

Aluminum Grating

I-BAR SWAGE-LOCKED

1-3/16" Center to Center of Bearing Bars



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



19-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"	
1" x 1/4"	19-4-44	2.00	0.316	U 632	404	281	206	158	125	
				D 0.144	0.225	0.324	0.441	0.576	0.729	
	19-2-44	2.30		C 632	505	421	361	316	281	
				D 0.115	0.180	0.259	0.353	0.461	0.583	5'-0"
1-1/4" x 1/4"	19-4-54	2.38	0.493	U 987	632	439	322	247	195	158
				D 0.115	0.180	0.259	0.353	0.461	0.583	0.720
	19-2-54	2.68		C 987	789	658	564	493	439	395
				D 0.092	0.144	0.207	0.282	0.369	0.467	0.576
1-1/2" x 1/4"	19-4-64	2.74	0.711	U 1421	909	632	464	355	281	227
				D 0.096	0.150	0.216	0.294	0.384	0.486	0.600
	19-2-64	3.04		C 1421	1137	947	812	711	632	568
				D 0.077	0.120	0.173	0.235	0.307	0.389	0.480
1-3/4" x 1/4"	19-4-74	3.09	0.967	U 1934	1238	860	632	484	382	309
				D 0.082	0.129	0.185	0.252	0.329	0.417	0.514
	19-2-74	3.39		C 1934	1547	1289	1105	967	860	774
				D 0.066	0.103	0.148	0.202	0.263	0.333	0.411
2" x 1/4"	19-4-84	3.49	1.263	U 2526	1617	1123	825	632	499	404
				D 0.072	0.113	0.162	0.221	0.288	0.365	0.450
	19-2-84	3.79		C 2526	2021	1684	1444	1263	1123	1011
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360
2-1/4" x 1/4"	19-4-94	3.89	1.599	U 3197	2046	1421	1044	799	632	512
				D 0.064	0.100	0.144	0.196	0.256	0.324	0.400
	19-2-94	4.14		C 3197	2558	2132	1827	1599	1421	1279
				D 0.051	0.080	0.115	0.157	0.205	0.259	0.320
2-1/2" x 1/4"	19-4-104	4.23	1.974	U 3947	2526	1754	1289	987	780	632
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360
	19-2-104	4.53		C 3947	3158	2632	2256	1974	1754	1579
				D 0.046	0.072	0.104	0.141	0.184	0.233	0.288

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

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.

Finish: Mill finish unless otherwise specified.

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