BORDEN GRATINGS

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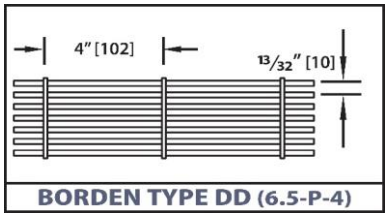
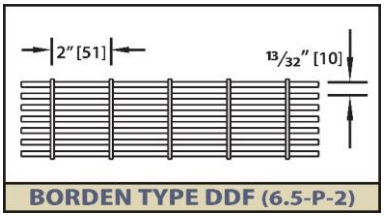
Pressure Locked Grating Steel

LOAD TABLE



BORDEN TYPE DD (6.5-P-4)

Free air % for 1/8 " bars: 67.07%
Free air % for 3/16 " bars: 52.16%



BORDEN TYPE DDF (6.5-P-2)

Free air % for 1/8 " bars: 64.90%
Free air % for 3/16 " bars: 50.48%

Size No.	Bearing Bar Size	Weight lbs/sq.ft.	Moment of Inertia	Section Modulus		Maximum span recommended for 1/4" deflection under uniform load of 100 psf. (normal pedestrian traffic)													
						Span in Inches													
						24	30	36	42	48	54	60	66	72	78	84	96	108
1	3/4"x1/8"	10.29	0.1298	0.3462	54	U 1038	665	462	339	260	205	166						
						Du 0.1	0.16	0.22	0.3	0.4	0.5	0.62						
		11.09				C 1038	831	692	593	519	462	415						
						Dc 0.08	0.12	0.18	0.24	0.32	0.4	0.5						
2	3/4"x3/16"	15.18	0.1947	0.5192	60	U 1558	997	692	509	389	308	249						
						Du 0.1	0.16	0.22	0.3	0.4	0.5	0.62						
		16.13				C 1558	1246	1038	890	779	692	623	566	519	479			
						Dc 0.08	0.12	0.18	0.24	0.32	0.4	0.5	0.6	0.72	0.84			
3	1"x1/8"	13.94	0.3077	0.6154	67	U 1846	1182	821	603	462	365	295	244	205	175			
						Du 0.07	0.12	0.17	0.23	0.3	0.38	0.47	0.56	0.67	0.79			
		15.21				C 1846	1477	1231	1055	923	821	738	671	615	568			
						Dc 0.06	0.09	0.13	0.18	0.24	0.3	0.37	0.45	0.54	0.63			
4	1"x3/16"	20.24	0.4615	0.9231	75	U 2769	1772	1231	904	692	547	443	366	308	262	226	173	137
						Du 0.07	0.12	0.17	0.23	0.3	0.38	0.47	0.56	0.67	0.79	0.91	1.19	1.51
		21.51				C 2769	2215	1846	1582	1385	1231	1108	1007	923	852	791	692	615
						Dc 0.06	0.09	0.13	0.18	0.24	0.3	0.37	0.45	0.54	0.63	0.73	0.95	1.21
5	1 1/4"x1/8"	17.10	0.6010	0.9615	80	U 2885	1846	1282	942	721	570	462	381	321	273	235	180	142
						Du 0.06	0.09	0.13	0.18	0.24	0.3	0.37	0.45	0.54	0.63	0.73	0.95	1.21
		18.38				C 2885	2308	1923	1648	1442	1282	1154	1049	962	888	824	721	641
						Dc 0.05	0.07	0.11	0.15	0.19	0.24	0.3	0.36	0.43	0.5	0.58	0.76	0.97
6	1 1/4"x3/16"	24.98	0.9014	1.4423	88	U 4327	2769	1923	1413	1082	855	692	572	481	410	353	270	214
						Du 0.06	0.09	0.13	0.18	0.24	0.3	0.37	0.45	0.54	0.63	0.73	0.95	1.21
		26.25				C 4327	3462	2885	2473	2163	1923	1731	1573	1442	1331	1236	1082	962
						Dc 0.05	0.07	0.11	0.15	0.19	0.24	0.3	0.36	0.43	0.5	0.58	0.76	0.97
7	1 1/2"x1/8"	20.27	1.0385	1.3846	91	U 4154	2658	1846	1356	1038	821	665	549	462	393	339	260	205
						Du 0.05	0.08	0.11	0.15	0.2	0.25	0.31	0.38	0.45	0.52	0.61	0.79	1.01
		21.55				C 4154	3323	2769	2374	2077	1846	1662	1510	1385	1278	1187	1038	923
						Dc 0.04	0.06	0.09	0.12	0.16	0.2	0.25	0.3	0.36	0.42	0.49	0.64	0.8
8	1 1/2"x3/16"	29.72	1.5577	2.0769	101	U 6231	3988	2769	2035	1558	1231	997	824	692	590	509	389	308
						Du 0.05	0.08	0.11	0.15	0.2	0.25	0.31	0.38	0.45	0.52	0.61	0.79	1.01
		30.99				C 6231	4985	4154	3560	3115	2769	2492	2266	2077	1917	1780	1558	1385
						Dc 0.04	0.06	0.09	0.12	0.16	0.2	0.25	0.3	0.36	0.42	0.49	0.64	0.8
9	1 3/4"x3/16"	34.46	2.4736	2.8269	113	U 8481	5428	3769	2769	2120	1675	1357	1121	942	803	692	530	419
						Du 0.04	0.07	0.1	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.68	0.86
		35.73				C 8481	6785	5654	4846	4240	3769	3392	3084	2827	2609	2423	2120	1885
						Dc 0.03	0.05	0.08	0.1	0.14	0.17	0.21	0.26	0.31	0.36	0.42	0.54	0.69
10	2"x3/16"	39.20	3.6923	3.6923	125	U ####	7089	4923	3617	2769	2188	1772	1465	1231	1049	904	692	547
						Du 0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.34	0.39	0.46	0.6	0.75
		40.47				C ####	8862	7385	6330	5538	4923	4431	4028	3692	3408	3165	2769	2462
						Dc 0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.31	0.36	0.48	0.6
11	2 1/4"x3/16"	43.94	5.2572	4.6731	137	U ####	8972	6231	4578	3505	2769	2243	1854	1558	1327	1144	876	692
						Du 0.03	0.05	0.07	0.1	0.13	0.17	0.21	0.25	0.3	0.35	0.41	0.53	0.67
		45.21				C ####	####	9346	8011	7010	6231	5608	5098	4673	4314	4005	3505	3115
						Dc 0.03	0.04	0.06	0.08	0.11	0.13	0.17	0.2	0.24	0.28	0.32	0.42	0.54
12	2 1/2"x3/16"	48.68	7.2115	5.7692	148	U ####	####	7692	5651	4327	3419	2769	2289	1923	1639	1413	1082	855
						Du 0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.31	0.36	0.48	0.6
		49.95				C ####	####	####	9890	8654	7692	6923	6294	5769	5325	4945	4327	3846
						Dc 0.02	0.04	0.05	0.07	0.1	0.12	0.15	0.18	0.21	0.25	0.29	0.38	0.48

