



LOAD & DEFLECTION TABLE

Bar Size	Approx. Weight per sq. ft.	Spc. Mid Per Ft. Or Width	SPAN (Length of Bearing Bar)				U	C	D	E	F					
			2'-0"	2'-6"	3'-0"	3'-6"										
3/4" x 1/8"	1.5	0.118	U	237	152	105	77									
	1.5		D	0.192	0.300	0.432	0.588									
	1.8		C	237	189	158	135									
	1.8		D	0.154	0.240	0.346	0.470									
3/4" x 3/16"	2.1	0.178	U	355	227	158	116									
	2.3		D	0.192	0.300	0.432	0.588									
	2.4		C	355	284	237	203									
	2.8		D	0.154	0.240	0.346	0.470	4'-0"								
1" x 1/8"	1.9	0.211	U	421	269	187	137	105								
	1.9		D	0.144	0.225	0.324	0.441	0.576								
	2.2		C	421	337	281	241	211								
	2.2		D	0.115	0.180	0.259	0.353	0.461	4'-6"							
1" x 3/16"	2.7	0.316	U	632	404	281	206	158	125							
	2.8		D	0.144	0.225	0.324	0.441	0.576	0.729							
	3.0		C	632	505	421	361	316	281							
	3.3		D	0.115	0.180	0.259	0.353	0.461	0.583							
1-1/4" x 1/8"	2.3	0.329	U	658	421	292	215	164	130							
	2.4		D	0.115	0.180	0.259	0.353	0.461	0.583							
	2.6		C	658	526	439	376	329	292							
	2.8		D	0.092	0.144	0.207	0.282	0.369	0.467	5'-0"						
1-1/4" x 3/16"	3.2	0.493	U	987	632	439	322	247	195	158						
	3.6		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
	3.6		C	987	789	658	564	493	439	395						
	4.3		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576						
1-1/2" x 1/8"	2.7	0.474	U	947	606	421	309	237	187	152						
	2.8		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600						
	3.0		C	947	758	632	541	474	421	379						
	3.2		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	5'-6"					
1-1/2" x 3/16"	3.8	0.711	U	1421	909	632	464	355	281	227	188					
	4.2		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726					
	4.1		C	1421	1137	947	812	711	632	568	517					
	4.8		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	6'-0"				
1-3/4" x 3/16"	4.4	0.967	U	1934	1238	860	632	484	382	309	256	215	183			
	4.8		D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869			
	4.7		C	1934	1547	1289	1105	967	860	774	703	645	595			
	5.4		D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	7'-0"		
2" x 3/16"	5.0	1.263	U	2526	1617	1123	825	632	499	404	334	281	239	206		
	5.3		D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882		
	5.3		C	2526	2021	1684	1444	1263	1123	1011	919	842	777	722		
	6.0		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	8'-0"	
2-1/4" x 3/16"	5.6	1.599	U	3197	2046	1421	1044	799	632	512	423	355	303	261	200	
	5.9		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	
	5.9		C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	799	
	6.6		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	9'-0"
2-1/2" x 3/16"	6.2	1.974	U	3947	2526	1754	1289	987	780	632	522	439	374	322	247	195
	6.5		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
	6.5		C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987	877
	7.2		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, ptw
 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
1/8" Bar	1 ⁹ / ₁₆	2 ⁹ / ₁₆	3 ¹⁵ / ₁₆	5 ¹ / ₈	6 ⁵ / ₁₆	7 ¹ / ₂	8 ¹¹ / ₁₆	9 ⁷ / ₈	11 ¹ / ₁₆	12 ¹ / ₄	13 ⁷ / ₁₆	14 ⁵ / ₈	15 ³ / ₁₆	17	18 ³ / ₁₆
3/16" Bar	1 ⁵ / ₈	2 ¹³ / ₁₆	4	5 ³ / ₁₆	6 ³ / ₈	7 ⁹ / ₁₆	8 ³ / ₄	9 ⁵ / ₈	11 ¹ / ₈	12 ⁵ / ₁₆	13 ¹ / ₂	14 ¹ / ₁₆	15 ⁷ / ₈	17 ¹ / ₁₆	18 ¹ / ₄
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/8" Bar	19 ³ / ₈	20 ⁹ / ₁₆	21 ³ / ₄	22 ¹⁵ / ₁₆	24 ¹ / ₈	25 ⁵ / ₁₆	26 ¹ / ₂	27 ¹¹ / ₁₆	28 ⁷ / ₈	30 ¹ / ₁₆	31 ¹ / ₄	32 ⁷ / ₁₆	33 ³ / ₈	34 ¹³ / ₁₆	36
3/16" Bar	19 ¹ / ₁₆	20 ⁵ / ₈	21 ¹³ / ₁₆	23	24 ⁹ / ₁₆	25 ³ / ₈	26 ³ / ₁₆	27 ³ / ₄	28 ¹⁵ / ₁₆	30 ¹ / ₈	31 ⁵ / ₁₆	32 ¹ / ₂	33 ¹¹ / ₁₆	34 ⁷ / ₈	36 ¹ / ₁₆