LOAD & DEFLECTION TABLE

Bar Size	Approx. Weight psf	Sec. Mod Per Ft. of Width		SPAN (Length of Bearing Bar) 2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	3.0	0.281	U	563	360	250	184	141								
	3.1		D	0.192	0.300	0.432	0.588	0.768								
	3.4		C	563	450	375	321	281								
	3.4		D	0.154	0.240	0.346	0.470	0.614								
3/4" x 3/16"	4.4	0.422	U	844	540	375	276	211	167							
	4.6		D	0.192	0.300	0.432	0.588	0.768	0.972							
	4.7		C	844	675	563	482	422	375							
	5.1		D	0.154	0.240	0.346	0.470	0.614	0.778							
1" x 1/8"	3.9	0.500	U	1000	640	444	327	250	198	160						
	4.0		D	0.144	0.225	0.324	0.441	0.576	0.729	0.900						
	4.3		C	1000	800	667	571	500	444	400						
	4.3		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
1" x 3/16"	5.8	0.750	U	1500	960	667	490	375	296	240	198					
	5.9		D	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089					
	6.1		C	1500	1200	1000	857	750	667	600	545					
	6.4		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871					
1-1/4" x 1/8"	4.9	0.781	U	1563	1000	694	510	391	309	250	207					
	5.0		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871					
	5.2		C	1563	1250	1042	893	781	694	625	568					
	5.4		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697					
1-1/4" x 3/16"	7.1	1.172	U	2344	1500	1042	765	586	463	375	310	260				
	7.5		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037				
	7.4		C	2344	1875	1563	1339	1172	1042	938	852	781				
	8.1		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829				
1-1/2" x 1/8"	5.8	1.125	U	2250	1440	1000	735	563	444	360	298	250	213			
	5.9		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014			
	6.1		C	2250	1800	1500	1286	1125	1000	900	818	750	692			
	6.3		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811			
1-1/2" x 3/16"	8.5	1.688	U	3375	2160	1500	1102	844	667	540	446	375	320	276		
	8.8		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176		
	8.8		C	3375	2700	2250	1929	1688	1500	1350	1227	1125	1038	964		
	9.5		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941		
1-3/4" x 3/16"	9.8	2.297	U	4594	2940	2042	1500	1148	907	735	607	510	435	375	287	
	10.2		D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	
	10.2		C	4594	3675	3063	2625	2297	2042	1838	1670	1531	1413	1313	1148	
	10.9		D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	
2" x 3/16"	11.2	3.000	U	6000	3840	2667	1959	1500	1185	960	793	667	568	490	375	296
	11.5		D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152	1.458
	11.5		C	6000	4800	4000	3429	3000	2667	2400	2182	2000	1846	1714	1500	1333
	12.2		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
2-1/4" x 3/16"	12.6	3.797	U	7594	4860	3375	2480	1898	1500	1215	1004	844	719	620	475	375
	12.9		D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024	1.296
	12.9		C	7594	6075	5063	4339	3797	3375	3038	2761	2531	2337	2170	1898	1688
	13.6		D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819	1.037
2-1/2" x 3/16"	13.9	4.688	U	9375	6000	4167	3061	2344	1852	1500	1240	1042	888	765	586	463
	14.3		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
	14.2		C	9375	7500	6250	5357	4688	4167	3750	3409	3125	2885	2679	2344	2083
	14.9		D	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

U = safe uniform load, psf
C = safe concentrated load, pfw
D = deflection, inches
E = modulus of elasticity, 10,000,000 psi
F = fiber stress, 12,000 psi

Material: ASTM B-221, 6063 or 6061

Deflection: Spans and loads to the right of the bold line exceed 1/4" deflection for uniform load of 100 psf which provides safe pedestrian comfort. These can be exceeded for other types of loads with engineer's approval.

Serrated Bars: For serrated grating, the depth of grating required for a specified load is 1/4" deeper than that shown in the table.

General: Loads and deflections are theoretical and based on static loading.

Finish: Mill finish unless otherwise specified.

PANEL WIDTH (inches)

Note: Includes 1/4" (1/8" each side) for extended cross rods on swage-locked (SR) and extended cross bars on press-locked (AP).

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1/8" Bar	7/8	1 3/8	1 7/8	2 3/8	2 7/8	3 3/8	3 7/8	4 3/8	4 7/8	5 3/8	5 7/8	6 3/8	6 7/8	7 3/8	7 7/8	8 3/8	8 7/8	9 3/8	9 7/8	10 3/8	10 7/8	11 3/8	11 7/8	12 3/8	12 7/8	13 3/8	13 7/8	14 3/8
3/16" Bar	15/16	1 7/16	1 15/16	2 7/16	2 15/16	3 7/16	3 15/16	4 7/16	4 15/16	5 7/16	5 15/16	6 7/16	6 15/16	7 7/16	7 15/16	8 7/16	8 15/16	9 7/16	9 15/16	10 7/16	10 15/16	11 7/16	11 15/16	12 7/16	12 15/16	13 7/16	13 15/16	14 7/16

No. of Bars	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
1/8" Bar	14 7/8	15 3/8	15 7/8	16 3/8	16 7/8	17 3/8	17 7/8	18 3/8	18 7/8	19 3/8	19 7/8	20 3/8	20 7/8	21 3/8	21 7/8	22 3/8	22 7/8	23 3/8	23 7/8	24 3/8	24 7/8	25 3/8	25 7/8	26 3/8	26 7/8	27 3/8	27 7/8	28 3/8
3/16" Bar	14 15/16	15 7/16	15 15/16	16 7/16	16 15/16	17 7/16	17 15/16	18 7/16	18 15/16	19 7/16	19 15/16	20 7/16	20 15/16	21 7/16	21 15/16	22 7/16	22 15/16	23 7/16	23 15/16	24 7/16	24 15/16	25 7/16	25 15/16	26 7/16	26 15/16	27 7/16	27 15/16	28 7/16

No. of Bars	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
1/8" Bar	28 7/8	29 3/8	29 7/8	30 3/8	30 7/8	31 3/8	31 7/8	32 3/8	32 7/8	33 3/8	33 7/8	34 3/8	34 7/8	35 3/8	35 7/8
3/16" Bar	28 15/16	29 7/16	29 15/16	30 7/16	30 15/16	31 7/16	31 15/16	32 7/16	32 15/16	33 7/16	33 15/16	34 7/16	34 15/16	35 7/16	35 15/16