



# Grating & Related Products



*Forging Partnerships™*



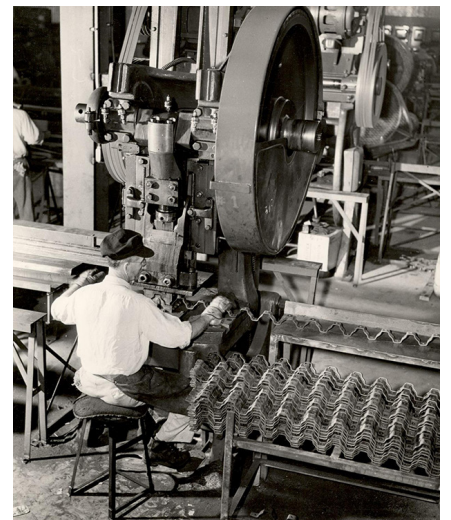
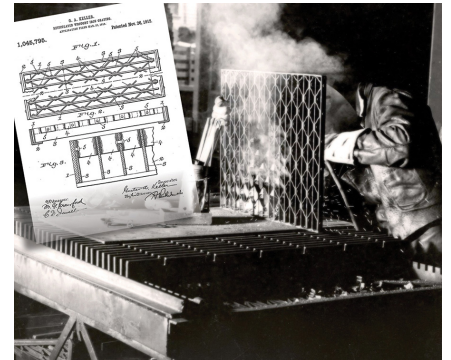
## Forging Partnerships™

IKG is the world's leading manufacturers of high quality steel and aluminum bar grating with manufacturing plants throughout North America.

Our skilled network of sales personnel and engineering staff is the most knowledgeable in the industry, providing consultative services and solutions to customers in a wide range of industries.

IKG carries on the pioneering spirit of its founders, bringing experience, quality, long-term value added solutions and time-tested reliability to its customers today.

Through consistent, competitive, and dependable customer care, *Forging Partnerships™* has become synonymous to IKG.



# Advantages and Applications



## When and Why to Choose Grating:

Choose grating instead of solid flooring when you need:

- Open areas to allow passage of light, air and heat between flooring levels.
- Flooring on which liquids and / or debris cannot collect.
- Easy installation and fabrication.
- Adaptability to complex floor patterns and hard-to-fit areas.
- High strength-to-weight ratio.

### Advantages:

- Strength and low weight specified
- Light and air passage
- Ease of Installation
- Security
- Durability

### Applications:

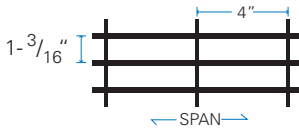
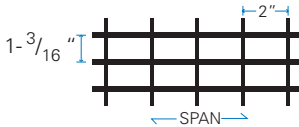
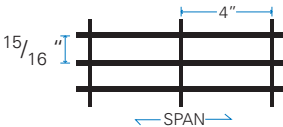
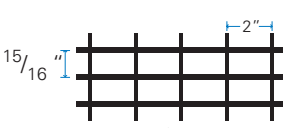
- Industrial Flooring
- Trenches
- Maintenance Platforms
- Walkways
- Power Plants
- Refineries
- Chemical Plants
- Bridge Decks
- Warehouses
- Water and Waste Treatment Plants
- Steel Mills

All grating products are manufactured to **NAAMM** tolerances and specifications.

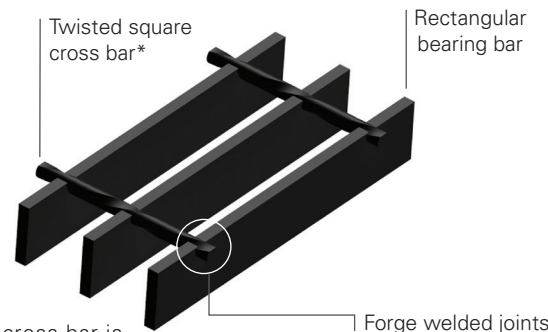


# Weldforged® Steel Grating



Type			
Standard	W/B		Recommended for general applications.
	W/F		Same as Type W/B but with closer cross bars spacing.
	W/D		Close bearing bars. Best for heavy public traffic, where increased carrying capacity is required.
	W/DF		Same as type W/D but with closer cross bar spacing.

Weight lb./sf.					
Bar Size	Bearing Bar Dimensions (inches)	Grating Types			
		WB	WF	WD	WDF
2	3/4" x 3/16"	5.8	6.7	7.2	8.1
3	1" X 1/8"	5.2	6.1	6.4	7.3
4	1" x 3/16"	7.5	8.4	9.3	10.2
5	1-1/4" x 1/8"	6.3	7.2	7.9	8.8
6	1-1/4" x 3/16"	9.1	10.0	11.3	12.2
7	1-1/2" x 1/8"	7.4	8.3	9.3	10.2
8	1-1/2" x 3/16"	10.8	11.7	13.5	14.4
9	1-3/4" x 3/16"	12.5	13.4	15.6	16.5
10	2" x 3/16"	14.1	15.0	17.7	18.6
11	2-1/4" x 3/16"	15.8	16.7	19.8	20.7
12	2-1/2" x 3/16"	17.4	18.3	21.9	22.8



\*A round cross bar is used for Stainless Steel

#### Surfaces:

- Plain
- Serrated
- MEBAC®

#### Finishes:

- Mill
- Galvanized
- Painted
- GrateCoat®

#### Panel sizes:

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

#### Available in:

- Carbon Steel
- Stainless Steel (304L & 316L)

1/4" and 3/8" bearing bar thicknesses are also available. Please call for assistance.

# LOAD TABLE FOR THE WELDFORGED® GRATING

This table is good for type W/B and W/F only.

\*Recommended max. span (in.) for 1/4" deflection under uniform load of 100lb/sf.

Size	Bearing Bar (in)	*	Span in inches							Span in inches					Percentages of Open Area			
			24	30	36	42	48	54	60	66	72	Rectangular Types		Bearing Bar Thickness				
2	3/4" x 3/16"	46	U	533	341	237	174	133	105				W/B	82.4%		77.1%		
			D	0.099	0.155	0.223	0.304	0.397	0.503	W/F	75.9%			70.7%				
3	1" x 1/8"	51	C	533	426	355	305	266	237					W/D	77.3%		70.4%	
			D	0.079	0.124	0.179	0.243	0.318	0.402	W/DF	70.9%		64.1%					
4	1" x 3/16"	57	U	632	404	281	206	158	125		101	84	70					
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670						
5	1-1/4" x 1/8"	61	C	632	505	421	361	316	281	253	230	211						
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536						
6	1-1/4" x 3/16"	67	U	947	606	421	309	237	187	152	125	105						
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670						
7	1-1/2" x 1/8"	70	C	947	758	632	541	474	421	379	334	316						
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536						
8	1-1/2" x 3/16"	77	U	987	632	439	322	247	195	158	130	110	93	81				
			D	0.06	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730				
9	1-3/4" x 1/8"	81	C	987	789	658	564	493	439	395	359	329	304	282				
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584				
10	1-3/4" x 3/16"	87	U	1480	947	658	483	370	292	237	196	164	140	121				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730				
11	2" x 1/8"	96	C	1480	1184	987	846	740	658	592	538	493	455	423				
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.36	0.429	0.504	0.584				
12	2" x 3/16"	105	U	1421	909	632	464	355	281	227	188	158	135	116	101	89	79	70
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.698	0.794	0.897	1.006
13	2-1/4" x 1/8"	113	C	1421	1137	947	812	711	632	568	517	474	437	406	379	355	334	316
			D	0.040	0.062	0.089	0.112	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.559	0.636	0.718	0.804
14	2-1/4" x 3/16"	121	U	2132	1364	947	696	533	421	341	282	237	202	174	152	133	118	105
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.698	0.794	0.897	1.006
15	2-1/2" x 1/8"	130	C	2132	1705	1421	1218	1066	947	853	775	711	656	609	568	533	502	474
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.559	0.636	0.718	0.804
16	2-1/2" x 3/16"	139	U	2901	1857	1289	947	725	573	464	384	322	275	237	206	181	161	143
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.599	0.681	0.769	0.862
17	2-3/4" x 1/8"	149	C	2901	2321	1934	1658	1451	1289	1161	1055	967	893	829	774	725	683	645
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.479	0.545	0.615	0.689
18	2-3/4" x 3/16"	158	U	3789	2425	1684	1237	947	749	606	501	421	359	309	269	237	210	187
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.524	0.596	0.673	0.754
19	3" x 1/8"	168	C	3789	3032	2526	2165	1895	1684	1516	1378	1263	1166	1083	1011	947	892	842
			D	0.03	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.419	0.477	0.538	0.603
20	3" x 3/16"	178	U	4796	3069	2132	1566	1199	947	767	634	533	454	392	341	300	266	237
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.466	0.530	0.598	0.670
21	3-1/4" x 1/8"	188	C	4796	3837	3197	2741	2398	2132	1918	1744	1599	1476	1370	1279	1199	1128	1066
			D	0.026	0.041	0.06	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.372	0.424	0.478	0.536
22	3-1/4" x 3/16"	198	U	5921	3789	2632	1933	1480	1170	947	783	658	561	483	421	370	328	292
			D	0.03	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.419	0.4777	0.538	0.603
23	3-1/2" x 1/8"	208	C	5921	4737	3947	3383	2961	2632	2368	2153	1974	1822	1692	1579	1480	1393	1316
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.335	0.381	0.431	0.483

U = Uniform load lb./sf.

