



LOAD & DEFLECTION TABLE

Bar Size	Approx. weight per sq ft	Req. Mod Per Ft. or width	SPAN (Length of Bearing Bar)												
			2'-0"	2'-6"	3'-0"	3'-6"	4'-0"								
3/4" x 1/8"	3.0	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	4'-6"							
3/4" x 3/16"	4.4	U	844	540	375	278	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	5'-0"						
1" x 1/8"	3.9	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	5'-6"					
1" x 3/16"	5.8	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	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	6'-0"				
1-1/4" x 3/16"	7.1	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	6'-6"			
1-1/2" x 1/8"	5.8	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	7'-0"		
1-1/2" x 3/16"	8.5	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	8'-0"	
1-3/4" x 3/16"	9.8	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	9'-0"
2" x 3/16"	11.2	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	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	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 1/8	1 1/4	1 5/8	2 1/8	2 1/2	3 1/8	3 1/2	4 1/8	4 1/2	5 1/8	5 1/2	6 1/8	6 1/2	7 1/8	7 1/2	8 1/8	8 1/2	9 1/8	9 1/2	10 1/8	10 1/2	11 1/8	11 1/2	12 1/8	12 1/2	13 1/8	13 1/2	14 1/8	
3/16" Bar	1 1/16	1 1/8	1 1/4	1 5/16	1 3/8	1 7/8	1 11/16	1 1/2	1 5/8	1 9/16	1 1/2	1 13/16	1 3/4	1 7/8	1 15/16	1 1/2	1 17/16	1 1/2	1 19/16	1 1/2	1 21/16	1 1/2	1 23/16	1 1/2	1 25/16	1 1/2	1 27/16	1 1/2	1 29/16	
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 1/8	15 1/4	15 3/8	15 1/2	15 5/8	15 3/4	15 7/8	16 1/8	16 1/4	16 3/8	16 1/2	16 5/8	16 3/4	16 7/8	17 1/8	17 1/4	17 3/8	17 1/2	17 5/8	17 3/4	17 7/8	18 1/8	18 1/4	18 3/8	18 1/2	18 5/8	18 3/4	18 7/8	
3/16" Bar	14 15/16	15 1/16	15 1/8	15 3/16	15 1/2	15 5/16	15 3/8	15 7/16	15 1/2	15 9/16	15 1/2	15 11/16	15 3/4	15 13/16	15 1/2	15 15/16	15 1/2	15 17/16	15 1/2	15 19/16	15 1/2	15 21/16	15 1/2	15 23/16	15 1/2	15 25/16	15 1/2	15 27/16	15 1/2	15 29/16
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 1/8	29 1/4	29 3/8	29 1/2	29 5/8	29 3/4	29 7/8	30 1/8	30 1/4	30 3/8	30 1/2	30 5/8	30 3/4	30 7/8	31 1/8	31 1/4	31 3/8	31 1/2	31 5/8	31 3/4	31 7/8	32 1/8	32 1/4	32 3/8	32 1/2	32 5/8	32 3/4	32 7/8	
3/16" Bar	28 15/16	29 1/16	29 1/8	29 3/16	29 1/2	29 5/16	29 3/8	29 7/16	29 1/2	29 9/16	29 1/2	29 11/16	29 3/4	29 13/16	29 1/2	29 15/16	29 1/2	29 17/16	29 1/2	29 19/16	29 1/2	29 21/16	29 1/2	29 23/16	29 1/2	29 25/16	29 1/2	29 27/16	29 1/2	29 29/16