

# Riveted Grating

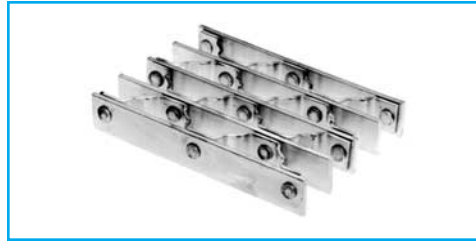
## STEEL RIVETED GRATING

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



**18-R-7**

7" Rivet Centers—1/4" Dia. Rivets



**18-R-3**

3-1/2" Rivet Centers—1/4" Dia. Rivets

### 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"			
3/4" x 1/8"	18-7-32	6.5	0.113	U	338	216	150	110	84	67		
	18-3-32	7.3		D	0.099	0.155	0.223	0.304	0.397	0.503		
3/4" x 3/16"	18-7-33	7.7	0.161	U	482	309	214	157	121	95		
	18-3-33	8.4		D	0.099	0.155	0.223	0.304	0.397	0.503		
1" x 1/8"	18-7-42	7.5	0.200	U	600	384	267	196	150	119	96	79
	18-3-42	8.3		D	0.079	0.124	0.179	0.243	0.318	0.402	0.466	0.563
1" x 3/16"	18-7-43	9.2	0.286	U	857	549	381	280	214	169	137	113
	18-3-43	9.9		D	0.079	0.124	0.179	0.243	0.318	0.402	0.466	0.563
1-1/4" x 1/8"	18-7-52	8.6	0.313	U	938	600	417	306	234	185	150	124
	18-3-52	9.4		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451
1-1/4" x 3/16"	18-7-53	10.7	0.446	U	1339	857	595	437	335	265	214	177
	18-3-53	11.4		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451
1-1/2" x 1/8"	18-7-62	10.7	0.450	U	1350	864	600	441	338	267	216	179
	18-3-62	11.7		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300
1-1/2" x 3/16"	18-7-63	13.2	0.643	U	1929	1234	857	630	482	381	309	255
	18-3-63	14.2		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300
1-3/4" x 3/16"	18-7-73	14.7	0.875	U	2625	1680	1167	857	656	519	420	347
	18-3-73	15.7		D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257
2" x 3/16"	18-7-83	16.2	1.143	U	3429	2194	1524	1120	857	677	549	453
	18-3-83	17.2		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225
2-1/4" x 3/16"	18-7-93	17.7	1.446	U	4339	2777	1929	1417	1085	857	694	574
	18-3-93	18.7		D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200
2-1/2" x 3/16"	18-7-103	19.2	1.786	U	5357	3429	2381	1749	1339	1058	857	708
	18-3-103	20.2		D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180

U = safe uniform load, psf  
 C = safe concentrated load, plw  
 D = deflection, inches  
 E = modulus of elasticity, 29,000,000 psi  
 F = fiber stress, 18,000 psi  
**Material:** ASTM A-569  
**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-R-7 & 18-R-3 PANEL WIDTH (inches)

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

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