

13-AP-4 & 13-AP-2 Aluminum Grating

Press-Locked Close Mesh

13/16" Center to Center of Bearing Bars



13-AP-4
Cross Rods 4" C/C



13-AP-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"										
3/4" x 1/8"	13-4-32 13-2-32	2.0 2.4	0.173	U	346	222	154	113									
				D	0.192	0.300	0.432	0.588									
				C	346	277	231	198									
3/4" x 3/16"	13-4-33 13-2-33	3.0 3.5	0.260	D	0.154	0.240	0.346	0.470	4'-0"								
				U	519	332	231	170	130								
				D	0.192	0.300	0.432	0.588	0.768								
1" x 1/8"	13-4-42 13-2-42	2.6 2.9	0.308	C	519	415	346	297	260								
				D	0.154	0.240	0.346	0.470	0.614								
				U	615	394	274	201	154								
1" x 3/16"	13-4-43 13-2-43	3.9 4.4	0.462	D	0.144	0.225	0.324	0.441	0.576								
				C	923	738	615	527	462	410							
				D	0.115	0.180	0.259	0.353	0.461	0.583							
1-1/4" x 1/8"	13-4-52 13-2-52	3.3 3.7	0.481	U	962	615	427	314	240	190							
				D	0.115	0.180	0.259	0.353	0.461	0.583							
				C	962	769	641	549	481	427							
1-1/4" x 3/16"	13-4-53 13-2-53	4.9 5.6	0.721	D	0.092	0.144	0.207	0.282	0.369	0.467							
				U	1442	923	641	471	361	285	231	191					
				D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871					
1-1/2" x 1/8"	13-4-62 13-2-62	3.8 4.3	0.692	C	1442	1152	962	824	721	641	577	524					
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697					
				U	1385	886	615	452	346	274	222	183					
1-1/2" x 3/16"	13-4-63 13-2-63	5.7 6.4	1.038	D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864				
				C	2077	1329	923	678	519	410	332	275	231				
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691				
1-3/4" x 3/16"	13-4-73 13-2-73	6.6 7.3	1.413	U	2827	1809	1256	923	707	558	452	374	314	268			
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869			
				C	2827	2262	1885	1651	1431	1256	1131	1028	942	870			
2" x 3/16"	13-4-83 13-2-83	7.4 8.1	1.846	D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	7'-0"		
				U	3692	2363	1641	1206	923	729	591	488	410	350	301		
				D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882		
2-1/4" x 3/16"	13-4-93 13-2-93	8.3 8.9	2.337	C	3692	2954	2462	2110	1846	1641	1477	1343	1231	1136	1055		
				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"	9'-0"
				U	4673	2991	2077	1526	1168	923	748	618	519	442	381	292	231
2-1/2" x 3/16"	13-4-103 13-2-103	9.1 9.8	2.885	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	1.296
				C	4673	3738	3115	2670	2337	2077	1869	1699	1558	1438	1335	1168	1038
				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	1.037
2-1/2" x 3/16"	13-4-103 13-2-103	9.1 9.8	2.885	U	5769	3692	2564	1884	1442	1140	923	763	641	546	471	361	285
				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
				C	5769	4615	3846	3297	2885	2564	2308	2098	1932	1775	1648	1442	1282
				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

Material: ASTM A-36

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. For deflections of uniform and concentrated loads, consult MARC engineering departments.

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.

U= safe uniform load, psf - C= safe concentrated load, pftw - D= deflection, inches - E= modulus of elasticity, 29,000,000 psi - F= fiber stress, 20,000 psi

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