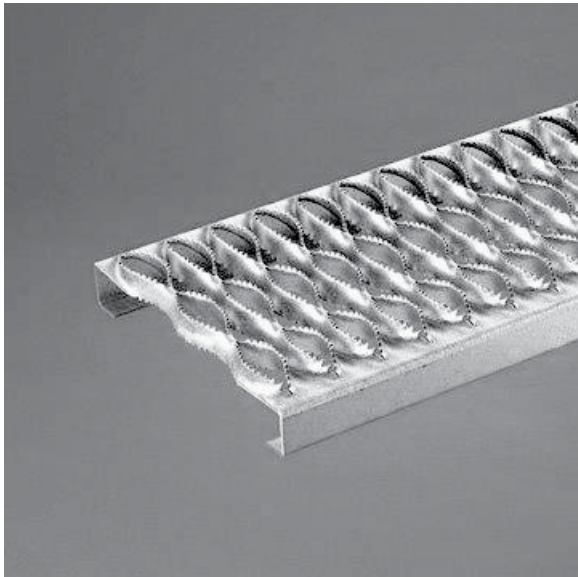
# HEAVY-DUTY GRIP STRUT® SAFETY FLOORING

## HEAVY-DUTY GRIP STRUT® PLANKS AVAILABLE IN LENGTHS UP TO 24'

Availability of Heavy-Duty Grip Strut Planks\*

Material	Thickness	Walkway Width				
		36"	27 <sup>3</sup> / <sub>4</sub> "	24"	13 <sup>3</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>4</sub> "
Steel	11 ga.	✓	✓	✓	✓	✓
	10 ga.	✓	✓	✓	✓	✓
	9 ga.	✓	✓	✓	✓	✓
Aluminum	.125"	--	--	--	✓	✓

\* All in depths of 2", 2<sup>1</sup>/<sub>2</sub>", 3" and 4".



## HEAVY-DUTY GRIP STRUT® WALKWAYS AVAILABLE IN LENGTHS UP TO 24'

Availability of Heavy-Duty Grip Strut Walkways\*

Material	Thickness	Walkway Width		
		36"	30"	24"
Steel	11 ga.	✓	✓	✓
	10 ga.	✓	✓	✓
	9 ga.	✓	✓	✓
Aluminum	.125"	--	✓	✓

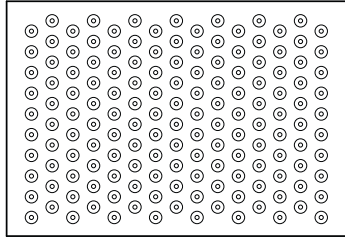
\* Standard toeboard depth of 5".

Engineering & Load Data Provided Upon Request

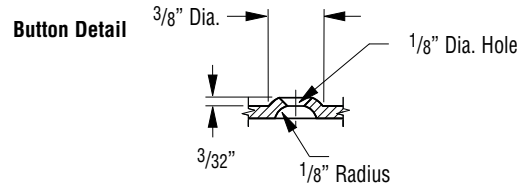
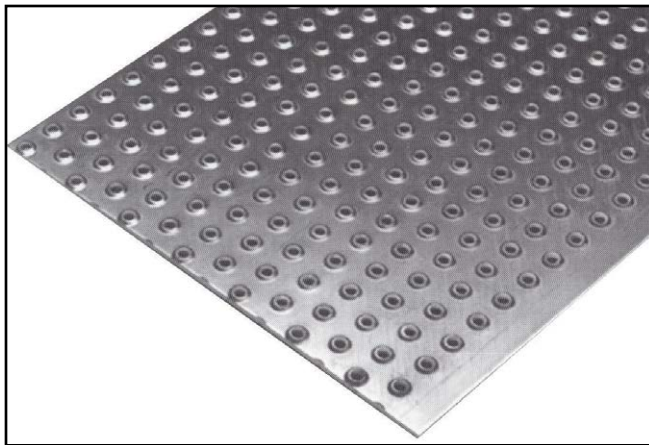
# TRACTION TREAD™ SAFETY FLOORING

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. Traction Tread is also appropriate for commercial applications where pedestrian traffic is a consideration, perfectly suited for ADA-compliant requirements.

Traction Tread is easily adapted for a multitude of applications, offering a safe walking-working surface for walkways, ramps, stair treads and equipment platforms. Traction Tread is ideal for the manufacture of special and fabricated products, and is often used as a reconditioning material over existing surfaces that do not provide slip-resistance.



**Standard Pattern**



Traction Tread™ flooring is readily available in stock sheets designed for secondary fabrication requirements:

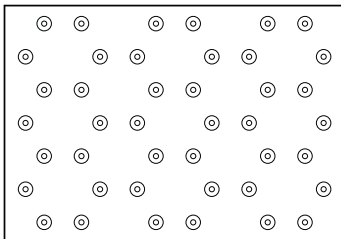
**Material Options:**

- Hot rolled, pickled and oiled carbon steel:
  - 11 gauge (5.0 lbs./sq. ft.)
  - 13 gauge (3.8 lbs./sq. ft.)
  - 16 gauge (2.5 lbs./sq. ft.)
- Aluminum alloy 5052-H32:
  - .125" (1.6 lbs./sq. ft.)
- Note: 14 ga. & 12 ga. carbon steel and 16 ga. 304 stainless steel are also available

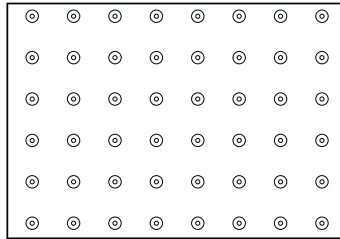
**Sheet Size:**

- Standard 36" x 120"
- Cut to order

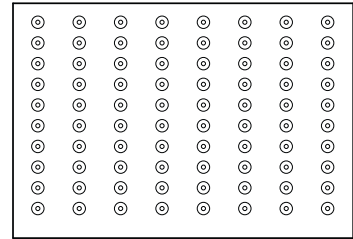
Traction Tread™ is available as shown above as a standard product, however, variations to the surface design can be produced according to your requirement (see examples illustrated below).



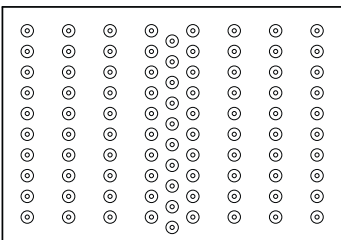
**Star Pattern**



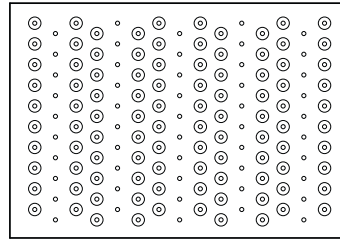
**Square Pattern**



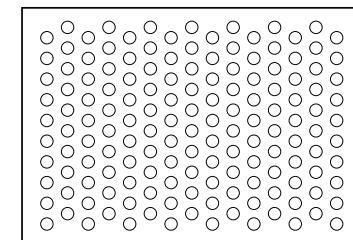
**Rectangular Pattern**



**OEM Pattern**



**Drain Hole Pattern**

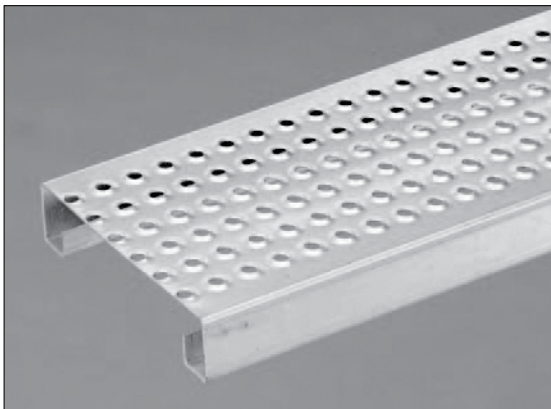


**Non-Perforated Pattern**

# TRACTION TREAD™ SAFETY PLANKS

Traction Tread™ Planks feature a moderate slip-resistance surface designed for maximum versatility. Planks are kind to knees and hands in commercial applications, including scaffolding. Surface textures work well for cart and wheeled traffic.

## Traction Tread Plank with LH Pattern

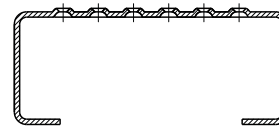


### Material Options:

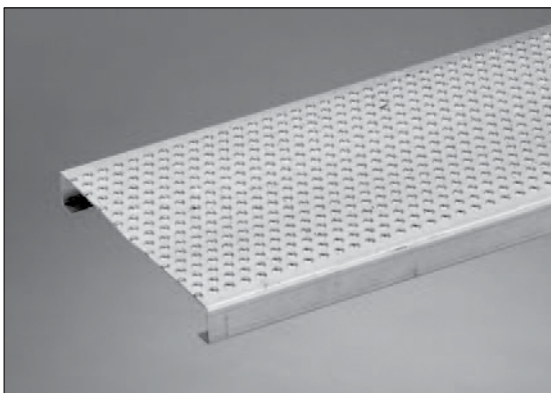
- Hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge
- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"
- Hot dipped galvanized after fabrication (HDGAF)
- LH pattern

### Plank Dimensions:

- 9" wide (nominal)
- 120" and 144" lengths (nominal)
- 1 1/2" minimum of 2" channel height



## Traction Tread Plank



### Material Options:

- Hot rolled, pickled and oiled carbon steel: 11 gauge and 13 gauge
- Mill-galvanized steel: 11 gauge and 13 gauge
- Aluminum alloy 5052-H32: .125"

### Plank Dimensions:

- 7", 10" and 12" widths (nominal)
- 20" and 144" lengths (nominal)
- 1 1/2" minimum of 2" channel height

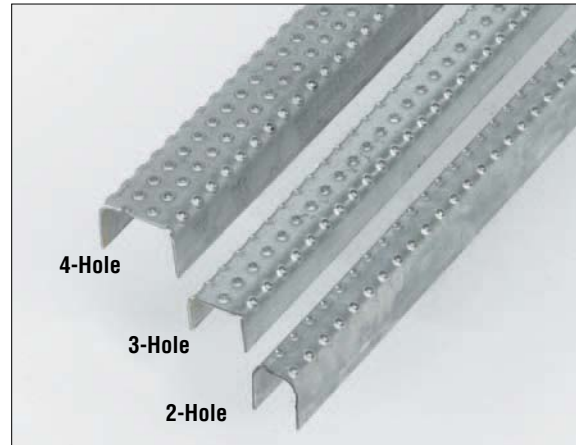


Product	"A"	"B"	"C"	Rows of Buttons
12" Wide	11 7/8" (301mm)	15/16" (24mm)	16" (406mm)	17
10" Wide	9 7/8" (251mm)	7/8" (22mm)	13" (330mm)	14
7" Wide	6 7/8" (174mm)	15/16" (24mm)	8" (203mm)	9

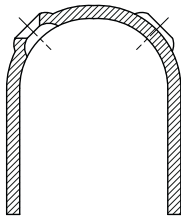
# TRACTION TREAD™ LADDER RUNGS

## *Traction Tread Ladder Rungs*

Traction Tread™ Ladder Rungs feature a hand-over-hand friendly surface with moderate slip resistance. Products are sold in efficient lengths, well suited to fabricators of ladders. Vehicle applications are extensive.

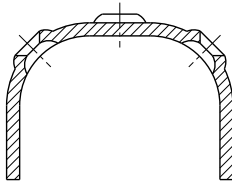


### 2-Hole Ladder Rung



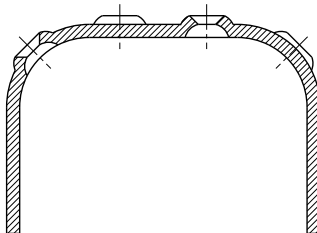
- Hot rolled, pickled and oiled carbon steel: 13 gauge (1.2 lbs./ft.)
- Aluminum alloy 5052-H32: .125" (0.5 lbs./ft.)
- 1 1/4" wide x 1 1/2" high x 48" or 60" long

### 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.)
- 1 5/8" wide x 1 1/8" high x 48" or 60" long

### 4-Hole Ladder Rung

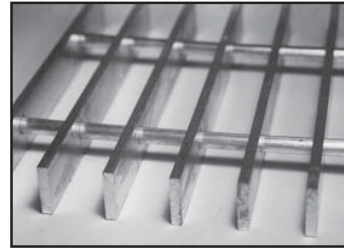


- Hot rolled, pickled and oiled carbon steel: 13 gauge (1.5 lbs./ft.)
- Aluminum alloy 5052-H32: .125" (0.7 lbs./ft.)
- 2 1/4" wide x 1 1/2" high x 48" or 60" long

**2, 3 & 4-Hole Ladder Rungs Are Also Available In 16 Gauge 304 Stainless Steel.**

# ALUMINUM SWAGED-LOCKED GRATING

Corrosive resistant aluminum grating is ideal for applications where a lightweight non-rusting grating is required. Manufactured by a swaging process that permanently locks cross rods between the bearing bars. Available in rectangular bar and economical I-Bar. Standard panel sizes are 2' and 3' widths by 20' and 24' lengths. Bearing bar spacing is available in 1-3/16"; 15/16"; 13/16"; 3/4"; 11/16"; 5/8"; 9/16"; and 1/2" center to center.



Rectangular Bar



I-Bar

Aluminum - Type 19-4  
Bearing Bars - 1-3/16" centers

BEARING BAR SIZE	WEIGHT lbs/sq.ft.	SPAN												Sec. Mod. Per Foot of Width	
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"		
1" X 1/8"	1.92	U	.458	.293	.203	.149	.114	.90	Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.						.216
		D	.144	.224	.324	.440	.573	.723							
		C	.458	.366	.305	.262	.229	.203							
		D	.115	.180	.260	.354	.482	.582							
1" x 3/16" 1" I-Bar	2.72	U	.688	.441	.306	.225	.172	.136							.325
	1.95	D	.144	.224	.324	.440	.573	.723							
	C	.888	.552	.459	.394	.345	.306								
	D	.115	.180	.260	.354	.482	.582								
1-1/4" x 1/8"	2.31	U	.718	.459	.318	.234	.180	.137	.114	.95	.80	.68	.58	.45	.339
		D	.115	.180	.260	.354	.482	.582	.720	.868	1.032	.122	1.418	1.840	
		C	.718	.575	.479	.410	.359	.319	.288	.261	.240	.221	.206	.179	
		D	.093	.144	.207	.282	.368	.487	.575	.695	.830	.975	1.131	1.475	
1 1/4" X 3/16" 1 1/4" I-Bar	3.31	U	1.075	.688	.477	.351	.269	.212	.172	.142	.119	.102	.88	.67	.507
	2.35	D	.115	.180	.258	.354	.460	.580	.720	.868	1.032	1.220	1.418	1.840	
	C	1.075	.858	.714	.613	.537	.477	.428	.390	.357	.330	.307	.268		
	D	.093	.144	.207	.282	.368	.467	.574	.695	.830	.975	1.131	1.475		
1-1/2" x 1/8"	2.72	U	1.032	.662	.480	.337	.258	.204	.165	.136	.115	.98	.84	.65	.488
		D	.096	.151	.216	.295	.384	.487	.603	.724	.865	1.030	1.173	1.540	
		C	1.032	.825	.687	.589	.518	.458	.413	.375	.344	.317	.295	.258	
		D	.077	.120	.172	.235	.307	.386	.479	.579	.690	.825	.939	1.228	
1-1/2" x 3/16" 1 1/2" I-Bar	3.89	U	1.550	.990	.687	.505	.387	.306	.248	.204	.172	.146	.126	.97	.730
	2.72	D	.096	.151	.216	.295	.384	.487	.603	.724	.865	1.030	1.173	1.540	
	C	1.550	1.238	1.032	.884	.775	.688	.618	.582	.516	.476	.442	.387		
	D	.077	.120	.172	.235	.3017	.386	.479	.579	.690	.825	.939	1.228		
1-3/4" X 3/16"	4.48	U	2.110	1.348	.935	.687	.527	.416	.337	.278	.234	.200	.172	.132	.994
		D	.082	.127	.185	.252	.329	.416	.515	.621	.740	.888	1.005	1.316	
		C	2.110	1.690	1.408	1.205	1.055	.935	.842	.765	.703	.648	.603	.528	
		D	.066	.103	.148	.202	.264	.333	.412	.497	.595	.696	.809	1.060	
2" X 3/16 2" I-Bar	5.08	U	2.750	1.760	1.223	.898	.687	.543	.440	.364	.306	.260	.224	.172	1.299
	3.43	D	.072	.113	.161	.222	.289	.366	.451	.547	.650	.760	.881	1.155	
	C	2.750	2.200	1.835	1.570	1.375	1.223	1.100	1.002	.917	.845	.786	.688		
	D	.057	.090	.129	.178	.230	.292	.360	.436	.517	.606	.703	.923		
2-1/4" x 3/16"	5.68	U	3.482	2.230	1.549	1.138	.870	.687	.557	.460	.387	.330	.284	.217	1.644
		D	.064	.100	.144	.196	.256	.324	.400	.483	.577	.677	.783	1.020	
		C	3.482	2.786	2.320	1.990	1.740	1.548	1.393	1.265	1.160	1.072	.995	.870	
		D	.051	.080	.115	.156	.204	.258	.319	.387	.460	.540	.627	.817	
2-1/2" x 3/16" 2 1/2" I-Bar	6.28	U	4.300	2.753	1.910	1.405	1.075	.850	.688	.569	.477	.407	.351	.269	2.029
	4.10	D	.057	.090	.130	.177	.230	.292	.360	.435	.515	.605	.704	.919	
	C	4.300	3.440	2.860	2.455	2.150	1.910	1.720	1.562	1.430	1.320	1.228	1.075		
	D	.046	.072	.103	.141	.184	.234	.288	.348	.413	.485	.562	.735		

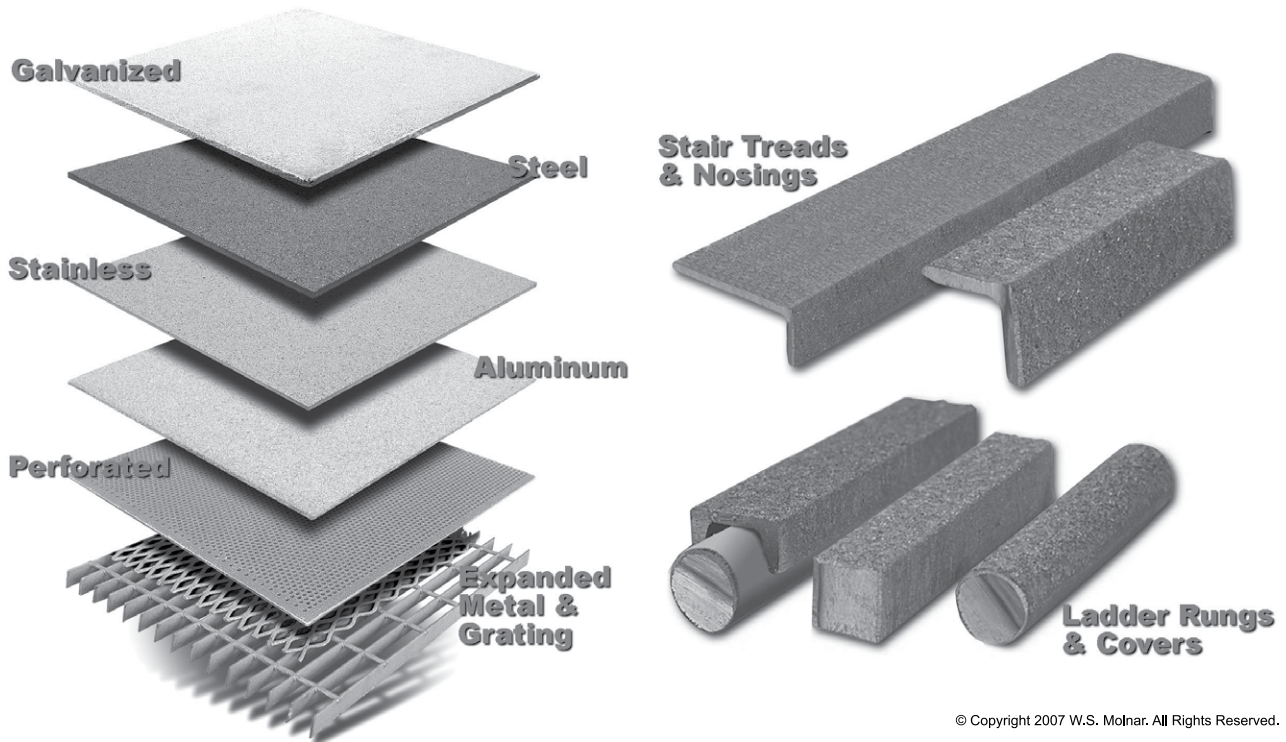
**Load Factors (Special Mesh Grating):**  
 Bearing Bars @11/16" centers - multiply tabulated load by 1.71  
 Bearing Bars @15/16" centers - multiply tabulated load by 1.28  
 Bearing Bars @1-7/8" centers - multiply tabulated load by .67  
 Bearing Bars @2-3/8" centers - multiply tabulated load by .52

Table of Safe Loads  
 Bearing Bars: 6063T6 - Cross Bars: 6063T5  
 Max. allowable fibre stress: 12,000 P.S.I.  
 U - Safe Uniform Load, in lbs. per sq. ft.  
 C - Safe Concentrated Load, in lbs. per foot of grating width.  
 D - Deflection in inches.  
 Stock Mats 3'-0" nominal width x 24'-0" long

# SLIPNOT® SAFETY FLOORING

**SlipNOT®** Metal Safety Flooring manufactures slip resistant metal flooring products. Products range from non-slip plates, grating, stair treads, nosings, ladder rungs and covers to handrails, vault covers and drain covers. **SlipNOT®** products are used by a variety of industries including automotive, food processing, commercial, utilities, mining, military and transportation.

