BORDEN GRATINGS

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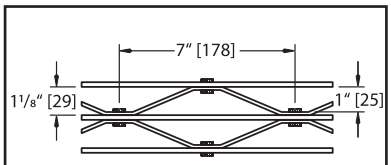
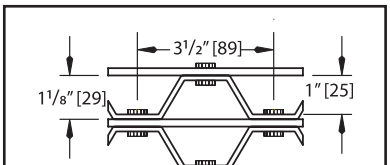
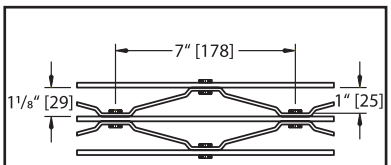
Riveted Grating Steel



BORDEN TYPE A (18-R-7)



BORDEN TYPE E (18-R-3.5)



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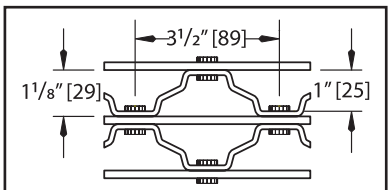

BORDEN TYPE U (18-R-3.5)

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"	6.36	0.0422	0.1125	41	U 338	216	150	110	84	67	54						
		6.76				Du 0.099	0.155	0.223	0.304	0.397	0.503	0.621						
						C 338	270	225	193	169	150	135						
						Dc 0.079	0.124	0.179	0.243	0.318	0.402	0.497						
2	3/4" x 3/16"	7.18	0.0603	0.1607	45	U 482	309	214	157	121	95	77						
		7.98				Du 0.099	0.155	0.223	0.304	0.397	0.503	0.621						
						C 482	386	321	276	241	214	193	175	161	148			
						Dc 0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601	0.715	0.839			
3	1" x 1/8"	7.38	0.1000	0.2000	51	U 600	384	267	196	150	119	96	79	67	57			
		7.78				Du 0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
						C 600	480	400	343	300	267	240	218	200	185			
						Dc 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
4	1"x 3/16"	8.63	0.1429	0.2857	56	U 857	549	381	280	214	169	137	113	95	81	70	54	42
		9.43				Du 0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787	0.912	1.192	1.508
						C 857	686	571	490	429	381	343	312	286	264	245	214	190
						Dc 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	1.207
5	1 1/4" x 1/8"	8.40	0.1953	0.3125	60	U 938	600	417	306	234	185	150	124	104	89	77	59	46
		8.80				Du 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	1.207
						C 938	750	625	536	469	417	375	341	313	288	268	234	208
						Dc 0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	0.965
6	1 1/4" x 3/16"	10.09	0.2790	0.4464	66	U 1339	857	595	437	335	265	214	177	149	127	109	84	66
		10.89				Du 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	1.207
						C 1339	1071	893	765	670	595	536	487	446	412	383	335	298
						Dc 0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	0.965
7	1 1/2" x 1/8"	9.43	0.3375	0.4500	69	U 1350	864	600	441	338	267	216	179	150	128	110	84	67
		9.83				Du 0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
						C 1350	1080	900	771	675	600	540	491	450	415	386	338	300
						Dc 0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
8	1 1/2" x 3/16"	11.55	0.4821	0.6429	75	U 1929	1234	857	630	482	381	309	255	214	183	157	121	95
		12.35				Du 0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
						C 1929	1543	1286	1102	964	857	771	701	643	593	551	482	429
						Dc 0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
9	1 3/4" x 3/16"	13.01	0.7656	0.8750	85	U 2625	1680	1167	857	656	519	420	347	292	249	214	164	130
		13.81				Du 0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
						C 2625	2100	1750	1500	1313	1167	1050	955	875	808	750	656	583
						Dc 0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
10	2"x 3/16"	15.47	1.1429	1.1429	93	U 3429	2194	1524	1120	857	677	549	453	381	325	280	214	169
		16.47				Du 0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
						C 3429	2743	2286	1959	1714	1524	1371	1247	1143	1055	980	857	762
						Dc 0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
11	2 1/4" x 3/16"	16.93	1.6272	1.4464	102	U 4339	2777	1929	1417	1085	857	694	574	482	411	354	271	214
		17.93				Du 0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
						C 4339	3471	2893	2480	2170	1929	1736	1578	1446	1335	1240	1085	964
						Dc 0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
12	2 1/2" x 3/16"	18.38	2.2321	1.7857	111	U 5357	3429	2381	1749	1339	1058	857	708	595	507	437	335	265
		19.38				Du 0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
						C 5357	4286	3571	3061	2679	2381	2143	1948	1786	1648	1531	1339	1190
						Dc 0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

Table in accordance with NAAMM MBG 531-00

F - 18,000 psi

E - 29,000,000 psi

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 1/2	2 13/16	4 1/8	5 7/16	6 3/4	8 1/16	9 3/8	10 11/16	12	13 5/16	14 5/8	15 15/16	17 1/4	18 9/16	19 7/8	21 3/16	22 1/2
1/8" Bars	1 3/8	2 5/8	3 7/8	5 1/8	6 3/8	7 5/8	8 7/8	10 1/8	11 3/8	12 5/8	13 7/8	15 1/8	16 3/8	17 5/8	18 7/8	20 1/8	21 3/8
# Bars	19	20	21	22	23	24	25	26	27	28	29						
3/16" Bars	23 13/16	25 1/8	26 7/16	27 3/4	29 1/16	30 3/8	31 11/16	33	34 5/16	35 5/8	36 15/16						
1/8" Bars	22 5/8	23 7/8	25 1/8	26 3/8	27 5/8	28 7/8	30 1/8	31 3/8	32 5/8	33 7/8	35 1/8						