C = Concentrated load lb./ft. of grating width, at mid-span.

D = Deflection in inches.

For spacings other than 1-3/16" centers, multiply the conversion factor times the U and C values shown in the table, the D (deflection) remains as shown.

Type	W/D	W/DF
Factor	1.27	

CONVERSION DATA: SERRATED GRATING											
Grating Size	3/4" x 3/16"	1" x 1/8"	1" x 3/16"	1-1/4" x 1/8"	1-1/4" x 3/16"	1-1/2" x 1/8"	1-1/2" x 3/16"	1-3/4" x 3/16"	2" x 3/16"	2-1/4" x 3/16"	2-1/2" x 3/16"
Multiply U & C by:	.70	.77	.77	.81	.81	.84	.84	.85	.88	.89	.90
Multiply deflection by:	1.20	1.14	1.14	1.11	1.11	1.09	1.09	1.08	1.07	1.06	1.05

**Note:** All deflections are theoretical and are based on standard engineering practices. They are provided for design selection only and should not be considered as absolute.

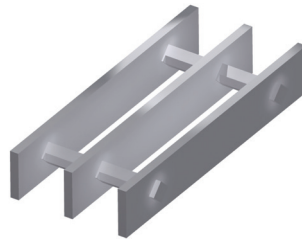
# Swage Locked Aluminum Grating



Type			
Standard Space	IB BS		Recommended for general applications.
	IF FS		Same as IB and BS but with closer cross bar spacing.
Close Space	ID DS		The close bearing bars provide a greater loading capacity than IB / BS without increasing the depth of the section.
	IDF DFS		Same as ID and DS but with closer cross bar spacing.
Very Close Space	ICM4 SCM4		Our closest spaced swage lock grating. Satisfies maximum clear opening required by ADA.
	ICMF4 SCMF4		With closer cross bars and bearing bars. For conditions requiring greatly reduced net openings. Satisfies maximum clear opening required by ADA.

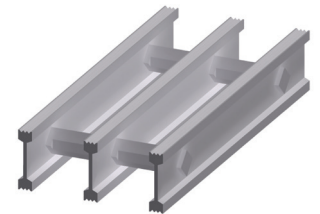
## Rectangular Bar Grating (BS, FS, DS, DFS, SCM4, SCMF4)

BS swaged rectangular bar grating provides all the strength of aluminum pressure locked grating at a slightly lower cost. The cross bars are swaged to lock the bearing bars in place, giving you high strength and rigidity in a light weight, virtually maintenance free aluminum grating.



## I-Bar Grating (IB, IF, ID, IDF, ICM4, ICMF4)

IB swaged aluminum I-Bar grating is the lightest weight, lowest cost aluminum grating. Its high strength, slip resistant striated bearing bars and low cost, I-Bar grating is an excellent choice when economy is a major factor.



Size	Bearing Bar Depth (inches)	Weights lb./sf.												
		Swage Locked "I Bar" Type						Bearing Bar Dimensions (inches)	Swage Locked "Rectangular Bar" Type					
		IB	IF	ID	IDF	ICM4	ICMF4		BS	FS	DS	DFS	SCM4	SCMF4
3	-	-	-	-	-	-	-	1" x 1/8"	1.9	2.2	2.3	2.6	3.0	3.3
4	1"	1.9	2.1	2.3	2.5	3.2	3.5	1" x 3/16"	2.6	2.9	3.3	3.5	4.3	4.6
5	-	-	-	-	-	-	-	1-1/4" x 1/8"	2.3	2.6	2.8	3.1	3.6	4.0
6	1-1/4"	2.3	2.5	2.8	2.9	3.8	4.2	1-1/4" x 3/16"	3.2	3.5	4.0	4.3	5.3	5.6
7	-	-	-	-	-	-	-	1-1/2" x 1/8"	2.8	3.2	3.4	3.8	4.3	4.6
8	1-1/2"	2.6	2.8	3.2	3.4	4.5	4.8	1-1/2" x 3/16"	3.9	4.3	4.8	5.2	6.3	6.6
9	1-3/4"	3.0	3.3	3.7	3.9	5.1	5.4	1-3/4" x 3/16"	4.5	4.9	5.6	5.9	7.2	7.6
10	2"	3.4	3.7	4.2	4.4	5.8	6.1	2" x 3/16"	5.1	5.5	6.3	6.7	8.2	8.6
11	2-1/4"	3.8	4.0	4.6	4.9	6.4	6.8	2-1/4" x 3/16"	5.7	6.1	7.0	7.4	9.2	9.5
12	2-1/2"	4.0	4.2	4.9	5.1	7.1	7.4	2-1/2" x 3/16"	6.3	6.7	7.8	8.1	10.2	10.5

### Surfaces:

- Plain
- Serrated\*
- MEBAC®

### Panel sizes:

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

### Finishes:

- Mill
- Anodized
- Duranodic

\*Only rectangular bar is serrated. I-Bar type is striated on top surface.

## LOAD TABLE FOR SWAGE LOCKED GRATING

This table is good for type IB, BS, IF and FS only.

\* Maximum span for 1/4" deflection under uniform load of 100lb/sf.

Size	Bearing Bar Size	*	Span in inches															
			24	30	35	42	Span in inches											
2	3/4" x 3/16"	35	U	355	227	158	116											
			D	0.191	0.299	0.432	0.588											
			C	355	284	237	203	Span in inches										
			D	0.153	0.239	0.345	0.470	48	54									
3	1" x 1/8"	39	U	421	269	187	137	105	83									
			D	0.144	0.225	0.324	0.441	0.576	0.729									
			C	421	337	281	241	211	187									
			D	0.115	0.180	0.259	0.353	0.461	0.583									
4	1" x 3/16" or 1" I Bar	44	U	632	404	281	206	158	125									
			D	0.144	0.225	0.324	0.441	0.576	0.729									
			C	632	505	421	361	316	281	Span in inches								
			D	0.115	0.180	0.259	0.353	0.461	0.583	60	66	72						
5	1-1/4" x 1/8"	47	U	658	421	292	215	164	130	105	87	73						
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.72	0.871	0.037						
			C	658	526	439	376	329	292	263	239	219	Span in inches					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	78	84				
6	1-1/4" x 3/16" or 1-1/4" I Bar	52	U	987	632	439	322	247	195	158	130	110	93	81				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	0.037	1.217	1.411				
			C	987	789	658	564	493	439	395	359	329	304	282	Span in inches			
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973	1.129	90	96		
7	1-1/2" x 1/8"	53	U	947	606	421	309	237	187	152	125	105	90	77	67	59		
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.350	1.536		
			C	947	758	632	541	474	421	379	344	316	291	271	253	237		
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.080	1.229		
8	1-1/2" x 3/16" or 1-1/2" I Bar	59	U	1421	909	632	464	355	281	227	188	158	135	116	101	89		
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.35	1.536		
			C	1421	1137	947	812	711	632	568	517	474	437	406	379	355		
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.080	1.229		
9	1-3/4" x 3/16" or 1-3/4" I Bar	66	U	1934	1238	860	632	484	382	309	256	215	183	158	138	121		
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.157	1.317		
			C	1934	1547	1289	1105	967	860	774	703	645	595	553	516	484		
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	0.926	1.053		
10	2" x 3/16" or 2" I Bar	73	U	2526	1617	1123	825	632	499	404	334	281	239	206	180	158		
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.013	1.152		
			C	2526	2021	1684	144	1263	1123	1011	919	842	777	722	674	632		
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.810	0.922		
11	2-1/4" x 3/16" or 2-1/4" I Bar	80	U	3197	2046	1421	1044	799	632	512	423	335	303	261	277	200		
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	0.900	1.024		
			C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	853	799		
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.720	0.819		
12	2-1/2" x 3/16" or 2-1/2" I BAR	87	U	3947	2526	1754	1289	987	780	632	522	439	374	322	281	247		
			D	0.058	0.090	0.130	0.176	0.23	0.292	0.360	0.436	0.518	0.608	0.706	0.810	0.922		
			C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	1053	987		
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.648	0.737		

U = Uniform load lb./sf.

C = Concentrated load lb./ft. of grating width, at mid-span.

D = Deflection in inches.

ALUMINUM CONVERSION FACTORS				
For spacings other than 1-3/16" centers, multiply the conversion factor times the U and C values shown in the table, the D (deflection) remains as shown.				
Type	ID / DS	IDF / DFS	ICM4 / SCM4	ICMF4 / SCMF4
Factor	1.27	1.27	1.73	1.73

**Note:** The carrying capacity of a piece of grating subjected to a concentrated load over only a portion of its width is determined by the stiffness of both the bearing bars and the cross bars, and therefore differs with the type of grating used. To determine the carrying capacity of gratings subject to such loadings, the IKG engineering department should be consulted.