- **Advantages:** **SlipNOT®**'s proven durability, superior slip resistance and grit-free surface insures maximum worker safety that outlasts taped on or painted on non-slip products. **SlipNOT®** slip resistant flooring products provide a permanently safe replacement for slippery diamond plate.
- **Availability:** **SlipNOT®** slip resistant plates can be purchased in stock sheets or can be cut to size and custom formed in order to meet specific project requirements.
- **Care:** The most effective cleaning method is with a steam cleaner or power washer. Debris can be removed with a stiff bristle brush. **SlipNOT®** recommends testing any chemical cleaning agent on a sample provided by **SlipNOT®** to verify that it is safe to use on the **SlipNOT®** surface.
- **Durability:** **SlipNOT®** products have a surface hardness of over 55 on the Rockwell "C" scale, and have over 4000 psi bond strength.
- **Fabrication:** Plates can be sheared, welded, flame cut, torch cut, laser or water-jet cut, plasma cut, countersunk, drilled and punched for complete versatility both in the shop and field. When fabricating or working with our product it can be treated like any other metal plate or grating.
- **Other options:** Retrofitting **SlipNOT®** plate over existing slippery grating instantly creates a safe, slip resistant walkway.
- **Slip Resistant Standards:** **SlipNOT®** slip resistant products exceed all requirements for coefficient of friction specified by ANSI, ASTM, ADA, NFPA, and OSHA. **SlipNOT®**'s coefficient of friction is greater than or equal to .85. **SlipNOT®** products are also U.L. approved and NSF registered.



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## STRONGWELL® PULTRUDED GRATING

**DURADEK®** and **DURAGRID®** are high-strength pultruded bar type gratings that can be designed and used like traditional metal grates but have the inherent benefits of fiberglass. These problem solving products are ideal replacements for steel or aluminum gratings in corrosive environments or anywhere frequent grating and walkway replacement costs are unacceptable.

**DURADEK®** is a standard product stocked by distributors nationwide. It is available with individual bearing bars in either 1" or 1-1/2" I-shapes or a 2" T-shape. **DURADEK®** is a flame retardant product utilizing a polyester or vinyl ester resin. The bearing bars are assembled into 12 panel sizes: 3-, 4-, and 5-foot widths in each of 8-, 10-, 12- and 20-foot lengths. Standard panels are available with cross-rod spacings of 6" or 12" on center.

**DURAGRID®** custom grid or grating systems are designed to accommodate specific applications that cannot effectively be met by a standard fiberglass grating. **DURAGRID®** offers the customer options such as selection of open space, bar shape, cross-rod placement, custom fabrication, custom resin or color. Why Use **DURADEK®** or **DURAGRID®** Grating?

**DURADEK®** and **DURAGRID®** are lightweight, which saves on freight and makes installation easier. The unique cross-bar construction of **DURADEK®** and **DURAGRID®** allows the grating panels to be easily cut and modified to fit almost any plant requirement. A full listing of features are shown below.

### Features

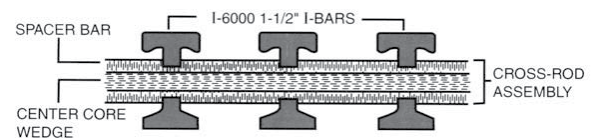
- Corrosion Resistant
- Structurally Strong
- High Impact and Fatigue Strength
- Lightweight
- Fire Retardant
- Easy to Fabricate and Install
- Low Maintenance
- Low Conductivity
- Resistant to Chipping and Cracking
- Aesthetically Pleasing Appearance
- Skid Resistant
- Rigid
- Low Thermal Conductivity
- Non-Sparking



DURADEK® and DURAGRID® fiberglass grating provide safe, corrosion-resistant walkways and work platforms around caustic chemical storage tanks in a broad range of markets and industries.

### Three-Piece Cross-Rod Assembly

The 3-piece cross-rod assembly used in DURADEK® and DURAGRID® grating forms a strong, unified panel that can be cut and fabricated like a solid sheet.



This unique system consists of two continuous, pultruded spacer bars and a center core wedge. The spacers are notched at each bearing bar so that the bars are both mechanically locked and chemically bonded to the web of each bearing bar. This separates and affixes bearing bars firmly in position and distributes concentrated loads to adjacent bars. The resulting panel can be easily fabricated with standard carpenters' tools with abrasive cutting edges.

# STRONGWELL® DURADEK®

## USING THE LOAD/DEFLECTION TABLES

### Typical Bearing Bar Spacings

Strongwell manufactures virtually any non-standard and non-stocked custom grid and grating. However, the following load tables are for the most popular bearing bar configurations. The physical properties are shown for the section.

To determine loading or physical properties for other bar spacings, use the multiplier shown on the tables.

### Series Designation

The series designation indicates the bar size and shape and the percent of open area. For example: T-1800 1" means 1" T-bar spaced to give an 18% open area.

### Cross Rod Spacings

Cross rod spacings must be 2", 4", 6", 8", 10", etc. Our standard spacings are 6" and 12" on center.

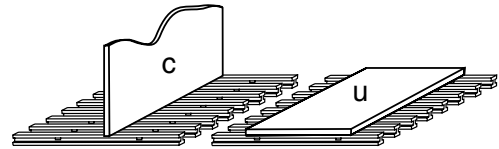
### Load Table Values

All tables show typical values.

### Load Data

Deflection and safe load data were calculated by the Strongwell Test Lab. All tables show typical values.

- c** is Concentrated Load LBS/FT of width
- Δc** is Deflection under Concentrated Load
- u** is Uniform Load LBS/FT<sup>2</sup>
- Δu** is Deflection under Uniform Load



The modulus of elasticity will vary with span length due to the non-homogeneous make-up of composite material.

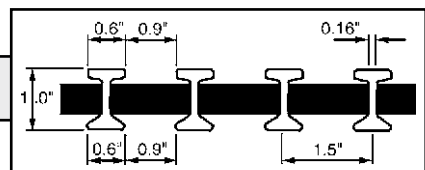
### DURADEK® High Strength Fiberglass Grating

The following load tables are for standard DURADEK® fiberglass grating panels stocked by distributors: DURADEK® I-6000 1", I-6000 1-1/2", and T-5000 2". Standard panels come with cross-rod spacings of 6" or optional 12" on center.

#### DURADEK® I-6000 1" Bearing Bars Spaced 1-1/2" On Center

A = 2.496 IN<sup>2</sup>/FT OF WIDTH    S = 0.656 IN<sup>2</sup>/FT OF WIDTH    I = 0.328 IN<sup>4</sup>/FT OF WIDTH  
60% OPEN AREA    APPROX. WT. = 2.4 LBS/SQ FT

SPAN INCHES		LOAD														SAFE LOAD SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000			
12	Δu	0.001	0.002	0.003	0.004	0.005	0.005	0.007	0.009	0.014	0.018	0.036	0.054	0.073	0.091	10401	0.189	3.78
	Δc	0.001	0.003	0.004	0.006	0.007	0.009	0.012	0.015	0.022	0.029	0.058	0.087	0.116	0.145			
18	Δu	0.004	0.008	0.013	0.017	0.021	0.025	0.033	0.042	0.063	0.084	0.167	0.251	0.335	0.418	4954	0.415	4.15
	Δc	0.004	0.009	0.013	0.018	0.022	0.027	0.036	0.045	0.067	0.089	0.179	0.268	0.357	0.446			
24	Δu	0.012	0.025	0.037	0.050	0.062	0.075	0.100	0.124	0.187	0.249	0.498				2900	0.722	4.41
	Δc	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.149	0.199	0.398	0.597					
30	Δu	0.029	0.058	0.087	0.116	0.145	0.174	0.231	0.289	0.434	0.579					1856	1.074	4.63
	Δc	0.019	0.037	0.056	0.074	0.093	0.111	0.148	0.185	0.278	0.370							
36	Δu	0.058	0.115	0.173	0.230	0.288	0.345	0.460	0.575							1289	1.483	4.83
	Δc	0.031	0.061	0.092	0.123	0.153	0.184	0.245	0.307	0.460	0.614							
42	Δu	0.105	0.211	0.316	0.422	0.527	0.633									943	1.989	4.88
	Δc	0.048	0.096	0.145	0.193	0.241	0.289	0.386	0.482									
48	Δu	0.176	0.353	0.529	0.705											719	2.534	4.98
	Δc	0.071	0.141	0.212	0.282	0.353	0.423	0.564										
54	Δu	0.281	0.563													566	3.184	5.00
	Δc	0.100	0.200	0.300	0.400	0.500	0.600											



**NOTE:** When a 100 pounds per square foot uniform load is placed upon a 43" simple span, it will produce a deflection of 1/4" at midspan.

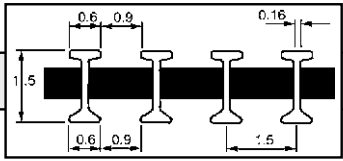


# STRONGWELL® DURADEK®

## DURADEK® I-6000 1-1/2" Bearing Bars Spaced 1-1/2" On Center

A = 3.136 IN<sup>2</sup>/FT OF WIDTH S = 1.240 IN<sup>2</sup>/FT OF WIDTH I = 0.928 IN<sup>4</sup>/FT OF WIDTH  
60% OPEN AREA APPROX. WT. = 3.0 LBS/SQ FT

SPAN INCHES	LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
	50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000				
12	Δu	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.006	0.013	0.019	0.026	0.032	0.038	0.045	17601 8800	0.113 0.090	3.79
	Δc	0.001	0.001	0.002	0.002	0.003	0.003	0.004	0.005	0.008	0.010	0.020	0.031	0.041	0.051	0.061	0.072			
18	Δu	0.002	0.003	0.005	0.006	0.008	0.009	0.012	0.015	0.023	0.030	0.061	0.091	0.121	0.152	0.182	0.212	7823 5867	0.237 0.190	4.05
	Δc	0.002	0.003	0.005	0.006	0.008	0.010	0.013	0.016	0.024	0.032	0.065	0.097	0.129	0.162	0.194	0.226			
24	Δu	0.005	0.009	0.014	0.018	0.023	0.027	0.037	0.046	0.069	0.091	0.183	0.274	0.366	0.457	0.549	0.640	4400 4400	0.403 0.322	4.24
	Δc	0.004	0.007	0.011	0.015	0.018	0.022	0.029	0.037	0.055	0.073	0.146	0.220	0.293	0.366	0.439	0.512			
30	Δu	0.011	0.022	0.032	0.043	0.054	0.065	0.086	0.108	0.161	0.215	0.430	0.646	2773 3467	0.597 0.478	4.40				
	Δc	0.007	0.014	0.021	0.028	0.034	0.041	0.055	0.069	0.103	0.138	0.276	0.413				0.551			
36	Δu	0.022	0.044	0.065	0.087	0.109	0.131	0.175	0.218	0.327	0.436	1896 2845	0.827 0.662	4.50						
	Δc	0.012	0.023	0.035	0.047	0.058	0.070	0.093	0.116	0.175	0.233				0.466					
42	Δu	0.040	0.079	0.119	0.159	0.198	0.238	0.317	0.396	0.595	1361 2381	1.079 0.863	4.59							
	Δc	0.018	0.036	0.054	0.072	0.091	0.109	0.145	0.181	0.272				0.362						
48	Δu	0.067	0.133	0.200	0.266	0.333	0.400	0.533	0.666	1017 2033	1.354 1.083	4.66								
	Δc	0.027	0.053	0.080	0.107	0.133	0.160	0.213	0.266				0.400	0.533						
54	Δu	0.106	0.211	0.317	0.422	0.528	0.633	777 1748	1.640 1.312	4.71										
	Δc	0.038	0.075	0.113	0.150	0.188	0.225				0.300	0.375	0.563							
60	Δu	0.160	0.320	0.480	0.639	608 1520	1.944 1.555	4.74												
	Δc	0.051	0.102	0.153	0.205				0.256	0.307	0.409	0.512								
66	Δu	0.233	0.466	485 1333	2.259 1.808	4.76														
	Δc	0.068	0.136				0.203	0.271	0.339	0.407	0.542	0.678								

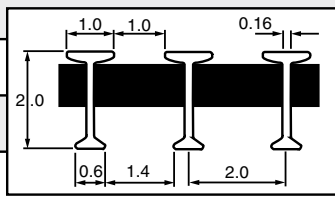


NOTE: When a 100 pounds per square foot uniform load is placed upon a 56" simple span, it will produce a deflection of 1/4" at midspan.

## DURADEK® T-5000 2" Bearing Bars Spaced 2" On Center

A = 3.252 IN<sup>2</sup>/FT OF WIDTH S<sub>1</sub> = 1.906 IN<sup>2</sup>/FT OF WIDTH S<sub>2</sub> = 1.495 IN<sup>2</sup>/FT OF WIDTH I = 1.676 IN<sup>4</sup>/FT OF WIDTH  
50% OPEN AREA APPROX. WT. = 3.1 LBS/SQ FT

SPAN INCHES	LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
	50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000				8000	
12	Δu	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.028	11333 5666	0.040 0.032	3.80
	Δc	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.006	0.011	0.017	0.023	0.028	0.034	0.040	0.045			
18	Δu	0.001	0.002	0.003	0.003	0.004	0.005	0.007	0.009	0.013	0.017	0.035	0.052	0.070	0.087	0.104	0.122	0.139	7536 5666	0.131 0.105	3.91
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.009	0.014	0.019	0.037	0.056	0.074	0.093	0.111	0.130	0.148			
24	Δu	0.003	0.005	0.008	0.011	0.013	0.016	0.021	0.027	0.040	0.054	0.107	0.161	0.214	0.268	0.321	0.375	0.429	5666 5666	0.304 0.243	4.01
	Δc	0.002	0.004	0.006	0.009	0.011	0.013	0.017	0.021	0.032	0.043	0.086	0.129	0.171	0.214	0.257	0.300	0.343			
30	Δu	0.006	0.013	0.019	0.026	0.032	0.038	0.051	0.064	0.096	0.128	0.256	0.384	0.512	0.640	3626 4534	0.464 0.371	4.10			
	Δc	0.004	0.008	0.012	0.016	0.020	0.025	0.033	0.041	0.061	0.082	0.164	0.246	0.327	0.409				0.491	0.573	0.655
36	Δu	0.013	0.026	0.039	0.052	0.065	0.078	0.104	0.130	0.195	0.260	0.520	2519 3778	0.655 0.524	4.18						
	Δc	0.007	0.014	0.021	0.028	0.035	0.042	0.055	0.069	0.104	0.139	0.277				0.416	0.555	0.694			
42	Δu	0.024	0.047	0.071	0.095	0.119	0.142	0.190	0.237	0.356	0.474	1850 3238	0.877 0.702	4.25							
	Δc	0.011	0.022	0.033	0.043	0.054	0.065	0.087	0.108	0.163	0.217				0.433	0.650					
48	Δu	0.040	0.079	0.119	0.158	0.198	0.238	0.317	0.396	0.594	1417 2834	1.122 0.898	4.34								
	Δc	0.016	0.032	0.048	0.063	0.079	0.095	0.127	0.158	0.238				0.317	0.634						
54	Δu	0.062	0.125	0.187	0.250	0.312	0.374	0.499	0.624	1120 2519	1.398 1.118	4.41									
	Δc	0.022	0.044	0.067	0.089	0.111	0.133	0.178	0.222				0.333	0.444							
60	Δu	0.094	0.188	0.282	0.375	0.469	0.563	0.751	907 2267	1.702 1.361	4.47										
	Δc	0.030	0.060	0.090	0.120	0.150	0.180	0.240				0.300	0.450	0.601							
66	Δu	0.136	0.272	0.408	0.544	0.679	749 2060	2.036 1.629	4.52												
	Δc	0.040	0.079	0.119	0.158	0.198				0.237	0.316	0.395	0.593								
72	Δu	0.190	0.380	0.570	629 1889	2.390 1.914	4.58														
	Δc	0.051	0.101	0.152				0.203	0.253	0.304	0.405	0.507									
78	Δu	0.260	0.520	536 1744	2.788 2.231	4.61															
	Δc	0.064	0.128				0.192	0.256	0.320	0.384	0.512	0.640									
84	Δu	0.347	0.693	463 1619	3.208 2.566	4.65															
	Δc	0.079	0.158				0.238	0.317	0.396	0.475	0.634										



NOTE: When a 100 pounds per square foot uniform load is placed upon a 64" simple span, it will produce a deflection of 1/4" at midspan.

# STRONGWELL® DURAGRID®

**DURAGRID®** - Custom grating systems are made to specific requirements. The following load tables are the most popular.

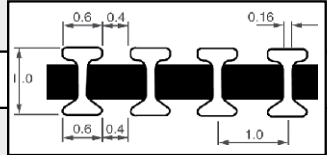
## DURAGRID® I-4000 1" I Bearing Bars Spaced 1" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-7000	2.000"	0.50
I-8000	3.000"	0.33
OR MULTIPLES OF ABOVE		

1" I BEARING BARS: VALUES PER FT OF WIDTH  
 A = 3.744 IN<sup>2</sup>/FT OF WIDTH S = 0.984 IN<sup>2</sup>/FT OF WIDTH I = 0.492 IN<sup>2</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .253 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 3.4 LBS/SQ. FT.

