

11-SI-4 & 11-SI-2 Aluminum Grating

I-Bar Swage-Locked

11/16" Center to Center of Bearing Bars



11-SI-4
Cross Rods 4" C/C



11-SI-2
Cross Rods 2" C/C

Load & Deflection Table

Bar Size	Symbol	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"	6'-6"	7'-0"	8'-0"	9'-0"					
1" x 1/4"	11-4-44 11-2-44	3.2 3.5	0.545	U	1091	698	485	356	273	215	175										
				D	0.144	0.225	0.324	0.441	0.576	0.729	0.900										
				C	1091	873	727	623	545	485	436										
				D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871									
1-1/4" x 1/4"	11-4-54 11-2-54	3.8 4.2	0.852	U	1705	1091	758	557	426	337	273	225									
				D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871									
				C	1705	1364	1136	974	852	758	682	620									
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.832	0.973							
1-1/2" x 1/4"	11-4-64 11-2-64	4.5 4.8	1.227	U	2455	1571	1091	801	614	485	393	325	273	232							
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014							
				C	2455	1964	1636	1403	1227	1091	982	893	818	755							
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941						
1-3/4" x 1/4"	11-4-74 11-2-74	5.1 5.4	1.670	U	3341	2138	1485	1091	835	660	535	442	371	316	273						
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008						
				C	3341	2673	2227	1909	1670	1485	1336	1215	1114	1028	955						
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	0.927	1.057				
2" x 1/4"	11-4-84 11-2-84	5.8 6.1	2.182	U	4364	2793	1939	1425	1091	862	698	577	485	413	356	273	215				
				D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.012	1.152	1.458			
				C	4364	3491	2909	2494	2182	1939	1745	1587	1455	1343	1247	1091	970				
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.822	0.952	1.106			
2-1/4" x 1/4"	11-4-94 11-2-94	6.4 6.8	2.761	U	5523	3535	2455	1803	1381	1091	884	730	614	523	451	345	273				
				D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	0.904	1.024	1.296			
				C	5523	4418	3682	3156	2761	2455	2209	2008	1841	1699	1578	1381	1227				
				D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.719	0.819	0.937			
2-1/2" x 1/4"	11-4-104 11-2-104	7.1 7.4	3.409	U	6818	4364	3030	2226	1705	1347	1091	902	758	646	557	426	337				
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.822	0.952	1.106			
				C	6818	5455	4545	3896	3409	3030	2727	2479	2273	2098	1948	1705	1515				
				D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.647	0.737	0.833			

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.
General: Loads and deflections are theoretical and based on static loading.

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

SI-11 PANEL WIDTH (inches) Note: Includes 1/4" (1/8" each side) for extended cross rods on swage-locked (SI).

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