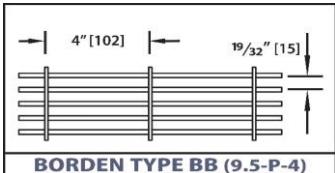




[www.bordengratings.com](http://www.bordengratings.com)

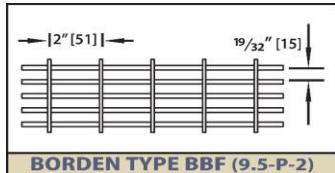
### Pressure Locked Grating Steel

#### LOAD TABLE



BORDEN TYPE BB (9.5-P-4)

Free air % for 1/8" bars: 76.48%  
Free air % for 3/16" bars: 66.28%



BORDEN TYPE BBF (9.5-P-2)

Free air % for 1/8" bars: 74.01%  
Free air % for 3/16" bars: 64.14%

| Size No. | Bearing Bar Size | Weight lbs/sq.ft. | Moment of Inertia | Section Modulus | Maximum span recommended for 1/4" deflection under uniform load of 100 psf. (normal pedestrian traffic) |          |       |       |       |       |       |       |  |                          |       |                    |
|----------|------------------|-------------------|-------------------|-----------------|---|----------|-------|-------|-------|-------|-------|-------|--|--------------------------|-------|--------------------|
|          |                  |                   |                   |                 | Span in Inches  |          |       |       |       |       |       |       |  |                          |       |                    |
| 1        | 3/4"x1/8"        | 7.33<br>8.13      | 0.0888            | 0.2368          | 49  | U 711    | 455   | 316   | 232   | 178   | 140   | 114   | <i>Table compiled as per ANSI/NAAMM MBG 534-14</i> |                          |       |                    |
|          |                  |                   |                   |                 |   | Du 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 | F - 18,000 psi                                     | E - 29,000,000 psi       |       |                    |
| 2        | 3/4"x3/16"       | 10.74<br>11.69    | 0.1332            | 0.3553          | 55  | C 711    | 568   | 474   | 406   | 355   | 316   | 284   | U - Safe Uniform Load (lbs./sq.ft.)                |                          |       |                    |
|          |                  |                   |                   |                 |   | Du 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 | C - Safe Conc. load (lbs./ft. width)               | D - Deflection in inches |       |                    |
| 3        | 1"x1/8"          | 9.99<br>11.26     | 0.2105            | 0.4211          | 61  | U 1263   | 808   | 561   | 412   | 316   | 250   | 202   | 167  | 140                      | 120   |                    |
|          |                  |                   |                   |                 |   | Du 0.074 | 0.116 | 0.168 | 0.228 | 0.298 | 0.377 | 0.466 | 0.563  | 0.67                     | 0.787 |                    |
| 4        | 1"x3/16"         | 14.32<br>15.59    | 0.3158            | 0.6316          | 68  | C 1895   | 1516  | 1263  | 1083  | 947   | 842   | 758   | 689  | 632                      | 583   | 541 <b>474</b> 421 |
|          |                  |                   |                   |                 |   | Dc 0.06  | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | 0.451  | 0.536                    | 0.629 | 0.73 0.953 1.207   |
| 5        | 1 1/4"x1/8"      | 12.16<br>13.44    | 0.4112            | 0.6579          | 72  | U 1974   | 1263  | 877   | 644   | 493   | 390   | 316   | 261  | 219                      | 187   | 161 123 97         |
|          |                  |                   |                   |                 |   | Du 0.06  | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | 0.451  | 0.536                    | 0.629 | 0.73 0.953 1.207   |
| 6        | 1 1/4"x3/16"     | 17.58<br>18.85    | 0.6168            | 0.9868          | 80  | U 2961   | 1895  | 1316  | 967   | 740   | 585   | 474   | 391  | 329                      | 280   | 242 185 146        |
|          |                  |                   |                   |                 |   | Du 0.06  | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 | 0.451  | 0.536                    | 0.629 | 0.73 0.953 1.207   |
| 7        | 1 1/2"x1/8"      | 14.34<br>15.62    | 0.7105            | 0.9474          | 83  | U 2842   | 1819  | 1263  | 928   | 711   | 561   | 455   | 376  | 316                      | 269   | 232 178 140        |
|          |                  |                   |                   |                 |   | Du 0.05  | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.31  | 0.376  | 0.447                    | 0.524 | 0.608 0.794 1.006  |
