

# Aluminum Grating

## I-BAR SWAGE-LOCKED

15/16" Center to Center of Bearing Bars



**15-SI-4**  
Cross Rods 4" C/C



**15-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"	5'-0"	5'-6"	6'-0"	7'-0"								
1" x 1/4"	15-4-44	2.45	0.400	U	800	512	356	261	200	158											
	15-2-44	2.75		D	0.144	0.225	0.324	0.441	0.576	0.729											
1-1/4" x 1/4"	15-4-54	2.91	0.625	U	1250	800	556	408	313	247	200	165									
	15-2-54	3.21		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871									
1-1/2" x 1/4"	15-4-64	3.36	0.900	U	1800	1152	800	588	450	356	288	238	200								
	15-2-64	3.66		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864								
1-3/4" x 1/4"	15-4-74	3.80	1.225	U	2450	1568	1089	800	613	484	392	324	272	232							
	15-2-74	4.10		D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869							
2" x 1/4"	15-4-84	4.30	1.600	U	3200	2048	1422	1045	800	632	512	423	356	303	261						
	15-2-84	4.60		D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882						
2-1/4" x 1/4"	15-4-94	4.74	2.025	U	4050	2592	1800	1322	1013	800	648	536	450	383	331	253	200				
	15-2-94	5.04		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	1.296				
2-1/2" x 1/4"	15-4-104	5.23	2.500	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	247				
	15-2-104	5.53		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166				
				C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250	1111				
				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, 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.  
**General:** Loads and deflections are theoretical and based on static loading.  
**Finish:** Mill finish unless otherwise specified.

### SI-15 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 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	3 <sup>5</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>16</sub>	8	8 <sup>15</sup> / <sub>16</sub>	9 <sup>7</sup> / <sub>8</sub>	10 <sup>13</sup> / <sub>16</sub>	11 <sup>3</sup> / <sub>4</sub>	12 <sup>11</sup> / <sub>16</sub>	13 <sup>5</sup> / <sub>8</sub>	14 <sup>9</sup> / <sub>16</sub>	15 <sup>1</sup> / <sub>2</sub>	16 <sup>7</sup> / <sub>16</sub>	17 <sup>3</sup> / <sub>8</sub>	18 <sup>5</sup> / <sub>16</sub>
No. of Bars	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1/4" Bar	19 <sup>1</sup> / <sub>4</sub>	20 <sup>3</sup> / <sub>16</sub>	21 <sup>1</sup> / <sub>8</sub>	22 <sup>1</sup> / <sub>16</sub>	23	23 <sup>15</sup> / <sub>16</sub>	24 <sup>7</sup> / <sub>8</sub>	25 <sup>13</sup> / <sub>16</sub>	26 <sup>3</sup> / <sub>4</sub>	27 <sup>11</sup> / <sub>16</sub>	28 <sup>5</sup> / <sub>8</sub>	29 <sup>9</sup> / <sub>16</sub>	30 <sup>1</sup> / <sub>2</sub>	31 <sup>7</sup> / <sub>16</sub>	32 <sup>3</sup> / <sub>8</sub>	33 <sup>5</sup> / <sub>16</sub>	34 <sup>1</sup> / <sub>4</sub>	35 <sup>3</sup> / <sub>16</sub>	36 <sup>1</sup> / <sub>8</sub>

