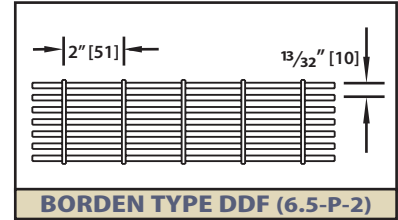


**BORDEN TYPE DD (6.5-P-4)**

Free air % for 1/8" bars: 67.07%  
Free air % for 3/16" bars: 52.16%



**BORDEN TYPE DDF (6.5-P-2)**

Free air % for 1/8" bars: 64.90%  
Free air % for 3/16" bars: 50.48%

**LOAD TABLE**

| Size No. | Bearing Bar Size | Weight (#/ft.²) | Moment of Inertia (in.⁴/f.w.) | Section Modulus (in.³/f.w.) | Maximum span recommended for 1/4" deflection under uniform load of 100 psf. (normal pedestrian traffic) in inches |       |       |       |       |       |       |       |       |  |    |    |     |  |  |  |  |  |  |  |
|----------|------------------|-----------------|-------------------------------|-----------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--|----|----|-----|--|--|--|--|--|--|--|
|          |                  |                 |                               |                             | Span in Inches  |       |       |       |       |       |       |       |       |  |    |    |     |  |  |  |  |  |  |  |
|          |                  |                 |                               |                             | 24  | 30    | 36    | 42    | 48    | 54    | 60    | 66    | 72    | 78   | 84 | 96 | 108 |  |  |  |  |  |  |  |
| 1        | 3/4" x 1/8"      | 10.29           | 0.1298                        | 0.3462                      | 54  | U     | 1038  | 665   | 462   | 339   | 260   | 205   | 166   | <b>Table in accordance with NAAMM MBG 531-09</b><br><b>F - 18,000 psi</b><br><b>E - 29,000,000 psi</b><br>U - Safe Uniform Load (lbs./sq.ft.)<br>C - Safe Conc. Load (lbs./ft. width)<br>D - Deflection in inches<br>f.w. = foot width |    |    |     |  |  |  |  |  |  |  |
|          |                  | 11.09           |                               |                             |   | Du    | 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | C               |                               |                             |   | 1038  | 831   | 692   | 593   | 519   | 462   | 415   |       |  |    |    |     |  |  |  |  |  |  |  |
| 2        | 3/4" x 3/16"     | 15.18           | 0.1947                        | 0.5192                      | 60  | Dc    | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.497 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 16.13           |                               |                             |   | U     | 1558  | 997   | 692   | 509   | 389   | 308   | 249   |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 |       |  |    |    |     |  |  |  |  |  |  |  |
| 3        | 1" x 1/8"        | 13.94           | 0.3077                        | 0.6154                      | 67  | C     | 1558  | 1246  | 1038  | 890   | 779   | 692   | 623   |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 15.21           |                               |                             |   | Dc    | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.497 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.099 | 0.155 | 0.223 | 0.304 | 0.397 | 0.503 | 0.621 |       |  |    |    |     |  |  |  |  |  |  |  |
| 4        | 1" x 3/16"       | 20.24           | 0.4615                        | 0.9231                      | 75  | C     | 1846  | 1477  | 1231  | 1055  | 923   | 821   | 738   |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 21.51           |                               |                             |   | Dc    | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.074 | 0.116 | 0.168 | 0.228 | 0.298 | 0.377 | 0.466 |       |  |    |    |     |  |  |  |  |  |  |  |
| 5        | 1 1/4" x 1/8"    | 17.10           | 0.6010                        | 0.9615                      | 80  | C     | 1846  | 1477  | 1231  | 1055  | 923   | 821   | 738   |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 18.38           |                               |                             |   | Dc    | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.372 |       |  |    |    |     |  |  |  |  |  |  |  |
