



Free air % for 1/8" bars: 72.66%
Free air % for 3/16" bars: 60.55%

Free air % for 1/8" bars: 70.31%
Free air % for 3/16" bars: 58.59%

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"	2.85	0.1055	0.2813	39	U	563	360	250	184	141	111	90	74	63	53	46	35	28
		Du				0.192	0.3	0.432	0.588	0.768	0.972	1.2	1.452	1.728	2.028	2.352	3.072	3.888	
		C				563	450	375	321	281	250	225	205	188	173	161	141	125	
		Dc				0.154	0.24	0.346	0.47	0.614	0.778	0.96	1.162	1.382	1.622	1.882	2.458	3.11	
2	3/4"x3/16"	4.19	0.1582	0.4219	44	U	844	540	375	276	211	167	135	112	94	80	69	53	42
		Du				0.192	0.3	0.432	0.588	0.768	0.972	1.2	1.452	1.728	2.028	2.352	3.072	3.888	
		C				844	675	563	482	422	375	338	307	281	260	241	211	188	
		Dc				0.154	0.24	0.346	0.47	0.614	0.778	0.96	1.162	1.382	1.622	1.882	2.458	3.11	
3	1"x1/8"	3.87	0.2500	0.5000	49	U	1000	640	444	327	250	198	160	132	111	95	82	63	49
		Du				0.144	0.225	0.324	0.441	0.576	0.729	0.9	1.089	1.296	1.521	1.764	2.304	2.916	
		C				1000	800	667	571	500	444	400	364	333	308	286	250	222	
		Dc				0.115	0.18	0.259	0.353	0.461	0.583	0.72	0.871	1.037	1.217	1.411	1.843	2.333	
4	1"x3/16"	5.59	0.3750	0.7500	54	U	1500	960	667	490	375	296	240	198	167	142	122	94	74
		Du				0.144	0.225	0.324	0.441	0.576	0.729	0.9	1.089	1.296	1.521	1.764	2.304	2.916	
		C				1500	1200	1000	857	750	667	600	545	500	462	429	375	333	
		Dc				0.115	0.18	0.259	0.353	0.461	0.583	0.72	0.871	1.037	1.217	1.411	1.843	2.333	
5	1 1/4"x1/8"	4.73	0.4883	0.7813	58	U	1563	1000	694	510	391	309	250	207	174	148	128	98	77
		Du				0.115	0.18	0.259	0.353	0.461	0.583	0.72	0.871	1.037	1.217	1.411	1.843	2.333	
		C				1563	1250	1042	893	781	694	625	568	521	481	446	391	347	
		Dc				0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973	1.129	1.475	1.866	
6	1 1/4"x3/16"	6.88	0.7324	1.1719	64	U	2344	1500	1042	765	586	463	375	310	260	222	191	146	116
		Du				0.115	0.18	0.259	0.353	0.461	0.583	0.72	0.871	1.037	1.217	1.411	1.843	2.333	
		C				2344	1875	1563	1339	1172	1042	938	852	781	721	670	586	521	
		Dc				0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973	1.129	1.475	1.866	
7	1 1/2"x1/8"	5.59	0.8438	1.1250	66	U	2250	1440	1000	735	563	444	360	298	250	213	184	141	111
		Du				0.096	0.15	0.216	0.294	0.384	0.486	0.6	0.726	0.864	1.014	1.176	1.536	1.944	
		C				2250	1800	1500	1286	1125	1000	900	818	750	692	643	563	500	
		Dc				0.077	0.12	0.173	0.235	0.307	0.389	0.48	0.581	0.691	0.811	0.941	1.229	1.555	
8	1 1/2"x3/16"	8.16	1.2656	1.6875	73	U	3375	2160	1500	1102	844	667	540	446	375	320	276	211	167
		Du				0.096	0.15	0.216	0.294	0.384	0.486	0.6	0.726	0.864	1.014	1.176	1.536	1.944	
		C				3375	2700	2250	1929	1688	1500	1350	1227	1125	1038	964	844	750	
		Dc				0.077	0.12	0.173	0.235	0.307	0.389	0.48	0.581	0.691	0.811	0.941	1.229	1.555	
9	1 3/4"x3/16"	9.45	2.0098	2.2969	82	U	4594	2940	2042	1500	1148	907	735	607	510	435	375	287	227
		Du				0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	1.666	
		C				4594	3675	3063	2625	2297	2042	1838	1670	1531	1413	1313	1148	1021	
		Dc				0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	1.333	
10	2"x3/16"	10.74	3.0000	3.0000	91	U	6000	3840	2667	1959	1500	1185	960	793	667	568	490	375	296
		Du				0.072	0.113	0.162	0.221	0.288	0.365	0.45	0.545	0.648	0.761	0.882	1.152	1.458	
		C				6000	4800	4000	3429	3000	2667	2400	2182	2000	1846	1714	1500	1333	
		Dc				0.058	0.09	0.13	0.176	0.23	0.292	0.36	0.436	0.518	0.608	0.706	0.922	1.166	
11	2 1/4"x3/16"	12.03	4.2715	3.7969	100	U	7594	4860	3375	2480	1898	1500	1215	1004	844	719	620	475	375
		Du				0.064	0.1	0.144	0.196	0.256	0.324	0.4	0.484	0.576	0.676	0.784	1.024	1.296	
		C				7594	6075	5063	4339	3797	3375	3038	2761	2531	2337	2170	1898	1688	
		Dc				0.051	0.08	0.115	0.157	0.205	0.259	0.32	0.387	0.461	0.541	0.627	0.819	1.037	
12	2 1/2"x3/16"	13.32	5.8594	4.6875	108	U	9375	6000	4167	3061	2344	1852	1500	1240	1042	888	765	586	463
		Du				0.058	0.09	0.13	0.176	0.23	0.292	0.36	0.436	0.518	0.608	0.706	0.922	1.166	
		C				9375	7500	6250	5357	4688	4167	3750	3409	3125	2885	2679	2344	2083	
		Dc				0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	0.933	

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