

LOAD & DEFLECTION TABLE:

Loads and deflections are theoretical and based on static loading.

U = safe uniform load (psf)
 C = safe concentrated load (psf)
 D = deflection in inches
 E = modulus of elasticity, 29,000,000 (psi)
 F = fiber stress, 18,000 (psi)
Material: ASTM-A-1011 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 comport. These can be exceeded for othertypes 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.

Bar Size	Symbol	# per sf	Sec. Mod per ft. of width	SAFE SPAN (Direction of Bearing Bar)												
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"						
3/4" x 1/8" Non-Serrated Only	11W4	6.2	0.21	614	393	273	200	153	121	98	0.621					
	11P4	6.6		614	491	409	351	307	273			245				
	11P2	7.6		0.079	0.124	0.179	0.243	0.318	0.402			0.497				
3/4" x 3/16" Non-Serrated Only	11W4	9.1	0.31	920	589	409	301	230	182	147						
	11P4	9.9		920	736	614	526	460	409		368					
	11P2	11.3		0.079	0.124	0.179	0.243	0.318	0.402		0.497					
1" x 1/8"	11W4	8.1	0.36	1091	698	485	356	273	215	175	144	121				
	11W2	8.6		0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
	11P4	8.5		1091	873	727	623	545	485	436	397	364				
	11P2	9.4		0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
	11W4	11.9		1636	1047	727	534	409	323	262	216	182	155			
1" x 3/16"	11W2	12.5	0.55	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
	11P4	12.7		1636	1309	1091	935	818	727	655	595	545	503			
	11P2	14.2		0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
	11W4	10.0		0.57	1705	1091	758	557	426	337	273	225	189	161	139	
	11W2	10.5			0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	
11P4	10.7	1705	1364		1136	974	852	758	682	620	568	524	487			
11P2	12.0	0.048	0.074		0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584			
11W4	14.7	0.85	2557		1636	1136	835	639	505	409	338	284	242	209	160	
11W2	15.3		0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953		
11P4	16.0		2557	2545	1705	1461	1278	1136	1023	930	852	787	731	639		
11P2	17.9		0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763		
11W4	11.9		0.82	2455	1571	1091	801	614	485	393	325	273	232	200	153	121
11W2	12.4	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	
11P4	12.6	2455		1964	1636	1403	1227	1091	982	893	818	755	701	614	545	
11P2	13.9	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	
11W4	17.5	1.23		3682	2356	1636	1202	920	727	589	487	409	349	301	230	182
11W2	18.1		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	
11P4	18.8		3682	2945	2455	2104	1841	1636	1473	1339	1227	1133	1052	920	818	
11P2	20.7		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	
11W4	20.4		1.67	5011	3207	2227	1636	1253	990	802	663	557	474	409	313	247
11W2	21.0	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	
11P4	21.7	5011		4009	3341	2864	2506	2227	2005	822	1670	1542	1432	1253	1114	
11P2	23.6	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	
11W4	23.2	2.18		6545	4189	2909	2137	1636	1293	1047	866	727	620	534	409	323
11W2	23.8		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	
11P4	24.5		6545	5236	4364	3740	3273	2909	2618	2380	2182	2014	1870	1636	1455	
11P2	26.4		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	
11W4	26.0		2.76	8284	5302	3682	2705	2071	1636	1325	1095	920	784	676	518	409
11W2	26.6	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	
11P4	27.3	8284		6627	5523	4734	4142	3682	3314	3012	2761	2549	2367	2071	1841	
11P2	29.2	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	
2-1/2" x 3/16"	11W4	28.8		3.41	10227	6545	4545	3340	2557	2020	1636	1352	1136	968	835	639
	11W2	29.4	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
	11P4	30.1	10227		8182	6818	5844	5114	4545	4091	3719	3409	3147	2922	2557	2273
	11P2	32.0	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

11W4 & 11P4 STANDARD 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
1/8" Bar	13/16"	1-1/2"	2-3/16"	2-7/8"	3-9/16"	4-1/4"	4-15/16"	5-5/8"	6-5/16"	7"	7-11/16"	8-3/8"	9-1/16"	9-3/4"	10-7/16"
3/16" Bar	7/8"	1-9/16"	2-1/4"	2-15/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/8" Bar	11-1/8"	11-13/16"	12-1/2"	13-3/16"	13-7/8"	14-9/16"	15-1/4"	15-5/8"	16-5/8"	17-5/16"	18"	18-11/16"	19-3/8"	20-1/16"	20-3/4"
3/16" Bar	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-7/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
No. of Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
1/8" Bar	21-7/16"	22-1/8"	22-13/16"	23-1/2"	24-3/16"	24-7/8"	25-9/16"	26-1/4"	26-15/16"	27-5/8"	28-5/16"	29"	29-11/16"	30-3/8"	31-1/16"
3/16" Bar	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
No. of Bars	47	48	49	50	51	52	53								
1/8" Bar	31-3/4"	32-7/16"	33-1/8"	33-13/16"	34-1/2"	35-3/16"	35-7/8"								
3/16" Bar	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