SPAN INCHES		LOAD															SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000				6000
12	Δu	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.024	0.030	0.036	0.048	0.060	0.073	15600	0.189	3.78
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.015	0.019	0.039	0.048	0.058	0.077	0.097	0.116			
18	Δu	0.003	0.006	0.008	0.011	0.014	0.017	0.022	0.028	0.042	0.056	0.112	0.139	0.167	0.223	0.279	0.335	7431	0.415	4.15
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.045	0.060	0.119	0.149	0.179	0.238	0.298	0.357			
24	Δu	0.008	0.017	0.025	0.033	0.041	0.050	0.066	0.083	0.124	0.166	0.332	0.415	0.498	0.664	4350	0.722	4.41		
	Δc	0.007	0.013	0.020	0.027	0.033	0.040	0.053	0.066	0.100	0.133	0.265	0.332	0.398	0.531				0.664	4350
30	Δu	0.019	0.039	0.058	0.077	0.096	0.116	0.154	0.193	0.289	0.386	2784	1.074	4.63						
	Δc	0.012	0.025	0.037	0.049	0.062	0.074	0.099	0.123	0.185	0.247				3480	0.859				
36	Δu	0.038	0.077	0.115	0.153	0.192	0.230	0.307	0.383	0.575	1933	1.482	4.83							
	Δc	0.020	0.041	0.061	0.082	0.102	0.123	0.164	0.205	0.307				0.409	2900	1.186				
42	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.703	1414	1.988	4.88								
	Δc	0.032	0.064	0.096	0.129	0.161	0.193	0.257	0.321				0.482	0.643	2474	1.590				
48	Δu	0.118	0.235	0.353	0.470	0.588	0.705	1078	2.534	4.98										
	Δc	0.047	0.094	0.141	0.188	0.235	0.282				0.376	0.470	2155	2.026						



\*(M) - Multiplier for load table loads

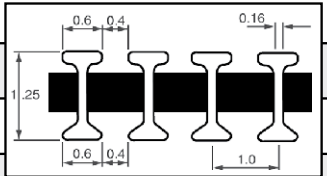
## DURAGRID® I-4000 1-1/4" I Bearing Bars Spaced 1" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-6000	1.500"	0.67
I-7000	2.000"	0.50
OR MULTIPLES OF ABOVE		

1-1/4" I BEARING BARS: VALUES PER FT OF WIDTH  
 A = 4.224 IN<sup>2</sup>/FT OF WIDTH S = 1.306 IN<sup>2</sup>/FT OF WIDTH I = 0.816 IN<sup>2</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .290 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 3.9 LBS/SQ. FT.

SPAN INCHES		LOAD															SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000				7000
12	Δu	0.000	0.001	0.001	0.002	0.002	0.002	0.003	0.004	0.006	0.008	0.016	0.023	0.031	0.039	0.047	0.054	21000	0.163	3.55
	Δc	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.025	0.037	0.050	0.062	0.075	0.087			
18	Δu	0.002	0.004	0.005	0.007	0.009	0.011	0.015	0.018	0.027	0.037	0.073	0.110	0.146	0.183	0.219	0.256	9582	0.350	3.82
	Δc	0.002	0.004	0.006	0.008	0.010	0.012	0.016	0.019	0.029	0.039	0.078	0.117	0.156	0.195	0.234	0.273			
24	Δu	0.005	0.011	0.016	0.022	0.027	0.033	0.044	0.054	0.082	0.109	0.218	0.327	0.436	0.545	0.654	5475	0.596	4.05	
	Δc	0.004	0.009	0.013	0.017	0.022	0.026	0.035	0.044	0.065	0.087	0.174	0.261	0.349	0.436	0.523				0.610
30	Δu	0.013	0.026	0.038	0.051	0.064	0.077	0.102	0.128	0.192	0.256	0.512	3472	0.888	4.21					
	Δc	0.008	0.016	0.025	0.033	0.041	0.049	0.065	0.082	0.123	0.164	0.327				4340	0.711			
36	Δu	0.026	0.051	0.077	0.103	0.128	0.154	0.205	0.257	0.385	0.513	2388	1.226	4.35						
	Δc	0.014	0.027	0.041	0.055	0.068	0.082	0.110	0.137	0.205	0.274				3583	0.981				
42	Δu	0.046	0.093	0.139	0.186	0.232	0.279	0.372	0.465	0.697	1727	1.606	4.45							
	Δc	0.021	0.043	0.064	0.085	0.106	0.128	0.170	0.213	0.319				0.425	3023	1.285				
48	Δu	0.078	0.155	0.233	0.310	0.388	0.465	0.621	1302	2.020	4.55									
	Δc	0.031	0.062	0.093	0.124	0.155	0.186	0.248				0.310	0.465	0.621	2603	1.615				
54	Δu	0.123	0.245	0.368	0.491	0.613	0.736	1007	2.470	4.61										
	Δc	0.044	0.087	0.131	0.174	0.218	0.262				0.349	0.436	0.654	2267	1.977					
60	Δu	0.185	0.370	0.555	0.740	796	2.944	4.66												
	Δc	0.059	0.118	0.178	0.237				0.296	0.355	0.473	0.592	1990	2.355						



\*(M) - Multiplier for load table loads

# STRONGWELL® DURAGRID®

DURAGRID® - Custom grating systems are made to specific requirements. The following load tables are the most popular.

## DURAGRID® I-4000 1" I Bearing Bars Spaced 1" On Center

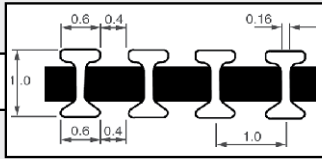
OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-7000	2.000"	0.50
I-8000	3.000"	0.33

OR MULTIPLES OF ABOVE

1" I BEARING BARS: VALUES PER FT OF WIDTH  
 A = 3.744 IN<sup>2</sup>/FT OF WIDTH S = 0.984 IN<sup>2</sup>/FT OF WIDTH I = 0.492 IN<sup>2</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .253 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 3.4 LBS/SQ. FT.

SPAN INCHES	Δu Δc	LOAD														SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000				5000	6000
12	Δu	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.024	0.030	0.036	0.048	0.060	0.073	15600 7800	0.189 0.151	3.78
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.015	0.019	0.039	0.048	0.058	0.077	0.097	0.116			
18	Δu	0.003	0.006	0.008	0.011	0.014	0.017	0.022	0.028	0.042	0.056	0.112	0.139	0.167	0.223	0.279	0.335	7431 5573	0.415 0.332	4.15
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.045	0.060	0.119	0.149	0.179	0.238	0.298	0.357			
24	Δu	0.008	0.017	0.025	0.033	0.041	0.050	0.066	0.083	0.124	0.166	0.332	0.415	0.498	0.664	4350 4350	0.722 0.577	4.41		
	Δc	0.007	0.013	0.020	0.027	0.033	0.040	0.053	0.066	0.100	0.133	0.265	0.332	0.398	0.531				0.664	
30	Δu	0.019	0.039	0.058	0.077	0.096	0.116	0.154	0.193	0.289	0.386	2784 3480	1.074 0.859	4.63						
	Δc	0.012	0.025	0.037	0.049	0.062	0.074	0.099	0.123	0.185	0.247				0.494	0.617				
36	Δu	0.038	0.077	0.115	0.153	0.192	0.230	0.307	0.383	0.575	1933 2900	1.482 1.186	4.83							
	Δc	0.020	0.041	0.061	0.082	0.102	0.123	0.164	0.205	0.307				0.409						
42	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.703	1414 2474	1.988 1.590	4.88								
	Δc	0.032	0.064	0.096	0.129	0.161	0.193	0.257	0.321				0.482	0.643						
48	Δu	0.118	0.235	0.353	0.470	0.588	0.705	1078 2155	2.534 2.026	4.98										
	Δc	0.047	0.094	0.141	0.188	0.235	0.282				0.376	0.470								



\*(M) - Multiplier for load table loads

## DURAGRID® I-4000 1-1/4" I Bearing Bars Spaced 1" On Center

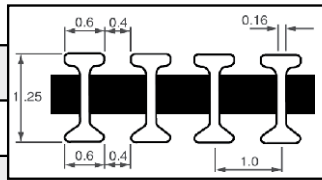
OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-6000	1.500"	0.67
I-7000	2.000"	0.50

OR MULTIPLES OF ABOVE

1-1/4" I BEARING BARS: VALUES PER FT OF WIDTH  
 A = 4.224 IN<sup>2</sup>/FT OF WIDTH S = 1.306 IN<sup>2</sup>/FT OF WIDTH I = 0.816 IN<sup>2</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .290 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 3.9 LBS/SQ. FT.

SPAN INCHES	Δu Δc	LOAD														SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000				6000	7000
12	Δu	0.000	0.001	0.001	0.002	0.002	0.002	0.003	0.004	0.006	0.008	0.016	0.023	0.031	0.039	0.047	0.054	21000 10500	0.163 0.130	3.55
	Δc	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.025	0.037	0.050	0.062	0.075	0.087			
18	Δu	0.002	0.004	0.005	0.007	0.009	0.011	0.015	0.018	0.027	0.037	0.073	0.110	0.146	0.183	0.219	0.256	9582 7187	0.350 0.280	3.82
	Δc	0.002	0.004	0.006	0.008	0.010	0.012	0.016	0.019	0.029	0.039	0.078	0.117	0.156	0.195	0.234	0.273			
24	Δu	0.005	0.011	0.016	0.022	0.027	0.033	0.044	0.054	0.082	0.109	0.218	0.327	0.436	0.545	0.654	5475 5475	0.596 0.477	4.05	
	Δc	0.004	0.009	0.013	0.017	0.022	0.026	0.035	0.044	0.065	0.087	0.174	0.261	0.349	0.436	0.523				0.610
30	Δu	0.013	0.026	0.038	0.051	0.064	0.077	0.102	0.128	0.192	0.256	0.512	3472 4340	0.888 0.711	4.21					
	Δc	0.008	0.016	0.025	0.033	0.041	0.049	0.065	0.082	0.123	0.164	0.327				0.491	0.655			
36	Δu	0.026	0.051	0.077	0.103	0.128	0.154	0.205	0.257	0.385	0.513	2388 3583	1.226 0.981	4.35						
	Δc	0.014	0.027	0.041	0.055	0.068	0.082	0.110	0.137	0.205	0.274				0.548					
42	Δu	0.046	0.093	0.139	0.186	0.232	0.279	0.372	0.465	0.697	1727 3023	1.606 1.285	4.45							
	Δc	0.021	0.043	0.064	0.085	0.106	0.128	0.170	0.213	0.319				0.425						
48	Δu	0.078	0.155	0.233	0.310	0.388	0.465	0.621	1302 2603	2.020 1.615	4.55									
	Δc	0.031	0.062	0.093	0.124	0.155	0.186	0.248				0.310	0.465	0.621						
54	Δu	0.123	0.245	0.368	0.491	0.613	0.736	1007 2267	2.470 1.977	4.61										
	Δc	0.044	0.087	0.131	0.174	0.218	0.262				0.349	0.436	0.654							
60	Δu	0.185	0.370	0.555	0.740	796 1990	2.944 2.355	4.66												
	Δc	0.059	0.118	0.178	0.237				0.296	0.355	0.473	0.592								



\*(M) - Multiplier for load table loads

# STRONGWELL® DURAGRID®

## DURAGRID® I-4000 1-1/2" I Bearing Bars Spaced 1" On Center

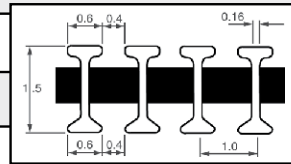
OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-7000	2.000"	0.50
I-8000	3.000"	0.33

OR MULTIPLES OF ABOVE

1-1/2" I BEARING BARS: VALUES PER FT OF WIDTH  
 A = 4.704 IN<sup>2</sup>/FT OF WIDTH    S<sub>1</sub> = 1.860 IN<sup>3</sup>/FT OF WIDTH    I = 1.392 IN<sup>4</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .319 LBS/FT OF BAR    WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 4.2 LBS/SQ. FT.

SPAN INCHES		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000				8000	9000
12	Δu	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.009	0.013	0.017	0.021	0.026	0.030	0.034	0.038	26400	0.113	3.79
	Δc	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.007	0.014	0.020	0.027	0.034	0.041	0.048	0.055	0.061	13200	0.090	
18	Δu	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.015	0.020	0.040	0.061	0.081	0.101	0.121	0.141	0.162	0.182	11734	0.237	4.05
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.009	0.011	0.016	0.022	0.043	0.065	0.086	0.108	0.129	0.151	0.172	0.194	8800	0.190	
24	Δu	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.046	0.061	0.122	0.183	0.244	0.305	0.366	0.427	0.488	0.549	6600	0.403	4.24
	Δc	0.002	0.005	0.007	0.010	0.012	0.015	0.020	0.024	0.037	0.049	0.098	0.146	0.195	0.244	0.293	0.342	0.390	0.439	6600	0.322	
30	Δu	0.007	0.014	0.022	0.029	0.036	0.043	0.057	0.072	0.108	0.143	0.287	0.430	0.574	0.717	4160	0.597	4.40				
	Δc	0.005	0.009	0.014	0.018	0.023	0.028	0.037	0.046	0.069	0.092	0.184	0.276	0.367	0.459	0.551	0.643		5200	0.478		
36	Δu	0.015	0.029	0.044	0.058	0.073	0.087	0.116	0.145	0.218	0.291	0.582	2844	0.827	4.50							
	Δc	0.008	0.016	0.023	0.031	0.039	0.047	0.062	0.078	0.116	0.155	0.310	0.466	0.621		4267	0.662					
42	Δu	0.026	0.053	0.079	0.106	0.132	0.159	0.211	0.264	0.396	0.528	2041	1.079	4.59								
	Δc	0.012	0.024	0.036	0.048	0.060	0.072	0.097	0.121	0.181	0.242	0.483	0.725		3571	0.863						
48	Δu	0.044	0.089	0.133	0.178	0.222	0.266	0.355	0.444	0.666	1525	1.354	4.66									
	Δc	0.018	0.036	0.053	0.071	0.089	0.107	0.142	0.178	0.266	0.355	3050		1.083								
54	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.704	1165	1.639	4.71										
	Δc	0.025	0.050	0.075	0.100	0.125	0.150	0.200	0.250	0.375	0.500		2622	1.312								
60	Δu	0.107	0.213	0.320	0.426	0.533	0.639	912	1.944	4.74												
	Δc	0.034	0.068	0.102	0.136	0.171	0.205	0.273	0.341		0.512	0.682	2280	1.555								
66	Δu	0.155	0.311	0.466	0.621	727	2.259	4.76														
	Δc	0.045	0.090	0.136	0.181	0.226	0.271		0.362	0.452	0.678	2000	1.808									



\*(M) - Multiplier for load table loads

## DURAGRID® T-1800 1" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):

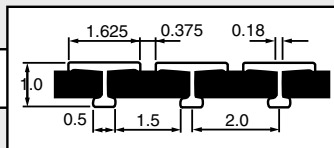
SERIES	(X)	(M)*
T-0000	1.625"	1.23
T-1000	1.800"	1.11
T-1200	1.850"	1.08
T-2500	2.120"	0.94
T-3500	2.400"	0.83
T-3800	2.620"	0.76

OR MULTIPLES OF ABOVE

1" T BEARING BARS: VALUES PER FT OF WIDTH  
 A = 2.850 IN<sup>2</sup>/FT OF WIDTH    S<sub>1</sub> = 0.903 IN<sup>3</sup>/FT OF WIDTH  
 I = 0.306 IN<sup>4</sup>/FT OF WIDTH    S<sub>2</sub> = 0.464 IN<sup>3</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .373 LBS/FT OF BAR    WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 2.6 LBS/SQ. FT.

Now available 1.5" T bar. Call for details.

SPAN INCHES		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	2500				3000	4000
12	Δu	0.001	0.002	0.003	0.004	0.006	0.007	0.009	0.011	0.017	0.022	0.045	0.056	0.067	0.090	10680	0.240	3.27
	Δc	0.002	0.004	0.005	0.007	0.009	0.011	0.014	0.018	0.027	0.036	0.072	0.090	0.108	0.144	5340	0.192	
18	Δu	0.005	0.010	0.016	0.021	0.026	0.031	0.041	0.052	0.078	0.104	0.207	0.259	0.311	0.415	4746	0.492	3.59
	Δc	0.006	0.011	0.017	0.022	0.028	0.033	0.044	0.055	0.083	0.111	0.221	0.277	0.332	0.442	3560	0.394	
24	Δu	0.015	0.031	0.046	0.062	0.077	0.093	0.124	0.155	0.232	0.310	0.619	2670	0.827	3.80			
	Δc	0.012	0.025	0.037	0.050	0.062	0.074	0.099	0.124	0.186	0.248	0.495	0.619	2670		0.661		
30	Δu	0.036	0.072	0.108	0.144	0.180	0.215	0.287	0.359	0.539	0.718	1693	1.216	4.00				
	Δc	0.023	0.046	0.069	0.092	0.115	0.138	0.184	0.230	0.345	0.460	2116	0.972					
36	Δu	0.072	0.145	0.217	0.289	0.361	0.434	0.578	0.723	1157	1.673	4.12						
	Δc	0.039	0.077	0.116	0.154	0.193	0.231	0.308	0.385	0.578	1736		1.338					
42	Δu	0.129	0.257	0.386	0.514	0.643	833	2.143	4.29									
	Δc	0.059	0.118	0.176	0.235	0.294	0.353	0.470		0.588	1458	1.714						
48	Δu	0.215	0.431	0.646	625	2.692	4.37											
	Δc	0.086	0.172	0.258	0.345	0.431		0.517	0.689	1250	2.154							



\*(M) - Multiplier for load table loads

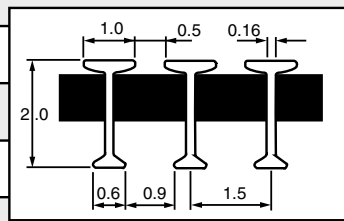
# STRONGWELL® DURAGRID®

## DURAGRID® T-3300 2" T Bearing Bars Spaced 1-1/2" On Center

OTHER COMMON SERIES AND SPACING (X):  
 SERIES (X) (M)\*  
**T-1700 1.200" 1.25**  
 OR MULTIPLES OF ABOVE

2" T BEARING BARS: VALUES PER FT OF WIDTH  
 A = 4.338 IN<sup>2</sup>/FT OF WIDTH S<sub>y</sub> = 2.541 IN<sup>3</sup>/FT OF WIDTH  
 I = 2.234 IN<sup>4</sup>/FT OF WIDTH S<sub>x</sub> = 1.994 IN<sup>3</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .446 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 3.9 LBS/SQ. FT.

SPAN INCHES		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	6000				7000	8000
12	Δu	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.005	0.007	0.008	0.011	0.013	0.016	0.019	0.021	15110 7555	0.040 0.032	3.80
	Δc	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.008	0.011	0.013	0.017	0.021	0.025	0.030	0.034			
18	Δu	0.001	0.001	0.002	0.003	0.003	0.004	0.005	0.007	0.010	0.013	0.026	0.033	0.039	0.052	0.065	0.078	0.091	0.104	10048 7555	0.131 0.105	3.91
	Δc	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.007	0.010	0.014	0.028	0.035	0.042	0.056	0.070	0.083	0.097	0.111			
24	Δu	0.002	0.004	0.006	0.008	0.010	0.012	0.016	0.020	0.030	0.040	0.080	0.100	0.121	0.161	0.201	0.241	0.281	0.321	7555 7555	0.304 0.243	4.01
	Δc	0.002	0.003	0.005	0.006	0.008	0.010	0.013	0.016	0.024	0.032	0.064	0.080	0.096	0.129	0.161	0.193	0.225	0.257			
30	Δu	0.005	0.010	0.014	0.019	0.024	0.029	0.038	0.048	0.072	0.096	0.192	0.240	0.288	0.384	0.480	0.576	0.672	4835 6045	0.464 0.371	4.10	
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.025	0.031	0.046	0.061	0.123	0.154	0.184	0.246	0.307	0.368	0.430				0.491
36	Δu	0.010	0.020	0.029	0.039	0.049	0.059	0.078	0.098	0.146	0.195	0.390	0.488	0.586	3358 5037	0.655 0.524	4.18					
	Δc	0.005	0.010	0.016	0.021	0.026	0.031	0.042	0.052	0.078	0.104	0.208	0.260	0.312				0.416	0.520	0.625		
42	Δu	0.018	0.036	0.053	0.071	0.089	0.107	0.142	0.178	0.267	0.356	2467 4317	0.877 0.702	4.25								
	Δc	0.008	0.016	0.024	0.033	0.041	0.049	0.065	0.081	0.122	0.163				0.325	0.406	0.488	0.650				
48	Δu	0.030	0.059	0.089	0.119	0.149	0.178	0.238	0.297	0.446	0.594	1889 3778	1.122 0.898	4.34								
	Δc	0.012	0.024	0.036	0.048	0.059	0.071	0.095	0.119	0.178	0.238				0.475	0.594						
54	Δu	0.047	0.094	0.140	0.187	0.234	0.281	0.375	0.468	1493 3358	1.398 1.118	4.41										
	Δc	0.017	0.033	0.050	0.067	0.083	0.100	0.133	0.166				0.250	0.333	0.666							
60	Δu	0.070	0.141	0.211	0.282	0.352	0.422	0.563	1209 3022	1.703 1.362	4.47											
	Δc	0.023	0.045	0.068	0.090	0.113	0.135	0.180				0.225	0.338	0.451								
66	Δu	0.102	0.204	0.306	0.408	0.510	0.612	999 2747	2.037 1.629	4.52												
	Δc	0.030	0.059	0.089	0.119	0.148	0.178				0.237	0.297	0.445	0.593								
72	Δu	0.142	0.285	0.427	0.570	839 2519	2.391 1.914	4.58														
	Δc	0.038	0.076	0.114	0.152				0.190	0.228	0.304	0.380	0.570									
78	Δu	0.195	0.390	0.585	715 2325	2.788 2.232	4.61															
	Δc	0.048	0.096	0.144				0.192	0.240	0.288	0.384	0.480										
84	Δu	0.260	0.520	617 2159	3.209 2.566	4.65																
	Δc	0.059	0.119				0.178	0.238	0.297	0.357	0.475	0.594										



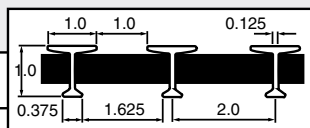
\*(M) - Multiplier for load table loads

## DURAGRID® ECONOMY 5000 1" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):  
 SERIES (X) (M)\*  
**ECONOMY 3300 1.500" 1.33**  
 OR MULTIPLES OF ABOVE

1" T BEARING BAR: VALUES PER FT OF WIDTH  
 A = 1.596 IN<sup>2</sup>/FT OF WIDTH S<sub>y</sub> = 0.530 IN<sup>3</sup>/FT OF WIDTH  
 I = 0.197 IN<sup>4</sup>/FT OF WIDTH S<sub>x</sub> = 0.314 IN<sup>3</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .207 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD  
 APPROX. WEIGHT = 1.62 LBS/SQ. FT.

