

Material: Hot Rolled Carbon Steel per ASTM A1011
 F_s = 18,000 psi
 E = 29,000,000 psi
 Bearing bars spaced 13/16" on center
 # of bearing bars per foot = 14.7692

Harsco Industrial IKG

a harsco company

Types CM5 & CMF5

STEEL SAFE LOAD TABLE

U = Uniform load in pounds per square foot
 D = Deflection in inches
 C = Concentrated load at mid span in pounds per foot of width

| Maximum span for 1/4" deflection under a uniform load of 100 psf | | SPAN IN INCHES | | | | | | | | | | | | | | | | | | | |
|---|-----|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 | |
| SIZE 1 3/4 X 1/8 S ³ /ft 0.1731 I ⁴ /ft 0.0649 | 46 | U | 2077 | 923 | 519 | 332 | 231 | 170 | 130 | 103 | 83 | 69 | 58 | 49 | 42 | 37 | 32 | 29 | 26 | 23 | 21 |
| | | D | 0.025 | 0.056 | 0.099 | 0.155 | 0.224 | 0.305 | 0.398 | 0.505 | 0.620 | 0.755 | 0.899 | 1.046 | 1.206 | 1.400 | 1.567 | 1.810 | 2.039 | 2.240 | 2.510 |
| | | C | 1039 | 692 | 519 | 415 | 346 | 297 | 260 | 231 | 208 | 189 | 173 | 160 | 148 | 138 | 130 | 122 | 115 | 109 | 104 |
| | | D | 0.020 | 0.045 | 0.079 | 0.124 | 0.179 | 0.244 | 0.318 | 0.403 | 0.497 | 0.601 | 0.715 | 0.840 | 0.971 | 1.114 | 1.273 | 1.433 | 1.604 | 1.788 | 1.989 |
| SIZE 2 3/4 X 3/16 S ³ /ft 0.2596 I ⁴ /ft 0.0974 | 51 | U | 3115 | 1385 | 779 | 498 | 346 | 254 | 195 | 154 | 125 | 103 | 87 | 74 | 64 | 55 | 49 | 43 | 38 | 35 | 31 |
| | | D | 0.025 | 0.056 | 0.099 | 0.155 | 0.223 | 0.304 | 0.398 | 0.503 | 0.622 | 0.751 | 0.898 | 1.052 | 1.224 | 1.386 | 1.599 | 1.788 | 1.986 | 2.271 | 2.469 |
| | | C | 1558 | 1038 | 779 | 623 | 519 | 445 | 389 | 346 | 312 | 283 | 260 | 240 | 223 | 208 | 195 | 183 | 173 | 164 | 156 |
| | | D | 0.020 | 0.045 | 0.079 | 0.124 | 0.179 | 0.243 | 0.317 | 0.402 | 0.497 | 0.600 | 0.716 | 0.840 | 0.975 | 1.118 | 1.272 | 1.432 | 1.607 | 1.792 | 1.988 |
| SIZE 3 1 X 1/8 S ³ /ft 0.3077 I ⁴ /ft 0.1538 | 57 | U | 3692 | 1641 | 923 | 591 | 410 | 301 | 231 | 182 | 148 | 122 | 103 | 87 | 75 | 66 | 58 | 51 | 46 | 41 | 37 |
| | | D | 0.019 | 0.042 | 0.074 | 0.116 | 0.168 | 0.228 | 0.298 | 0.376 | 0.467 | 0.563 | 0.673 | 0.783 | 0.908 | 1.053 | 1.198 | 1.343 | 1.522 | 1.685 | 1.867 |
| | | C | 1846 | 1231 | 923 | 738 | 615 | 527 | 462 | 410 | 369 | 336 | 308 | 284 | 264 | 246 | 231 | 217 | 205 | 194 | 185 |
| | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.239 | 0.302 | 0.372 | 0.451 | 0.537 | 0.630 | 0.731 | 0.838 | 0.955 | 1.076 | 1.206 | 1.343 | 1.493 |
| SIZE 4 1 X 3/16 S ³ /ft 0.4615 I ⁴ /ft 0.2308 | 63 | U | 5538 | 2461 | 1385 | 886 | 615 | 452 | 346 | 273 | 222 | 183 | 154 | 131 | 113 | 98 | 87 | 77 | 68 | 61 | 55 |
