BORDEN GRATINGS

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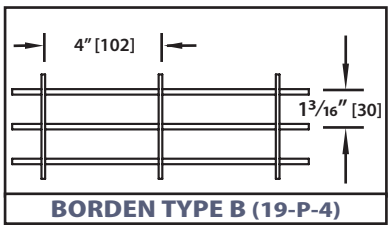
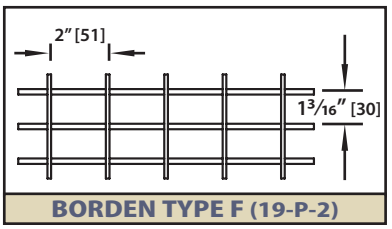
Pressure Locked Grating Aluminum



BORDEN TYPE B (19-P-4)



BORDEN TYPE F (19-P-2)

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 / Du 0.192 / C 237 / Dc 0.154	152 / 0.300 / 189 / 0.240	105 / 0.432 / 158 / 0.346	77 / 0.588 / 135 / 0.470	59 / 0.768 / 118 / 0.614	47 / 0.972 / 105 / 0.778	38 / 1.200 / 95 / 0.960						
2	3/4" x 3/16"	2.00 / 2.32	0.0666	0.1776	35	U 355 / Du 0.192 / C 355 / Dc 0.154	227 / 0.300 / 284 / 0.240	158 / 0.432 / 237 / 0.346	116 / 0.588 / 203 / 0.470	89 / 0.768 / 178 / 0.614	70 / 0.972 / 158 / 0.778	57 / 1.200 / 142 / 0.960						
3	1" x 1/8"	1.92 / 2.35	0.1053	0.2105	39	U 421 / Du 0.144 / C 421 / Dc 0.115	269 / 0.225 / 337 / 0.180	187 / 0.324 / 281 / 0.259	137 / 0.441 / 241 / 0.353	105 / 0.576 / 211 / 0.461	83 / 0.729 / 187 / 0.583	67 / 0.900 / 168 / 0.720	56 / 1.089 / 153 / 0.871	47 / 1.296 / 140 / 1.037	40 / 1.521 / 130 / 1.217			
4	1"x 3/16"	2.66 / 3.09	0.1579	0.3158	44	U 632 / Du 0.144 / C 632 / Dc 0.115	404 / 0.225 / 505 / 0.180	281 / 0.324 / 421 / 0.259	206 / 0.441 / 361 / 0.353	158 / 0.576 / 316 / 0.461	125 / 0.729 / 281 / 0.583	101 / 0.900 / 253 / 0.720	84 / 1.089 / 230 / 0.871	70 / 1.296 / 211 / 1.037	60 / 1.521 / 194 / 1.217	52 / 1.764 / 180 / 1.411	39 / 2.304 / 158 / 1.843	31 / 2.916 / 140 / 2.333
5	1 1/4" x 1/8"	2.29 / 2.72	0.2056	0.3289	47	U 658 / Du 0.115 / C 658 / Dc 0.092	421 / 0.180 / 526 / 0.144	292 / 0.259 / 439 / 0.207	215 / 0.353 / 376 / 0.282	164 / 0.461 / 329 / 0.369	130 / 0.583 / 292 / 0.467	105 / 0.720 / 263 / 0.576	87 / 0.871 / 239 / 0.697	73 / 1.037 / 219 / 0.829	62 / 1.217 / 202 / 0.973	54 / 1.411 / 188 / 1.129	41 / 1.843 / 164 / 1.475	32 / 2.333 / 146 / 1.866
6	1 1/4"x 3/16"	3.22 / 3.65	0.3084	0.4934	52	U 987 / Du 0.115 / C 987 / Dc 0.092	632 / 0.180 / 789 / 0.144	439 / 0.259 / 658 / 0.207	322 / 0.353 / 564 / 0.282	247 / 0.461 / 493 / 0.369	195 / 0.583 / 439 / 0.467	158 / 0.720 / 395 / 0.576	130 / 0.871 / 359 / 0.697	110 / 1.037 / 329 / 0.829	93 / 1.217 / 304 / 0.973	81 / 1.411 / 282 / 1.129	62 / 1.843 / 247 / 1.475	49 / 2.333 / 219 / 1.866
