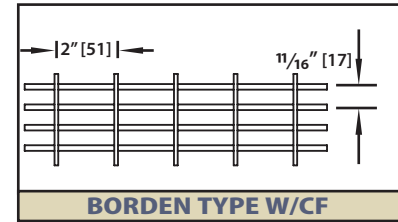
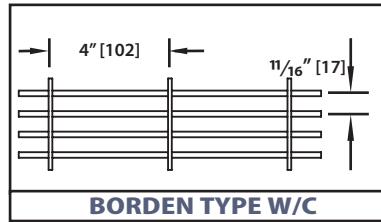


Welded Grating

LOAD TABLE

| Size No. | Bearing Bar Size | Weight (#/ft. ²) | Moment of Inertia (in. ⁴ /ft.w.) | Section Modulus (in. ³ /ft.w.) | Maximum span recommended for 1/4" deflection under uniform load of 100 psf. (normal pedestrian traffic) in inches | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|------------------|------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----|----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-------|-------|-------|-------|
| | | | | | Span in Inches | | | | | | | | | | Table in accordance with NAAMM MBG 531-09 F - 18,000 psi E - 29,000,000 psi U - Safe Uniform Load (lbs./sq.ft.) C - Safe Conc. load (lbs./ft. width) D - Deflection in inches f.w. = foot width | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | | | | 84 | 96 | 108 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 3/4" x 1/8" | 6.45 | 0.0767 | 0.2045 | 48 | U | 614 | 393 | 273 | 200 | 153 | 121 | 98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Du | | | | 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 | 0.621 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C | | | | 614 | 491 | 409 | 351 | 307 | 273 | 245 | 245 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 3/4" x 3/16" | 9.43 | 0.1151 | 0.3068 | 53 | Dc | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.497 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | U | | | | 920 | 589 | 409 | 301 | 230 | 182 | 147 | 147 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Du | | | | 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 | 0.621 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 1" x 1/8" | 8.82 | 0.1818 | 0.3636 | 59 | C | 920 | 736 | 614 | 526 | 460 | 409 | 368 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Dc | | | | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.497 | 0.497 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | U | | | | 1091 | 698 | 485 | 356 | 273 | 215 | 175 | 175 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 1" x 3/16" | 12.57 | 0.2727 | 0.5455 | 65 | Du | 0.074 | 0.116 | 0.168 | 0.228 | 0.298 | 0.377 | 0.466 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C | | | | 1091 | 873 | 727 | 623 | 545 | 485 | 436 | 397 | | | | | | | | | | | | | | | | | | | | | | | | | 364 | 336 | 336 | | |
| | | Dc | | | | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | 0.451 | | | | | | | | | | | | | | | | | | | | | | | | | 0.536 | 0.629 | 0.629 | 0.629 | |
| 5 | 1 1/4" x 1/8" | 10.70 | 0.3551 | 0.5682 | 70 | U | 1636 | 1047 | 727 | 534 | 409 | 323 | 262 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Du | | | | 0.074 | 0.116 | 0.168 | 0.228 | 0.298 | 0.377 | 0.466 | 0.563 | | | | | | | | | | | | | | | | | | | | | | | | | 0.670 | 0.787 | 0.787 | | |
| | | C | | | | 1636 | 1309 | 1091 | 935 | 818 | 727 | 655 | 595 | | | | | | | | | | | | | | | | | | | | | | | | | 545 | 503 | 468 | 409 | 364 |
| 6 | 1 1/4" x 3/16" | 15.39 | 0.5327 | 0.8523 | 77 | Dc | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | U | | | | 1705 | 1091 | 758 | 557 | 426 | 337 | 273 | 225 | | | | | | | | | | | | | | | | | | | | | | | | | 189 | 161 | 139 | 107 | 84 |
| | | Du | | | | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | 0.451 | | | | | | | | | | | | | | | | | | | | | | | | | 0.536 | 0.629 | 0.730 | 0.953 | 1.207 |
| 7 | 1 1/2" x 1/8" | 12.59 | 0.6136 | 0.8182 | 80 | C | 1705 | 1364 | 1136 | 974 | 852 | 758 | 682 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Dc | | | | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.241 | 0.298 | 0.360 | | | | | | | | | | | | | | | | | | | | | | | | | 0.429 | 0.504 | 0.584 | 0.763 | 0.965 |
| | | U | | | | 2557 | 1636 | 1136 | 835 | 639 | 505 | 409 | 338 | | | | | | | | | | | | | | | | | | | | | | | | | 284 | 242 | 209 | 160 | 126 |
| 8 | 1 1/2" x 3/16" | 18.21 | 0.9205 | 1.2273 | 89 | Du | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C | | | | 2557 | 2045 | 1705 | 1461 | 1278 | 1136 | 1023 | 930 | | | | | | | | | | | | | | | | | | | | | | | | | 852 | 787 | 731 | 639 | 568 |
| | | Dc | | | | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.241 | 0.298 | 0.360 | | | | | | | | | | | | | | | | | | | | | | | | | 0.429 | 0.504 | 0.584 | 0.763 | 0.965 |
| 9 | 1 3/4" x 3/16" | 21.04 | 1.4616 | 1.6705 | 99 | U | 2455 | 1571 | 1091 | 801 | 614 | 485 | 393 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Du | | | | 0.050 | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.310 | 0.376 | | | | | | | | | | | | | | | | | | | | | | | | | 0.447 | 0.524 | 0.608 | 0.794 | 1.006 |
| | | C | | | | 3682 | 2945 | 2455 | 2104 | 1841 | 1636 | 1473 | 1339 | | | | | | | | | | | | | | | | | | | | | | | | | 1227 | 1133 | 1052 | 920 | 818 |
| 10 | 2" x 3/16" | 23.86 | 2.1818 | 2.1818 | 110 | Dc | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | U | | | | 5011 | 3207 | 2227 | 1636 | 1253 | 990 | 802 | 663 | | | | | | | | | | | | | | | | | | | | | | | | | 557 | 474 | 409 | 313 | 247 |
| | | Du | | | | 0.043 | 0.067 | 0.096 | 0.130 | 0.170 | 0.215 | 0.266 | 0.322 | | | | | | | | | | | | | | | | | | | | | | | | | 0.383 | 0.450 | 0.521 | 0.681 | 0.862 |
| 11 | 2 1/4" x 3/16" | 26.68 | 3.1065 | 2.7614 | 120 | C | 5011 | 4009 | 3341 | 2864 | 2506 | 2227 | 2005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Dc | | | | 0.034 | 0.053 | 0.077 | 0.104 | 0.136 | 0.172 | 0.213 | 0.257 | | | | | | | | | | | | | | | | | | | | | | | | | 0.306 | 0.360 | 0.417 | 0.545 | 0.689 |
| | | U | | | | 6545 | 4189 | 2909 | 2137 | 1636 | 1293 | 1047 | 866 | | | | | | | | | | | | | | | | | | | | | | | | | 727 | 620 | 534 | 409 | 323 |
| 12 | 2 1/2" x 3/16" | 29.50 | 4.2614 | 3.4091 | 130 | Du | 0.037 | 0.058 | 0.084 | 0.114 | 0.149 | 0.189 | 0.233 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C | | | | 6545 | 5236 | 4364 | 3740 | 3273 | 2909 | 2618 | 2380 | | | | | | | | | | | | | | | | | | | | | | | | | 2182 | 2014 | 1870 | 1636 | 1455 |
| | | Dc | | | | 0.030 | 0.047 | 0.067 | 0.091 | 0.119 | 0.151 | 0.186 | 0.225 | | | | | | | | | | | | | | | | | | | | | | | | | 0.268 | 0.315 | 0.365 | 0.477 | 0.603 |

