



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"										
3/4" x 1/8"	4.7	0.150	U	450	288	200	147	113	89												
	5.1		D	0.099	0.155	0.223	0.304	0.397	0.503												
	5.3		C	450	360	300	257	225	200												
3/4" x 3/16"	6.1	0.225	D	0.079	0.124	0.179	0.243	0.318	0.402												
	6.9		U	675	432	300	220	169	133	108											
	7.7		D	0.099	0.155	0.223	0.304	0.397	0.503	0.621											
1" x 1/8"	7.5	0.267	C	675	540	450	386	338	300	270											
	6.1		U	800	512	356	261	200	158	128	106	89									
	6.5		D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670									
1" x 3/16"	6.7	0.400	C	800	640	533	457	400	356	320	291	267									
	7.5		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536									
	8.9		U	1200	768	533	392	300	237	192	159	133									
1-1/4" x 1/8"	9.8	0.417	D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670									
	9.6		C	1200	960	800	686	600	533	480	436	400									
	11.2		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536									
1-1/4" x 3/16"	7.5	0.625	U	1250	800	556	408	313	247	200	165	139									
	8.2		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730							
	8.1		C	1250	1000	833	714	625	556	500	455	417	385	357							
1-1/2" x 1/8"	9.5	0.825	D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584							
	11.0		U	1875	1200	833	612	469	370	300	248	208	178	153							
	12.3		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730							
1-1/2" x 3/16"	11.6	0.600	C	1875	1500	1250	1071	938	833	750	682	625	577	536							
	14.2		D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584							
	8.9		U	1800	1152	800	588	450	356	288	238	200	170	147							
1-1/2" x 3/16"	9.6	0.900	D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006					
	9.4		C	1800	1440	1200	1029	900	800	720	655	600	554	514	450	400					
	10.9		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804					
1-3/4" x 1/8"	13.1	0.625	U	2700	1728	1200	882	675	533	432	357	300	256	220	169	133					
	14.4		D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006					
	13.7		C	2700	2160	1800	1543	1350	1200	1080	982	900	831	771	675	600					
1-3/4" x 3/16"	16.3	1.225	D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804					
	15.2		U	3675	2352	1633	1200	919	726	588	486	408	348	300	230	181					
	16.5		D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862					
2" x 3/16"	15.8	1.600	C	3675	2940	2450	2100	1838	1633	1470	1336	1225	1131	1050	919	817					
	18.4		D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689					
	17.3		U	4800	3072	2133	1567	1200	948	768	635	533	454	392	300	237					
2-1/4" x 1/8"	18.6	2.025	D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754					
	17.9		C	4800	3840	3200	2743	2400	2133	1920	1745	1600	1477	1371	1200	1067					
	20.5		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603					
2-1/4" x 3/16"	19.4	2.500	U	6075	3888	2700	1984	1519	1200	972	803	675	575	496	380	300					
	20.7		D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670					
	20.0		C	6075	4860	4050	3471	3038	2700	2430	2209	2025	1869	1736	1519	1350					
2-1/2" x 3/16"	22.6	2.500	D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536					
	21.4		U	7500	4800	3333	2449	1875	1481	1200	992	833	710	612	469	370					
	22.7		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603					
22.0	C	7500	6000	5000	4286	3750	3333	3000	2727	2500	2308	2143	1875	1667							
24.7	D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483							

U = safe uniform load, psf
 C = safe concentrated load, pfw
 D = deflection, inches
 E = modulus of elasticity, 29,000,000 psi
 F = fiber stress, 18,000 psi
Material: ASTM A-569 standard
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.

PANEL WIDTH (inches)

Note: P-Press Locked cross bars typically extend 1/8" each side. W-Welded cross rods may extend 1/8" each side. Panel widths do not include these extensions.

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1/8" Bar	1 1/16	2	2 15/16	3 7/8	4 13/16	5 3/4	6 11/16	7 5/8	8 9/16	9 1/2	10 7/16	11 3/8	12 5/16	13 1/4	14 3/16	15 1/8	16 1/16	17	17 15/16
3/16" Bar	1 1/8	2 1/16	3	3 15/16	4 7/8	5 13/16	6 3/4	7 11/16	8 5/8	9 9/16	10 1/2	11 7/16	12 3/8	13 1/4	14 3/16	15 1/8	16 1/16	17 1/16	18
No. of Bars	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1/8" Bar	18 7/8	19 13/16	20 3/4	21 11/16	22 5/8	23 9/16	24 1/2	25 7/16	26 3/8	27 5/16	28 1/4	29 3/16	30 1/8	31 1/16	32	32 15/16	33 7/8	34 13/16	35 3/4
3/16" Bar	18 15/16	19 7/8	20 13/16	21 3/4	22 11/16	23 5/8	24 9/16	25 1/2	26 7/16	27 3/8	28 5/16	29 1/4	30 3/16	31 1/8	32 1/16	33	33 15/16	34 7/8	35 13/16