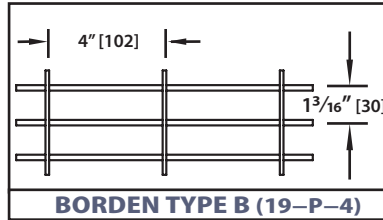




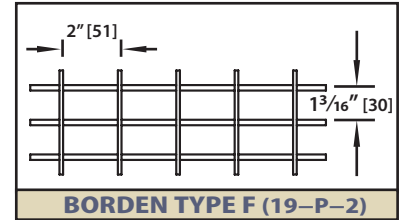
www.bordengratings.com

Pressure Locked Grating Aluminum



BORDEN TYPE B (19-P-4)

Free air % for 1/8" bars: 86.68%
Free air % for 3/16" bars: 81.58%



BORDEN TYPE F (19-P-2)

Free air % for 1/8" bars: 83.88%
Free air % for 3/16" bars: 78.95%

LOAD TABLE

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"	1.39 1.65	0.0444	0.1184	32	U	237	152	105	77	59	47	38	Table in accordance with NAAMM MBG 531-09										
						Du	0.192	0.300	0.432	0.588	0.768	0.972	1.200	F - 12,000 psi										
						C	237	189	158	135	118	105	95	E - 10,000,000 psi										
2	3/4" x 3/16"	2.00 2.32	0.0666	0.1776	35	U	355	227	158	116	89	70	57	Alloys 6061 T6 and 6063 T6										
						Du	0.192	0.300	0.432	0.588	0.768	0.972	1.200	U - Safe Uniform Load (lbs./sq.ft.)										
						C	355	284	237	203	178	158	142	C - Safe Conc. load (lbs./ft. width)										
3	1" x 1/8"	1.92 2.35	0.1053	0.2105	39	U	421	269	187	137	105	83	67	56	47	40	D - Deflection in inches f.w. = foot width							
						Du	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089	1.296	1.521	1.764	2.016	2.280	2.560	2.850	3.150	3.450	3.750
						C	421	337	281	241	211	187	168	148	130	115	102	90	80	71	63	56	50	44
4	1" x 3/16"	2.66 3.09	0.1579	0.3158	44	U	632	404	281	206	158	125	101	84	70	60	52	45	39	31				
						Du	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089	1.296	1.521	1.764	2.016	2.280	2.560	2.850	3.150	3.450	3.750
						C	632	505	421	361	316	281	253	230	211	194	180	168	158	148	140	132	125	118
5	1 1/4" x 1/8"	2.29 2.72	0.2056	0.3289	47	U	658	421	292	215	164	130	105	87	73	62	54	41	32					
						Du	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217	1.411	1.620	1.843	2.080	2.330	2.590	2.860	3.140
						C	658	526	439	376	329	292	263	239	219	202	188	176	164	154	146	139	132	126
6	1 1/4" x 3/16"	3.22 3.65	0.3084	0.4934	52	U	987	632	439	322	247	195	158	130	110	93	81	62	49					
						Du	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217	1.411	1.620	1.843	2.080	2.330	2.590	2.860	3.140
						C	987	789	658	564	493	439	395	359	329	304	282	264	247	231	219	209	200	191
7	1 1/2" x 1/8"	2.67 3.09	0.3553	0.4737	53	U	947	606	421	309	237	187	152	125	105	90	77	59	47					
						Du	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	1.732	1.940	2.160	2.390	2.630
						C	947	758	632	541	474	421	379	344	316	291	271	253	237	221	207	194	182	171
8	1 1/2" x 3/16"	3.78 4.21	0.5329	0.7105	59	U	1421	909	632	464	355	281	227	188	158	135	116	89	70					
						Du	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	1.732	1.940	2.160	2.390	2.630
						C	1421	1137	947	812	711	632	568	517	474	437	406	385	365	346	327	309	292	275
9	1 3/4" x 3/16"	4.34 4.76	0.8462	0.9671	66	U	1934	1238	860	632	484	382	309	256	215	183	158	121	96					
						Du	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	1.486	1.666	1.856	2.056	2.266
						C	1934	1547	1289	1105	967	860	774	703	645	595	553	514	477	441	406	372	339	307
10	2" x 3/16"	4.89 5.32	1.2632	1.2632	73	U	2526	1617	1123	825	632	499	404	334	281	239	206	158	125					
						Du	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.012	1.152	1.302	1.462	1.632	1.812	2.002
						C	2526	2021	1684	1444	1263	1123	1011	919	842	777	722	672	622	572	522	472	422	372
11	2 1/4" x 3/16"	5.45 5.88	1.7985	1.5987	80	U	3197	2046	1421	1044	799	632	512	423	355	303	261	200	158					
						Du	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	1.156	1.296	1.444	1.600	1.764
						C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	841	779	711	647	583	519	455
12	2 1/2" x 3/16"	6.01 6.44	2.4671	1.9737	87	U	3947	2526	1754	1289	987	780	632	522	439	374	322	247	195					
						Du	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.812	0.924	1.040	1.164	1.296	1.436	1.584
						C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	1041	964	897	831	765	709	653

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.

1/4" 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 1/4" 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
3/16" Bars	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	19 3/16	20 3/8
1/8" Bars	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	19 1/8	20 5/16
# Bars	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
3/16" Bars	21 9/16	22 3/4	23 15/16	25 1/8	26 5/16	27 1/2	28 11/16	29 7/8	31 1/16	32 1/4	33 7/16	34 5/8	35 13/16	37	38 3/16	39 3/8	
1/8" Bars	21 1/2	22 11/16	23 7/8	25 1/16	26 1/4	27 7/16	28 5/8	29 13/16	31	32 3/16	33 3/8	34 9/16	35 3/4	36 15/16	38 1/8	39 5/16	