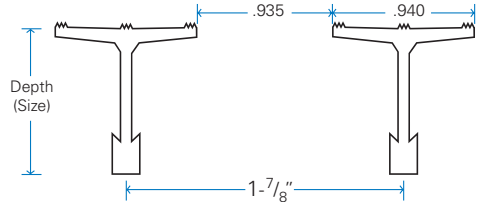
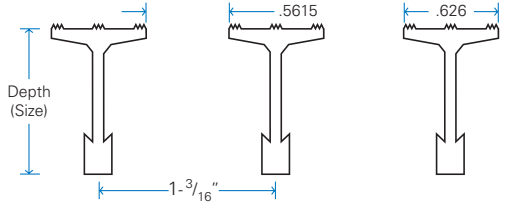
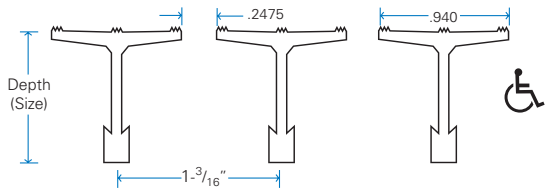
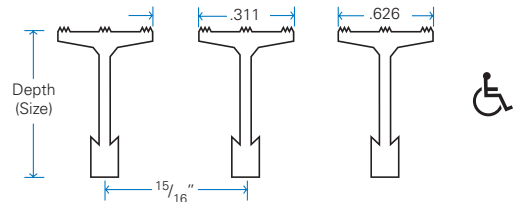
**Frames to fit.** We offer aluminum frames for concrete embedment that are made specifically for Safe T Grid® installation. Frames can be supplied with rubber cushion for total noise elimination and also with the same finish specified for the grating.

**Comfortable.** For both walking and standing. The broad top flange walking surface feels much like solid flooring underfoot.

**Will not catch high heels.** Openings of Type TB-940 are less than 1/4" wide, narrower than most slender high heels, yet sufficient to allow the free passage of air and water.

**Rigid, rattle-free construction.** Strong, tight swaging of cross bars locks bearing bars solidly in place with a positive lock that prevents the main bearing bars from racking or "venetian blinding". This result will last for years without loosening even under heavy traffic. Wide top flange of bearing bars gives added lateral rigidity.

**Invisible fastening system.** Special clips can be supplied with the grating that lock into the bottom flange of the bearing bars. Clips can be tightened from above with a screw driver or an Allen wrench, and can just as easily be released for removing the grating to clean the collection pit.

Aluminum Grating			
Type TP -940			
	Size	Depth	Wt./sf.
4	1"	2.1	49.9%
6	1-1/4"	2.8	49.9%
8	1-1/2"	3.0	49.9%
10	2"	3.4	49.9%
Type TB -626			
	Size	Depth	Wt./sf.
4	1"	2.7	47.2%
6	1-1/4"	3.3	47.2%
8	1-1/2"	3.6	47.2%
10	2"	4.1	47.2%
Type TB -940			
	Size	Depth	Wt./sf.
4	1"	3.0	20.8%
6	1-1/4"	4.2	20.8%
8	1-1/2"	4.4	20.8%
10	2"	5.0	20.8%
Type TD -626			
	Size	Depth	Wt./sf.
4	1"	3.4	33.2%
6	1-1/4"	4.1	33.2%
8	1-1/2"	4.4	33.2%
10	2"	5.1	33.2%

**Surfaces:**

- Standard striated top
- MEBAC®

**Panel sizes:**

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

**Finishes:**

- Mill
- Anodized
- Duranodic



## LOAD TABLE FOR SAFET GRID® GRATING

\* Maximum span for 1/4" deflection under uniform load of 100lb/sf.

Size No.	Depth	Type	Top Flange Width	S/FT	I/FT	*	SPAN													
							1'-0	1'-6	2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	
4	1"	TP-940-4	.940	.332	.192	46	U	2662	1183	666	426	296	217	166	131	106	88	74	63	54
							D	0.031	0.070	0.124	0.195	0.280	0.381	0.498	0.629	0.776	0.943	1.123	1.317	1.519
							C	1331	887	666	532	444	380	333	296	266	242	222	205	190
							D	0.024	0.056	0.099	0.155	0.224	0.305	0.399	0.505	0.623	0.754	0.899	1.055	1.221
4	1"	TB-626-4	.626	.495	.262	50	U	3961	1761	990	634	440	323	248	196	158	131	110	94	81
							D	0.033	0.076	0.135	0.212	0.305	0.415	0.543	0.688	0.845	1.026	1.220	1.436	1.665
							C	1981	1320	990	792	660	566	495	440	396	360	330	305	283
							D	0.027	0.061	0.108	0.169	0.244	0.332	0.434	0.549	0.678	0.820	0.976	1.147	1.330
4	1"	TB-940-4	.940	.525	.303	51	U	4204	1868	1051	673	467	343	263	208	168	139	117	99	86
							D	0.031	0.070	0.124	0.195	0.280	0.382	0.499	0.633	0.779	0.944	1.125	1.311	1.532
							C	2102	1401	1051	841	701	601	525	467	420	382	350	323	300
							D	0.024	0.056	0.099	0.156	0.224	0.305	0.398	0.505	0.623	0.754	0.897	1.053	1.221
4	1"	TD-626-4	.626	.627	.332	53	U	5018	2230	1254	803	558	410	314	248	201	166	139	119	102
							D	0.033	0.076	0.135	0.212	0.305	0.415	0.543	0.687	0.849	1.026	1.217	1.436	1.655
							C	2509	1673	1254	1004	836	717	627	558	502	456	418	386	358
							D	0.027	0.061	0.108	0.169	0.244	0.332	0.434	0.550	0.678	0.820	0.976	1.146	1.328
6	1-1/4"	TP-940-6	.940	.550	.409	55	U	4403	1957	1101	705	489	359	275	217	176	146	122	104	90
							D	0.024	0.054	0.096	0.151	0.217	0.295	0.386	0.488	0.604	0.733	0.868	1.019	1.187
							C	2202	1468	1101	881	734	629	550	489	440	400	367	339	315
							D	0.019	0.43	0.077	0.120	0.174	0.237	0.309	0.391	0.483	0.584	0.696	0.818	0.949
6	1-1/4"	TB-626-6	.626	.757	.505	58	U	6063	2695	1516	970	674	495	379	299	243	200	168	144	124
							D	0.026	0.060	0.108	0.168	0.243	0.330	0.432	0.545	0.676	0.814	0.969	1.144	1.325
							C	3032	2021	1516	1213	1011	866	758	674	606	551	505	466	433
							D	0.021	0.048	0.086	0.135	0.194	0.264	0.345	0.437	0.539	0.653	0.777	0.911	1.058
6	1-1/4"	TB-940-6	.940	.869	.646	62	U	6952	3090	1738	1112	772	568	435	343	278	230	193	165	142
							D	0.024	0.054	0.096	0.151	0.217	0.296	0.387	0.489	0.604	0.732	0.870	1.024	1.186
							C	3476	2317	1738	1390	1159	993	869	772	695	632	579	535	497
							D	0.019	0.043	0.077	0.120	0.174	0.236	0.309	0.391	0.483	0.585	0.696	0.817	0.948
6	1-1/4"	TD-626-6	.626	.960	.640	62	U	7680	3413	1920	1229	853	627	480	379	307	254	213	182	157
							D	0.027	0.060	0.108	0.168	0.242	0.330	0.432	0.546	0.674	0.817	0.970	1.142	1.325
							C	3840	2560	1920	1536	1280	1097	960	853	768	698	640	591	549
							D	0.021	0.048	0.086	0.135	0.194	0.264	0.345	0.437	0.54	0.653	0.777	0.912	1.059
8	1-1/2"	TP-940-8	.940	.742	.652	62	U	5939	2640	1485	950	660	485	371	293	238	196	165	141	121
							D	0.020	0.046	0.081	0.127	0.184	0.250	0.327	0.414	0.512	0.618	0.737	0.867	1.001
							C	2970	1980	1485	1188	990	848	742	660	594	540	495	457	424
							D	0.016	0.036	0.065	0.102	0.147	0.200	0.261	0.331	0.409	0.495	0.589	0.692	0.802
8	1-1/2"	TB-626-8	.626	1.010	.798	65	U	8084	3593	2021	1293	898	660	505	399	323	267	225	191	165
							D	0.022	0.051	0.091	0.142	0.205	0.279	0.364	0.461	0.568	0.688	0.821	0.960	1.116
							C	4042	2695	2021	1617	1347	1155	1011	898	808	735	674	622	577
							D	0.018	0.041	0.072	0.113	0.164	0.223	0.291	0.369	0.455	0.551	0.656	0.770	0.892
8	1-1/2"	TB-940-8	.940	1.172	1.030	70	U	9378	4168	2344	1500	1042	766	586	463	375	310	260	222	191
							D	0.020	0.046	0.081	0.127	0.184	0.250	0.327	0.414	0.511	0.619	0.735	0.865	1.001
							C	4689	3126	2344	1876	1563	1340	1172	1042	938	853	781	721	670
							D	0.016	0.036	0.065	0.102	0.147	0.200	0.261	0.331	0.409	0.495	0.589	0.691	0.802
8	1-1/2"	TD-626-8	.626	1.280	1.011	69	U	10240	4551	2560	1638	1138	836	640	506	410	339	284	242	209
							D	0.022	0.051	0.091	0.142	0.205	0.279	0.364	0.461	0.570	0.690	0.818	0.961	1.116
							C	5120	3413	2560	2048	1707	1463	1280	1138	1024	931	853	788	731
							D	0.018	0.041	0.072	0.113	0.164	0.223	0.291	0.369	0.445	0.511	0.655	0.770	0.892
10	2"	TP-940-10	.940	1.177	1.350	75	U	9421	4187	2355	1507	1047	769	589	465	377	311	262	223	192
							D	0.015	0.035	0.062	0.098	0.141	0.192	0.251	0.317	0.392	0.474	0.565	0.663	0.768
							C	4710	3140	2355	1884	1570	1346	1178	1047	942	856	785	725	673
							D	0.012	0.028	0.050	0.078	0.113	0.153	0.200	0.254	0.313	0.379	0.452	0.530	0.615
10	2"	TB-626-10	.626	1.586	1.647	78	U	12692	5641	3173	2031	1410	1036	793	627	508	420	353	300	259
							D	0.017	0.039	0.069	0.108	0.156	0.212	0.277	0.351	0.433	0.524	0.624	0.731	0.849
							C	6346	4231	3173	2538	2115	1813	1587	1410	1269	1154	1058	976	907
							D	0.013	0.031	0.055	0.086	0.124	0.169	0.221	0.280	0.346	0.419	0.499	0.585	0.679
10	2"	TB-940-10	.940	1.859	2.132	84	U	14875	6611	3719	2380	1653	1214	930	735	595	492	413	352	304
							D	0.015	0.035	0.062	0.098	0.141	0.192	0.251	0.318	0.392	0.475	0.564	0.663	0.770
							C	7438	4958	3719	2975	2479	2125	1859	1653	1488	1352	1240	1144	1063
							D	0.012	0.028	0.050	0.078	0.113	0.153	0.200	0.254	0.314	0.379	0.452	0.530	0.615
10	2"	TD-626-10	.626	2.009	2.086	83	U	16077	7145	4019	2572	1786	1312	1005	794	643	531	447	381	328
							D	0.017	0.039	0.069	0.108	0.156	0.212	0.277	0.351	0.433	0.523	0.624	0.733	0.849
							C	8038	5359	4019	3215	2679	2297	2010	1786	1608	1462	1340	1237	1148
							D	0.013	0.031	0.055	0.086	0.124	0.169	0.221	0.280	0.346	0.419	0.499	0.586	0.679