SPAN INCHES		LOAD										SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		50	100	150	200	250	300	400	500	750	1000				2000
12	Δu	0.002	0.004	0.006	0.008	0.010	0.011	0.015	0.019	0.029	0.038	0.076	4766 2383	0.182 0.146	2.99
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.031	0.046	0.061	0.122			
18	Δu	0.009	0.019	0.028	0.037	0.047	0.056	0.075	0.094	0.140	0.187	0.374	2144 1609	0.401 0.321	3.09
	Δc	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.150	0.200	0.399			
24	Δu	0.029	0.057	0.086	0.114	0.143	0.171	0.228	0.286	0.428	0.571	1221 1221	0.697 0.558	3.20	
	Δc	0.023	0.046	0.069	0.091	0.114	0.137	0.183	0.228	0.343	0.457				
30	Δu	0.068	0.135	0.203	0.270	0.338	0.406	0.541	0.676	791 989	1.069 0.856	3.30			
	Δc	0.043	0.087	0.130	0.173	0.216	0.260	0.346	0.433				0.649		
36	Δu	0.136	0.272	0.408	0.544	0.680	556 834	1.513 1.210	3.40						
	Δc	0.073	0.145	0.218	0.290	0.363				0.435	0.580	0.726			
42	Δu	0.244	0.488	0.732	413 723	2.017 1.614	3.51								
	Δc	0.112	0.223	0.335				0.446	0.558	0.670					



\*(M) - Multiplier for load table loads

# STRONGWELL® DURAGRID®

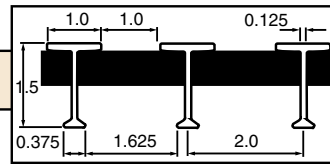
## DURAGRID® ECONOMY 5000 1-1/2" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):  
 SERIES (X) (M)\*  
**ECONOMY 3300 1.500" 1.33**  
 OR MULTIPLES OF ABOVE

1-1/2" T BEARING BAR: VALUES PER FT OF WIDTH  
 A = 1.968 IN<sup>2</sup>/FT OF WIDTH S<sub>y</sub> = 0.950 IN<sup>2</sup>/FT OF WIDTH  
 I = 0.557 IN<sup>4</sup>/FT OF WIDTH S<sub>x</sub> = 0.609 IN<sup>2</sup>/FT OF WIDTH  
 WEIGHT/FOOT = .250 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS./FT OF CROSS ROD  
 APPROX. WEIGHT = 1.9 LBS/SQ. FT.

SPAN INCHES		LOAD															SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000			
12	Δu	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.007	0.010	0.014	0.028	0.034	0.041	0.055	0.069	10322	0.142	2.93
	Δc	0.001	0.002	0.003	0.004	0.006	0.007	0.009	0.011	0.017	0.022	0.044	0.055	0.066	0.088	0.110			
18	Δu	0.003	0.007	0.010	0.014	0.017	0.020	0.027	0.034	0.051	0.068	0.136	0.170	0.204	0.273	0.341	4643	0.316	3.00
	Δc	0.004	0.007	0.011	0.015	0.018	0.022	0.029	0.036	0.055	0.073	0.145	0.182	0.218	0.291	0.364			
24	Δu	0.011	0.021	0.032	0.042	0.053	0.063	0.084	0.105	0.158	0.211	0.421	0.526	0.632	2643	0.556	3.07		
	Δc	0.008	0.017	0.025	0.034	0.042	0.051	0.067	0.084	0.126	0.168	0.337	0.421	0.505				0.674	2643
30	Δu	0.025	0.050	0.076	0.101	0.126	0.151	0.202	0.252	0.378	0.504	1712	0.863	3.13					
	Δc	0.016	0.032	0.048	0.065	0.081	0.097	0.129	0.161	0.242	0.323				0.645	2139	0.690		
36	Δu	0.051	0.102	0.153	0.204	0.256	0.307	0.409	0.511	0.767	1202	1.229	3.20						
	Δc	0.027	0.055	0.082	0.109	0.136	0.164	0.218	0.273	0.409				0.545	1804	0.984			
42	Δu	0.093	0.185	0.278	0.371	0.463	0.556	0.742	894	1.657	3.27								
	Δc	0.042	0.085	0.127	0.169	0.212	0.254	0.339				0.424	0.636	1564	1.325				
48	Δu	0.155	0.310	0.464	0.619	692	2.143	3.34											
	Δc	0.062	0.124	0.186	0.248				0.310	0.372	0.495	0.619	1384	1.714					

\*(M) - Multiplier for load table loads



### DURAGRID® Heavy Duty Grating

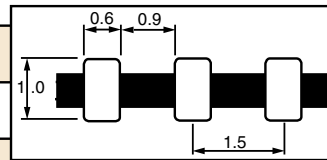
The following load tables are for the solid bar heavy duty grating designed to take heavy wheel traffic such as forklifts, tow motors and truck traffic. Because of the variety of wheel types and loading, it is recommended that you contact Strongwell to determine the series of heavy duty grating needed for your application.



### DURAGRID® HD-6000 1" Bearing Bar

A = 4.8 in<sup>2</sup>/ft. of width I = 0.40 in<sup>4</sup>/ft. of width S = 0.80 in<sup>2</sup>/ft. of width

SPAN INCHES		LOAD								SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		100	200	300	500	1000	2000	3000	4000			
12	Δu	0.001	0.002	0.003	0.006	0.011	0.022	0.033	0.044	4445	0.049	5.08
	Δc	0.002	0.004	0.005	0.009	0.018	0.035	0.053	0.071			
18	Δu	0.005	0.010	0.015	0.025	0.050	0.099	0.149	0.199	4285	0.213	5.73
	Δc	0.005	0.011	0.016	0.027	0.053	0.106	0.159	3857			
24	Δu	0.015	0.031	0.046	0.077	0.154	0.309	2948	0.455	5.83		
	Δc	0.012	0.025	0.037	0.062	0.123	0.247				2948	0.364
30	Δu	0.037	0.074	0.111	0.185	0.369	1543	0.570	5.95			
	Δc	0.024	0.047	0.071	0.118	0.236				1928	0.456	
36	Δu	0.076	0.152	0.228	0.380	1071	0.815	5.99				
	Δc	0.041	0.081	0.122	0.203				0.406	1607	0.652	
42	Δu	0.140	0.280	0.421	787	1.104	6.02					
	Δc	0.064	0.128	0.192				0.320	0.641	1377	0.883	
48	Δu	0.239	0.478	603	1.440	6.03						
	Δc	0.096	0.191				0.287	0.478	1205	1.151		
54	Δu	0.380	476	1.809	6.07							
	Δc	0.135				0.270	0.405	0.676	1071	1.447		



Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>2</sup> /ft. of Width	S-in <sup>2</sup> /ft. of Width
HD 6000	.60	.90	60	4.9	0.40	0.80
HD 5000	.60	.60	50	5.9	0.50	1.00
HD 4000	.60	.40	40	7.0	0.60	1.20

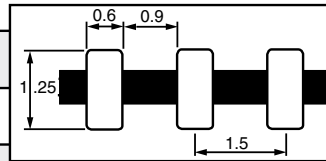
**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

# STRONGWELL® DURAGRID®

## DURAGRID® HD-6000 1-1/4" Bearing Bar

A = 6.0 in<sup>2</sup>/ft. of width    I = 0.781 in<sup>4</sup>/ft. of width    S = 1.24 in<sup>3</sup>/ft. of width

SPAN INCHES		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.001	0.001	0.002	0.003	0.006	0.013	0.019	0.025	0.032	0.038	0.044	0.051	13760	0.087	4.56
	Δc	0.001	0.002	0.003	0.005	0.010	0.020	0.030	0.040	0.051	0.061	0.071	0.081			
18	Δu	0.003	0.005	0.008	0.013	0.027	0.053	0.080	0.107	0.134	0.160	0.187	7684	0.205	5.46	
	Δc	0.003	0.006	0.009	0.014	0.028	0.057	0.085	0.114	0.142	0.171	0.199				7200
24	Δu	0.008	0.016	0.024	0.040	0.080	0.161	0.241	0.322	0.402	0.483	0.563	7032	0.566	5.73	
	Δc	0.006	0.013	0.019	0.032	0.064	0.129	0.193	0.257	0.322	0.386	0.450				7032
30	Δu	0.019	0.038	0.057	0.095	0.190	0.381	0.571	4504	0.858	5.91					
	Δc	0.012	0.024	0.037	0.061	0.122	0.244	0.366				0.487	0.609	5626	0.686	
36	Δu	0.039	0.078	0.117	0.196	0.392	3125	1.224	5.96							
	Δc	0.021	0.042	0.063	0.104	0.209				0.418	0.626	4680	0.977			
42	Δu	0.072	0.144	0.216	0.360	2296	1.652	6.01								
	Δc	0.033	0.066	0.099	0.164				0.329	0.658	4018	1.321				
48	Δu	0.122	0.243	0.365	0.609	1758	2.140	6.06								
	Δc	0.049	0.097	0.146	0.243				0.487	3516	1.712					
54	Δu	0.195	0.390	0.585	1389	2.708	6.06									
	Δc	0.069	0.139	0.208				0.347	3125	2.166						
60	Δu	0.296	0.591	1125	3.326	6.09										
	Δc	0.095	0.189				0.284	0.473	2812	2.660						



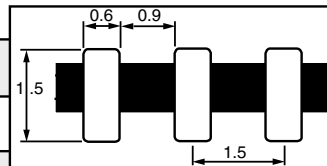
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>2</sup> /ft. of Width	S-in <sup>3</sup> /ft. of Width
HD 6000	.60	.90	60	5.9	.781	1.25
HD 5000	.60	.60	50	7.2	.977	1.56
HD 4000	.60	.40	40	8.5	1.172	1.88

**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

## DURAGRID® HD-6000 1-1/2" Bearing Bar

A = 7.2 in<sup>2</sup>/ft. of width    I = 1.35 in<sup>4</sup>/ft. of width    S = 1.80 in<sup>3</sup>/ft. of width

SPAN INCHES		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.000	0.001	0.001	0.002	0.005	0.009	0.014	0.019	0.023	0.028	0.033	0.037	18880	0.088	3.58
	Δc	0.001	0.001	0.002	0.004	0.007	0.015	0.022	0.030	0.037	0.045	0.052	0.060			
18	Δu	0.002	0.004	0.005	0.009	0.018	0.035	0.053	0.070	0.088	0.106	0.123	0.141	9728	0.171	4.79
	Δc	0.002	0.004	0.006	0.009	0.019	0.038	0.056	0.075	0.094	0.113	0.132	0.150			
24	Δu	0.005	0.010	0.015	0.026	0.051	0.103	0.154	0.205	0.256	0.308	0.359	0.410	9500	0.487	5.20
	Δc	0.004	0.008	0.012	0.021	0.041	0.082	0.123	0.164	0.205	0.246	0.287	0.328			
30	Δu	0.012	0.024	0.036	0.060	0.120	0.240	0.360	0.480	0.599	0.719	6570	0.788	5.43		
	Δc	0.008	0.015	0.023	0.038	0.077	0.153	0.230	0.307	0.384	0.460				0.537	0.614
36	Δu	0.025	0.049	0.074	0.123	0.246	0.492	0.783	4562	1.122	5.49					
	Δc	0.013	0.026	0.039	0.066	0.131	0.262	0.393				0.525	0.656	6843	0.897	
42	Δu	0.045	0.090	0.135	0.225	0.449	3352	1.505	5.57							
	Δc	0.021	0.041	0.062	0.103	0.205				0.411	0.616	5865	1.204			
48	Δu	0.076	0.152	0.228	0.380	2566	1.952	5.61								
	Δc	0.030	0.061	0.091	0.152				0.304	0.608	5132	1.561				
54	Δu	0.121	0.242	0.364	0.606	2027	2.456	5.64								
	Δc	0.043	0.086	0.129	0.215				0.431	4562	1.966					
60	Δu	0.185	0.369	0.554	1642	2.033	5.64									
	Δc	0.059	0.118	0.177				0.296	0.591	4106	2.427					
66	Δu	0.269	0.537	1354	3.636	5.68										
	Δc	0.078	0.156				0.234	0.391	3732	2.915						
72	Δu	0.380	0.761	1140	4.335	5.68										
	Δc	0.101	0.203				0.304	0.507	3422	3.470						



Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>2</sup> /ft. of Width	S-in <sup>3</sup> /ft. of Width
HD 6000	.60	.90	60	7.0	1.35	1.80
HD 5000	.60	.60	50	8.5	1.69	2.25
HD 4000	.60	.40	40	10.1	2.02	2.70

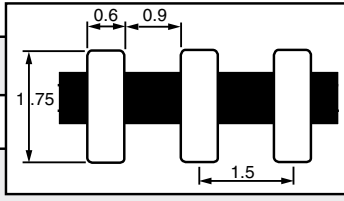
**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

# STRONGWELL® DURAGRID®

## DURAGRID® HD-6000 1-3/4" Bearing Bar

A = 8.4 in<sup>2</sup>/ft. of width      I = 2.14 in<sup>4</sup>/ft. of width      S = 2.45 in<sup>3</sup>/ft. of width

SPAN INCHES		LOAD											SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000				8000
12	Δu	0.000	0.001	0.001	0.002	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.029	19920	0.071	2.95
	Δc	0.000	0.001	0.002	0.003	0.006	0.011	0.017	0.023	0.029	0.034	0.040	0.046			
18	Δu	0.001	0.002	0.004	0.006	0.012	0.023	0.035	0.047	0.059	0.070	0.082	0.094	15926	0.187	4.53
	Δc	0.001	0.003	0.004	0.006	0.013	0.025	0.038	0.050	0.063	0.075	0.088	0.100			
24	Δu	0.003	0.007	0.010	0.016	0.033	0.065	0.098	0.131	0.164	0.196	0.229	0.262	12400	0.406	5.14
	Δc	0.003	0.005	0.008	0.013	0.026	0.052	0.079	0.105	0.131	0.157	0.183	0.209			
30	Δu	0.007	0.015	0.022	0.037	0.075	0.149	0.224	0.298	0.373	0.447	0.522	0.596	9062	0.675	5.51
	Δc	0.005	0.010	0.014	0.024	0.048	0.095	0.143	0.191	0.239	0.286	0.334	0.382			
36	Δu	0.015	0.030	0.045	0.076	0.151	0.303	0.454	0.605	0.756	0.908			6294	0.952	5.63
	Δc	0.008	0.016	0.024	0.040	0.081	0.161	0.242	0.323	0.403	0.484	0.565	0.645			
42	Δu	0.027	0.055	0.082	0.137	0.275	0.550							4623	1.271	5.74
	Δc	0.013	0.025	0.038	0.063	0.126	0.251	0.377	0.503	0.628						
48	Δu	0.046	0.093	0.139	0.232	0.464								3540	1.643	5.80
	Δc	0.019	0.037	0.056	0.093	0.186	0.371	0.557								
54	Δu	0.074	0.148	0.221	0.369	0.738								2796	2.064	5.84
	Δc	0.026	0.052	0.079	0.131	0.262	0.525									
60	Δu	0.113	0.225	0.338	0.563									2265	2.549	5.84
	Δc	0.036	0.072	0.108	0.180	0.360										
66	Δu	0.164	0.327	0.491										1872	3.063	5.88
	Δc	0.048	0.095	0.143	0.238	0.476										
72	Δu	0.231	0.463	0.694										1573	3.639	5.89
	Δc	0.062	0.123	0.185	0.308	0.617										
78	Δu	0.313	0.626											1340	4.192	6.00
	Δc	0.077	0.154	0.231	0.385											



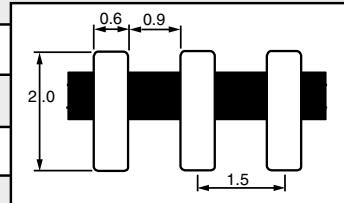
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>4</sup> /ft. of Width	S-in <sup>3</sup> /ft. of Width
HD 6000	.60	.90	60	8.0	2.14	2.45
HD 5000	.60	.60	50	9.8	2.68	3.06
HD 4000	.60	.40	40	11.6	3.22	3.68

**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

## DURAGRID® HD-6000 2" Bearing Bar

A = 9.6 in<sup>2</sup>/ft. of width      I = 3.2 in<sup>4</sup>/ft. of width      S = 3.2 in<sup>3</sup>/ft. of width

SPAN INCHES		LOAD											SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000				8000
12	Δu	0.000	0.001	0.001	0.002	0.003	0.006	0.009	0.012	0.015	0.018	0.021	0.024	15360	0.047	2.32
	Δc	0.000	0.001	0.001	0.002	0.005	0.010	0.015	0.019	0.024	0.029	0.034	0.039			
18	Δu	0.001	0.002	0.003	0.005	0.009	0.018	0.028	0.037	0.046	0.055	0.064	0.074	13500	0.124	3.87
	Δc	0.001	0.002	0.003	0.005	0.010	0.020	0.029	0.039	0.049	0.059	0.069	0.078			
24	Δu	0.002	0.005	0.007	0.012	0.024	0.049	0.073	0.098	0.122	0.146	0.171	0.195	13000	0.317	4.61
	Δc	0.002	0.004	0.006	0.010	0.020	0.039	0.059	0.078	0.098	0.117	0.137	0.156			
30	Δu	0.005	0.011	0.016	0.027	0.054	0.108	0.162	0.215	0.269	0.323	0.377	0.431	9946	0.536	5.10
	Δc	0.003	0.007	0.010	0.017	0.034	0.069	0.103	0.138	0.172	0.207	0.241	0.276			
36	Δu	0.011	0.022	0.032	0.054	0.108	0.216	0.324	0.431	0.539	0.647			6880	0.742	5.28
	Δc	0.006	0.012	0.017	0.029	0.058	0.115	0.173	0.230	0.288	0.345	0.403	0.460			
42	Δu	0.019	0.039	0.058	0.097	0.194	0.387	0.581	0.774					5112	0.990	5.45
	Δc	0.009	0.018	0.027	0.044	0.089	0.177	0.266	0.354	0.443	0.531	0.620	0.708			
48	Δu	0.033	0.066	0.099	0.164	0.328	0.657							3860	1.268	5.48
	Δc	0.013	0.026	0.039	0.066	0.131	0.263	0.394	0.526	0.657						
54	Δu	0.052	0.104	0.156	0.259	0.519								3070	1.592	5.56
	Δc	0.018	0.037	0.055	0.092	0.184	0.369	0.553								
60	Δu	0.079	0.158	0.236	0.394									2485	1.957	5.58
	Δc	0.025	0.050	0.076	0.126	0.252	0.504									
66	Δu	0.114	0.228	0.342	0.570									2054	2.343	5.64
	Δc	0.033	0.066	0.100	0.166	0.332	0.664									
72	Δu	0.161	0.323	0.484	0.806									1726	2.784	5.65
	Δc	0.043	0.086	0.129	0.215	0.430										
78	Δu	0.221	0.443	0.664										1471	3.256	5.67
	Δc	0.054	0.109	0.163	0.272	0.545										
84	Δu	0.296	0.592											1269	3.758	5.70
	Δc	0.068	0.135	0.203	0.338	0.677										



