BORDEN GRATINGS 1955

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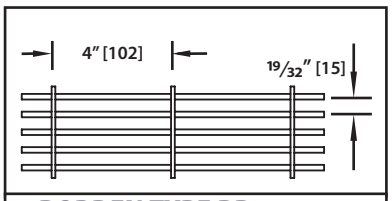
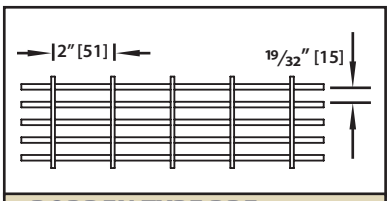
Pressure Locked Grating Aluminum

LOAD TABLE



BORDEN TYPE BB (9.5–P–4)

Free air % for 1/8" bars: 76.48%
Free air % for 3/16" bars: 66.28%



BORDEN TYPE BBF (9.5–P–2)

Free air % for 1/8" bars: 74.01%
Free air % for 3/16" bars: 64.14%

Size No.	Bearing Bar Size	Weight (#/ft.²)	Moment of Inertia (in.⁴/f.w.)	Section Modulus (in.³/f.w.)		Maximum span recommended for 1/4" deflection under uniform load of 100 psf. (normal pedestrian traffic) in inches — Span in Inches												
						24	30	36	42	48	54	60	66	72	78	84	96	108
1	3/4" x 1/8"	2.47	0.0888	0.2368	38	U 474	303	211	155	118	94	76						
		2.74				Du 0.192	0.300	0.432	0.588	0.768	0.972	1.200						
						C 474	379	316	271	237	211	189						
						Dc 0.154	0.240	0.346	0.470	0.614	0.778	0.960						
2	3/4" x 3/16"	3.62	0.1332	0.3553	42	U 711	455	316	232	178	140	114						
		3.94				Du 0.192	0.300	0.432	0.588	0.768	0.972	1.200						
						C 711	568	474	406	355	316	284						
						Dc 0.154	0.240	0.346	0.470	0.614	0.778	0.960						
3	1" x 1/8"	3.36	0.2105	0.4211	47	U 842	539	374	275	211	166	135	111	94	80			
		3.79				Du 0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089	1.296	1.521			
						C 842	674	561	481	421	374	337	306	281	259			
						Dc 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217			
4	1"x 3/16"	4.82	0.3158	0.6316	52	U 1263	808	561	412	316	250	202	167	140	120	103	79	62
		5.25				Du 0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089	1.296	1.521	1.764	2.304	2.916
						C 1263	1011	842	722	632	561	505	459	421	389	361	316	281
						Dc 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217	1.411	1.843	2.333
5	1 1/4" x 1/8"	4.10	0.4112	0.6579	55	U 1316	842	585	430	329	260	211	174	146	125	107	82	65
		4.53				Du 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217	1.411	1.843	2.333
						C 1316	1053	877	752	658	585	526	478	439	405	376	329	292
						Dc 0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973	1.129	1.475	1.866
6	1 1/4"x 3/16"	5.92	0.6168	0.9868	61	U 1974	1263	877	644	493	390	316	261	219	187	161	123	97
		6.35				Du 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217	1.411	1.843	2.333
						C 1974	1579	1316	1128	987	877	789	718	658	607	564	493	439
						Dc 0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973	1.129	1.475	1.866
7	1 1/2"x 1/8"	4.83	0.7105	0.9474	64	U 1895	1213	842	619	474	374	303	251	211	179	155	118	94
		5.26				Du 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536	1.944
						C 1895	1516	1263	1083	947	842	758	689	632	583	541	474	421
						Dc 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229	1.555
8	1 1/2"x 3/16"	7.02	1.0658	1.4211	70	U 2842	1819	1263	928	711	561	455	376	316	269	232	178	140
		7.45				Du 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536	1.944
						C 2842	2274	1895	1624	1421	1263	1137	1033	947	874	812	711	632
						Dc 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229	1.555
9	1 3/4"x 3/16"	8.11	1.6924	1.9342	79	U 3868	2476	1719	1263	967	764	619	512	430	366	316	242	191
		8.54				Du 0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	1.666
						C 3868	3095	2579	2211	1934	1719	1547	1407	1289	1190	1105	967	860
						Dc 0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	1.333
10	2"x 3/16"	9.21	2.5263	2.5263	87	U 5053	3234	2246	1650	1263	998	808	668	561	478	412	316	250
		9.64				Du 0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152	1.458
						C 5053	4042	3368	2887	2526	2246	2021	1837	1684	1555	1444	1263	1123
						Dc 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
11	2 1/4"x 3/16"	10.31	3.5970	3.1974	95	U 6395	4093	2842	2088	1599	1263	1023	846	711	605	522	400	316
		10.74				Du 0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024	1.296
						C 6395	5116	4263	3654	3197	2842	2558	2325	2132	1968	1827	1599	1421
						Dc 0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819	1.037
12	2 1/2"x 3/16"	11.41	4.9342	3.9474	103	U 7895	5053	3509	2578	1974	1559	1263	1044	877	747	644	493	390
		11.84				Du 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
						C 7895	6316	5263	4511	3947	3509	3158	2871	2632	2429	2256	1974	1754
						Dc 0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	0.933

