BORDEN GRATINGS 1955

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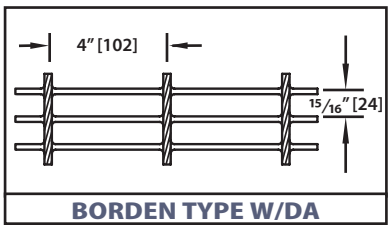
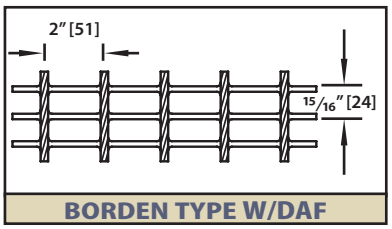
Welded Grating

LOAD TABLE



BORDEN TYPE W/DA



BORDEN TYPE W/DAF

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"	4.81	0.0563	0.1500	44	U 450	288	200	147	113	89	72						
		5.45				Du 0.099	0.155	0.223	0.304	0.397	0.503	0.621						
						C 450	360	300	257	225	200	180						
						Dc 0.079	0.124	0.179	0.243	0.318	0.402	0.497						
2	3/4" x 3/16"	6.89	0.0844	0.2250	49	U 675	432	300	220	169	133	108						
		7.53				Du 0.099	0.155	0.223	0.304	0.397	0.503	0.621						
						C 675	540	450	386	338	300	270	245	225	208			
						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"	6.21	0.1333	0.2667	55	U 800	512	356	261	200	158	128	106	89	76			
		6.84				Du 0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
						C 800	640	533	457	400	356	320	291	267	246			
						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"	8.98	0.2000	0.4000	60	U 1200	768	533	392	300	237	192	159	133	114	98	75	59
		9.61				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 1200	960	800	686	600	533	480	436	400	369	343	300	267
						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"	7.60	0.2604	0.4167	65	U 1250	800	556	408	313	247	200	165	139	118	102	78	62
		8.24				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 1250	1000	833	714	625	556	500	455	417	385	357	313	278
						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"	11.06	0.3906	0.6250	71	U 1875	1200	833	612	469	370	300	248	208	178	153	117	93
		11.70				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 1875	1500	1250	1071	938	833	750	682	625	577	536	469	417
						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"	8.99	0.4500	0.6000	74	U 1800	1152	800	588	450	356	288	238	200	170	147	113	89
		9.63				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 1800	1440	1200	1029	900	800	720	655	600	554	514	450	400
						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"	13.14	0.6750	0.9000	82	U 2700	1728	1200	882	675	533	432	357	300	256	220	169	133
		13.78				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 2700	2160	1800	1543	1350	1200	1080	982	900	831	771	675	600
						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"	15.23	1.0719	1.2250	92	U 3675	2352	1633	1200	919	726	588	486	408	348	300	230	181
		15.87				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 3675	2940	2450	2100	1838	1633	1470	1336	1225	1131	1050	919	817
						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"	17.31	1.6000	1.6000	102	U 4800	3072	2133	1567	1200	948	768	635	533	454	392	300	237
		17.95				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 4800	3840	3200	2743	2400	2133	1920	1745	1600	1477	1371	1200	1067
						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"	19.40	2.2781	2.0250	111	U 6075	3888	2700	1984	1519	1200	972	803	675	575	496	380	300
		20.04				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 6075	4860	4050	3471	3038	2700	2430	2209	2025	1869	1736	1519	1350
						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"	21.48	3.1250	2.5000	120	U 7500	4800	3333	2449	1875	1481	1200	992	833	710	612	469	370
		22.12				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 7500	6000	5000	4286	3750	3333	3000	2727	2500	2308	2143	1875	1667
						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	19	20
3/16" Bars	1 1/8	2 1/16	3	3 15/16	4 7/8	5 13/16	6 3/4	7 11/16	8 5/8	9 9/16	10 1/2	11 7/16	12 3/8	13 5/16	14 1/4	15 3/16	16 1/8	17 1/16	18
1/8" Bars	1 1/16	2	2 15/16	3 7/8	4 13/16	5 3/4	6 11/16	7 5/8	8 9/16	9 1/2	10 7/16	11 3/8	12 5/16	13 1/4	14 3/16	15 1/8	16 1/16	17	17 15/16
# Bars	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
3/16" Bars	18 15/16	19 7/8	20 13/16	21 3/4	22 11/16	23 5/8	24 9/16	25 1/2	26 7/16	27 3/8	28 5/16	29 1/4	30 3/16	31 1/8	32 1/16	33	33 15/16	34 7/8	35 13/16
1/8" Bars	18 7/8	19 13/16	20 3/4	21 11/16	22 5/8	23 9/16	24 1/2	25 7/16	26 3/8	27 5/16	28 1/4	29 3/16	30 1/8	31 1/16	32	32 15/16	33 7/8	34 13/16	35 3/4