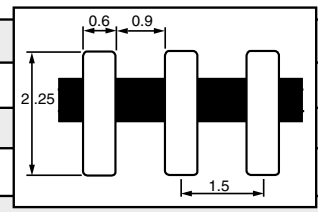


# STRONGWELL® DURAGRID®

## DURAGRID® HD-6000 2-1/4" Bearing Bar

A = 10.8 in<sup>2</sup>/ft. of width    I = 4.56 in<sup>4</sup>/ft. of width    S = 4.05 in<sup>3</sup>/ft. of width

SPAN INCHES		LOAD											SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000				8000
12	Δu	0.000	0.000	0.001	0.001	0.002	0.005	0.007	0.010	0.012	0.015	0.017	0.019	20960	0.051	2.03
	Δc	0.000	0.001	0.001	0.002	0.004	0.008	0.012	0.016	0.019	0.023	0.027	0.031			
18	Δu	0.001	0.001	0.002	0.004	0.007	0.014	0.021	0.028	0.035	0.042	0.050	0.057	16640	0.118	3.53
	Δc	0.001	0.002	0.002	0.004	0.008	0.015	0.023	0.030	0.038	0.045	0.053	0.060			
24	Δu	0.002	0.003	0.005	0.009	0.017	0.035	0.052	0.070	0.087	0.105	0.122	0.139	16000	0.279	4.53
	Δc	0.001	0.003	0.004	0.007	0.014	0.028	0.042	0.056	0.070	0.084	0.098	0.112			
30	Δu	0.004	0.008	0.011	0.019	0.038	0.076	0.114	0.152	0.190	0.228	0.266	0.304	12800	0.486	5.08
	Δc	0.002	0.005	0.007	0.012	0.024	0.049	0.073	0.097	0.121	0.146	0.170	0.194			
36	Δu	0.007	0.015	0.022	0.037	0.075	0.149	0.224	0.299	0.374	0.448	0.523	0.598	10720	0.801	5.35
	Δc	0.004	0.008	0.012	0.020	0.040	0.080	0.120	0.159	0.199	0.239	0.279	0.319			
42	Δu	0.013	0.027	0.040	0.067	0.134	0.268	0.402	0.536	0.669	7876	1.055	5.53			
	Δc	0.006	0.012	0.018	0.031	0.061	0.122	0.184	0.245	0.306				0.367	0.428	0.490
48	Δu	0.022	0.045	0.067	0.112	0.224	0.447	0.671	6030	1.348	5.65					
	Δc	0.009	0.018	0.027	0.045	0.089	0.179	0.268				0.358	0.447	0.537	0.626	
54	Δu	0.035	0.070	0.106	0.176	0.352	4764	1.679	5.74							
	Δc	0.013	0.025	0.038	0.063	0.125				0.251	0.376	0.501	0.627			
60	Δu	0.053	0.107	0.160	0.267	0.534	3859	2.063	5.77							
	Δc	0.017	0.034	0.051	0.086	0.171				0.342	0.513	0.684				
66	Δu	0.078	0.155	0.233	0.388	3789	2.939	5.82								
	Δc	0.023	0.045	0.068	0.113				0.226	0.451	0.677					
72	Δu	0.109	0.219	0.328	0.547	2680	2.935	5.84								
	Δc	0.029	0.058	0.088	0.146				0.292	0.584						
78	Δu	0.151	0.301	0.452	2283	3.437	5.85									
	Δc	0.037	0.074	0.111				0.185	0.371							
84	Δu	0.201	0.403	0.604	1954	3.937	5.88									
	Δc	0.046	0.092	0.138				0.230	0.461							
90	Δu	0.265	0.529	1715	4.538	5.90										
	Δc	0.056	0.113				0.169	0.282	0.565							
96	Δu	0.341	0.683	1507	5.145	5.92										
	Δc	0.068	0.137				0.205	0.341	0.683							



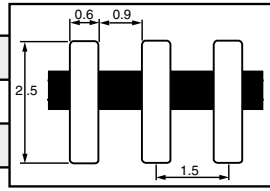
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>4</sup> /ft. of Width	S-in <sup>3</sup> /ft. of Width
HD 6000	.60	.90	60	10.1	4.56	4.05
HD 5000	.60	.60	50	12.4	5.70	5.06
HD 4000	.60	.40	40	14.7	6.83	6.07

**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

## DURAGRID® HD-6000 2-1/2" Bearing Bar

A = 12.0 in<sup>2</sup>/ft. of width    I = 6.25 in<sup>4</sup>/ft. of width    S = 5.00 in<sup>3</sup>/ft. of width

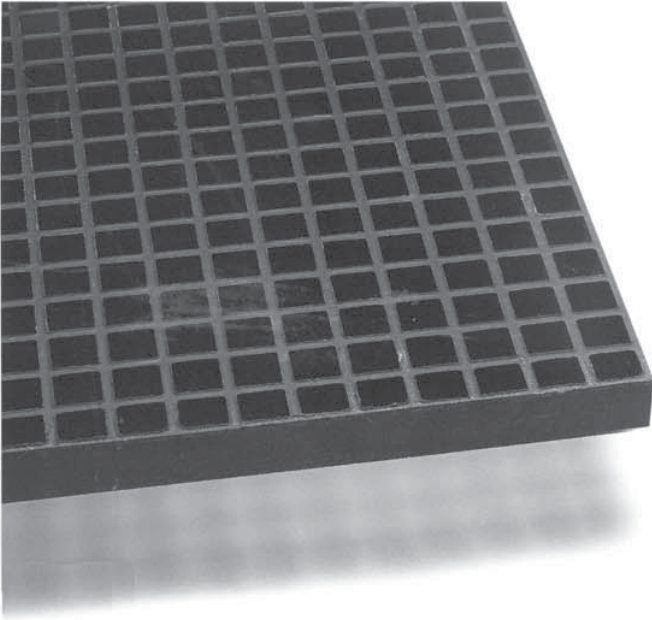
SPAN INCHES		LOAD											SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI	
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000				8000
12	Δu	0.000	0.000	0.001	0.001	0.002	0.004	0.007	0.009	0.011	0.013	0.016	0.018	22400	0.050	1.61
	Δc	0.000	0.001	0.001	0.002	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.029			
18	Δu	0.001	0.001	0.002	0.003	0.006	0.012	0.018	0.023	0.029	0.035	0.041	0.047	17640	0.103	3.11
	Δc	0.001	0.001	0.002	0.003	0.006	0.013	0.019	0.025	0.031	0.038	0.044	0.050			
24	Δu	0.001	0.003	0.004	0.007	0.014	0.029	0.043	0.057	0.071	0.086	0.100	0.114	13716	0.196	4.03
	Δc	0.001	0.002	0.003	0.006	0.011	0.023	0.034	0.046	0.057	0.069	0.080	0.091			
30	Δu	0.003	0.006	0.009	0.015	0.030	0.060	0.091	0.121	0.151	0.181	0.211	0.241	11800	0.356	4.66
	Δc	0.002	0.004	0.006	0.010	0.019	0.039	0.058	0.077	0.097	0.116	0.135	0.155			
36	Δu	0.006	0.012	0.017	0.029	0.058	0.117	0.175	0.233	0.292	0.350	0.408	0.467	9493	0.554	5.00
	Δc	0.003	0.006	0.009	0.016	0.031	0.062	0.093	0.124	0.156	0.187	0.218	0.249			
42	Δu	0.010	0.021	0.031	0.051	0.103	0.206	0.309	0.412	0.515	0.617	6975	0.718	5.25		
	Δc	0.005	0.009	0.014	0.024	0.047	0.094	0.141	0.188	0.235	0.282				0.329	0.376
48	Δu	0.017	0.034	0.052	0.086	0.172	0.344	0.516	0.688	5340	0.918	5.36				
	Δc	0.007	0.014	0.021	0.034	0.069	0.138	0.206	0.275				0.344	0.413	0.481	0.550
54	Δu	0.027	0.054	0.081	0.135	0.270	0.541	4419	1.195	5.46						
	Δc	0.010	0.019	0.029	0.048	0.096	0.192				0.288	0.385	0.481	0.577	0.673	
60	Δu	0.041	0.082	0.123	0.204	0.408	3417	1.395	5.51							
	Δc	0.013	0.026	0.039	0.065	0.131				0.261	0.392	0.523	0.653			
66	Δu	0.059	0.119	0.178	0.297	0.594	2824	1.676	5.55							
	Δc	0.017	0.035	0.052	0.086	0.173				0.345	0.518	0.691				
72	Δu	0.084	0.168	0.252	0.420	2374	1.992	5.56								
	Δc	0.022	0.045	0.067	0.112				0.224	0.448	0.671					
78	Δu	0.115	0.230	0.345	0.575	2022	2.324	5.59								
	Δc	0.028	0.057	0.085	0.141				0.283	0.566	0.849					
84	Δu	0.154	0.308	0.461	1744	2.682	5.62									
	Δc	0.035	0.070	0.105				0.176	0.352	0.703						
90	Δu	0.202	0.404	0.606	1519	3.068	5.64									
	Δc	0.043	0.086	0.129				0.215	0.431							
96	Δu	0.260	0.520	1335	3.472	5.67										
	Δc	0.052	0.104				0.156	0.260	0.520							
102	Δu	0.330	0.659	1182	3.897	5.70										
	Δc	0.062	0.124				0.186	0.310	0.621							



Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in <sup>4</sup> /ft. of Width	S-in <sup>3</sup> /ft. of Width
HD 6000	.60	.90	60	11.1	6.25	5.00
HD 5000	.60	.60	50	13.7	7.81	6.25
HD 4000	.60	.40	40	16.3	9.38	7.50

**Multipliers for Series Other Than HD-6000**  
 HD 5000 - Multiply Load Table Deflection by 0.80  
 HD 4000 - Multiply Load Table Deflection by 0.67

# STRONGWELL® MOLDED GRATING



## SHAPES, SIZES & AVAILABILITY

Typical DURAGRATE® Panels		
THICKNESS	MESH PATTERN	PANEL SIZES
1"	1-1/2" Square	3' x 10', 4' x 8', 4' x 12'
1"	1" x 4" Rectangular	3' x 10', 4' x 12'
1-1/2"	3/4" x 3/4" Mini-Grid™	4' x 12'
1-1/2"	1-1/2" x 6" Rectangular	4' x 12'
1-1/2"	1-1/2" Square	3' x 10', 4' x 8', 4' x 12', 5' x 10'
2"	2" Square	4' x 12'

NOTE: All panel sizes available in VE, XVE, PP, GP or FF resin systems. NPP and NVE resin systems are available in most panel sizes. Custom panel sizes and resins available upon request.

### How to Specify

The molded fiberglass grating shall be **DURAGRATE®** as supplied by Strongwell. Grating panels shall be (pick one from chart for thickness, mesh pattern, resin code) molded grid pattern. The grating shall be one-piece construction with the tops of the bearing bars and cross bars in the same plane. Color shall be (green) (orange) (yellow) (dark gray) (light gray). Surface shall be (concave top) (gritted).

DURAGRATE® molded fiberglass grating is a strong mesh grating panel that is the chemical resistant flooring choice for many industrial applications. DURAGRATE® panels are molded in one piece and feature a concave non-slip walking surface. The cost-effective panels allow for efficient on-site cutting to minimize grating waste and load bearing bars in both directions allow for use without continuous side support.

DURAGRATE® molded fiberglass grating is significantly lighter in weight than metallic gratings and the high resin content provides excellent corrosion resistance and requires very little maintenance. A higher safety factor is achieved by designing in a higher glass content at the bottom of the grating for greater tensile strength.

DURAGRATE® molded fiberglass grating is:

- Corrosion Resistant
- Fire Retardant
- Low in Maintenance
- Lightweight
- Easy To Install
- Uniform in Appearance
- Easy To Fabricate
- Impact Resistant
- Low in Conductivity
- Bidirectional Load Bearing
- Cost Effective

### Materials of Construction

DURAGRATE® molded fiberglass grating is composed of fiberglass rovings combined with a choice of five thermosetting resin systems. All of the resins contain a UV inhibitor.

Standard DURAGRATE® grating has a concave profile on the upper surface for skid resistance. Grit tops are available upon request.

### Standard Resin Systems Available\*

Resin Code	Description	Resin Base	Corrosion Resistance	Flame Spread Rating**	NSF-61 Approval
VE	Chemical Proof Fire Retardant	Vinyl Ester	Excellent	Class 1 25 or less	
NVE	Chemical Proof Fire Retardant	Vinyl Ester	Excellent	Class 1 25 or less	Hot & Cold
XVE	Chemical Proof Fire Retardant	Vinyl Ester	Excellent	Class 1 10 or less	
PP	Industrial Grade Fire Retardant	Isophthalic	Very Good	Class 1 25 or less	
NPP	Industrial Grade Fire Retardant	Isophthalic	Very Good	Class 1 25 or less	Hot & Cold
GP	Architectural Grade Fire Retardant	Orthophthalic	Good	Class 1 25 or less	
FF	Food Grade Fire Retardant	Isophthalic	Very Good	Class 2 30 or less	

\*Strongwell's Standard Colors are Dark Gray, Green, Yellow, Orange and Light Gray. Contact Customer Service for Resin System and Color Requirements. Custom Colors are Available upon Request.

\*\* Flame Spread Rating per ASTM E-84 Tunnel Test

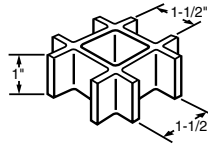
# STRONGWELL® DURAGRATE®

## Load Tables

### 1" THICK 1-1/2" SQUARE MESH DURAGRATE®

A=1.71 in.<sup>2</sup>/ft. of width  
I=0.14 in.<sup>4</sup>/ft. of width  
S=0.29 in.<sup>3</sup>/ft. of width

1" bearing bars: Values per foot of width  
Open Space = 70%  
Approx. Weight = 2.6 lbs/sq. ft.

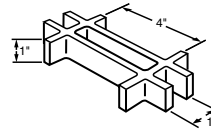


SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	0.013	0.017	0.021	0.025	0.034	0.042	1360	0.115	1.90
	Δc	<0.010	0.014	0.020	0.027	0.034	0.041	0.054	0.068	680	0.092	
18	Δu	0.021	0.041	0.062	0.082	0.103	0.123	0.164	0.205	666	0.274	1.98
	Δc	0.022	0.044	0.066	0.088	0.110	0.131	0.175	0.219	500	0.219	
24	Δu	0.064	0.128	0.192	0.256	0.320	0.384	0.512	0.640	380	0.486	2.01
	Δc	0.051	0.102	0.154	0.205	0.256	0.307	0.409	0.512	380	0.389	
30	Δu	0.155	0.309	0.464	0.619					240	0.742	2.03
	Δc	0.099	0.198	0.297	0.396	0.495	0.594			300	0.594	
36	Δu	0.318	0.635							160	1.016	2.05
	Δc	0.169	0.339	0.508	0.677					240	0.813	

### 1" THICK 1" x 4" RECTANGULAR MESH DURAGRATE®

A=2.57 in.<sup>2</sup>/ft. of width  
I=0.22 in.<sup>4</sup>/ft. of width  
S=0.43 in.<sup>3</sup>/ft. of width

1" bearing bars: Values per foot of width  
Open Space = 69%  
Approx. Weight = 2.8 lbs/sq. ft.

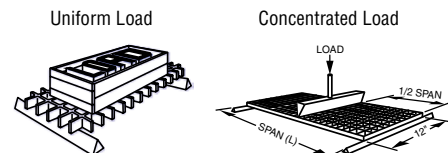


SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	<0.010	0.011	0.014	0.017	0.022	0.028	1960	0.108	1.85
	Δc	<0.010	<0.010	0.013	0.018	0.022	0.027	0.035	0.044	980	0.087	
18	Δu	0.012	0.025	0.037	0.049	0.062	0.074	0.099	0.123	960	0.237	2.10
	Δc	0.013	0.026	0.039	0.053	0.066	0.079	0.105	0.131	720	0.189	
24	Δu	0.037	0.074	0.112	0.149	0.186	0.223	0.298	0.372	560	0.417	2.20
	Δc	0.030	0.060	0.089	0.119	0.149	0.179	0.238	0.298	560	0.333	
30	Δu	0.088	0.176	0.264	0.352	0.440	0.528			336	0.591	2.27
	Δc	0.056	0.113	0.169	0.225	0.282	0.338	0.451	0.563	420	0.473	
36	Δu	0.176	0.353	0.529						240	0.846	2.35
	Δc	0.094	0.188	0.282	0.376	0.470	0.564			360	0.677	
42	Δu	0.316	0.632							183	1.155	2.43
	Δc	0.144	0.289	0.433	0.577					320	0.924	

NOTE: Rectangular grating tables are for loading in the crosswise orientation.

- c IS CONCENTRATED LOAD LBS/FT OF WIDTH
- Δc IS DEFLECTION UNDER CONCENTRATED LOAD(in)
- u IS UNIFORM LOAD LBS/FT<sup>2</sup>
- Δu IS DEFLECTION UNDER UNIFORM LOAD(in)

NOTE: ALL TABLE VALUES ARE TYPICAL



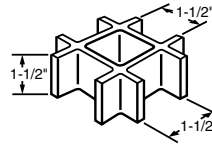
# STRONGWELL® DURAGRATE®

## Load Tables

### 1-1/2" THICK 1-1/2" SQUARE MESH DURAGRATE®

A=2.85 in.<sup>2</sup>/ft. of width  
 I=0.51 in.<sup>4</sup>/ft. of width  
 S=0.65 in.<sup>3</sup>/ft. of width

1-1/2" bearing bars: Values per foot of width  
 Open Space = 70%  
 Approx. Weight = 3.8 lbs/sq.ft.

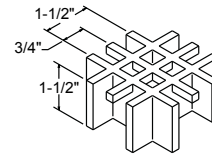


SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	0.014	0.018	3120	0.111	1.24
	Δc	<0.010	<0.010	<0.010	0.011	0.014	0.017	0.023	0.028	1560	0.089	
18	Δu	<0.010	0.014	0.021	0.028	0.036	0.043	0.057	0.071	1386	0.197	1.57
	Δc	<0.010	0.015	0.023	0.030	0.038	0.046	0.061	0.076	1040	0.158	
24	Δu	0.021	0.042	0.063	0.084	0.104	0.125	0.167	0.209	780	0.326	1.69
	Δc	0.017	0.033	0.050	0.067	0.084	0.100	0.134	0.167	780	0.261	
30	Δu	0.047	0.094	0.141	0.188	0.235	0.283	0.377	0.471	496	0.467	1.83
	Δc	0.030	0.060	0.090	0.121	0.151	0.181	0.241	0.301	620	0.374	
36	Δu	0.096	0.192	0.288	0.384	0.480	0.576			347	0.666	1.86
	Δc	0.051	0.102	0.154	0.205	0.256	0.307	0.410	0.512	520	0.533	
42	Δu	0.175	0.350	0.525						251	0.881	1.89
	Δc	0.080	0.160	0.240	0.320	0.400	0.480	0.641	0.801	440	0.705	
48	Δu	0.287	0.573							170	0.975	1.97
	Δc	0.115	0.229	0.344	0.459	0.573	0.688			340	0.780	

### 1-1/2" THICK 3/4" MINI-GRID™ DURAGRATE®

A=3.62 in.<sup>2</sup>/ft. of width  
 I=0.73 in.<sup>4</sup>/ft. of width  
 S=0.90 in.<sup>3</sup>/ft. of width

1-1/2" bearing bars: Values per foot of width  
 Open Space = 44%  
 Approx. Weight = 4.4 lbs/sq.ft.



SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	0.011	0.014	0.017	0.021	0.028	0.035	3860	0.270	0.44
	Δc	<0.010	0.011	0.017	0.022	0.028	0.034	0.045	0.056	1930	0.216	
18	Δu	0.013	0.026	0.039	0.052	0.065	0.078	0.104	0.130	1776	0.470	0.59
	Δc	0.014	0.028	0.042	0.056	0.070	0.084	0.112	0.139	1332	0.376	
24	Δu	0.025	0.050	0.075	0.100	0.126	0.151	0.201	0.251	1052	0.529	0.98
	Δc	0.020	0.040	0.060	0.080	0.101	0.121	0.161	0.201	1052	0.423	
30	Δu	0.055	0.110	0.165	0.219	0.274	0.329	0.439	0.548	632	0.692	1.10
	Δc	0.035	0.070	0.105	0.140	0.176	0.211	0.281	0.351	790	0.553	
36	Δu	0.087	0.173	0.260	0.346	0.433	0.520	0.692		456	0.796	1.43
	Δc	0.046	0.092	0.139	0.185	0.231	0.277	0.370	0.462	684	0.637	
42	Δu	0.150	0.300	0.450	0.600					332	1.005	1.53
	Δc	0.069	0.138	0.207	0.276					582	0.804	
48	Δu	0.245	0.490	0.735						215	1.054	1.61
	Δc	0.098	0.196	0.294						430	0.843	

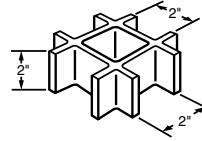
# STRONGWELL® DURAGRATE®

## Load Tables

### 2" THICK 2" SQUARE MESH DURAGRATE®

A=2.88 in.<sup>2</sup>/ft. of width  
 I=0.96 in.<sup>4</sup>/ft. of width  
 S=0.94 in.<sup>3</sup>/ft. of width

2" bearing bars: Values per foot of width  
 Open Space = 72%  
 Approx. Weight = 4.0 lbs/sq.ft.

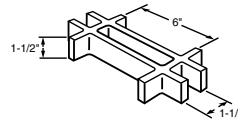


SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	4000	0.081	1.15
	Δc	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.013	0.016	2000	0.065	
18	Δu	<0.010	<0.010	0.012	0.016	0.020	0.024	0.032	0.040	1813	0.145	1.48
	Δc	<0.010	<0.010	0.013	0.017	0.021	0.026	0.034	0.043	1360	0.116	
24	Δu	0.010	0.021	0.031	0.042	0.052	0.063	0.083	0.104	960	0.200	1.80
	Δc	<0.010	0.017	0.025	0.033	0.042	0.050	0.067	0.083	960	0.160	
30	Δu	0.023	0.046	0.069	0.092	0.114	0.137	0.183	0.229	640	0.293	2.00
	Δc	0.015	0.029	0.044	0.059	0.073	0.088	0.117	0.146	800	0.234	
36	Δu	0.044	0.089	0.133	0.177	0.222	0.266	0.355	0.444	453	0.402	2.14
	Δc	0.024	0.047	0.071	0.095	0.118	0.142	0.189	0.237	680	0.322	
42	Δu	0.082	0.164	0.245	0.327	0.409	0.491	0.654		331	0.542	2.15
	Δc	0.037	0.075	0.112	0.150	0.187	0.224	0.299	0.374	580	0.434	
48	Δu	0.135	0.270	0.405	0.541					260	0.703	2.22
	Δc	0.054	0.108	0.162	0.216	0.270	0.324	0.432	0.541	520	0.562	
54	Δu	0.210	0.420	0.630						204	0.858	2.29
	Δc	0.075	0.149	0.224	0.298	0.373	0.448	0.597		460	0.686	

### 1-1/2" THICK 1-1/2" x 6" RECTANGULAR DURAGRATE®

A=3.785 in.<sup>2</sup>/ft. of width  
 I=0.56 in.<sup>4</sup>/ft. of width  
 S=1.500 in.<sup>3</sup>/ft. of width

1-1/2" bearing bars: Values per foot of width  
 Open Space = 67%  
 Approx. Weight = 3.5 lbs/sq.ft.

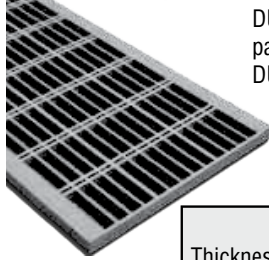


SPAN INCHES		LOAD								SAFE LOAD 5:1 SAFETY FACTOR	DEFLECTION	E x 10 <sup>6</sup> PSI
		50	100	150	200	250	300	400	500			
12	Δu	<0.010	<0.010	<0.010	<0.010	0.011	0.014	0.018	0.023	4272	0.195	0.88
	Δc	<0.010	<0.010	0.011	0.015	0.018	0.022	0.029	0.037	2136	0.156	
18	Δu	<0.010	0.018	0.027	0.035	0.044	0.053	0.071	0.089	1712	0.300	1.16
	Δc	0.010	0.019	0.028	0.038	0.047	0.057	0.076	0.095	1284	0.240	
24	Δu	0.019	0.038	0.056	0.075	0.094	0.112	0.150	0.188	956	0.359	1.71
	Δc	0.015	0.030	0.045	0.060	0.075	0.090	0.120	0.150	956	0.288	
30	Δu	0.039	0.078	0.117	0.156	0.195	0.233	0.311	0.389	587	0.458	2.01
	Δc	0.025	0.050	0.075	0.100	0.125	0.150	0.200	0.250	734	0.367	
36	Δu	0.071	0.143	0.214	0.285	0.357	0.428			385	0.550	2.28
	Δc	0.038	0.076	0.114	0.152	0.190	0.228	0.304	0.381	578	0.440	
42	Δu	0.126	0.252	0.378	0.504	0.630				370	0.680	2.39
	Δc	0.058	0.115	0.173	0.230	0.288	0.346	0.461		472	0.544	
48	Δu	0.207	0.414	0.621						184	0.760	2.49
	Δc	0.083	0.160	0.248	0.331	0.414	0.497			368	0.608	

# STRONGWELL® STAIR TREADS

## DURAGRATE®

### Stair Treads

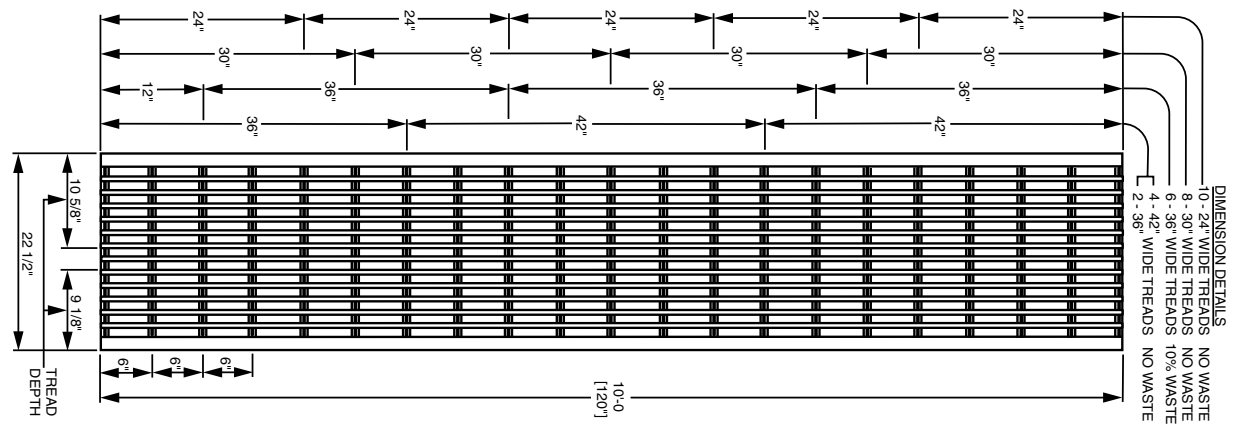


DURAGRATE® molded fiberglass stair treads are available in a 1-1/2" thick 1-1/2" x 6" rectangular mesh pattern. The standard panel size is 22-1/2" x 10'. Stair treads can be produced in any of the standard DURAGRATE® resin systems. The stair tread panel comes complete with anti-slip nosing.

#### DURAGRATE® Stair Tread

Thickness	Mesh	Panel Size	Maximum Span for 300 lbs. at Mid-Span		Panel Weight	Open Area
			1/8" or less deflection	1/4" or less deflection		
1-1/2"	1-1/2" x 6"	22-1/2" x 10'	31"	38"	60 lbs.	67%

#### Stair Tread Panel Cutting Diagram

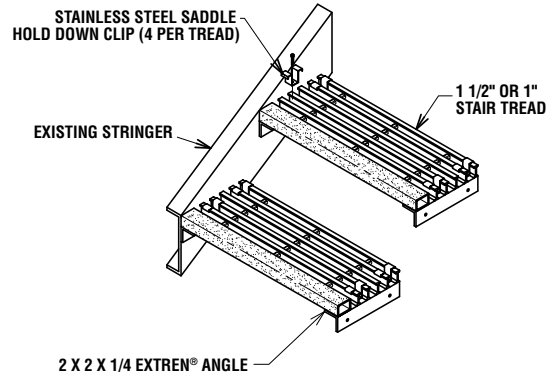
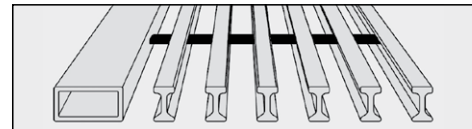


## DURADEK® & DURAGRID®

### Nosings for Stair Treads and Landings

Stair treads and landings are produced by attaching a 2" deep nosing to the leading edge. This gives added strength and rigidity to the area that takes the most impact and abuse. In addition, the nosing provides more surface area for skid resistance, wear and better visibility. Gray stair treads with yellow nosing are available at additional cost.

TREAD WIDTH & COLOR	STAIR TREAD SERIES	MAXIMUM SPAN FOR 300 LBS. AT MIDSPAN	
		1/8" OR LESS DEFLECTION	1/4" OR LESS DEFLECTION
11" Gray or Yellow	I-6000 1"	29"	37"
11" Gray or Yellow	I-6000 1-1/2"	40"	52"
12" Gray or Yellow	T-5000 2"	47"	59"



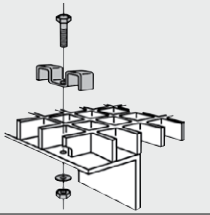
# STRONGWELL® ACCESSORIES

## DURAGRATE®

### Panel Installation

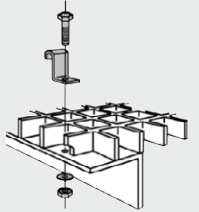
#### Type M Clips

For attaching grating to supports.



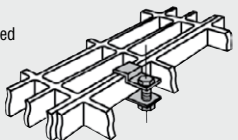
#### Type J Clips

For attaching grating to supports for moderate loads.



#### Type C Clips

For joining two unsupported edges if needed.

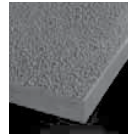


### Sealing Kits

To maintain corrosion resistance and structural integrity, standard resin sealing kits are available to protect the exposed ends of cut panels and other components.

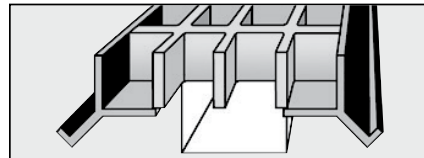
### Solid Surface

DURAGRATE® is available with an integral cover bonded to the top surface with a slip resistant grit surface.



### Curb Angle

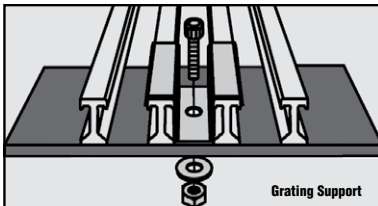
Strongwell's pultruded fiberglass Curb Angle provides a strong, firm base for bearing bars. Standard Curb Angle is produced using a gray, fire retardant vinyl ester resin system and is available in three sizes.



## DURADEK® & DURAGRID®

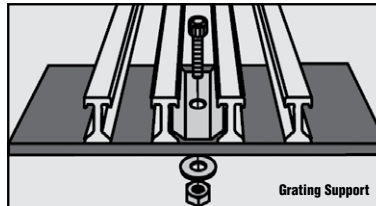
### Panel Hold Downs

2 X 2 X 1/4 EXTREN® ANGLE



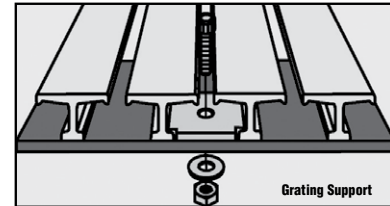
Weldable 316L stainless steel saddle clips are available for all grating series except T-1800 and T-3500.

*\*Bolts are priced separately from the saddle clips.*



Weldable 316L stainless steel insert clips are available for all grating series except T-1800 and T-3500.

*\*Bolts are priced separately from the hold-down.*

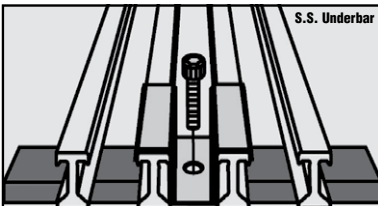


Weldable 316L stainless steel insert clips are available for series T-1800 and T-3500 only.

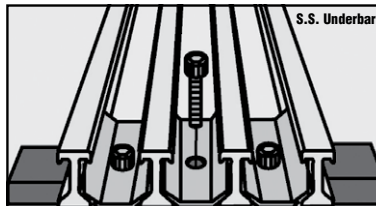
*\*Bolts are priced separately from the hold-down. (All bolts are 1/4-20 x 1-1/4", cap head, 316L stainless steel.)*

### Panel Connectors

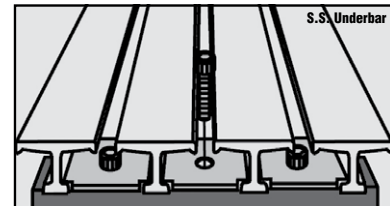
Panel Connectors are generally only used at midspan to assist in transferring load from section to section.



316L stainless steel saddle clips are available as panel connectors for "I" and "HD" bar grating and T-bar grating except T-1800 and T-3500.



Insert clip hold-downs are available for I-bar grating and T-bar grating except for T-1800 and T-3500.

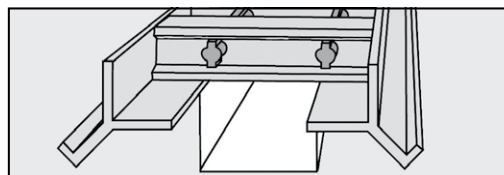


Insert clip hold-downs are available for T-1800 and T-3500 grating.

*(All bolts are 1/4-20 x 1-1/4", cap head, 316L stainless steel.)*

### Curb Angle

Fiberglass Curb Angle provides a strong, firm base for bearing bars and is pultruded from the same material and in the same manner as other DURADEK® and DURAGRID® products. Corrosion resistant Fiberglass Curb Angles are available in four sizes in gray fire retardant vinyl ester.



# STRONGWELL® SHAPES & PLATES

## EXTREN® FIBERGLASS SERIES

EXTREN® is a proprietary combination of fiberglass reinforcements and thermosetting polyester or vinyl ester resin systems. It is produced in more than 100 standard shapes. All EXTREN® shapes have a surface veil to protect against glass fibers penetrating the resin surface in service and to increase corrosion and UV resistance. EXTREN® is offered in three series designed for different environments and applications.

### EXTREN® 500

An all-purpose series utilizing an isophthalic polyester resin system with a UV inhibitor.

**Color:** olive green

### EXTREN® 525

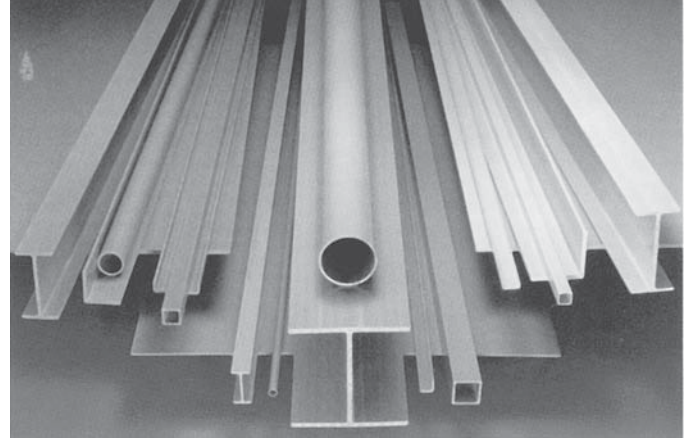
An all-purpose series utilizing a fire retardant isophthalic polyester resin system with a UV inhibitor.

**Color:** slate gray (plus certain handrail and fixed-ladder components in yellow)

### EXTREN® 625

A premium series — both fire retardant and highly corrosion resistant — utilizing a vinyl ester resin system with a UV inhibitor.

**Color:** beige



## Availability List

STOCKED

NONSTOCKED

### Equal Leg Angles

1 x 1/8  
1-1/4 x 3/16  
1-1/2 x 3/16  
1-1/2 x 1/8  
1-1/2 x 1/4  
2 x 3/16  
2 x 1/4  
3 x 1/4  
3 x 3/8  
4 x 1/4  
4 x 3/8  
4 x 1/2  
6 x 1/2

1-1/4 x 1/8  
2 x 1/8  
5 x 1/2  
6 x 1/4 (Stock Series 525)  
6 x 3/8

### Unequal Leg Angles

1-3/4 x 1-1/4 x 1/4

### Channels

2 x 9/16 x 1/8  
3 x 7/8 x 1/4  
4 x 1-3/8 x 3/16  
4 x 1-3/8 x 1/4  
5 x 1-5/8 x 1/4  
6 x 1-5/8 x 1/4  
8 x 2-3/16 x 3/8  
10 x 2-3/4 x 1/2 (24' lg.)  
1-1/2 x 1 x 3/16  
1-1/2 x 1-1/2 x 1/4  
2 x 7/8 x 1/4  
2-5/8 x 1/8 x 1-1/4 x 3/16  
3 x 1 x 3/16  
3-1/2 x 2 x 3/32  
4 x 1-1/16 x 1/8  
6 x 1-11/16 x 3/8 (Stock S-500)  
8 x 2-3/16 x 1/4  
14 x 3-1/2 x 3/40  
18 x 2-3/16 x 3/16

### I-Beams

3 x 1-1/2 x 1/4  
4 x 2 x 1/4  
8 x 4 x 3/8  
2 x 1 x 1/8  
6 x 3 x 1/4  
6 x 3 x 3/8  
8 x 4 x 1/2  
10 x 5 x 3/8  
10 x 5 x 1/2  
12 x 6 x 1/2  
18 x 3/8 x 4-1/2 x 1/2  
24 x 3/8 x 7-1/2 x 3/4

### Wide Flange Beams

3 x 1/4  
4 x 1/4  
6 x 3/8  
8 x 3/8  
10 x 3/8 (32'lg.)  
2 x 1/8  
8 x 1/2  
10 x 1/2  
12 x 1/2

### Plate

1/8"  
3/16"  
1/4"  
3/8"  
1/2"  
3/4"  
5/8"  
1"

### Round Tube

1 x 1/8  
1-1-4 x 1/8  
1-1/2 x 1/8  
1-1/2 x 1/4  
2 x 1/8  
2 x 1/4  
2-1/2 x 1/4  
3 x 1/4

3/4 x 3/16  
1-1/4 x 3/16  
1-3/8 x 3/16  
1-3/4 x 1/8  
1-3/4 x 1/4  
2-3/4 x 1/4  
2-3/4 x 3/8  
3 x 1/8  
3-1/2 x .140  
4 x 1/8  
4 x 1/4  
5 x 1/8  
5 x 1/4  
6 x 1/8  
6 x .156  
8 x 1/4  
8 x 3/16  
10 x 3/16

### FIBREBOLT® Studs and Nuts

Stocked in 4' lengths  
Size: 3/8", 1/2", 5/8",  
3/4", 1"

### Rectangular Tube

4 x 1/8 x 2 x 1/4  
2-1/2 x 1-5/8 x 1/8  
3-1/4 x 2-1/2 x .160  
6-1/2 x 1/4 x 2 x 1/2  
7 x 4 x 1/4

### Square Tube

1 x 1/8  
1-1/2 x 1/8  
2 x 1/8  
2 x 1/4  
2 x 1/4 (Yellow Series 525)  
2-1/2 x 1/4 (Yellow Series 525)  
3 x 1/4  
4 x 1/4

1-1/4 x 1/8  
1-1/2 x 1/4  
1-3/4 x 1/8\*\*  
1-3/4 x 1/4\*\*  
2-1/2 x 1/4  
6 x 3/8

### Square Bar - Thermal Cure Clear

1/2"  
5/8"  
3/4"  
1"  
1-1/4"  
1-1/2"

### Rod - Thermal Cure Clear

1/4"  
3/8"  
1/2"  
5/8"  
3/4"  
13/16"  
.7/8"  
1"  
1-1/8"  
1-1/4"  
1-1/2"  
1-7/8"  
2"

### Special Pultruded Shapes

#### Corner Post

3-1/4 x 1/8

#### Curb Angle

1 x 1-1/2  
1-1/2 x 1-1/2  
2 x 1-1/2  
(stocked at  
Chatfield Division)

#### F-Section

5-1/2 x 1-1/2 x 1/4  
6 x 1-1/2 x 1/4

#### Flat Bar

.25 x .25  
.25 x .75  
.25x .812

#### Flat Strips

1 x 1/4  
2 x 3/16  
2 x 1/4  
3 x 3/16  
3 x 1/2

#### Flight Channel

5-1/4 x 1/8 x 2-1/2 x 3/16  
7-1/8x 1/8 x 2-1/2 x 3/16

#### Foam Core Planks

4 x 2  
5 x 2  
6 x 2  
8 x 2

#### Framing Angle

2 x 2 x 1/4

#### Custom Pultrusions

strongwell produces custom pultrusions in many shapes and materials for hundreds of customers. The listing on this page is only a partial listing of dies owned by Strongwell.