U = Uniform load lb./sf.

C = Concentrated load, lb./ft. of grating width, at mid-span.

D = Deflection in inches.

Theoretical values based on f = 12,000 PSI, E = 10,000,000 psi, gross section of bearing bar.

**Note:** All deflections are theoretical and are based on standard engineering practices. They are provided for design selection only and should not be considered as absolute.

# Pressure Locked Grating



Type	Diagram	Description
B		Recommended for general applications.
F		Closer cross bars. Best for heavy public traffic, or where smaller openings are required.
D		Same as type B but closer bearing bars for conditions where more steel area is required.
DF		With closer cross bar and bearing bars. For conditions requiring greatly reduced net opening.

## Pressure Locked Grating

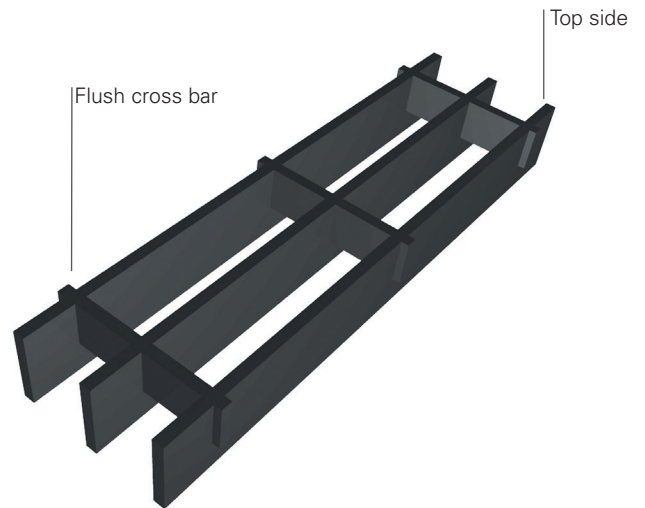
Pressure locked grating incorporates tight-fitting, slotted bearing bars and cross bars, locked together. The permanent locking of the bars is accomplished by slotting the bearing bars with a wider “dovetail” shape at the bottom of the slot.

The bearing bar slot is usually 1/2 the depth of the cross bar. The cross bars are slotted to a depth slightly less than half the bar depth. When the bars are press together under hydraulic pressure, the cross bar material is forced into the “dovetail” shape of the bearing bar notch, forming a strong, rigid unit.

## Installation note:

Pressure locked grating should be installed with the “flush” side up. On 3/4 deep pressure locked grating where the cross bars and bearing bars are the same depth. IKG will mark the grating showing the top side for installation.

Weights lb./sf.									
Bar Size	Bearing Bar Dimensions (inches)	STEEL				ALUMINUM			
		B	D	F	DF	B	D	F	DF
1	3/4" x 1/8"	4.4	4.8	4.6	5.5	1.6	1.7	1.7	2.0
2	3/4" x 3/16"	5.7	7.0	6.4	7.7	2.0	2.5	2.2	2.7
3	1" x 1/8"	5.2	6.4	6.0	7.2	1.9	2.3	2.2	2.6
4	h	7.5	9.3	8.3	10.1	2.6	3.3	2.9	3.5
5	1-1/4" x 1/8"	6.3	7.9	7.1	8.7	2.3	2.8	2.6	3.1
6	1-1/4" x 3/16"	9.1	11.3	9.9	12.2	3.2	4.0	3.5	4.3
7	1-1/2" x 1/8"	7.6	9.5	8.7	10.6	2.8	3.4	3.2	3.8
8	1-1/2" x 3/16"	11.0	13.7	12.1	14.8	3.9	4.8	4.3	5.2
9	1-3/4" x 3/16"	12.7	15.8	13.8	16.9	4.5	5.6	4.9	5.9
10	2" x 3/16"	14.3	17.9	15.4	19.0	5.1	6.3	5.5	6.7
11	2-1/4" x 3/16"	16.0	20.0	17.1	21.1	5.7	7.0	6.1	7.4
12	2-1/2" x 3/16"	17.7	22.1	18.8	23.2	6.3	7.8	6.7	8.1



## Surfaces:

- Plain
- Serrated
- MEBAC®

## Finishes:

- Mill
- Galvanized
- Painted

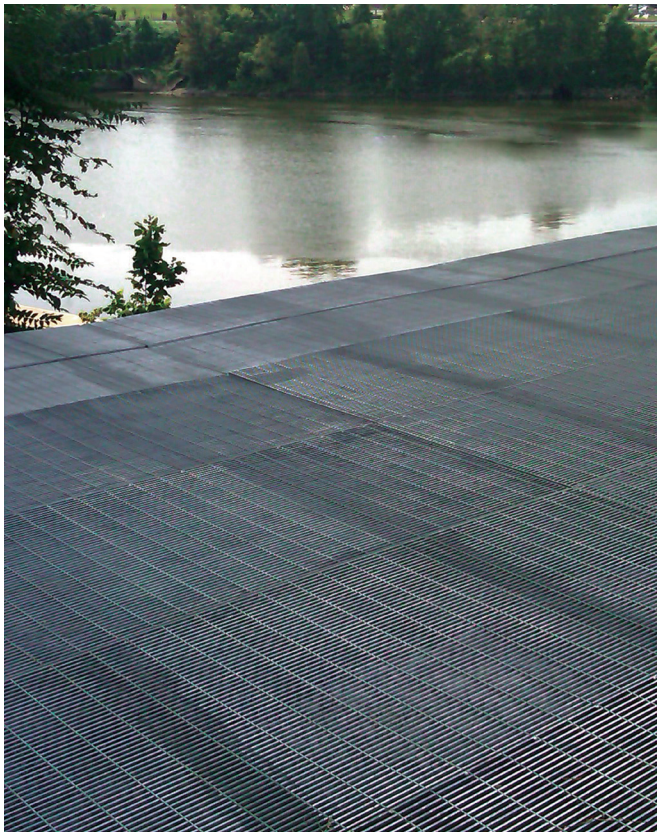
## Panel sizes:

- 3' x 12'
- 2' x 12'

## Available in:

- Carbon Steel
- Stainless Steel (304L & 316L)
- Aluminum

# Pressure Locked Close Mesh



High heel proof 1/4" Clear opening.

Pressure locked grating is available with these close bar spacing to accommodate requirements for pedestrian comfort and safety as well as many other architectural needs for special grating for a particular job.

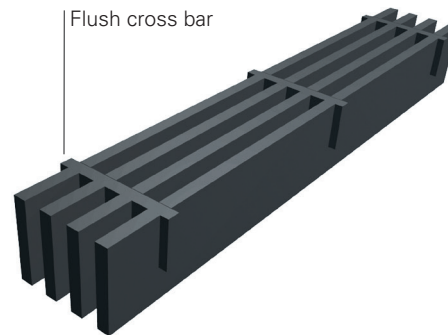
Type		
CM1		Our closest spaced grating available. Excellent for pedestrian use and areas where high visibility is a concern. Satisfies maximum 1/2" clear opening as required by ADA.
CM2		Same as CM 1 only with a slightly increased opening. Satisfies maximum 1/2" clear opening as required by ADA.
CM3		As with the other close mesh types, this style resists all small objects from falling through. Satisfies maximum 1/2" clear opening as required by ADA.
CM4		Provides larger open area for use where more ventilation is required beneath the grating. Satisfies, maximum 1/2" clear opening as required by ADA.
CM5		Recommended for general applications.