Table compiled as per ANSI/NAAMM MBG 534-14

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

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**
3/16" Bars	19/32	1	1 13/32	1 13/16	2 7/32	2 5/8	3 1/32	3 7/16	3 27/32	4 1/4	4 21/32	5 1/16
1/8" Bars	17/32	15/16	1 11/32	1 3/4	2 5/32	2 9/16	2 31/32	3 3/8	3 25/32	4 3/16	4 19/32	5
# Bars	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
3/16" Bars	5 15/32	5 7/8	6 9/32	6 11/16	7 3/32	7 1/2	7 29/32	8 5/16	8 23/32	9 1/8	9 17/32	9 15/16
1/8" Bars	5 13/32	5 13/16	6 7/32	6 5/8	7 1/32	7 7/16	7 27/32	8 1/4	8 21/32	9 1/16	9 15/32	9 7/8
# Bars	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**
3/16" Bars	10 11/32	10 3/4	11 5/32	11 9/16	11 31/32	12 3/8	12 25/32	13 3/16	13 19/32	14	14 13/32	14 13/16
1/8" Bars	10 9/32	10 11/16	11 3/32	11 1/2	11 29/32	12 5/16	12 23/32	13 1/8	13 17/32	13 15/16	14 11/32	14 3/4
# Bars	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**
3/16" Bars	15 7/32	15 5/8	16 1/32	16 7/16	16 27/32	17 1/4	17 21/32	18 1/16	18 15/32	18 7/8	19 9/32	19 11/16
1/8" Bars	15 5/32	15 9/16	15 31/32	16 3/8	16 25/32	17 3/16	17 19/32	18	18 13/32	18 13/16	19 7/32	19 5/8
# Bars	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**
3/16" Bars	20 3/32	20 1/2	20 29/32	21 5/16	21 23/32	22 1/8	22 17/32	22 15/16	23 11/32	23 3/4	24 5/32	24 9/16
1/8" Bars	20 1/32	20 7/16	20 27/32	21 1/4	21 21/32	22 1/16	22 15/32	22 7/8	23 9/32	23 11/16	24 3/32	24 1/2
# Bars	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**
3/16" Bars	24 31/32	25 3/8	25 25/32	26 3/16	26 19/32	27	27 13/32	27 13/16	28 7/32	28 5/8	29 1/32	29 7/16
1/8" Bars	24 29/32	25 5/16	25 23/32	26 1/8	26 17/32	26 15/16	27 11/32	27 3/4	28 5/32	28 9/16	28 31/32	29 3/8
# Bars	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**
3/16" Bars	29 27/32	30 1/4	30 21/32	31 1/16	31 15/32	31 7/8	32 9/32	32 11/16	33 3/32	33 1/2	33 29/32	34 5/16
1/8" Bars	29 25/32	30 3/16	30 19/32	31	31 13/32	31 13/16	32 7/32	32 5/8	33 1/32	33 7/16	33 27/32	34 1/4
# Bars	**86**	**87**	**88**	**89**								
3/16" Bars	34 23/32	35 1/8	35 17/32	35 15/16								
1/8" Bars	34 21/32	35 1/16	35 15/32	35 7/8								

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