Table in accordance with NAAMM MBG 531-09

F - 12,000 psi
E - 10,000,000 psi
Alloys 6061 T6 and 6063 T6

U - Safe Uniform Load (lbs./sq.ft.)
C - Safe Conc. load (lbs./ft. width)
D - Deflection in inches
f.w. = foot width

All loads and deflections are based on gross sections and nominal sizes of bearing bars. The values listed are for design selection only and are not intended to be "absolute".

Actual load capacity will be affected slightly by variations which can be expected due to material and manufacturing tolerances.

¼" is considered the maximum deflection which is consistent with pedestrian comfort, but may be exceeded for other application at the discretion of the Engineer.

When serrated gratings are specified, increase the depth of the grating selected from the table by ¼" to allow for the serrations.

PANEL WIDTHS (inches)																				
# Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
3/16" Bars	25/32	1 3/8	1 31/32	2 9/16	3 5/32	3 3/4	4 11/32	4 15/16	5 17/32	6 1/8	6 23/32	7 5/16	7 29/32	8 1/2	9 3/32	9 11/16	10 9/32	10 7/8	11 15/32	12 1/16
1/8" Bars	23/32	1 5/16	1 29/32	2 1/2	3 3/32	3 11/16	4 9/32	4 7/8	5 15/32	6 1/16	6 21/32	7 1/4	7 27/32	8 7/16	9 1/32	9 5/8	10 7/32	10 13/16	11 13/32	12
# Bars	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
3/16" Bars	12 21/32	13 1/4	13 27/32	14 7/16	15 1/32	15 5/8	16 7/32	16 13/16	17 13/32	18	18 19/32	19 3/16	19 25/32	20 3/8	20 31/32	21 9/16	22 5/32	22 3/4	23 11/32	23 15/16
1/8" Bars	12 19/32	13 3/16	13 25/32	14 3/8	14 31/32	15 9/16	16 5/32	16 3/4	17 11/32	17 15/16	18 17/32	19 1/8	19 23/32	20 5/16	20 29/32	21 1/2	22 3/32	22 11/16	23 9/32	23 7/8
# Bars	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
3/16" Bars	24 17/32	25 1/8	25 23/32	26 5/16	26 29/32	27 1/2	28 3/32	28 11/16	29 9/32	29 7/8	30 15/32	31 1/16	31 21/32	32 1/4	32 27/32	33 7/16	34 1/32	34 5/8	35 7/32	35 13/16
1/8" Bars	24 15/32	25 1/16	25 21/32	26 1/4	26 27/32	27 7/16	28 1/32	28 5/8	29 7/32	29 13/16	30 13/32	31	31 19/32	32 3/16	32 25/32	33 3/8	33 31/32	34 9/16	35 5/32	35 3/4