Visit our website for loading information.

### ADA Compliance:

If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2 inch wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

		Weights lb./sf.									
Bar Size	Bearing Bar Dimensions (inches)	STEEL					ALUMINUM				
		CM-1	CM-2	CM-3	CM-4	CM-5	CM-1	CM-2	CM-3	CM-4	CM-5
1	3/4" X 1/8"	-	8.6	6.9	-	5.5	-	3.1	2.4	-	-
2	3/4" X 3/16"	13.7	13.3	-	9.0	7.8	4.7	4.1	-	3.1	2.7
3	1" X 1/8"	-	11.5	9.0	-	7.1	-	4.2	3.1	-	-
4	1" X 3/16"	18.1	16.5	-	11.9	10.2	6.2	5.5	-	4.1	3.5
5	1-1/4" X 1/8"	-	14.2	11.2	-	8.9	-	5.2	3.9	-	-
6	1-1/4" X 3/16"	22.6	20.7	-	14.8	12.7	7.8	6.9	-	5.1	4.4
7	1-1/2" X 1/8"	-	17.2	13.5	-	10.8	-	6.3	4.7	-	-
8	1-1/2" X 3/16"	27.2	25	-	17.8	15.3	9.4	8.3	-	6.2	5.3
9	1-3/4" X 3/16"	31.6	29.4	-	20.8	17.8	10.9	9.6	-	7.2	6.1
10	2" X 3/16"	36.2	33.2	-	23.8	20.5	12.5	11.0	-	8.2	7.1
11	2-1/4" X 3/16"	40.1	37.3	-	26.5	22.7	14	12.4	-	9.1	7.8
12	2-1/2" X 3/16"	-	41.4	-	29.5	25.0	-	14.8	-	10.0	8.6



### Surfaces:

- Plain
- Serrated
- MEBAC®

### Finishes:

- Mill
- Galvanized
- Painted
- GrateCoat®

### Panel sizes:

- 3' x 12'
- 2' x 12'

### Available in:

- Carbon Steel
- Stainless Steel (304L & 316L)
- Aluminum

# Treads



IKG recommends the treads for stairs where maximum safety is required.

**Grating Type Available:**

- Weldforged®
- Swage Locked
- Pressure Locked
- Riveted

**Finishes:**

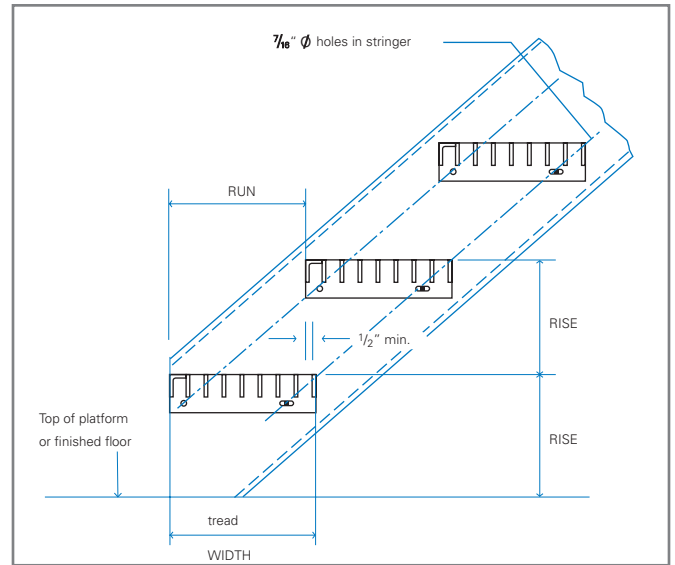
- Mill
- Galvanized
- Painted
- GrateCoat®

**Surfaces:**

- Plain
- Serrated
- MEBAC®

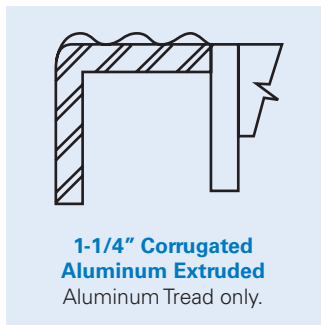
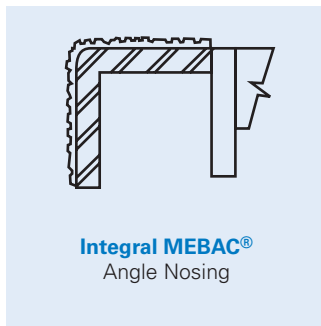
**Material Available:**

- Carbon Steel
- Stainless Steel (304L & 316L)
- Aluminum

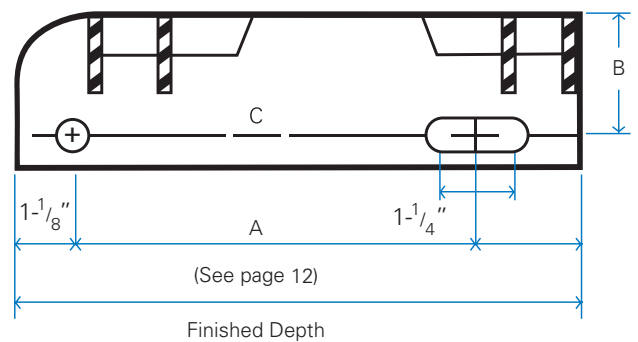


Note: Tread width should always be greater than tread run by 1/2 in. (12mm) minimum.

**Nosing Types**



**Carrier Plate**



- Dimension B**
- Steel Treads 1-3/4" up to including 1-1/4" deep treads. 2-1/4" for others

- Dimension B**
- Aluminum treads through 1-3/4" bearing bar depth will be 2-1/4"

7/16" Ø hole & slot, for 3/8" Ø bolt

Note: Bolts for mounting to stringers not supplied.



## Recommended Bearing Bar Sizes

Steel Treads				
Bearing Bar Size in. (mm)	Maximum Tread Length*			
	@ 1-3/16" (30) o.c.		@ 15/16" (24) o.c.	
	Plain	Serrated	Plain	Serrated
3/4" x 3/16"	2'-4"	-	2'-8"	-
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 (Rectangular Bars)				
Bearing Bar Size in. (mm)	Maximum Tread Length*			
	@ 1-3/16" (30) o.c.		@ 15/16" (24) o.c.	
	Plain	Serrated	Plain	Serrated
1" x 3/16"	2'-4"	-	2'-6"	-
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 Treads I Bars		
Bearing Bar Size in. (mm)	Maximum Tread Length*	
	@ 1-3/16" (30) o.c.	@ 15/16" (24) o.c.
1" I	2'-4"	2'-6"
1-1/4" I	2'-10"	3'-1"
1-1/2" I	3'-6"	3'-10"
1-3/4" I	4'-3"	4'-8"

\*Maximum tread length based on 300 lb (133 kN) concentrated load on front 5 in. (127 mm) of tread at center of tread length and deflection limitation of L/240 of length. For maximum length under other loadings, consult the manufacturer.

Safe T Grid® Treads Recommended Spans		
Size	General Public Use	Commercial / Industrial
1" TP - 940	2'-2"	2'-2"
1" TB - 626	2'-4"	2'-7"
1" TB - 940	2'-5"	2'-9"
1" TD - 626	2'-6"	2'-11"
1-1/4" TP - 940	2'-11"	3'-3"
1-1/4" TB - 626	2'-11"	3'-5"
1-1/4" TB - 940	3'-3"	3'-9"
1-1/4" TD - 626	3'-3"	3'-9"
1-1/2" TP - 940	3'-6"	4'-1"
1-1/2" TB - 626	3'-7"	4'-2"
1-1/2" TB - 940	4'-0"	4'-7"
1-1/2" TD - 626	3'-11"	4'-7"
2" TP - 940	4'-10"	5'-7"
2" TB - 626	4'-11"	5'-8"
2" TB - 940	5'-4"	6'-2"
2" TD - 626	5'-4"	6'-1"

1. Recommended span for general uses for Safe T Grid® is developed by using a concentrated load of 300 pound with a 33% impact at midspan supported by:

Nosing plus 3 "T" bars for TP spacing  
 Nosing plus 4 "T" bars for TB spacing  
 Nosing plus 5 "T" bars for TD spacing  
 with a deflection not to exceed L/240 or .250 inches.

2. Recommended span for commercial / industrial uses is developed by using the same loading criteria as for general public but with a deflection not to exceed L/180 or .375 inches.

Table of Standard Tread Depths for:

Pressure Locked	Swage Locked	Riveted	*(Dimension A) Hole Centers
B; W/B	IB	Type K (3/16 B.B.)	
6-3/16"	6-1/4"	6-11/16"	2-1/2"
7-3/8"	7-7/16"	8"	4-1/2"
8-9/16"	8-5/8"	9-5/16"	4-1/2"
9-3/4"	9-13/16"	10-5/8"	7"
10-15/16"	11"	11-15/16"	7"
12-1/8"	12-3/16"	13-1/4"	7"

DIMENSION B in TREAD with carrier plate detail in. (mm)

Grating Depth	*Dimension B
3/4" to 1/4"	1-3/4"
1-1/2" and up	2-1/4"
Aluminum is usually 2-1/4" (57) regardless of depth	

\*See Page 11

# Heavy Duty Grating



For Drains, Trenches and Scuppers.