| 8        | 1 1/2"x3/16"     | 20.84<br>22.11    | 1.0658            | 1.4211          | 92  | U 4263   | 2728  | 1895  | 1392  | 1066  | 842   | 682   | 564  | 474                      | 404   | 348 266 211        |
|          |                  |                   |                   |                 |   | Du 0.05  | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.31  | 0.376  | 0.447                    | 0.524 | 0.608 0.794 1.006  |
| 9        | 1 3/4"x3/16"     | 24.10<br>25.37    | 1.6924            | 1.9342          | 103   | U 5803   | 3714  | 2579  | 1895  | 1451  | 1146  | 928   | 767  | 645                      | 549   | 474 363 287        |
|          |                  |                   |                   |                 |   | Du 0.043 | 0.067 | 0.096 | 0.13  | 0.17  | 0.215 | 0.266 | 0.322  | 0.383                    | 0.45  | 0.521 0.681 0.862  |
| 10       | 2"x3/16"         | 27.36<br>28.63    | 2.5263            | 2.5263          | 114   | U 7579   | 4851  | 3368  | 2475  | 1895  | 1497  | 1213  | 1002   | 842                      | 718   | 619 474 374        |
|          |                  |                   |                   |                 |   | Du 0.037 | 0.058 | 0.084 | 0.114 | 0.149 | 0.189 | 0.233 | 0.282  | 0.335                    | 0.393 | 0.456 0.596 0.754  |
| 11       | 2 1/4"x3/16"     | 30.62<br>31.89    | 3.5970            | 3.1974          | 125   | U 9592   | 6139  | 4263  | 3132  | 2398  | 1895  | 1535  | 1268   | 1066                     | 908   | 783 600 474        |
|          |                  |                   |                   |                 |   | Du 0.033 | 0.052 | 0.074 | 0.101 | 0.132 | 0.168 | 0.207 | 0.25   | 0.298                    | 0.35  | 0.406 0.53 0.67    |
| 12       | 2 1/2"x3/16"     | 33.88<br>35.15    | 4.9342            | 3.9474          | 135   | U 11842  | 7579  | 5263  | 3867  | 2961  | 2339  | 1895  | 1566   | 1316                     | 1121  | 967 740 585        |
|          |                  |                   |                   |                 |   | Du 0.03  | 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       |  |
| 3/16" Bars            | 25/32    | 1 3/8    | 1 31/32  | 2 9/16   | 3 5/32   | 3 3/4    | 4 11/32  | 4 15/16  | 5 17/32  | 6 1/8    | 6 23/32  | 7 5/16   | 7 29/32  |  |
| 1/8" Bars             | 23/32    | 1 5/16   | 1 29/32  | 2 1/2    | 3 3/32   | 3 11/16  | 4 9/32   | 4 7/8    | 5 15/32  | 6 1/16   | 6 21/32  | 7 1/4    | 7 27/32  |  |
| # Bars                | 15       | 16       | 17       | 18       | 19       | 20       | 21       | 22       | 23       | 24       | 25       | 26       | 27       |  |
| 3/16" Bars            | 8 1/2    | 9 3/32   | 9 11/16  | 10 9/32  | 10 7/8   | 11 15/32 | 12 1/16  | 12 21/32 | 13 1/4   | 13 27/32 | 14 7/16  | 15 1/32  | 15 5/8   |  |
| 1/8" Bars             | 8 7/16   | 9 1/32   | 9 5/8    | 10 7/32  | 10 13/16 | 11 13/32 | 12       | 12 19/32 | 13 3/16  | 13 25/32 | 14 3/8   | 14 31/32 | 15 9/16  |  |
| # Bars                | 28       | 29       | 30       | 31       | 32       | 33       | 34       | 35       | 36       | 37       | 38       | 39       | 40       |  |
| 3/16" Bars            | 16 7/32  | 16 13/16 | 17 13/32 | 18       | 18 19/32 | 19 3/16  | 19 25/32 | 20 3/8   | 20 31/32 | 21 9/16  | 22 5/32  | 22 3/4   | 23 11/32 |  |
| 1/8" Bars             | 16 5/32  | 16 3/4   | 17 11/32 | 17 15/16 | 18 17/32 | 19 1/8   | 19 23/32 | 20 5/16  | 20 29/32 | 21 1/2   | 22 3/32  | 22 11/16 | 23 9/32  |  |
| # Bars                | 41       | 42       | 43       | 44       | 45       | 46       | 47       | 48       | 49       | 50       | 51       | 52       | 53       |  |
| 3/16" Bars            | 23 15/16 | 24 17/32 | 25 1/8   | 25 23/32 | 26 5/16  | 26 29/32 | 27 1/2   | 28 3/32  | 28 11/16 | 29 9/32  | 29 7/8   | 30 15/32 | 31 1/16  |  |
| 1/8" Bars             | 23 7/8   | 24 15/32 | 25 1/16  | 25 21/32 | 26 1/4   | 26 27/32 | 27 7/16  | 28 1/32  | 28 5/8   | 29 7/32  | 29 13/16 | 30 13/32 | 31       |  |
| # Bars                | 54       | 55       | 56       | 57       | 58       | 59       | 60       | 61       |          |          |          |          |          |  |
| 3/16" Bars            | 31 21/32 | 32 1/4   | 32 27/32 | 33 7/16  | 34 1/32  | 34 5/8   | 35 7/32  | 35 13/16 |          |          |          |          |          |  |
| 1/8" Bars             | 31 19/32 | 32 3/16  | 32 25/32 | 33 3/8   | 33 31/32 | 34 9/16  | 35 5/32  | 35 3/4   |          |          |          |          |          |  |

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