Additional Sections are frequently added and modifications to existing sections may be possible. For special needs contact your EXTREN® distributor. For special needs, contact your P & R Metals representative.

#### H-Section

3-1/2x 1-9/16x 1-1/2x 1/4

#### Hat Section

3-1/2 x 1-7/8 x 2 x 1/8

#### Square Tube w/Round Hole

1" sq. with 3/4" round hole  
1" sq. with 5/8" round hole  
1-1/2" sq. with 1" round hole

#### Stair Riser

8 x 1-1/2 x 1/8

#### Top Rail

2 x 1/4 modified rd. tube

#### Z-Section

1-1/4 x 2-1/2 x 1/8

#### Kick Plate

4 x 1/2 x 3/16  
(Yellow; Series 525)

#### Slide Guide

2-1/2 x 2-1/4 x 1/4  
(White; Series 500)

#### Square Tube

2 x .156 yellow

#### Strut

1-5/8 x 1-5/8 x 5/32  
(Gray; Series 525)

\*\*1-3/4 x 1/8 and 1-3/4 x 1/4 Square Tubes are undersized to allow telescoping.



# STRONGWELL® SAFPLANK®

## Features

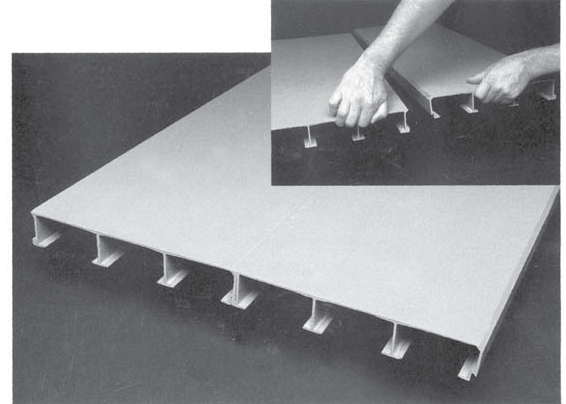
SAFPLANK® is a high strength system of fiberglass planks designed to interlock to form a continuous solid surface. SAF-PLANK® is intended to replace wood, aluminum or steel planks in environments where corrosion or rotting creates costly maintenance problems or unsafe conditions.

### SAFPLANK® panels are:

- Corrosion Resistant
- Easy to Install
- Strong
- Lightweight
- Easy to Maintain
- Low in Conductivity
- Non-sparking
- Interlocking

### Sizes

SAFPLANK® is available in 2" deep panels in 12" and 24" widths and in a slotted version to offer flexibility in design. Stock panels are available in 20' and 24' lengths. Other lengths are available upon request. SAFPLANK® may be ordered with a smooth surface for non-pedestrian applications.

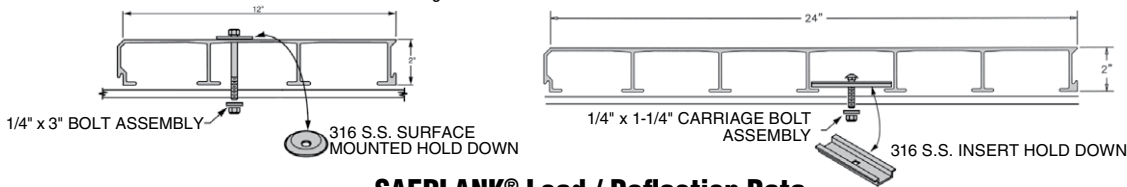


## Materials of Construction

SAFPLANK® is a composite of fiberglass reinforcements (glass and mat) and a thermoset resin system. The pultrusion process is used to produce the panels. The standard resin system is a slate gray fire retardant polyester resin meeting the requirements of Class 1 flame spread rating of 25 or less per ASTM E-84 and the self-extinguishing requirements of ASTM D-635. The resin is UV inhibited and the composite includes a surface veil on all exposed surfaces for enhanced corrosion and UV protection. Other resins and colors are available upon request. The standard grit system for SAFPLANK® is a polyurethane based fine grit. This grit system is recommended for light pedestrian traffic only. Other grit systems available include epoxy medium and epoxy coarse and may be more appropriate for applications with heavier traffic.

## Accessories

Two hold-down connections are available for installing SAFPLANK®. Both hold-downs can be used with either 12" or 24" wide SAFPLANK®.



### SAFPLANK® Load / Deflection Data

SPAN	12" SAFPLANK® $I_{12} = 1.69 \text{ in.}^4$ , $wt = 2.6 \text{ lb/lin. ft. (gritted)}$						24" SAFPLANK® $I_{24} = 3.10 \text{ in.}^4$ , $wt = 5.1 \text{ lb/lin. ft. (gritted)}$					
	50 $u=2394$ $c=730$	100 $u=4788$ $c=1460$	200 $u=9576$ $c=2920$	300 $u=14364$ $c=4380$	500 $u=23990$ $c=7300$	1000 $u=47888$ $c=14600$	100 $u=4788$ $c=1460$	200 $u=9576$ $c=2920$	300 $u=14364$ $c=4380$	500 $u=28990$ $c=7300$	1000 $u=47888$ $c=14600$	
24" 610 mm	$\Delta u$	.006	.011	.023	.034	.057	.113	.015	.030	.045	.075	.151
	$\Delta u$	.152	.279	.584	.864	1.448	2.87	.381	.762	1.143	1.905	3.835
	$\Delta c$	< .005	.009	.018	.027	.045	.091	.012	.024	.036	.060	.121
	$\Delta c$	< .127	.229	.457	.686	1.143	2.311	.305	.610	.914	1.524	3.073
36" 914 mm	$\Delta u$	.022	.043	.087	.130	.217	.434	.046	.092	.138	.231	.462
	$\Delta u$	.559	1.092	2.210	3.302	5.512	11.024	1.168	2.337	3.505	5.867	11.734
	$\Delta c$	.012	.023	.046	.070	.116	.232	.024	.049	.074	.123	.246
	$\Delta c$	.305	.584	1.168	1.778	2.946	5.893	.610	1.245	1.870	3.124	6.248
48" 1219 mm	$\Delta u$	.062	.123	.247	.370	.603	1.206	.133	.265	.398	.631	1.262
	$\Delta u$	1.575	3.124	6.274	9.398	15.330	30.660	3.378	6.731	10.109	15.164	30.328
	$\Delta c$	.025	.049	.099	.148	.247	.494	.053	.106	.159	.265	.530
	$\Delta c$	.635	1.245	2.515	3.759	6.274	12.548	1.346	2.692	4.039	6.731	13.462
60" 1524 mm	$\Delta u$	.140	.283	.562	.841	1.368	2.736	.302	.605	.908	1.461	2.922
	$\Delta u$	3.556	7.137	14.275	21.412	35.687	71.374	7.671	15.367	23.050	35.625	71.250
	$\Delta c$	.045	.090	.180	.270	.450	.900	.097	.193	.290	.484	.968
	$\Delta c$	1.143	2.286	4.572	6.858	11.43	22.86	2.464	4.902	7.417	12.294	24.588
72" 1829 mm	$\Delta u$	.291	.583	1.166	1.749	2.838	5.676	.627	1.254	1.881	2.922	5.844
	$\Delta u$	7.391	14.808	29.616	44.424	73.040	146.080	15.926	31.852	47.778	71.667	143.334
	$\Delta c$	.078	.155	.311	.466	.777	1.554	.167	.334	.501	.835	1.670
	$\Delta c$	1.981	3.937	7.899	11.836	19.727	39.454	4.242	8.611	12.725	21.285	42.570

# EXPANDED METAL SHEETS

## STANDARD - ALUMINUM

## FLATTENED - ALUMINUM

Style	Weight lbs/Sq.Ft.	Opening Size (in inches)		Strand Size (in inches)		Approx. Open Area %
		SWO	LWO	Width	Thick	
A1/2" - 0.051R	27	0.375	0.937	0.096	0.051	65
A1/2" - 0.081R	44	0.375	0.937	0.096	0.081	60
A3/4" - 0.051R	17	0.812	1.75	0.109	0.051	78
A3/4" - 0.081LR	32	0.75	1.68	0.129	0.081	76
A3/4" - 0.081HR	41	0.75	1.68	0.165	0.081	69
A3/4" - 0.125R	65	0.687	1.68	0.169	0.125	68
A1 1/2" - 0.081R	22	1.187	2.5	0.128	0.081	85
A1 1/2" - 0.125R	43	1.187	2.5	0.162	0.125	79

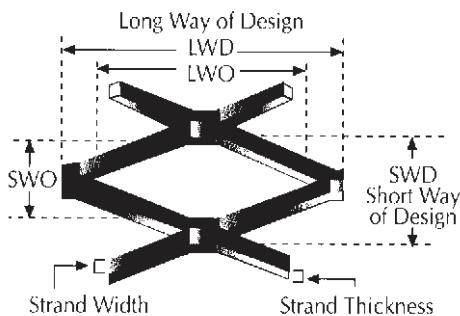
Style	Weight lbs/Sq.Ft.	Opening Size (in inches)		Strand Size (in inches)		Approx. Open Area %
		SWO	LWO	Width	Thick	
A1/2" - 0.051F	26	0.312	1	0.104	0.04	61
A1/2" - 0.081F	42	0.312	1	0.105	0.06	58
A3/4" - 0.051F	16	0.75	1.812	0.122	0.04	72
A3/4" - 0.081LF	30	0.687	1.75	0.143	0.07	70
A3/4" - 0.081HF	39	0.687	1.75	0.181	0.07	63
A3/4" - 0.125F	62	0.625	1.75	0.187	0.095	62
A1 1/2" - 0.081F	21	1.062	2.75	0.143	0.055	77
A1 1/2" - 0.125F	41	1	2.75	0.181	0.08	70

## STANDARD - CARBON STEEL

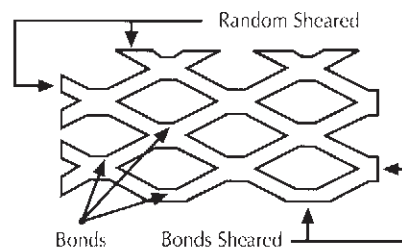
## FLATTENED - CARBON STEEL

Style	Weight lbs/Sq.Ft.	Opening Size (in inches)		Strand Size (in inches)		Approx. Open Area %
		SWO	LWO	Width	Thick	
1/2" - #20R	0.43	0.438	0.938	0.072	0.036	80
1/2" - #18R	0.7	0.44	0.938	0.088	0.048	72
1/2" - #16R	0.86	0.375	0.938	0.086	0.06	65
1/2" - #13R	1.47	0.312	0.938	0.096	0.092	57
1/2" - #13(.188)R	2.82	0.25	0.8	0.188	0.092	25
3/4" - #16R	0.54	0.813	1.75	0.099	0.06	78
3/4" - #13R	0.8	0.75	1.688	0.096	0.092	76
3/4" - #10 (13)R	1.2	0.75	1.625	0.144	0.092	72
3/4" - #9R	1.8	0.688	1.563	0.148	0.134	68
1" - #16R	0.44	1	2.063	0.096	0.06	82
1" - #14R	0.78	0.875	1.563	0.125	0.074	75
1" - #12R	1.02	0.907	1.563	0.109	0.105	78
1" - #10 (170)R	1.7	0.75	1.563	0.155	0.135	62
1" - #10HR	2	0.725	1.563	0.18	0.135	60
1" - #7R	4.12	0.576	1.563	0.275	0.183	45
1 1/2" - #18R	0.2	1.313	2.625	0.067	0.048	90
1 1/2" - #16R	0.4	1.25	2.625	0.107	0.06	85
1 1/2" - #13R	0.6	1.188	2.5	0.104	0.092	85
1 1/2" - #10 (13)R	0.79	1.188	2.5	0.137	0.092	80
1 1/2" - #10R	1.7	1	2.375	0.2	0.135	74
1 1/2" - #10HR	2	0.83	2.375	0.24	0.135	72
1 1/2" - #9R	1.2	1.125	2.375	0.142	0.134	76
1 1/2" - #6R	2.5	1	2.313	0.201	0.198	69

Style	Weight	Opening Size (in inches)		Strand Size (in inches)		Approx. Open Area %
	lbs/100	SWO	LWO	Width	Thick	
	Plain					
1/2" - #20F	0.4	0.375	1	0.079	0.029	65
1/2" - #18F	0.66	0.312	1	0.097	0.039	60
1/2" - #16F	0.82	0.312	1	0.096	0.05	63
1/2" - #13F	1.4	0.265	1	0.107	0.07	52
3/4" - #16F	0.51	0.75	1.75	0.111	0.048	74
3/4" - #13F	0.75	0.688	1.781	0.106	0.07	74
3/4" - #10 (13)F	1.14	0.637	1.755	0.16	0.07	68
3/4" - #9F	1.71	0.563	1.688	0.165	0.12	63
1" - #16F	0.41	0.813	2.25	0.098	0.05	78
1" - #14F	0.63	0.79	2	0.125	0.07	80
1" - #12F	0.98	0.785	2	0.156	0.085	74
1" - #10F	1.65	0.75	1.9	0.16	0.11	58
1 1/2" - #16F	0.38	1.062	2.75	0.119	0.048	83
1 1/2" - #13F	0.57	1.062	2.75	0.116	0.07	80
1 1/2" - #10 F	1.65	0.9	2.56	0.188	0.11	63
1 1/2" - #9F	1.14	1	2.563	0.158	0.11	75



STYLE DIMENSION - Nominal dimension Short Way of Design (SWD).  
 DESIGN SIZE - Actual dimension SWD and LWD. Measured from a point to a corresponding point on the following design.  
 (SWO) - Short Way of Opening.  
 (LWO) - Long Way of Opening  
 STRANDS - The sides of design.  
 STRAND THICKNESS - Gauge thickness of metal expanded.  
 STRAND WIDTH - Amount of metal fed under dies to produce one strand.



BOND - Where two strands intersect. Eliminates prongs or jagged edges.  
 TOLERANCE - Minus 0 plus 1/2 the design size, either SWD or LWD.  
 RANDOM - This type of shearing leaves prongs or jagged edges  
 Tolerance: + or - 1/16"  
 Grating: = or 1/4"

# EXPANDED METAL GRATING

## GRATING DATA - CARBON STEEL

STYLE	Lbs. Per sq. ft.	Standard Sheet Size (Feet)		Design Size (Inches)		Opening Size (Inches)		Strand Size (Inches)		Overall Thickness (Inches)	No. of Designs Per Ft.		% Open Area
		width SWD	length SWD	SWD	LWD	SWO	LWO	Width	Thickness		SWD	LWD	
3.0 lb.	3.00	4 & 6	8,10 & 12	1.33	5.33	0.94	3.44	0.264	0.183	0.540	9	2.25	60
3.14 lb.	3.14	4-4&6	8-10	2.00	6.00	1.63	4.88	0.312	0.250	0.656	6	2	69
4.0 lb.	4.00	4-5&6	8 & 10	1.33	5.33	0.94	3.44	0.300	0.215	0.618	9	2.25	55
4.27 lb.	4.27	4 & 6	8 & 10	1.41	4.00	1.00	2.88	0.300	0.250	0.625	8.5	3	58
5.0 lb.	5.00	4-5&6	8 & 10	1.33	5.33	0.813	3.38	0.331	0.250	0.655	9	2.25	50
6.25 lb.	6.25	4 & 6	8 & 12	1.41	5.33	0.813	3.38	0.350	0.312	0.715	8.5	2.25	50
7.0 lb.	7.00	4	8	1.41	5.33	0.813	3.38	0.391	0.312	0.740	8.5	2.25	45

## GRATING DATA - ALUMINUM (TYPE 5052-H-32)

STYLE	Lbs. Per sq. ft.	Standard Sheet Size (Feet)		Design Size (Inches)		Opening Size (Inches)		Strand Size (Inches)		Overall Thickness (Inches)	No. of Designs Per Ft.		% Open Area
		width SWD	length SWD	SWD	LWD	SWO	LWO	Width	Thickness		SWD	LWD	
2.0 lb.	2.0	5	12	1.33	5.33	0.940	3.44	0.387	0.250	0.730	9	2.25	48

Above material meets all requirements of Military Specifications MIL-M-17194C (Metals, Expanded, Steel) and MIL-G 18015 (Ships) (Gratings, Metal, other than Bar Type) and the deflection requirements of Federal Specification RR-G-661-B.