7	1 1/2"x 1/8"	2.67 / 3.09	0.3553	0.4737	53	U 947 / Du 0.096 / C 947 / Dc 0.077	606 / 0.150 / 758 / 0.120	421 / 0.216 / 632 / 0.173	309 / 0.294 / 541 / 0.235	237 / 0.384 / 474 / 0.307	187 / 0.486 / 421 / 0.389	152 / 0.600 / 379 / 0.480	125 / 0.726 / 344 / 0.581	105 / 0.864 / 316 / 0.691	90 / 1.014 / 291 / 0.811	77 / 1.176 / 271 / 0.941	59 / 1.536 / 237 / 1.229	47 / 1.944 / 211 / 1.555
8	1 1/2"x 3/16"	3.78 / 4.21	0.5329	0.7105	59	U 1421 / Du 0.096 / C 1421 / Dc 0.077	909 / 0.150 / 1137 / 0.120	632 / 0.216 / 947 / 0.173	464 / 0.294 / 812 / 0.235	355 / 0.384 / 711 / 0.307	281 / 0.486 / 632 / 0.389	227 / 0.600 / 568 / 0.480	188 / 0.726 / 517 / 0.581	158 / 0.864 / 474 / 0.691	135 / 1.014 / 437 / 0.811	116 / 1.176 / 406 / 0.941	89 / 1.536 / 355 / 1.229	70 / 1.944 / 316 / 1.555
9	1 3/4"x 3/16"	4.34 / 4.76	0.8462	0.9671	66	U 1934 / Du 0.082 / C 1934 / Dc 0.066	1238 / 0.129 / 1547 / 0.103	860 / 0.185 / 1289 / 0.148	632 / 0.252 / 1105 / 0.202	484 / 0.329 / 967 / 0.263	382 / 0.417 / 860 / 0.333	309 / 0.514 / 774 / 0.411	256 / 0.622 / 703 / 0.498	215 / 0.741 / 645 / 0.592	183 / 0.869 / 595 / 0.695	158 / 1.008 / 553 / 0.806	121 / 1.317 / 484 / 1.053	96 / 1.666 / 430 / 1.333
10	2"x 3/16"	4.89 / 5.32	1.2632	1.2632	73	U 2526 / Du 0.072 / C 2526 / Dc 0.058	1617 / 0.113 / 2021 / 0.090	1123 / 0.162 / 1684 / 0.130	825 / 0.221 / 1444 / 0.176	632 / 0.288 / 1263 / 0.230	499 / 0.365 / 1123 / 0.292	404 / 0.450 / 1011 / 0.360	334 / 0.545 / 919 / 0.436	281 / 0.648 / 842 / 0.518	239 / 0.761 / 777 / 0.608	206 / 0.882 / 722 / 0.706	158 / 1.152 / 632 / 0.922	125 / 1.458 / 561 / 1.166
11	2 1/4"x 3/16"	5.45 / 5.88	1.7985	1.5987	80	U 3197 / Du 0.064 / C 3197 / Dc 0.051	2046 / 0.100 / 2558 / 0.080	1421 / 0.144 / 2132 / 0.115	1044 / 0.196 / 1827 / 0.157	799 / 0.256 / 1599 / 0.205	632 / 0.324 / 1421 / 0.259	512 / 0.400 / 1279 / 0.320	423 / 0.484 / 1163 / 0.387	355 / 0.576 / 1066 / 0.461	303 / 0.676 / 984 / 0.541	261 / 0.784 / 914 / 0.627	200 / 1.024 / 799 / 0.819	158 / 1.296 / 711 / 1.037
12	2 1/2"x 3/16"	6.01 / 6.44	2.4671	1.9737	87	U 3947 / Du 0.058 / C 3947 / Dc 0.046	2526 / 0.090 / 3158 / 0.072	1754 / 0.130 / 2632 / 0.104	1289 / 0.176 / 2256 / 0.141	987 / 0.230 / 1974 / 0.184	780 / 0.292 / 1754 / 0.233	632 / 0.360 / 1579 / 0.288	522 / 0.436 / 1435 / 0.348	439 / 0.518 / 1316 / 0.415	374 / 0.608 / 1215 / 0.487	322 / 0.706 / 1128 / 0.564	247 / 0.922 / 987 / 0.737	195 / 1.166 / 877 / 0.933

Table in accordance with NAAMM MBG 531-00

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
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	