## Design criteria

### Basis of Design for Heavy Duty Grating

AASHTO (American Association Society of State Highway Transportation Officials) Loadings for H-10, H-15, H-20

Wheel Load			
	H-10	10,400 lbs.	(10"X10" print)
	H-15	15,600 lbs.	(15"X15" print)
	H-20	20,800 lbs.	(20"X20" print)

- Impact Factor, 30%
- Method of Load Distribution:  
Each wheel distributed over a width of 10" (H-10); 15" (H-15); 20" (H-20) plus 2 times the distance center-to-center of the bearing bars over a length on each bar equal to 10" for H-10, 15" for H-15 and 20" for H-20.
- Maximum allowable stress in accordance with AASHTO specifications for highway bridges, 1984 edition.
- Simple span.

All Heavy Duty Grating subject to rolling loads will be load banded, regardless of span.

Size of Bearing Bar	Type / Style / Size	Weights lb./sf.		Type / Style / Size	Weights lb./sf.		Type / Style / Size	Weights lb./sf.	
		EC	HW		EC	HW		EC	HW
2" X 1/4"	C10A	16.46	16.42	P10A	13.12	13.02	L10A	10.62	10.47
2" X 3/8"	C10C	24.32	24.95	P10C	19.34	19.85	L10C	15.61	16.03
2-1/2" X 1/4"	C12A	20.68	20.25	P12A	16.51	16.00	L12A	13.38	12.81
2-1/2" X 3/8"	C12C	30.52	30.69	P12C	24.31	24.32	L12C	19.64	19.53
3" X 1/4"	C14A	24.86	24.08	P14A	18.97	18.19	L14A	15.56	14.78
3" X 3/8"	C14C	36.9	36.36	P14C	28.08	27.54	L14C	22.98	22.44
3-1/2" X 1/4"	C16A	28.73	27.95	P16A	21.85	21.07	L16A	17.86	17.08
3-1/2" X 3/8"	C16C	42.55	42.01	P16C	32.28	31.74	L16C	26.34	25.8
4" X 1/4"	C18A	34.44	31.19	P18A	26.59	23.88	L18A	22.04	19.33
4" X 3/8"	C18C	49.58	47.754	P18C	37.84	36.01	L18C	31.04	29.22

Please call for vehicular traffic table, panel sizes and spacing for increased lateral stability due to turning traffic and traffic traveling perpendicular to span.

Type	Diagram	Description
HWB		Bearing bars 1-3/16" c/c Cross Bars 4" c/c
HWD		Bearing bars 15/16" c/c Cross Bars 4" c/c
HWC		Bearing bars 1-3/8" c/c Cross Bars 4" c/c
HWP		Bearing bars 1-7/8" c/c Cross Bars 4" c/c
HWL		Bearing bars 2-3/8" c/c Cross Bars 4" c/c

## Product designation

### Style:

- EC:** Welded construction with rectangular cross bar welded at each joint.
- HW:** Welded construction with round cross bars welded at each joint.

### Bar Size Designation:

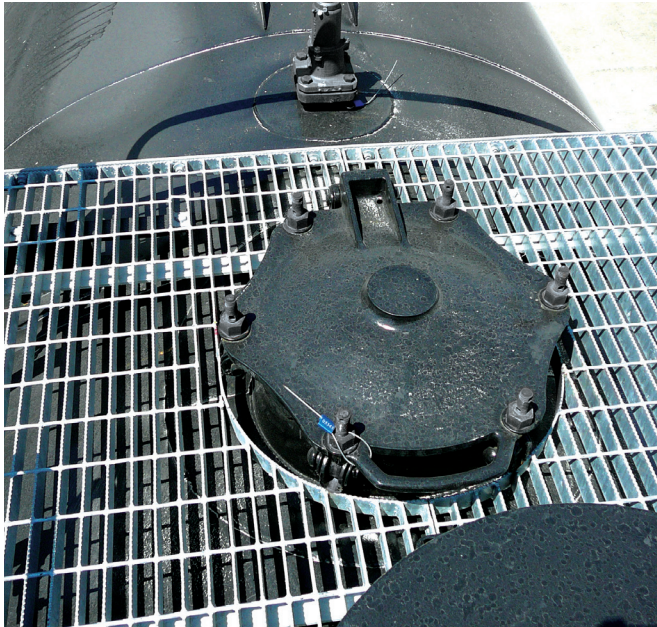
- Size # 10 = 2"
- Size # 12 = 2-1/2"
- Size # 14 = 3"
- Size # 16 = 3-1/2"
- Size # 18 = 4"

### Bar Size Thickness:

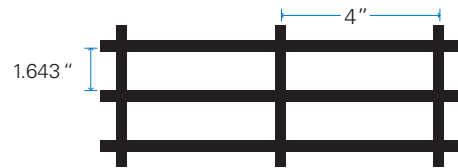
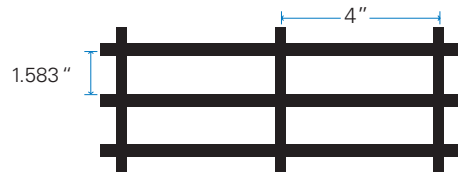
- A = 1/4"
- B = 5/16"
- C = 3/8"

EXAMPLE: A product that has a main bar of 3-1/2" X 1/4" with the main bars spaced 1-3/8" o.c. is designated: **HWC16A**

# Railroad Grating

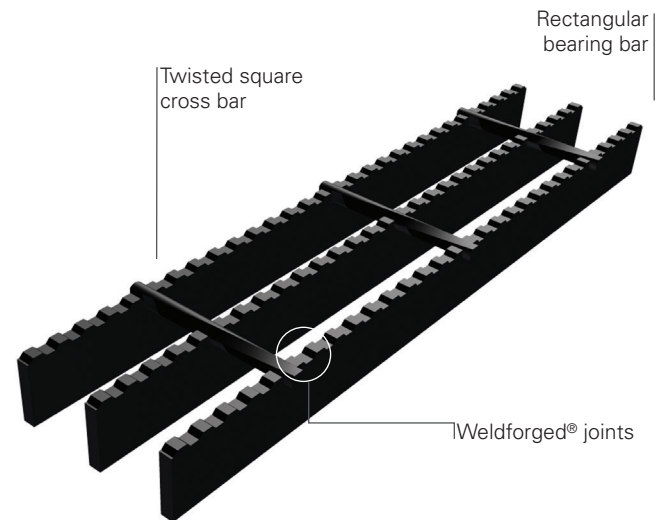


Type
WRR - BC
WRR - TC



AAR Group #	Size of Bearing Bar	IKG Symbol	Weight Per Sq. Ft.	Unsupported Span not to exceed
1	1" x 1/8"	WRR3BC	3.18	4' 0"
2	1-1/2" x 3/16"	WRR8	8.33	7' 0"
3	2" x 3/16"	WRR10	10.55	10' 0"

Group # 1 WRR3BC 1.583" c/c	Group # 2 & 3 WRR8 WRR10 1.643" c/c	No. Bars
1-11/16"	1-13/16"	2
3-9/32"	3-15/32"	3
4-7/8"	5-1/8"	4
6-15/32"	6-3/4"	5
8-1/32"	8-13/32"	6
9-5/8"	10-1/16"	7
11-7/32"	11-11/16"	8
1' 0-25/32"	1' 1-3/16"	9
1' 2-3/8"	1' 2-31/32"	10
1' 3-31/32"	1' 4-5/8"	11
1' 5-17/32"	1' 6-1/4"	12
1' 7-1/8"	1' 7-7/8"	13
1' 8-23/32"	1' 9-17/32"	14
1' 10-9/32"	1' 11-3/16"	15
1' 11-7/8"	2' 0-13/16"	16
2' 1-7/16"	2' 2-1/2"	17
2' 3"	2' 4-1/8"	18
2' 4-5/8"	2' 5-3/4"	19
2' 6-3/16"	2' 7-13/32"	20
2' 7-25/32"	2' 9-1/16"	21
2' 9-3/8"	2' 10-11/16"	22
2' 10-15/16"	3' 0-11/32"	23
3' 0-17/32"	3' 1-31/32"	24



#### Approved by:

- Association of American Railroads (AAR).

