

Riveted Grating

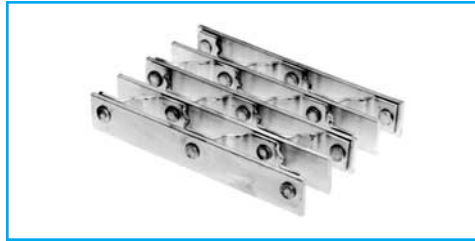
ALUMINUM RIVETED GRATING

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 psl	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	50"	53"
	18-3-52	3.4		D	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089
1-1/4" x 3/16"	18-7-53	3.8	0.446	U	400	320	267	229	200	178	160	145
	18-3-53	4.1		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871
1-1/2" x 1/8"	18-7-62	3.8	0.450	U	571	366	254	187	143	113	91	76
	18-3-62	4.2		D	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089
1-1/2" x 3/16"	18-7-63	4.6	0.643	U	571	457	381	327	286	254	229	208
	18-3-63	5.0		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871
1-3/4" x 3/16"	18-7-73	5.1	0.875	U	625	400	278	204	156	123	100	83
	18-3-73	5.6		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871
2" x 3/16"	18-7-83	5.7	1.143	U	625	500	417	357	313	278	250	227
	18-3-83	6.1		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697
2-1/4" x 3/16"	18-7-93	6.2	1.446	U	893	571	397	292	223	176	143	118
	18-3-93	6.6		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871
2-1/2" x 3/16"	18-7-103	6.7	1.786	U	893	714	595	510	446	397	357	325
	18-3-103	7.1		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697
3/4" x 1/8" CRIMP BAR				U	900	576	400	294	225	178	144	119
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726
1" x 1/8" CRIMP BAR				U	900	720	600	514	450	400	360	327
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581
1" x 3/16" CRIMP BAR				U	1286	823	571	420	321	254	206	170
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726
1" x 1/8" CRIMP BAR				U	1750	1120	778	571	438	346	280	231
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622
1" x 3/16" CRIMP BAR				U	2286	1463	1016	746	571	451	366	302
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498
1" x 1/8" CRIMP BAR				U	2286	1829	1524	1306	1143	1016	914	831
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436
1" x 3/16" CRIMP BAR				U	2893	1851	1286	945	723	571	463	383
				D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484
1" x 1/8" CRIMP BAR				U	3571	2286	1587	1166	893	705	571	472
				D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387
1" x 3/16" CRIMP BAR				U	3571	2857	2381	2041	1786	1587	1429	1299
				D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348

U = safe uniform load, psl

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 psl 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			