All loads and deflections are based on gross sections and nominal sizes of bearing bars. The values listed are for design selection only and are not intended to be "absolute".

Actual load capacity will be affected slightly by variations which can be expected due to material and manufacturing tolerances.

1/4" is considered the maximum deflection which is consistent with pedestrian comfort, but may be exceeded for other application at the discretion of the Engineer.

When serrated gratings are specified, increase the depth of the grating selected from the table by 1/4" to allow for the serrations.

PANEL WIDTHS (inches)

| # Bars | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|------------|---------|----------|----------|----------|----------|----------|----------|---------|----------|----------|---------|----------|----------|---------|----------|----------|----------|----------|
| 3/16" Bars | 7/8 | 1 9/16 | 2 1/4 | 2 5/16 | 3 5/8 | 4 5/16 | 5 | 5 11/16 | 6 3/8 | 7 1/16 | 7 3/4 | 8 7/16 | 9 1/8 | 9 13/16 | 10 1/2 | 11 3/16 | 11 7/8 | 12 9/16 |
| 1/8" Bars | 1 3/16 | 1 1/2 | 2 3/16 | 2 7/8 | 3 9/16 | 4 1/4 | 4 5/16 | 5 5/8 | 6 5/16 | 7 | 7 11/16 | 8 3/8 | 9 1/16 | 9 3/4 | 10 7/16 | 11 1/8 | 11 13/16 | 12 1/2 |
| # Bars | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 3/16" Bars | 13 1/4 | 13 15/16 | 14 5/8 | 15 5/16 | 16 | 16 11/16 | 17 3/8 | 18 1/16 | 18 3/4 | 19 7/16 | 20 1/8 | 20 13/16 | 21 1/2 | 22 3/16 | 22 7/8 | 23 9/16 | 24 1/4 | 24 15/16 |
| 1/8" Bars | 13 3/16 | 13 7/8 | 14 9/16 | 15 1/4 | 15 15/16 | 16 5/8 | 17 5/16 | 18 | 18 11/16 | 19 3/8 | 20 1/16 | 20 3/4 | 21 7/16 | 22 1/8 | 22 13/16 | 23 1/2 | 24 3/16 | 24 7/8 |
| # Bars | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | | |
| 3/16" Bars | 25 5/8 | 26 5/16 | 27 | 27 11/16 | 28 3/8 | 29 1/16 | 29 3/4 | 30 7/16 | 31 1/8 | 31 13/16 | 32 1/2 | 33 13/16 | 33 7/8 | 34 9/16 | 35 1/4 | 35 15/16 | | |
| 1/8" Bars | 25 9/16 | 26 1/4 | 26 15/16 | 27 5/8 | 28 5/16 | 29 | 29 11/16 | 30 3/8 | 31 1/16 | 31 3/4 | 32 7/16 | 33 1/8 | 33 13/16 | 34 1/2 | 35 3/16 | 35 7/8 | | |