| | | D | 0.019 | 0.042 | 0.074 | 0.116 | 0.167 | 0.228 | 0.298 | 0.376 | 0.466 | 0.563 | 0.671 | 0.786 | 0.912 | 1.042 | 1.198 | 1.351 | 1.500 | 1.670 | 1.849 |
| | | C | 2769 | 1846 | 1385 | 1108 | 923 | 791 | 692 | 615 | 554 | 503 | 462 | 426 | 396 | 369 | 346 | 326 | 308 | 291 | 277 |
| | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.301 | 0.372 | 0.450 | 0.537 | 0.629 | 0.731 | 0.837 | 0.953 | 1.077 | 1.208 | 1.342 | 1.490 |
| SIZE 5 1 1/4 X 1/8 S ³ /ft 0.4808 I ⁴ /ft 0.3005 | 67 | U | 5770 | 2564 | 1442 | 923 | 641 | 471 | 361 | 285 | 231 | 191 | 160 | 137 | 118 | 103 | 90 | 80 | 71 | 64 | 58 |
| | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.239 | 0.302 | 0.373 | 0.451 | 0.535 | 0.631 | 0.731 | 0.841 | 0.952 | 1.078 | 1.203 | 1.346 | 1.498 |
| | | C | 2885 | 1923 | 1442 | 1154 | 962 | 824 | 721 | 641 | 577 | 525 | 481 | 444 | 412 | 385 | 361 | 339 | 321 | 304 | 288 |
| | | 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 | 0.671 | 0.764 | 0.860 | 0.967 | 1.077 | 1.190 |
| SIZE 6 1 1/4 X 3/16 S ³ /ft 0.7212 I ⁴ /ft 0.4507 | 74 | U | 8654 | 3846 | 2164 | 1385 | 962 | 706 | 541 | 427 | 346 | 286 | 240 | 205 | 177 | 154 | 135 | 120 | 107 | 96 | 87 |
| | | D | 0.015 | 0.034 | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.301 | 0.372 | 0.451 | 0.535 | 0.630 | 0.732 | 0.839 | 0.952 | 1.078 | 1.209 | 1.346 | 1.498 |
| | | C | 4327 | 2885 | 2164 | 1731 | 1442 | 1236 | 1082 | 962 | 865 | 787 | 721 | 666 | 618 | 577 | 541 | 509 | 481 | 455 | 433 |
| | | 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 | 1.074 | 1.193 |
| SIZE 7 1 1/2 X 1/8 S ³ /ft 0.6923 I ⁴ /ft 0.5192 | 77 | U | 8308 | 3692 | 2077 | 1329 | 923 | 678 | 519 | 410 | 332 | 275 | 231 | 197 | 170 | 148 | 130 | 115 | 103 | 92 | 83 |
| | | D | 0.012 | 0.028 | 0.050 | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.310 | 0.376 | 0.447 | 0.525 | 0.610 | 0.700 | 0.796 | 0.897 | 1.010 | 1.120 | 1.240 |
| | | C | 4154 | 2769 | 2077 | 1662 | 1385 | 1187 | 1038 | 923 | 831 | 755 | 692 | 639 | 593 | 554 | 519 | 489 | 462 | 437 | 415 |
| | | D | 0.010 | 0.022 | 0.040 | 0.062 | 0.089 | 0.122 | 0.159 | 0.201 | 0.248 | 0.300 | 0.357 | 0.420 | 0.486 | 0.559 | 0.635 | 0.718 | 0.805 | 0.896 | 0.992 |
| SIZE 8 1 1/2 X 3/16 S ³ /ft 1.0385 I ⁴ /ft 0.7788 | 85 | U | 12462 | 5539 | 3116 | 1994 | 1385 | 1017 | 779 | 615 | 498 | 412 | 346 | 295 | 254 | 222 | 195 | 172 | 154 | 138 | 125 |
| | | D | 0.012 | 0.028 | 0.050 | 0.078 | 0.112 | 0.152 | 0.199 | 0.251 | 0.310 | 0.376 | 0.447 | 0.525 | 0.608 | 0.700 | 0.796 | 0.894 | 1.007 | 1.120 | 1.245 |
