

Aluminum Grating

RECTANGULAR BAR SWAGE-LOCKED

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



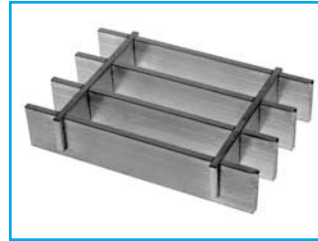
19-SR-4
Cross Rods 4" C/C



19-SR-2
Cross Rods 2" C/C

PRESS-LOCKED

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



19-AP-4
Cross Bars 4" C/C



19-AP-2
Cross Bars 2" C/C

LOAD & DEFLECTION TABLE

Bar Size	Symbol	Approx. Weight psf	Sec. Mod Per Ft. Of Width	SPAN (Length of Bearing Bar)				U	D	E	F	
				2'-0"	2'-6"	3'-0"	3'-6"					
3/4" x 1/8"	19-4-32	SR	1.5	0.118	U	237	152	105	77			
					D	0.192	0.300	0.432	0.588			
	19-2-32	AP	1.8	0.118	U	237	189	158	135			
					D	0.154	0.240	0.346	0.470			
3/4" x 3/16"	19-4-33	SR	2.1	0.178	U	355	227	158	116			
					D	0.192	0.300	0.432	0.588			
	19-2-33	AP	2.4	0.178	U	355	284	237	203			
					D	0.154	0.240	0.346	0.470			
1" x 1/8"	19-4-42	SR	1.9	0.211	U	421	269	187	137	105		
					D	0.144	0.225	0.324	0.441	0.576		
	19-2-42	AP	2.2	0.211	U	421	337	281	241	211		
					D	0.115	0.180	0.259	0.353	0.461		
1" x 3/16"	19-4-43	SR	2.7	0.316	U	632	404	281	206	158	125	
					D	0.144	0.225	0.324	0.441	0.576	0.729	
	19-2-43	AP	3.0	0.316	U	632	505	421	361	316	281	
					D	0.115	0.180	0.259	0.353	0.461	0.583	
1-1/4" x 1/8"	19-4-52	SR	2.3	0.329	U	658	421	292	215	164	130	
					D	0.115	0.180	0.259	0.353	0.461	0.583	
	19-2-52	AP	2.6	0.329	U	658	526	439	376	329	292	
					D	0.092	0.144	0.207	0.282	0.369	0.467	
1-1/4" x 3/16"	19-4-53	SR	3.2	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
	19-2-53	AP	4.3	0.493	U	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 1/8"	19-4-62	SR	2.7	0.474	U	947	606	421	309	237	187	152
					D	0.096	0.150	0.216	0.294	0.384	0.486	0.600
	19-2-62	AP	3.0	0.474	U	947	758	632	541	474	421	379
					D	0.077	0.120	0.173	0.235	0.307	0.389	0.480
1-1/2" x 3/16"	19-4-63	SR	3.8	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
	19-2-63	AP	4.1	0.711	U	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 3/16"	19-4-73	SR	4.4	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
	19-2-73	AP	4.7	0.967	U	1934	1547	1289	1105	967	860	774
					D	0.066	0.103	0.148	0.202	0.263	0.333	0.411
2" x 3/16"	19-4-83	SR	5.0	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
	19-2-83	AP	5.3	1.263	U	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 3/16"	19-4-93	SR	5.6	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
	19-2-93	AP	5.9	1.599	U	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 3/16"	19-4-103	SR	6.2	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
	19-2-103	AP	6.5	1.974	U	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, plw
 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.
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.

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

