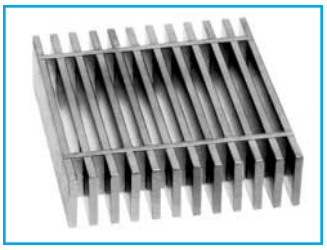
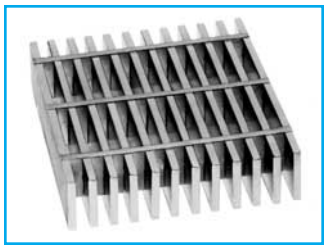
Steel Bar Grating

PRESS-LOCKED CLOSE-MESH

7/16" Center to Center of Bearing Bars



7-P-4
Cross Bars 4" C/C



7-P-2
Cross Bars 2" C/C

LOAD & DEFLECTION TABLE

SPAN (Length of Bearing Bar)

Bar Size	Symbol	Approx. Weight psf	Sec. Mod Per Ft. Of Width		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"	7-4-32	9.8	0.321	U	964	617	429	315	241	190	154						
				D	0.099	0.155	0.223	0.304	0.397	0.503	0.621						
	7-2-32	10.7		C	964	771	643	551	482	429	386						
				D	0.079	0.124	0.179	0.243	0.318	0.402	0.497						
3/4" x 3/16"	7-4-33	14.6	0.482	U	1446	926	643	472	362	286	231	191					
				D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751					
	7-2-33	16.1		C	1446	1157	964	827	723	643	579	526					
				D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601					
1" x 1/8"	7-4-42	12.7	0.571	U	1714	1097	762	560	429	339	274	227	190	162			
				D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
	7-2-42	13.7		C	1714	1371	1143	980	857	762	686	623	571	527			
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
1" x 3/16"	7-4-43	19.0	0.857	U	2571	1646	1143	840	643	508	411	340	286	243	210		
				D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787	0.912		
	7-2-43	20.5		C	2571	2057	1714	1469	1286	1143	1029	935	857	791	735		
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
1-1/4" x 1/8"	7-4-52	16.0	0.893	U	2679	1714	1190	875	670	529	429	354	298	254	219	167	
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	
	7-2-52	17.2		C	2679	2143	1786	1531	1339	1190	1071	974	893	824	765	670	
				D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	
1-1/4" x 3/16"	7-4-53	23.9	1.339	U	4018	2571	1786	1312	1004	794	643	531	446	380	328	251	198
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	1.207
	7-2-53	25.8		C	4018	3214	2679	2296	2009	1786	1607	1461	1339	1236	1148	1004	893
				D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	0.965
1-1/2" x 1/8"	7-4-62	18.9	1.286	U	3857	2469	1714	1259	964	762	617	510	429	365	315	241	190
				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
	7-2-62	20.2		C	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187	1102	964	857
				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
1-1/2" x 3/16"	7-4-63	28.3	1.929	U	5786	3703	2571	1889	1446	1143	926	765	643	548	472	362	286
				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
	7-2-63	30.2		C	5786	4629	3857	3306	2893	2571	2314	2104	1929	1780	1653	1446	1286
				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 3/16"	7-4-73	32.7	2.625	U	7875	5040	3500	2571	1969	1556	1260	1041	875	746	643	492	389
				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
	7-2-73	34.6		C	7875	6300	5250	4500	3938	3500	3150	2864	2625	2423	2250	1969	1750
				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
2" x 3/16"	7-4-83	37.1	3.429	U	10286	6583	4571	3359	2571	2032	1646	1360	1143	974	840	643	508
				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
	7-2-83	39.0		C	10286	8229	6857	5878	5143	4571	4114	3740	3429	3165	2939	2571	2286
				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"	7-4-93	41.5	4.339	U	13018	8331	5786	4251	3254	2571	2083	1721	1446	1232	1063	814	643
				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
	7-2-93	43.4		C	13018	10414	8679	7439	6509	5786	5207	4734	4339	4005	3719	3254	2893
				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
2-1/2" x 3/16"	7-4-103	45.9	5.357	U	16071	10286	7143	5248	4018	3175	2571	2125	1786	1522	1312	1004	794
				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
	7-2-103	47.8		C	16071	12857	10714	9184	8036	7143	6429	5844	5357	4945	4592	4018	3571
				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.

P-7 PANEL WIDTH (inches)

Note: P-Press-Locked cross bars typically 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	21	22	23	24	25	26	27	28	29
1/8" Bar	9/16	1	1 7/16	1 7/8	2 5/16	2 3/4	3 3/16	3 5/8	4 1/16	4 1/2	4 15/16	5 3/8	5 13/16	6 1/4	6 11/16	7 1/8	7 9/16	8	8 7/16	8 7/8	9 5/16	9 3/4	10 3/16	10 5/8	11 1/16	11 1/2	11 15/16	12 3/8
3/16" Bar	5/8	1 1/16	1 1/2	1 15/16	2 3/8	2 13/16	3 1/4	3 11/16	4 1/8	4 9/16	5	5 7/16	5 7/8	6 5/16	6 3/4	7 3/16	7 5/8	8 1/16	8 1/2	8 15/16	9 3/8	9 13/16	10 1/4	10 11/16	11 1/8	11 9/16	12	12 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	12 13/16	13 1/4	13 11/16	14 1/8	14 9/16	15	15 7/16	15 7/8	16 5/16	16 3/4	17 3/16	17 5/8	18 1/16	18 1/2	18 15/16	19 3/8	19 13/16	20 1/4	20 11/16	21 1/8	21 9/16	22	22 7/16	22 7/8	23 5/16	23 3/4	24 3/16	24 5/8
3/16" Bar	12 7/8	13 5/16	13 3/4	14 3/16	14 5/8	15 1/16	15 1/2	15 15/16	16 3/8	16 13/16	17 1/4	17 11/16	18 1/8	18 9/16	19	19 7/16	19 7/8	20 5/16	20 3/4	21 3/16	21 5/8	22 1/16	22 1/2	22 15/16	23 3/8	23 13/16	24 1/4	24 11/16
No. of Bars	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**		
1/8" Bar	25 1/16	25 1/2	25 15/16	26 3/8	26 13/16	27 1/4	27 11/16	28 1/8	28 9/16	29	29 7/16	29 7/8	30 5/16	30 3/4	31 3/16	31 5/8	32 1/16	32 1/2	32 15/16	33 3/8	33 13/16	34 1/4	34 11/16	35 1/8	35 9/16	36		
3/16" Bar	25 1/8	25 9/16	26	26 7/16	26 7/8	27 5/16	27 3/4	28 3/16	28 5/8	29 1/16	29 1/2	29 15/16	30 3/8	30 13/16	31 1/4	31 11/16	32 1/8	32 9/16	33	33 7/16	33 7/8	34 5/16	34 3/4	35 3/16	35 5/8	36 1/16		