

Riveted Grating

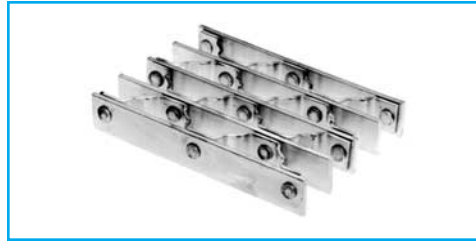
ALUMINUM RIVETED GRATING

1-1/8" Inside Face to Inside Face of Bearing Bars



18-AR-7

7" Rivet Centers—1/4" Dia. Rivets



18-AR-3

3-1/2" Rivet Centers—1/4" Dia. Rivets

LOAD & DEFLECTION TABLE

Bar Size	Symbol	Approx. Weight pst	Sec. Mod Per Ft. Of Width	SPAN (Length of Bearing Bar)								
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"			
3/4" x 1/8"	18-7-32	2.3	0.113	U	225	144	100	73	56	44		
	18-3-32	2.6		D	0.192	0.300	0.432	0.588	0.768	0.972		
3/4" x 3/16"	18-7-33	2.7	0.161	U	225	180	150	129	113	100		
	18-3-33	3.0		D	0.154	0.240	0.346	0.470	0.614	0.778		
1" x 1/8"	18-7-42	2.7	0.200	U	321	206	143	105	80	63		
	18-3-42	3.0		D	0.192	0.300	0.432	0.588	0.768	0.972		
1" x 3/16"	18-7-43	3.2	0.286	U	321	257	214	184	161	143		
	18-3-43	3.6		D	0.154	0.240	0.346	0.470	0.614	0.778		
1-1/4" x 1/8"	18-7-52	3.0	0.313	U	400	256	178	131	100	79		
	18-3-52	3.4		D	0.144	0.225	0.324	0.441	0.576	0.729		
1-1/4" x 3/16"	18-7-53	3.8	0.446	U	400	320	267	229	200	178		
	18-3-53	4.1		D	0.115	0.180	0.259	0.353	0.461	0.583		
1-1/2" x 1/8"	18-7-62	3.8	0.450	U	571	366	254	187	143	113		
	18-3-62	4.2		D	0.144	0.225	0.324	0.441	0.576	0.729		
1-1/2" x 3/16"	18-7-63	4.6	0.643	U	571	457	381	327	286	254		
	18-3-63	5.0		D	0.115	0.180	0.259	0.353	0.461	0.583		
1-3/4" x 3/16"	18-7-73	5.1	0.875	U	625	400	278	204	156	123		
	18-3-73	5.6		D	0.115	0.180	0.259	0.353	0.461	0.583		
2" x 3/16"	18-7-83	5.7	1.143	U	625	500	417	357	313	278		
	18-3-83	6.1		D	0.092	0.144	0.207	0.282	0.369	0.467		
2-1/4" x 3/16"	18-7-93	6.2	1.446	U	893	571	397	292	223	176		
	18-3-93	6.6		D	0.115	0.180	0.259	0.353	0.461	0.583		
2-1/2" x 3/16"	18-7-103	6.7	1.786	U	893	714	595	510	446	397		
	18-3-103	7.1		D	0.092	0.144	0.207	0.282	0.369	0.467		
1" x 1/8" CRIMP BAR				U	900	576	400	294	225	178		
				D	0.096	0.150	0.216	0.294	0.384	0.486		
1" x 3/16" CRIMP BAR				U	900	720	600	514	450	400		
				D	0.077	0.120	0.173	0.235	0.307	0.389		
1" x 1/8" CRIMP BAR				U	1286	823	571	420	321	254		
				D	0.096	0.150	0.216	0.294	0.384	0.486		
1" x 3/16" CRIMP BAR				U	1286	1029	857	735	643	571		
				D	0.077	0.120	0.173	0.235	0.307	0.389		
1" x 1/8" CRIMP BAR				U	1750	1120	778	571	438	346		
				D	0.082	0.129	0.185	0.252	0.329	0.417		
1" x 3/16" CRIMP BAR				U	1750	1400	1167	1000	875	778		
				D	0.066	0.103	0.148	0.202	0.263	0.333		
1" x 1/8" CRIMP BAR				U	2286	1463	1016	746	571	451		
				D	0.072	0.113	0.162	0.221	0.288	0.365		
1" x 3/16" CRIMP BAR				U	2286	1829	1524	1306	1143	1016		
				D	0.058	0.090	0.130	0.176	0.230	0.292		
1" x 1/8" CRIMP BAR				U	2893	1851	1286	945	723	571		
				D	0.064	0.100	0.144	0.196	0.256	0.324		
1" x 3/16" CRIMP BAR				U	2893	2314	1929	1653	1446	1286		
				D	0.051	0.080	0.115	0.157	0.205	0.259		
1" x 1/8" CRIMP BAR				U	3571	2286	1587	1166	893	705		
				D	0.058	0.090	0.130	0.176	0.230	0.292		
1" x 3/16" CRIMP BAR				U	3571	2857	2381	2041	1786	1587		
				D	0.046	0.072	0.104	0.141	0.184	0.233		

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
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: Normally we serrate the reticulate bar and raise it slightly above the top surface of the bearing bars. We can also serrate the bearing bars. When bearing bars are serrated, 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.

18-AR-7 & 18-AR-3 PANEL WIDTH (inches)

Note: Dimensions include 1/4" for rivet heads (1/8" each side).

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