| | | C | 6231 | 4154 | 3116 | 2492 | 2077 | 1780 | 1558 | 1385 | 1246 | 1133 | 1039 | 959 | 890 | 831 | 779 | 733 | 692 | 656 | 623 |
| | | 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 | 0.487 | 0.559 | 0.636 | 0.718 | 0.804 | 0.897 | 0.993 |
| SIZE 9 1 3/4 X 3/16 S ³ /ft 1.4135 I ⁴ /ft 1.2368 | 95 | U | 16962 | 7539 | 4241 | 2714 | 1885 | 1385 | 1060 | 838 | 678 | 561 | 471 | 401 | 346 | 302 | 265 | 235 | 209 | 188 | 170 |
| | | D | 0.011 | 0.024 | 0.043 | 0.067 | 0.096 | 0.130 | 0.170 | 0.216 | 0.266 | 0.322 | 0.383 | 0.449 | 0.521 | 0.599 | 0.681 | 0.770 | 0.860 | 0.961 | 1.066 |
| | | C | 8481 | 5654 | 4241 | 3392 | 2827 | 2423 | 2120 | 1885 | 1696 | 1542 | 1414 | 1305 | 1212 | 1131 | 1060 | 998 | 942 | 893 | 848 |
| | | D | 0.009 | 0.019 | 0.034 | 0.053 | 0.077 | 0.104 | 0.136 | 0.172 | 0.213 | 0.258 | 0.307 | 0.360 | 0.417 | 0.479 | 0.545 | 0.615 | 0.689 | 0.768 | 0.851 |
| SIZE 10 2 X 3/16 S ³ /ft 1.8462 I ⁴ /ft 1.8462 | 105 | U | 22154 | 9846 | 5539 | 3545 | 2462 | 1809 | 1385 | 1094 | 886 | 732 | 615 | 524 | 452 | 394 | 346 | 307 | 274 | 245 | 222 |
| | | D | 0.009 | 0.021 | 0.037 | 0.058 | 0.084 | 0.114 | 0.149 | 0.189 | 0.233 | 0.281 | 0.335 | 0.393 | 0.456 | 0.524 | 0.596 | 0.673 | 0.755 | 0.839 | 0.933 |
| | | C | 11077 | 7385 | 5539 | 4431 | 3692 | 3165 | 2769 | 2462 | 2215 | 2014 | 1846 | 1704 | 1582 | 1477 | 1385 | 1303 | 1231 | 1166 | 1108 |
| | | 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 | 0.672 | 0.745 |
| SIZE 11 2 1/4 X 3/16 S ³ /ft 2.3365 I ⁴ /ft 2.6286 | 115 | U | 28038 | 12461 | 7010 | 4486 | 3115 | 2289 | 1752 | 1385 | 1122 | 927 | 779 | 664 | 572 | 498 | 438 | 388 | 346 | 311 | 280 |
| | | 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 | 0.405 | 0.465 | 0.530 | 0.598 | 0.670 | 0.748 | 0.826 |
| | | C | 14019 | 9346 | 7010 | 5608 | 4673 | 4005 | 3505 | 3115 | 2804 | 2549 | 2337 | 2157 | 2003 | 1869 | 1752 | 1649 | 1558 | 1476 | 1402 |
| | | 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 |
| SIZE 12 2 1/2 X 3/16 S ³ /ft 2.8846 I ⁴ /ft 3.6058 | 125 | U | 34615 | 15385 | 8654 | 5538 | 3846 | 2826 | 2163 | 1709 | 1385 | 1144 | 962 | 819 | 706 | 615 | 541 | 479 | 427 | 384 | 346 |
| | | 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 | 0.744 |
| | | C | 17308 | 11538 | 8654 | 6923 | 5769 | 4945 | 4327 | 3846 | 3462 | 3147 | 2885 | 2663 | 2473 | 2308 | 2163 | 2036 | 1923 | 1822 | 1731 |
| | | 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 | 0.430 | 0.483 | 0.538 | 0.596 |