#### Produced in two bar spacings

- Box Car  
1.583" ctr. - ctr. Bearing Bars
- Tank Car  
1.643" ctr. - ctr. Bearing Bars

#### Produced in two bar thicknesses

- 1/8" thick
- 3/16" thick

#### Weldforged® construction

- for durability

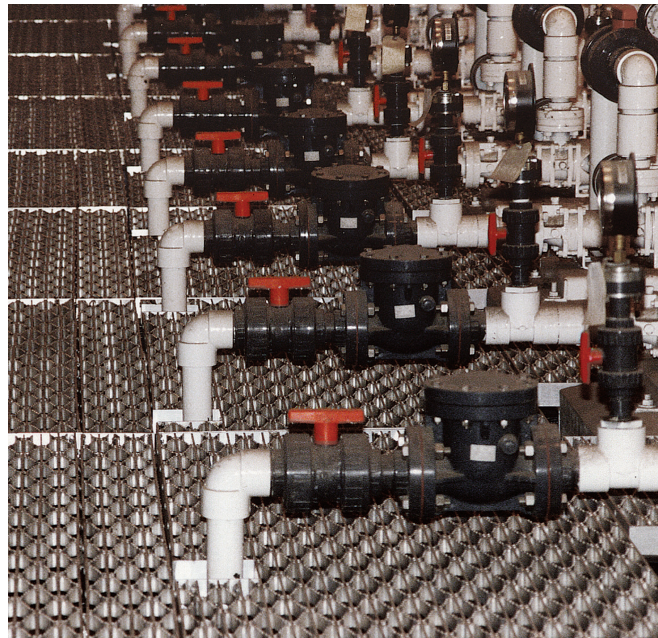
#### Carbon Steel

- for strength

#### Serrated top surface

- for slip resistance

# Riveted Grating



Type	Diagram	Description
<b>K</b>		Recommended for general applications.
<b>J</b>		Ornamental design with close bar centers. Excellent for pedestrian traffic.
<b>U</b>		Ornamental design with closer bar centers. Easy under foot.
<b>UJ</b>		Combines the closer bar and rivet centers of the U and J.
<b>W</b>		Economical type for special industrial uses where wider opening can be used.

Bar Size	Bearing Bar Dimensions (inches)	Weights lb./sf.									
		STEEL					ALUMINUM				
		K	J	U	UJ	W	K	J	U	UJ	W
1	3/4" x 1/8"	6.5	9.0	7.0	7.9	4.9	2.3	3.3	2.4	2.7	1.7
2	3/4" x 3/16"	8.0	10.4	8.5	9.7	5.9	2.8	3.8	2.9	3.3	2.0
3	1" x 3/8"	7.5	10.5	8.0	11.1	5.7	2.7	3.8	2.7	3.8	2.0
4	1" x 3/16"	9.0	12.5	9.5	13.2	7.0	3.3	4.5	3.2	4.5	2.4
5	1-1/4" x 1/8"	8.5	12.0	9.0	12.6	6.5	3.1	4.3	3.1	4.3	2.3
6	1-1/4" x 3/16"	10.5	14.7	11.0	15.3	8.1	3.8	5.3	3.8	5.2	2.8
7	1-1/2" x 1/8"	9.5	13.5	10.0	14.2	7.3	3.5	4.9	3.4	4.9	2.5
8	1-1/2" x 3/16"	12.0	16.8	12.5	17.4	9.2	4.4	6.0	4.3	6.0	3.2
9	1-3/4" x 3/16"	13.5	18.8	14.0	19.4	10.4	4.9	6.8	4.8	6.7	3.6
10	2" x 3/16"	16.0	22.9	17.0	23.3	12.3	5.8	8.0	5.8	8.0	4.2
11	2-1/4" x 3/16"	17.5	25.0	18.5	25.4	13.3	6.4	8.8	6.4	8.7	4.6
12	2-1/2" x 3/16"	19.0	27.1	20.0	27.8	14.4	7.0	9.6	7.2	9.7	5.0



**Surfaces:**

- Plain
- Serrated

**Available in:**

- Carbon Steel
- Stainless Steel (304L & 316L)
- Aluminum

**Finishes:**

- Mill
- Galvanized
- GrateCoat®

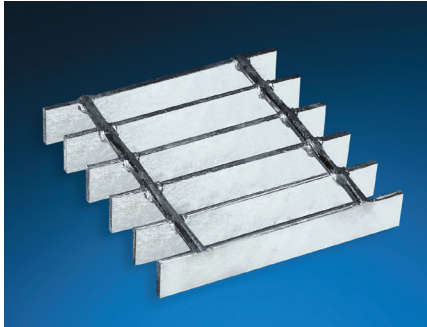
Please call for load information and panel sizes.



# Surfaces and Finishes

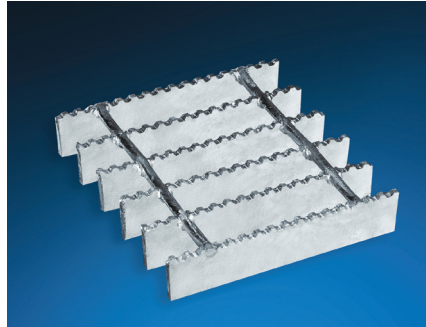


## SURFACES



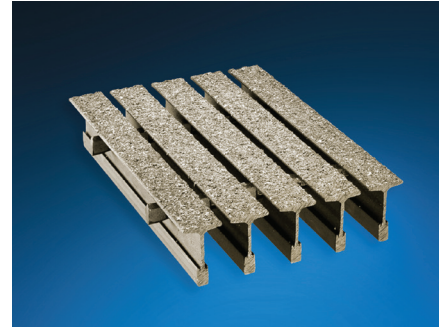
### Plain (smooth)

Top surface is available for all products: steel, stainless steel and aluminum grating products.



### Serrated (slip resistant)

Top surface for all products, except Aluminum I-Bar, Flush Top, and Safe T Grid®. Serrated offers more secure footing, where oil, water or chemicals are present.



### MEBAC® (Metal Bonded Anti-Slip Coatings)

MEBAC products are manufactured using abrasive grit particles encapsulated in metal spray arc that is bonded to an aluminum or steel substrate. MEBAC offers a consistently high coefficient of friction under a wide range of conditions, even when wet with lubricants such as brake fluid and oil, providing margins of safety that are unmatched in the industry. Visit: [www.MEBAC.com](http://www.MEBAC.com)

## FINISHES



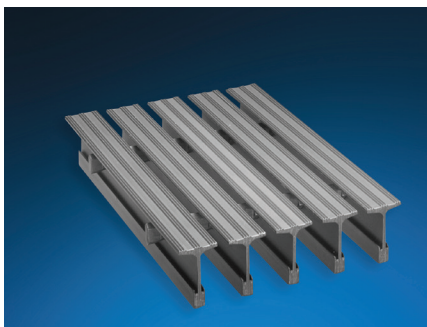
**Mill.** For carbon steel grating, refers to the natural finish of carbon steel as it comes from the mill. Mill Finish is our standard stainless steel and aluminum grating finish. The welded stainless steel grating and the aluminum grating undergoes caustic cleaning after fabrication which causes discoloration of the finished product.



**Galvanized.** A galvanized steel finish is the best protection for corrosion resistance for steel grating because the zinc metallurgically bonds with to the steel, creating a series of highly corrosion-resistant zinc-iron alloy layers. IKG's galvanized steel is galvanized per ASTM A-123 industry standard.



**GrateCoat®.** IKG offers the highest quality standard paint finish in the Industry. GrateCoat® powder coat finish.

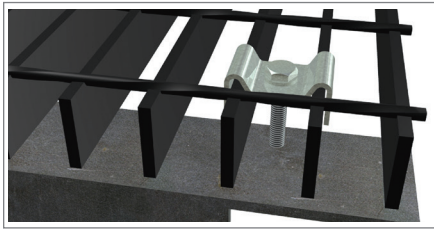


**Anodized.** Oxide coatings of different colors and hard, wear-resisting surface finishes can be applied in aluminum grating.

## MATERIALS

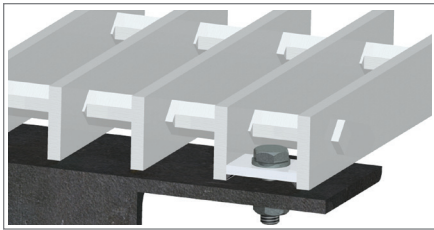
- Standard Steel of 1/8" and 3/16" conforms to ASTM A1011 CS type B.
- Wire Cross Rods for Welded Grating conform to ASTM A510.
- Steel Bars of 1/4" and heavier conforms to ASTM A36.
- Aluminum bars and extrusions conform to ASTM B221 alloy 6063-T6 for bearing bars and 6060-T1 for cross bars.
- Stainless Steel material conforms to ASTM A167 type 304L or type 316L.

# Fastening Methods



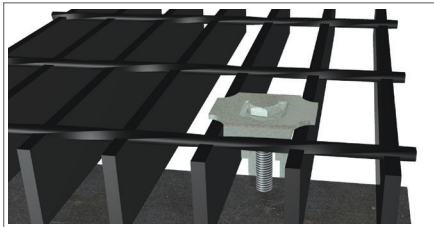
## SADDLE CLIP:

A special bent-clip type bar grating fastener for removable bar grating panels available in aluminum, stainless steel, and galvanized steel. Cross bars may need to be snipped in the field to facilitate placement of saddle clips.



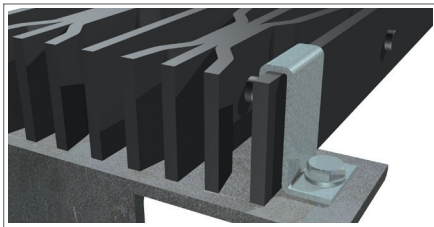
## PLATE FASTENERS (aka LUGS/ANCHOR BLOCKS)

Plate fasteners of 1/4" or 3/16" thick aluminum or steel may be shop welded by the grating manufacturer and used to fasten permanent or removable grating panels. Plate fasteners are recessed thus offering a trip-free surface.



