

19-SI-4 & 19-SI-2 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	0.255	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	0.155	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	5'-6"						
1-1/2" x 1/4"	19-4-64	2.74	0.711	U	1421	909	632	464	355	281	227	188					
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726					
	19-2-64	3.04	C	1421	1137	947	812	711	632	568	517						
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	6'-0"	6'-6"				
1-3/4" x 1/4"	19-4-74	3.09	0.967	U	1934	1238	860	632	484	382	309	256	215	183			
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869			
	19-2-74	3.39	C	1934	1547	1289	1105	967	860	774	703	645	595				
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	7'-0"			
2" x 1/4"	19-4-84	3.49	1.263	U	2526	1617	1123	825	632	499	404	334	281	239	206		
				D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882		
	19-2-84	3.79	C	2526	2021	1684	1444	1263	1123	1011	919	842	777	772			
			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"		
2-1/4" x 1/4"	19-4-94	3.89	1.599	U	3197	2046	1421	1044	799	632	512	423	355	303	261	200	
				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	
	19-2-94	4.14	C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	799		
			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	9'-0"	
2-1/2" x 1/4"	19-4-104	4.23	1.974	U	3947	2526	1754	1289	987	780	632	522	439	374	322	247	195
				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	1.166
	19-2-104	4.53	C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987	877	
			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	

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-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								