| 6        | 1 1/4" x 3/16"   | 24.98           | 0.9014                        | 1.4423                      | 88  | C     | 2885  | 2308  | 1923  | 1648  | 1442  | 1282  | 1154  | 1049   |    |    |     |  |  |  |  |  |  |  |
|          |                  | 26.25           |                               |                             |   | Dc    | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.241 | 0.298 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.241 | 0.298 |       |  |    |    |     |  |  |  |  |  |  |  |
| 7        | 1 1/2" x 1/8"    | 20.27           | 1.0385                        | 1.3846                      | 91  | C     | 4154  | 3323  | 2769  | 2374  | 2077  | 1846  | 1662  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 21.55           |                               |                             |   | Dc    | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 |       |  |    |    |     |  |  |  |  |  |  |  |
| 8        | 1 1/2" x 3/16"   | 29.72           | 1.5577                        | 2.0769                      | 101   | C     | 6231  | 4985  | 4154  | 3560  | 3115  | 2769  | 2492  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 30.99           |                               |                             |   | Dc    | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 |       |  |    |    |     |  |  |  |  |  |  |  |
| 9        | 1 3/4" x 3/16"   | 34.46           | 2.4736                        | 2.8269                      | 113   | C     | 8481  | 6785  | 5654  | 4846  | 4240  | 3769  | 3392  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 35.73           |                               |                             |   | Dc    | 0.034 | 0.053 | 0.077 | 0.104 | 0.136 | 0.172 | 0.213 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.034 | 0.053 | 0.077 | 0.104 | 0.136 | 0.172 | 0.213 |       |  |    |    |     |  |  |  |  |  |  |  |
| 10       | 2" x 3/16"       | 39.20           | 3.6923                        | 3.6923                      | 125   | C     | 11077 | 7089  | 4923  | 3617  | 2769  | 2188  | 1772  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 40.47           |                               |                             |   | Dc    | 0.030 | 0.047 | 0.067 | 0.091 | 0.119 | 0.151 | 0.186 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.030 | 0.047 | 0.067 | 0.091 | 0.119 | 0.151 | 0.186 |       |  |    |    |     |  |  |  |  |  |  |  |
| 11       | 2 1/4" x 3/16"   | 43.94           | 5.2572                        | 4.6731                      | 137   | C     | 14019 | 8972  | 6231  | 4578  | 3505  | 2769  | 2243  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 45.21           |                               |                             |   | Dc    | 0.026 | 0.041 | 0.060 | 0.081 | 0.106 | 0.134 | 0.166 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.026 | 0.041 | 0.060 | 0.081 | 0.106 | 0.134 | 0.166 |       |  |    |    |     |  |  |  |  |  |  |  |
| 12       | 2 1/2" x 3/16"   | 48.68           | 7.2115                        | 5.7692                      | 148   | C     | 17308 | 13846 | 11538 | 9890  | 8654  | 7692  | 6923  |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | 49.95           |                               |                             |   | Dc    | 0.024 | 0.037 | 0.054 | 0.073 | 0.095 | 0.121 | 0.149 |  |    |    |     |  |  |  |  |  |  |  |
|          |                  | Du              |                               |                             |   | 0.024 | 0.037 | 0.054 | 0.073 | 0.095 | 0.121 | 0.149 |       |  |    |    |     |  |  |  |  |  |  |  |