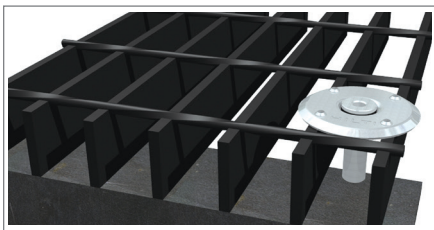
## G-CLIP:

Available in aluminum, stainless steel, and galvanized steel used in conjunction with bar grating and embedded grating frames. Cross bars may need to be snipped in the field to facilitate placement of bar grating clamps.



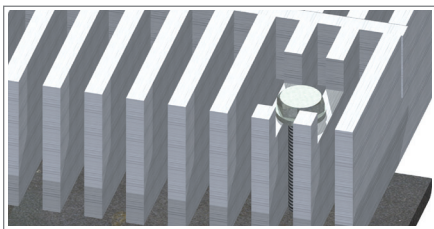
## Z CLIP:

Especially helpful in holding down riveted grating. Z Clips are manufactured from stainless steel and are available in 1" (1" and 1-1/4" grating) 1-1/2" (1-1/2" and 1-3/4" grating) and 2" (2", 2-1/4" and 2-1/2" grating) with a pre-punched hole to accept a 1/4" bolt or TEK screw (by others).



## HILTI DISK:

For a wide range of grating fastening applications like: oil and gas installations, offshore and ship building, industrial construction, steel industry, other public facilities, among others.



## COUNTERSUNK LAND:

For close-mesh aluminum grating (7/16" bearing bar centers) a countersunk land may be drilled by the grating manufacturer for use with a 1/4" diameter TEK screw (by others).



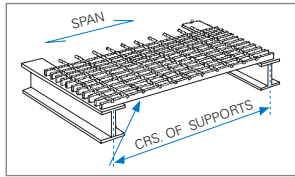
## WELD INSTALLATION:

Tack weld the third bearing bar from each panel side to the support member with 3/16" fillet welds x 3/4" long, plus weld in center of panel at intermediate supports when appropriate.

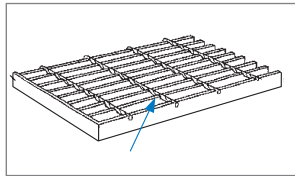
# Engineering Data



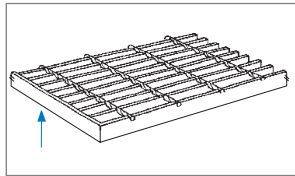
## GLOSSARY OF TERMS



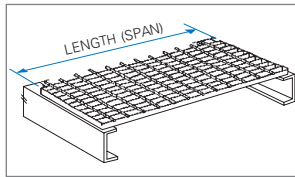
**BEARING BAR (Load Bar)**  
Uniform Load carrying bar spanning across supporting members.



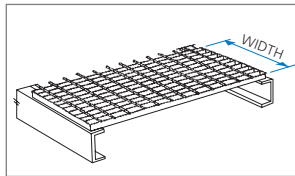
**CROSS BAR (Twisted)**  
Uniform rod, in square twisted steel, forged into and at right angles to the load bar.



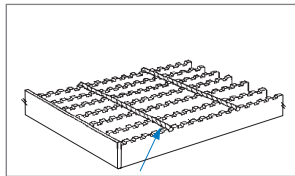
**BANDING BAR (Edge Bar)**  
Trim bar, generally as same size as load bars, welded to ends of load bars across panel ends and around notches and penetrations (if any).



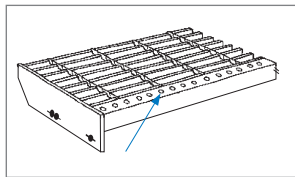
**LENGTH OF PANEL (Span)**  
Overall dimension of a panel measured parallel with load bars. (Indicated by  $\longleftrightarrow$  symbol)



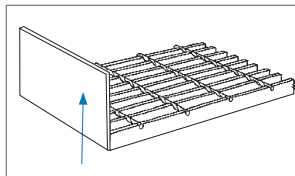
**WIDTH OF PANEL**  
Overall dimension of a panel measured at right angles to the load bars. (Always called "width" even if greater than the length.)



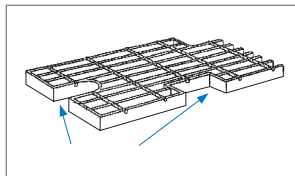
**SERRATIONS**  
Small notches made in the top edge of the load bar to assist in skid resistance.



**NOSING**  
A member attached to or on the leading edge of a stair tread to assist in skid resistance.

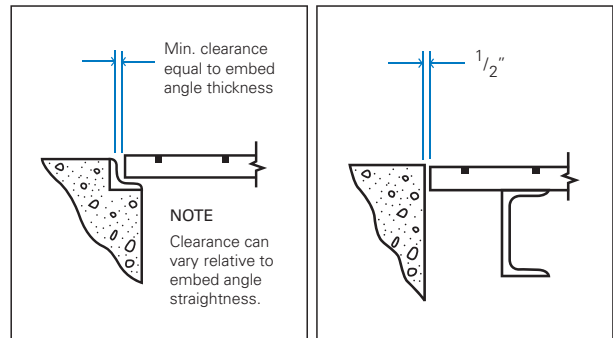
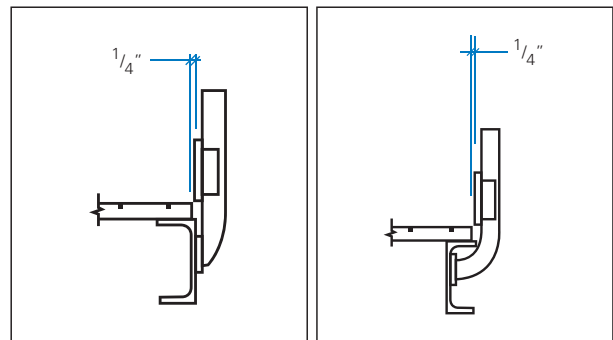
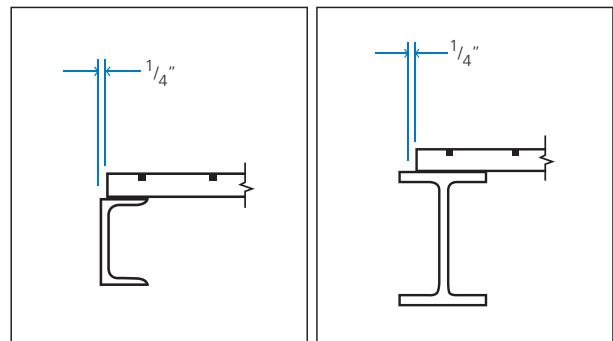
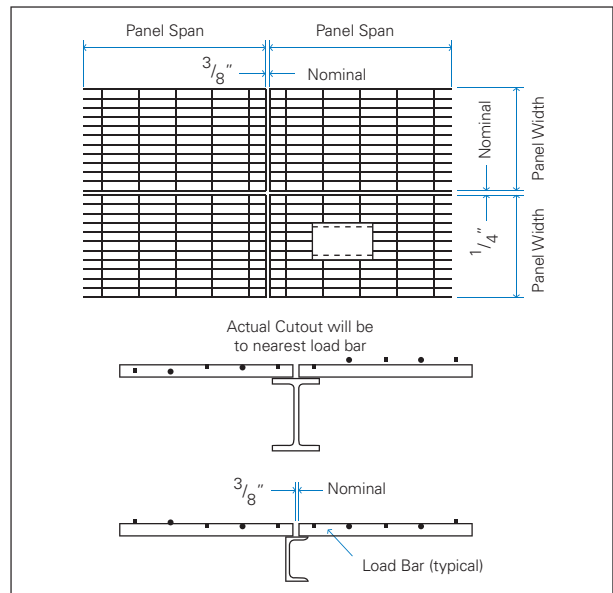


**KICK PLATE (Toe Plate)**  
Heavy section flat bar welded to ends or sides of panels and around cut-outs, etc., when specified. Top edge to be 4" above grating generally.



**CUT OUTS**  
Grating areas removed from panel to permit passage or installation of pipes, equipment, structural and handrail items.

## INSTALLATION CLEARANCE



## Manufacturing Facilities

### Division Headquarters

1514 South Sheldon Road  
Houston, TX 77015  
P. O. Box 310  
Channelview, TX 77530  
Phone: (281) 452-6637  
Fax: (281) 457-6054

### Garrett, IN.

1801 Forrest Park Drive  
Garrett, IN 46738  
Phone: (260) 357-6900  
Fax: (260) 357-0027

### Leeds, AL.

8500 Dunnavant Road  
Leeds, AL 35094  
Phone: (205) 699-2111  
Fax: (205) 699-8388

### Reno, NV.

6645 Echo Ave Suite C  
Reno, NV 89506  
Phone: (713) 378-3935

### Sand Springs, OK.

920 East Pecan  
Sand Springs, OK 74063  
Phone: (918) 246-0772  
Fax: (918) 246-0783

### Querétaro, México.

Rejillas Irving  
Prol. Corregidora Nte. 487  
Col. Parques Industriales  
Querétaro, Qro. 76160  
Phone: 52 (442) 227-1000  
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