## CONCENTRATED & UNIFORM LOAD DEFLECTION / FIXED SPAN

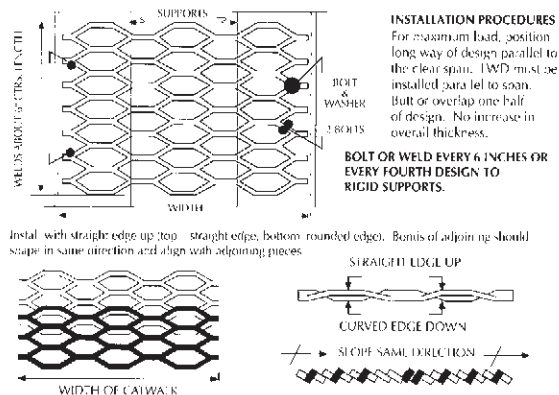
		CARBON STEEL -----STYLE * (LBS. PER SQ. FT)-----														ALUMINUM	
		3		3.14		4		4.27		5		6.25		7		2	
		LOAD	D	LOAD	D	LOAD	D	LOAD	D	LOAD	D	LOAD	D	LOAD	D	LOAD	D
24" SPAN	U	275	0.250	375	0.25	350	0.24	500	0.245	600	0.240	800	0.220	800	0.210		
	C	275	0.250	375	0.25	440	0.25	400	0.250	540	0.245	800	0.220	800	0.220	250	0.250
36" SPAN	U	100	0.220	150	0.24	150	0.245	165	0.245	175	0.240	300	0.250	400	0.250		
	C	165	0.250	155	0.25	220	0.25	225	0.240	310	0.250	300	0.240	350	0.240	100	0.250
48" SPAN	U			50	0.25	50	0.25	60	0.250	100	0.250	115	0.240	165	0.240		
	C	75	0.250	75	0.25	100	0.25	100	0.250	140	0.250	150	0.240	175	0.250	50	0.250

U- Uniform Load in Lbs. Per Sq. Ft. \* C-Concentrated Load in Lbs. Per Sq. Ft. \* D- Deflection in inches

## SELECTION CHART - CARBON STEEL

CONCENTRATED LOAD (Lbs. Per Ft. of Length of Catwalk or Platform)	CLEAR SPAN (Distance between supports, measured from the inside edge of one support to the inside edge of the next support)						
	23"	30"	35"	42"	47"	54"	60"
50 Lbs. Light or occasional pedestrian traffic	3.00	3.00	3.00	3.00	3.00	4.00	5.00
100 Lbs. Normal or frequent pedestrian traffic	3.14	3.14	3.14	3.14	3.14	4.27	6.25
150 Lbs. Heavy or constant pedestrian traffic	3.00	4.00	4.00	5.00	6.25	7.00	
200 Lbs. pedestrian traffic with light equipment	3.14	4.27	4.27	6.25			
250 Lbs.	4.00	5.00	5.00	7.00			
300 Lbs.	4.27	6.25					
350 Lbs.	4.00	6.25	7.00				

The concentrated load selection for this chart do not exceed the 1.4 inch maximum deflection as stated in Federal Specification RR-G-618 and the generally accepted maximum deflection for heavy pedestrian traffic.



# PERFORATED METAL

## IPA Standard Perforations

The enormous number of perforating patterns possible with round holes, squares, slots and other special perforations make it impractical to list every combination. The following IPA numbered perforations listed and illustrated here are common to all members and considered Standard. The die banks of IPA members hold tooling for literally thousands of additional patterns so, if your requirements cannot be met with a Standard perforation, consult with your IPA members supplier.

### Round Holes:

IPA Numbers	Perforations	Centers	Holes per sq.in.	Open Area	Line
100	.020"	.043"	625	20%	Staggered
101	.023"	.0415"	576	24%	Straight
102	.027"	.050"	400	23%	Straight
103	.032"	.055"	324	26%	Straight
104	.040"	.066"	225	30%	Straight
105	.045"	.066"	224	37%	Straight
106	1/16"	1/8"	74	23%	Staggered
107	5/64"	7/64"	97	46%	Staggered
108	5/64"	1/8"	74	36%	Staggered
109	3/32"	5/32"	47	32%	Staggered
110	3/32"	3/16"	33	23%	Staggered
111	3/32"	1/4"	19	12%	Staggered
112	1/10"	5/32"	47	36%	Staggered
113	1/8"	3/16"	33	40%	Staggered
114	1/8"	7/32"	24	29%	Staggered
115	1/8"	1/4"	19	23%	Staggered
116	5/32"	7/32"	24	46%	Staggered
117	5/32"	1/4"	19	36%	Staggered
118	3/16"	1/4"	19	51%	Staggered
119	3/16"	5/16"	12	33%	Staggered
120	1/4"	5/16"	12	58%	Staggered
121	1/4"	3/8"	8	40%	Staggered
122	1/4"	7/16"	6	30%	Staggered
123	1/4"	1/2"	5	23%	Staggered
124	3/8"	1/2"	5	51%	Staggered
125	3/8"	9/16"	4	40%	Staggered
126	3/8"	5/8"	3	33%	Staggered
127	7/16"	5/8"	3	45%	Staggered
128	1/2"	11/16"	2	47%	Staggered
129	9/16"	3/4"	2	51%	Staggered
130	5/8"	13/16"	2	53%	Staggered
131	3/4"	1"	1	51%	Staggered

### Squares:

IPA Numbers	Perforations	Centers	Holes per sq.in.	Open Area	Line
200	2/10"	1/4"	20	64%	Straight
201	1/4"	3/8"	9	44%	Straight
202	3/8"	1/2"	5	56%	Straight
203	1/2"	11/16"	3	53%	Straight
204	3/4"	1"	1	56%	Straight
205	1"	1-1/4"	.8	64%	Straight
206	1"	1-3/8"	.7	53%	Straight

### Slots:

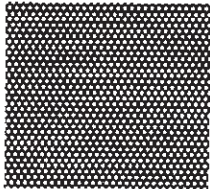
IPA Numbers	Perforations	Bar(s)	Holes per sq.in.	Open Area	Line
207	1/8" x 3/4"	1/8"		41%	Side Staggered
208	1/8" x 1"	1/8"		43%	Side Staggered



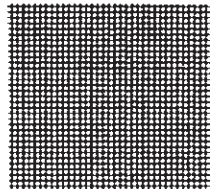
Aluminum Perforated Sheet with border

# PERFORATED METAL

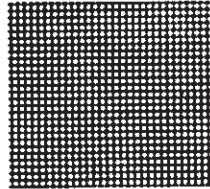
## Round Holes



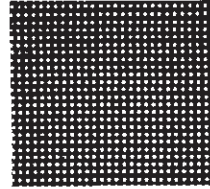
No. 100, .020" diam., 20% O.A.



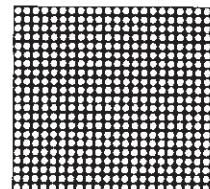
No. 101, .023" diam., 24% O.A.



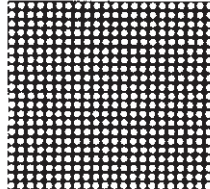
No. 102, .027" diam., 23% O.A.



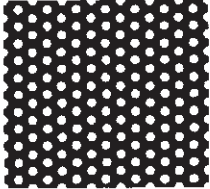
No. 103, .032" diam., 26% O.A.



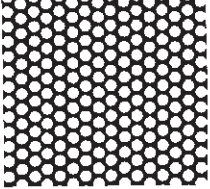
No. 104, .040" diam., 30% O.A.



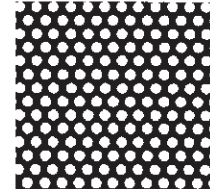
No. 105, .045" diam., 37% O.A.



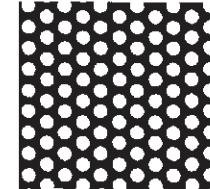
No. 106, 1/32" diam., 23% O.A.



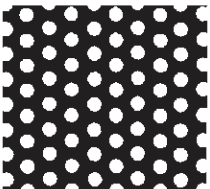
No. 107, 1/16" diam., 46% O.A.



No. 108, 3/32" diam., 36% O.A.



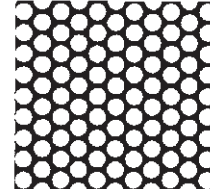
No. 109, 1/8" diam., 32% O.A.



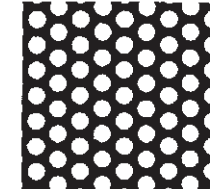
No. 110, 3/16" diam., 23% O.A.



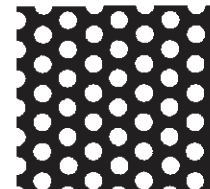
No. 111, 1/8" diam., 12% O.A.



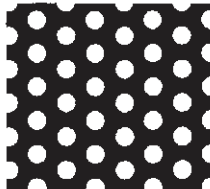
No. 112, 1/10" diam., 36% O.A.



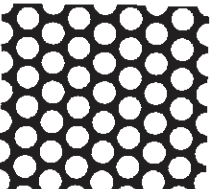
No. 113, 3/16" diam., 40% O.A.



No. 114, 1/4" diam., 23% O.A.



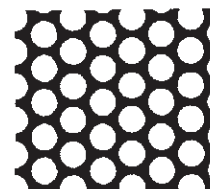
No. 115, 5/16" diam., 23% O.A.



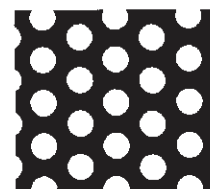
No. 116, 3/8" diam., 46% O.A.



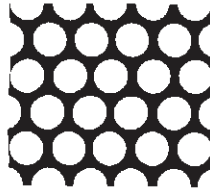
No. 117, 7/16" diam., 36% O.A.



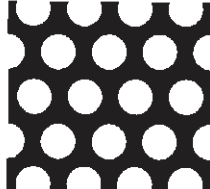
No. 118, 1/2" diam., 51% O.A.



No. 119, 5/8" diam., 33% O.A.



No. 120, 3/4" diam., 18% O.A.



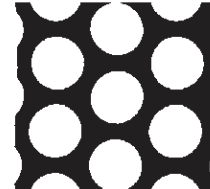
No. 121, 7/8" diam., 40% O.A.



No. 122, 1" diam., 30% O.A.



No. 123, 1 1/8" diam., 23% O.A.



No. 124, 1 1/4" diam., 51% O.A.



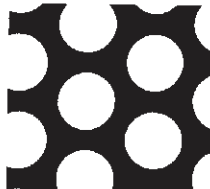
No. 125, 3/8" diam., 40% O.A.



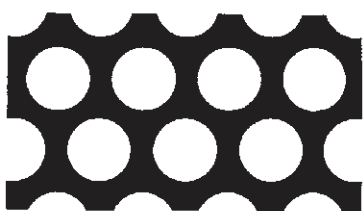
No. 126, 1/2" diam., 33% O.A.



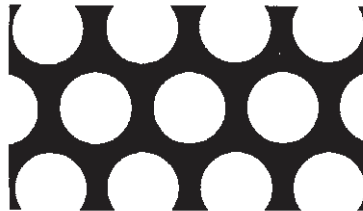
No. 127, 7/16" diam., 45% O.A.



No. 128, 1/2" diam., 47% O.A.



No. 129, 3/4" diam., 51% O.A.



No. 130, 5/8" diam., 53% O.A.



No. 131, 3/4" diam., 51% O.A.

# WIRE MESH

Available in woven and welded. Full Rolls, panels, or cut to length

**Materials:** Plain Steel  
Pre-Galvanized  
Hot Dipped Galvanized  
Stainless Steel

**Available Square Openings:**

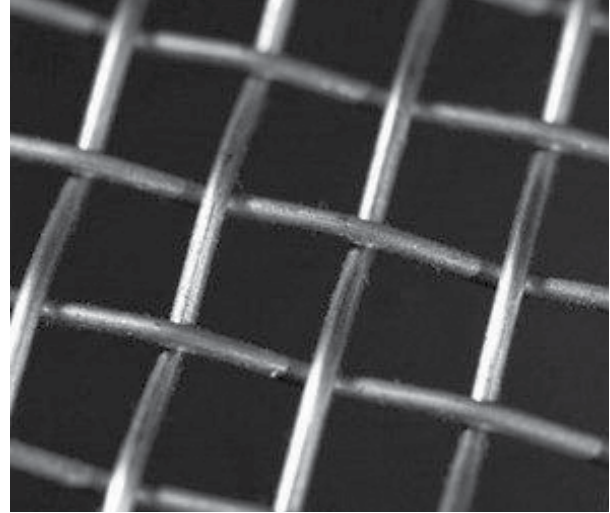
**WOVEN**

Opening/Mesh	Diameter	Material
1/2"	0.120	Plain Steel/Stainless
5/8"	0.120	Plain Steel
3/4"	0.120	Plain Steel
1"	.120;.135;.250	Plain Steel/Stainless
1-1/2"	.120;.135;.250	Plain Steel
1-1/2"	0.120	Stainless Steel
2"	.120;.135;.250	Plain Steel
2"	.120;.250	Stainless Steel
3"	0.250	Plain Steel
4"	0.250	Plain Steel

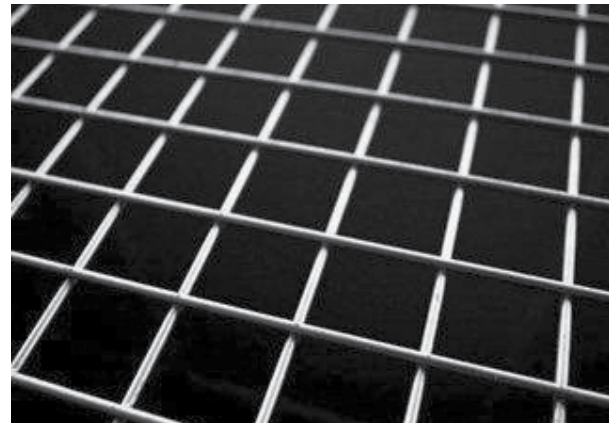
1 Mesh	.080;.105;.120	Plain Steel
1 Mesh	0.120	Stainless Steel
2 Mesh	.063;.120;.135	Plain Steel/Stainless
3 Mesh	.063;.105	Plain Steel
3 Mesh	.047;.063;.080	Stainless Steel
4 Mesh	.063;.080	Plain Steel
4 Mesh	.063;.080;.120	Stainless Steel
6 Mesh	.047;.063	Plain Steel/Stainless
8 Mesh	.047;.063	Plain Steel/Stainless
10 Mesh	0.025	Plain Steel/Stainless

**WELDED**

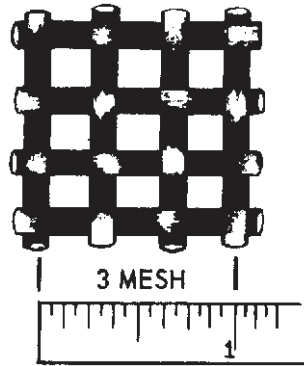
Opening	Diameter	Material
1" x 1"	0.120	Pre-Galv.
1-1/2" x 1-1/2"	0.135	Plain Steel
2" x 2"	0.120	Stainless Steel
2" x 2"	0.250	Plain Steel
2" x 2"	0.105	Pre-Galv.
2" x 2"	.100;.125;.188	Galv. After
2-1/2" x 2-1/2"	0.162	Plain Steel
3"	0.250	Plain Steel
3"	0.188	Galv. After



Woven

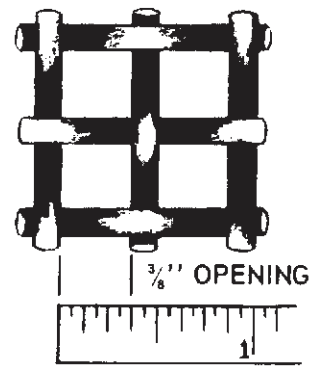


Welded



**MESH**

Mesh denotes the number of openings per linear inch.



**SPACE**

Space is the actual "clear opening" or open space between parallel wires.

This listing denotes only a small amount of available sizes and materials. For additional information, contact your P & R Metals sales representative.

# Project Pictures



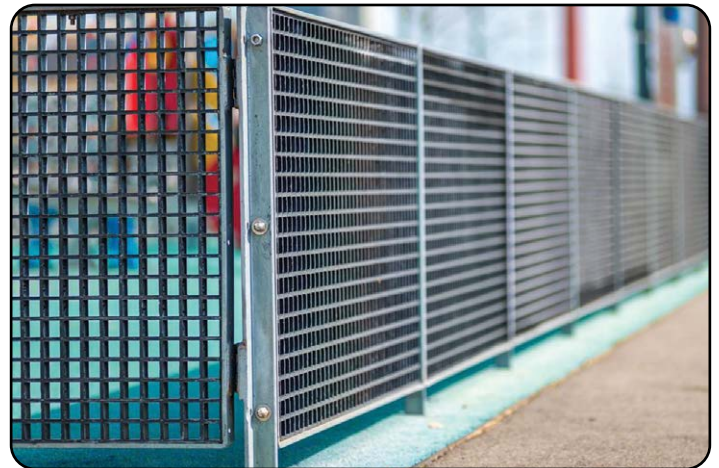
**Welded Wire Mesh and Gripstrut®**



**Molded Fiberglass Floor Grating**



**Aluminum Swaged Locked Grating  
used as security fencing**



**Molded Fiberglass Grating used as fencing**

## Contact Information

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Toll-Free: 1-877-880-3319  
Fax: 205-328-3394

**Web Address:**

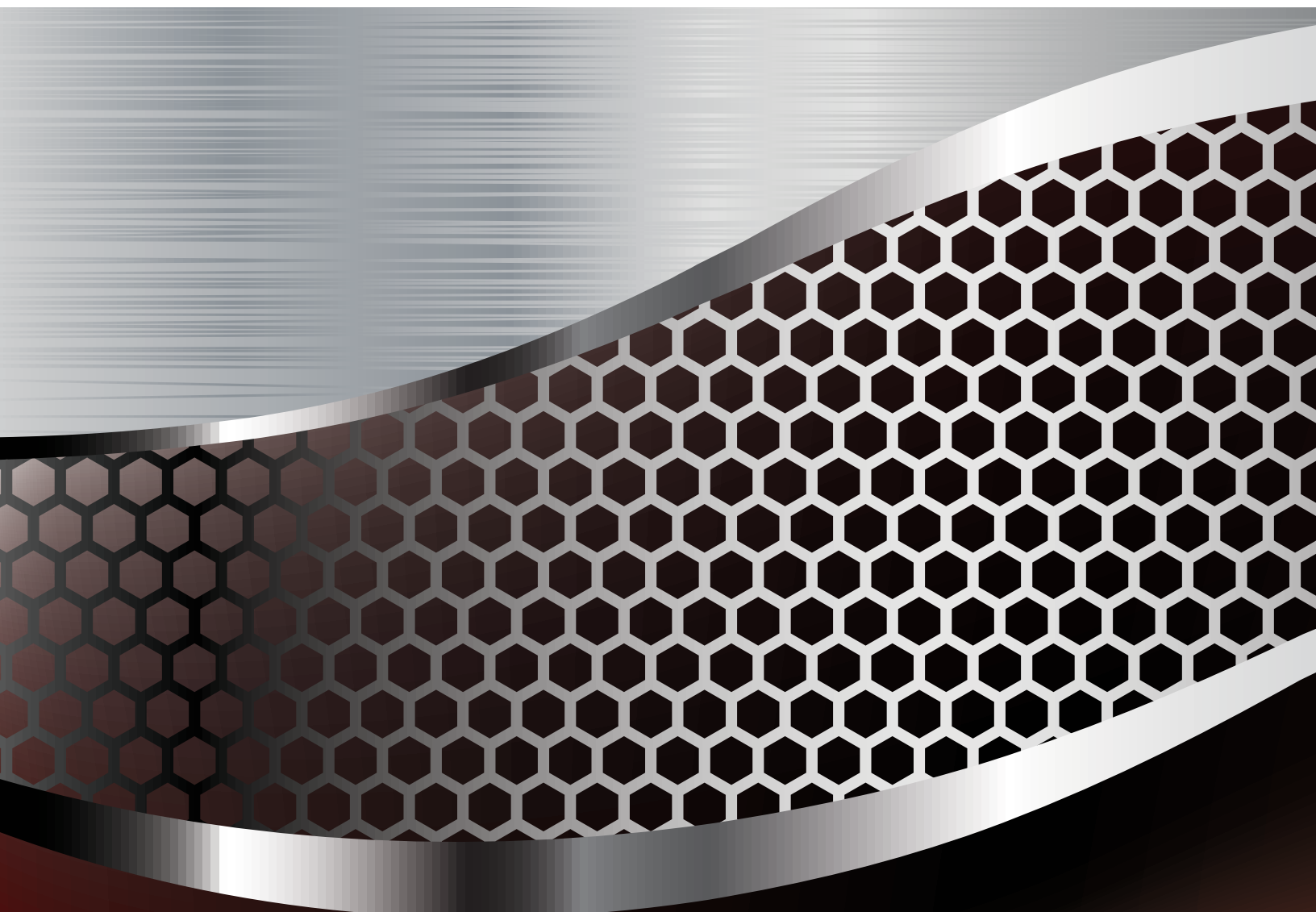
[www.prmets.com](http://www.prmets.com)  
[sales@prmetals.com](mailto:sales@prmetals.com)

**Business Hours:**

Monday - Friday  
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