

Aluminum Grating

I-BAR SWAGE-LOCKED

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



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



19-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" | | | | | | | | | | | | |
| 1" x 1/4" | 19-4-44 | 2.00 | 0.316 | U | 632 | 404 | 281 | 206 | 158 | 125 | | | | | | | | | | | |
| | 19-2-44 | 2.30 | | D | 0.144 | 0.225 | 0.324 | 0.441 | 0.576 | 0.729 | | | | | | | | | | | |
| | | | | C | 632 | 505 | 421 | 361 | 316 | 281 | | | | | | | | | | | |
| 1-1/4" x 1/4" | 19-4-54 | 2.38 | 0.493 | U | 987 | 632 | 439 | 322 | 247 | 195 | | | | | | | | | | | |
| | 19-2-54 | 2.68 | | D | 0.115 | 0.180 | 0.259 | 0.353 | 0.461 | 0.583 | | | | | | | | | | | |
| | | | | C | 987 | 789 | 658 | 564 | 493 | 439 | | | | | | | | | | | |
| 1-1/2" x 1/4" | 19-4-64 | 2.74 | 0.711 | U | 1421 | 909 | 632 | 464 | 355 | 281 | | | | | | | | | | | |
| | 19-2-64 | 3.04 | | D | 0.096 | 0.150 | 0.216 | 0.294 | 0.384 | 0.486 | | | | | | | | | | | |
| | | | | C | 1421 | 1137 | 947 | 812 | 711 | 632 | | | | | | | | | | | |
| 1-3/4" x 1/4" | 19-4-74 | 3.09 | 0.967 | U | 1934 | 1238 | 860 | 632 | 484 | 382 | | | | | | | | | | | |
| | 19-2-74 | 3.39 | | D | 0.082 | 0.129 | 0.185 | 0.252 | 0.329 | 0.417 | | | | | | | | | | | |
| | | | | C | 1934 | 1547 | 1289 | 1105 | 967 | 860 | | | | | | | | | | | |
| 2" x 1/4" | 19-4-84 | 3.49 | 1.263 | U | 2526 | 1617 | 1123 | 825 | 632 | 499 | | | | | | | | | | | |
| | 19-2-84 | 3.79 | | D | 0.072 | 0.113 | 0.162 | 0.221 | 0.288 | 0.365 | | | | | | | | | | | |
| | | | | C | 2526 | 2021 | 1684 | 1444 | 1263 | 1123 | | | | | | | | | | | |
| 2-1/4" x 1/4" | 19-4-94 | 3.89 | 1.599 | U | 3197 | 2046 | 1421 | 1044 | 799 | 632 | | | | | | | | | | | |
| | 19-2-94 | 4.14 | | D | 0.064 | 0.100 | 0.144 | 0.196 | 0.256 | 0.324 | | | | | | | | | | | |
| | | | | C | 3197 | 2558 | 2132 | 1827 | 1599 | 1421 | | | | | | | | | | | |
| 2-1/2" x 1/4" | 19-4-104 | 4.23 | 1.974 | U | 3947 | 2526 | 1754 | 1289 | 987 | 780 | | | | | | | | | | | |
| | 19-2-104 | 4.53 | | D | 0.058 | 0.090 | 0.130 | 0.176 | 0.230 | 0.292 | | | | | | | | | | | |
| | | | | C | 3947 | 3158 | 2632 | 2256 | 1974 | 1754 | | | | | | | | | | | |
| | | | | 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, 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-19 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 ¹¹ / ₁₆ | 2 ⁷ / ₈ | 4 ¹ / ₁₆ | 5 ¹ / ₄ | 6 ⁷ / ₁₆ | 7 ⁵ / ₈ | 8 ¹³ / ₁₆ | 10 | 11 ³ / ₁₆ | 12 ³ / ₈ | 13 ⁹ / ₁₆ | 14 ³ / ₄ | 15 ¹⁵ / ₁₆ | 17 ¹ / ₈ | 18 ⁵ / ₁₆ | 19 ¹ / ₂ | 20 ¹¹ / ₁₆ | 21 ⁷ / ₈ | 23 ¹ / ₁₆ |
| No. of Bars | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | | | | | | |
| 1/4" Bar | 24 ¹ / ₄ | 25 ⁷ / ₁₆ | 26 ⁵ / ₈ | 27 ¹³ / ₁₆ | 29 | 30 ³ / ₁₆ | 31 ³ / ₈ | 32 ⁹ / ₁₆ | 33 ³ / ₄ | 34 ¹⁵ / ₁₆ | 36 ¹ / ₈ | | | | | | | | |