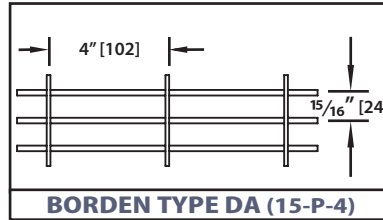


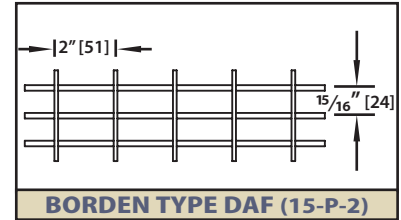


www.bordengratings.com

Pressure Locked Grating Steel



Free air % for 1/8" bars: 83.96%
Free air % for 3/16" bars: 77.50%



Free air % for 1/8" bars: 81.25%
Free air % for 3/16" bars: 75.00%

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"	4.97	0.0563	0.1500	44	U	450	288	200	147	113	89	72	Table in accordance with NAAMM MBG 531-09 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							
		Du				0.099	0.155	0.223	0.304	0.397	0.503	0.621									
		Dc				0.079	0.124	0.179	0.243	0.318	0.402	0.497									
2	3/4" x 3/16"	7.21	0.0844	0.2250	49	U	675	432	300	220	169	133	108	245	225	208	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.601	0.715	0.839						
		C				675	540	450	386	338	300	270	0.451	0.536	0.629						
3	1" x 1/8"	6.84	0.1333	0.2667	55	U	800	512	356	261	200	158	128	106	89	76	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787						
		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"	9.61	0.2000	0.4000	60	U	1200	768	533	392	300	237	192	159	133	114	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787						
		Dc				0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629						
5	1 1/4" x 1/8"	8.24	0.2604	0.4167	65	U	1250	800	556	408	313	247	200	165	139	118	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629						
		C				1250	1000	833	714	625	556	500	455	417	385						
6	1 1/4" x 3/16"	11.70	0.3906	0.6250	71	U	1875	1200	833	612	469	370	300	248	208	178	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629						
		C				1875	1500	1250	1071	938	833	750	682	625	577						
7	1 1/2" x 1/8"	9.63	0.4500	0.6000	74	U	1800	1152	800	588	450	356	288	238	200	170	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524						
		Dc				0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420						
8	1 1/2" x 3/16"	13.78	0.6750	0.9000	82	U	2700	1728	1200	882	675	533	432	357	300	256	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524						
		Dc				0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420						
9	1 3/4" x 3/16"	15.87	1.0719	1.2250	92	U	3675	2352	1633	1200	919	726	588	486	408	348	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450						
		Dc				0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360						
10	2" x 3/16"	17.95	1.6000	1.6000	102	U	4800	3072	2133	1567	1200	948	768	635	533	454	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393						
		Dc				0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315						
11	2 1/4" x 3/16"	20.04	2.2781	2.0250	111	U	6075	3888	2700	1984	1519	1200	972	803	675	575	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350						
		Dc				0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280						
12	2 1/2" x 3/16"	22.12	3.1250	2.5000	120	U	7500	4800	3333	2449	1875	1481	1200	992	833	710	U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width				
		Du				0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315						
		Dc				0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252						

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	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