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.

| # Bars     | PANEL WIDTHS (inches) |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |
|------------|-----------------------|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
|            | 2                     | 3        | 4        | 5        | 6        | 7        | 8       | 9        | 10       | 11       | 12       | 13       | 14       | 15       | 16       | 17       | 18       | 19       | 20       | 21       | 22       |  |
| 3/16" Bars | 19/32                 | 1        | 1 13/32  | 1 13/16  | 2 7/32   | 2 5/8    | 3 1/32  | 3 7/16   | 3 27/32  | 4 1/4    | 4 21/32  | 5 1/16   | 5 15/32  | 5 7/8    | 6 9/32   | 6 11/16  | 7 3/32   | 7 1/2    | 7 29/32  | 8 5/16   | 8 23/32  |  |
| 1/8" Bars  | 17/32                 | 1 5/16   | 1 11/32  | 1 3/4    | 2 5/32   | 2 9/16   | 2 31/32 | 3 3/8    | 3 25/32  | 4 3/16   | 4 19/32  | 5        | 5 13/32  | 5 13/16  | 6 7/32   | 6 5/8    | 7 1/32   | 7 7/16   | 7 27/32  | 8 1/4    | 8 21/32  |  |
| # Bars     | 23                    | 24       | 25       | 26       | 27       | 28       | 29      | 30       | 31       | 32       | 33       | 34       | 35       | 36       | 37       | 38       | 39       | 40       | 41       | 42       | 43       |  |
| 3/16" Bars | 9 1/8                 | 9 17/32  | 9 15/16  | 10 11/32 | 10 3/4   | 11 5/32  | 11 9/16 | 11 31/32 | 12 3/8   | 12 25/32 | 13 3/16  | 13 19/32 | 14       | 14 13/32 | 14 13/16 | 15 5/32  | 15 5/8   | 16 3/32  | 16 7/16  | 16 27/32 | 17 1/4   |  |
| 1/8" Bars  | 9 1/16                | 9 15/32  | 9 7/8    | 10 9/32  | 10 11/16 | 11 3/32  | 11 1/2  | 11 29/32 | 12 5/16  | 12 23/32 | 13 3/8   | 13 17/32 | 13 15/16 | 14 11/32 | 14 3/4   | 15 5/32  | 15 9/16  | 15 31/32 | 16 3/8   | 16 25/32 | 17 3/16  |  |
| # Bars     | 44                    | 45       | 46       | 47       | 48       | 49       | 50      | 51       | 52       | 53       | 54       | 55       | 56       | 57       | 58       | 59       | 60       | 61       | 62       | 63       | 64       |  |
| 3/16" Bars | 17 21/32              | 18 1/16  | 18 15/32 | 18 7/8   | 19 9/32  | 19 11/16 | 20 3/32 | 20 1/2   | 20 29/32 | 21 5/16  | 21 23/32 | 22 1/8   | 22 17/32 | 22 15/16 | 23 11/32 | 23 3/4   | 24 5/32  | 24 9/16  | 24 31/32 | 25 3/8   | 25 25/32 |  |
| 1/8" Bars  | 17 19/32              | 18       | 18 13/32 | 18 13/16 | 19 7/32  | 19 5/8   | 20 1/32 | 20 7/16  | 20 27/32 | 21 1/4   | 21 21/32 | 22 1/16  | 22 15/32 | 22 7/8   | 23 9/32  | 23 11/16 | 24 3/32  | 24 1/2   | 24 29/32 | 25 5/16  | 25 23/32 |  |
| # Bars     | 65                    | 66       | 67       | 68       | 69       | 70       | 71      | 72       | 73       | 74       | 75       | 76       | 77       | 78       | 79       | 80       | 81       | 82       | 83       | 84       | 85       |  |
| 3/16" Bars | 26 3/16               | 26 19/32 | 27       | 27 13/32 | 27 13/16 | 28 7/32  | 28 5/8  | 29 1/32  | 29 7/16  | 29 27/32 | 30 1/4   | 30 21/32 | 31 1/16  | 31 15/32 | 31 7/8   | 32 9/32  | 32 11/16 | 33 3/32  | 33 1/2   | 33 29/32 | 34 5/16  |  |
| 1/8" Bars  | 26 7/8                | 26 17/32 | 26 15/16 | 27 11/32 | 27 3/4   | 28 5/32  | 28 9/16 | 28 31/32 | 29 3/8   | 29 25/32 | 30 3/16  | 30 19/32 | 31       | 31 13/32 | 31 13/16 | 32 7/32  | 32 5/8   | 33 1/32  | 33 7/16  | 33 27/32 | 34 1/4   |  |
| # Bars     | 86                    | 87       | 88       | 89       |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |
| 3/16" Bars | 34 23/32              | 35 1/8   | 35 17/32 | 35 15/16 |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |
| 1/8" Bars  | 34 21/32              | 35 1/16  | 35 15/32 | 35 7/8   |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |