

| SERIES TYPE & NAME | BB HGT | BB THK | LBS./SF | | LOAD/DEFL | CLEAR SPAN | | | | | | | | | | | | | | | | | | |
|-------------------------|--------|--------|---------|--------|-----------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 15-W-4 | 15-W-2 | | 12" | 18" | 24" | 30" | 36" | 42" | 48" | 54" | 60" | 66" | 72" | 78" | 84" | 90" | 96" | 102" | 108" | 114" | 120" |
| SGW-75-A & SGW-75-A-2 | 3/4" | 1/8" | 5.0 | 5.9 | U | 1800 | 800 | 450 | 288 | 200 | 147 | 113 | 89 | 72 | 60 | 43 | 37 | 32 | 28 | 25 | 22 | 20 | 18 | |
| | | | | | D | 0.025 | 0.056 | 0.099 | 0.155 | 0.223 | 0.304 | 0.398 | 0.503 | 0.620 | 0.757 | 0.893 | 1.058 | 1.224 | 1.395 | 1.580 | 1.798 | 1.989 | 2.245 | 2.481 |
| | | | | | C | 900 | 600 | 450 | 360 | 300 | 257 | 225 | 200 | 180 | 164 | 150 | 138 | 129 | 120 | 113 | 106 | 100 | 95 | 90 |
| | | | | | D | 0.020 | 0.045 | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.496 | 0.602 | 0.714 | 0.836 | 0.976 | 1.116 | 1.276 | 1.435 | 1.607 | 1.796 | 1.984 |
| SGW-75 & SGW-75-2 | 3/4" | 3/16" | 7.2 | 8.1 | U | 2700 | 1200 | 675 | 432 | 300 | 220 | 169 | 133 | 108 | 89 | 75 | 64 | 55 | 48 | 42 | 37 | 33 | 30 | 27 |
| | | | | | D | 0.025 | 0.056 | 0.099 | 0.155 | 0.223 | 0.303 | 0.398 | 0.501 | 0.621 | 0.749 | 0.894 | 1.050 | 1.214 | 1.396 | 1.581 | 1.775 | 1.990 | 2.246 | 2.482 |
| | | | | | C | 1350 | 900 | 675 | 540 | 450 | 386 | 338 | 300 | 270 | 245 | 225 | 208 | 193 | 180 | 169 | 159 | 150 | 142 | 135 |
| | | | | | D | 0.020 | 0.045 | 0.079 | 0.124 | 0.179 | 0.243 | 0.318 | 0.402 | 0.496 | 0.600 | 0.715 | 0.840 | 0.974 | 1.117 | 1.273 | 1.436 | 1.608 | 1.791 | 1.986 |
| SGW-100-A & SGW-100-A-2 | 1" | 1/8" | 6.4 | 7.3 | U | 3200 | 1422 | 800 | 512 | 356 | 261 | 200 | 158 | 128 | 106 | 89 | 76 | 65 | 57 | 50 | 44 | 40 | 35 | 32 |
| | | | | | D | 0.019 | 0.042 | 0.075 | 0.116 | 0.168 | 0.228 | 0.298 | 0.377 | 0.466 | 0.565 | 0.671 | 0.790 | 0.908 | 1.050 | 1.192 | 1.337 | 1.528 | 1.659 | 1.863 |
| | | | | | C | 1600 | 1067 | 800 | 640 | 533 | 457 | 400 | 356 | 320 | 291 | 267 | 246 | 229 | 213 | 200 | 188 | 178 | 168 | 160 |
| | | | | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.302 | 0.373 | 0.451 | 0.537 | 0.629 | 0.731 | 0.837 | 0.954 | 1.075 | 1.208 | 1.341 | 1.490 |
| SGW-100 & SGW-100-2 | 1" | 3/16" | 9.3 | 10.2 | U | 4800 | 2133 | 1200 | 768 | 533 | 392 | 300 | 237 | 192 | 159 | 133 | 114 | 98 | 85 | 75 | 66 | 59 | 53 | 48 |
| | | | | | D | 0.019 | 0.042 | 0.074 | 0.116 | 0.167 | 0.228 | 0.298 | 0.377 | 0.466 | 0.564 | 0.669 | 0.789 | 0.913 | 1.043 | 1.192 | 1.337 | 1.502 | 1.675 | 1.862 |
| | | | | | C | 2400 | 1600 | 1200 | 960 | 800 | 686 | 600 | 533 | 480 | 436 | 400 | 369 | 343 | 320 | 300 | 282 | 267 | 253 | 240 |
| | | | | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.183 | 0.238 | 0.301 | 0.372 | 0.450 | 0.536 | 0.629 | 0.730 | 0.838 | 0.953 | 1.075 | 1.208 | 1.346 | 1.490 |
| SGW-125-A & SGW-125-A-2 | 1-1/4" | 1/8" | 7.9 | 8.8 | U | 5000 | 2222 | 1250 | 800 | 556 | 408 | 313 | 247 | 200 | 165 | 139 | 118 | 102 | 89 | 78 | 69 | 62 | 55 | 50 |
| | | | | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.239 | 0.302 | 0.372 | 0.450 | 0.537 | 0.628 | 0.730 | 0.839 | 0.952 | 1.073 | 1.212 | 1.335 | 1.490 |
| | | | | | C | 2500 | 1667 | 1250 | 1000 | 833 | 714 | 625 | 556 | 500 | 455 | 417 | 385 | 357 | 333 | 313 | 294 | 278 | 263 | 250 |
| | | | | | D | 0.012 | 0.027 | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.242 | 0.298 | 0.361 | 0.429 | 0.504 | 0.584 | 0.670 | 0.764 | 0.861 | 0.966 | 1.075 | 1.192 |
| SGW-125 & SGW-125-2 | 1-1/4" | 3/16" | 11.3 | 12.2 | U | 7500 | 3333 | 1875 | 1200 | 833 | 612 | 469 | 370 | 300 | 248 | 208 | 178 | 153 | 133 | 117 | 104 | 93 | 83 | 75 |
| | | | | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.301 | 0.372 | 0.451 | 0.535 | 0.631 | 0.730 | 0.836 | 0.952 | 1.078 | 1.212 | 1.343 | 1.490 |
| | | | | | C | 3750 | 2500 | 1875 | 1500 | 1250 | 1071 | 938 | 833 | 750 | 682 | 625 | 577 | 536 | 500 | 469 | 441 | 417 | 395 | 375 |
| | | | | | D | 0.012 | 0.027 | 0.048 | 0.074 | 0.107 | 0.146 | 0.191 | 0.241 | 0.298 | 0.361 | 0.429 | 0.504 | 0.584 | 0.670 | 0.763 | 0.861 | 0.966 | 1.076 | 1.192 |
| SGW-150-A & SGW-150-A-2 | 1-1/2" | 1/8" | 9.3 | 10.2 | U | 7200 | 3200 | 1800 | 1152 | 800 | 588 | 450 | 356 | 288 | 238 | 200 | 170 | 147 | 128 | 113 | 100 | 89 | 80 | 72 |
| | | | | | D | 0.012 | 0.028 | 0.050 | 0.078 | 0.112 | 0.152 | 0.199 | 0.252 | 0.310 | 0.375 | 0.447 | 0.523 | 0.609 | 0.698 | 0.798 | 0.900 | 1.007 | 1.123 | 1.241 |
| | | | | | C | 3600 | 2400 | 1800 | 1440 | 1200 | 1029 | 900 | 800 | 720 | 655 | 600 | 554 | 514 | 480 | 450 | 424 | 400 | 379 | 360 |
| | | | | | D | 0.010 | 0.022 | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 | 0.301 | 0.358 | 0.420 | 0.486 | 0.559 | 0.636 | 0.718 | 0.804 | 0.896 | 0.993 |
| SGW-150 & SGW-150-2 | 1-1/2" | 3/16" | 13.5 | 14.4 | U | 10800 | 4800 | 2700 | 1728 | 1200 | 882 | 675 | 533 | 432 | 357 | 300 | 256 | 220 | 192 | 169 | 149 | 133 | 120 | 108 |
| | | | | | D | 0.012 | 0.028 | 0.050 | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.310 | 0.375 | 0.447 | 0.525 | 0.607 | 0.698 | 0.796 | 0.894 | 1.003 | 1.123 | 1.241 |
| | | | | | C | 5400 | 3600 | 2700 | 2160 | 1800 | 1543 | 1350 | 1200 | 1080 | 982 | 900 | 831 | 771 | 720 | 675 | 635 | 600 | 568 | 540 |
| | | | | | D | 0.010 | 0.022 | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 | 0.300 | 0.358 | 0.420 | 0.486 | 0.559 | 0.636 | 0.717 | 0.804 | 0.896 | 0.993 |
| SGW-175 & SGW-175-2 | 1-3/4" | 3/16" | 15.6 | 16.5 | U | 14700 | 6533 | 3675 | 2352 | 1633 | 1200 | 919 | 726 | 588 | 486 | 408 | 348 | 300 | 261 | 230 | 203 | 181 | 163 | 147 |
| | | | | | D | 0.011 | 0.024 | 0.043 | 0.067 | 0.096 | 0.130 | 0.170 | 0.215 | 0.266 | 0.322 | 0.383 | 0.450 | 0.521 | 0.598 | 0.682 | 0.767 | 0.860 | 0.961 | 1.064 |
| | | | | | C | 7350 | 4900 | 3675 | 2940 | 2450 | 2100 | 1838 | 1633 | 1470 | 1336 | 1225 | 1131 | 1050 | 980 | 919 | 865 | 817 | 774 | 735 |
| | | | | | D | 0.009 | 0.019 | 0.034 | 0.053 | 0.077 | 0.104 | 0.136 | 0.172 | 0.213 | 0.257 | 0.306 | 0.360 | 0.417 | 0.479 | 0.545 | 0.615 | 0.690 | 0.769 | 0.851 |
| SGW-200 & SGW-200-2 | 2" | 3/16" | 17.7 | 18.6 | U | 19200 | 8533 | 4800 | 3072 | 2133 | 1567 | 1200 | 948 | 768 | 635 | 533 | 454 | 392 | 341 | 300 | 266 | 237 | 213 | 192 |
| | | | | | D | 0.009 | 0.021 | 0.037 | 0.058 | 0.084 | 0.114 | 0.149 | 0.189 | 0.233 | 0.282 | 0.335 | 0.393 | 0.456 | 0.523 | 0.596 | 0.673 | 0.754 | 0.841 | 0.931 |
| | | | | | C | 9600 | 6400 | 4800 | 3840 | 3200 | 2743 | 2400 | 2133 | 1920 | 1745 | 1600 | 1477 | 1371 | 1280 | 1200 | 1129 | 1067 | 1011 | 960 |
| | | | | | D | 0.007 | 0.017 | 0.030 | 0.047 | 0.067 | 0.091 | 0.119 | 0.151 | 0.186 | 0.225 | 0.268 | 0.315 | 0.365 | 0.419 | 0.477 | 0.538 | 0.603 | 0.673 | 0.745 |
| SGW-225 & SGW-225-2 | 2-1/4" | 3/16" | 19.8 | 20.7 | U | 24300 | 10800 | 6075 | 3888 | 2700 | 1984 | 1519 | 1200 | 972 | 803 | 675 | 575 | 496 | 432 | 380 | 336 | 300 | 269 | 243 |
| | | | | | D | 0.008 | 0.019 | 0.033 | 0.052 | 0.074 | 0.101 | 0.132 | 0.168 | 0.207 | 0.250 | 0.298 | 0.350 | 0.406 | 0.466 | 0.530 | 0.597 | 0.670 | 0.746 | 0.828 |
| | | | | | C | 12150 | 8100 | 6075 | 4860 | 4050 | 3471 | 3038 | 2700 | 2430 | 2209 | 2025 | 1869 | 1736 | 1620 | 1519 | 1429 | 1350 | 1279 | 1215 |
| | | | | | D | 0.007 | 0.015 | 0.026 | 0.041 | 0.060 | 0.081 | 0.106 | 0.134 | 0.166 | 0.200 | 0.238 | 0.280 | 0.324 | 0.372 | 0.424 | 0.478 | 0.536 | 0.598 | 0.662 |
| SGW-250 & SGW-250-2 | 2-1/2" | 3/16" | 21.9 | 22.8 | U | 30000 | 13333 | 7500 | 4800 | 3333 | 2449 | 1875 | 1481 | 1200 | 992 | 833 | 710 | 612 | 533 | 469 | 415 | 370 | 332 | 300 |
| | | | | | D | 0.007 | 0.017 | 0.030 | 0.047 | 0.067 | 0.091 | 0.119 | 0.151 | 0.186 | 0.225 | 0.268 | 0.315 | 0.365 | 0.419 | 0.477 | 0.538 | 0.603 | 0.671 | 0.745 |
| | | | | | C | 15000 | 10000 | 7500 | 6000 | 5000 | 4286 | 3750 | 3333 | 3000 | 2727 | 2500 | 2308 | 2143 | 2000 | 1875 | 1765 | 1667 | 1579 | 1500 |
| | | | | | D | 0.006 | 0.013 | 0.024 | 0.037 | 0.054 | 0.073 | 0.095 | 0.121 | 0.149 | 0.180 | 0.215 | 0.252 | 0.292 | 0.335 | 0.381 | 0.431 | 0.483 | 0.538 | 0.596 |

U - Uniform Load - Lbs. per Square Foot

D - Deflection - in Inches

C - Concentrated Load - Lbs. per Square Foot of Width at Mid Span

- Span and loading values to the left of the bolded black line produce a deflection of 1/4" or less under a uniform load of 100 lbs. per square foot, allowing for safe pedestrian comfort. Span and loading values to the right of the bolded black line are applicable to other types of loads at the discretion of a licensed engineer.
- For Grating with a serrated surface (1" bearing bar height or taller), subtract 1/4" from the bearing bar height requirement and reference that loading information listed in the table. For example, a 1-1/2" x 3/16" serrated bearing bar height and thickness would have the same strength and loading values as a 1-1/4" x 3/16" smooth (non-serrated) bearing bar height and thickness.
- Loading and deflection values are theoretical and based on a maximum allowable fiber stress (Fs) of 18,000 PSI, E = 29,000,000 PSI.
- Technical information provided is theoretical and for evaluation by technically skilled persons, with any use thereof to be at their independent discretion and risk. **McNICHOLS** shall have no responsibility or liability for results obtained or damages resulting from improper evaluation or use of Bar Grating.

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